

MAD

Feb 09, 2021

PROJECT ID:

5758-00-73

COUNTY:

ROCK

WITH: N/A

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile (Including Erosion Control)
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 = 36



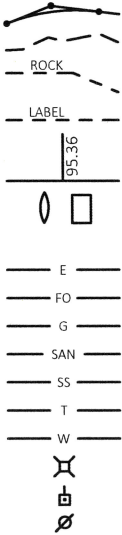
DESIGN DESIGNATION 5758-00-73

A.A.D.T.	2021	=	110
A.A.D.T.	2041	=	130
D.H.V.		=	20
D.D.		=	62/38
T.		=	9.7%
DESIGN SPEED		=	30 MPH
ESALS		=	22,000

CONVENTIONAL SYMBOLS

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

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



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF JANESVILLE, POLZIN ROAD

(MARSH CREEK BRIDGE, B-53-0387)

LOCAL STREET
ROCK COUNTY

STATE PROJECT NUMBER

5758-00-73

STATE PROJECT

5758-00-73

FEDERAL PROJECT

PROJECT

CONTRACT

END PROJECT 5758-00-73
STA. 10+75.00

BEGIN PROJECT 5758-00-73
STA. 09+25.00
Y = 282,929.14
X = 466,720.98

ACCEPTED FOR

ROCK COUNTY

Date: 10/8/2020 Director of Public Works

ORIGINAL PLANS PREPARED BY



1702 Pankratz Street, Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664



DATE: 10-1-2020 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Project Manager	ZACHARY PEARSON
Regional Examiner	SW REGION
Regional Supervisor	IAN WINGER

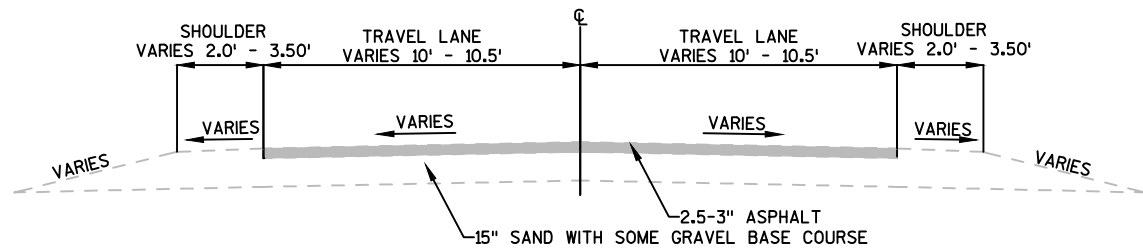
APPROVED FOR THE DEPARTMENT
10/12/2020
DATE: (Signature)

E

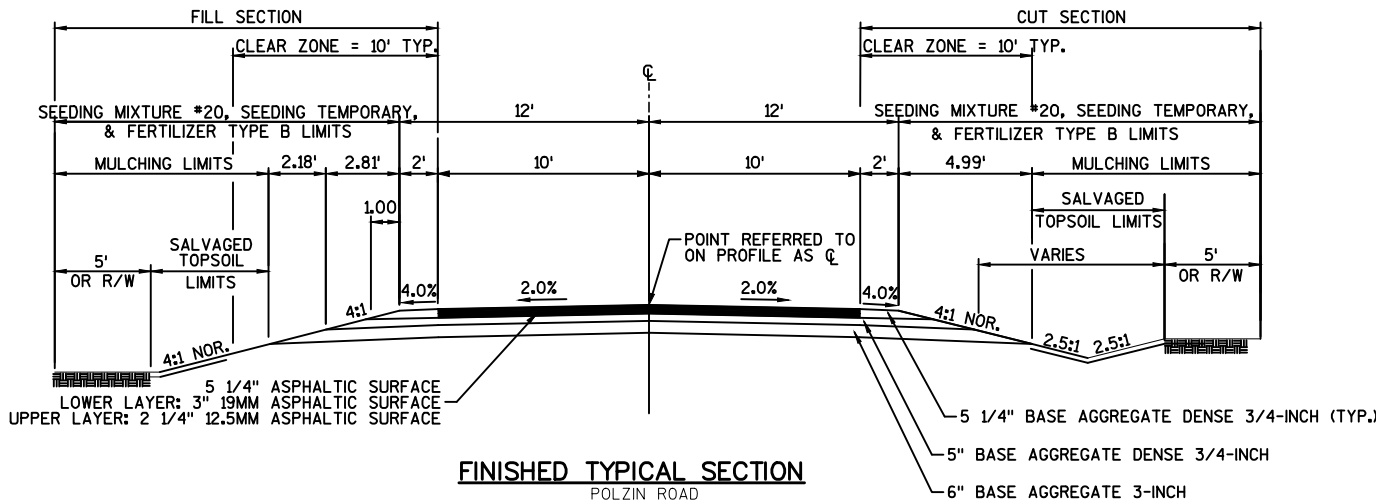
TOTAL NET LENGTH OF CENTERLINE = 0.028 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ROCK COUNTY, NAD83 (2011 ADJUSTMENT), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD88 (2012).



EXISTING TYPICAL SECTION
POLZIN ROAD



FINISHED TYPICAL SECTION
POLZIN ROAD
STA. 9+25 - STA. 10+75

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 = 0.18 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.15 ACRES

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY 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 AREA THAT ARE NOT SHOWN.

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

THE 5 1/4" ASPHALTIC SURFACE SHALL BE CONSTRUCTED USING A 2.25" UPPER LAYER WITH 12.5 MM AGGREGATE AND A 3.0" LOWER LAYER WITH 19.0 MM AGGREGATE.

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

TEMPORARY DITCH CHECKS, IF NEEDED, SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

THE ASPHALTIC SURFACE SHALL TAPER FROM 24.0 FEET AT THE END OF THE BRIDGE TO 20.0 FEET AT +/- 25 FEET FROM THE BRIDGE ENDS,

MAINTAIN 4:1 FORESLOPES AND BACKSLOPES UNTIL OUTSIDE THE CLEAR ZONE FOR CUT AND FILL SECTIONS.

THE CONTRACTOR IS RESPONSIBLE FOR THE RESHAPING AND FINISHING OF ALL PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATIONS OUTSIDE THE PLAN CONSTRUCTION LIMITS.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY THESE LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THEY ARE NO LONGER NECESSARY.

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: JAIME KURTEN, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
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ROCK COUNTY PUBLIC WORKS
ATTN: DUANE JORGENSEN
3715 N. NEWVILLE ROAD
JANESVILLE, WI 53545
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EMAIL: DUANE.JORGENSEN@CO.ROCK.WI.US

WISDOT SW REGION LOCAL PROGRAM
ATTN: STEFAN CIOBANU, P.E.
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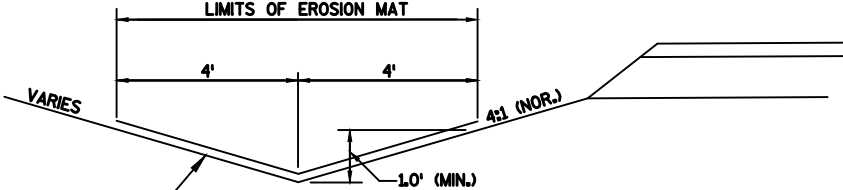
TELEPHONE:
AT&T
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MADISON, WI 53701
PHONE: (608) 252-2385
EMAIL: CA2624@ATT.COM

GAS:
ALLIANT ENERGY
ATTN: ZACHARY STOCKS
3730 KENNEDY ROAD
JANESVILLE, WI 53545
PHONE:
EMAIL: ZACHARYSTOCKS@ALLIANTENERGY.COM

DNR LIAISON
DEPARTMENT OF NATURAL RESOURCES
ATTN.: SHELLEY NELSON
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 444-2835
EMAIL: SHELLEY.NELSON@WISCONSIN.GOV

ELECTRIC:
ROCK ENERGY COOPERATIVE
ATTN: AARON RECHLIN
2815 KENNEDY ROAD
JANESVILLE, WI 53547
PHONE: (608) 531-6562
EMAIL: AARONR@ROCK.COOP

*-DENOTES UTILITIES THAT ARE NOT
DIGGERS HOTLINE MEMBERS



EROSION MAT DITCH DETAIL

STANDARD ABBREVIATIONS

AC	ACRES
AEW	APRON ENDWALL
AH	AHEAD
ALUM.	ALUMINUM
A.P.	ACCESS POINT
ASPH	ASPHALT
AVE	AVENUE
BAD	BASE AGGREGATE DENSE
BK	BACK
BLK	BLOCK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CL or C	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CONC	CONCRETE
CP	CONTROL POINT
CSM	CERTIFIED SURVEY MAP
D	DEGREE OF CURVE
DIA	DIAMETER
E	EAST
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EOP	EDGE OF PAVEMENT
ET AL	AND OTHERS
EW	ENDWALL
EXIST	EXISTING
FOC	FACE OF CURB
FT	FOOT
FT2	SQUARE FEET
GN	GRID NORTH
GV	GAS VALVE
HYD	HYDRANT
IN	INCH
INL	INLET
INV	INVERT ELEVATION
IP	IRON PIPE
L	LENGTH
LF	LENGTH OF CURVE
LC	LINEAL FEET
LCB	LONG CHORD
LP	LONG CHORD BEARING
LS	LOW POINT
LT	LUMP SUM
LT	LEFT
MH	MANHOLE
MI	MILE
MON	MONUMENT
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PB	PULLBOX
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT
PT	POINT OF TANGENCY
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
R	RADIUS
R	RANGE
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RL or R/L	REFERENCE LINE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
S	SOUTH
SAN	SANITARY SEWER
SB	SOUTHBOUND
SL	SPECIAL LOGO
SQ	SQUARE
STD	STANDARD
SEC	SECTION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE
	HORIZONTAL ELLIPTICAL
ST	STREET
STA	STATION
STH	STATE TRUNK HIGHWAY
STM	STORM SEWER
STR	STRUCTURE
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T or TN	TOWN
TYP.	TYPICAL
UD	PIPE UNDERDRAIN
WM	WATERMAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

Estimate Of Quantities

5758-00-73					
Line	Item	Item Description	Unit	Total	Qty
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0004	205.0100	Excavation Common	CY	154.000	154.000
0006	206.1000	Excavation for Structures Bridges (structure) 01. B-53-0387	LS	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	232.000	232.000
0010	213.0100	Finishing Roadway (project) 01. 5758-00-73	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	120.000	120.000
0014	305.0130	Base Aggregate Dense 3-Inch	TON	220.000	220.000
0016	455.0605	Tack Coat	GAL	13.000	13.000
0018	465.0105	Asphaltic Surface	TON	80.000	80.000
0020	502.0100	Concrete Masonry Bridges	CY	138.000	138.000
0022	502.3200	Protective Surface Treatment	SY	157.000	157.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	3,240.000	3,240.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,710.000	14,710.000
0028	513.4061	Railing Tubular Type M	LF	128.000	128.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0032	550.0500	Pile Points	EACH	8.000	8.000
0034	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	540.000	540.000
0036	606.0300	Riprap Heavy	CY	90.000	90.000
0038	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	178.000	178.000
0040	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5758-00-73	EACH	1.000	1.000
0042	619.1000	Mobilization	EACH	1.000	1.000
0044	624.0100	Water	MGAL	4.000	4.000
0046	625.0500	Salvaged Topsoil	SY	60.000	60.000
0048	627.0200	Mulching	SY	160.000	160.000
0050	628.1504	Silt Fence	LF	250.000	250.000
0052	628.1520	Silt Fence Maintenance	LF	500.000	500.000
0054	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0058	628.2004	Erosion Mat Class I Type B	SY	50.000	50.000
0060	628.2008	Erosion Mat Urban Class I Type B	SY	25.000	25.000
0062	628.6005	Turbidity Barriers	SY	90.000	90.000
0064	628.7560	Tracking Pads	EACH	2.000	2.000
0066	629.0210	Fertilizer Type B	CWT	0.170	0.170
0068	630.0120	Seeding Mixture No. 20	LB	8.000	8.000
0070	630.0200	Seeding Temporary	LB	5.000	5.000
0072	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0074	637.2230	Signs Type II Reflective F	SF	12.000	12.000

Estimate Of Quantities

5758-00-73					
Line	Item	Item Description	Unit	Total	Qty
0076	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000
0080	643.5000	Traffic Control	EACH	1.000	1.000
0082	645.0111	Geotextile Type DF Schedule A	SY	112.000	112.000
0084	645.0120	Geotextile Type HR	SY	176.000	176.000
0086	650.4500	Construction Staking Subgrade	LF	225.000	225.000
0088	650.5000	Construction Staking Base	LF	225.000	225.000
0090	650.6500	Construction Staking Structure Layout (structure) 01. B-53-0387	LS	1.000	1.000
0092	650.9910	Construction Staking Supplemental Control (project) 01. 5758-00-73	LS	1.000	1.000
0094	650.9920	Construction Staking Slope Stakes	LF	225.000	225.000
0096	690.0150	Sawing Asphalt	LF	40.000	40.000
0098	715.0502	Incentive Strength Concrete Structures	DOL	828.000	828.000

Division	From/To Station	Location	Common Excavation (1) <small>(item # 205.0100)</small>		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
Project ID 5758-00-73			(item #208.0100)									
1	9+25 - 9+81.25	Polzin Rd - South Approach	54	0	0	54	8	10	45	45	0	
2	10+18.75-10+75	Polzin Rd - North Approach	64	0	0	64	2	2	61	61	0	
UNDISTRIBUTED EBS			0	36								
Grand Total			118	36	0	118	9	12	106	106	0	
			154									

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) EBS Excavation to be backfilled with Base Aggregate Dense 3-Inch material.
- 4) Salvaged/Unusable Pavement Material
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 6) Expanded Fill. Factor = 1.25
- 7) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

465 - HMA PAVEMENT						305-BAD								
						305.0110	305.0130	624.0100						
						BASE AGGREGATE	BASE AGGREGATE							
						DENSE 3/4-INCH	DENSE 3-INCH	WATER						
CATEGORY	STATION	TO	STATION	TACK COAT GAL	455.0605 ASPHALTIC SURFACE TON	REMARKS	CATEGORY	STATION	TO	STATION	TON	TON	MGAL	REMARKS
0010	9+25		9+81.25	7	40		0010	9+25		9+81.25	60	70	2	WATER FOR DUST CONTROL AND COMPACTION
0010	10+18.75		10+75	7	40		0010	10+18.75		10+75	60	70	2	WATER FOR DUST CONTROL AND COMPACTION
				<u>13</u>	<u>80</u>		0010	UNDISTRIBUTED (EBS)			-	80	-	
							TOTAL 0010				<u>120</u>	<u>220</u>	<u>4</u>	

628- MOBILIZATIONS EROSION CONTROL				628.7560-TRACKING PADS			
		628.1905	628.1910			628.7560	
		MOBILIZATIONS	MOBILIZATIONS			TRACKING PADS	
		EROSION	EMERGENCY			EACH	
		CONTROL	EROSION CONTROL				
CATEGORY	DESCRIPTION	EACH	EACH				
0010	PROJECT 5758-00-73	2	1				
TOTAL 0010		2	1				

CATEGORY	STATION	
0010	9+25	1
0010	10+75	1
TOTAL 0010		2

FINISHING ITEMS														
					625.0500	627.0200	628.1504	628.1520	628.2004	628.2008	628.6005	629.0210	630.0120	630.0200
					SALVAGED TOPSOIL	MULCHING	SILT FENCE	SILT FENCE	EROSION MAT	EROSION MAT	TURBIDITY	FERTILIZER TYPE	SEEDING	SEEDING
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	LF	LF	CLASS I TYPE B	URBAN CLASS I	SY	SY	MIXTURE NO. 20	TEMPORARY
										TYPE B			LB	LB
0010	9+25		9+81.25	LT	20	40	50	100	-	10	-	0.06	3	2
0010	9+25		9+81.25	RT	15	40	50	100	-	7	-	0.04	2	1
0010	9+81.25		10+18.75	LT&RT	-	-	-	-	-	-	90	-	-	-
0010	10+18.75		10+75	LT	15	40	50	100	-	8	-	0.04	2	1
0010	10+18.75		10+75	RT	10	40	50	100	-	-	-	0.03	1	1
0010	UNDISTRIBUTED				-	-	50	100	50	-	-	-	-	-
TOTAL 0010					60	160	250	500	50	25	90	0.17	8	5

PERMANENT SIGNING

638.3000-REMOVING SMALL SIGN SUPPORTS

CATEGORY	STATION	LOCATION	SIGN CODE	634.0612	637.2230
				POSTS WOOD 4X6-INCH X 12-FT EACH	SIGNS TYPE II REFLECTIVE F SF
0010	9+80.55	10.92' LT	W5-52L	1	3
0010	9+80.32	11.32' RT	W5-52R	1	3
0010	10+20.78	11.40' LT	W5-52L	1	3
0010	10+20.29	11.19' RT	W5-52R	1	3
TOTAL 0010				4	12

CATEGORY	STATION	LOCATION	638.3000
			REMOVING SMALL SIGN SUPPORTS EACH
0010	909+00	LT	1
0010	9+81.25	LT	1
0010	9+81.25	RT	1
0010	10+18.75	LT	1
0010	10+18.75	RT	1
0010	10+83.75	RT	1
TOTAL 0010			6

650- CONSTRUCTION STAKING

690.0150-SAWING ASPHALT

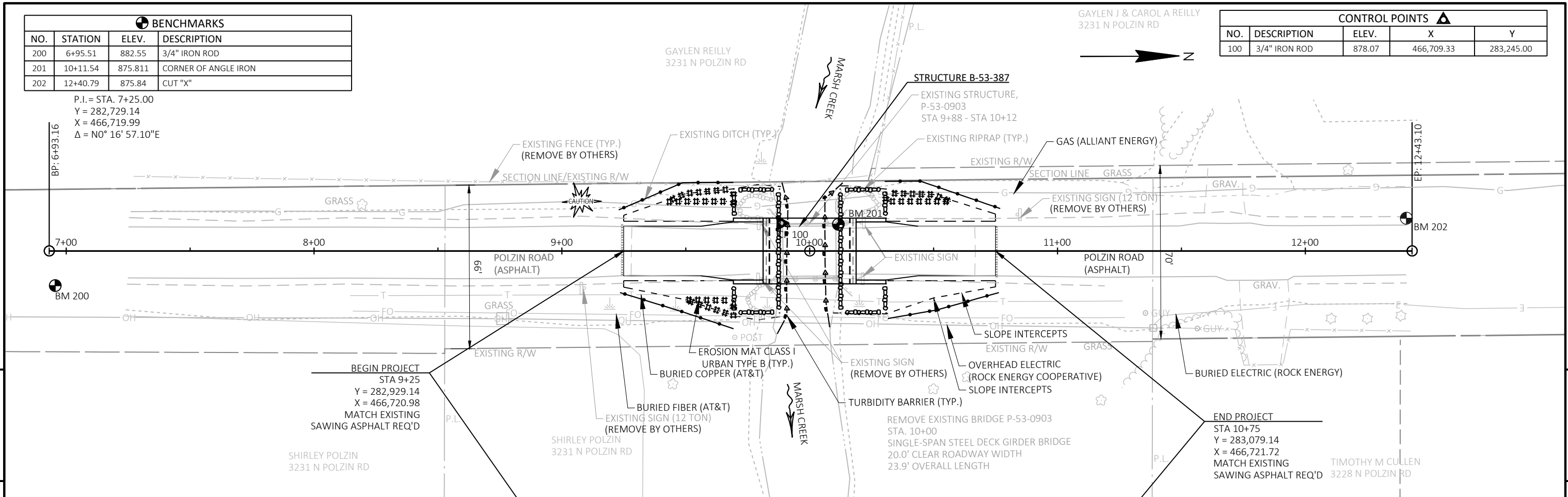
					650.4500	650.5000	650.9910.01	650.9920
					CONSTRUCTION		CONSTRUCTION	
					STAKING		STAKING	
					SUBGRADE	CONSTRUCTION	SUPPLEMENTAL	CONSTRUCTION
					LF	STAKING BASE	CONTROL	STAKING SLOPE
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	(PROJECT)	STAKES
0010	9+25		9+81.25	LT	56	56	-	56
0010	7+50		9+32	RT	56	56	-	56
0010	10+18.75		10+75	LT	56	56	-	56
0010	10+18.75		10+75	RT	56	56	-	56
0010	PROJECT 5758-00-73				-	-	1	-
TOTAL 0010					225	225	1	225

CATEGORY	STATION	TO	STATION	LOCATION	690.0150
					SAWING ASPHALT LF
0010	9+25		9+81.25	RT & LT	20
0010	10+18.75		10+75	RT & LT	20
TOTAL 0010					40

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
200	6+95.51	882.55	3/4" IRON ROD
201	10+11.54	875.811	CORNER OF ANGLE IRON
202	12+40.79	875.84	CUT "X"

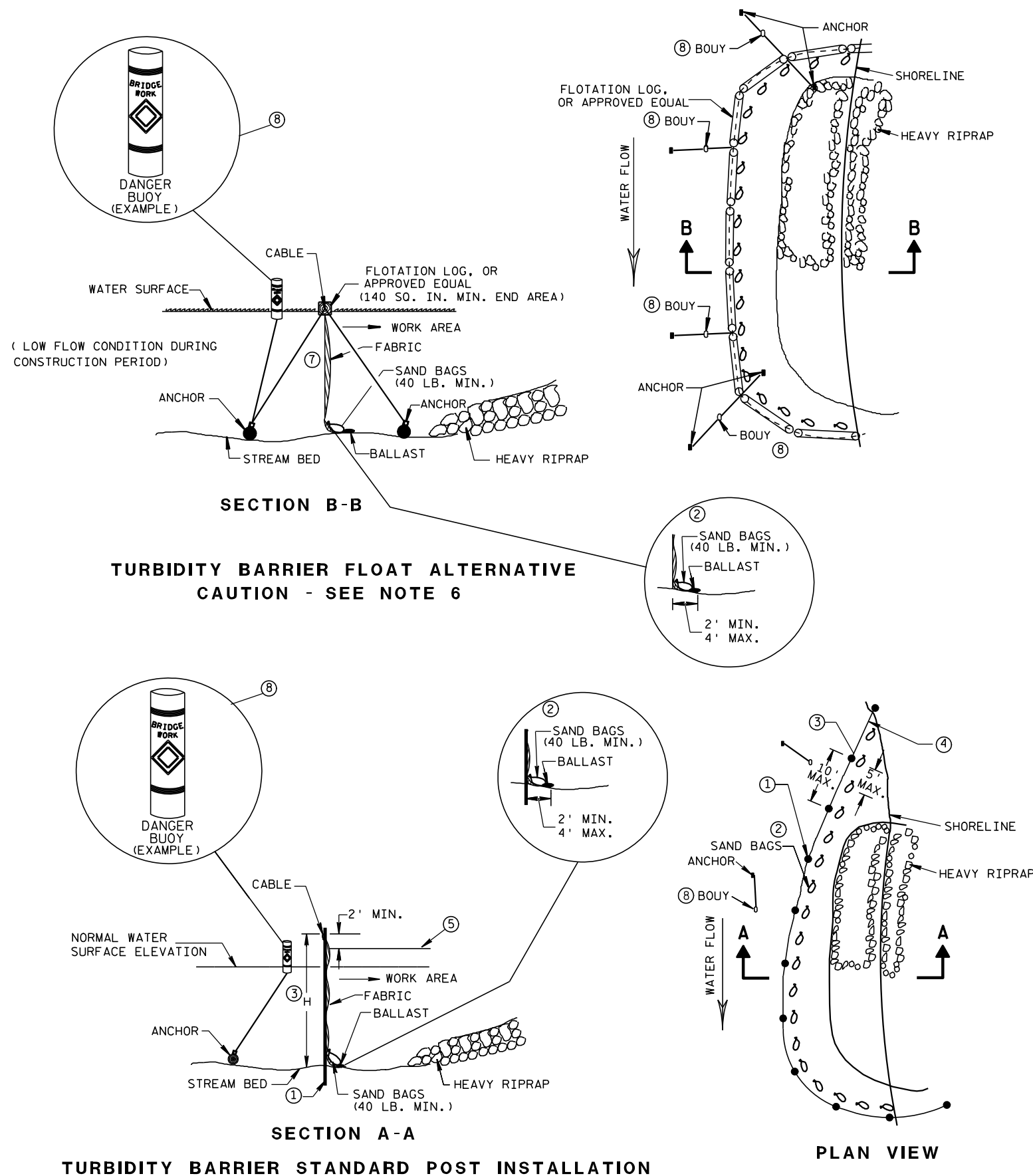
P.I. = STA. 7+25.00
Y = 282,729.14
X = 466,719.99
Δ = N0° 16' 57.10"E

CONTROL POINTS				
NO.	DESCRIPTION	ELEV.	X	Y
100	3/4" IRON ROD	878.07	466,709.33	283,245.00



Standard Detail Drawing List

08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES

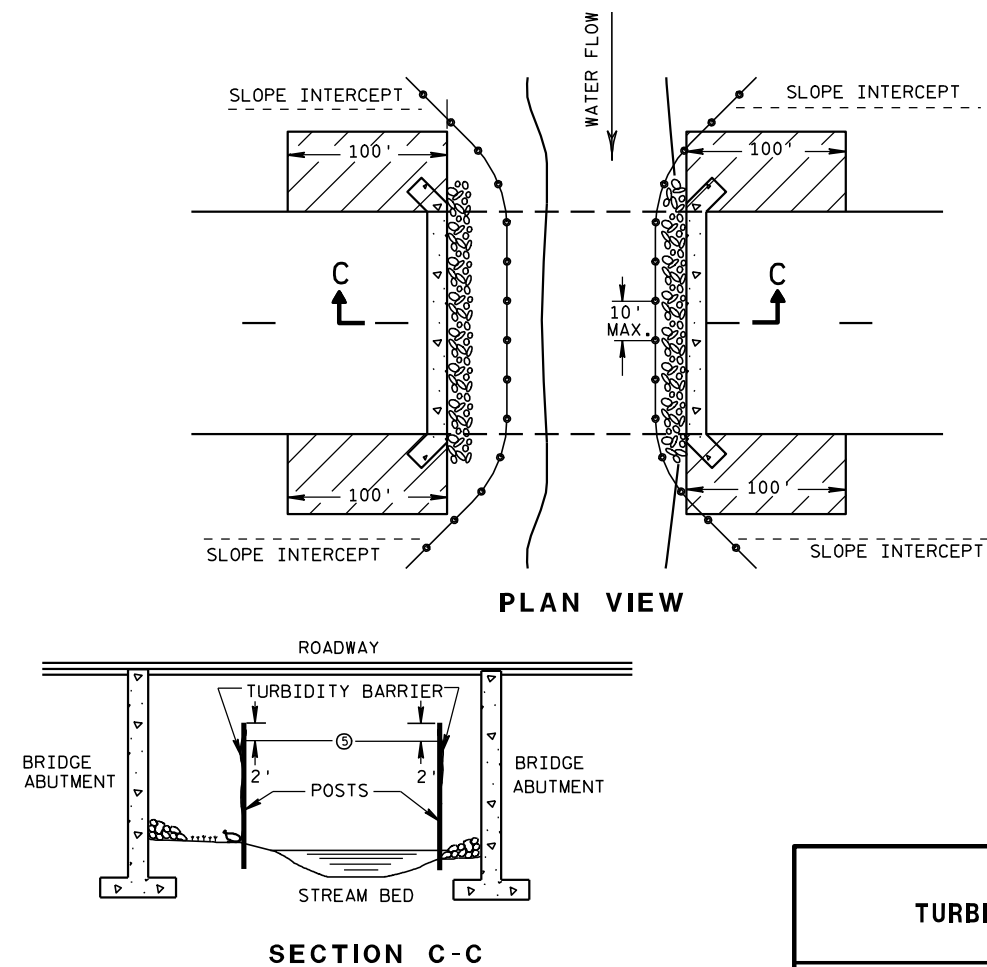


GENERAL NOTES

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

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

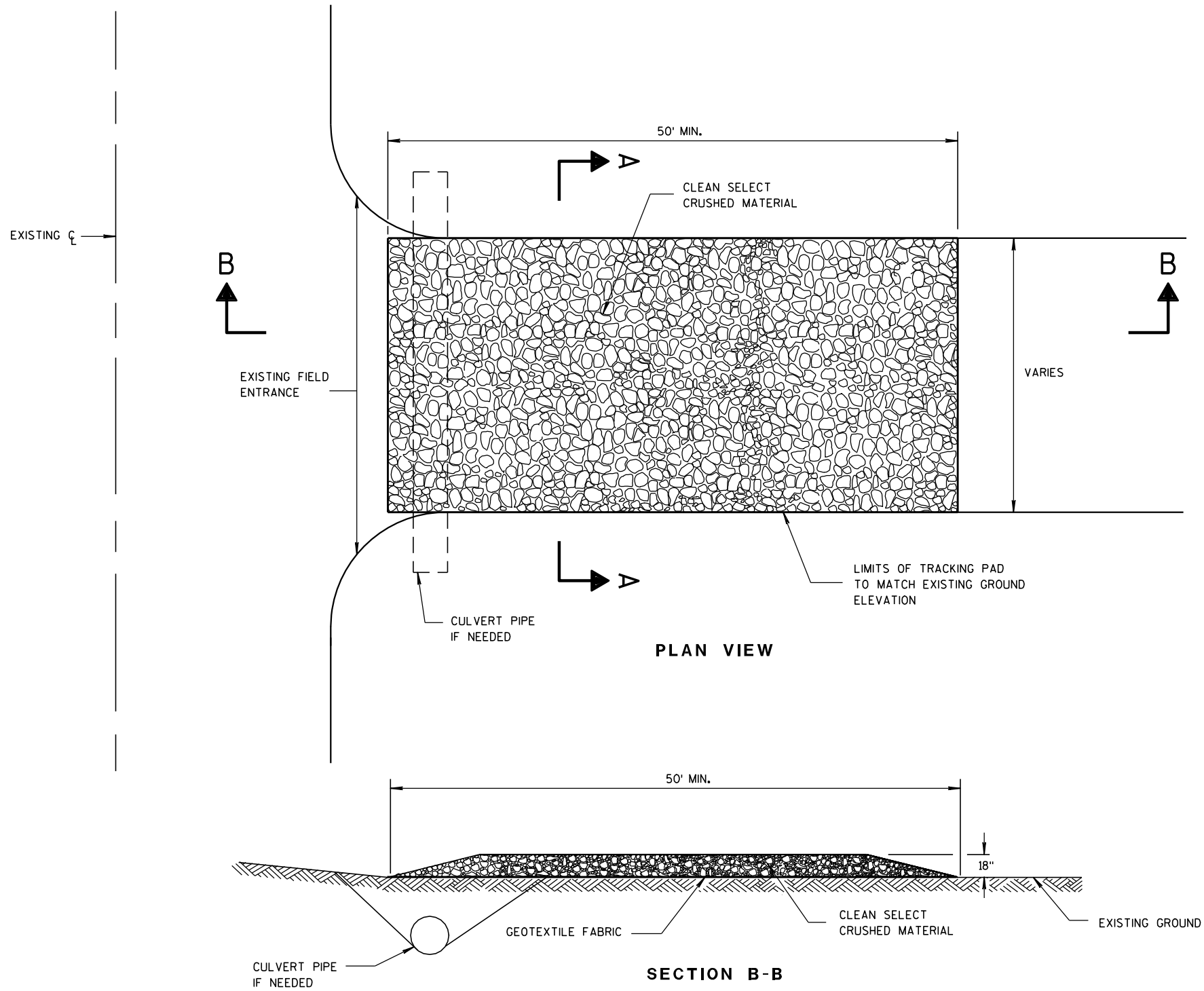
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

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.

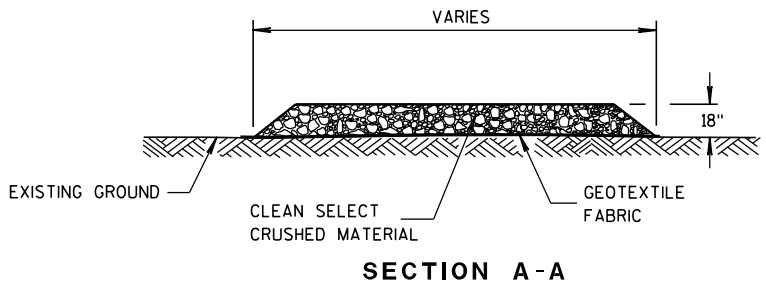
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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.

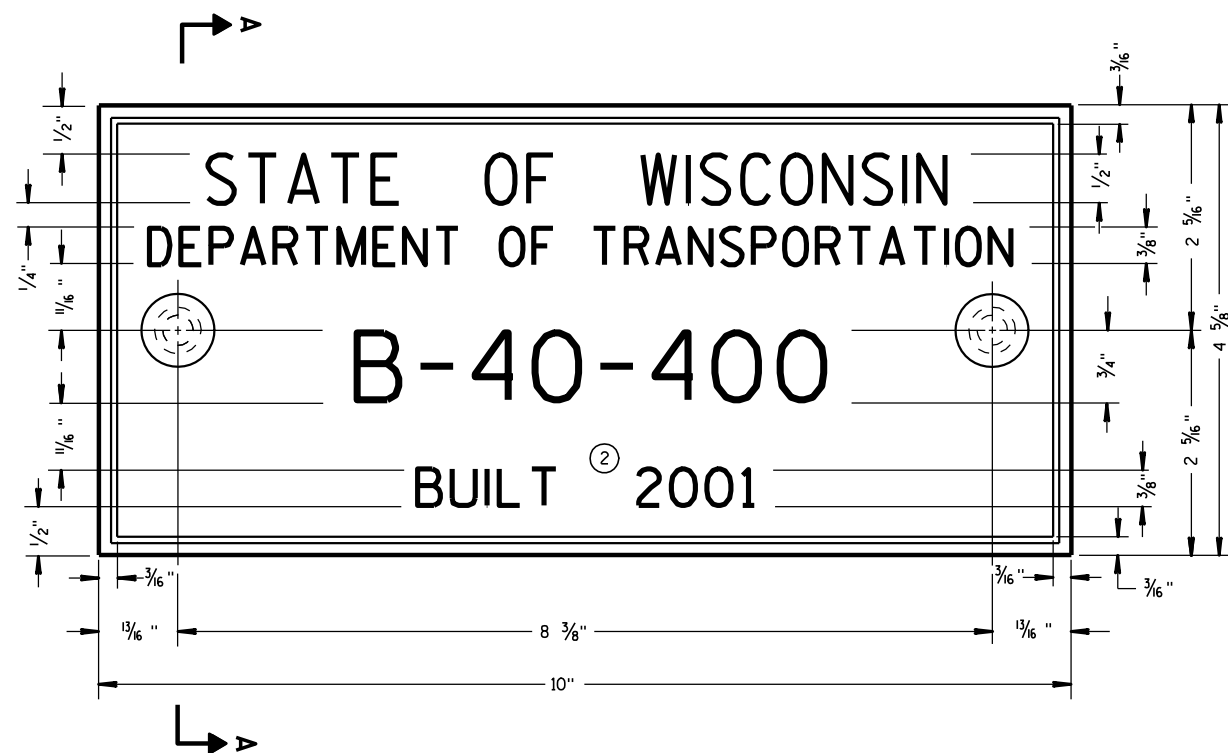
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



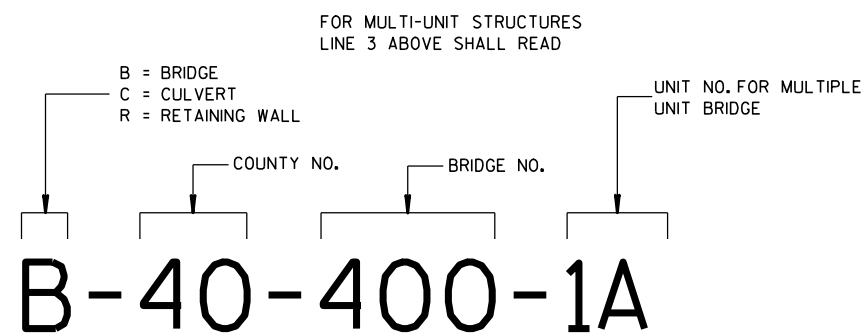
TRACKING PAD

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)



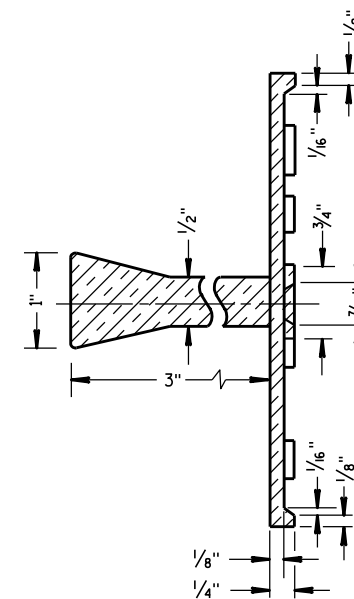
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

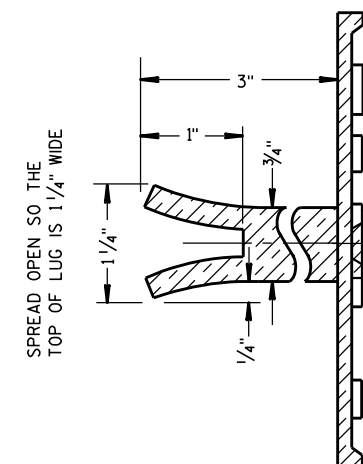
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

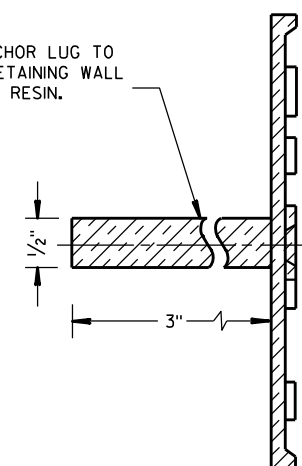


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

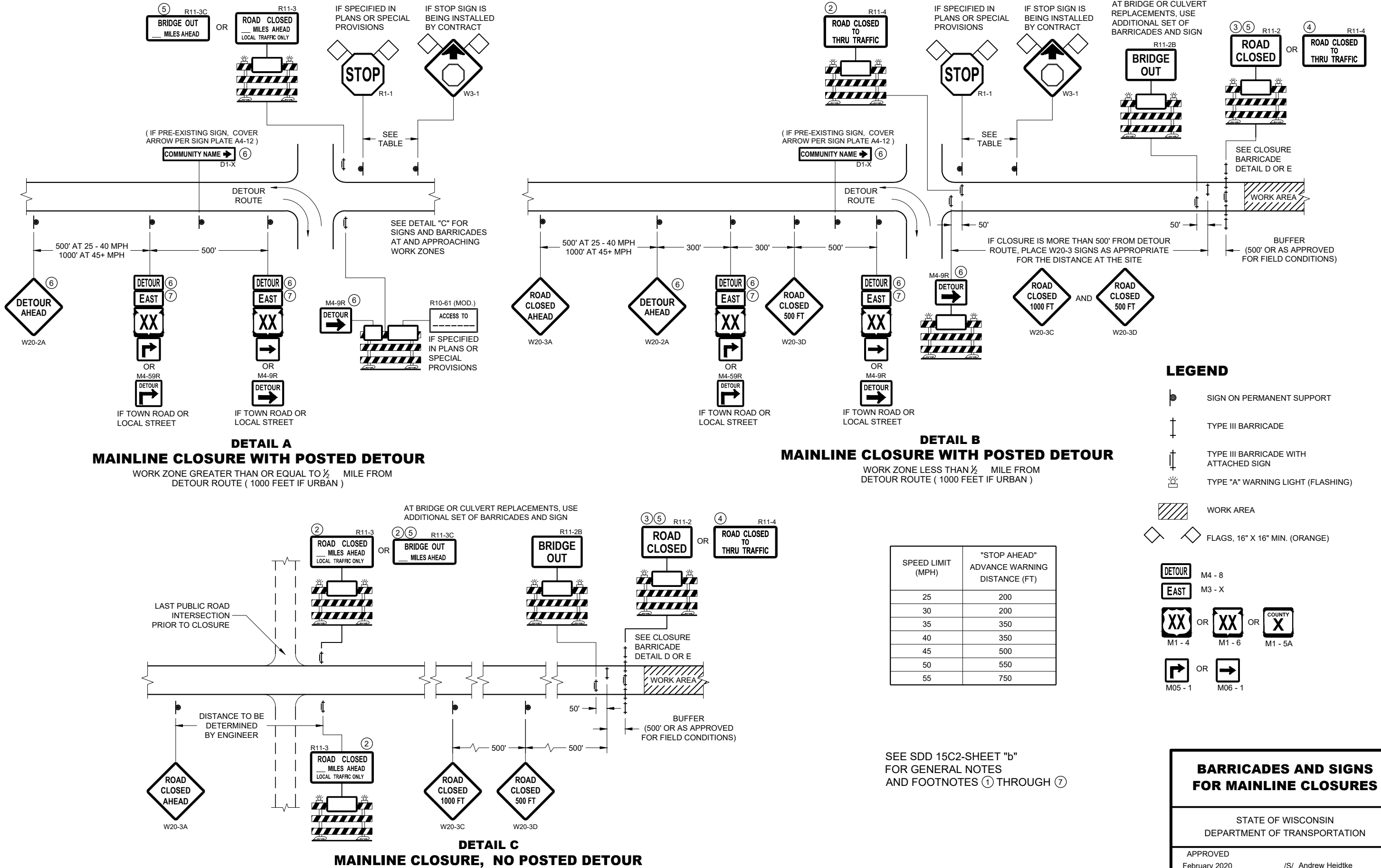
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

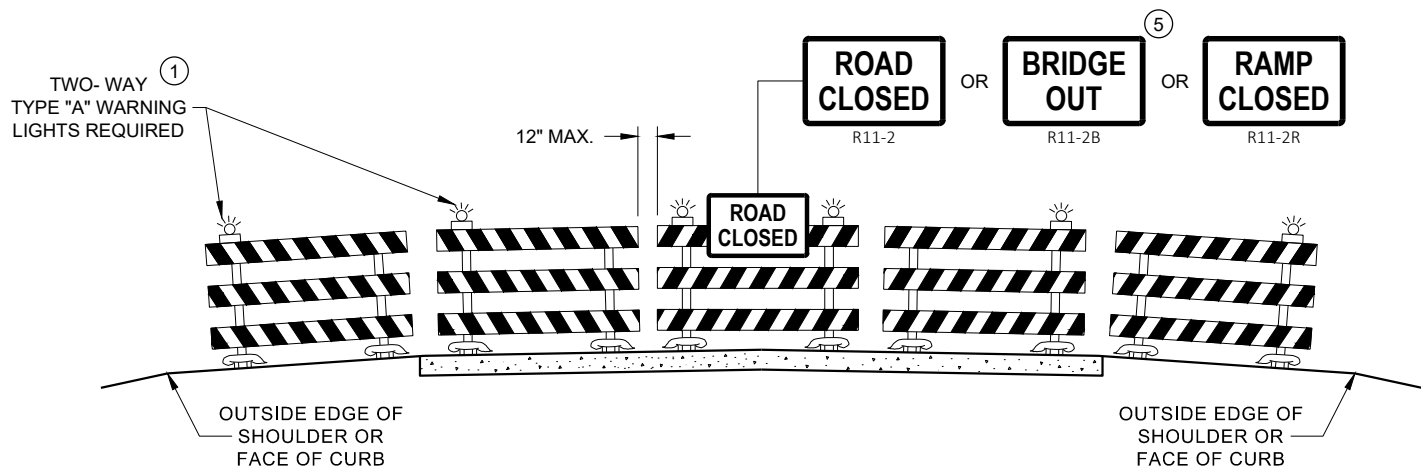


**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

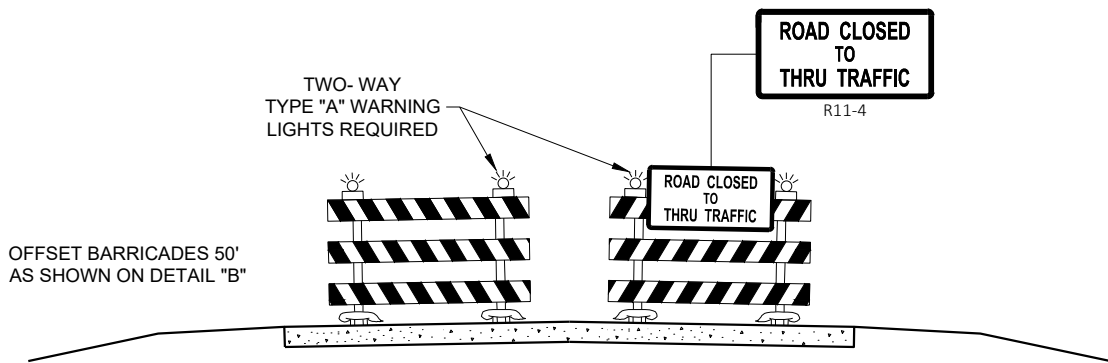
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /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"

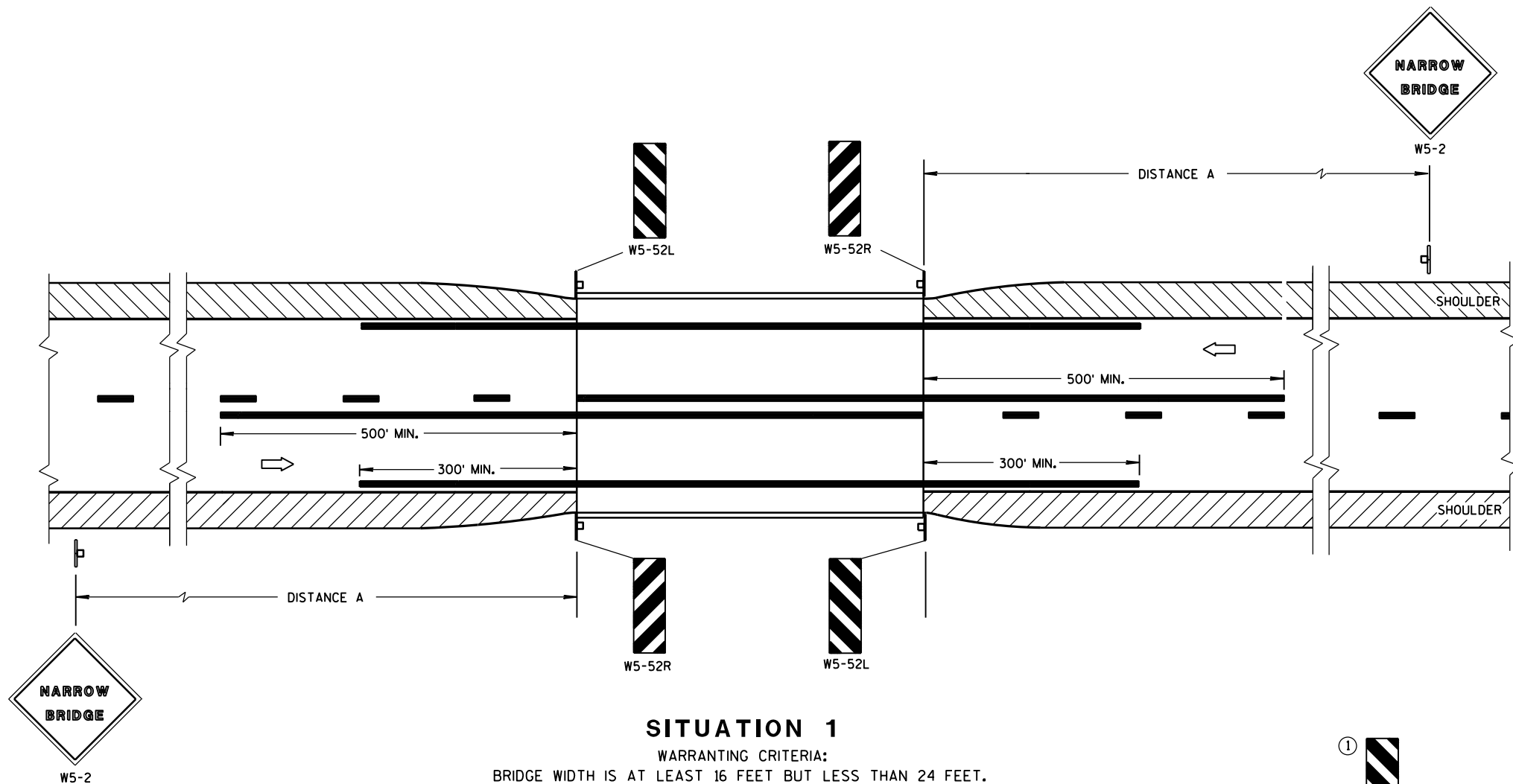
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

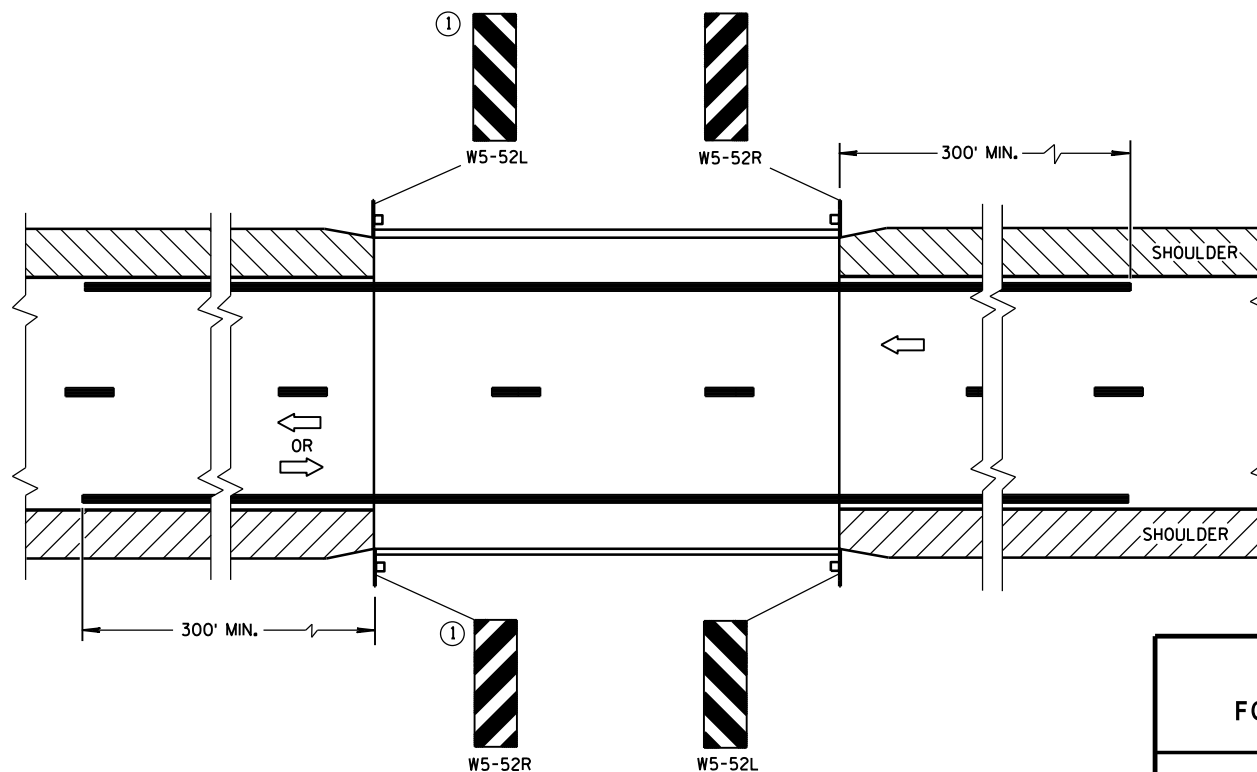
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



SITUATION 2

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

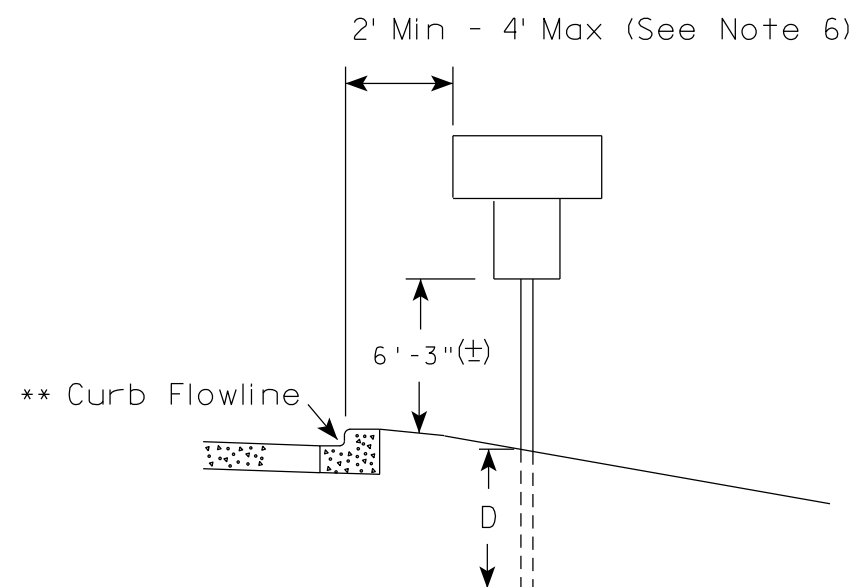
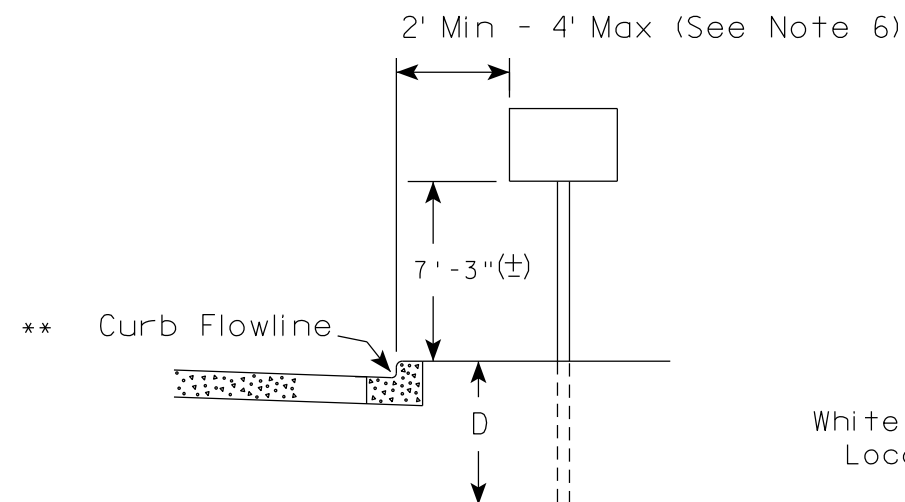
APPROVED

June 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

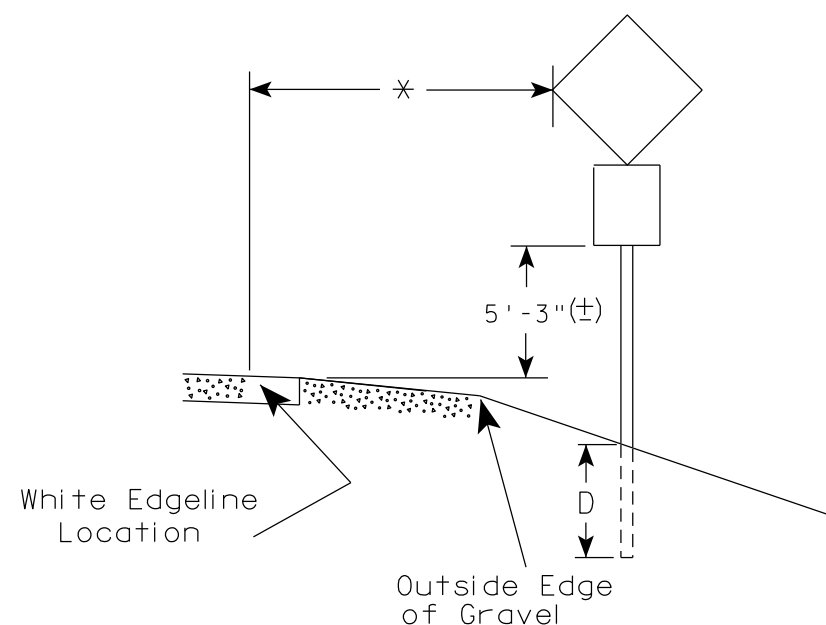
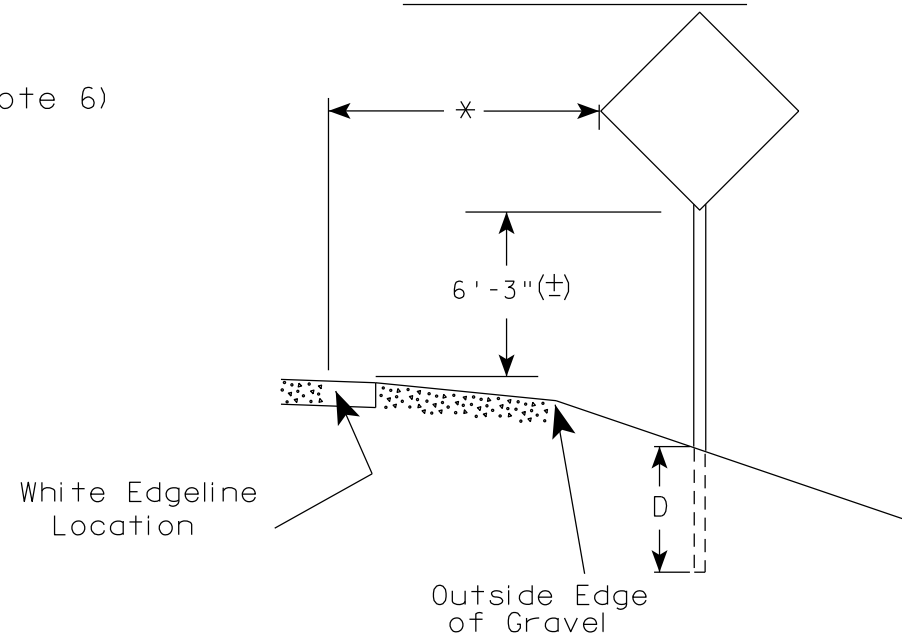
FHWA

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

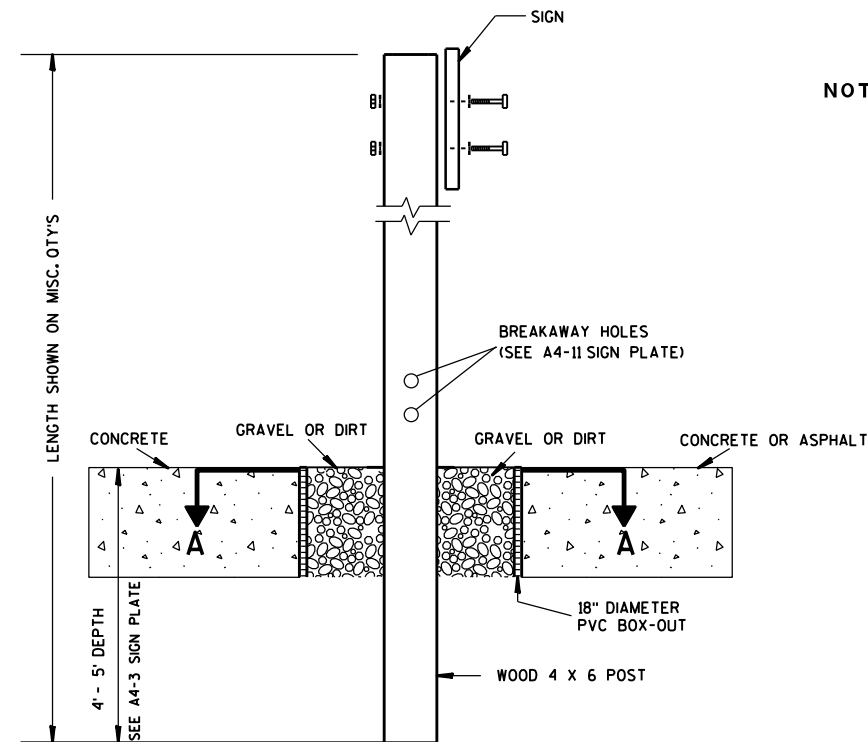
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

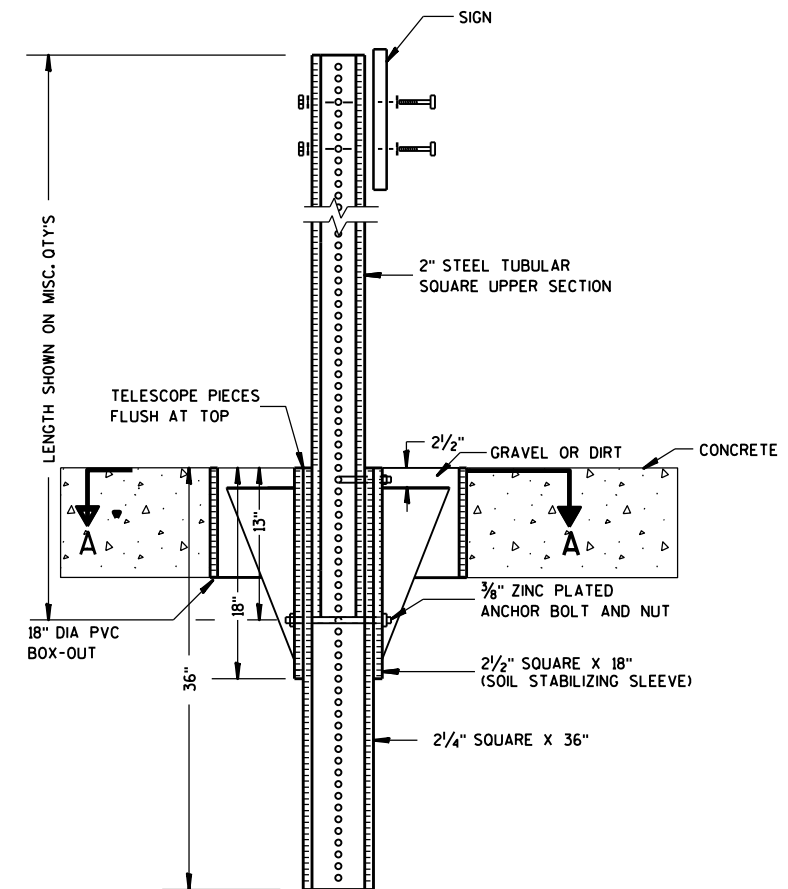
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

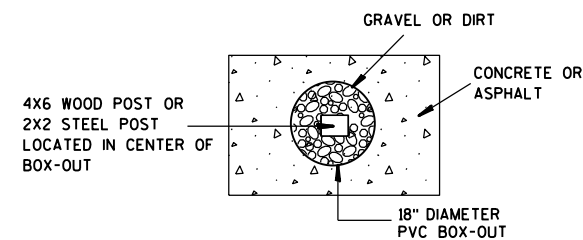
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

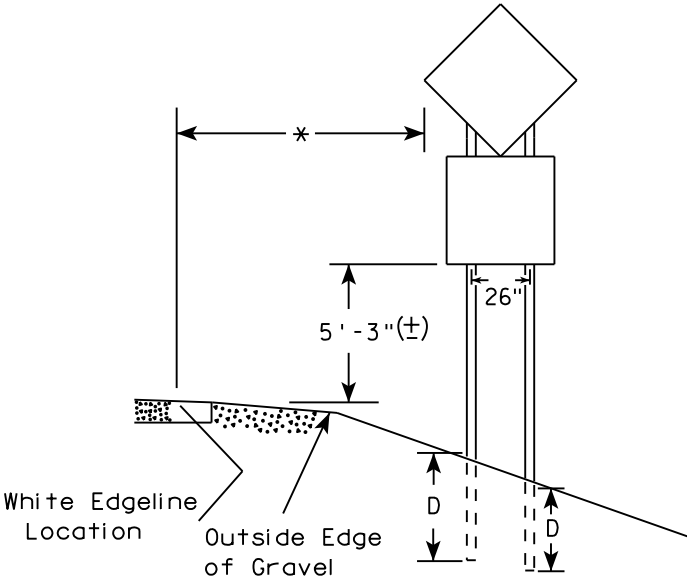
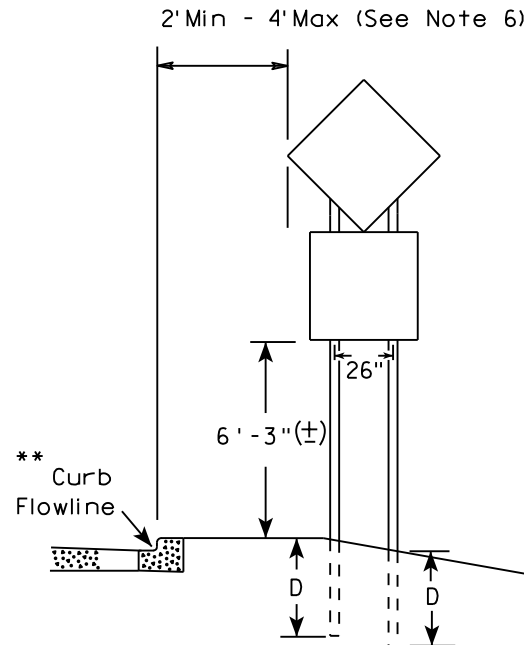
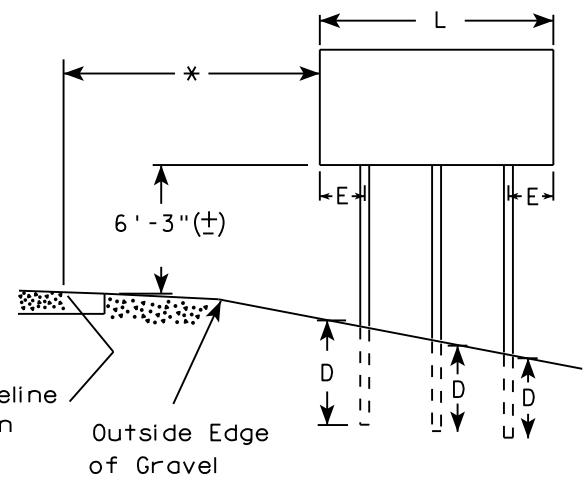
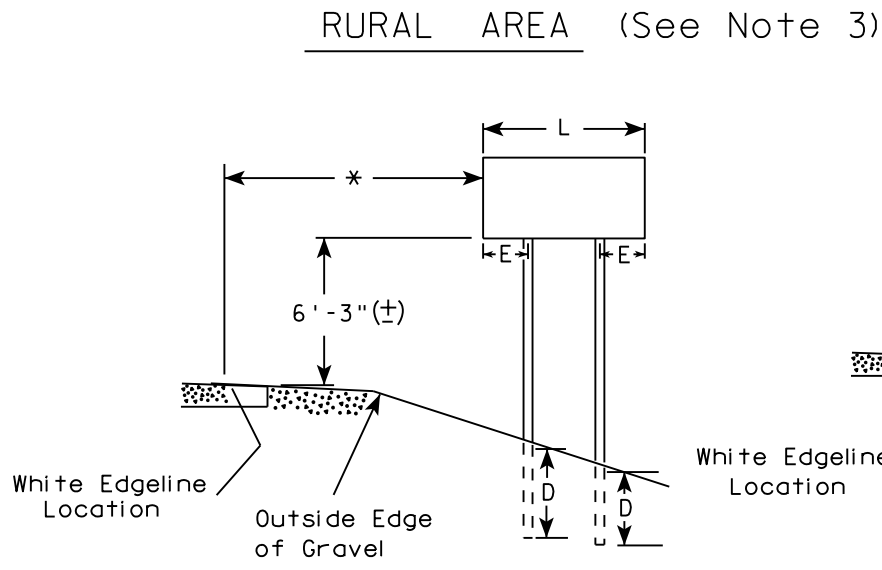
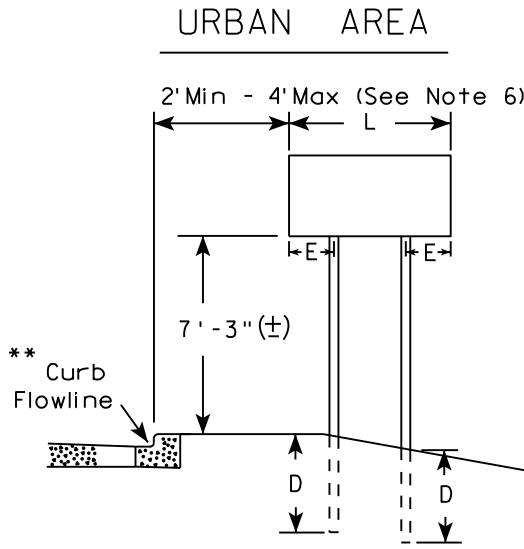
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

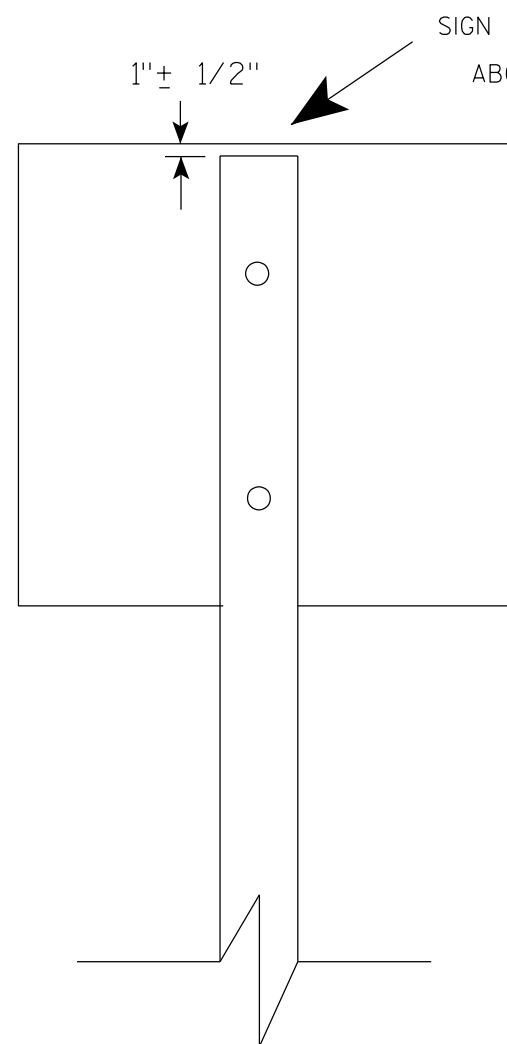
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

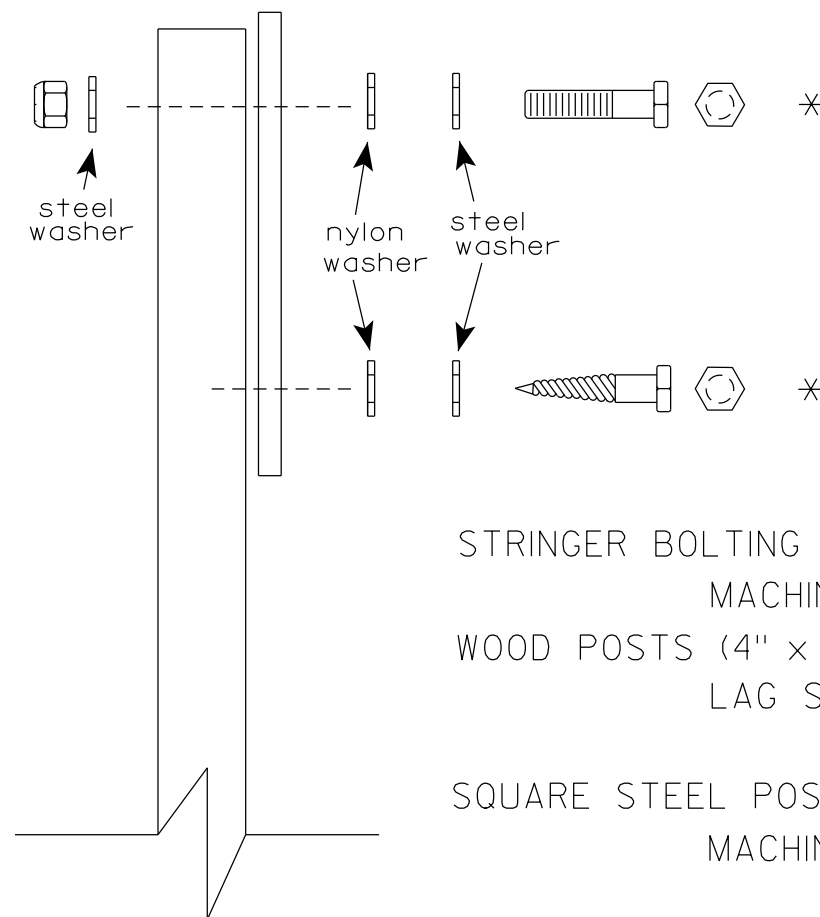
DATE 8/21/17 PLATE NO. A4-4.15

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

- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



SIGN SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST



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.

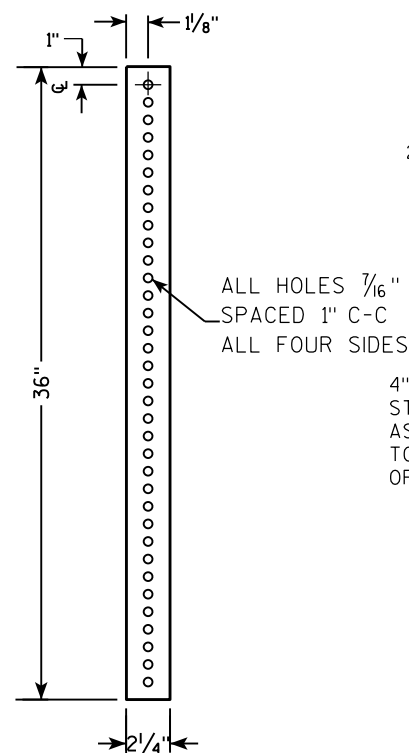
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

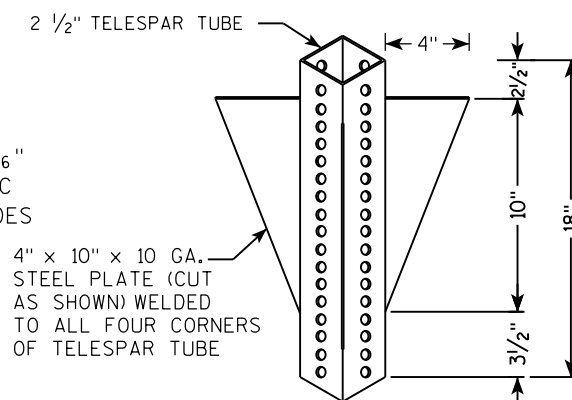
APPROVED Matthew R. Rauch
For State Traffic Engineer

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**



TECHNICAL DRAWING OF A SIGN POST ASSEMBLY.

Side View Labels:

- 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
- 2 1/2" GRAVEL OR DIRT
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"

Cross Section Labels:

- TELESCOPE PIECES FLUSH AT TOP
- 13"
- 18"
- 36"
- 18" DIA SCHEDULE 40 PVC BOX-OUT

Vertical Dimension:

- LENGTH SHOWN ON MISC. QTY'S

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

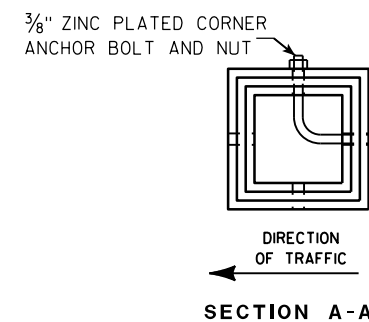
- Overall height: LENGTH SHOWN ON MISC. QTYS
- Section A-A: 36" (Total height of the main post section)
- Section B-B: 18" (Height of the upper section)
- Section C-C: 12" (Height of the lower section)

End View Details:

- SIGN:** Indicated at the top.
- 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** (1" spacing)
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT**
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**
- 2 1/4" SQUARE X 36"**

Assembly Notes:

- TELESCOPE PIECES FLUSH AT TOP
- Section A-A shows downward arrows indicating load or direction.
- Section B-B shows a horizontal line indicating a joint or transition.



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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

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

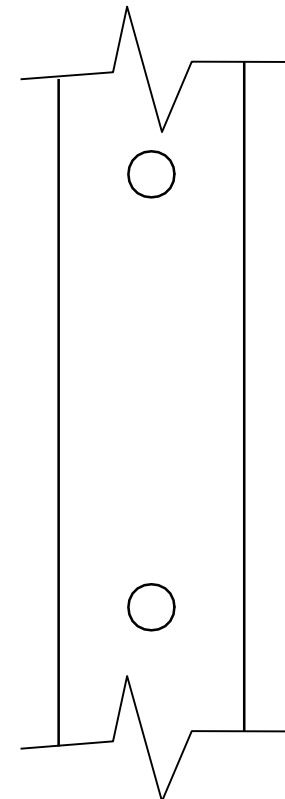
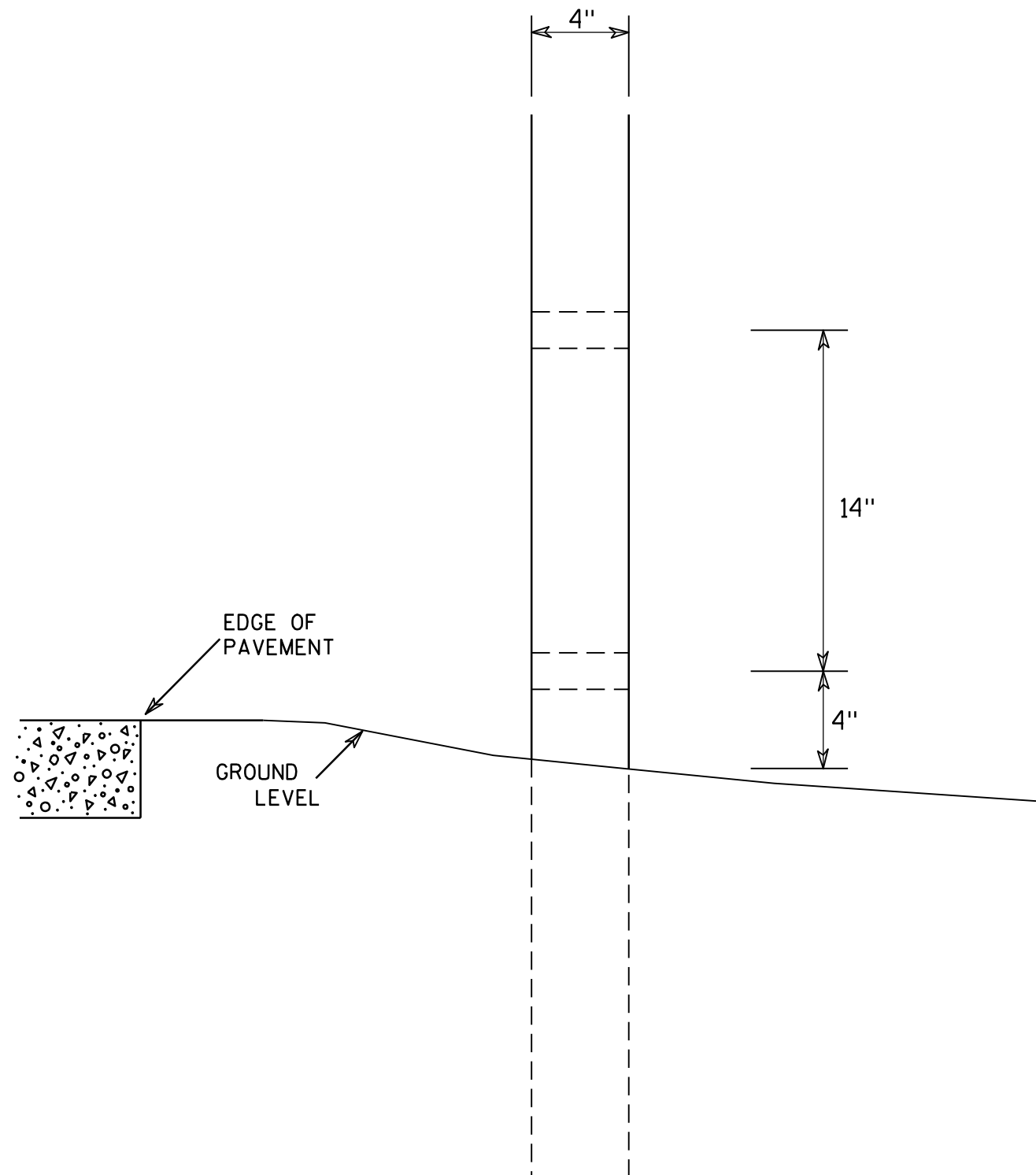
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

T



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

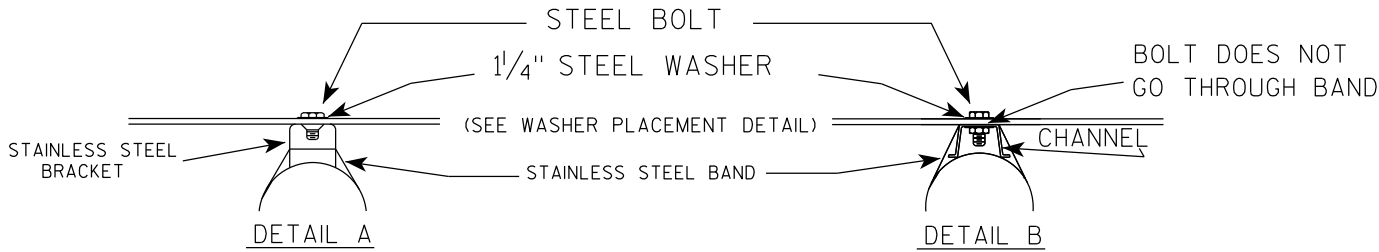
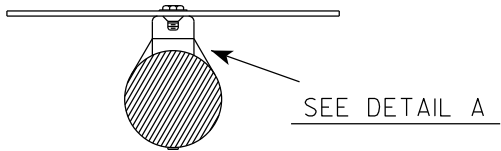
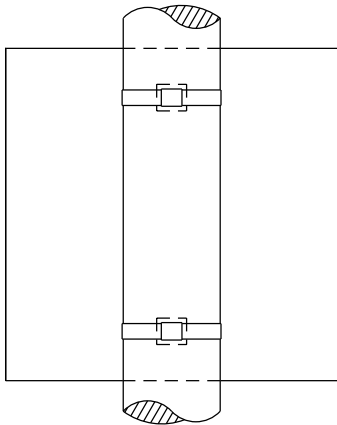
COUNTY:

SHEET NO:

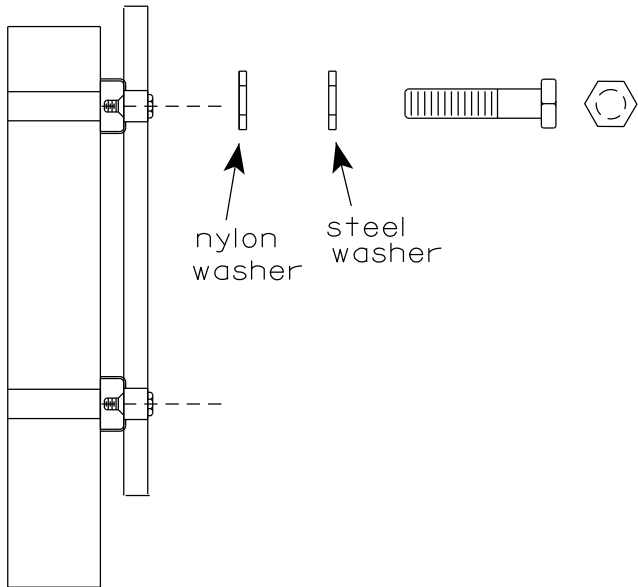
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

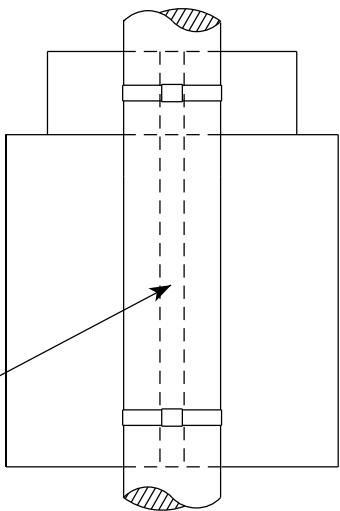


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

SEE DETAIL B

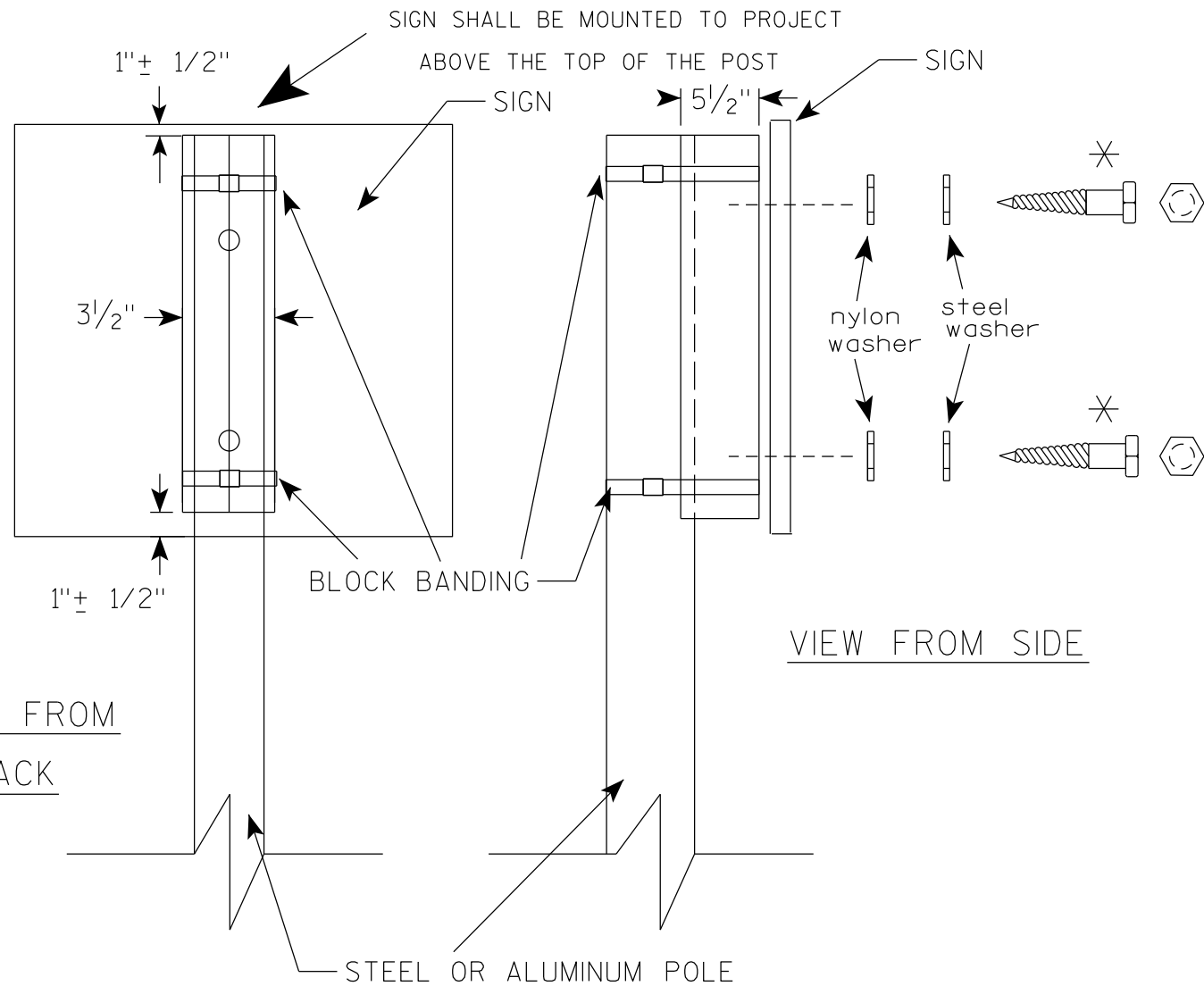
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

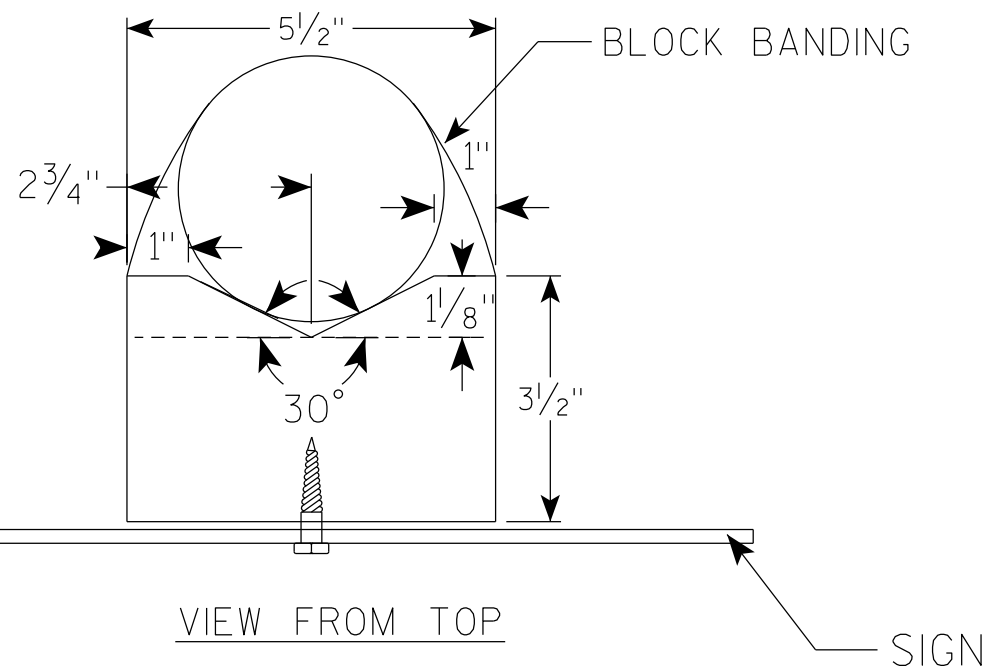
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " 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

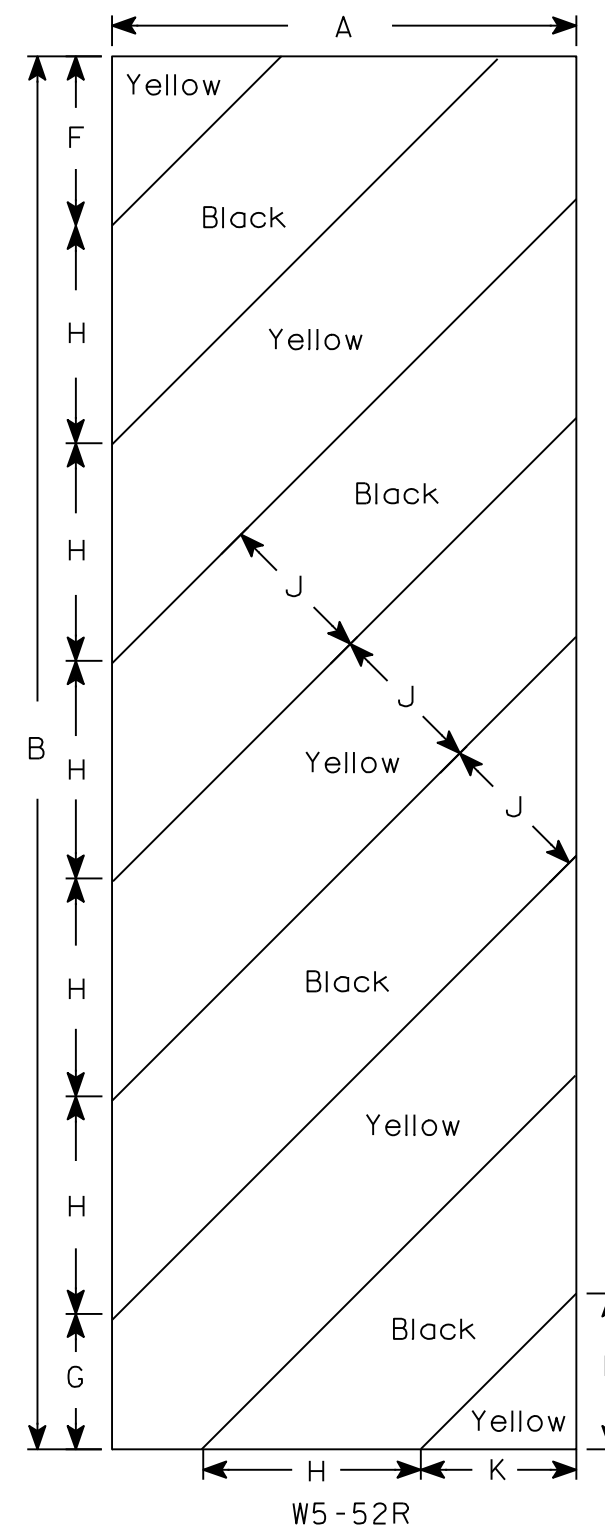
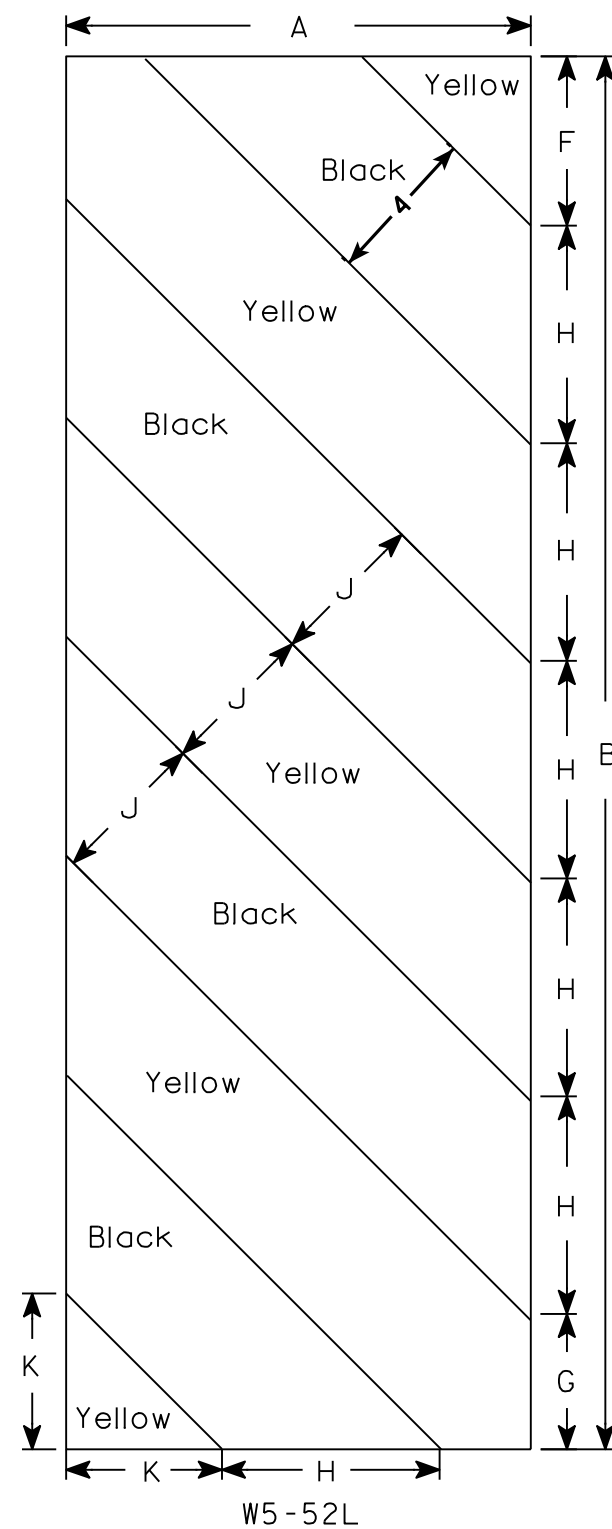
APPROVED Matthew R. Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO:

E



NOTES

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

[illegible]

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

BENCHMARKS		NAVD 88	
NO.	STA./OFFSET	DESCRIPTION	ELEV.
200	6+95.51, 14' RT	3/4" IRON ROD	882.55
201	10+11.54, 11' LT	CORNER OF ANGLE IRON	875.81
202	12+40.79, 13' LT	CUT 'X'	875.84

DESIGN DATA

LIVE LOAD:
DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.10
OPERATIONAL RATING FACTOR : 1.43
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

TRAFFIC DATA:
A.A.D.T. (2021) = 110
A.A.D.T. (2041) = 130
R.D.S. = 30 MPH

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB $f'_c = 4,000$ P.S.I.
ALL OTHER $f'_c = 3,500$ P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 160 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 60'-0" AT THE SOUTH ABUTMENT AND 75'-0" AT THE NORTH ABUTMENT.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY
DRAINAGE AREA 29.2 SQ. MI.
 Q_{100} 1,200 C.F.S.
VELOCITY 6.85 C.F.S.
WATERWAY AREA 175 SQ. FT.
SCOUR CRITICAL CODE 5
HIGH WATER 100 ELEVATION 874.97
 Q_2 440 C.F.S.
 Q_2 VELOCITY 4.38 FT./SEC.
 Q_2 ELEVATION 871.96

ROADWAY OVERFLOW DESIGN FREQUENCY
OVERTOPPING FREQUENCY > 100 YEARS

DESIGN CONTACT:
JOSH SWENO
(608) 355-8852

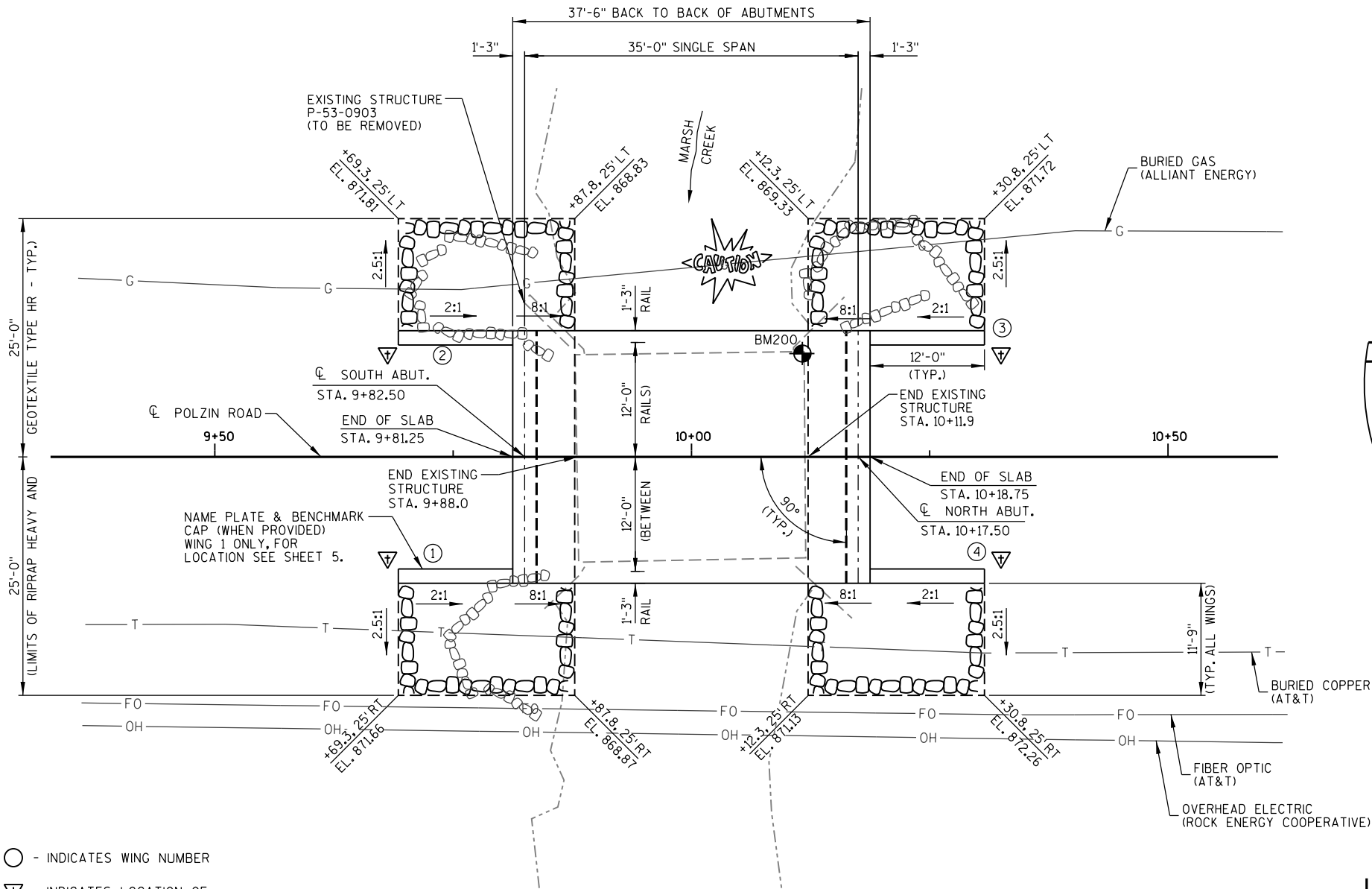
BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

LIST OF DRAWINGS

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



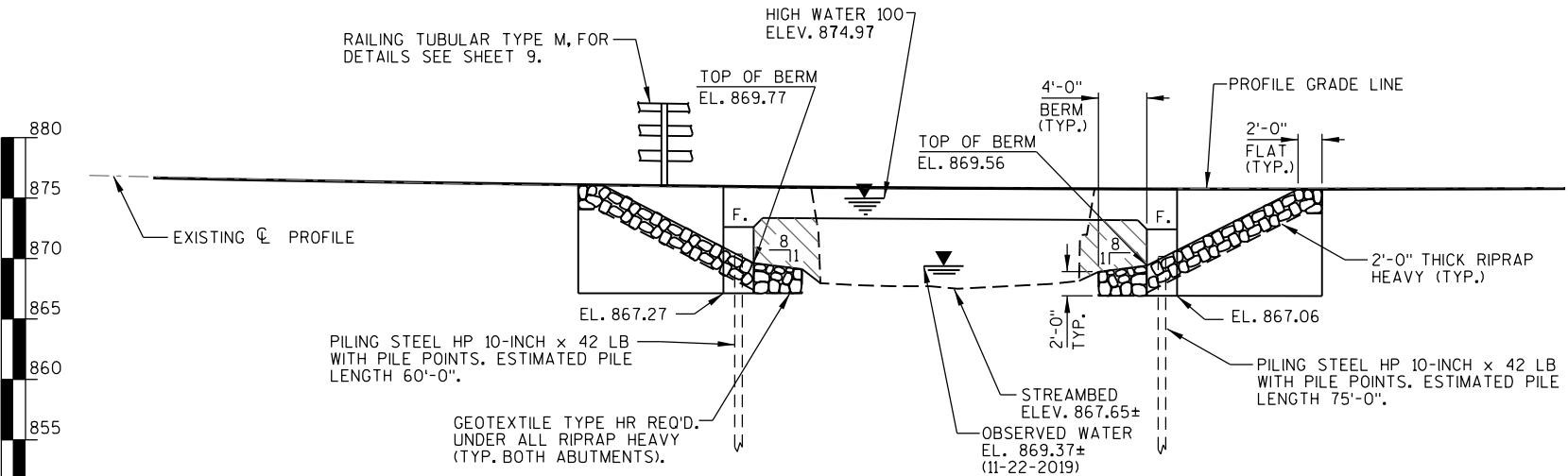
8/28/2020



PLAN



(SINGLE SPAN FLAT CONCRETE SLAB)

- - INDICATES WING NUMBER
- ▽ - INDICATES LOCATION OF PROVISION FOR FUTURE THRIE BEAM GUARD ATTACHMENT
- ▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-53-387".

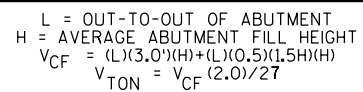


ELEVATION

(LOOKING WEST)

NO.	DATE	REVISION	BY
<div> MSA</div> <div>ENGINEERING ARCHITECTURE SURVEYING FUNDING PLANNING ENVIRONMENTAL 1702 PANKRATZ STREET, MADISON WI 53704 (608) 242-7779 www.msa-ps.com © MSA Professional Services, Inc.</div>			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	 SDR		11/17/20
CHIEF STRUCTURES DESIGN ENGINEER			DATE
STRUCTURE B-53-387			
POLZIN ROAD OVER MARSH CREEK			
COUNTY	ROCK	TOWN/CITY/VILLAGE	JANESVILLE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	JZ	DESIGN CK'D.	JRS
		DRAWN BY	CAR
		PLANS CK'D.	JZ
GENERAL PLAN			SHEET 1 OF 9

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

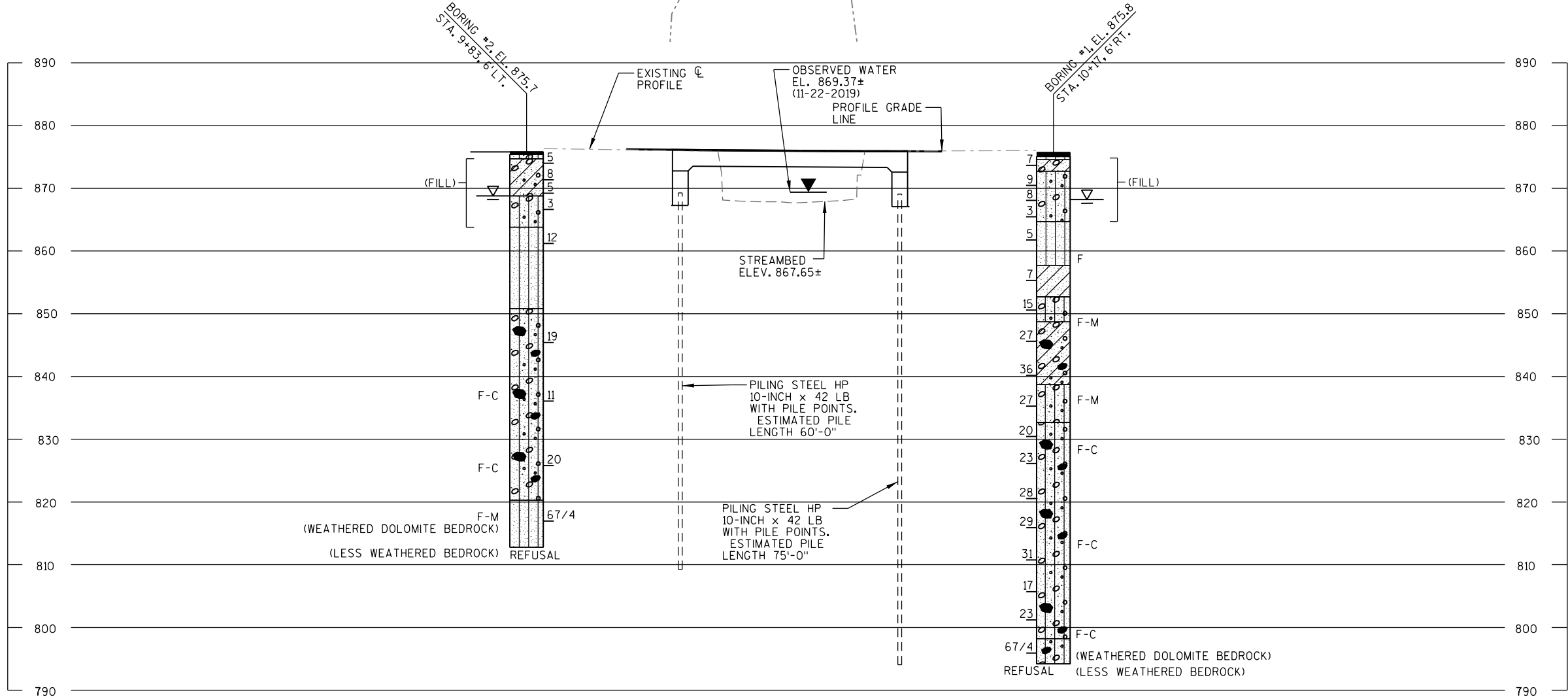
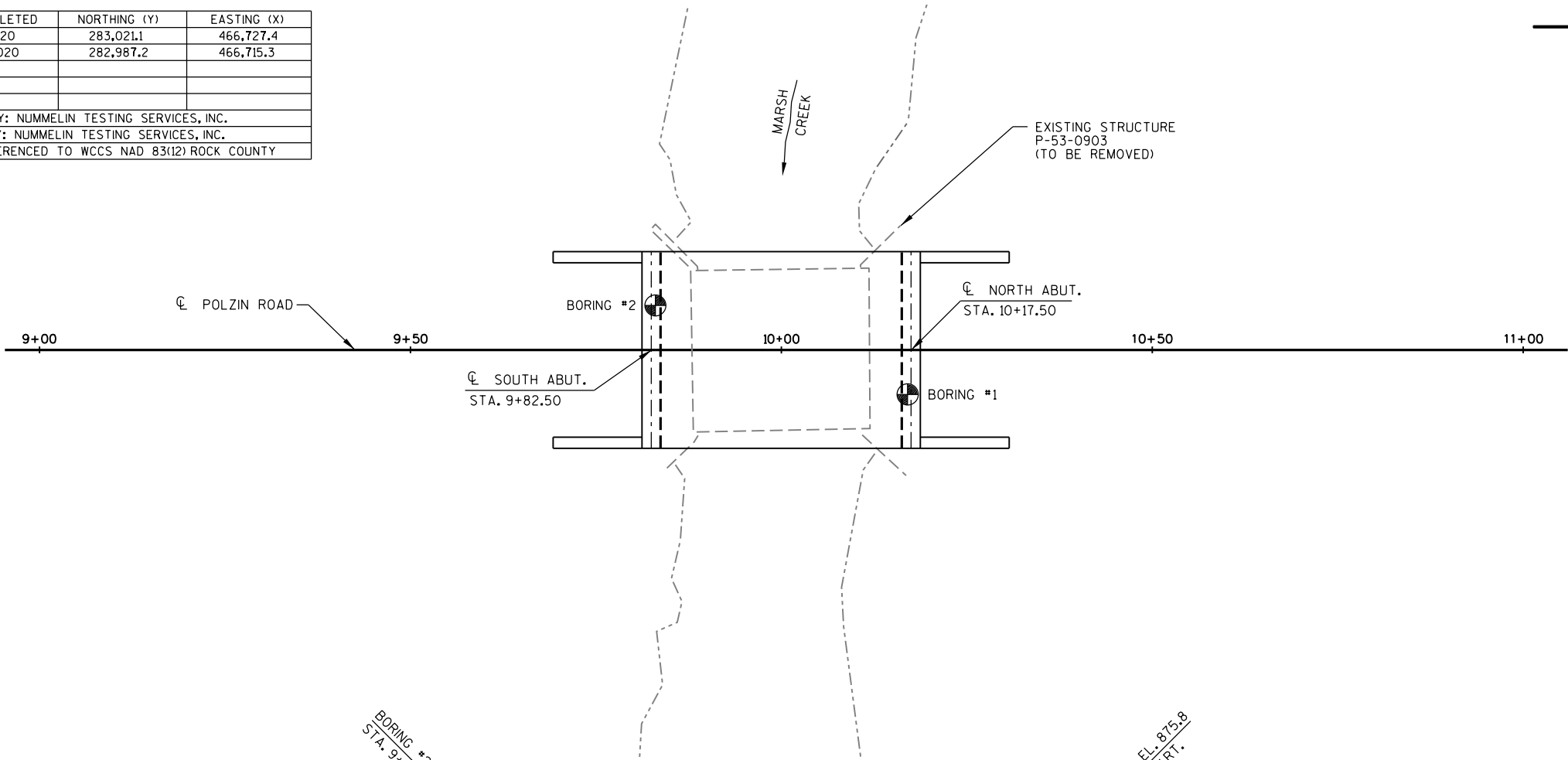


ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-53-387	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	116	116	-	232
502.0100	CONCRETE MASONRY BRIDGES	CY	36	36	66	138
502.3200	PROTECTIVE SURFACE TREATMENT	SY	12	12	133	157
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1620	1620	-	3240
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1680	1660	11370	14710
513.4061	RAILING TUBULAR TYPE M	LF	-	-	128	128
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
550.0500	PILE POINTS	E/ACH	4	4	-	8
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LB	240	300	-	540
606.0300	RIPRAP HEAVY	CY	45	45	-	90
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	89	89	-	178
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	56	56	-	112
645.0120	GEOTEXTILE TYPE HR	SY	88	88	-	176
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE		B-53-387			
		DRAWN BY	CAR	PLANS CK'D.	JZ
CROSS SECTION, QUANTITIES & NOTES				SHEET 2 OF 9	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	3-18-2020	283,021.1	466,727.4
2	3-20-2020	282,987.2	466,715.3
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(12) ROCK COUNTY			



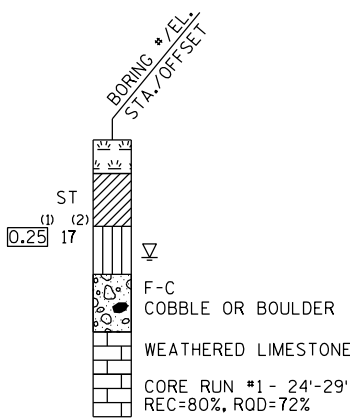
STATE PROJECT NUMBER

5758-00-73

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▽ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

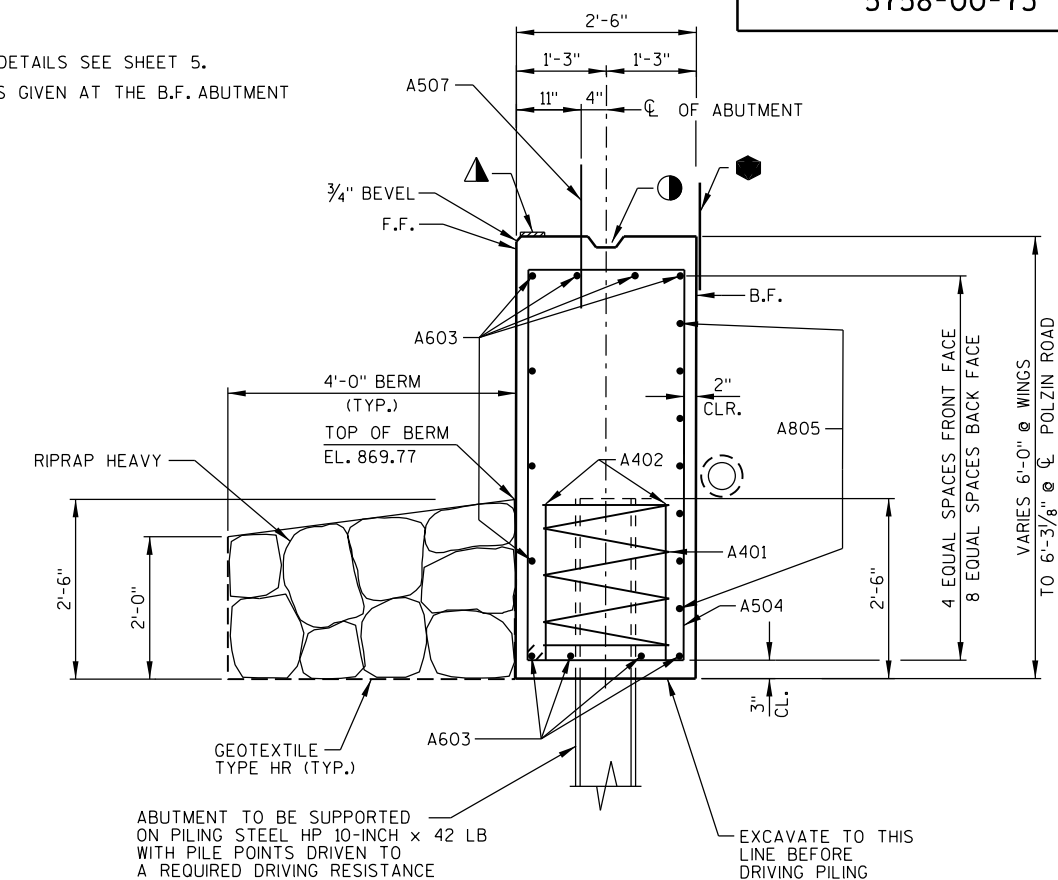
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-53-387	
DRAWN BY		CAR	PLANS CK'D. JZ
SUBSURFACE EXPLORATION		SHEET 3 OF 9	

NOTES:
FOR WING DETAILS SEE SHEET 5.
ELEVATIONS GIVEN AT THE B.F. ABUTMENT



TYPICAL SECTION THRU ABUTMENT

LEGEND

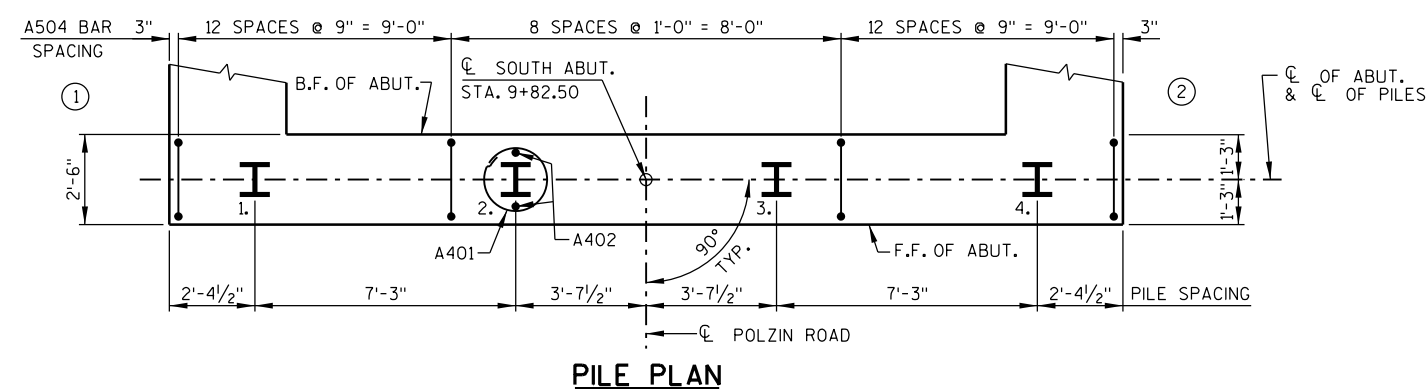
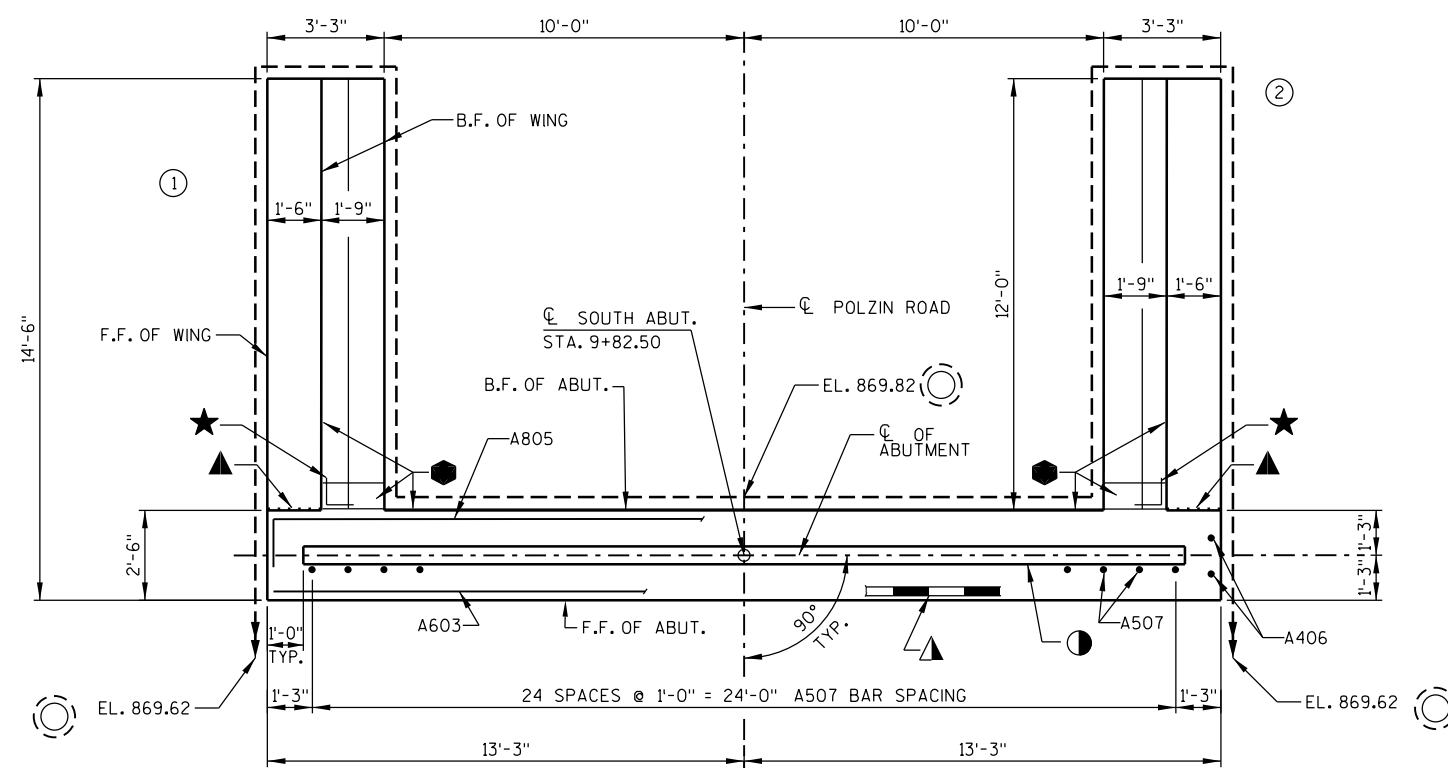
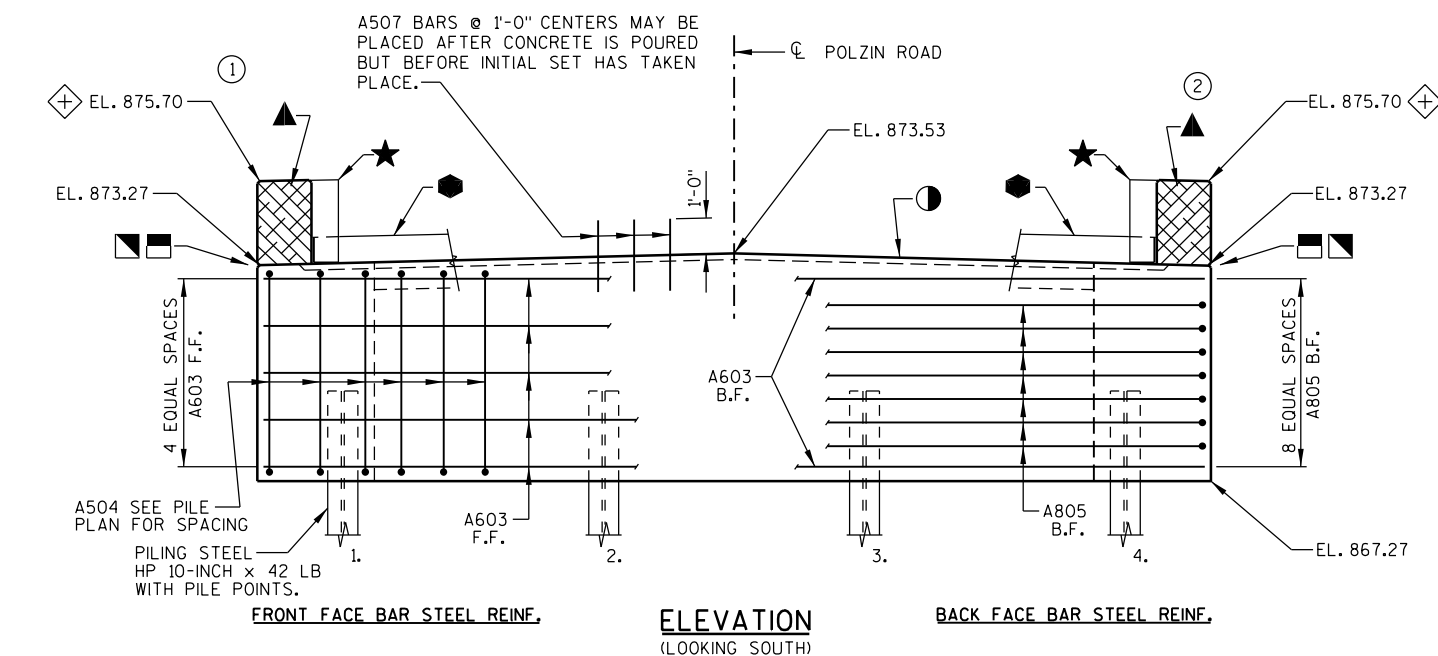
- OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ON B.F. OF WING.
- 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- 4"x 3/4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
- INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-387			
DRAWN BY RLR		PLANS CK'D. JZ	
SOUTH ABUTMENT		SHEET 4 OF 9	



✱ - FOR RAIL POST ANCHOR DETAILS SEE SHEET 9.

⊗ - ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE F.F. OF WING.

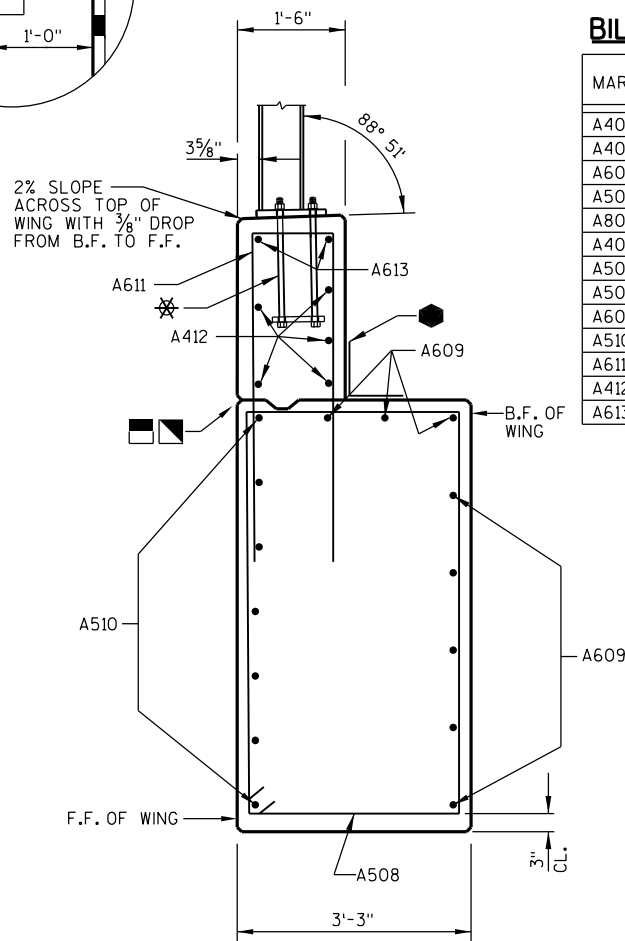
(COATED) 1680 LBS.

(UNCOATED) 1620 LBS.

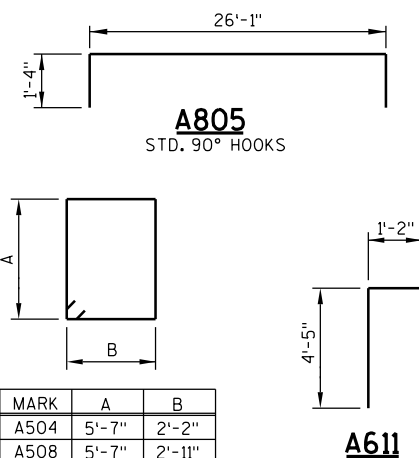
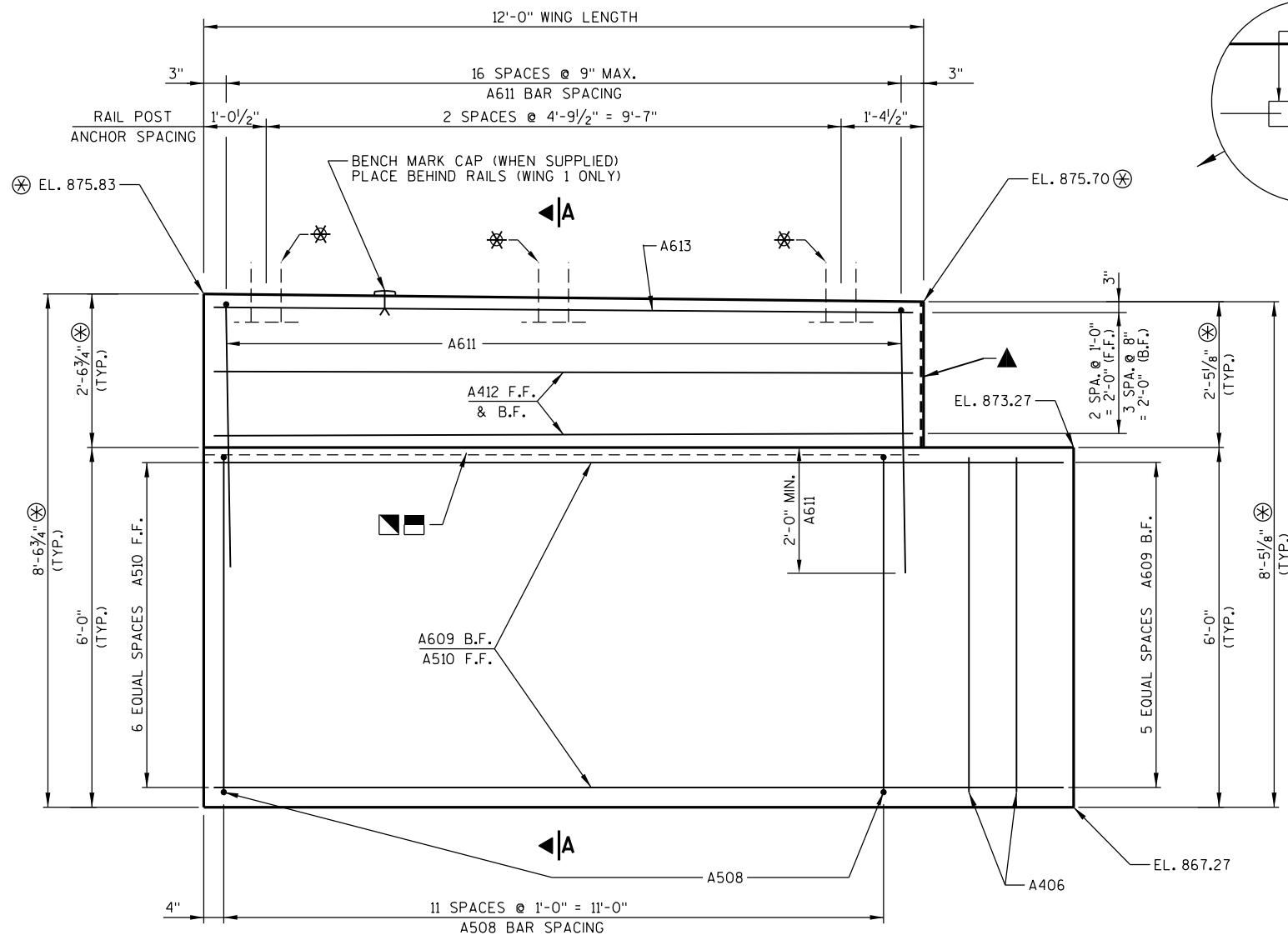
BILL OF BARS (SOUTH ABUT.)

MARK	NUMBER REQUIRED COATED	UNCOATED	LENGTH	BENT	LOCATION
A401	-	4	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
A402	-	8	2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
A603	-	11	26'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	33	16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
A805	-	7	28'-4"	X	ABUTMENT BODY - B.F. - HORIZ.
A406	-	4	5'-7"		ABUTMENT BODY - ENDS - VERT.
A507	25	-	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
A508	24	-	17'-8"	X	WINGS 1 & 2 - BASE - STIRRUP - VERT.
A609	16	-	13'-11"		WINGS 1 & 2 - BASE - B.F. & CENTER - HORIZ.
A510	14	-	14'-2"		WINGS 1 & 2 - BASE - F.F. - HORIZ.
A611	34	-	9'-8"	X	WINGS 1 & 2 - TOP - STIRRUP - VERT.
A412	10	-	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A613	4	-	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.

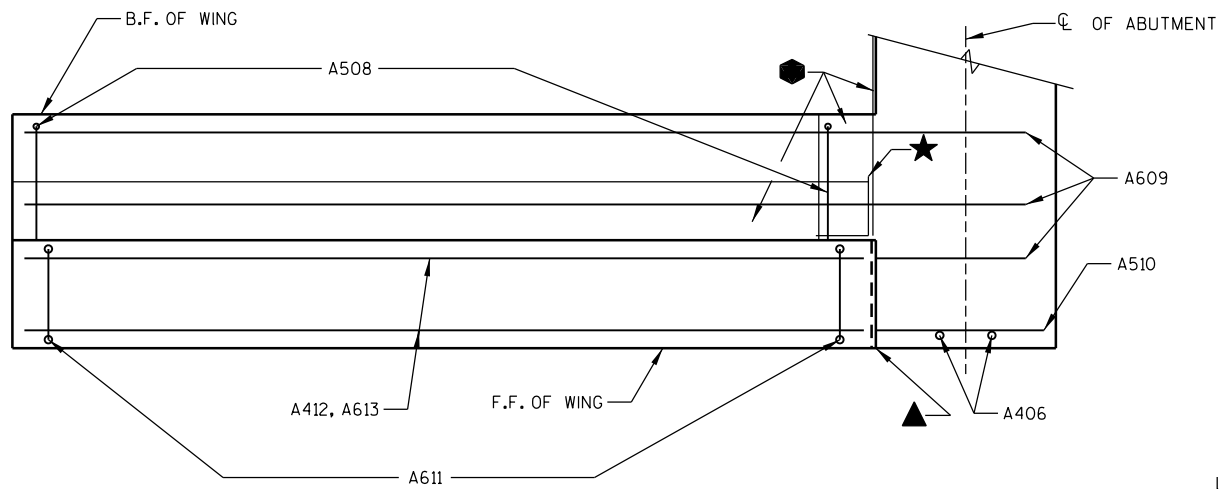
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



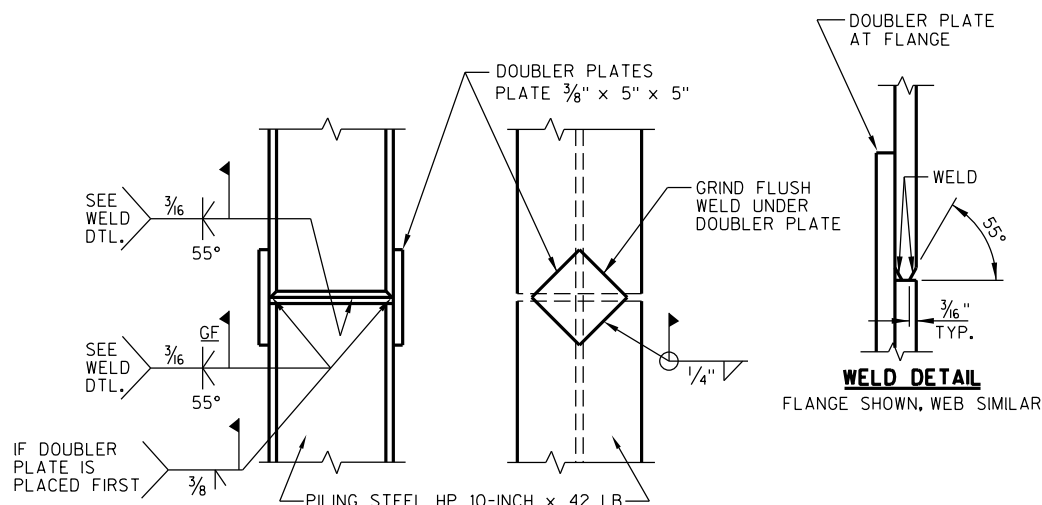
SECTION A-A THRU WING

WING 1 SHOWN
WING 2 SIMILAR

ELEVATION - WING



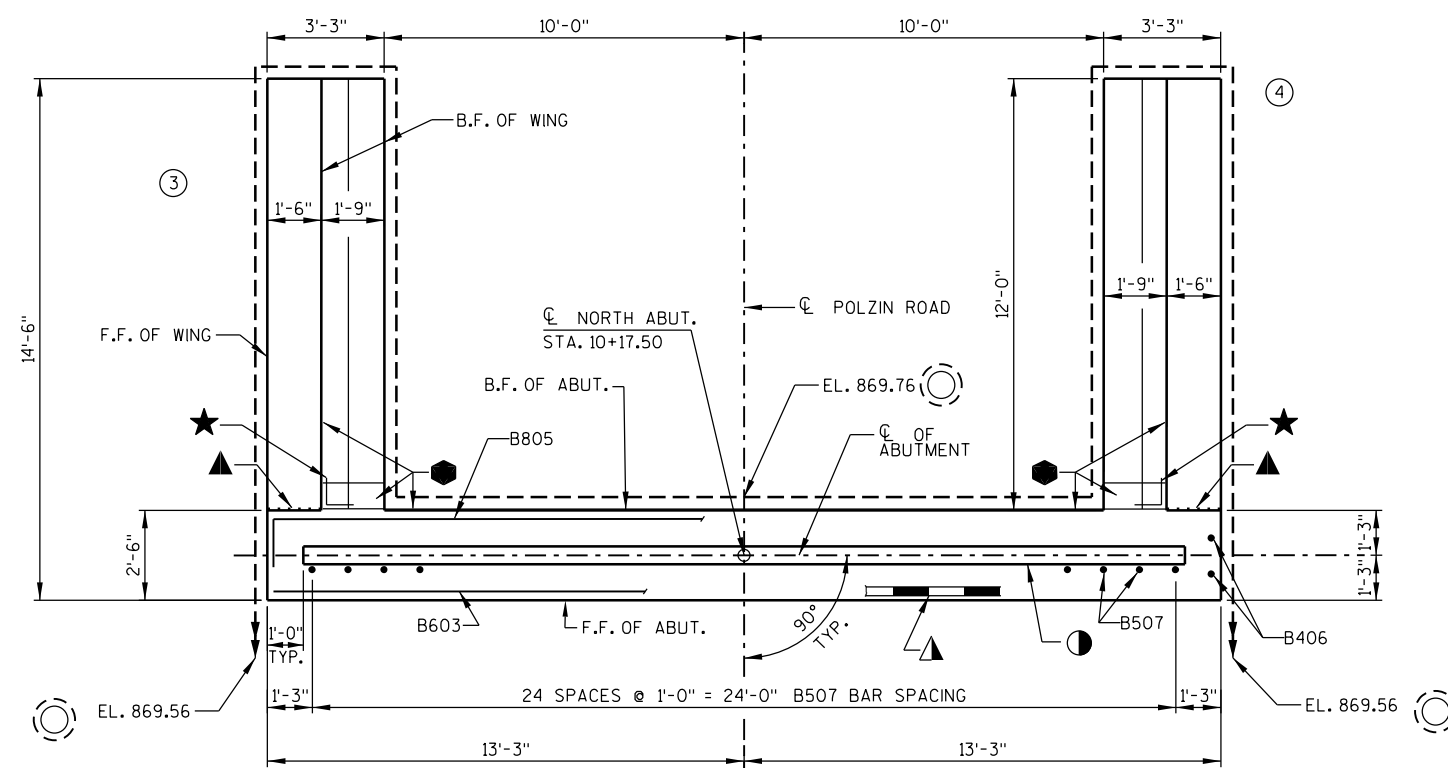
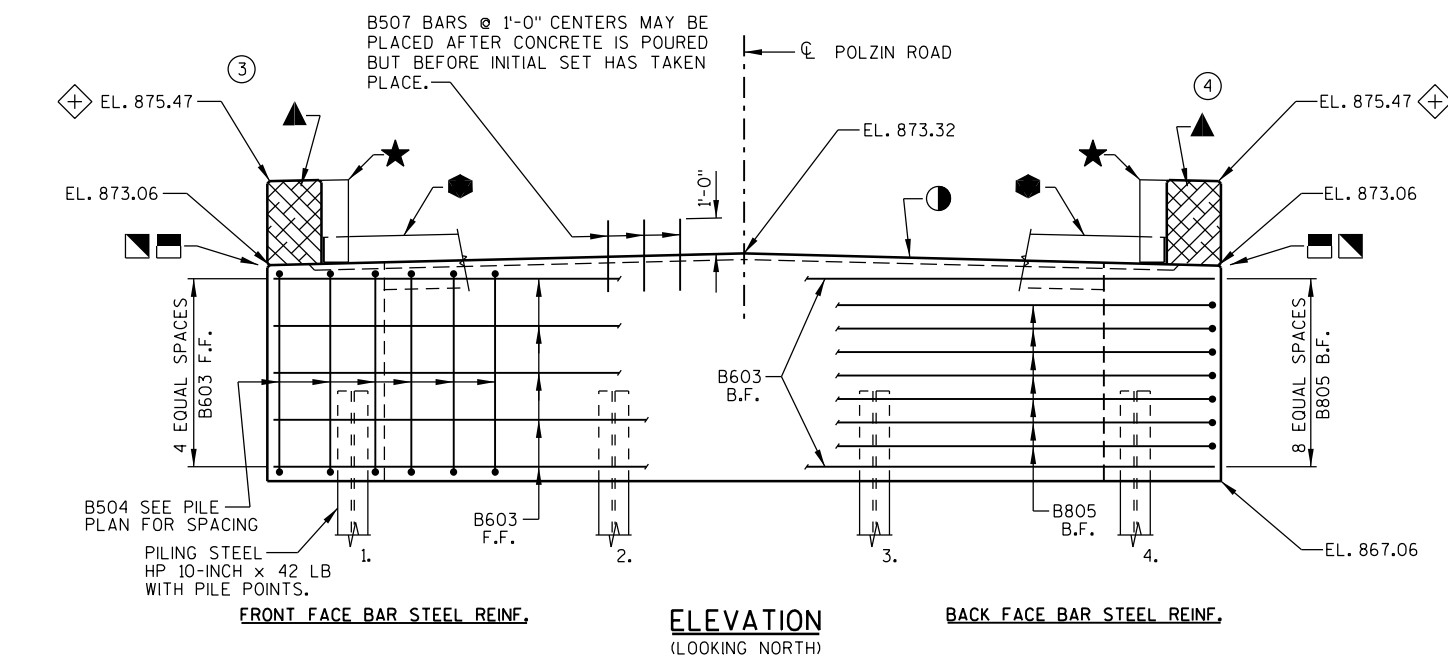
PLAN - WING



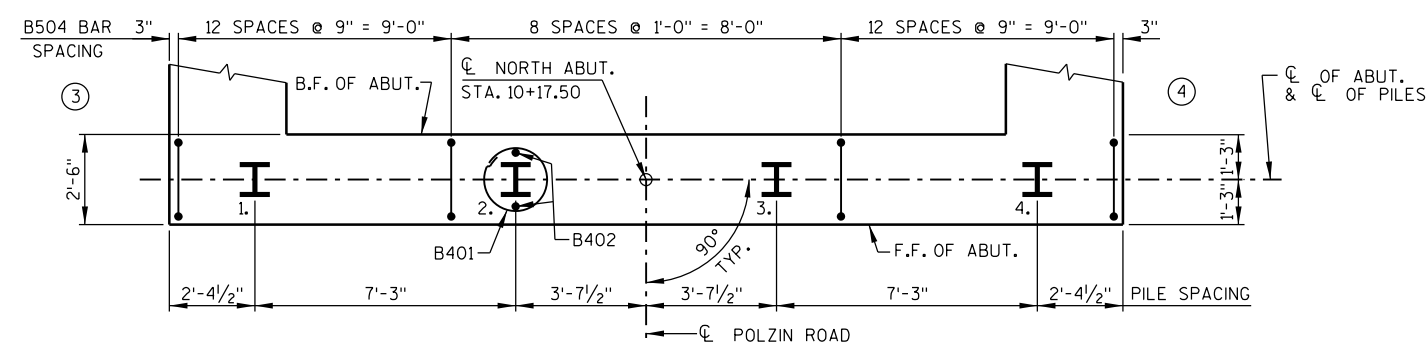
PILE SPLICE DETAILS

SEE SHEET 4 LEGEND
FOR DESCRIPTION OF

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-387			
DRAWN BY RLR		PLANS CK'D. JZ	
SOUTH ABUTMENT DETAILS		SHEET 5 OF 9	

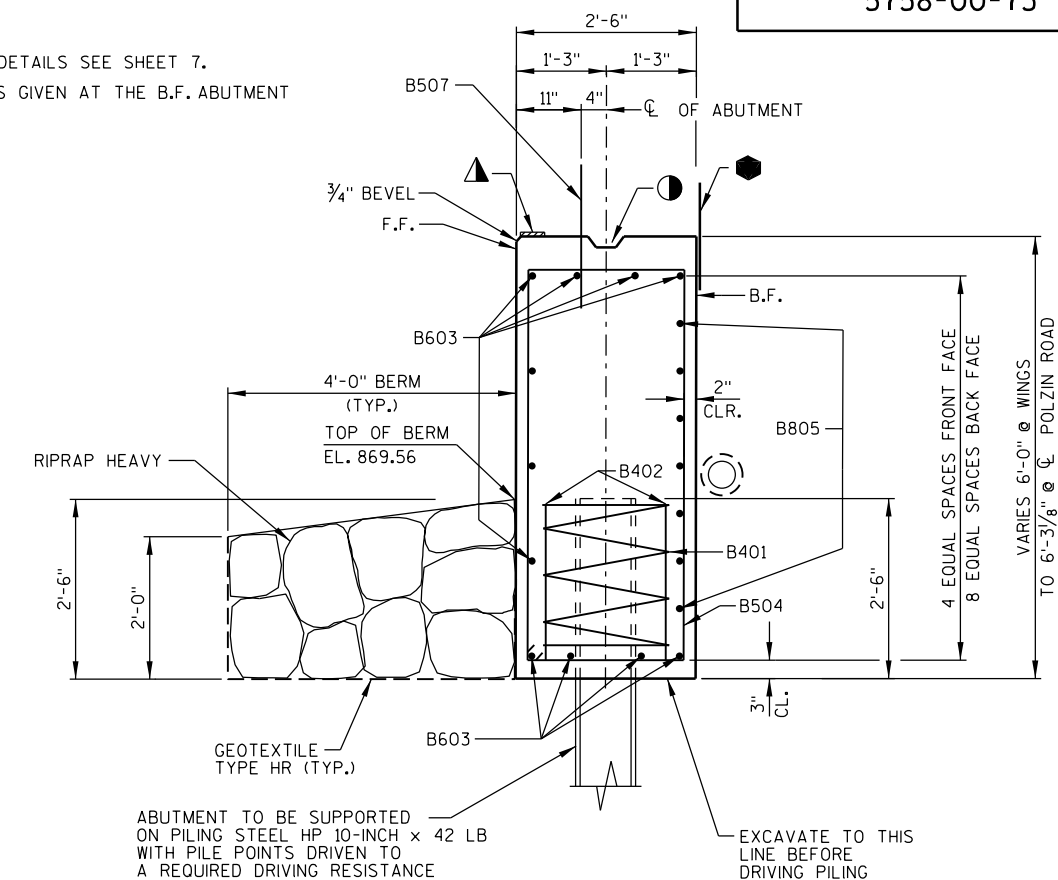


PLAN



PILE PLAN










NOTES:
FOR WING DETAILS SEE SHEET 7.
+ ELEVATIONS GIVEN AT THE B.F. ABUTMENT



ABUTMENT TO BE SUPPORTED
ON PILING STEEL HP 10-INCH x 42 LB
WITH PILE POINTS DRIVEN TO
A REQUIRED DRIVING RESISTANCE
OF 160 TONS PER PILE AS DETERMINED
BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED PILE LENGTHS ARE 75'-0" AT
THE NORTH ABUTMENT. FOR PILE
SPICE DETAILS SEE SHEET 5.

TYPICAL SECTION THRU ABUTMENT

LEGEND

-  - OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ON B.F. OF WING.
-  - $\frac{3}{4}$ " "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
-  - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
-  - $\frac{1}{2}$ " FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONCRETE).
-  - 4"x $\frac{3}{4}$ " FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
-  - VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
-  - HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
-  - PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
-  - INDICATES WING NUMBER

FF - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE		B-53-387			
		DRAWN BY	RLR	PLANS CK'D.	JZ
NORTH ABUTMENT				SHEET 6 OF 9	

✱ - FOR RAIL POST ANCHOR DETAILS SEE SHEET 9.

⊗ - ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE F.F. OF WING.

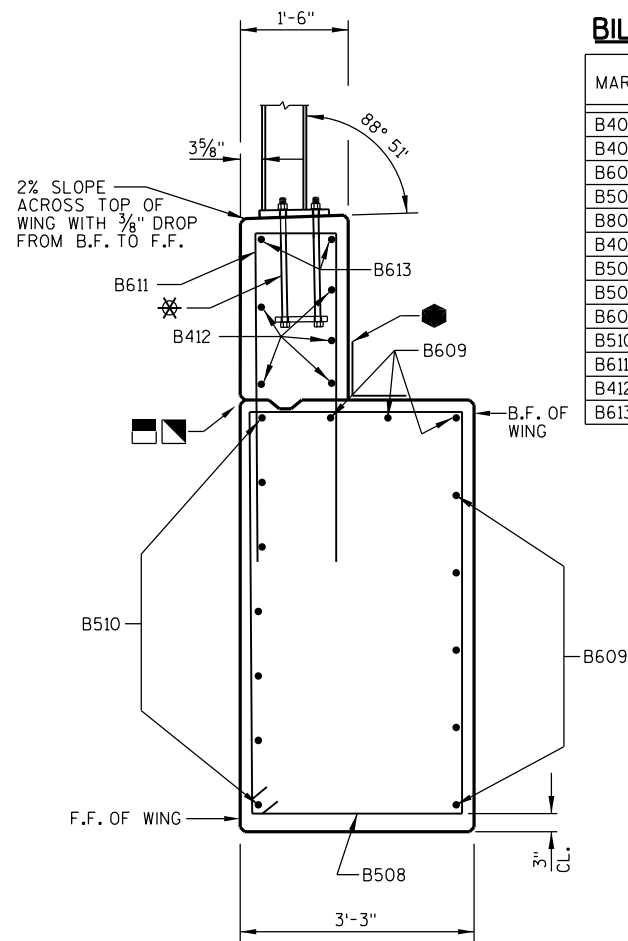
(COATED) 1660 LBS.

(UNCOATED) 1620 LBS.

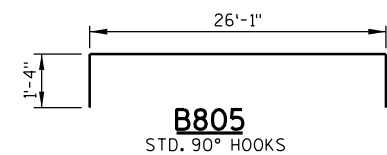
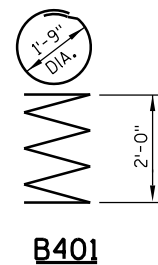
BILL OF BARS (NORTH ABUT.)

MARK	NUMBER REQUIRED	COATED	UNCOATED	LENGTH	BENT	LOCATION
B401	-	4		28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
B402	-	8		2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
B603	-	11		26'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	33		16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
B805	-	7		28'-4"	X	ABUTMENT BODY - B.F. - HORIZ.
B406	-	4		5'-7"		ABUTMENT BODY - ENDS - VERT.
B507	25	-		2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
B508	24	-		17'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B609	16	-		13'-11"		WINGS 3 & 4 - BASE - B.F. & CENTER - HORIZ.
B510	14	-		14'-2"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B611	34	-		9'-4"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B412	10	-		11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B613	4	-		11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



SECTION B-B THRU WING



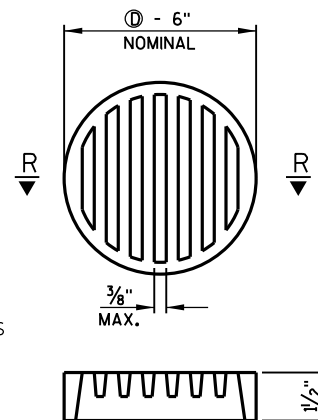
MARK	A	B
B504	5'-7"	2'-2"
B508	5'-7"	2'-11"

WING 3 SHOWN
WING 4 SIMILAR

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

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 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. THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



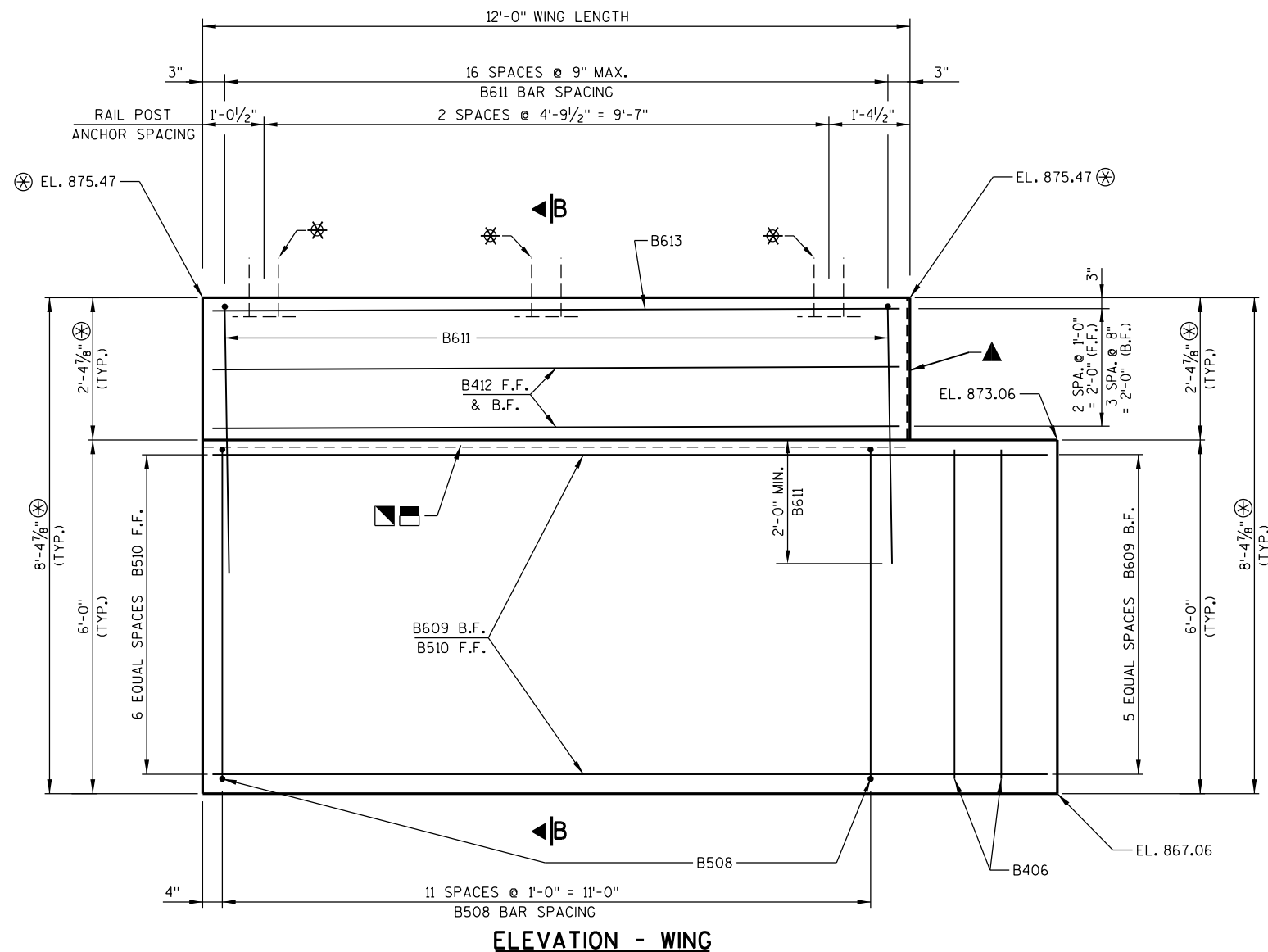
SECTION R-R

RODENT SHIELD

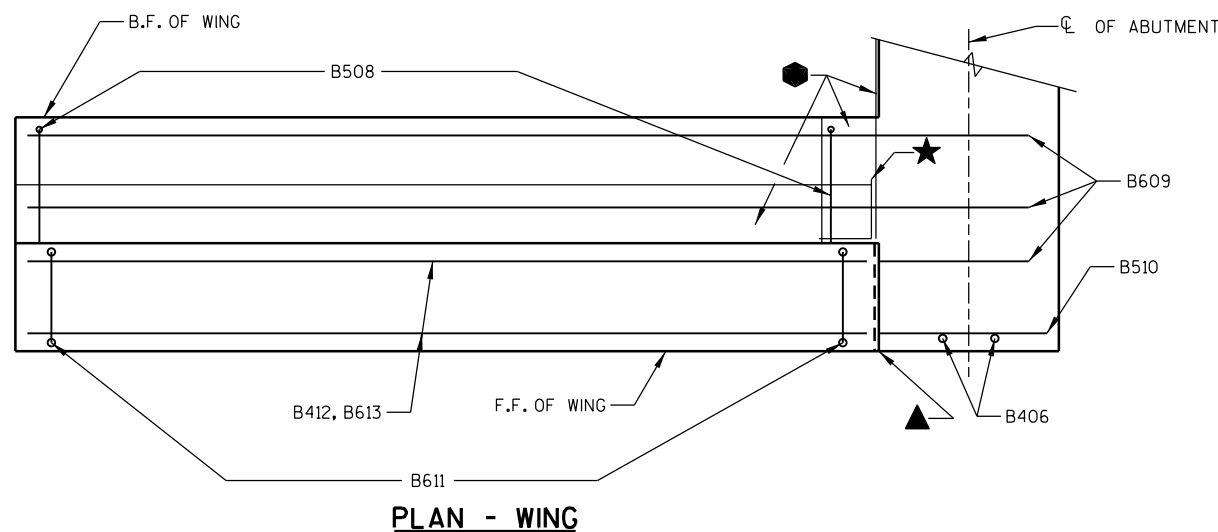
⊙ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

SEE SHEET 6 LEGEND
FOR DESCRIPTION OF

NO.	DATE	REVISION	BY
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STRUCTURE B-53-387			
DRAWN BY RLR		PLANS CK'D. JZ	
NORTH ABUTMENT DETAILS		SHEET 7 OF 9	



ELEVATION - WING



PLAN - WING

GENERAL NOTES

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

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.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	WEST SLAB EDGE	C/L POLZIN ROAD	EAST SLAB EDGE
SOUTH ABUT.	1.0			
	1.5			
NORTH ABUT.	2.0			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ϕ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ϕ . RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	EAST SLAB EDGE	C/L POLZIN ROAD	WEST SLAB EDGE	CAMBER VALUE (INCHES)
SOUTH ABUT.	1.0	875.69	875.95	875.69	0.0
	1.1	875.65	875.92	875.65	0.3
	1.2	875.62	875.89	875.62	0.5
	1.3	875.60	875.86	875.60	0.7
	1.4	875.57	875.84	875.57	0.9
	1.5	875.55	875.81	875.55	0.9
	1.6	875.53	875.79	875.53	0.9
	1.7	875.51	875.78	875.51	0.7
	1.8	875.50	875.76	875.50	0.5
NORTH ABUT.	1.9	875.49	875.75	875.49	0.3
	2.0	875.48	875.74	875.48	0.0

BILL OF BARS (COATED) 11,370 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	54	7'-9"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S902	27	37'-2"		SLAB BOTTOM - LONGIT.
S1003	26	29'-6"		SLAB BOTTOM - LONGIT.
S504	93	26'-2"		SLAB TOP & BOTTOM - TRANS.
S405	27	37'-2"		SLAB TOP - LONGIT.
S606	28	12'-0"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	40	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	16	6'-0"	X	SLAB TOP @ RAIL END POST AS NOTED

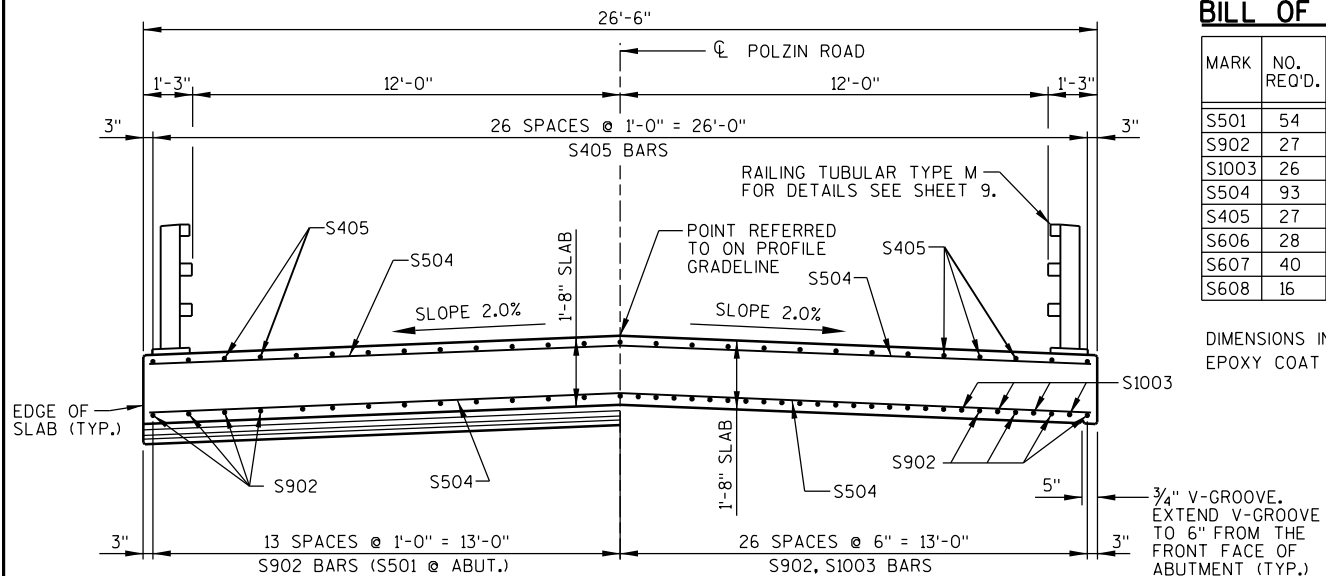
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR. EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.

CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

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

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

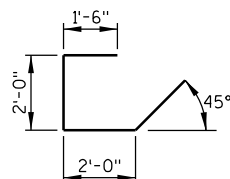


AT ABUTMENTS

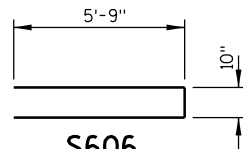
IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



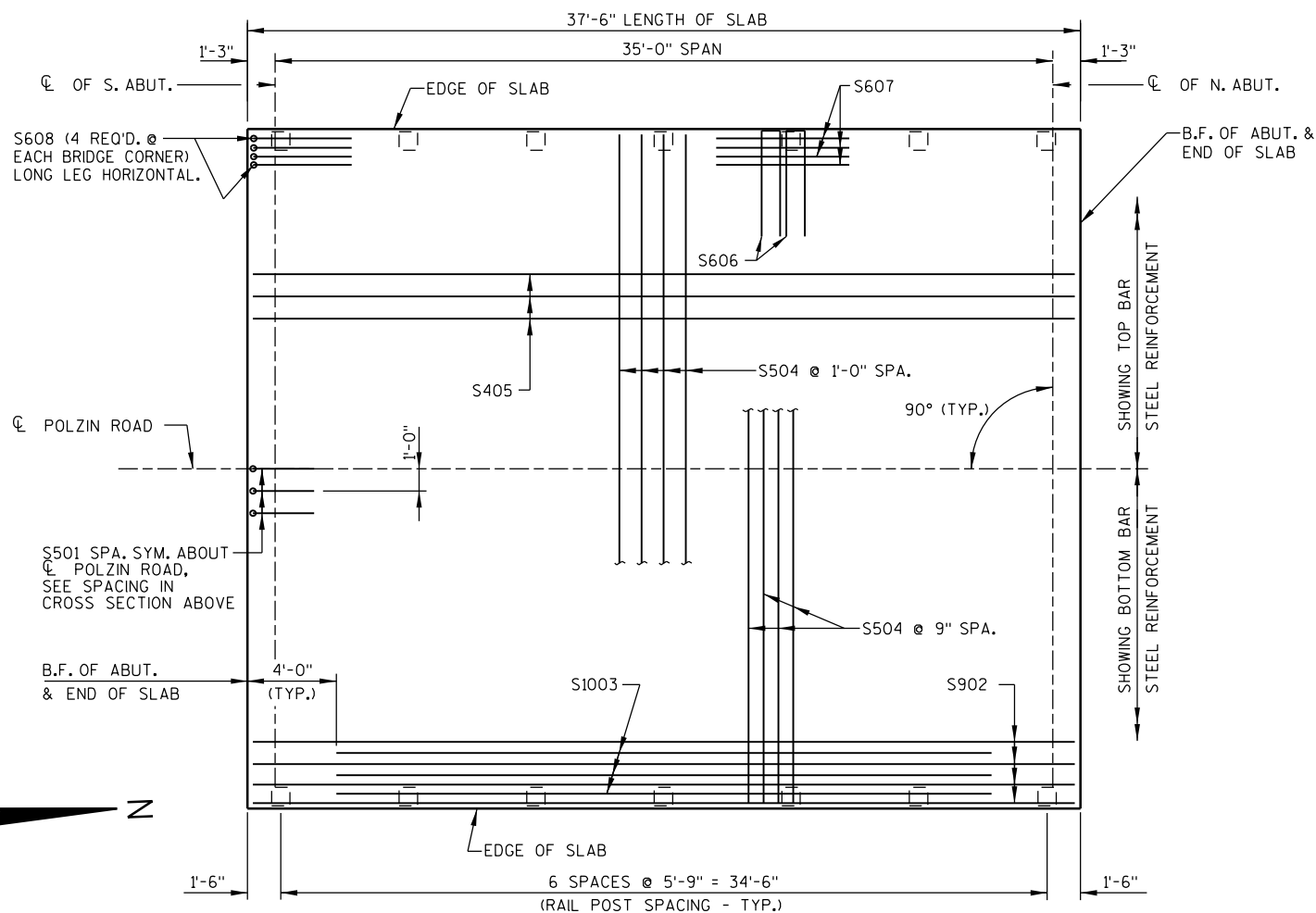
S501



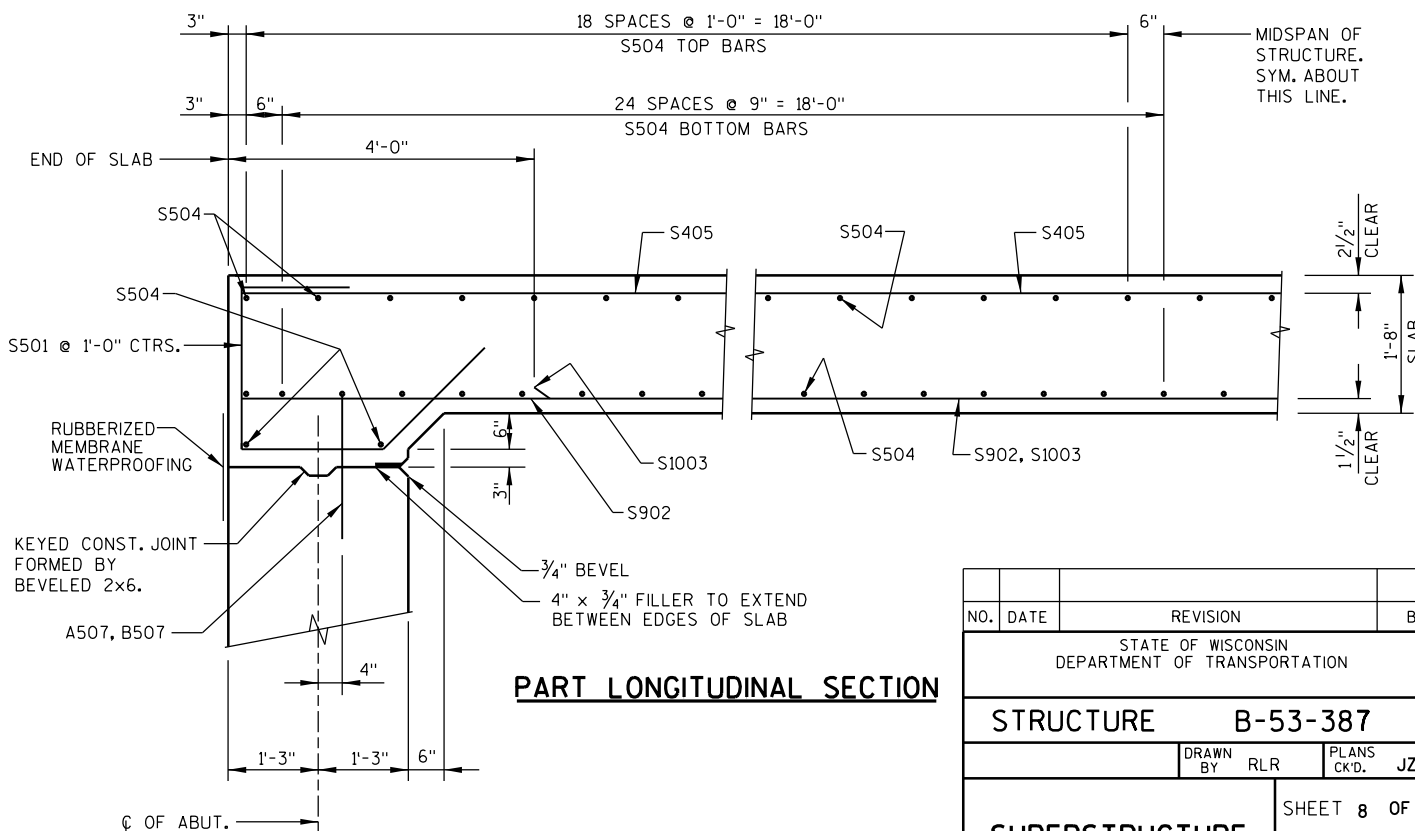
S606



S608



PLAN



PART LONGITUDINAL SECTION

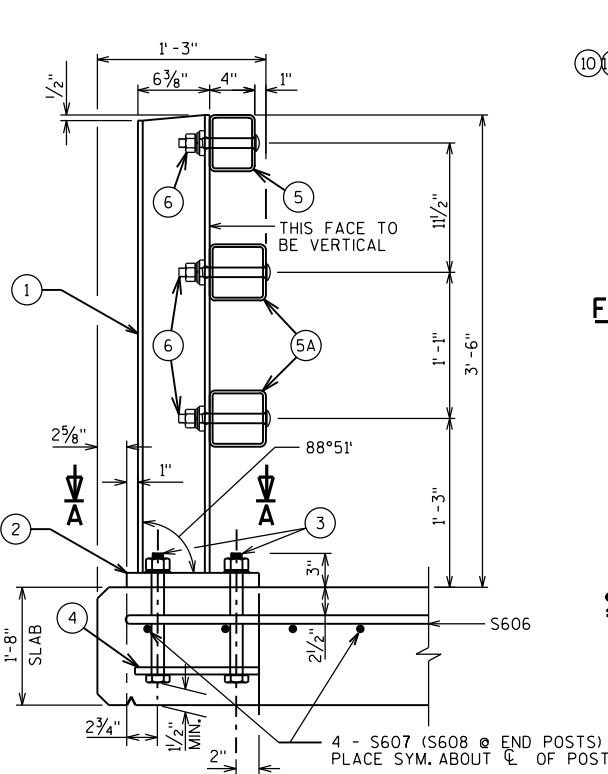
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-53-387			
DRAWN BY RLR		PLANS CK'D. JZ	
SUPERSTRUCTURE		SHEET 8 OF 9	

LEGEND

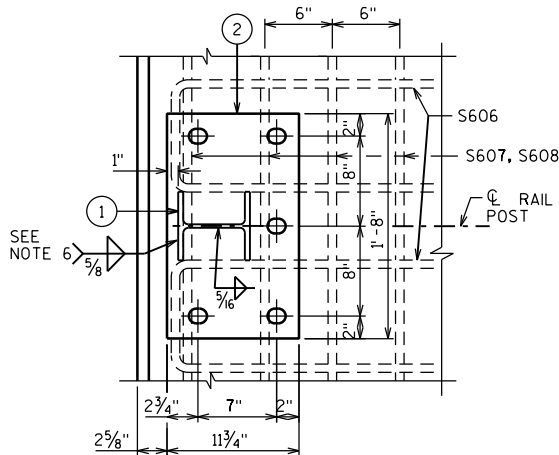
- ① W6 x 25 WITH 1/8" X 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO.6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" X 11 3/4" X 1'-8" WITH 1 5/8" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO.3. WELD TO NO.1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ③ ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO.2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 10 3/4" LONG IN SUPERSTRUCTURE SLAB. USE 1'-9" LONG IN ABUTMENT WINGS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY).
- ④ 5/8" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/8" DIA. HOLES FOR ANCHOR BOLTS NO.3
- ⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO.1 WITH NO.6.
- ⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO.1 WITH NO.6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO.12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO.5A.
- ⑧ 1" DIA. HOLES IN PLATE NO.7 & TUBES NO.5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO.7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO.5 & 5A.
- ⑩A 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO.5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO.5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/8" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS IN PLATE NO.10A.
- ⑫ 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- ⑬ 3/8" X 8" X 1'-6" ANCHOR PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO.5A.
- ⑭ 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQUIRED).
- ⑮ 1" DIA. HOLES IN TUBES NO.5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

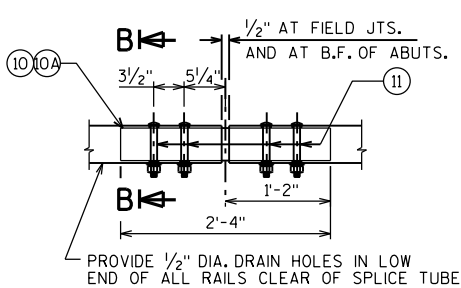
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES,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



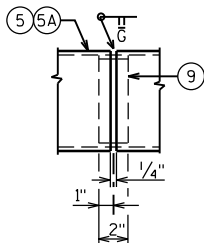
SECTION THRU RAILING ON SLAB
SECTION THRU RAILING ON ABUTMENT WINGS SIMILAR. SEE ABUTMENT DETAIL SHEETS.



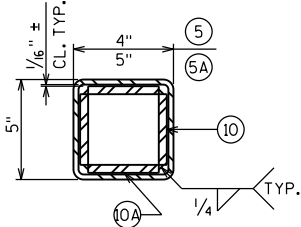
SECTION A-A



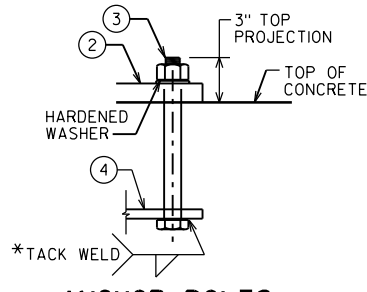
FIELD ERECTION JOINT DETAIL



SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

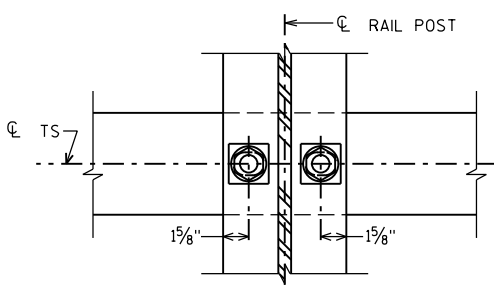


SECTION B-B

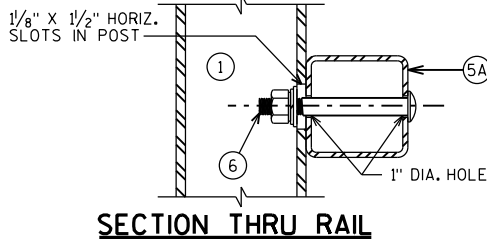


ANCHOR BOLTS

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



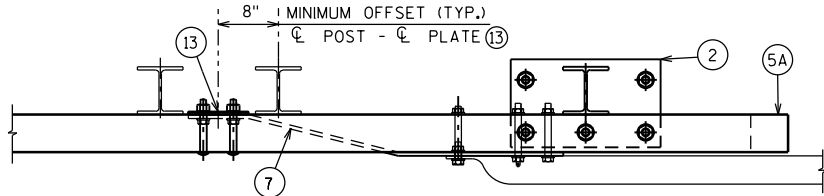
SECTION THRU POST WEB



SECTION THRU RAIL

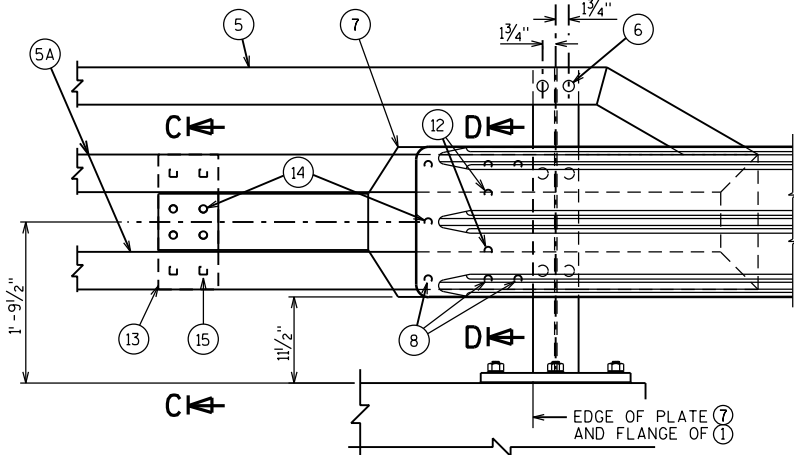
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



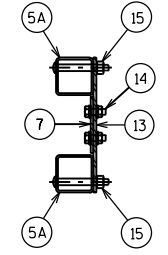
TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

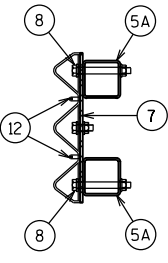


DETAIL AT END POST

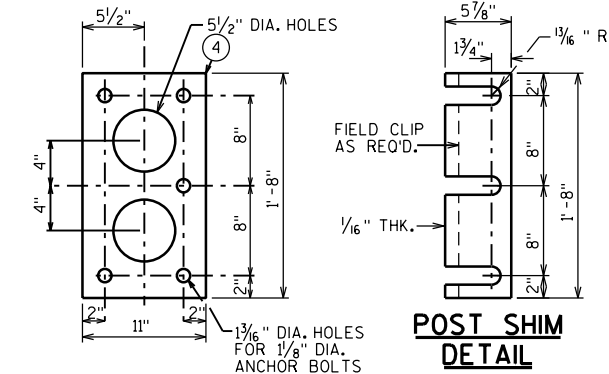
(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

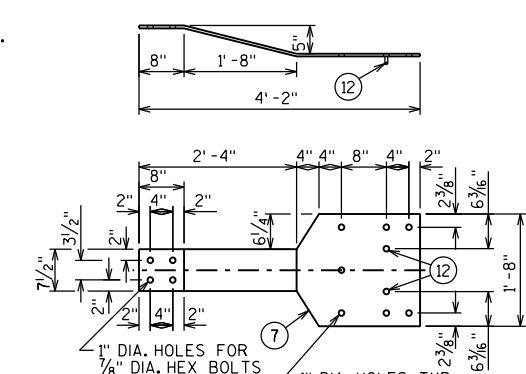


SECTION D-D



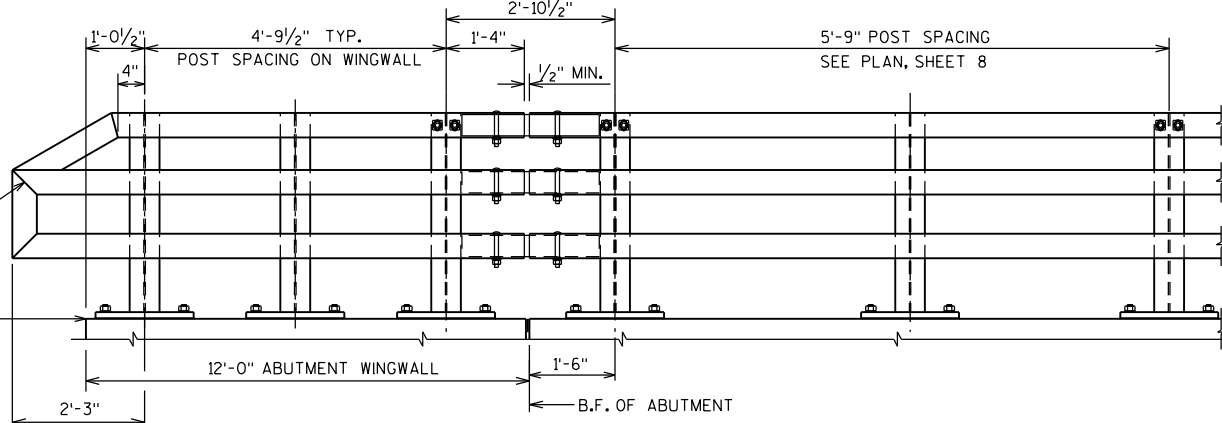
ANCHOR PLATE

AT RAIL TO SLAB ATTACHMENT
RAIL TO ABUTMENT WING ATTACHMENT IS SIMILAR.



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

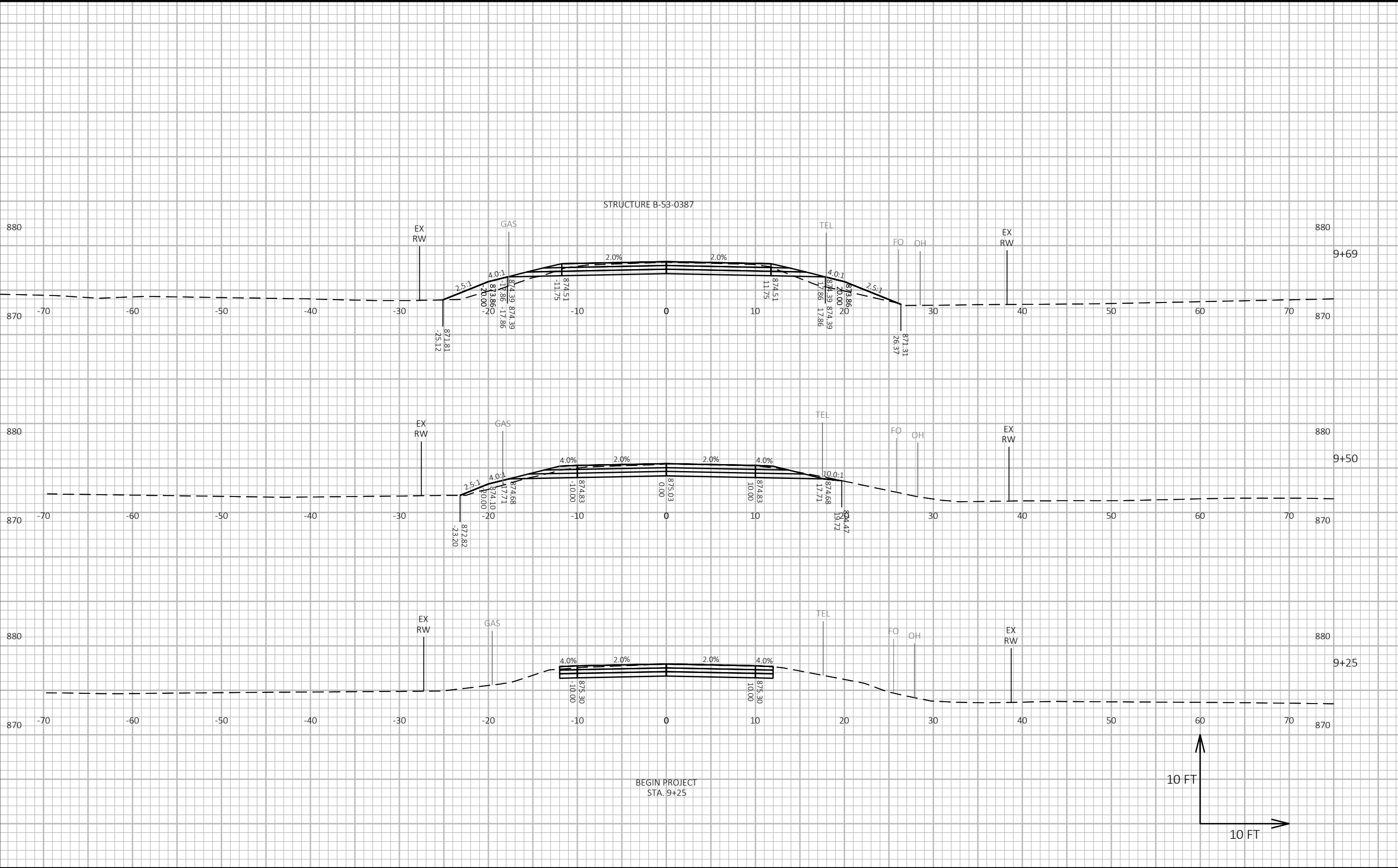
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-53-387	
DRAWN BY		RLR	PLANS CK'D. JZ
RAILING TUBULAR TYPE M		SHEET 9 OF 9	

EARTHWORK PROJECT I.D. 5758-00-73

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
9+25		31	0	0	0	0	0	0	0	0
9+50.	25.00	35	0	3	31	0	1	31	2	29
9+69.26	19.26	30	0	15	24	0	6	54	10	45
B-53-0387*										
*Excavation for abutments accounted for in structure plans.					54	0	8			

EARTHWORK PROJECT I.D. 5758-00-73

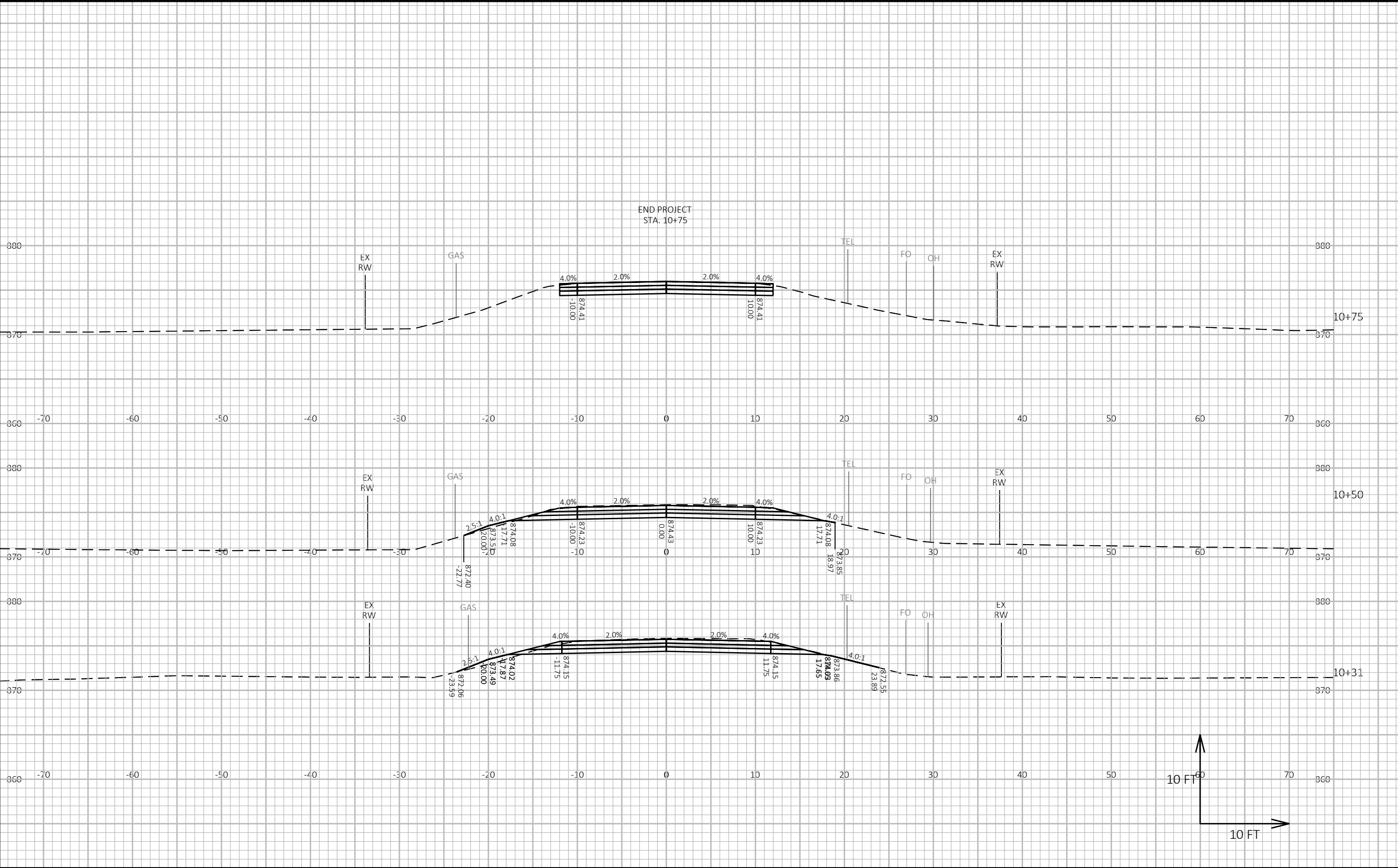
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
B-53-0387*										
10+31		41	0	2	0	0	0	0	0	0
10+50	19.24	42	0	1	29	0	1	29	2	28
10+75	24.99	32	0	0	34	0	1	64	2	61
*Excavation for abutments accounted for in structure plans.					64	0	2			



9

9

PROJECT NO: 5758-00-73	HWY: POLZIN ROAD	COUNTY: ROCK COUNTY	CROSS SECTIONS: POLZIN ROAD	SHEET E
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