

GRE

FEB 11, 2020

ORDER OF SHEETS

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

TOTAL SHEETS = 48

PROJECT LOCATION



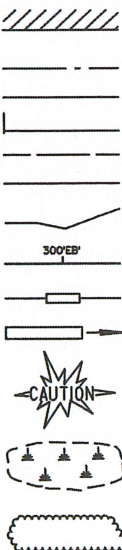
BEGIN PROJECT
STA. 9+00
Y=498341.545
X=119736.432

DESIGN DESIGNATION

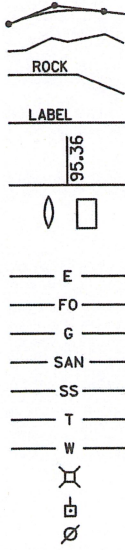
A.A.D.T. 2018 = 20
A.A.D.T. 2038 = 25
D.H.V. 2038 = 5.8
D.D. = 60/40
T. = 22.3
DESIGN SPEED = 55 MPH
ESALS = 7,300

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

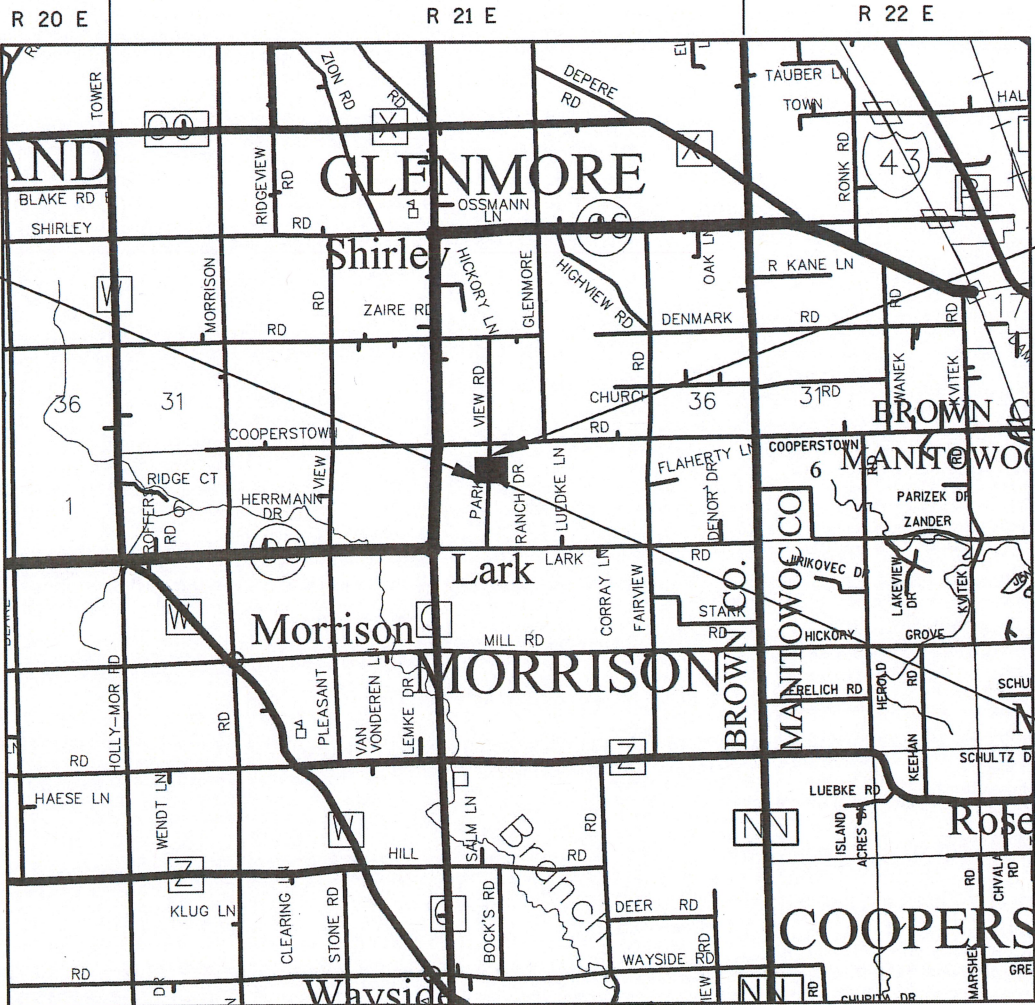
PLAN OF PROPOSED IMPROVEMENT

T MORRISON, PARK VIEW RD

DEVILS RIVER BRIDGE & APPROACHES

LOC STR
BROWN COUNTY

STATE PROJECT NUMBER
4508-08-71



LAYOUT
SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.032 MI.

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

STATE PROJECT

4508-08-71

FEDERAL PROJECT

PROJECT

CONTRACT

ACCEPTED FOR
BROWN COUNTY

7/16/19
DATE COUNTY HIGHWAY REPRESENTATIVE

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES
WISCONSIN
ANDREW C. DANA
34172
OCONTO, WI
PROFESSIONAL ENGINEER
7-16-2019
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor AYRES ASSOCIATES
Designer AYRES ASSOCIATES
Regional Examiner BRIAN EDWARDS
Regional Supervisor JAMES THOMPSON

APPROVED FOR THE DEPARTMENT
DATE: 7/22/19
(Signature)

E

GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%.

CONSTRUCT 4-INCH ASPHALTIC SURFACE WITH A 1 3/4" UPPER LAYER AND A 2 1/4" LOWER LAYER.

PROPERTY LINES AS SHOWN ARE APPROXIMATE.

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

BEARING SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

PLACE EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN.

THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE FERTILIZED, SEEDED, AND EROSION MAT AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE SUBGRADE ELEVATIONS AT THE CENTERLINE OF THE ROADWAY.

ALL ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012).

WISDOT WILL FURNISH A BENCHMARK MONUMENT TO BE SET BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER IN THE FIELD

SAW CUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. THE LINE OF SUCH SAW CUTS WILL BE NEATLY DELINEATED THROUGH THE ASPHALT WITHOUT ANY DAMAGE TO THE REMAINING PORTION OF THE EXISTING PAVEMENT.

UTILITIES

*CENTURYLINK
HIGHWAY 180
PO BOX 260
WAUSAUKEE, WISCONSIN 54177
ATTENTION: MATT GUNDERSON
E-MAIL: MATT.GUNDERSON@CENTURYLINK.COM

TELEPHONE 920-837-2344

*WISCONSIN PUBLIC SERVICE - ELECTRIC
700 N. ADAMS STREET
PO BOX 1210
GREEN BAY, WISCONSIN 54307
ATTENTION: RYAN VOSKUIL
E-MAIL: RYAN.VOSKUIL@WISCONSINPUBLICSERVICE.COM

TELEPHONE 920-617-5150

*-MEMBER OF DIGGERS HOTLINE



Dial 811 or (800)242-8511

www.DiggersHotline.com

DEPARTMENT OF NATURAL RESOURCES

WDNR
P.O. BOX 10448
GREEN BAY, WISCONSIN 54307
ATTENTION: JIM DOPERALSKI
E-MAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

TELEPHONE 920-412-0165

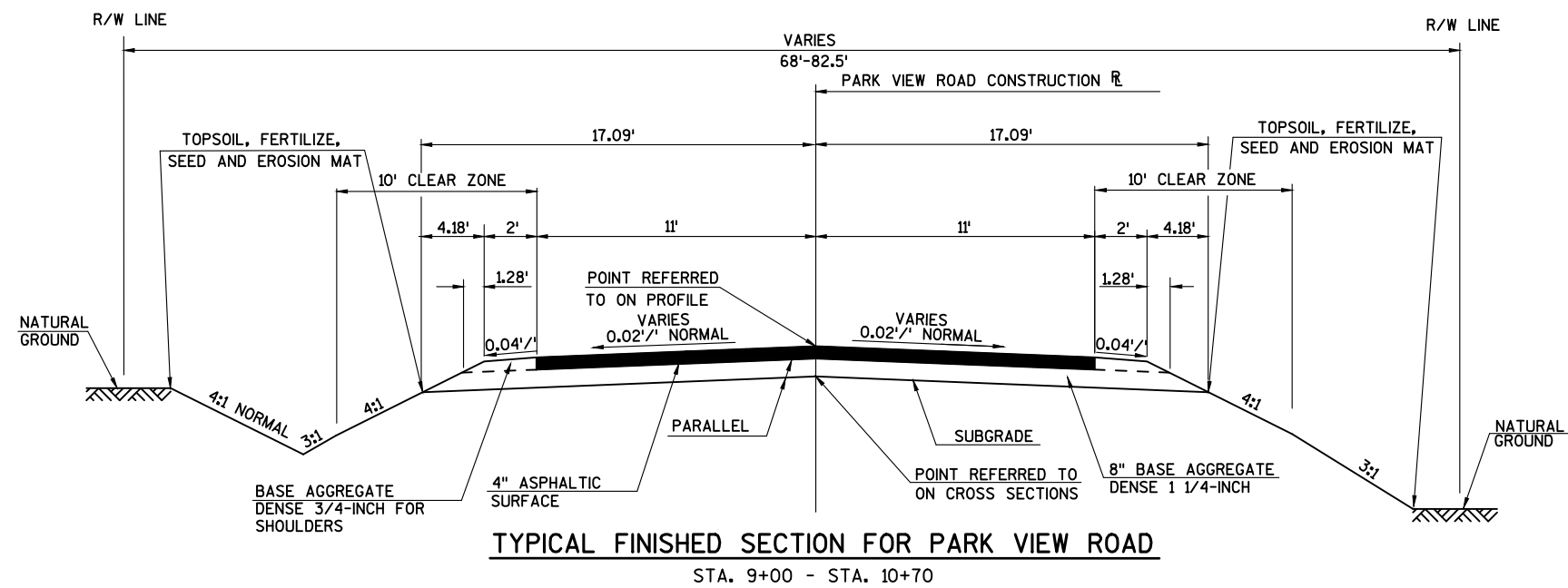
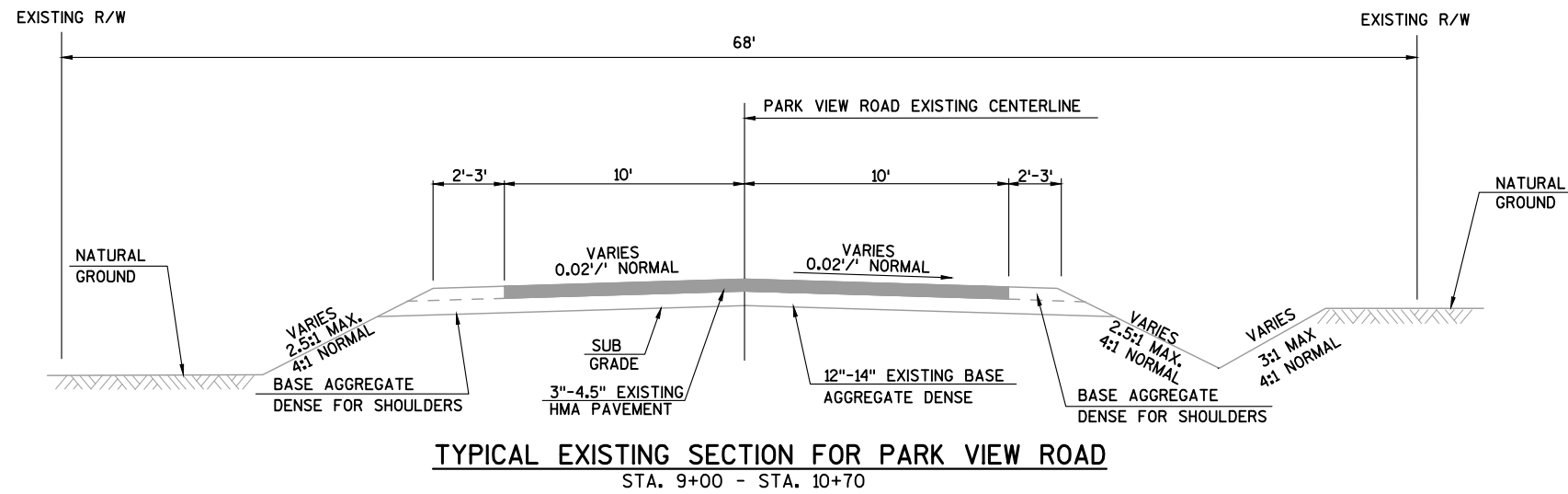
RUNOFF COEFFICIENT TABLE

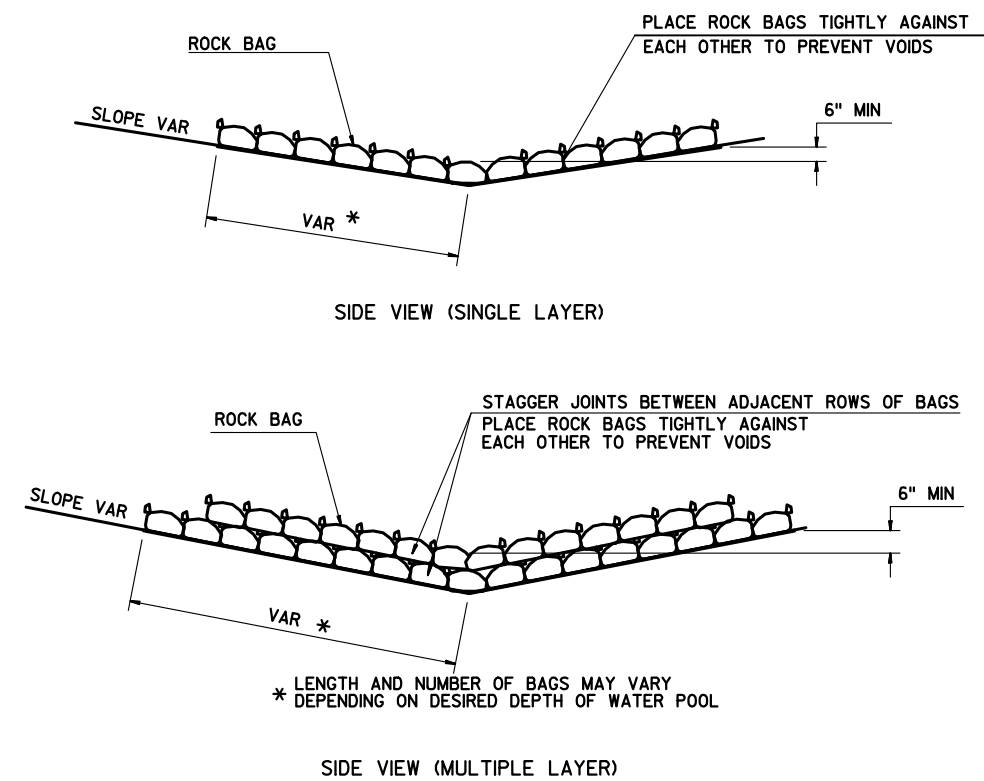
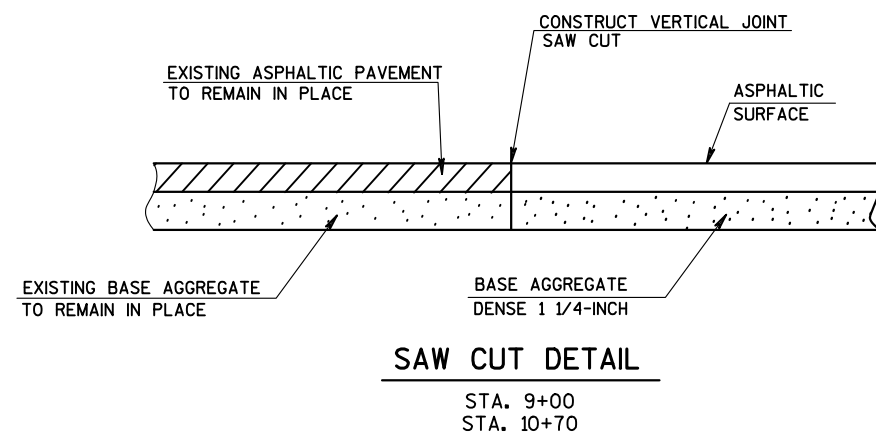
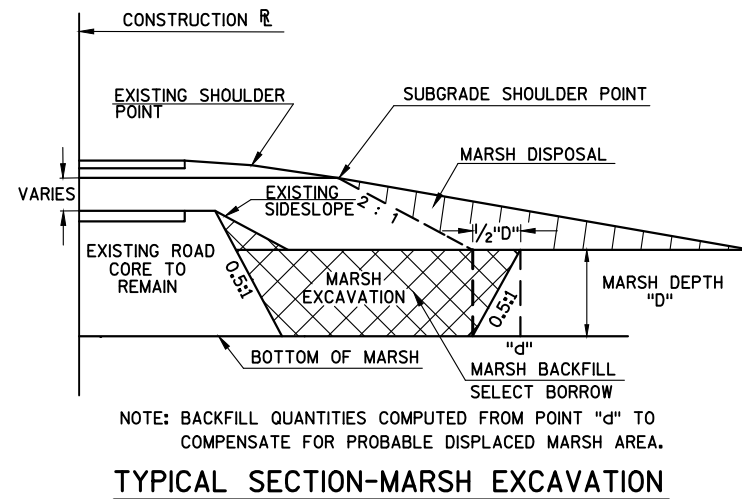
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.12 ACRES
SOIL GROUP C

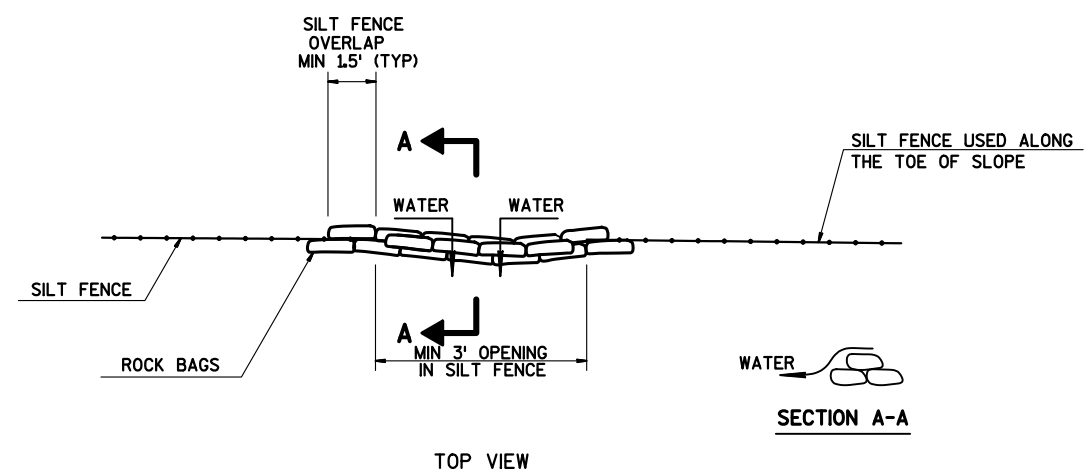
STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
AC	ASPHALT CEMENT	PT	POINT OF TANGENCY
AGG	AGGREGATE	PC	POINT OF CURVATURE
ASPH	ASPHALT	PI	POINT OF INTERSECTION
BM	BENCH MARK	PE	PRIVATE ENTRANCE
C/L	CENTERLINE	R	RADIUS
CONC	CONCRETE	REM	REMOVE
CMP	CORRUGATED METAL PIPE	R/L OR RL	REFERENCE LINE
CR.	CREEK	RCCP	REINFORCED CONCRETE CULVERT PIPE
D	DEGREE OF CURVE	RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
DHV	DESIGN HOUR VOLUME	R.O.	RUNOUT
ESALS	EQUIVALENT SINGLE AXIS LOADS	R/W	RIGHT-OF-WAY
EXIST	EXISTING	STA	STATION
FE	FIELD ENTRANCE	SE	SUPER ELEVATION
HYD	HYDRANT	SS	STORM SEWER
IP	IRON PIPE OR PIN	T	TANGENT
L	LENGTH OF CURVE	TEL	TELEPHONE
LC	LONG CHORD OF CURVE	TLE	TEMPORARY LIMITED EASEMENT
LR	LENGTH OF RUNOFF	T	TRUCKS
MH	MANHOLE	VC	VERTICAL CURVE
		W	WELL



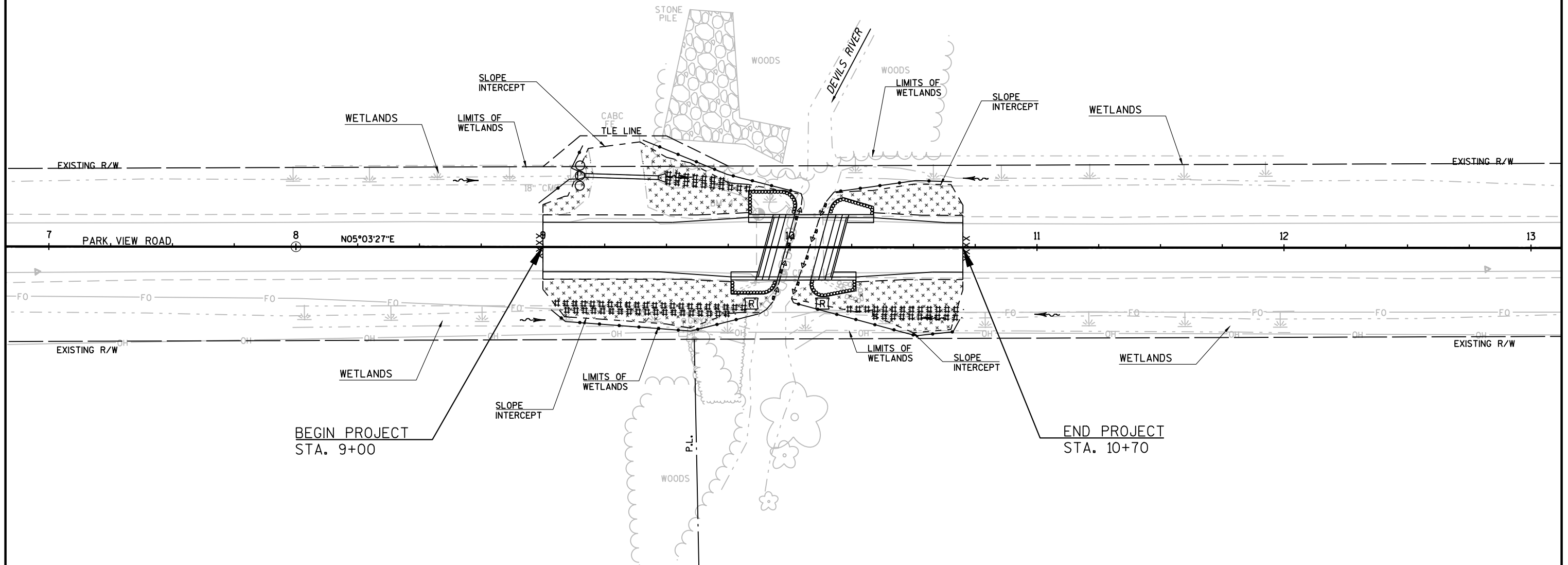


ROCK BAGS DITCH CHECK
PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL
PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)

LEGEND	
	EROSION MAT URBAN CLASS I, TYPE B
	EROSION MAT URBAN CLASS II, TYPE C
	SILT FENCE
	SLOPE INTERCEPT
	TURBIDITY BARRIER
	ROCK BAGS
	SURFACE WATER FLOW
	CULVERT PIPE CHECK



Estimate Of Quantities By Plan Sets

4508-08-71					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0010	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. 10+00	LS	1.000	1.000
0012	205.0100	Excavation Common	CY	165.000	165.000
0014	205.0400	Excavation Marsh	CY	100.000	100.000
0018	206.1000	Excavation for Structures Bridges (structure) 02. B-05-0425	LS	1.000	1.000
0020	208.1100	Select Borrow	CY	150.000	150.000
0022	210.1500	Backfill Structure Type A	TON	200.000	200.000
0024	213.0100	Finishing Roadway (project) 01. 4508-08-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	50.000	50.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	240.000	240.000
0034	455.0605	Tack Coat	GAL	25.000	25.000
0036	465.0105	Asphaltic Surface	TON	80.000	80.000
0038	502.0100	Concrete Masonry Bridges	CY	102.000	102.000
0040	502.3200	Protective Surface Treatment	SY	110.000	110.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	3,180.000	3,180.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	11,450.000	11,450.000
0046	513.4061	Railing Tubular Type M	LF	107.000	107.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0050	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0052	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	30.000	30.000
0058	550.0500	Pile Points	EACH	8.000	8.000
0060	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	220.000	220.000
0062	606.0300	Riprap Heavy	CY	130.000	130.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0066	619.1000	Mobilization	EACH	0.500	0.500
0068	624.0100	Water	MGAL	25.000	25.000
0070	625.0100	Topsoil	SY	480.000	480.000
0072	628.1504	Silt Fence	LF	380.000	380.000
0074	628.1520	Silt Fence Maintenance	LF	760.000	760.000
0076	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	380.000	380.000
0082	628.2027	Erosion Mat Class II Type C	SY	100.000	100.000
0084	628.6005	Turbidity Barriers	SY	50.000	50.000
0086	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0088	628.7570	Rock Bags	EACH	45.000	45.000

Estimate Of Quantities By Plan Sets

4508-08-71					
Line	Item	Item Description	Unit	Total	Qty
0090	629.0210	Fertilizer Type B	CWT	0.500	0.500
0092	630.0120	Seeding Mixture No. 20	LB	15.000	15.000
0094	630.0200	Seeding Temporary	LB	15.000	15.000
0096	630.0500	Seed Water	MGAL	12.000	12.000
0098	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0100	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0102	638.2602	Removing Signs Type II	EACH	6.000	6.000
0104	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0106	642.5001	Field Office Type B	EACH	0.500	0.500
0108	643.0420	Traffic Control Barricades Type III	DAY	540.000	540.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	840.000	840.000
0112	643.0900	Traffic Control Signs	DAY	360.000	360.000
0114	643.5000	Traffic Control	EACH	0.500	0.500
0116	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0118	645.0120	Geotextile Type HR	SY	260.000	260.000
0120	650.4500	Construction Staking Subgrade	LF	136.000	136.000
0122	650.5000	Construction Staking Base	LF	136.000	136.000
0126	650.6500	Construction Staking Structure Layout (structure) 02. B-05-0425	LS	1.000	1.000
0128	650.9910	Construction Staking Supplemental Control (project) 01. 4508-08-71	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	136.000	136.000
0134	690.0150	Sawing Asphalt	LF	40.000	40.000
0136	715.0502	Incentive Strength Concrete Structures	DOL	612.000	612.000
0140	SPV.0105	Special 02. Superstructure 3/4" V-Drip Edge Structure B-5-425	LS	1.000	1.000

CLEARING AND GRUBBING

STATION TO STATION				201.0105 CLEARING STA	201.0205 GRUBBING STA
LOCATION					
9+50	-	10+00	PARK VIEW RD, LT	1	1
TOTALS				1	1

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	DESCRIPTION
9+25	PARK VIEW RD, LT	1	18-INCH, CMP
TOTAL		1	

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (item #205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Excavation Marsh (6)	Expanded Marsh Backfill (10)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Select Borrow (item #208.1100)	Comment:
			Cut			(item #205.0400)	Factor 1.50		Factor 1.30				
1	9+50 - 10+70	PARK VIEW ROAD	165	9	156	100	150	67	87	69	69	150	
Division 1 Total			165	9	156	100	150	67	87	69	69	150	

- 2) Unsuable Pavement Material is included in Cut
5) Available Material = Cut - Unsuable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material as show n in cross sections, then Borrow for the remaining Marsh Excavation.
10) Expanded Marsh Backfill - This is to be filled w ith Select Borrow material. Marsh Backfill Factor = 1.5. Item Number 208.1100.
13) Expanded Fill. Factor = 1.3 Expanded Fill = Unexpanded Fill * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material w ithin the Division. Minus indicates a shortage of material w ithin the Division.

BASE AGGREGATE DENSE AND WATER

STATION TO STATION				305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
LOCATION						
9+00	-	9+86	PARK VIEW RD, LT & RT	20	150	15
10+20	-	10+70	PARK VIEW RD, LT & RT	10	90	10
9+25 P.E., LT				20	-	-
TOTALS				50	240	25

ASPHALTIC SURFACE

STATION TO STATION				455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
LOCATION					
9+00	-	9+86	PARK VIEW RD	15	50
10+20	-	10+70	PARK VIEW RD	10	30
TOTALS				25	80

CULVERT PIPES AND ENDWALLS

STATION	LOCATION	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.1018 APRON ENDWALLS CULVERT PIPE STEEL 18-INCH EACH	STEEL THICKNESS
9+25	PARK VIEW RD, LT	30	2	0.064
TOTALS		30	2	

LANDSCAPING ITEMS

STATION TO STATION				LOCATION	625.0100	628.2008	628.2027	629.0210	630.0120	630.0200	630.0500
					TOPSOIL	EROSION MAT URBAN	EROSION MAT CLASS II TYPE C	FERTILIZER TYPE B	SEEDING MIXTURE NO. 20	SEEDING TEMPORARY	SEED WATER
					CLASS I TYPE B						
				SY	SY	SY	CWT	LB	LB	MGAL	
9+00	-	9+86	PARK VIEW RD, LT & RT	255	205	50	0.2	7	7	6	
10+20	-	10+70	PARK VIEW RD, LT & RT	150	125	25	0.1	4	4	4	
UNDISTRIBUTED				75	50	25	0.2	4	4	2	
TOTALS				480	380	100	0.5	15	15	12	

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
9+15	PARK VIEW RD, LT	5
UNDISTRIBUTED		5
TOTAL		10

ROCK BAGS

STATION	LOCATION	628.7570 EACH
9+85	PARK VIEW RD, RT	15
10+15	PARK VIEW RD, RT	15
UNDISTRIBUTED		15
TOTAL		45

SILT FENCE

STATION TO STATION		LOCATION	628.1504 SILT FENCE LF	628.1520 MAINTENANCE LF	
9+25	-	10+00	PARK VIEW RD, LT & RT	185	370
10+20	-	10+70	PARK VIEW RD, LT & RT	120	240
UNDISTRIBUTED			75	150	
TOTALS			380	760	

TURBIDITY BARRIERS

STATION	LOCATION	628.6005 SY
SOUTH ABUTMENT		25
NORTH ABUTMENT		25
TOTAL		50

REMOVING SIGNS AND SUPPORTS

STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	DESCRIPTION
SOUTH & NORTH OF PROJECT LIMITS		2	2	WEIGHT LIMIT
9+85	PARK VIEW RD, RT & LT	2	2	
10+15	PARK VIEW RD, RT & LT	2	2	
TOTALS		6	6	

NOTE: MULTIPLE TYPE II SIGNS MOUNTED TOGETHER WILL BE PAID AS ONE (1) SIGN REMOVAL

SIGNS REFLECTIVE TYPE II AND WOOD POSTS

STATION	LOCATION	634.0612 WOOD POSTS 4"x6"x12' EACH	637.2230 SIGNS	
			W5-52L S.F.	W5-52R S.F.
9+76	PARK VIEW RD, RT	1	-	3
9+83	PARK VIEW RD, LT	1	3	-
10+27	PARK VIEW RD, RT	1	3	-
10+34	PARK VIEW RD, LT	1	-	3
TOTALS		4	12	

TRAFFIC CONTROL SUMMARY

LOCATION	APPROXIMATE SERVICE DAYS	643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0900 SIGNS		
		NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	
COUNTY LINE ROAD / SCHOOL ROAD	60	2	120	4	240	2	120	BRIDGE OUT 1/4 MILE AHEAD - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
SOUTH OF WORK ZONE LIMITS	60	-	-	-	-	3	180	ADVANCE WARNING SIGNS - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
SOUTH WORK ZONE LIMITS	60	7	420	10	600	2	120	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C, D, & E
NORTH WORK ZONE LIMITS	60	7	420	10	600	2	120	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C, D, & E
NORTH OF WORK ZONE LIMITS	60	-	-	-	-	2	120	ADVANCE WARNING SIGNS - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
COUNTY LINE ROAD / COOPERSTOWN ROAD	60	2	120	4	240	2	120	BRIDGE OUT 3/4 MILE AHEAD - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
TOTALS			540		840		360	

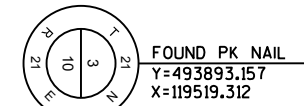
CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6500	650.9910	650.9920	CATEGORY
				SUBGRADE LF	BASE LF	STRUCTURE LAYOUT LS	SUPPLEMENTAL CONTROL LS	SLOPE STAKES LF	
9+00	-	9+86	PARK VIEW RD	86	86	-	1	86	0010
10+20	-	10+70	PARK VIEW RD	50	50	-	-	50	0010
SUBTOTALS				136	136	0	1	136	0010
10+00 PARK VIEW RD				-	-	1	-	-	0020
SUBTOTALS				0	0	1	0	0	0020
TOTALS				136	136	1	1	136	

SAWING ASPHALT

STATION	LOCATION	690.0150
		LF
9+25	COUNTY LINE ROAD	20
11+75	COUNTY LINE ROAD	20
TOTAL		40

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
6	5+90	SPIKE IN PP-42' RT.	888.35
4	9+87	CHIS. SQUARE ON SW WING-13' LT.	873.90
5	13+17	SPIKE IN PP-35' RT.	872.07



TOWN

WHO FAMILY LLC

TLE FOR SLOPING AND
DRIVEWAY CONSTRUCTION

STONE PILE

NE-FRACTIONAL NW
3-21-21

DEVILS RIVER

WOODS

SCHEDULE OF LANDS AND INTERESTS REQUIRED

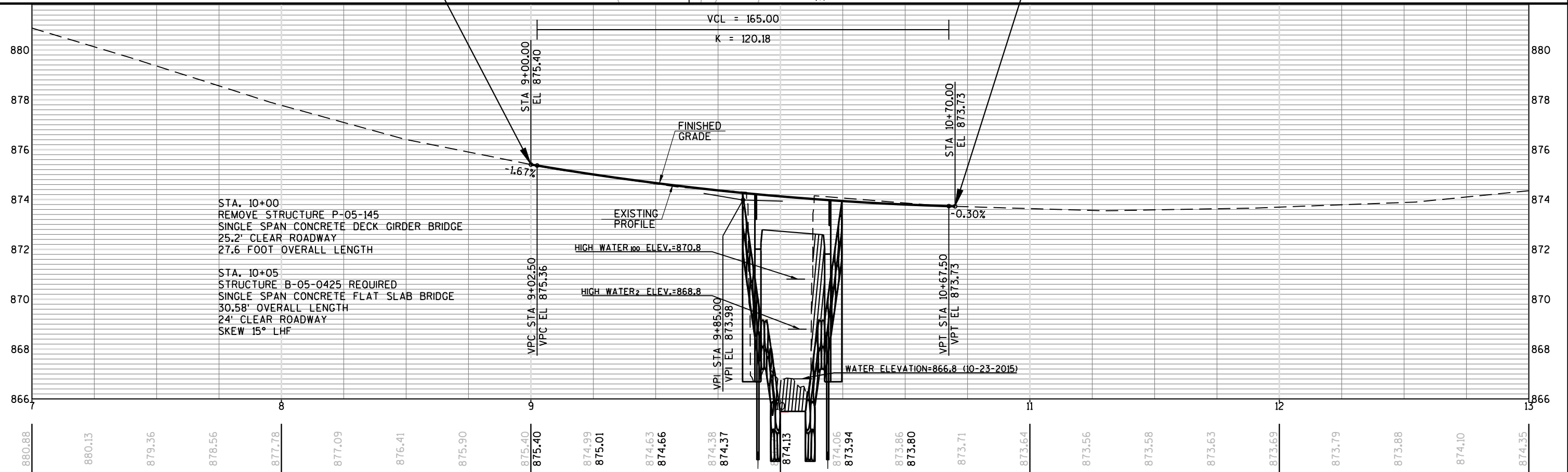
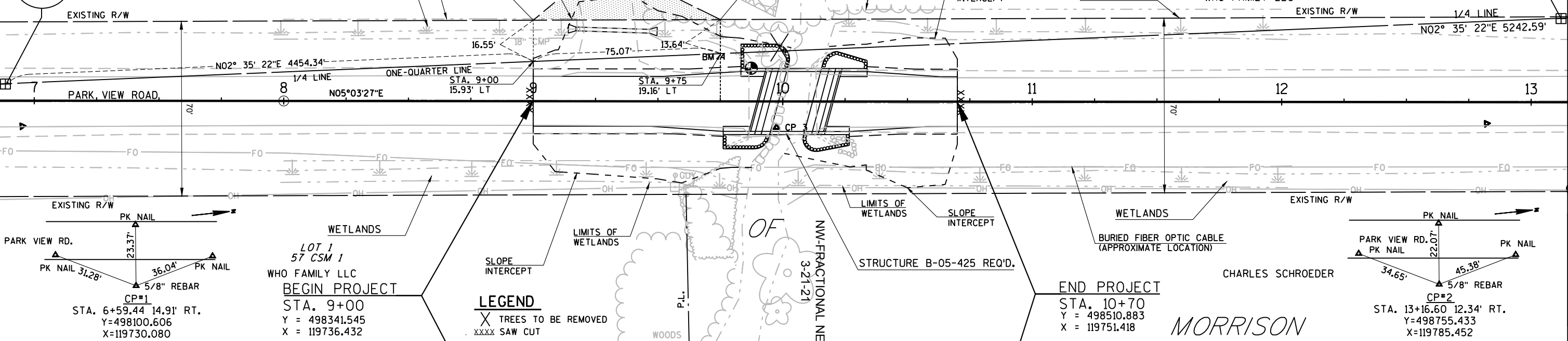
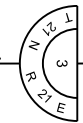
PARCEL NO.	OWNERSHIP	INTEREST REQUIRED	TLE ACRES
1	WHO FAMILY LLC	TLE	0.02
50	CENTURYLINK	RELEASE OF RIGHTS	----

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN

50 CENTURYLINK
V. 834, P.195, DOC.686174
(BLANKET EASEMENT)
WETLANDS

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

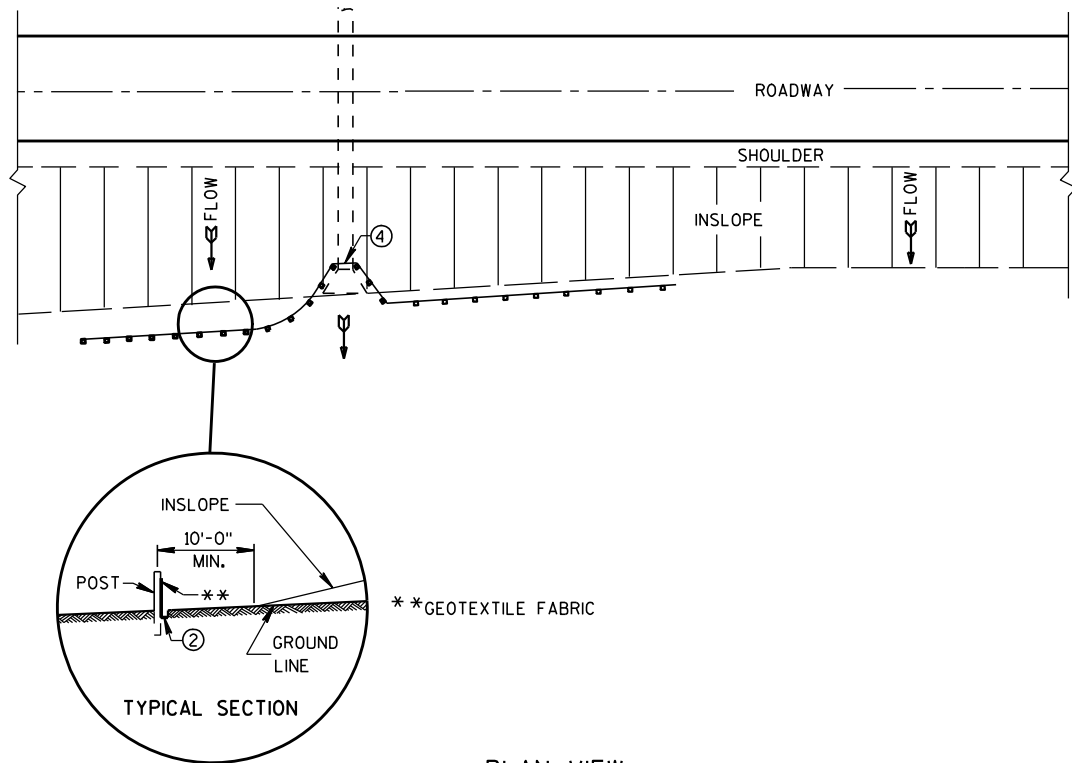
FOUND PK NAIL
Y=499130.392
X=119756.176



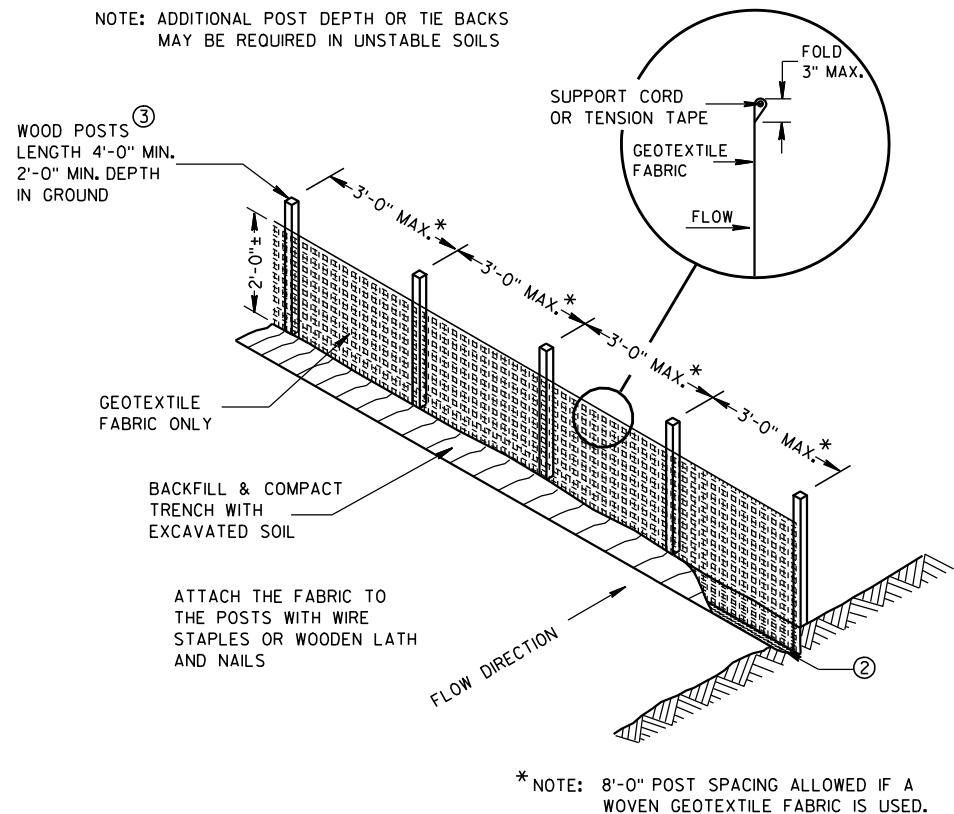
PROJECT NO: 4508-08-71	HWY: PARK VIEW ROAD	COUNTY: BROWN	PLAN AND PROFILE:	SHEET	E
------------------------	---------------------	---------------	-------------------	-------	---

Standard Detail Drawing List

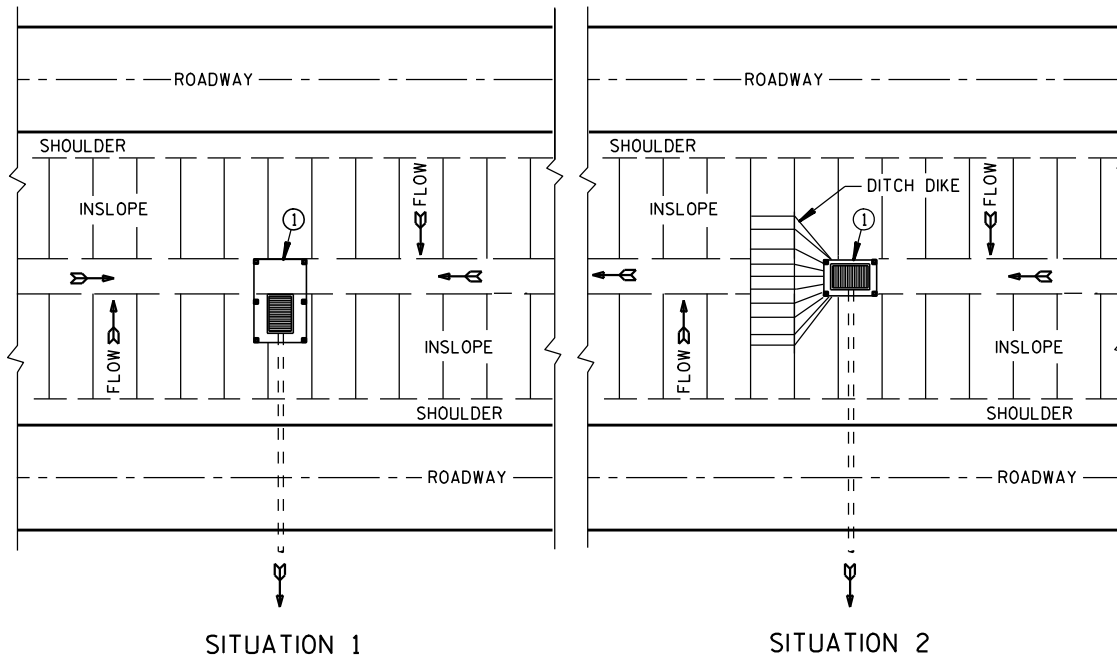
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



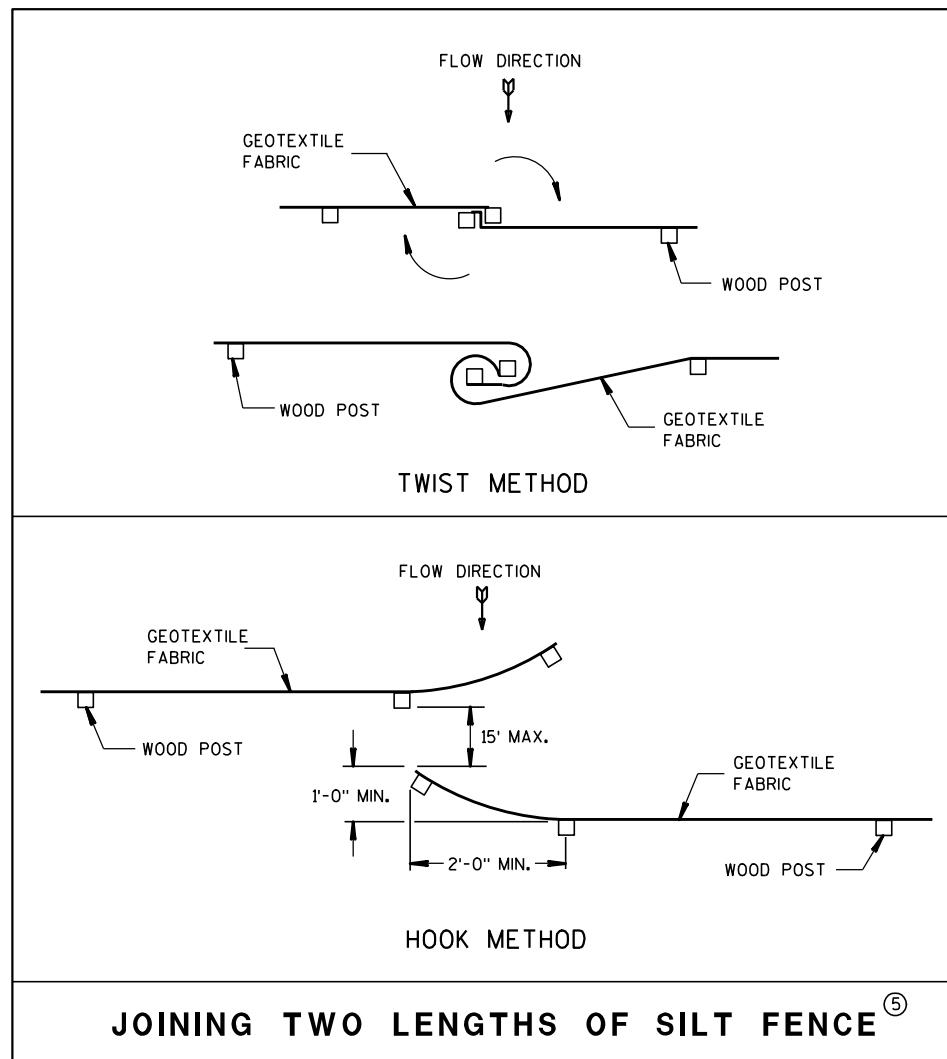
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

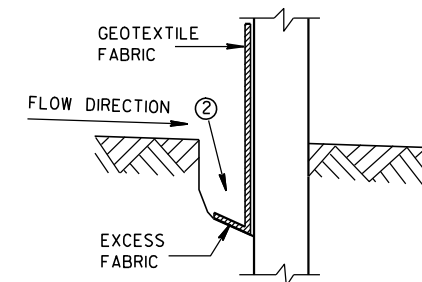


JOINING TWO LENGTHS OF SILT FENCE

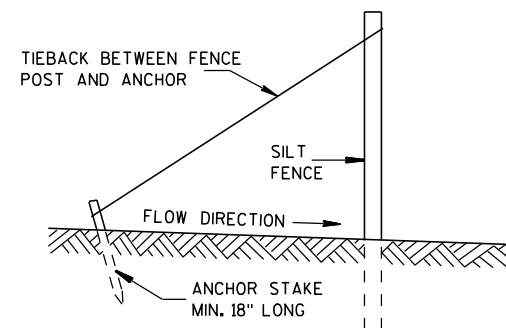
GENERAL NOTES

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

- 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.



TRENCH DETAIL

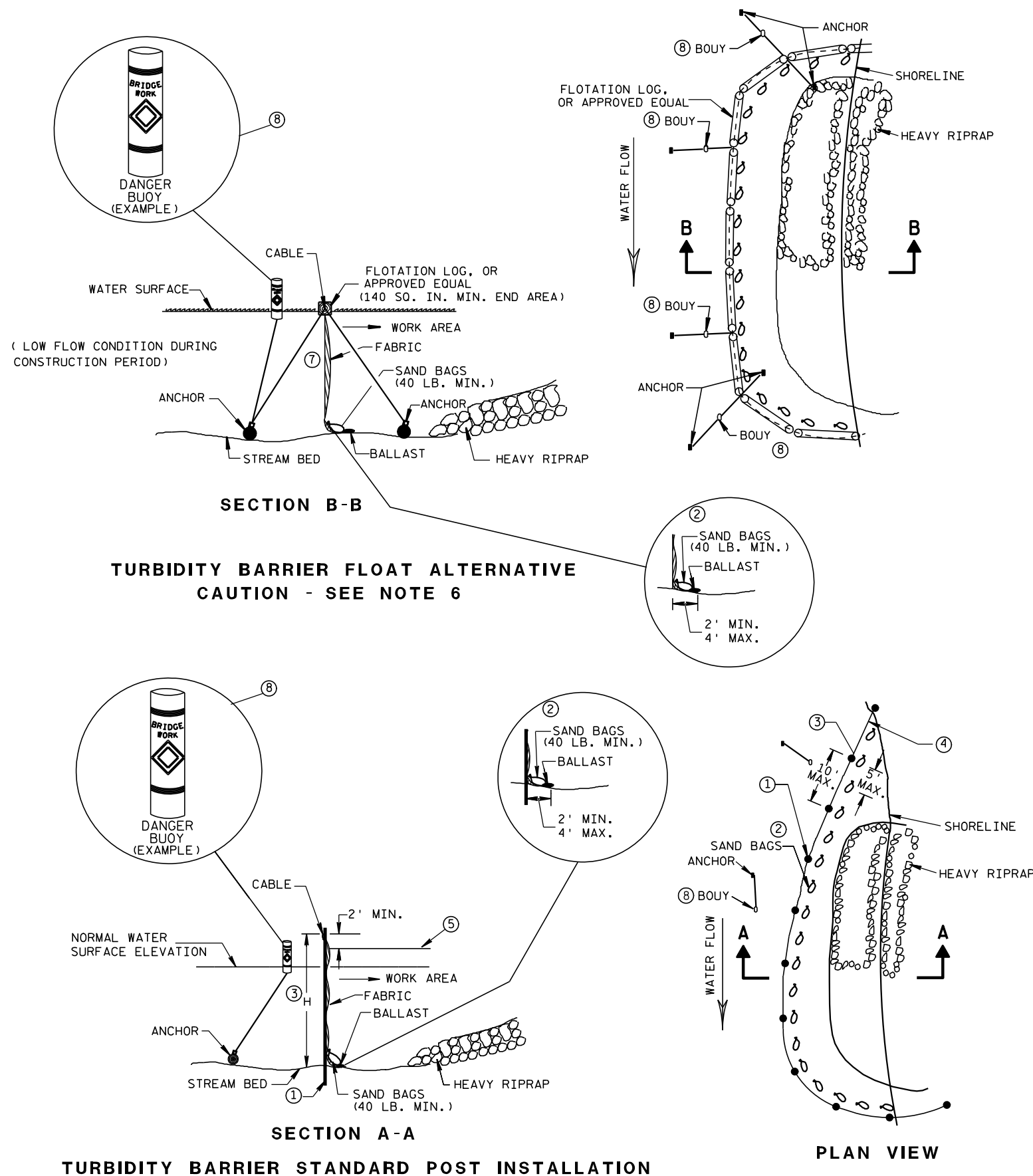


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

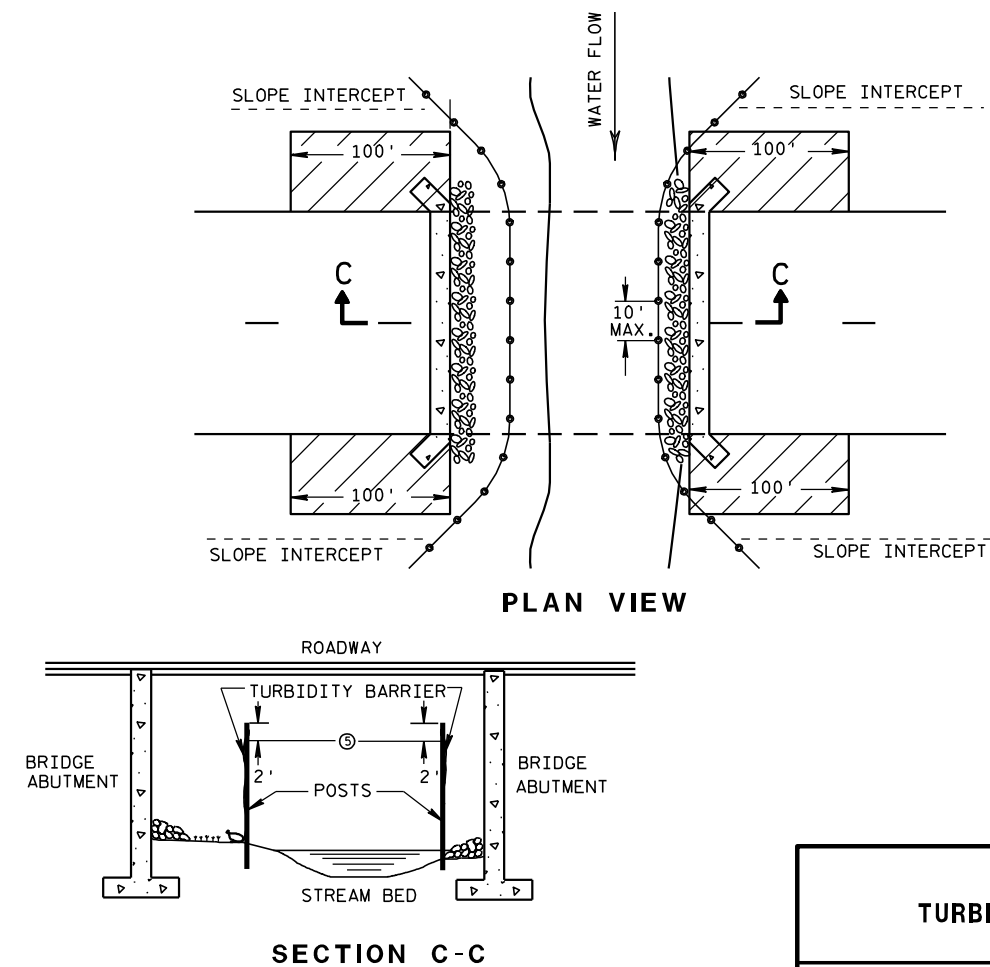


GENERAL NOTES

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.

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

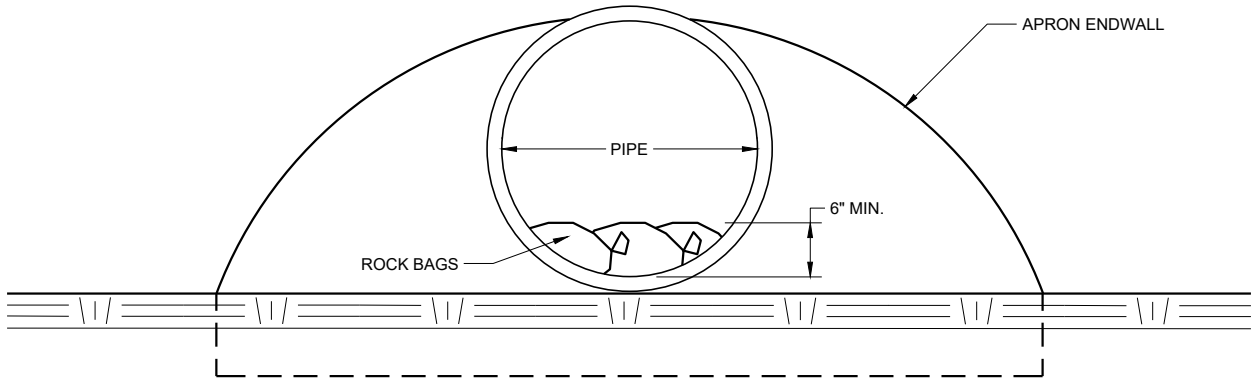
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

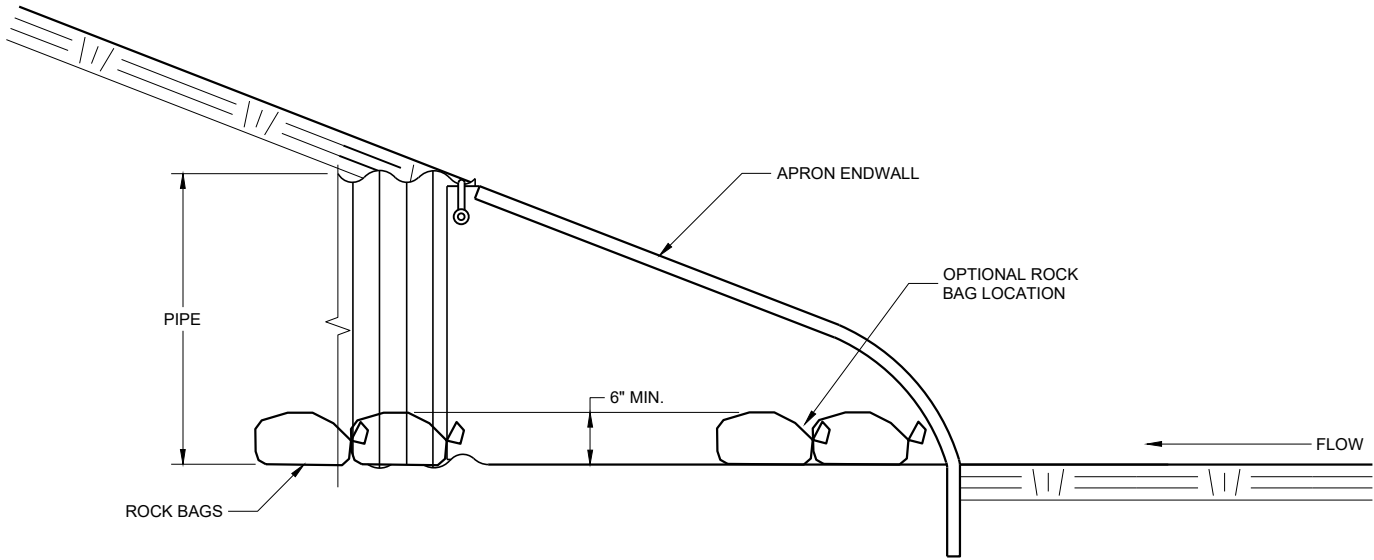
6/04/02
DATE

FWHA

/S/ Beth Connestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



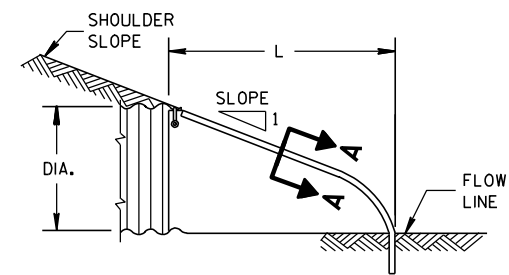
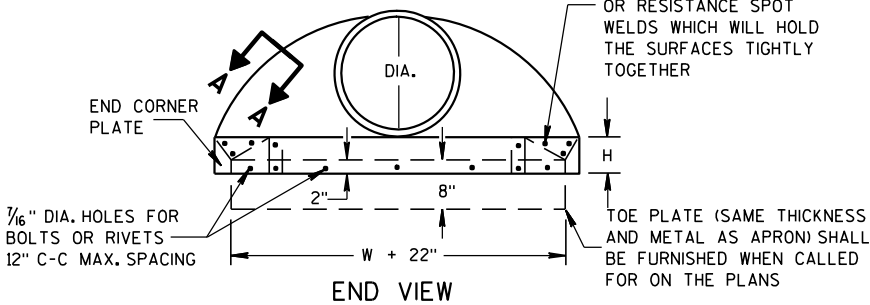
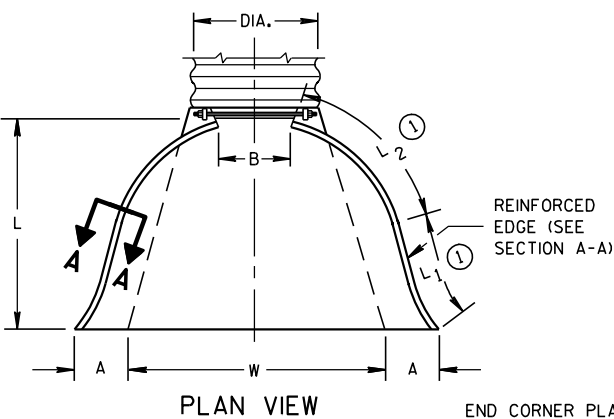
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
FHWA	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

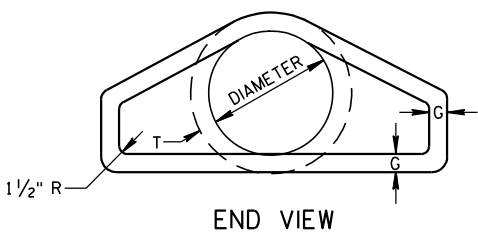
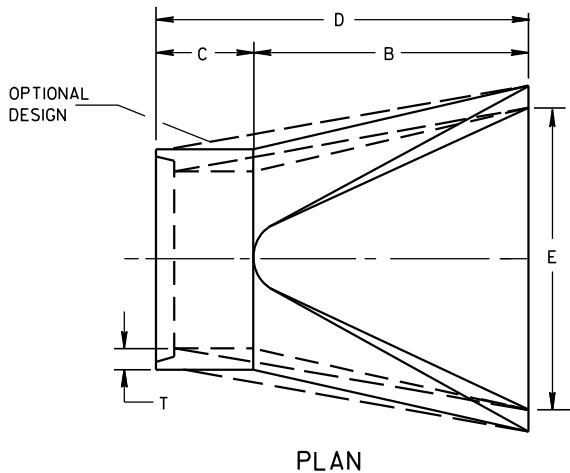
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



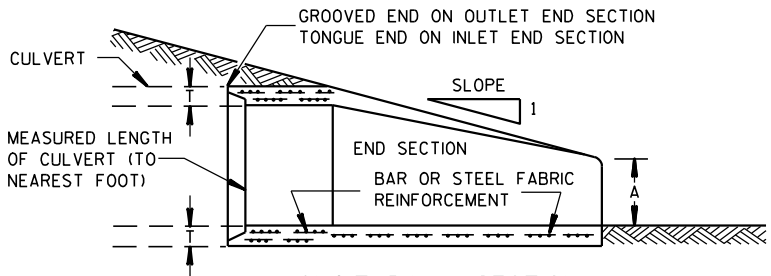
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1			
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1			
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1			
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1			
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1			
48	5	24	72	26	98	84	5	3 to 1			
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1			
60	6	30-35	60	39	99	96	5	2 to 1			
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1			
72	7	24-36	78	21	99	108	6	2 to 1			
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1			
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1			
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1			

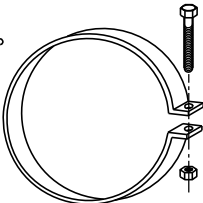
* MINIMUM
** MAXIMUM



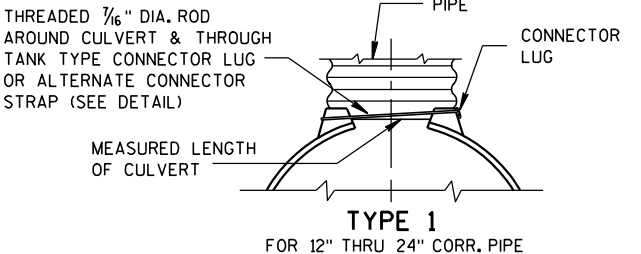
LONGITUDINAL SECTION
CONCRETE ENDWALLS



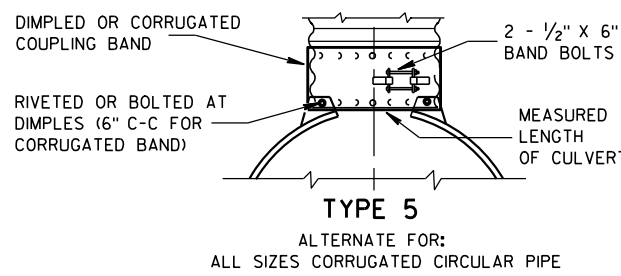
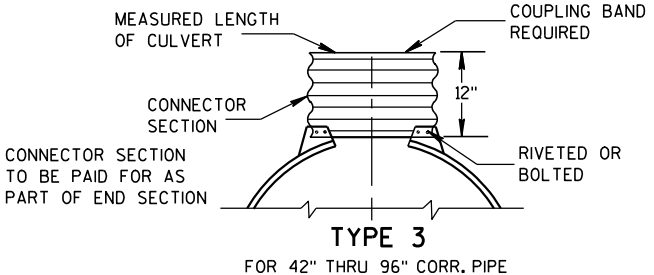
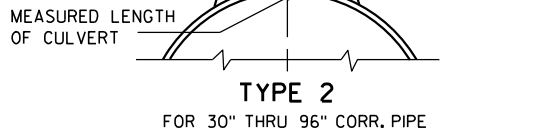
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



TYPE 1
FOR 12" THRU 24" CORR. PIPE



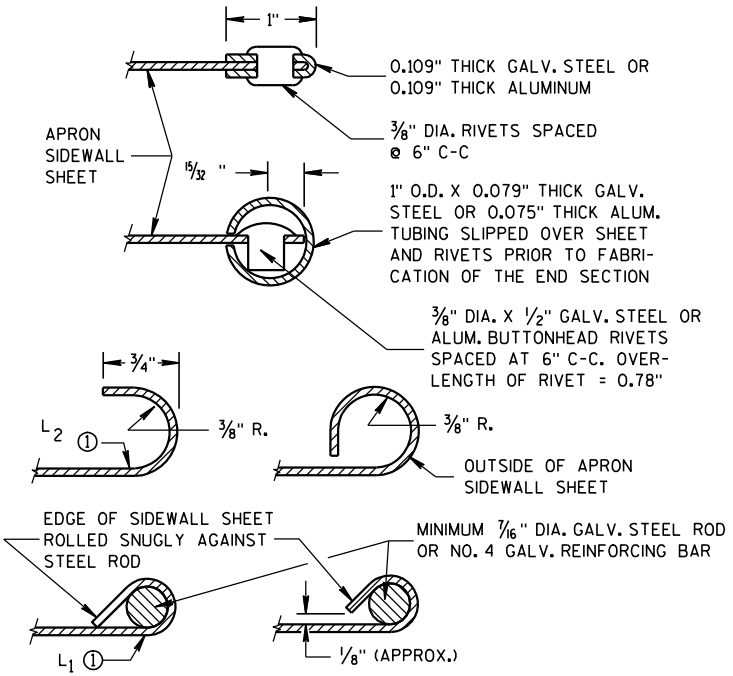
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

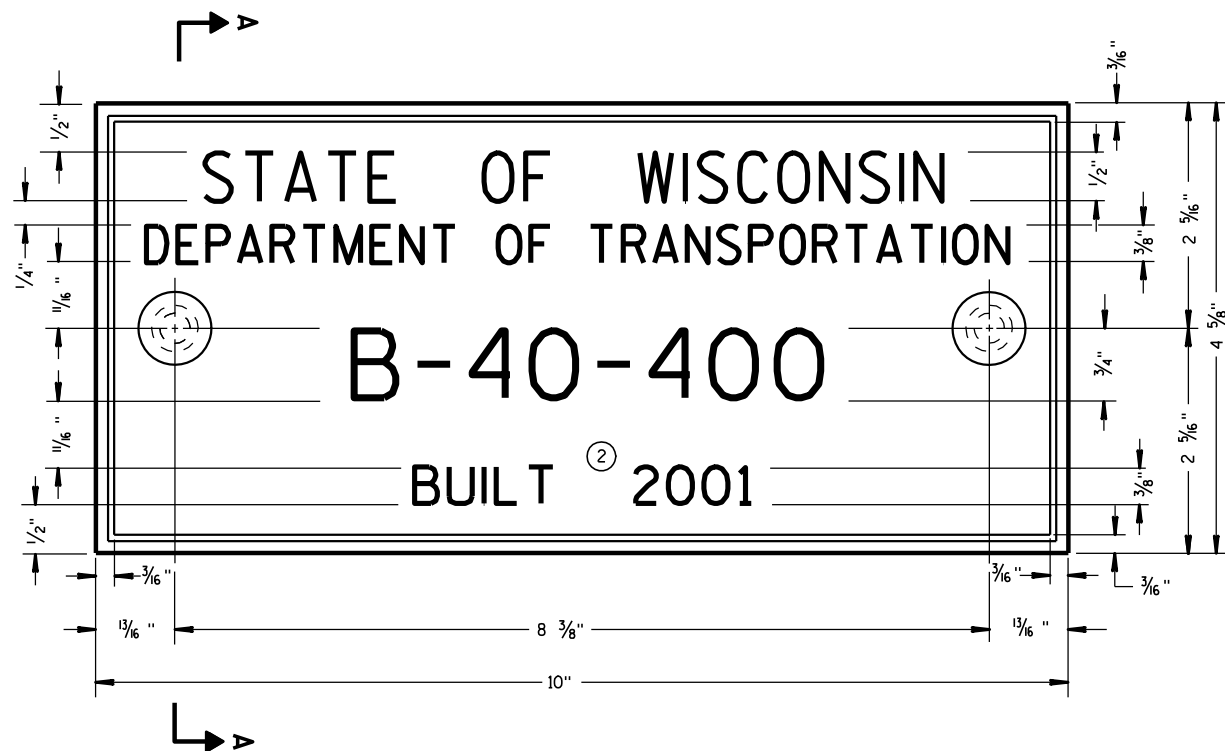
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

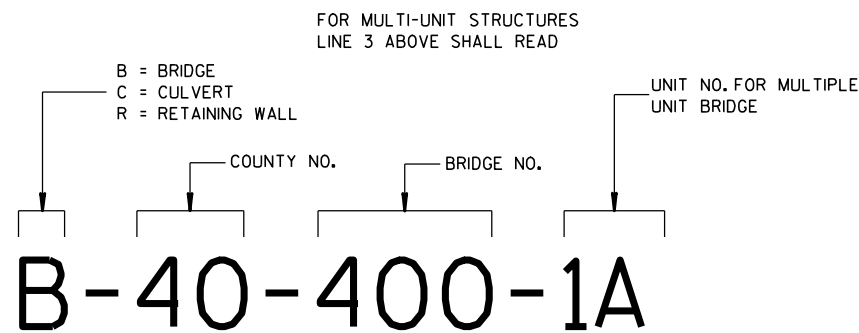
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



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



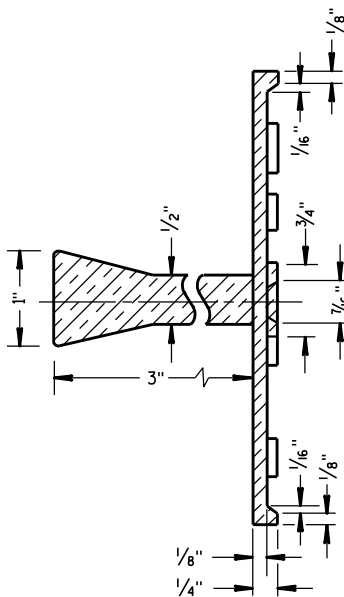
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

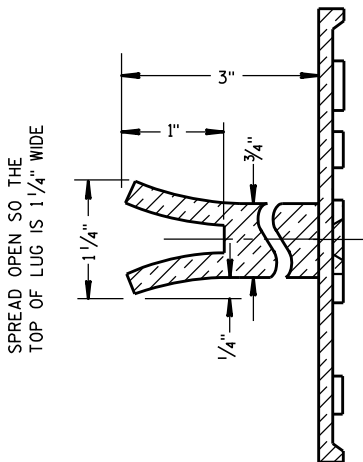
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

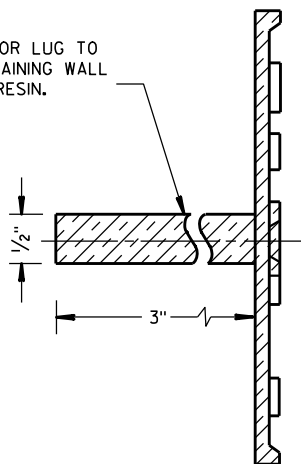


SECTION A-A



ALTERNATE LUG

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

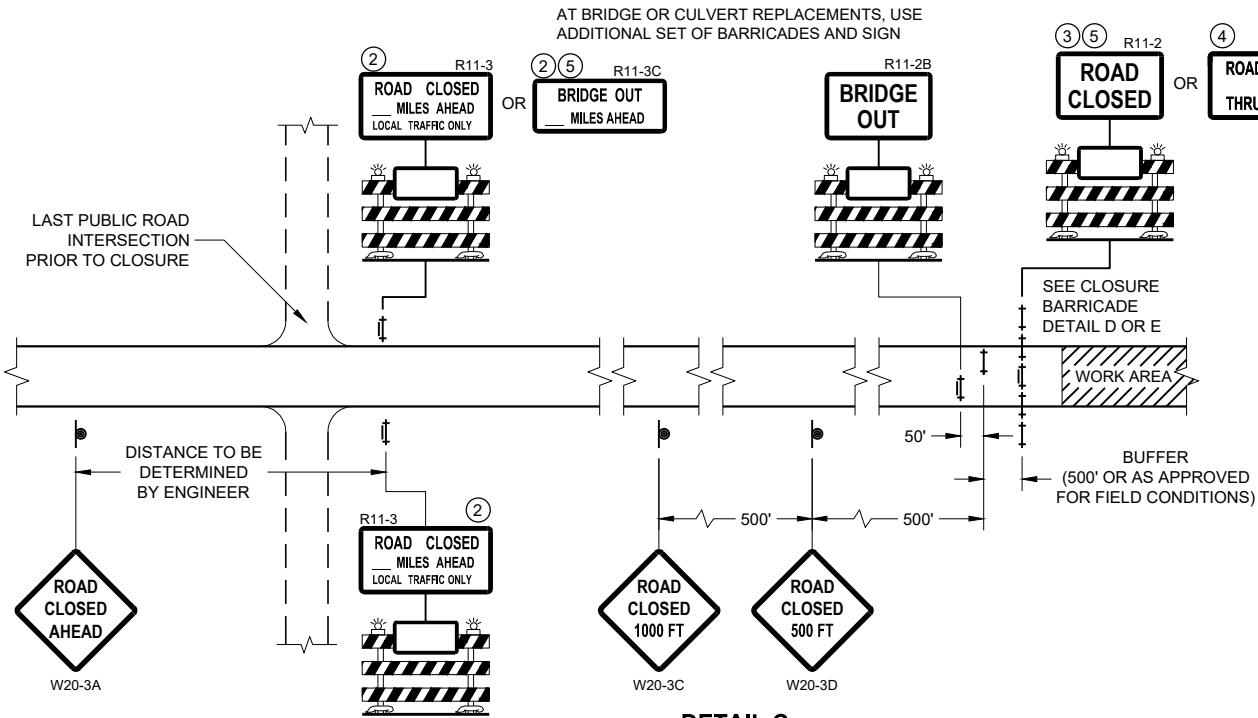
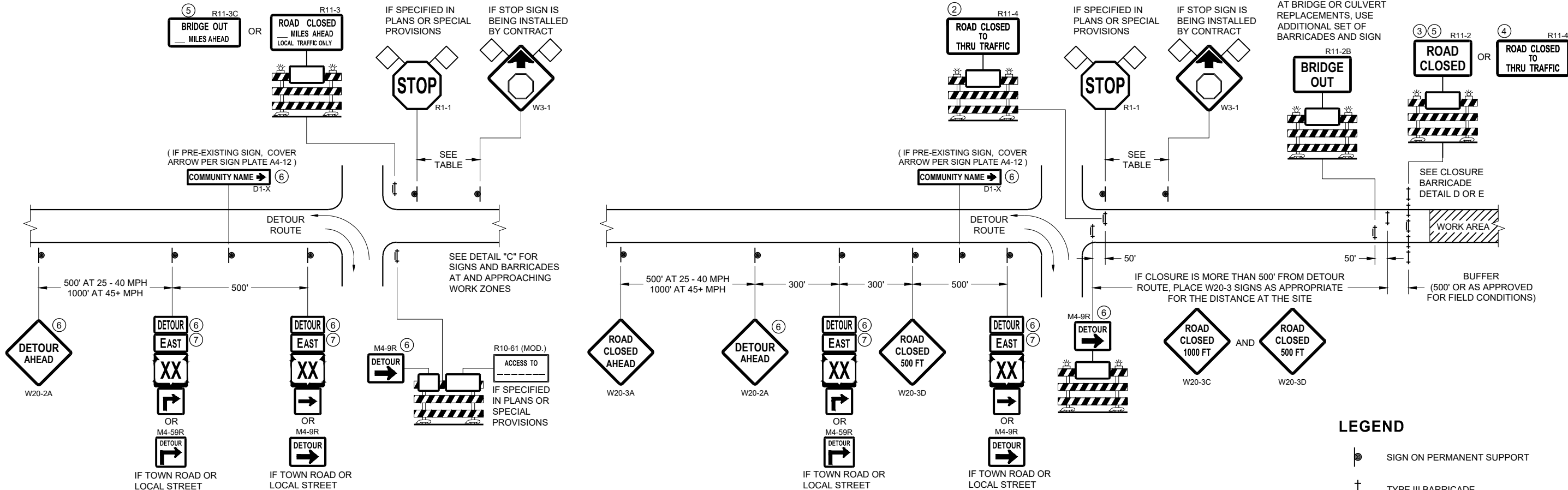


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

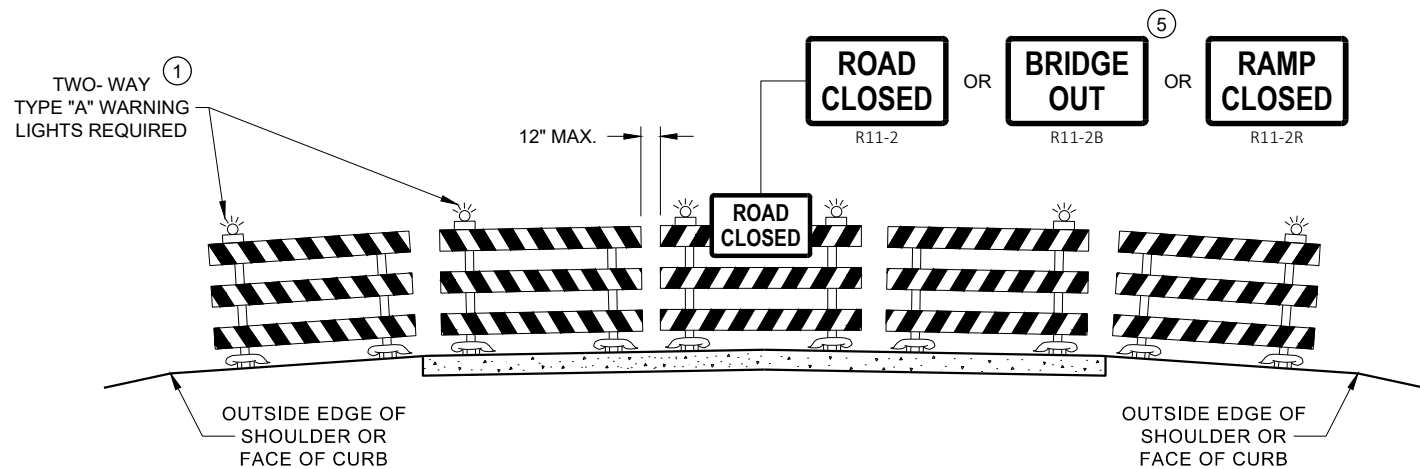
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

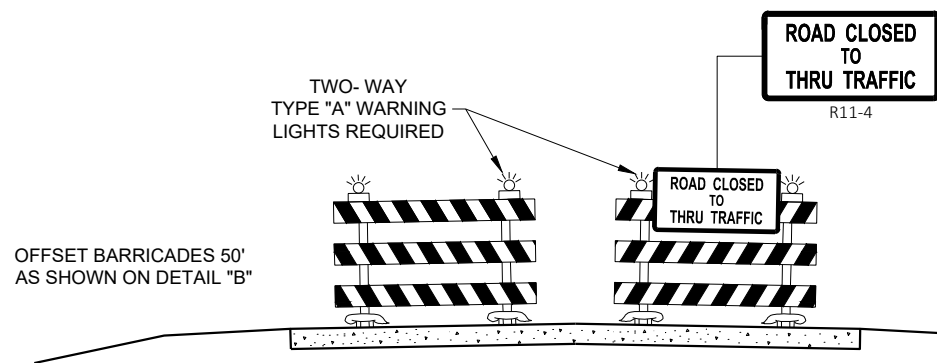
APPROVED
November 2018
DATE

/S/ Andrew Heidtke
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"

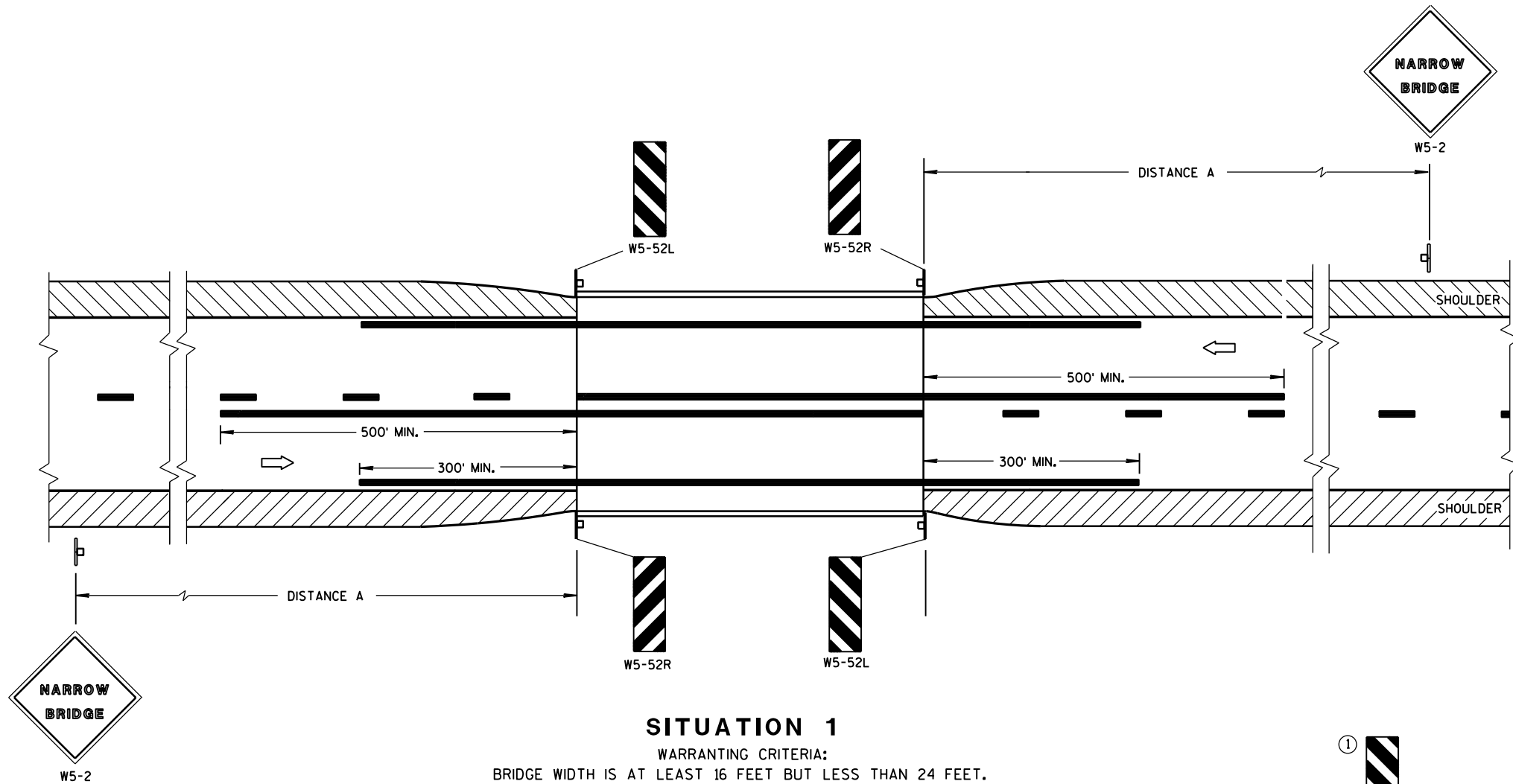
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS 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
November 2018 /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

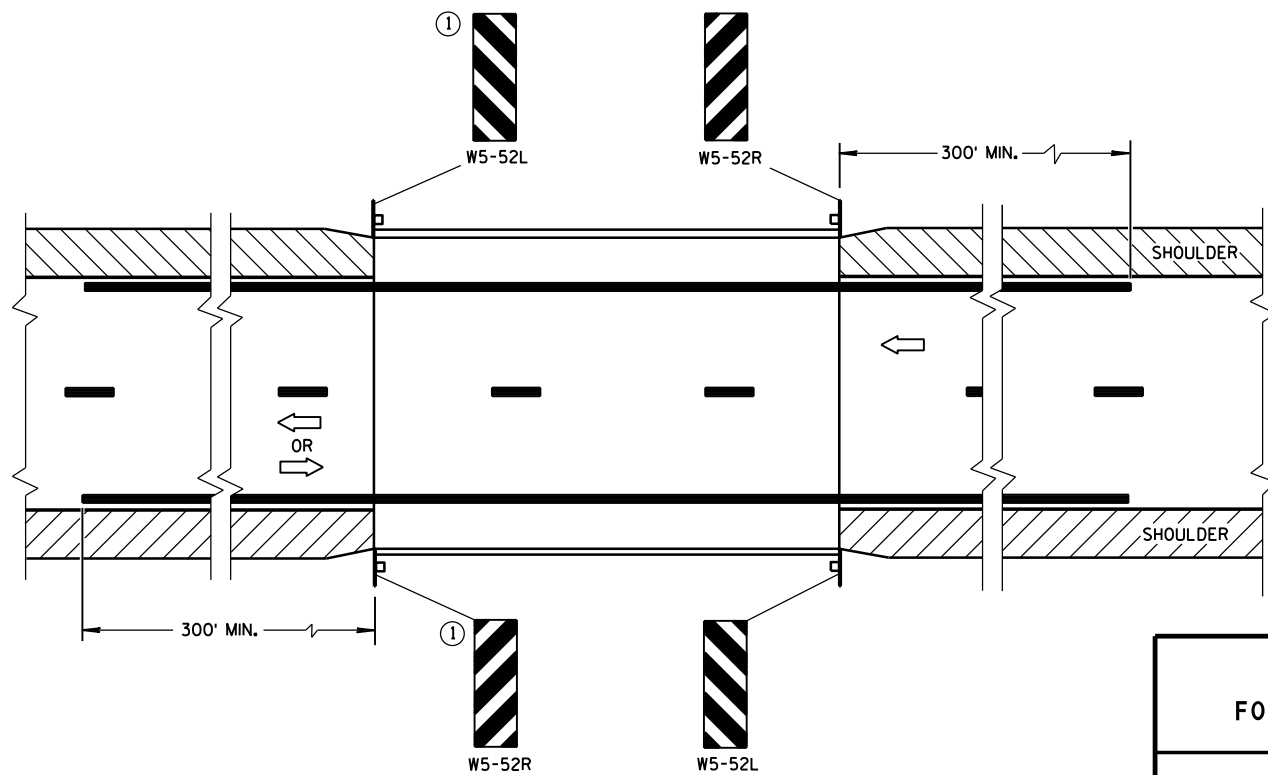
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

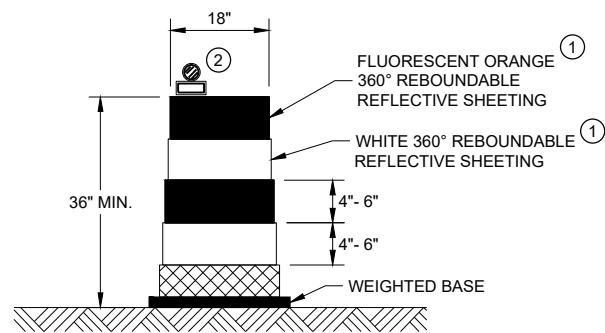
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

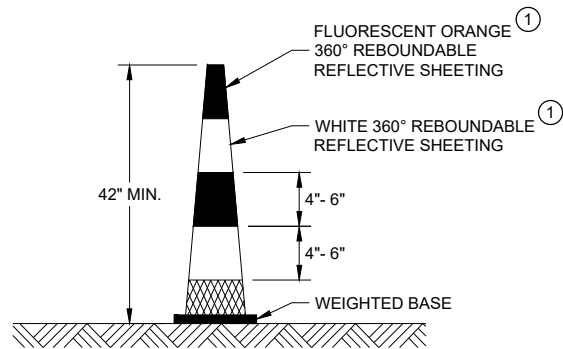
June 2017
DATE

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

FHWA

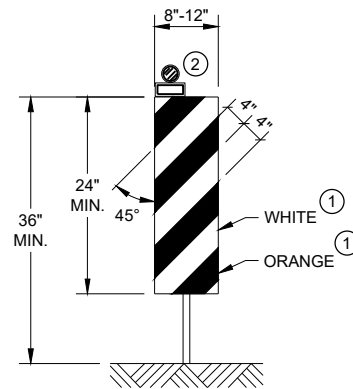


DRUM



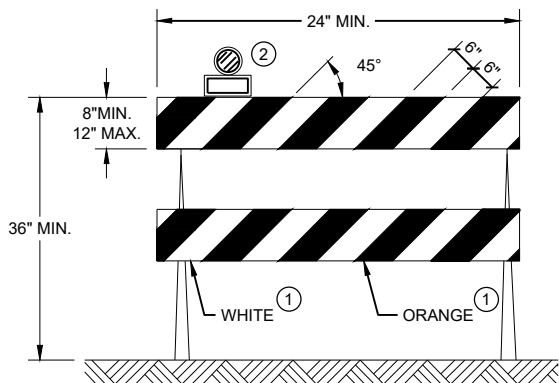
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



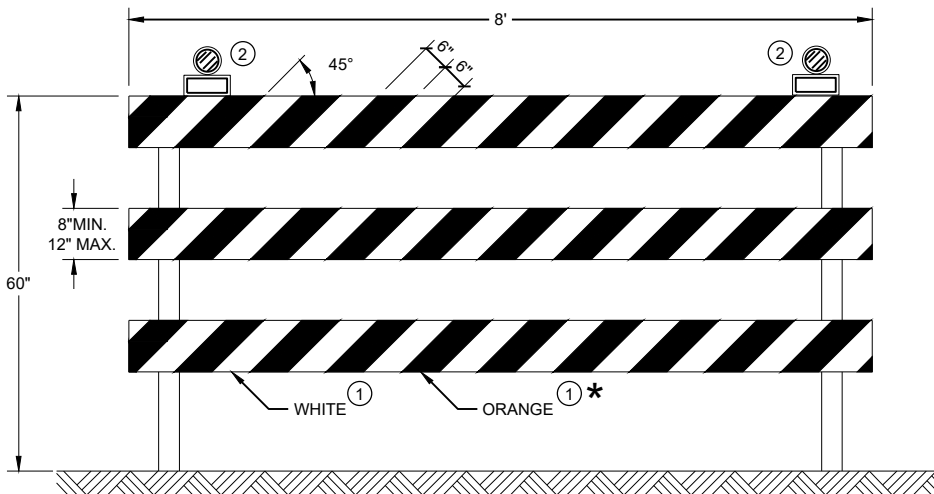
VERTICAL PANEL

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

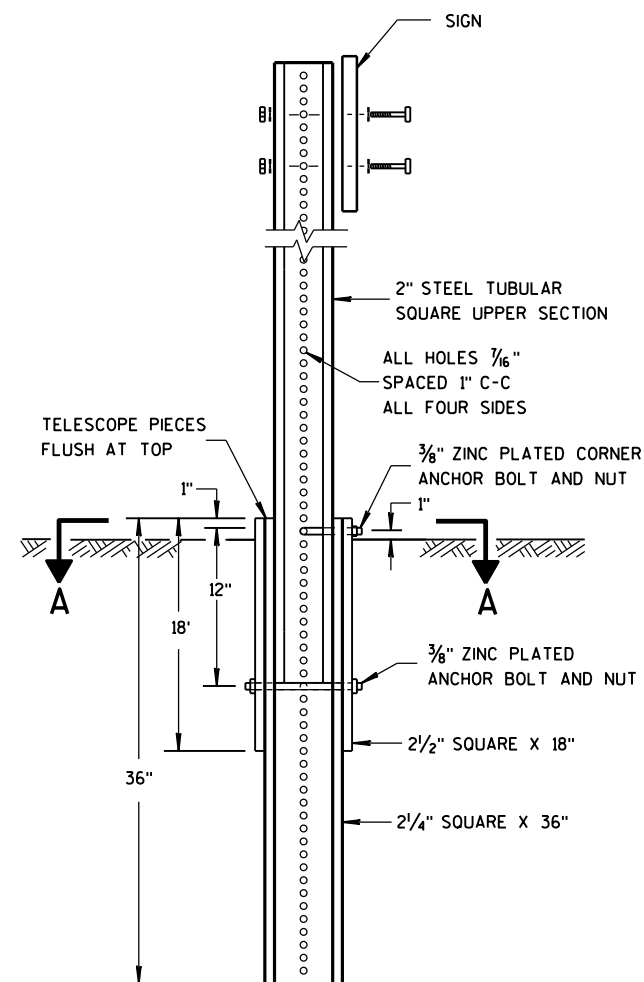
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

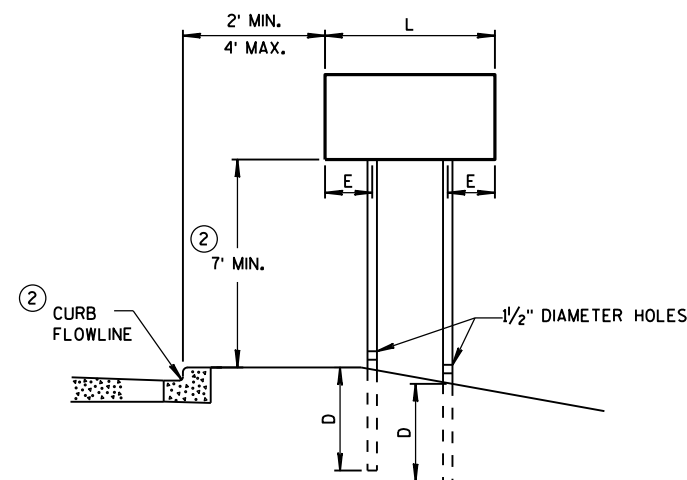
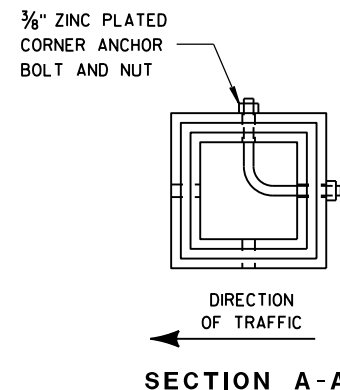


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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

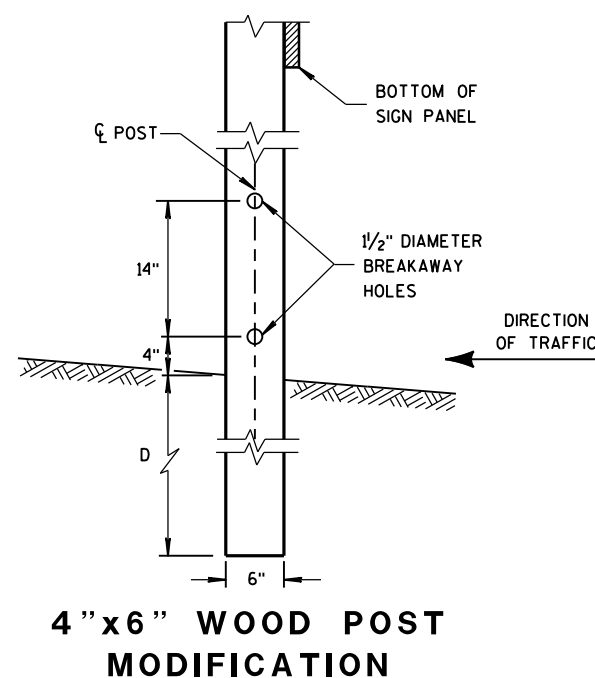
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



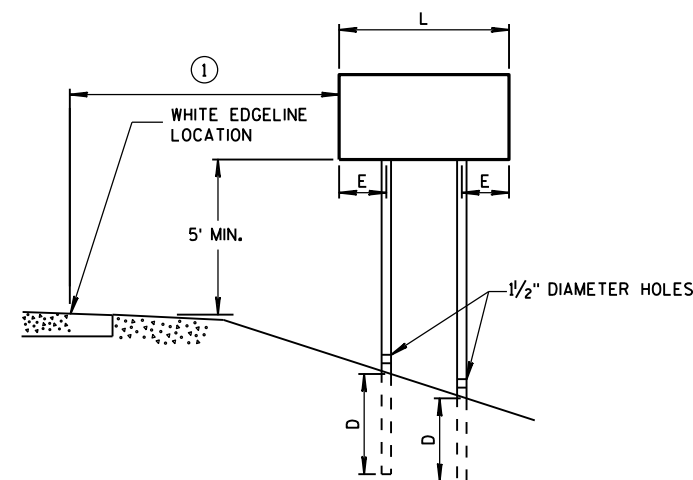
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

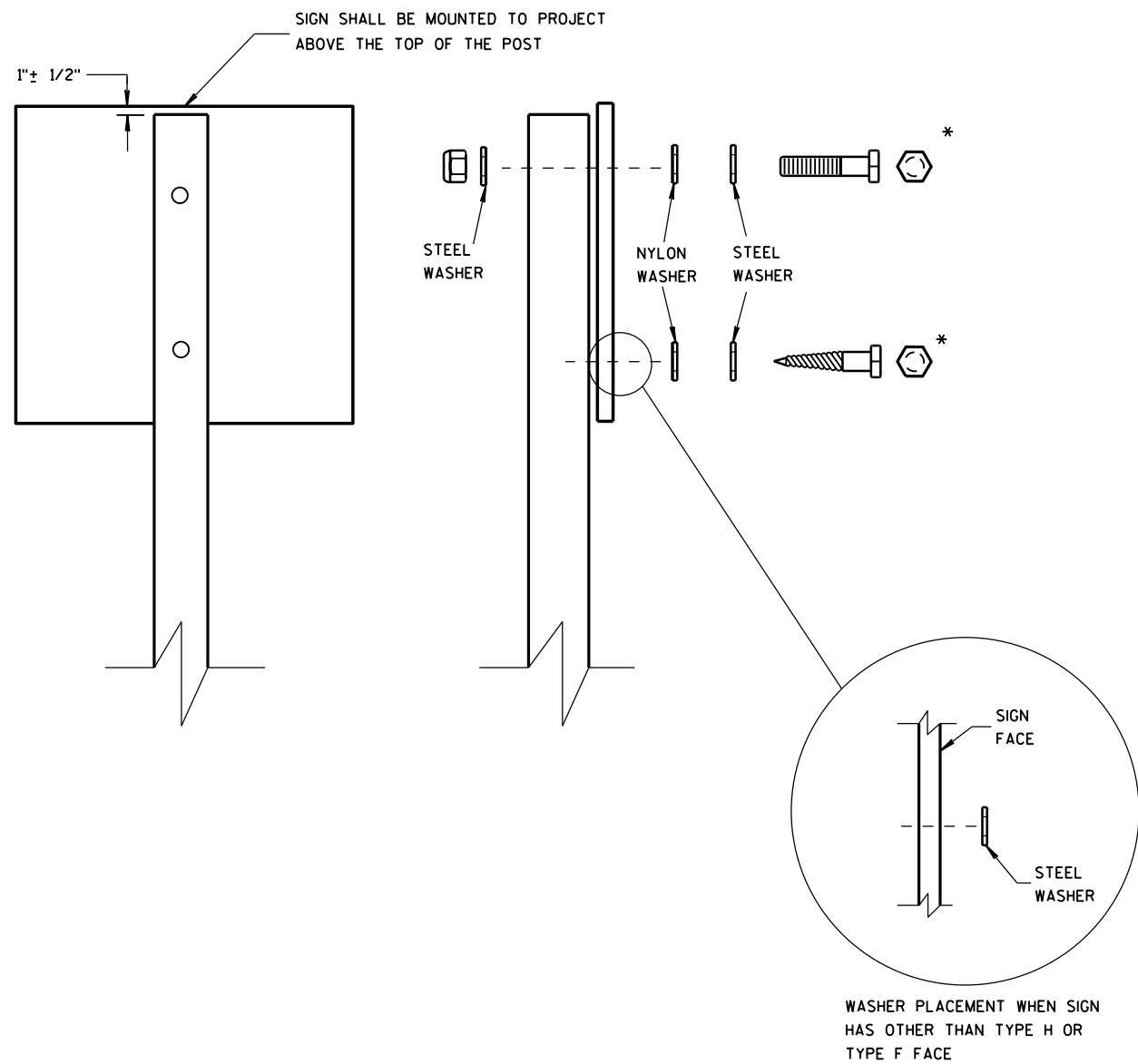
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

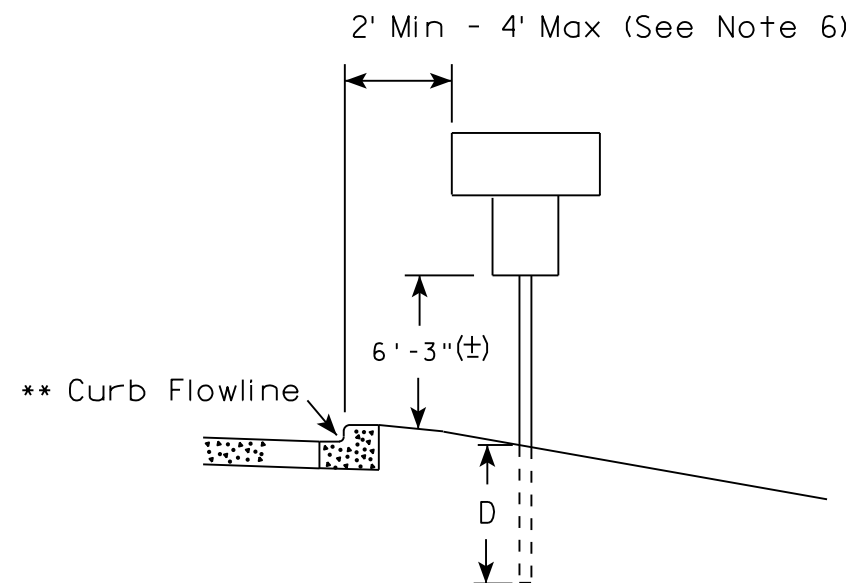
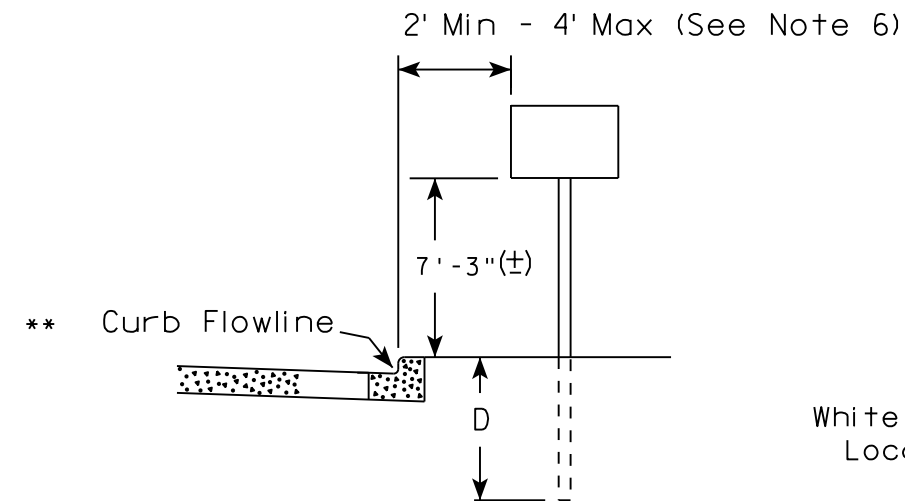
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

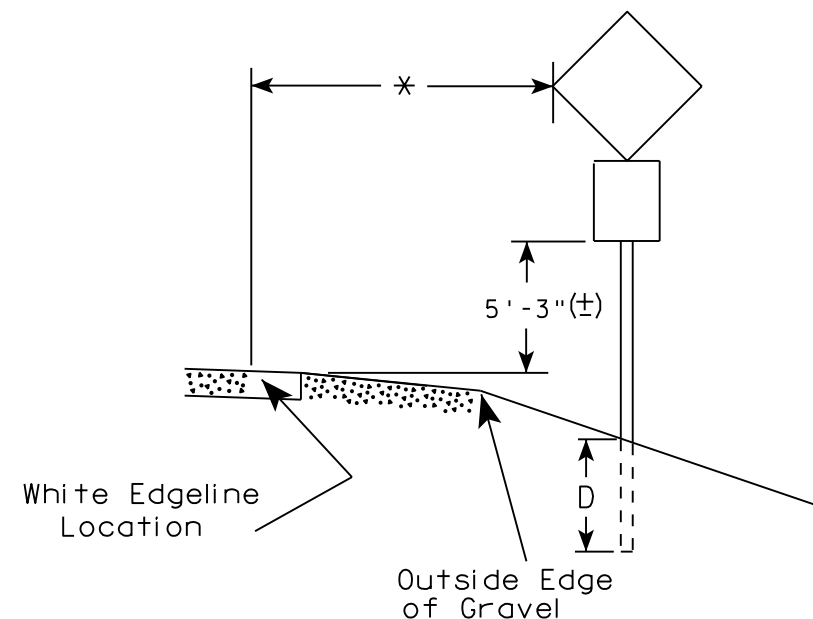
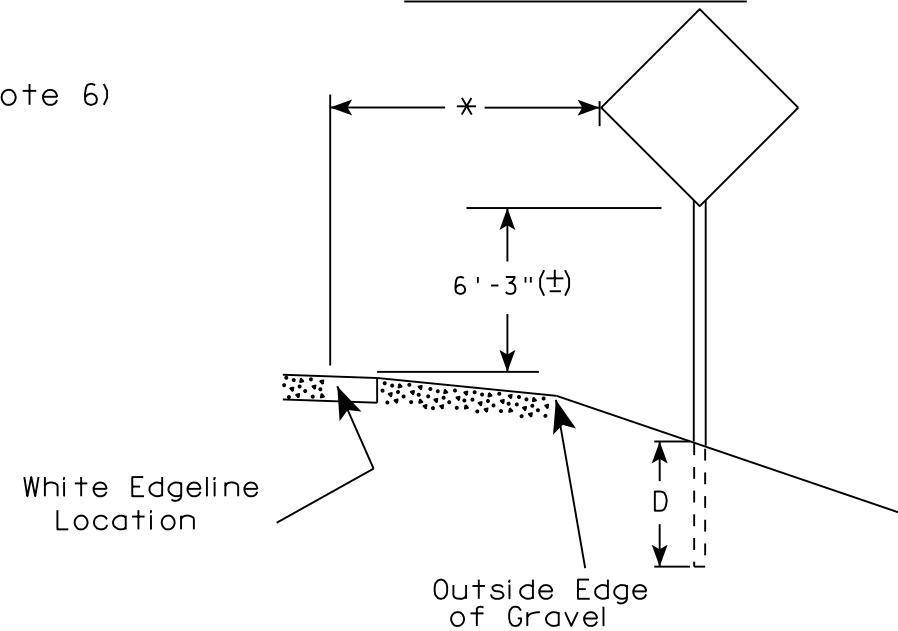
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

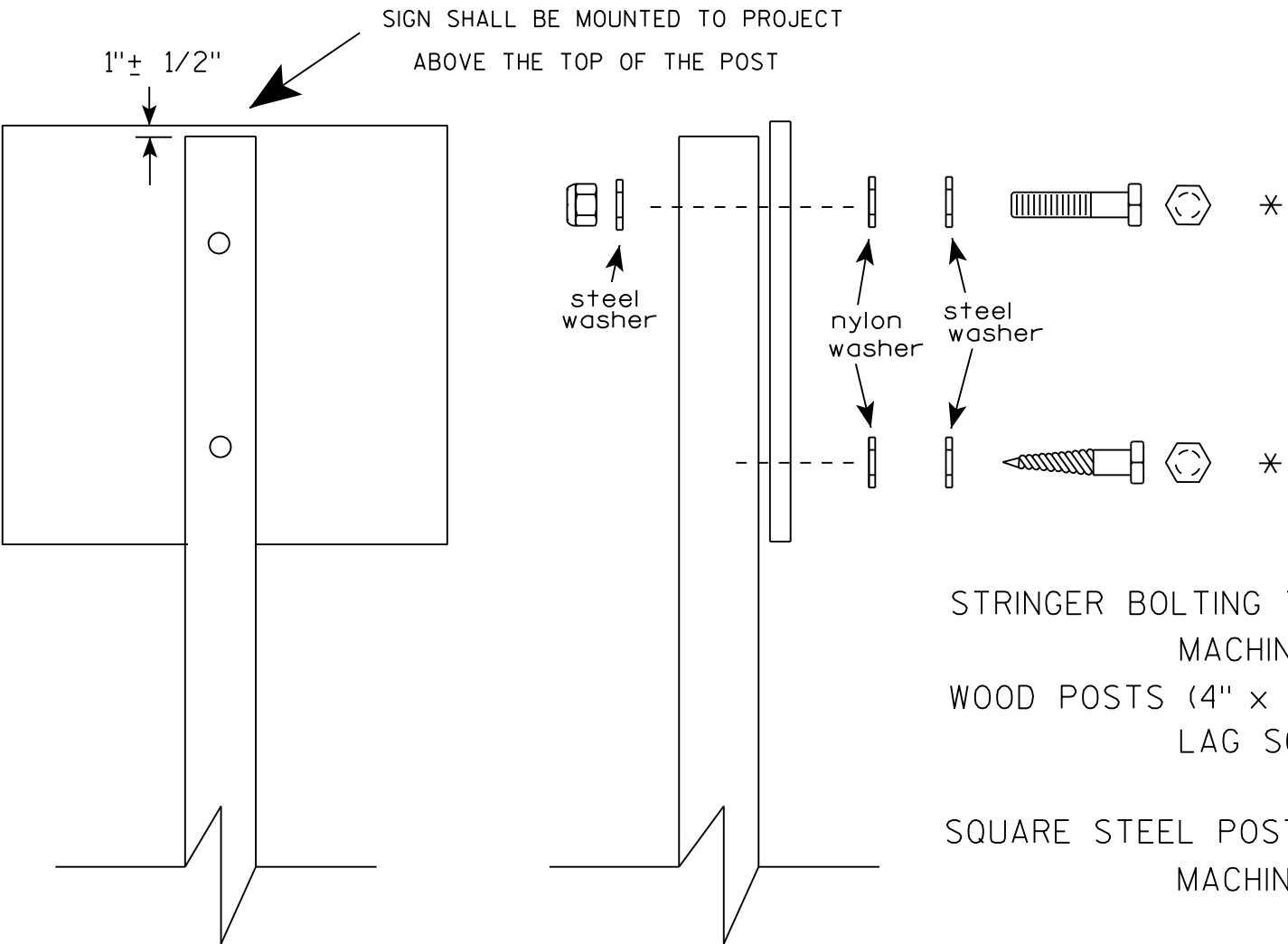
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21



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

* 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.

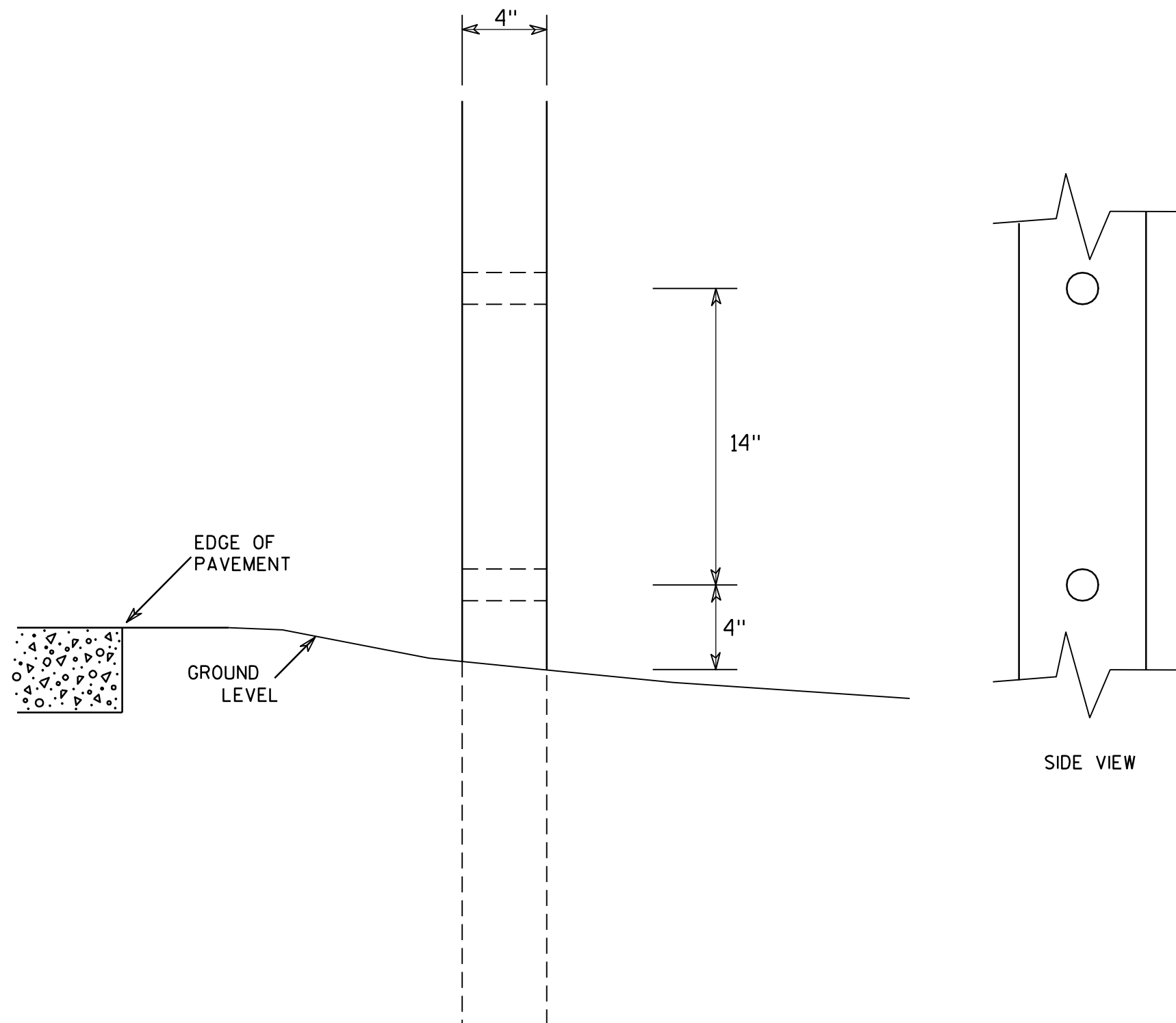
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

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

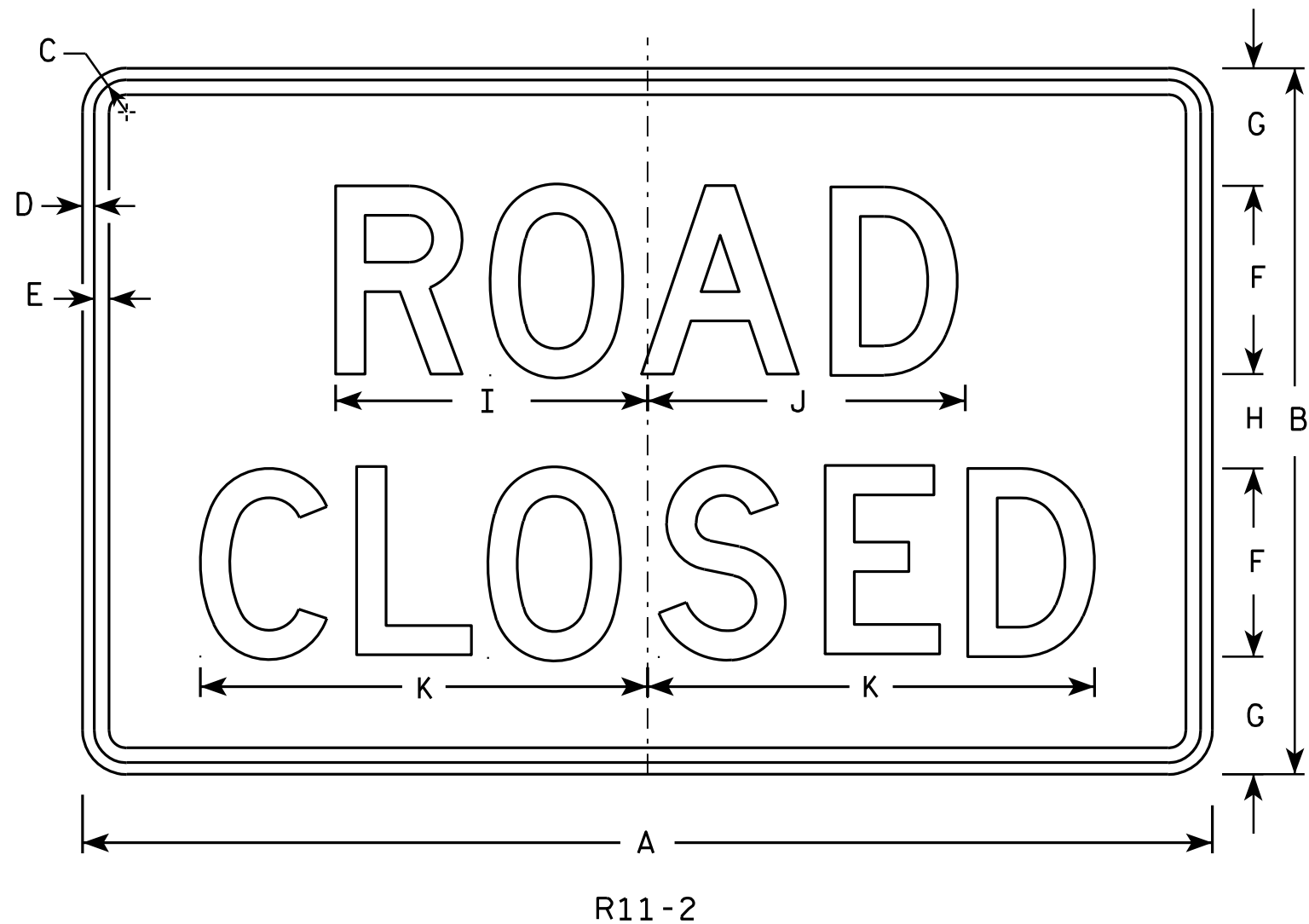
PROJECT NO:

HWY:

COUNTY:

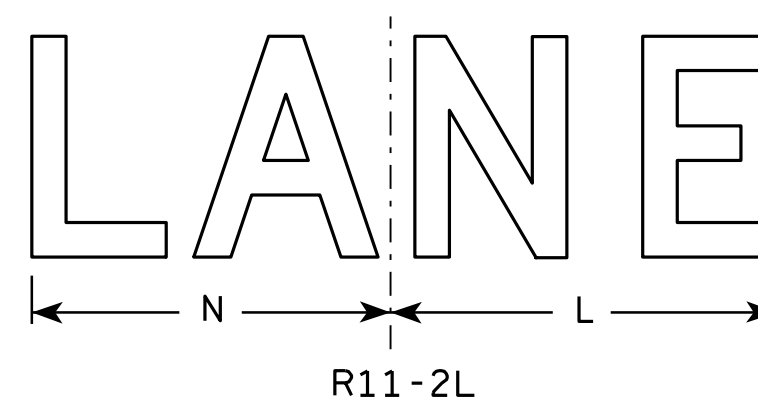
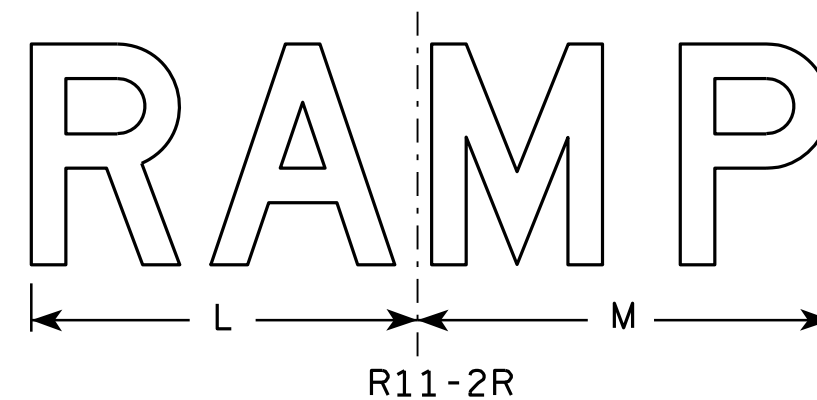
SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.
5. Modify the message as required.



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 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

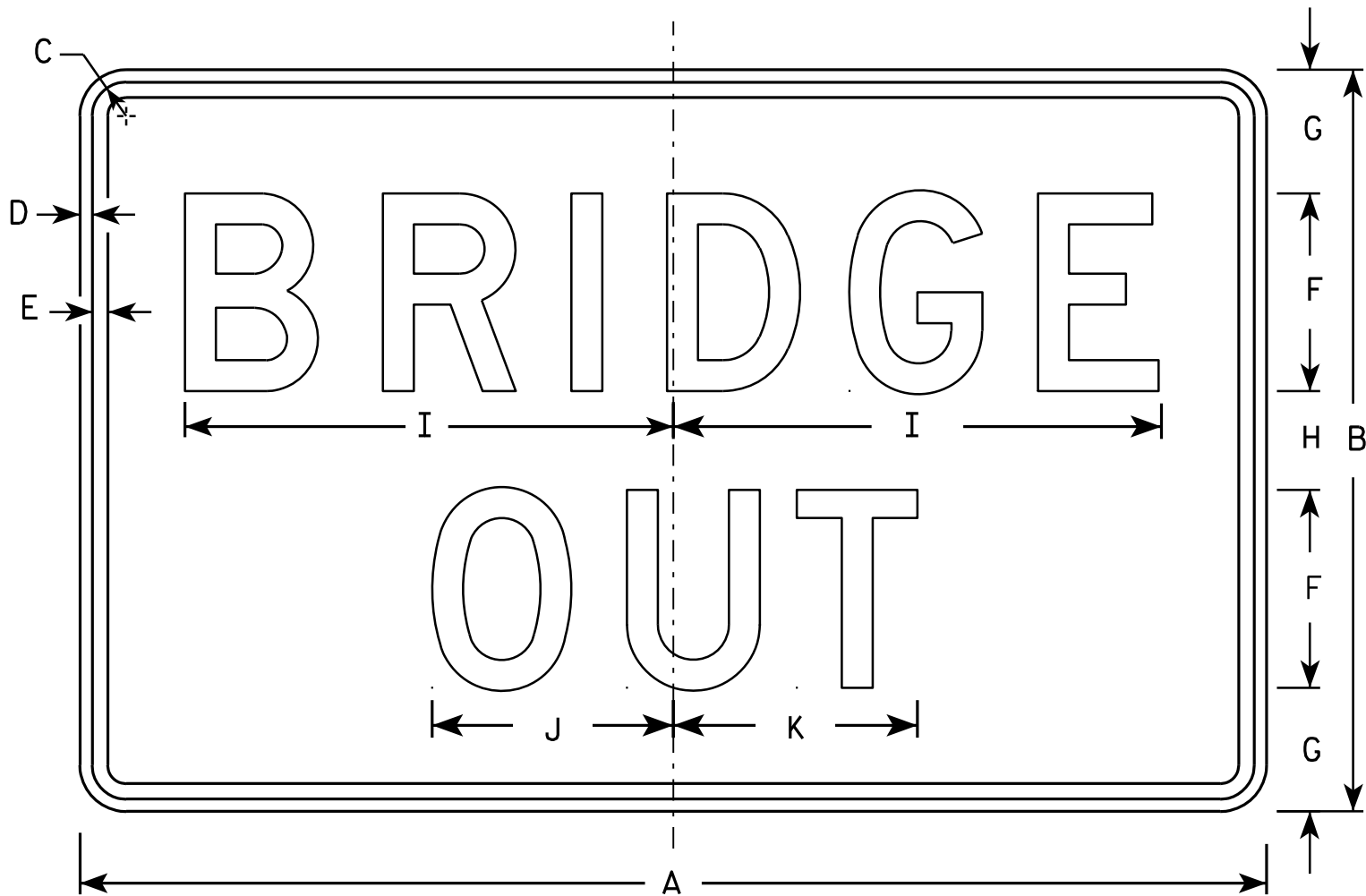
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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.



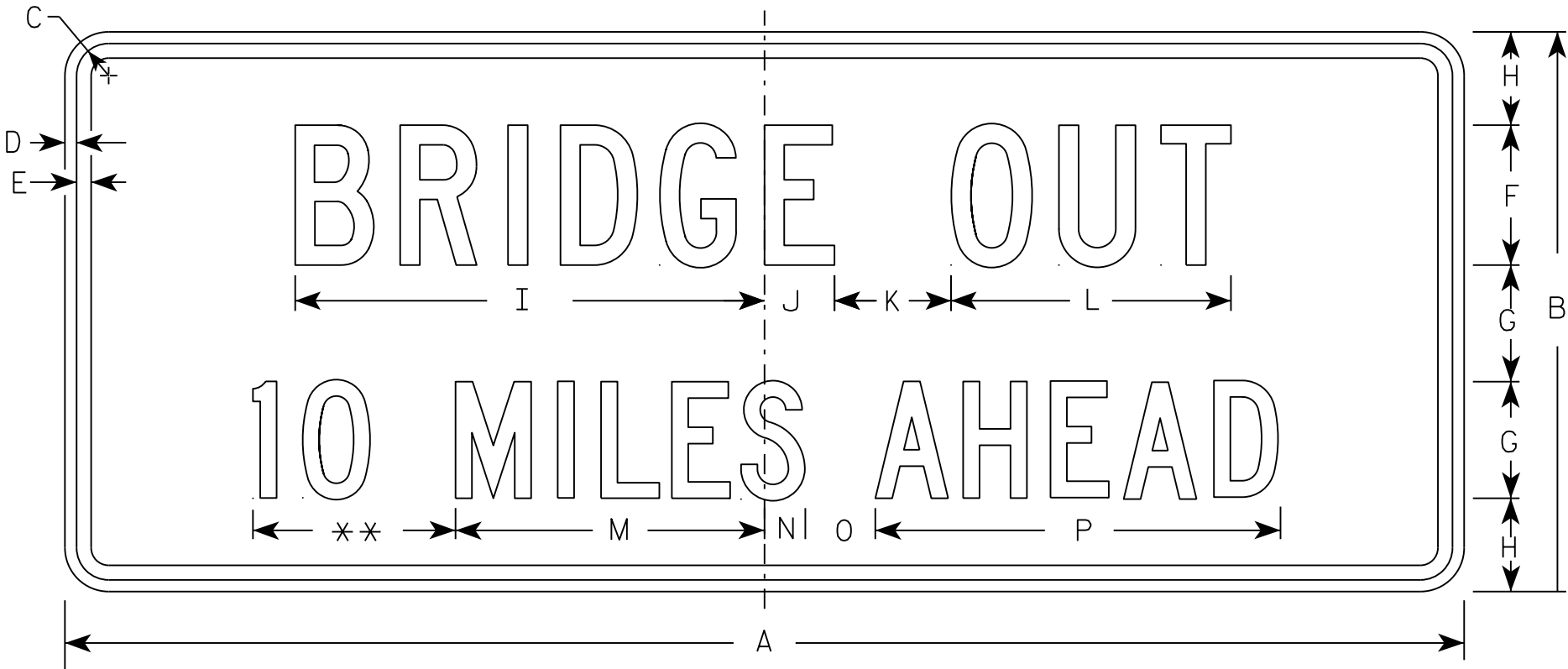
R11-2B

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 3⁄8	1⁄2	5⁄8	8	5	4	19 3⁄4	9 3⁄4	9 7⁄8																10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	19 3⁄4	9 3⁄4	9 7⁄8																10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	19 3⁄4	9 3⁄4	9 7⁄8																10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	19 3⁄4	9 3⁄4	9 7⁄8																10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	19 3⁄4	9 3⁄4	9 7⁄8																10.0

STANDARD SIGN	
R11-2B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-2B.2

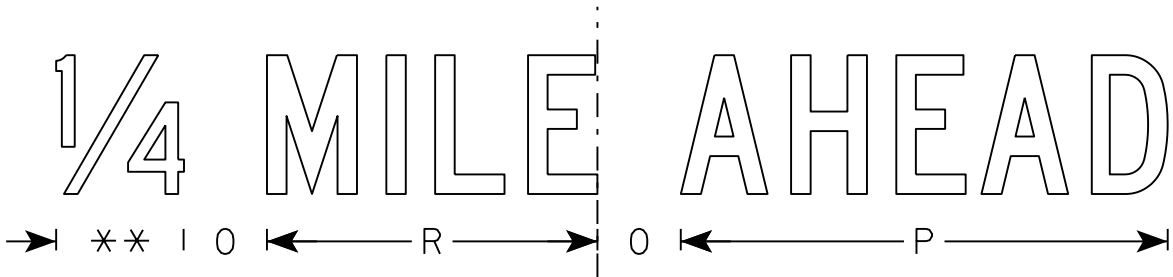
NOTES

- 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



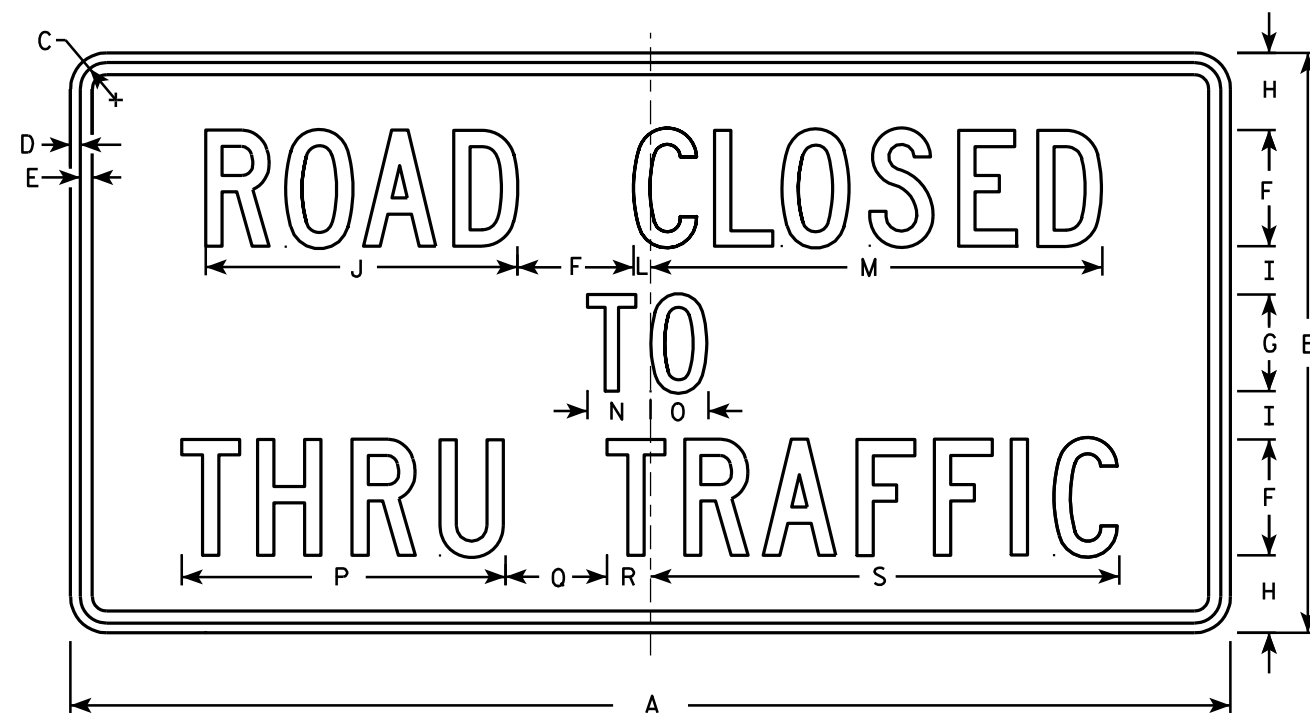
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 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 7/28/16 PLATE NO. R11-3C.3



R11-4

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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.

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	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

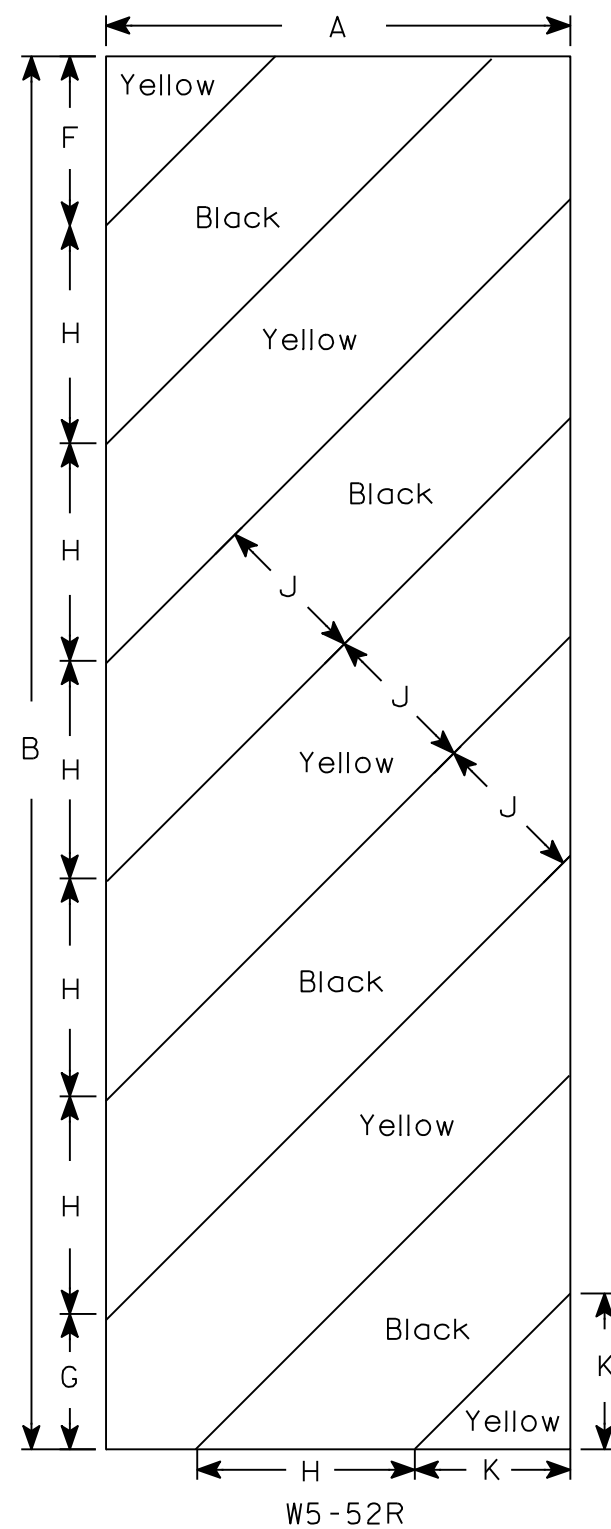
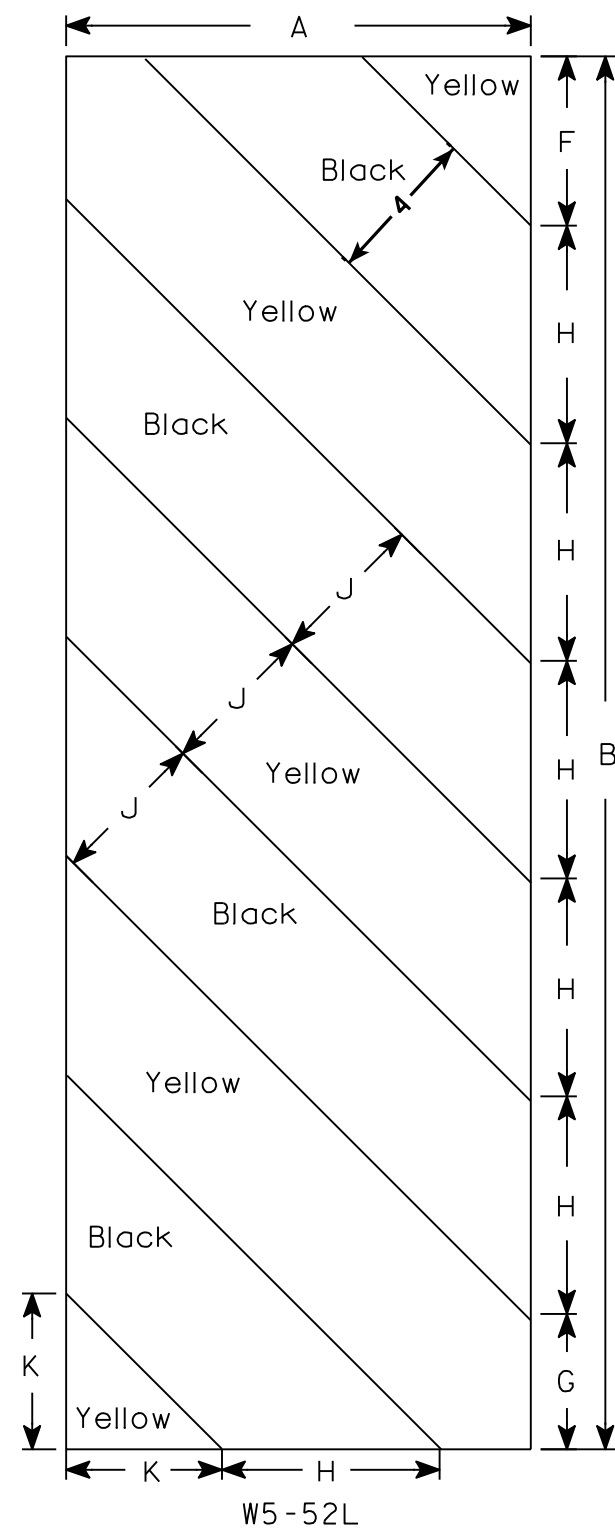
PROJECT NO:

HWY:

COUNTY:

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.

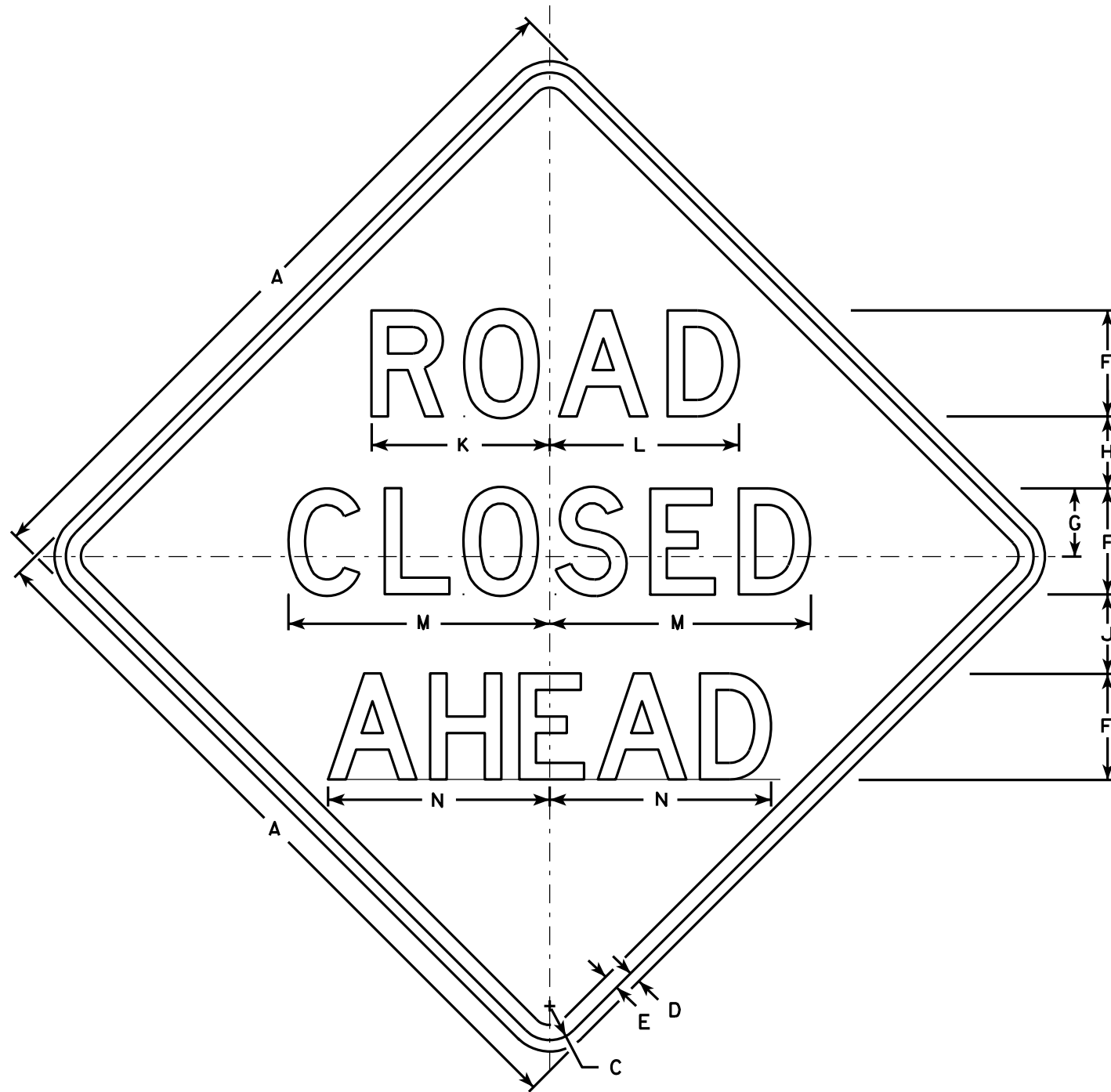
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 9⁄16																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



W20-3A

500 FT

W20-3D

1000 FT

W20-3C

1500 FT

W20-3B

1/2 MILE

W20-3G

1 MILE

W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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		1 5/8	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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 3/18/11 PLATE NO. W20-3.7

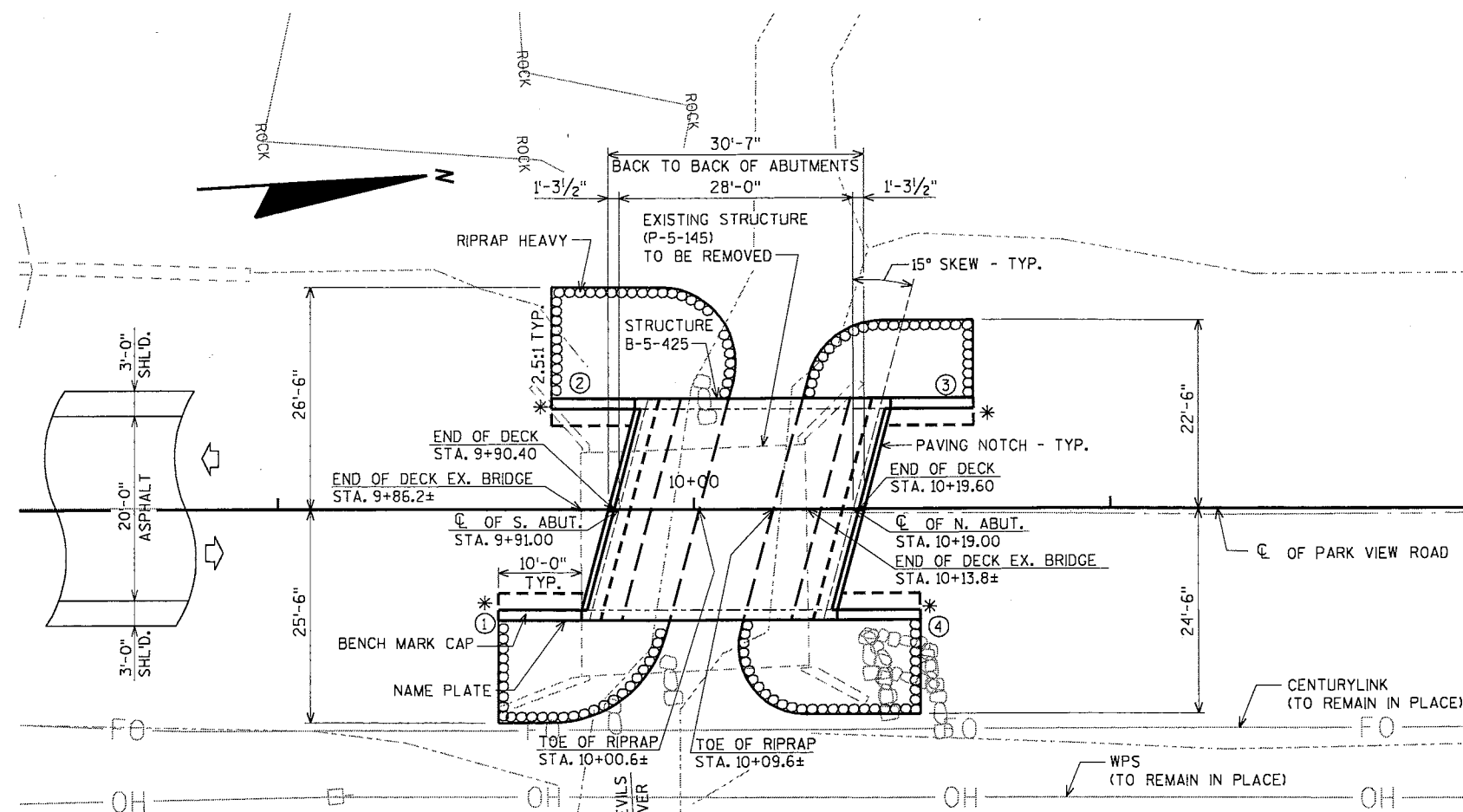
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

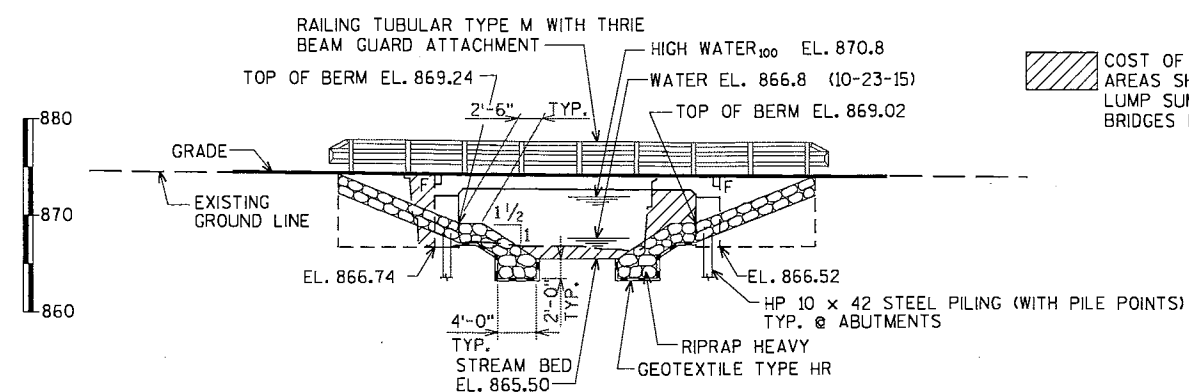


PLAN

SINGLE SPAN CONCRETE FLAT SLAB

* ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

○ DENOTES WING NUMBER.

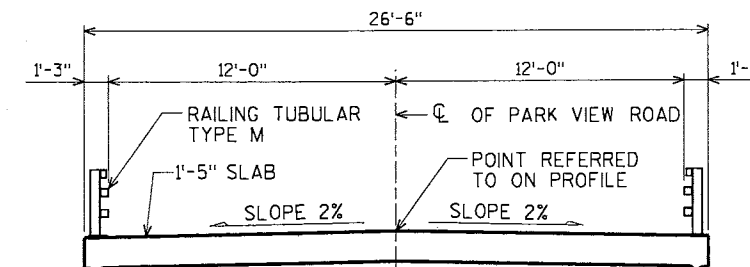


ELEVATION

(NORMAL TO C. OF RIVER)

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WINGS 1 & 2 DETAILS
6. SOUTH ABUTMENT DETAILS & BILL OF BARS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WINGS 3 & 4 DETAILS
9. NORTH ABUTMENT DETAILS & BILL OF BARS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. RAILING TUBULAR TYPE M



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: 1.14
 OPERATING RATING FACTOR: 1.48
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE 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.

HYDRAULIC DATA:

100 YEAR FREQUENCY

O_{100} = 400 c.f.s.
 $VEL.$ = 5.0 f.p.s.
 HW_{100} = EL. 870.8
 WATERWAY AREA = 80 sq. ft.
 DRAINAGE AREA = 3.4 sq. mi.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 8
 DATUM = NAVD88 (2012)

2 YEAR FREQUENCY

O_2 = 94 c.f.s.
 $VEL.$ = 2.5 f.p.s.
 HW_2 = EL. 868.9

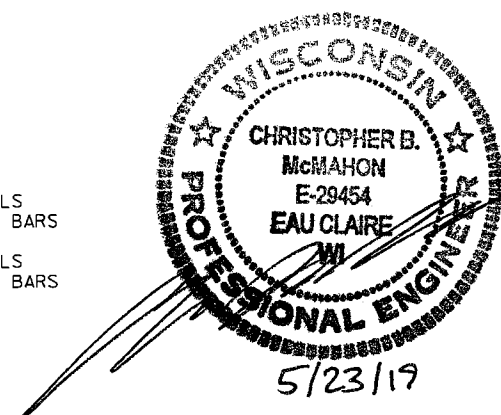
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS ± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 25'-0" FOR THE SOUTH ABUTMENT AND 30'-0" FOR 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.

TRAFFIC DATA:

A.A.D.T. = 20 (2018)
 A.A.D.T. = 25 (2038)
 R.D.S. = 55 M.P.H.

PROFILE GRADE LINE
(PARK VIEW ROAD)

BENCH MARK:
 CHISELED SQUARE ON SW WING
 STA. 9+87.13' LT.
 EL. 873.90

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> SDR		08/26/19 DATE	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-5-425			
PARK VIEW ROAD OVER THE DEVILS RIVER			
COUNTY	BROWN	TOWN/CITY/VILLAGE	MORRISON
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	KLW	DRAWN BY	CKJ/CLS
PLANS CK'D.	CBM		
GENERAL PLAN			SHEET 1 OF 12

BRIDGE OFFICE CONTACT:
 WILLIAM DREHER
 (608)-266-8489

CONSULTANT CONTACT:
 CHRIS MCMAHON
 (715)-834-3161

\$PRNAME\$
U:\45-0415.00 - Brown Co., Park View Rd\Structures\450415 gp.dgn

STATE PROJECT NUMBER

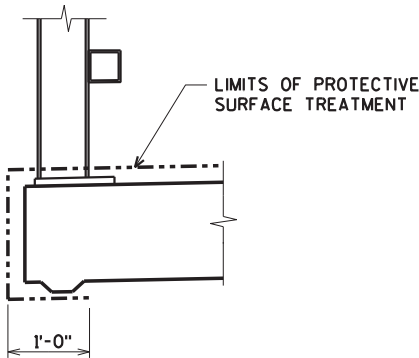
4508-08-71

TOTAL ESTIMATED QUANTITIES

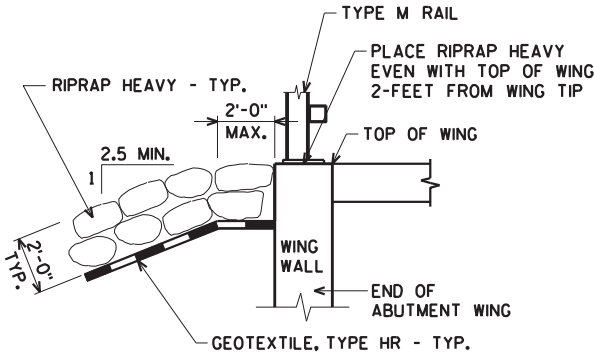
BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-425	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	100	100	-----	200
502.0100	CONCRETE MASONRY BRIDGES	CY	28	28	46	102
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	110	110
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,590	1,590	-----	3,180
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,350	1,340	8,760	11,450
513.4061	RAILING TUBULAR TYPE M	LF	22.5	22.5	62	107
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.0500	PILE POINTS	EACH	4	4	-----	8
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	100	120	-----	220
606.0300	RIPRAP HEAVY	CY	70	60	-----	130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	75	-----	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	30	30	-----	60
645.0120	GEOTEXTILE TYPE HR	SY	140	120	-----	260
SPV.0105.02	SUPERSTRUCTURE ¾" V-DRIP EDGE B-5-425	LS	-----	-----	-----	1
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	½" & ¾"

GENERAL NOTES

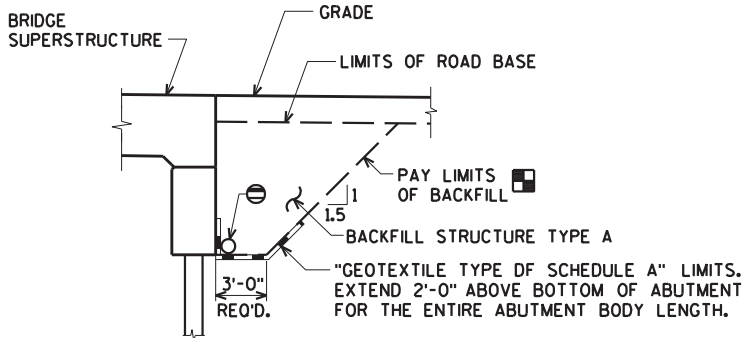
DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-5-425" SHALL BE THE EXISTING GROUNDLINE.
THE EXISTING STRUCTURE, P-5-145, TO BE REMOVED, IS A SINGLE SPAN CONCRETE DECK GIRDER BRIDGE, 27.6 FT. LONG WITH A 25.2 FT. CLEAR ROADWAY WIDTH.
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 BACKFILL STRUCTURE TYPE A.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.
THE 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 DETAIL

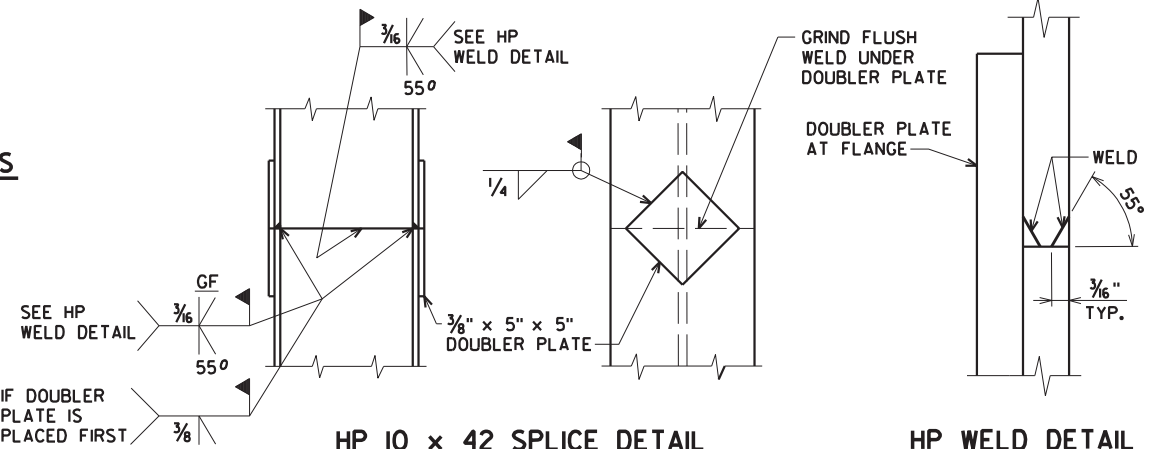


TYPICAL FILL SECTION AT WING TIPS



BACKFILL STRUCTURE LIMITS

- BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL 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 AS DETAILED ON SHEET 6.



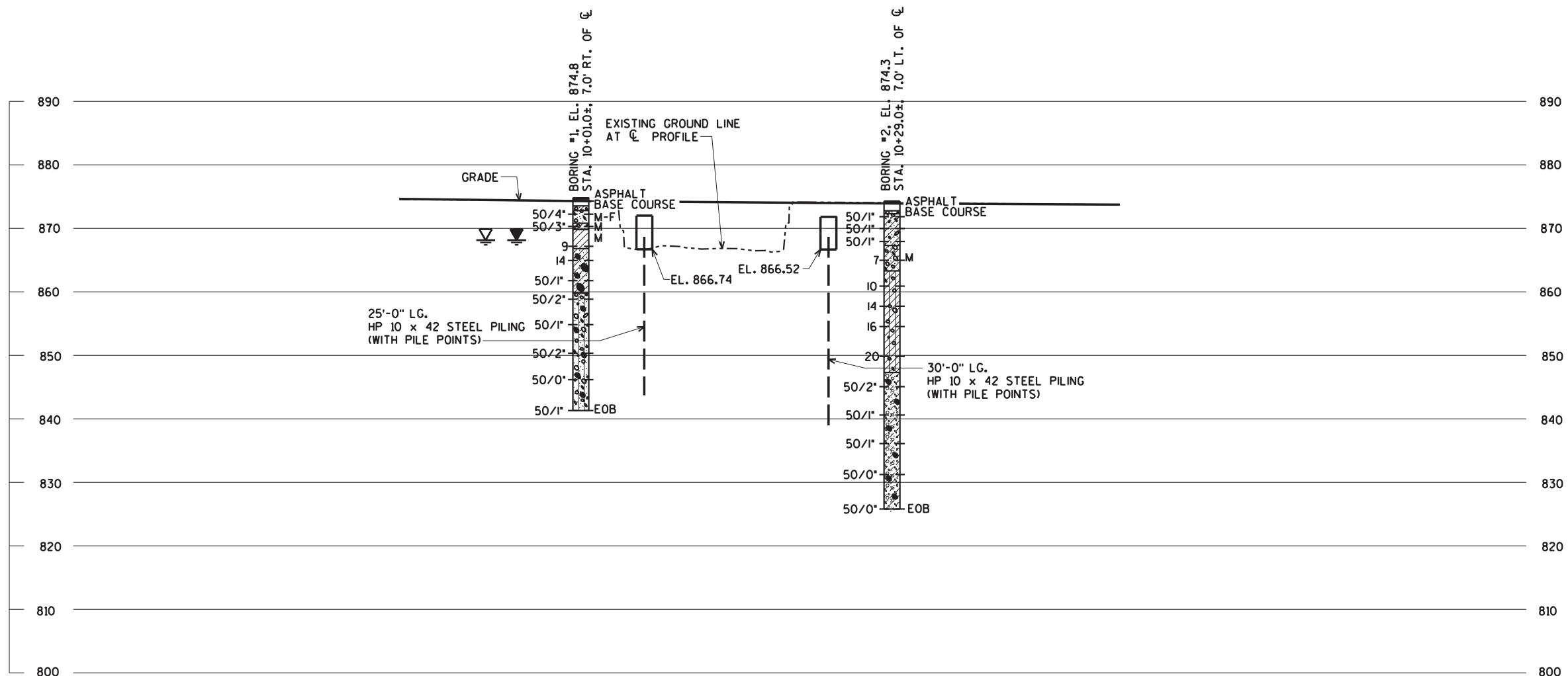
HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY CKJ/CLS		PLANS CK'D. CBM	
QUANTITIES AND NOTES		SHEET 2 OF 12	

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

BORINGS COMPLETED BY: RIVER VALLEY TESTING CORP.
REPORT COMPLETED BY: RIVER VALLEY TESTING CORP.
ALL COORDINATES REFERENCED TO WCCS NAVD 88(12) BROWN COUNTY



LEGEND OF BORING

BORING #/E.L.
STA./OFFSET

ST

ST (1) (2)

0.25 17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29'
REC=80%, ROD=72%

(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.

 AT TIME OF DRILLING
 END OF DRILLING
 AFTER DRILLING

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-5-425			
		DRAWN BY CKJ/CLS	PLANS CK'D. CBM
SUBSURFACE EXPLORATION		SHEET 3 OF 12	



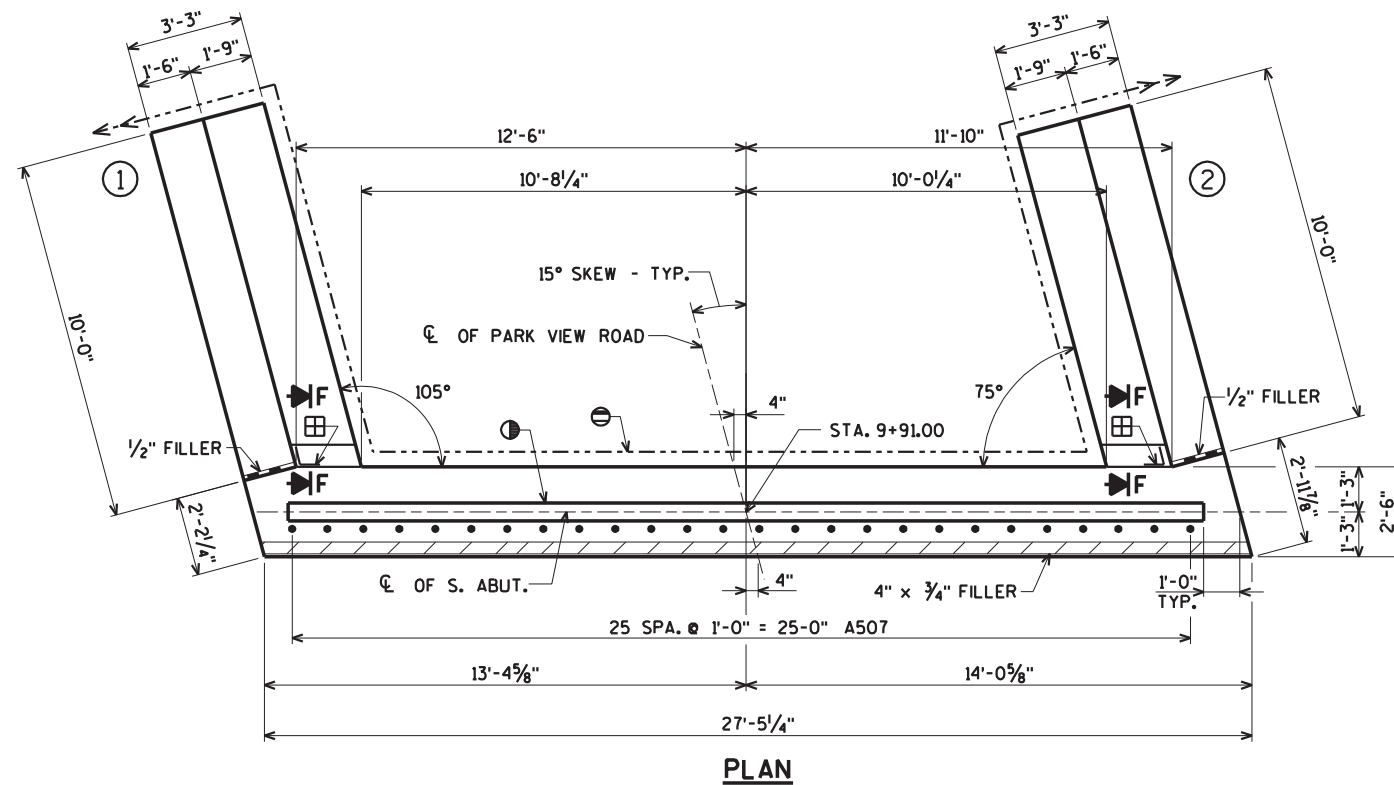
B.F. OF ABUTMENT

18" RUBBERIZED MEMBRANE
WATERPROOFING BETWEEN
WINGWALLS

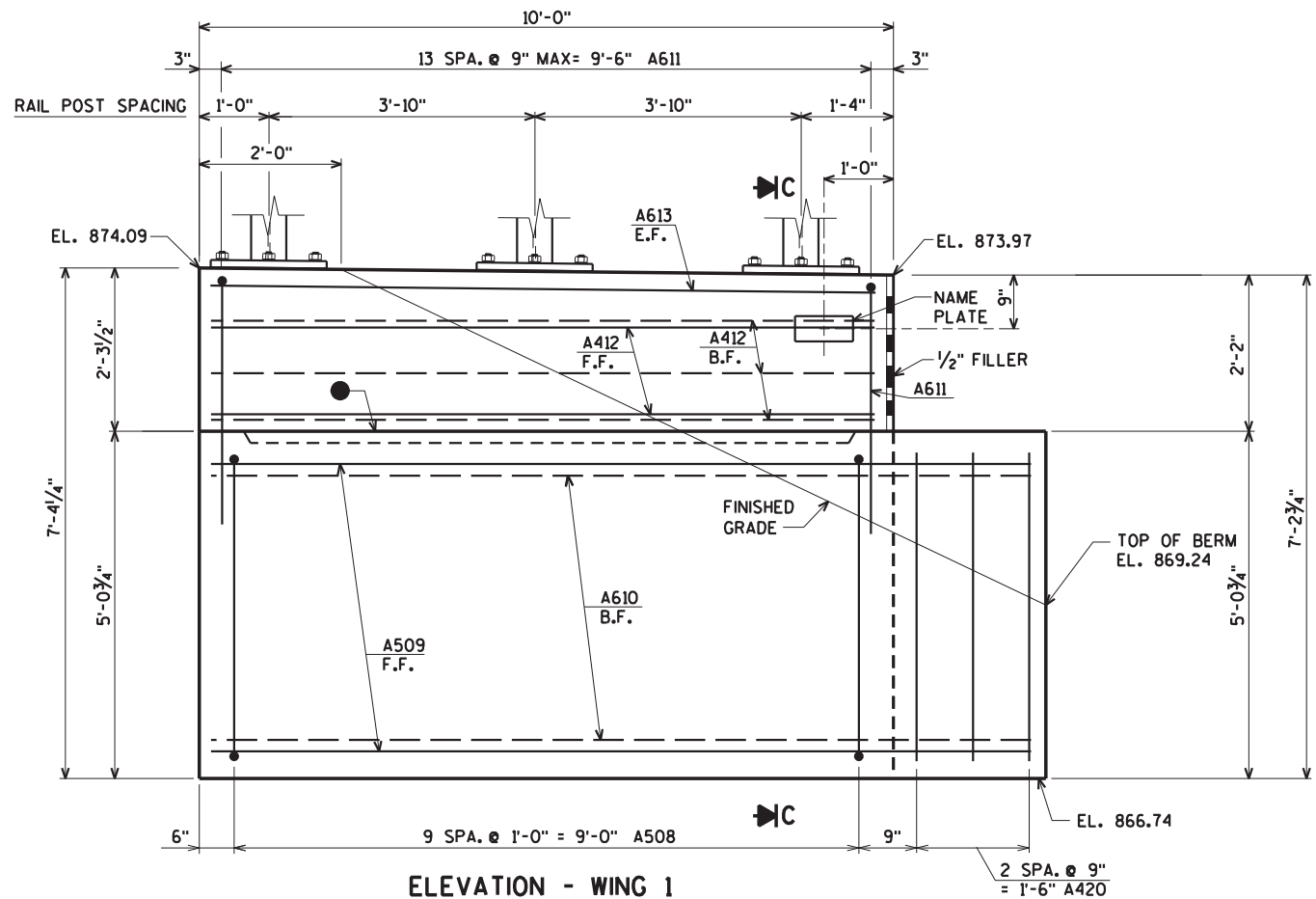
SUPERSTRUCTURE

ABUTMENT

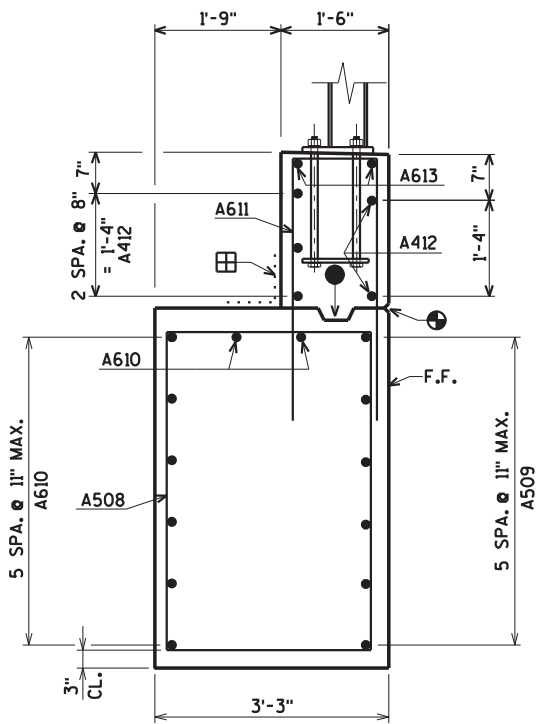
SECTION F



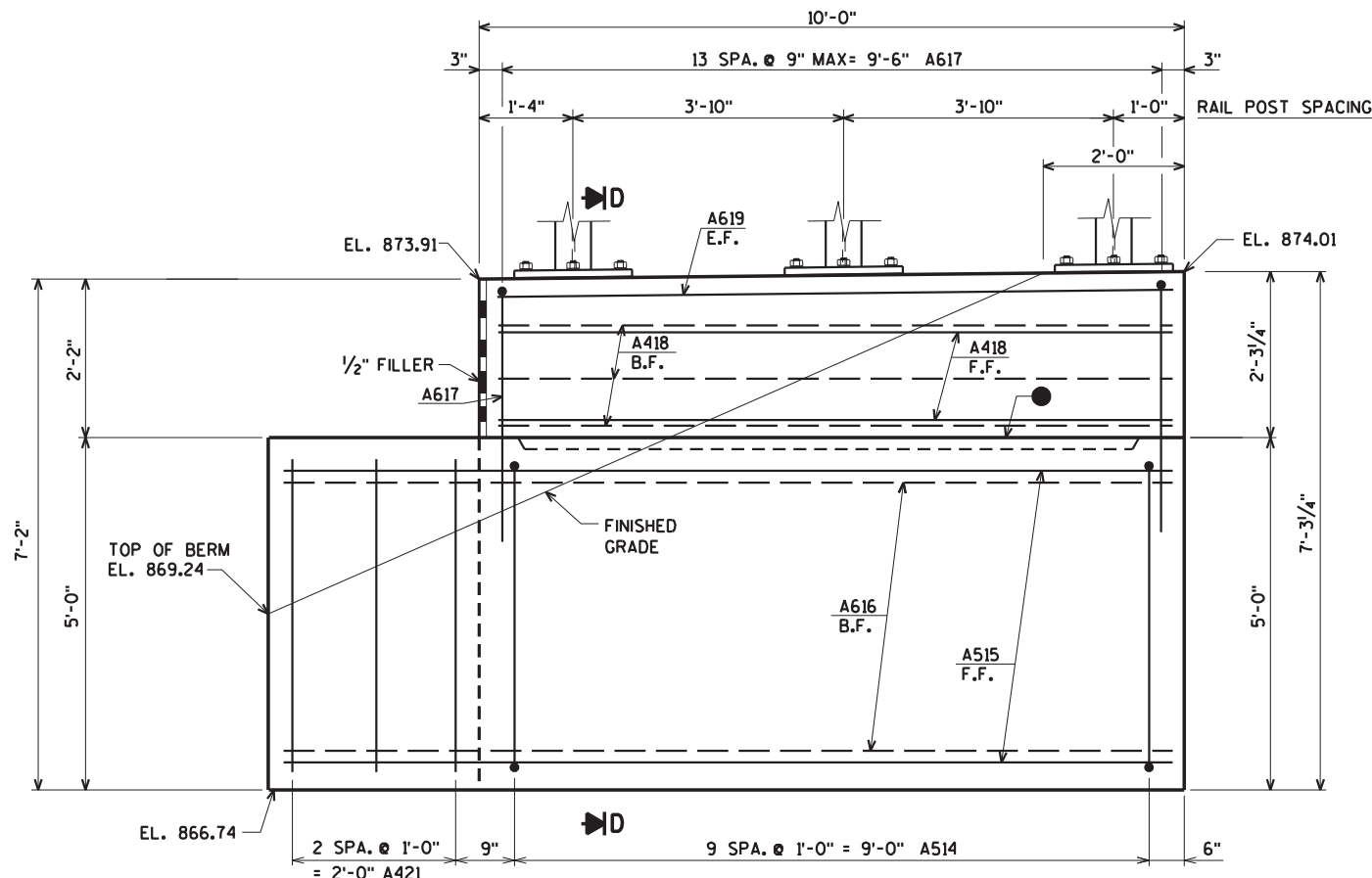
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT		SHEET 4 OF 12	



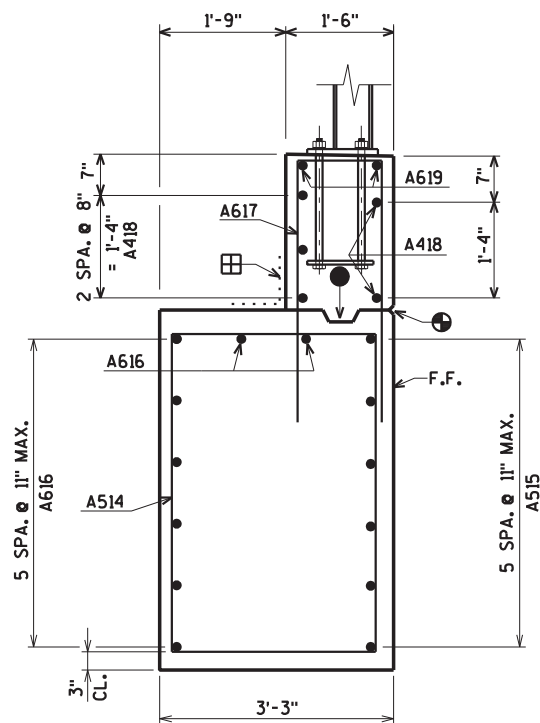
ELEVATION - WING 1



SECTION C



ELEVATION - WING 2



SECTION D

- 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

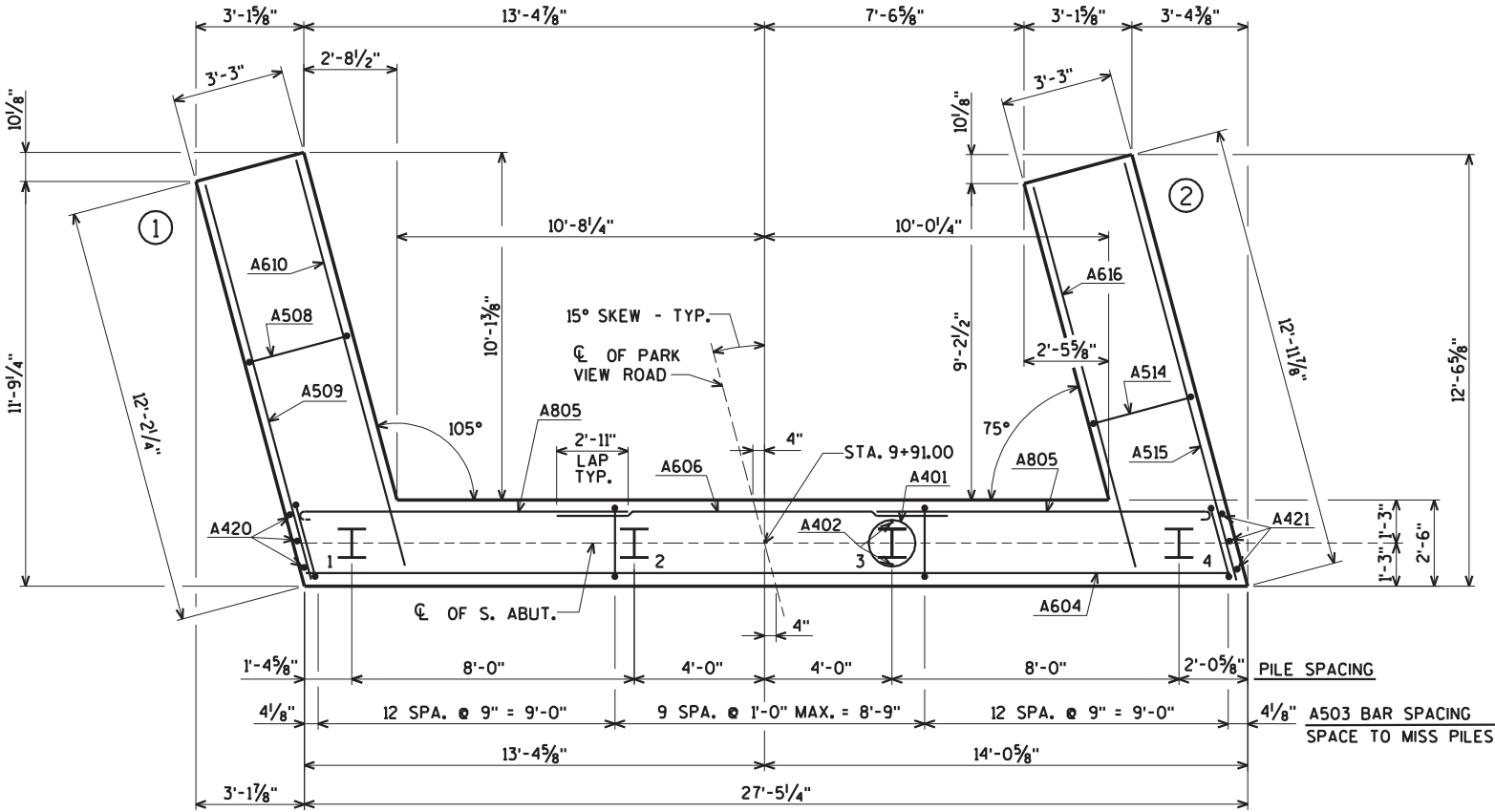
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT WINGS 1 & 2 DETAILS			SHEET 5 OF 12

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

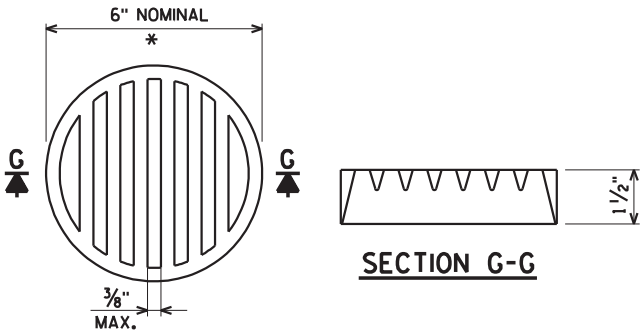
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,350# COATED 1,590# UNCOATED
						LOCATION
A401		4	28-0	X		BODY @ PILES
A402		8	2-3			BODY @ PILES
A503		35	14-0	X		BODY VERT.
A604		11	27-0			BODY HORIZ.
A805		14	10-11	X		BODY HORIZ. @ WING B.F.
A606		7	12-11			BODY HORIZ. BETW. WINGS B.F.
A507	X	26	2-0			BODY DOWELS
A508	X	10	15-8	X		WING 1 VERT.
A509	X	6	11-10			WING 1 HORIZ. F.F.
A610	X	8	12-5			WING 1 HORIZ. B.F. & TOP
A611	X	14	9-3	X		WING 1 VERT.
A412	X	5	9-7			WING 1 HORIZ. E.F.
A613	X	2	9-7			WING 1 HORIZ. E.F.
A514	X	10	15-8	X		WING 2 VERT.
A515	X	6	12-7			WING 2 HORIZ. F.F.
A616	X	8	11-5			WING 2 HORIZ. B.F. & TOP
A617	X	14	9-3	X		WING 2 VERT.
A418	X	5	9-7			WING 2 HORIZ. E.F.
A619	X	2	9-7			WING 2 HORIZ. E.F.
A420	X	3	4-7			BODY VERT. END @ WING 1
A421	X	3	4-7			BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT

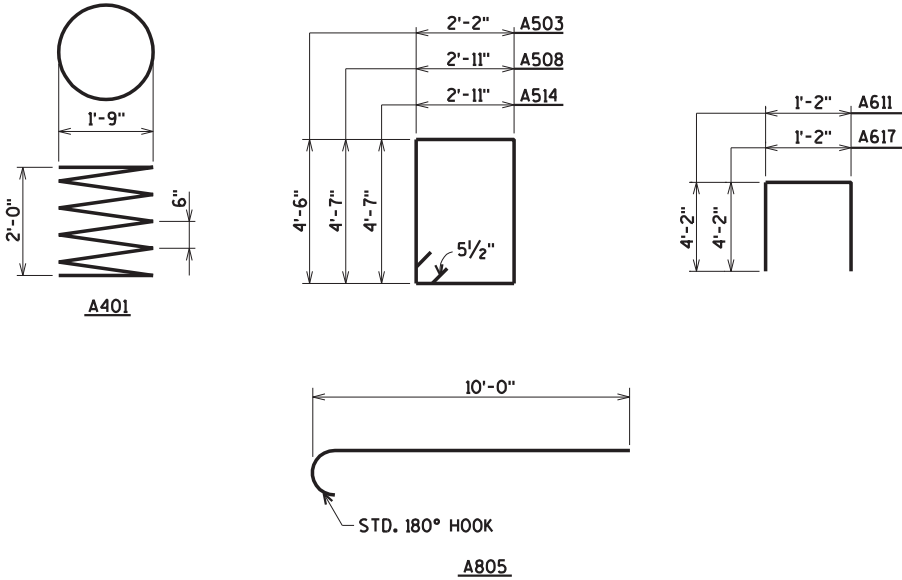


* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL



FOR PILE SPLICE DETAIL SEE SHEET 2.

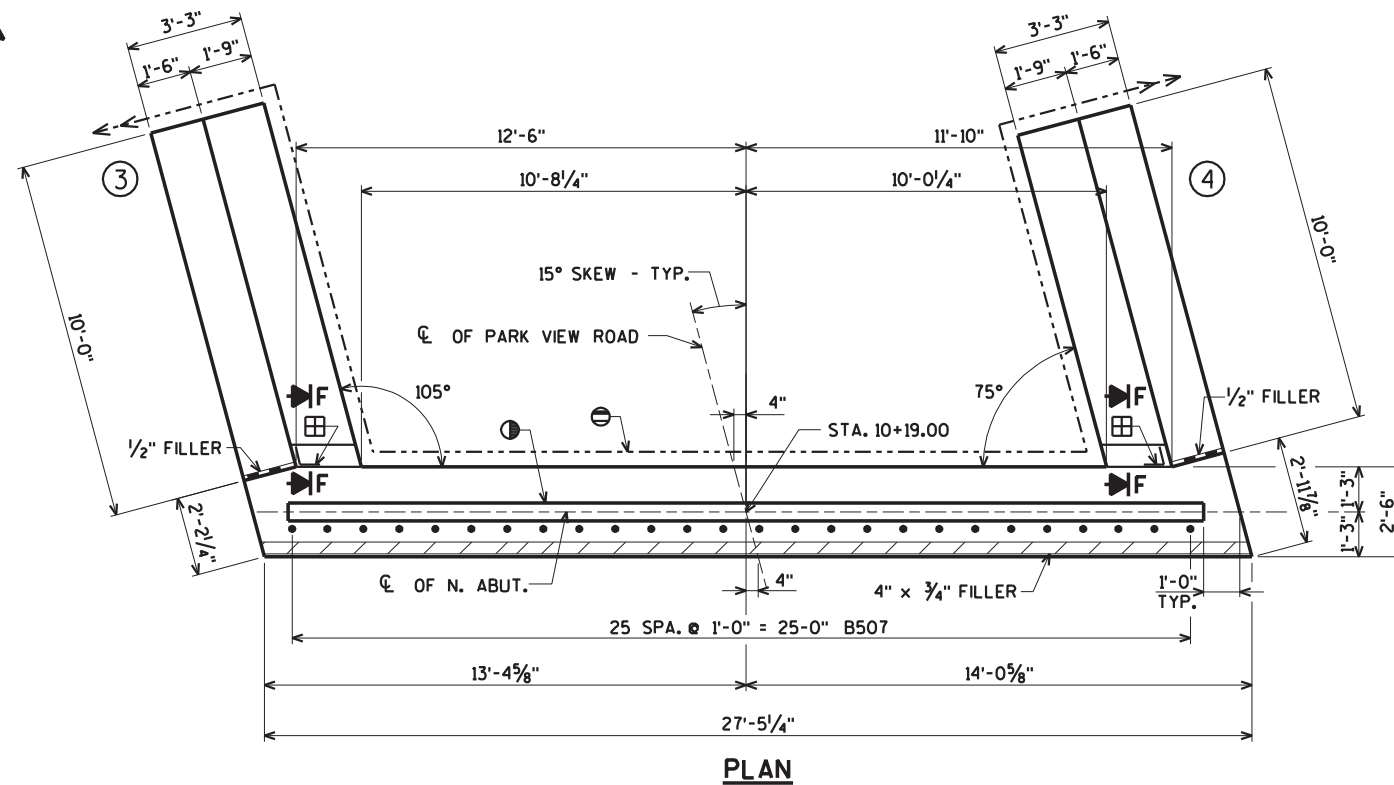
B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

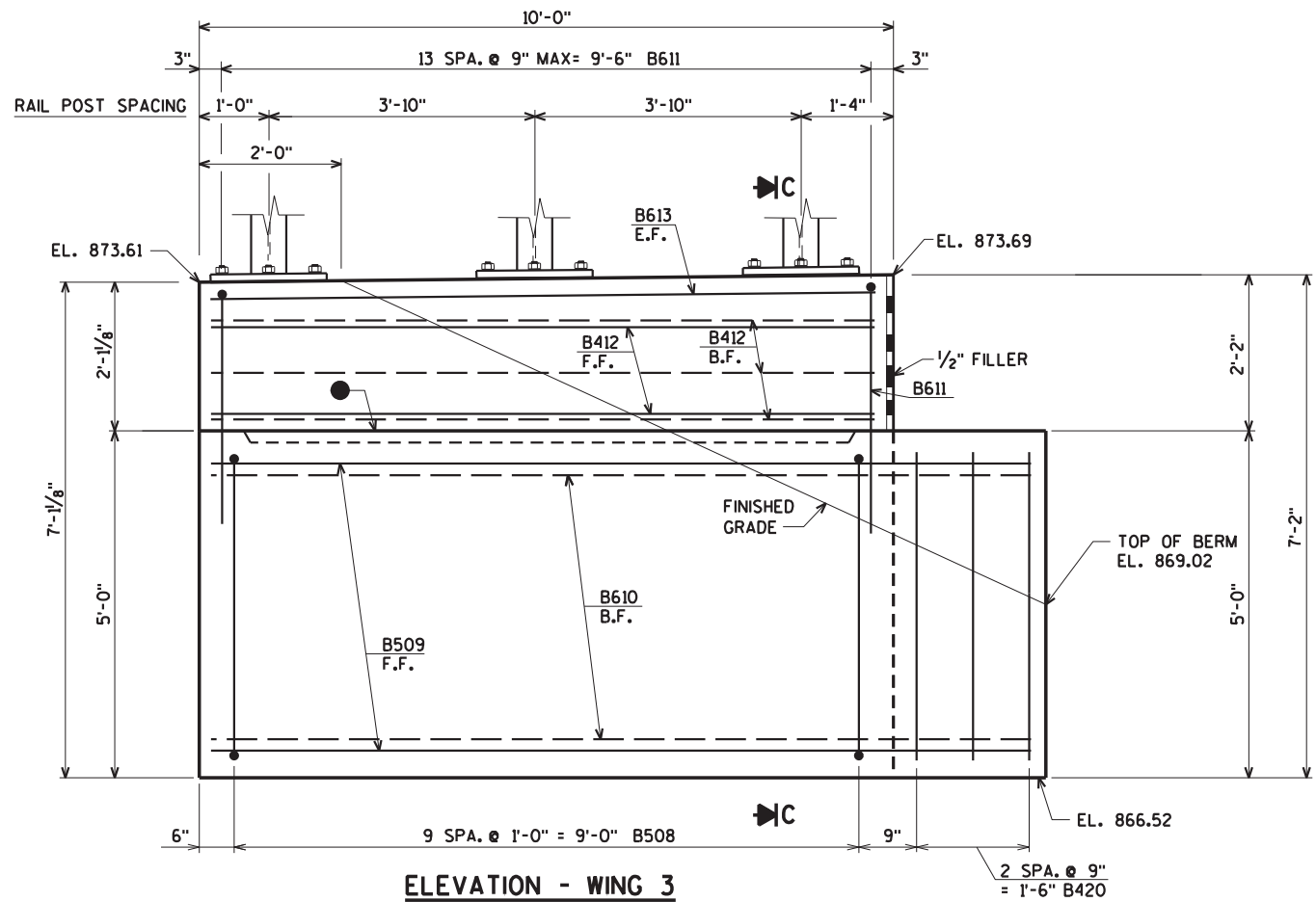
F.F. DENOTES FRONT FACE

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

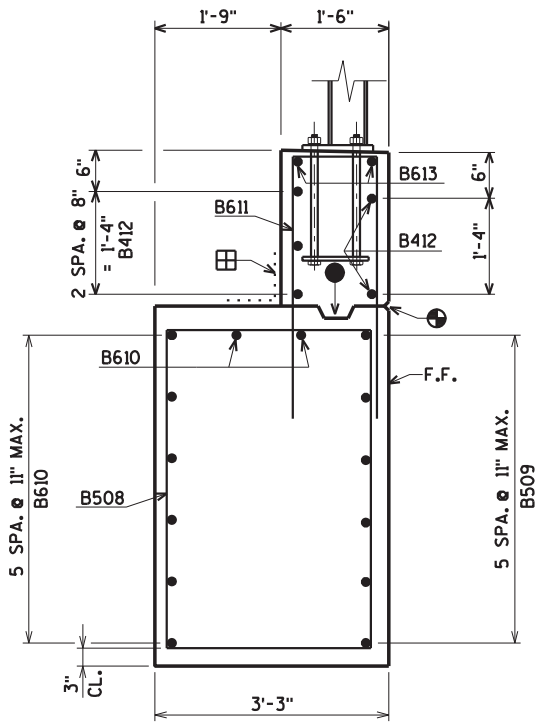
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY	CLS	PLANS CK'D.	CBM
SOUTH ABUTMENT DETAILS & BILL OF BARS			SHEET 6 OF 12

[illegible]

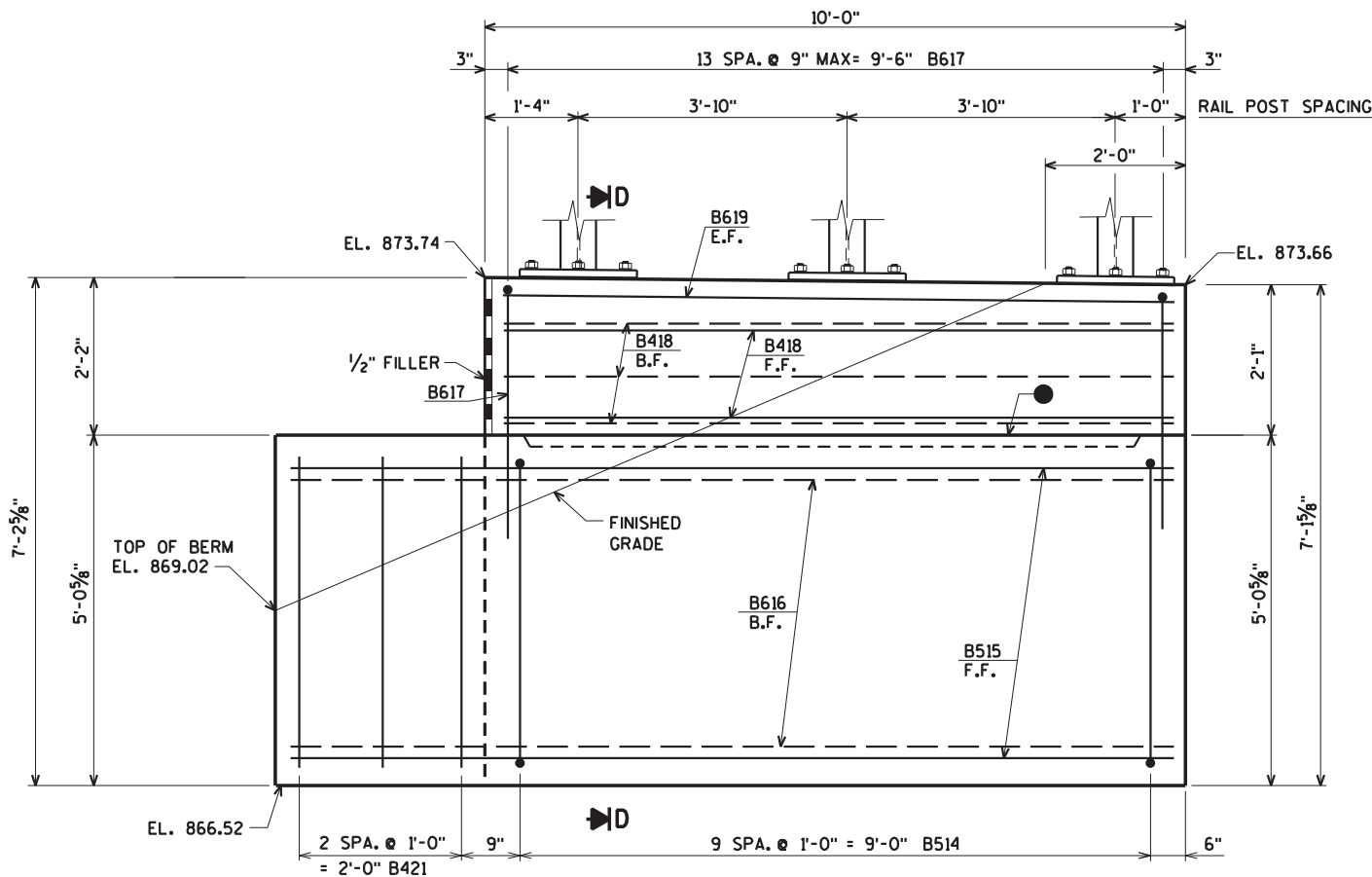
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT		SHEET 7 OF 12	



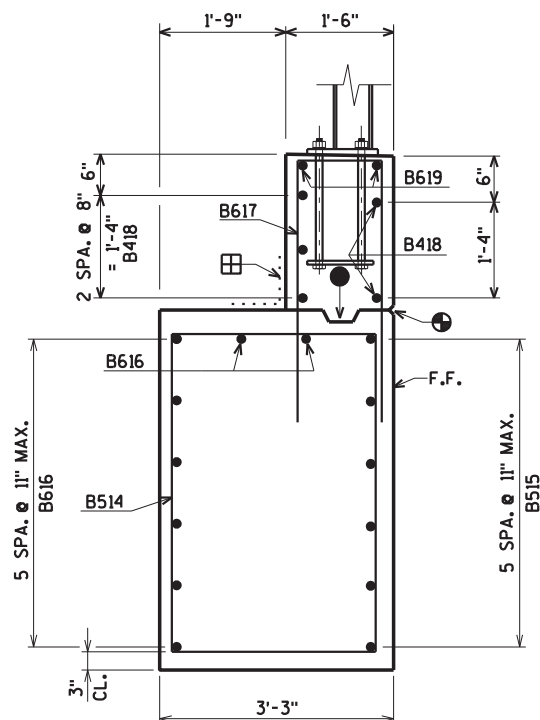
ELEVATION - WING 3



SECTION C



ELEVATION - WING 4



SECTION D

- 3/4" V GROOVE ON FRONT FACE OF WINGWALL.
- OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

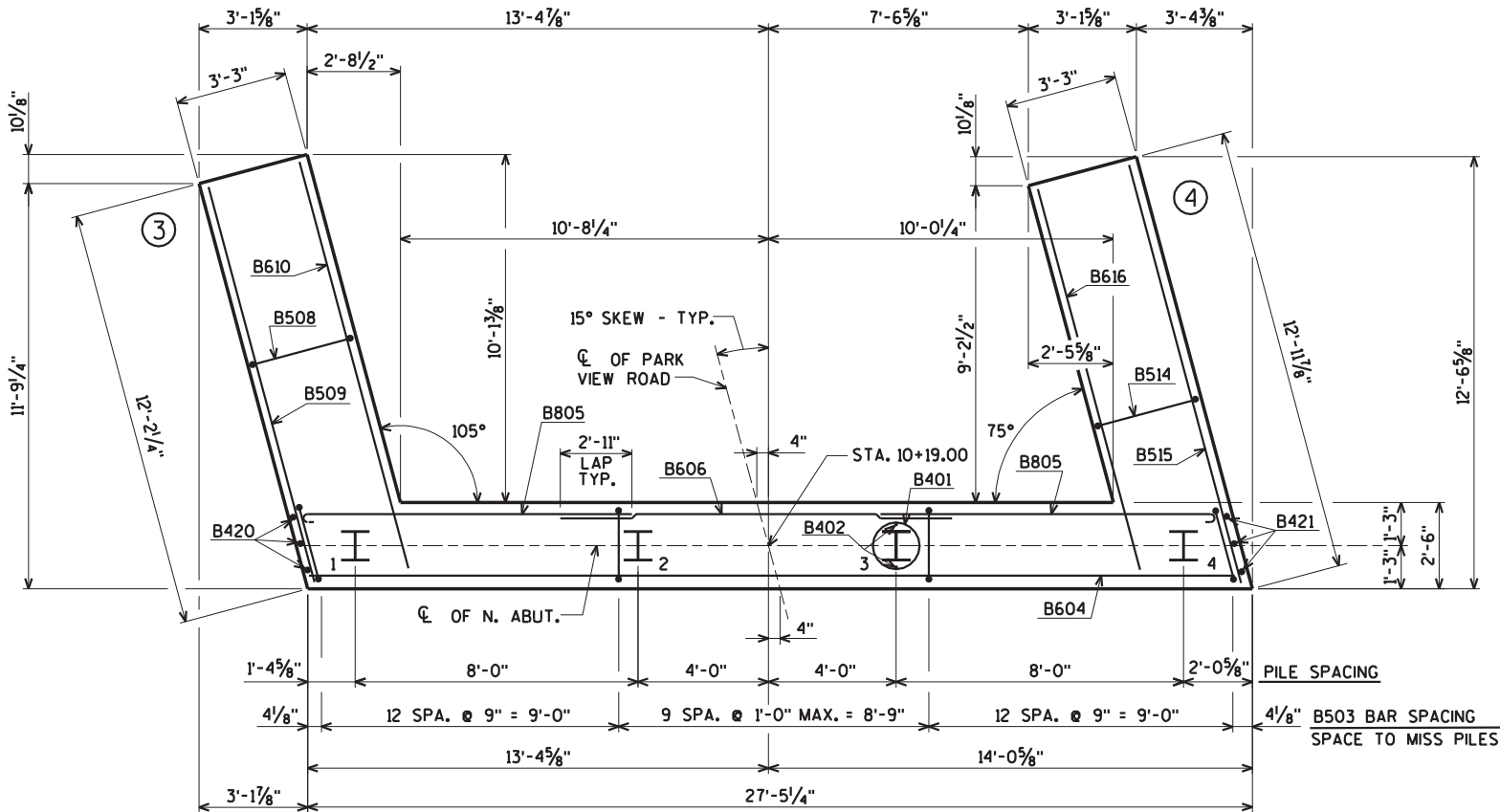
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT WINGS 3 & 4 DETAILS			SHEET 8 OF 12

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

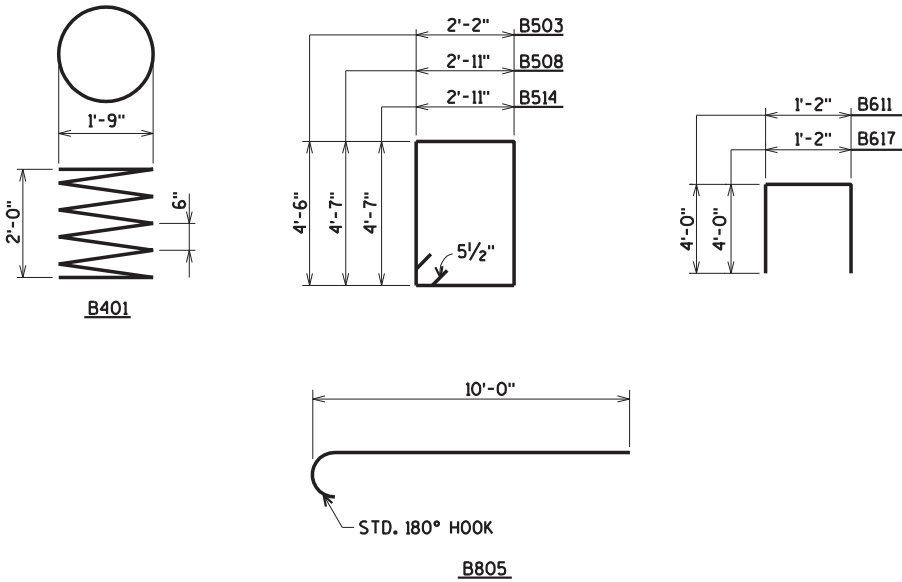
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,340# COATED 1,590# UNCOATED
						LOCATION
B401		4	28-0	X		BODY @ PILES
B402		8	2-3			BODY @ PILES
B503		35	14-0	X		BODY VERT.
B604		11	27-0			BODY HORIZ.
B805		14	10-11	X		BODY HORIZ. @ WING B.F.
B606		7	12-11			BODY HORIZ. BETW. WINGS B.F.
B507	X	26	2-0			BODY DOWELS
B508	X	10	15-8	X		WING 3 VERT.
B509	X	6	11-10			WING 3 HORIZ. F.F.
B610	X	8	12-5			WING 3 HORIZ. B.F. & TOP
B611	X	14	8-11	X		WING 3 VERT.
B412	X	5	9-7			WING 3 HORIZ. E.F.
B613	X	2	9-7			WING 3 HORIZ. E.F.
B514	X	10	15-8	X		WING 4 VERT.
B515	X	6	12-7			WING 4 HORIZ. F.F.
B616	X	8	11-5			WING 4 HORIZ. B.F. & TOP
B617	X	14	8-11	X		WING 4 VERT.
B418	X	5	9-7			WING 4 HORIZ. E.F.
B619	X	2	9-7			WING 4 HORIZ. E.F.
B420	X	3	4-7			BODY VERT. END @ WING 3
B421	X	3	4-7			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT



FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY	CLS	PLANS CK'D.	CBM
NORTH ABUTMENT DETAILS & BILL OF BARS			SHEET 9 OF 12



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

[illegible]

Technical drawing of a bridge deck cross-section showing reinforcement details, dimensions, and labels.

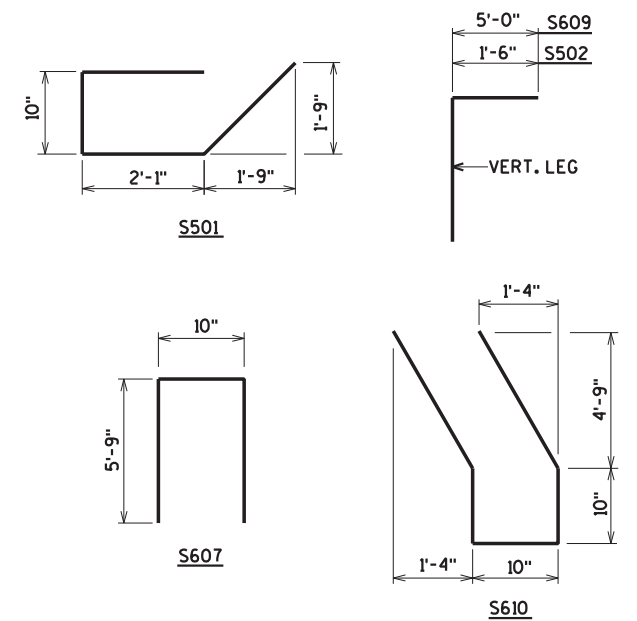
Dimensions:

- Overall width: 30'-7"
- Back to back of abutments: 28'-0"
- End offsets: 1'-3 1/2" (each side)
- Typical rail post spacing: 5 SPA. @ 5'-5" = 27'-1"
- Deck width at abutments: 26 SPA. @ 1'-0" = 26'-0"
- End offsets at abutments: 1'-3"
- End offsets at deck: 2'-3"
- End offsets at bottom: 1'-6" (typ.)
- End offsets at top: 3"
- End offsets at bottom: 1'-3"
- End offsets at top: 3"

Reinforcement Details:

- TOP BAR STEEL REINFORCEMENT:** S608 TYP. @ INT. POSTS, S607 TYP. @ POSTS, S406 TYP., S505 TOP, S501, S504 BOT., S903 TYP., S610.
- BOT. BAR STEEL REINFORCEMENT:** S609 TYP. @ END POSTS, S610.
- Other Labels:** 15° SKEW, END OF DECK, CL OF S. ABUT., CL OF N. ABUT., CL OF PARK VIEW ROAD, PAVING NOTCH - TYP., 1'-0", 3'-3" TYP., 6", 1'-3 1/2", 1'-3", 2'-3", 1'-6" TYP., 3", 1'-3 1/2", 28'-0", 30'-7", 5 SPA. @ 5'-5" = 27'-1", 26 SPA. @ 1'-0" = 26'-0" TYP. AT ABUTMENTS.

PLAN



3/4" V-DRIP EDGE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY		CLS	PLANS CK'D. CBM
SUPERSTRUCTURE		SHEET 10 OF 12	



PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C OF ABUTMENTS, AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR C.

TOP OF DECK ELEVATIONS

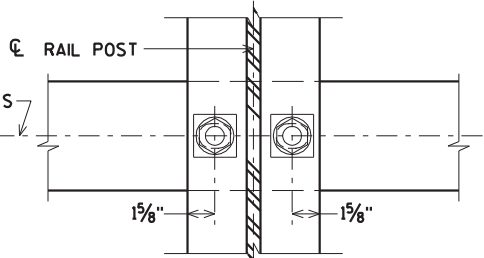
LOCATION	€ OF S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	€ OF N. ABUT.
W. EDGE OF SLAB	873.91	873.88	873.86	873.83	873.81	873.79	873.77	873.74	873.72	873.70	873.69
€ OF STRUCTURE	874.20	874.18	874.15	874.13	874.10	874.08	874.06	874.04	874.02	873.99	873.97
E. EDGE OF SLAB	873.97	873.95	873.92	873.90	873.87	873.85	873.82	873.80	873.78	873.76	873.74

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

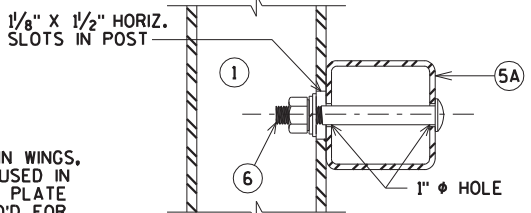
- 18" RUBBERIZED MEMBRANE WATERPROOFING
 ● DIMENSIONS MEASURED ALONG ϕ OF PARK VIEW ROAD.
 ▲ DIMENSIONS MEASURED NORMAL TO ϕ OF SUBSTRUCTURE.

LEGEND

- W6 x 25 WITH 1 1/8" x 1 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.
- PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 1/8" x 1 1/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- 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 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. ~~USE 10 7/8" LONG AT ALL OTHER LOCATIONS.~~ (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
- 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 1/8" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- 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.
- 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/8" x 1 5/8" x 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- 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.
- 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.
- SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 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.
- 7/8" A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 1/8" x 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 5/8" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.~~
- 7/8" DIA. x 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D.).
- 3/8" x 8" x 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- 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.



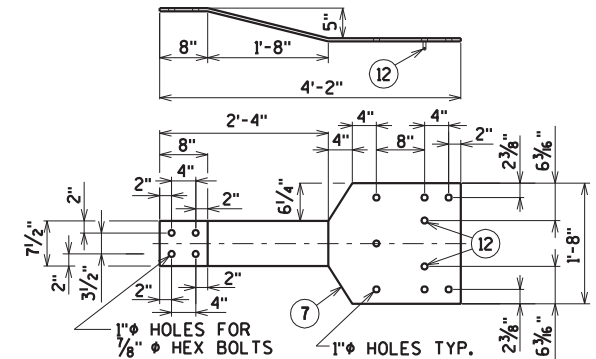
SECTION THRU POST WEB



SECTION THRU RAIL

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

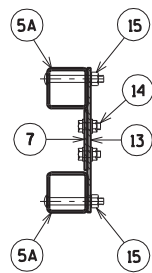
TYPICAL RAIL TO POST CONNECTIONS



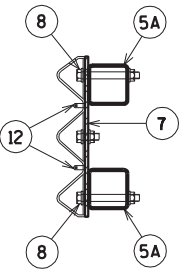
BACK-UP PLATE DETAIL
(AT BEAM GUARD ATTACHMENT)

GENERAL NOTES

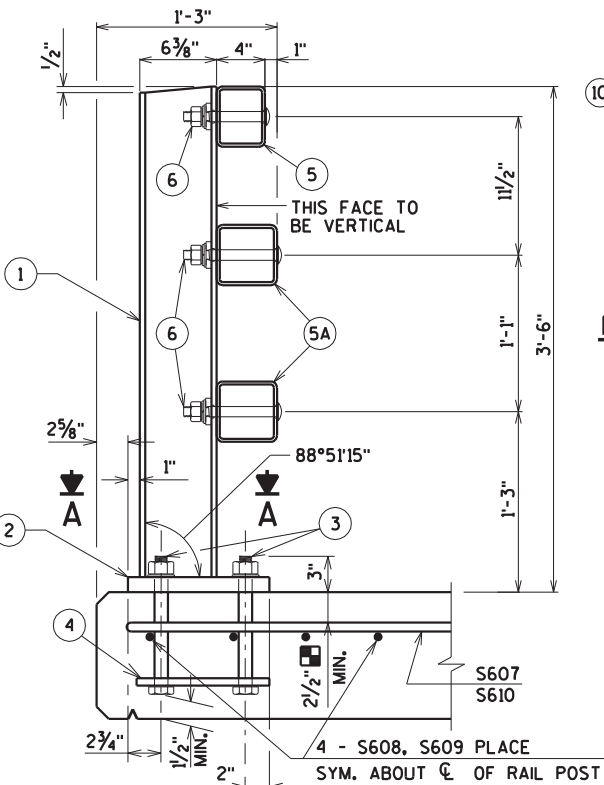
- BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
- RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
- THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
- RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
- ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
- WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
- 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.
- 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.
- 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.
- WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.



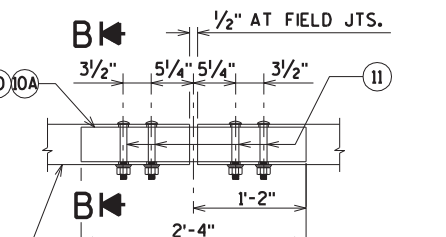
SECTION C



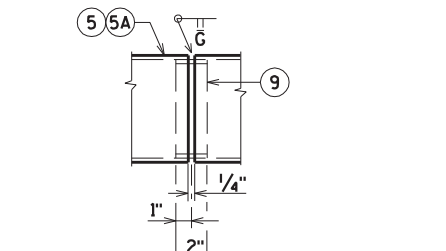
SECTION D



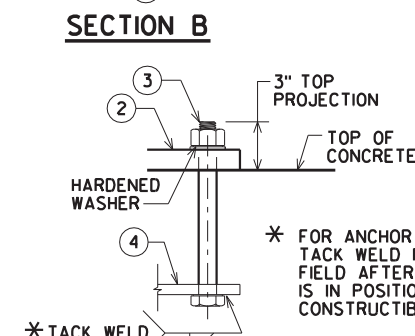
SECTION THRU RAILING ON DECK



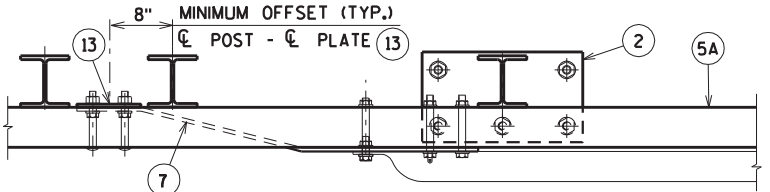
FIELD ERECTION JOINT DETAIL



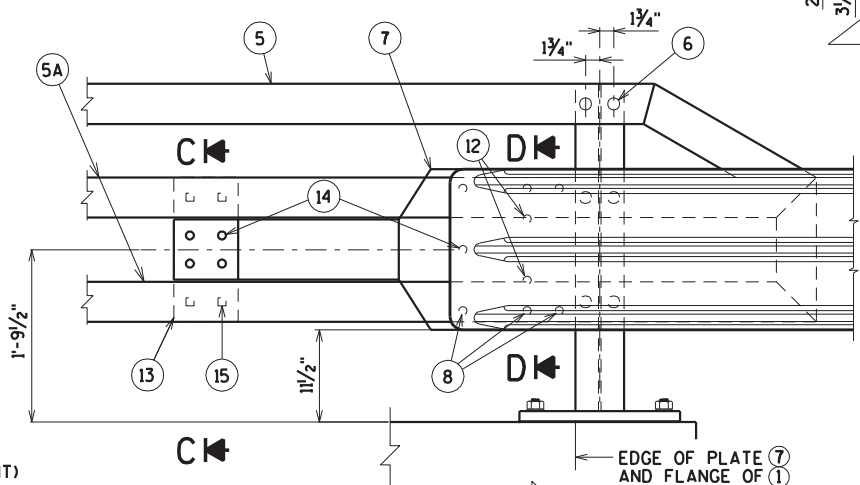
SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



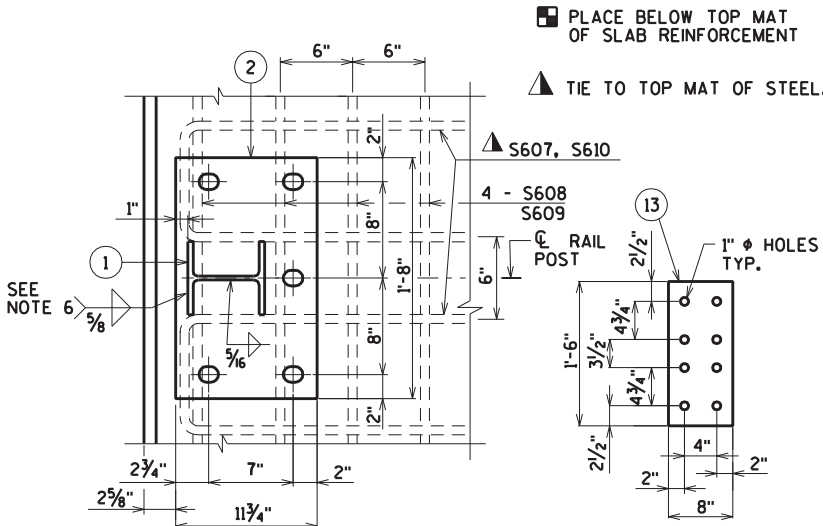
ANCHOR BOLTS



TOP VIEW AT END POST
(THRIE BEAM RAIL ATTACHMENT)

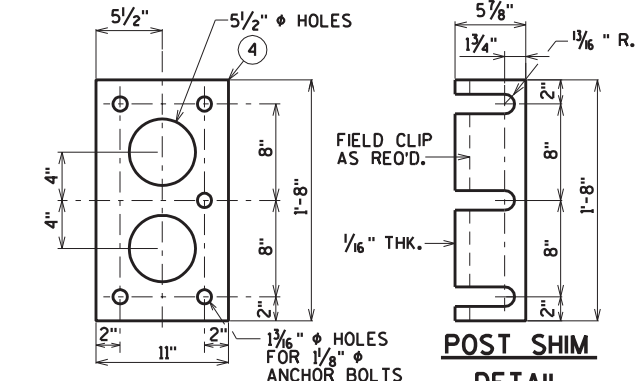


DETAIL AT END POST
(THRIE BEAM RAIL ATTACHMENT)

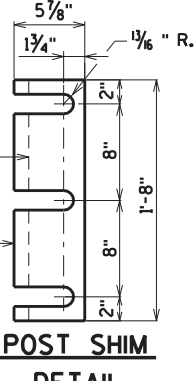


SECTION A

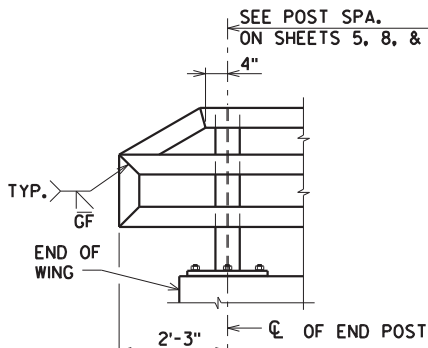
ANCHOR PLATE
(AT BEAM GUARD ATTACHMENT)



ANCHOR PLATE
(AT RAIL TO DECK CONNECTION)



POST SHIM
DETAIL



PART ELEVATION OF RAILING

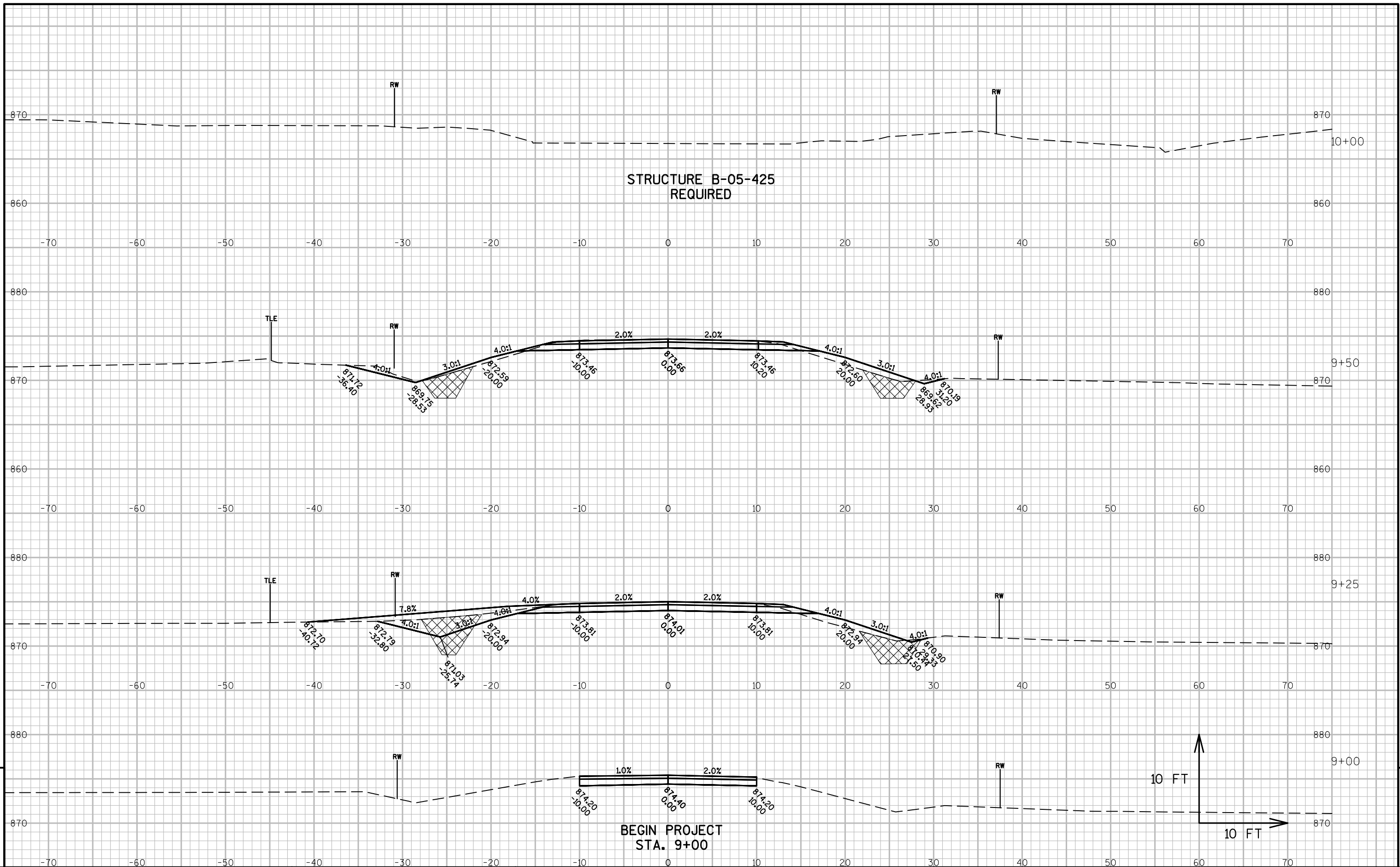
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

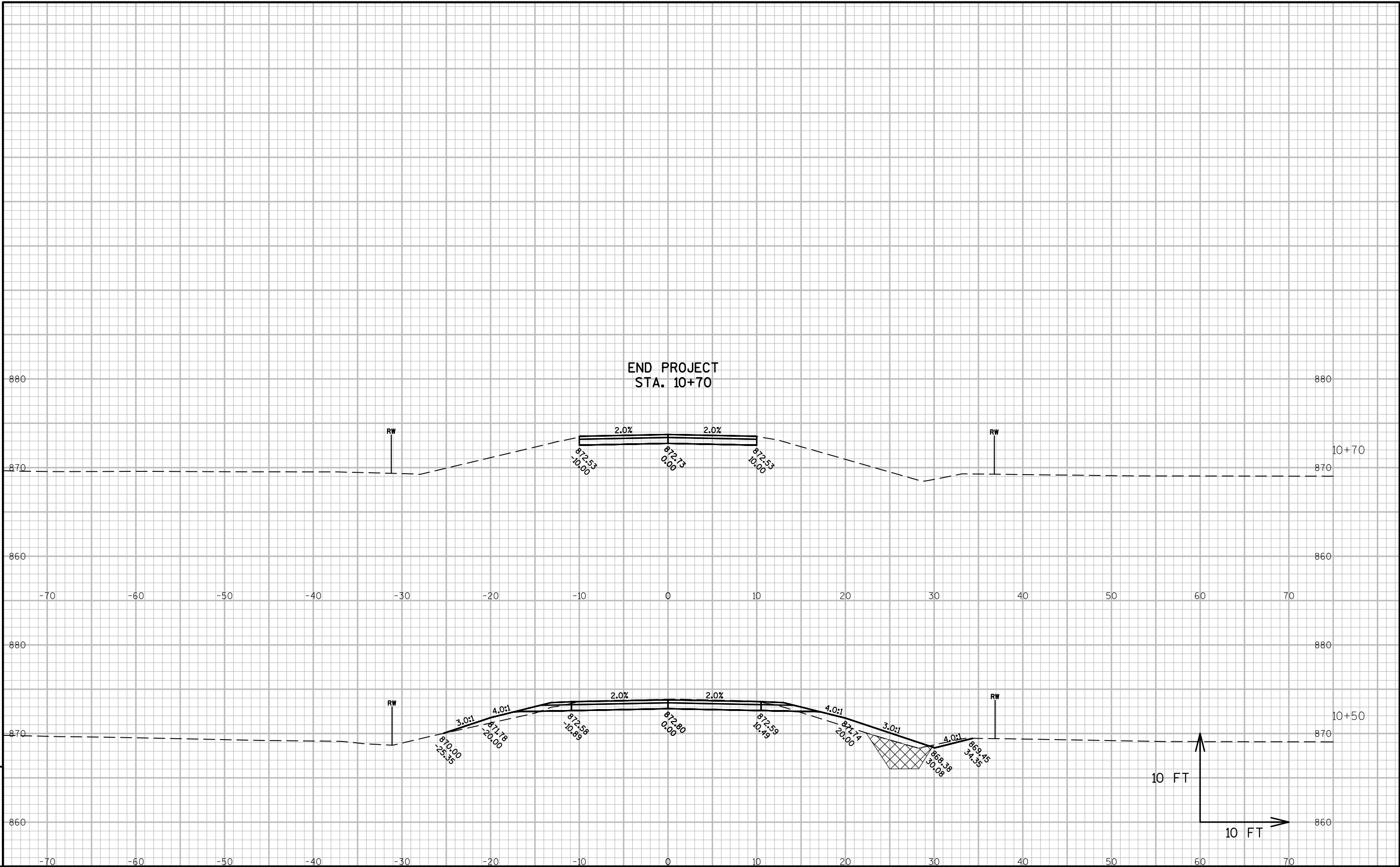
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-425			
DRAWN BY CLS		PLANS CK'D. CBM	
RAILING TUBULAR TYPE M			SHEET 12 OF 12

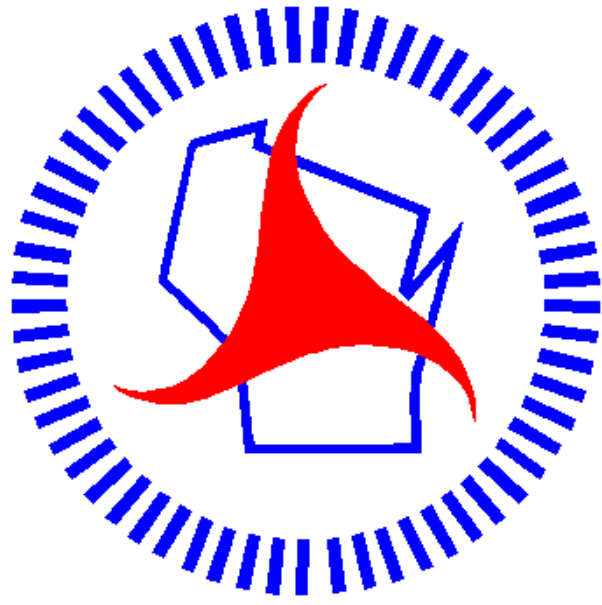
EARTHWORK - PARK VIEW ROAD

STATION	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)			Mass Ordinate
	Cut	Unusable Pavement Material	Fill	Marsh Exc	Cut	Unusable Pavement Material	Fill	Marsh Exc	Cut 1.00 Note 1	Expanded Fill 1.3	Expanded Marsh Backfill 1.5 Note 4	
9+00	21	1.7	0	0	0	0	0	0	0	0	0	
9+25	47	1.7	7	31	31	2	3	14	31	4	22	26
9+50	33	1.7	11	26	37	2	8	26	69	15	61	50
9+90	27	1.7	36	25	44	3	35	38	113	60	118	47
B-05-425												
10+20	30	1.7	12	15	0	0	0	0	113	60	118	47
10+50	29	1.7	15	14	33	2	15	16	146	80	142	58
10+70	23	1.7	0	0	19	1	6	5	165	87	150	69
					165	9	67	100				

Notes:	
1 - Cut	Cut includes existing asphalt and base material
2 - Unusable Pavement Material	Does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Material Volume
4 - Expanded Marsh Backfill	Will be backfilled with Select Borrow
8 - Mass Ordinate	Cut - (Fill * Fill Factor)
8 - Mass Ordinate	Mass Ordinate does not include Marsh Excavation







Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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

GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%.

CONSTRUCT 3 1/2-INCH ASPHALTIC SURFACE WITH A 1 3/4" UPPER LAYER AND A 1 3/4" LOWER LAYER.

PROPERTY LINES AS SHOWN ARE APPROXIMATE.

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

BEARING SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

PLACE EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN.

THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE FERTILIZED, SEEDED, AND EROSION MAT AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE SUBGRADE ELEVATIONS AT THE CENTERLINE OF THE ROADWAY.

ALL ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012).

WISDOT WILL FURNISH A BENCHMARK MONUMENT TO BE SET BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER IN THE FIELD

SAW CUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. THE LINE OF SUCH SAW CUTS WILL BE NEATLY DELINEATED THROUGH THE ASPHALT WITHOUT ANY DAMAGE TO THE REMAINING PORTION OF THE EXISTING PAVEMENT.

*AT&T
205 JEFFERSON STREET
GREEN BAY, WI 54301
ATTN: JOE KASSAB
E-MAIL: JK572K@ATT.NET

TELEPHONE 920-735-3206

*WISCONSIN PUBLIC SERVICE - ELECTRIC
700 N. ADAMS STREET
PO BOX 1210
GREEN BAY, WISCONSIN 54307
ATTENTION: RYAN VOSKUIL
E-MAIL: RYAN.VOSKUIL@WISCONSINPUBLICSERVICE.COM

TELEPHONE 920-617-5150

*-MEMBER OF DIGGERS HOTLINE



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

DEPARTMENT OF NATURAL RESOURCES

WDNR
P.O. BOX 10448
GREEN BAY, WISCONSIN 54307
ATTENTION: JIM DOPERALSKI
E-MAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

TELEPHONE 920-412-0165

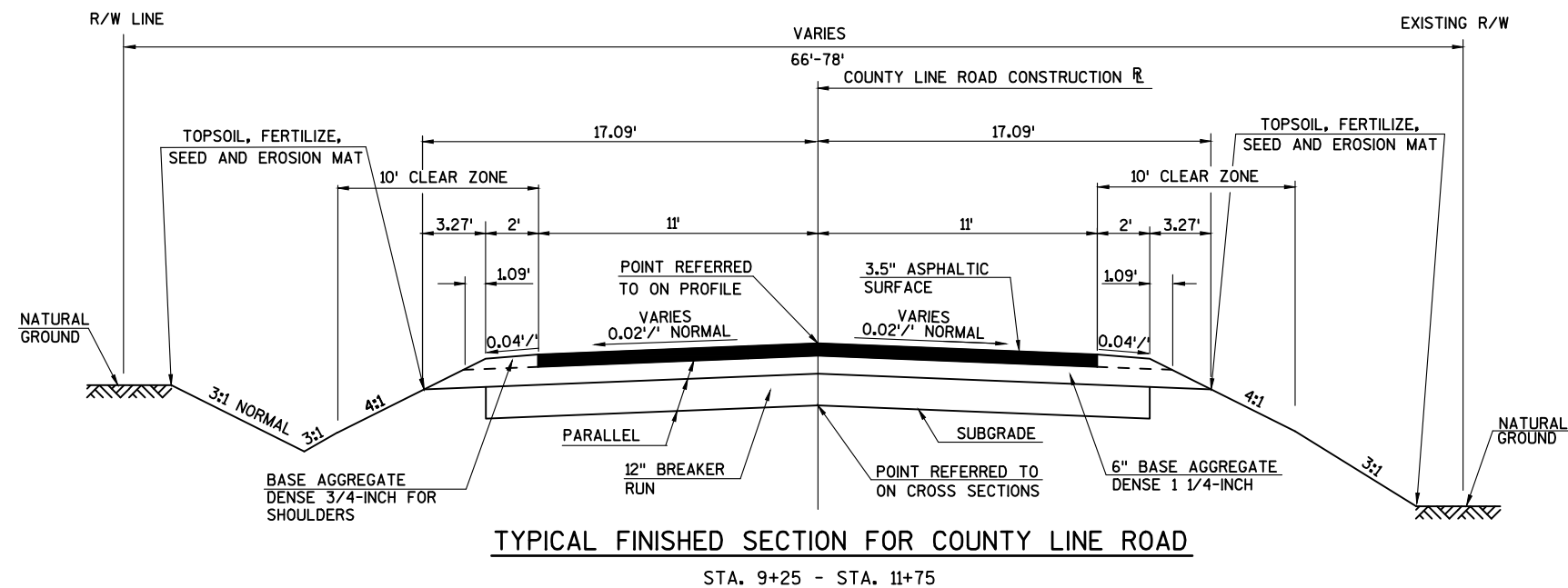
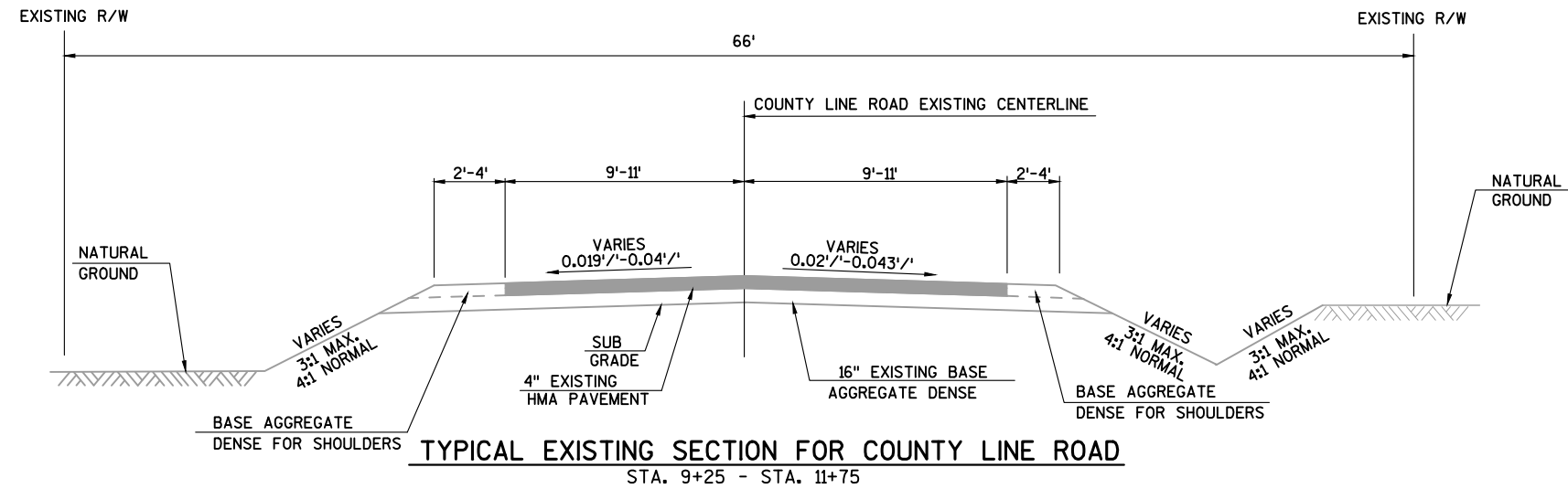
RUNOFF COEFFICIENT TABLE

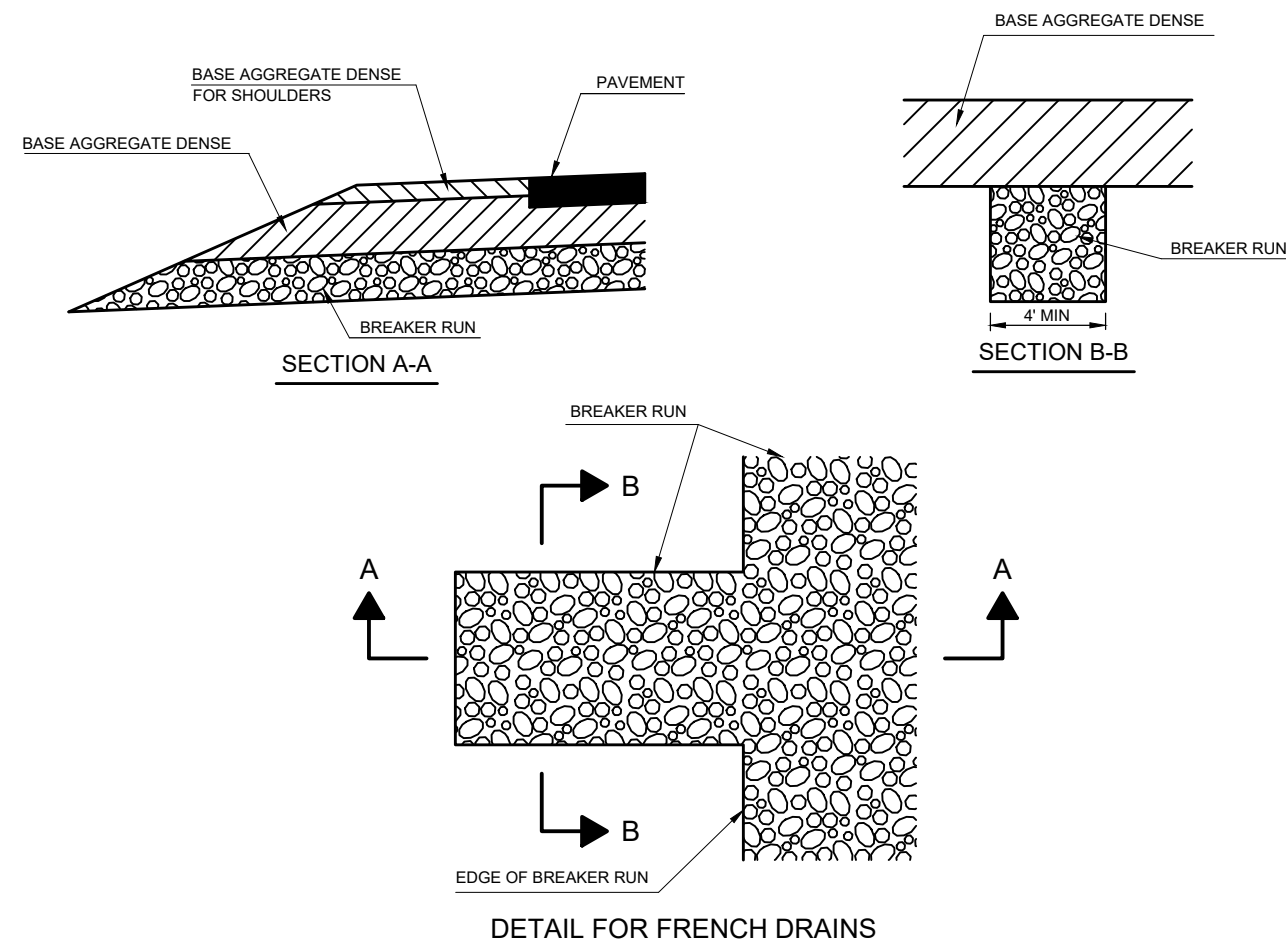
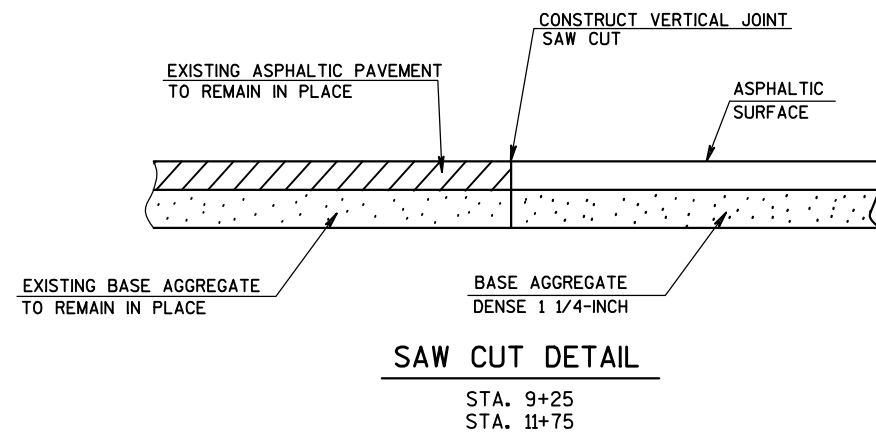
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.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 AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.32 ACRES
SOIL GROUP C

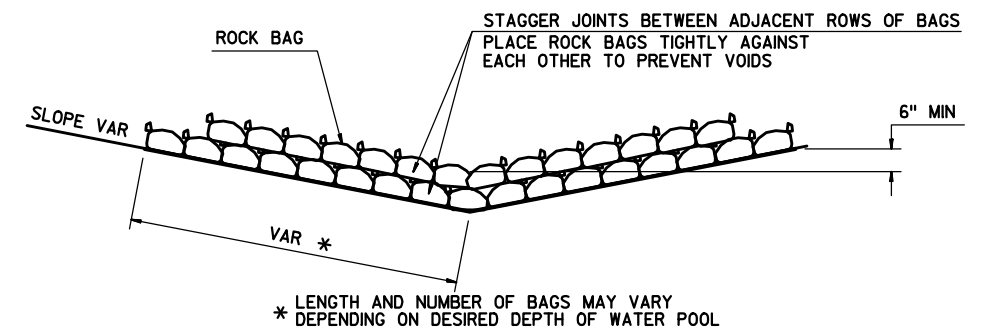
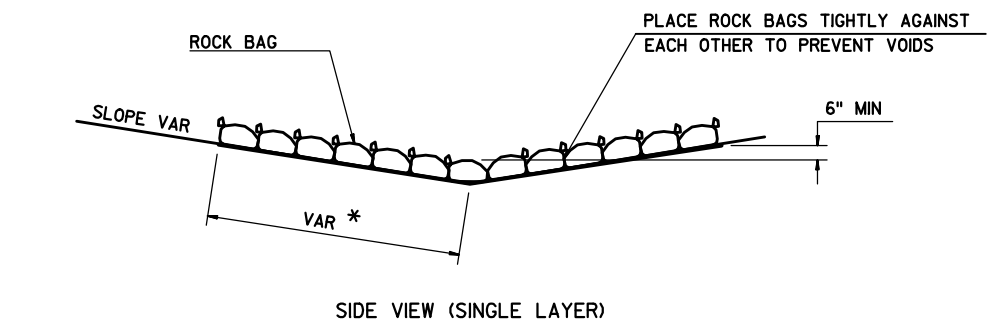
STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
AC	ASPHALT CEMENT	PT	POINT OF TANGENCY
AGG	AGGREGATE	PC	POINT OF CURVATURE
ASPH	ASPHALT	PI	POINT OF INTERSECTION
BM	BENCH MARK	PE	PRIVATE ENTRANCE
C/L	CENTERLINE	R	RADIUS
CONC	CONCRETE	REM	REMOVE
CMP	CORRUGATED METAL PIPE	R/L OR RL	REFERENCE LINE
CR.	CREEK	RCCP	REINFORCED CONCRETE CULVERT PIPE
D	DEGREE OF CURVE	RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
DHV	DESIGN HOUR VOLUME	R.O.	RUNOUT
ESALS	EQUIVALENT SINGLE AXIS LOADS	R/W	RIGHT-OF-WAY
EXIST	EXISTING	STA	STATION
FE	FIELD ENTRANCE	SE	SUPER ELEVATION
HYD	HYDRANT	SS	STORM SEWER
IP	IRON PIPE OR PIN	T	TANGENT
L	LENGTH OF CURVE	TEL	TELEPHONE
LC	LONG CHORD OF CURVE	TLE	TEMPORARY LIMITED EASEMENT
LR	LENGTH OF RUNOFF	T	TRUCKS
MH	MANHOLE	VC	VERTICAL CURVE
		W	WELL

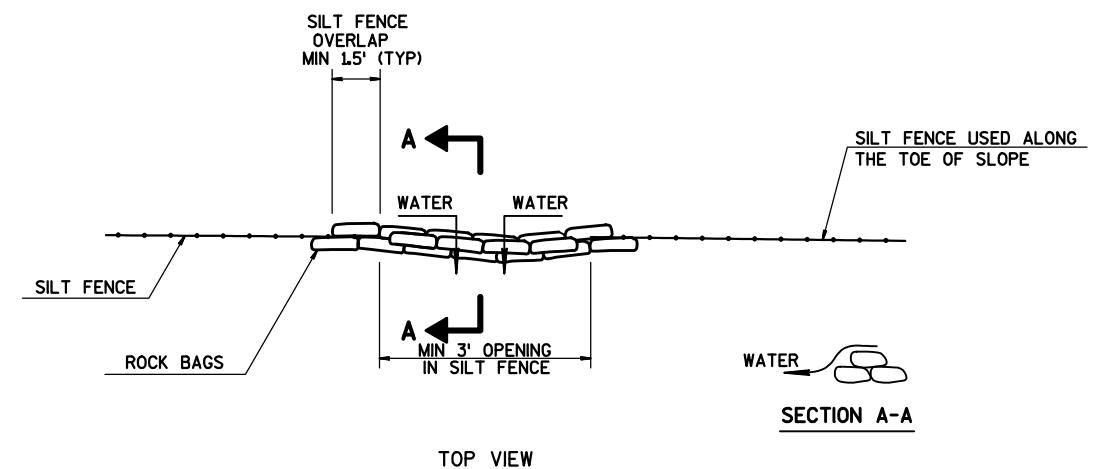




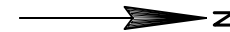
LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL
BE CONSIDERED INCIDENTAL TO THE ITEM "BREAKER RUN".



ROCK BAGS DITCH CHECK
PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL
PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



Estimate Of Quantities By Plan Sets

4519-09-71					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01 10+00	LS	1.000	1.000
0012	205.0100	Excavation Common	CY	420.000	420.000
0016	206.1000	Excavation for Structures Bridges (structure) 01. B-5-424	LS	1.000	1.000
0022	210.1500	Backfill Structure Type A	TON	770.000	770.000
0026	213.0100	Finishing Roadway (project) 02. 4519-09-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	50.000	50.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	260.000	260.000
0032	311.0110	Breaker Run	TON	440.000	440.000
0034	455.0605	Tack Coat	GAL	40.000	40.000
0036	465.0105	Asphaltic Surface	TON	115.000	115.000
0038	502.0100	Concrete Masonry Bridges	CY	158.000	158.000
0040	502.3200	Protective Surface Treatment	SY	110.000	110.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	5,160.000	5,160.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	13,150.000	13,150.000
0046	513.4061	Railing Tubular Type M	LF	64.000	64.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0054	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	29.000	29.000
0056	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0058	550.0500	Pile Points	EACH	14.000	14.000
0060	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	980.000	980.000
0062	606.0300	Riprap Heavy	CY	120.000	120.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0066	619.1000	Mobilization	EACH	0.500	0.500
0068	624.0100	Water	MGAL	30.000	30.000
0070	625.0100	Topsoil	SY	800.000	800.000
0072	628.1504	Silt Fence	LF	460.000	460.000
0074	628.1520	Silt Fence Maintenance	LF	920.000	920.000
0076	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	595.000	595.000
0082	628.2027	Erosion Mat Class II Type C	SY	300.000	300.000
0084	628.6005	Turbidity Barriers	SY	165.000	165.000
0086	628.7555	Culvert Pipe Checks	EACH	15.000	15.000
0088	628.7570	Rock Bags	EACH	60.000	60.000

Estimate Of Quantities By Plan Sets

4519-09-71					
Line	Item	Item Description	Unit	Total	Qty
0090	629.0210	Fertilizer Type B	CWT	0.700	0.700
0092	630.0120	Seeding Mixture No. 20	LB	25.000	25.000
0094	630.0200	Seeding Temporary	LB	25.000	25.000
0096	630.0500	Seed Water	MGAL	20.000	20.000
0098	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0100	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0102	638.2602	Removing Signs Type II	EACH	4.000	4.000
0104	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0106	642.5001	Field Office Type B	EACH	0.500	0.500
0108	643.0420	Traffic Control Barricades Type III	DAY	630.000	630.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	980.000	980.000
0112	643.0900	Traffic Control Signs	DAY	420.000	420.000
0114	643.5000	Traffic Control	EACH	0.500	0.500
0116	645.0111	Geotextile Type DF Schedule A	SY	120.000	120.000
0118	645.0120	Geotextile Type HR	SY	280.000	280.000
0120	650.4500	Construction Staking Subgrade	LF	146.000	146.000
0122	650.5000	Construction Staking Base	LF	146.000	146.000
0124	650.6500	Construction Staking Structure Layout (structure) 01. B-5-424	LS	1.000	1.000
0130	650.9910	Construction Staking Supplemental Control (project) 02. 4519-09-71	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	146.000	146.000
0134	690.0150	Sawing Asphalt	LF	44.000	44.000
0136	715.0502	Incentive Strength Concrete Structures	DOL	948.000	948.000
0138	SPV.0105	Special 01. Superstructure 3/4" V-Drip Edge Structure B-5-424	LS	1.000	1.000

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STATION	201.0205 GRUBBING STATION
9+25	-	9+81	COUNTY LINE ROAD, RT	1	1
10+10	-	11+75	COUNTY LINE ROAD, RT	2	2
TOTALS				3	3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	DESCRIPTION
11+10	COUNTY LINE ROAD, LT	1	36-INCH, RCCP
TOTAL		1	

BASE AGGREGATE DENSE AND WATER

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
9+25	-	9+81	COUNTY LINE ROAD, LT & RT	10	65	8
10+10	-	11+75	COUNTY LINE ROAD, LT & RT	25	195	22
	11+10		P.E., LT	15	-	-
TOTALS				50	260	30

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (item #205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Comment:
			Cut				Factor 1.30		
1	9+25 - 11+75	COUNTY LINE ROAD	420	55	365	131	170	195	
Division 1 Total			420	55	365	131	170	195	

4) Unusable Pavement Material = Existing Asphaltic Pavement
5) Available Material = Cut - Unusable Pavement Material
13) Expanded Fill. Factor = 1.3 Expanded Fill = Unexpanded Fill * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material w ithin the Division. Minus indicates a shortage of material w ithin the Division.

BREAKER RUN

STATION	TO	STATION	LOCATION	311.0110 TON	REMARKS
9+25	-	9+81	COUNTY LINE ROAD	110	
	9+75		COUNTY LINE ROAD, LT & RT	5	FRENCH DRAINS
10+10	-	11+75	COUNTY LINE ROAD	320	
	11+70		COUNTY LINE ROAD, LT & RT	5	FRENCH DRAINS
TOTALS				440	

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
9+25	-	9+81	COUNTY LINE ROAD	10	30
10+10	-	11+75	COUNTY LINE ROAD	30	85
TOTALS				40	115

CULVERT PIPES AND ENDWALLS

STATION	LOCATION	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	522.1036 APRON ENDWALLS CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH
		LF	
11+10	COUNTY LINE ROAD, LT	29	2
TOTALS		29	2

TOPSOIL, MULCHING, FERTILIZER AND SEED

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
8+50	-	8+50	COUNTY LINE ROAD, LT & RT	115	0.1	3	3	3
10+10	-	11+75	COUNTY LINE ROAD, LT & RT	600	0.4	16	16	14
UNDISTRIBUTED				85	0.2	6	6	3
TOTALS				800	0.7	25	25	20

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 MAINTENANCE LF
9+25	-	9+81	COUNTY LINE ROAD, LT & RT	125	250
10+10	-	11+75	COUNTY LINE ROAD, LT & RT	240	480
UNDISTRIBUTED				95	190
TOTALS				460	920

EROSION MAT

STATION	TO	STATION	LOCATION	628.2008 URBAN CLASS I TYPE B SY	628.2027 CLASS II TYPE C SY
9+25	-	9+81	COUNTY LINE ROAD, LT & RT	115	-
10+10	-	11+75	COUNTY LINE ROAD, LT & RT	360	240
UNDISTRIBUTED				120	60
TOTAL				595	300

TURBIDITY BARRIERS

STATION	LOCATION	628.6005 SY
SOUTH ABUTMENT	COUNTY LINE ROAD	75
NORTH ABUTMENT	COUNTY LINE ROAD	90
TOTAL		165

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
11+25	COUNTY LINE ROAD, LT	10
UNDISTRIBUTED		5
TOTAL		15

ROCK BAGS

STATION	LOCATION	628.7570 EACH
9+75	COUNTY LINE ROAD, RT	15
10+15	COUNTY LINE ROAD, LT	15
10+35	COUNTY LINE ROAD, RT	15
UNDISTRIBUTED		15
TOTAL		60

REMOVING SIGNS AND SUPPORTS

STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EA	638.3000 REMOVING SMALL SIGN SUPPORTS EA	REMARKS
9+85	COUNTY LINE ROAD, LT & RT	2	2	OBJECT MARKER
10+15	COUNTY LINE ROAD, LT & RT	2	2	OBJECT MARKER
TOTALS		4	4	

SIGNS REFLECTIVE TYPE II AND WOOD POSTS

STATION	LOCATION	634.0612 WOOD POSTS 4"x6"x12" EACH	637.2230 SIGNS W5-52L S.F.	W5-52R S.F.
9+75	COUNTY LINE ROAD, LT	1	3	-
9+85	COUNTY LINE ROAD, RT	1	-	3
10+05	COUNTY LINE ROAD, LT	1	-	3
10+15	COUNTY LINE ROAD, RT	1	3	-
TOTALS		4	12	

TRAFFIC CONTROL SUMMARY

LOCATION	APPROXIMATE SERVICE DAYS	643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0900 SIGNS		
		NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	
SOUTH OF WORK ZONE LIMITS	70	-	-	-	-	3	210	ADVANCE WARNING SIGNS - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
SOUTH WORK ZONE LIMITS	70	7	490	10	700	2	140	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C, D, & E
NORTH WORK ZONE LIMITS	70	7	490	10	700	2	140	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C, D, & E
NORTH OF WORK ZONE LIMITS	70	-	-	-	-	2	140	ADVANCE WARNING SIGNS - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
COUNTY LINE ROAD / CTH ZZ	70	2	140	4	280	2	140	BRIDGE OUT 1 MILE AHEAD - SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
TOTALS			630		980		420	

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6500	650.9910	650.9920	CATEGORY
				SUBGRADE LF	BASE LF	STRUCTURE LAYOUT LS	SUPPLEMENTAL CONTROL LS	SLOPE STAKES LF	
9+25	-	9+81	COUNTY LINE ROAD	56	56	-	1	56	0010
10+10	-	11+75	COUNTY LINE ROAD	90	90	-	-	90	0010
SUBTOTALS				146	146	0	1	146	0010
10+00			COUNTY LINE ROAD	-	-	1	-	-	0020
SUBTOTALS				0	0	1	0	0	0020
TOTALS				146	146	1	1	146	

SAWING ASPHALT

STATION	LOCATION	690.0150
		LF
9+25	COUNTY LINE ROAD	22
11+75	COUNTY LINE ROAD	22
TOTAL		44

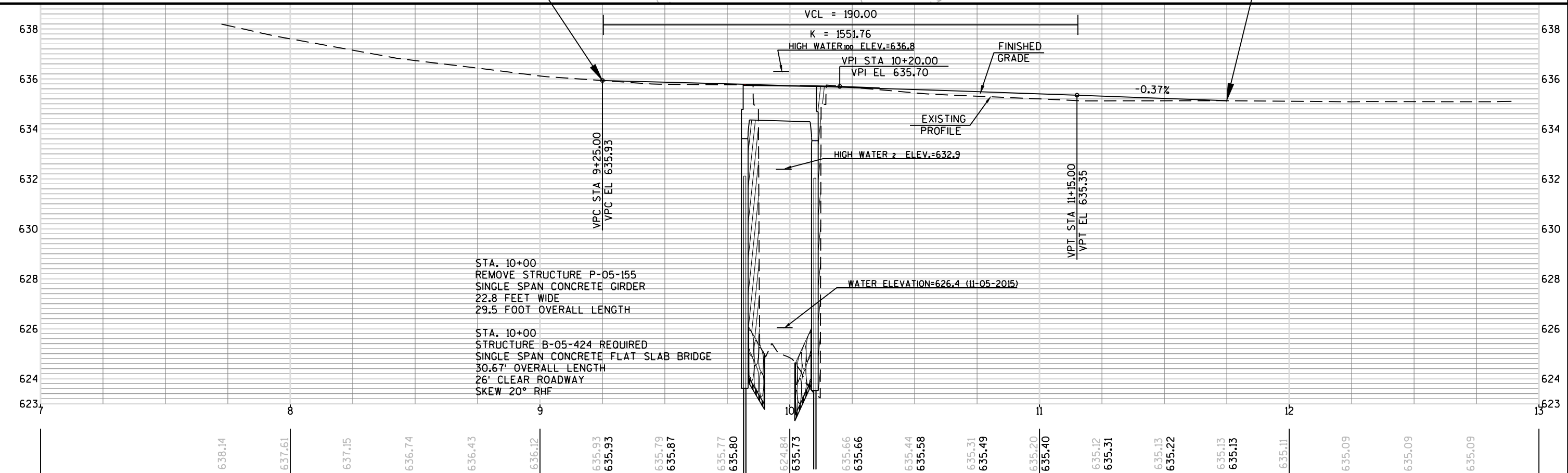
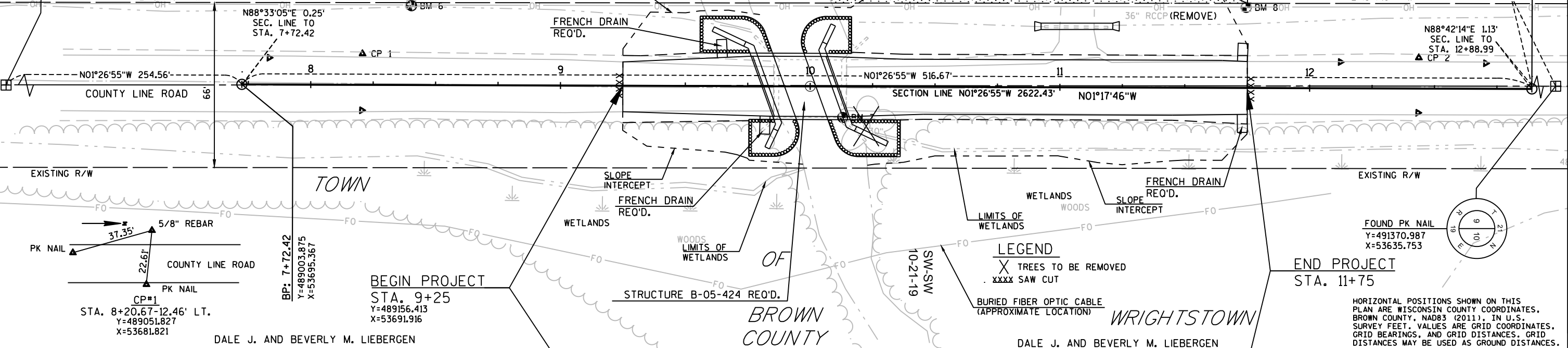
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
6	8+40	RR SPK IN PP-32' LT.	632.46
7	10+13	ALUM. CAP ON WW-12.4' RT.	634.98
8	11+74	NAIL IN PP-32' LT.	633.16

TOWN
FOUND COUNTY MONUMENT
Y=488749.400
X=53702.051

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNERSHIP	INTEREST REQUIRED	TLE ACRES
1	JEAN FELDKAMP TRUSTEE OF THE JEAN FELDKAMP REVOCABLE LIVING TRUST-LC VENDOR ROGER L. FELDKAMP-LC PURCHASER	TLE	0.04

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN
JEAN FELDKAMP TRUSTEE OF THE
JEAN FELDKAMP REVOCABLE LIVING TRUST-LC VENDOR
ROGER L. FELDKAMP-LC PURCHASER

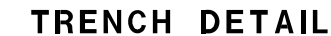


Standard Detail Drawing List

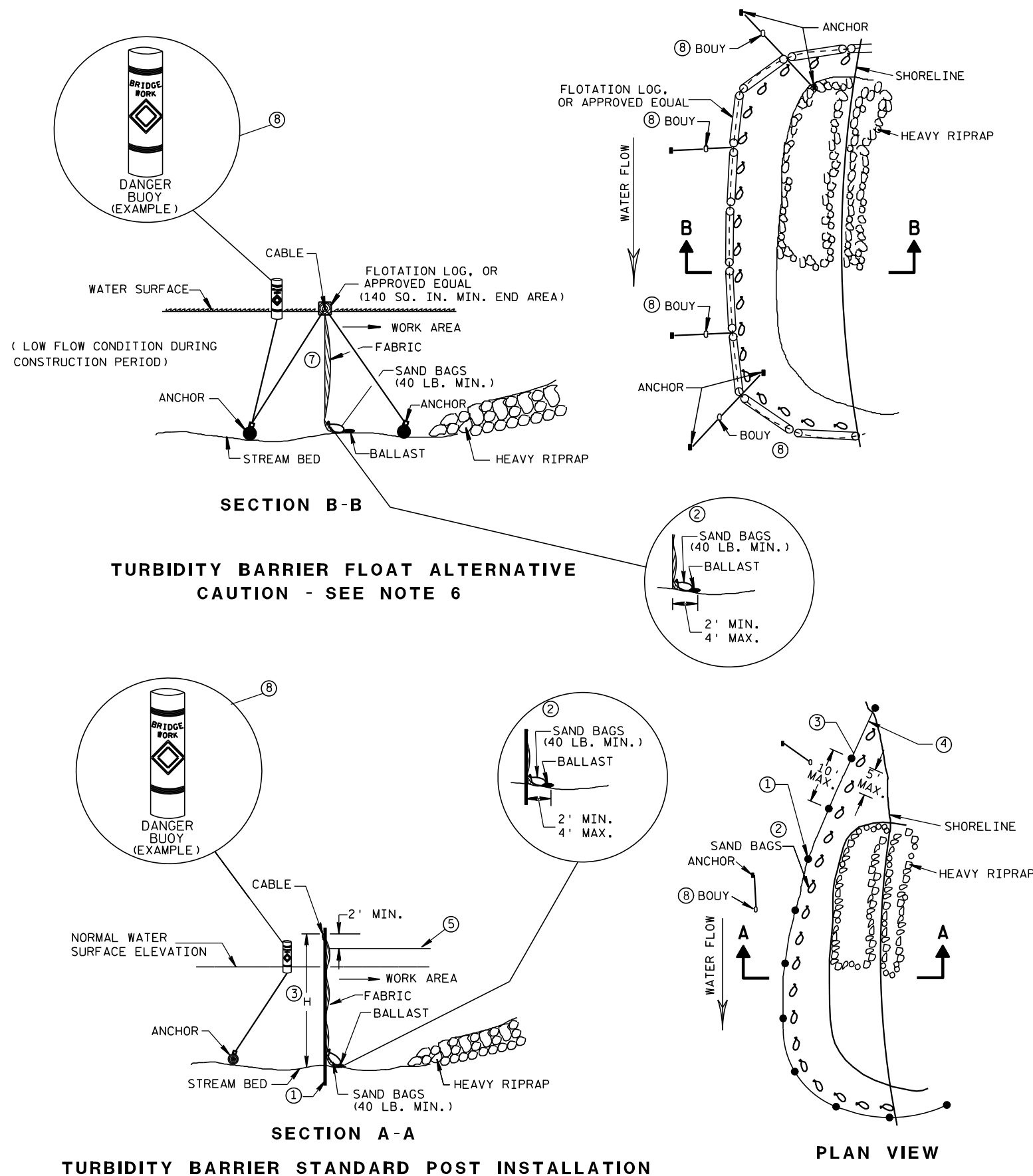
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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

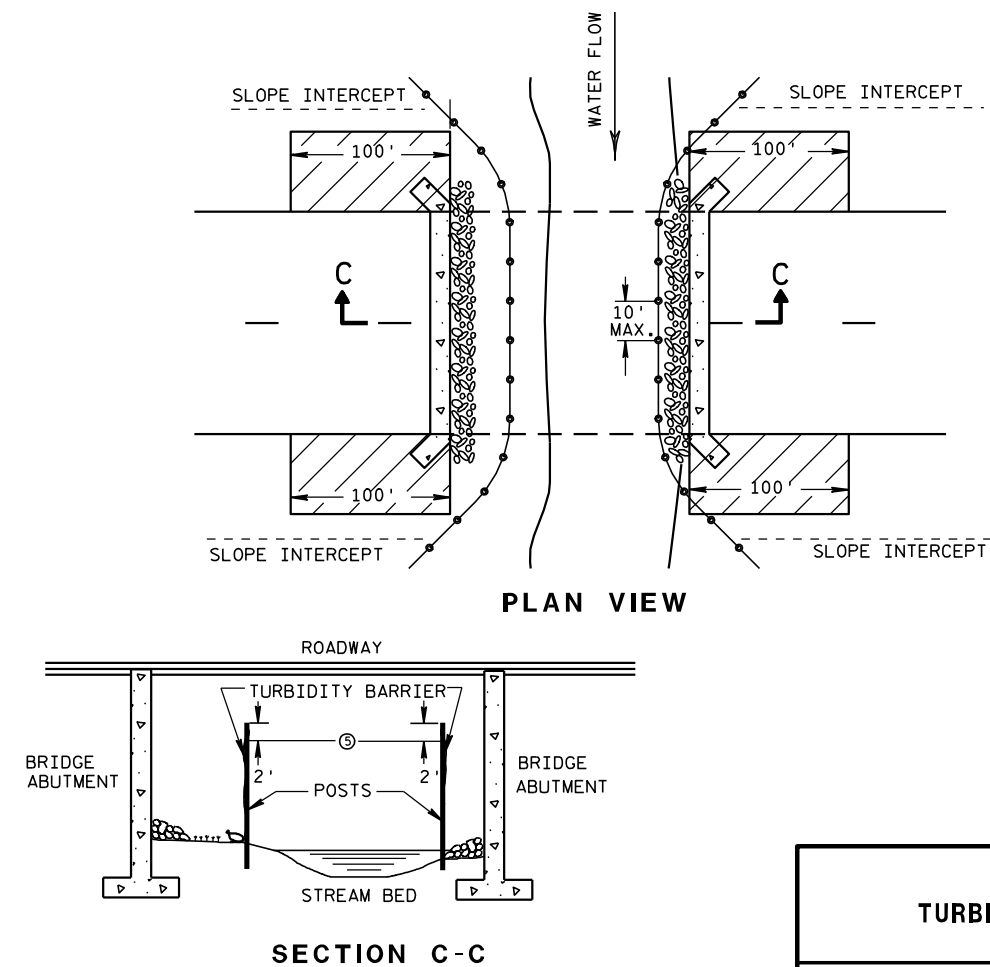


GENERAL NOTES

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

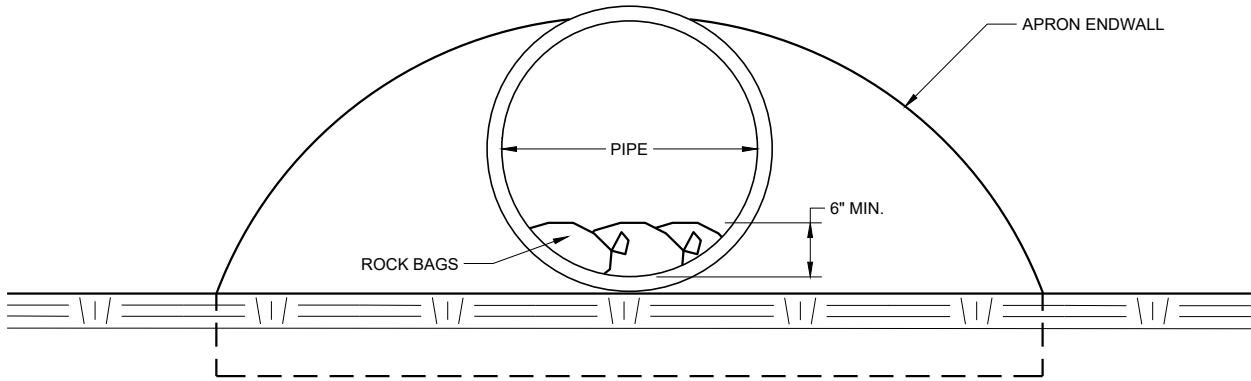
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

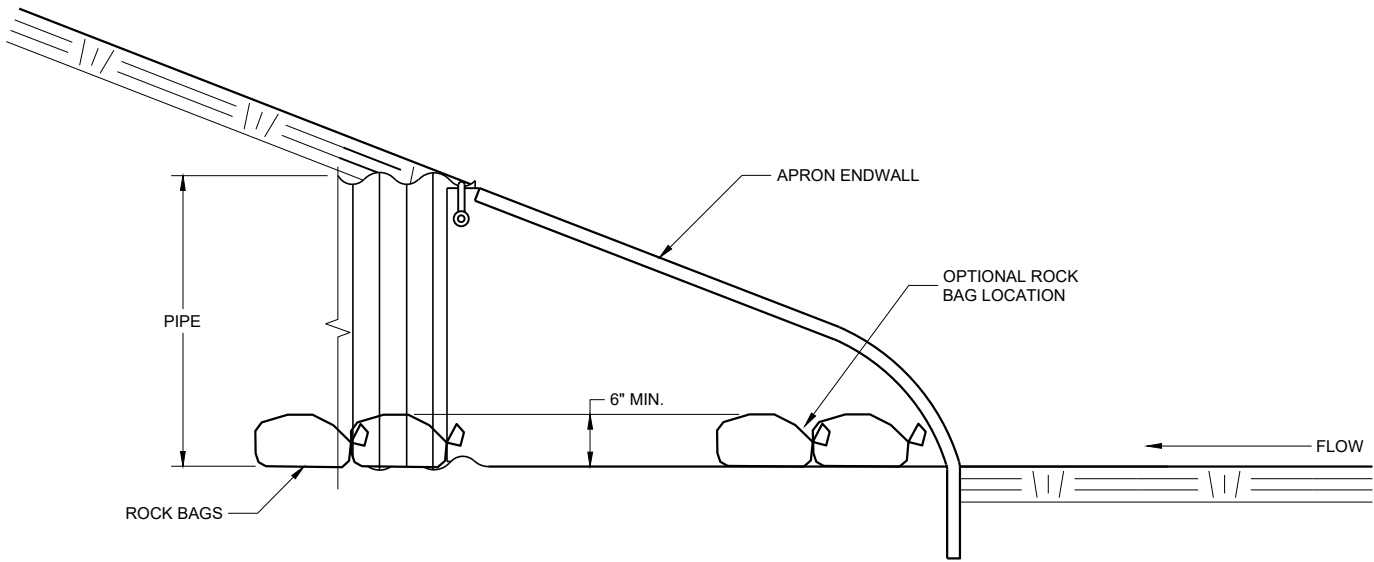
6/04/02
DATE

FWHA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



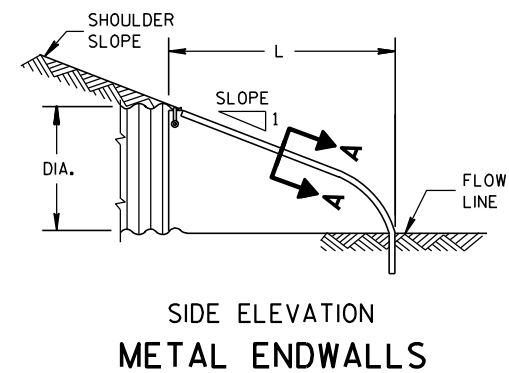
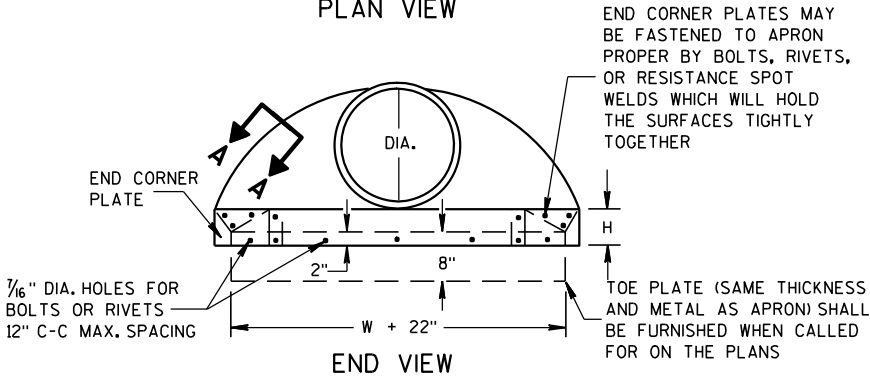
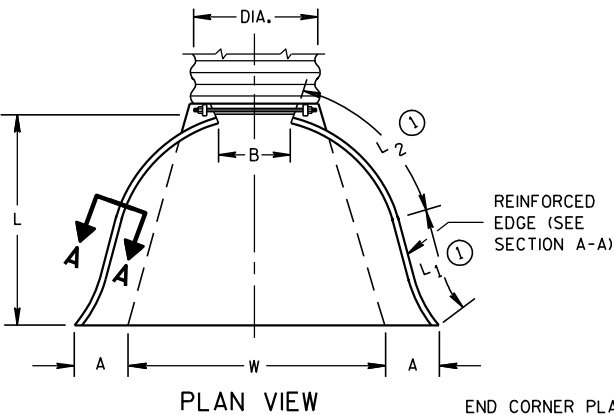
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
FHWA	

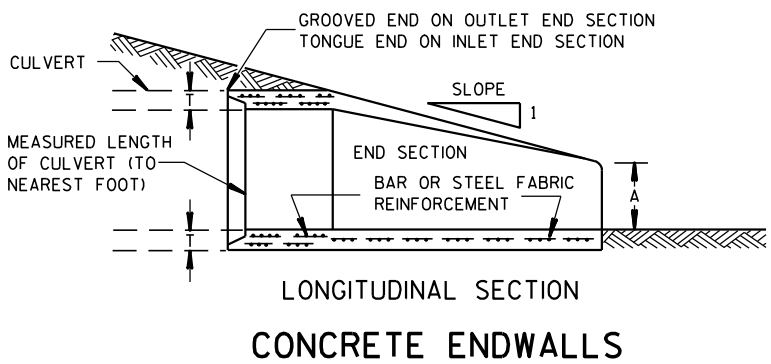
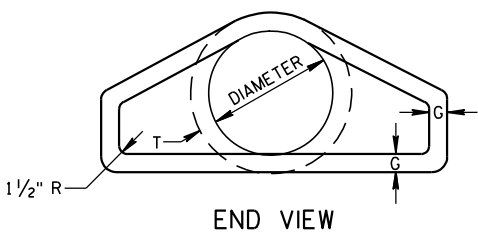
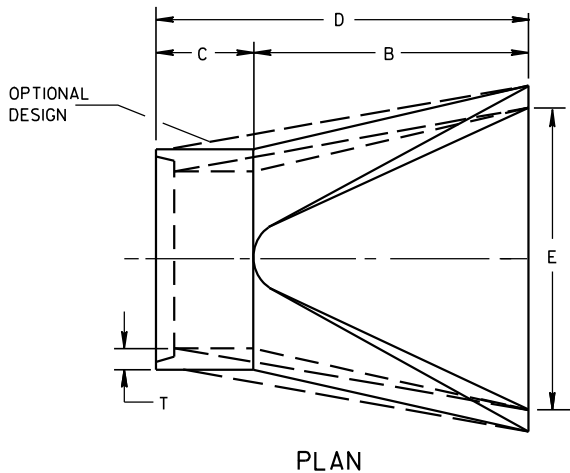
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.	

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

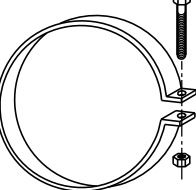


REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ¹ / ₈	72 ¹ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 ¹ / ₂	30	73 ¹ / ₂	48	3	3 to 1
27	3 ¹ / ₄	10 ¹ / ₂	49 ¹ / ₂	24	73 ¹ / ₂	54	3 ¹ / ₄	3 to 1
30	3 ¹ / ₂	12	54	19 ³ / ₄	73 ¹ / ₂	60	3 ¹ / ₂	3 to 1
36	4	15	63	34 ³ / ₄	97 ³ / ₄	72	4	3 to 1
42	4 ¹ / ₂	21	63	35	98	78	4 ¹ / ₂	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 ¹ / ₂	27	65	^{**} / _{33¹/₄-35}	^{**} / _{98¹/₄-100}	90	5 ¹ / ₂	2 ¹ / ₅ to 1
60	6	^{**} / ₃₀₋₃₅	60	39	99	96	5	2 to 1
66	6 ¹ / ₂	^{**} / ₂₄₋₃₀	^{**} / ₇₂₋₇₈	^{**} / ₂₁₋₂₇	99	102	5 ¹ / ₂	2 to 1
72	7	^{**} / ₂₄₋₃₆	78	21	99	108	6	2 to 1
78	7 ¹ / ₂	^{**} / ₂₄₋₃₆	78	21	99	114	6 ¹ / ₂	2 to 1
84	8	36	90 ¹ / ₂	21	111 ¹ / ₂	120	6 ¹ / ₂	1 ¹ / ₂ to 1
90	8 ¹ / ₂	41	87 ¹ / ₂	24	111 ¹ / ₂	132	6 ¹ / ₂	1 ¹ / ₂ to 1

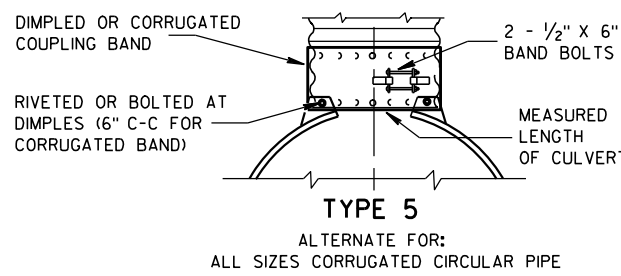
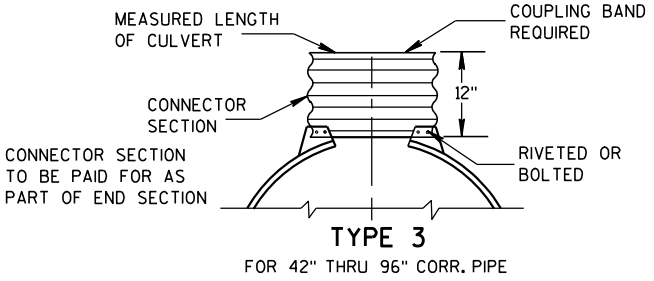
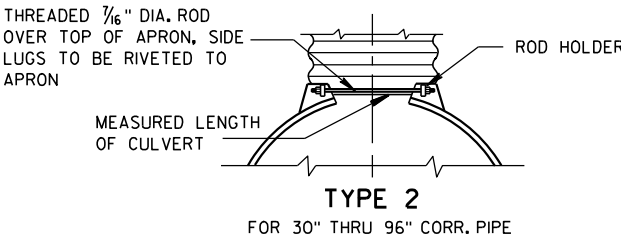
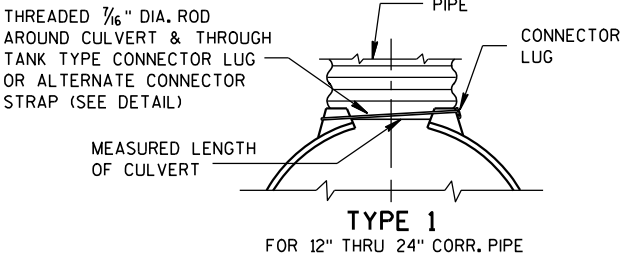
* MINIMUM
** MAXIMUM



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



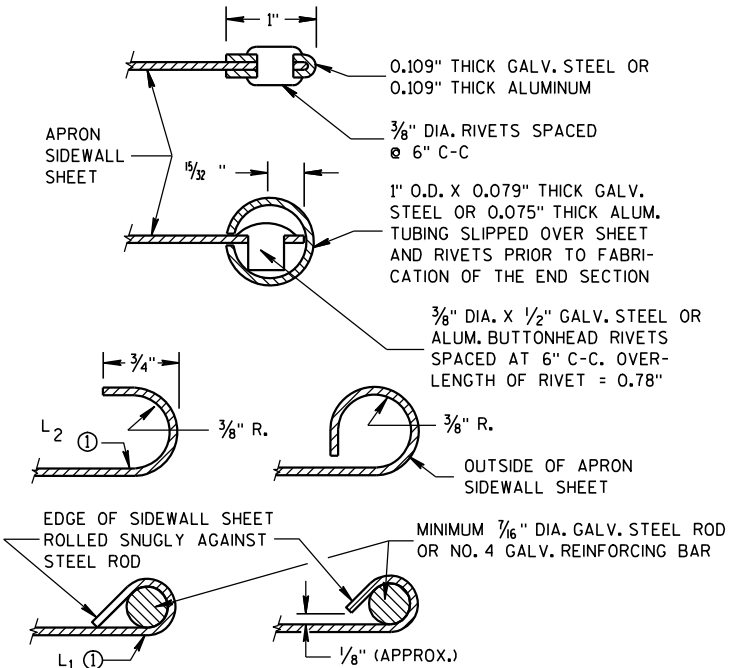
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

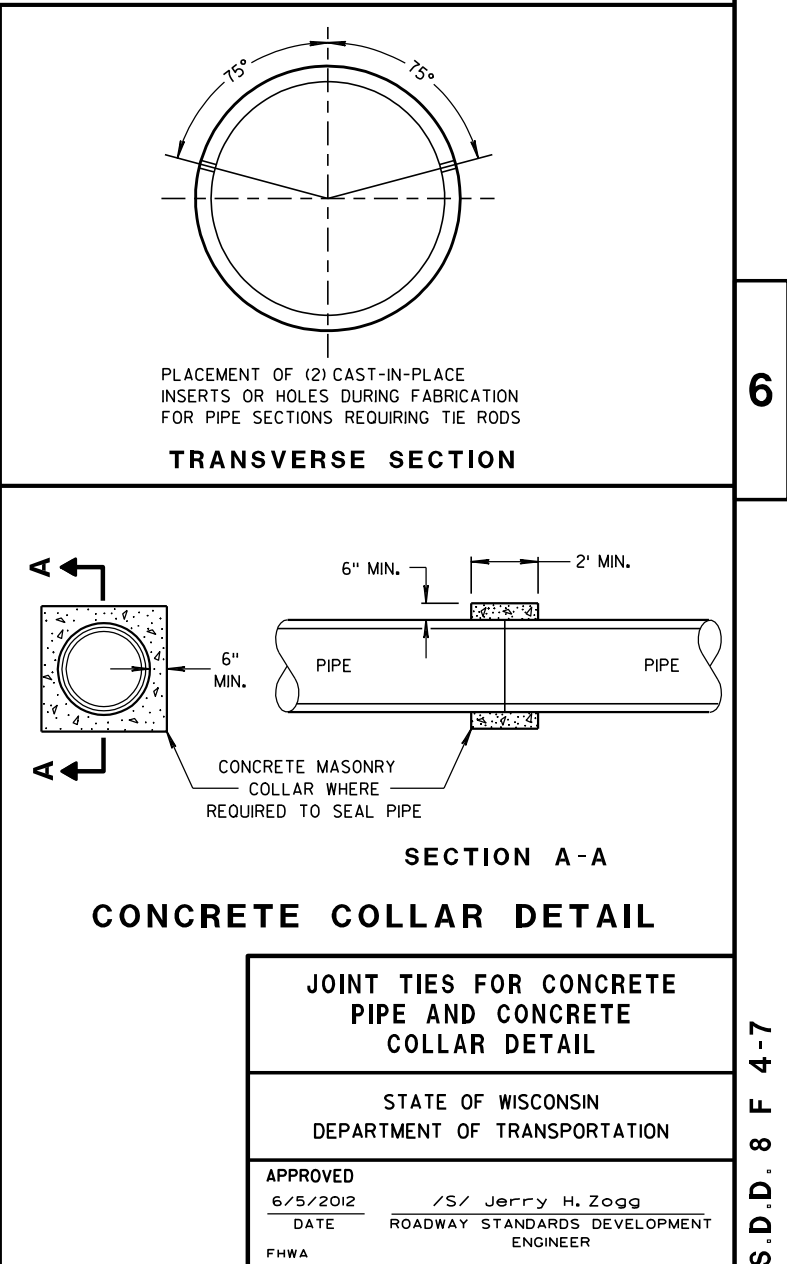
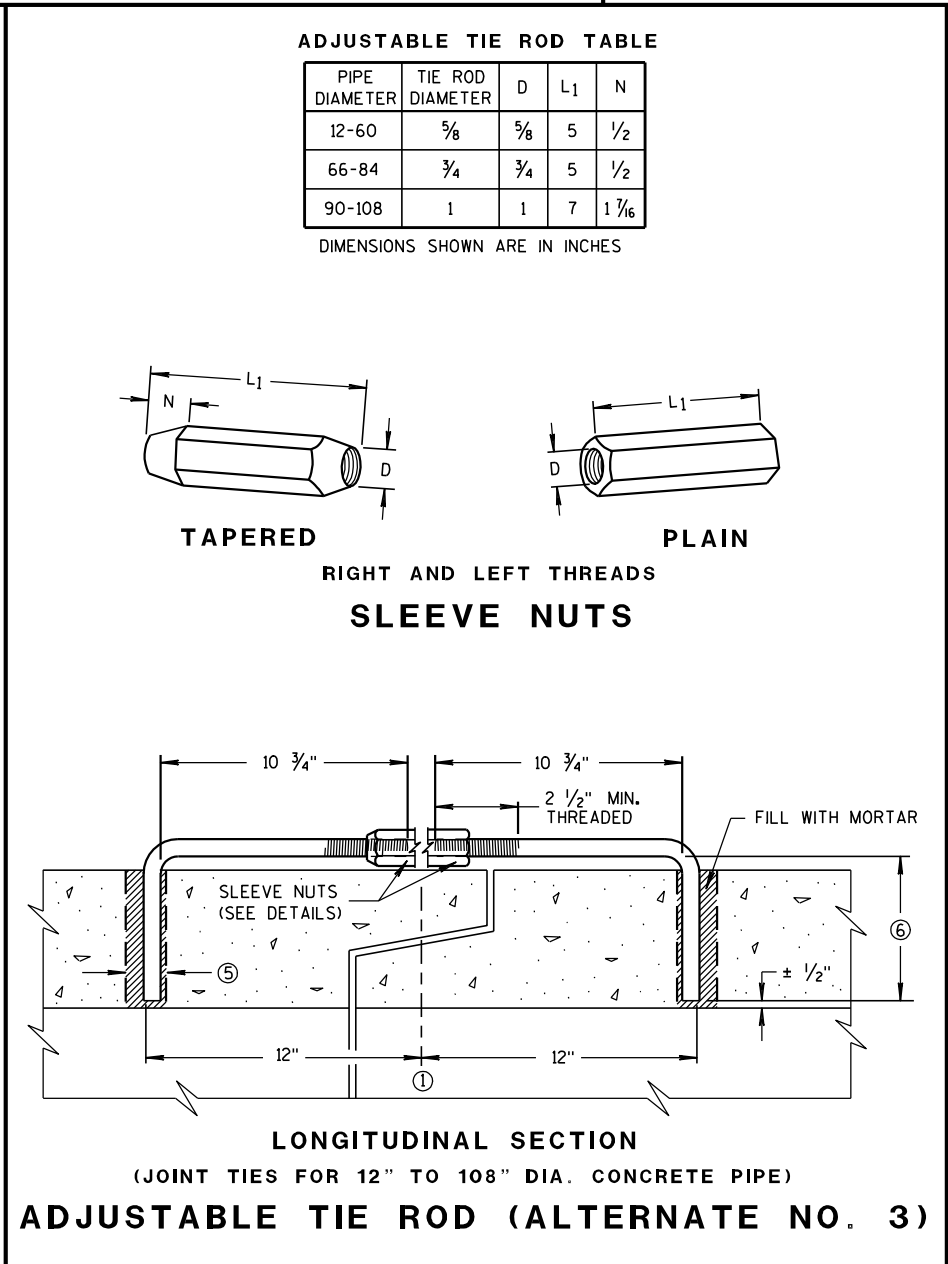
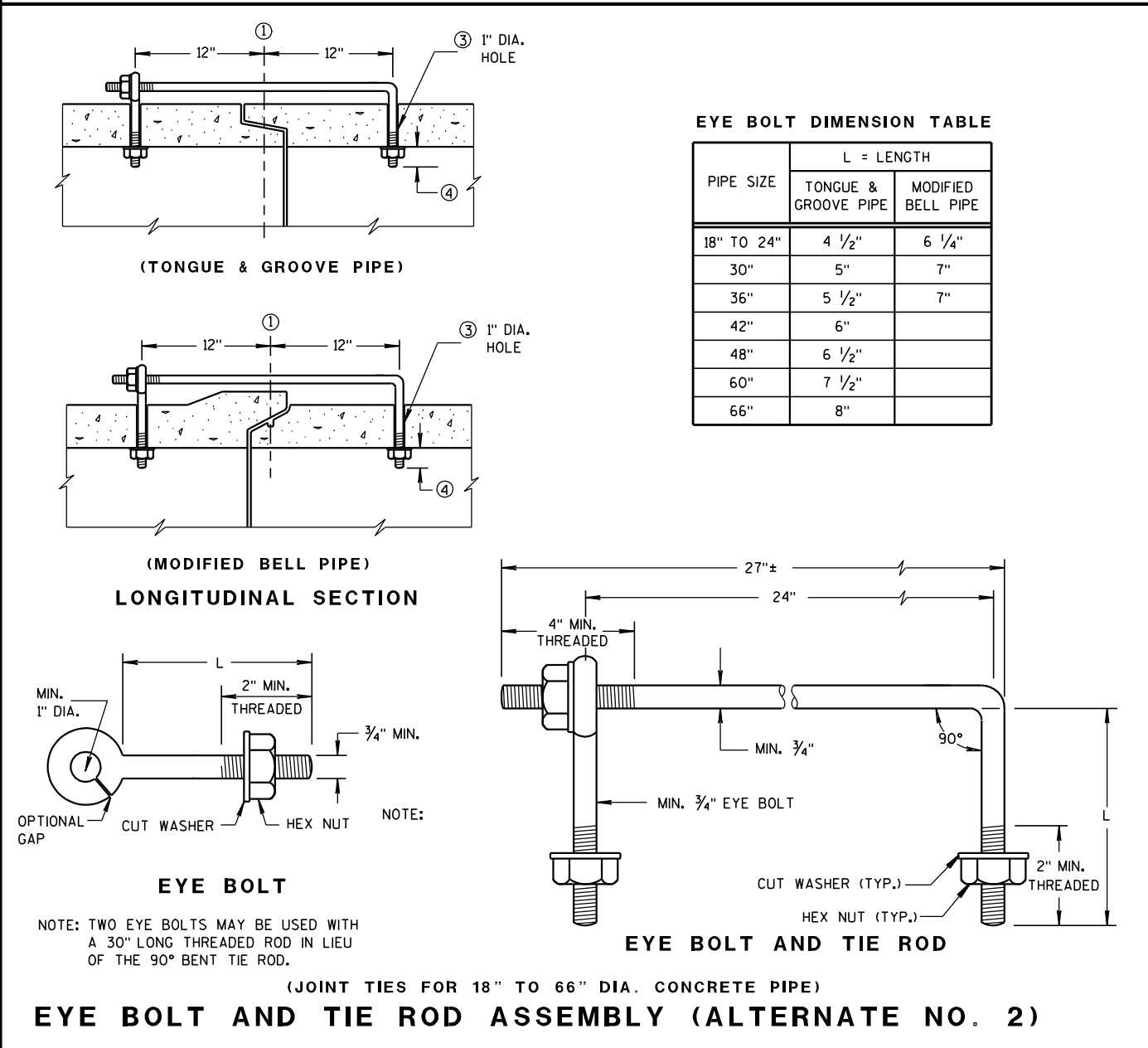
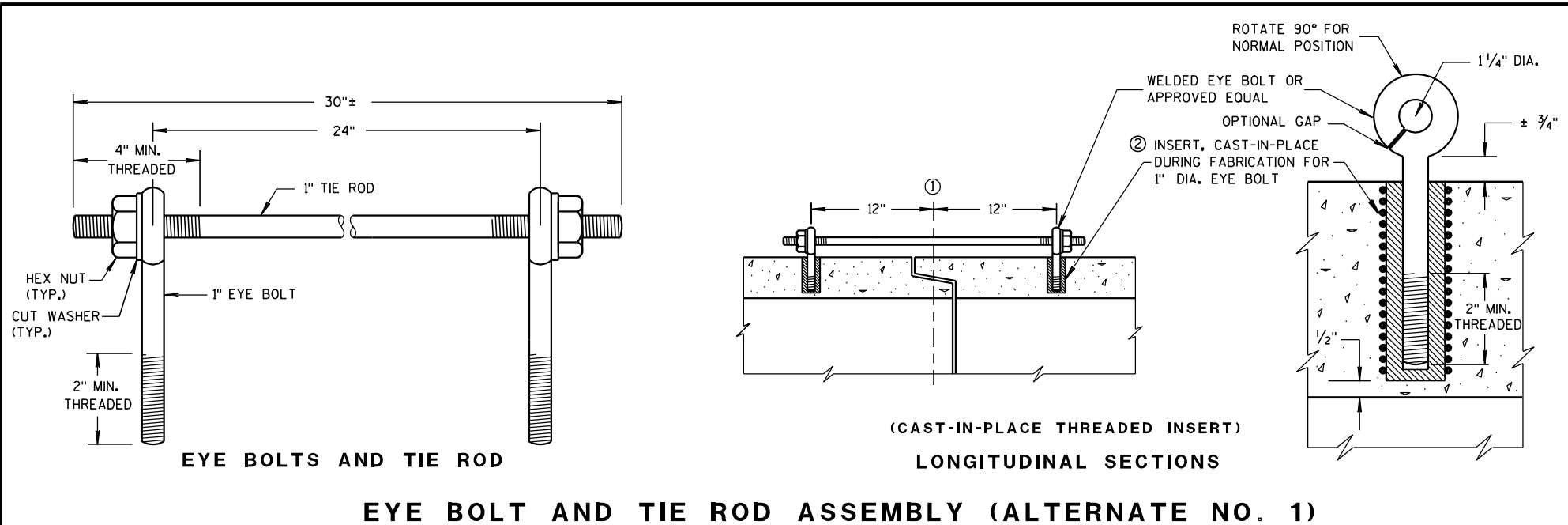
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

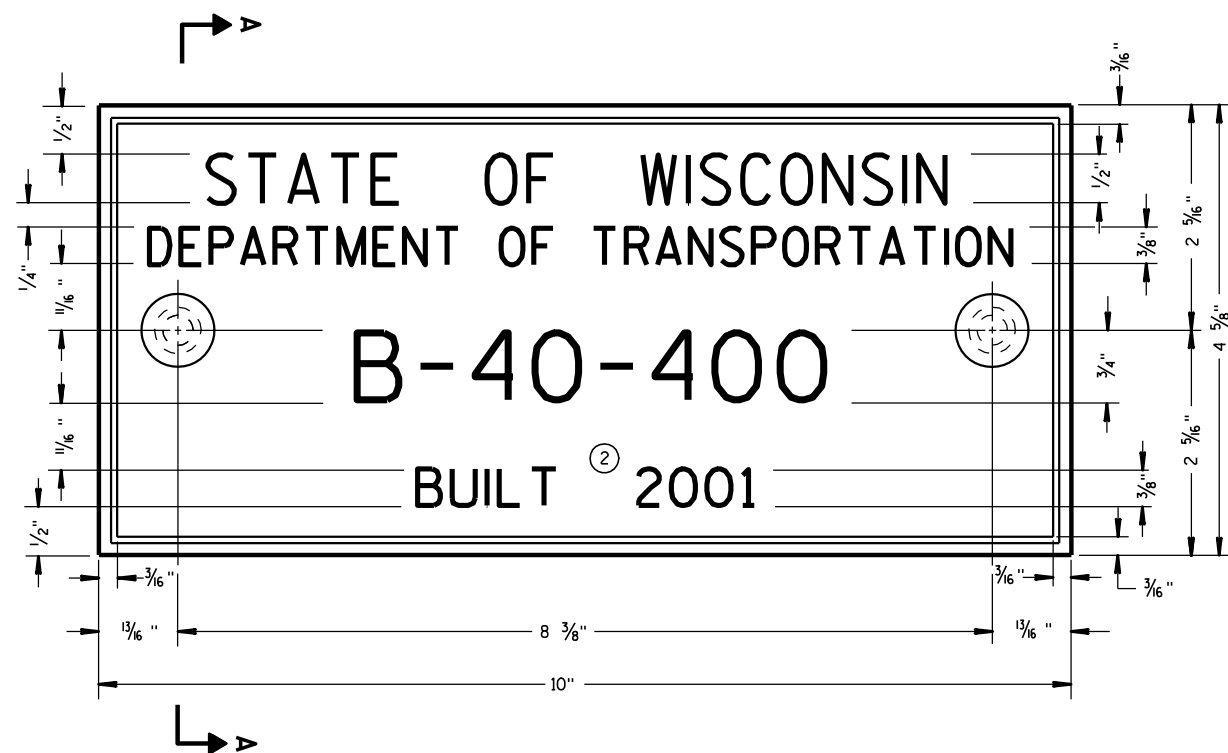
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

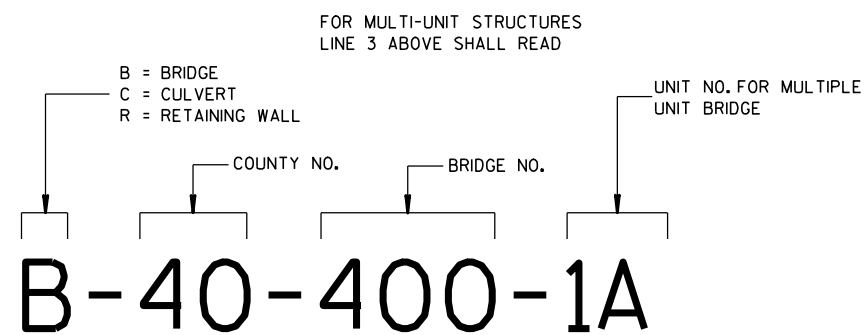
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA





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



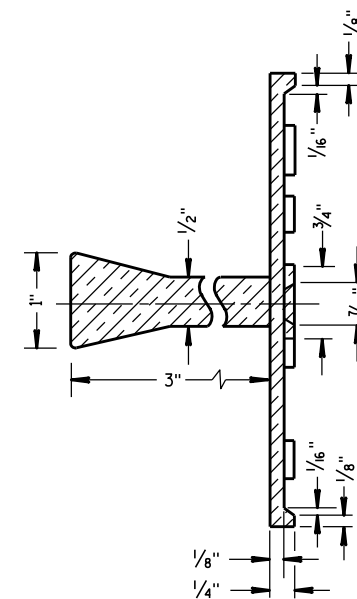
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

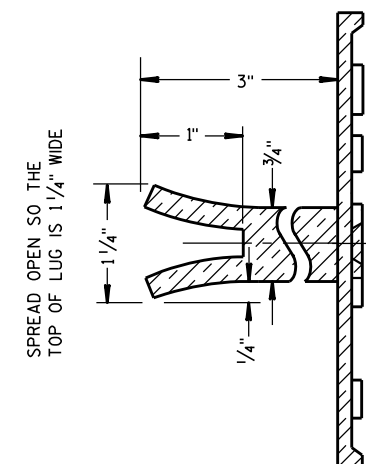
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

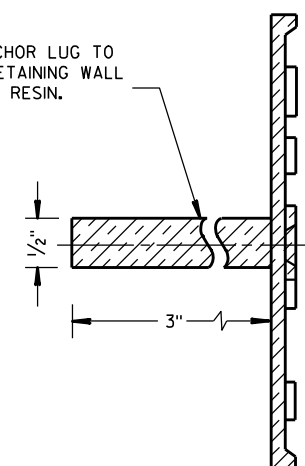


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

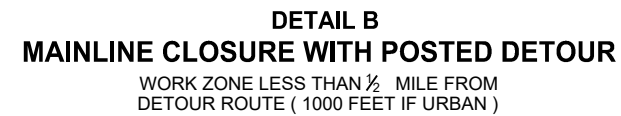
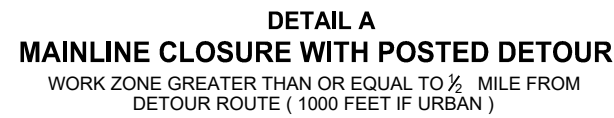
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

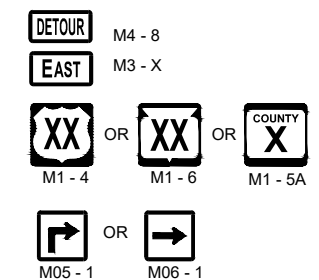


SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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



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



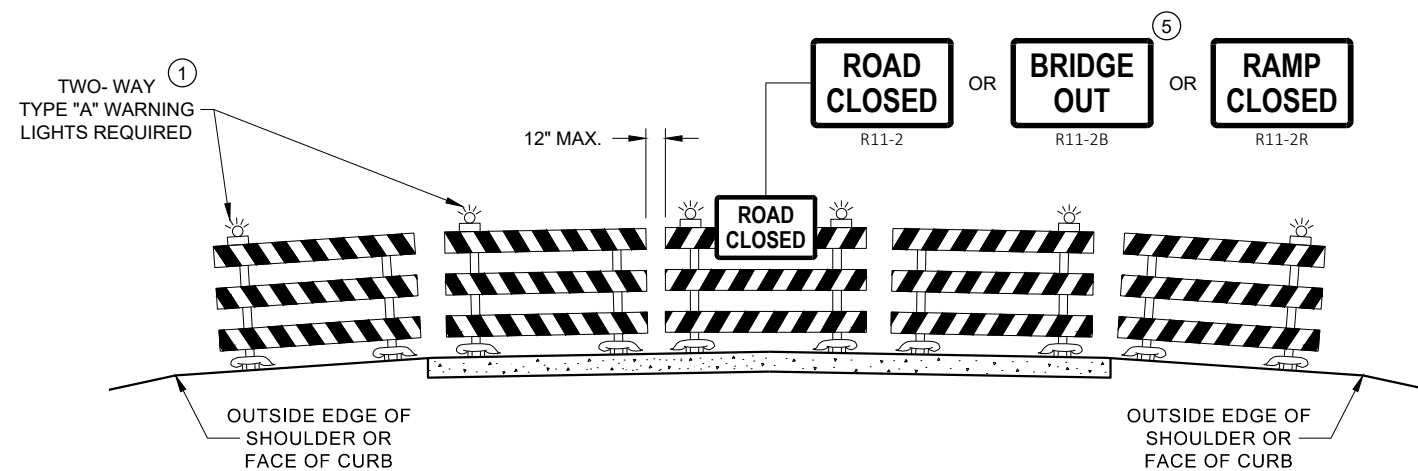
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

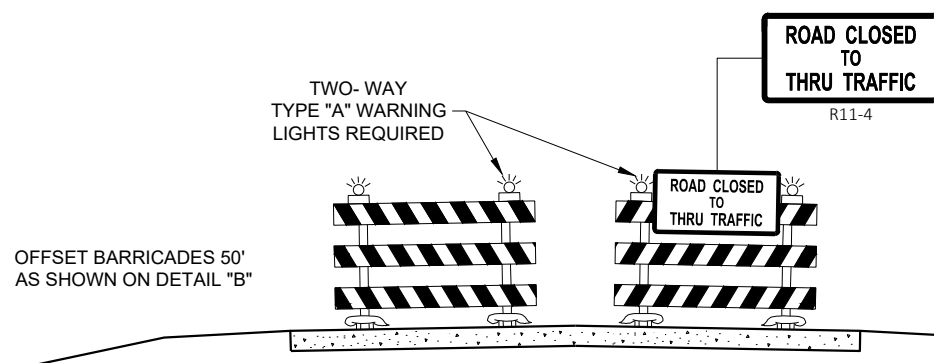
APPROVED
November 2018
DATE

/S/ Andrew Heidtke
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"

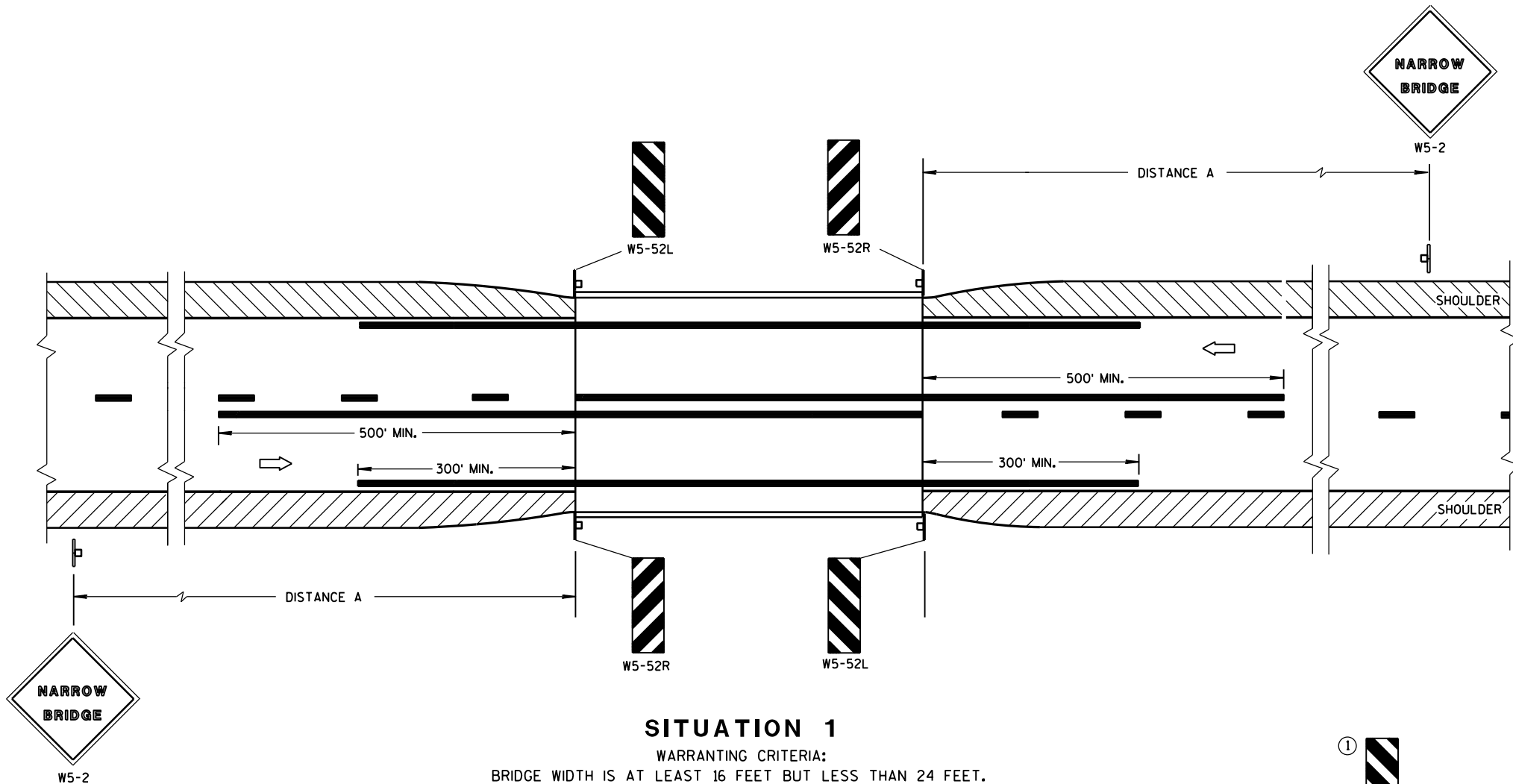
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

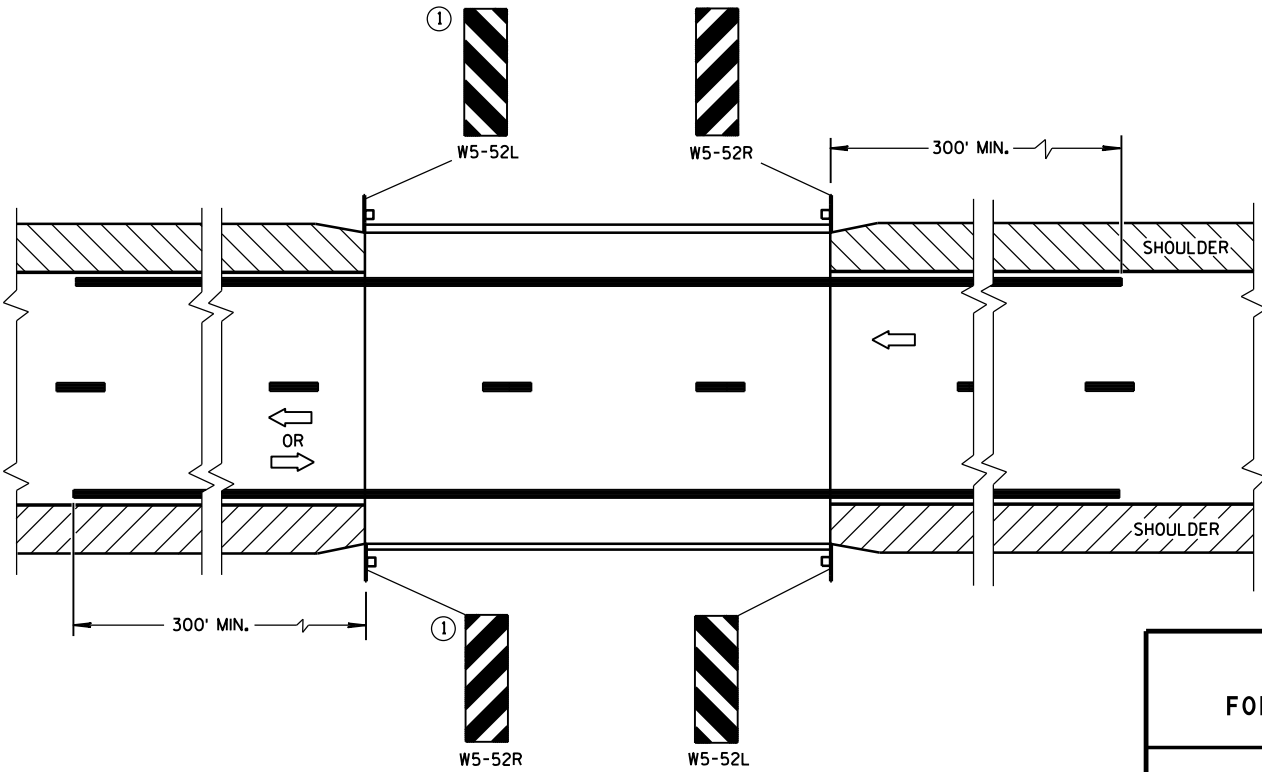


SITUATION 1

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'



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 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.

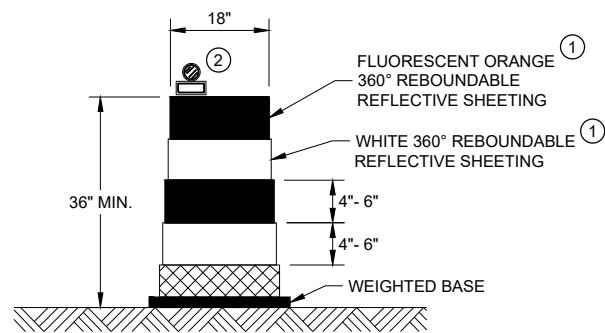
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC

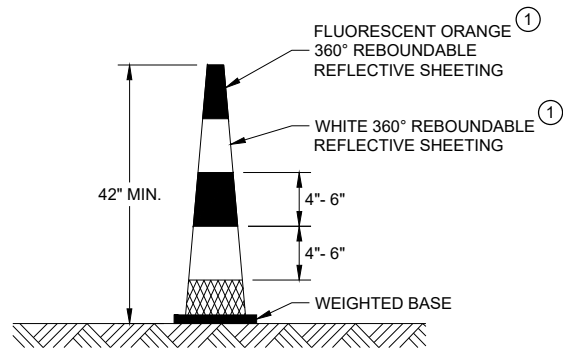
**SIGNING & MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

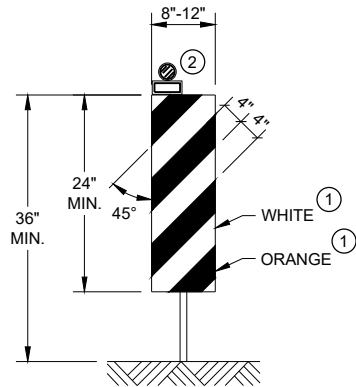


DRUM



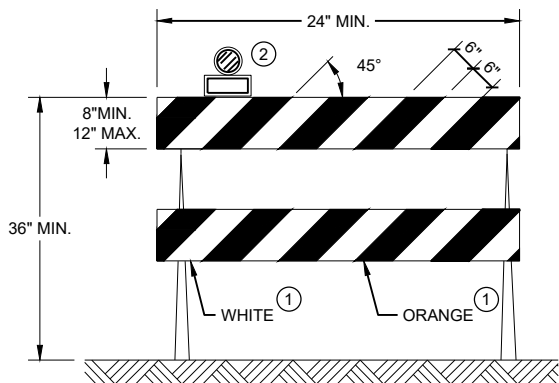
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



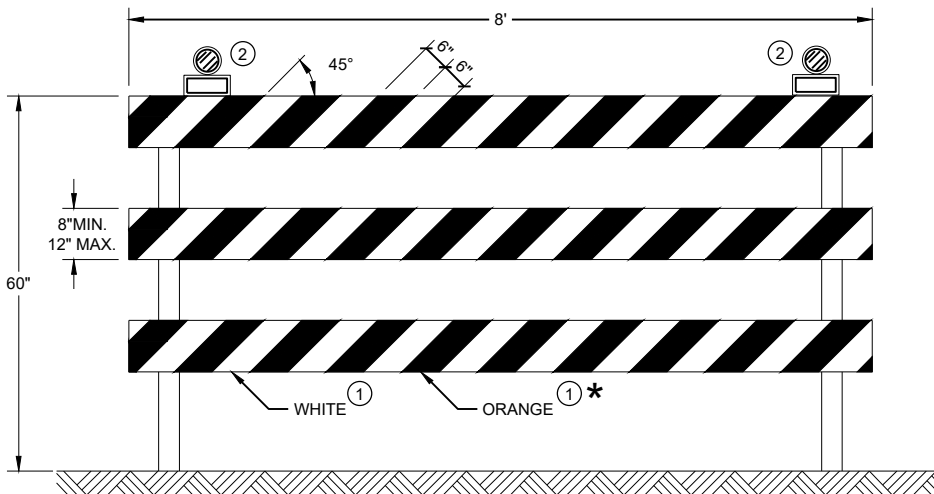
VERTICAL PANEL

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

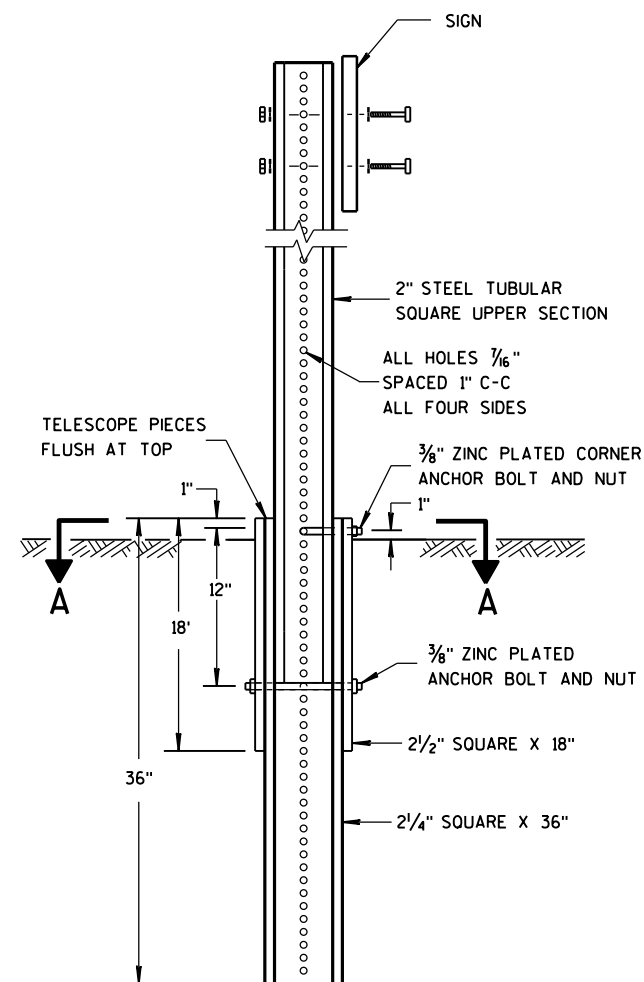
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

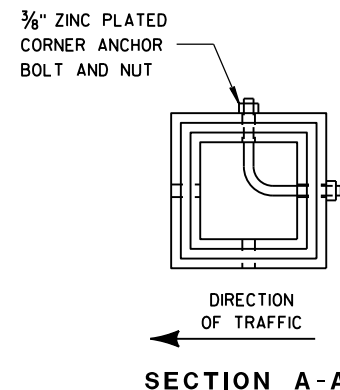


DETAIL OF TUBULAR
STEEL SIGN POST

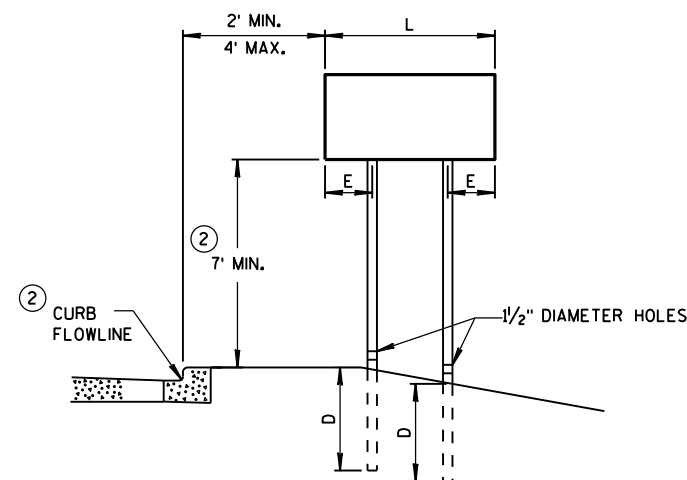
TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



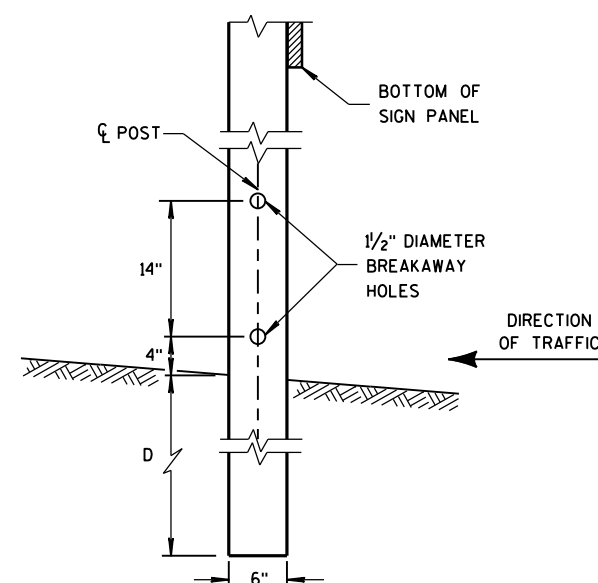
SECTION A-A



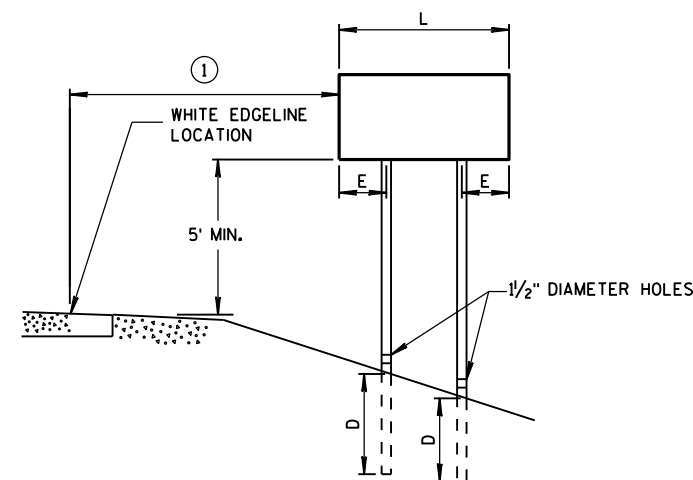
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

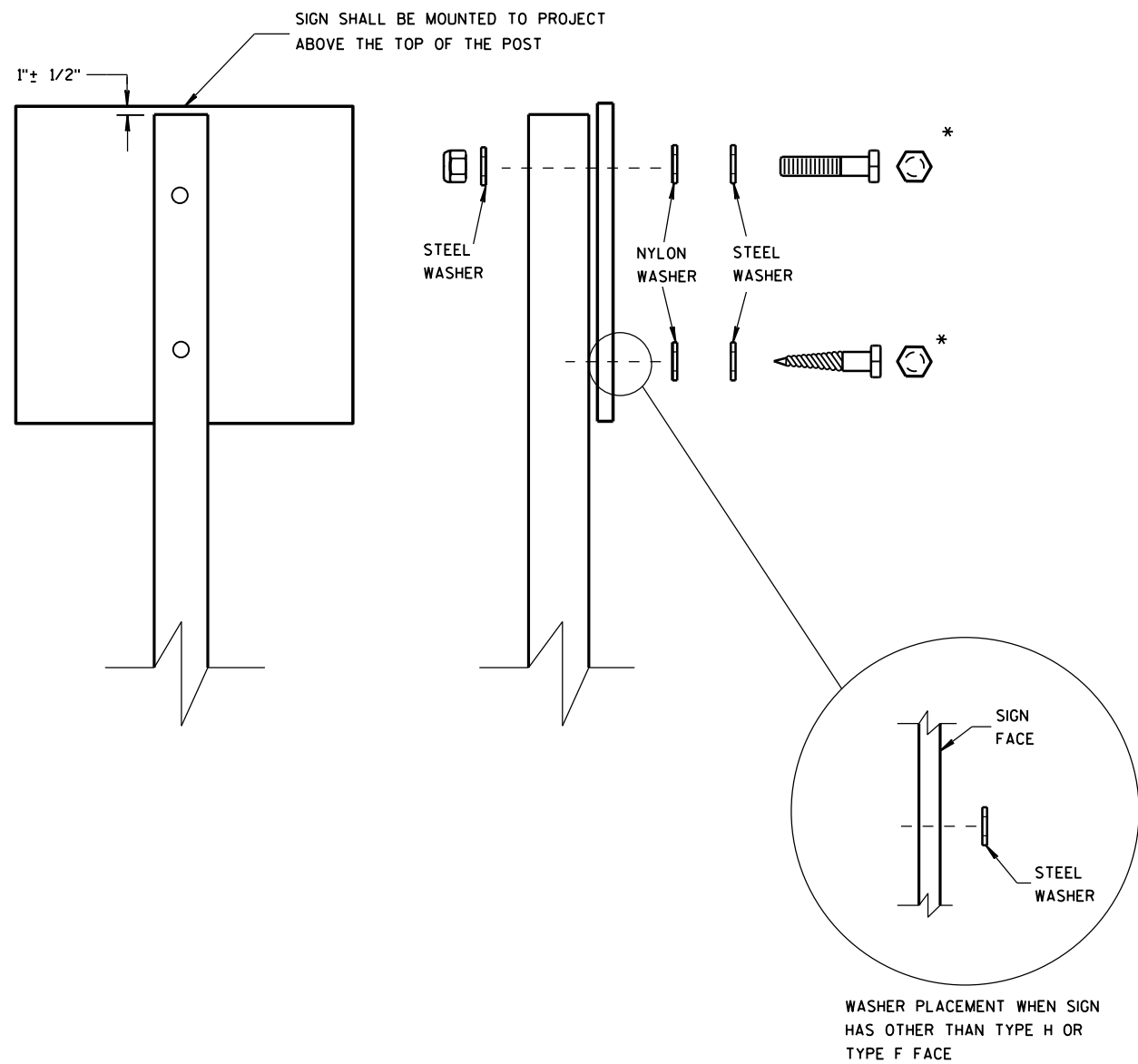
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

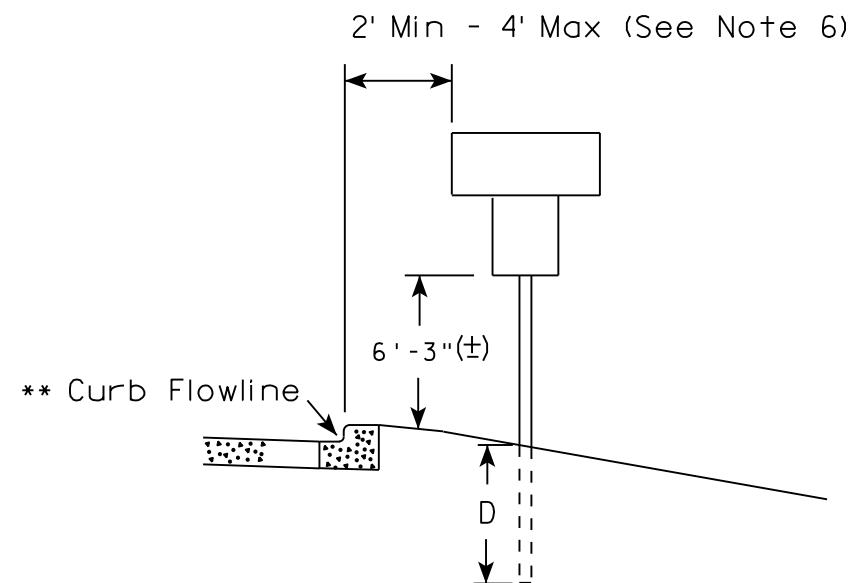
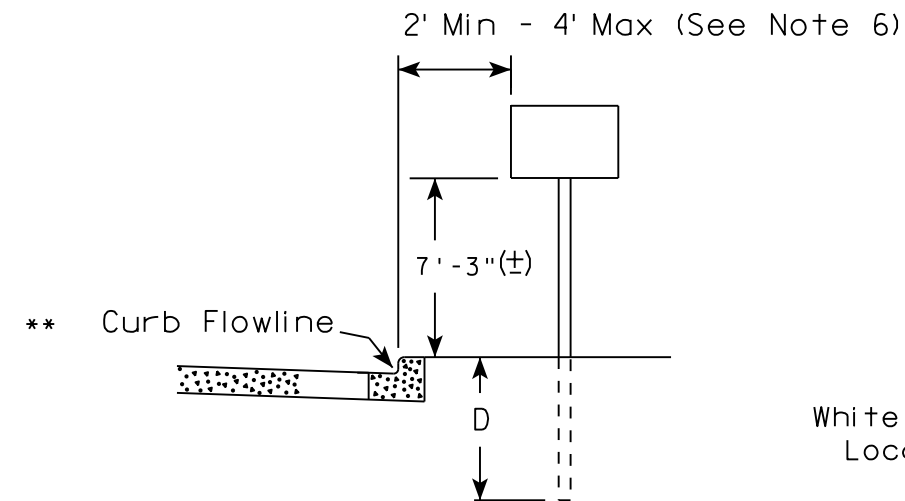
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

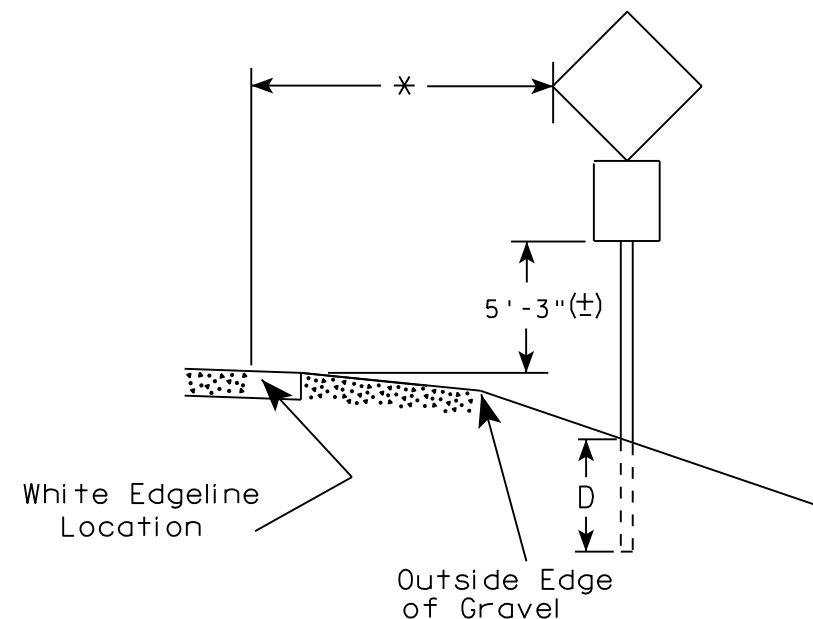
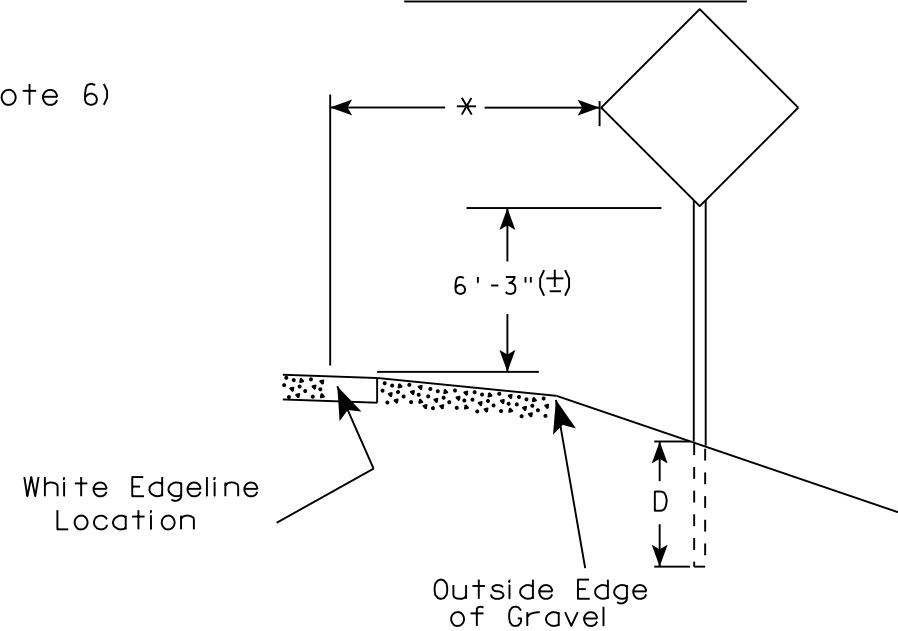
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

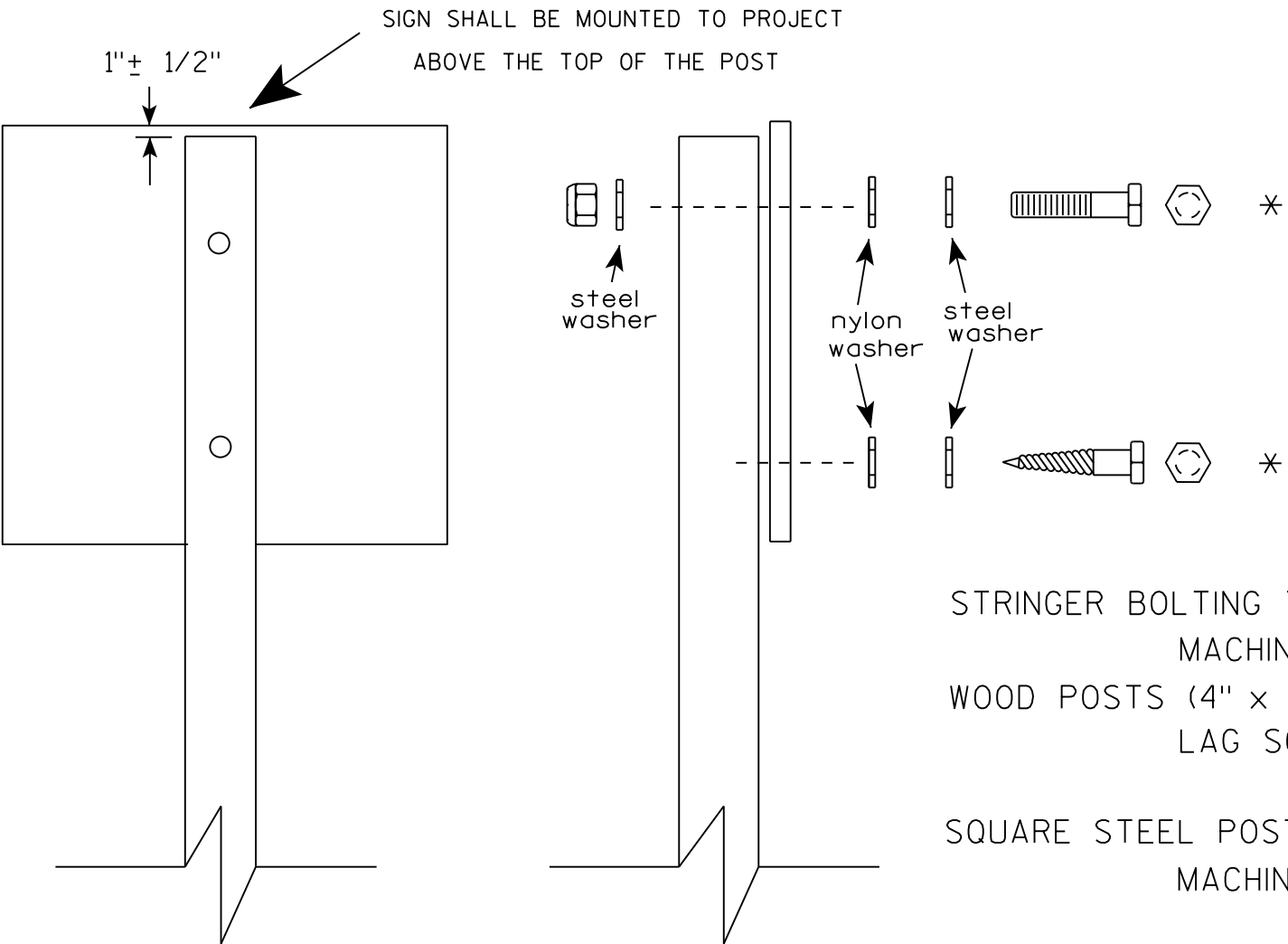
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21



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.

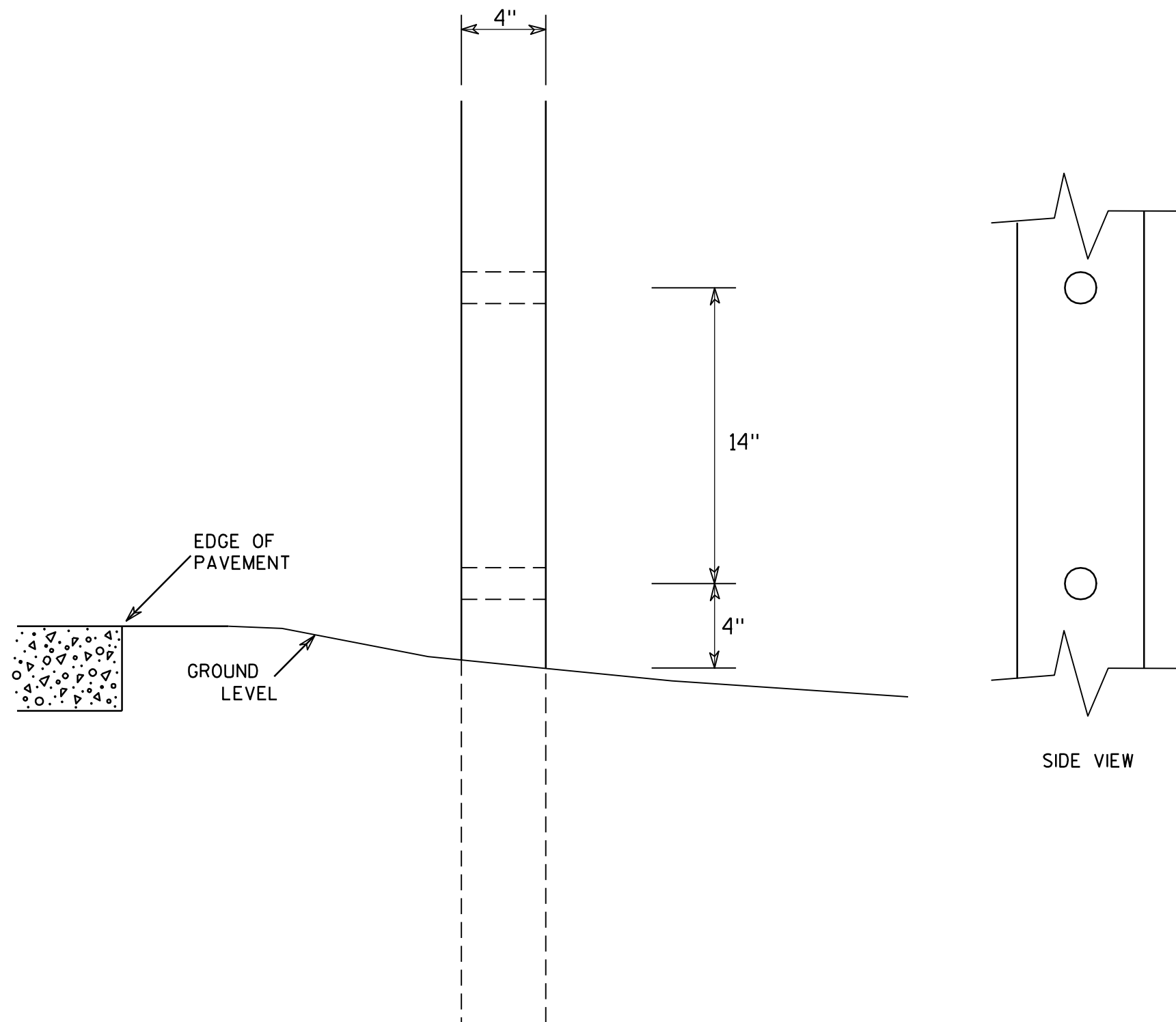
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

* 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 8/11/16	PLATE NO. A4-8.8

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

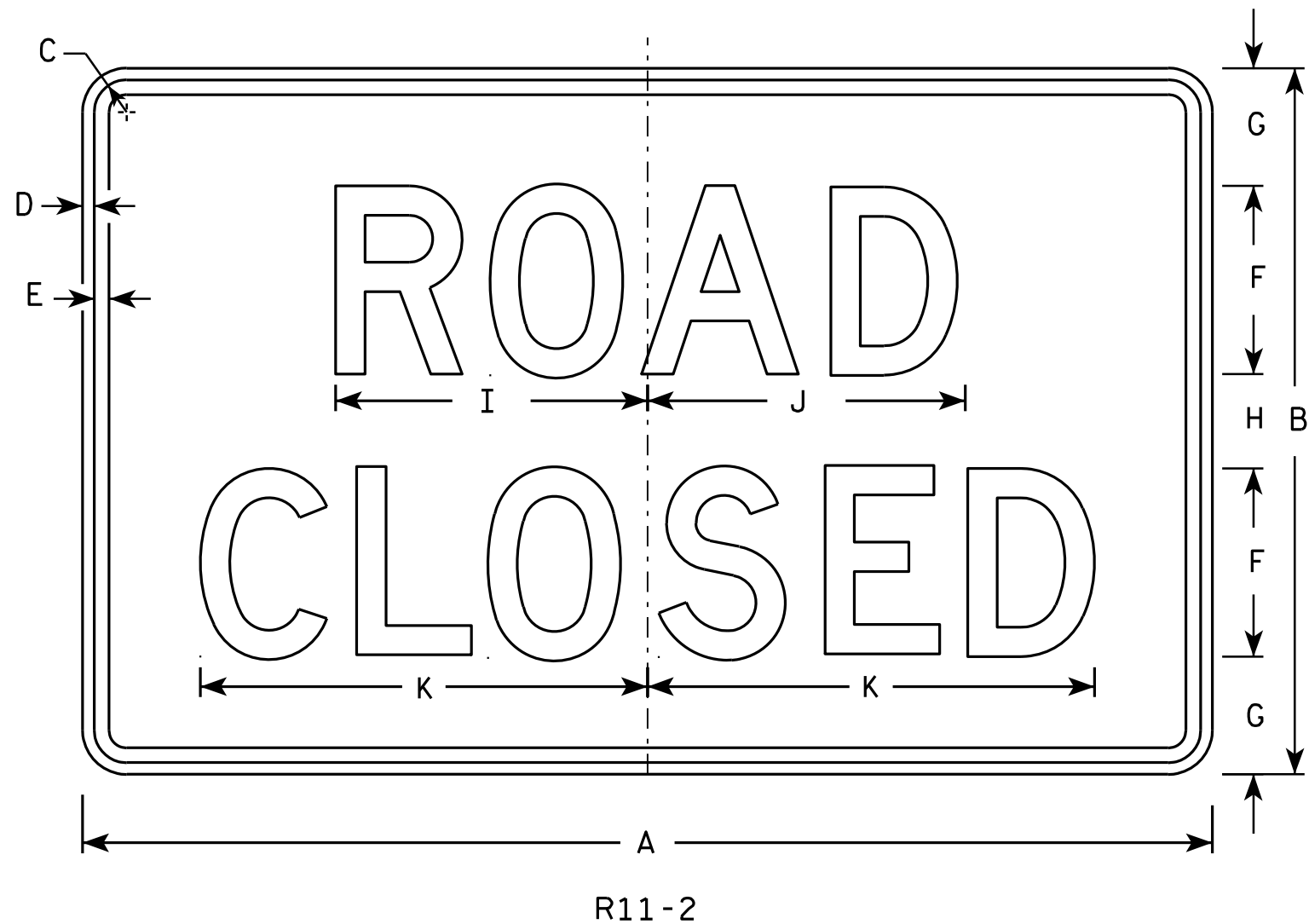
PROJECT NO:

HWY:

COUNTY:

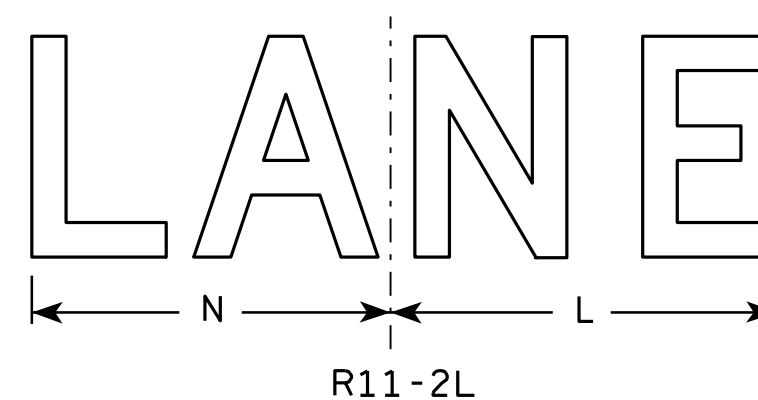
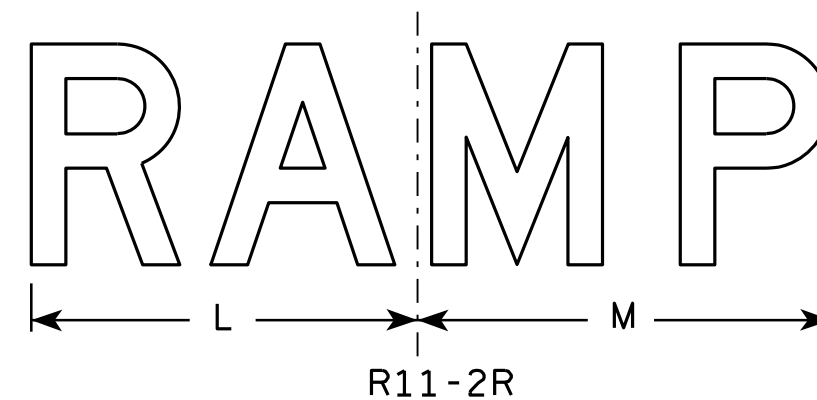
SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.
5. Modify the message as required.



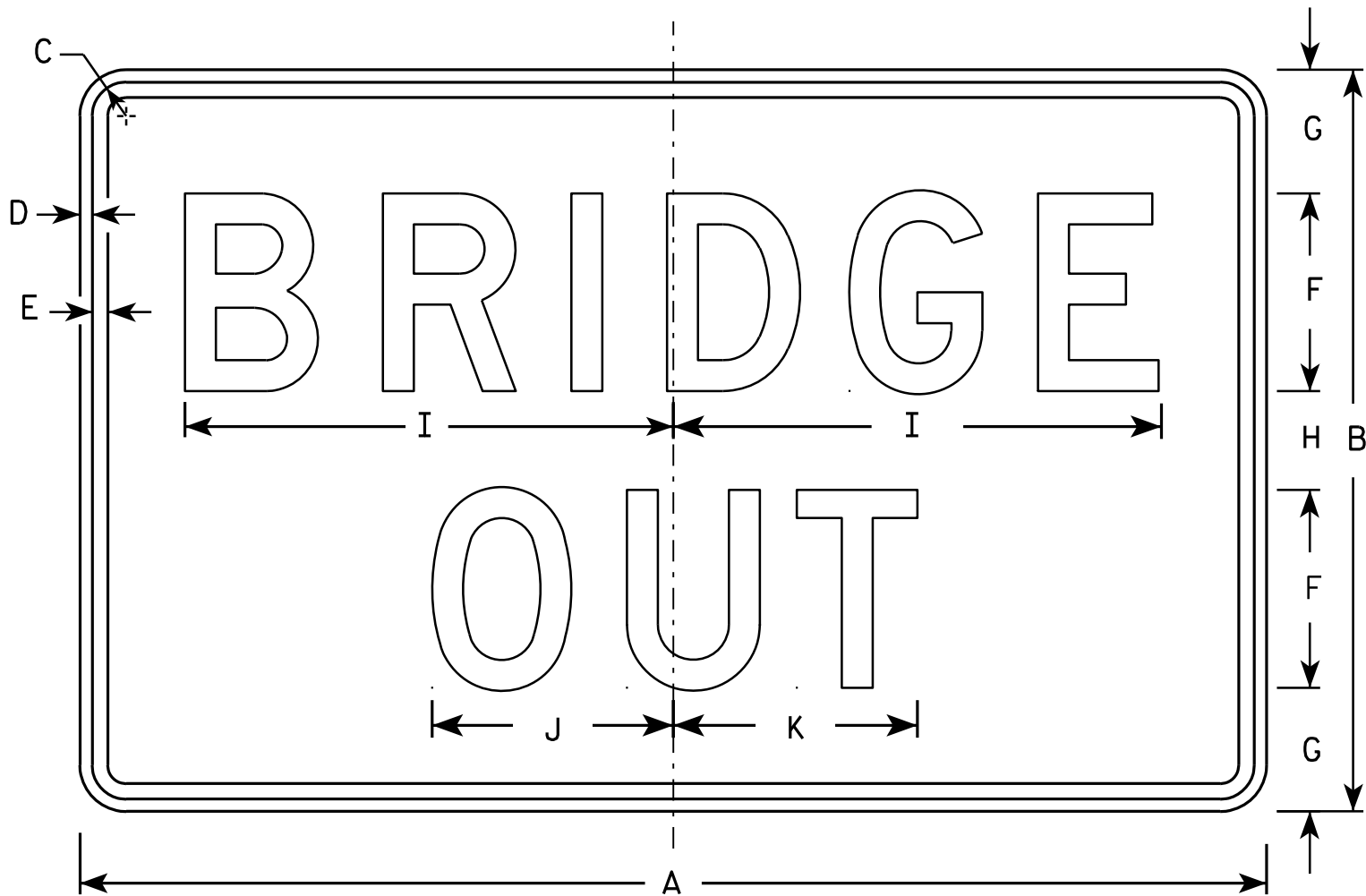
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:	SHEET NO: E
-------------	------	---------	--------------------

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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.



R11-2B

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 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN

R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

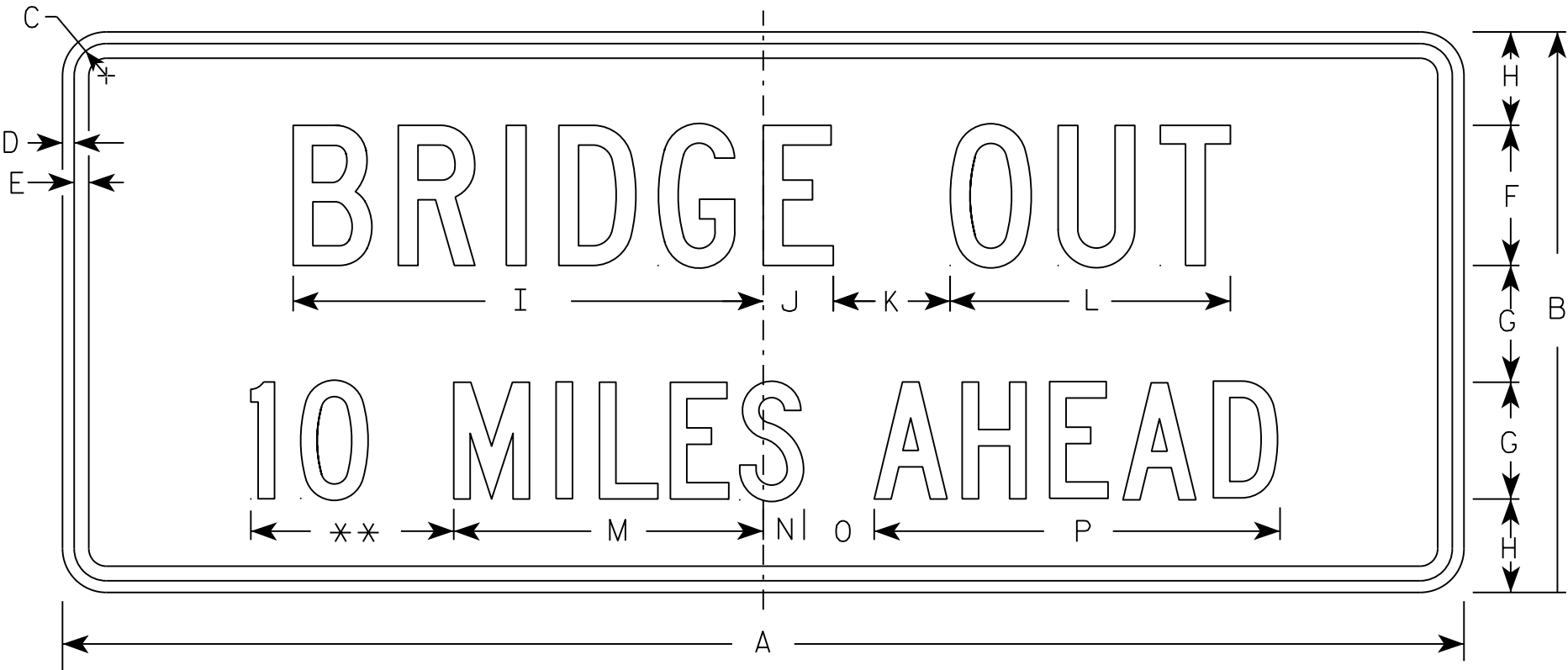
DATE 4/1/11 PLATE NO. R11-2B.2

NOTES

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

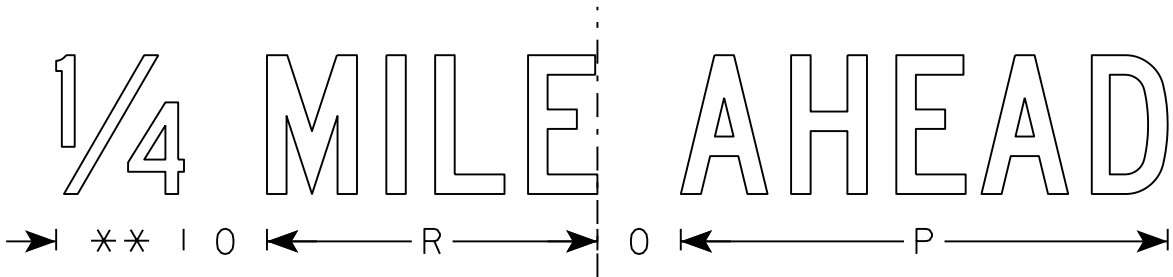
Background - White

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



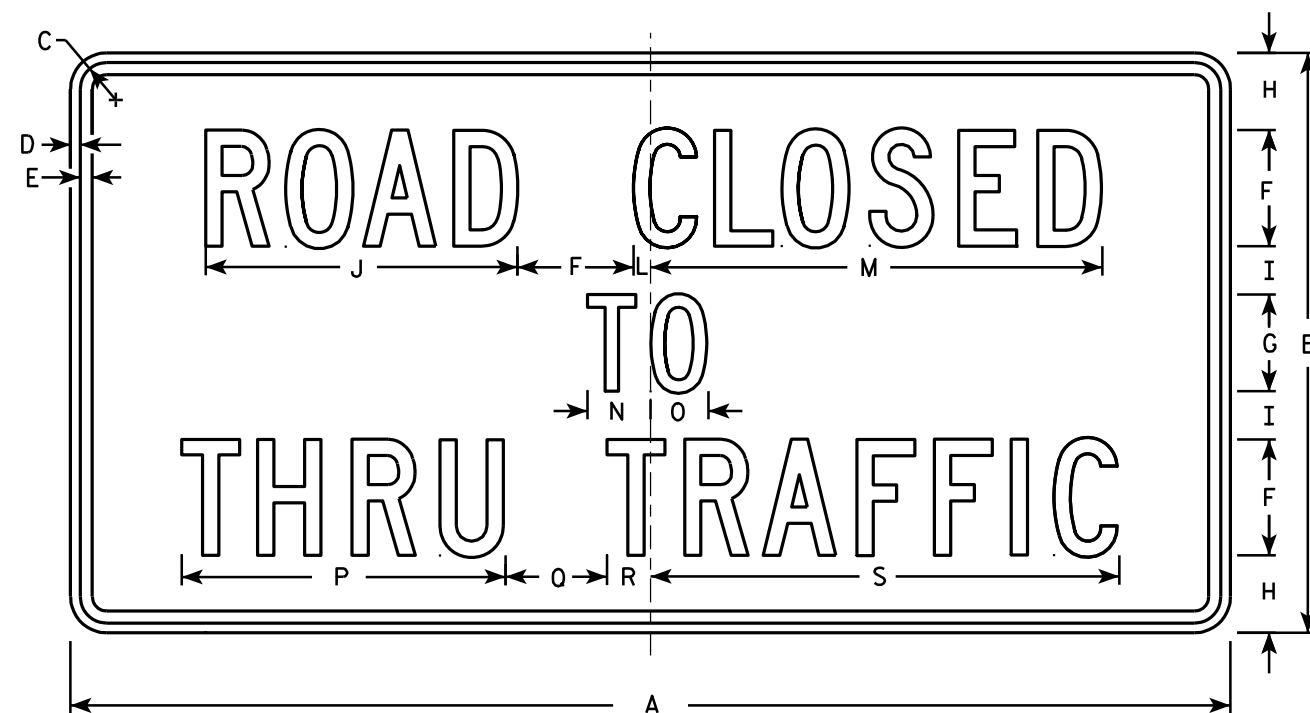
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 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 7/28/16 PLATE NO. R11-3C.3



R11-4

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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.

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	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

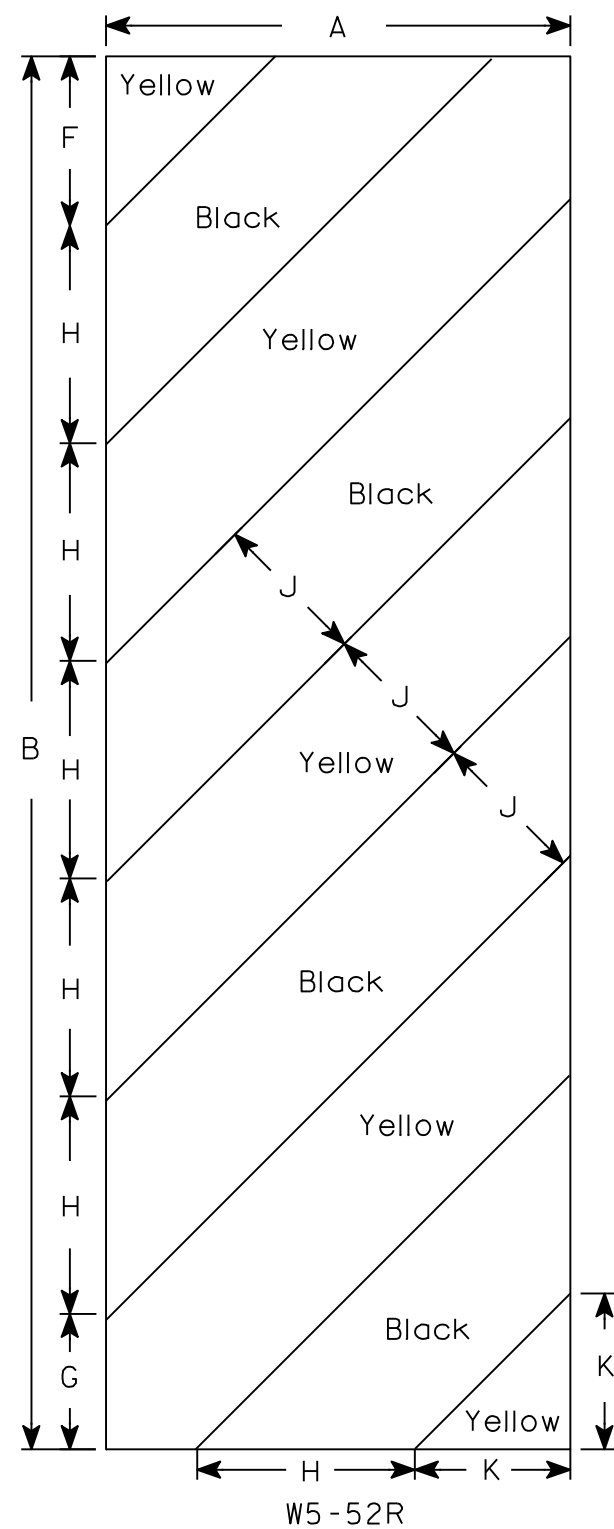
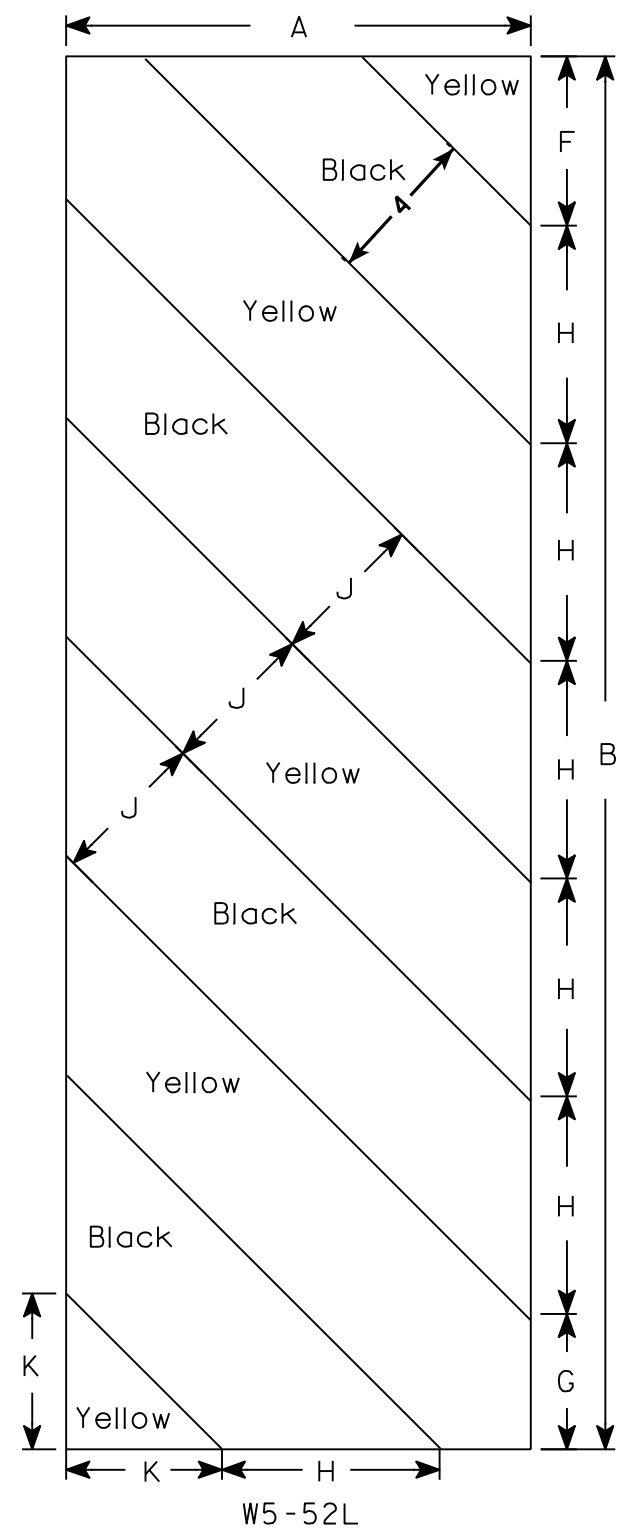
PROJECT NO:

HWY:

COUNTY:

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.

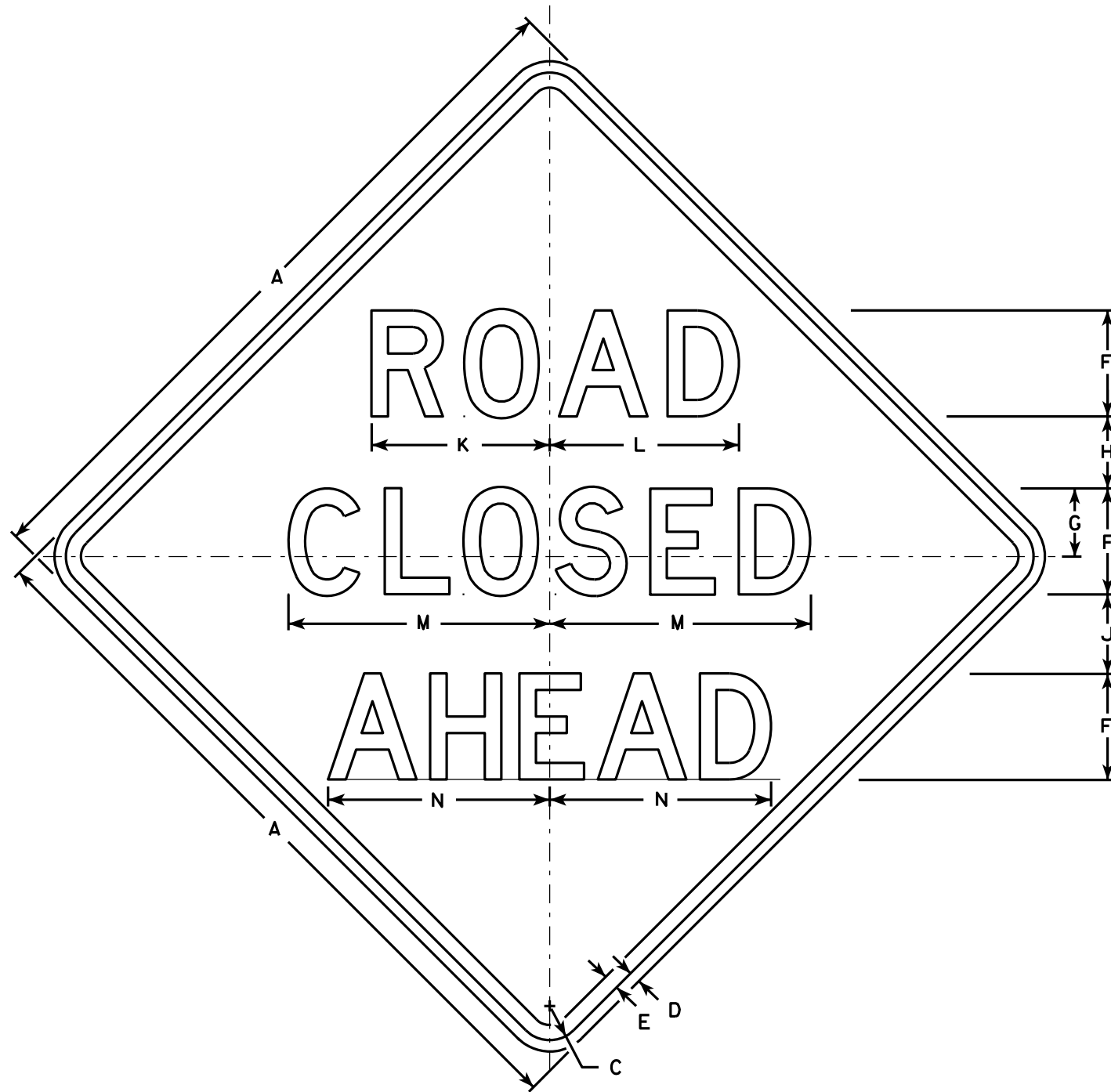
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 5⁄6																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

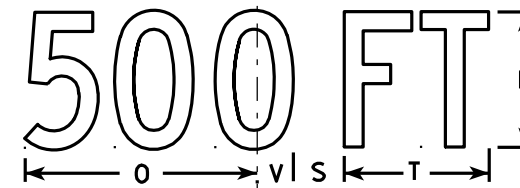
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

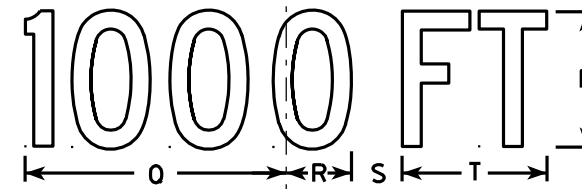
DATE 5/29/12 PLATE NO. W5-52.9



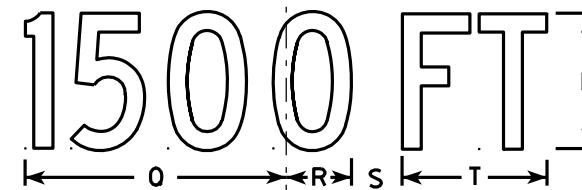
W20-3A



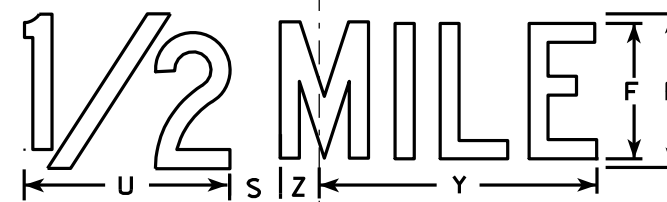
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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		1 5/8	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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 3/18/11 PLATE NO. W20-3.7

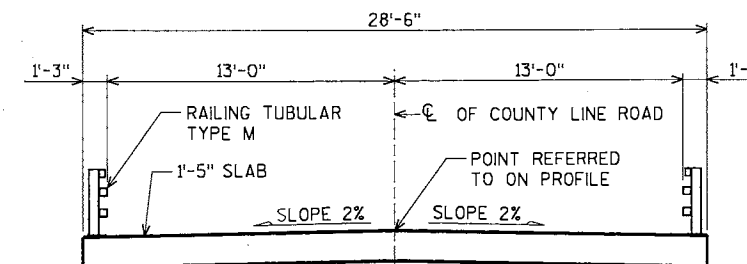
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



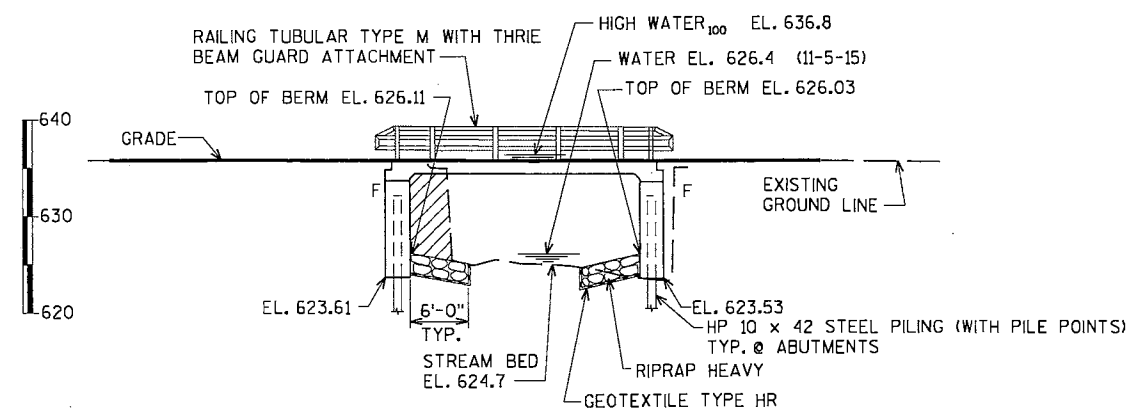
A circular professional engineer seal for the State of Wisconsin. The outer ring contains the text "STATE OF WISCONSIN" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The center of the seal contains the following text: "CHRISTOPHER D. MCMAHON", "E-29454", "EAU CLAIRE", and "WI". There are some handwritten marks and a diagonal line across the bottom right of the seal.

Plan view of bridge structure B-5-424, showing the deck, abutments, and riprap details. The diagram includes the following information:

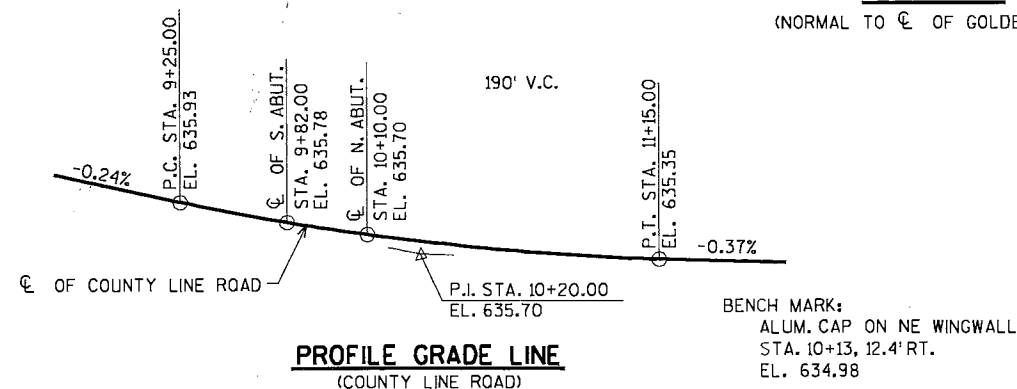
- Deck and Approach:**
 - Deck width: 22'-0" ASPHALT.
 - Shoulders: 3'-0" SHL'D. on both sides.
 - Approach: 28'-0" - TYP. (typical).
 - 20° SKEW - TYP. (typical).
- Abutments and Structure:**
 - BACK TO BACK OF ABUTMENTS: 30'-8".
 - Structure B-5-424.
 - TOE OF RIPRAP STA. 9+89.7±.
 - TOE OF RIPRAP STA. 10+02.3±.
 - EXISTING STRUCTURE (P-5-155) TO BE REMOVED.
- Stationing and Key Points:**
 - END OF DECK STA. 9+81.38.
 - END OF DECK EX. BRIDGE STA. 9+85.6±.
 - END OF DECK STA. 10+10.62.
 - END OF DECK EX. BRIDGE STA. 10+14.6±.
 - Station 10+00.
- Dimensions and Slopes:**
 - 20'-0" (width of deck).
 - 10'-0" (width of deck).
 - 14'-0" (width of deck).
 - 12'-0" (width of deck).
 - 1'-4" (width of deck).
 - 1'-0" TYP. (typical).
 - 2:1 (slope).
- Legend:**
 - * ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.
 - DENOTES WING NUMBER.
 - PAVING NOTCH - TYP.
- Other Labels:**
 - GOLDEN CREEK.
 - WPS (TO REMAIN IN PLACE).
 - OH (Overhead).
 - NAME PLATE.
 - BENCH MARK CAP.
 - RIPRAP HEAVY.
 - CL OF COUNTY LINE ROAD.

PLAN
SINGLE SPAN CONCRETE FLAT SLAB

 COST OF EXCAVATION IN THE HATCHED AREA SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-5-424".



(NORMAL TO C_2 OF GOLDEN CREEK)



1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING 1 DETAILS
6. SOUTH ABUTMENT WING 2 DETAILS & BILL OF BARS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING 3 DETAILS
9. NORTH ABUTMENT WING 4 DETAILS & BILL OF BARS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. RATTLING TUBULAR TYPE M

CHECKED BY: DATE:
REACK CHECKED BY: DATE:
CORRECTED BY: DATE:

8

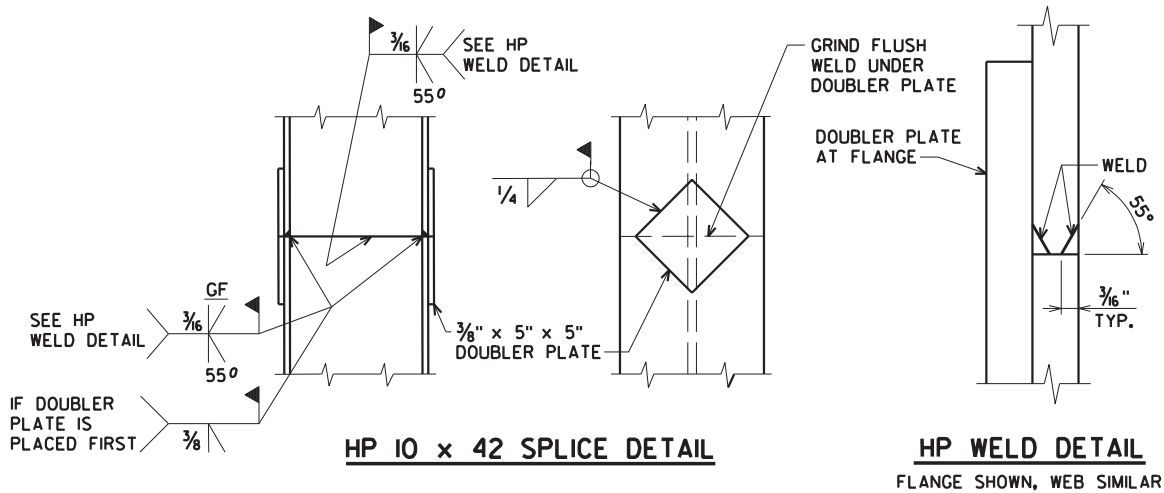
8

\$PRNAME\$
U:\45-0412.00 - Brown Co., County Line Road\Structures\450412 gp.dgn

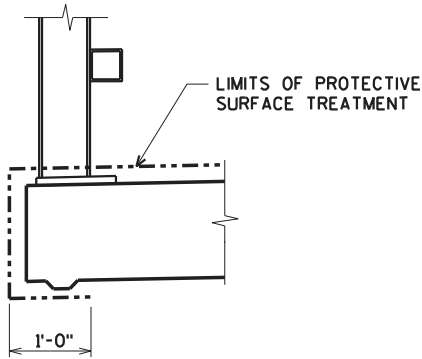
8

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-424	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	385	385	-----	770
502.0100	CONCRETE MASONRY BRIDGES	CY	54	54	50	158
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	110	110
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,580	2,580	-----	5,160
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,860	1,860	9,430	13,150
513.4061	RAILING TUBULAR TYPE M	LF	-----	-----	64	64
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	-----	12
550.0500	PILE POINTS	EACH	7	7	-----	14
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	490	490	-----	980
606.0300	RIPRAP HEAVY	CY	60	60	-----	120
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	-----	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	60	60	-----	120
645.0120	GEOTEXTILE TYPE HR	SY	140	140	-----	280
SPV.0105.01	SUPERSTRUCTURE ¾" V-D RIP EDGE STRUCTURE B-5-424	LS	-----	-----	-----	1
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	½" & ¾"

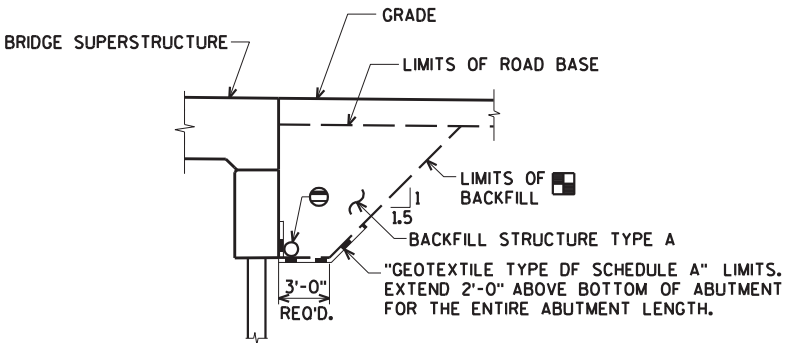


PROTECTIVE SURFACE TREATMENT DETAIL



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-5-424" SHALL BE THE EXISTING GROUNDLINE.
THE EXISTING STRUCTURE, P-5-155, TO BE REMOVED, IS A SINGLE SPAN CONCRETE DECK GIRDER BRIDGE, 29.0 FT. LONG WITH A 20.0 FT. CLEAR ROADWAY WIDTH.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
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 BACKFILL STRUCTURE TYPE A.
BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.
THE 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.



- BACKFILL STRUCTURE LIMITS**
- BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL 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 AS DETAILED ON SHEET 5.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY CKJ/CLS		PLANS CK'D.	CBM
QUANTITIES AND NOTES		SHEET 2 OF 12	

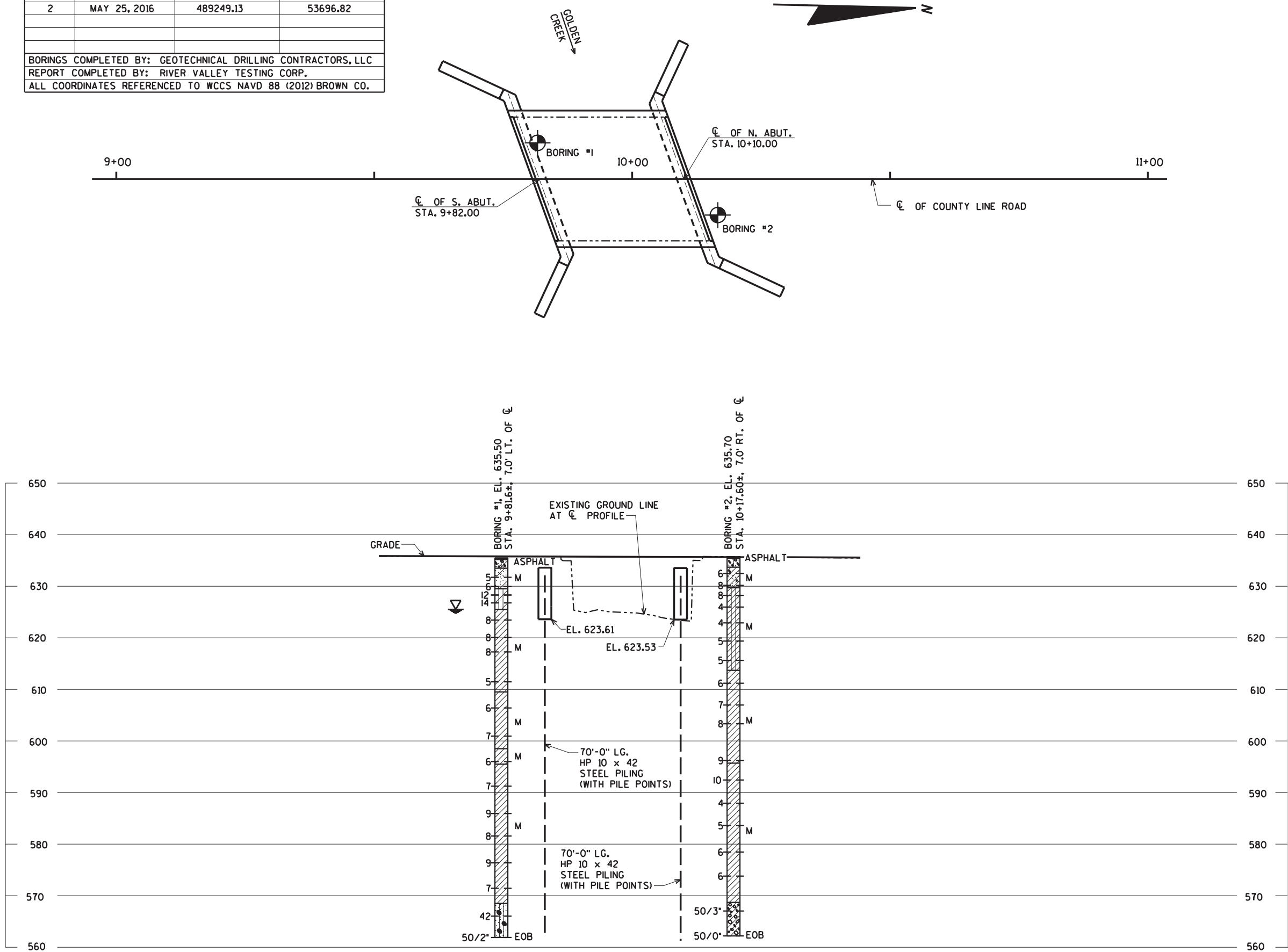
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

\$PRNAME\$
U:\45-0412.00 - Brown Co., County Line Road\Structures\450412 soils.dgn

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	MAY 25, 2016	489212.58	53683.64
2	MAY 25, 2016	489249.13	53696.82
BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, LLC			
REPORT COMPLETED BY: RIVER VALLEY TESTING CORP.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88 (2012) BROWN CO.			



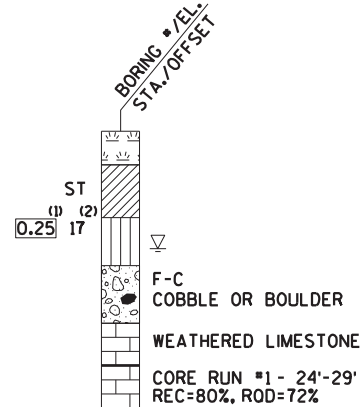
STATE PROJECT NUMBER

4519-09-71

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

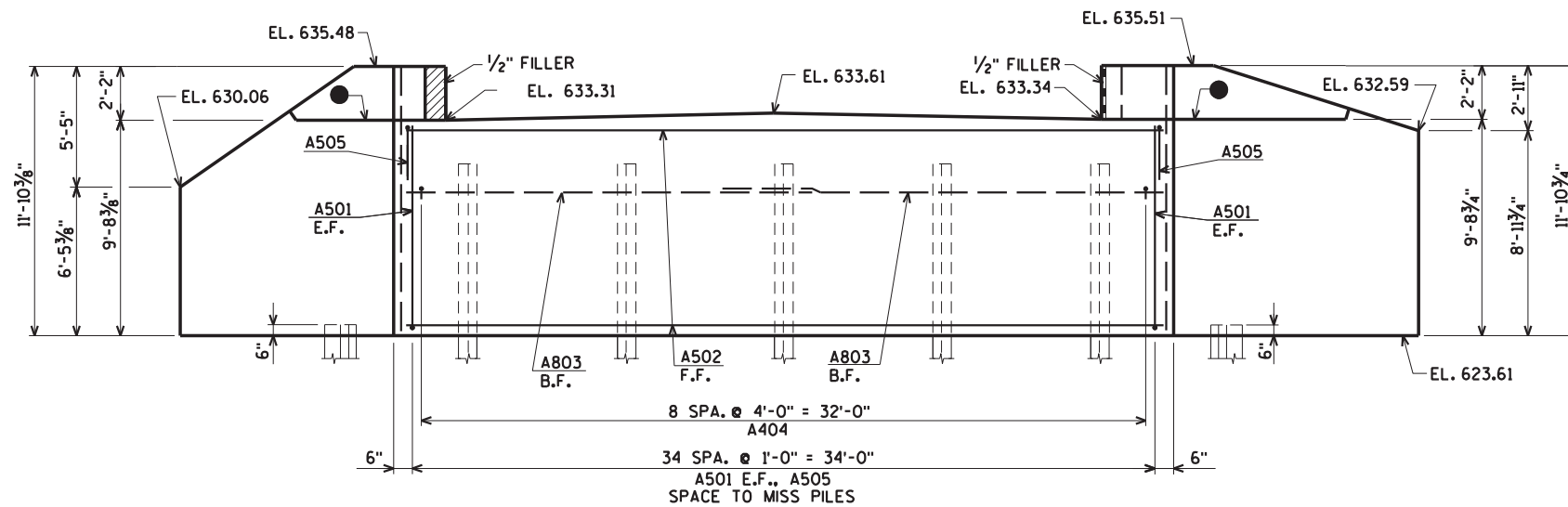
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT 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.

8

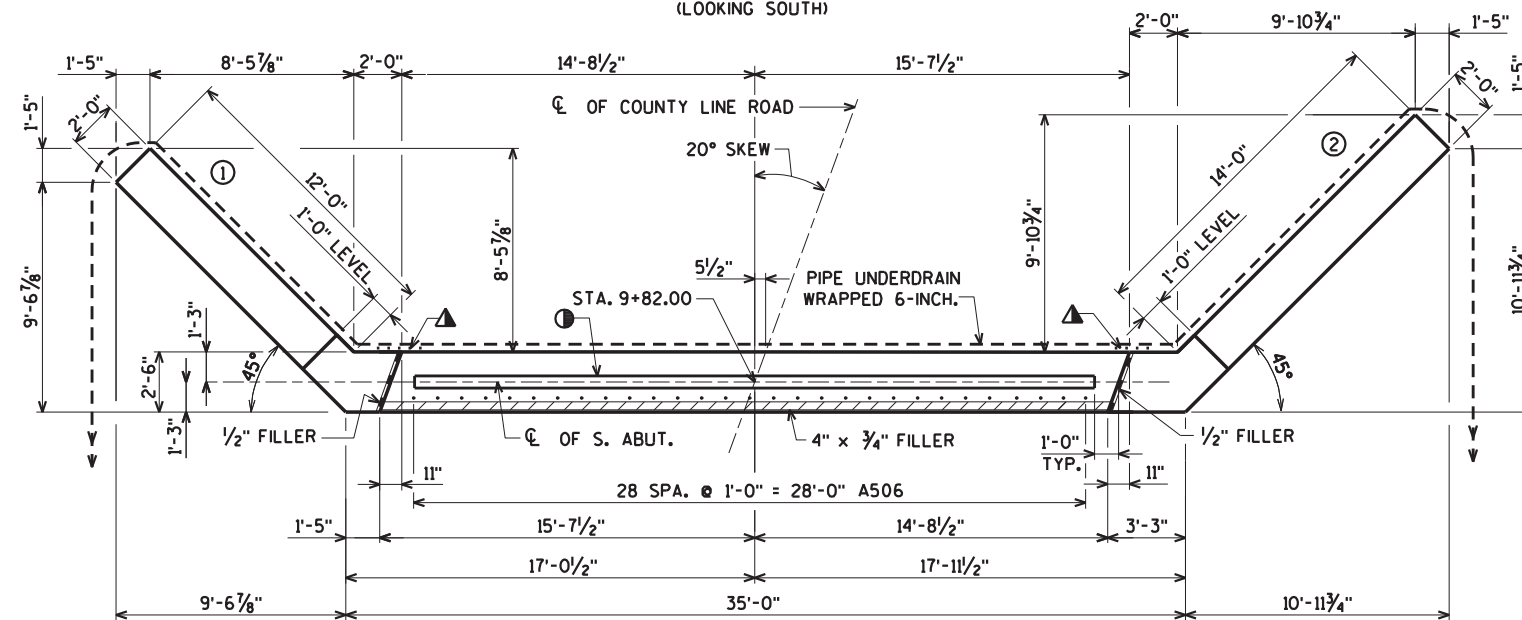
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY CKJ/CLS		PLANS CK'D. CBM	
SUBSURFACE EXPLORATION		SHEET 3 OF 12	

5/16/2019
PENTABLE:Requ.shd_util.tbl

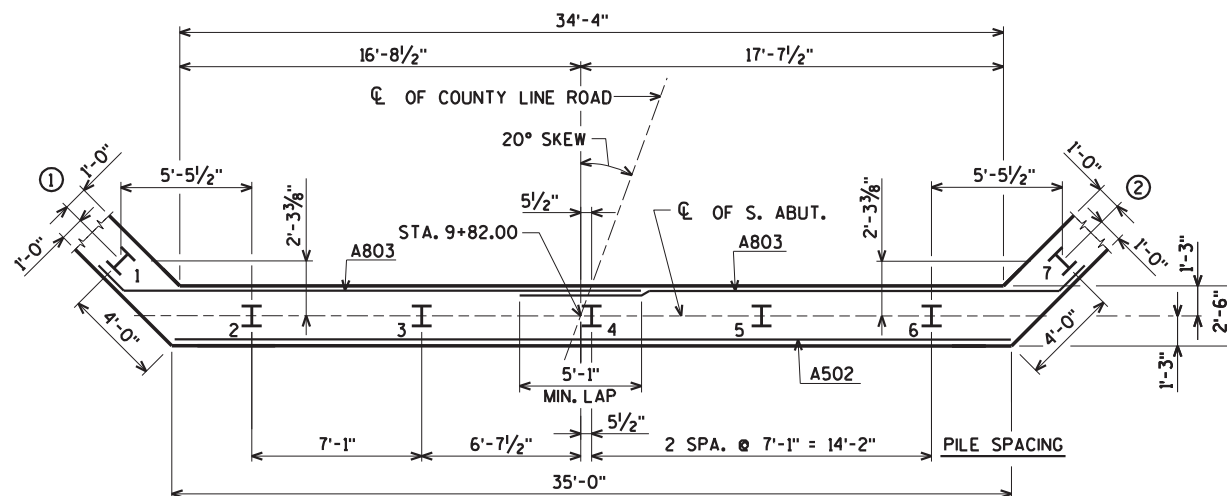
8



ELEVATION
(LOOKING SOUTH)



PLAN

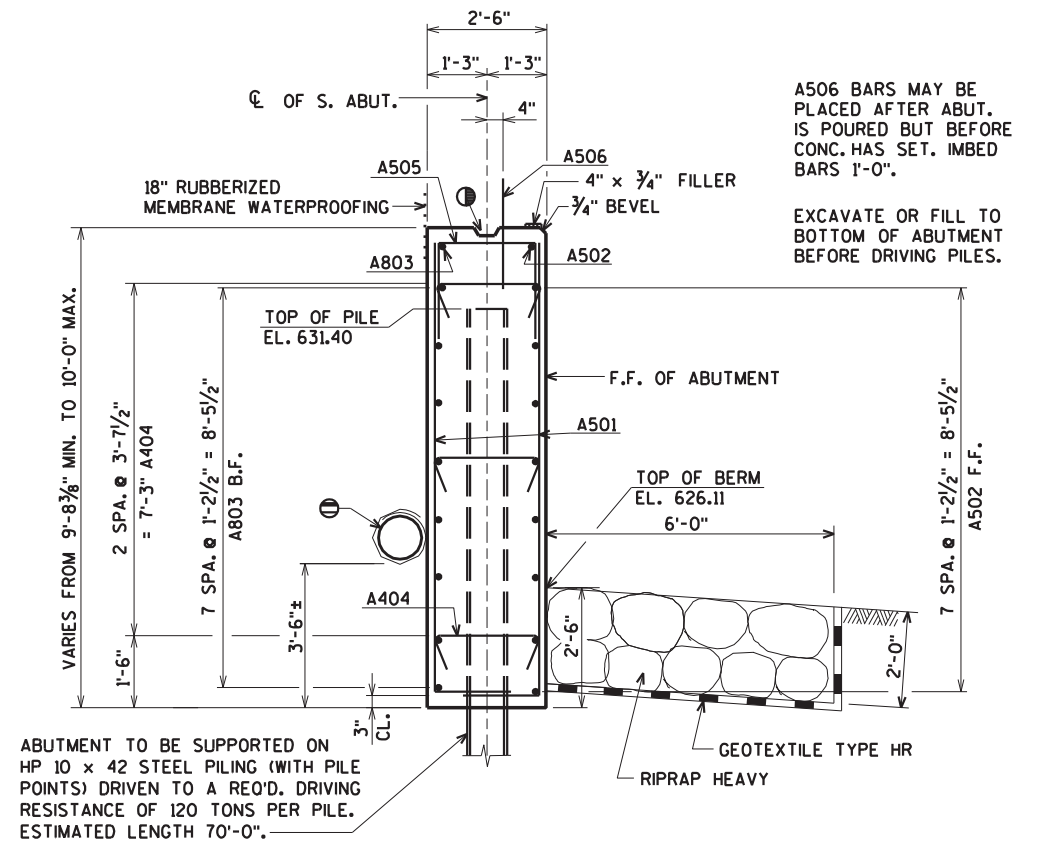


PILE LAYOUT

NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

4519-09-71



TYPICAL SECTION THRU BODY

NOTE: DO NOT PLACE FILL ABOVE THREE FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD DETAIL SEE SHEET 5.

● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊙ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

FOR PILE SPlice DETAIL SEE SHEET 2.

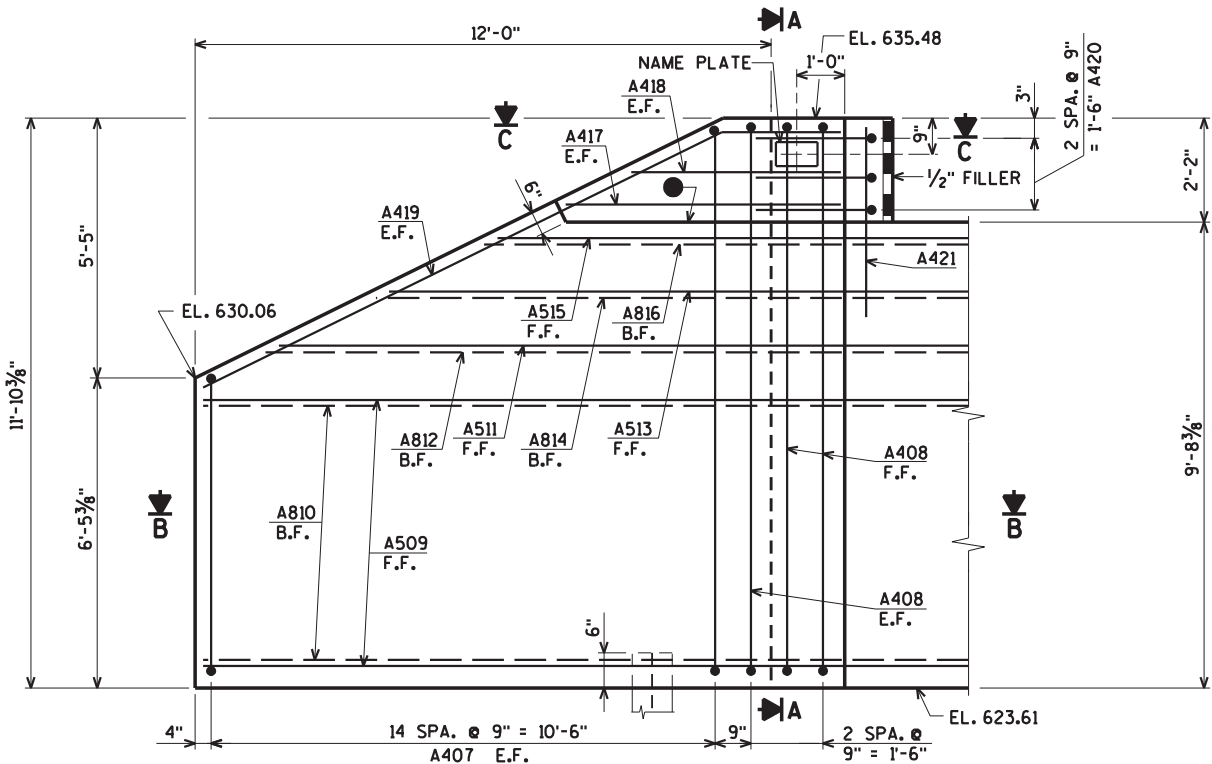
B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

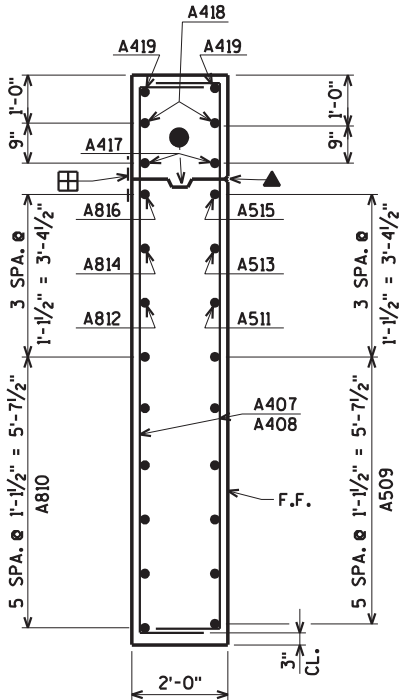
E.F. DENOTES EACH FACE.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

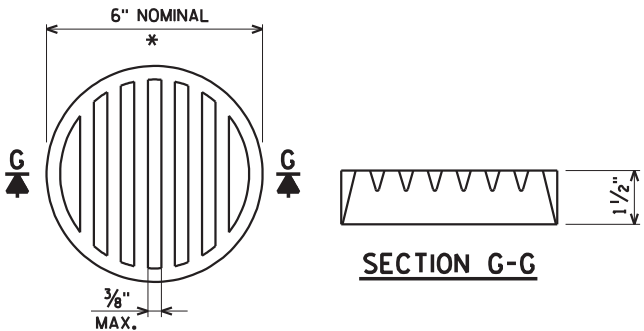
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT		SHEET 4 OF 12	



ELEVATION - WING 1



SECTION A

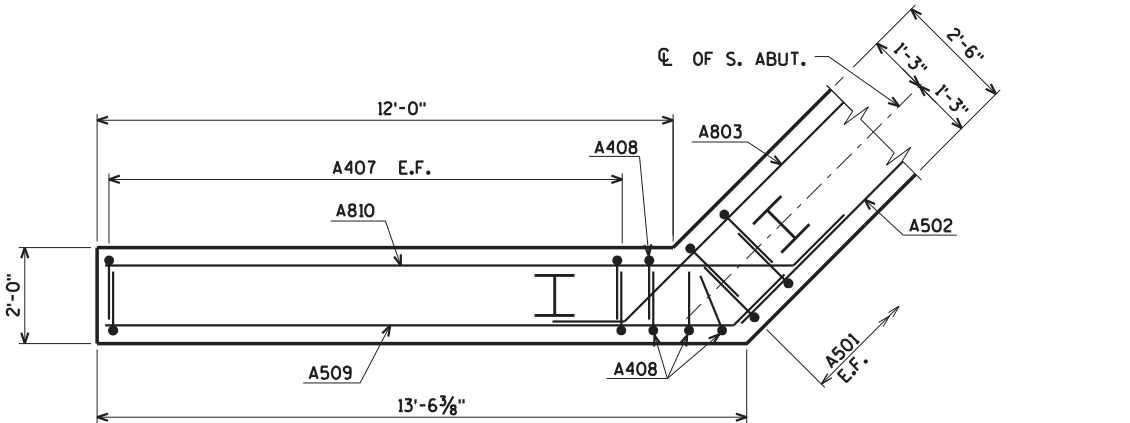


* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

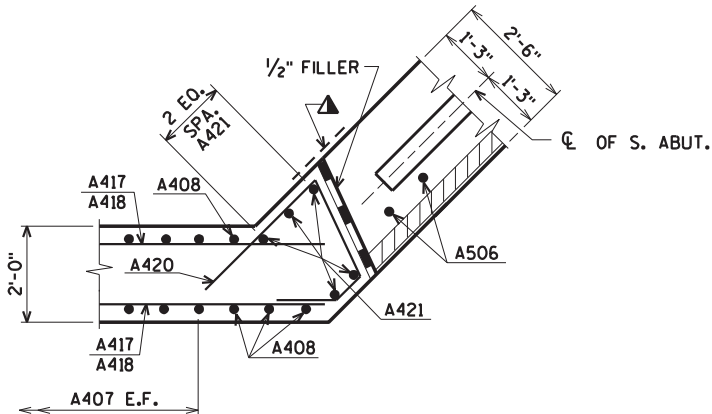
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.

RODENT SHIELD DETAIL



SECTION B



SECTION C

- ▲ 3/4" 'V' GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BEAM SEAT TO TOP OF WINGWALL.
- ▣ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").

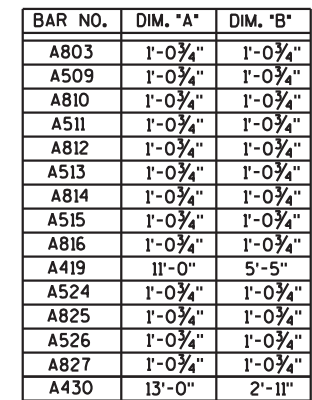
B.F. DENOTES BACK FACE.
F.F. DENOTES FRONT FACE.
E.F. DENOTES EACH FACE.

ORIGINAL PLANS PREPARED BY

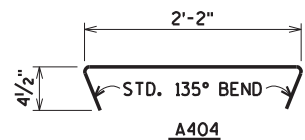
AYRES ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBM
SOUTH ABUTMENT WING 1 DETAILS			SHEET 5 OF 12



BUNDLE AND TAG EACH SERIES SEPARATELY.



- E.F. DENOTES EACH FACE.



BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,580" UNCOATED 1,860" COATED
							LOCATION
A501		70	10-9	X			BODY VERT. E.F.
A502		9	34-8				BODY HORIZ. F.F.
A803		18	23-6	X			BODY HORIZ. B.F.
A404		27	2-9	X			BODY TIES
A505		35	8-1	X			BODY VERT. TOP
A506	X	29	2-0				BODY DOWELS
A407	X	30	11-2	X	⊗		WING 1 VERT. E.F.
A408	X	4	13-11	X			WING 1 VERT. E.F.
A509	X	6	14-7	X			WING 1 HORIZ. F.F.
A810	X	6	16-1	X			WING 1 HORIZ. B.F.
A511	X	1	13-3	X			WING 1 HORIZ. F.F.
A812	X	1	14-9	X			WING 1 HORIZ. B.F.
A513	X	1	11-0	X			WING 1 HORIZ. F.F.
A814	X	1	12-6	X			WING 1 HORIZ. B.F.
A515	X	1	8-7	X			WING 1 HORIZ. F.F.
A816	X	1	10-1	X			WING 1 HORIZ. B.F.
A417	X	2	5-6				WING 1 HORIZ. E.F.
A418	X	2	4-0				WING 1 HORIZ. E.F.
A419	X	2	14-7	X			WING 1 DIAG. E.F.
A420	X	3	7-9	X			WING 1 HORIZ.
A421	X	5	3-6				WING 1 VERT.
A422	X	34	12-4	X	⊗		WING 2 VERT. E.F.
A423	X	6	13-11	X			WING 2 VERT. E.F.
A524	X	8	16-7	X			WING 2 HORIZ. F.F.
A825	X	8	18-1	X			WING 2 HORIZ. B.F.
A526	X	1	14-6	X			WING 2 HORIZ. F.F.
A827	X	1	16-0	X			WING 2 HORIZ. B.F.
A428	X	2	9-4				WING 2 HORIZ. E.F.
A429	X	2	6-0				WING 2 HORIZ. E.F.
A430	X	2	15-8	X			WING 2 DIAG. E.F.
A431	X	3	9-7	X			WING 2 HORIZ.
A432	X	7	3-6				WING 2 VERT.

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
		DRAWN BY	CLAS CK'D. CBM
SOUTH ABUTMENT WING 2 DETAILS & BILL OF BARS		SHEET 6 OF 12	

This elevation view shows the bridge deck with the following details and dimensions:

- Elevations:**
 - Top Left: EL. 635.43
 - Top Right: EL. 635.40
 - Left Slope: EL. 630.01
 - Left Vertical: EL. 633.26
 - Right Vertical: EL. 633.23
 - Right Slope: EL. 632.48
 - Bottom Right: EL. 623.53
 - Top Center: EL. 633.53
- Structural Details:**
 - 1/2" FILLER:** Indicated at the top corners.
 - B505:** Vertical reinforcement bars.
 - B501 E.F.:** End reinforcement bars.
 - B803 B.F.:** Bottom reinforcement bars.
 - B502 F.F.:** Field reinforcement bars.
 - B404:** Bottom reinforcement bars.
- Dimensions:**
 - Vertical:**
 - Left: 11'-10 3/4" (total), 5'-5" (upper), 9'-8 3/4" (lower).
 - Right: 11'-10 3/4" (total), 2'-2" (upper), 9'-8 3/4" (lower), 8'-11 3/8" (lower).
 - Horizontal:**
 - 8 SPA. @ 4'-0" = 32'-0" (B404)
 - 34 SPA. @ 1'-0" = 34'-0" (B501 E.F., B505 SPACE TO MISS PILES)

(LOOKING NORTH)

CL OF COUNTY LINE ROAD

20° SKEW

STA. 10+10.00

PIPE UNDERDRAIN WRAPPED 6-INCH.

CL OF N. ABUT.

28 SPA. @ 1'-0" = 28'-0" B506

1'-0" TYP.

1'-5"

8'-5 7/8"

2'-0"

14'-8 1/2"

15'-7 1/2"

2'-0"

9'-10 3/4"

9'-11 3/4"

1'-5"

1'-5"

2'-0"

12'-0"

1'-0" LEVEL

8'-5 7/8"

1'-3"

2'-6"

1'-3"

45°

1/2" FILLER

11"

15'-7 1/2"

14'-8 1/2"

3'-3"

17'-0 1/2"

17'-11 1/2"

10'-11 3/4"

35'-0"

9'-6 7/8"

9'-6 7/8"

10'-11 3/4"

14'-0"

1'-0" LEVEL

45°

1/2" FILLER

4"

3/4" FILLER

Plan view of the bridge deck showing dimensions, pile layout, and abutment details. The diagram includes a north arrow pointing towards the top-left. Key dimensions and features include:

- Overall Dimensions:**
 - Top width: 34'-4"
 - Bottom width: 35'-0"
 - Left side slope: 4'-0"
 - Right side slope: 4'-0"
- Abutment Details:**
 - Left abutment (Station 10+10.00) has a 20° skew and a 5'-1" minimum lap.
 - Right abutment has a 20° skew.
- Pile Layout:**
 - Two rows of piles are shown: B803 (top row) and B502 (bottom row).
 - Dimensions between piles: 7'-1", 6'-7 1/2", 5'-1", 5/2", 6'-7 1/2", 7'-1".
 - Overall pile spacing: 2 SPA. @ 7'-1" = 14'-2".
- Other Dimensions:**
 - Top width segments: 16'-8 1/2" and 17'-7 1/2".
 - Bottom width segments: 5'-5 1/2", 2'-3 3/8", 5'-5 1/2", 2'-3 3/8".
 - Right side slope segments: 1'-0", 1'-0", 1'-3", 2'-6".

[illegible]

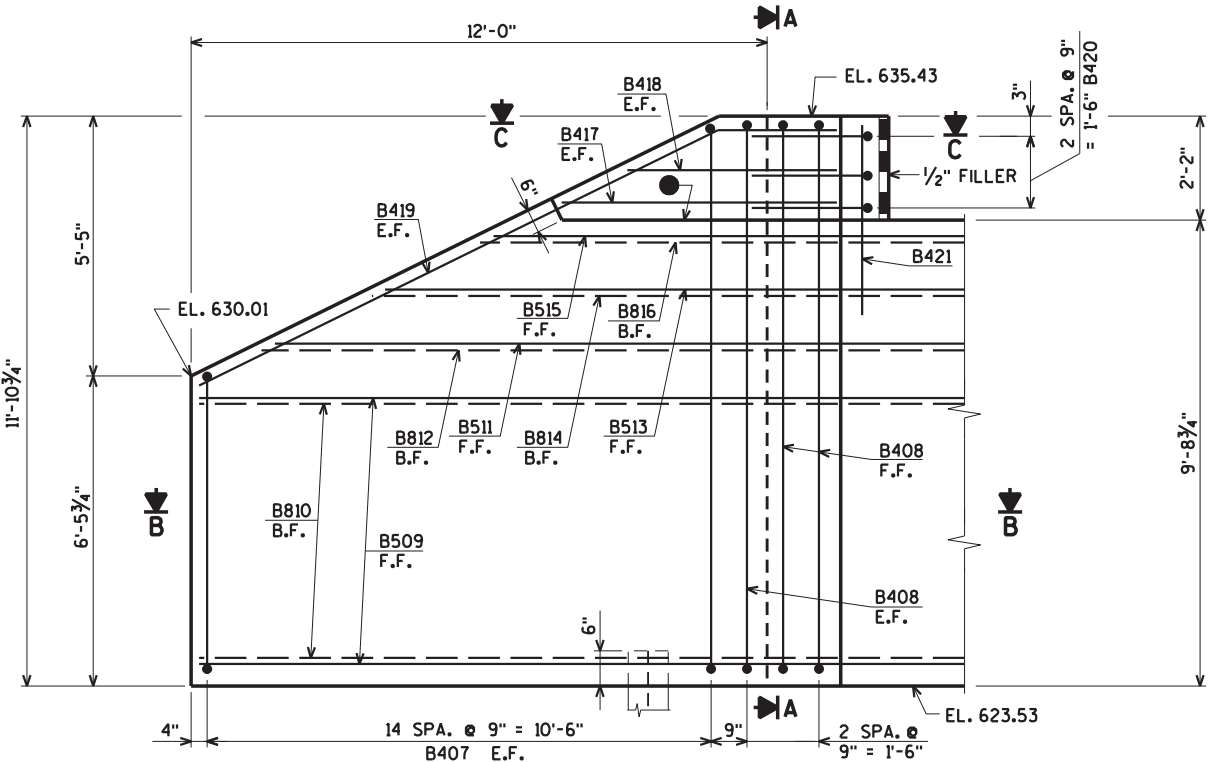
NOTE: DO NOT PLACE FILL ABOVE
THREE FEET FROM BOTTOM OF
ABUTMENT UNTIL SUPERSTRUCTURE
IS IN PLACE.

- E.F. DENOTES EACH FACE.

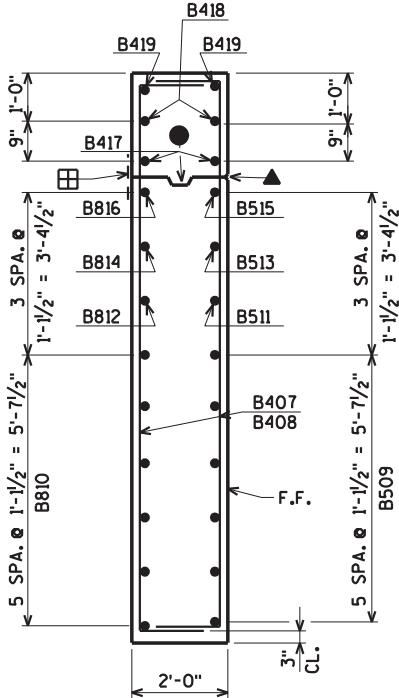
ORIGINAL PLANS PREPARED BY

AYRES
ASSOCIATES

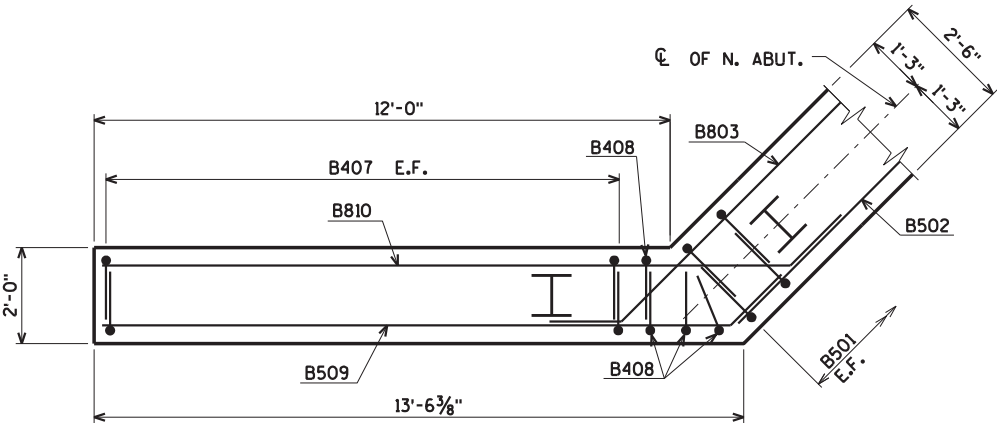
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



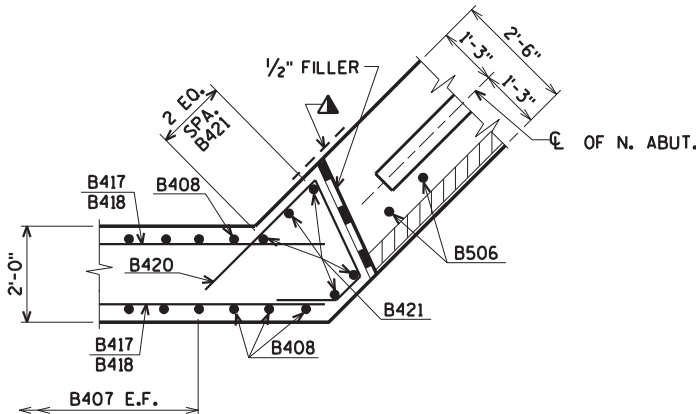
ELEVATION - WING 3



SECTION A



SECTION B



SECTION C

- ▲ 3/4" 'V' GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BEAM SEAT TO TOP OF WINGWALL.
- ▣ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

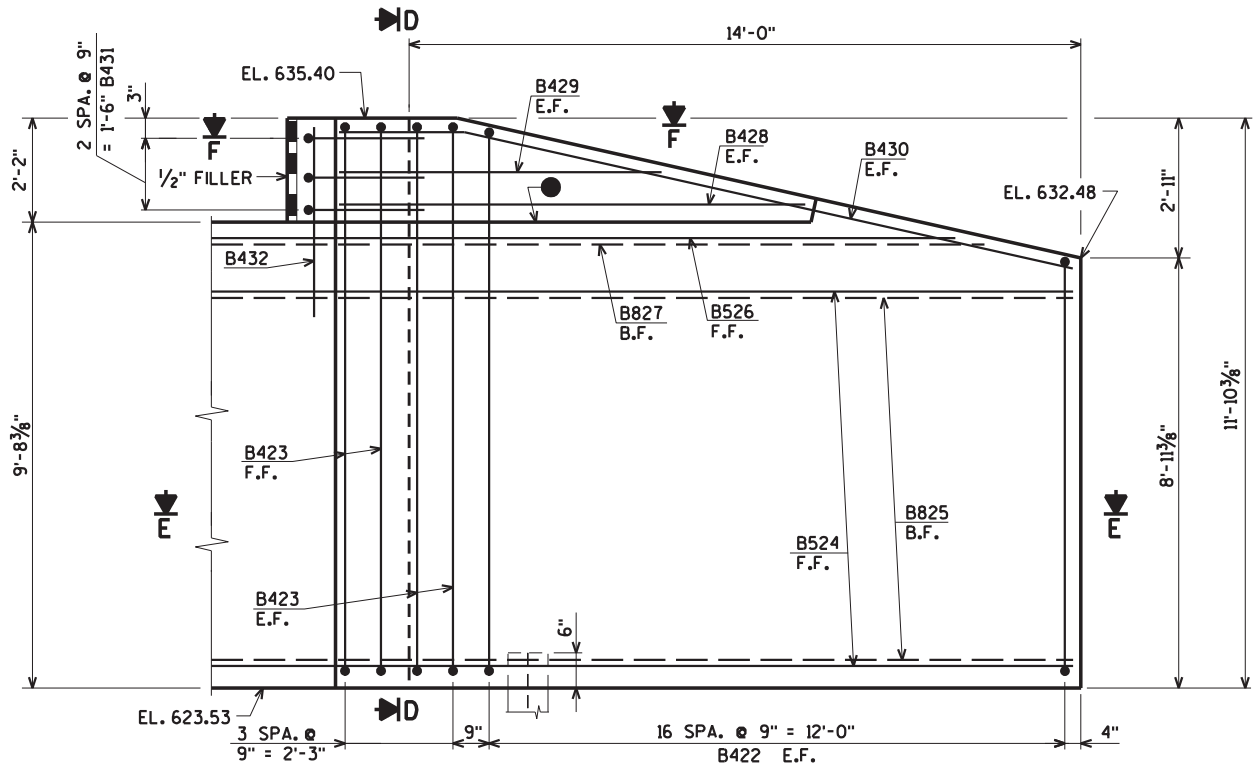
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT WING 3 DETAILS			SHEET 8 OF 12

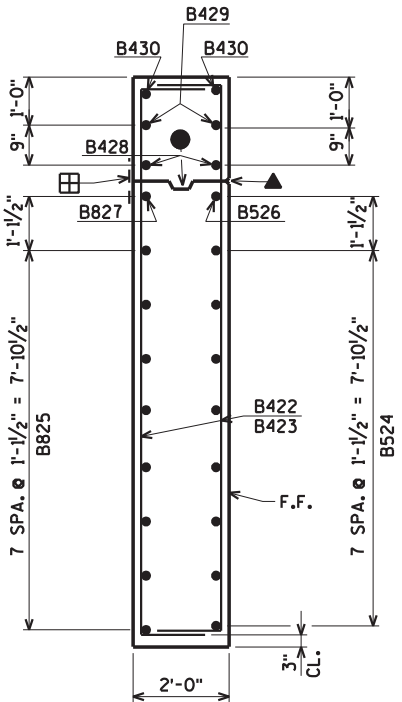
5/16/2019
PENTABLE:BRequ.shd_util.tbl

STATE PROJECT NUMBER

4519-09-71



ELEVATION - WING 4

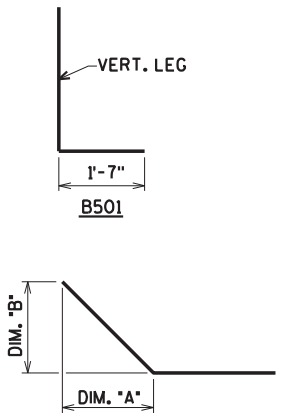


SECTION D

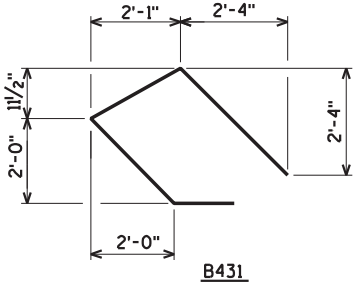
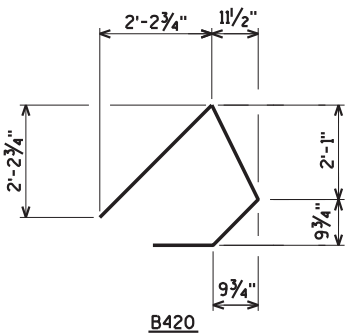
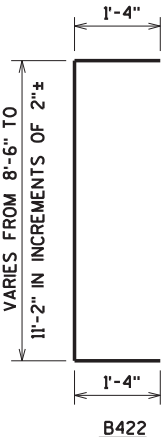
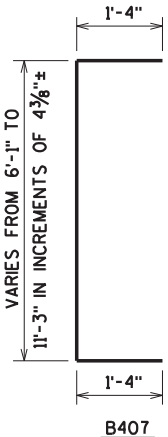
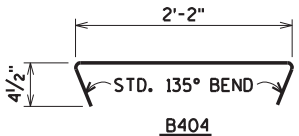
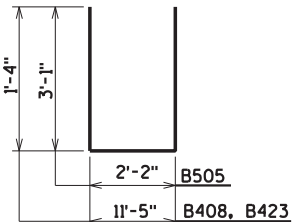
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B407	2 SERIES OF 15	8'-7" TO 13'-9"
B422	2 SERIES OF 17	11'-0" TO 13'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.



BAR NO.	DIM. "A"	DIM. "B"
B803	1'-0 3/4"	1'-0 3/4"
B509	1'-0 3/4"	1'-0 3/4"
B810	1'-0 3/4"	1'-0 3/4"
B511	1'-0 3/4"	1'-0 3/4"
B812	1'-0 3/4"	1'-0 3/4"
B513	1'-0 3/4"	1'-0 3/4"
B814	1'-0 3/4"	1'-0 3/4"
B515	1'-0 3/4"	1'-0 3/4"
B816	1'-0 3/4"	1'-0 3/4"
B419	1'-0"	5'-5"
B524	1'-0 3/4"	1'-0 3/4"
B825	1'-0 3/4"	1'-0 3/4"
B526	1'-0 3/4"	1'-0 3/4"
B827	1'-0 3/4"	1'-0 3/4"
B430	13'-0"	2'-11"

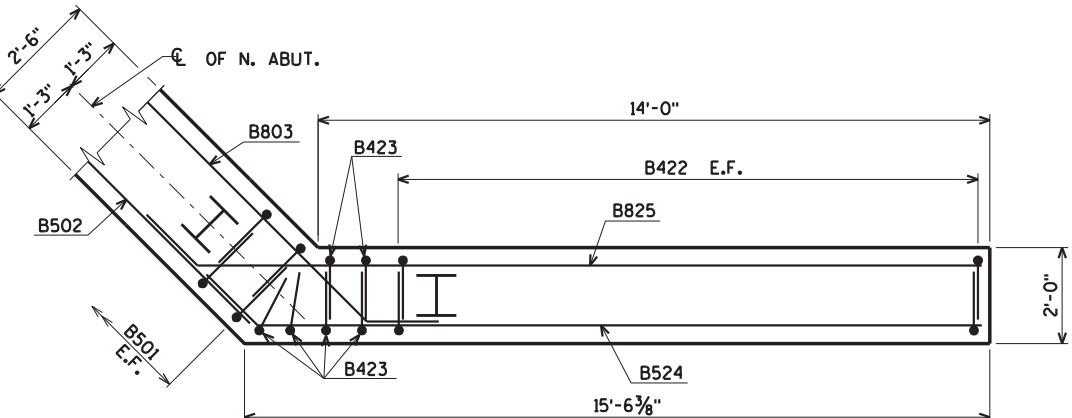


BILL OF BARS

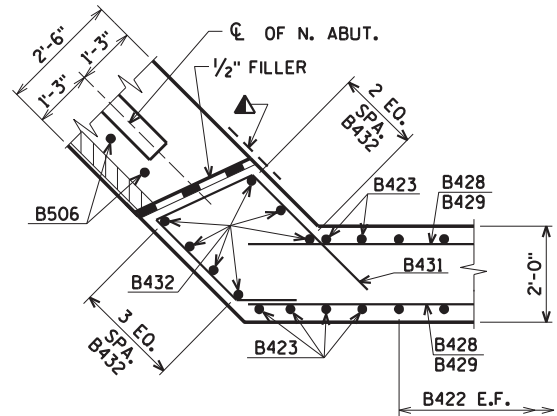
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLE	BAR SERIES	2,580# UNCOATED 1,860# COATED
							LOCATION
B501		70	10-9	X			BODY VERT. E.F.
B502		9	34-8				BODY HORIZ. F.F.
B803		18	23-6	X			BODY HORIZ. B.F.
B404		27	2-9	X			BODY TIES
B505		35	8-1	X			BODY VERT. TOP
B506	X	29	2-0				BODY DOWELS
B407	X	30	11-2	X	⊗		WING 3 VERT. E.F.
B408	X	4	13-11	X			WING 3 VERT. E.F.
B509	X	6	14-7	X			WING 3 HORIZ. F.F.
B810	X	6	16-1	X			WING 3 HORIZ. B.F.
B511	X	1	13-3	X			WING 3 HORIZ. F.F.
B812	X	1	14-9	X			WING 3 HORIZ. B.F.
B513	X	1	11-0	X			WING 3 HORIZ. F.F.
B814	X	1	12-6	X			WING 3 HORIZ. B.F.
B515	X	1	8-7	X			WING 3 HORIZ. F.F.
B816	X	1	10-1	X			WING 3 HORIZ. B.F.
B417	X	2	5-6				WING 3 HORIZ. E.F.
B418	X	2	4-0				WING 3 HORIZ. E.F.
B419	X	2	14-7	X			WING 3 DIAG. E.F.
B420	X	3	7-9	X			WING 3 HORIZ.
B421	X	5	3-6				WING 3 VERT.
B422	X	34	12-4	X	⊗		WING 4 VERT. E.F.
B423	X	6	13-11	X			WING 4 VERT. E.F.
B524	X	8	16-7	X			WING 4 HORIZ. F.F.
B825	X	8	18-1	X			WING 4 HORIZ. B.F.
B526	X	1	14-6	X			WING 4 HORIZ. F.F.
B827	X	1	16-0	X			WING 4 HORIZ. B.F.
B428	X	2	9-4				WING 4 HORIZ. E.F.
B429	X	2	6-0				WING 4 HORIZ. E.F.
B430	X	2	15-8	X			WING 4 DIAG. E.F.
B431	X	3	9-7	X			WING 4 HORIZ.
B432	X	7	3-6				WING 4 VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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



SECTION E



SECTION F

- ▲ 3/4" "V" GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BEAM SEAT TO TOP OF WINGWALL.
- ⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

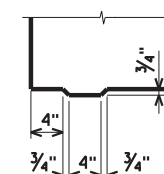
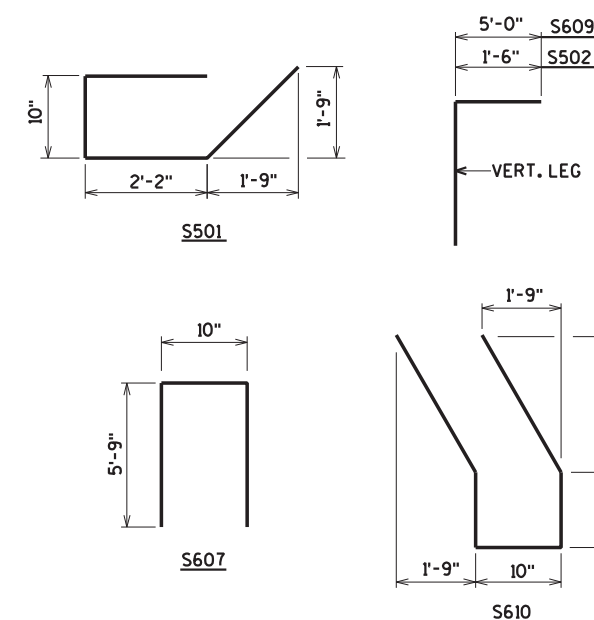
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBM
NORTH ABUTMENT WING 4 DETAILS & BILL OF BARS			SHEET 9 OF 12



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

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



3/4" V-DRIP EDGE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBI
SUPERSTRUCTURE		SHEET 10 OF	



PRIOR TO RELEASING SLAB FALSEWORK,
TAKE TOP OF SLAB ELEVATIONS AT THE
C. OF ABUTMENTS, AND AT 5/10 PTS.
TO VERIFY CAMBER. TAKE ELEVATIONS
ALONG EDGE OF SLAB AND CROWN OR C.

LOCATION	€ OF S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	€ OF N. ABUT.
W. EDGE OF SLAB	635.51	635.50	635.50	635.49	635.48	635.47	635.46	635.46	635.45	635.44	635.43
€ OF STRUCTURE	635.78	635.77	635.77	635.76	635.75	635.74	635.73	635.73	635.72	635.71	635.70
E. EDGE OF SLAB	635.48	635.47	635.47	635.46	635.45	635.44	635.43	635.42	635.42	635.41	635.40

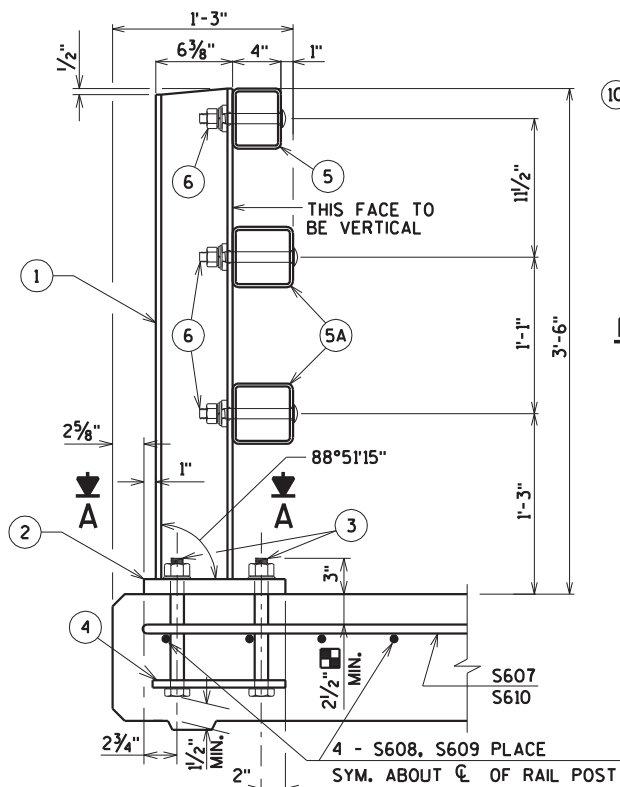
▲ DIMENSIONS MEASURED NORMAL TO $\mathbb{C}$
OF SUBSTRUCTURE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY		CLS	PLANS CK'D. CBM
SUPERSTRUCTURE DETAILS		SHEET 11 OF 12	

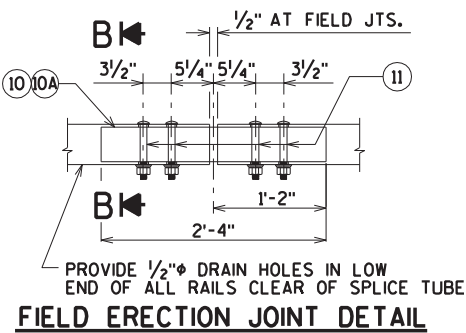
5/16/2019
PENTABLE:Breau_shd_util.tbl

LEGEND

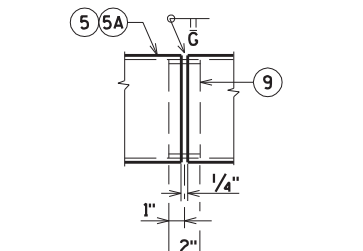
- W6 x 25 WITH 1/8" x 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- PLATE 1/4" x 11 3/4" x 1'-8" WITH 1 5/8" x 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS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



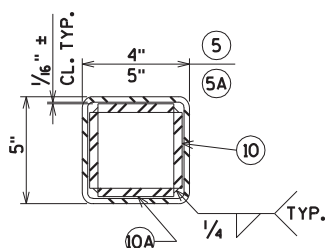
SECTION THRU RAILING ON DECK



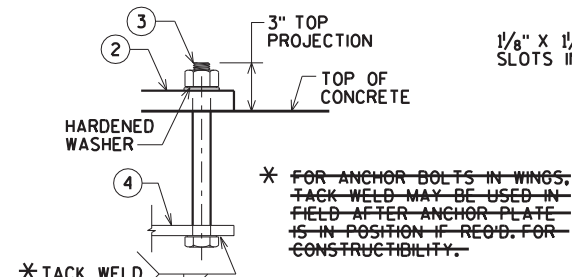
FIELD ERECTION JOINT DETAIL



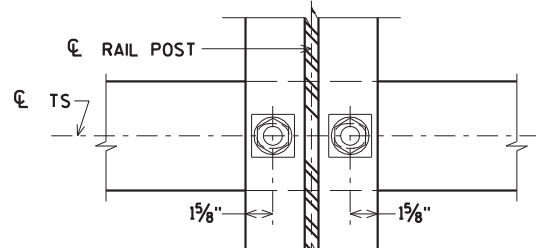
SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



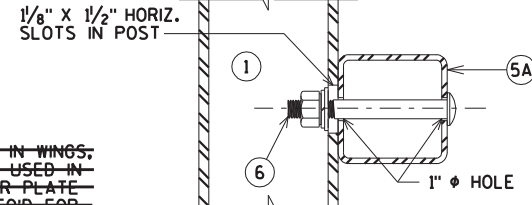
SECTION B



ANCHOR BOLTS



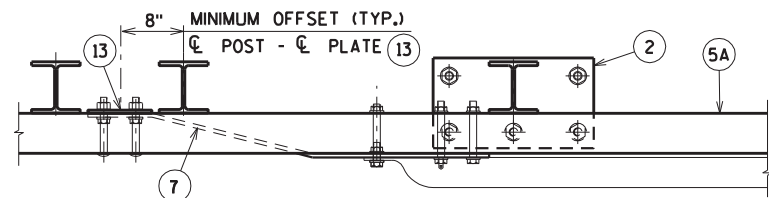
SECTION THRU POST WEB



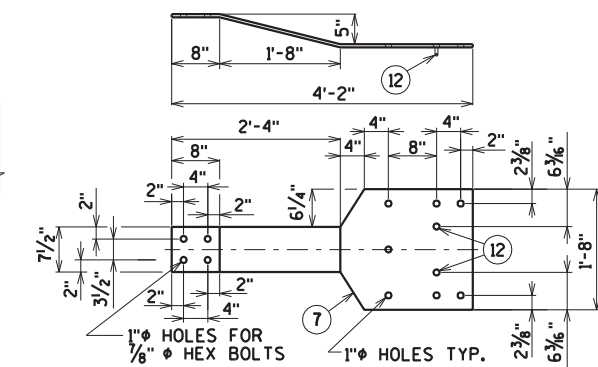
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS



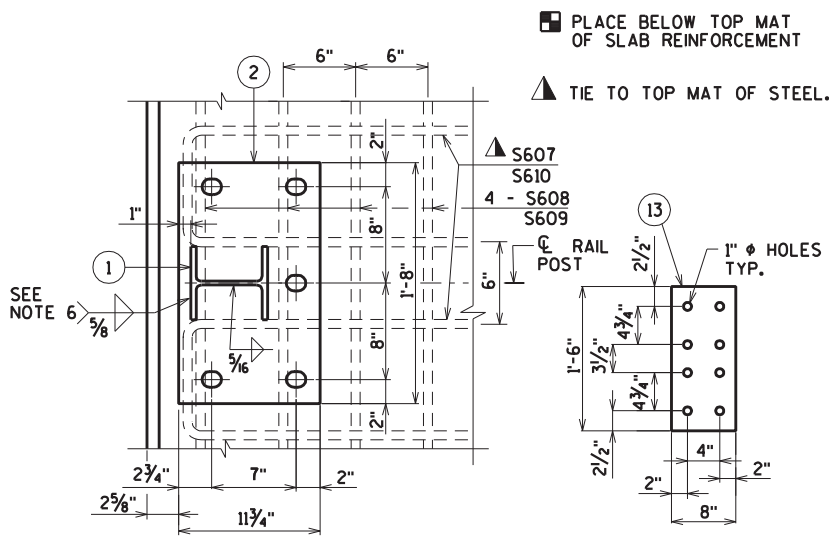
TOP VIEW AT END POST
(THRIE BEAM RAIL ATTACHMENT)



BACK-UP PLATE DETAIL
(AT BEAM GUARD ATTACHMENT)

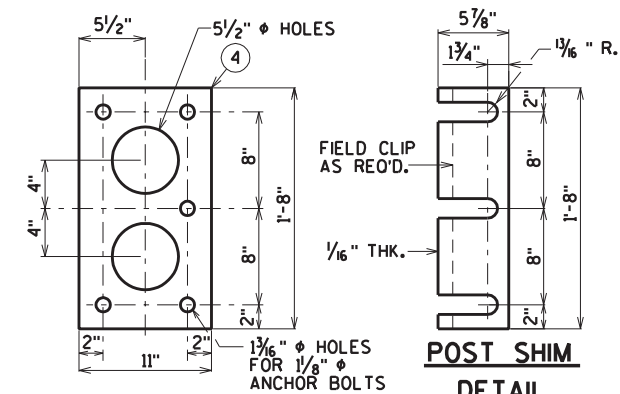
GENERAL NOTES

- BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
- 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.
- THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
- RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
- ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
- WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
- 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.
- 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.
- 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.
- WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.

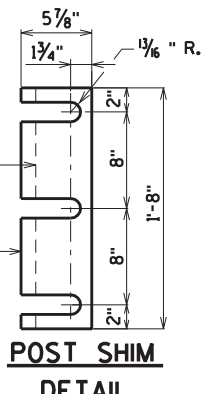


SECTION A

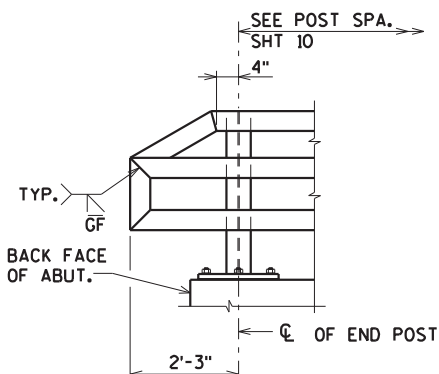
ANCHOR PLATE
(AT BEAM GUARD ATTACHMENT)



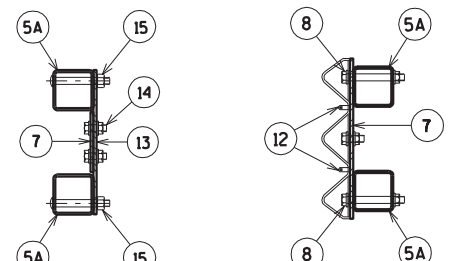
ANCHOR PLATE
(AT RAIL TO DECK CONNECTION)



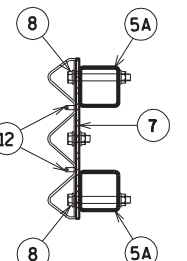
POST SHIM
DETAIL



PART ELEVATION OF RAILING



SECTION C



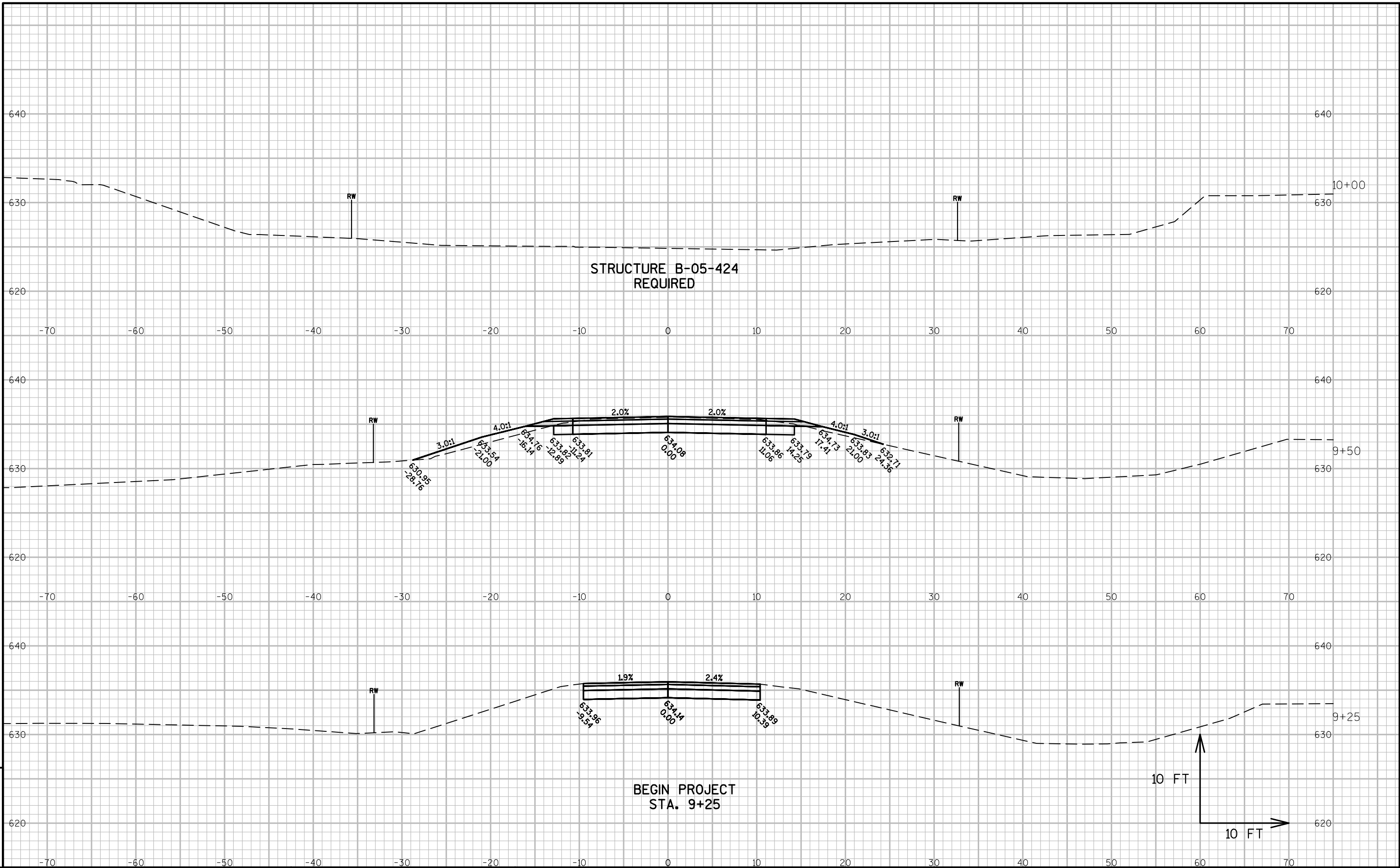
SECTION D

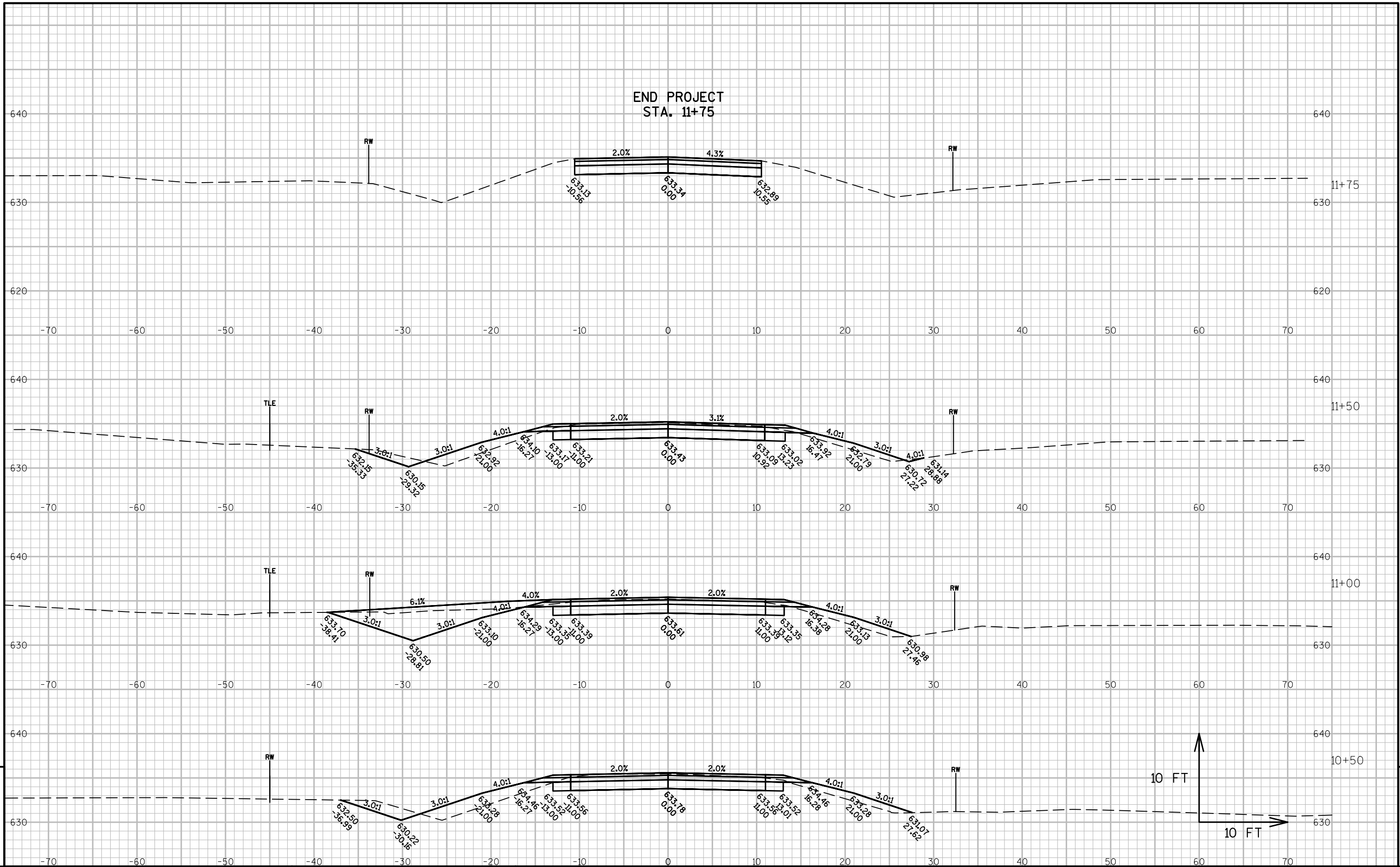
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-5-424			
DRAWN BY CLS		PLANS CK'D. CBM	
RAILING TUBULAR TYPE M			SHEET 12 OF 12

COMPUTER EARTHWORK - COUNTY LINE ROAD

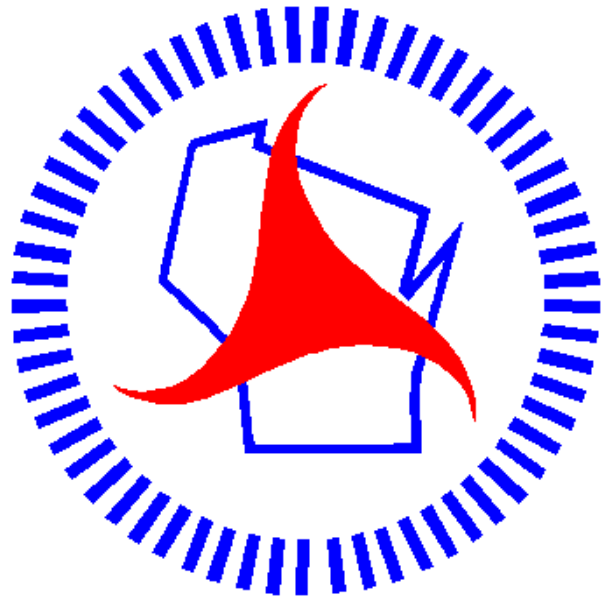
STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Unusable Pavement Material	Fill	Cut	Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.3	
	Note 1	Note 2	Note 3	Note 1	Note 2	Note 3	Note 1	Note 1	Note 8
9+25	47	7	11	0	0	0	0	0	0
9+50	44	7	11	42	6	10	44	14	22
9+70	42	7	15	32	5	10	86	34	37
9+80	22	7	10	12	3	5	108	47	40
B-05-424									
10+20	54	7	29	0	0	0	162	85	40
10+50	50	7	26	58	8	31	212	118	50
11+00	74	7	9	115	13	32	286	130	110
11+50	48	7	19	113	13	26	334	155	176
11+75	56	7	19	48	6	18	390	179	195
				420	55	131			

Notes:	
1 - Cut	Cut includes existing asphalt and base material
2 - Unusable Pavement Material	Does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Material Volume
8 - Mass Ordinate	Cut - Unusable Pavement Material - (Fill * Fill Factor)





Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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