

EAU MARCH 2024  
PROJECT ID: 7850-00-71  
WITH: N/A

32

COUNTY: CLARK

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### T YORK, ROMADKA AVENUE

MIDDLE BR ONEILL CREEK BRDG B100399

### LOC STR CLARK COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7850-00-71	WISC 2024300	1

ORDER OF SHEETS

Section No.	Title
1	Title
2	Typical Sections and Details
3	Estimate of Quantities
3	Miscellaneous Quantities
<del>4</del>	<del>Right of Way Plat</del>
5	Plan and Profile (INCLUDES EROSION CONTROL)
6	Standard Detail Drawings
7	Sign Plates
8	Structure Plans
9	Computer Earthwork Data
9	Cross Sections

TOTAL SHEETS = 46

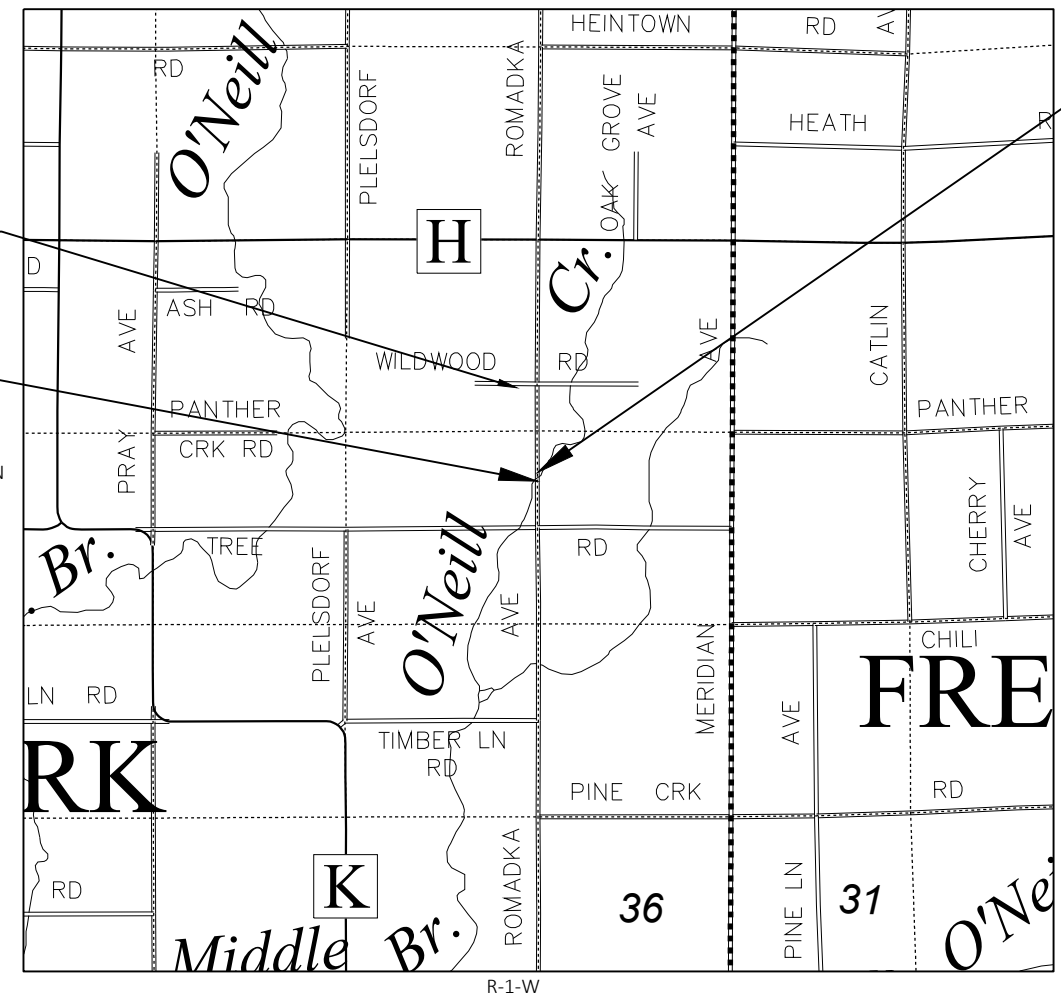
STATE PROJECT NUMBER
<b>7850-00-71</b>



EXISTING STRUCTURE P-10-0185  
PROPOSED STRUCTURE B-10-0399

BEGIN PROJECT  
STA 4+28.75  
Y = 377,995.4597  
X = 721,578.5987

END PROJECT  
STA 5+71.25

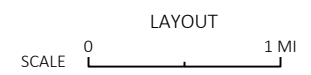


DESIGN DESIGNATION

A.A.D.T. (2024)	=	220
A.A.D.T. (2044)	=	300
D.H.V.	=	57
D.D.	=	60/40
T.	=	5%
DESIGN SPEED	=	40 MPH
ESALS	=	30,000

#### CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE



TOTAL NET LENGTH OF CENTERLINE = 0.015 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CLARK 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.

ACCEPTED FOR  
TOWN OF YORK  
10-19-23  
Date  
*Roger Evenden*  
(Signature and Title of Official)  
Chairman

ORIGINAL PLANS PREPARED BY  
AECOM  
10/10/2023  
DATE: *Jessica Lancelle*  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PREPARED BY  
Surveyor \_\_\_\_\_ AECOM  
Designer \_\_\_\_\_ AECOM  
Project Manager \_\_\_\_\_ TYLER RONGSTAD, PE  
Regional Examiner \_\_\_\_\_ TOU YANG, PE  
Regional Supervisor \_\_\_\_\_ TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT  
DATE: Tyler Rongstad  
(Signature)

E

**GENERAL NOTES:**

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

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.

RIGHT OF WAY INFORMATION, AS SHOWN ON THE PLANS, IS APPROXIMATE.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

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

ROMADKA AVENUE WILL BE CLOSED DURING CONSTRUCTION. USE THE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" TO CLOSE ROMADKA AVENUE AT TREE ROAD AND CTH H.

**SECTION 2 SHEETS**

GENERAL NOTES  
PROJECT OVERVIEW  
TYPICAL SECTIONS

**WDNR CONTACT**

WISCONSIN DNR - CENTRAL REGION  
BRAD BETTHAUSER  
BLACK RIVER FALLS DNR SERVICE CENTER  
910 HWY 54 E  
BLACK RIVER FALLS, WI 54615  
T: (715) 213-9064  
BRADLEY.BETTHAUSER@WISCONSIN.GOV

**UTILITIES**

TDS TELECOM - COMMUNICATIONS  
JEFF OLSON  
OSPE-NETWORK SPECIALIST II  
T: (608) 845-2219  
C: (608) 444-6208  
JEFFREY.OLSON@TDSTELECOM.COM

XCEL ENERGY - ELECTRIC  
CORISSA SEELY  
1414 W. HAMILTON AVE.  
P.O. BOX 8  
EAU CLAIRE, WI 54702-0008  
T: (715) 737-4097  
CORISSA.E.SEELY@XCELENERGY.COM

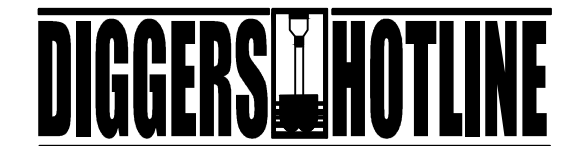
**LOCAL CONTACT**

TOWN OF YORK  
ROGER ERICKSON  
W4196 PINE CREEK ROAD  
NEILLSVILLE, WI 54456  
T: (715) 797-5730  
ROGER.ERICKSON.FOURSTAR@GMAIL.COM

RUNOFF COEFFICIENT TABLE

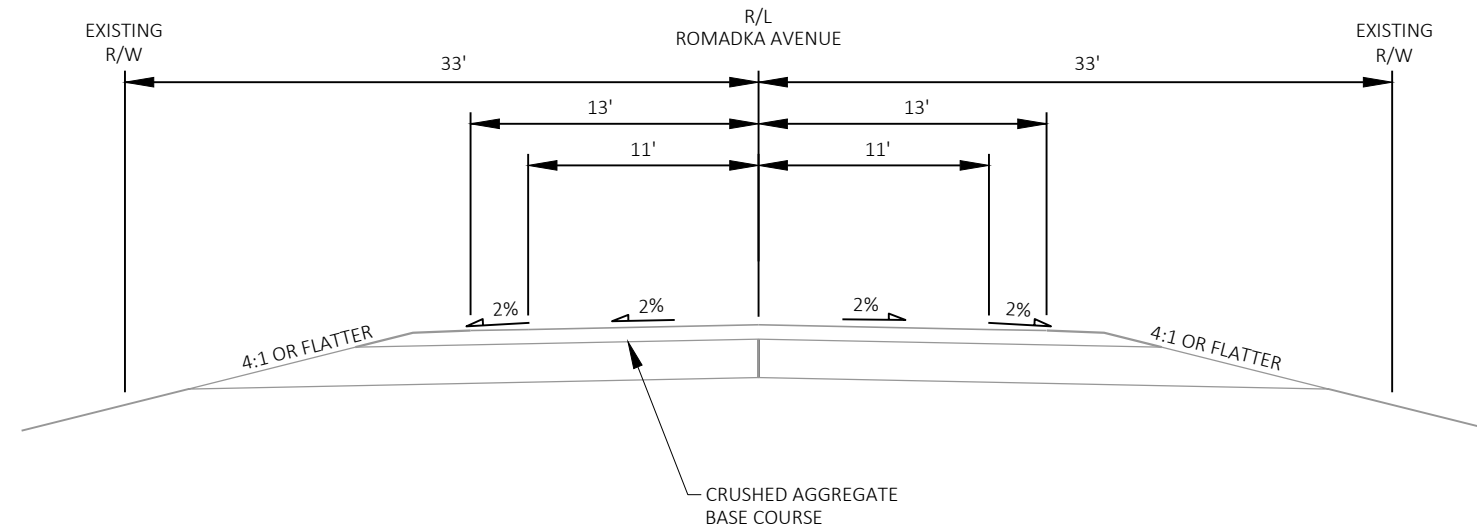
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 0.231 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.167 ACRES



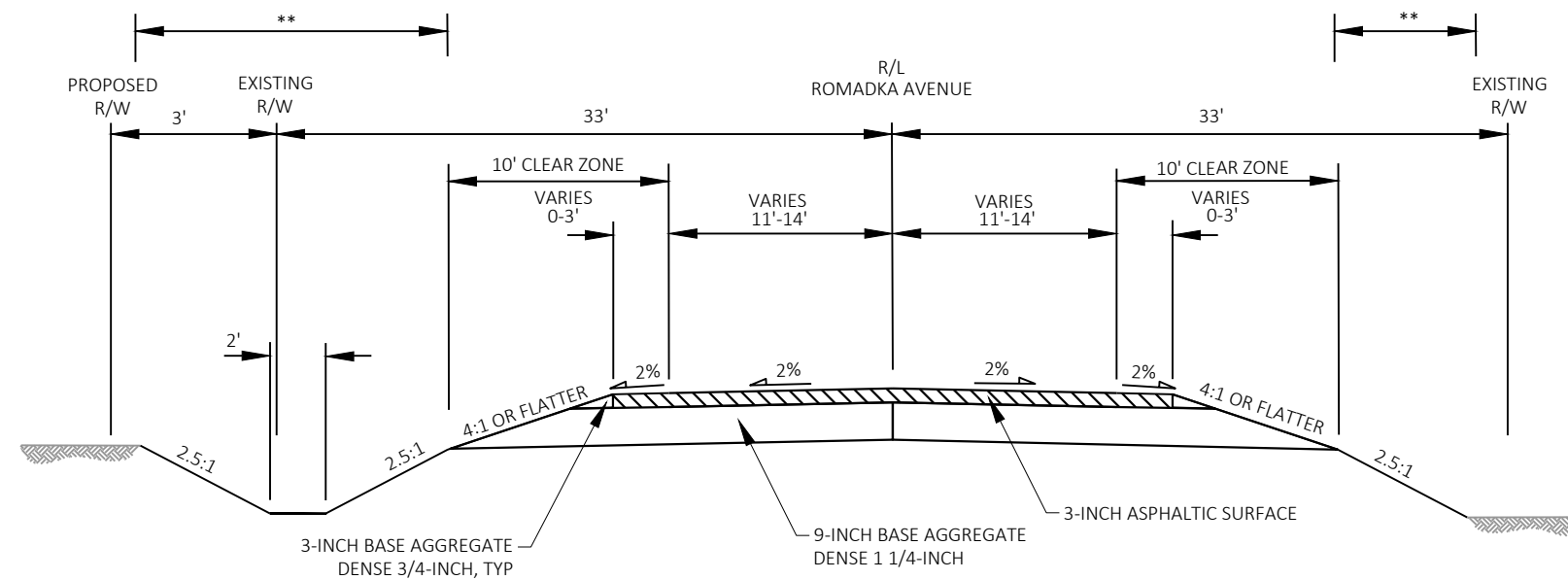
Dial **811** or (800)242-8511

www.DiggersHotline.com



**EXISTING TYPICAL SECTION**

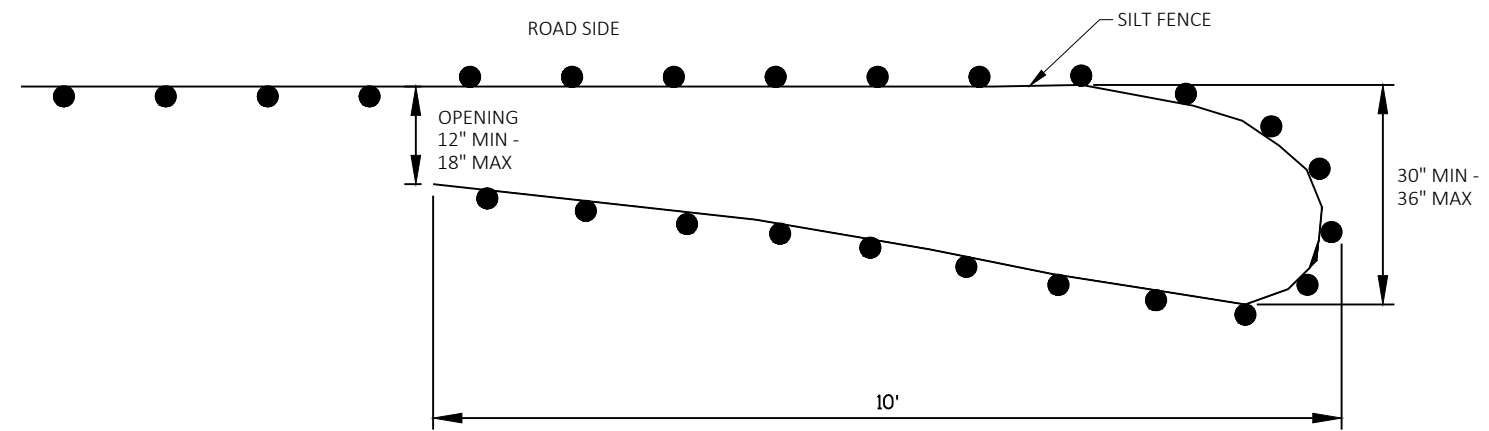
STA 4+28.75 - STA 4+84.19  
STA 5+15.88 - STA 5+71.25



**FINISHED TYPICAL SECTION**

STA 4+28.75 - STA 4+78.75  
STA 5+21.25 - STA 5+71.25

\*\*TOPSOIL, FERTILIZER TYPE B, EROSION MAT  
URBAN CLASS I TYPE B, SEED NO. 20 FOR  
DITCHES AND SIDE SLOPES OR SEED NO. 60 FOR  
WET AREAS, AS NEEDED.



PLAN VIEW

GENERAL NOTES:  
 SILT FENCE POSTS FOR THE TURN-AROUND FENCING SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND. AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.  
 SEE PLANS FOR SILT FENCE LOCATIONS. INSTALL TURN-AROUND AT END OF SHOWN FENCING.  
 SEE PROJECT SPECIFICATIONS FOR INSTALLATION RESTRICTIONS.  
 ROADSIDE OFFSETS DEPENDENT ON LOCATION.

TEMPORARY SMALL ANIMAL TURN-AROUND FENCING

APPROXIMATE STATION OR FIELD FIT WITH ENGINEER'S APPROVAL  
 STATION 4+60 LT  
 STATION 4+72 RT  
 STATION 5+26 RT  
 STATION 5+28 LT

Estimate Of Quantities

7850-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-10-185	EACH	1.000	1.000
0006	205.0100	Excavation Common	CY	186.000	186.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-10-399	EACH	1.000	1.000
0010	210.1500	Backfill Structure Type A	TON	360.000	360.000
0012	213.0100	Finishing Roadway (project) 01. 7850-00-71	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	3.000	3.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	209.000	209.000
0018	465.0105	Asphaltic Surface	TON	46.000	46.000
0020	502.0100	Concrete Masonry Bridges	CY	168.000	168.000
0022	502.3200	Protective Surface Treatment	SY	230.000	230.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	4,400.000	4,400.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	23,210.000	23,210.000
0028	513.4061	Railing Tubular Type M	LF	97.000	97.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	14.000	14.000
0032	550.0020	Pre-Boring Rock or Consolidated Materials	LF	105.000	105.000
0034	550.0500	Pile Points	EACH	7.000	7.000
0036	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	315.000	315.000
0038	606.0300	Riprap Heavy	CY	110.000	110.000
0040	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0042	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7850-00-71	EACH	1.000	1.000
0044	619.1000	Mobilization	EACH	1.000	1.000
0046	624.0100	Water	MGAL	2.100	2.100
0048	625.0100	Topsoil	SY	307.000	307.000
0050	628.1504	Silt Fence	LF	230.000	230.000
0052	628.1520	Silt Fence Maintenance	LF	230.000	230.000
0054	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0058	628.2008	Erosion Mat Urban Class I Type B	SY	307.000	307.000
0060	628.6005	Turbidity Barriers	SY	72.000	72.000
0062	628.7504	Temporary Ditch Checks	LF	40.000	40.000
0064	629.0210	Fertilizer Type B	CWT	0.500	0.500
0066	630.0120	Seeding Mixture No. 20	LB	9.000	9.000
0068	630.0160	Seeding Mixture No. 60	LB	2.000	2.000
0070	630.0500	Seed Water	MGAL	14.000	14.000
0072	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	4.000	4.000
0074	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0076	638.2602	Removing Signs Type II	EACH	4.000	4.000
0078	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0080	642.5001	Field Office Type B	EACH	1.000	1.000
0082	643.0420	Traffic Control Barricades Type III	DAY	1,080.000	1,080.000
0084	643.0705	Traffic Control Warning Lights Type A	DAY	1,680.000	1,680.000
0086	643.0900	Traffic Control Signs	DAY	840.000	840.000
0088	643.5000	Traffic Control	EACH	1.000	1.000
0090	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0092	645.0120	Geotextile Type HR	SY	170.000	170.000
0094	650.4500	Construction Staking Subgrade	LF	100.000	100.000
0096	650.5000	Construction Staking Base	LF	100.000	100.000
0098	650.6501	Construction Staking Structure Layout (structure) 01. B-10-399	EACH	1.000	1.000
0100	650.9911	Construction Staking Supplemental Control (project) 01. 7850-00-71	EACH	1.000	1.000

Estimate Of Quantities

7850-00-71

Line	Item	Item Description	Unit	Total	Qty
0102	650.9920	Construction Staking Slope Stakes	LF	100.000	100.000
0104	715.0502	Incentive Strength Concrete Structures	DOL	1,380.000	1,380.000
0106	999.2005.S	Maintaining Bird Deterrent System (station) 01. 5+00	EACH	1.000	1.000
0108	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0110	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0112	SPV.0090	Special 01. Flashing Stainless Steel	LF	83.000	83.000

**GRUBBING**

STATION - STATION		201.0205 GRUBBING STA
4+29	- 5+71	2
<b>PROJECT TOTAL</b>		<b>2</b>

**BASE AGGREGATE DENSE**

STATION - STATION		LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
4+29	- 4+79	ROMADKA AVE. - BASE	1	91	---
5+21	- 5+71	ROMADKA AVE. - BASE	1	91	---
4+29	- 4+79	ROMADKA AVE. - SHLDR	---	4	---
5+21	- 5+71	ROMADKA AVE. - SHLDR	---	4	---
		UNDISTRIBUTED	1	19	2.1
<b>PROJECT TOTAL</b>			<b>3</b>	<b>209</b>	<b>2.1</b>

**EARTHWORK**

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	COMMENT
		CUT (2)	EBS EXCAVATION (3)				FACTOR 1.25			
ROMADKA AVE	4+28.75/5+70.00	186	0	0	186	74	93	94	94	
TOTAL COMMON EXC		186	0	0	186	74	93	94	94	

**NOTES:**

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.25
- DEPENDING ON SELEC **EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) \* FILL FACTOR**
  - (C) EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) \* FILL FACTOR
  - (C) EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) \* FILL FACTOR
  - (C) EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) \* FILL FACTOR
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION

**ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.**

**ASPHALTIC ITEMS**

465.0105  
ASPHALTIC  
SURFACE

STATION - STATION	LOCATION	TON
4+29 - 4+79	ROMADKA AVE.	23
5+21 - 5+71	ROMADKA AVE.	23
<b>PROJECT TOTAL</b>		<b>46</b>

**HAUL ROADS (CAT. 0030)**

618.0100  
MAINTENANCE  
AND REPAIR  
OF HAUL ROADS  
7850-00-71

LOCATION	EACH
PROJECT	1
<b>PROJECT TOTAL</b>	<b>1</b>

**LANDSCAPING**

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0160 SEEDING MIXTURE NO. 60 LB	630.0500 SEED WATER MGAL
4+29 - 4+78		140	140	0.2	4	1	6.0
5+22 - 5+71		167	167	0.3	5	1	8.0
<b>PROJECT TOTAL</b>		<b>307</b>	<b>307</b>	<b>0.5</b>	<b>9</b>	<b>2</b>	<b>14.0</b>

**EROSION CONTROL**

STATION - STATION	OFFSET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
4+29 - 4+78		120	120	42	20
5+22 - 5+71		110	110	30	20
UNDISTRIBUTED	---	---	---	---	
<b>PROJECT TOTAL</b>		<b>230</b>	<b>230</b>	<b>72</b>	<b>40</b>

**EROSION CONTROL MOBILIZATION**

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT LIMITS	3	3
<b>PROJECT TOTAL</b>	<b>3</b>	<b>3</b>

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.



3

**PERMANENT SIGNING**

STATION	SIGN CODE	SIGN MESSAGE	SIZE		634.0814	637.2230	638.2602	638.3000
			IN	X IN	TUBULAR STEEL 2x2-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE F SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
NE	W5-52L	BRIDGE HASH MARKS	12	36	1	3.00	1	1
SE	W5-52R	BRIDGE HASH MARKS	12	36	1	3.00	1	1
NW	W5-52R	BRIDGE HASH MARKS	12	36	1	3.00	1	1
SW	W5-52L	BRIDGE HASH MARKS	12	36	1	3.00	1	1
<b>PROJECT TOTAL</b>					<b>4</b>	<b>12.00</b>	<b>4</b>	<b>4</b>

**CONSTRUCTION STAKING**

STATION	-	STATION	650.4500	650.5000	650.6501	650.9911	650.9920
			CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING STRUCTURE LAYOUT B-10-399 EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 7850-00-71 EACH	CONSTRUCTION STAKING SLOPE STAKES LF
4+29	-	4+78	50	50	1	1	50
5+22	-	5+71	50	50		---	50
<b>PROJECT TOTAL</b>			<b>100</b>	<b>100</b>	<b>1</b>	<b>1</b>	<b>100</b>

\*\*CATEGORY 0020\*\*

3

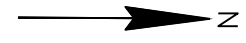
**TRAFFIC CONTROL**

LOCATION	DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS	
		NO.	DAY	NO.	DAY	NO.	DAY
ROMADKA AVENUE	60	18	1,080	28	1,680	14	840
<b>PROJECT TOTAL</b>			<b>1,080</b>		<b>1,680</b>		<b>840</b>

**BIRD DETERRENT SYSTEM**

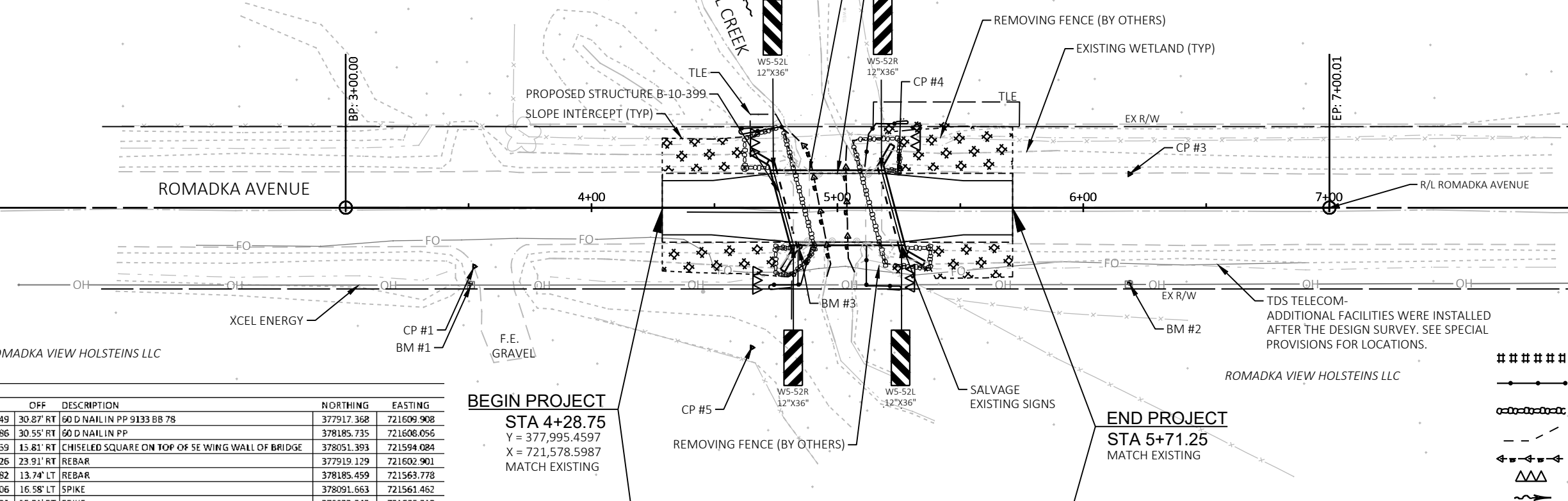
LOCATION	999.2005.S MAINTAINING BIRD DETERRENT SYSTEM STATION 5+00 EACH
P-10-185	1
<b>PROJECT TOTAL</b>	<b>1</b>

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.



ROMADKA VIEW HOLSTEINS LLC

CHRISTINE N & DAVID J STUTZMAN



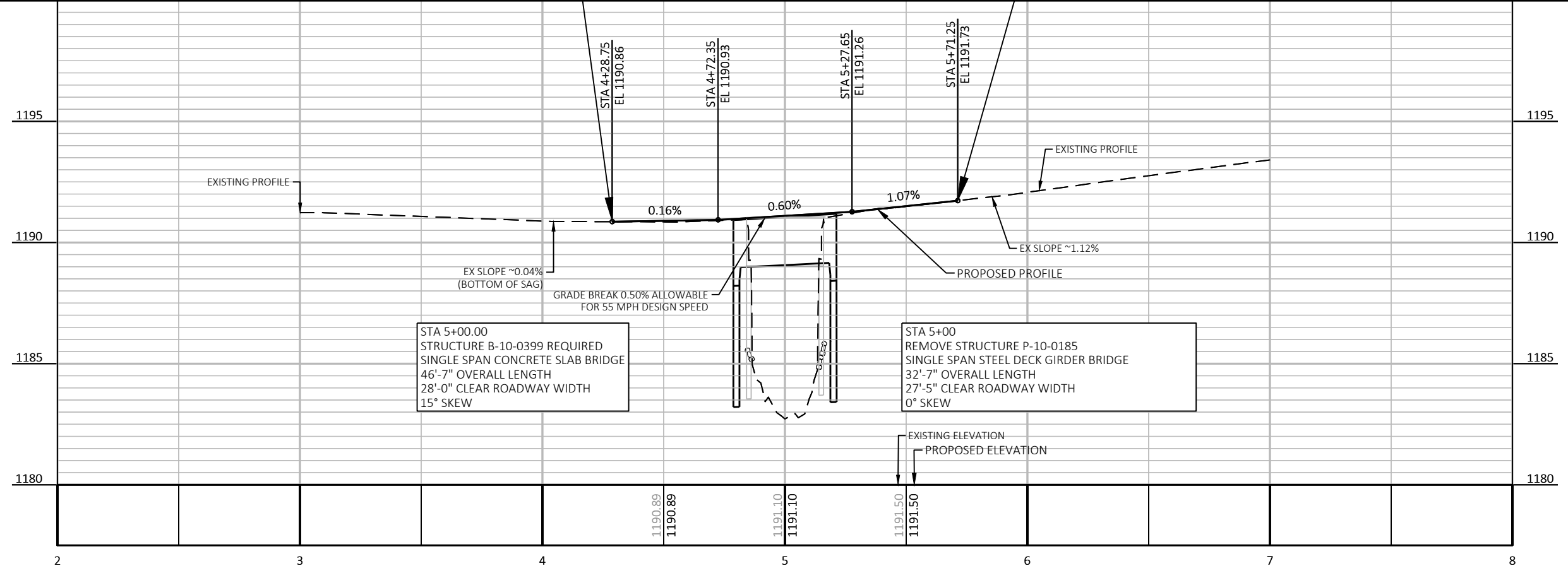
**BEGIN PROJECT**  
**STA 4+28.75**  
 Y = 377,995.4597  
 X = 721,578.5987  
 MATCH EXISTING

**END PROJECT**  
**STA 5+71.25**  
 MATCH EXISTING

**LEGEND**

- ##### EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- - - SLOPE INTERCEPT
- ←-←-←- TURBIDITY BARRIER
- △△△ TEMPORARY DITCH CHECK
- ~> SURFACE WATER FLOW

BENCHMARKS						
POINT	ELEV.	STA	OFF	DESCRIPTION	NORTHING	EASTING
BM#1	1191.03	3+50.49	30.87' RT	60 D NAIL IN PP 9133 BB 78	377917.368	721609.908
BM#2	1188.29	6+18.86	30.55' RT	60 D NAIL IN PP	378185.735	721608.056
BM#3	1190.41	4+84.39	15.81' RT	CHISELED SQUARE ON TOP OF SE WING WALL OF BRIDGE	378051.393	721594.084
CP#1	1190.57	3+52.26	23.91' RT	REBAR	377919.129	721602.901
CP#3	1191.558	6+18.82	13.74' LT	REBAR	378185.459	721563.778
CP#4	1190.579	5+25.06	16.58' LT	SPIKE	378091.663	721561.462
CP#5	1189.301	4+65.21	56.81' RT	SPIKE	378032.242	721635.218



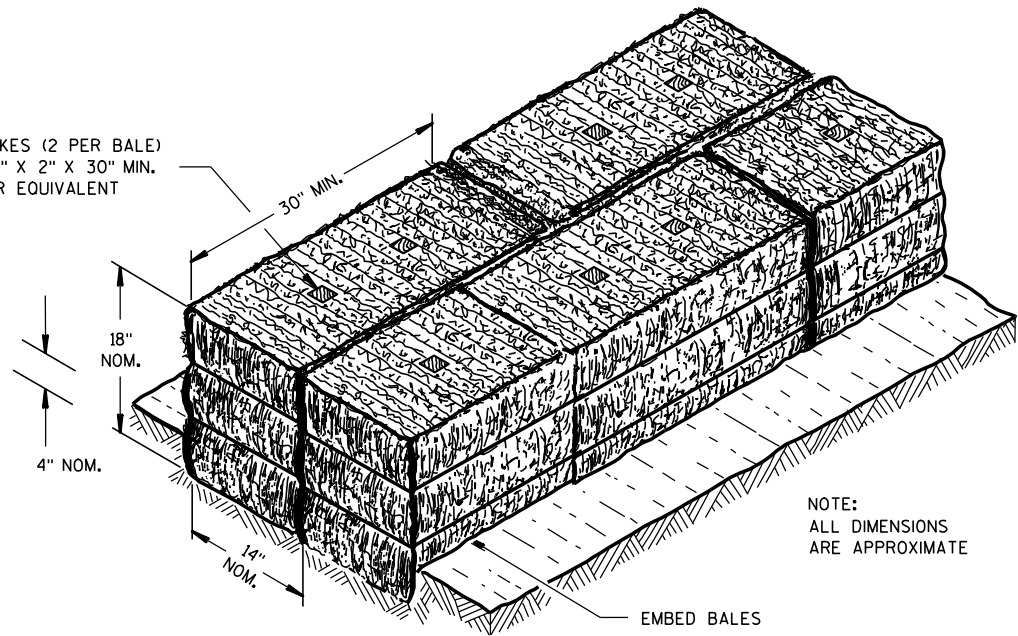
STA 5+00.00  
 STRUCTURE B-10-0399 REQUIRED  
 SINGLE SPAN CONCRETE SLAB BRIDGE  
 46'-7" OVERALL LENGTH  
 28'-0" CLEAR ROADWAY WIDTH  
 15° SKEW

STA 5+00  
 REMOVE STRUCTURE P-10-0185  
 SINGLE SPAN STEEL DECK GIRDER BRIDGE  
 32'-7" OVERALL LENGTH  
 27'-5" CLEAR ROADWAY WIDTH  
 0° SKEW

## Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
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

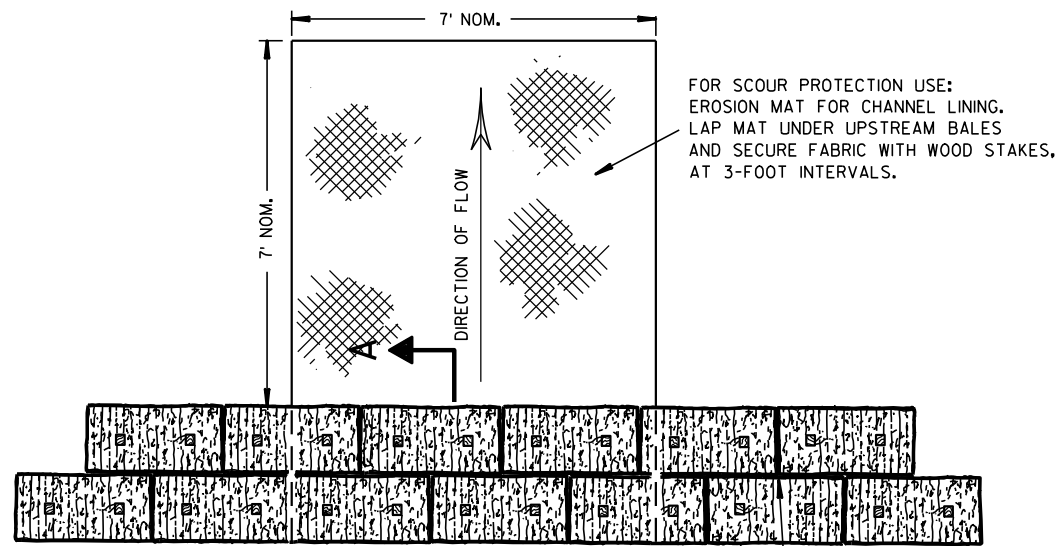
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

SECTION A-A

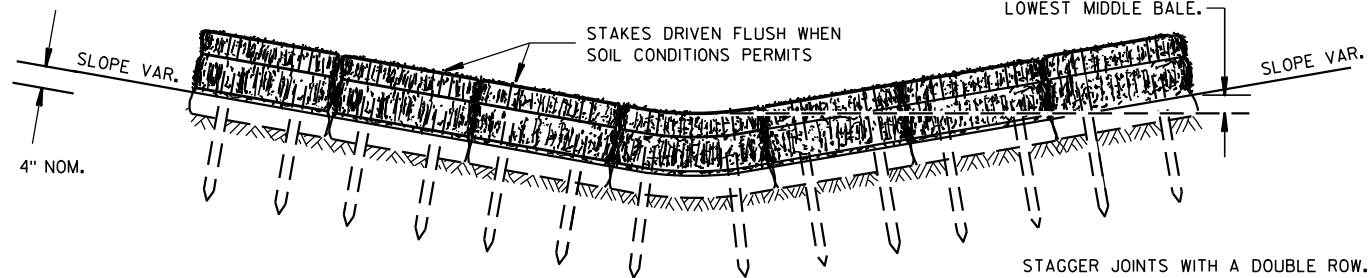


FOR SCOUR PROTECTION USE:  
EROSION MAT FOR CHANNEL LINING.  
LAP MAT UNDER UPSTREAM BALES  
AND SECURE FABRIC WITH WOOD STAKES,  
AT 3-FOOT INTERVALS.

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



FRONT ELEVATION

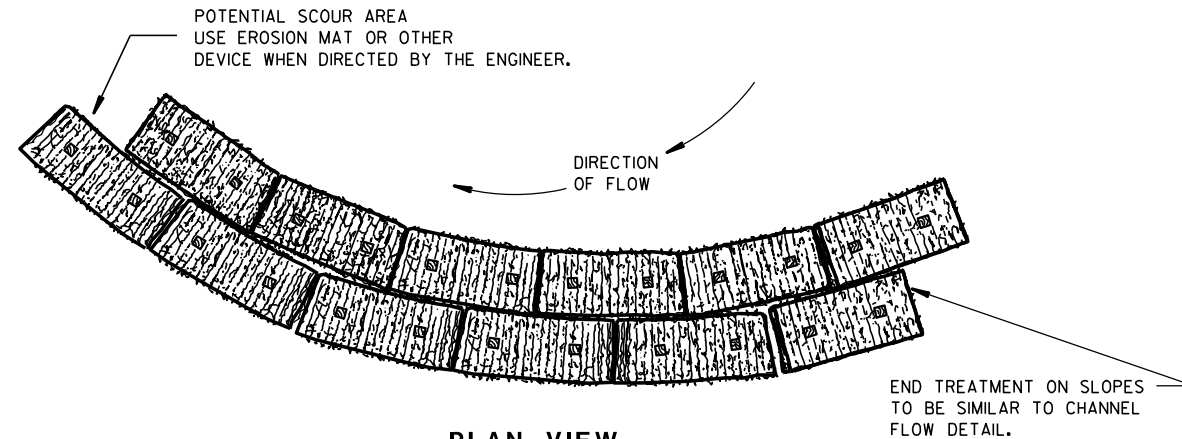
STAGGER JOINTS WITH A DOUBLE ROW.

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

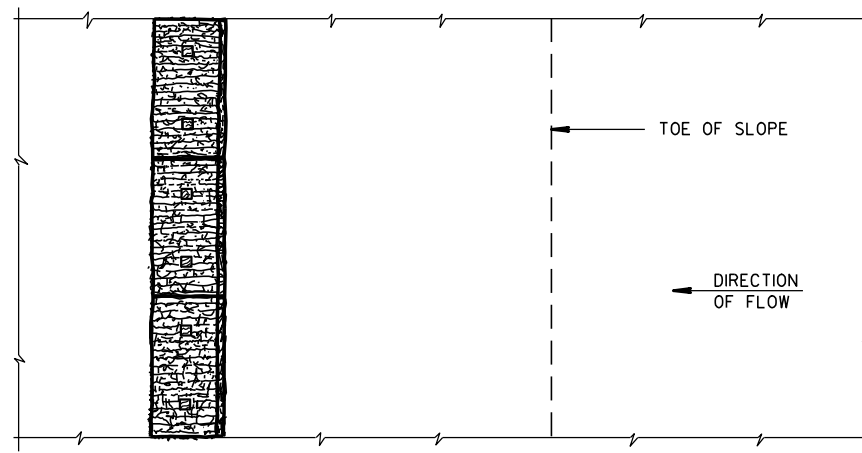
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

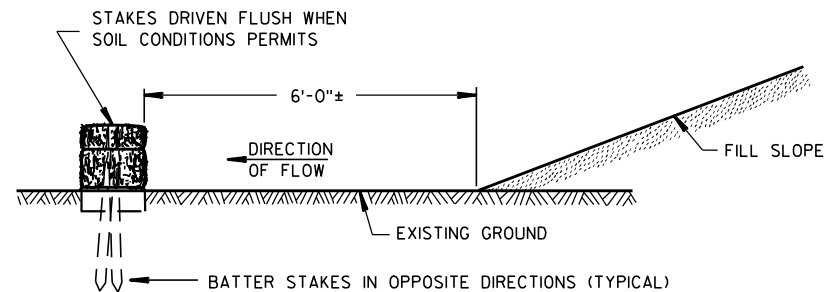


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

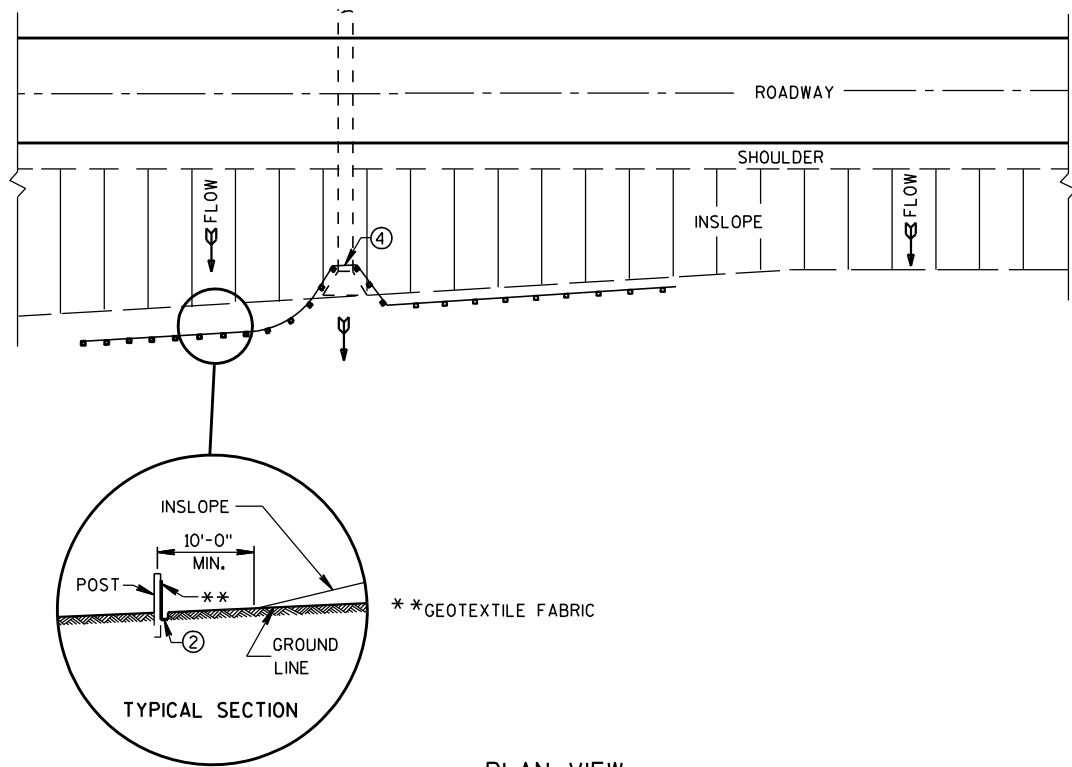
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

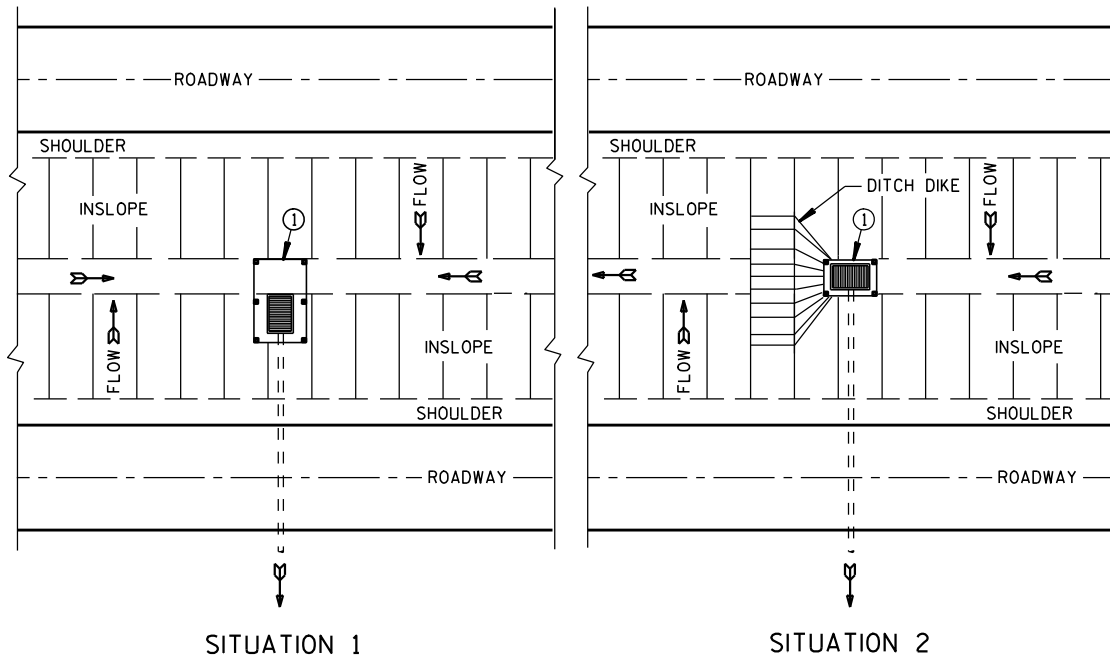
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

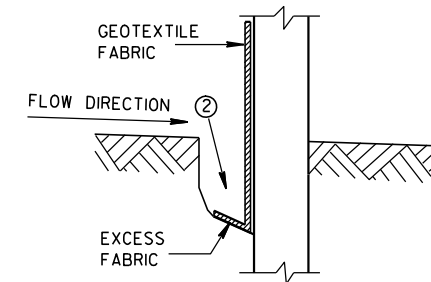


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

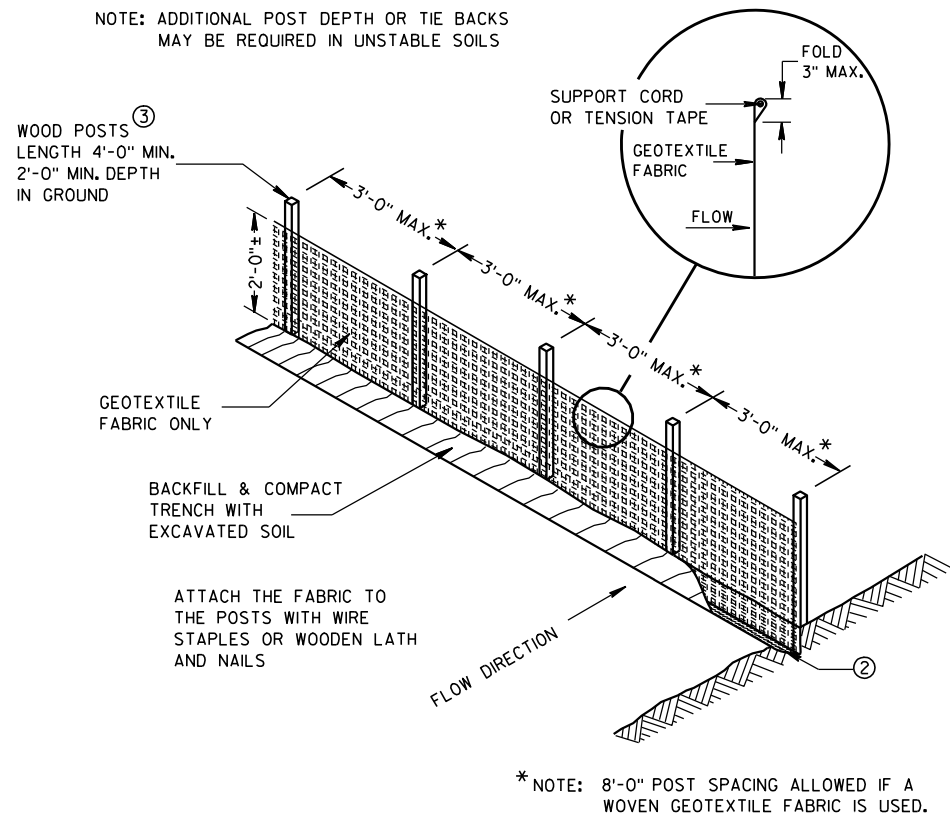
**GENERAL NOTES**

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

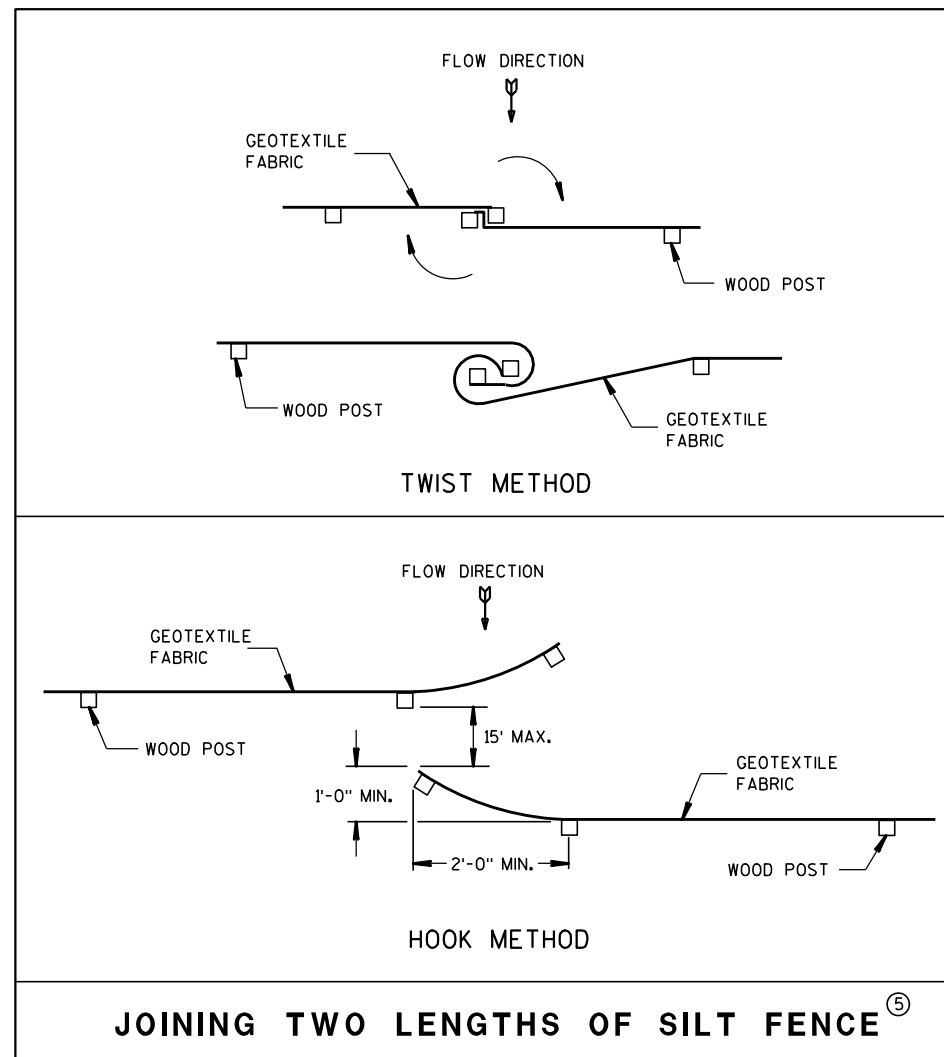
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



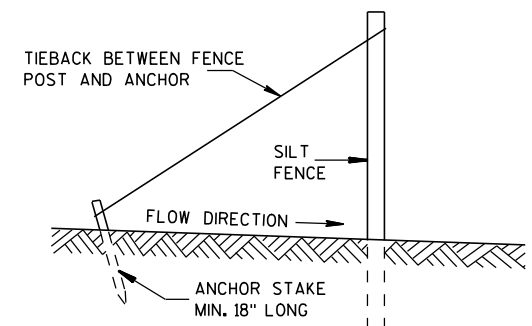
TRENCH DETAIL



SILT FENCE

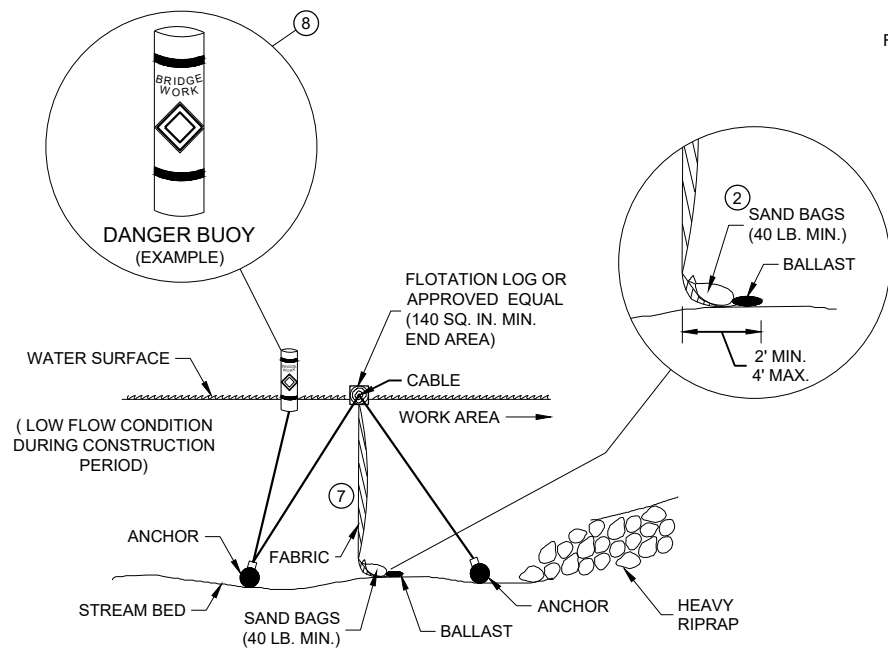


JOINING TWO LENGTHS OF SILT FENCE ⑤



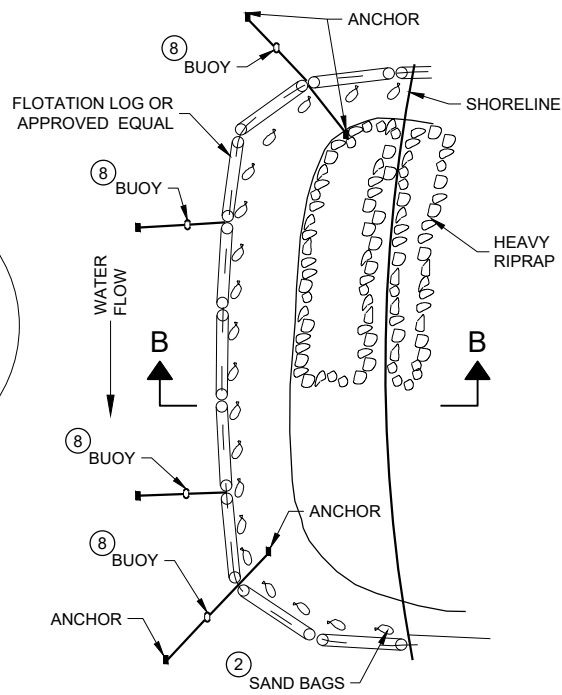
SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

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

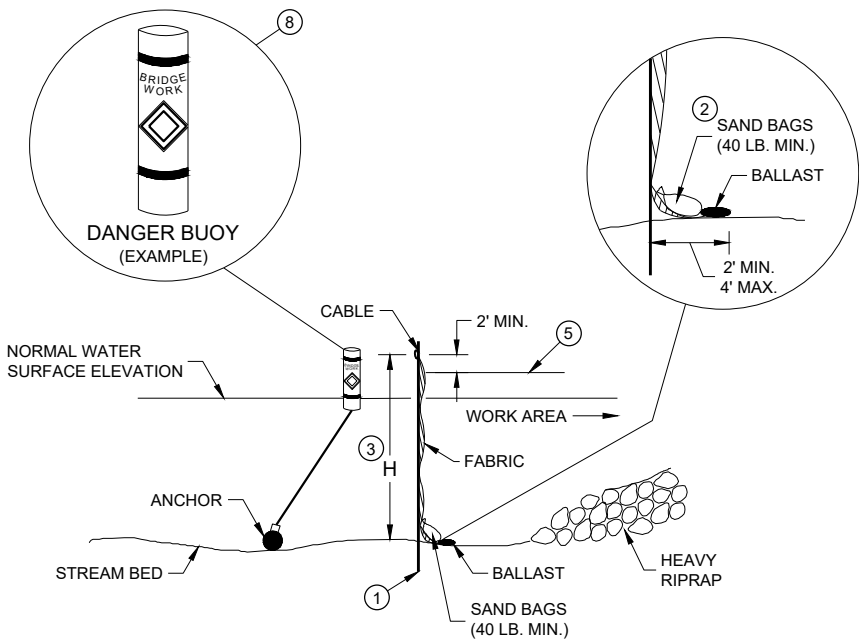


**SECTION B - B**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE  
CAUTION - SEE NOTE 6**

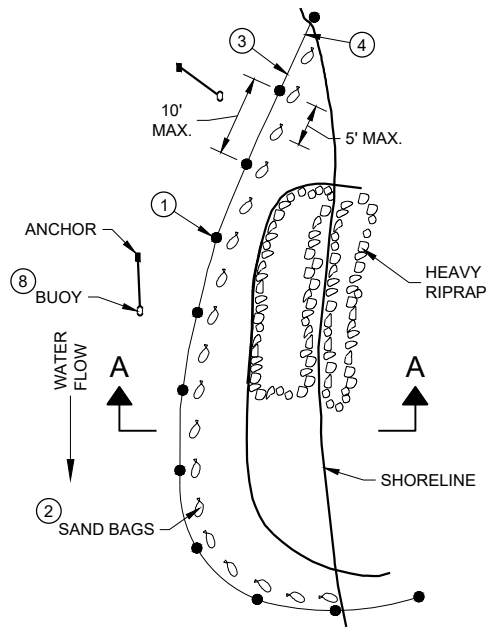


**PLAN VIEW**



**SECTION A - A**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**



**PLAN VIEW**

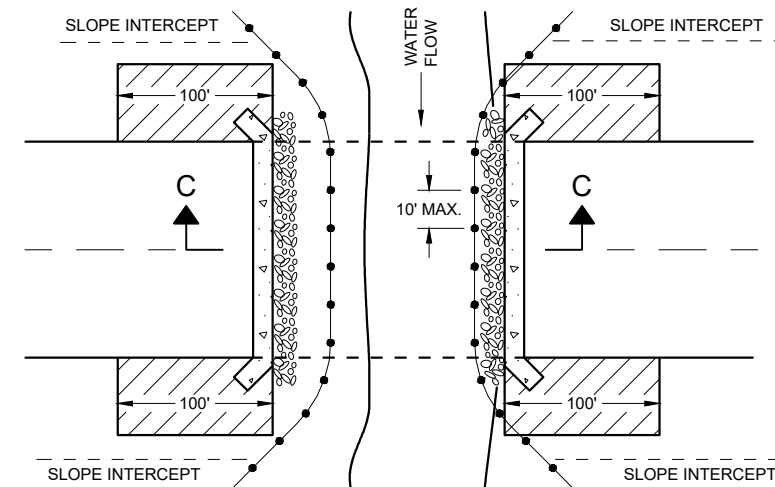
**TURBIDITY BARRIER PLACEMENT DETAILS**

**GENERAL NOTES**

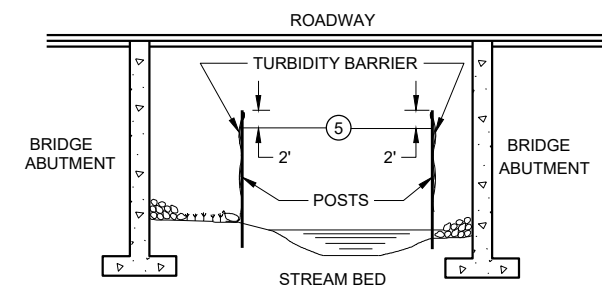
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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**

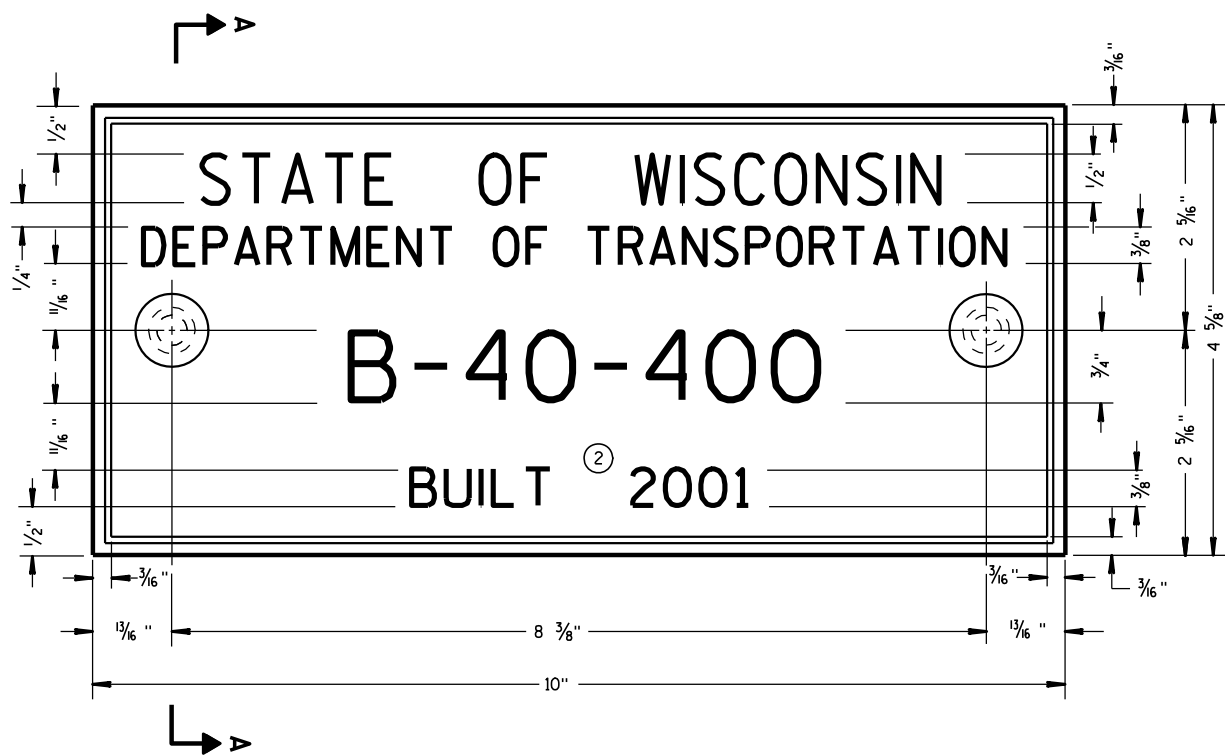
**TURBIDITY BARRIER DETAIL SHOWING  
TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



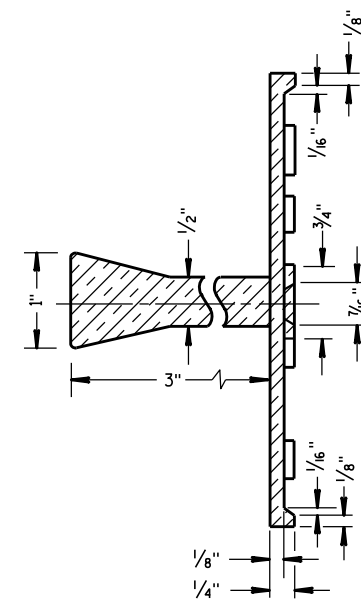
**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)

**GENERAL NOTES**

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

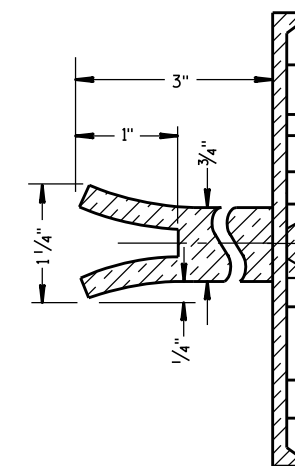
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

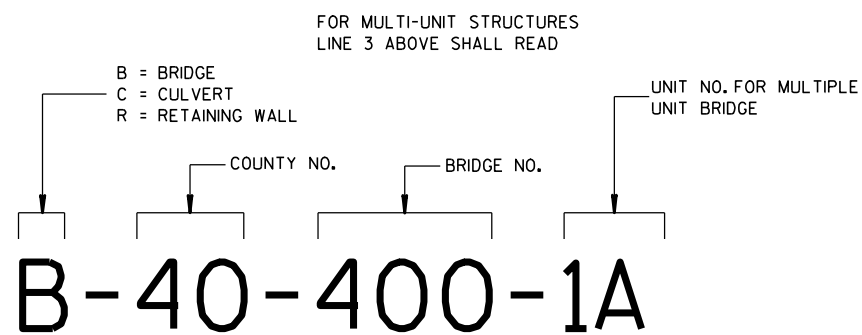


**SECTION A-A**

SPREAD OPEN SO THE TOP OF LUG IS 1 1/4" WIDE

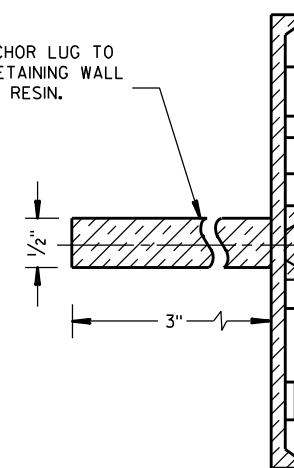


**ALTERNATE LUG**



**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

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



**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

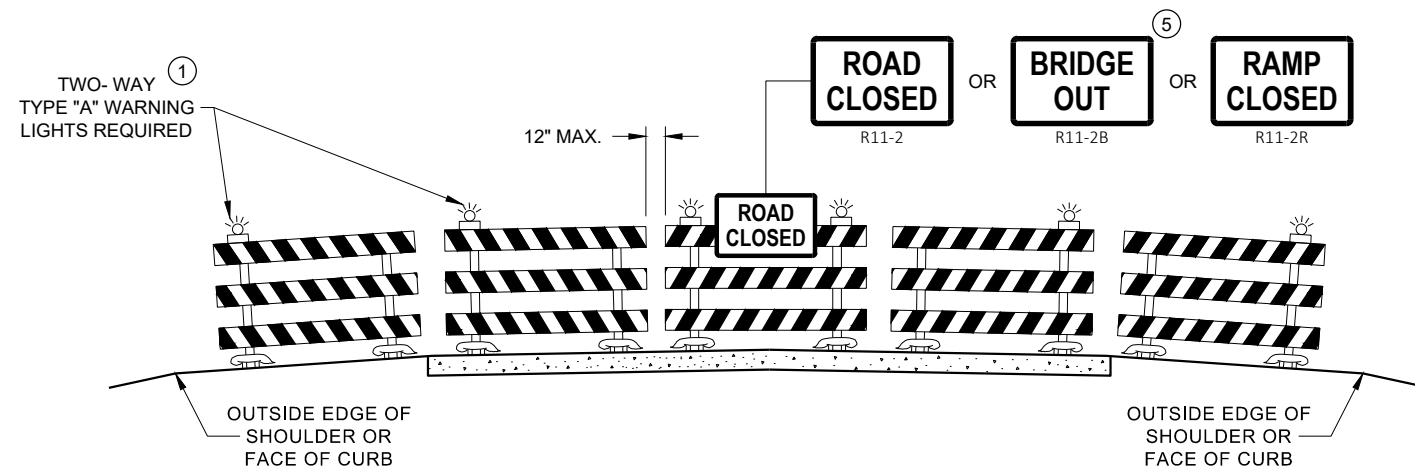
**NAME PLATE  
(STRUCTURES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

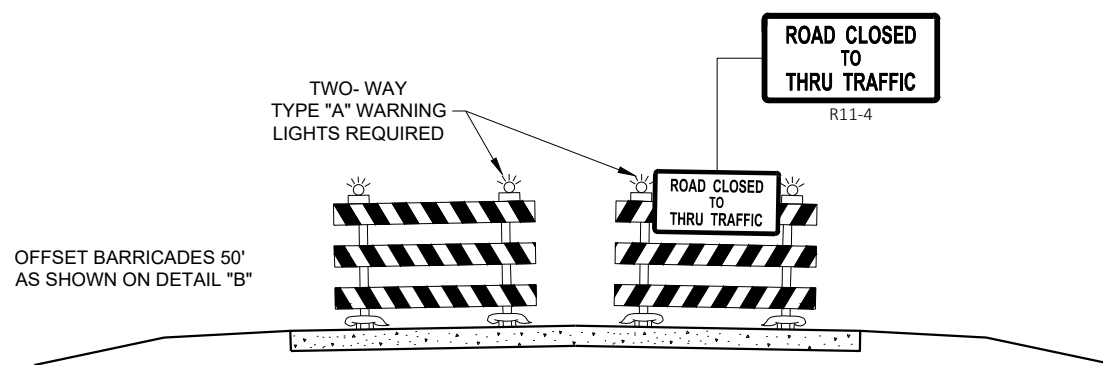
APPROVED  
DATE 3/26/10 /S/ Scot Becker  
CHIEF STRUCTURAL DEVELOPMENT ENGINEER  
FHWA







**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

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

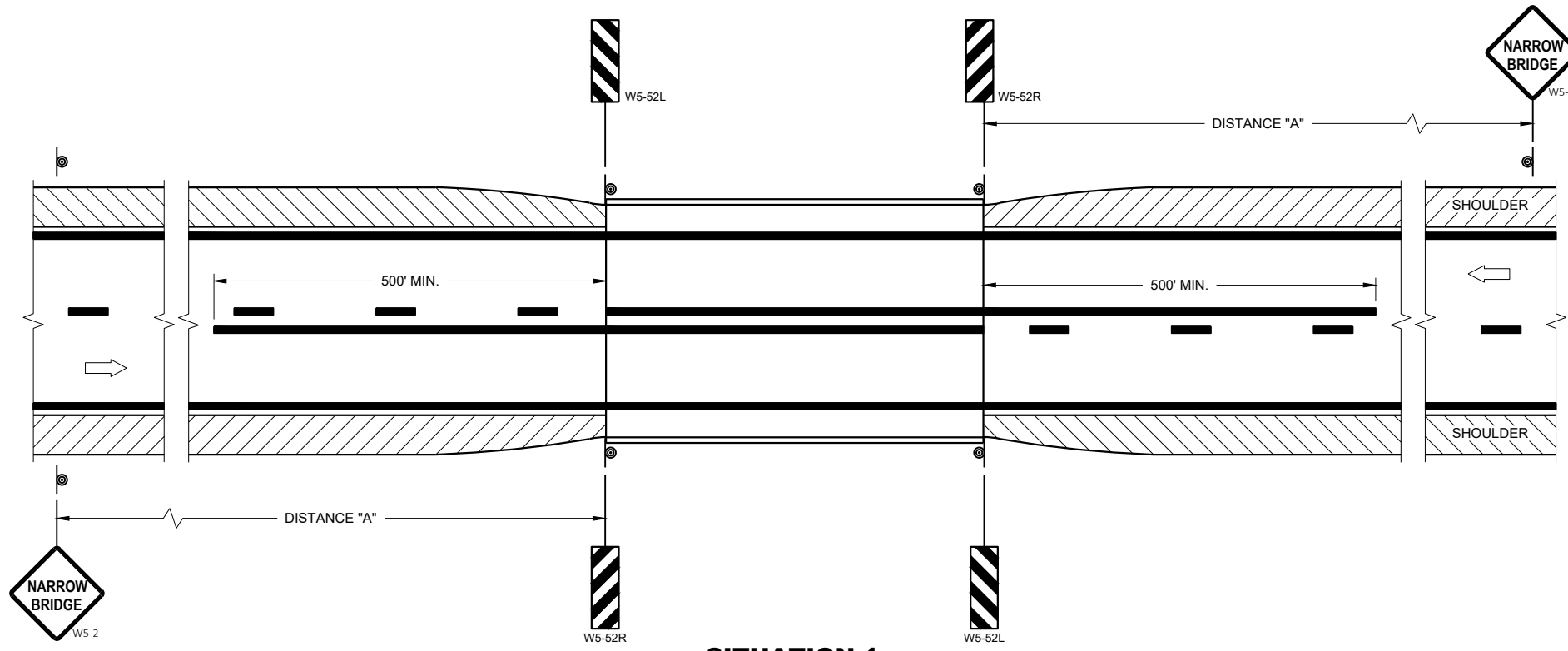
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24"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

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

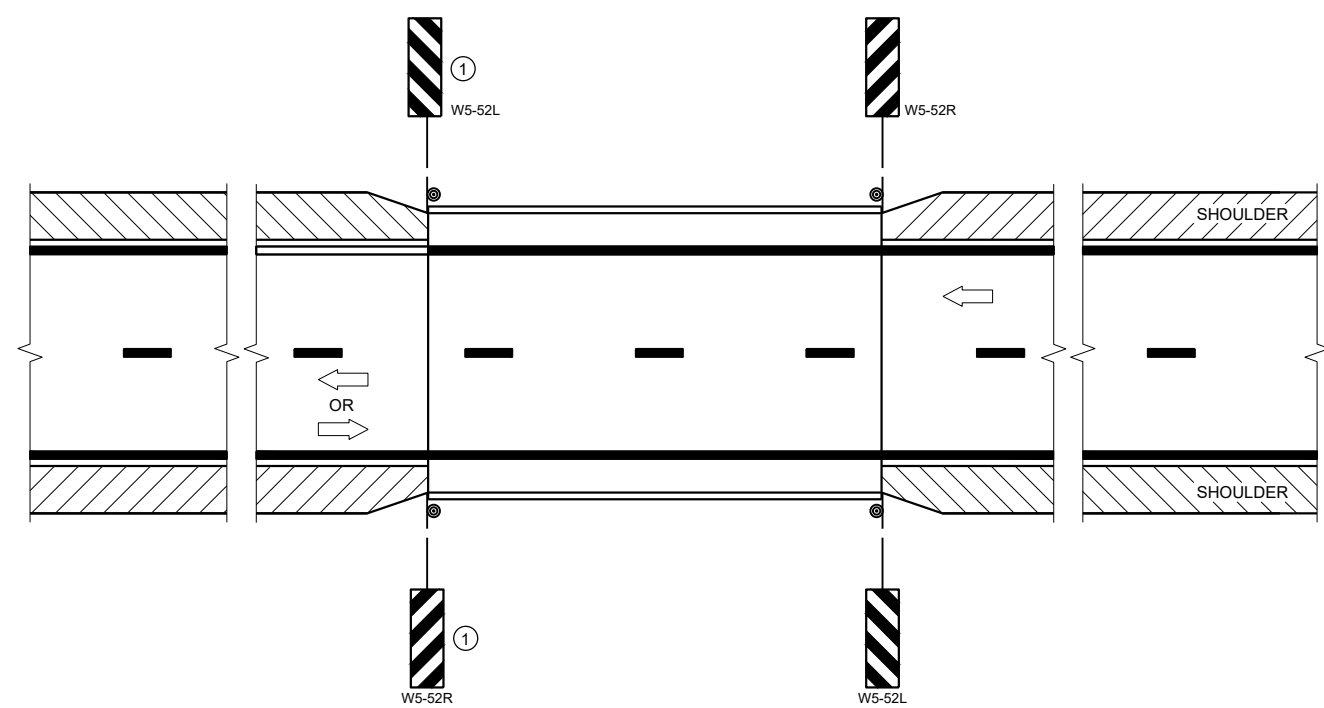
**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**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'

6

6

SDD 15C06-12

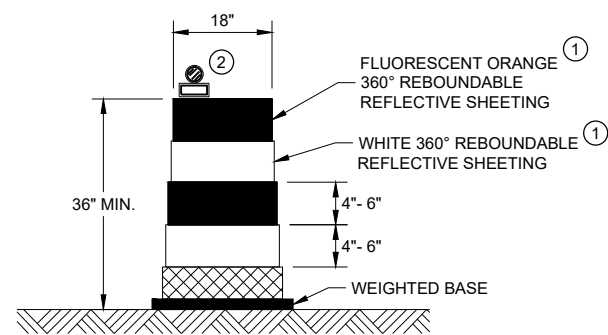
SDD 15C06-12

**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

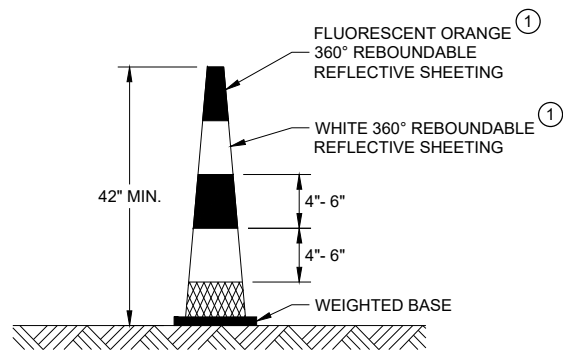
APPROVED  
 May 2023 /S/ Jeannie Silver  
 DATE STATE SIGNING AND MARKING ENGINEER

FHWA



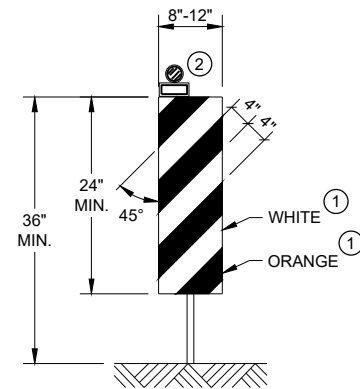
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



**42" CONE**

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

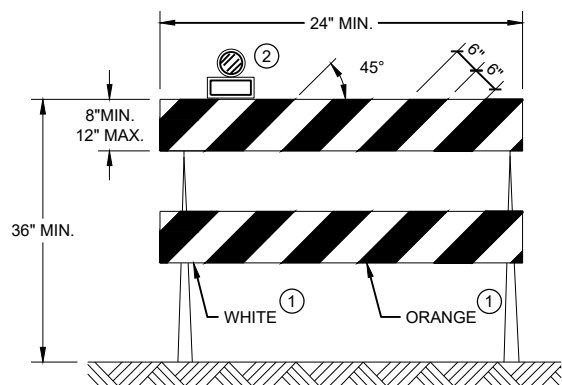


**VERTICAL PANEL**

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

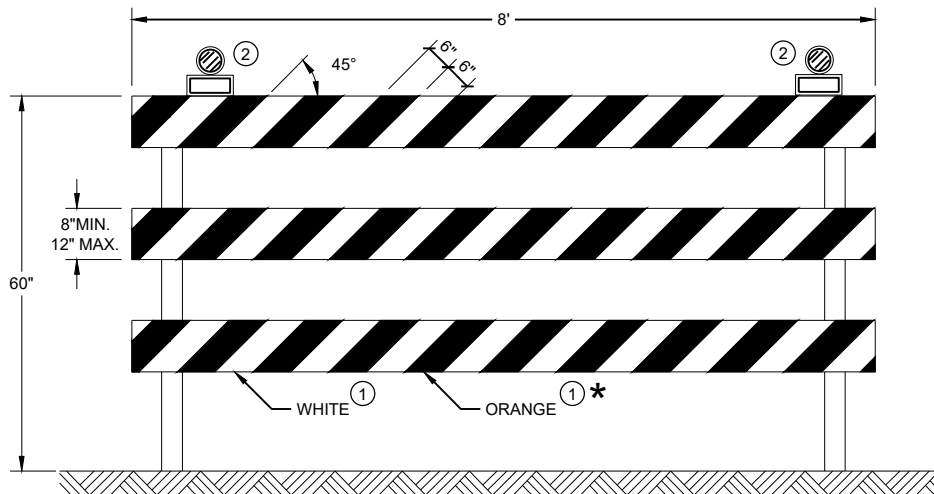
**GENERAL NOTES**

- 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.



**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.

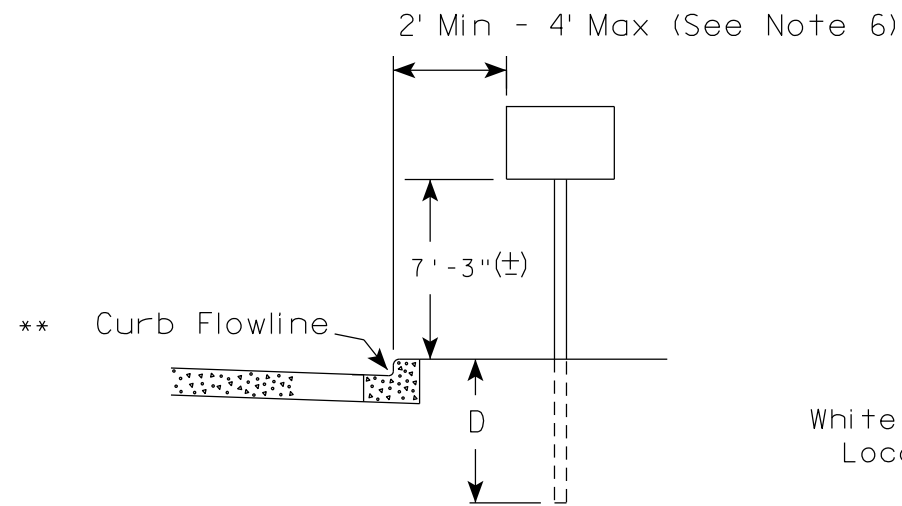
\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

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

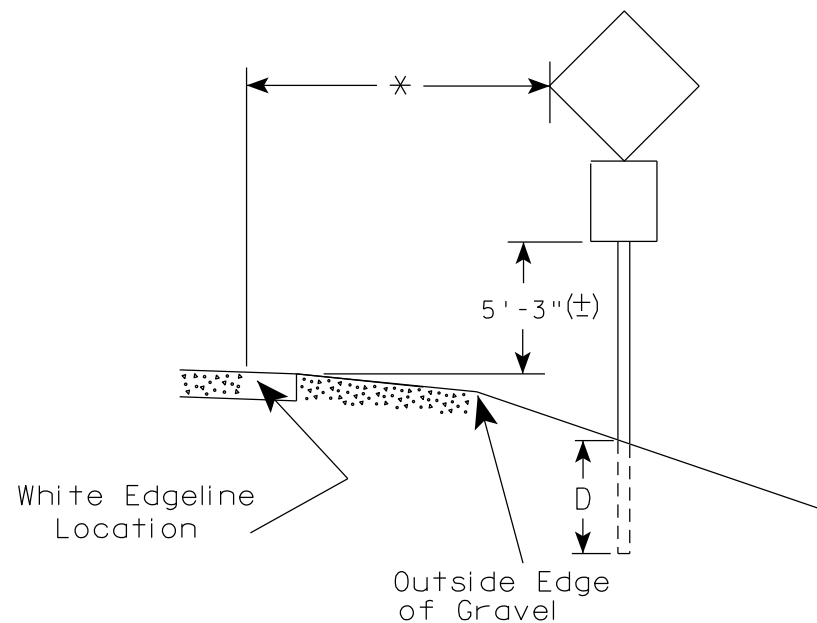
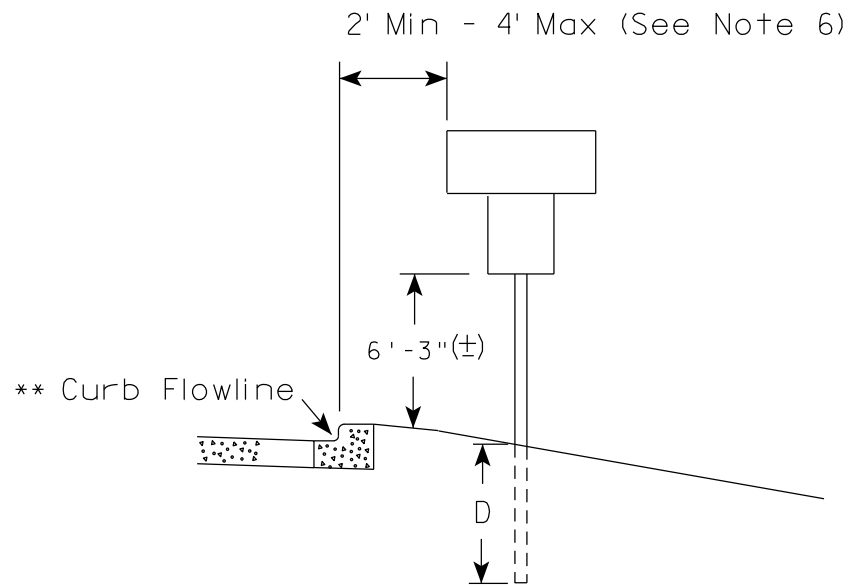
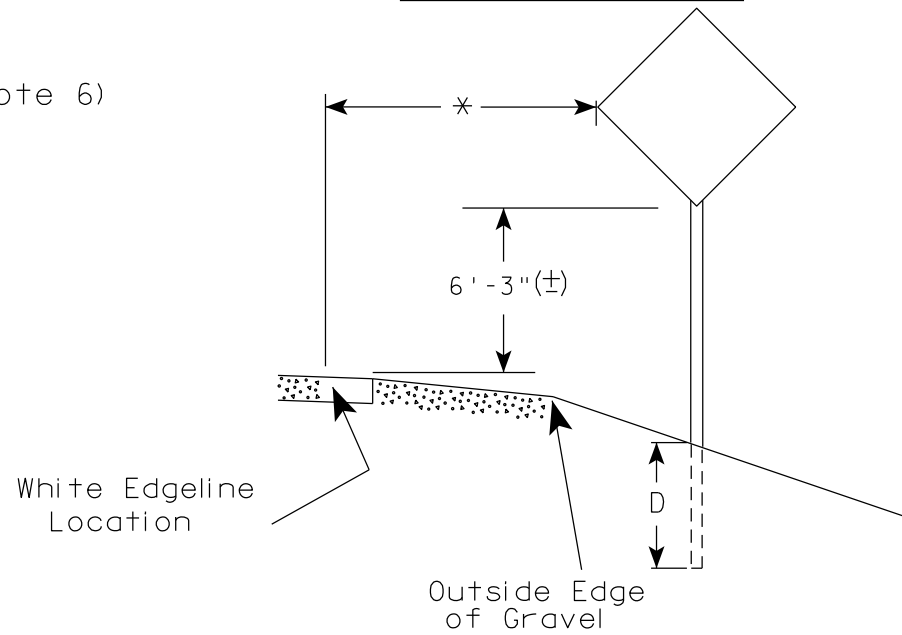
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

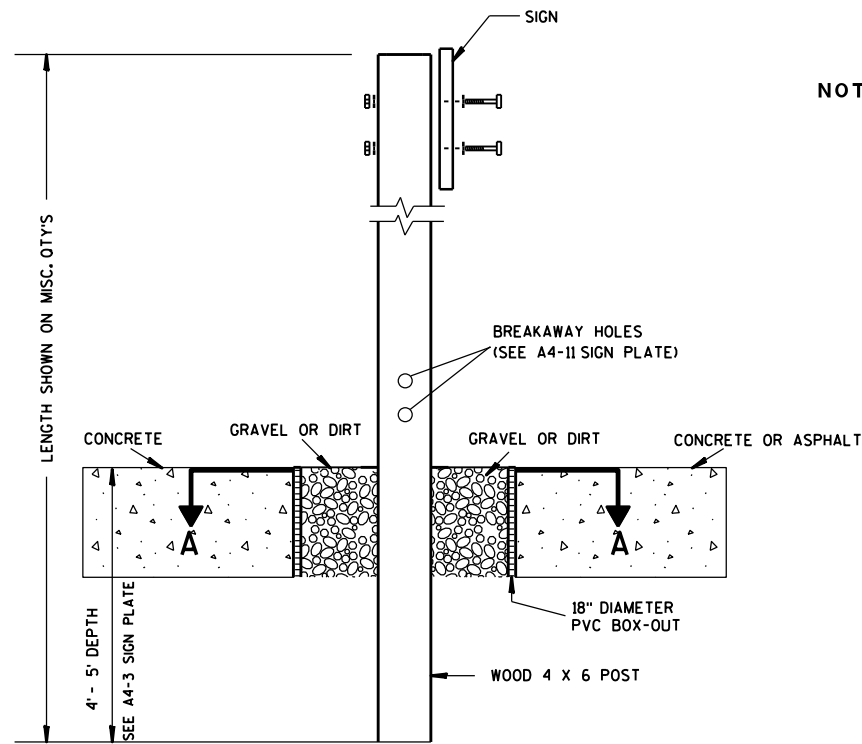
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

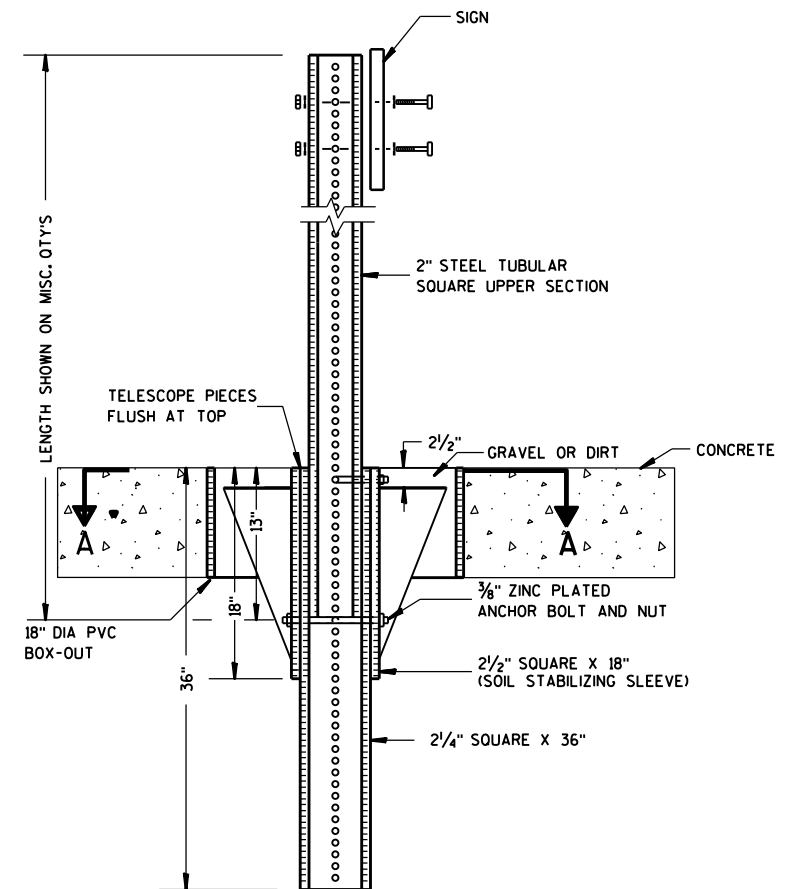
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

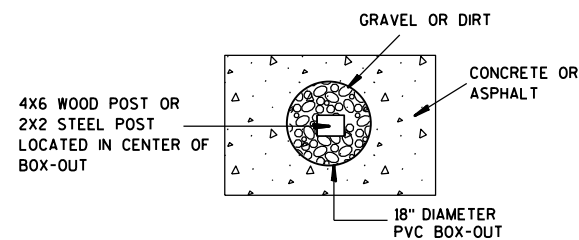
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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



**ELEVATION VIEW**

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



**PLAN VIEW**

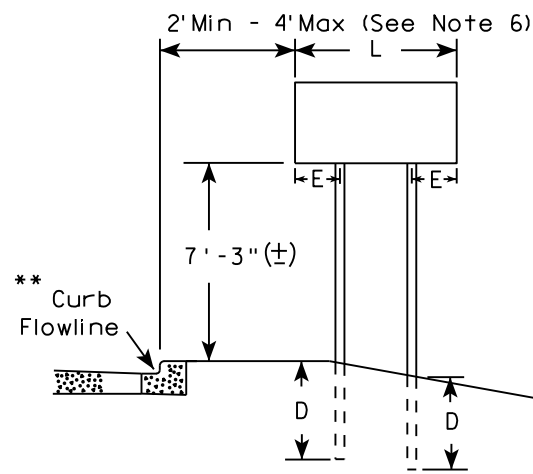
**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

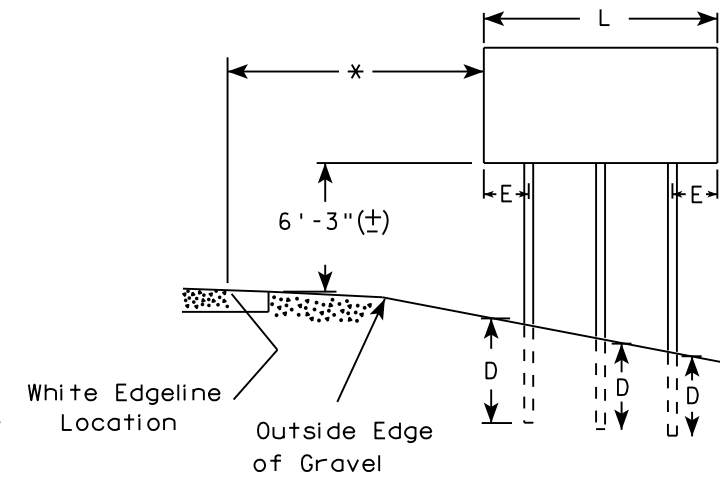
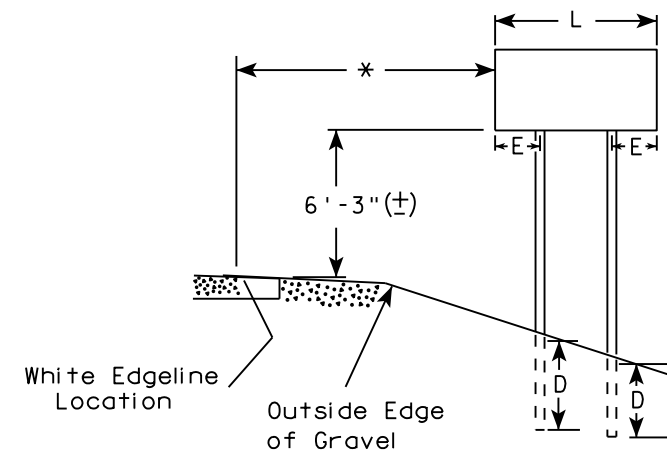
GENERAL NOTES

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

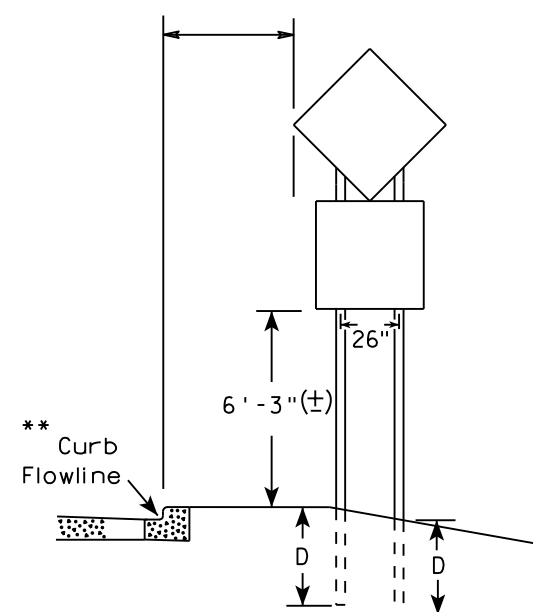
URBAN AREA



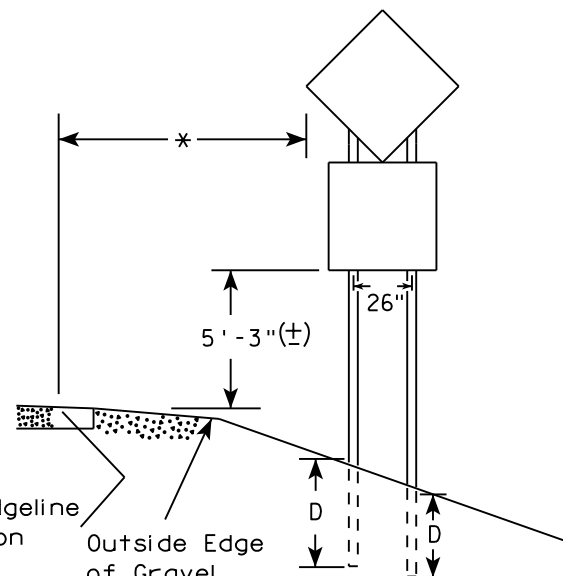
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 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

\*\*\*

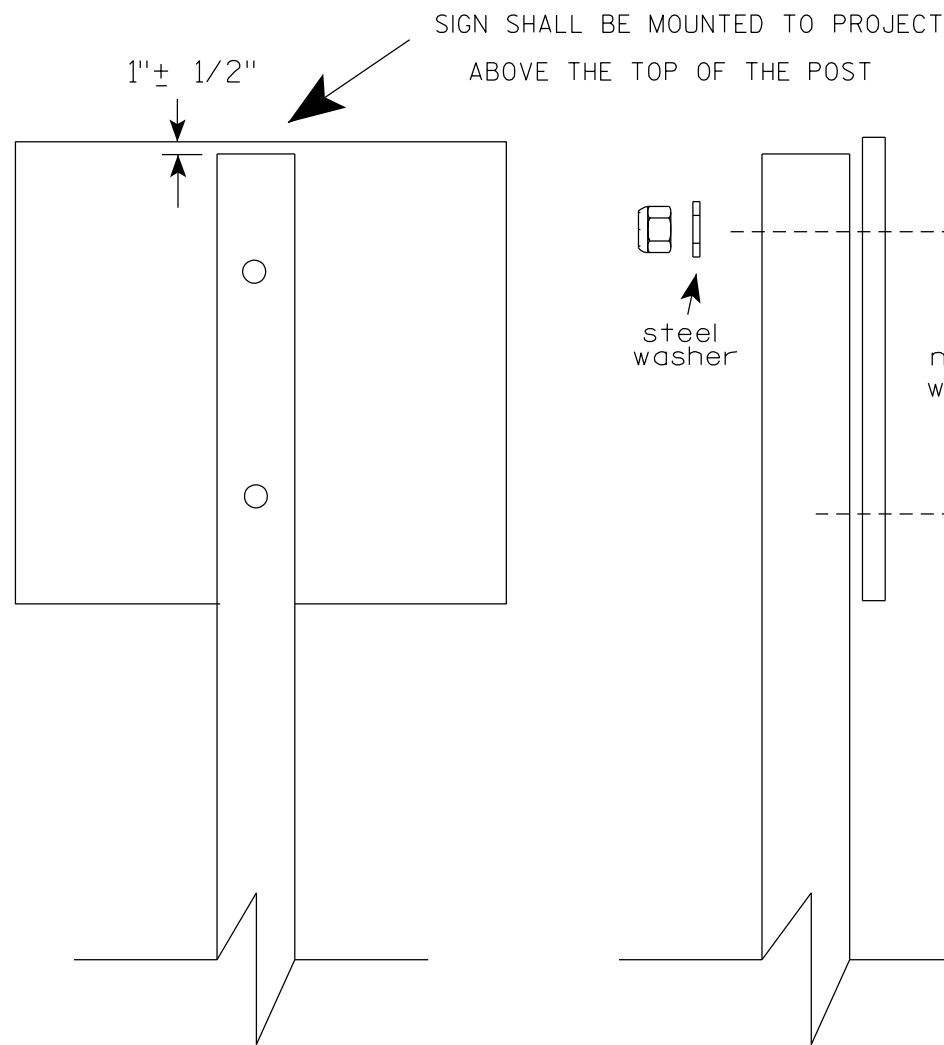
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 8/21/17 PLATE NO. A4-4.15



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

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

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

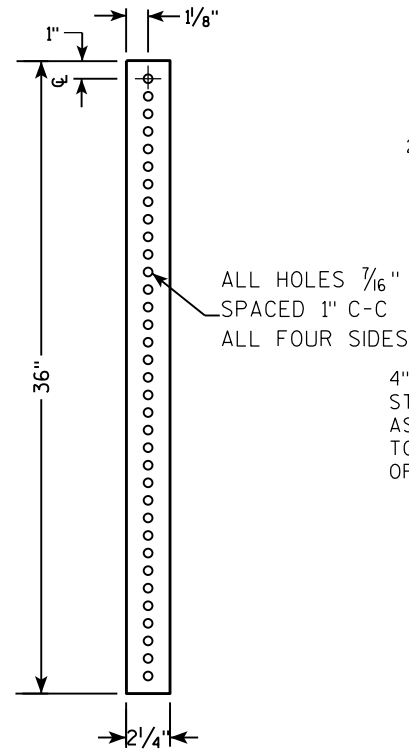
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
-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

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

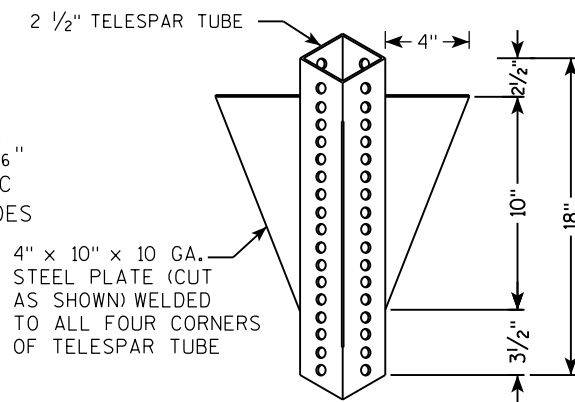
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

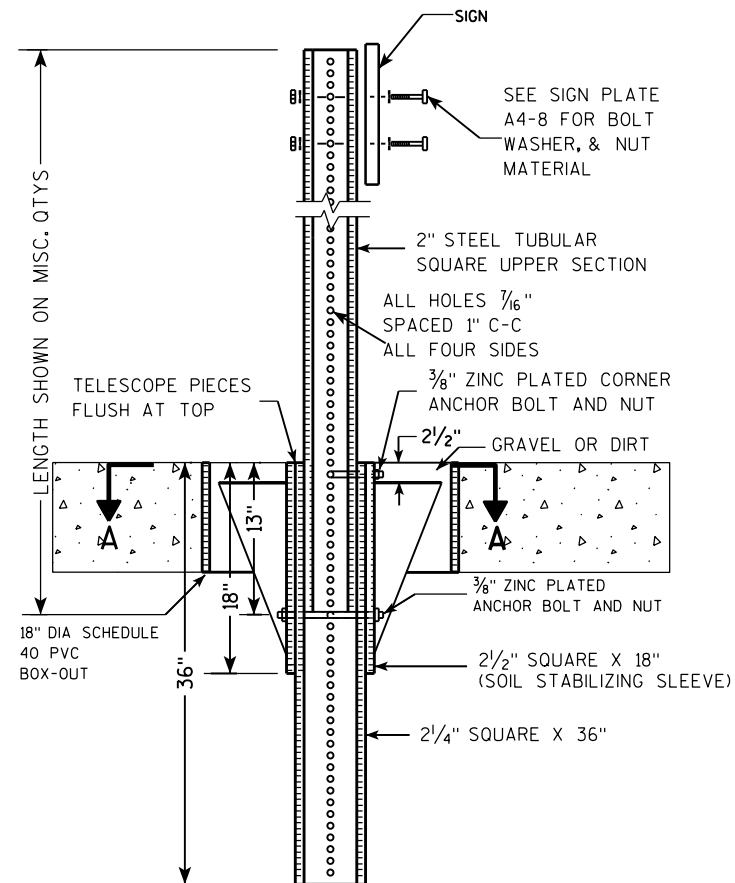
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



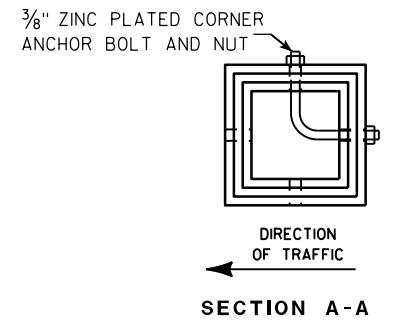
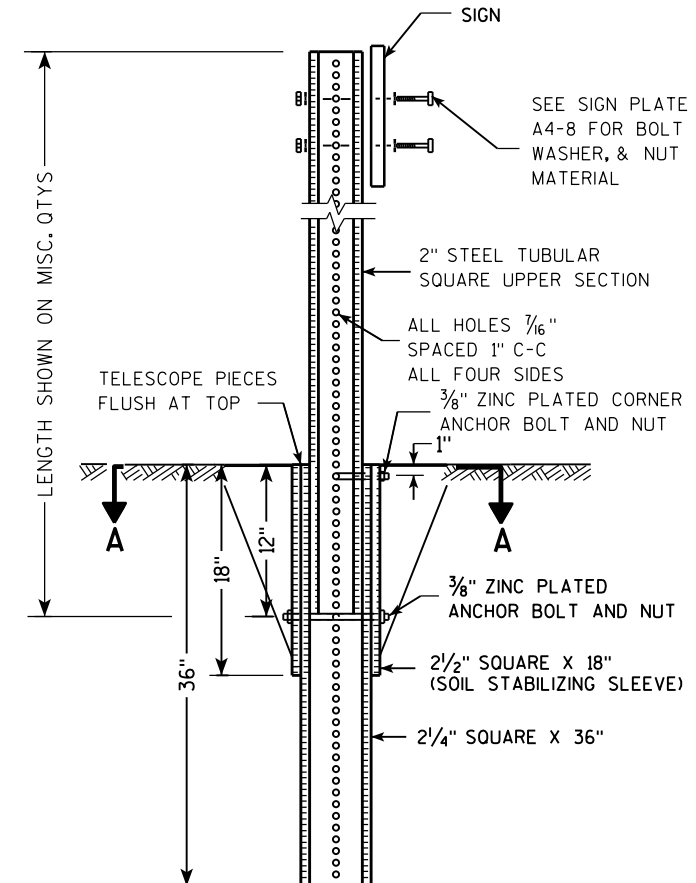
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**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)**



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

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

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO:

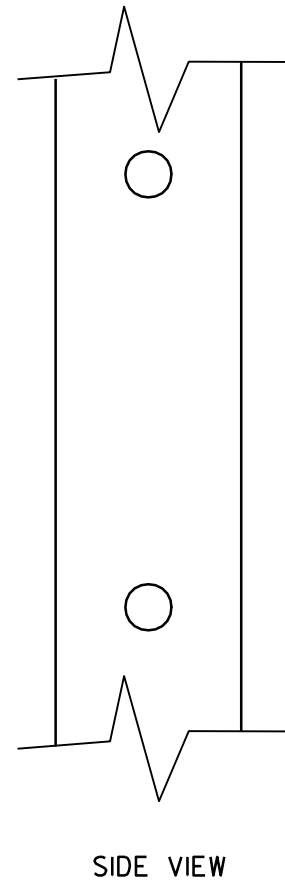
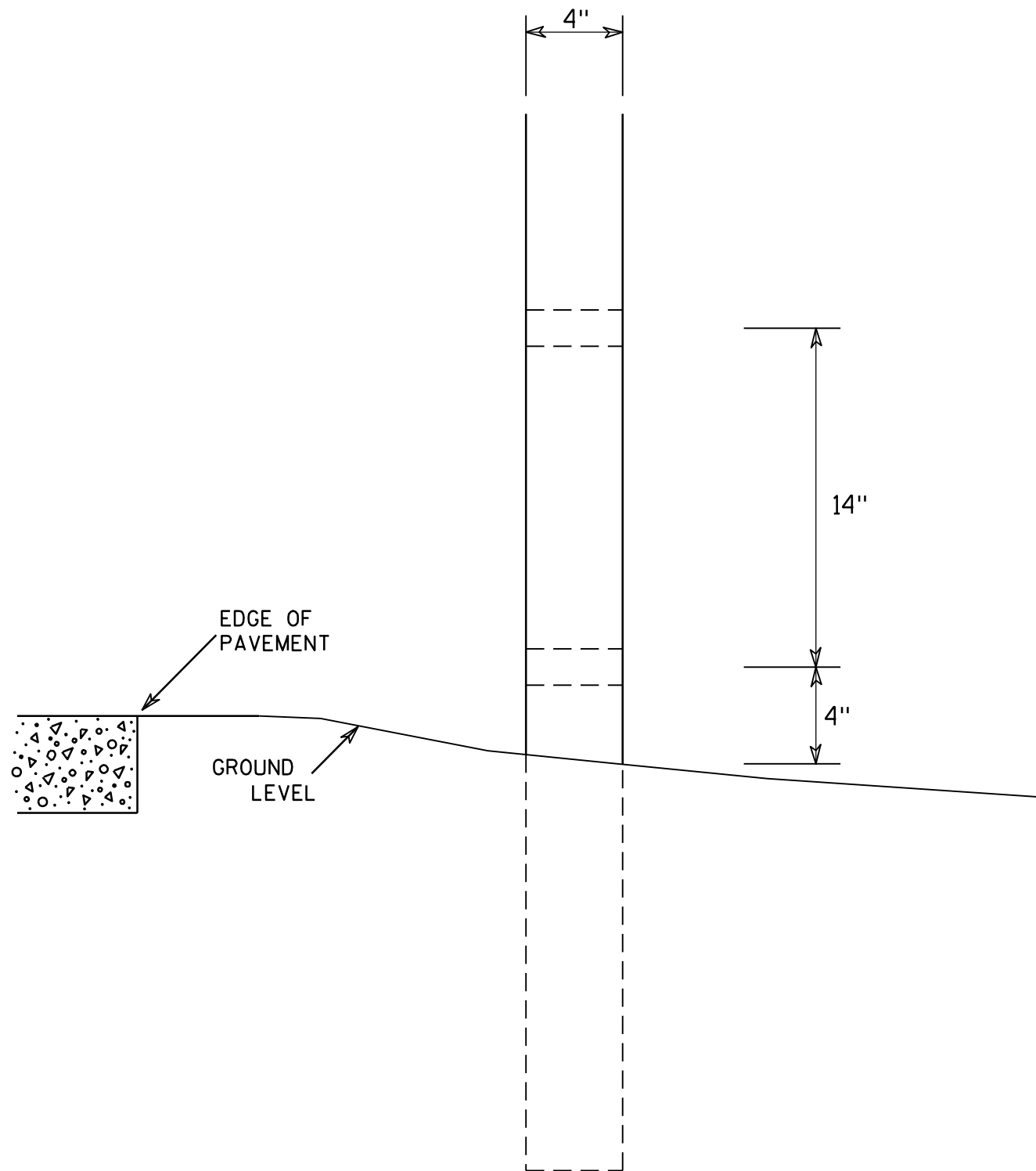
HWY:

COUNTY:

SHEET NO:

E





GENERAL NOTES

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

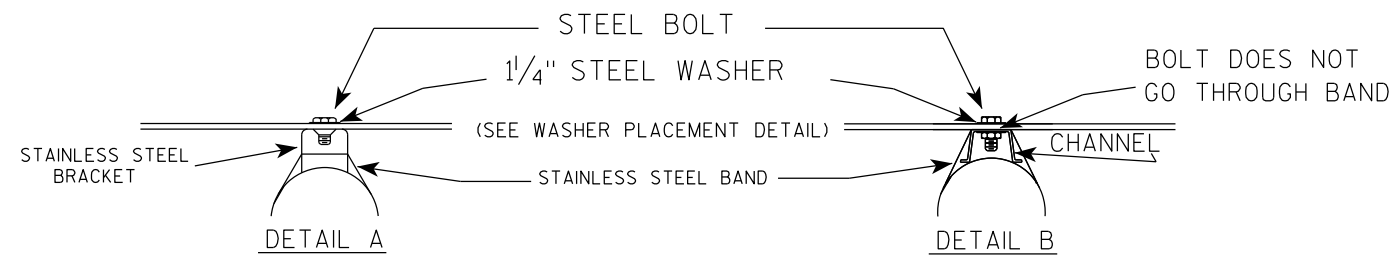
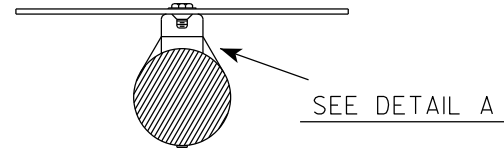
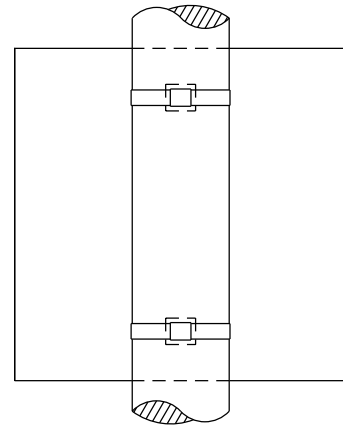
7

7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	 <small>for State Traffic Engineer</small>
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

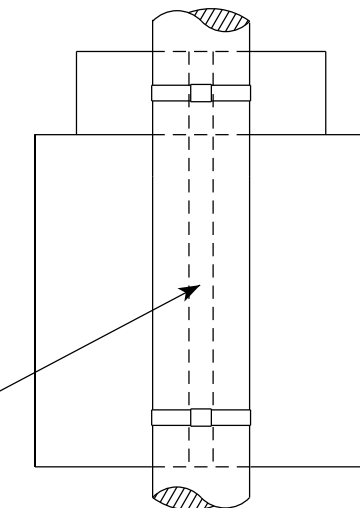
SINGLE SIGN



## 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  $\frac{3}{4}$ " in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

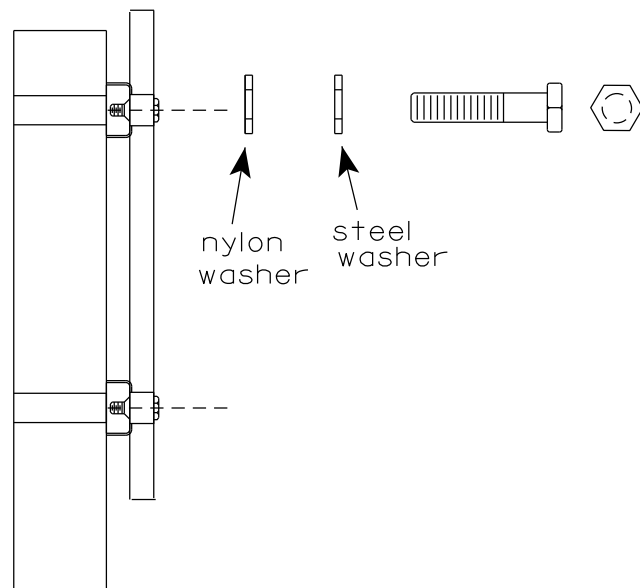
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



WASHER PLACEMENT



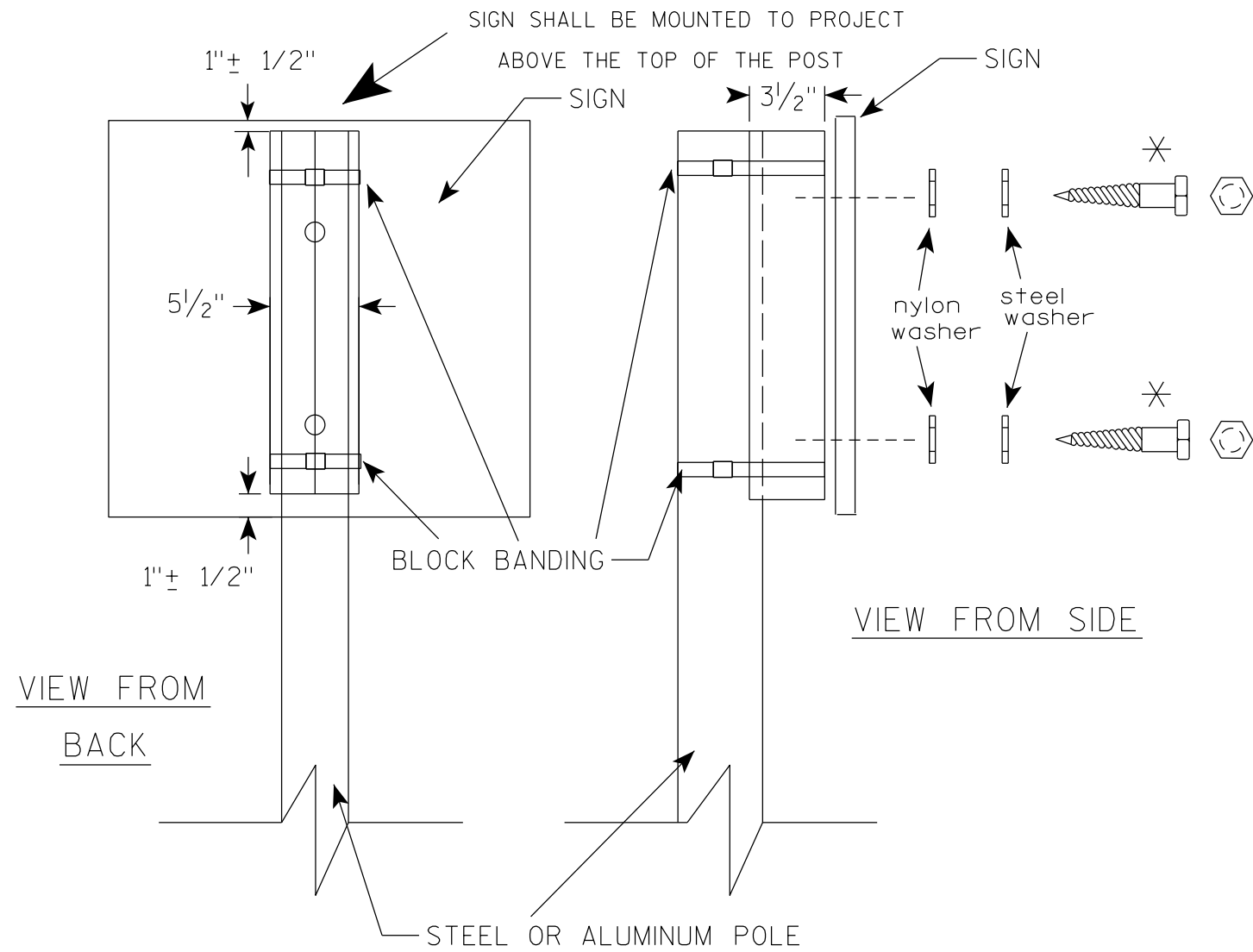
WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

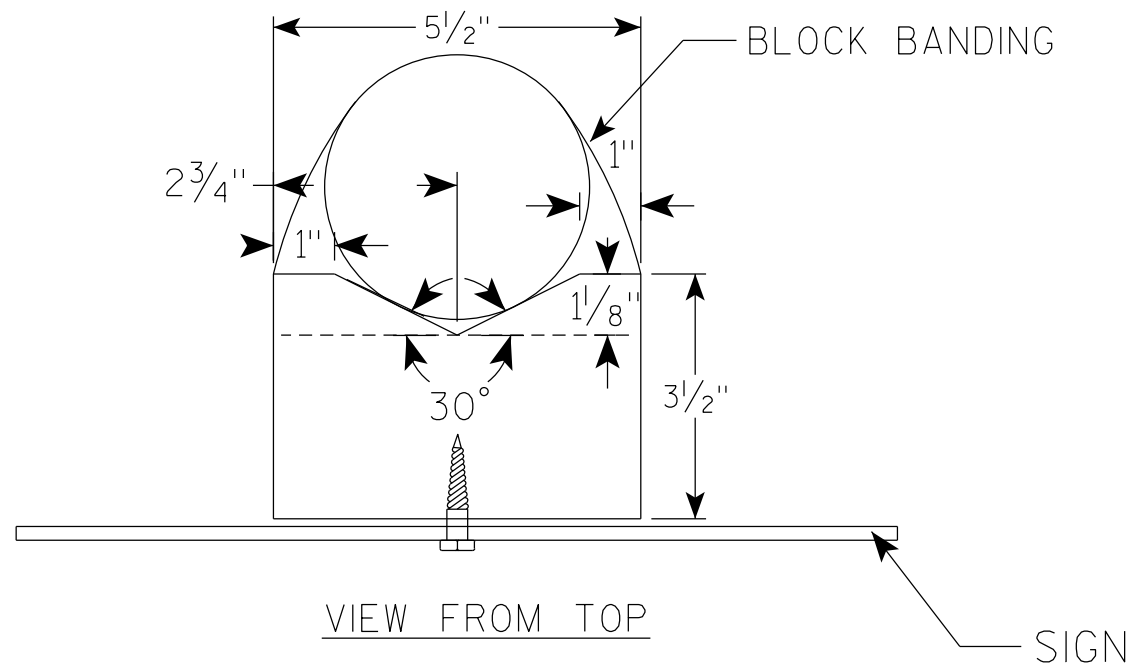
DATE 6/10/19 PLATE NO. A5-9.4



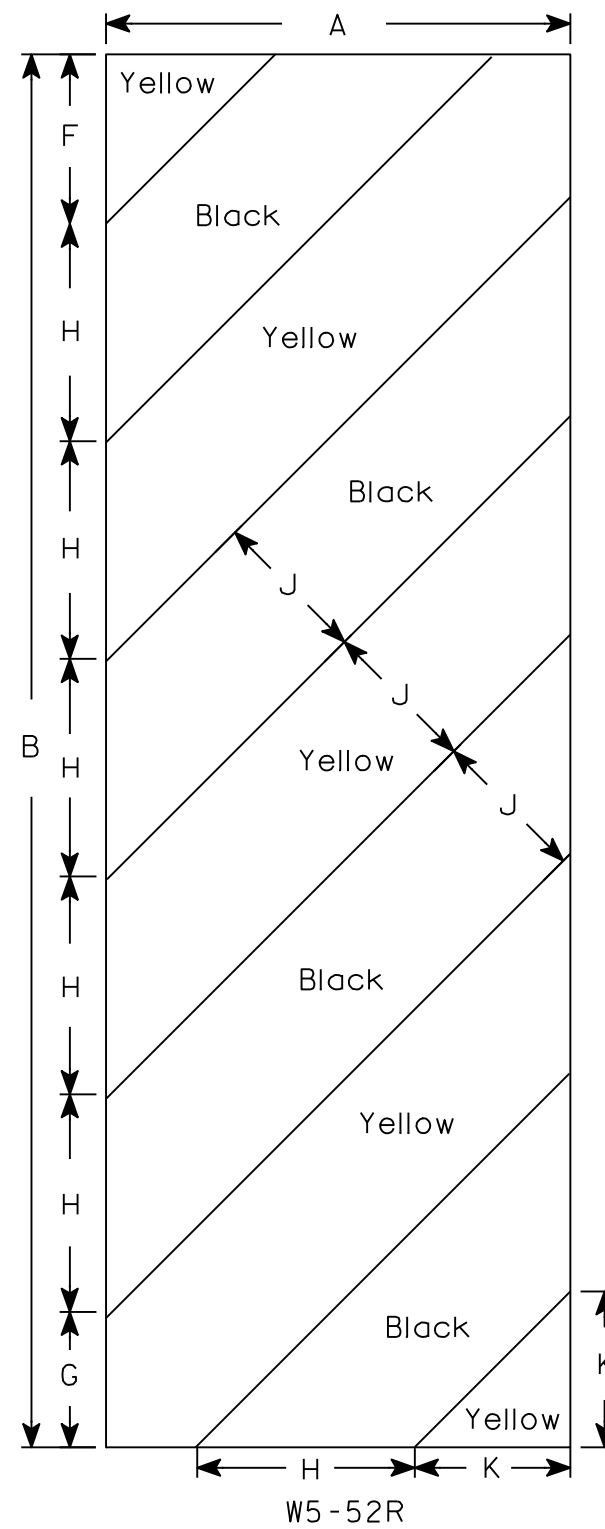
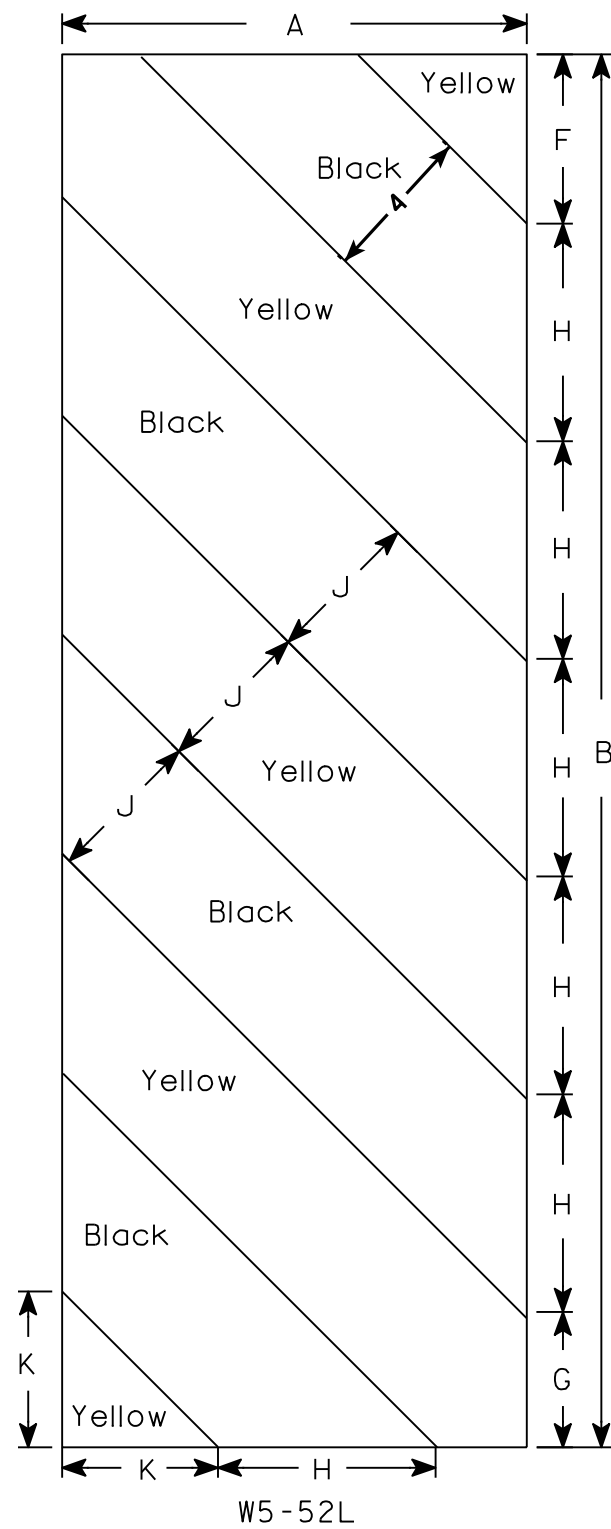
GENERAL NOTES

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

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3



NOTES

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

7

7

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

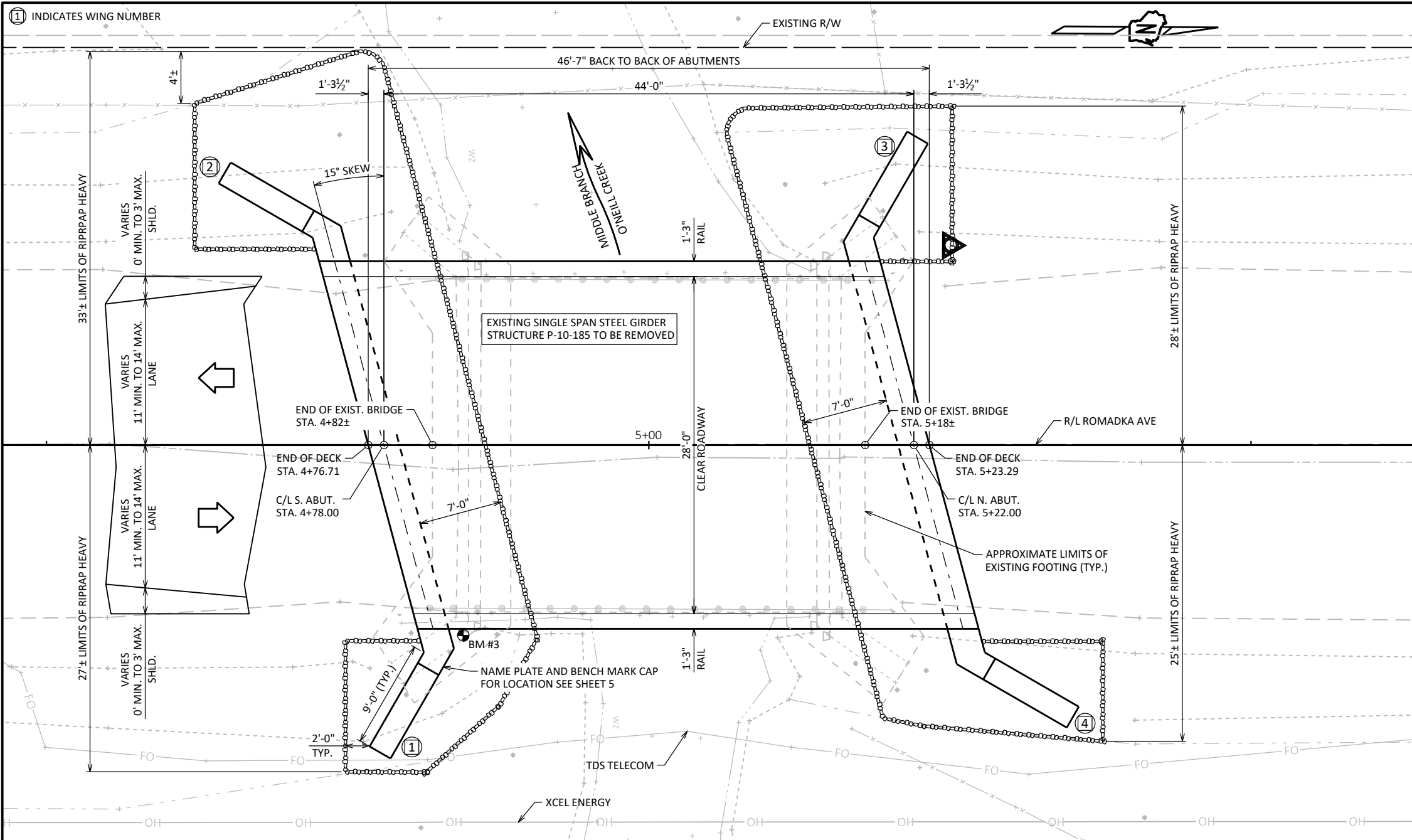
STANDARD SIGN  
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



**PLAN**

SINGLE SPAN CONCRETE FLAT SLAB

**DESIGN DATA**

STATE PROJECT NUMBER

**7850-00-71**

**LIVE LOAD:**

DESIGN LOADING: HL-93  
 INVENTORY RATING: RF = 1.36  
 OPERATING RATING: RF = 1.76  
 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**

SOUTH ABUTMENT TO BE SUPPORTED ON STEEL HP 10-INCH X 42 LB PILING PREBORED A MINIMUM OF 3 FEET INTO BEDROCK. ESTIMATED 20'-0" LONG.

PILES PLACED IN HOLES PREBORED INTO ROCK DO NOT REQUIRE DRIVING. PILING SHALL BE FIRMLY SEATED AFTER PLACEMENT.

NORTH ABUTMENT TO BE SUPPORTED ON STEEL HP 10-INCH X 42 LB PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS \*\* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25'-0" LONG WITH PILE POINTS.

\*\*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**

**TRAFFIC DATA**

**100-YEAR FREQUENCY:**

$Q_{100} = 440$  C.F.S.  
 $V_{100} = 3.9$  F.P.S.  
 $HW_{100} = EL. 1187.55$   
 WATERWAY AREA = 112.9 SQ. FT.  
 DRAINAGE AREA = 1.13 SQ. MI.  
 ROADWAY OVERTOPPING = N/A  
 SCOUR CRITICAL CODE = 5

**FEATURE ON:**

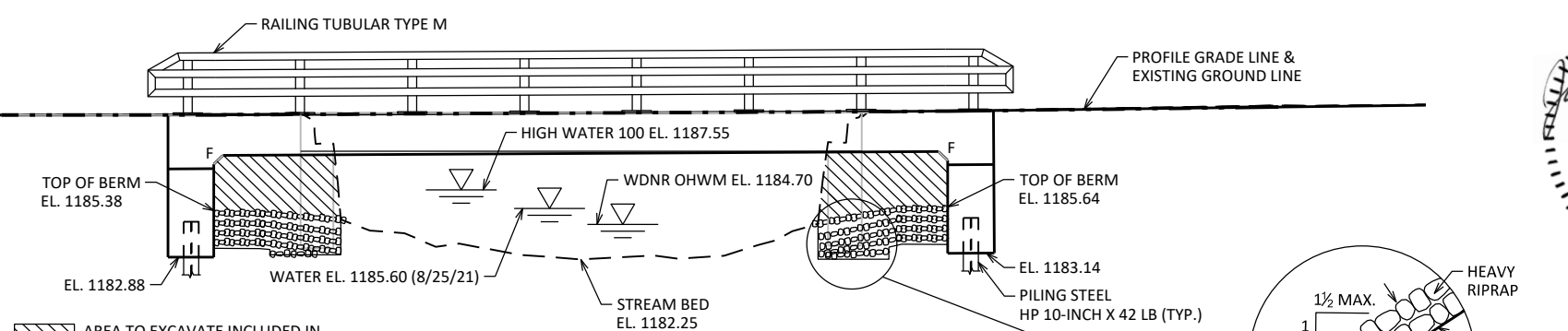
ADT = 220 (2024)  
 ADT = 300 (2044)  
 R.D.S. = 40 MPH

**2-YEAR FREQUENCY:**

$Q_2 = 110$  C.F.S.  
 $V_2 = 1.7$  F.P.S.  
 $HW_2 = EL. 1185.76$

**LIST OF DRAWINGS:**

- 1 GENERAL PLAN
- 2 CROSS SECTION & QUANTITIES
- 3 SUBSURFACE EXPLORATION
- 4 SOUTH ABUTMENT
- 5 WINGS 1 & 2
- 6 SOUTH ABUTMENT DETAILS
- 7 NORTH ABUTMENT
- 8 WINGS 3 & 4
- 9 NORTH ABUTMENT DETAILS
- 10 SUPERSTRUCTURE
- 11 SUPERSTRUCTURE DETAILS 1
- 12 SUPERSTRUCTURE DETAILS 2
- 13 RAILING TUBULAR TYPE M



**ELEVATION**

NORMAL TO ROADWAY

AREA TO EXCAVATE INCLUDED IN "EXCAVATION FOR STRUCTURES BRIDGES B-10-399"



**STRUCTURE DESIGN CONTACTS:**  
 AARON BONK (608) 261-0261  
 JAMES RHOAD-DROGALIS (608) 828-8166

**BENCH MARK**

NO.	STATION	DESCRIPTION	ELEV.
1	3+52.26, 23.91' RT.	60 D NAIL IN PP 9133 BB 78	1191.03
2	6+18.86, 30.55' RT.	60 D NAIL IN PP	1188.29
3	4+84.59, 15.81' RT.	CHISELED SQUARE ON TOP OF SE WING WALL OF BRIDGE	1190.41

NO.	DATE	REVISION	BY



STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

ACCEPTED *[Signature]* SDR **11/15/23**  
 CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-10-399**

ROMADKA AVE OVER MIDDLE BRANCH O'NEILL CREEK

COUNTY CLARK TOWN YORK

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION  
 DESIGNED BY TRA CK'D JRD DRAWN BY TRA CK'D JRD

**GENERAL PLAN** SHEET 1 OF 13

**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 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-10-399" SHALL BE THE EXISTING GROUNDLINE.

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.

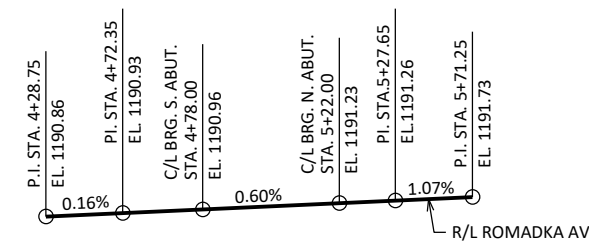
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF SLAB, TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

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. PLACE RIPRAP TO ALLOW FOR THE FULL STREAM WIDTH AT THE BRIDGE AS SHOWN ON SHEET 1.

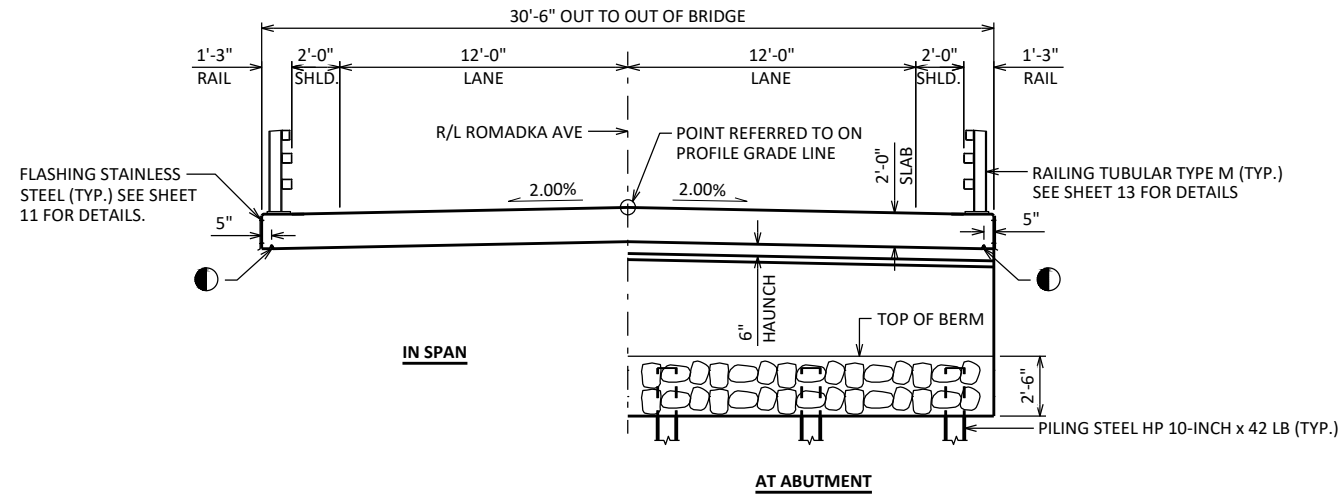
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE (P-10-185) IS A STEEL GIRDER STRUCTURE, 32.6' LONG X 27.4' WIDE, TO BE REMOVED.



**PROFILE GRADE LINE**

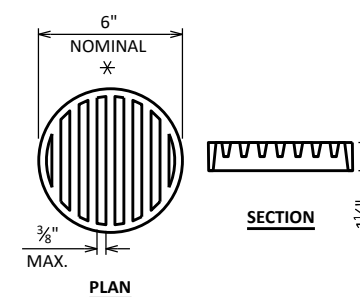


**CROSS SECTION THRU ROADWAY LOOKING NORTH**

3/4" V-GROOVE REQ'D. EXTEND V-GROOVE 6" FROM FRONT FACE OF ABUTMENT.

**TOTAL ESTIMATED QUANTITIES**

BID ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUTMENT	NORTH ABUTMENT	SUPER.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS P-10-185	EACH				1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-10-399	EACH				1
210.1500	BACKFILL STRUCTURE TYPE A	TON	180	180		360
502.0100	CONCRETE MASONRY BRIDGES	CY	29	29	110	168
502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	20	190	230
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,200	2,200		4,400
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,430	1,440	20,340	23,210
513.4061	RAILING TUBULAR TYPE M	LF			97	97
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	7		14
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	105			105
550.0500	PILE POINTS	EACH		7		7
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	140	175		315
606.0300	RIPRAP HEAVY	CY	60	50		110
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70		140
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	55		110
645.0120	GEOTEXTILE TYPE HR	SY	90	80		170
SPV.0090.01	FLASHING STAINLESS STEEL	LF			83	83
NON-BID ITEMS						
	FILLER	SIZE				1/2" & 3/4"

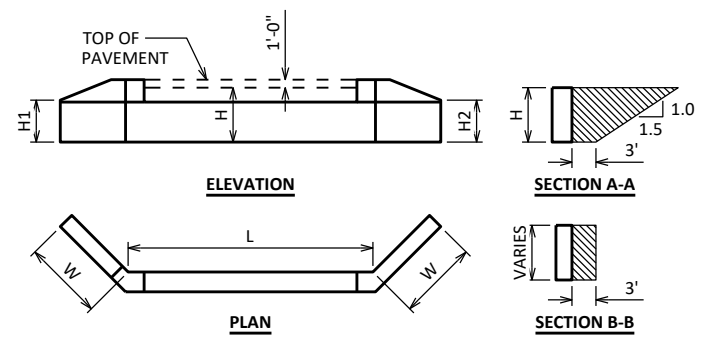


**RODENT SHIELD DETAIL**

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

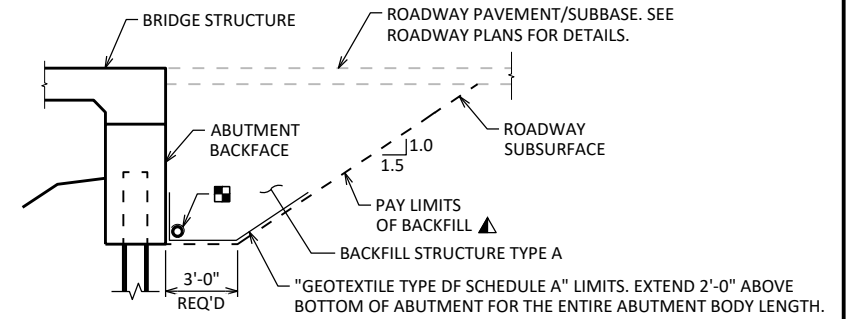
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



**ABUTMENT BACKFILL DIAGRAM**

- L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- H1 = WING 1 HEIGHT AT TIP (FT)
- H2 = WING 2 HEIGHT AT TIP (FT)
- W = WING LENGTH (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
- V<sub>CF</sub> = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
- V<sub>CY</sub> = V<sub>CF</sub>(EF)/27
- V<sub>TON</sub> = V<sub>CY</sub>(2.0)



**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.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>CROSS SECTION &amp; QUANTITIES</b>			SHEET 2 OF 13

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	9/3/21	378099.7'	721584.1'
B-2	9/3/21	378033.8'	721570.3'

BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.  
 REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.  
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CLARK COUNTY

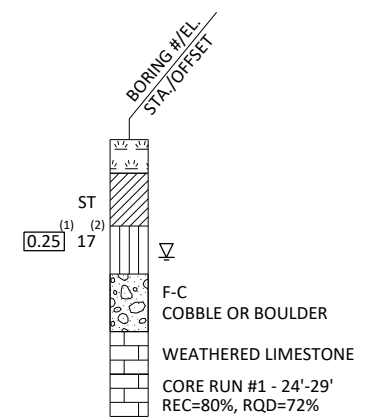
STATE PROJECT NUMBER

**7850-00-71**

**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

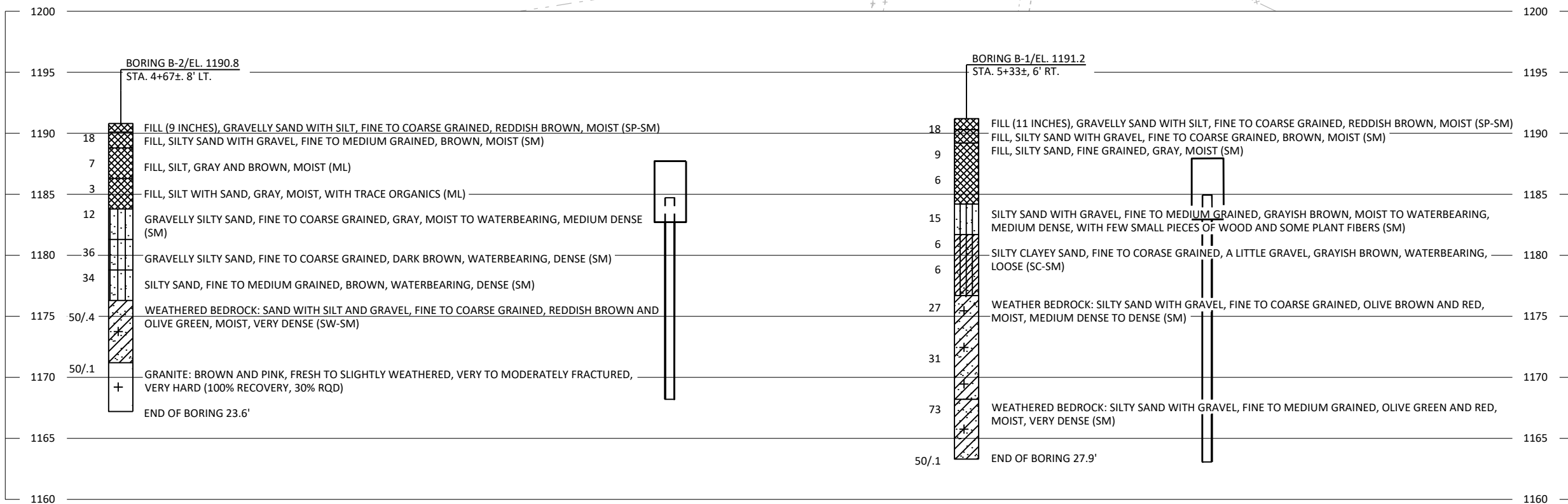
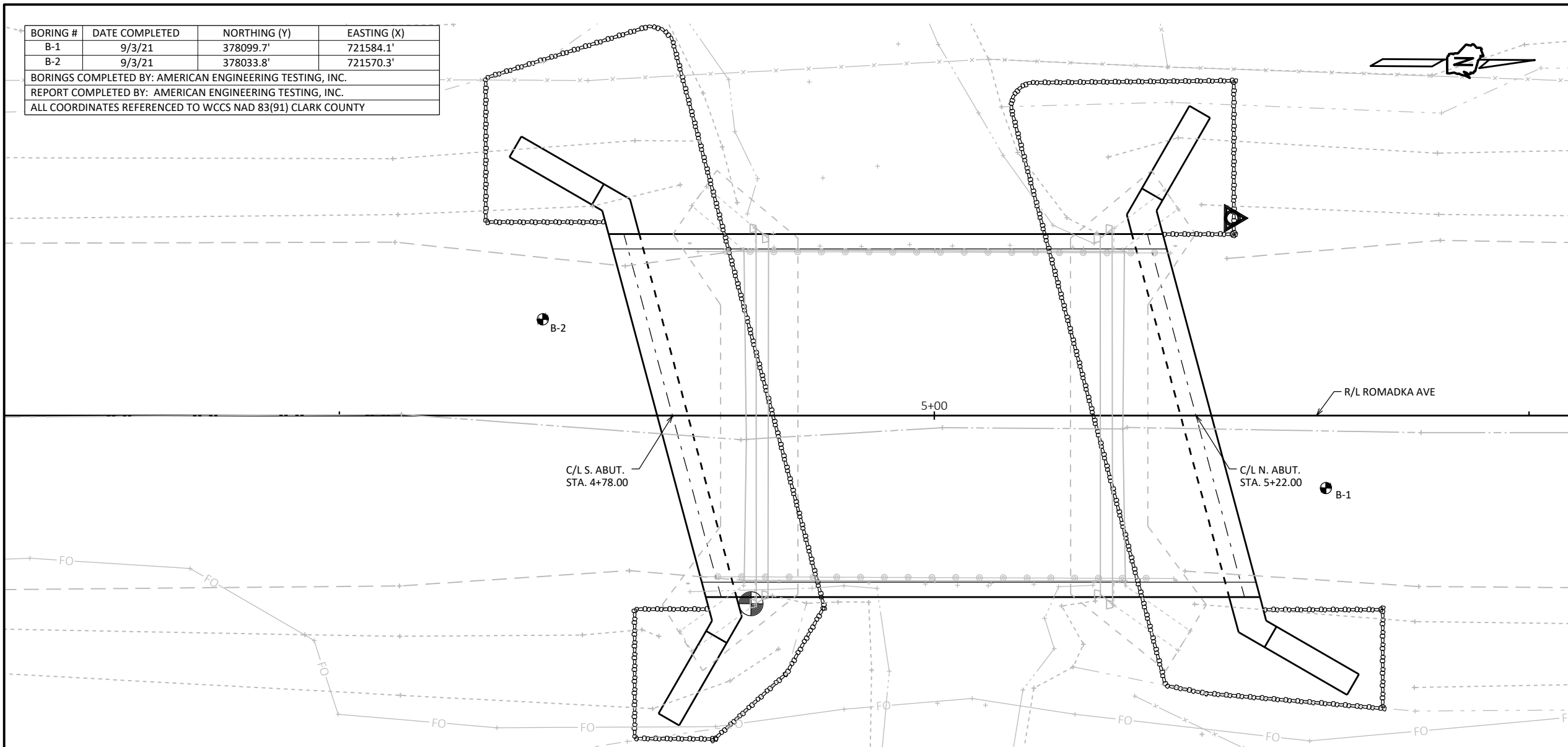
**STRUCTURE B-10-399**

DRAWN BY	MES	PLANS CK'D	JRD

**SUBSURFACE EXPLORATION**

SHEET 3 OF 13

SCALE =

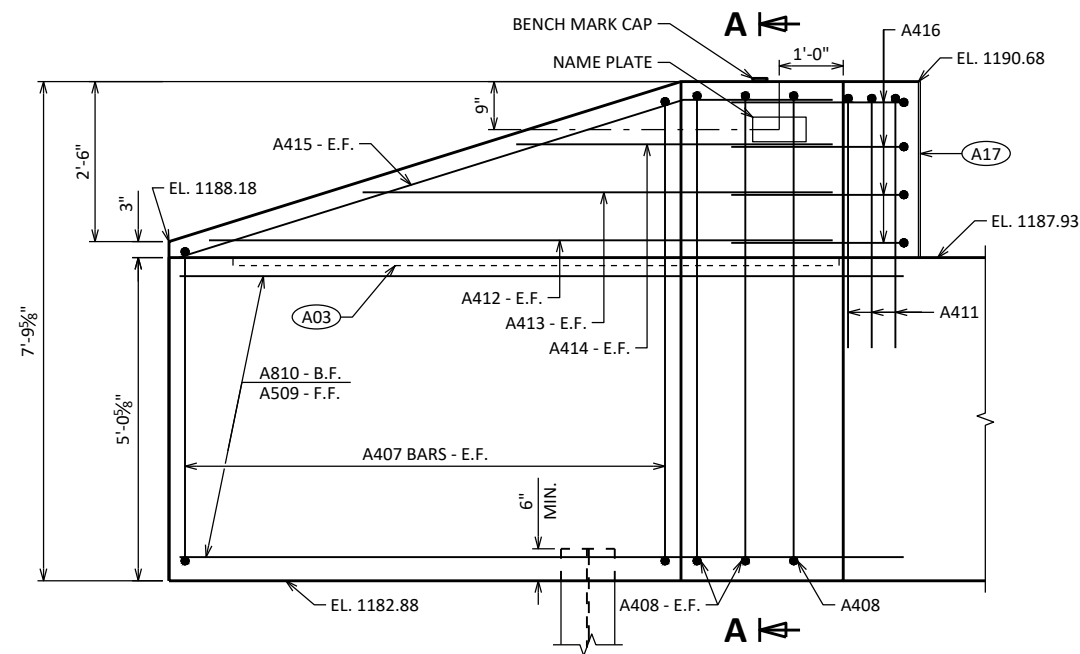


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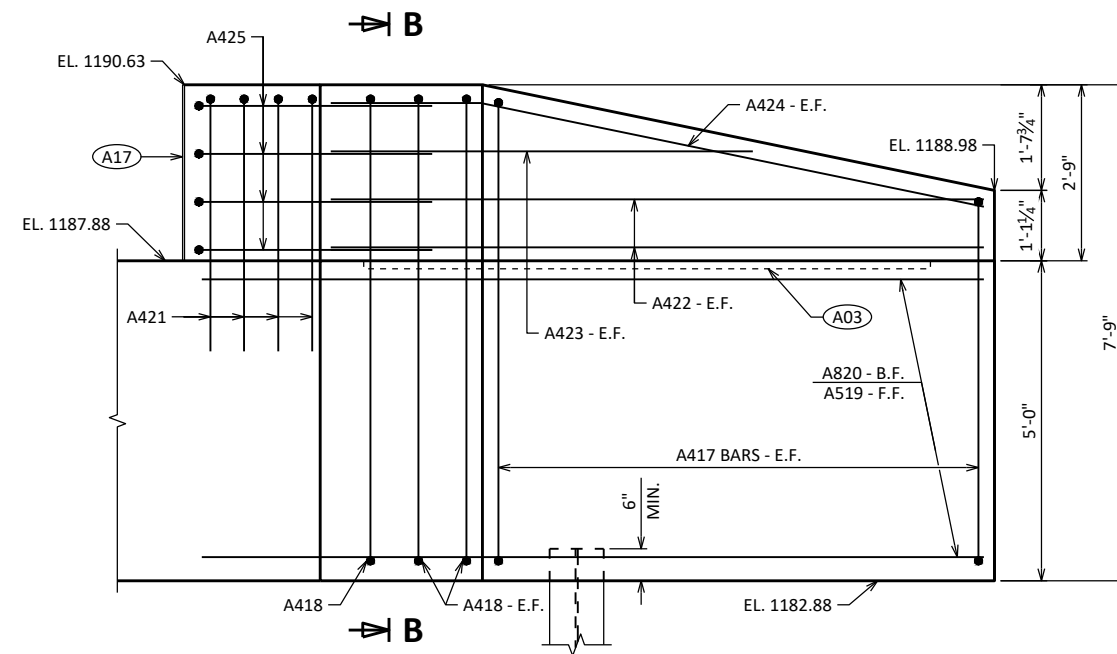
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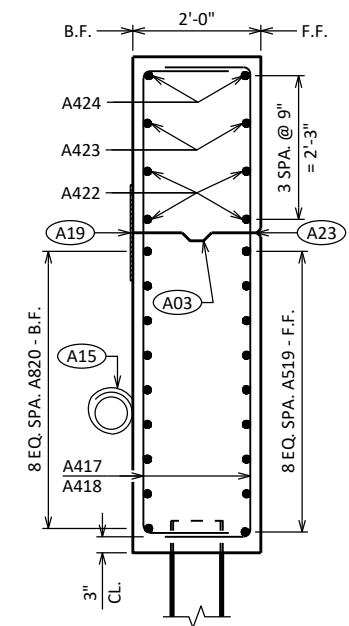




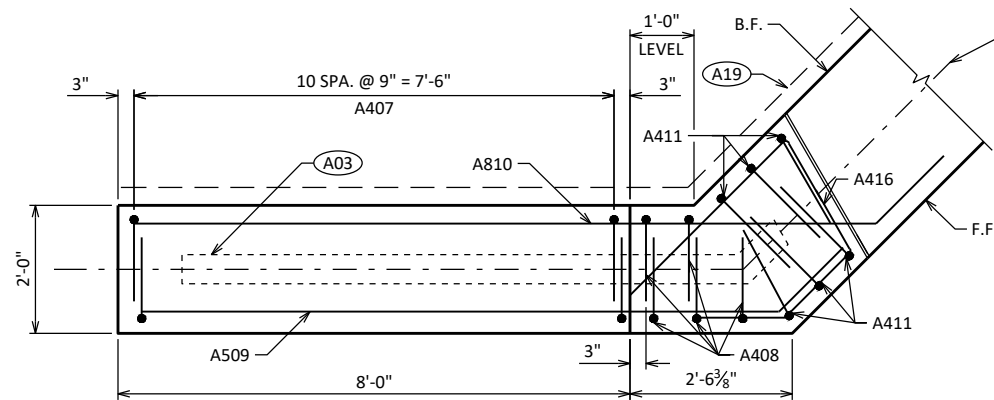
**ELEVATION - WING 1**



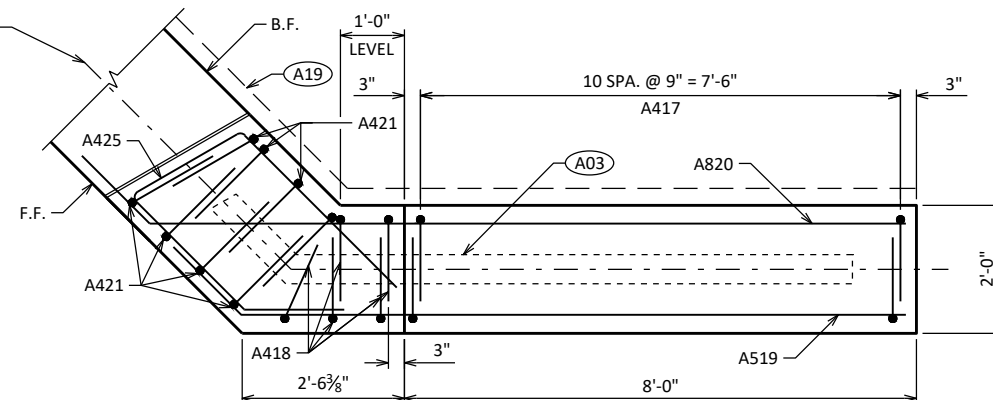
**ELEVATION - WING 2**



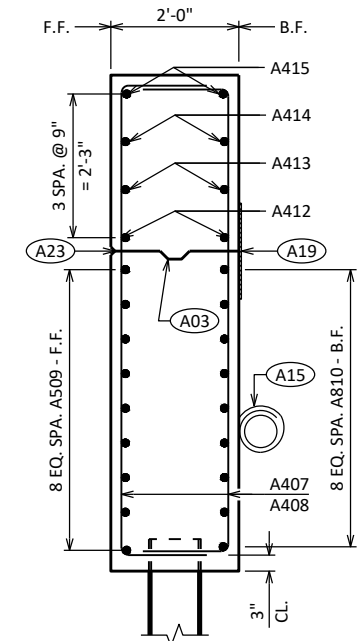
**SECTION B-B**



**PLAN - WING 1**



**PLAN - WING 2**



**SECTION A-A**

**NOTES**

18" RUBBERIZED MEMBRANE WATERPROOFING REQUIRED IF OPTIONAL CONST. JOINT IS USED. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").

ADJUST A407 AND A417 BARS TO MISS PILING.

**LEGEND**

(A23) 3/4" "V" GROOVE ON F.F. OF WINGWALL - NOT REQUIRED IF CONST. JOINT IS NOT USED.

FOR ADDITIONAL SYMBOL DESCRIPTIONS SEE SHEET 4.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>WINGS 1 &amp; 2</b>			SHEET 5 OF 13

**LEGEND**

SEE SHEET 4 FOR SYMBOL DESCRIPTIONS.

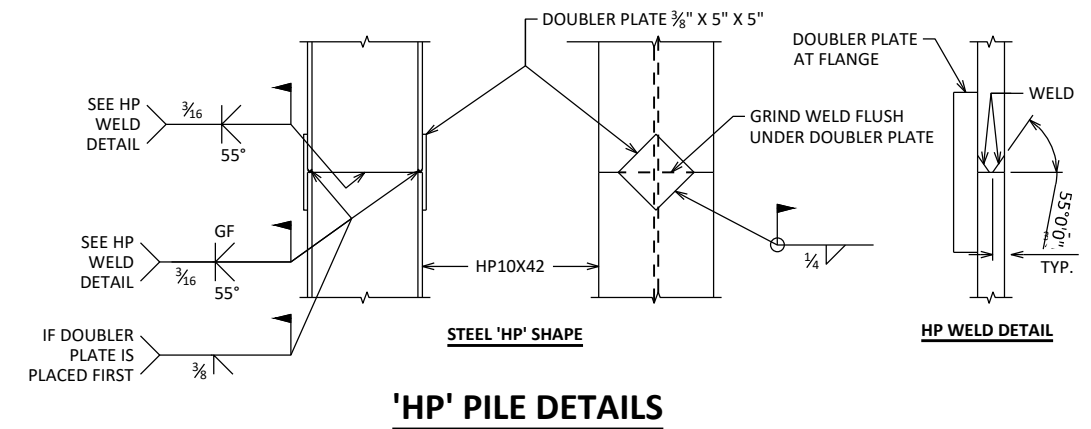
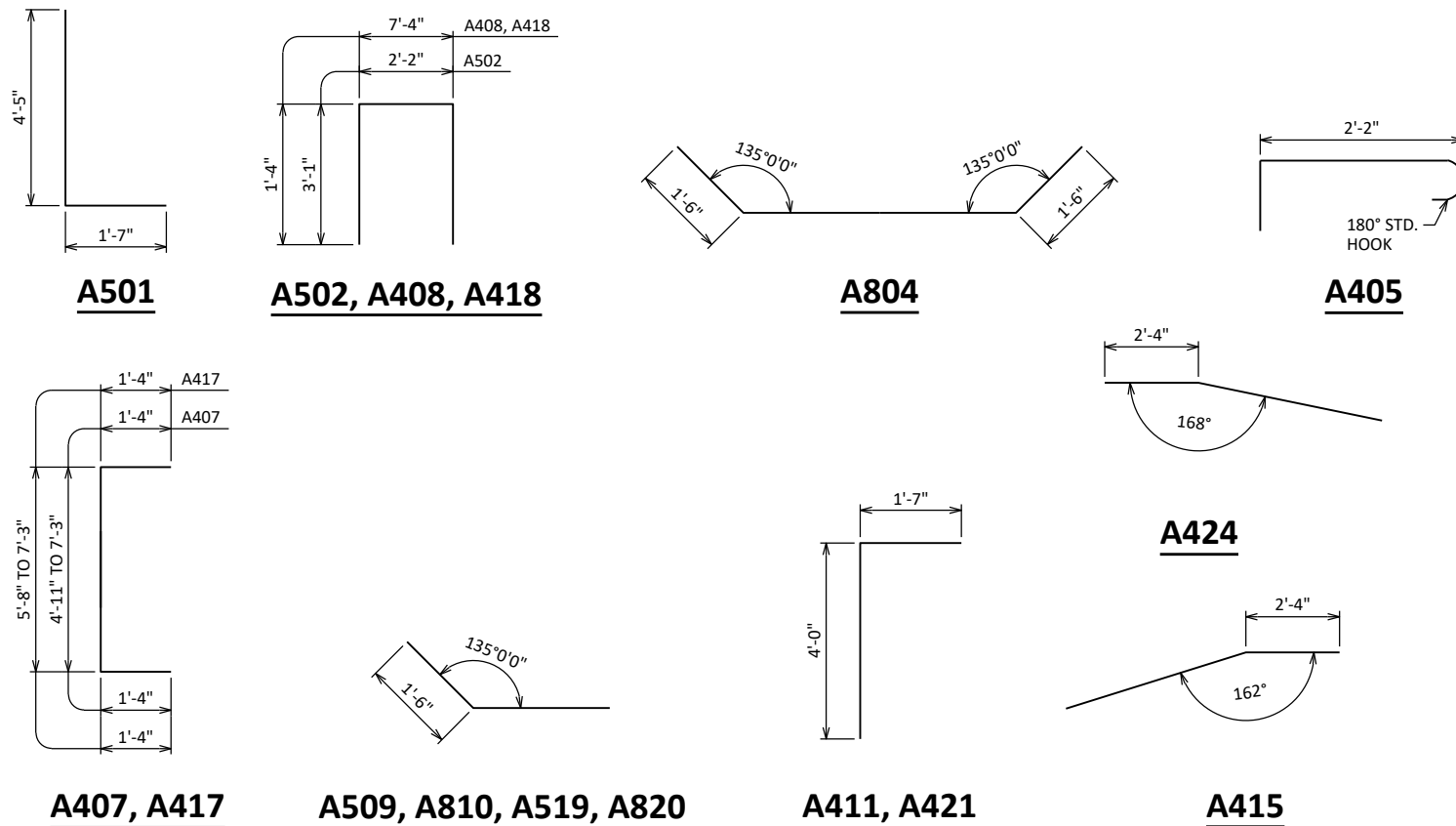
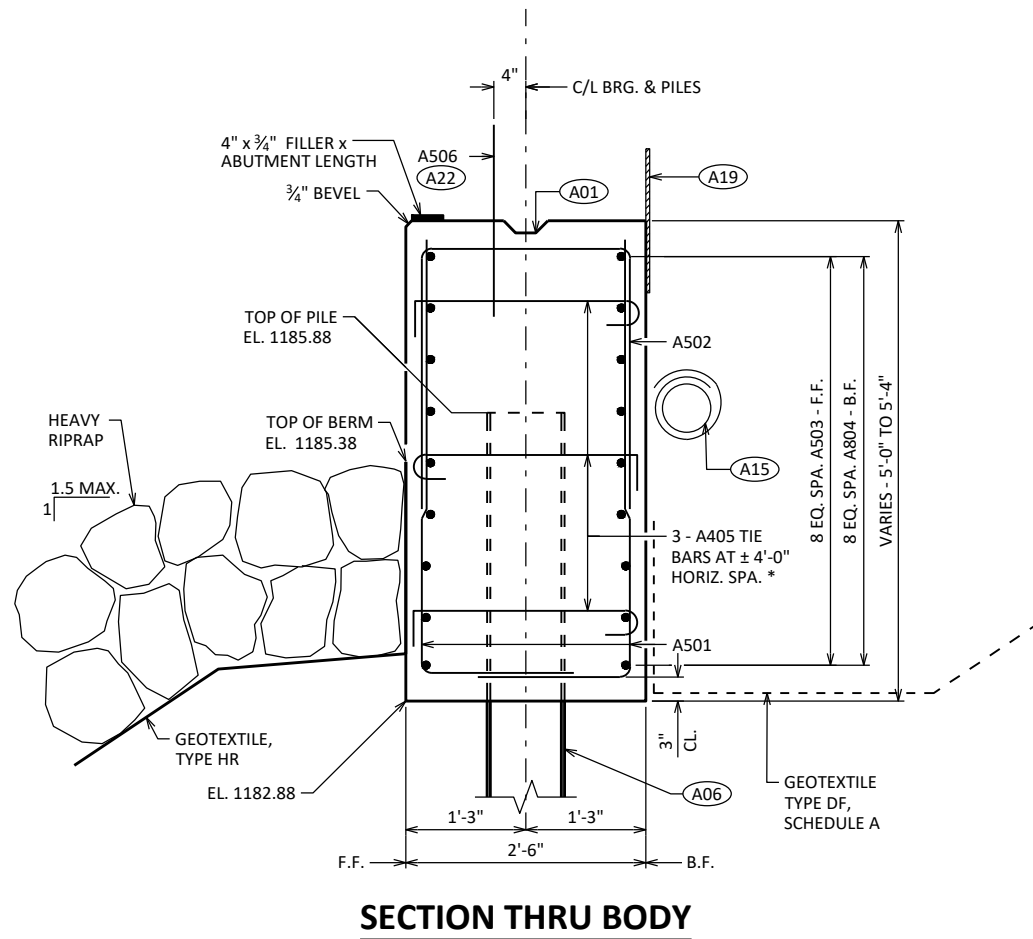
**BAR SERIES**

MARK	NO. REQ'D	LENGTH
A407	2 SETS OF 11	7'-5" TO 9'-9"
A417	2 SETS OF 11	8'-2" TO 9'-9"

**BILL OF BARS**

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.  
 ▲ LENGTH SHOWN FOR BAR IS AN AVG. LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
<b>UNCOATED BARS</b>					
					TOTAL WEIGHT = 2,200 LBS
A501	74	5 - 11	X		ABUT. BODY STIRRUPS
A502	37	8 - 1	X		ABUT. BODY STIRRUPS - TOP U-BAR
A503	9	36 - 2			ABUT. BODY - F.F.
A804	9	42 - 11	X		ABUT. BODY - B.F.
A405	30	3 - 0	X		ABUT. BODY TIE BARS
<b>COATED BARS</b>					
					TOTAL WEIGHT = 1,430 LBS
A506	30	2 - 0			ABUT. BODY DOWEL BARS
A407	22	8 - 7	X	▲	WING 1 STIRRUPS
A408	5	9 - 11	X		WING 1 STIRRUPS
A509	9	11 - 8	X		WING 1 - F.F.
A810	9	13 - 2	X		WING 1 - B.F.
A411	6	5 - 6	X		WING 1 - E.F.
A412	2	9 - 5			WING 1 - E.F.
A413	2	7 - 0			WING 1 - E.F.
A414	2	4 - 8			WING 1 - E.F.
A415	2	10 - 6	X		WING 1 - E.F.
A416	4	8 - 4	X		WING 1
A417	22	9 - 0	X	▲	WING 2 STIRRUPS
A418	5	9 - 10	X		WING 2 STIRRUPS
A519	9	11 - 8	X		WING 2 - F.F.
A820	9	13 - 2	X		WING 2 - B.F.
A421	8	5 - 6	X		WING 2 - E.F.
A422	4	10 - 2			WING 2 - E.F.
A423	2	6 - 2			WING 2 - E.F.
A424	2	10 - 4	X		WING 2 - E.F.
A425	4	9 - 7	X		WING 2

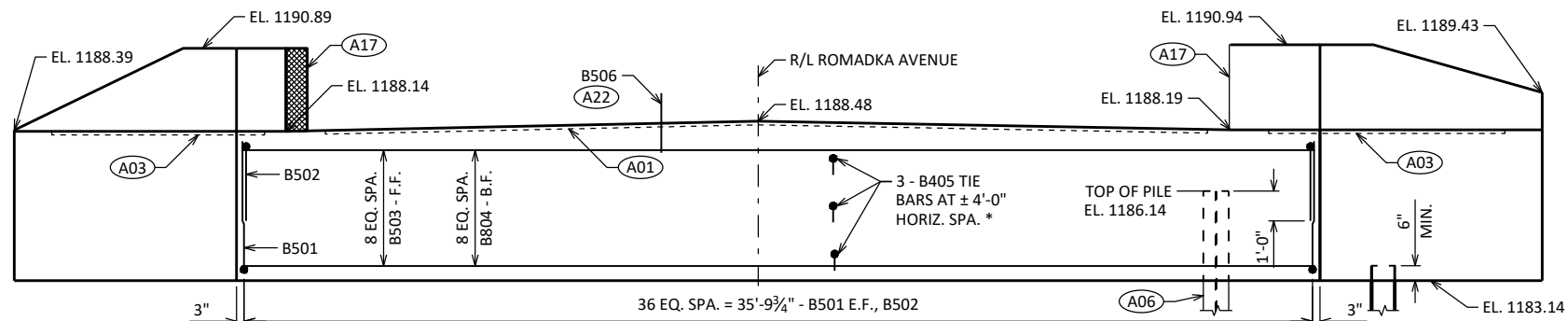


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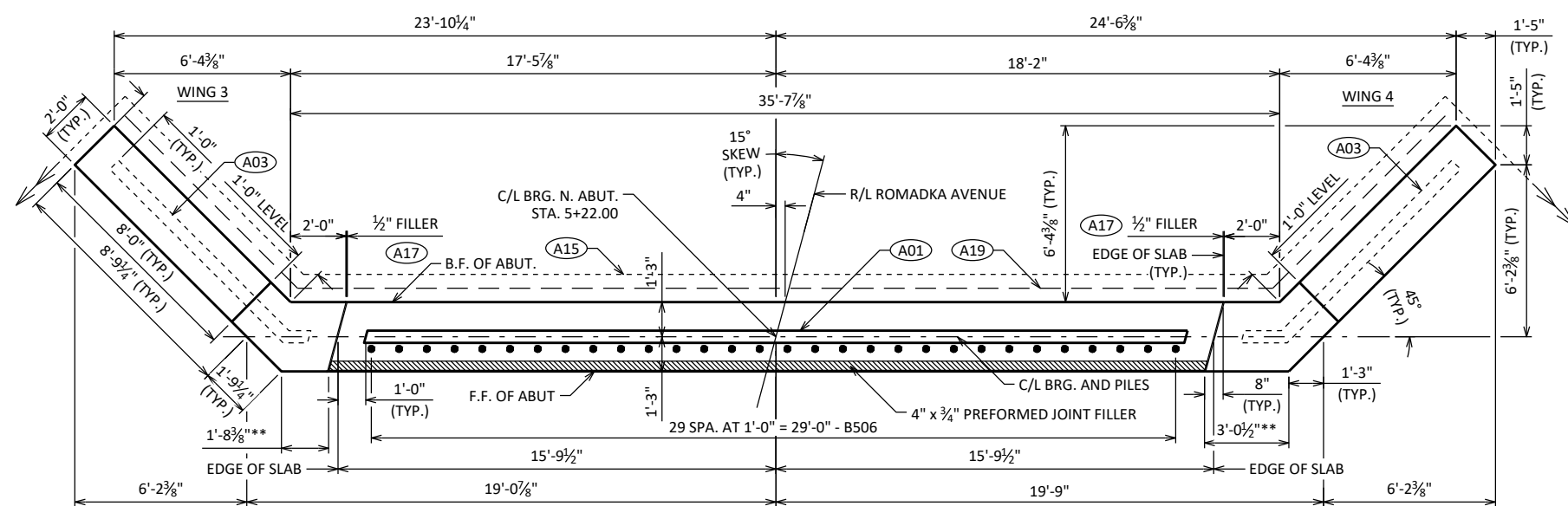
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>SOUTH ABUTMENT DETAILS</b>		SHEET 6 OF 13	

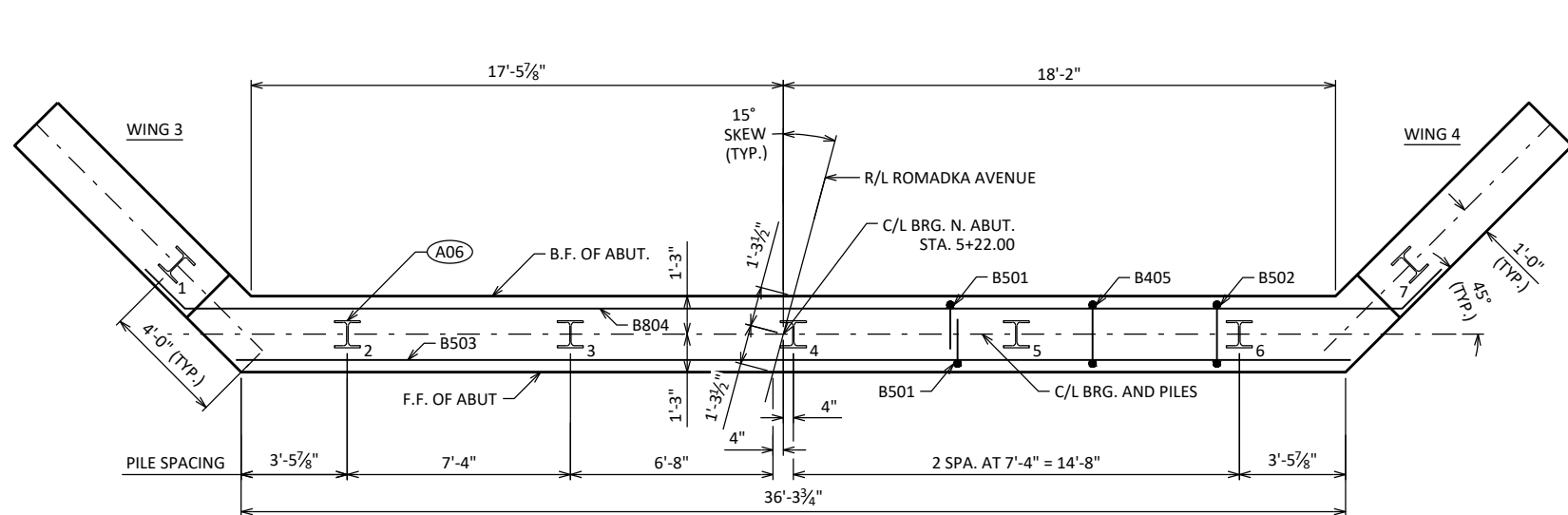
SCALE =



**ELEVATION**  
(LOOKING NORTH AT NORTH ABUT.)



**PLAN**



**PILE PLAN**

**LEGEND**

SEE SHEET 4 FOR SYMBOL DESCRIPTIONS.

**NOTES**

FOR WING DETAILS SEE SHEET 8.

ADJUST B501 AND B502 BARS TO MISS PILING.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

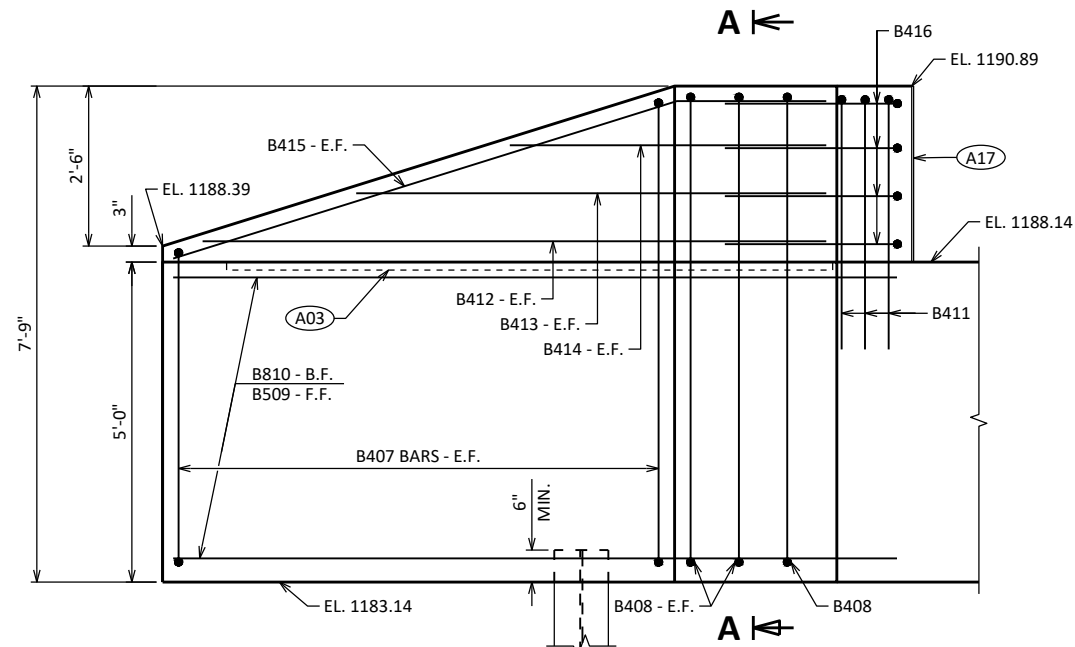
DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP EXTERIOR EXPOSED FACE OF WINGS, AND TO THE FRONT FACE OF THE ABUTMENT FROM THE ABUTMENT CORNER TO 1'-0" UNDER THE SLAB.

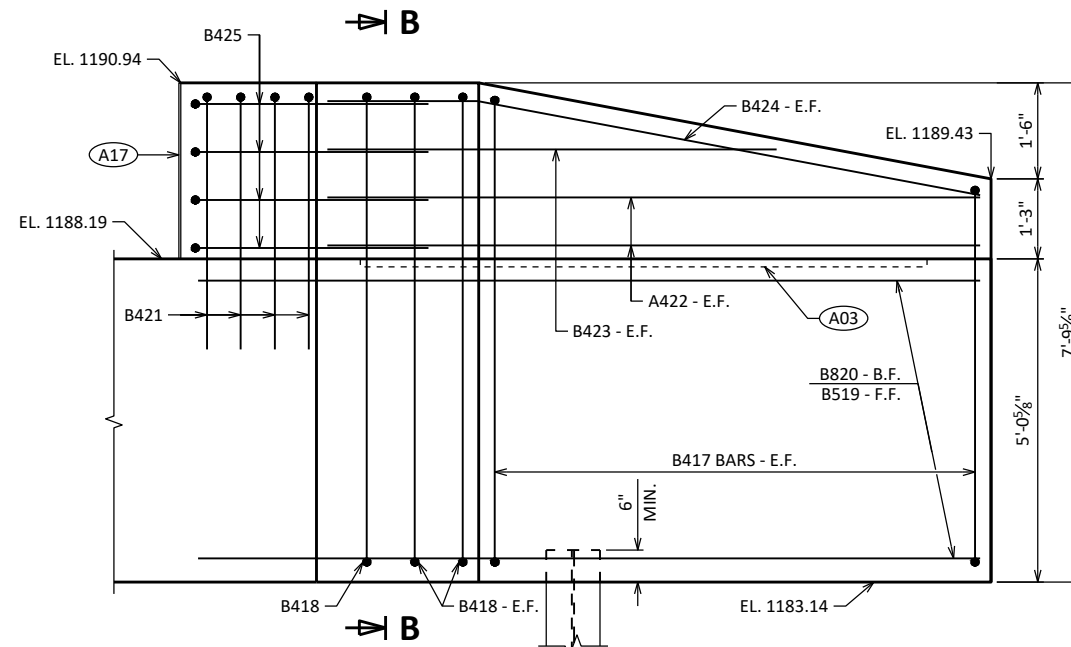
CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.



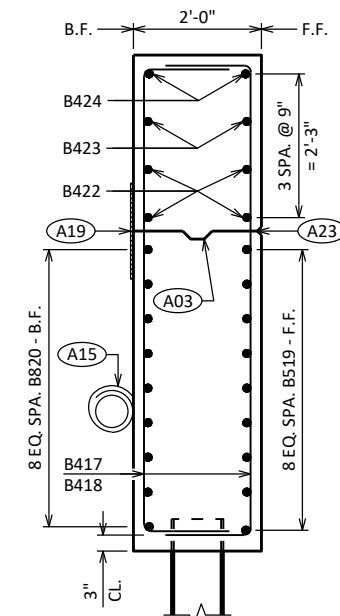
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>NORTH ABUTMENT</b>			SHEET 7 OF 13



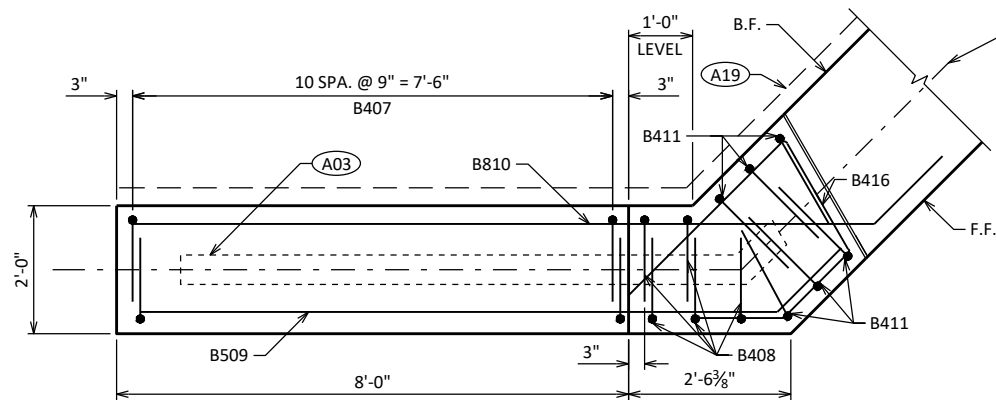
**ELEVATION - WING 3**



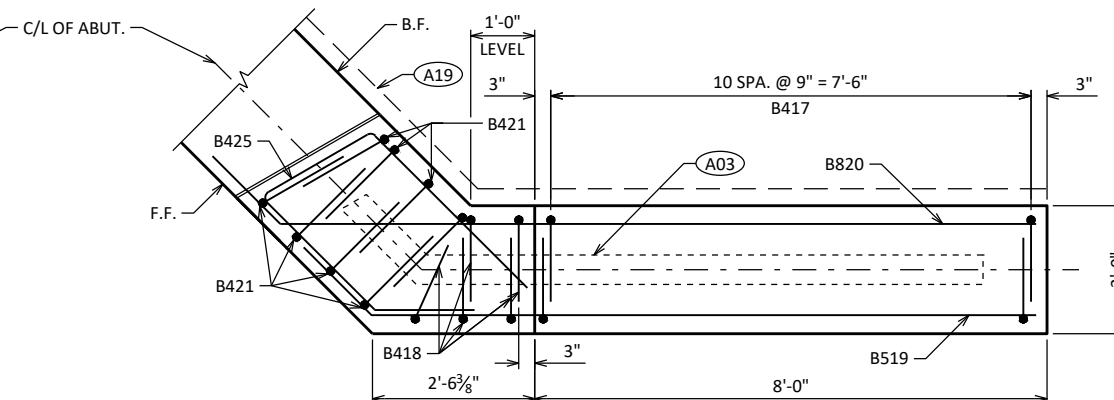
**ELEVATION - WING 4**



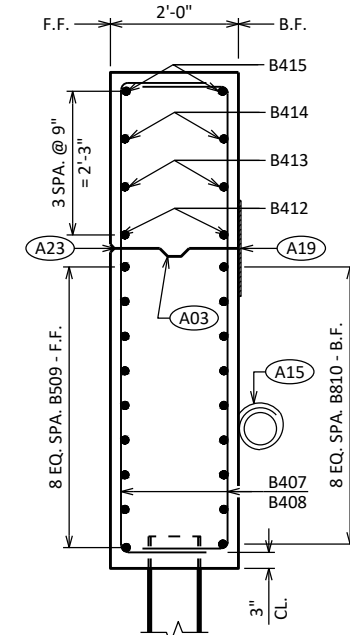
**SECTION B-B**



**PLAN - WING 3**



**PLAN - WING 4**



**SECTION A-A**

**NOTES**

18" RUBBERIZED MEMBRANE WATERPROOFING REQUIRED IF OPTIONAL CONST. JOINT IS USED. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").

ADJUST B407 AND B417 BARS TO MISS PILING.

**LEGEND**

(A23) 3/4" "V" GROOVE ON F.F. OF WINGWALL - NOT REQUIRED IF CONST. JOINT IS NOT USED.

FOR ADDITIONAL SYMBOL DESCRIPTIONS SEE SHEET 4.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>WINGS 3 &amp; 4</b>			SHEET 8 OF 13

**LEGEND**

SEE SHEET 4 FOR SYMBOL DESCRIPTIONS.

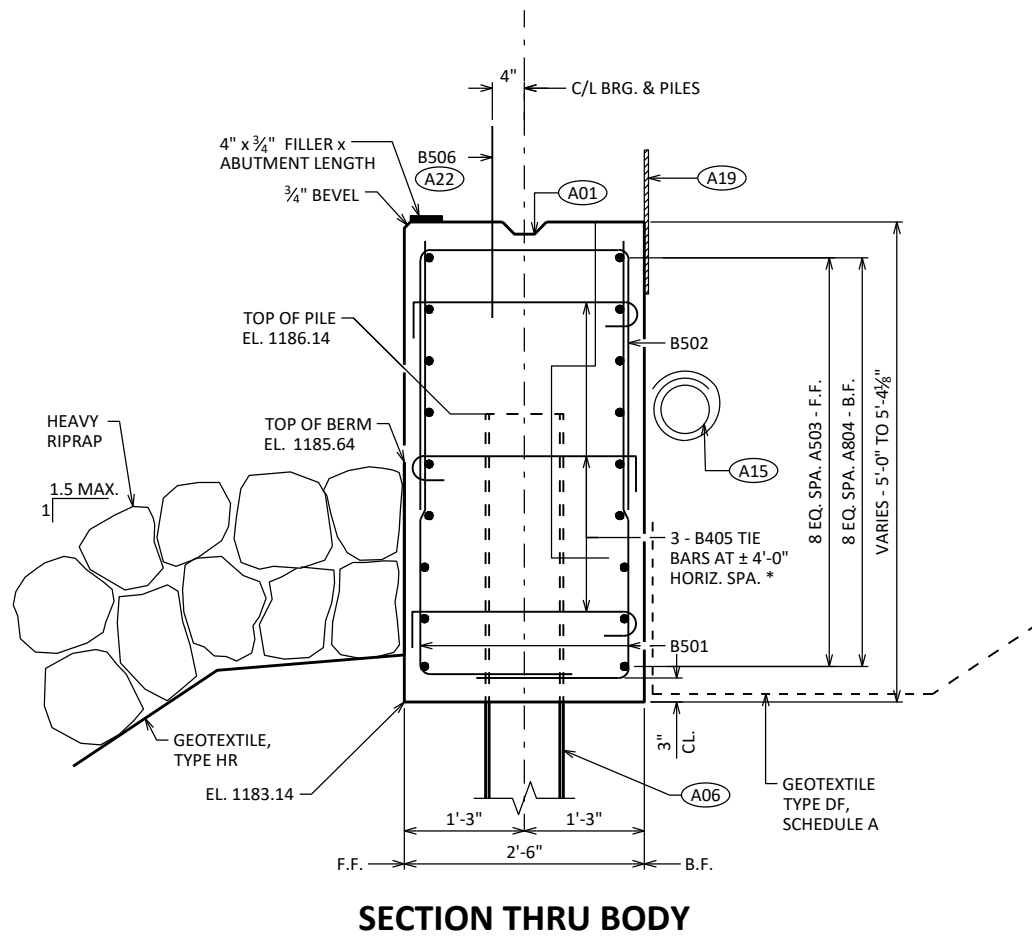
**BAR SERIES**

MARK	NO. REQ'D	LENGTH
B407	2 SETS OF 11	7'-5" TO 9'-9"
B417	2 SETS OF 11	8'-5" TO 9'-10"

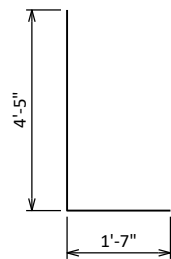
**BILL OF BARS**

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.  
 ▲ LENGTH SHOWN FOR BAR IS AN AVG. LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

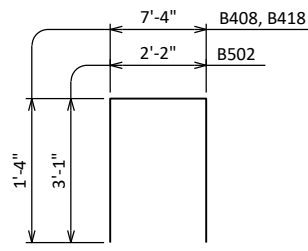
MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
UNCOATED BARS					
TOTAL WEIGHT = 2,200 LBS					
B501	74	5 - 11	X		ABUT. BODY STIRRUPS VERT.
B502	37	8 - 1	X		ABUT. BODY STIRRUPS - TOP U-BAR VERT.
B503	9	36 - 2			ABUT. BODY - F.F. HORIZ.
B804	9	42 - 11	X		ABUT. BODY - B.F. HORIZ.
B405	30	3 - 0	X		ABUT. BODY TIE BARS HORIZ.
COATED BARS					
TOTAL WEIGHT = 1,440 LBS					
B506	30	2 - 0			ABUT. BODY DOWEL BARS VERT.
B407	22	8 - 7	X	▲	WING 3 STIRRUPS VERT.
B408	5	9 - 11	X		WING 3 STIRRUPS VERT.
B509	9	11 - 8	X		WING 3 - F.F. HORIZ.
B810	9	13 - 2	X		WING 3 - B.F. HORIZ.
B411	6	5 - 6	X		WING 3 - E.F. VERT.
B412	2	9 - 5			WING 3 - E.F. HORIZ.
B413	2	7 - 0			WING 3 - E.F. HORIZ.
B414	2	4 - 8			WING 3 - E.F. HORIZ.
B415	2	10 - 6	X		WING 3 - E.F. HORIZ.
B416	4	8 - 4	X		WING 3 HORIZ.
B417	22	9 - 2	X	▲	WING 4 STIRRUPS VERT.
B418	5	9 - 10	X		WING 4 STIRRUPS VERT.
B519	9	11 - 8	X		WING 4 - F.F. HORIZ.
B820	9	13 - 2	X		WING 4 - B.F. HORIZ.
B421	8	5 - 6	X		WING 4 - E.F. VERT.
B422	4	10 - 2			WING 4 - E.F. HORIZ.
B423	2	6 - 6			WING 4 - E.F. HORIZ.
B424	2	10 - 3	X		WING 4 - E.F. HORIZ.
B425	4	9 - 7	X		WING 4 HORIZ.



**SECTION THRU BODY**



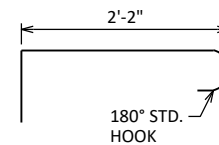
**B501**



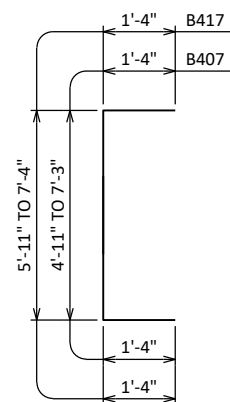
**B502, B408, B418**



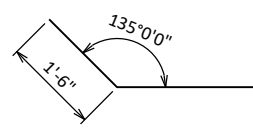
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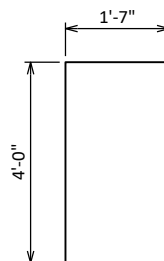
**B405**



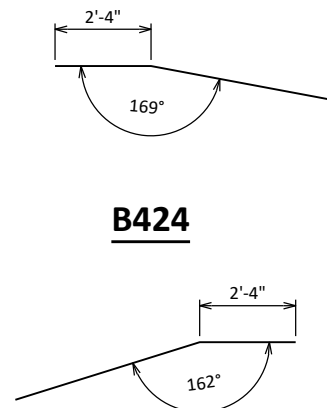
**B407, B417**



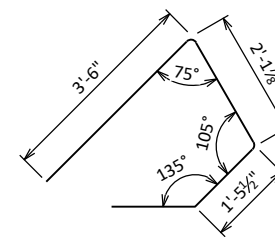
**B509, B810, B519, B820**



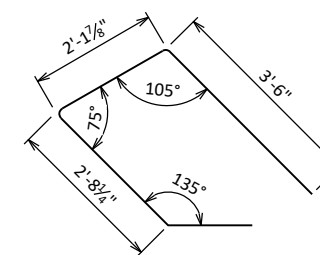
**B411, B421**



**B424**



**B416**



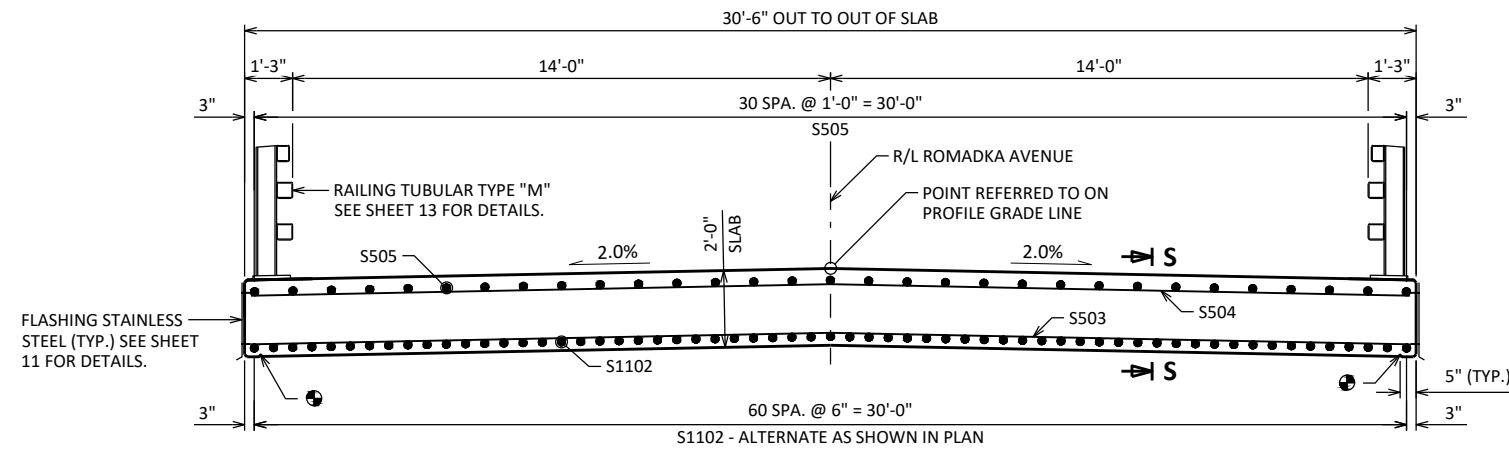
**B425**

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8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>NORTH ABUTMENT DETAILS</b>			SHEET 9 OF 13

SCALE =

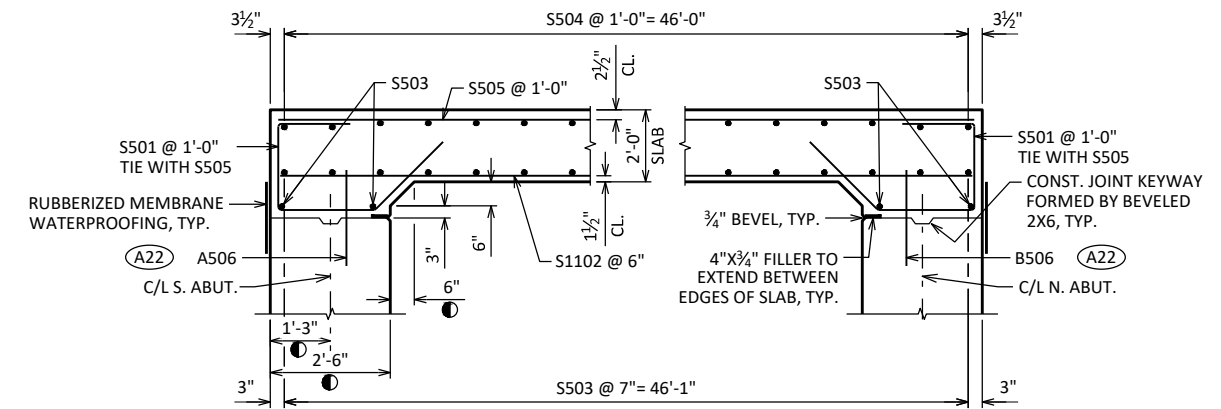


**CROSS SECTION THRU BRIDGE**

(LOOKING UPSTATION)

① 3/4" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.

V-GROOVES ARE REQUIRED.

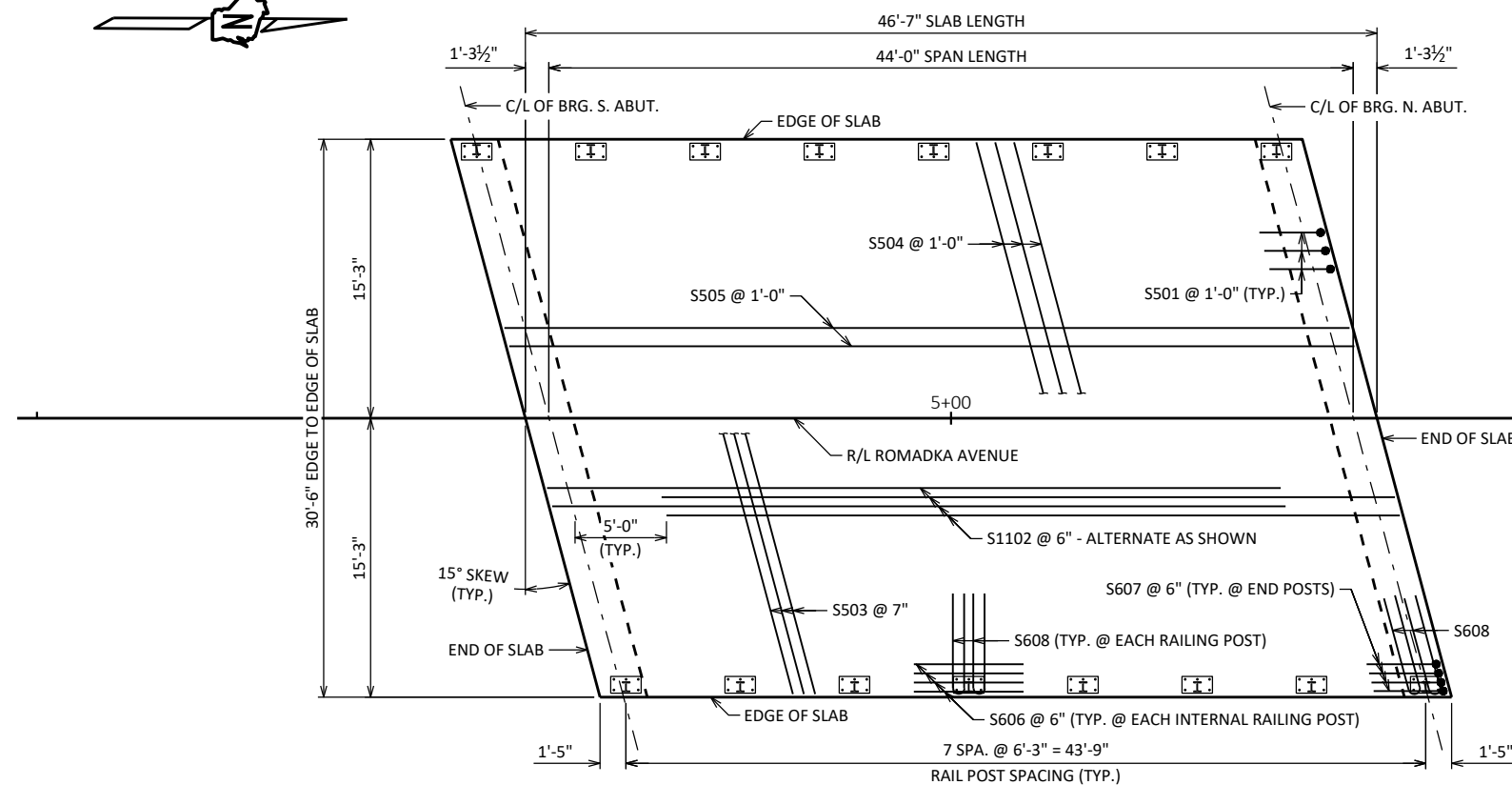


**LONGITUDINAL SECTION**

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

① MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

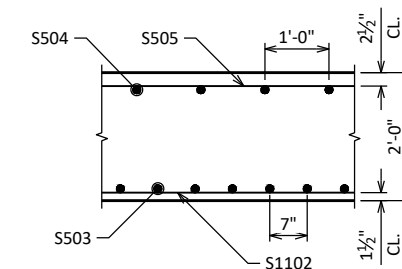
(A22) A506, B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



**PLAN**

SHOWING TOP SLAB REINFORCEMENT

SHOWING BOT. SLAB REINFORCEMENT



**SECTION S - S**

**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 (+).

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

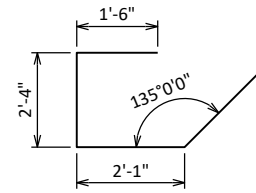
PRIOR TO RELEASING SLAB FLASEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, AND AT 3/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR R/L. RECORD ELEVATIONS ON AS BUILT PLANS. SEE SHEET 12.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>SUPERSTRUCTURE</b>		SHEET 10 OF 13	

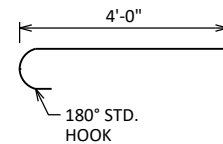
**BILL OF BARS**

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

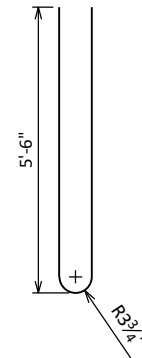
MARK	NO.	REQ'D.	LENGTH	BENT	LOCATION	
UNCOATED BARS						TOTAL WEIGHT = 20,340 LBS
S501	62	7	- 9	X	SLAB - AT ABUT.	LONGIT.
S1102	61	40	- 1		SLAB - BOTTOM	LONGIT.
S503	84	31	- 2		SLAB - BOTTOM	TRANS.
S504	47	31	- 2		SLAB - TOP	TRANS.
S505	31	46	- 2		SLAB - TOP	LONGIT.
S606	48	6	- 0		SLAB - AT INT. POST - 4 PER POST	LONGIT.
S607	16	4	- 8	X	SLAB - AT EXT. POST - 4 PER POST	LONGIT.
S608	32	11	- 4	X	SLAB - AT POST - 2 PER POST	TRANS.



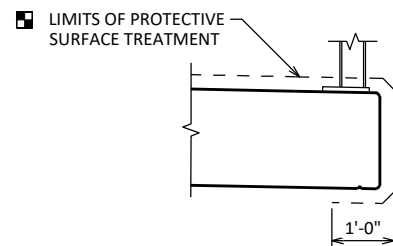
**S501**



**S607**

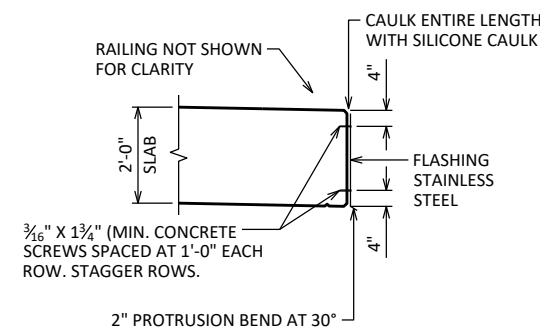


**S608**



**SURFACE PROTECTION DETAIL**

COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.



**FLASHING DETAIL**

**FLASHING NOTES**

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK AND 3/16" CONCRETE SCREWS.

FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

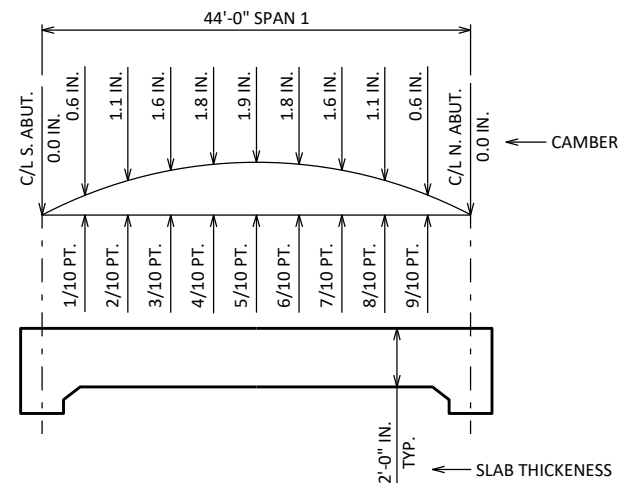
EXTEND FLASHING TO B.F. OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

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<b>SUPERSTRUCTURE DETAILS 1</b>		SHEET 11 OF 13	



**CAMBER AND SLAB THICKNESS DIAGRAM**

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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

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

**TOP OF SLAB ELEVATIONS**

SPAN	LOCATION	C/L BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. S. ABUT.
1	W. EDGE OF SLAB	1190.63	1190.66	1190.69	1190.71	1190.74	1190.77	1190.79	1190.82	1190.84	1190.87	1190.90
	CROWN OR R/L	1190.96	1190.99	1191.02	1191.04	1191.07	1191.09	1191.12	1191.15	1191.17	1191.20	1191.23
	E. EDGE OF SLAB	1190.68	1190.71	1190.74	1190.76	1190.79	1190.81	1190.84	1190.87	1190.89	1190.92	1190.95

**SURVEY TOP OF SLAB ELEVATIONS**

LOCATION	S. ABUTMENT	5/10 PT.	N. ABUTMENT
W. EDGE OF SLAB			
CROWN OR R/L			
E. EDGE OF SLAB			

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

**NOTES**

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

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 (+).

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<b>SUPERSTRUCTURE DETAILS 2</b>			SHEET 12 OF 13

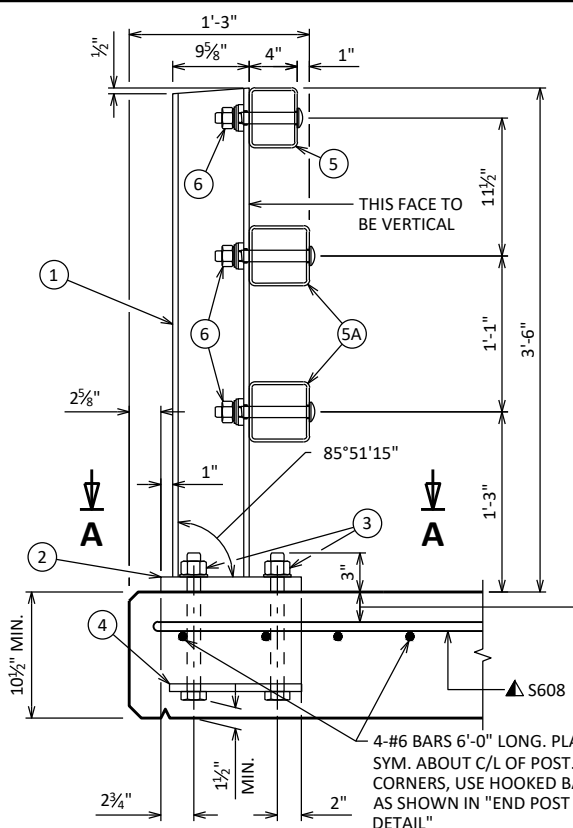


**LEGEND**

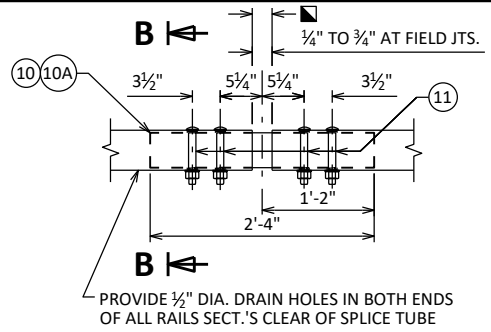
- 1 W6 X 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- 2 PLATE 1 1/4" X 11 3/8" X 1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.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

**GENERAL NOTES**

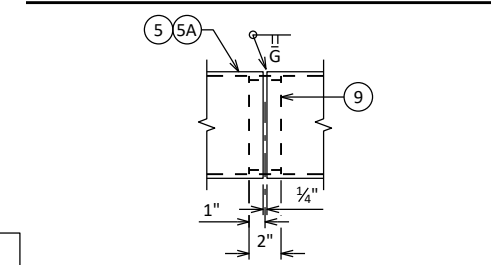
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES,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



**SECTION THRU RAILING ON DECK**

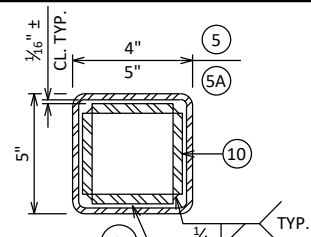


**FIELD ERECTION JOINT DETAIL**

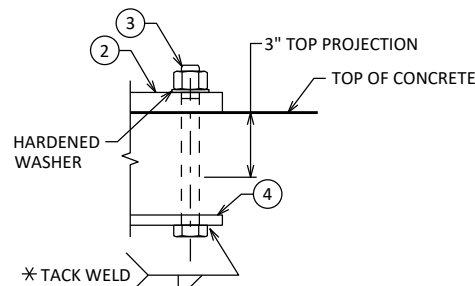


**SHOP RAIL SPLICE DETAIL**

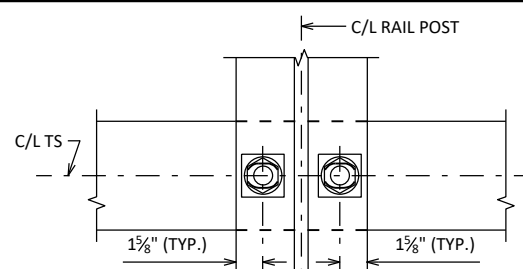
2 1/2" FOR SLABS ON GIRDERS; FOR OTHER STRUCTURES, PLACE BELOW TOP MAT SLAB REINFORCEMENT



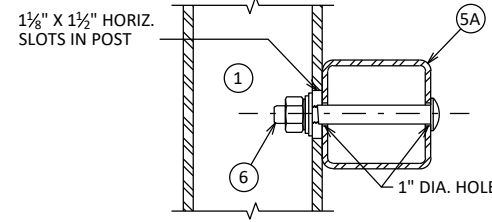
**SECTION B-B**



**ANCHOR BOLTS**



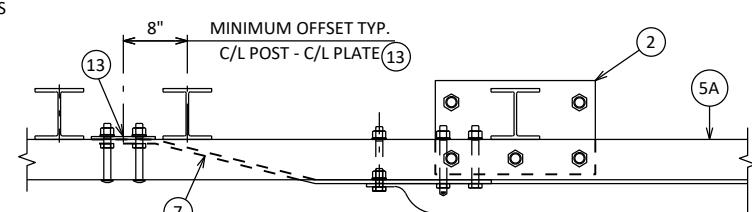
**SECTION THRU POST WEB**



**SECTION THRU RAIL**

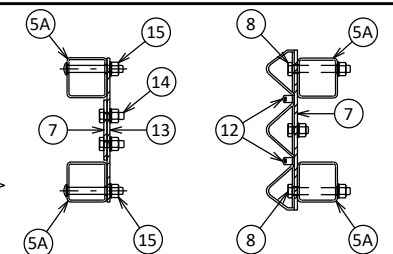
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

**TYPICAL RAIL TO POST CONNECTIONS**

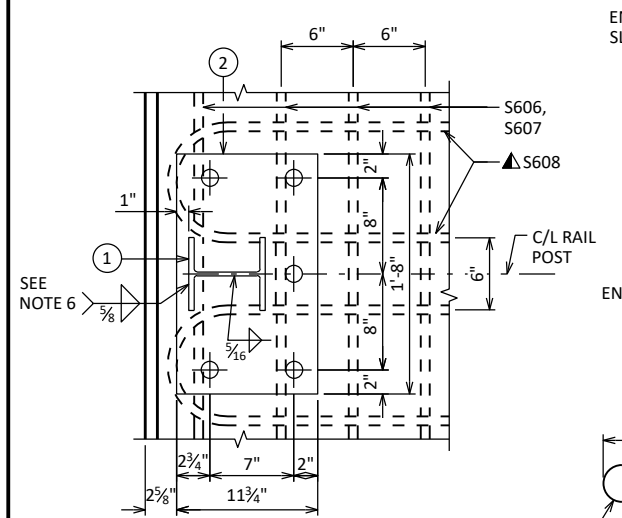


**TOP VIEW AT END POST**

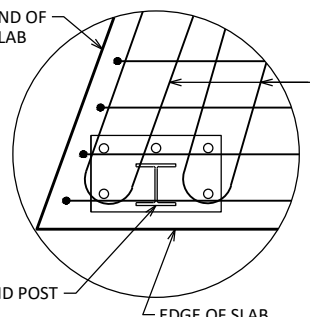
THRIE BEAM RAIL ATTACHMENT



**SECTION C-C SECTION D-D**

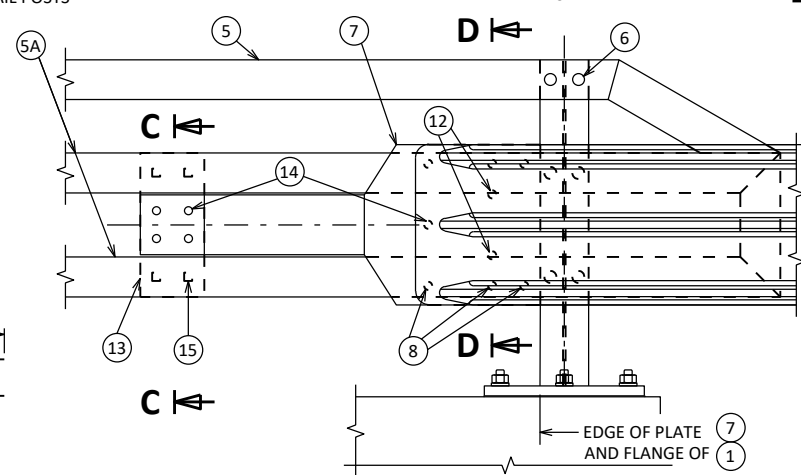


**SECTION A-A**



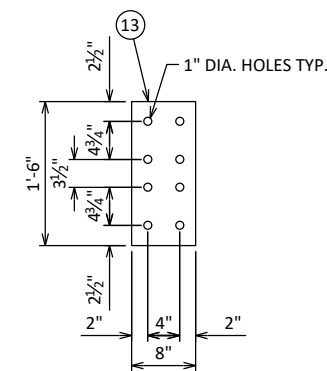
**END POST DETAIL**

REINFORCEMENT AT CORNERS



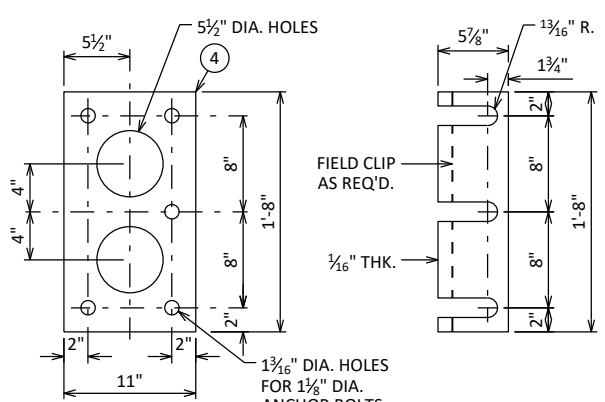
**DETAIL AT END POST**

THRIE BEAM RAIL ATTACHMENT



**ANCHOR PLATE**

AT BEAM GUARD ATTACHMENT

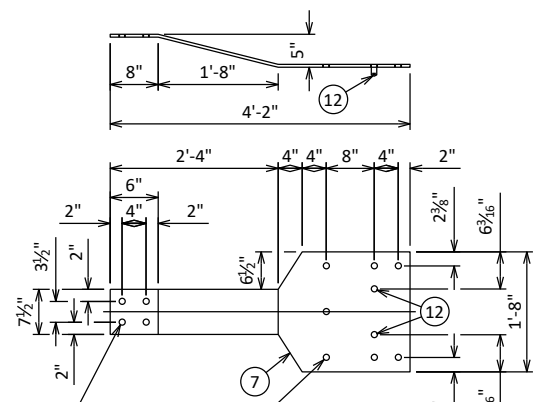


**ANCHOR PLATE**

AT RAIL TO DECK CONNECTION

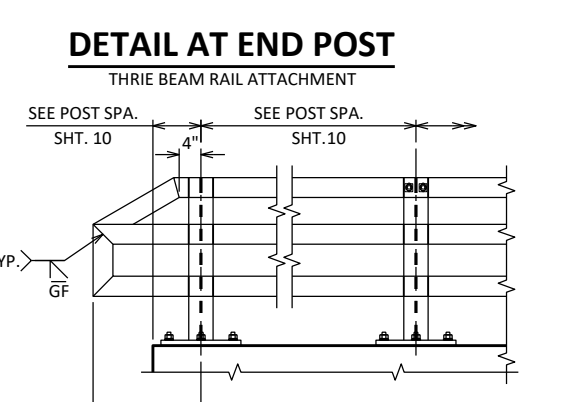
**POST SHIM**

**DETAIL**



**BACK-UP PLATE DETAIL**

AT BEAM GUARD ATTACHMENT



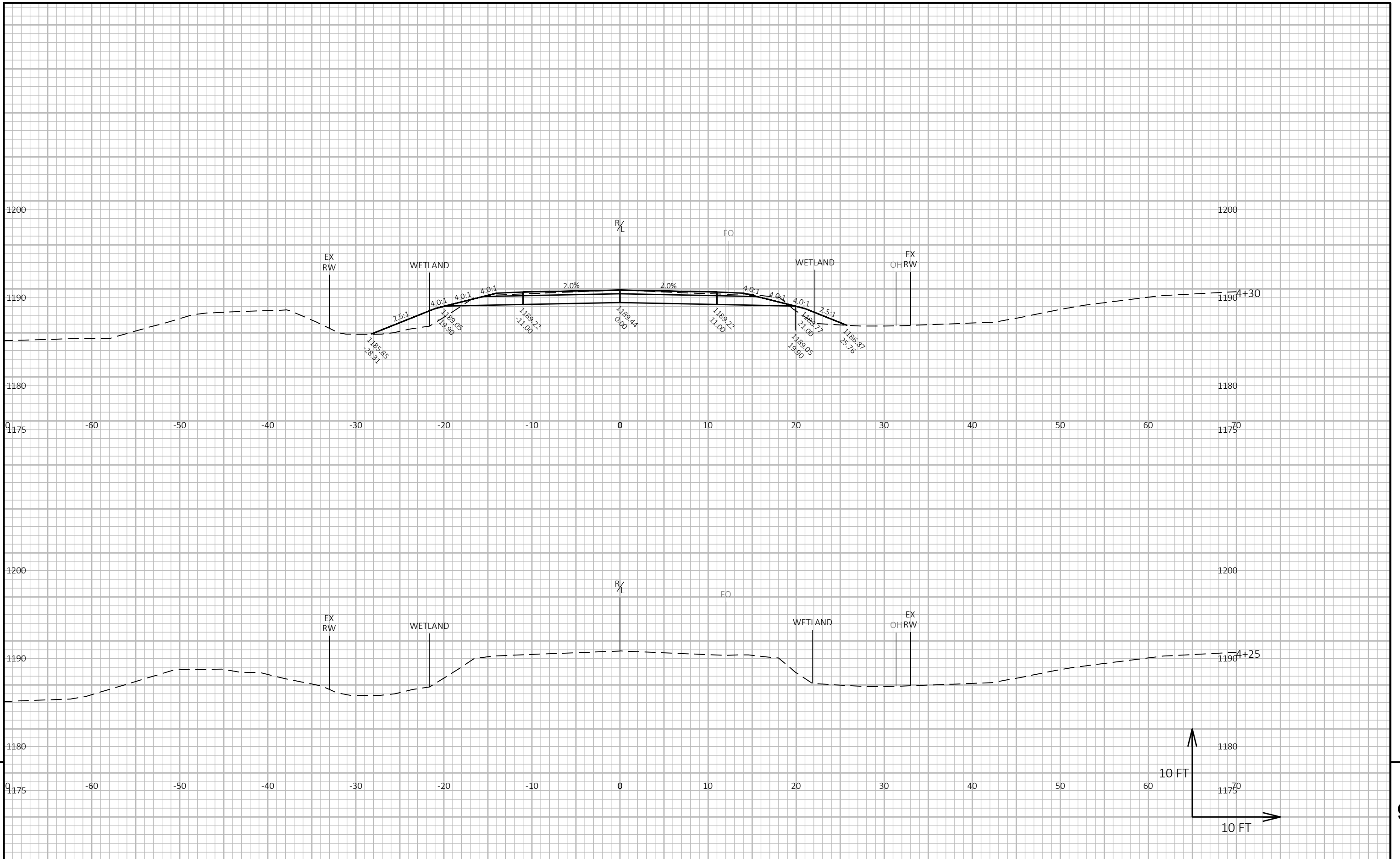
**PART ELEVATION OF RAILING**

- ▲ 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.

NO.	DATE	REVISION	BY
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<b>STRUCTURE B-10-399</b>			
DRAWN BY		TRA	PLANS CK'D JRD
<b>TUBULAR STEEL RAILING TYPE "M"</b>			SHEET 13 OF 13

ROMADKA AVENUE

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3			
4+28.75	428.75	0.00	44.39	0.00	14.57	0	0	0	0	0	0
4+50.00	450.00	21.25	43.33	0.00	14.36	35	0	11	35	14	21
4+75.00	475.00	25.00	47.94	0.00	11.97	42	0	12	77	29	48
4+78.80	478.80	3.80	50.83	0.00	15.76	7	0	2	84	31	53
4+84.19	484.19	5.39	44.62	0.00	0.00	10	0	2	94	34	60
5+15.85	515.85	0.00	40.88	0.00	0.00	0	0	0	94	34	60
5+20.00	520.00	4.15	45.16	0.00	30.02	7	0	2	101	36	65
5+25.00	525.00	5.00	47.82	0.00	26.95	9	0	5	110	43	68
5+50.00	550.00	25.00	44.44	0.00	23.49	43	0	23	153	71	82
5+70.00	570.00	20.00	44.25	0.00	22.20	33	0	17	186	93	94



PROJECT NO: 7850-00-71

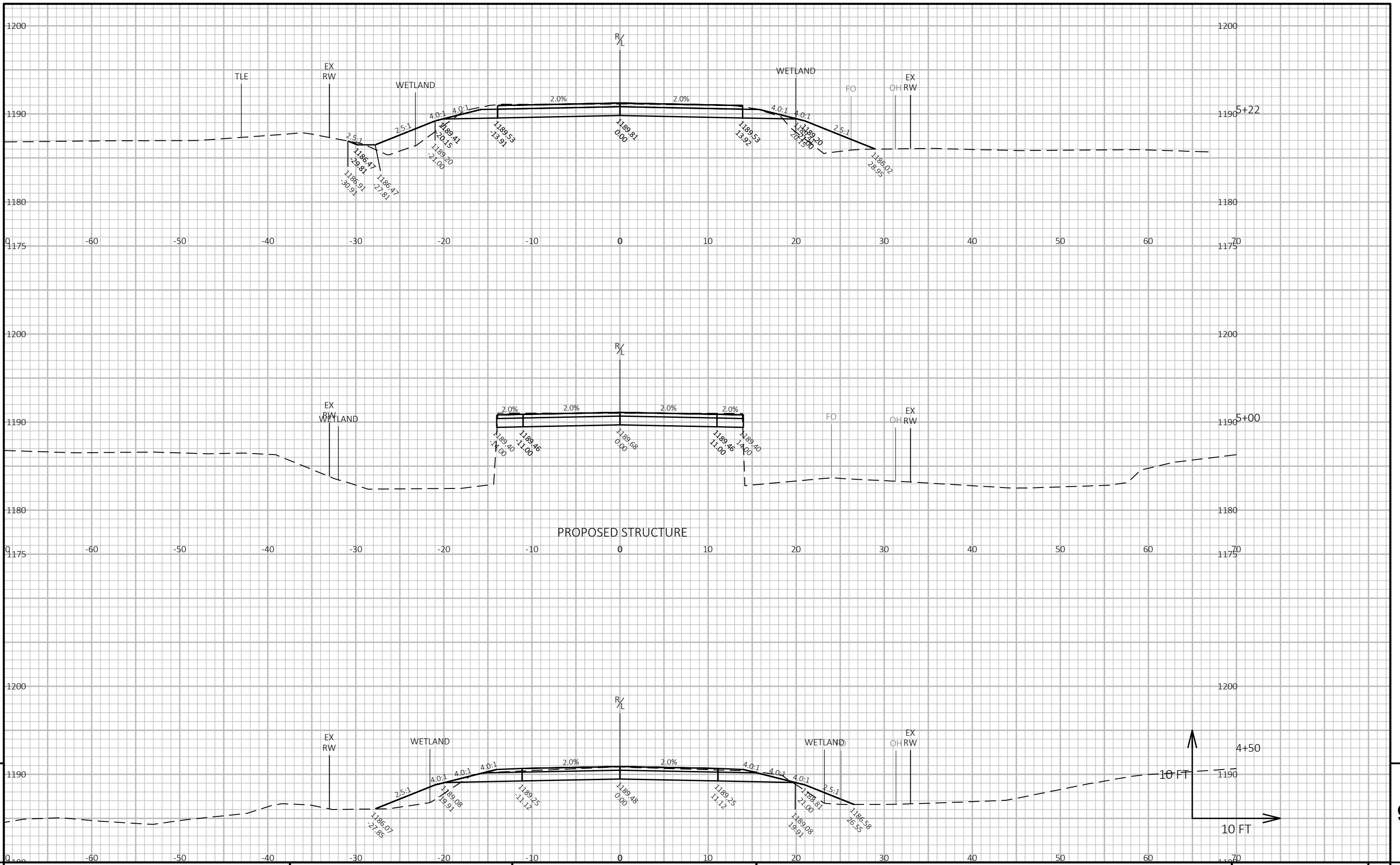
HWY: LOC STR

COUNTY: CLARK

CROSS SECTIONS: ROMADKA AVENUE

SHEET

E



PROJECT NO: 7850-00-71

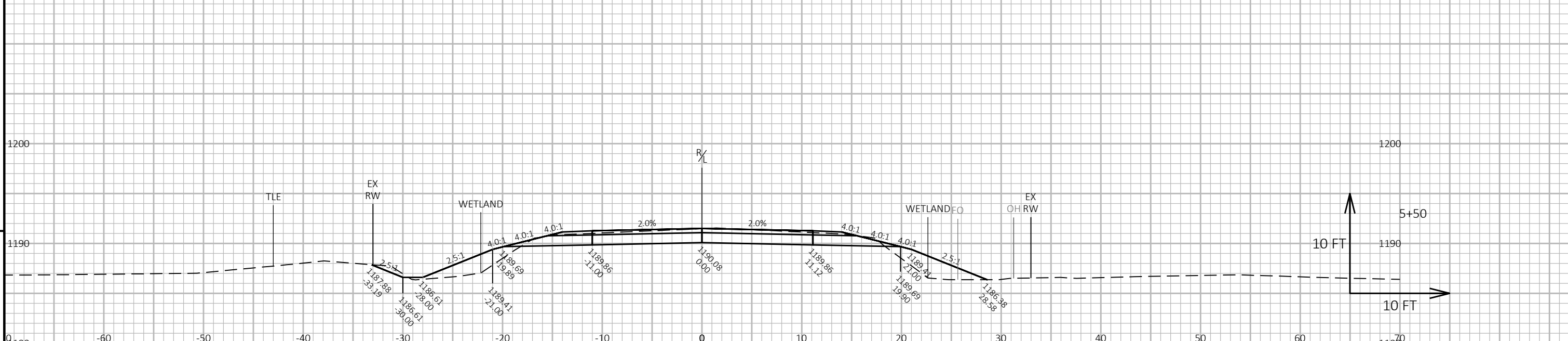
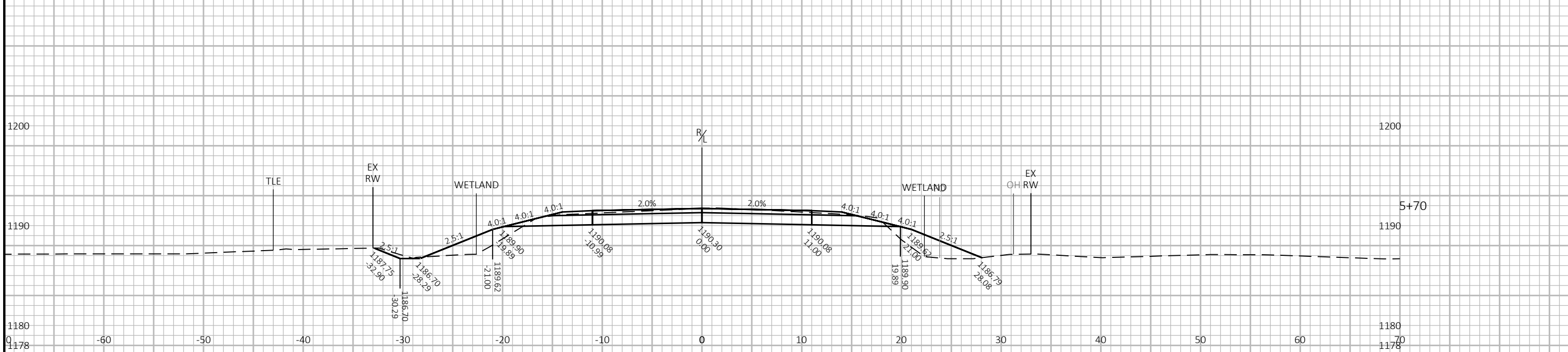
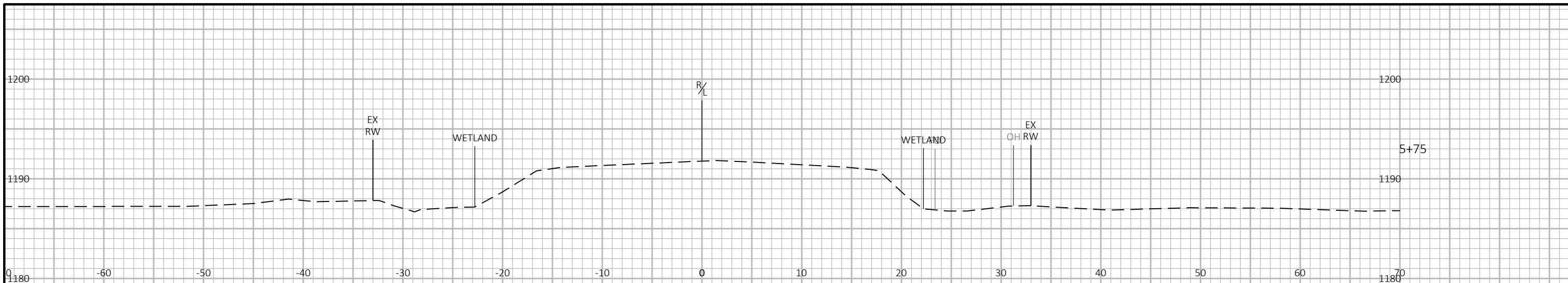
HWY: LOC STR

COUNTY: CLARK

CROSS SECTIONS: ROMADKA AVENUE

SHEET

E



PROJECT NO: 7850-00-71      HWY: LOC STR      COUNTY: CLARK      CROSS SECTIONS: ROMADKA AVENUE      SHEET



## ***Wisconsin Department of Transportation***

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