EAU

PROJECT ID: 7861-00-71

COUNTY: CHIPPEWA

MAY 2025

ORDER OF SHEETS

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

TOTAL SHEETS = 42

DESIGN DESIGNATION

A.A.D.T.	2025	=	180
A.A.D.T.	2045	=	225
D.H.V.		=	430
D.D.		=	50/50
T.		=	5%
DESIGN SPEED		=	40 MPH
ESALS		=	62,085

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T EDSON, 20TH AVENUE

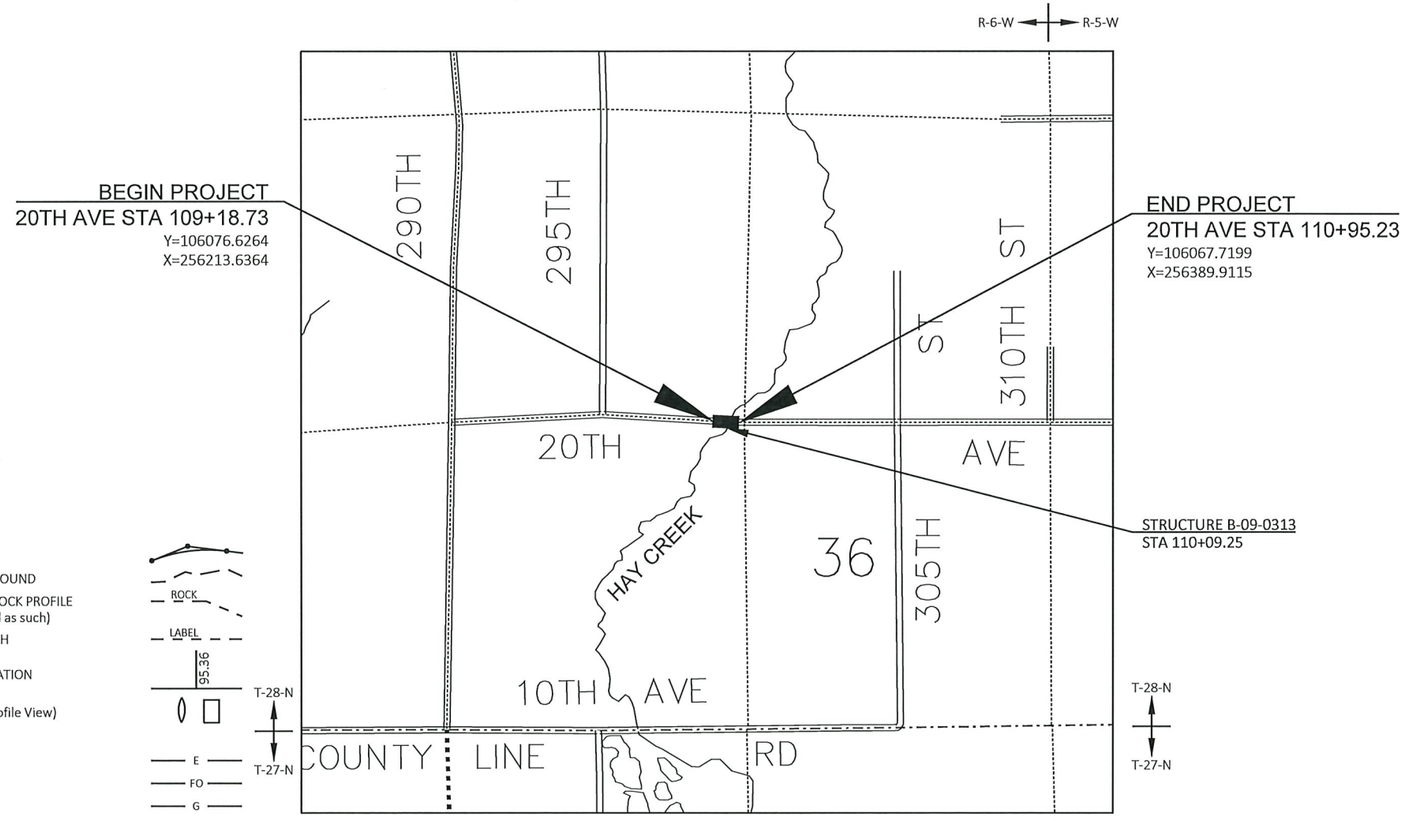
HAY CREEK BRIDGE B-09-0313

LOCAL STREET

CHIPPEWA COUNTY

STATE PROJECT NUMBER
7861-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7861-00-71	WISC 2025483	1



LAYOUT

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = .087 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CHIPPEWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18

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 (300'EB')
- 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 (95.36)
- 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

ACCEPTED FOR

COUNTY of CHIPPEWA

2-3-25 (Date)

(Signature) HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

cbs²

WISCONSIN
DANIELLE A. STEEG
E-101723
LAKEVILLE
MN
PROFESSIONAL ENGINEER

DATE: 1-30-25 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CBS SQUARED, INC
Designer	CBS SQUARED, INC
Project Manager	MATTHEW BERG, P.E.
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 1/30/2025 (Signature)

E

FILE NAME : P:\CHIPC\23001 - 7861-00-01 T EDSON, 20TH AVE HAY CREEK BRDG\CAD\C3D\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 1/30/2025 9:50 AM

PLOT BY : GEOFF RASMUSSEN2

PLOT NAME :

2

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

FILL EXPANSION FACTOR IS 30%.

PROPERTY LINES SHOWN ARE APPROXIMATE.

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

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

PLACE EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

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

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE LOCATIONS OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
AH	AHEAD
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALTIC
AVG	AVERAGE
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BR	BRIDGE
CL OR C/L	CENTER LINE
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY OR CUYD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DIA	DIAMETER
DISCH	DISCHARGE
E	EAST
EB	EASTBOUND
EL OR ELEV	ELEVATION
EW	END WALL
ENT	ENTRANCE
EXC	EXCAVATION
EX	EXISTING
FERT	FERTILIZER
FE	FIELD ENTRANCE
FL OR F/L	FLOW LINE
FT	FOOT
HMA	HOT MIX ASPHALT
CWT	HUNDREDWEIGHT
INL	INLET
INV	INVERT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LIN FT OR LF	LINEAR FOOT
LS	LUMP SUM
NC	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PT	POINT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
LB	POUND
PE	PRIVATE ENTRANCE
R	RADIUS
RL OR R/L	REFERENCE LINE
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SHLDR	SHOULDER
SB	SOUTHBOUND
SF OR SQ FT	SQUARE FEET
SY OR SQ YD	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAY
SE	SUPERELEVATION
T	TANGENT
TEMP	TEMPORARY
USH	UNITED STATES HIGHWAY
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE
WB	WESTBOUND
YD	YARD

UTILITY CONTACTS

BRIGHTSPEED
1120 S TRYON ST SUITE 700
CHARLOTTE, NC 28203-4244
XAN MARIE RYPKEMA
(303) 525-2994
(704) 314-2659
XAN.RYPKEMA@BRIGHTSPEED.COM

DESIGN CONTACT

CBS SQUARED INC.
615 FIRST AVENUE NE, SUITE 415
MINNEAPOLIS, MN 55413
ATTN: DANIELLE STEEG, PE
(651) 396-9086
DSTEEG@CBSSQUAREDINC.COM

WISCONSIN DOT NORTHWEST REGION

WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION - EAU CLAIRE OFFICE
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
ATTN: MATTHEW BERG, PE
(920) 492-4147
MATTHEW.BERG@DOT.WI.GOV

WISCONSIN DNR - LIASON

DEPARTMENT OF NATURAL RESOURCES
EAU CLAIRE SERVICE CENTER
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
ATTN: LEAH NICOL
(715) 934-9014
LEAH.NICOL@WISCONSIN.GOV

CHIPPEWA COUNTY HIGHWAY DEPARTMENT

BRIAN KELLEY, PE
HIGHWAY COMMISSIONER
CHIPPEWA COUNTY HIGHWAY DEPARTMENT
801 EAST GRAND AVE
CHIPPEWA FALLS, WI 54729
(715) 726-7914
BKELLEY@CO.CHIPPEWA.WI.US

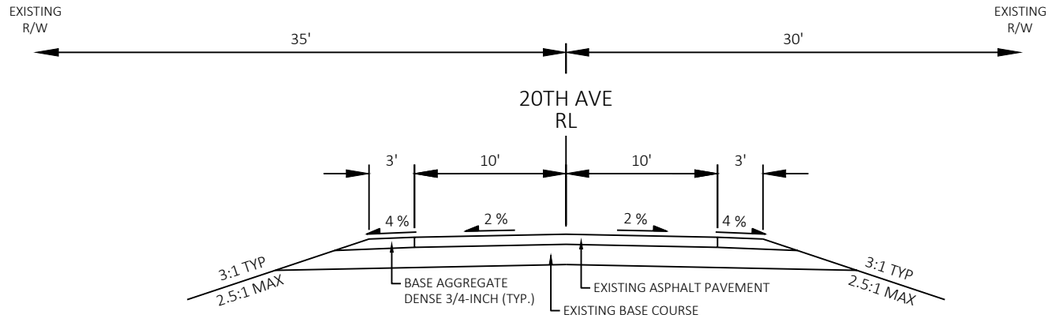
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.205 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.143ACRES

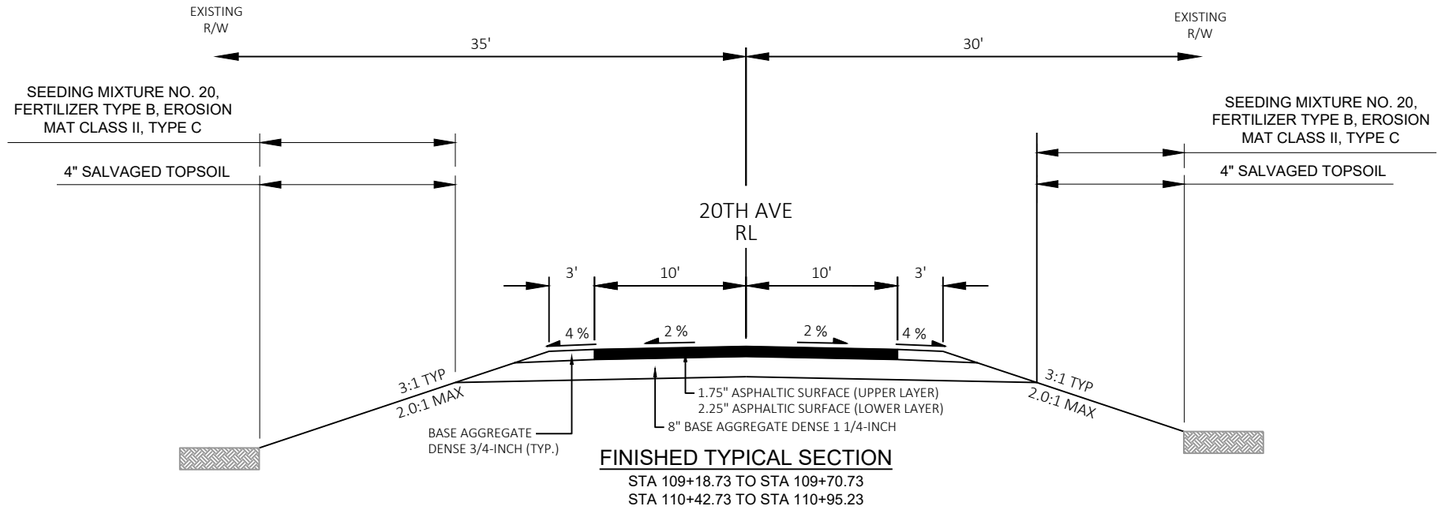
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2



EXISTING TYPICAL SECTION

STA 109+18.73 TO STA 109+70.73
STA 110+42.73 TO STA 110+95.23



FINISHED TYPICAL SECTION

STA 109+18.73 TO STA 109+70.73
STA 110+42.73 TO STA 110+95.23

PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 3	E

2

N

CP #2
3/4-INCH REBAR
Y = 106087.4150
X = 256261.8730

CP #1
3/4-INCH REBAR
Y = 106072.5010
X = 256542.7590

PC: 111+28.99

PT: 113+06.59

107+00 108+00 109+00 110+00 S87° 06' 27"E 111+00 112+00 113+00 S89° 31' 49"E 114+00

BM51

CP #3
3/4-INCH REBAR
Y = 106073.1330
X = 256051.1310

BEGIN PROJECT
STA 109+18.73
Y = 106076.6264
X = 256213.6364

END PROJECT
STA 110+95.23
Y = 106067.7199
X = 256389.9115

BM50

PI STA = 112+17.81
Y = 106061.534
X = 256512.331
DELTA = 2°25'22"
D = 1°21'51"
T = 88.81'
L = 177.60'
R = 4200.00'
PC STA = 111+28.99
Y = 106066.016
X = 256423.633
PT STA = 113+06.59
Y = 106060.806
X = 256601.140
BK = S87°06'27.0"E
AH = S89°31'49.0"E

BENCHMARKS (NAVD 88)

NO.	STA./OFFSET	DESCRIPTION	ELEVATION
BM50	112+38.97, 35.12' RT	RAIL SPIKE IN POST	1011.51
BM51	109+81.30, 12.86' RT	CORNER CONCRETE OF STRUCTURE	1016.71

CONTROL POINT TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
CP1	112+47.96	10.81' LT	106072.501	256542.759	1015.32	3/4-INCH REBAR
CP2	109+66.36	13.21' LT	106087.415	256261.873	1016.21	3/4-INCH REBAR
CP3	107+56.61	11.69' RT	106073.133	256051.131	1013.79	3/4-INCH REBAR

PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	ALIGNMENT AND CONTROL DATA	SHEET 4	E

FILE NAME : P:\CHIPC\23001 - 7861-00-01 T EDSON, 20TH AVE HAY CREEK BRDG\CAD\C3D\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 027201-ad
PLOT DATE : 3/11/2025 4:13 PM PLOT BY : CHRIS BURNS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

WETLAND BOUNDARY (TYP)

66'

EDGE OF WATER

HEAVY RIPRAP

PC: 111+28.99

'27"E
04'

109+00

110+00

111+00

COFFERDAM

HAY CREEK

EXISTING STRUCTURE P-09-0168

1005
1010
1015

LEGEND

- EROSION MAT CLASS II, TYPE C
- SILT FENCE
- HEAVY RIPRAP
- TURBIDITY BARRIER
- SURFACE WATER FLOW

PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	EROSION CONTROL	SHEET 5	E

FILE NAME : P:\CHIPC\23001 - 7861-00-01 T EDSON, 20TH AVE HAY CREEK BRDG\CAD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - EC-01

PLOT DATE : 1/30/2025 5:49 PM PLOT BY : GEOFF RASMUSSEN2 PLOT NAME : PLOT SCALE : ##########

Estimate Of Quantities

7861-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-9-168	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	187.000	187.000
0006	205.0506.S	Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	120.000	120.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-9-313	EACH	1.000	1.000
0010	206.5001	Cofferdams (structure) 01. B-9-313	EACH	1.000	1.000
0012	208.0100	Borrow	CY	60.000	60.000
0014	210.1500	Backfill Structure Type A	TON	220.000	220.000
0016	213.0100	Finishing Roadway (project) 01. 7861-00-71	EACH	1.000	1.000
0018	305.0115	Base Aggregate Dense 3/4-Inch	CY	5.000	5.000
0020	305.0125	Base Aggregate Dense 1 1/4-Inch	CY	70.000	70.000
0022	455.0605	Tack Coat	GAL	18.000	18.000
0024	465.0105	Asphaltic Surface	TON	66.000	66.000
0026	502.0100	Concrete Masonry Bridges	CY	213.000	213.000
0028	502.3200	Protective Surface Treatment	SY	298.000	298.000
0030	502.9000.S	Underwater Substructure Inspection (structure) 01. B-9-313	EACH	1.000	1.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,950.000	4,950.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	29,980.000	29,980.000
0036	513.4061	Railing Tubular Type M	LF	194.000	194.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0040	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	720.000	720.000
0042	606.0300	Riprap Heavy	CY	144.000	144.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	124.000	124.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7861-00-71	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	625.0500	Salvaged Topsoil	SY	142.000	142.000
0052	628.1504	Silt Fence	LF	330.000	330.000
0054	628.1520	Silt Fence Maintenance	LF	330.000	330.000
0056	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0060	628.2027	Erosion Mat Class II Type C	SY	150.000	150.000
0062	628.6005	Turbidity Barriers	SY	62.000	62.000
0064	629.0210	Fertilizer Type B	CWT	0.100	0.100
0066	630.0120	Seeding Mixture No. 20	LB	4.000	4.000
0068	630.0500	Seed Water	MGAL	1.000	1.000
0070	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0072	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0074	638.2602	Removing Signs Type II	EACH	6.000	6.000
0076	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000
0080	643.0420	Traffic Control Barricades Type III	DAY	660.000	660.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	880.000	880.000
0084	643.0900	Traffic Control Signs	DAY	660.000	660.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	645.0111	Geotextile Type DF Schedule A	SY	56.000	56.000
0090	645.0120	Geotextile Type HR	SY	330.000	330.000
0092	650.4500	Construction Staking Subgrade	LF	104.000	104.000
0094	650.5000	Construction Staking Base	LF	104.000	104.000
0096	650.6501	Construction Staking Structure Layout (structure) 01. B-9-313	EACH	1.000	1.000
0098	650.9911	Construction Staking Supplemental Control (project) 01. 7861-00-71	EACH	1.000	1.000

Estimate Of Quantities

7861-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	650.9920	Construction Staking Slope Stakes	LF	104.000	104.000
0102	715.0502	Incentive Strength Concrete Structures	DOL	1,278.000	1,278.000
0104	999.2005.S	Maintaining Bird Deterrent System (station) 01. 110+07	EACH	1.000	1.000
0106	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0108	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

REMOVAL

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	205.0506.S EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL TON	208.0100 BORROW CY	REMARKS
0010	109+18	-	110+95	LT & RT	187	120	60	
				TOTAL 0010	187	120	60	

ROADWAY

CATEGORY	STATION	TO	STATION	LOCATION	305.0115 BASE AGGREGATE DENSE 3/4-INCH CY	305.0125 BASE AGGREGATE DENSE 1 1/4-INCH CY	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	REMARKS
0010	109+18	-	110+95	LT & RT	5	70	18	66	
				TOTAL 0010	5	70	18	66	

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY	REMARKS
0010	109+18	-	110+95	LT & RT	330	330	1	3	150	62	
				TOTAL 0010	330	330	1	3	150	62	

FINISHING

CATEGORY	STATION	TO	STATION	LOCATION	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 7861-00-71) EACH	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL	REMARKS
0010	109+18	-	110+95	LT & RT	1	142	0.1	4	1	
				TOTAL 0010	1	142	0.1	4	1	

3

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-09-0313) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7861-00-71) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	109+18	-	110+95	LT & RT	104	104		1	104	
0020	109+18	-	110+95	LT & RT			1			
				TOTAL 0010	104	104	1	1	104	

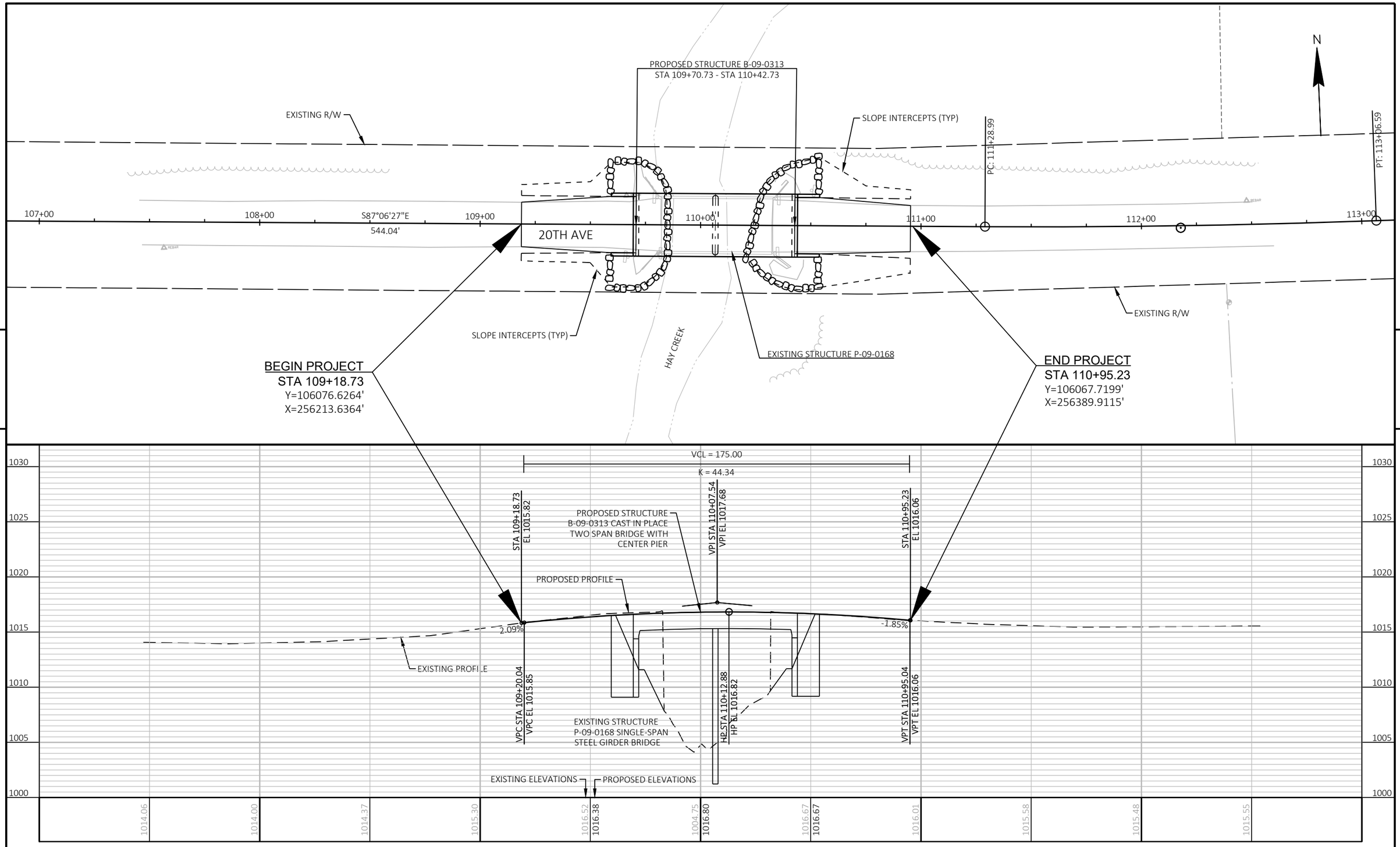
TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	109+18	-	110+95	LT & RT	660	880	660	1	
				TOTAL 0010	660	880	660	1	

3

SIGNING

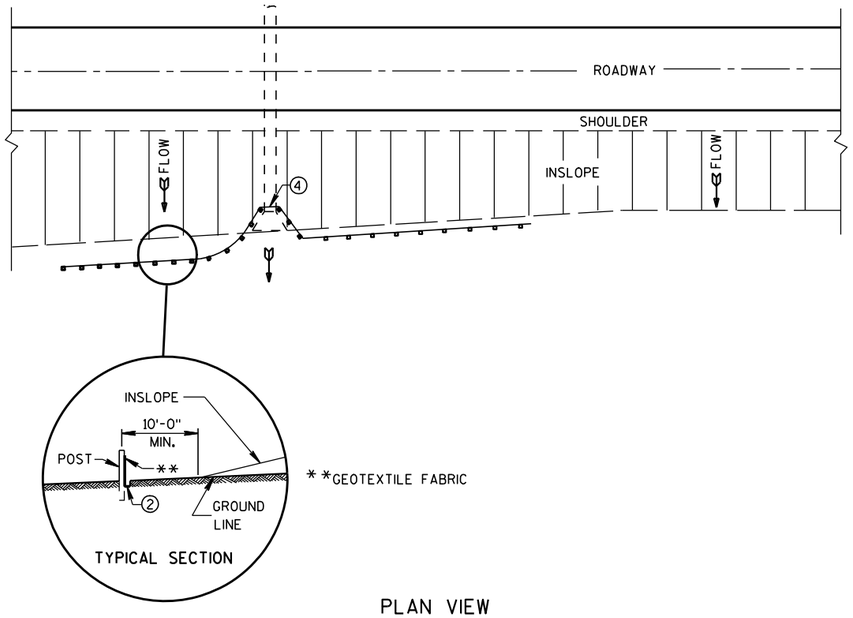
CATEGORY	STATION	TO	STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	109+18	-	110+95	LT & RT	4	12	4	4	W5-52L & W5-52R
0010		109+67		RT			1	1	WEIGHT LIMIT 25 TONS
0010		110+50		LT			1	1	WEIGHT LIMIT 25 TONS
				TOTAL 0010	4	12	6	6	



PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	PLAN AND PROFILE: 20TH AVE	SHEET 10	E

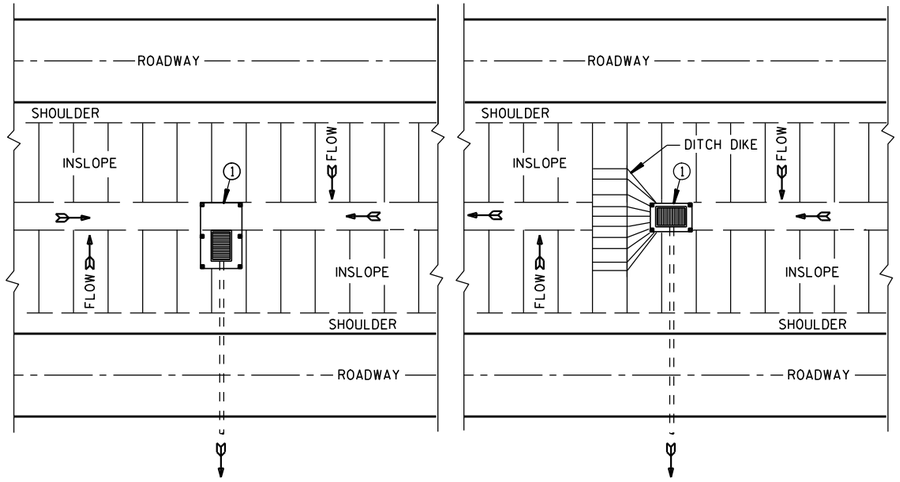
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



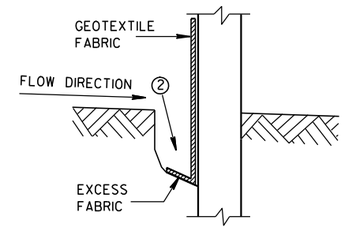
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

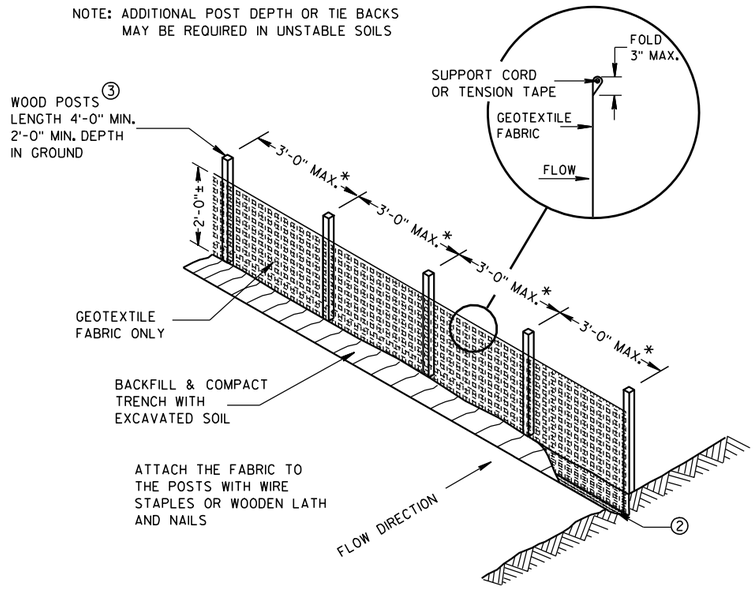
GENERAL NOTES

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

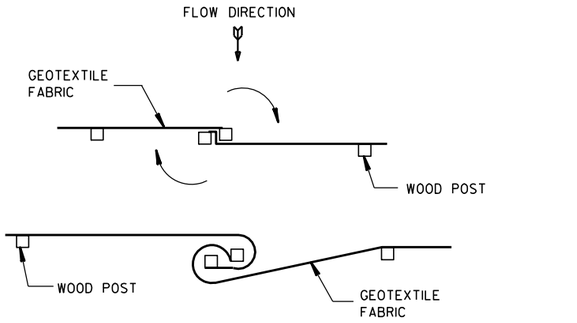
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



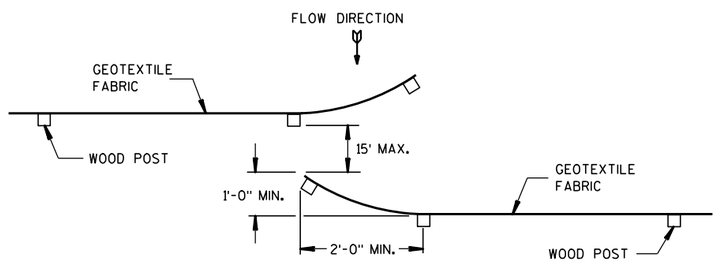
TRENCH DETAIL



SILT FENCE

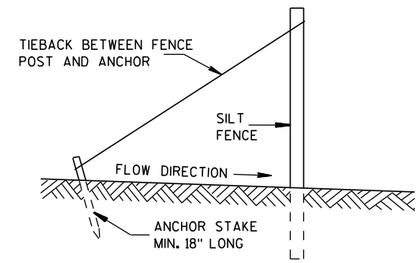


TWIST METHOD



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	

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S.D.D. 8 E 9-6

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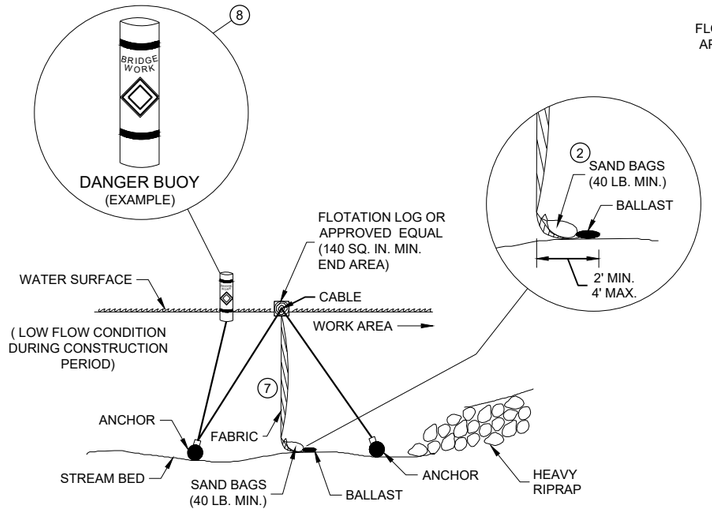
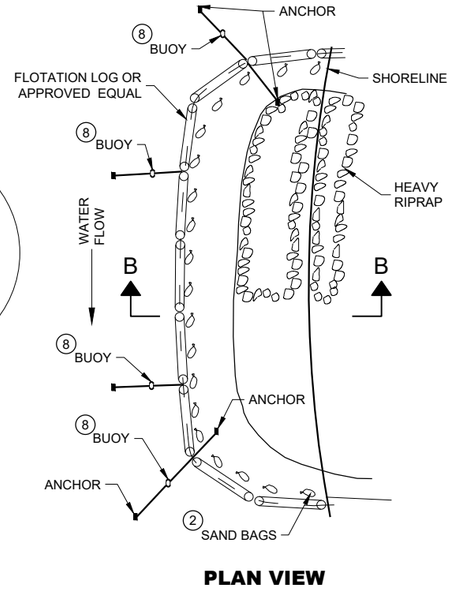
S.D.D. 8 E 9-6

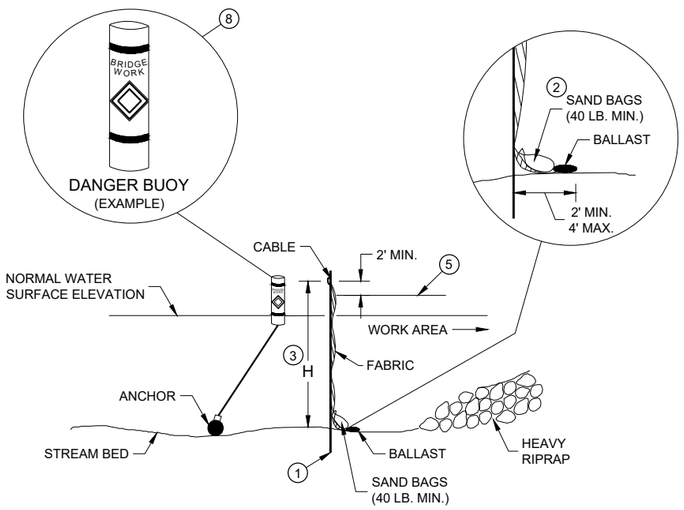


SECTION B - B

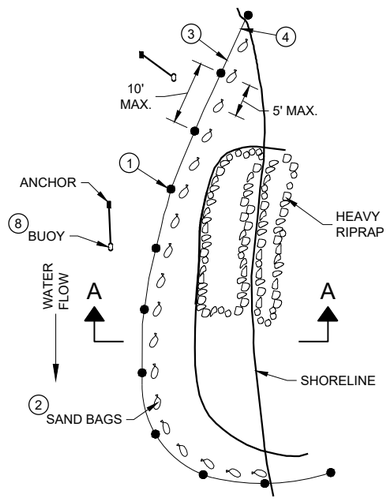


PLAN VIEW

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) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

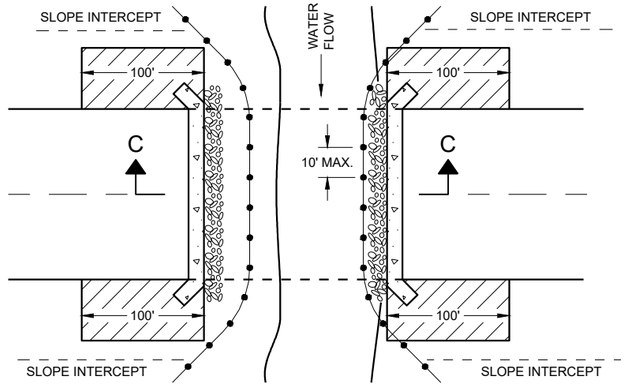
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

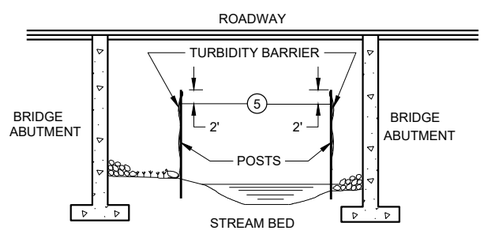
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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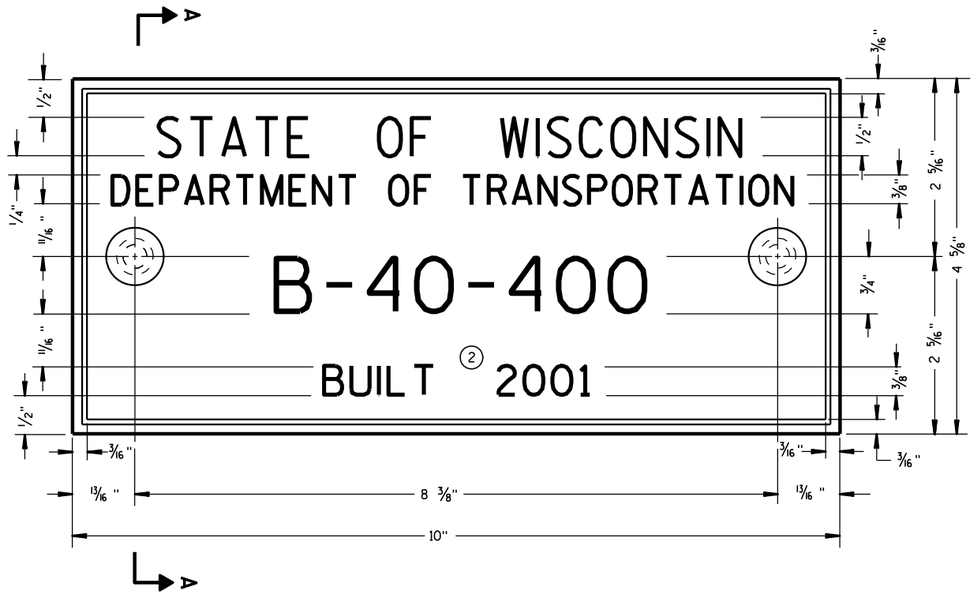
SDD 08E11 - 02



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

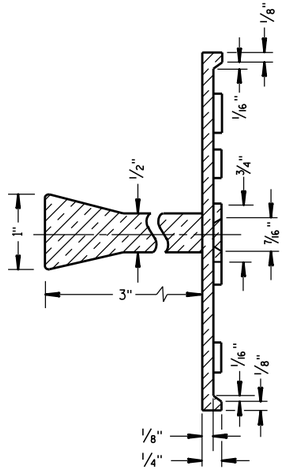
GENERAL NOTES

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

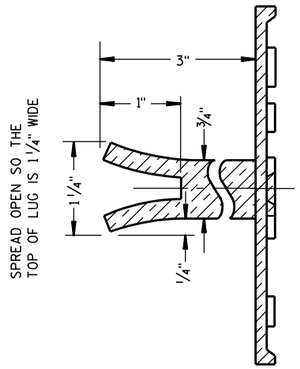
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

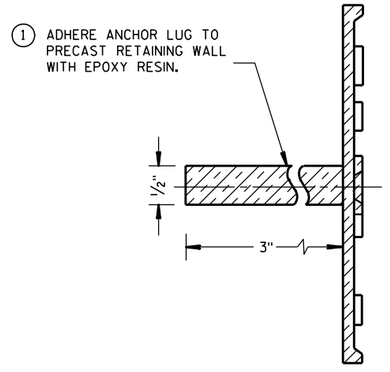
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



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

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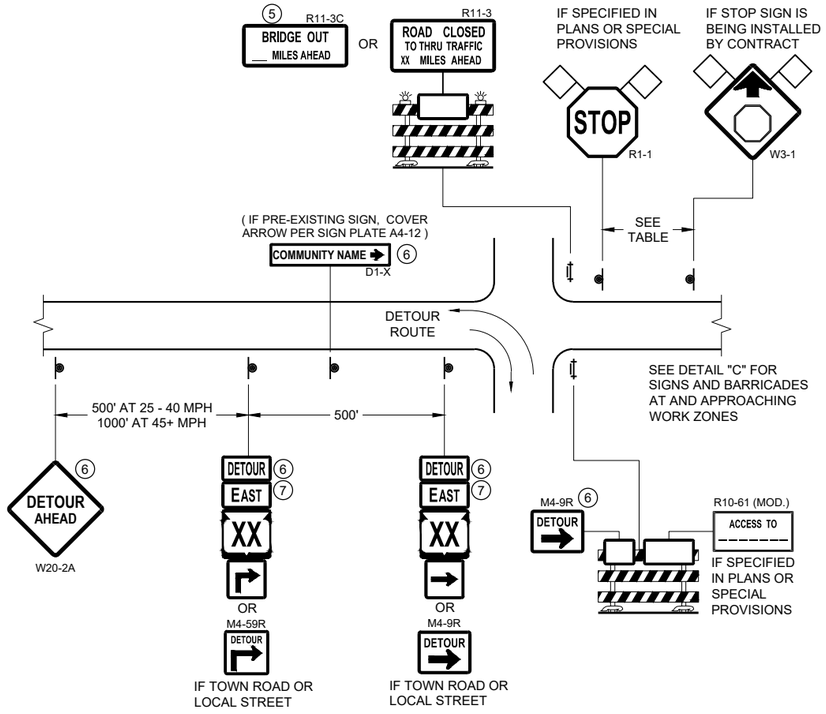
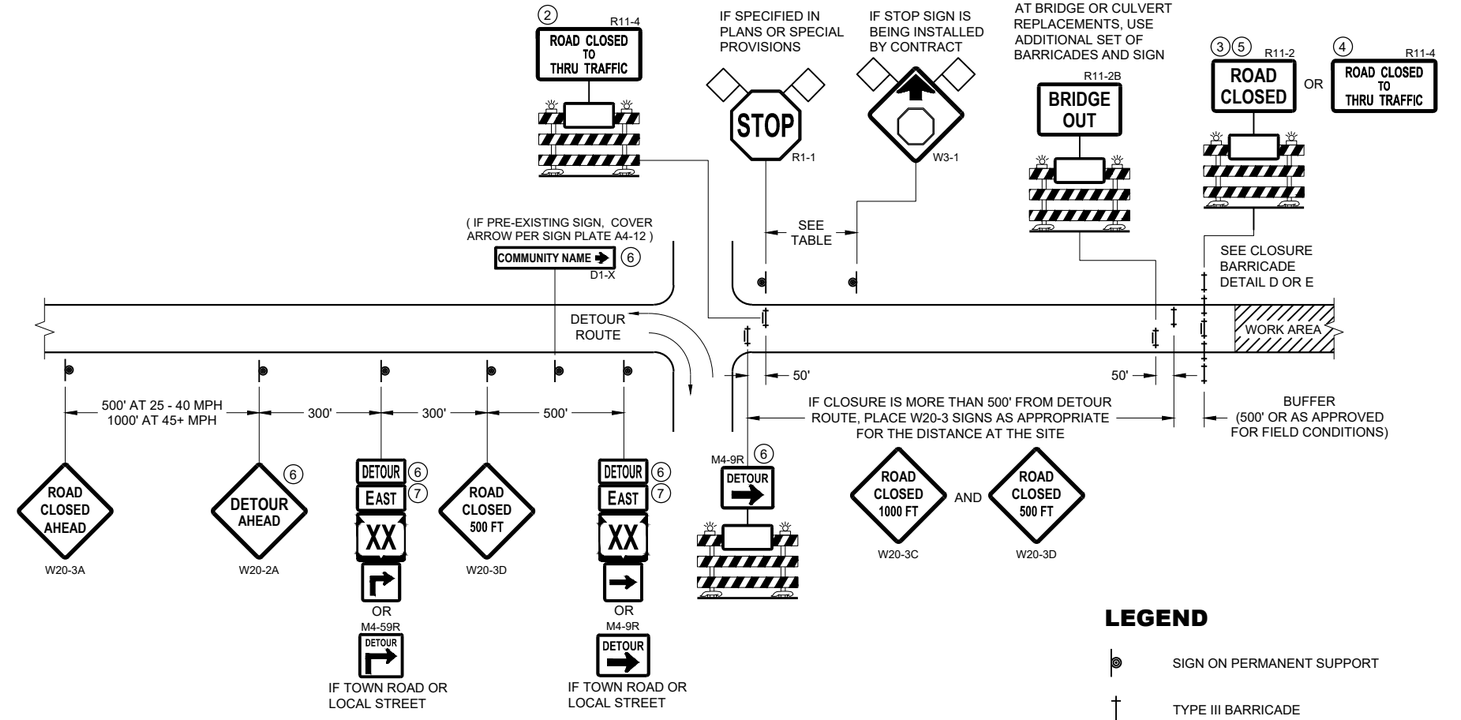
S.D.D. 12 A 3-10



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

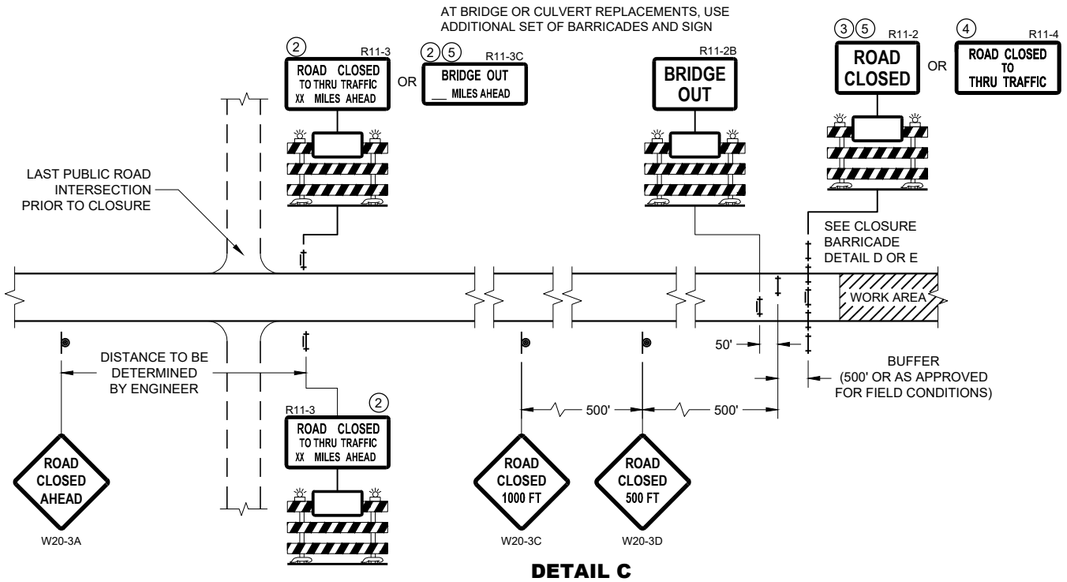
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

LEGEND

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

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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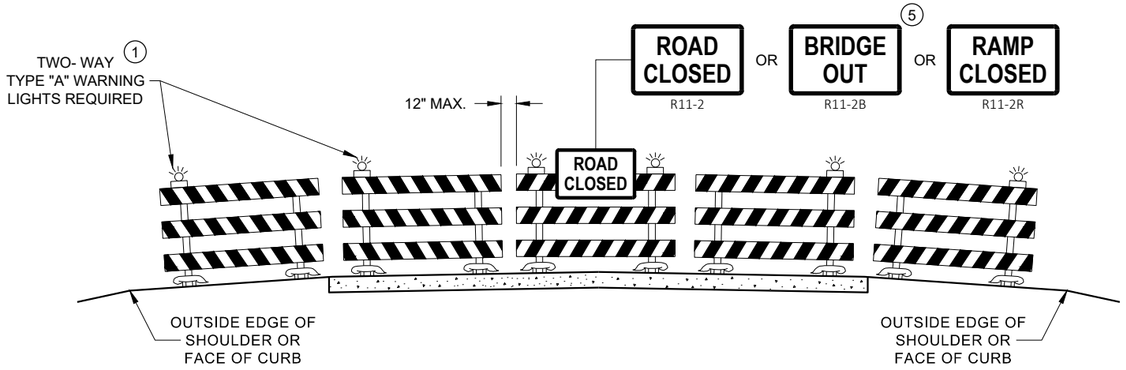
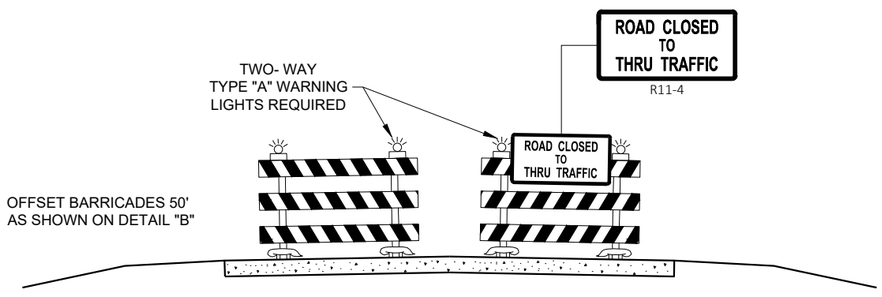
SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 09b

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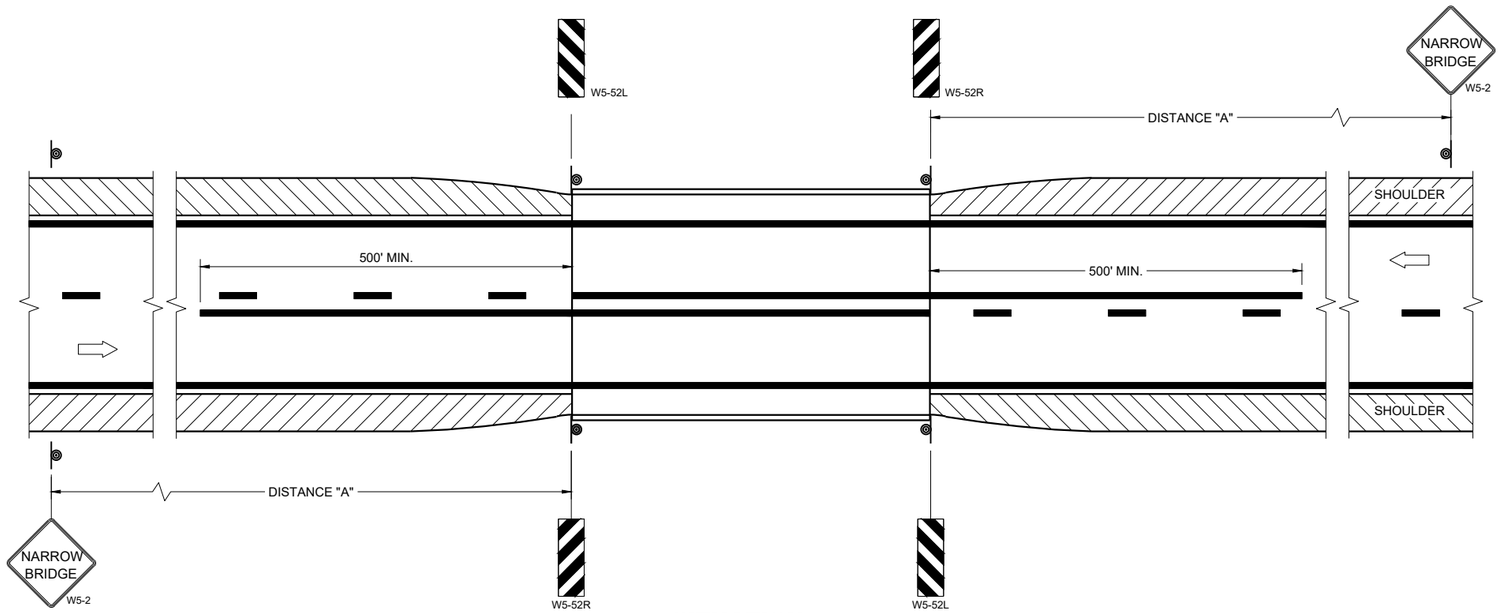
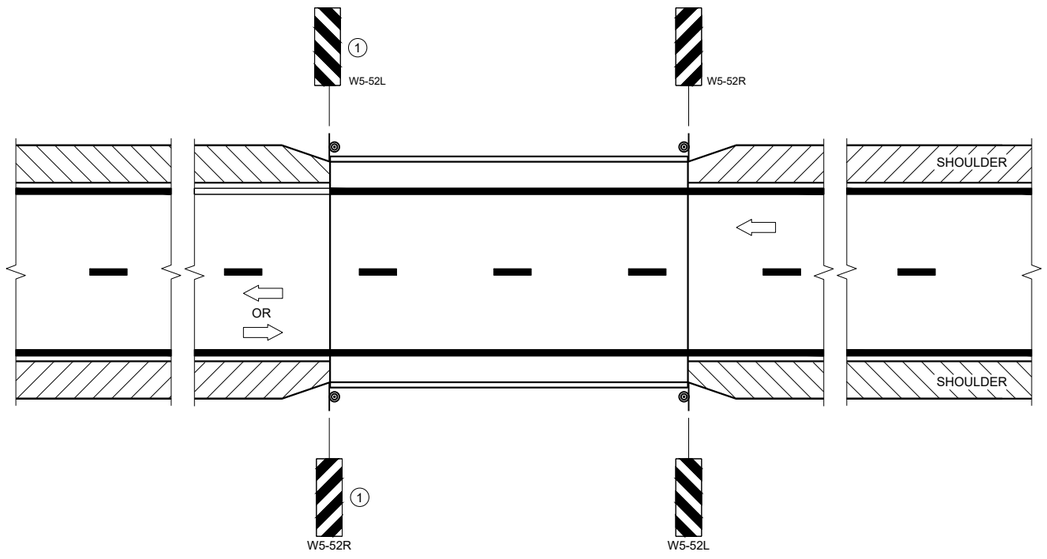
SDD 15C02 - 09b



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

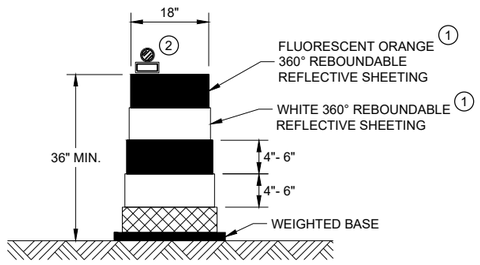
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

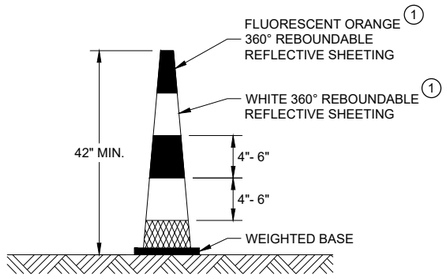
GENERAL NOTES

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



DRUM

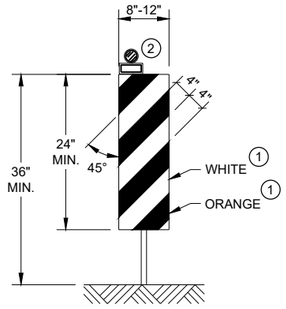
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

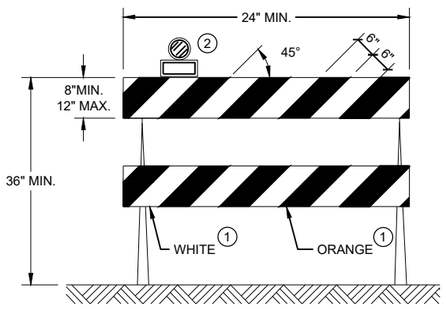
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



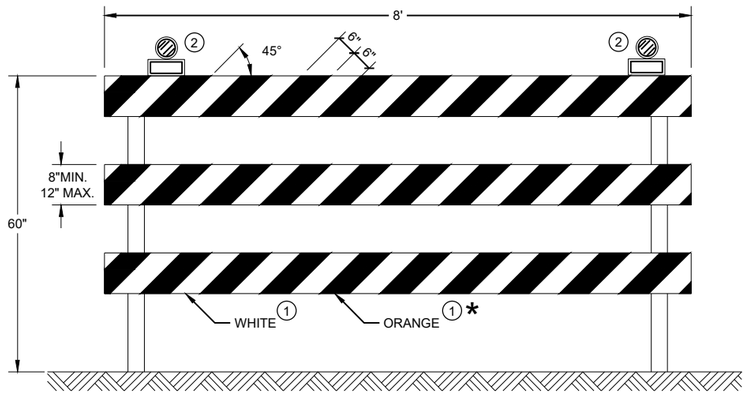
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b

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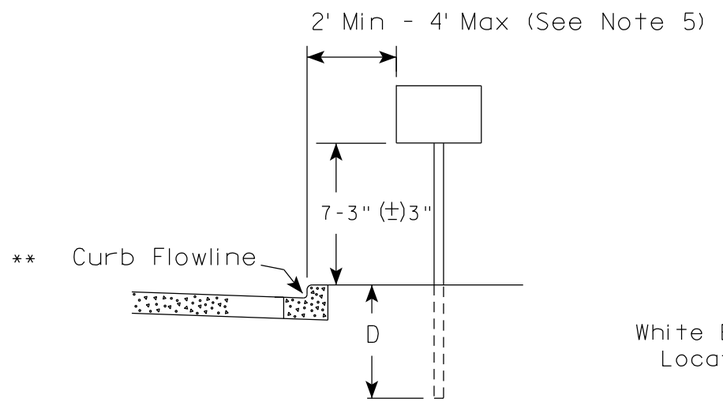
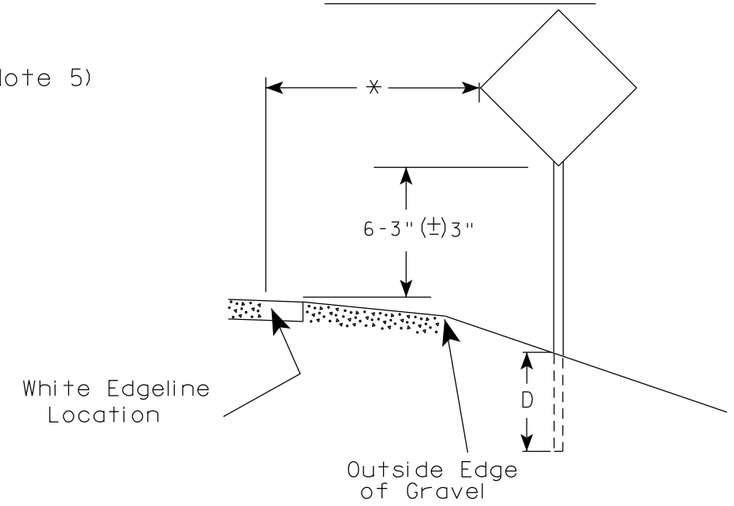
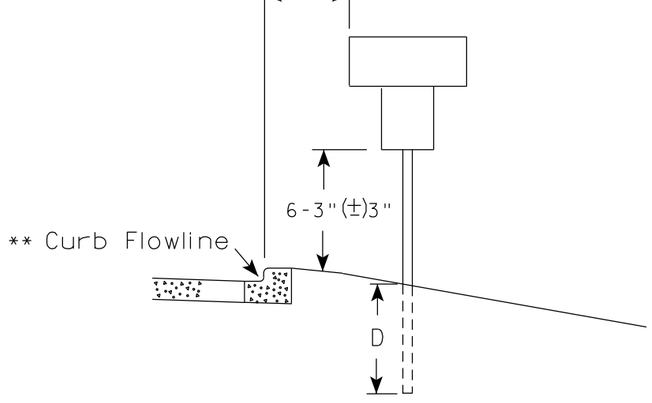
SDD 15C11 - 10b

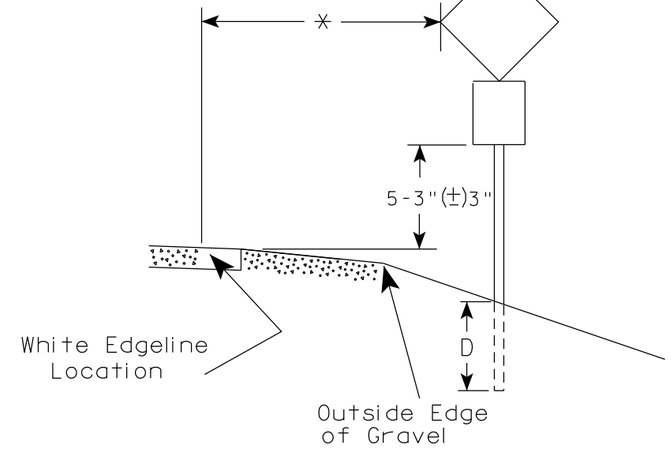
URBAN AREA



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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

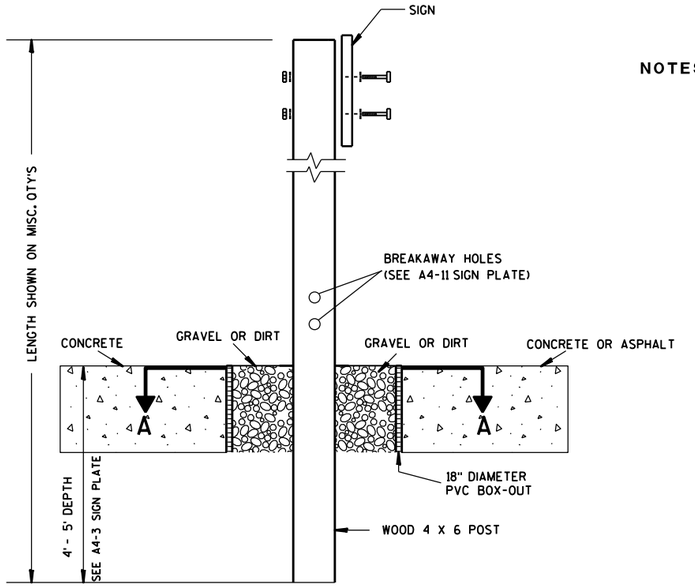
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

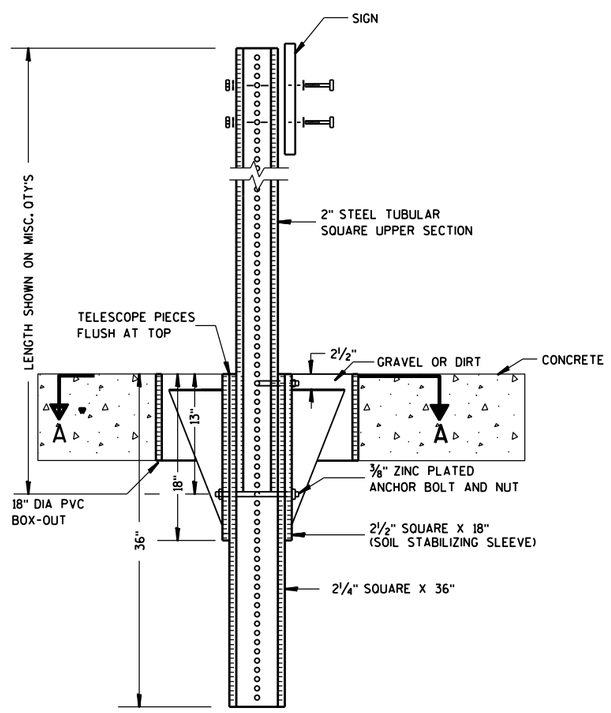
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 19	E



ELEVATION VIEW

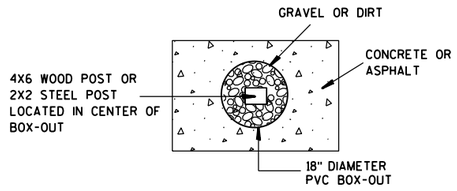
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

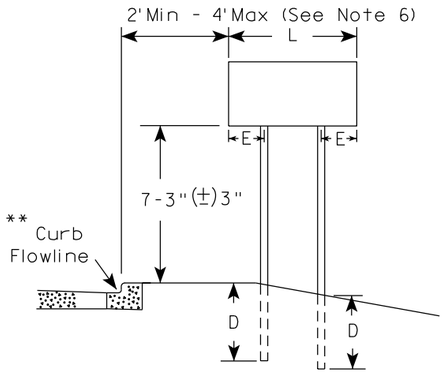
APPROVED Matthew R Rauch
for State Traffic Engineer

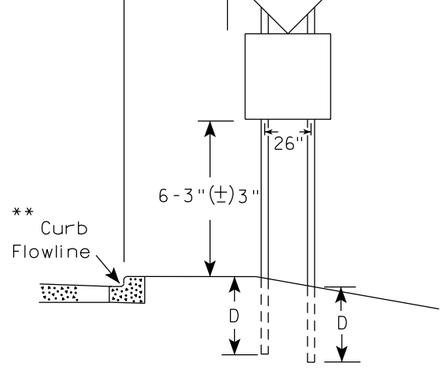
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

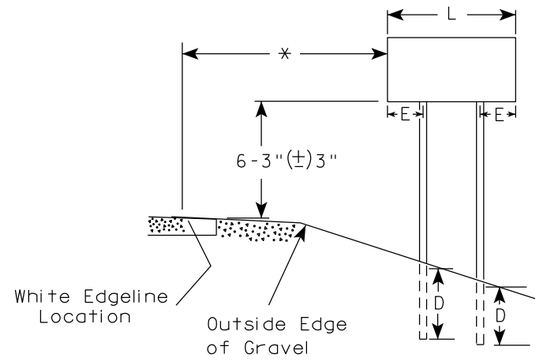
URBAN AREA

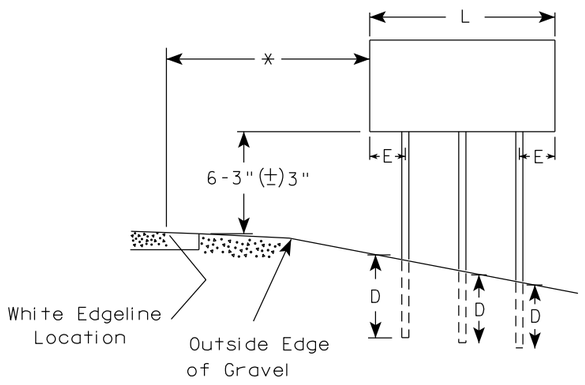


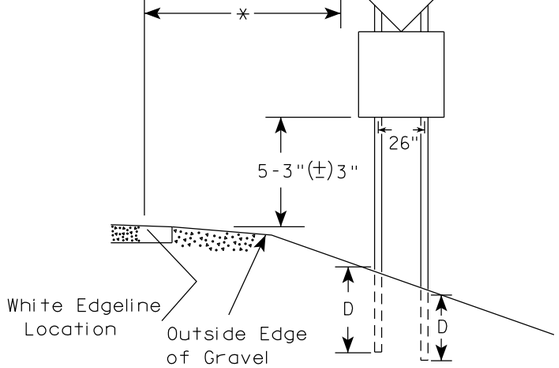


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±) 3".

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

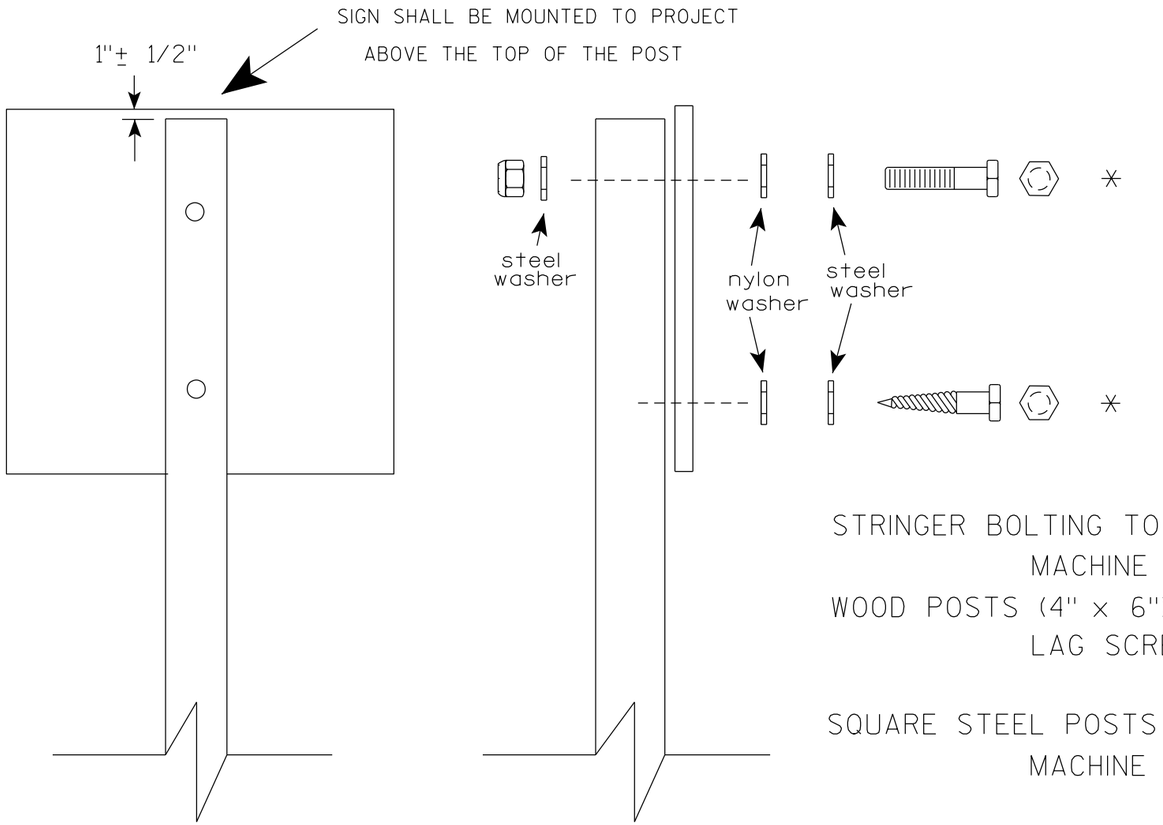
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E



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

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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

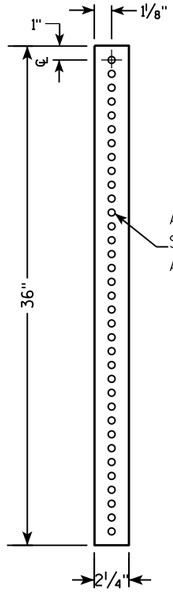
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

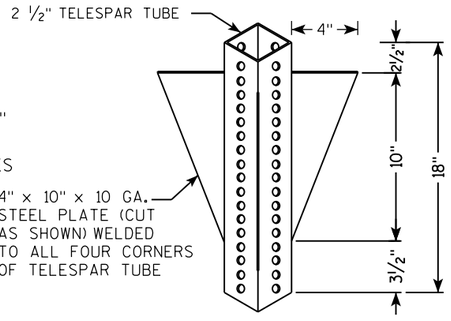
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

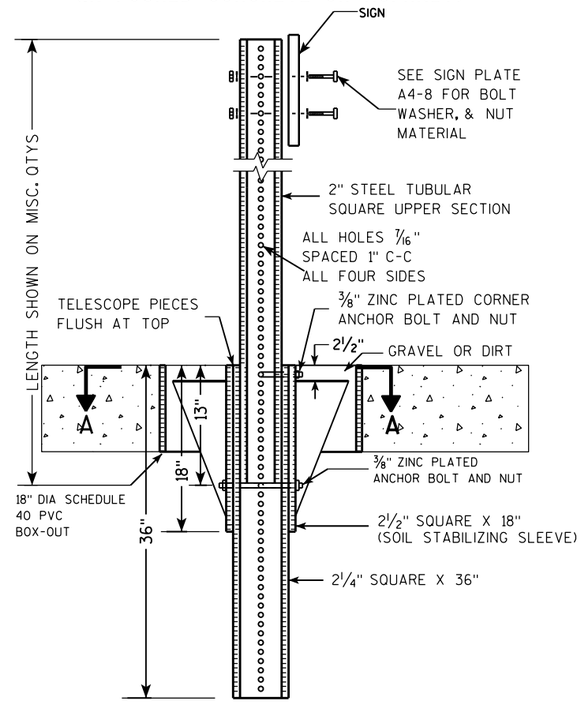
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



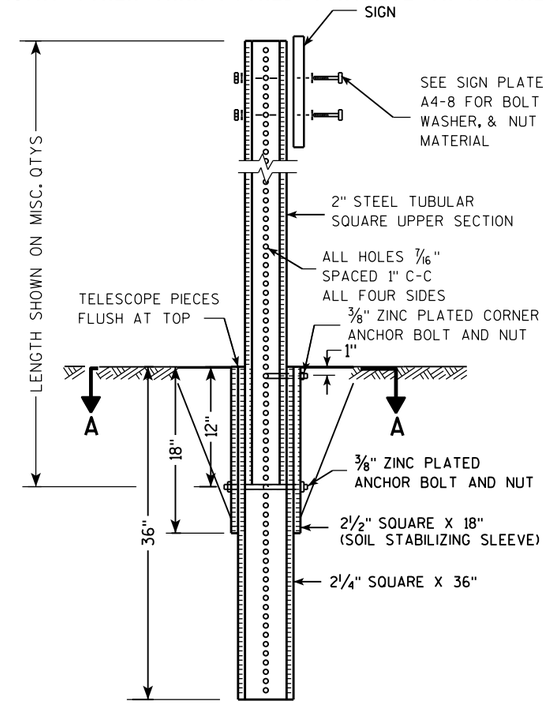
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

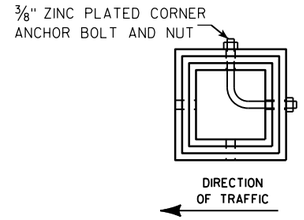


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

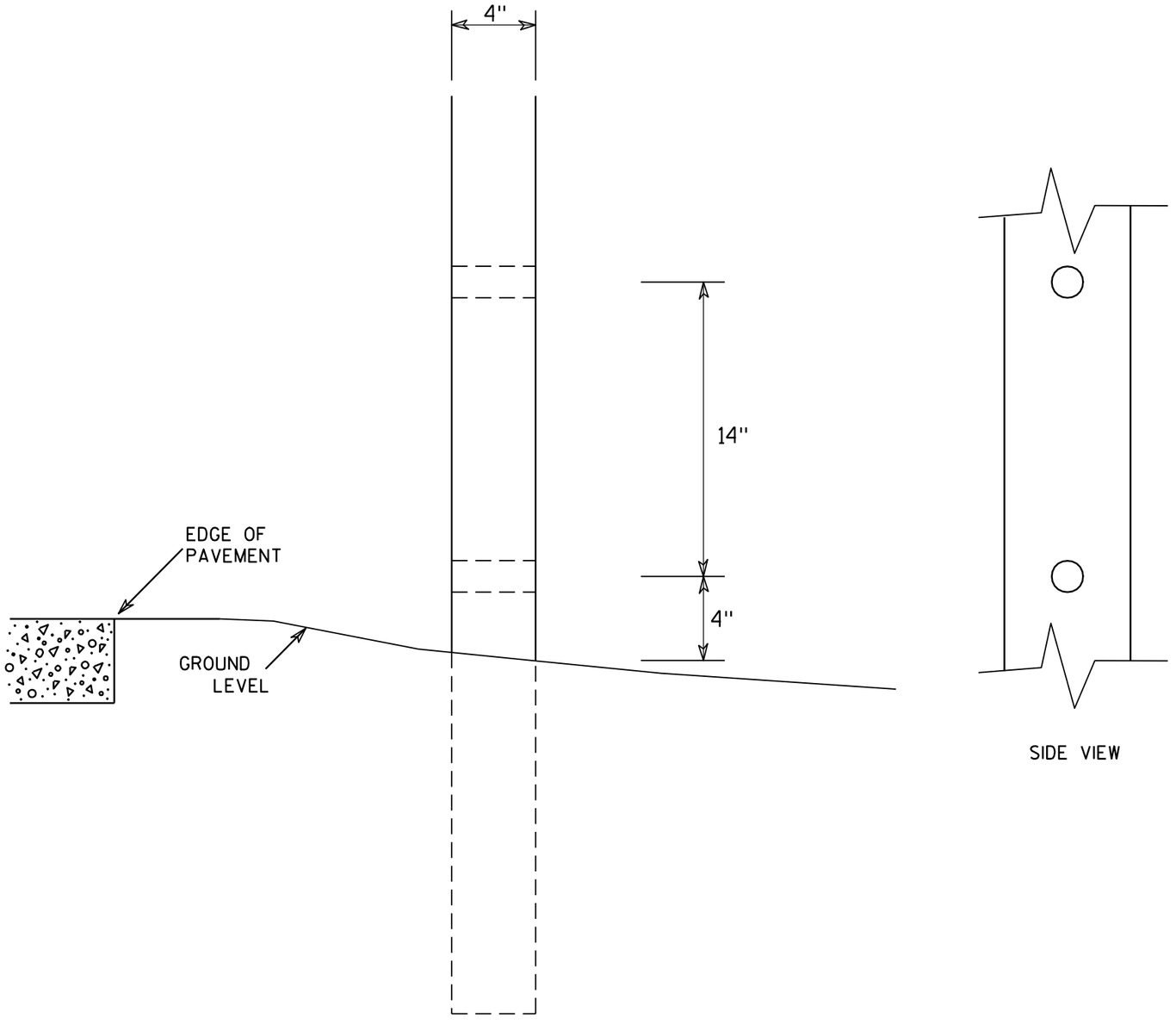
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

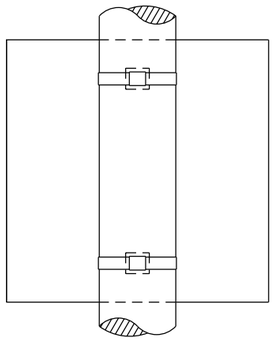
APPROVED Chester J Spang for State Traffic Engineer

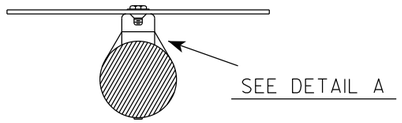
DATE 3/27/97 PLATE NO. A4-11.2

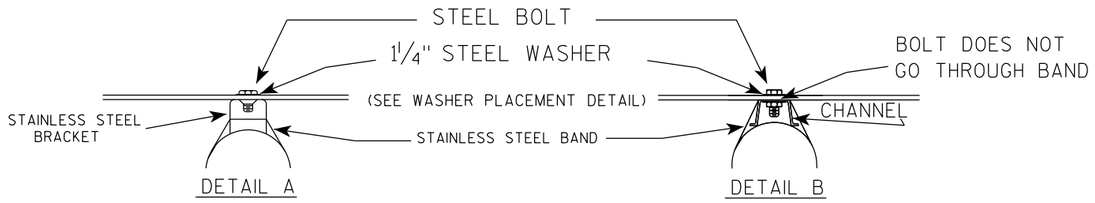
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 24	E

BANDING

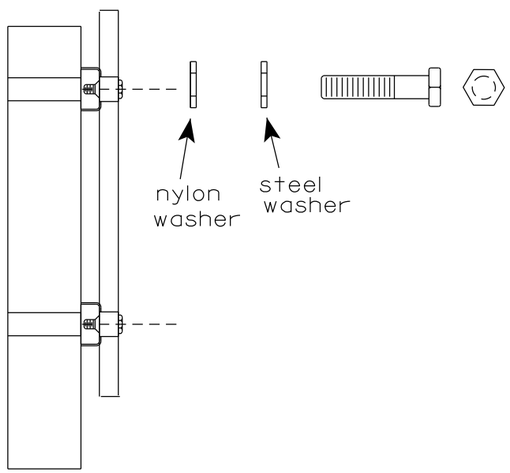
SINGLE SIGN







WASHER PLACEMENT

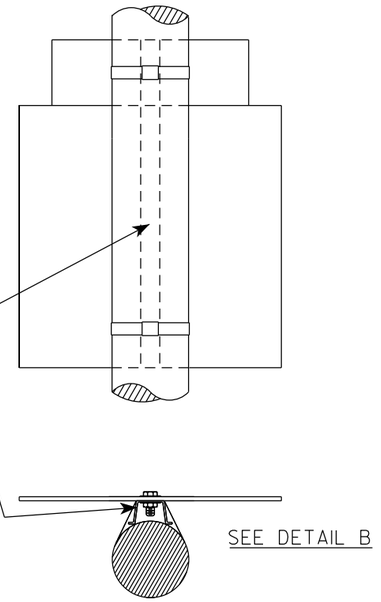


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

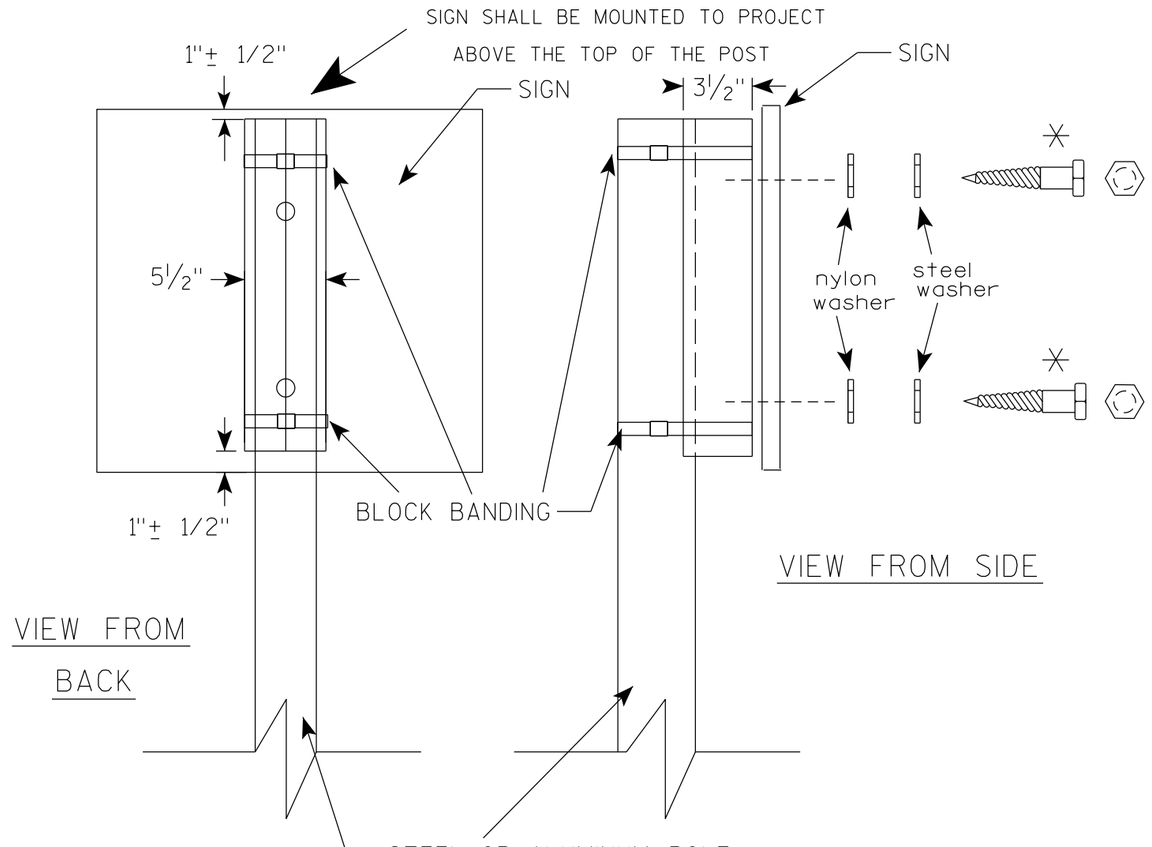
WISCONSIN DEPT OF TRANSPORTATION

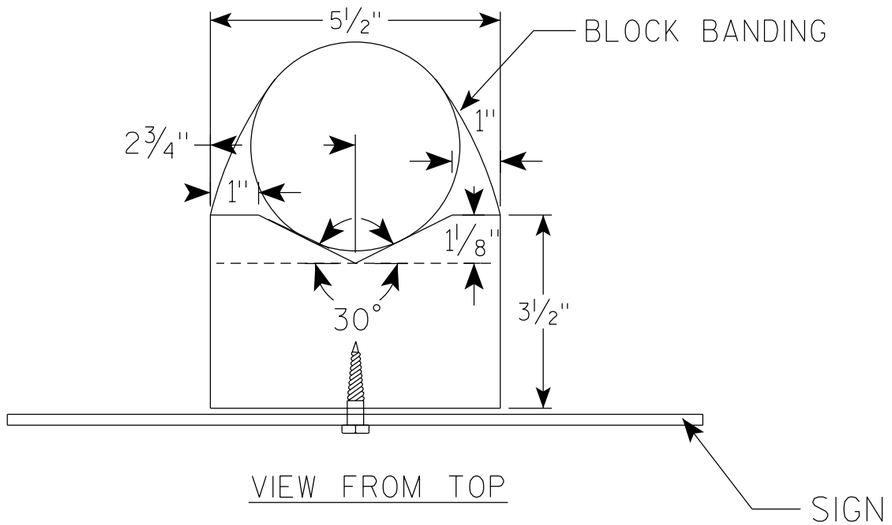
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 25	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

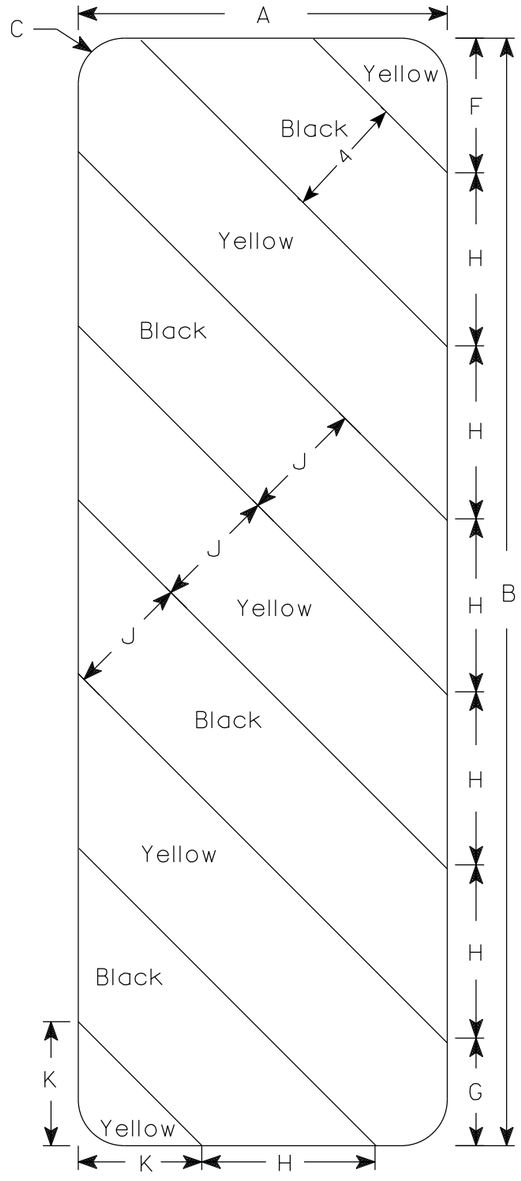
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

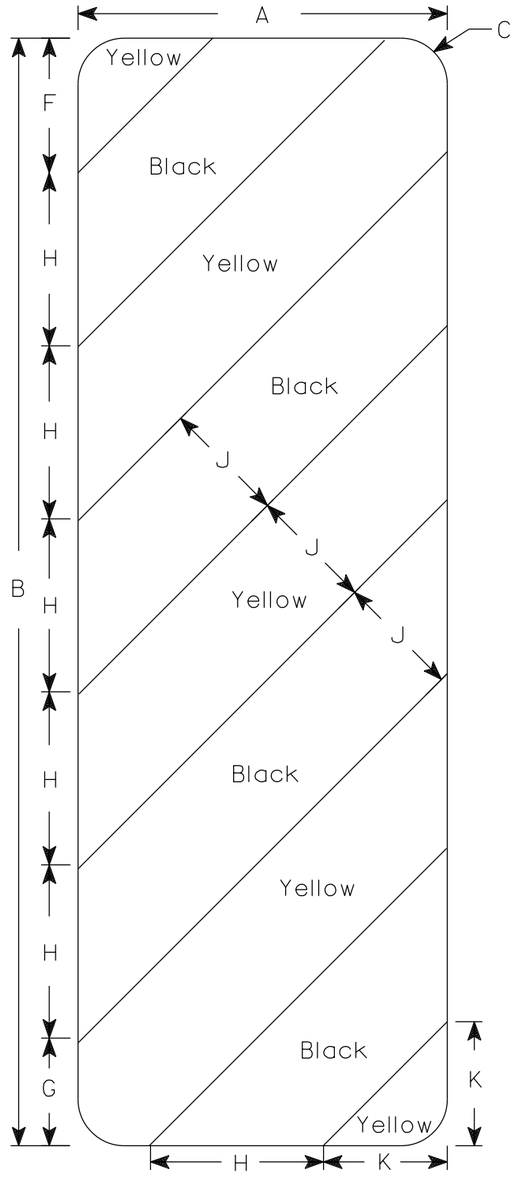
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 26 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

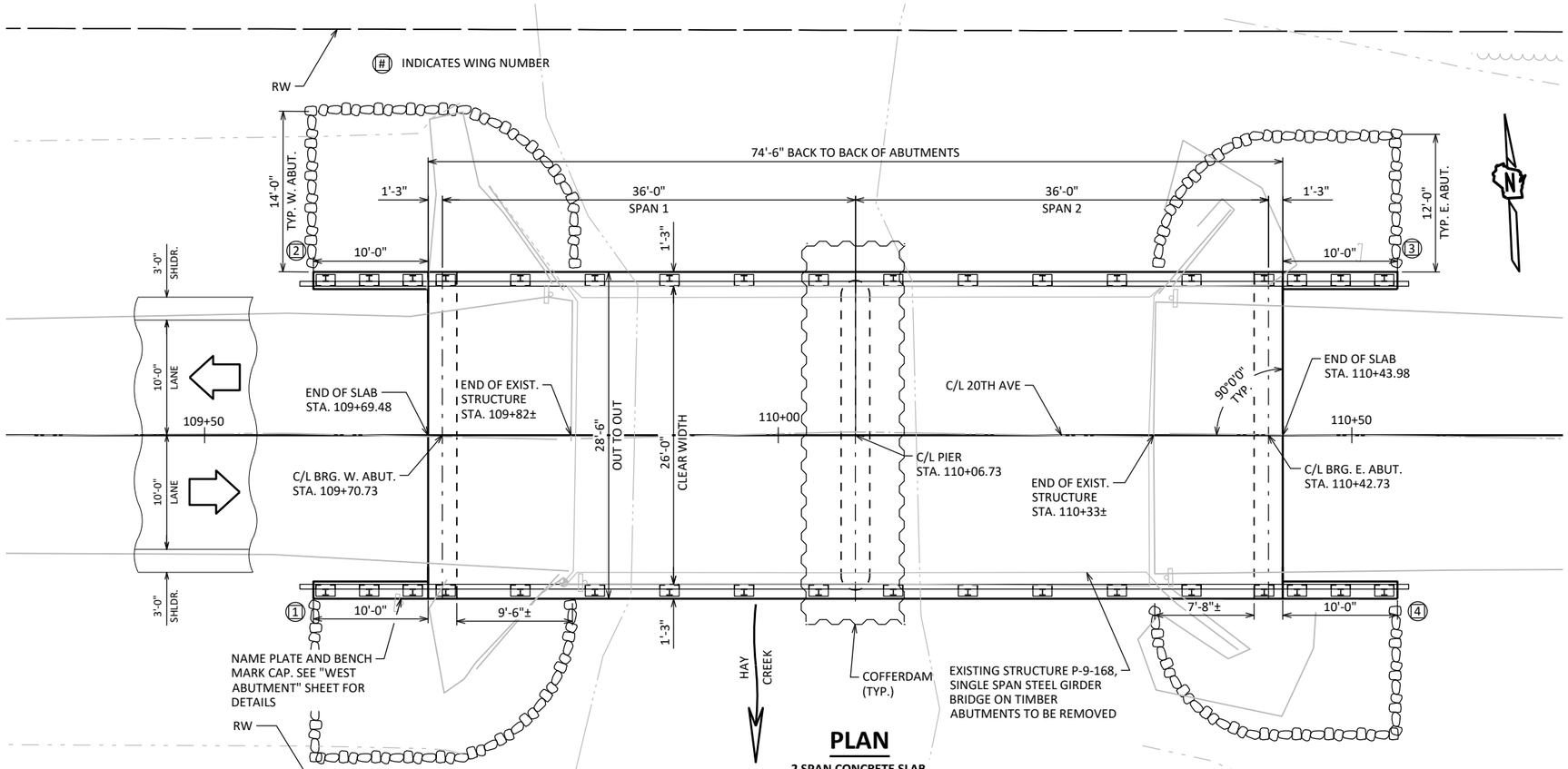
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

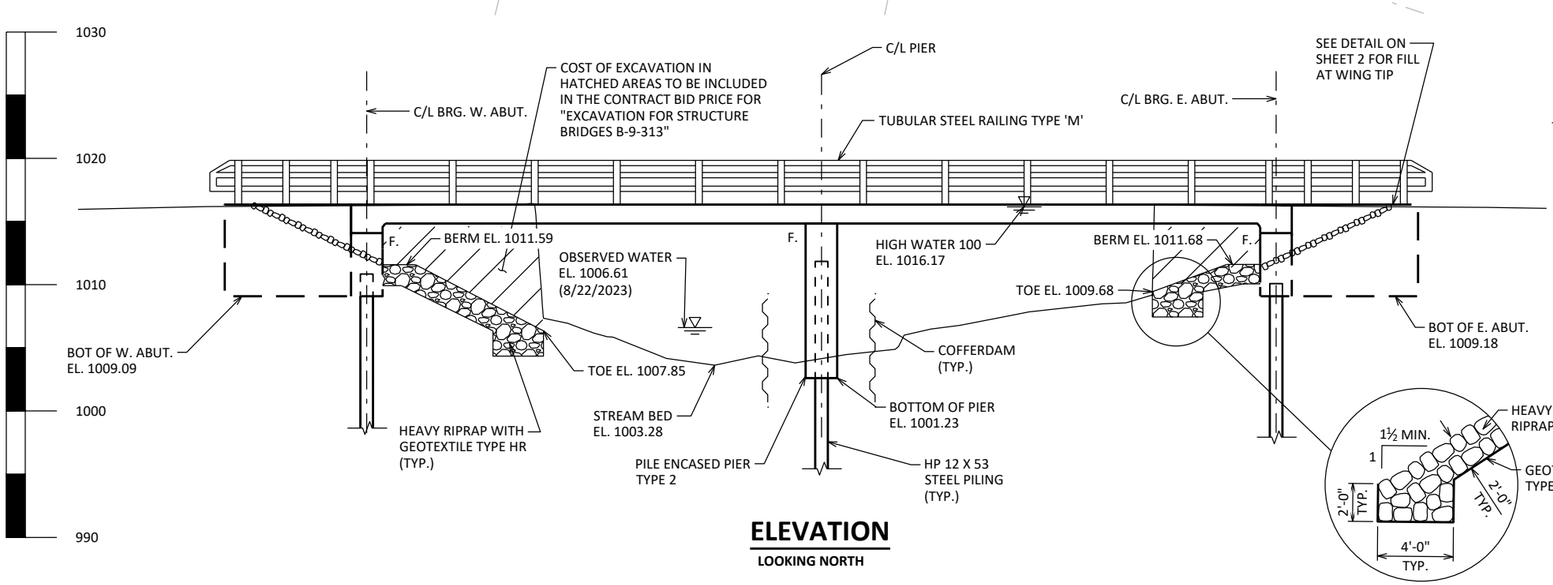
STATE PROJECT NUMBER

7861-00-71



PLAN

2 SPAN CONCRETE SLAB



ELEVATION

LOOKING NORTH

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.12
OPERATING RATING: RF = 1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
- SUPERSTRUCTURE — f'_c = 4,000 PSI
- ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
- GRADE 60 — f_y = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12X53 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
W. ABUT. ESTIMATED 55'-0" LONG.
E. ABUT. ESTIMATED 50'-0" LONG.

PIER TO BE SUPPORTED ON HP 12X53 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 60'-0" LONG.

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

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 4330 C.F.S.
V_{100}= 7.3 F.P.S.
HW_{100}= EL. 1016.17
WATERWAY AREA = 511 SQ. FT.
DRAINAGE AREA = 20.9 SQ. MI.
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 937 C.F.S.
V_2= 3.41 F.P.S.
HW_2= EL. 1011.32

ROADWAY OVERTOPPING

FREQUENCY = 36 YEARS
Q_{36} = 3303 C.F.S.
HW_{36} = EL. 1013.92

TRAFFIC DATA

20TH AVE:

ADT = 225 (2045)
R.D.S. = 40 MPH

STRUCTURE DESIGN CONTACTS:

CONSULTANT: MATT BUCKLI 608-443-0441
BUREAU OF STRUCTURES: AARON BONK 608-261-0261

LIST OF DRAWINGS:

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/19/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-9-313

20TH AVE OVER HAY CREEK

COUNTY	TOWN
CHIPPEWA	EDSON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	JLA	DESIGNED CK'D	RCP	DRAWN BY	JLA	PLANS CK'D	RCP

WISCONSIN MATTHEW BUCKLI E-39849 MADISON WI PROFESSIONAL ENGINEER 2/19/25

GENERAL PLAN

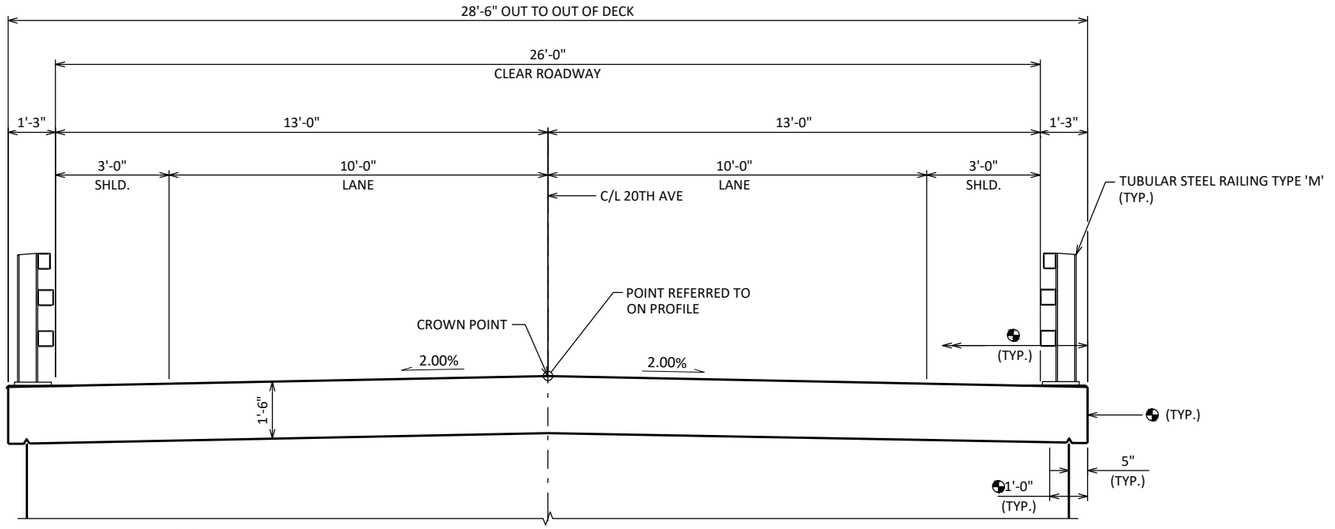
SHEET 1 OF 11
28

I.D. DATE:

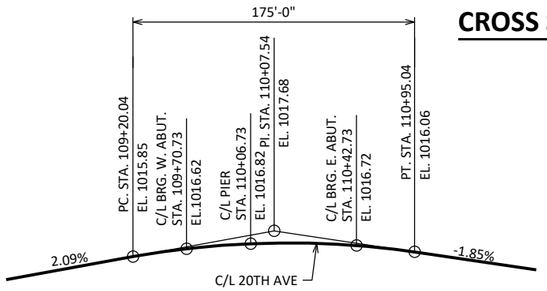
8 8

STATE PROJECT NUMBER

7861-00-71

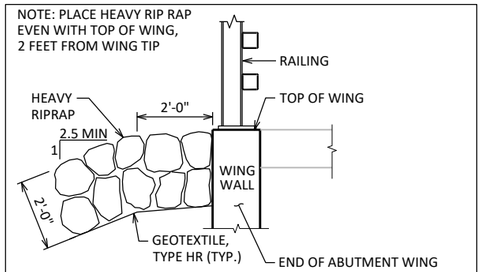


CROSS SECTION THRU BRIDGE



PROFILE GRADE LINE

LOOKING UPSTATION



TYPICAL FILL SECTION AT WING TIPS

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	PIER	E. ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-9-168	EACH	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-9-313	EACH	---	---	---	---	1
206.5001	COFFERDAMS B-9-313	EACH	---	---	1	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	110	---	110	220
502.0100	CONCRETE MASONRY BRIDGES	CY	122.3	27.8	34.5	27.8	213
502.3200	PROTECTIVE SURFACE TREATMENT	SY	278	10	---	10	298
502.9000.S	UNDERWATER SUBSTRUCTURE INSPECTION B-9-313	EACH	---	---	1	---	1
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	1660	1630	1660	4950
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	27280	1350	---	1350	29980
513.4061	RAILING TUBULAR TYPE M	LF	194	---	---	---	194
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	9	---	9	18
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	---	220	300	200	720
606.0300	RIPRAP HEAVY	CY	---	80	---	64	144
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	63	---	61	124
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	28	---	28	56
645.0120	GEOTEXTILE TYPE HR	SY	---	180	---	150	330
	NON-BID ITEMS						
	FILLER	SIZE	---	---	---	---	½", ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-313" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIER.

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

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

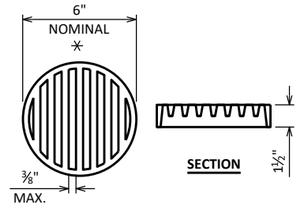
THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

◈ PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE EXPOSED TOP OF SLAB, EDGE OF SLAB, OUTSIDE 1'-0" OF BOTTOM OF SLAB, TOP AND EXPOSED EXTERIOR FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

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

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

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATION.



RODENT SHIELD DETAIL

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

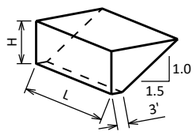
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

TYPICAL SECTION THRU ABUTMENT

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

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



ABUTMENT BACKFILL DIAGRAM

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D RCP

CROSS SECTION , QUANTITIES, AND NOTES

SHEET 2
29

8

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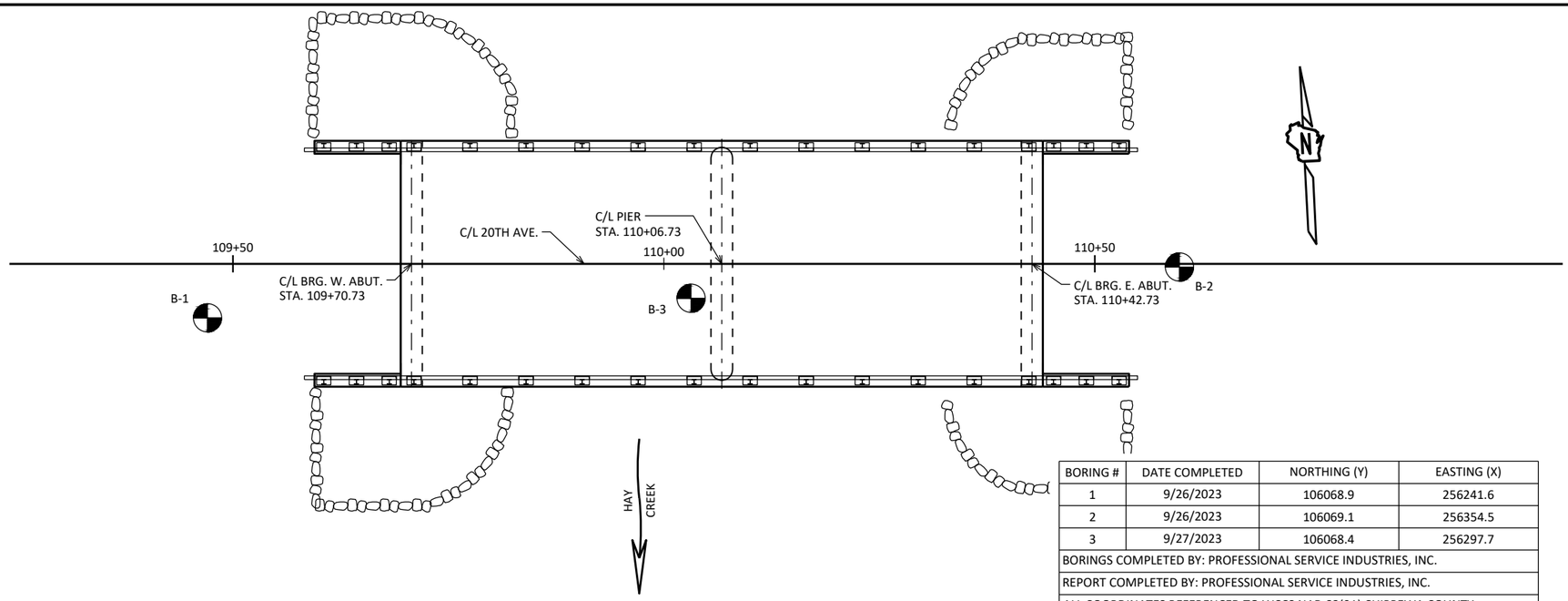
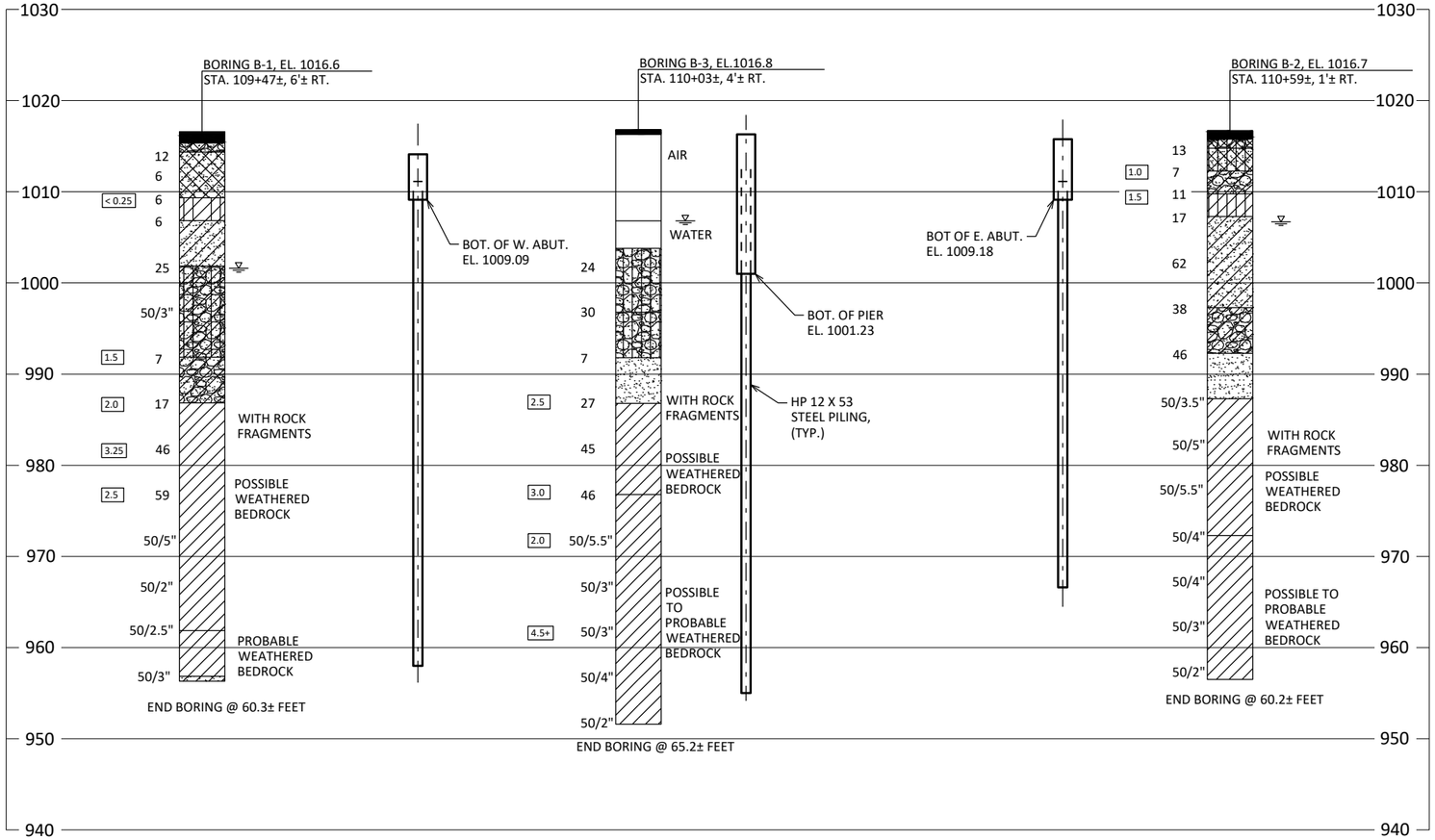


BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/26/2023	106068.9	256241.6
2	9/26/2023	106069.1	256354.5
3	9/27/2023	106068.4	256297.7
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC.			
REPORT COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY			



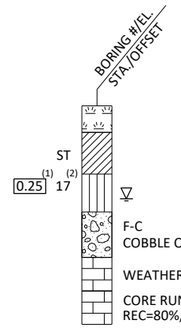
STATE PROJECT NUMBER

7861-00-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D MJB

SUBSURFACE EXPLORATION

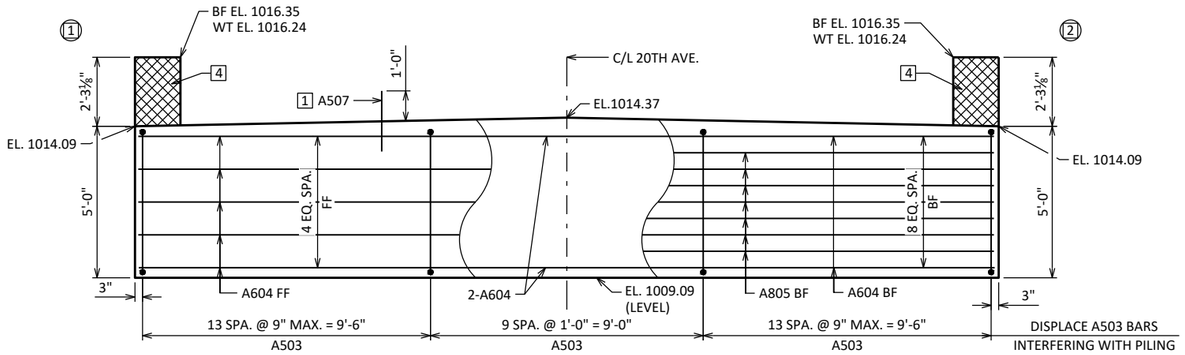
SHEET 3
30

8

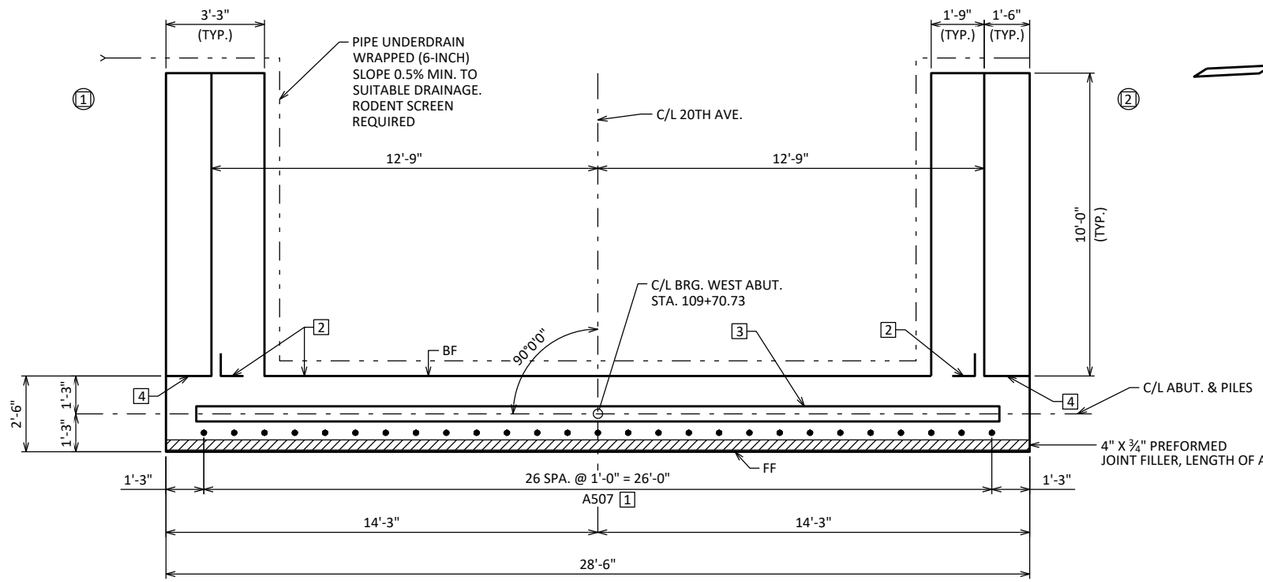
8

STATE PROJECT NUMBER

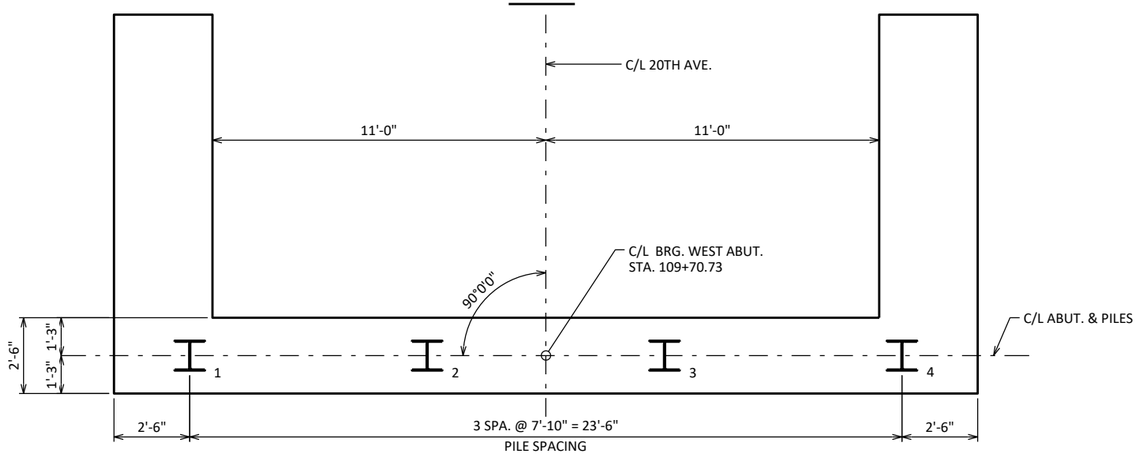
7861-00-71



ELEVATION
(LOOKING WEST)



PLAN



PILE PLAN

NOTES

FOR PILE SPLICE DETAIL SEE SHEET 5

FILL/EXCAVATE TO BOTTOM OF ABUTMENT EL. 1009.09 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL, PIPE UNDERDRAIN, AND RODENT SHIELD DETAILS.

ABUTMENT SUPPORTED ON HP 12 X 53 PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 55' LONG.

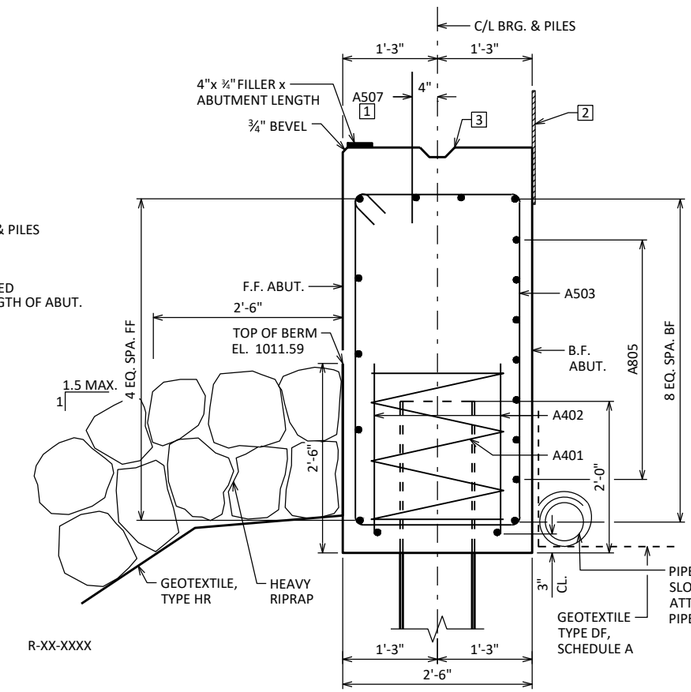
1. A507 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY. TERMINATE 1'-0" FROM ABUTMENT ENDS.
4. ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

FF - FRONT FACE

BF - BACK FACE

WT - WING TIP

(#) INDICATES WING NUMBER



R-XX-XXXX

SECTION THRU BODY

ALL HORIZONTAL BARS NOT LABELED ARE A604 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D RCP

WEST ABUTMENT

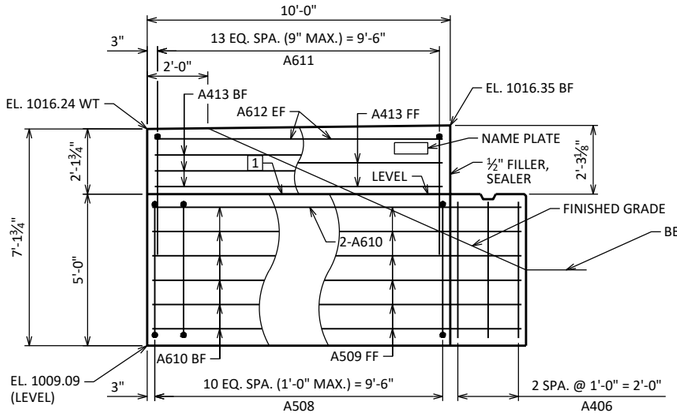
SHEET 4

8

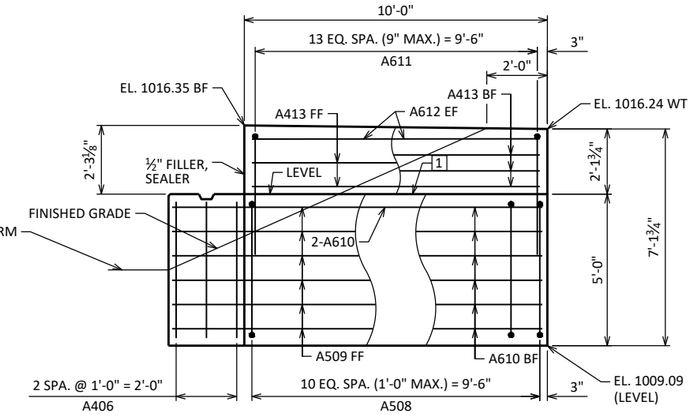
8

STATE PROJECT NUMBER

7861-00-71



WING 1 ELEVATION



WING 2 ELEVATION

BILL OF BARS

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

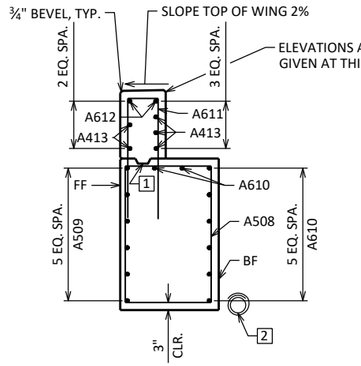
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
A401		4	28'-0"	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
A402		8	2'-3"			ABUTMENT BODY - 2 PER PILE	VERT
A503		36	13'-8"	X		ABUTMENT BODY - STIRRUPS	VERT
A604		11	28'-2"			ABUTMENT BODY - FF, TOP, BTM	HORIZ
A805		7	30'-5"	X		ABUTMENT BODY - BF	HORIZ
A406		6	4'-7"			ABUTMENT BODY - AT ENDS	VERT
A507	X	27	2'-0"			ABUTMENT BODY - DOWELS	VERT
A508	X	22	15'-4"	X		WING WALL - BODY	VERT
A509	X	12	12'-2"			WING WALL - FF OF BODY	HORIZ
A610	X	16	11'-11"			WING WALL - BODY	HORIZ
A611	X	28	9'-0"	X		WING WALL - TOP	VERT
A612	X	4	9'-7"			WING WALL - TOP	HORIZ
A413	X	10	9'-7"			WING WALL - TOP	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

RMW - RUBBERIZED MEMBRANE WATERPROOFING
FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

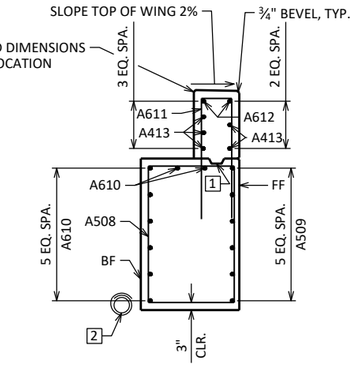
1 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". 18" RMW AT BF AND ¾" "V" GROOVE AT FF IF JOINT IS USED.

2 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.



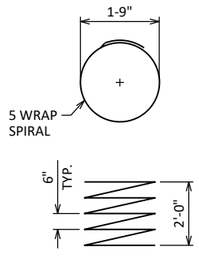
WING 1 SECTION

SEE SHEET 11 FOR RAIL POST ANCHORS

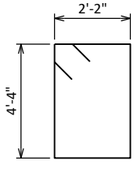


WING 2 SECTION

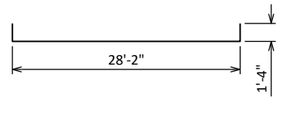
SEE SHEET 11 FOR RAIL POST ANCHORS



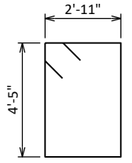
A401



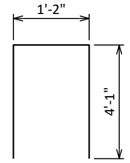
A503



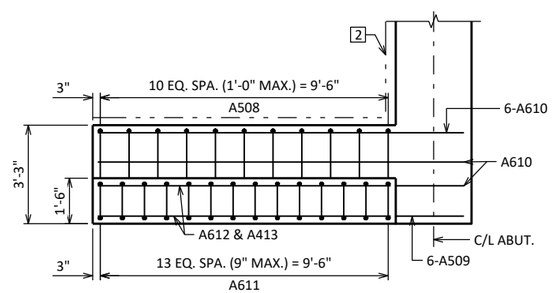
A805



A508

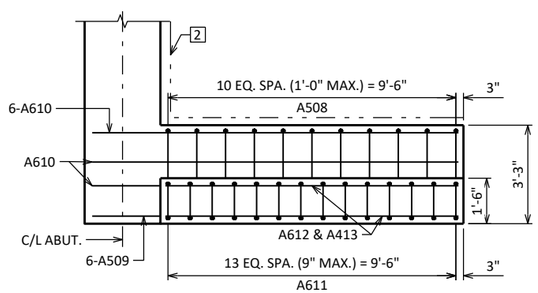


A611



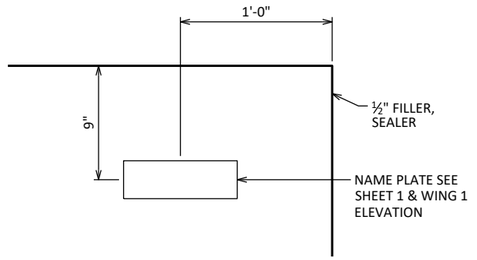
WING 1 PLAN

SPACE A611 TO MISS ANCHORS FOR RAIL POSTS



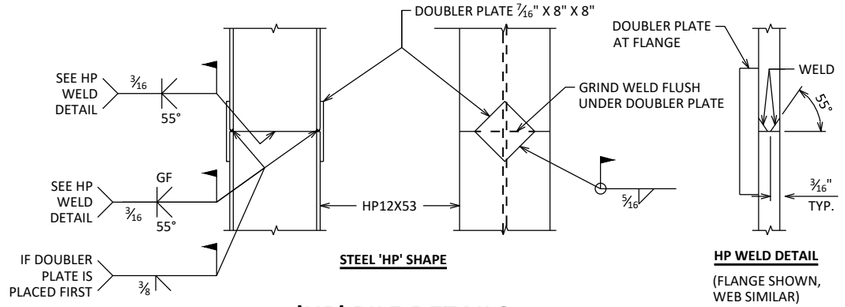
WING 2 PLAN

SPACE A611 TO MISS ANCHORS FOR RAIL POSTS



NAME PLATE LOCATION

ON WING 1



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D RCP

WEST ABUTMENT DETAILS

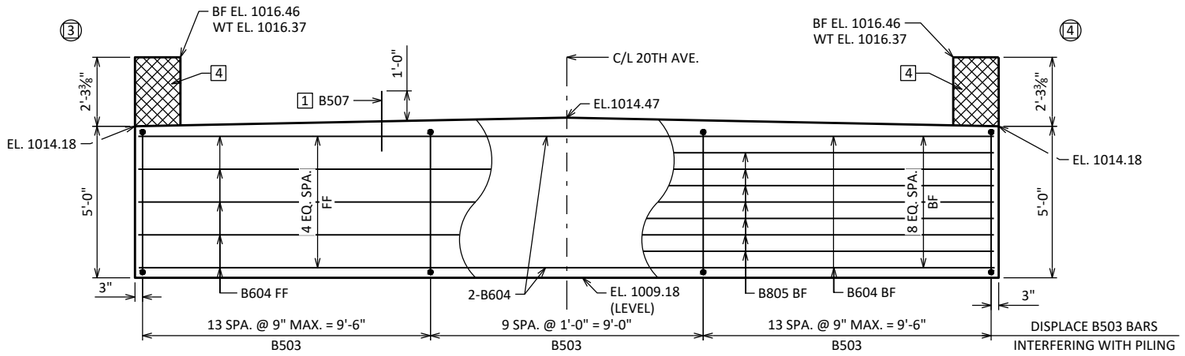
SHEET 5
32

8

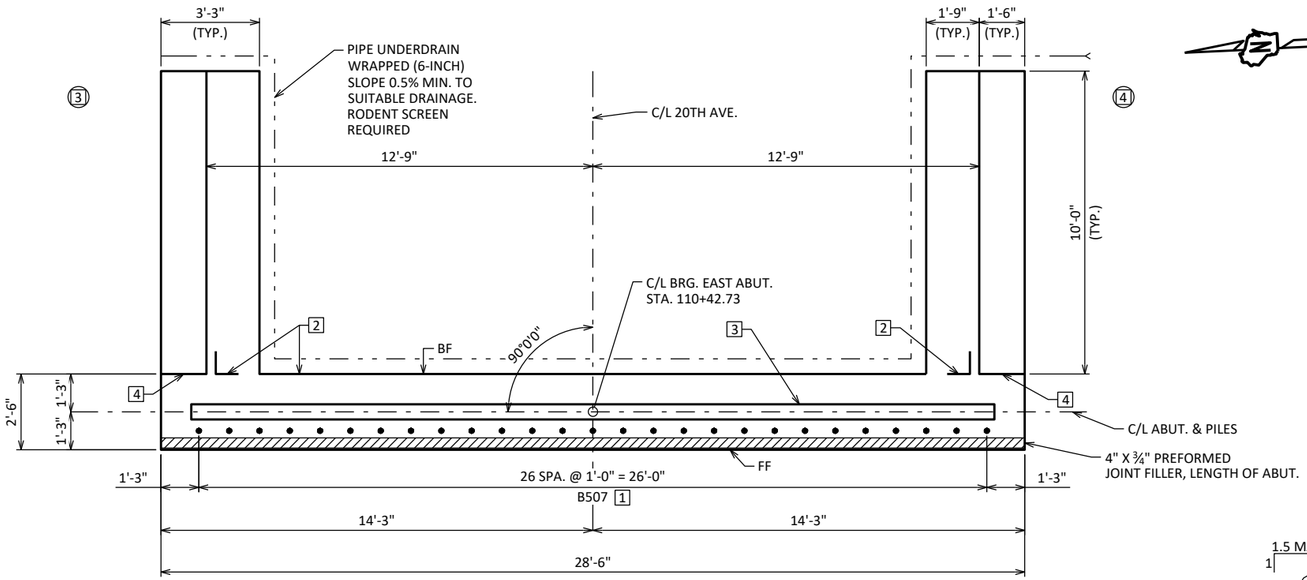
8

STATE PROJECT NUMBER

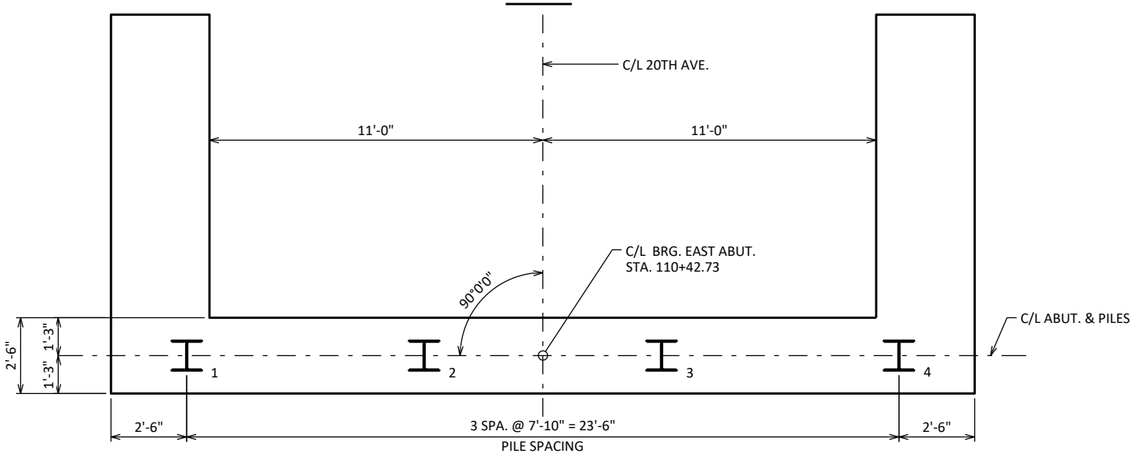
7861-00-71



ELEVATION
(LOOKING EAST)



PLAN



PILE PLAN

NOTES

FOR PILE SPLICE DETAIL SEE SHEET 7

FILL/EXCAVATE TO BOTTOM OF ABUTMENT EL. 1009.18 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL, PIPE UNDERDRAIN, AND RODENT SHIELD DETAILS.

ABUTMENT SUPPORTED ON HP 12 X 53 PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 50' LONG.

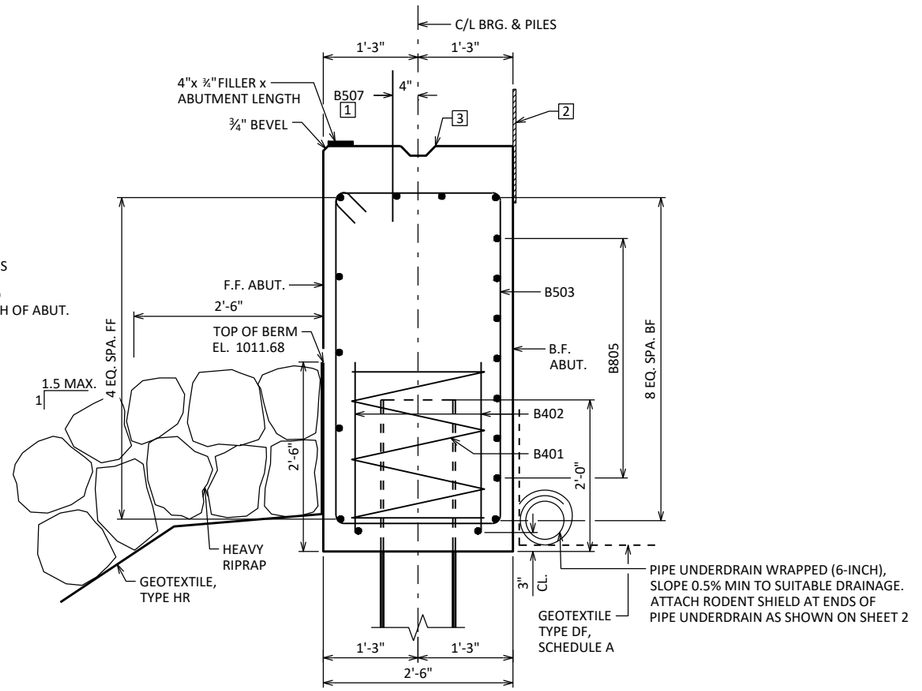
1. B507 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY. TERMINATE 1'-0" FROM ABUTMENT ENDS.
4. ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

FF - FRONT FACE

BF - BACK FACE

WT - WING TIP

(#) INDICATES WING NUMBER



SECTION THRU BODY

ALL HORIZONTAL BARS NOT LABELED ARE B604 BARS

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STRUCTURE B-9-313

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EAST ABUTMENT

SHEET 6
33

8

8

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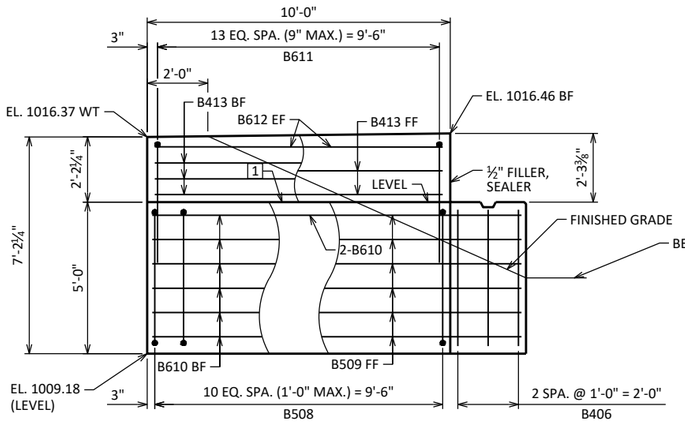
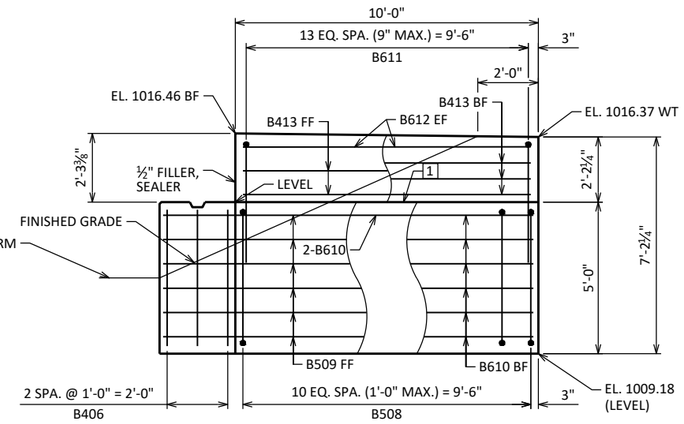
7861-00-71



WING 3 ELEVATION



WING 4 ELEVATION

BILL OF BARS

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

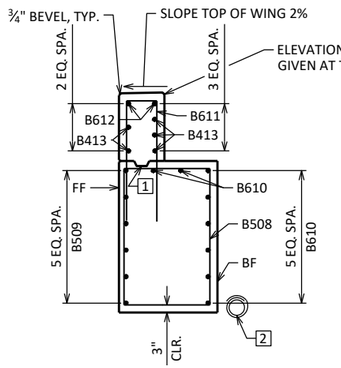
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
B401		4	28'-0"	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
B402		8	2'-3"			ABUTMENT BODY - 2 PER PILE	VERT
B503		36	13'-8"	X		ABUTMENT BODY - STIRRUPS	VERT
B604		11	28'-2"			ABUTMENT BODY - FF, TOP, BTM	HORIZ
B805		7	30'-5"	X		ABUTMENT BODY - BF	HORIZ
B406		6	4'-7"			ABUTMENT BODY - AT ENDS	VERT
B507	X	27	2'-0"			ABUTMENT BODY - DOWELS	VERT
B508	X	22	15'-4"	X		WING WALL - BODY	VERT
B509	X	12	12'-2"			WING WALL - FF OF BODY	HORIZ
B610	X	16	11'-11"			WING WALL - BODY	HORIZ
B611	X	28	9'-0"	X		WING WALL - TOP	VERT
B612	X	4	9'-7"			WING WALL - TOP	HORIZ
B413	X	10	9'-7"			WING WALL - TOP	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

RMW - RUBBERIZED MEMBRANE WATERPROOFING
FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

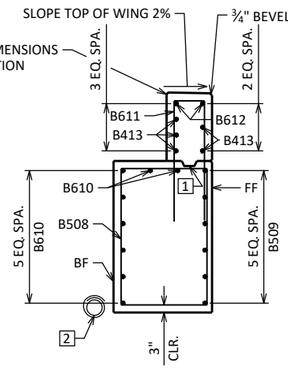
1 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". 18" RMW AT BF AND ¾" "V" GROOVE AT FF IF JOINT IS USED.

2 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED



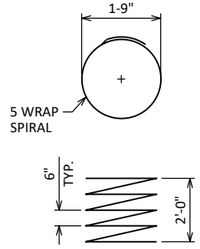
WING 3 SECTION

SEE SHEET 11 FOR RAIL POST ANCHORS

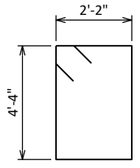


WING 4 SECTION

SEE SHEET 11 FOR RAIL POST ANCHORS



B401



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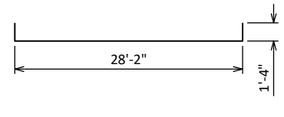

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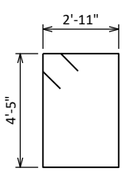

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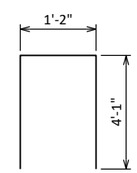

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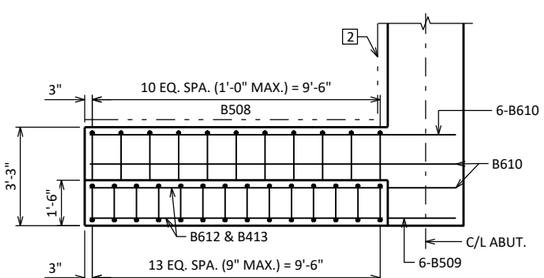
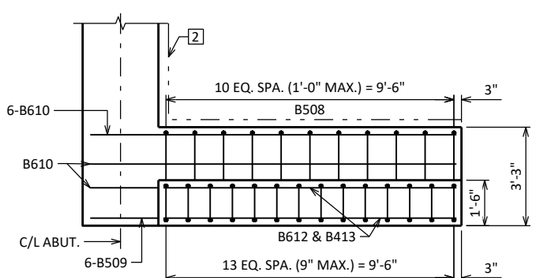


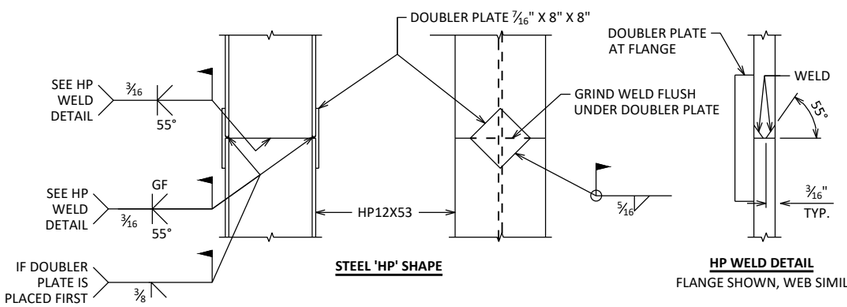
WING 3 PLAN

SPACE B611 TO MISS ANCHORS FOR RAIL POSTS



WING 4 PLAN

SPACE B611 TO MISS ANCHORS FOR RAIL POSTS



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

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EAST ABUTMENT DETAILS

SHEET 7
34

8

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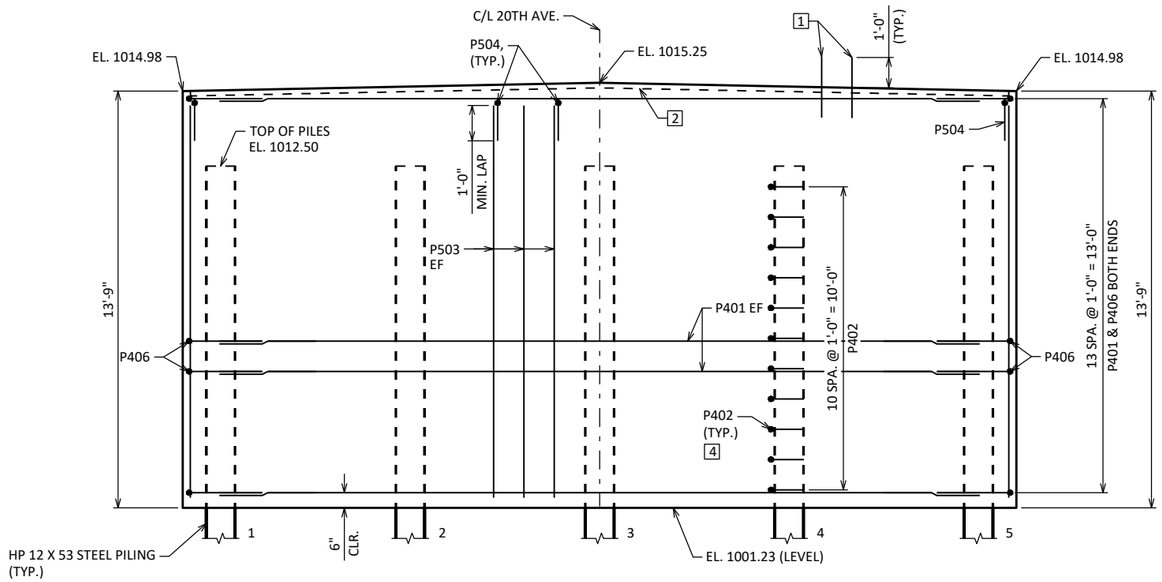


ELEVATION

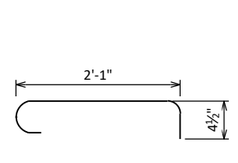
(LOOKING EAST)

BILL OF BARS

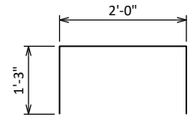
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
P401		28	25'-0"			SHAFT	HORIZ
P402		55	2'-11"	X		SHAFT - TIES	HORIZ
P503		60	13'-1"			SHAFT	VERT
P504		13	4'-3"	X		SHAFT AT TOP	VERT
P505		27	2'-0"			SHAFT AT DOWELS	VERT
P406		28	6'-1"	X		SHAFT AT ENDS	HORIZ

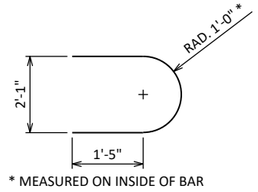
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.



P402

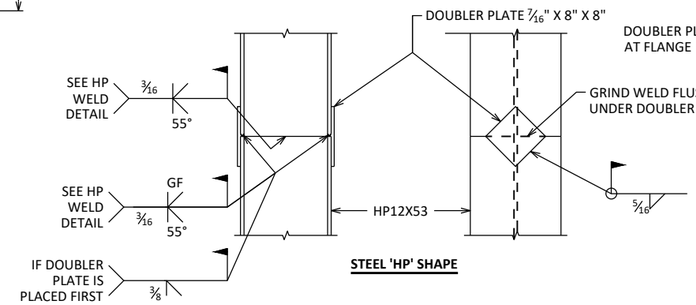


P504

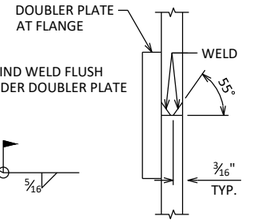


* MEASURED ON INSIDE OF BAR

P406

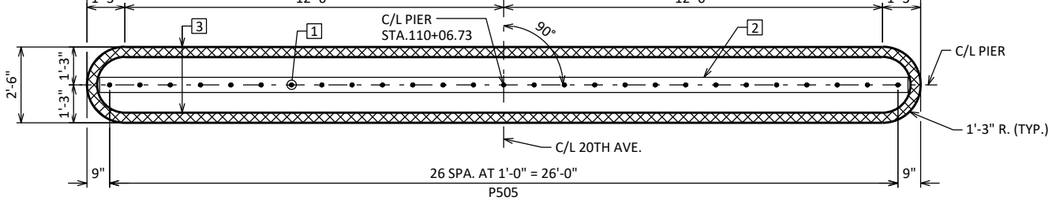


STEEL 'HP' SHAPE

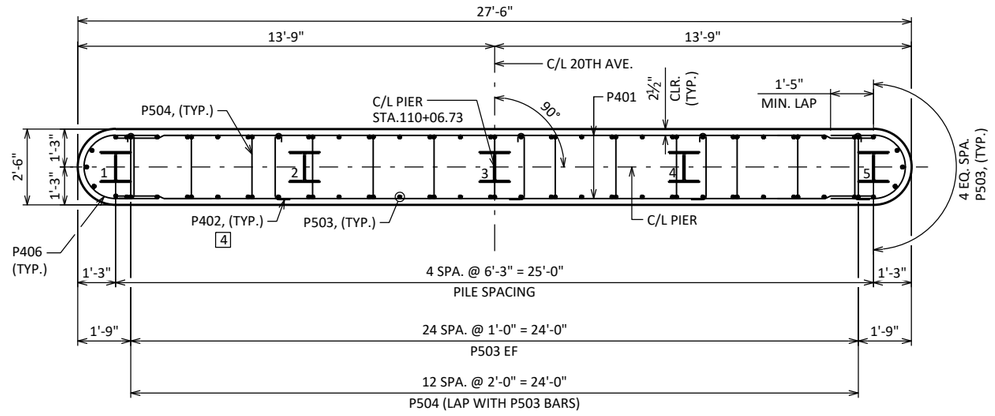


HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

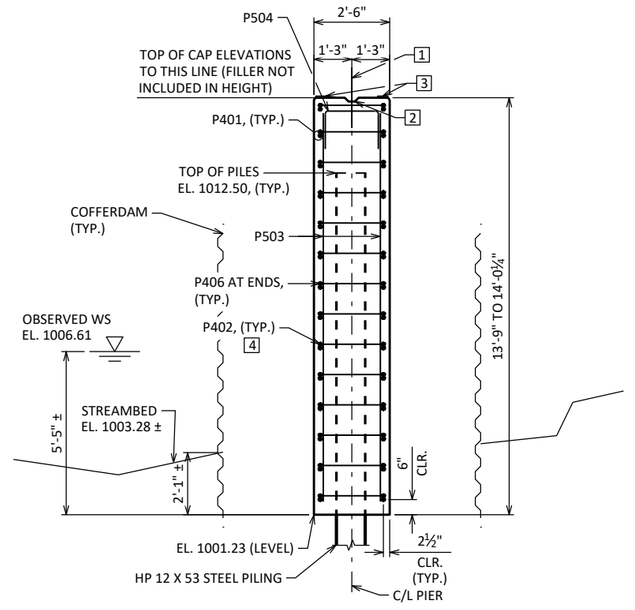
'HP' PILE DETAILS



PLAN



PILE AND REINFORCEMENT PLAN



TYPICAL SECTION THRU PIER

NOTES

PIER SUPPORTED ON HP 12 X 53 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 60'-0" LONG.

AT PIER, COFFERDAM REQUIRED. CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET DEPTH, UNLESS APPROVED OTHERWISE.

1. P505 BARS MAY BE PLACED AFTER CONCRETE IS PLACED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
2. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY. TERMINATE 6" FROM PIER ENDS.
3. 4" X ¾" PREFORMED JOINT FILLER LENGTH OF PIER.
4. P402 PLACED ADJACENT TO EACH PILE AT 1'-0" VERTICAL CENTERS. TIE TO THE NEAREST VERTICAL #5 BAR. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

EF - EACH FACE

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STRUCTURE B-9-313

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PIER

SHEET 8

8

8

STATE PROJECT NUMBER

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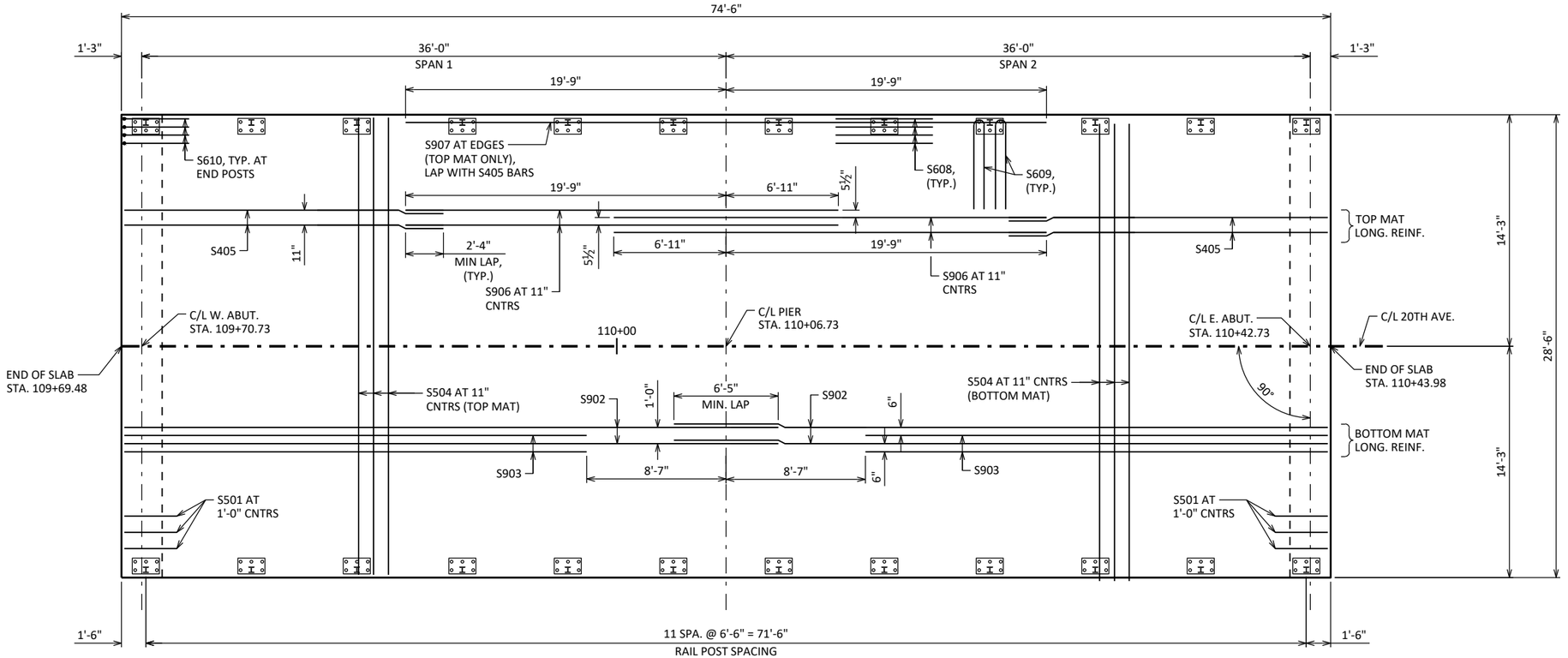
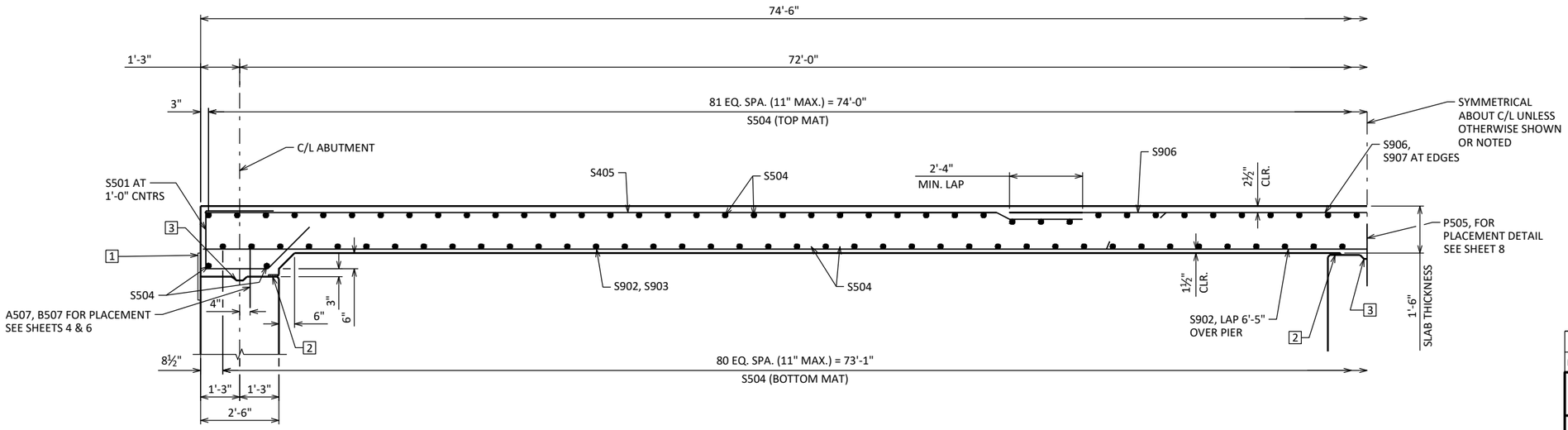


PLAN



PART LONGITUDINAL SECTION

NOTES

1. 18" RUBBERIZED MEMBRANE WATERPROOFING
2. 4" X ¾" PREFORMED JOINT FILLER
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY

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STRUCTURE B-9-313

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SUPERSTRUCTURE

SHEET 9
36

8

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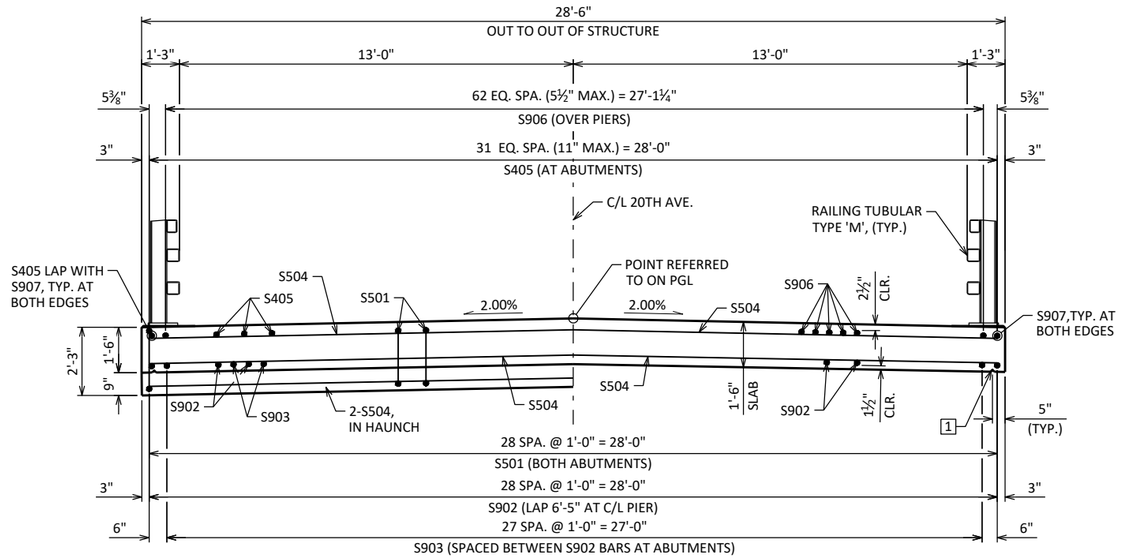


CROSS SECTION THRU ROADWAY

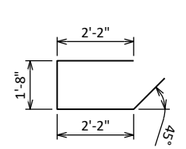
(LOOKING EAST)

BILL OF BARS

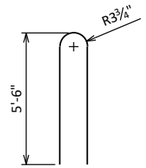
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
S501	X	58	7'-10"	X		SLAB - ABUTMENT TIES	LONGIT
S902	X	58	40'-4"			SLAB - BOTTOM	LONGIT
S903	X	56	28'-6"			SLAB - BOTTOM	LONGIT
S504	X	167	28'-2"			SLAB - TOP & BOTTOM	TRANS
S405	X	64	19'-8"			SLAB - TOP	LONGIT
S906	X	63	26'-8"			SLAB - TOP	LONGIT
S907	X	2	39'-6"			SLAB - TOP AT EDGES	LONGIT
S608	X	80	6'-0"			RAILING ANCHORS	LONGIT
S609	X	48	12'-0"	X		RAILING ANCHORS	TRANS
S610	X	16	4'-8"	X		RAILING ANCHORS AT CORNERS	LONGIT

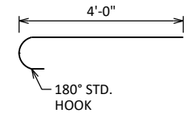
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.



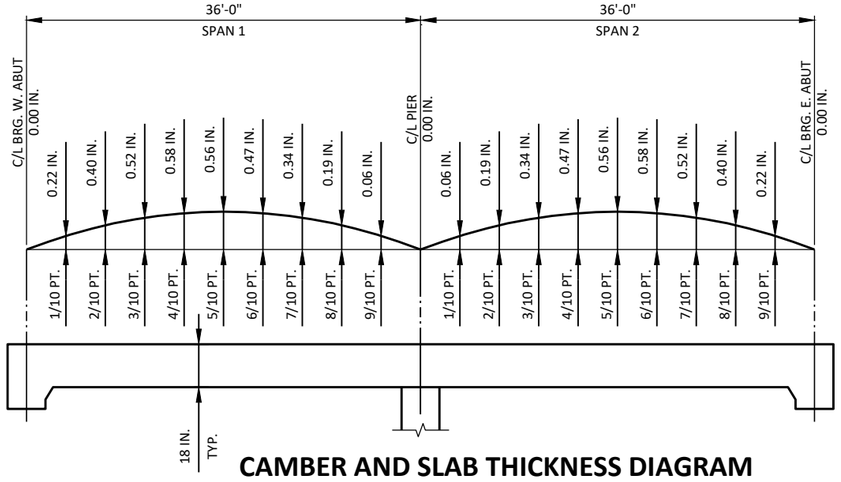
S501



S609



S610



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTION.

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

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB AND CROWN FOLLOW THIS PROCEDURE:

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

EQUALS = TOP OF SLAB FALSEWORK ELEVATION

NOTES

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

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

[1] ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V-GROOVES ARE REQUIRED.

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS

SPAN PT.	NORTH EDGE STATION	NORTH EDGE ELEVATION	CENTERLINE/CROWN STATION	CENTERLINE/CROWN ELEVATION	SOUTH EDGE STATION	SOUTH EDGE ELEVATION
W. ABUT.	109 + 70.73	1016.34	109 + 70.73	1016.62	109 + 70.73	1016.34
0.1	109 + 74.33	1016.37	109 + 74.33	1016.65	109 + 74.33	1016.37
0.2	109 + 77.93	1016.40	109 + 77.93	1016.68	109 + 77.93	1016.40
0.3	109 + 81.53	1016.42	109 + 81.53	1016.71	109 + 81.53	1016.42
0.4	109 + 85.13	1016.45	109 + 85.13	1016.73	109 + 85.13	1016.45
0.5	109 + 88.73	1016.47	109 + 88.73	1016.75	109 + 88.73	1016.47
0.6	109 + 92.33	1016.49	109 + 92.33	1016.77	109 + 92.33	1016.49
0.7	109 + 95.93	1016.50	109 + 95.93	1016.79	109 + 95.93	1016.50
0.8	109 + 99.53	1016.52	109 + 99.53	1016.80	109 + 99.53	1016.52
0.9	110 + 03.13	1016.52	110 + 03.13	1016.81	110 + 03.13	1016.52
PIER	110 + 06.73	1016.53	110 + 06.73	1016.82	110 + 06.73	1016.53
0.1	110 + 10.33	1016.53	110 + 10.33	1016.82	110 + 10.33	1016.53
0.2	110 + 13.93	1016.53	110 + 13.93	1016.82	110 + 13.93	1016.53
0.3	110 + 17.53	1016.53	110 + 17.53	1016.82	110 + 17.53	1016.53
0.4	110 + 21.13	1016.53	110 + 21.13	1016.81	110 + 21.13	1016.53
0.5	110 + 24.73	1016.52	110 + 24.73	1016.80	110 + 24.73	1016.52
0.6	110 + 28.33	1016.51	110 + 28.33	1016.79	110 + 28.33	1016.51
0.7	110 + 31.93	1016.49	110 + 31.93	1016.78	110 + 31.93	1016.49
0.8	110 + 35.53	1016.48	110 + 35.53	1016.76	110 + 35.53	1016.48
0.9	110 + 39.13	1016.46	110 + 39.13	1016.74	110 + 39.13	1016.46
E. ABUT.	110 + 42.73	1016.43	110 + 42.73	1016.72	110 + 42.73	1016.43

SURVEY TOP OF SLAB ELEVATIONS

	C/L BRG. WEST ABUTMENT	5/10 PT.	C/L PIER	5/10 PT.	C/L BRG. EAST ABUTMENT
NORTH EDGE OF SLAB					
C/L 20TH AVE / CROWN					
SOUTH EDGE OF SLAB					

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIER, AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D RCP

SUPERSTRUCTURE DETAILS

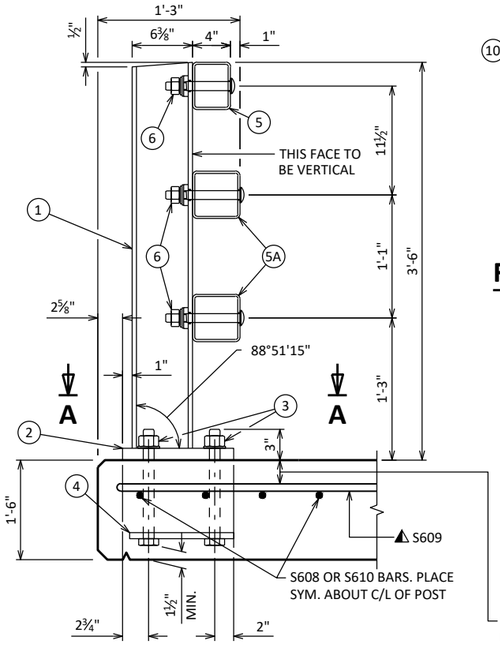
SHEET 10
37

8

8

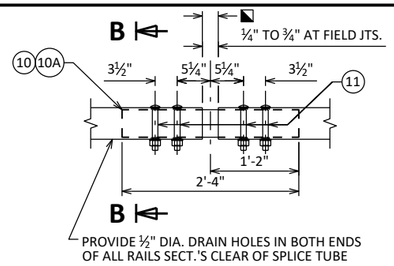
STATE PROJECT NUMBER

7861-00-71

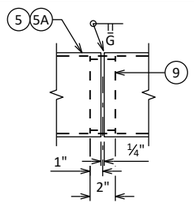


SECTION THRU RAILING ON DECK

PLACE BELOW TOP MAT OF SLAB REINFORCEMENT

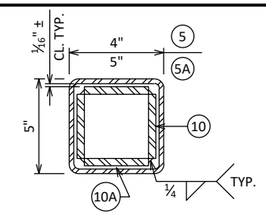


FIELD ERECTION JOINT DETAIL

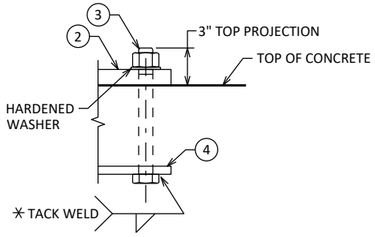


SHOP RAIL SPLICE DETAIL

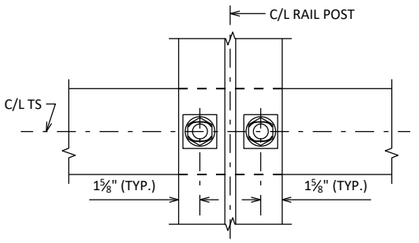
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



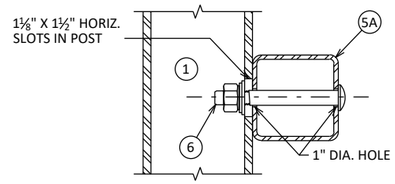
SECTION B-B



ANCHOR BOLTS



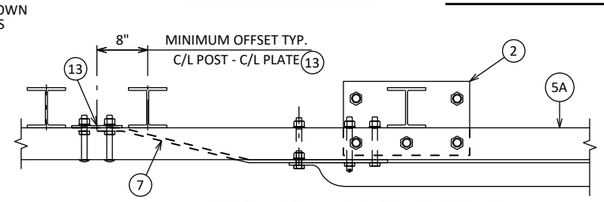
SECTION THRU POST WEB



SECTION THRU RAIL

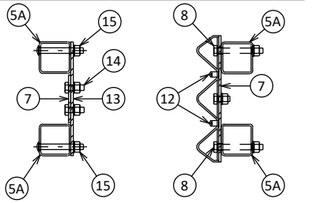
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

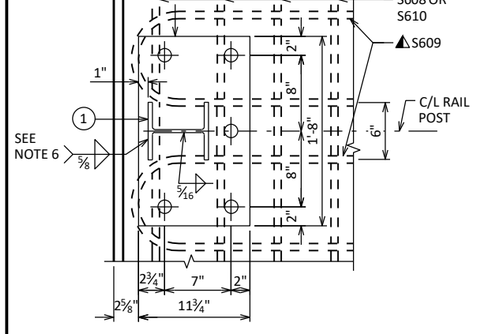


SECTION C-C

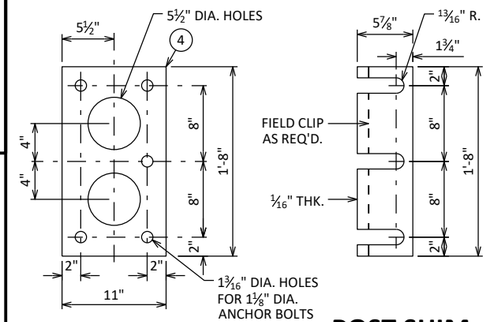
SECTION D-D

DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



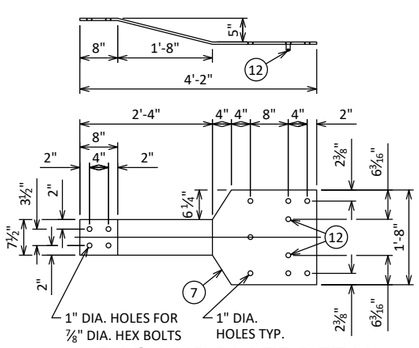
SECTION A-A



ANCHOR PLATE

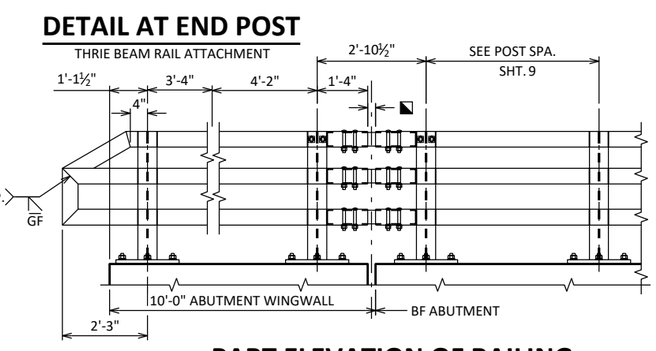
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL

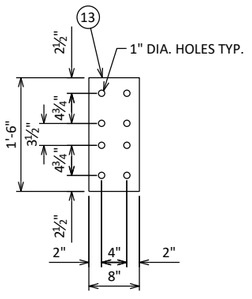


BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

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" X 11¾" X 1'-8" WITH 1⁷⁄₁₆" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
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 AND 1'-3" LONG IN SLAB. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆" X 1⅝" X 1⅝" MIN. 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" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆" X 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND ¹⁵⁄₁₆" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE ¹⁵⁄₁₆" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
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" DIA. 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" 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.
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.

▲ TIE TO TOP MAT OF STEEL.

✳ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

◥ ¼" TO ¾" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-313

DRAWN BY JLA | PLANS CK'D RCP

TUBULAR STEEL RAILING TYPE 'M'

SHEET 11
38

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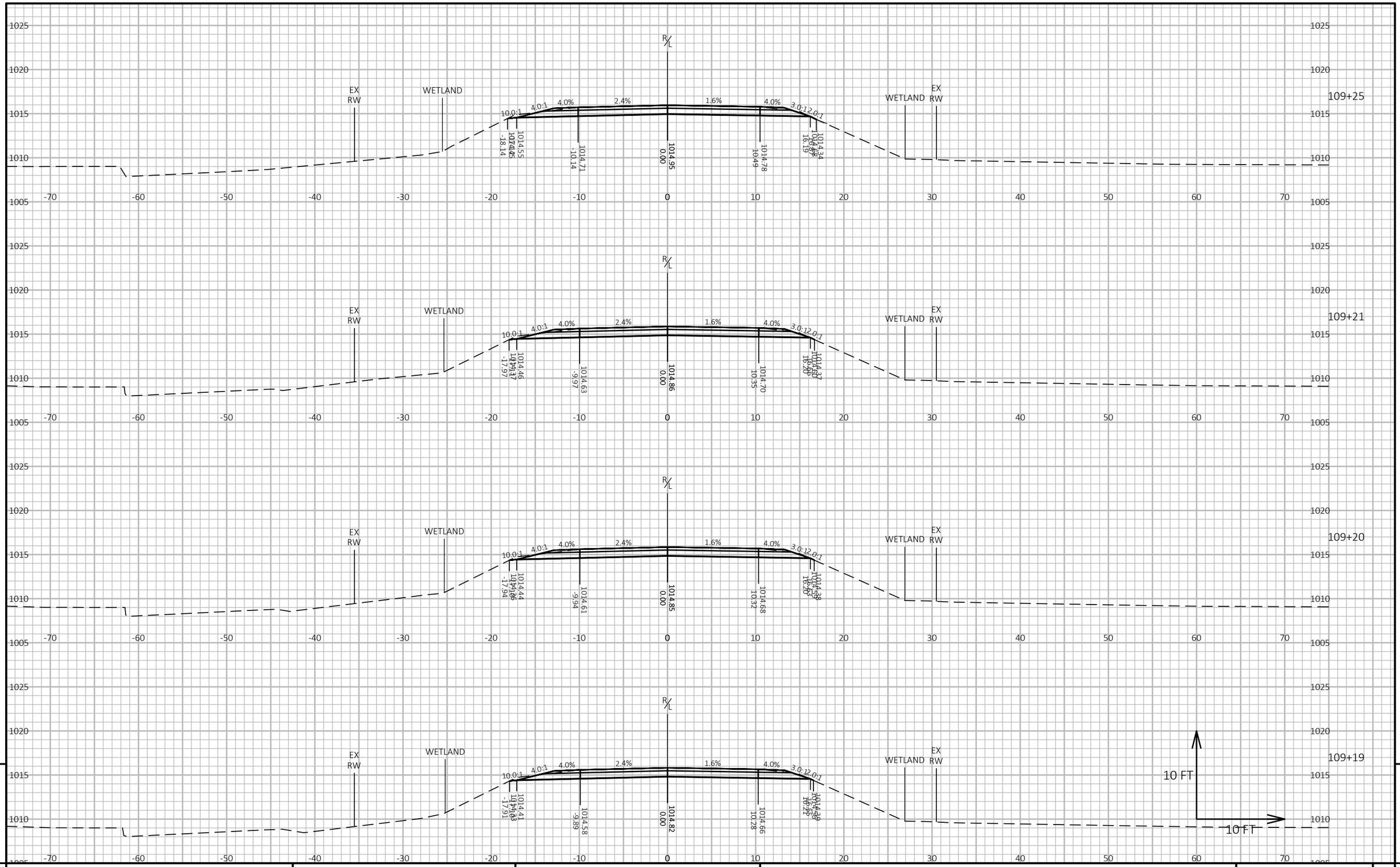

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PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	CROSS SECTIONS: 20TH AVE	SHEET 39	E

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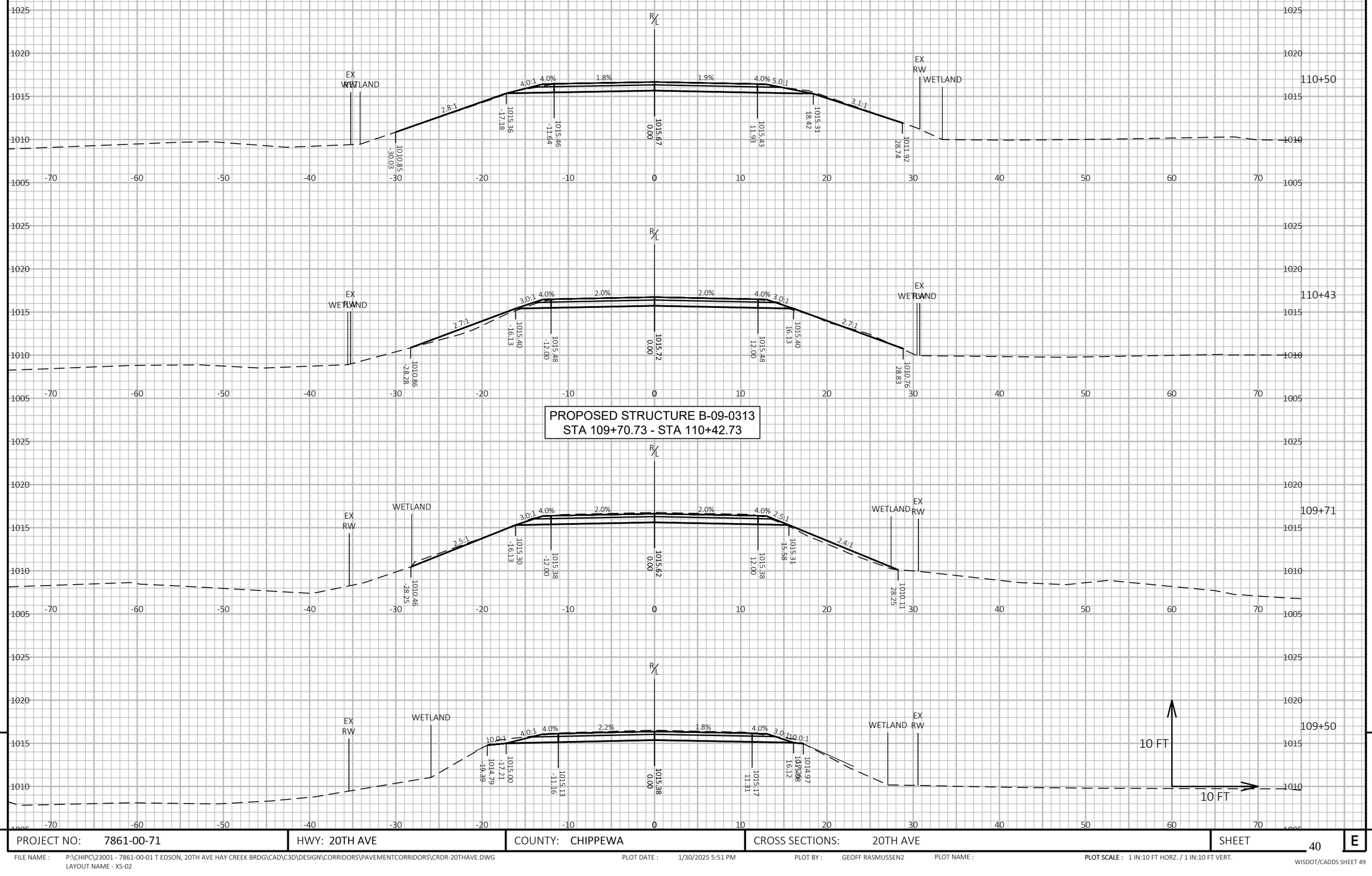
LAYOUT NAME - XS-01

PLOT DATE : 1/30/2025 5:51 PM PLOT BY : GEOFF RASMUSSEN2 PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 7861-00-71	HWY: 20TH AVE	COUNTY: CHIPPEWA	CROSS SECTIONS: 20TH AVE	SHEET 40 E

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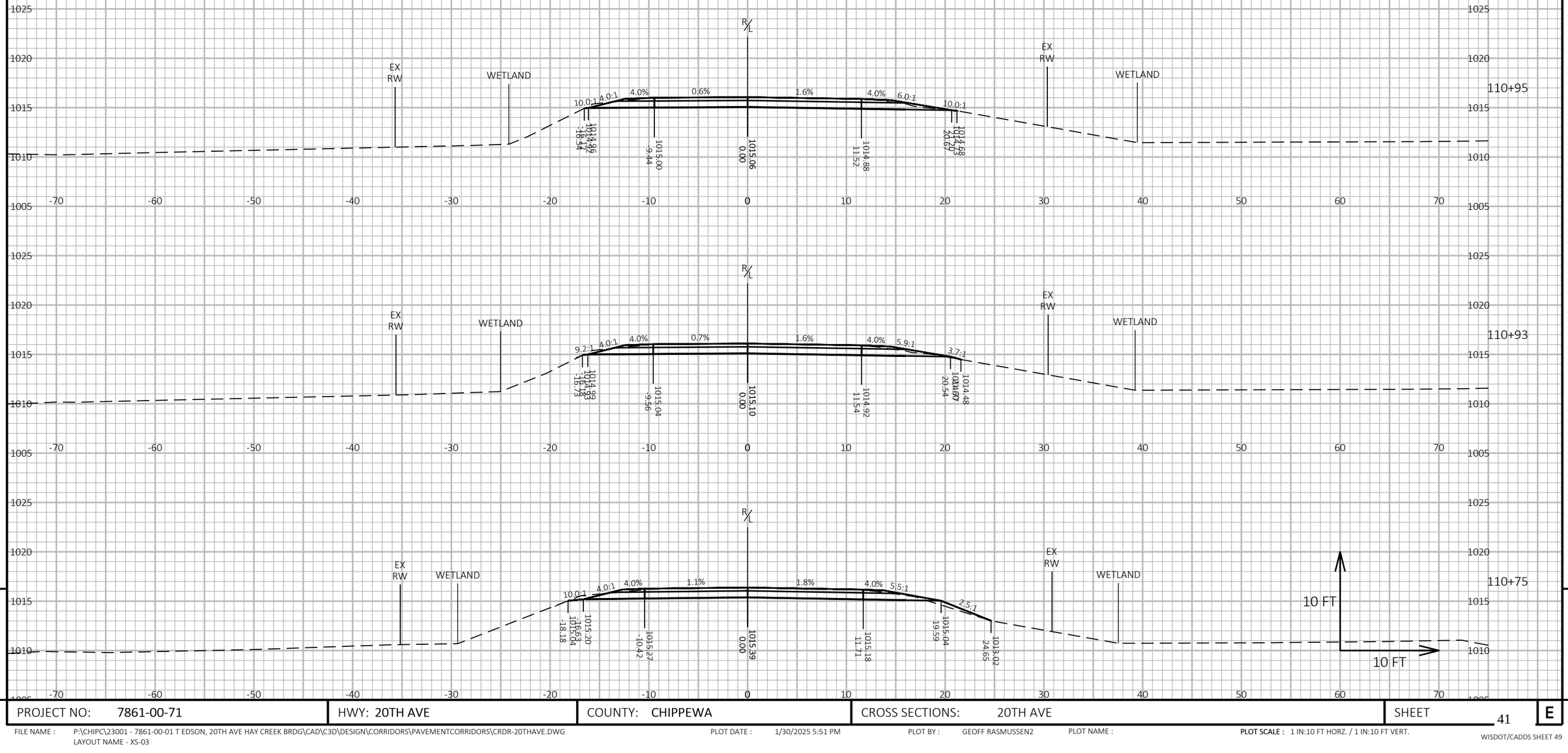
LAYOUT NAME - XS-02

PLOT DATE : 1/30/2025 5:51 PM PLOT BY : GEOFF RASMUSSEN2 PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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LAYOUT NAME - XS-03

PLOT DATE : 1/30/2025 5:51 PM PLOT BY : GEOFF RASMUSSEN2 PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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