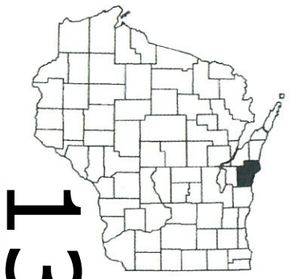
NEL JULY 2017

PROJECT ID: 4313-08-71
WITH: NA

COUNTY: MANITOWOC

ORDER OF SHEETS

TOTAL SHEETS = 44



13

N

DESIGN DESIGNATION

A.A.D.T. (2017)	=	70
A.A.D.T. (2037)	=	80
D.H.V.	=	40
D.D.	=	60/40
T.	=	8.5%
DESIGN SPEED	=	55 MPH
ESALS	=	7300

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 (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (995.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T MEEME, MINERAL SPRINGS RD

PIGEON RIVER BRIDGE & APPROACHES

LOCAL STREET

MANITOWOC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4313-08-71	WISC 2017347	1

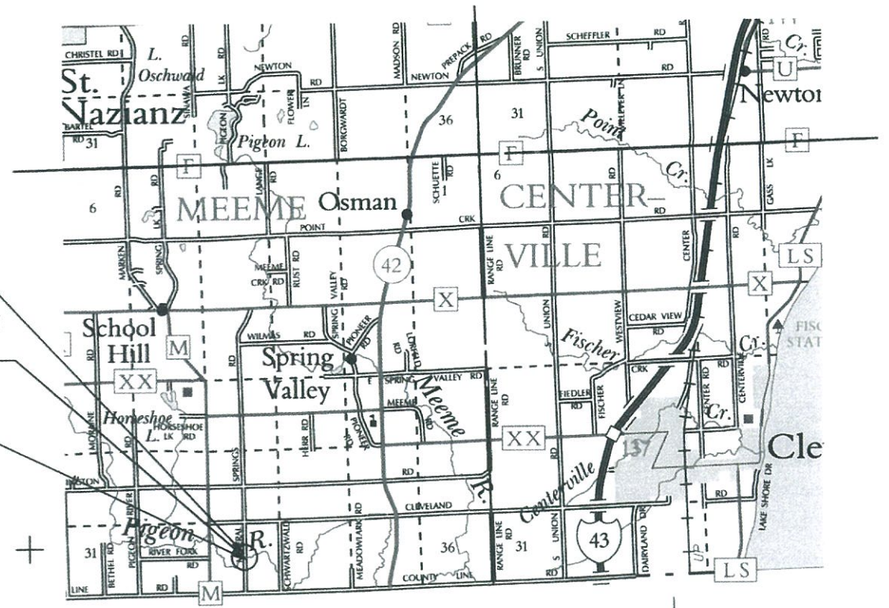
STATE PROJECT NUMBER
4313-08-71

END PROJECT
STA. 13+50

T-17-N

STRUCTURE B-36-0218

BEGIN PROJECT
STA. 11+85
Y=230,490.10
X=177,224.27



LAYOUT
SCALE 0 — 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.023 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MANITOWOC 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.

ACCEPTED FOR
COUNTY of MANITOWOC

1/25/2017 (Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY:

exp U.S. Services Inc.
t: +1.414.221.0088
241 N Broadway
Milwaukee, WI 53202
U.S.A.
www.exp.com

• BUILDINGS • ENVIRONMENT • ENERGY • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

WISCONSIN JEFFREY A. ROEMER E-23321 MILWAUKEE, WI PROFESSIONAL ENGINEER

02/01/17 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: exp US Services, Inc
Designer: exp US Services, Inc
Management Consultant: J. T. Engineering

APPROVED FOR THE DEPARTMENT
DATE: 1/24/17
Management Consultant Signature

E

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AGG	AGGREGATE
ET AL	AND OTHERS
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCHMARK
C/L OR ℄	CENTERLINE
Δ	CENTRAL ANGLE OR DELTA
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
COR	CORNER
CMP	CORRUGATED METAL PIPE
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CFS	CUBIC FEET/SECOND
CULV	CULVERT
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
E	EAST
EL	ELEVATION
EST	ESTIMATED
FPS	FEET PER SECOND
FE	FIELD ENTRANCE
FT	FOOT (FEET)
FTG	FOOTING
FDN	FOUNDATION
FF	FRONT FACE
IP	IRON PIN
LT	LEFT
LHF	LEFT-HAND FORWARD
L	LENGTH
LF	LINEAR FOOT
MAX	MAXIMUM
MI	MILE
MIN	MINIMUM
NC	NORMAL CROWN
N	NORTH
NE	NORTHEAST
NW	NORTHWEST
NO	NUMBER
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
POL	POINT ON LINE
PE	PRIVATE ENTRANCE
PL	PROPERTY LINE
PSI	POUNDS/SQUARE INCH
PROP	PROPOSED
R	RADIUS
RR	RAILROAD
REBAR	REINFORCEMENT BAR
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
SEC	SECTION
S	SOUTH
SE	SOUTHEAST
SW	SOUTHWEST
STH	STATE TRUNK HIGHWAY
STA	STATION
SE	SUPER ELEVATION
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TELEPHONE
TL OR T/L	TRANSIT LINE
T	TRUCKS
TYP	TYPICAL
U/G	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
YD	YARD

UTILITIES

TDS TELECOM
10 COLLEGE AVENUE, SUITE 218A
APPLETON, WI 54911
steve.jakubiec@tdstelecom.com
OFFICE: (920) 882-3330

WE-ENERGIES
245 SAND DRIVE
WEST BEND, WI 53095
alan.schmitt@we-energies.com
OFFICE: (262) 338-7662
CELL: (414) 322-1824

DNR LIAISON

DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVENUE
GREENBAY, WI 54313
(920) 622-5472
MATTHEW SCHAEVE
matthew.schaeve@wisconsin.gov

GENERAL NOTES

1. NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TRESS OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.
2. THE LOCATIONS OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
3. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED, SEEDED AND COVERED WITH EROSION MAT (TYPE) AS DIRECTED BY THE ENGINEER.
4. RESTORATION OF EXPOSED SLOPES AND DITCHES SHALL TAKE PLACE IMMEDIATEDLY AFTER FINISHED GRADING IS COMPLETE.
5. SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE IN PLACE PRIOR TO STRUCTURE REMOVAL.
6. ALL TEMPORARY STOCK PILES MUST BE IN AN UPLAND LOCATION AND PROTECTED WITH EROSION CONTROL MEASURES. DO NOT STOCK PILE MATERIALS IN WETLANDS, WATERWAYS, OR FLOOD PLAINS.
7. SHRINKAGE IS ESTIMATED AT 33%.
8. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

RUNOFF COEFFICIENT TABLE

	HYDRAULIC 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
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:												
ASHPALT	.07 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 0.35 ACRES
TOTAL AREA EXPECTED TO BE DISTRUBED BY CONSTRUCTION ACTIVITES = 0.17 ACRES

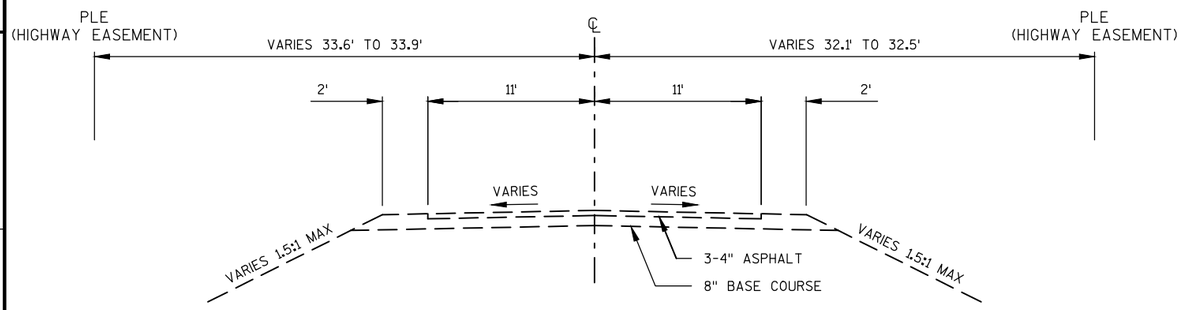
ALL TYPES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATION:		
TOTAL PAVEMENT LAYER THICKNESS	LAYER	NOMINAL MINIMUM SIZE GRADATION NO. 4
1.75"	UPPER LAYER	12.5mm
2.25"	LOWER LAYER	12.5mm

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

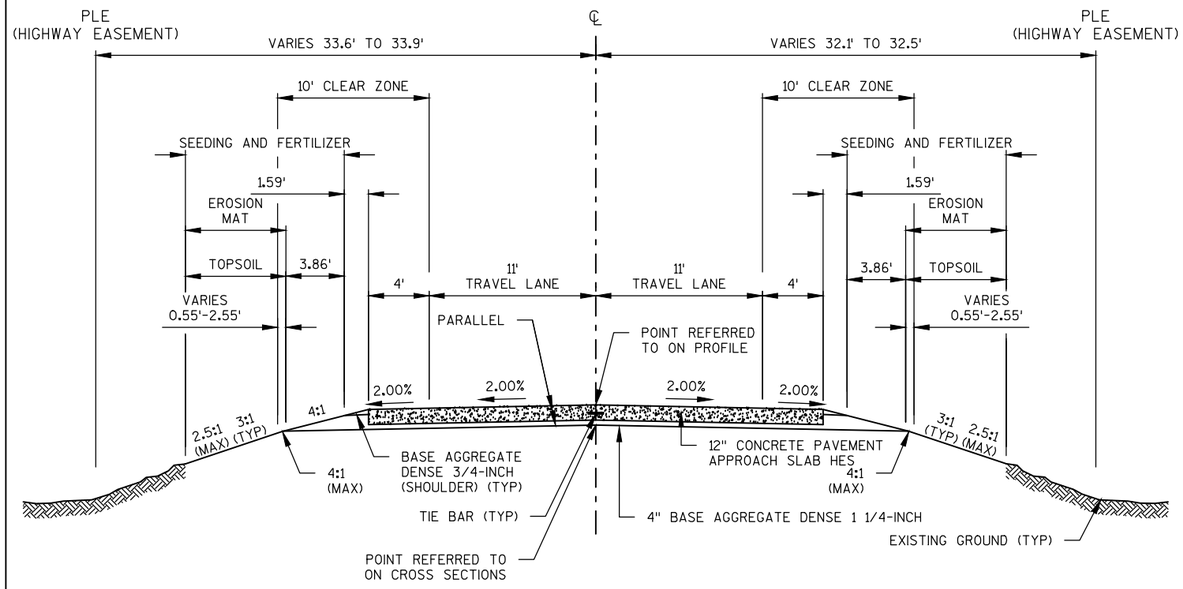
www.DiggersHotline.com

** DENOTES UTLITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS.



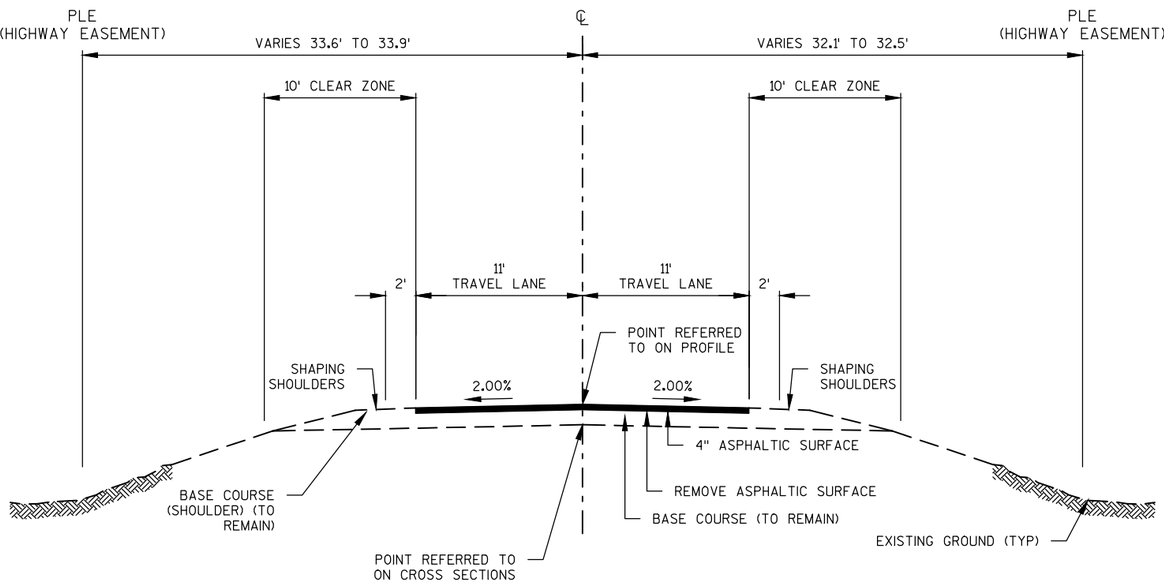
TYPICAL EXISTING SECTION MINERAL SPRINGS ROAD

STA 11+85 - STA 13+50



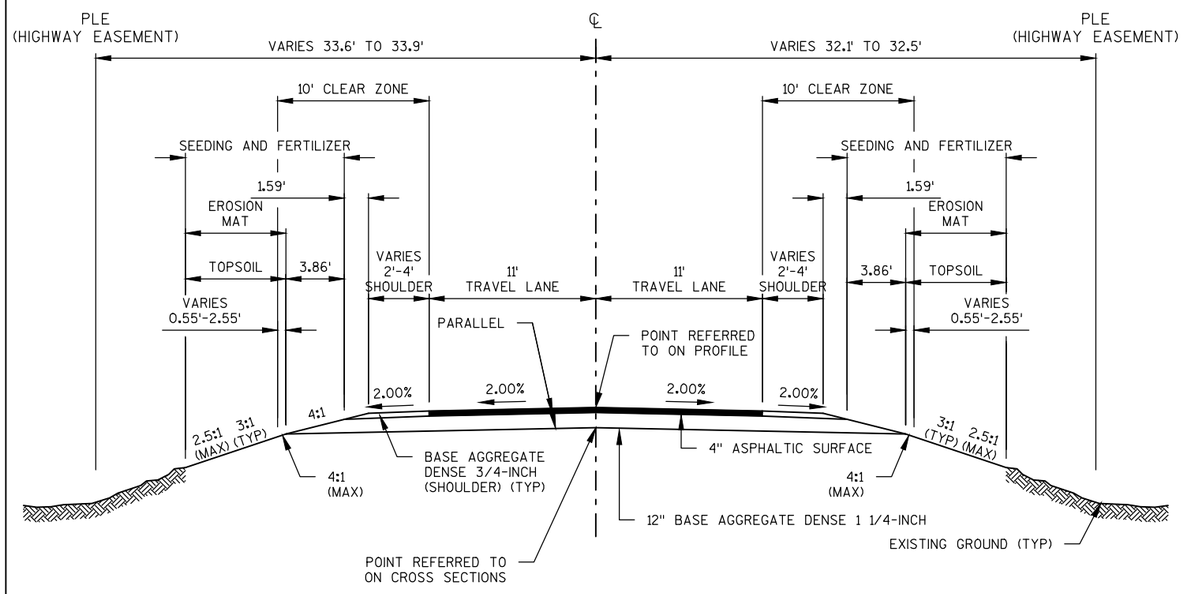
TYPICAL FINISHED SECTION MINERAL SPRINGS ROAD

STA 12+60 - STA 12+76
STA 13+22 - STA 13+40



TYPICAL FINISHED SECTION MINERAL SPRINGS ROAD

STA 11+85 - STA 12+50



TYPICAL FINISHED SECTION MINERAL SPRINGS ROAD

STA 12+50 - STA 12+60
STA 13+40 - STA 13+50

PROJECT NO: 4313-08-71	HWY: MINERAL SPRINGS ROAD	COUNTY: MANITOWOC	TYPICAL SECTIONS	SHEET 3	E

4313-08-71

Line	Item	Item Description	Unit	Total	Qty
0010	203.0500.S	Removing Old Structure Over Waterway (station) 01. STA 12+98.94	LS	1.000	1.000
0020	204.0110	Removing Asphaltic Surface	SY	160.000	160.000
0030	205.0100	Excavation Common **P**	CY	62.000	62.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-36-218	LS	1.000	1.000
0050	208.0100	Borrow **P**	CY	100.000	100.000
0060	210.1500	Backfill Structure Type A	TON	260.000	260.000
0070	213.0100	Finishing Roadway (project) 01. 4313-08-71	EACH	1.000	1.000
0080	305.0110	Base Aggregate Dense 3/4-Inch	TON	4.000	4.000
0090	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	88.000	88.000
0100	305.0500	Shaping Shoulders	STA	1.000	1.000
0110	415.1410	Concrete Pavement Approach Slab HES	SY	116.000	116.000
0120	450.4000	HMA Cold Weather Paving	TON	48.000	48.000
0130	455.0605	Tack Coat	GAL	3.000	3.000
0140	465.0105	Asphaltic Surface	TON	48.000	48.000
0150	502.0100	Concrete Masonry Bridges	CY	185.000	185.000
0160	502.3200	Protective Surface Treatment	SY	226.000	226.000
0170	505.0400	Bar Steel Reinforcement HS Structures	LB	4,160.000	4,160.000
0180	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	24,470.000	24,470.000
0190	513.4061	Railing Tubular Type M (structure) 01. B-36-218	LF	140.000	140.000
0200	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0210	550.0500	Pile Points	EACH	12.000	12.000
0220	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	780.000	780.000
0230	606.0300	Riprap Heavy	CY	230.000	230.000
0240	612.0106	Pipe Underdrain 6-Inch	LF	50.000	50.000
0250	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0260	612.0700	Drain Tile Exploration	LF	50.000	50.000
0270	619.1000	Mobilization	EACH	1.000	1.000
0280	624.0100	Water	MGAL	3.000	3.000
0290	625.0100	Topsoil **P**	SY	160.000	160.000
0300	628.1504	Silt Fence	LF	500.000	500.000
0310	628.1520	Silt Fence Maintenance	LF	500.000	500.000
0320	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0330	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0340	628.2008	Erosion Mat Urban Class I Type B **P**	SY	160.000	160.000
0350	628.6005	Turbidity Barriers	SY	190.000	190.000
0360	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0370	628.7570	Rock Bags	EACH	50.000	50.000
0380	629.0210	Fertilizer Type B **P**	CWT	1.000	1.000

4313-08-71

Line	Item	Item Description	Unit	Total	Qty
0390	630.0130	Seeding Mixture No. 30 **P**	LB	2.000	2.000
0400	630.0200	Seeding Temporary **P**	LB	7.000	7.000
0410	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0420	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0430	638.2602	Removing Signs Type II	EACH	6.000	6.000
0440	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0450	642.5001	Field Office Type B	EACH	1.000	1.000
0460	643.0100	Traffic Control (project) 01. 4313-08-71	EACH	1.000	1.000
0470	643.0420	Traffic Control Barricades Type III	DAY	750.000	750.000
0480	643.0705	Traffic Control Warning Lights Type A	DAY	900.000	900.000
0490	643.0900	Traffic Control Signs	DAY	1,500.000	1,500.000
0500	645.0120	Geotextile Type HR	SY	460.000	460.000
0510	646.0103	Pavement Marking Paint 4-Inch	LF	215.000	215.000
0520	650.4500	Construction Staking Subgrade	LF	54.000	54.000
0530	650.5000	Construction Staking Base	LF	54.000	54.000
0540	650.6500	Construction Staking Structure Layout (structure) 01. B-36-218	LS	1.000	1.000
0550	650.9910	Construction Staking Supplemental Control (project) 01. 4313-08-71	LS	1.000	1.000
0560	650.9920	Construction Staking Slope Stakes	LF	54.000	54.000
0570	690.0150	Sawing Asphalt	LF	44.000	44.000
0580	715.0502	Incentive Strength Concrete Structures	DOL	1,110.000	1,110.000
0590	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0600	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100) **P**		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow
			Cut (2)	EBS Excavation (3)				Factor 1.33			(item #208.0100) **P**
1	12-50 - 13+50	MINERAL SPRINGS ROAD	62	0	0	62	122	162	-100		
Division 1 Subtotal			62	0	0	62	122	162	-100		
Grand Total			62	0	0	62	122	162	-100	0	100
			Total Common Exc	62							

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
7) Rock Excavation item number 205.0200
13) Expanded Fill. Factor = 1.33
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

CONCRETE PAVEMENT

STATION	TO STATION	415.1410 CONCRETE PAVEMENT APPROACH SLAB HES SY
MINERAL SPRINGS ROAD		
12+60	12+76	58
13+22	13+40	58
PROJECT ID 4313-08-71 TOTALS (0010)		116

REMOVING ASPHALTIC SURFACE
SAWCUTTING

STATION	TO STATION	204.0110 REMOVING ASPHALTIC SURFACE SY	690.0150 SAWING ASPHALT LF
MINERAL SPRINGS ROAD			
11+85	12+50	160	---
11+85	---	---	22
13+50	---	---	22
PROJECT 4313-08-71 TOTALS (0010)		160	44

BASE AGGREGATE DENSE
ASPHALTIC SURFACE

STATION	TO STATION	305.0110 BASE AGGREGATE DENSE 3/4 - INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4 - INCH TON	305.0500 SHAPING SHOULDERS STA	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
MINERAL SPRINGS ROAD							
11+85	12+50	-	-	1	-		-
11+85	12+75	2	44	-	40	2	40
13+22	13+50	2	44	-	8	1	8
PROJECT ID 4313-08-71 TOTALS (0010)		4	88	1	48	3	48

UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

LANDSCAPING

STATION	TO	STATION	625.0100 TOPSOIL SY **p**	628.2008 EROSION MAT URBAN CLASS I TYPE B SY **p**	629.0210 FERTILIZER TYPE B CWT **p**	630.0130 SEEDING MIXTURE NO. 30 LB **p**	630.0200 SEEDING TEMPORARY LB **p**
MINERAL SPRINGS ROAD							
12+50	--	12+70	81	81	0.1	1	2
13+30	--	13+50	63	63	0.0	1	2
UNDISTRIBUTED			16	16	0.9	0	3
PROJECT ID 4313-08-71 TOTALS (0010)			160	160	1.0	2	7

EROSION CONTROL ITEMS

STATION	TO	STATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDTY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH
MINERAL SPRINGS ROAD							
11+85		12+75	250	250	75	0	0
13+22		13+50	100	100	75	0	0
UNDISTRIBUTED			150	150	40	50	50
PROJECT ID 4313-08-71 TOTAL (0010)			500	500	190	50	50

DUST CONTROL AND WATER

STATION	TO	STATION	624.0100 WATER MGAL
MINERAL SPRINGS ROAD			
12+50		13+50	3
PROJECT 4313-08-71 TOTAL (0010)			3

APPLICATION RATES:

2 GAL / TON BASE COURSE CABC
2 GAL / CY COMMON EXCAVATION OR BORROW
5.5 GAL / SY SEEDING * 4 WEEKS

SIGNS REFLECTIVE TYPE II AND WOOD POSTS

STATION	634.0612 POSTS WOOD 4x6-INCHx12 FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F W5-52R SF	637.2230 SIGNS TYPE II REFLECTIVE F W5-52L SF
NW QUADRANT	1	3	-
SW QUADRANT	1	-	3
NE QUADRANT	1	-	3
SE QUADRANT	1	3	-
PROJECT ID 4313-08-71 TOTALS (0010	4	12	

SIGN REMOVALS

SIGN #	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
R-1	1	1	BRIDGE MARKER
R-2	1	1	BRIDGE MARKER
R-3	1	1	BRIDGE MARKER
R-4	1	1	BRIDGE MARKER
R-5	1	1	WEIGHT LIMIT
R-6	1	1	WEIGHT LIMIT
PROJECT ID 4313-08-71	6	6	

TRAFFIC CONTROL

LOCATION	ESTIMATED DURATION TIME DAYS	643.0100 TRAFFIC CONTROL (PROJECT) 4313-08-71 EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS
MINERAL SPRINGS ROAD	75	1	750	900	1,500
PROJECT 4313-08-71 TOTAL (0010)		1	750	900	1,500

MOBILIZATIONS EROSION CONTROL

STATION	TO	STATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
MINERAL SPRINGS ROAD			5	2
PROJECT ID 4313-08-71 TOTALS			5	2

UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

CONSTRUCTION STAKING ITEMS

STATION	–	STATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9910 CONSTRUCTION STAKING STRUCTURE LAYOUT B-36-218 LS	650.9920 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 4313-08-71 LS	CONSTRUCTION STAKING SLOPE STAKES LF
MINERAL SPRINGS ROAD							
12+50		12+76	26	26	–	–	26
13+22		13+50	28	28	–	–	28
PROJECT 4313-08-71			–	–	1	1	–
PROJECT 4313-08-71 TOTALS (0010)			54	54	0	1	54
PROJECT 4313-08-71 TOTALS (0020)			0	0	1	0	0

PAVEMENT MARKING ITEMS

STATION	–	STATION	646.0103 PAVEMENT MARKING PAINT 4-INCH LF	REMARKS
MINERAL SPRINGS ROAD				
11+85		13+50	215	CENTERLINE AND SKIPS
PROJECT 4313-08-71 TOTALS (0010)			215	

DRAIN TILE

	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0700 DRAIN TILE EXPLORATION LF
MINERAL SPRINGS ROAD		
13+00-13+50	50	50
PROJECT 4313-08-71 TOTALS (0010)	50	50

UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

TRANSPORTATION PROJECT PLAT NO: 4313-08-71 - 4.01

PART OF THE WEST HALF OF THE WEST HALF OF THE SOUTHEAST 1/4 OF SECTION 33, PART OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 33 AND PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 33, ALL IN TOWNSHIP 17 NORTH, RANGE 22 EAST, TOWN OF MEEMEE, MANITOWOC COUNTY, WISCONSIN.

RELOCATION ORDER MINERAL SPRINGS RD. TOWN OF MEEMEE, MANITOWOC COUNTY, (MINERAL SPRINGS ROAD PIGEON RIVER BRIDGE & APPROACHES)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE TOWN OF MEMEE DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 60.50 AND 82.12, WISCONSIN STATUTES, THE TOWN OF MEMEE HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE TOWN FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE TOWN OF MEMEE, PURSUANT TO THE PROVISIONS OF SUBSECTION 60.50 AND 82.12, WISCONSIN STATUTES.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4313-08-71
AMENDMENT NO:

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MANITOWOC COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER SURVEYS OF PUBLIC RECORD.

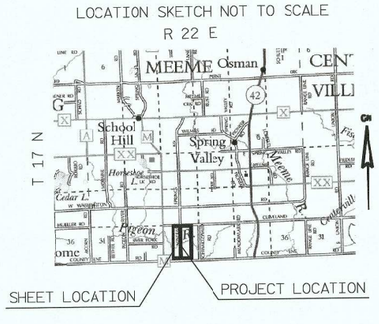
DIMENSIONS FOR THE RIGHT OF WAY ARE MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINE.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION OF THE PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

EXISTING RIGHT OF WAY SHOWN HEREIN IS BASED ON RELEASE BY OWNERS OF LAND FOR HIGHWAY PURPOSES RECORDED IN VOL. 461 RECORDS, PAGE 122 AS DOC. NO. 460657 AND IN VOL. 461 RECORDS, PAGE 131 AS DOC. NO. 460664.

LOCATION SKETCH NOT TO SCALE



SCALE, FEET
0 50 100

GN

TOWN OF MEEMEE

PIGEON RIVER

Tax No.012-033-009-001.00
ANDREW R. SCHUELER
AND
CASSANDRE J. SCHUELER
NE1/4 - SW1/4

Tax No.012-033-008-000.00
DANIEL J. KUETHER
SE1/4 - NW1/4

MAC NAIL
IN PAVEMENT
N = 230602.61
E = 177226.56

NOTE:
ACCESS DRIVEWAY EASEMENT PER DOC. 1113217 IN FAVOR OF THE PROPERTY ADJOINING ON THE SOUTH (PARCEL 3).

1,100 SF TLE FOR SLOPES

1,100 SF TLE FOR SLOPES

12+42.44
53.17' LT.

12+42.46
33.17' LT.

14+02.44
53.30' LT.

14+02.54
33.30' LT.

MINERAL SPRINGS RD.

34.31'

33.42'

32.58'

3.69'

N 01°07'30" E

9+00

10+00

R/L MINERAL SPRINGS RD.

11+00 2,636.93' N 01°17'43" E 12+00

PI STA = 11+00.00
N = 230405.11
E = 177222.51

BP STA = 8+00.00
N = 230105.17
E = 177216.62

1" IRON PIPE
FOUND
N = 227966.36
E = 177166.95

N 01°11'08" E
STA. 12+97.54

13+00

14+00

15+00 2,64L60' N 00°56'30" E 16+00

17+00

N 01°01'05" E

PI STA = 14+00.00
N = 230705.05
E = 177228.72

33.48'

32.52'

34.01'

31.99'

EP STA = 18+00.00
N = 231104.98
E = 177235.83

1" IRON PIN
FOUND
N = 233243.86
E = 177269.97

12+43.07
32.83' RT.

12+43.33
52.83' RT.

12+90.32
32.94' RT.

12+82.73
52.91' RT.

866 SF TLE FOR SLOPES

S 89°32'15" E

NW1/4 - SE1/4

SW1/4 - NE1/4

SIEMERS FARMS, INC.

Tax No.012-033-014-000.00

SCOTT A. KAFKA
AND
AMY L. MILZ

Tax No.012-033-003-002.00

PARCEL 1
CSM
V.31 P.355
DOC.1165102

SCHEDULE OF LANDS & INTERESTS REQUIRED		NOTE: OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE TOWNSHIP OF MEEMEE.					
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES
1	SIEMERS FARMS, INC.	TLE				0.020	0.000
2	ANDREW R. AND CASSANDRA J. SCHUELER	TLE				0.025	0.000
3	DANIEL J. KUETHER	TLE				0.025	0.000

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	L2 (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE TOWN OF MEMEE, MANITOWOC COUNTY, WISCONSIN.

PRINTED NAME _____ SIGNATURE _____ DATE _____

exp.U.S. Services Inc.
t +1.414.221.0088 | f +1.414.221.0537
411 N. Broadway
Suite 203
Milwaukee, WI 53202
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY • • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

I, JACK A. ZLOTEK, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE TOWN OF MEEMEE, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 10-24-2016
PRINT NAME: JACK A. ZLOTEK
REGISTRATION NUMBER: 2720
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE TOWN OF MEEMEE.

WISCONSIN JACK A. ZLOTEK S-2720 MILWAUKEE WIS. LAND SURVEYOR

SIGNATURE: _____ DATE: _____
PRINT NAME:

FILE NAME : TBD

PLOT DATE : 10/07/2016 PLOT BY : JAZ PLOT NAME : PLOT SCALE : 1" = 50'

ANDREW & CASSANDRA SCHUELER

PIGEON RIVER

DANIEL KUETHER
16432 MINERAL SPRINGS ROAD

WETLAND LIMITS

REMOVING STRUCTURE P-36-197

PROPOSED STRUCTURE B-36-218

P.L.

PLE (HIGHWAY EASEMENT)

15' (TYP)

CONCRETE PAVEMENT APPROACH SLAB STA. 12+60 - STA. 12+76

CONCRETE PAVEMENT APPROACH SLAB STA. 13+22 - STA. 13+40

SAWING ASPHALT

WE ENERGIES

18" CPCP TO REMAIN

15" CPCP TO REMAIN

WE ENERGIES ELECTRIC

SAWING ASPHALT

PI: 11+00.00

PI: 14+00.00

PLE (HIGHWAY EASEMENT)

R-4 R-3 R-6

33.6'

30' (TYP)

PE

TDS TELECOM

PE

10+00 N1° 07' 30"E 11+00 N1° 11' 08"E 12+00 13+00 14+00 N1° 01' 05"E 15+00 16+00

300.00' 300.00' 400.00'

MINERAL SPRINGS ROAD

℄ MINERAL SPRINGS ROAD

BM#1

32.5'

SHAPING SHOULDER STA. 11+85 - 12+50

REMOVING ASPHALTIC SURFACE STA. 11+85 - STA. 12+50

R-5 R-1 R-2

24" CPCS TO REMAIN

PE

18" CPRC TO REMAIN

PE

32.1'

PLE (HIGHWAY EASEMENT)

SIEMERS FARMS INC

6" DRAIN TILE (APPROX) (TO REMAIN)

SIEMERS FARMS INC

5

5

SLOPE INTERCEPTS (TYP)

PLE (HIGHWAY EASEMENT)

P.L.

T 17 N R 22 E 33

P.L.

BEGIN PROJECT
STA 11+85
Y=230,490.10
X=177,224.27

END PROJECT
STA 13+50
Y=230,655.06
X=177,227.69

SCOTT KAFKA AND AMY L MILZ
16433 MINERAL SPRINGS ROAD

SILT FENCE

TURBIDITY BARRIER

R-* REMOVING SIGNS TYPE II AND SMALL SIGN SUPPORTS

N

VCL = 300.00

K = 115.38

PROPOSED PROFILE GRADE LINE

VPC STA 11+00.00
VPC EL 817.86

-1.20%

1.40%

VPI STA 12+50.00
VPI EL 816.06

VPT STA 14+00.00
VPT EL 818.16

STA 14+05.00
EL 818.23

EXISTING GROUND

HIGH WATER100
EL = 810.31

Q_2
ELEV = 807.61

OBSERVED WATER LEVEL
EL = 805.87
(DECEMBER 2015)

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

STATION 12+98.94
REMOVE STRUCTURE P-36-197
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
27.0'± OVERALL LENGTH
31.7'± OVERALL WIDTH

STA 12+98.94
STRUCTURE B-36-218 REQUIRED
SINGLE SPAN CONCRETE SLAB BRIDGE 30' CLEAR ROADWAY
SKEW 10°0'0" LHF

820
815
810
805

819.02 818.48 817.88 817.40 817.03 817.09 816.89 817.04 804.56 817.19 817.55 817.57 818.20 818.99 819.94 820.58 821.16

10+00 11+00 12+00 13+00 14+00 15+00 16+00

BENCHMARKS

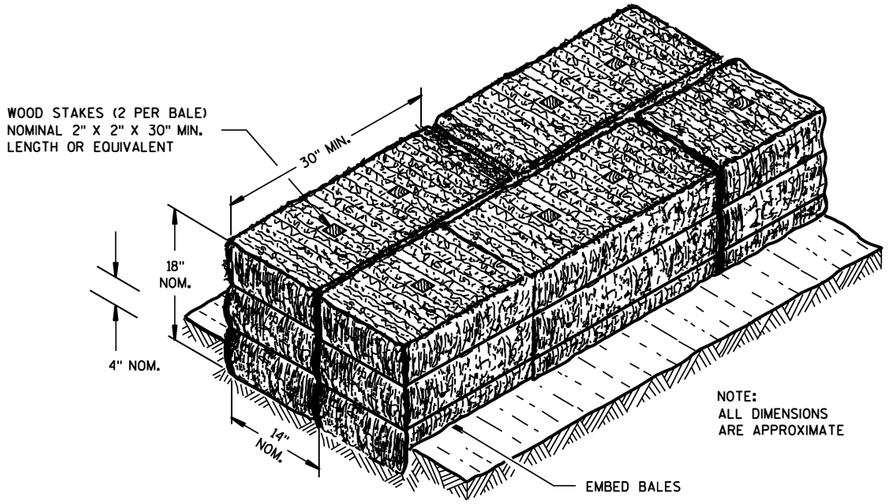
NO	STA, OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV
BM1	12+97.49, 0.06' LT	230,602.56	177,226.54	PK NAIL LOCATED IN THE CENTER SECTION WITHIN THE CENTERLINE OF MINERAL SPRINGS ROAD	817.23'
TP100	OUTSIDE OF ALIGNMENT	230,203.81	177,232.92	TEMPORARY BENCHMARK IRON PIPE WITH YELLOW CAP	820.08'
TP101	OUTSIDE OF ALIGNMENT	230,823.71	177,215.95	TEMPORARY BENCHMARK IRON PIPE WITH YELLOW CAP	819.69'

PROJECT NO: 4313-08-71 | HWY: MINERAL SPRINGS ROAD | COUNTY: MANITOWOC | PLAN AND PROFILE: MINERAL SPRINGS ROAD | SHEET 10 | E

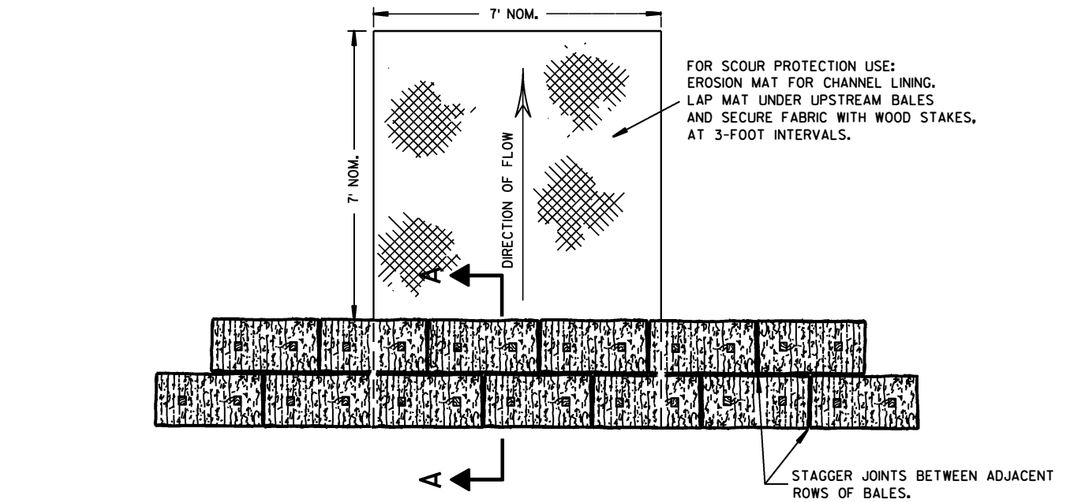
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)

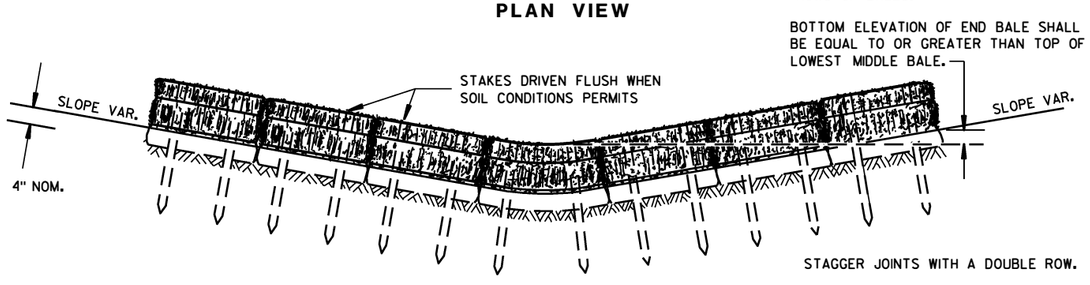
6



SECTION A-A



PLAN VIEW



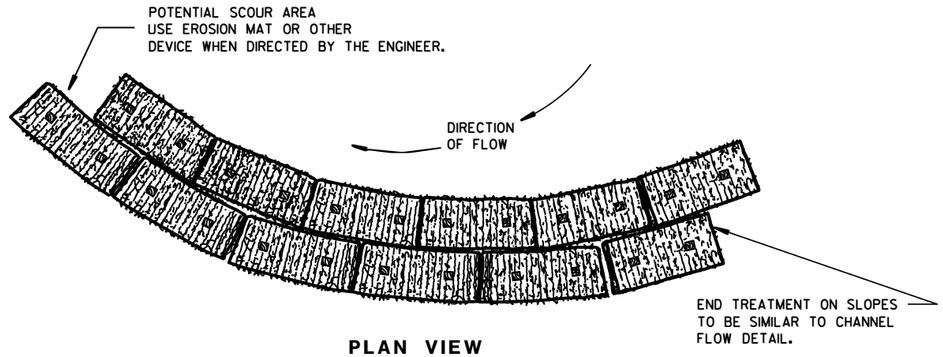
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

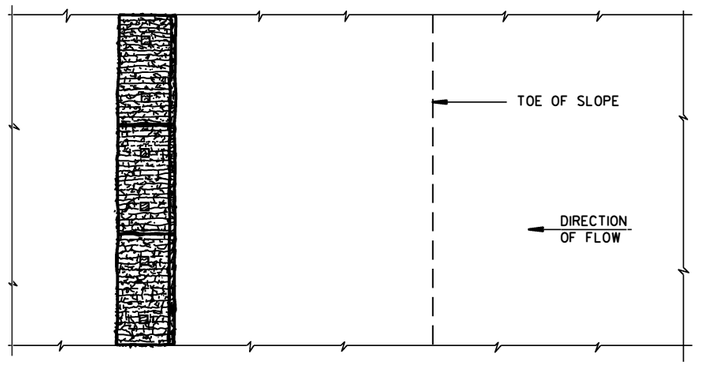
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

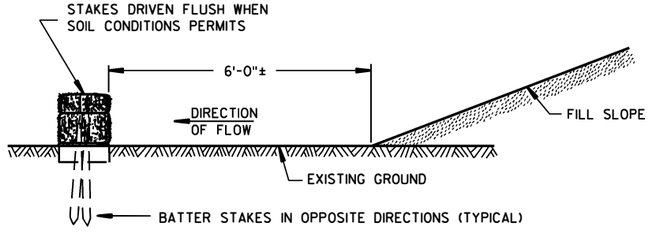


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Cannestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

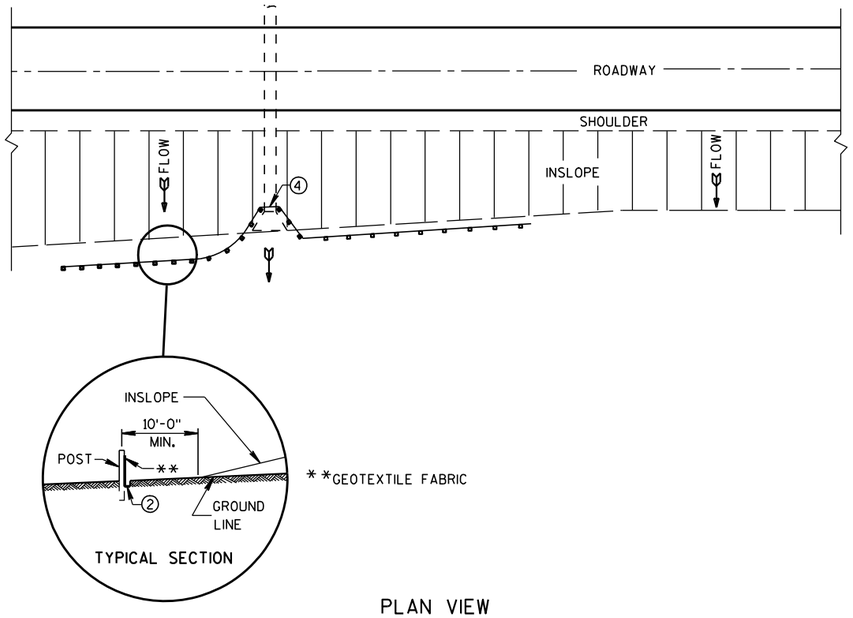
FHWA

6

S.D.D. 8 E 8-3

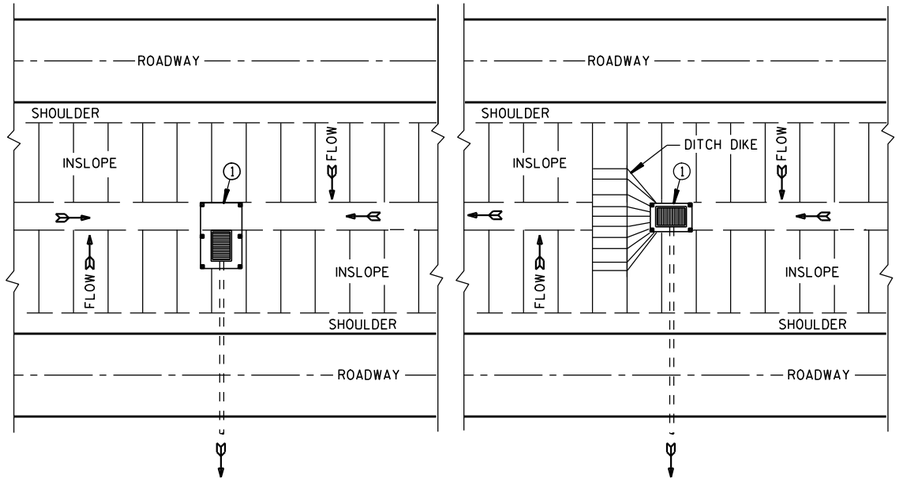
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

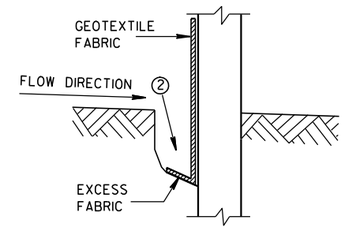
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

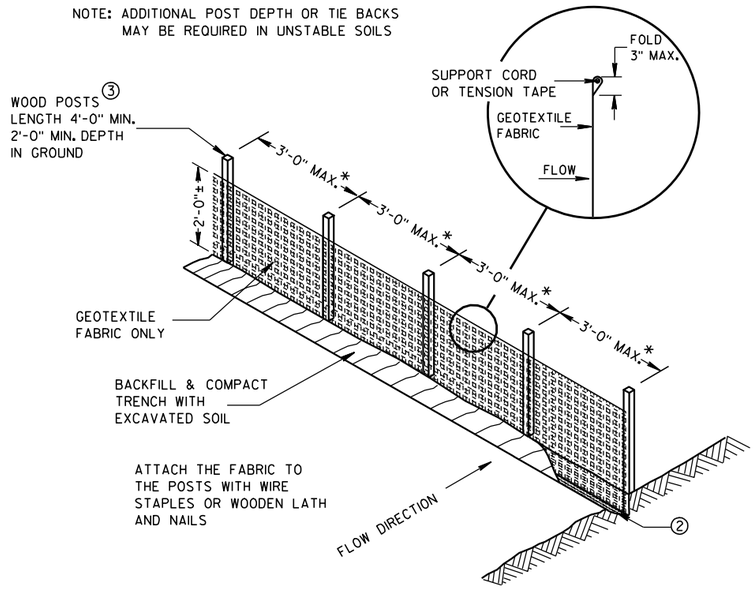
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

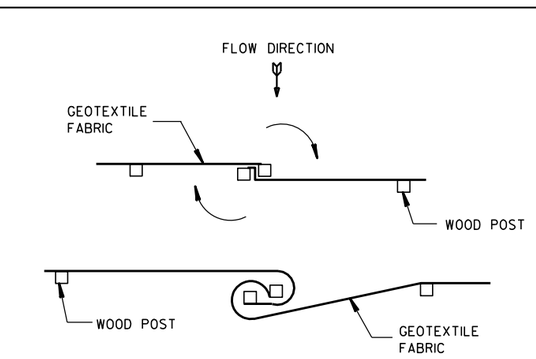
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



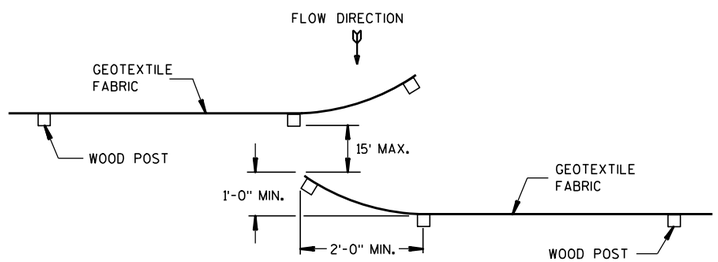
TRENCH DETAIL



SILT FENCE

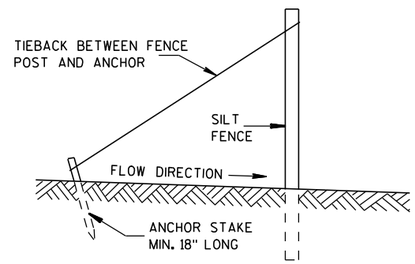


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

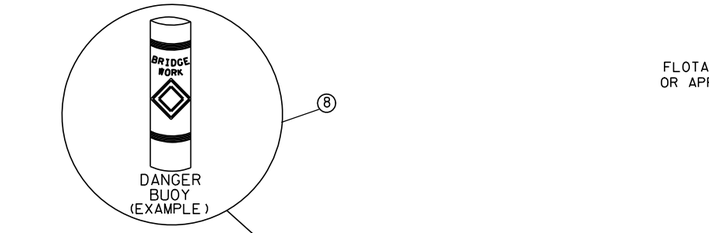
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

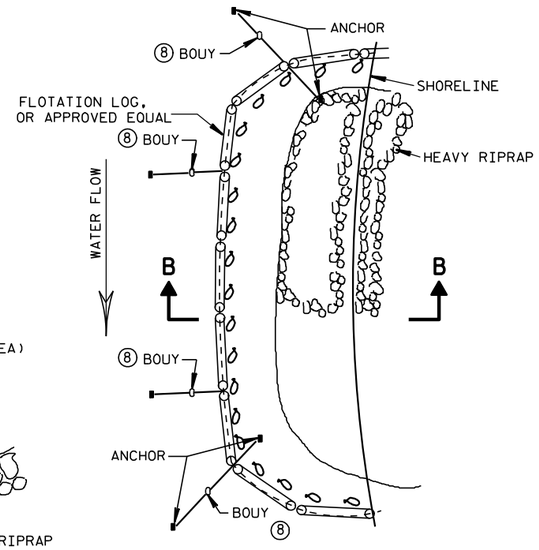
S.D.D. 8 E 9-6

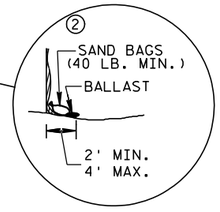
6

S.D.D. 8 E 9-6

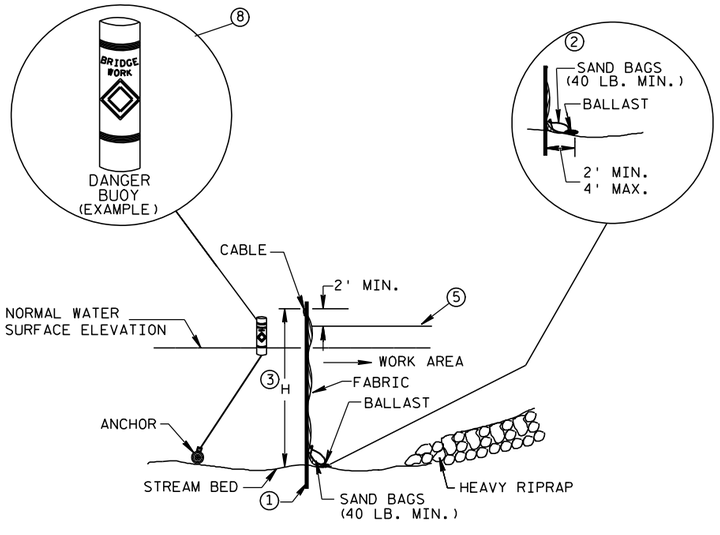


SECTION B-B

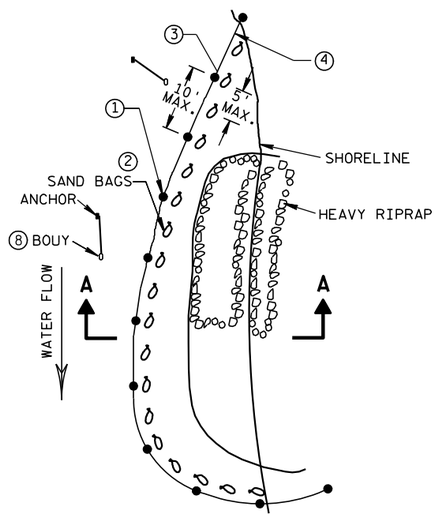




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

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.

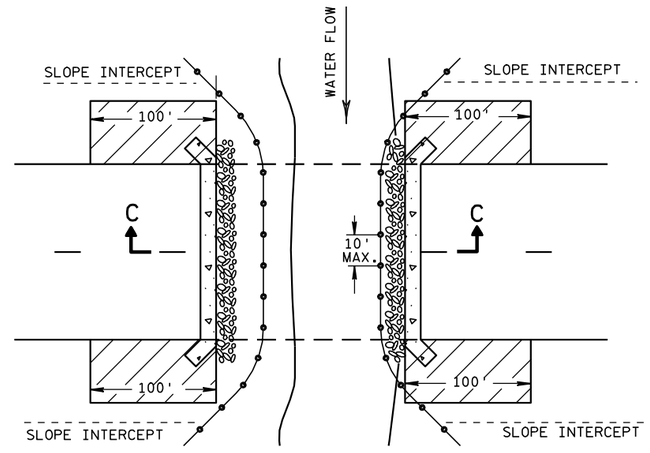
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

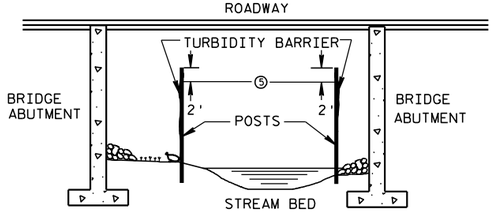
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 11-2

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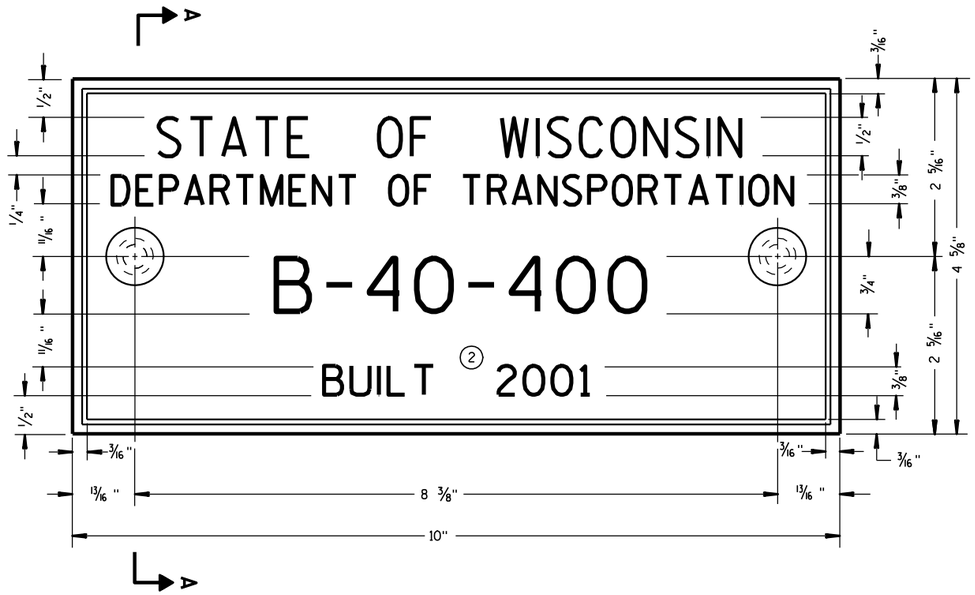
S.D.D. 8 E 11-2



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

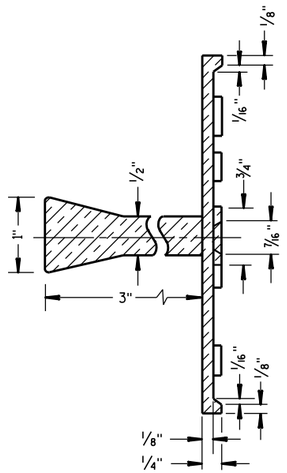
GENERAL NOTES

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.

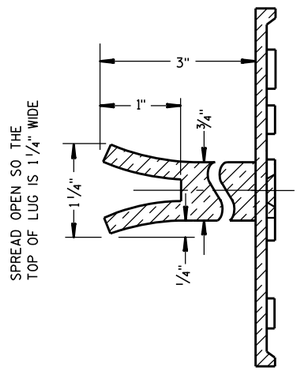
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

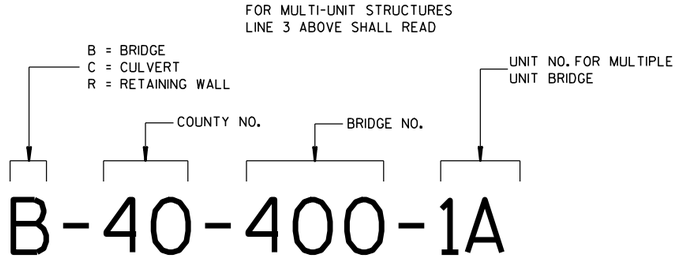
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



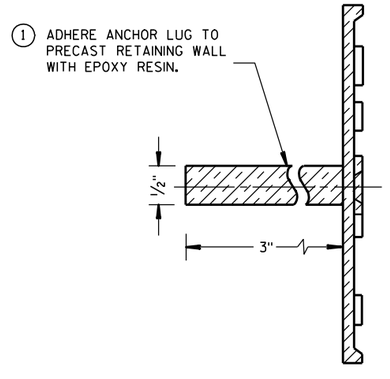
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

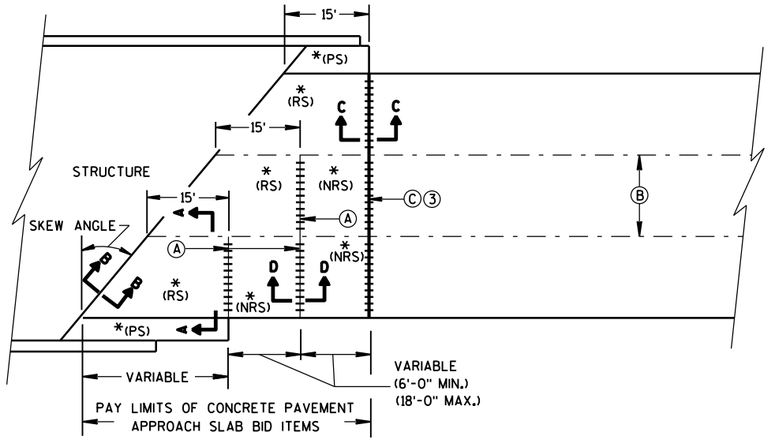
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

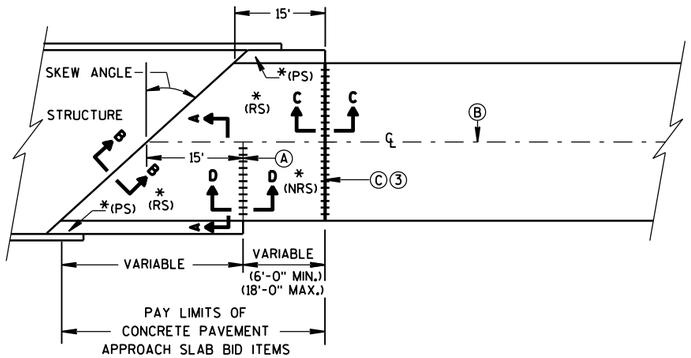
FHWA

6

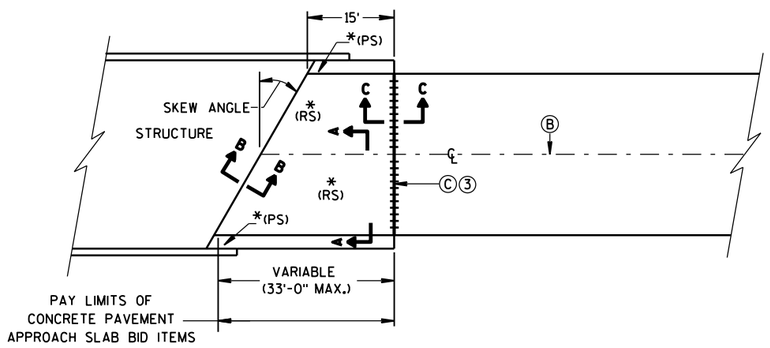
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

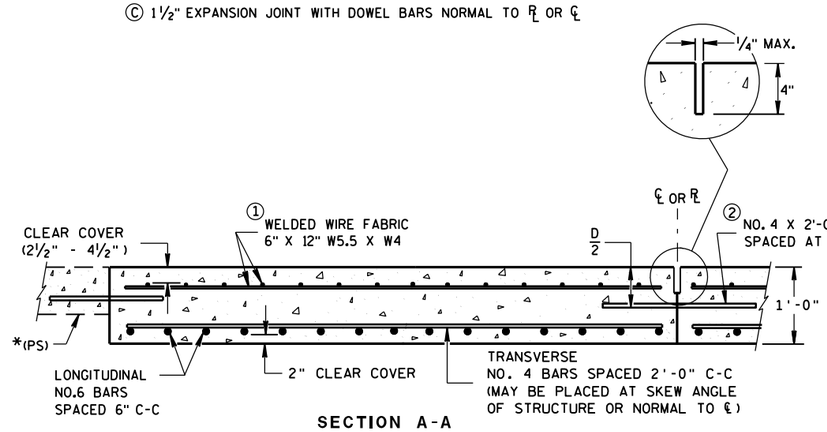
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

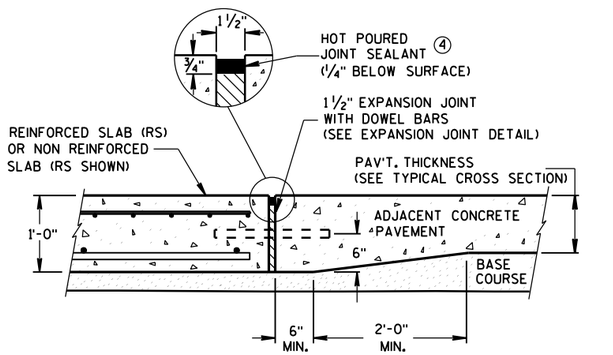
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

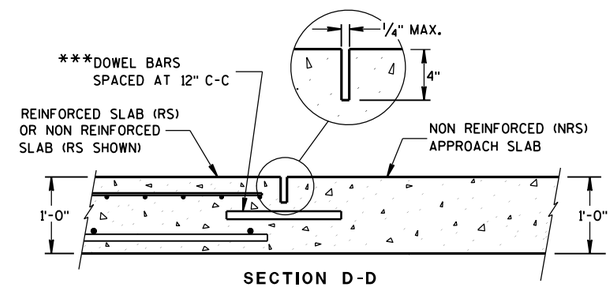
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

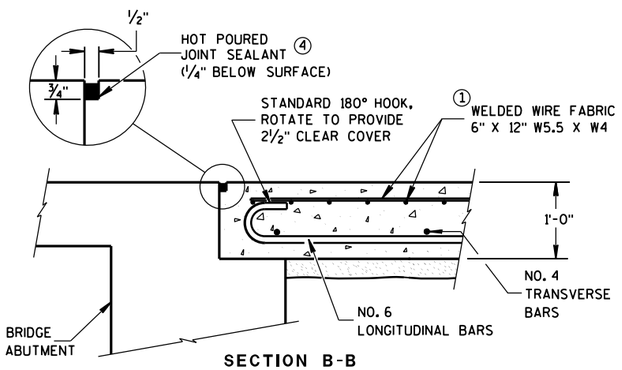
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

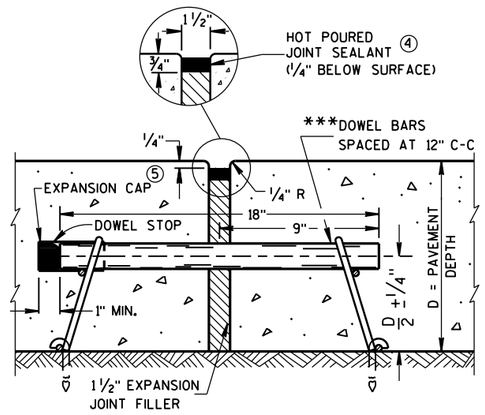
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPE
FHWA

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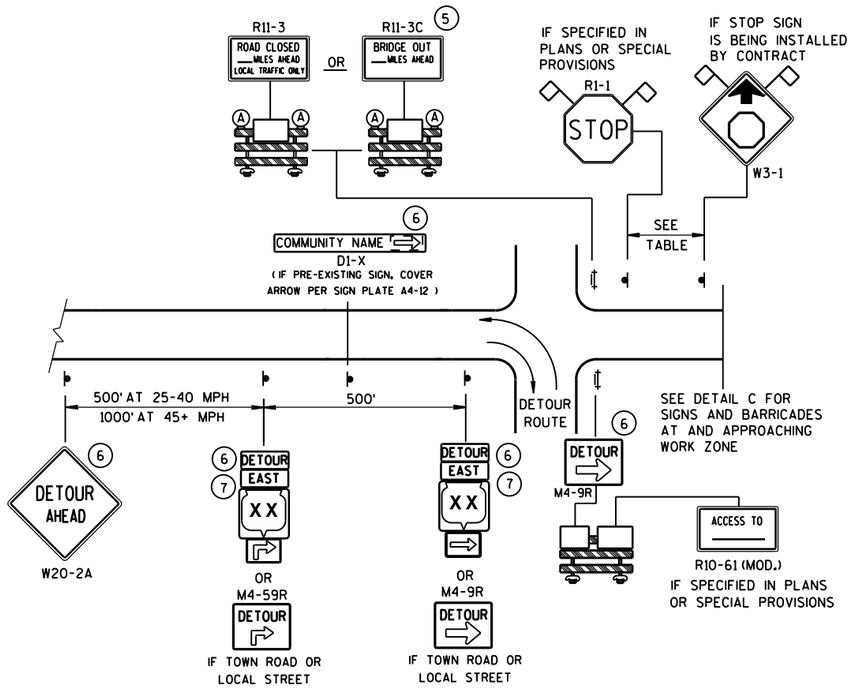
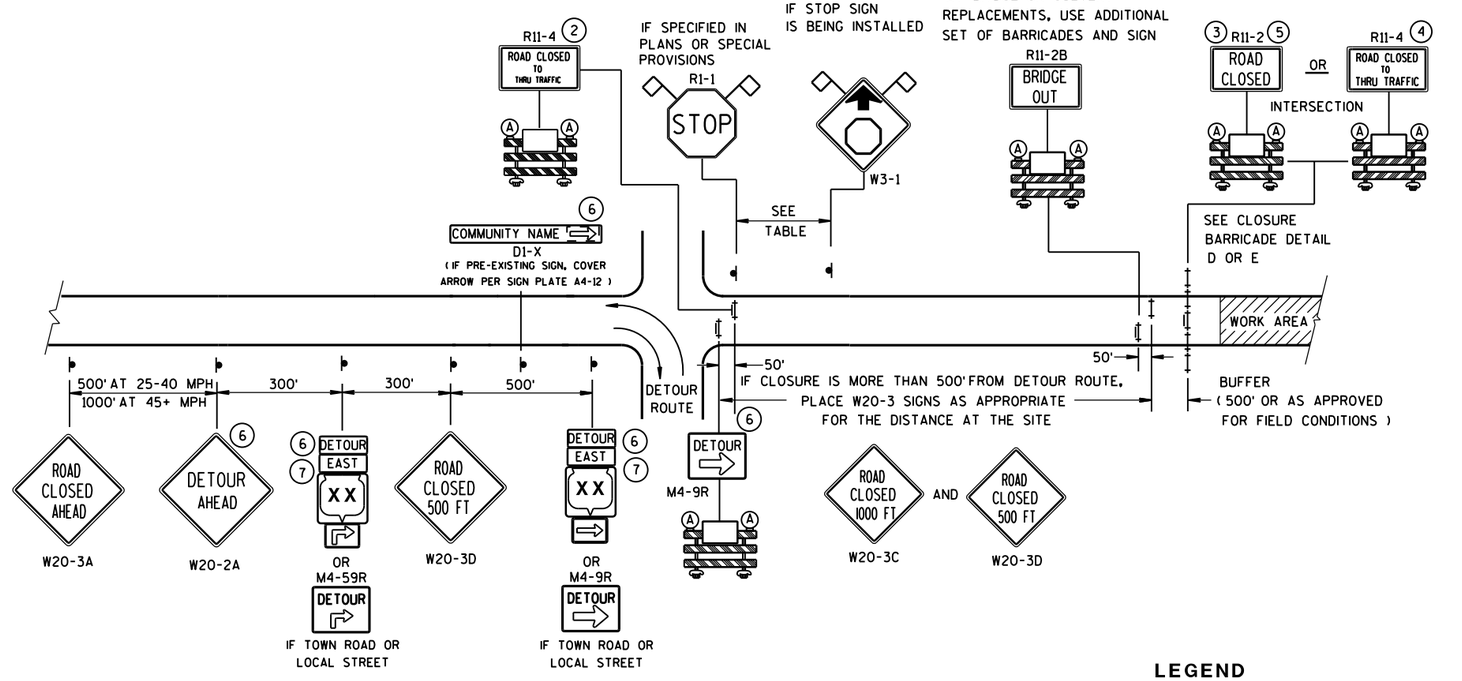
S.D.D. 13 B 2-8a



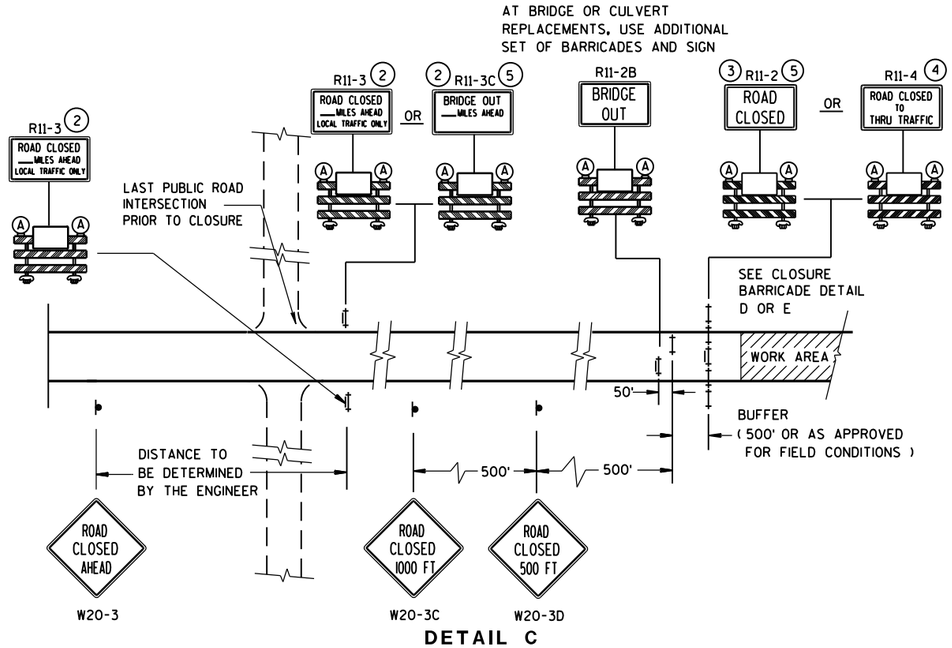
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

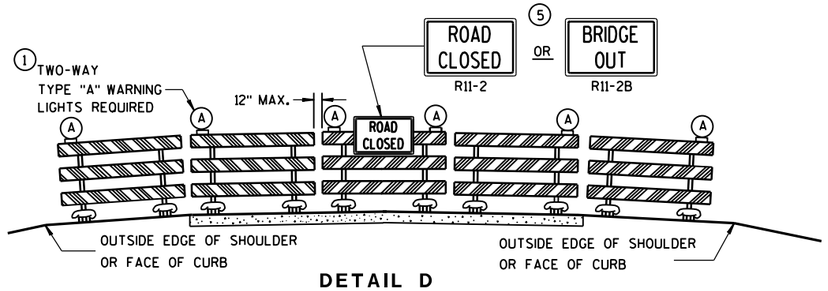
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

S.D.D. 15 C 2-6a

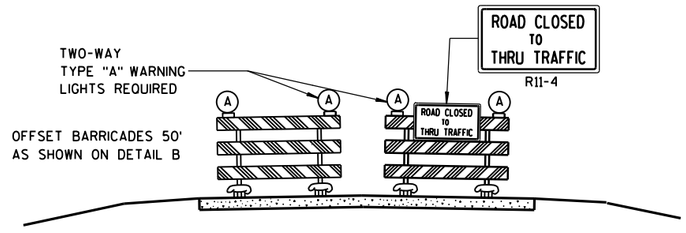
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe	
DATE	STATEWIDE WORK ZO SAFETY ENGI	FIC
FHWA		

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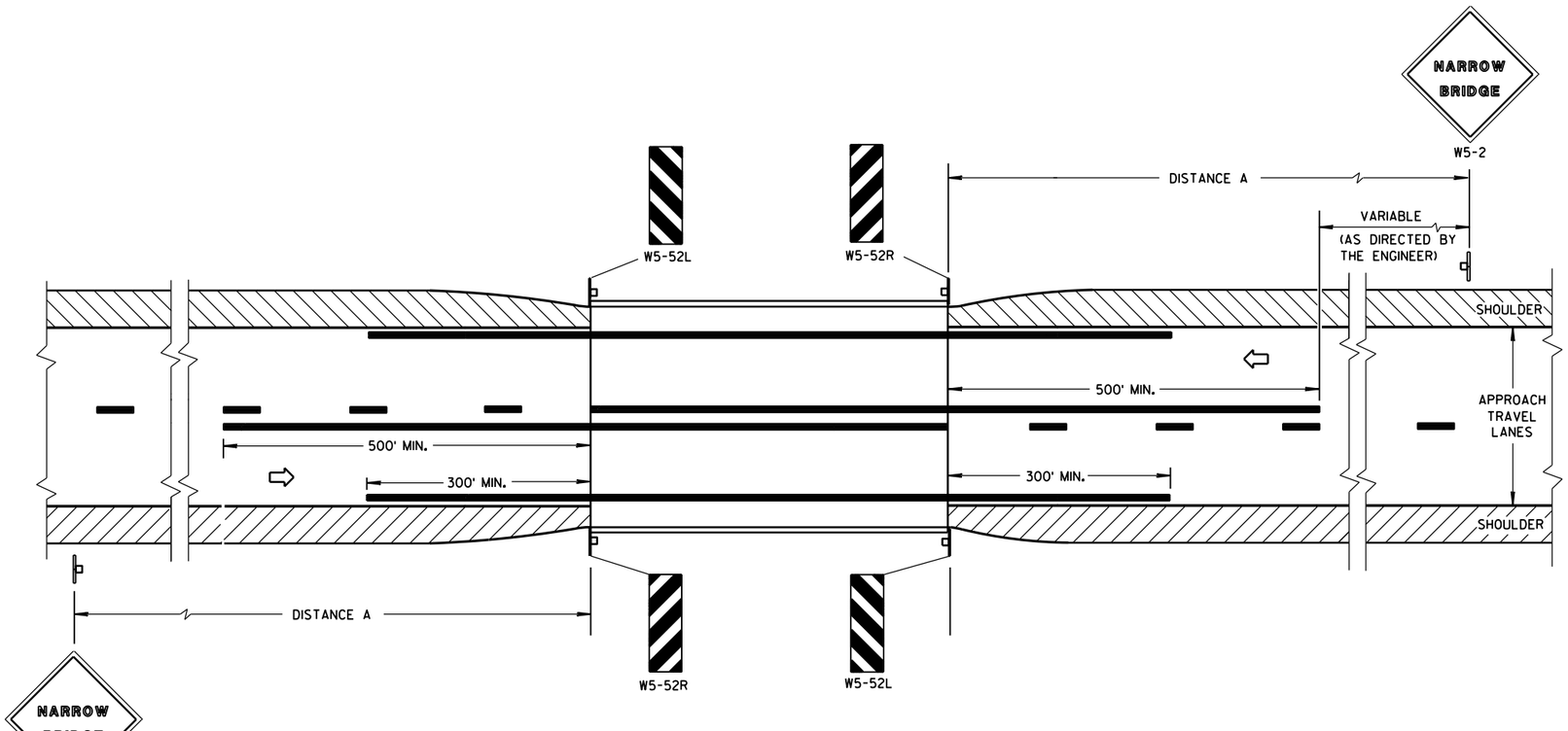
S.D.D. 15 C 2-6b

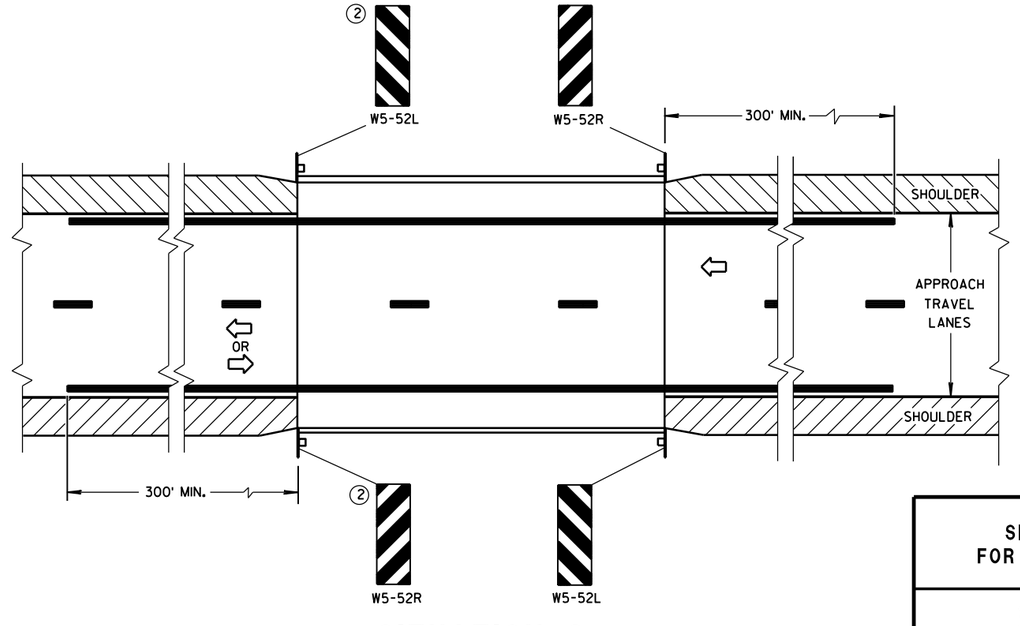


SITUATION 1

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.

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 C 6-8

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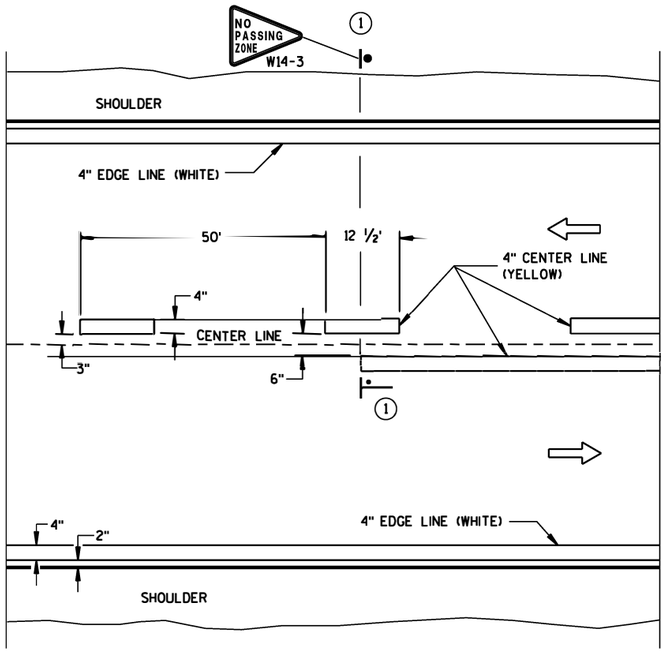
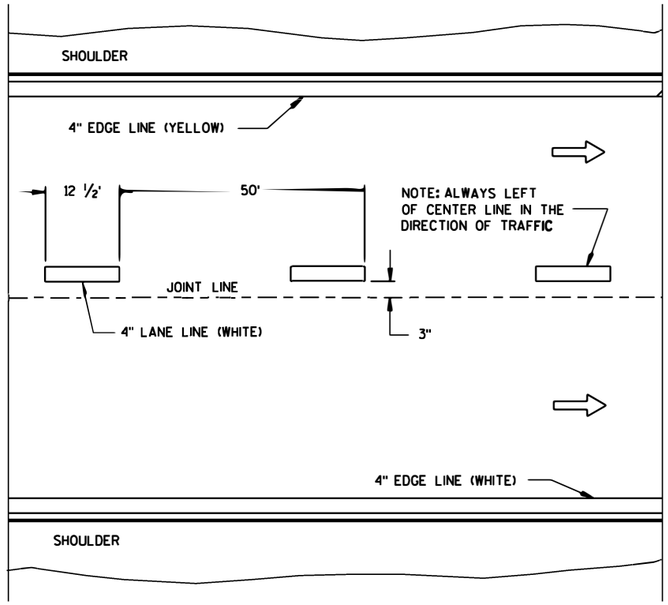
S.D.D. 15 C 6-8



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

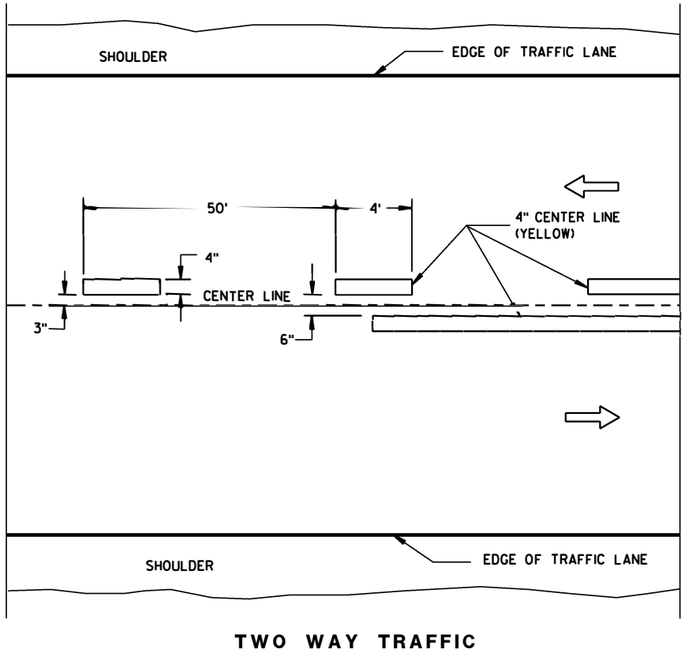
GENERAL NOTES

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

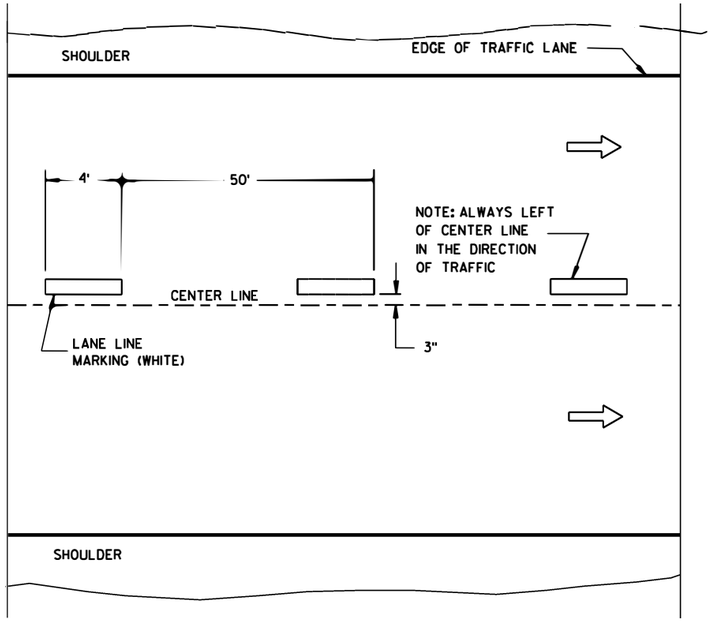
(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LEGEND

"T" MARKING

POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

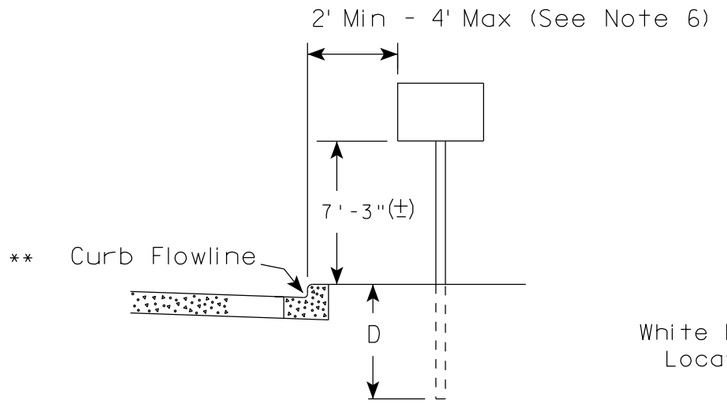
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAR ENGINEER
FHWA

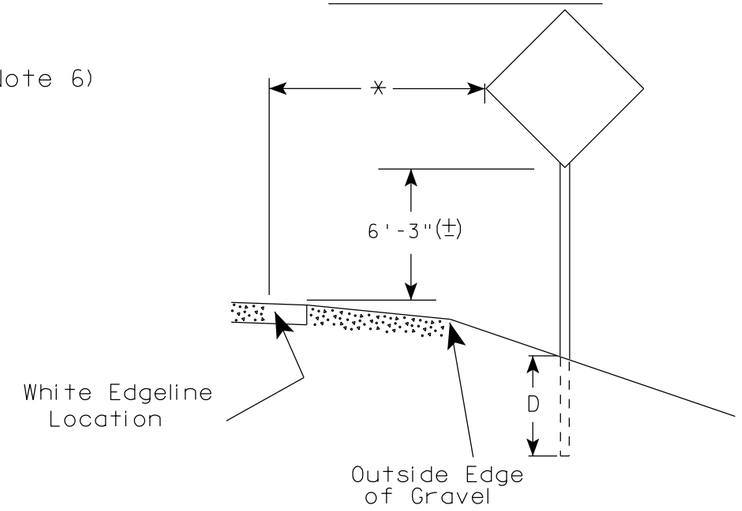
6

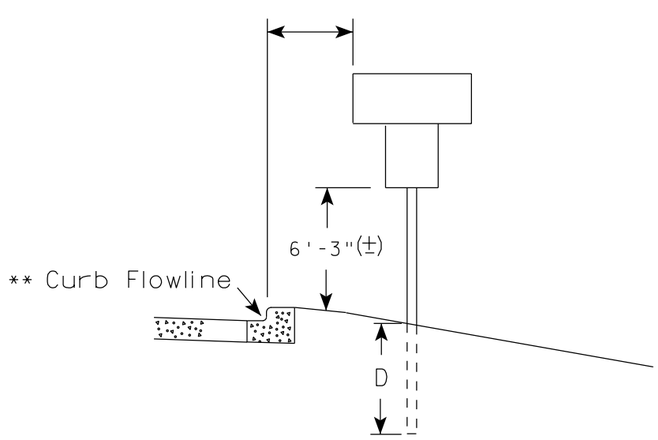
S.D.D. 15 C 8-17a

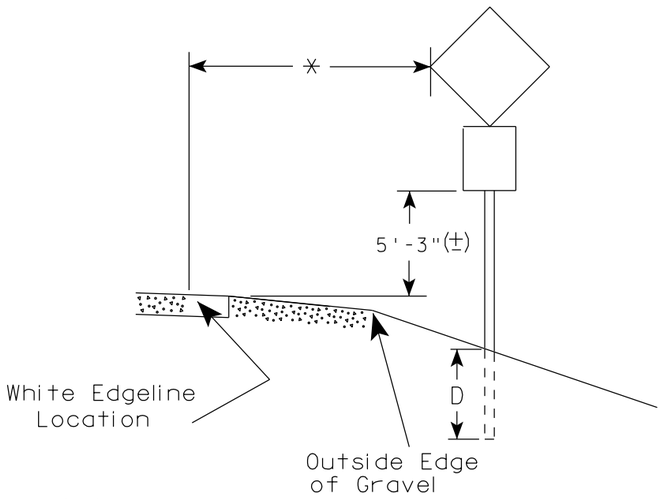
URBAN AREA



RURAL AREA (See Note 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. Offset of signs is measured from the flow line.

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

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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd 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" (±).

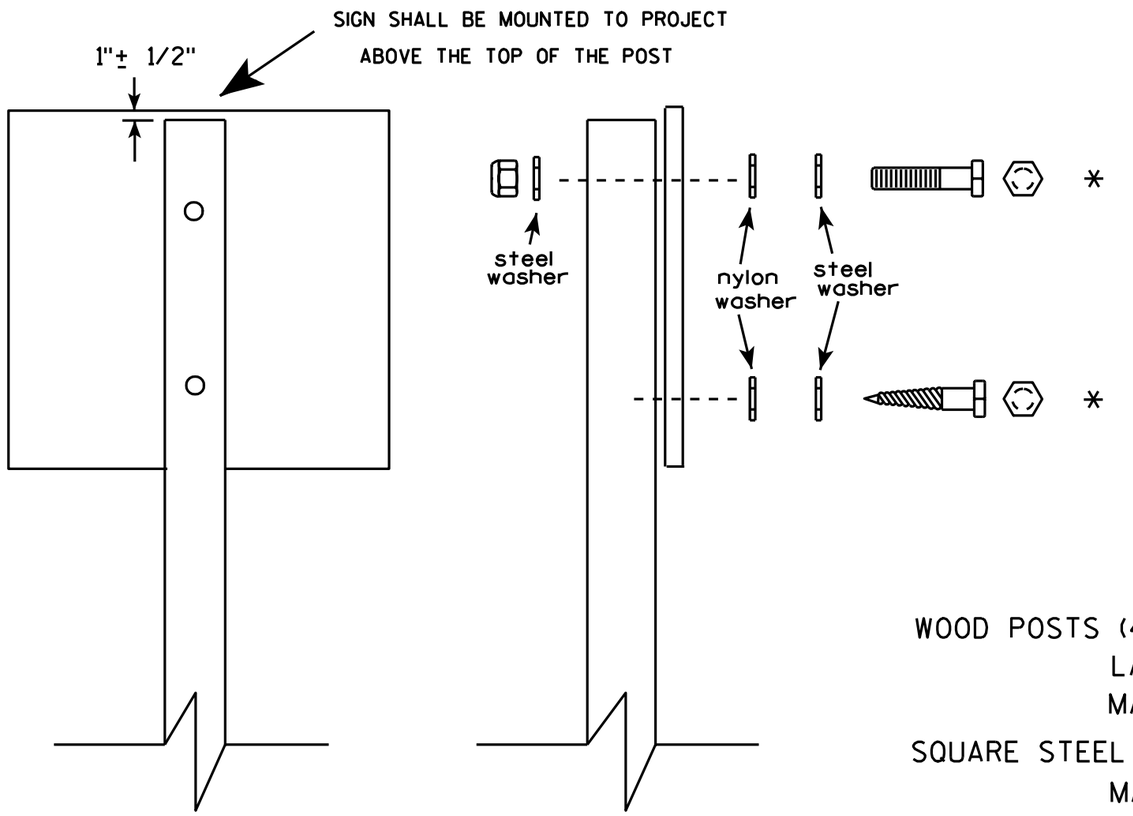
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

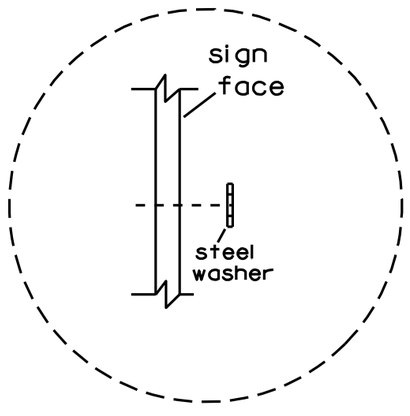
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

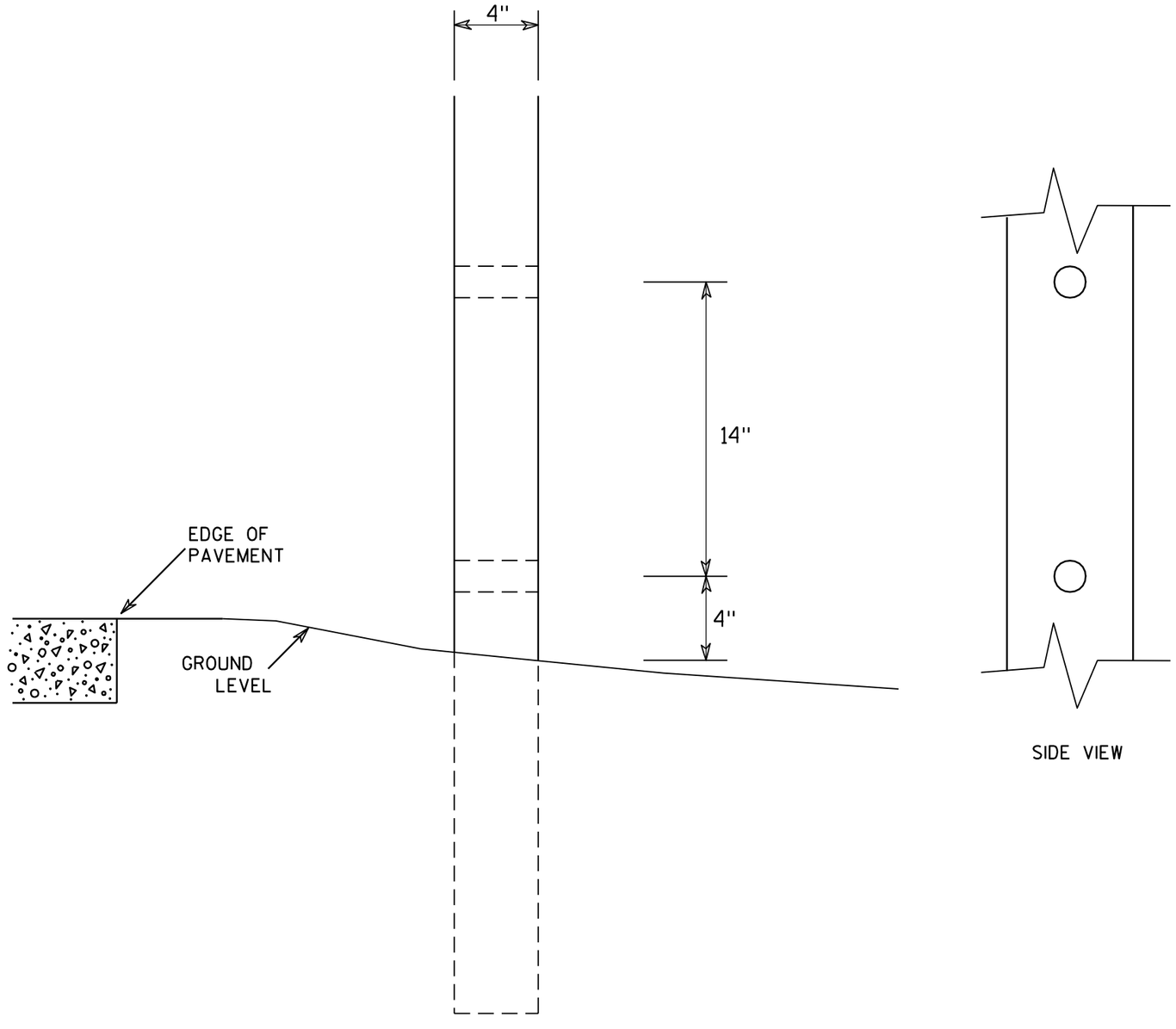
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 22 E



SIDE VIEW

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

7

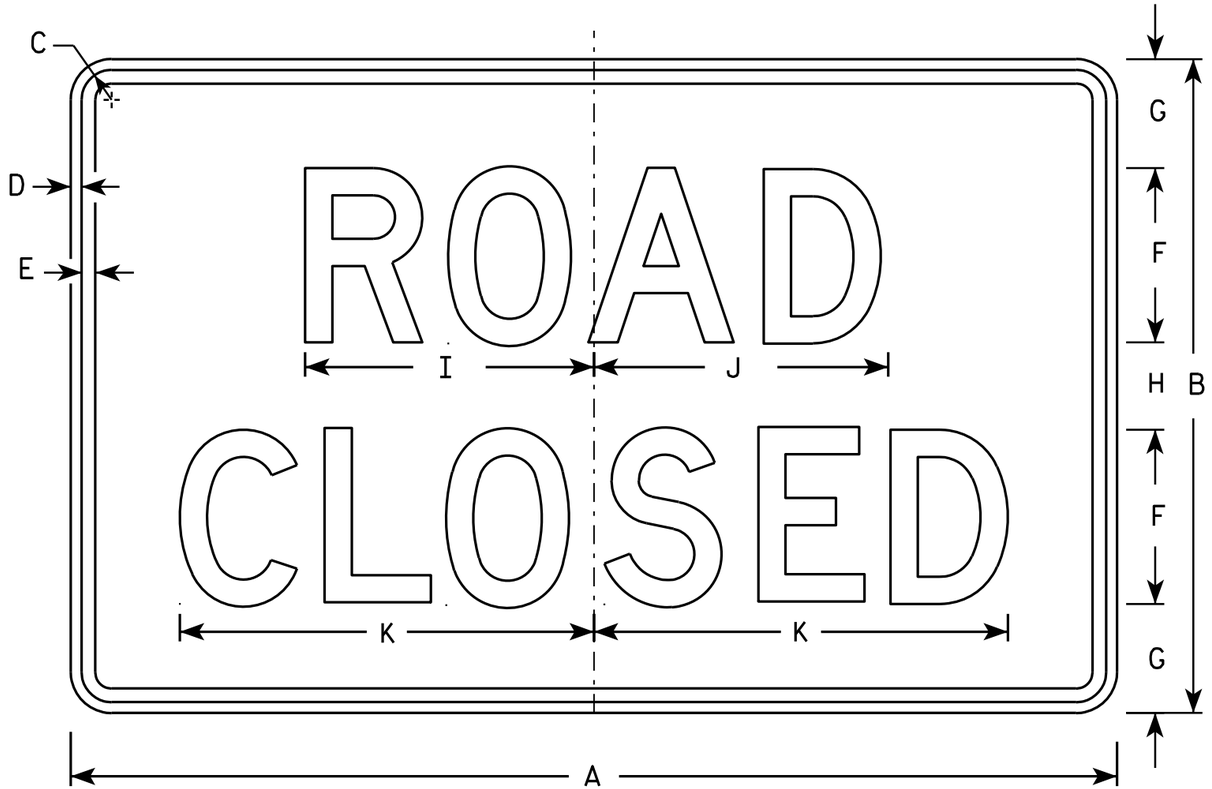
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

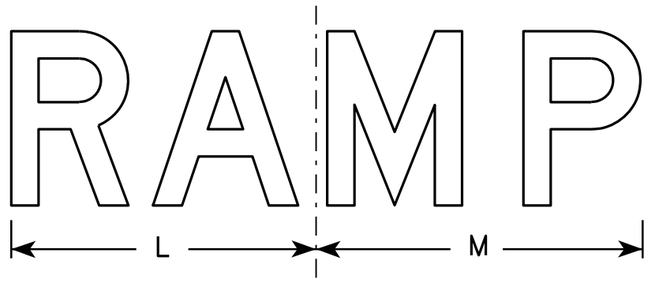
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 23	E



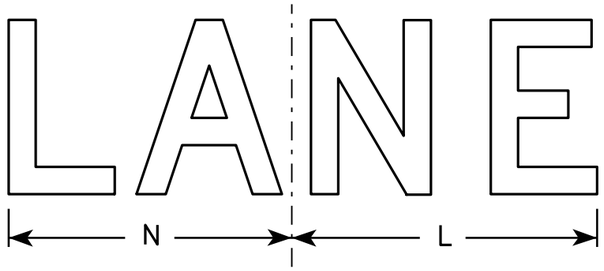
R11-2

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.



R11-2R



R11-2L

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

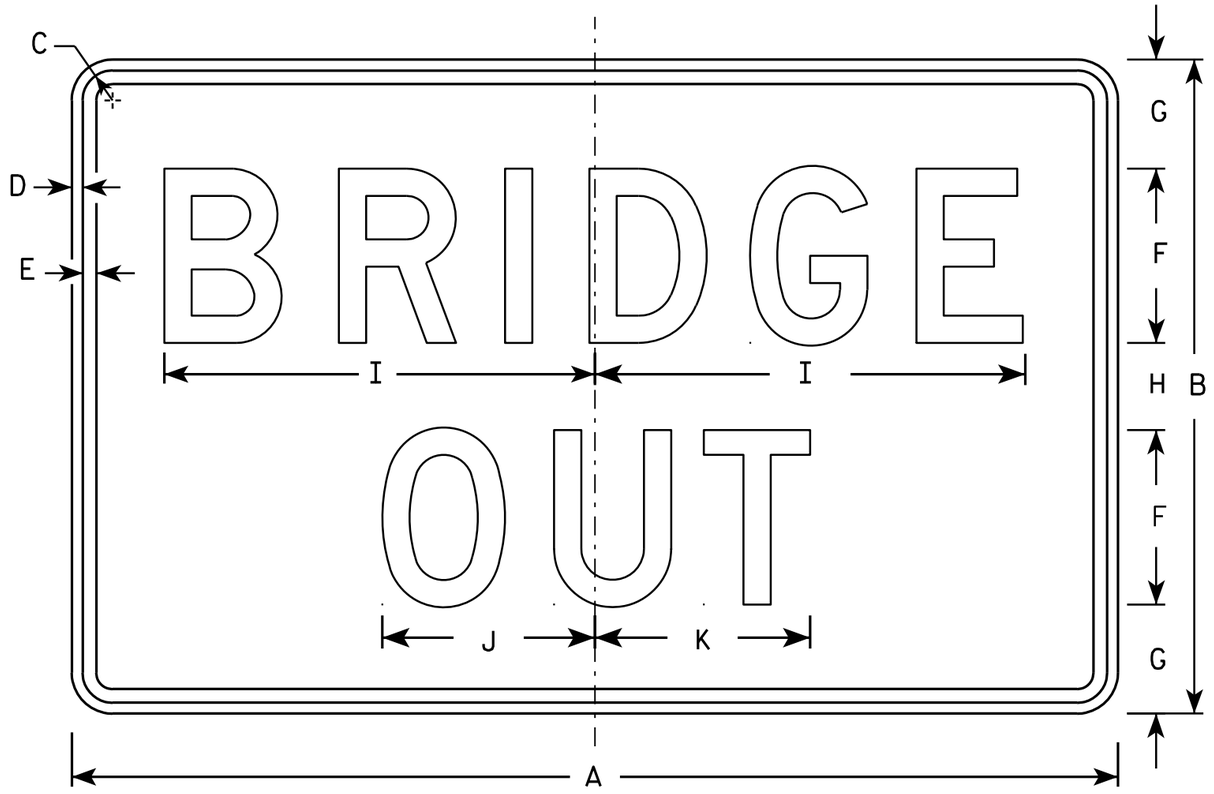
STANDARD SIGN
R11-2

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: 24	E



R11-2B

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.

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

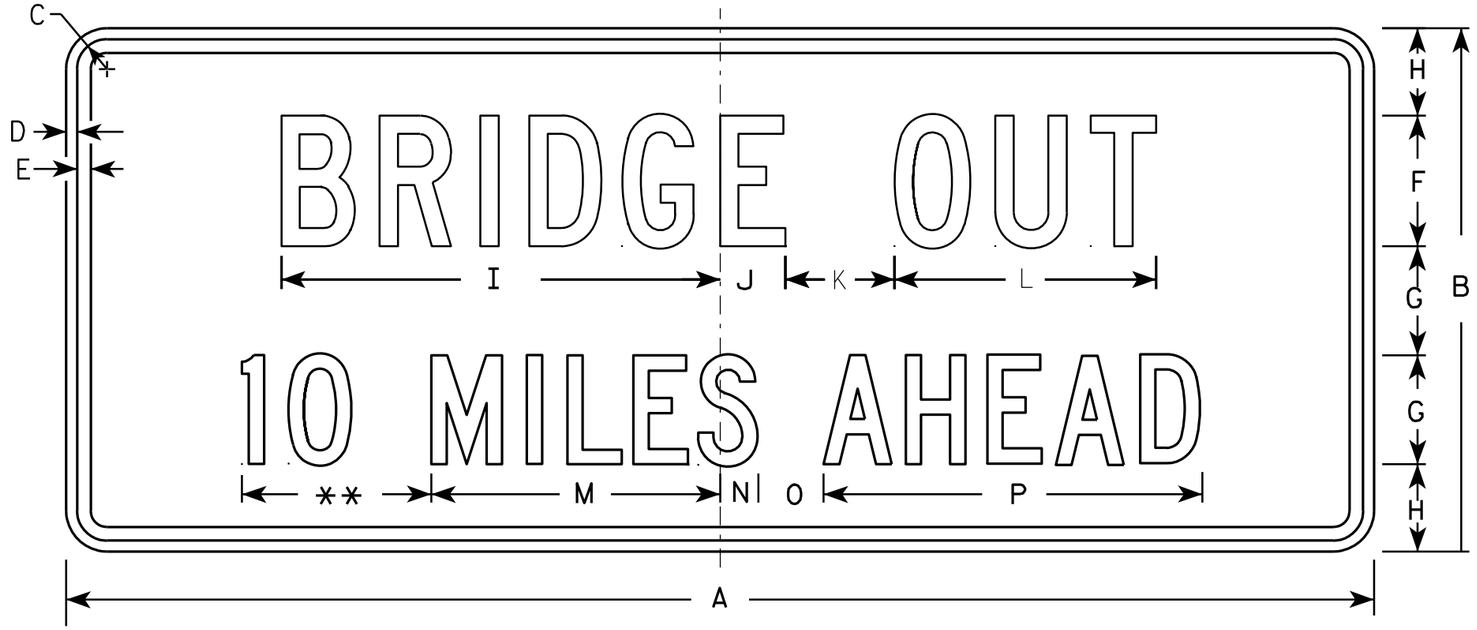
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 25 E



R11-3C

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.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** 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											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											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											10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

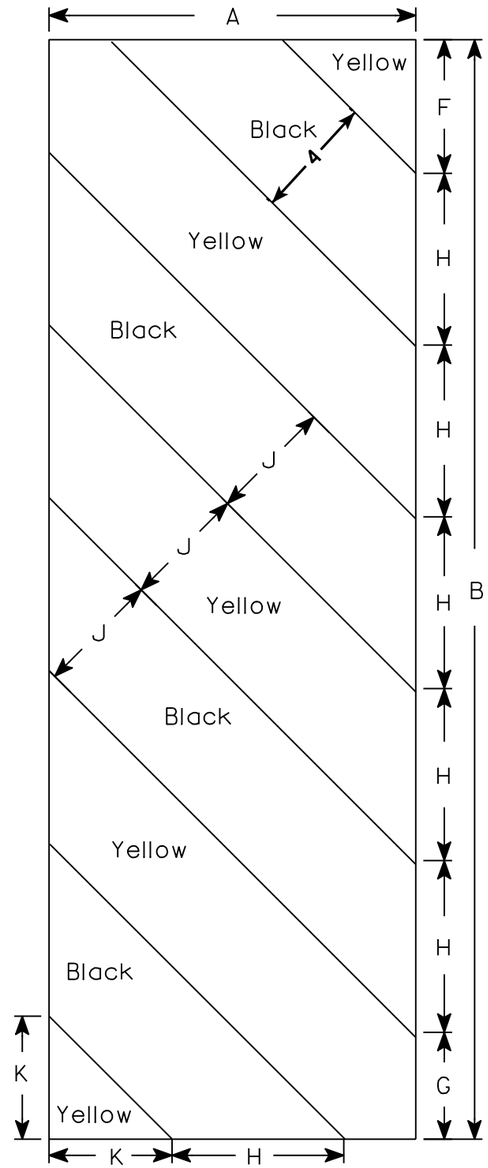
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

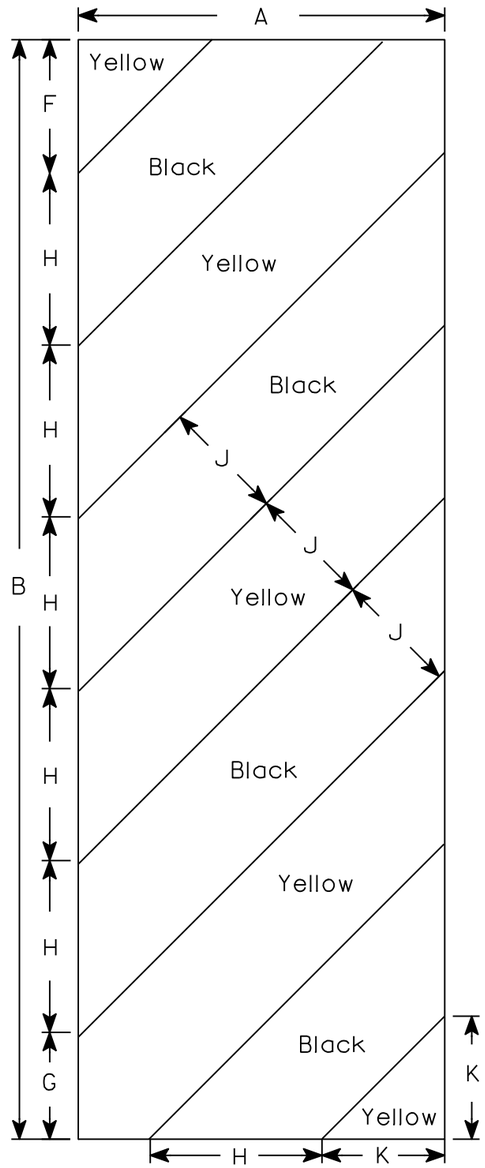
DATE 4/1/11 PLATE NO. R11-3C.2

PROJECT NO:

SHEET NO: 26 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

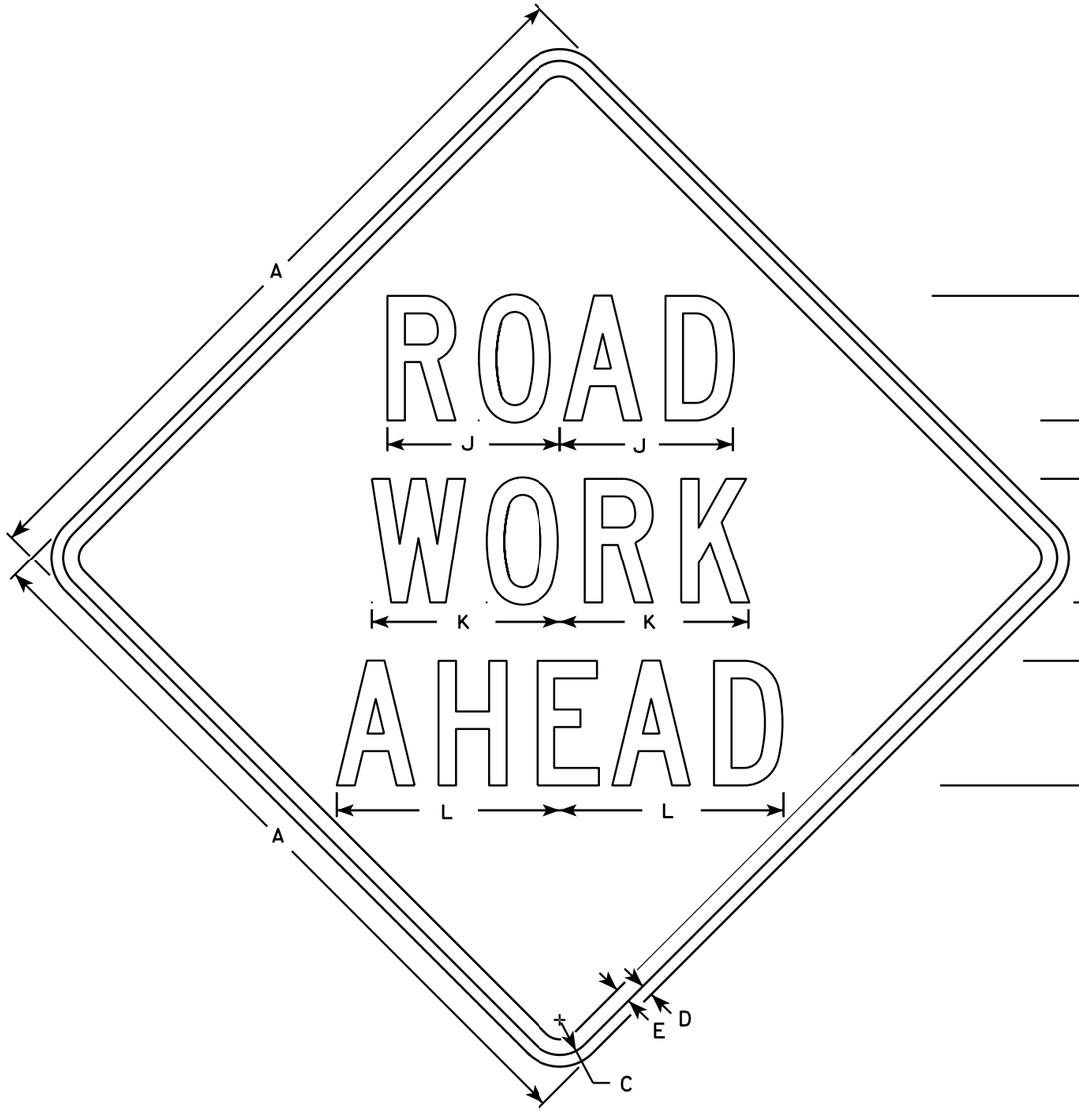
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

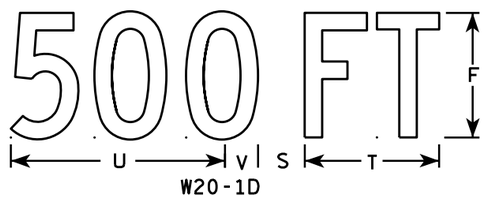
APPROVED Matthew R Rauch
for State Traffic Engineer

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

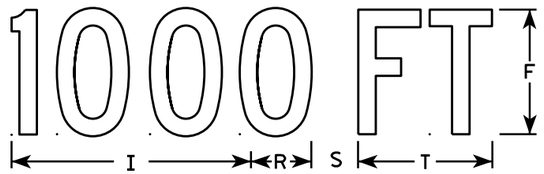
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 27 | E



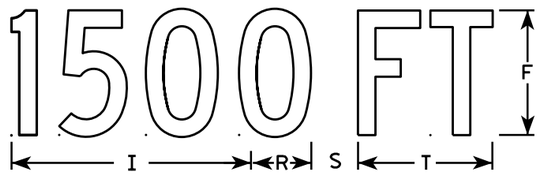
W20-1A



W20-1D



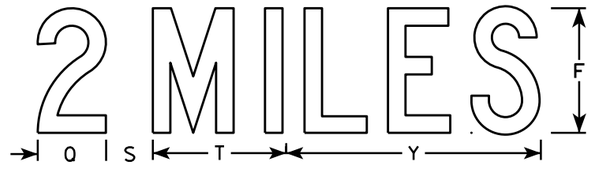
W20-1C



W20-1B

W20-1G

W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

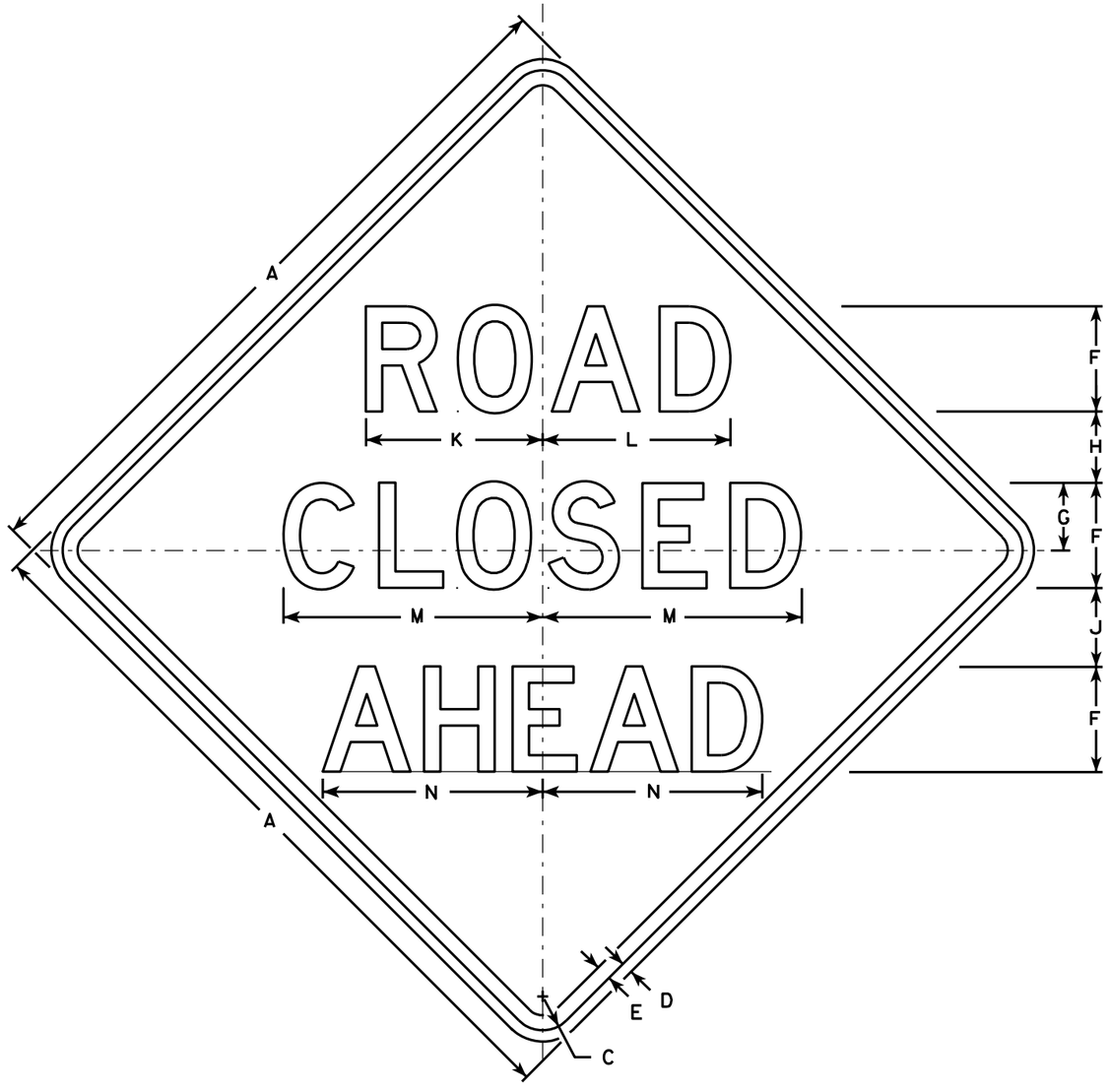
PROJECT NO:

SHEET NO: E

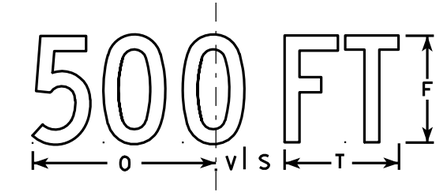
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W201.dgn PLOT DATE : 27-MAY-2015 15:58 PLOT BY : mscsja

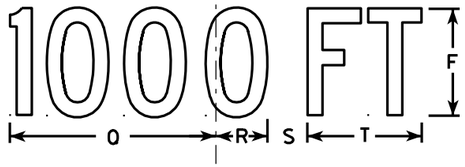
WISDOT/CADDS SHEET 42



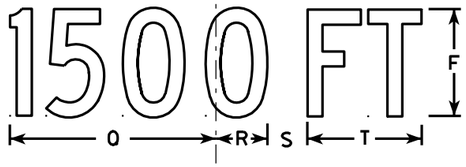
W20-3A



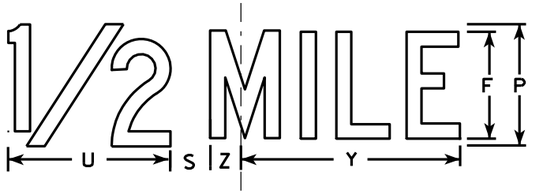
W20-3D



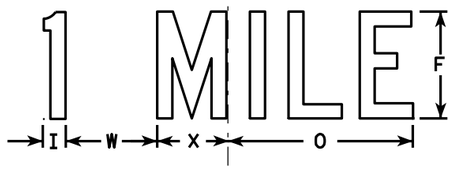
W20-3C



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.

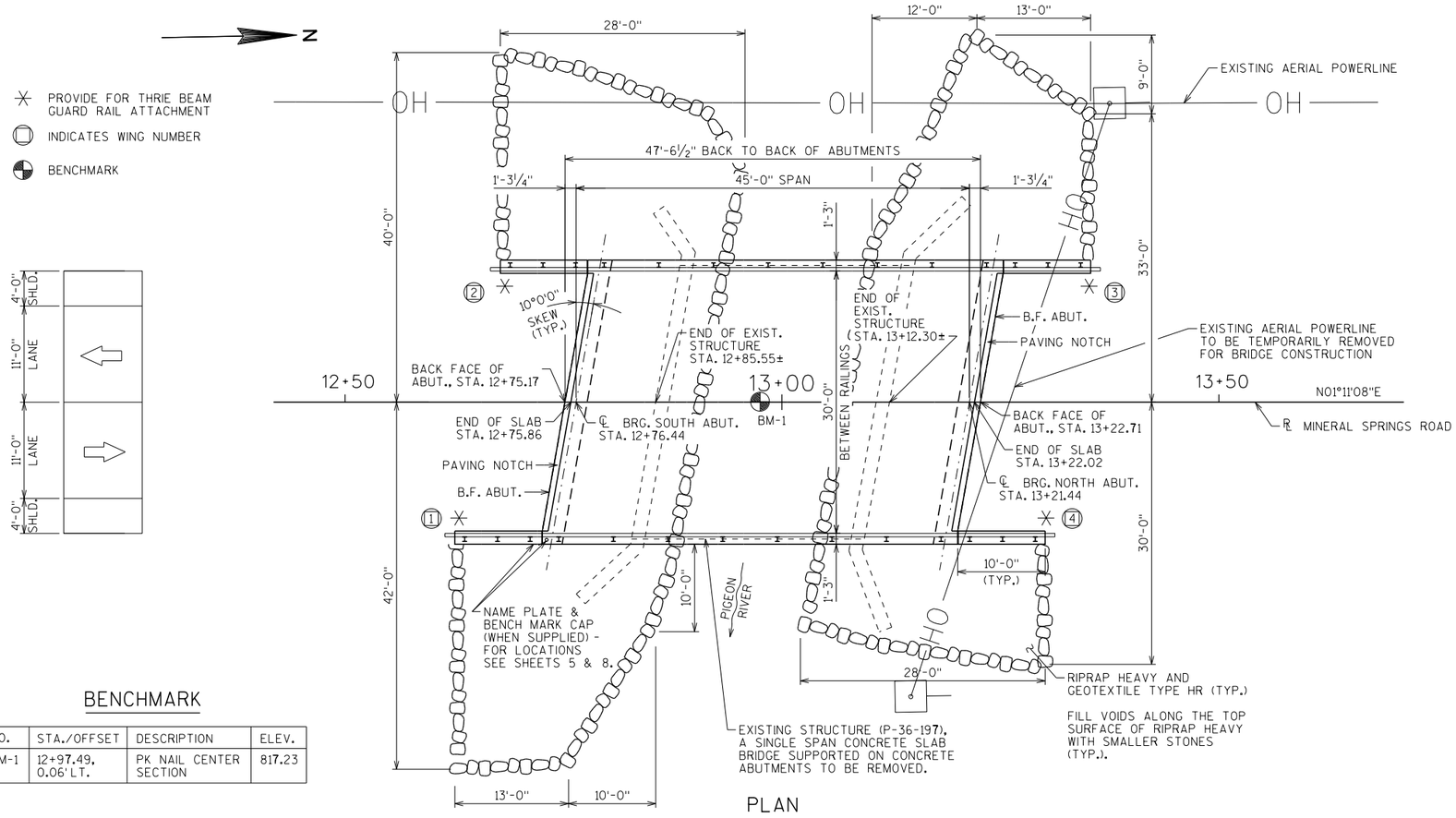
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	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: 29 | E

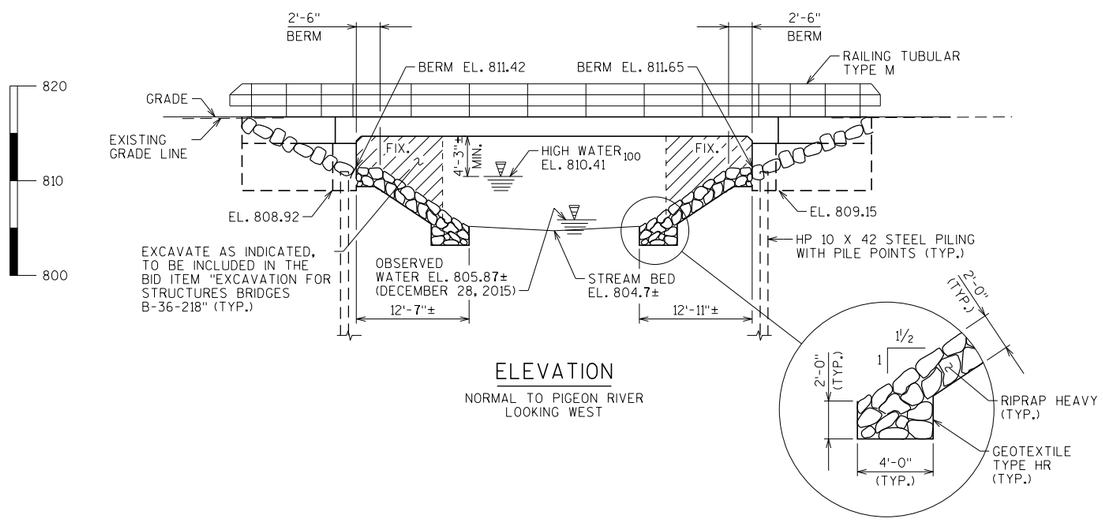


PLAN

SINGLE SPAN - FLAT SLAB

BENCHMARK

NO.	STA./OFFSET	DESCRIPTION	ELEV.
BM-1	12+97.49, 0.06' LT.	PK NAIL CENTER SECTION	817.23



ELEVATION

NORMAL TO PIGEON RIVER
LOOKING WEST

DESIGN DATA

LIVE LOAD:

DESIGN LOADING = HL-93
INVENTORY RATING FACTOR = 1.28
OPERATING RATING FACTOR = 1.66
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) RATING = 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB.....f'c = 4,000 P.S.I.
CONCRETE MASONRY, ALL OTHER.....f'c = 3,500 P.S.I.

HIGH STRENGTH BAR STEEL REINFORCEMENT GRADE 60.....fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING FITTED WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 165 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES FORMULA.
ESTIMATED 65'-0" LONG (S. ABUT.)
ESTIMATED 65'-0" LONG (N. ABUT.)

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

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 800 C.F.S.
VEL. = 9.83 F.P.S.
$HW._{100}$ = EL. 810.41
WATERWAY AREA = 81 SQ. FT. (FLOW AREA)
DRAINAGE AREA = 12.5 SQ. MI.
ROADWAY OVERTOPPING = NA
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 200 C.F.S.
$HW._2$ = EL. 807.67

TRAFFIC VOLUME

MINERAL SPRINGS ROAD

A.D.T. = 80 (2037)
R.D.S. = 55 M.P.H.

LIST OF DRAWINGS

WISCONSIN VINOD C. PATEL 37887 CAROL STREAM, IL PROFESSIONAL ENGINEER

DATE: 01/12/2017

STRUCTURE DESIGN CONTACTS

BRIDGE OFFICE: WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT: VINOD PATEL, P.E. (312) 616-7395

STATE PROJECT NUMBER

4313-08-71

NO.	DATE	REVISION	BY

exp U.S. Services Inc.
Milwaukee, WI
BUILDINGS·EARTH & ENVIRONMENT·ENERGY
INDUSTRIAL·INFRASTRUCTURE·SUSTAINABILITY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/23/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-36-218

MINERAL SPRINGS ROAD OVER PIGEON RIVER

COUNTY	TOWN ~~CITY/VILLAGE~~
MANITOWOC	MEEME

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	VCP	JJG	VCP

GENERAL PLAN & ELEVATION

SHEET 1 OF 10

30

8

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\\PCHIAPP0041\AM\VAULT_D-TRANS_07\TDCWS\0023806-A0\STRUCT\CAD\01B36028\NA EXP\SHEET\01GP01NA001.SHT

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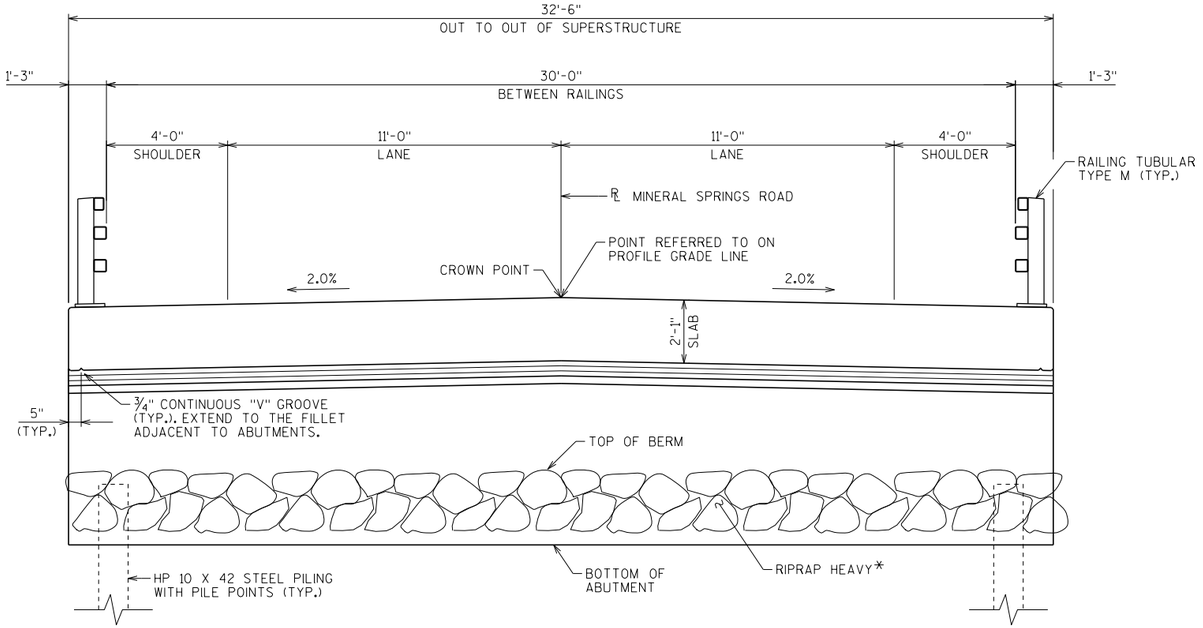
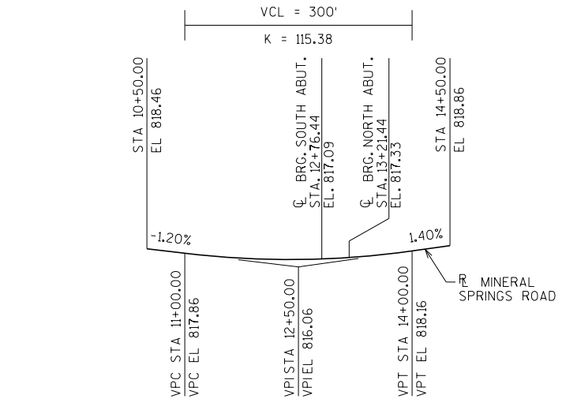


CROSS SECTION THRU BRIDGE

LOOKING NORTH

* FILL VOIDS ALONG THE TOP SURFACE OF RIPRAP HEAVY WITH SMALLER STONES.



PROFILE GRADE LINE - MINERAL SPRINGS ROAD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

RECORD PLANS FOR EXISTING STRUCTURE (P-36-197) ARE NOT AVAILABLE. THE EXISTING STRUCTURE SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY DATA.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF ABUTMENT 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.

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

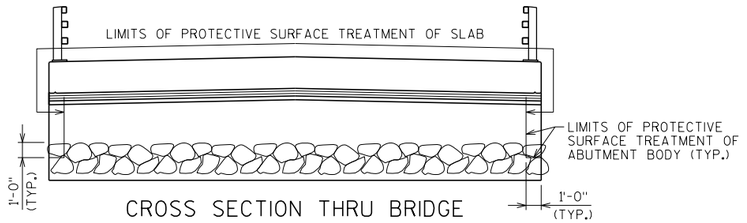
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

THE TOWN HAS REQUESTED THAT THE VOIDS ALONG THE TOP SURFACE OF THE RIPRAP HEAVY BE FILLED WITH SMALLER STONES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP FACES AND DOWN TO 1'-0" BELOW EXPOSED FACES OF WINGS, THE TOP AND EDGES OF SLAB, AND TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF SLAB.

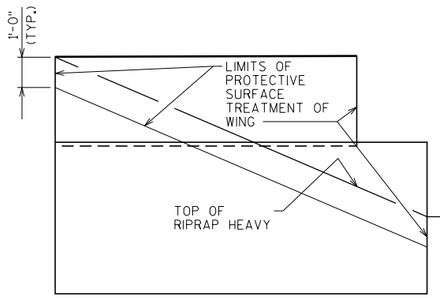
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTALS
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STA. 12+98.94	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-36-218	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	130	130	-	260
502.0100	CONCRETE MASONRY BRIDGES	CY	31	31	123	185
502.3200	PROTECTIVE SURFACE TREATMENT	SY	13	13	200	226
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2080	2080	-	4160
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1430	1430	21610	24470
513.4061	RAILING TUBULAR TYPE M B-36-218	LF	22	22	96	140
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-	20
550.0500	PILE POINTS	EACH	6	6	-	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	390	390	-	780
606.0300	RIPRAP HEAVY	CY	125	105	-	230
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	75	-	150
645.0120	GEOTEXTILE TYPE HR	SY	250	210	-	460
			-	-	-	-
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE	-	-	-	1/2" & 3/4"



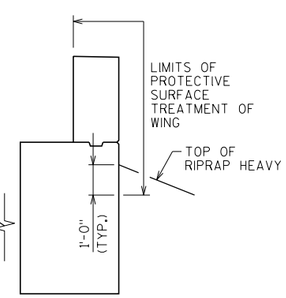
CROSS SECTION THRU BRIDGE

SHOWING LIMITS OF PROTECTIVE SURFACE TREATMENT



WING ELEVATION

LOOKING AT FRONT FACE
SHOWING LIMITS OF PROTECTIVE SURFACE TREATMENT
RAILING NOT SHOWN



CROSS SECTION THRU WING

LOOKING TOWARD ABUTMENT BODY
SHOWING LIMITS OF PROTECTIVE SURFACE TREATMENT
RAILING NOT SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY JJG/YC | PLANS CK'D. VCP

CROSS SECTION, QUANTITIES & NOTES

SHEET 2 OF 10

31

8

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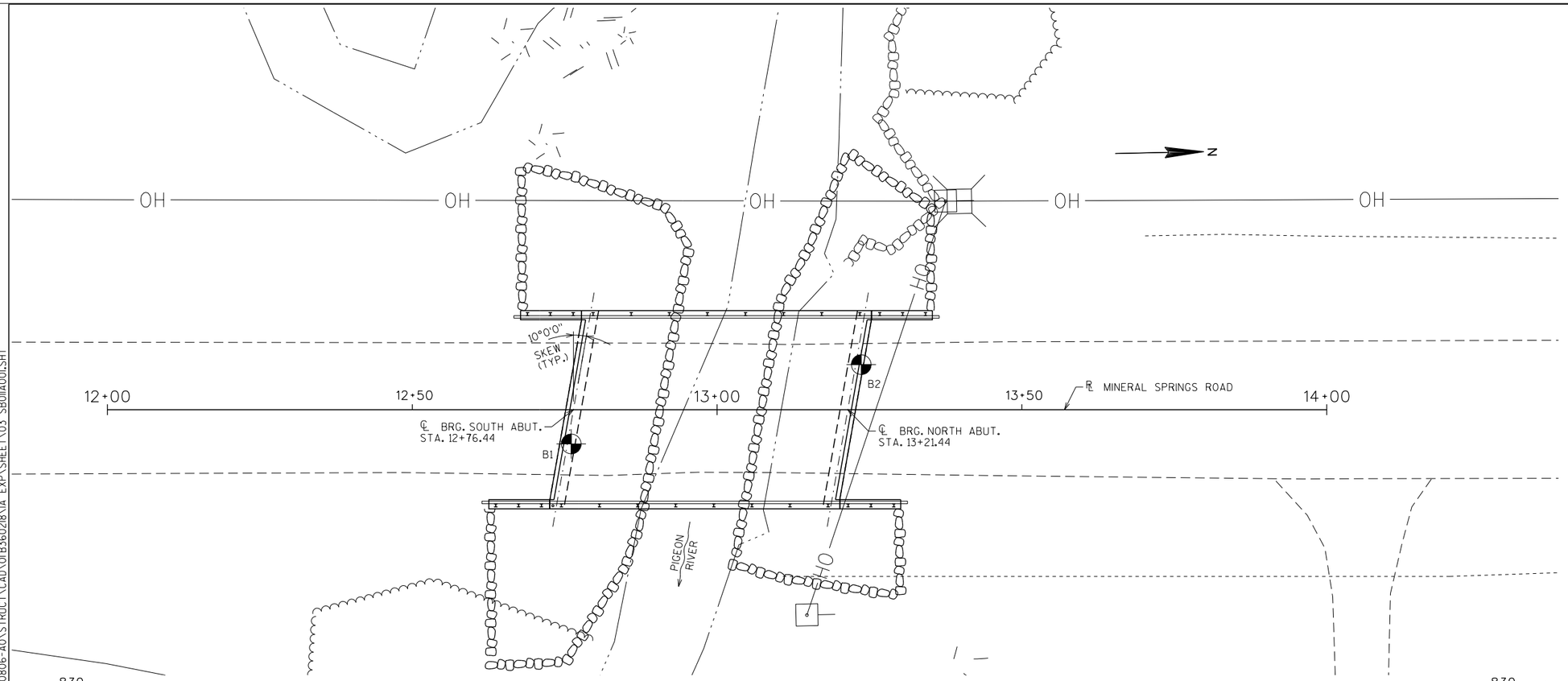

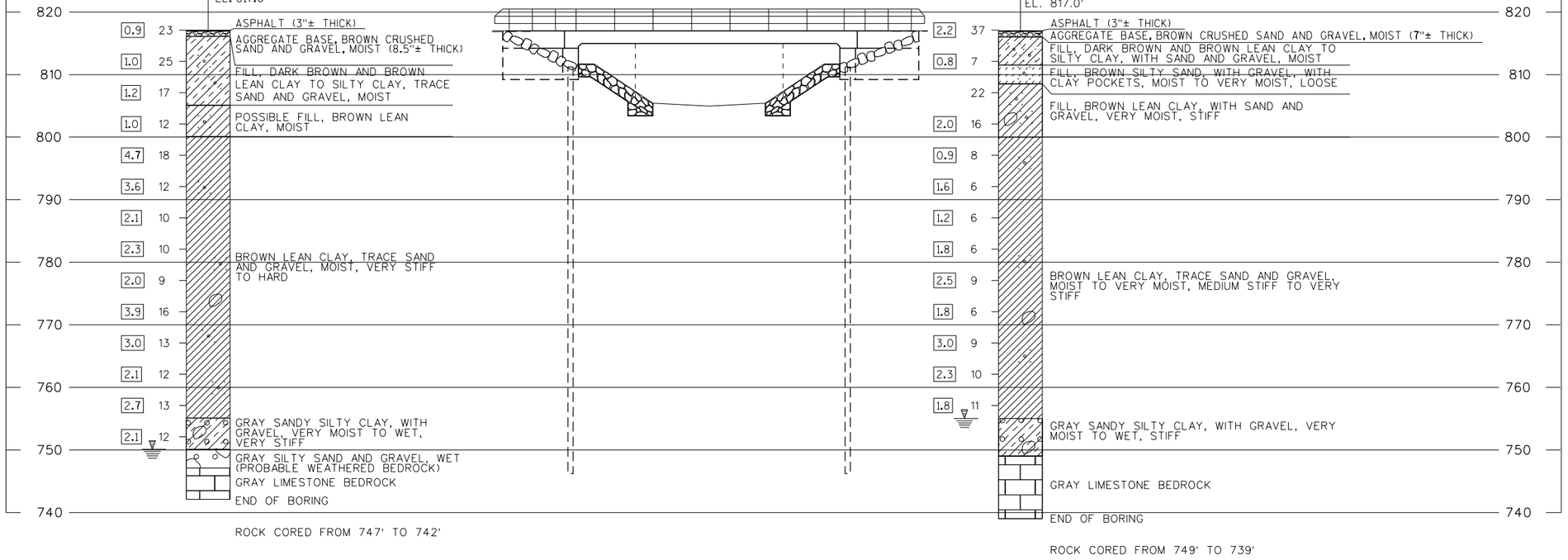

STATE PROJECT NUMBER

4313-08-71

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH (TSF) → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-36-218

DRAWN BY JJG/YC | PLANS CK'D. VCP

SUBSURFACE EXPLORATION

SHEET 3 OF 10

32

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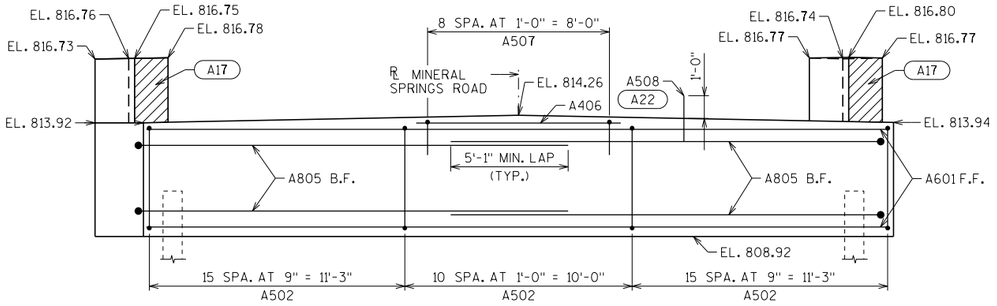
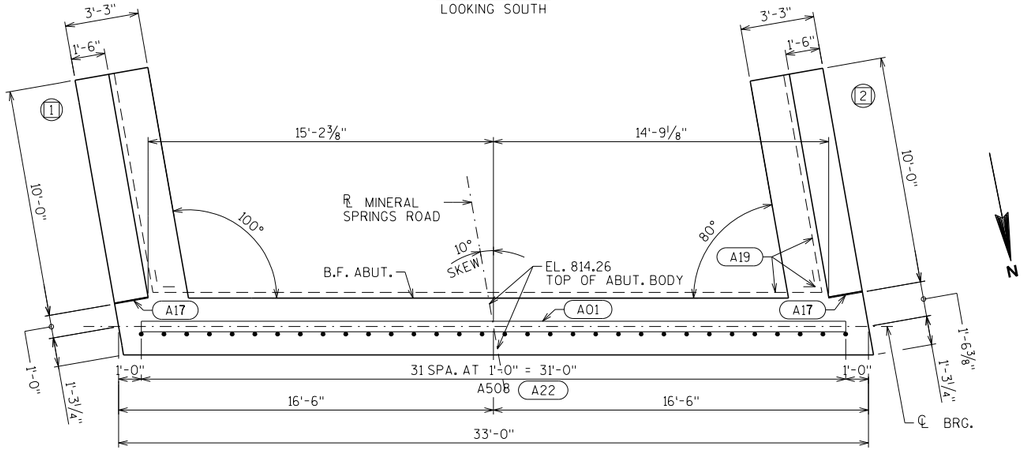
STATE PROJECT NUMBER
4313-08-71

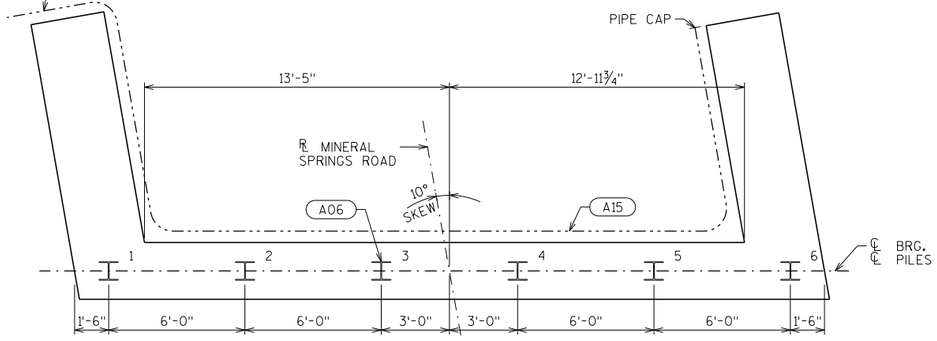


ELEVATION

LOOKING SOUTH



PLAN



PILE PLAN

A01 CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.

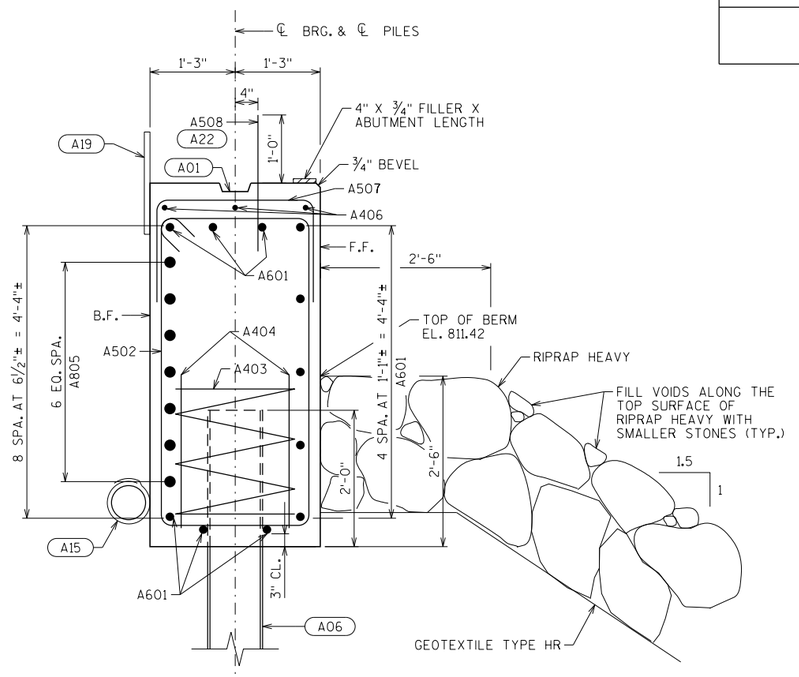
A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING FITTED WITH PILE POINTS, ESTIMATED 65'LONG WITH A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

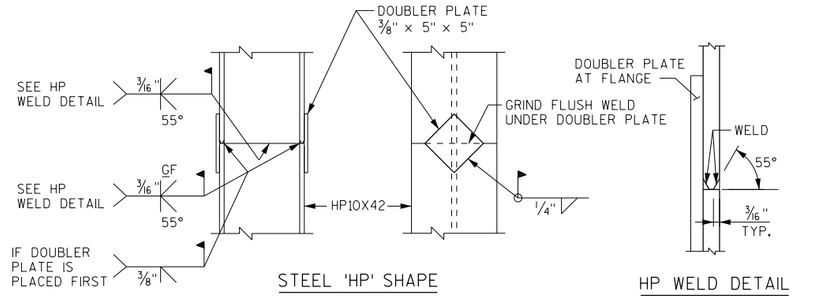
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

A22 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



CROSS SECTION THRU ABUTMENT BODY

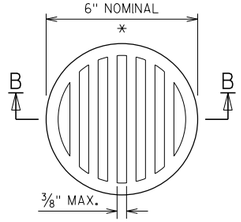


STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL



SECTION B-B

RODENT SCREEN DETAIL

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

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

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

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY JJG/YC	PLANS CK'D. VCP

SOUTH ABUTMENT

SHEET 4 OF 10

33

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STATE PROJECT NUMBER

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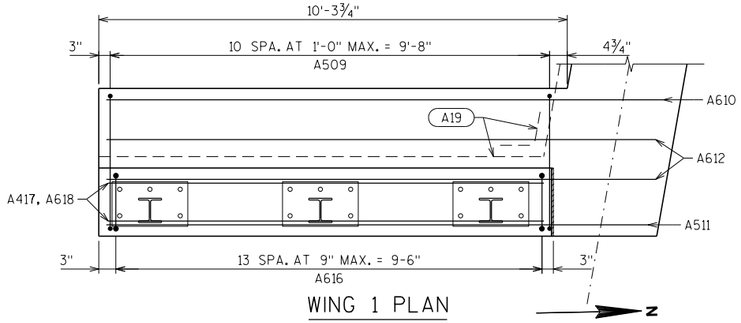
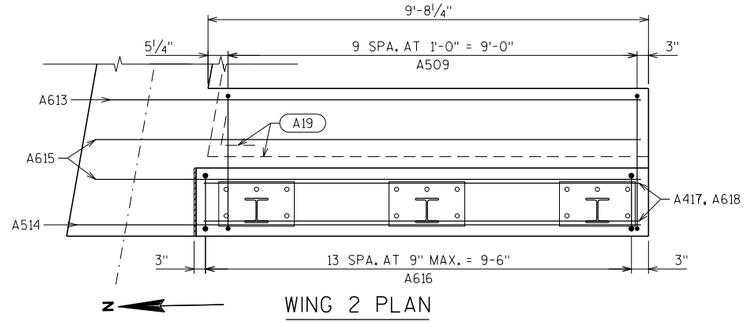
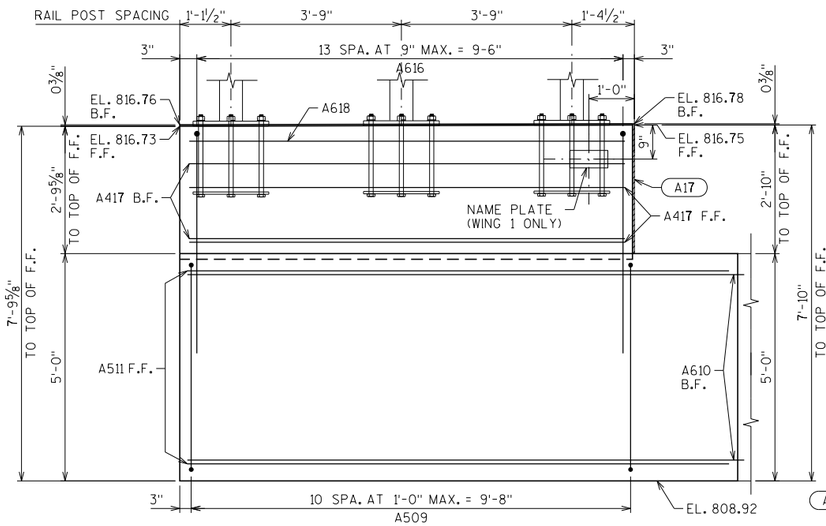


WING 1 PLAN

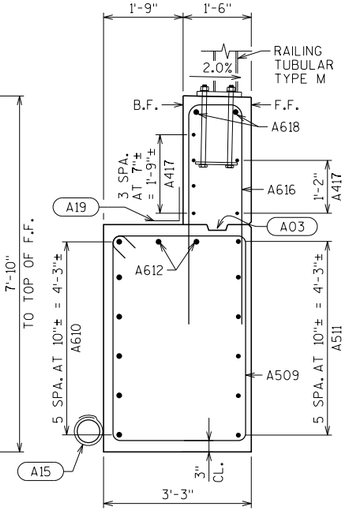


WING 2 PLAN



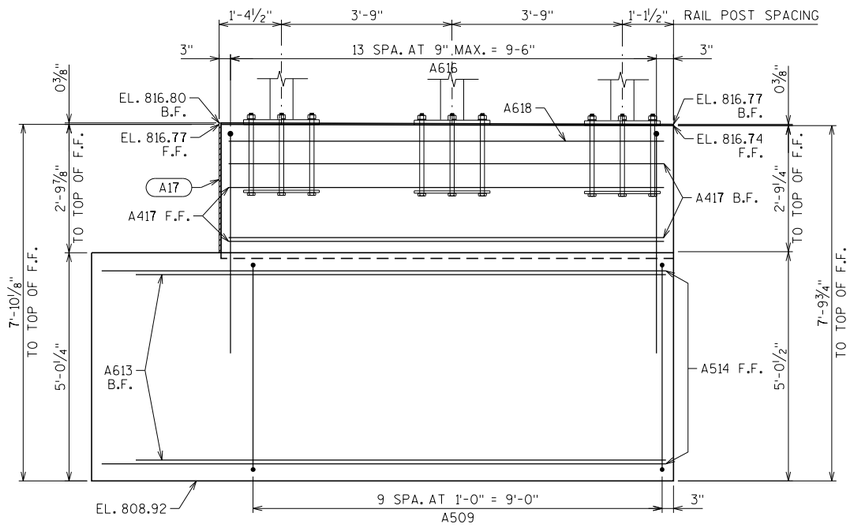
WING 1 ELEVATION

LOOKING AT FRONT FACE



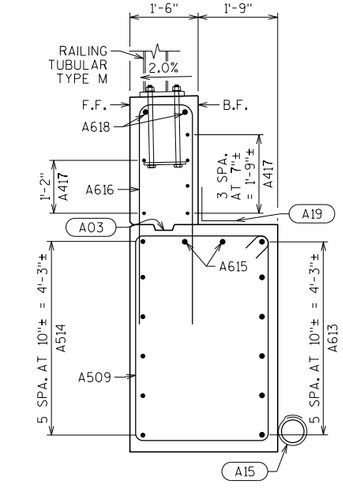
CROSS SECTION THRU WING 1

LOOKING TOWARD ABUTMENT BODY



WING 2 ELEVATION

LOOKING AT FRONT FACE



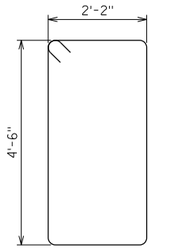
CROSS SECTION THRU WING 2

LOOKING TOWARD ABUTMENT BODY

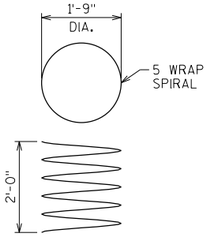
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR. UNCOATED: 2080 LBS
COATED: 1430 LBS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601		11	32'-8"			BODY - HORIZ. - BOTTOM, F.F., & TOP
A502		41	14'-0"	X		BODY - STIRRUPS
A403		6	28'-0"	X		BODY - 1 PER PILE
A404		12	2'-3"			BODY - VERT. - 2 PER PILE
A805		14	19'-10"	X		BODY - HORIZ. - B.F.
A406		3	9'-0"			BODY - HORIZ. - TOP
A507		9	4'-11"	X		BODY - TOP
A508	X	32	2'-0"			BODY - VERT. - TOP
A509	X	21	15'-6"	X		WINGS 1 & 2 - STIRRUPS
A610	X	6	12'-3"			WING 1 - HORIZ. - B.F.
A511	X	6	11'-11"			WING 1 - HORIZ. - F.F.
A612	X	2	12'-1"			WING 1 - HORIZ. - TOP
A613	X	6	11'-8"			WING 2 - HORIZ. - B.F.
A514	X	6	12'-5"			WING 2 - HORIZ. - F.F.
A615	X	2	12'-0"			WING 2 - HORIZ. - TOP
A616	X	28	10'-6"	X		UPPER WING - VERT.
A417	X	12	9'-7"			UPPER WING - HORIZ. - F.F. & B.F.
A618	X	4	9'-7"			UPPER WING - HORIZ. - TOP
- - -	-	-	--			- - -



A502



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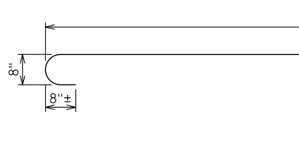

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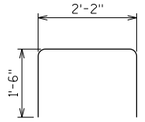

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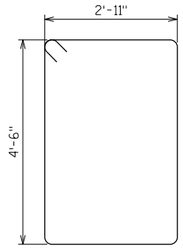

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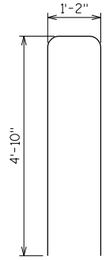

A616

LEGEND

(A03) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6. (18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.)

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC | PLANS CK'D. VCP

SOUTH ABUTMENT DETAILS

SHEET 5 OF 10

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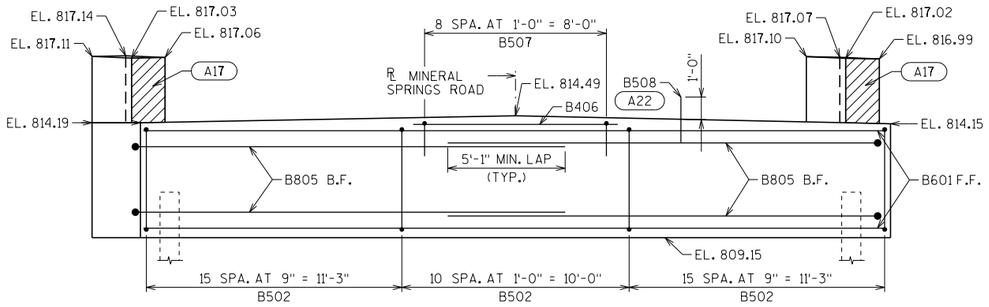
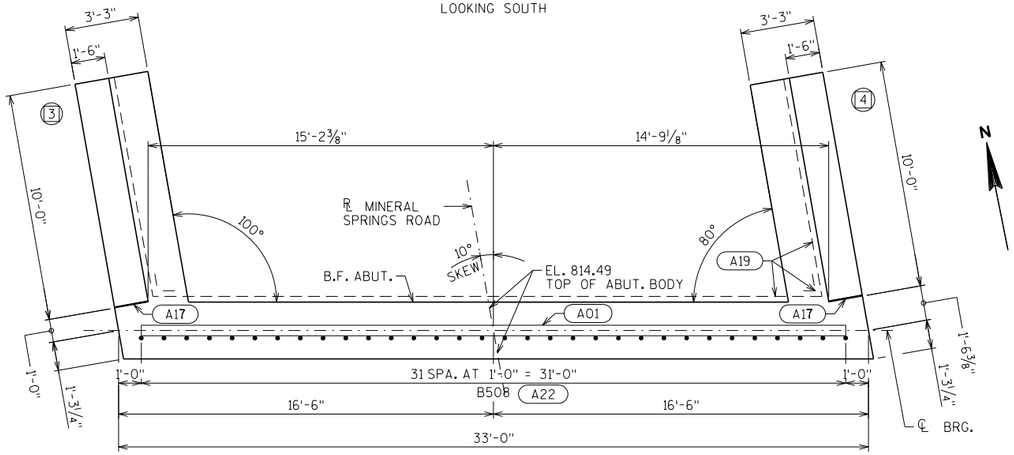
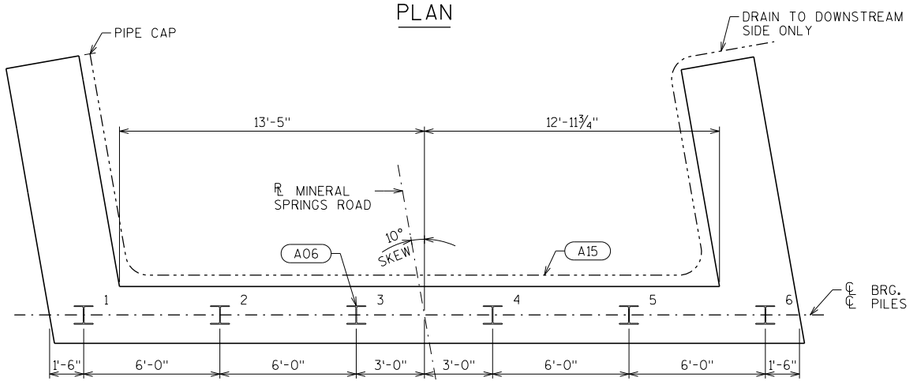


ELEVATION

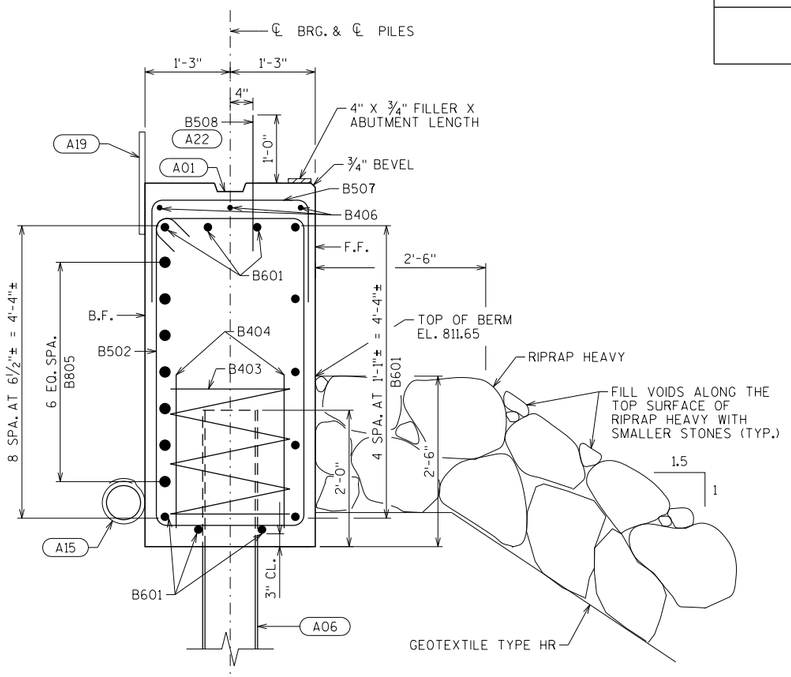
LOOKING SOUTH



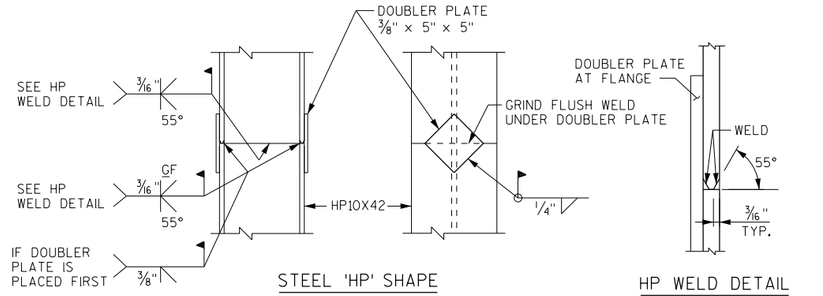
PLAN



PILE PLAN



CROSS SECTION THRU ABUTMENT BODY

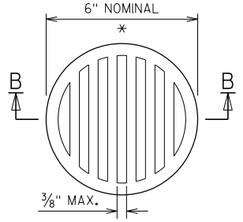


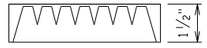
STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL





SECTION B-B

RODENT SCREEN DETAIL

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

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

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

(A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.

(A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING FITTED WITH PILE POINTS, ESTIMATED 65'LONG WITH A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

(A22) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC | PLANS CK'D. VCP

NORTH ABUTMENT

SHEET 6 OF 10

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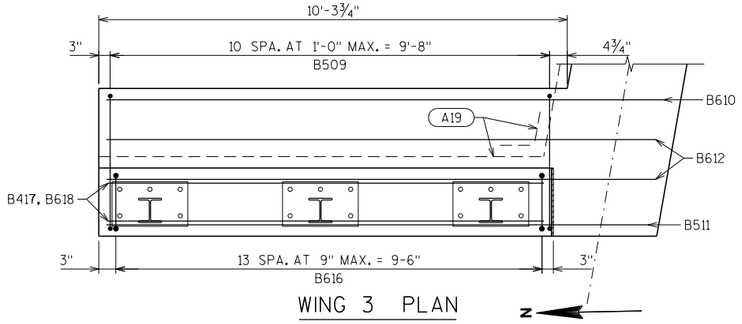
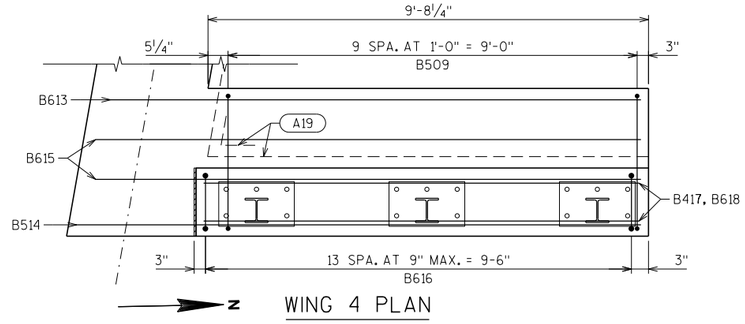
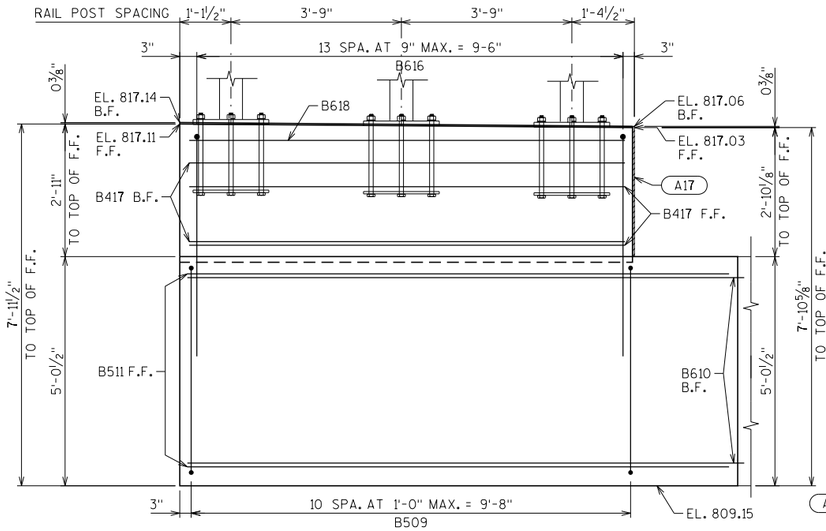


WING 3 PLAN

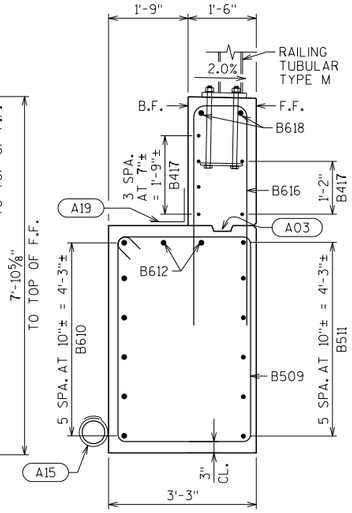


WING 4 PLAN



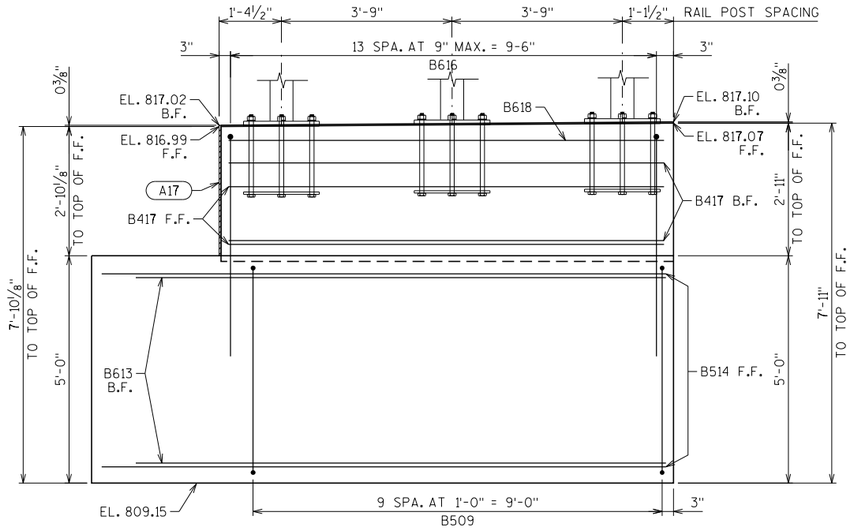
WING 3 ELEVATION

LOOKING AT FRONT FACE



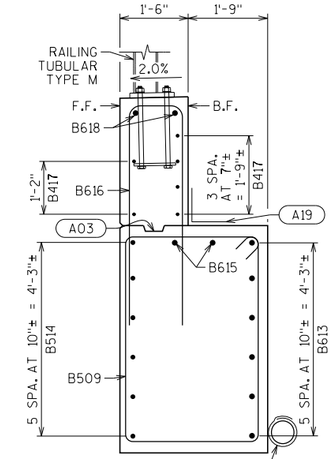
CROSS SECTION THRU WING 3

LOOKING TOWARD ABUTMENT BODY



WING 4 ELEVATION

LOOKING AT FRONT FACE



CROSS SECTION THRU WING 4

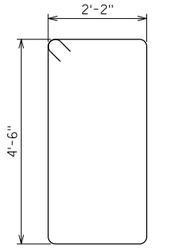
LOOKING TOWARD ABUTMENT BODY

BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

UNCOATED: 2080 LBS
COATED: 1430 LBS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B601		11	32'-8"			BODY - HORIZ. - BOTTOM, F.F., & TOP
B502		41	14'-0"	X		BODY - STIRRUPS
B403		6	28'-0"	X		BODY - 1 PER PILE
B404		12	2'-3"			BODY - VERT. - 2 PER PILE
B805		14	19'-10"	X		BODY - HORIZ. - B.F.
B406		3	9'-0"			BODY - HORIZ. - TOP
B507		9	4'-11"	X		BODY - TOP
B508	X	32	2'-0"			BODY - VERT. - TOP
B509	X	21	15'-6"	X		WINGS 3 & 4 - STIRRUPS
B610	X	6	12'-3"			WING 3 - HORIZ. - B.F.
B511	X	6	11'-11"			WING 3 - HORIZ. - F.F.
B612	X	2	12'-1"			WING 3 - HORIZ. - TOP
B613	X	6	11'-8"			WING 4 - HORIZ. - B.F.
B514	X	6	12'-5"			WING 4 - HORIZ. - F.F.
B615	X	2	12'-0"			WING 4 - HORIZ. - TOP
B616	X	28	10'-6"	X		UPPER WING - VERT.
B417	X	12	9'-7"			UPPER WING - HORIZ. - F.F. & B.F.
B618	X	4	9'-7"			UPPER WING - HORIZ. - TOP
- - -	-	-	--			- - -



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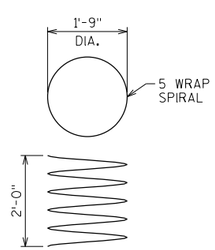

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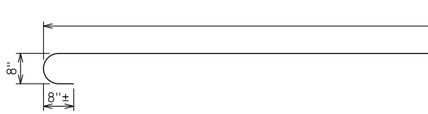

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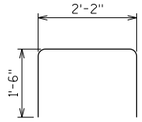

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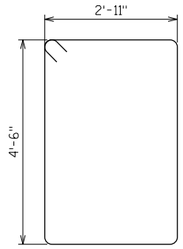

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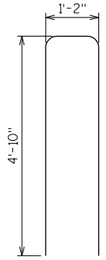

B616

LEGEND

(A03) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6. (18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.)

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

F.F. FRONT FACE

B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC | PLANS CK'D. VCP

NORTH ABUTMENT DETAILS

SHEET 7 OF 10

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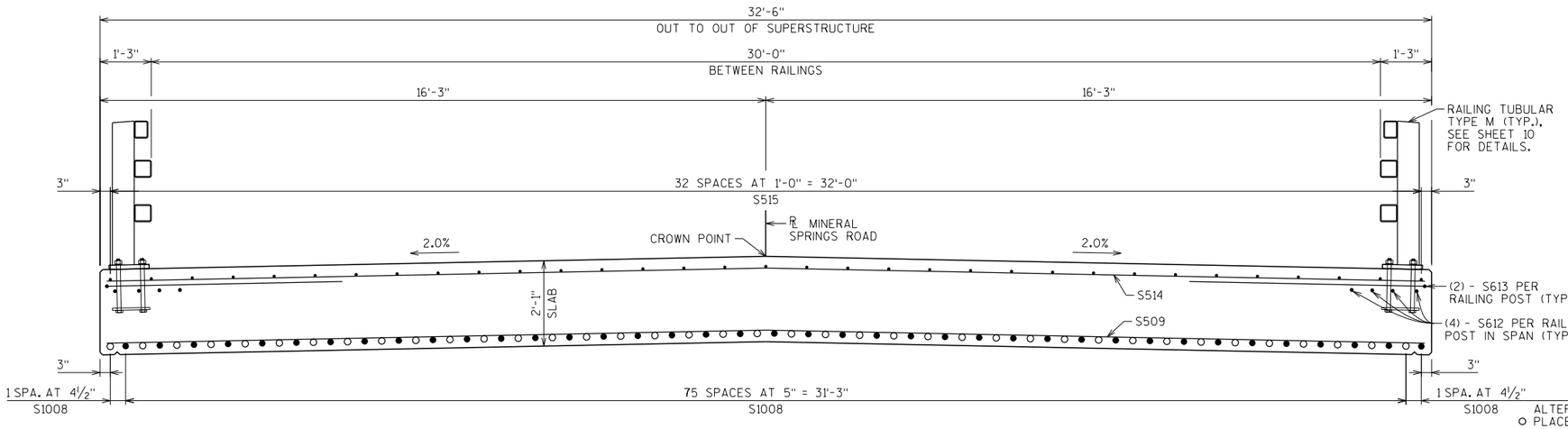


CROSS SECTION THRU BRIDGE AT MIDSPAN

LOOKING NORTH

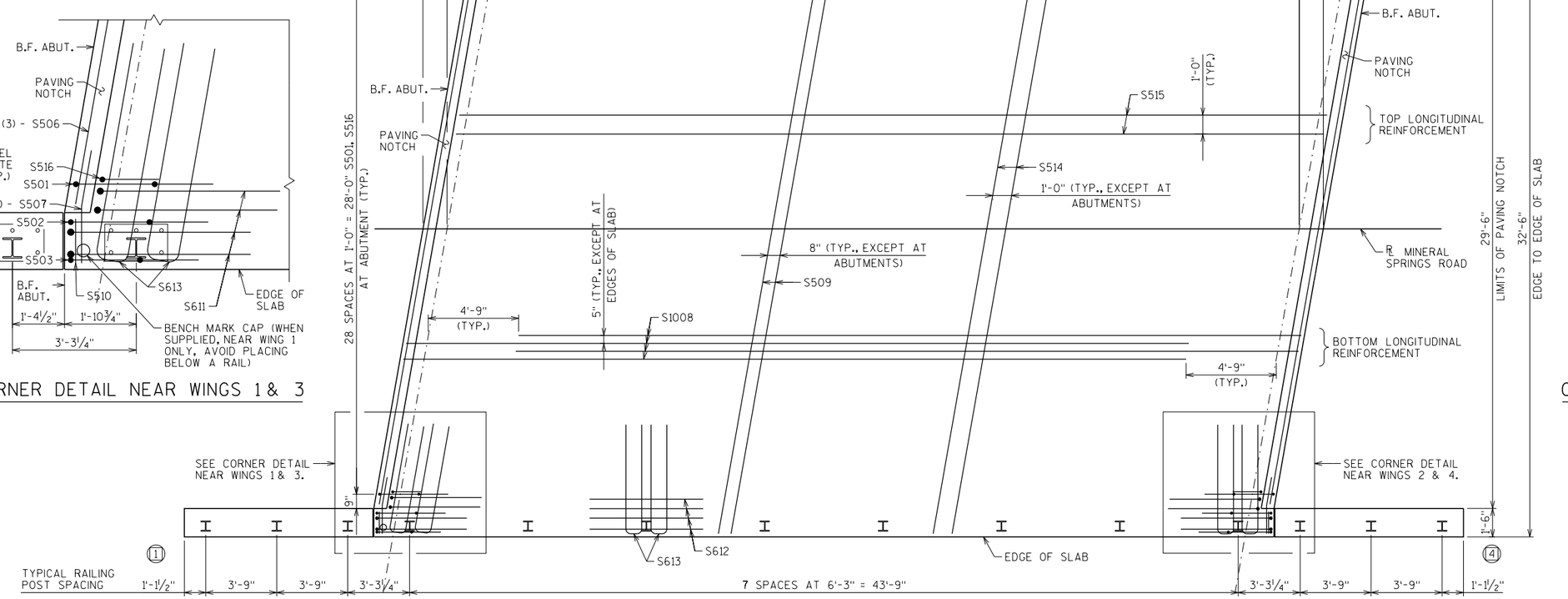
NOTES

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

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

ALTERNATE THE BAR LOCATIONS.
- ○ PLACE S1008 TOWARD NORTH ABUT.
- ● PLACE S1008 TOWARD SOUTH ABUT.

SEE THE PLAN BELOW.



CORNER DETAIL NEAR WINGS 1& 3

CORNER DETAIL NEAR WINGS 2 & 4

STEEL PLATES AND ANCHOR BOLTS OF RAILING NOT SHOWN FOR CLARITY

PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC | PLANS CK'D. VCP

SUPERSTRUCTURE | SHEET 8 OF 10

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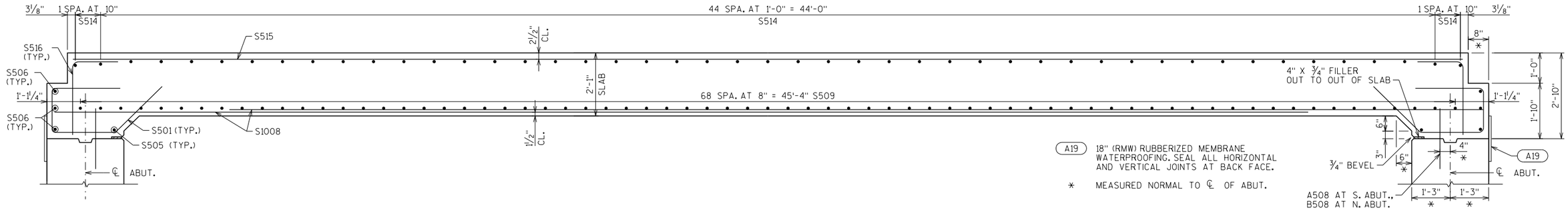
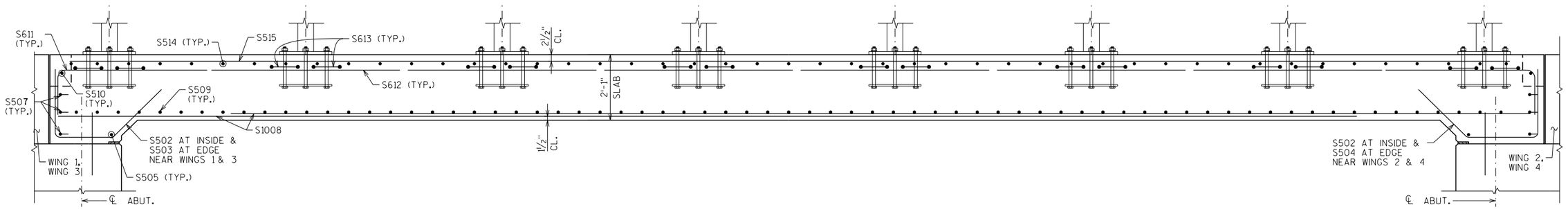


A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

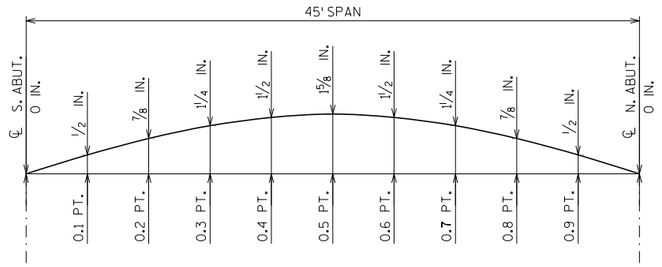
* MEASURED NORMAL TO ℄ OF ABUT.

LONGITUDINAL SECTION THRU BRIDGE

TYPICAL DETAILS AT ABUT.



LONGITUDINAL SECTION THRU BRIDGE ALONG EDGE OF SLAB



CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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

PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

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

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

TOP OF DECK ELEVATIONS

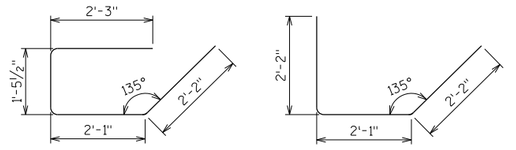
LOCATION	C/L BRG. S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	C/L BRG. N. ABUT.
WEST EDGE OF DECK	816.78	816.79	816.81	816.83	816.85	816.88	816.90	816.93	816.96	816.99	817.02
CROWN	817.09	817.11	817.12	817.14	817.17	817.19	817.21	817.24	817.27	817.30	817.33
EAST EDGE OF DECK	816.76	816.77	816.79	816.81	816.83	816.85	816.87	816.90	816.92	816.95	816.98

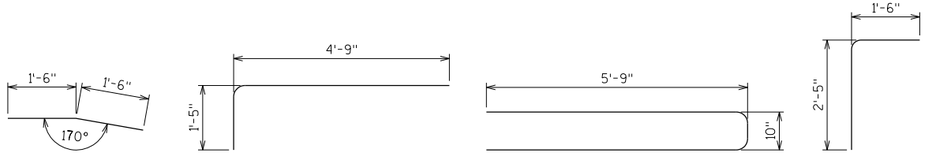
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

UNCOATED: 0 LBS
COATED: 21610 LBS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	58	7'-8"	X		SLAB AT ABUT. - PAVING NOTCH
S502	X	4	6'-3"	X		SLAB AT ABUT. - CORNERS
S503	X	2	6'-0"	X		SLAB AT ABUT. - EDGE NEAR WINGS 1& 3
S504	X	2	6'-5"	X		SLAB AT ABUT. - EDGE NEAR WINGS 2 & 4
S505	X	2	32'-8"			SLAB AT ABUT. - BOTTOM - TRANS.
S506	X	6	29'-6"			SLAB AT ABUT. - PAVING BLOCKS - TRANS.
S507	X	12	3'-0"	X		SLAB AT ABUT. - CORNERS - TRANS.
S1008	X	78	41'-4"			SLAB - BOTTOM - LONGIT.
S509	X	69	32'-8"			SLAB - BOTTOM - TRANS.
S510	X	4	1'-10"			SLAB AT ABUT. - CORNERS - TOP - TRANS.
S611	X	16	6'-0"	X		SLAB AT ABUT. - RAILING POST - TOP - LONGIT.
S612	X	48	6'-0"			SLAB - RAILING POST - TOP - LONGIT.
S613	X	32	12'-0"	X		SLAB - RAILING POST - TOP - TRANS.
S514	X	47	32'-8"			SLAB - TOP - TRANS.
S515	X	33	45'-10"			SLAB - TOP - LONGIT.
S516	X	58	3'-10"	X		SLAB AT ABUT. - PAVING NOTCH
- - -	-	-	--			- - -





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC | PLANS CK'D. VCP

SUPERSTRUCTURE DETAILS

SHEET 9 OF 10

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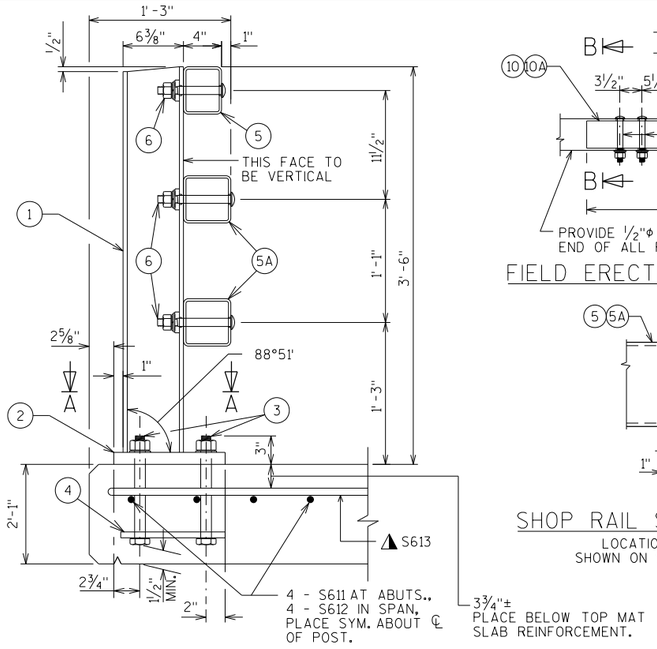
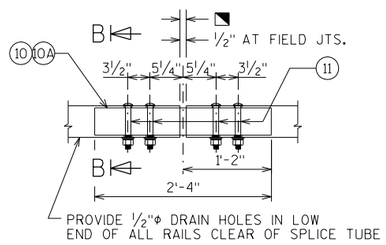
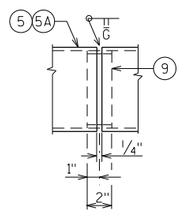
STATE PROJECT NUMBER
4313-08-71



SECTION THRU RAILING ON DECK

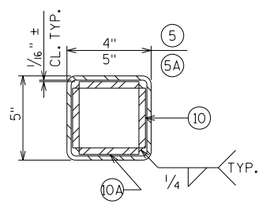


FIELD ERECTION JOINT DETAIL

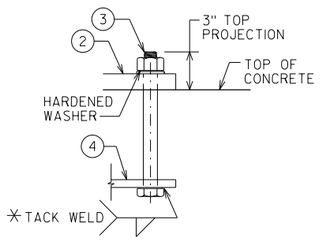


SHOP RAIL SPLICE DETAIL

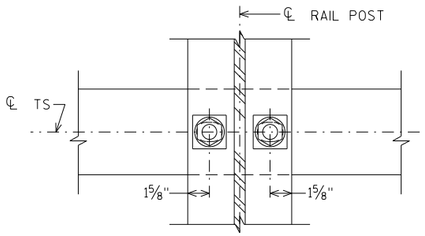
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



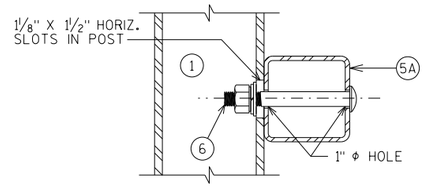
SECTION B-B



ANCHOR BOLTS



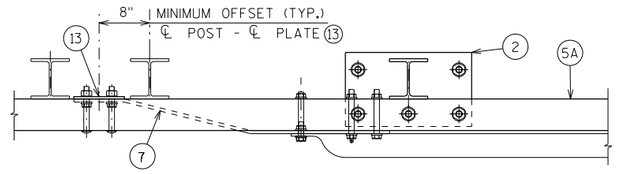
SECTION THRU POST WEB



SECTION THRU RAIL

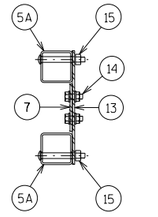
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



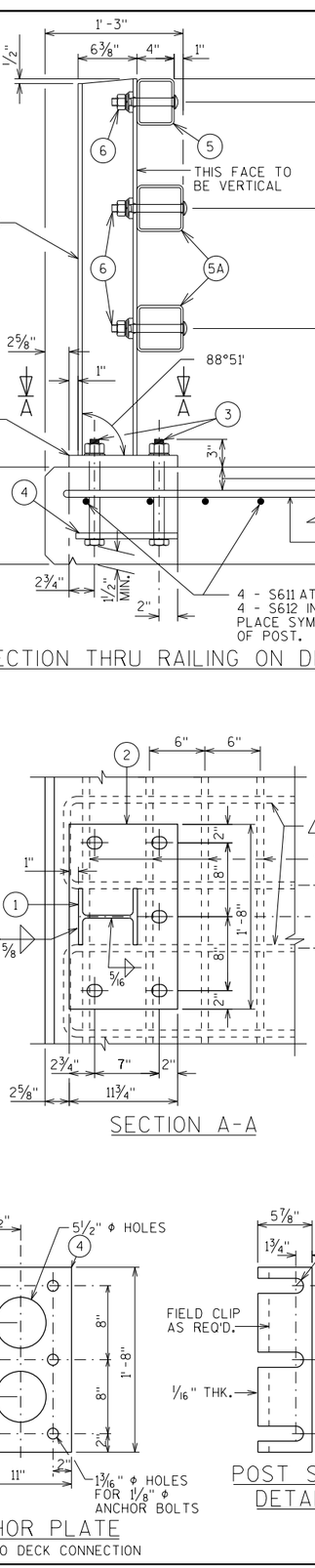
TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

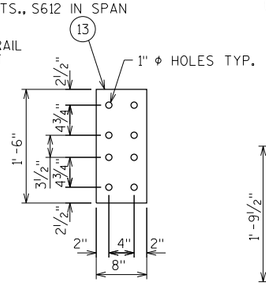


SECTION C-C

SECTION D-D

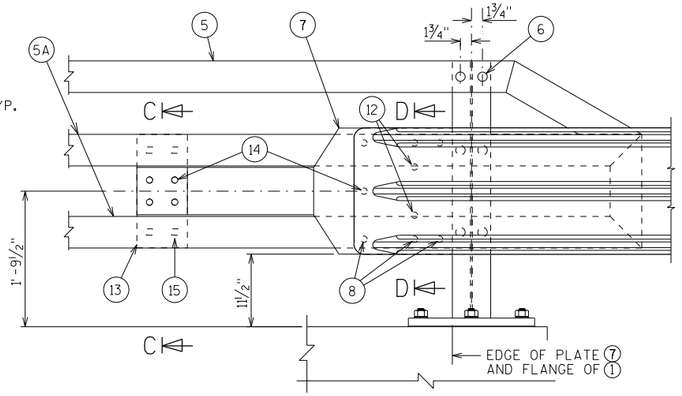


SECTION A-A



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



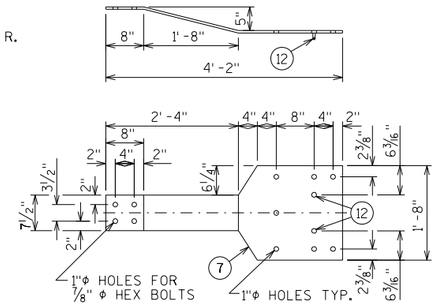
DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

ANCHOR PLATE

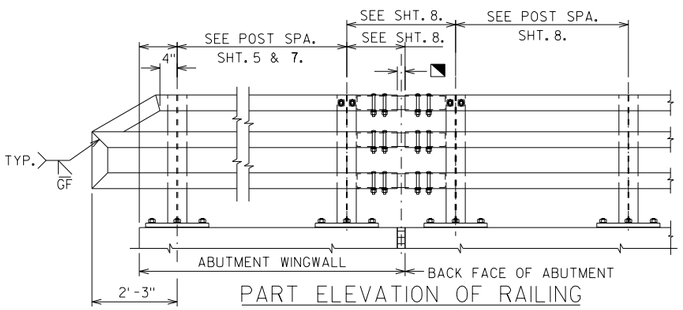
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

(1) W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" × 11¾" × 1'-8" WITH 1⅜" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. ~~USE 10¾" LONG AT ALL OTHER LOCATIONS.~~ (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) ⅝" × 11" × 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 × 4 × 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 × 5 × 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3⁄16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

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

(10) ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) ⅞" ϕ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15⁄16 " X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15⁄16 " X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

(13) ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

(14) ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

(15) 1" ϕ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-36-218" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. ~~WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. [ ] , [ ] (FILL IN COLOR NAME).~~
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

▲ TIE TO TOP MAT OF STEEL.

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-218

DRAWN BY YC	PLANS CK'D. VCP

TUBULAR STEEL RAILING TYPE M

SHEET 10 OF 10

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RAILM
7-16

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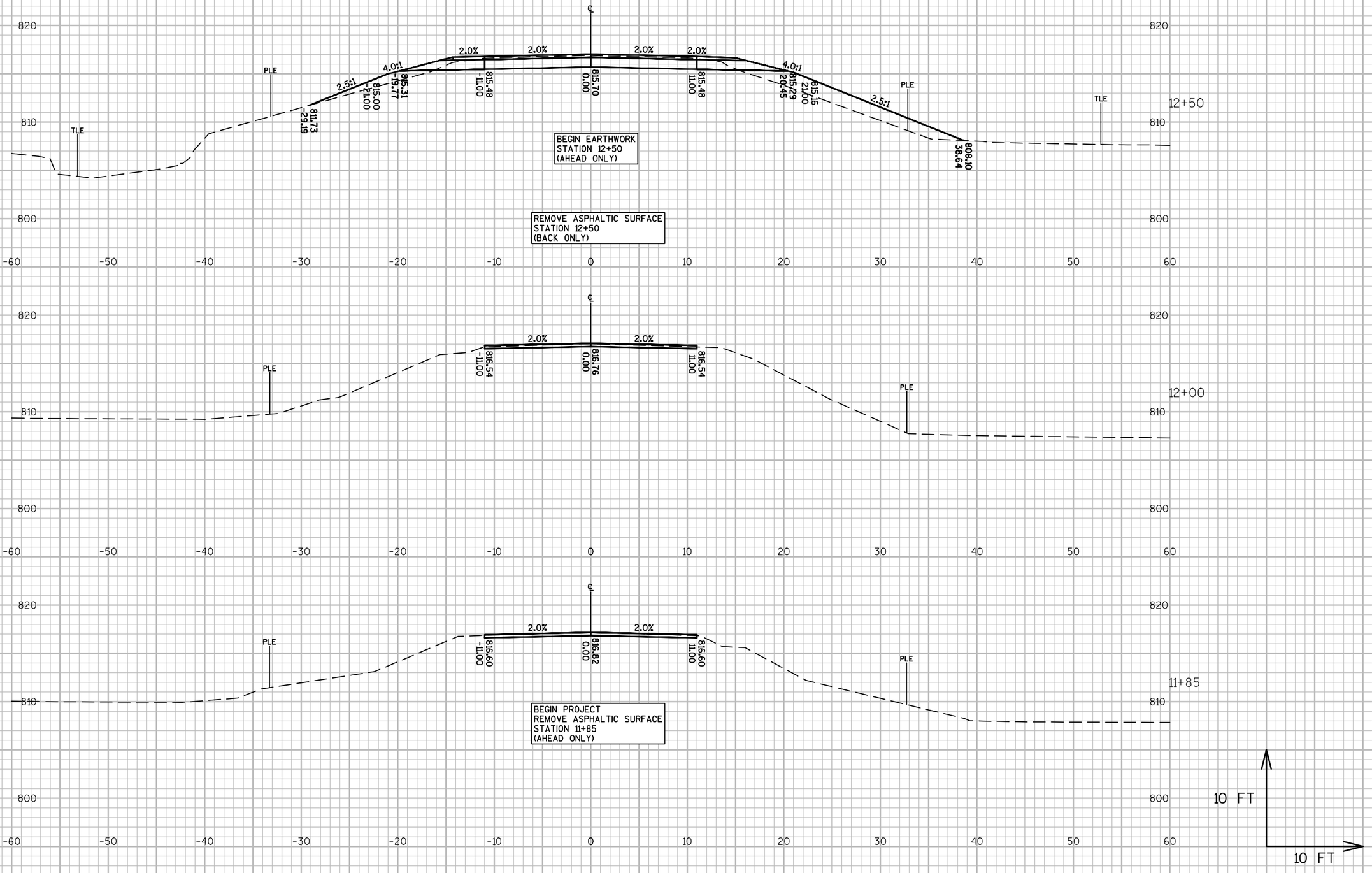
1-12-2017, 11:25:34

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Marsh Exc	Rock Exc	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.33	Mass Ordinate Note 8
12+50.00	1250.00	AHEAD	32.0	0	40.0	0	0	0	0	0	0	0	0	0
12+59.00	1259.00	9.00	31.0	0	80.0	11	0	20	0	0	0	11	27	-16
12+68.00	1268.00	9.00	27.0	0	87.0	10	0	28	0	0	0	21	64	-44
12+76.00	1276.00	8.00	25.0	0	110.0	8	0	29	0	0	0	29	102	-75
		BACK												
13+22.00	1322.00	AHEAD	25.0	0	91.0	0	0	0	0	0	0	0	0	-75
13+39.00	1339.00	17.00	32.0	0	25.0	18	0	37	0	0	0	39	152	-106
13+50.00	1350.00	11.00	44.0	0	13.0	15	0	8	0	0	0	44	162	-100
		BACK												
				Column totals		62	0	122	0	0	0			

Notes:

1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavemen	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor)]



PROJECT NO: 4313-08-71	HWY: MINERAL SPRINGS ROAD	COUNTY: MANITOWOC	CROSS SECTIONS: MAINLINE	SHEET 41	E

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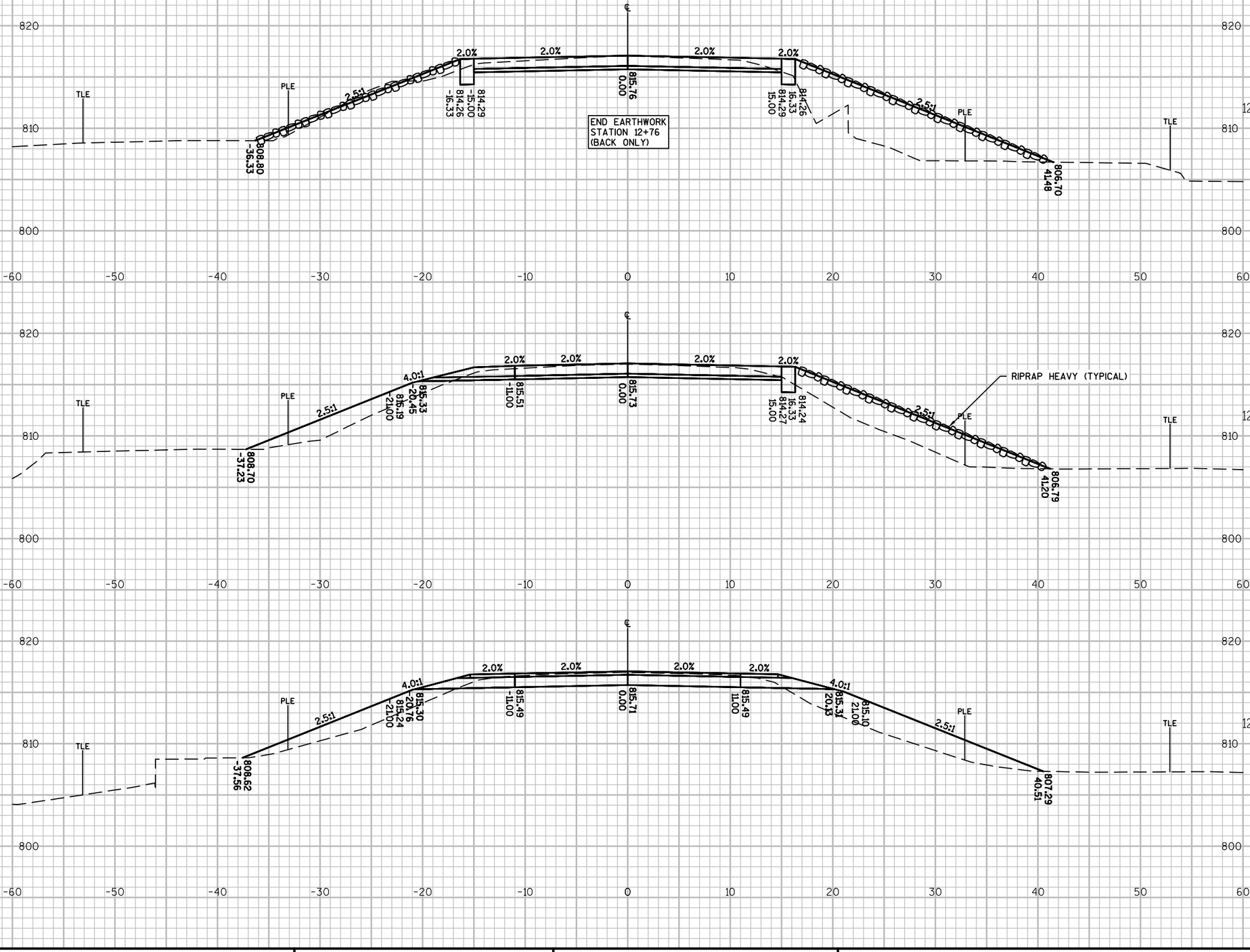
LAYOUT NAME - 090201

PLOT DATE : 1/11/2017 3:43 PM PLOT BY : AARON SCHRAMM PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 4313-08-71	HWY: MINERAL SPRINGS ROAD	COUNTY: MANITOWOC	CROSS SECTIONS: MAINLINE	SHEET 42	E

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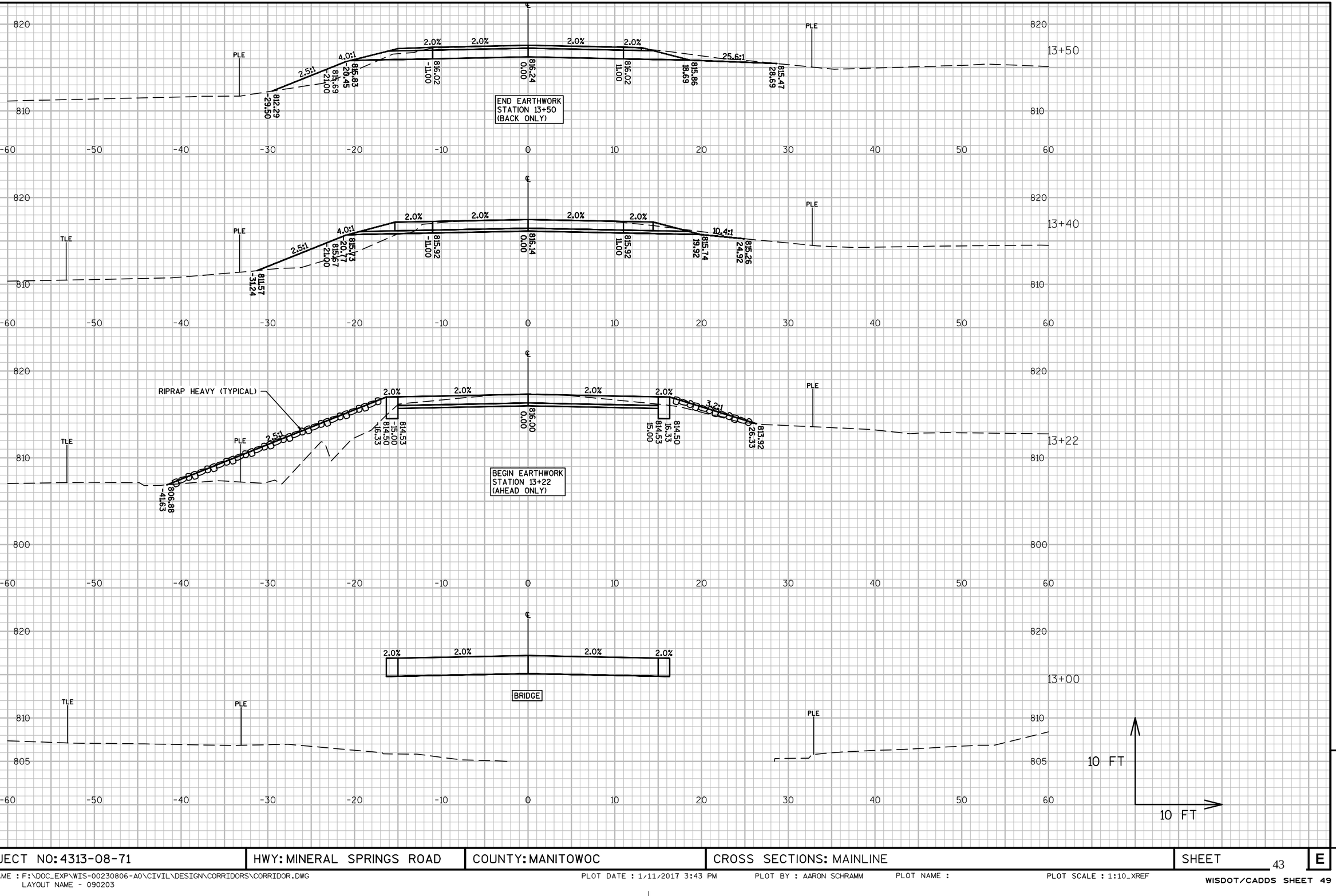
LAYOUT NAME - 090202

PLOT DATE : 1/11/2017 3:43 PM PLOT BY : AARON SCHRAMM PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 4313-08-71	HWY: MINERAL SPRINGS ROAD	COUNTY: MANITOWOC	CROSS SECTIONS: MAINLINE	SHEET 43	E

Wisconsin Department of Transportation

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