RHI APRIL 2022

PROJECT ID: 9911-00-70

COUNTY: FLORENCE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9911-00-70	WISC 2022312	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T FENCE, ROCK CREEK BRIDGE

ROCK CREEK ROAD; FR 2383

LOCAL STEET
FLORENCE COUNTY

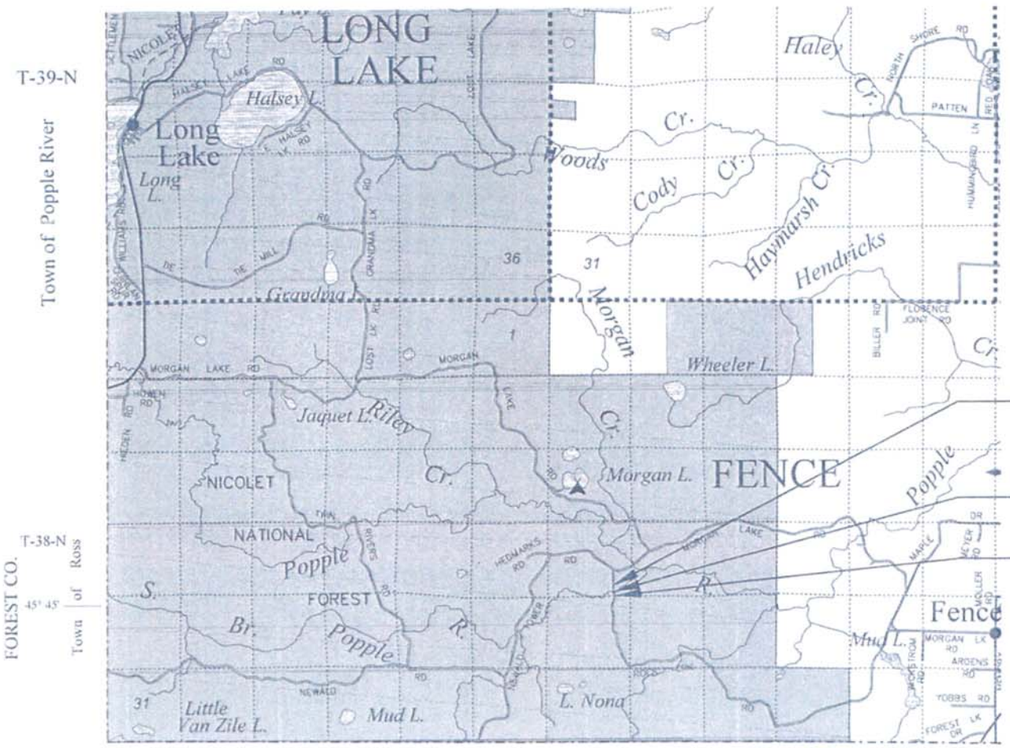
STATE PROJECT NUMBER
9911-00-70

ORDER OF SHEETS

TOTAL SHEETS = 38

28

N



END PROJECT
STA. 12+00.00
Y =10068.6503
X = 9983.4038

STRUCTURE
B-19-0014

BEGIN PROJECT
STA. 8+00.00
Y = 9711.5972
X = 10152.8506

LAYOUT
SCALE 0 2.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FLORENCE COUNTY, NAD83 (2019), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES. GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2019). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	60
A.A.D.T.	(2042)	=	109
D.H.V.		=	15
D.D.		=	50/50
T.		=	10%
DESIGN SPEED		=	55 MPH
ESALS		=	NA

CONVENTIONAL SYMBOLS

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

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

UTILITIES
- ELECTRIC
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR
Town of Fence
Date 10-25-21
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
U.P. ENGINEERS & ARCHITECTS, INC.
WISCONSIN
GUST B. JUNTTILA
E-45456
IRON MOUNTAIN
MICHIGAN
PROFESSIONAL ENGINEER
DATE 10/29/2021
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	U.P. ENGINEERS & ARCHITECTS
Designer	U.P. ENGINEERS & ARCHITECTS
Project Manager	MICHAEL GRAGE
Regional Examiner	N/A
Regional Supervisor	DAN ERVA

APPROVED FOR THE DEPARTMENT
DATE 10/29/2021
(Signature)

E

FILE NAME: P:\F109-00215 FENCE, TOWN OF-ROCK CREEK ROAD BRIDGE DESIGN\DWGS\9911-00-00 TITLE.DWG PLOT DATE: 3/27/2021 8:10 AM PLOT BY: JAKE ALLEN PLOT NAME:

DNR LIAISON

DNR NORTHERN REGION HEADQUARTERS
107 SUTLIFF
RHINELANDER, WI 54501
ATTN: JON SIMONSEN
(715) 367-1936
jonathan.simonsen@wisconsin.gov

FLORENCE COUNTY

FLORENCE COUNTY HIGHWAY DEPARTMENT
5471 CTH N
FLORENCE, WI 54121
ATTN: JOE WITYNSKI
(715) 528-4253

UTILITIES

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

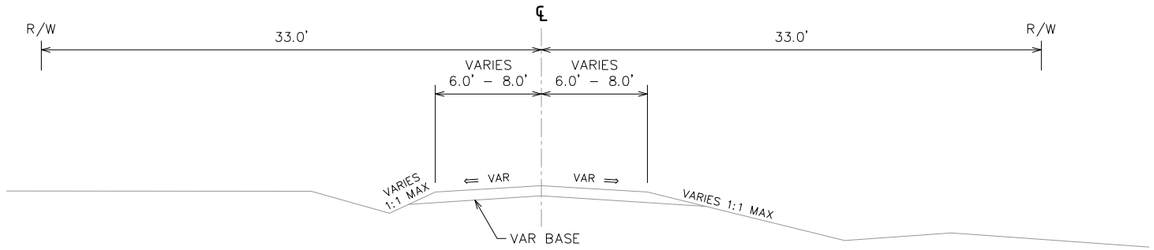
** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

DESIGN CONSULTANT

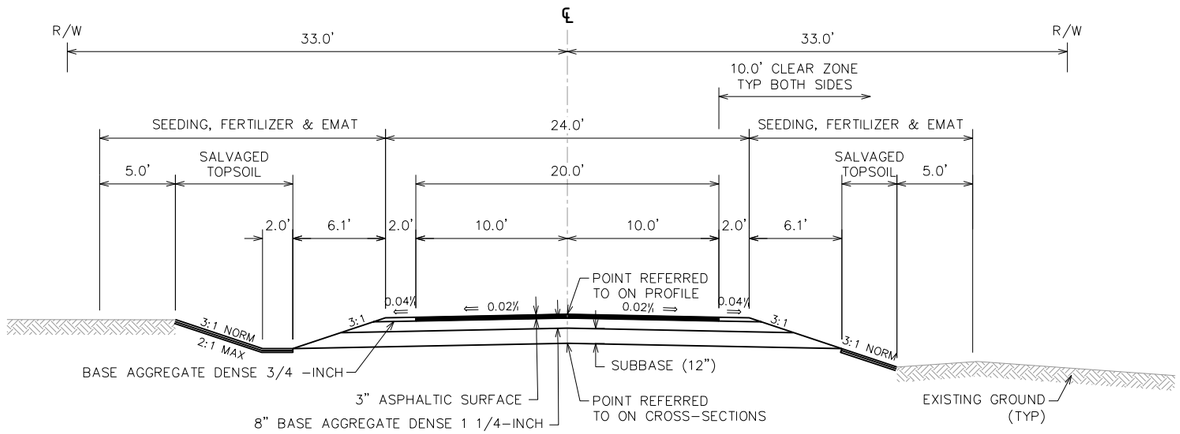
U.P. ENGINEERS & ARCHITECTS
2906 N. STEPHENSON AVE.
IRON MOUNTAIN, MI 49801
ATTN: GUST JUNTTILA, PE
(906) 779-0937
gjunttila@upea.com

TOWN OF FENCE

CHAIRMAN
P.O. BOX 11
FENCE, WI 54120
ATTN: JIM McLAIN
(715) 889-1273



TYPICAL EXISTING SECTION ROCK CREEK ROAD



TYPICAL FINISHED SECTION ROCK CREEK ROAD

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.

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN FIELD.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), FLORENCE COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

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

THE BENCHMARK IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88).

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

ASPHALTIC SURFACE SHALL BE COMPLETED IN TWO LIFTS, EACH 1.5" THICK.

STANDARD ABBREVIATIONS

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

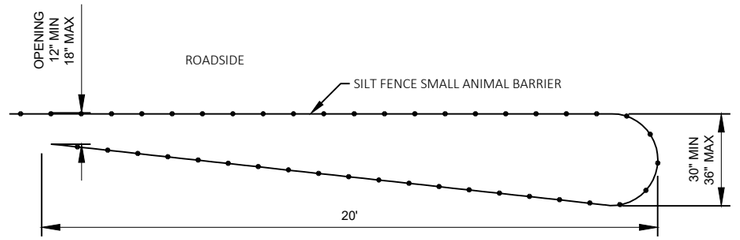
2

LEGEND

SEEDING MIXTURE NO. 10, FERTILIZER TYPE B, AND EROSION MAT CLASS I TYPE B

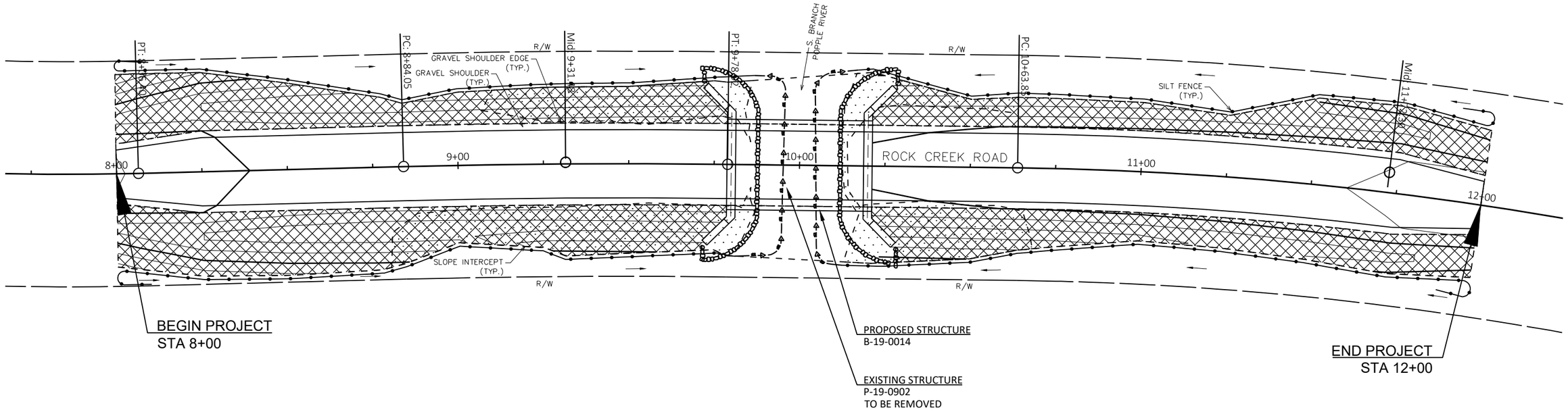
SILT FENCE

TURBIDITY BARRIER



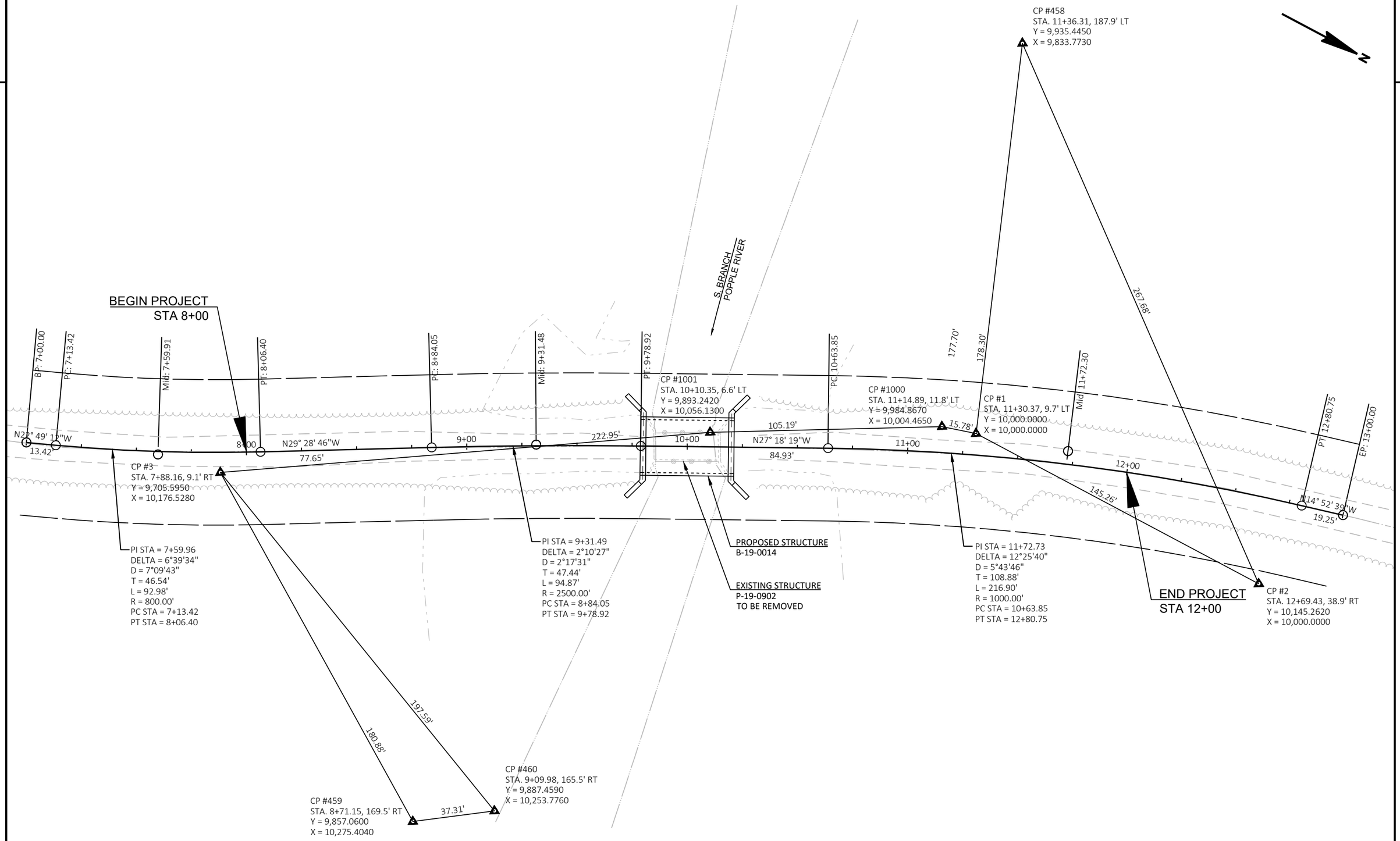
NOTES:
SILT FENCE POSTS FOR THE TURN–AROUND SHOULD BE ON THE OUTSIDE OF THE TURN–AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

* TEMPORARY SMALL ANIMAL BARRIER



PROJECT NO: 9911-00-70	HWY: ROCK CREEK ROAD	COUNTY: FLORENCE	EROSION CONTROL	SHEET 3	E

2



PROJECT NO: 9911-00-70	HWY: ROCK CREEK ROAD	COUNTY: FLORENCE	ALIGNMENT & CONTROL POINT TIES	SHEET 4	E

9911-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-19-0902	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	532.000	532.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-19-0014	LS	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	292.000	292.000
0014	213.0100	Finishing Roadway (project) 01. 9911-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	430.000	430.000
0020	350.0102	Subbase	CY	430.000	430.000
0022	455.0605	Tack Coat	GAL	60.000	60.000
0024	465.0105	Asphaltic Surface	TON	135.000	135.000
0026	502.0100	Concrete Masonry Bridges	CY	131.000	131.000
0028	502.3200	Protective Surface Treatment	SY	180.000	180.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,940.000	3,940.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,710.000	18,710.000
0034	513.4061	Railing Tubular Type M	LF	90.000	90.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	10.000	10.000
0038	550.0500	Pile Points	EACH	12.000	12.000
0040	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	330.000	330.000
0042	606.0300	Riprap Heavy	CY	94.000	94.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	142.000	142.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	4.000	4.000
0050	625.0500	Salvaged Topsoil	SY	1,000.000	1,000.000
0052	628.1504	Silt Fence	LF	900.000	900.000
0054	628.1520	Silt Fence Maintenance	LF	900.000	900.000
0056	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0060	628.2004	Erosion Mat Class I Type B	SY	1,000.000	1,000.000
0062	628.6005	Turbidity Barriers	SY	85.000	85.000
0064	629.0210	Fertilizer Type B	CWT	0.375	0.375
0066	630.0110	Seeding Mixture No. 10	LB	7.500	7.500
0068	630.0500	Seed Water	MGAL	1.000	1.000
0070	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0072	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0074	638.2602	Removing Signs Type II	EACH	4.000	4.000
0076	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000
0080	643.0420	Traffic Control Barricades Type III	DAY	360.000	360.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	240.000	240.000
0084	643.0900	Traffic Control Signs	DAY	120.000	120.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	645.0111	Geotextile Type DF Schedule A	SY	58.000	58.000
0090	645.0120	Geotextile Type HR	SY	190.000	190.000
0092	650.4500	Construction Staking Subgrade	LF	360.000	360.000
0094	650.5000	Construction Staking Base	LF	360.000	360.000
0096	650.6500	Construction Staking Structure Layout (structure) 01. B-19-0014	LS	1.000	1.000
0098	650.9910	Construction Staking Supplemental Control (project) 01. 9911-00-70	LS	1.000	1.000

9911-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	650.9920	Construction Staking Slope Stakes	LF	375.000	375.000
0102	715.0502	Incentive Strength Concrete Structures	DOL	1,000.000	1,000.000
0104	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0106	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0108	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	40.000	40.000

3

3

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	630.0110 SEEDING MIXTURE NO. 10 LB	630.0500 SEED WATER MGAL	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	629.0210 FERTILIZER TYPE B CWT	625.0500 SALVAGED TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
8+00 - 9+79	MAINLINE, LT	1.5	0.25	215	215	0.075	240	240	--	--
8+00 - 9+79	MAINLINE, RT	1.5	0.25	210	210	0.075	310	310	--	--
10+22 - 12+00	MAINLINE, LT	1.5	0.25	215	215	0.075	204	204	--	--
10+22 - 12+00	MAINLINE, RT	1.5	0.25	210	210	0.075	216	216	--	--
8+00 - 12+00	MAINLINE	--	--	--	--	--	--	--	2	2
8+00 - 12+00	UNDISTRIBUTED	1.5	--	50	50	0.075	30	30	--	--
TOTAL		7.5	1	900	900	0.375	1000	1000	2	2

BASE AGGREGATE DENSE 1 1/4 INCH

STATION - STATION	LOCATION	305.0120 TON
8+00 - 9+79	MAINLINE	215
10+22 - 12+00	MAINLINE	215
TOTAL		430

SUBBASE

ROADWAY	LOCATION	350.0102 CY
8+00 - 9+79	MAINLINE SOUTH	215
10+22 - 12+00	MAINLINE NORTH	215
TOTAL		430

WATER

PROJECT	LOCATION	624.0100 MGAL
9911-00-70	MAINLINE	4
TOTAL		4

BASE AGGREGATE DENSE 3/4 INCH

STATION - STATION	LOCATION	305.0120 TON
8+00 - 9+79	SHLDRS	15
10+22 - 12+00	SHLDRS	15
TOTAL		30

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING STA.	201.0205 GRUBBING STA.
8+00-9+80, 10+20-12+00	MAINLINE, LT & RT	4	4
TOTAL		4	4

PAVEMENT

STATION - STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	455.0605 TACK COAT GAL
8+00 - 9+79	MAINLINE SOUTH	67.5	30
10+22 - 12+00	MAINLINE NORTH	67.5	30
TOTAL		135	60

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

Division	From/to Station	Location	205.0100 Common Excavation (CYD) Cut (1)	Salvaged Unusable Pavement Material (1)	Available Material (2)	Unexpanded Fill	Expanded Fill Factor 1.25	Mass Ordinate + / - (3)	Waste (CYD)	Comment
1	8+00 - 9+79	Mainline South Approach	280	0	280	157	196.25	84	84	
		Division 1 Subtotal =	280	0	280	157	196.25	84	84	
2	10+22 - 12+00	Mainline North Approach	252	0	252	80	100	152	152	
		Division 2 Subtotal =	252	0	252	80	100	152	152	
		Grand Total =	532	0	532	237	296.25	236	236	Waste total is excess material not used for fill.

1. Salvaged/Unusable Pavement Material is included in the cut (excavation).

2. Available Material = cut (excavation) - salvaged unusable pavement material

3. Mass Ordinate can be a positive or negative value. Positive indicates excess material for the division, negative indicates a shortage of material for the division.

TRAFFIC CONTROL

LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL 9911-00-70 EACH
PROJECT 9911-00-70	360	240	120	1
TOTAL	360	240	120	1

FIELD OFFICE TYPE B

PROJECT	LOCATION	642.5001 EACH
9911-00-70	MAINLINE	1
TOTAL		1

TURBIDITY BARRIER

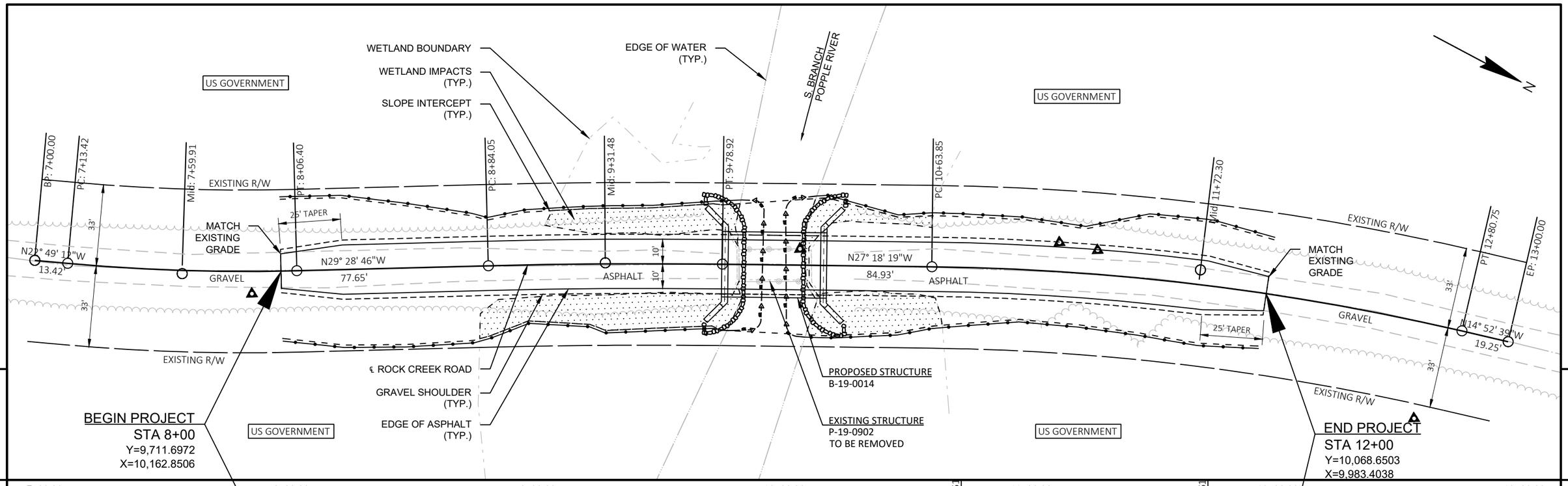
LOCATION	ABUTMENT	628.6005 SY
9+95	SOUTH	42.5
10+05	NORTH	42.5
TOTAL		85

SIGNING QUANTITIES

LOCATION	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	DESCRIPTION
NW BRIDGE CORNER	3.00	1	1	1	W5-52 L
SW BRIDGE CORNER	3.00	1	1	1	W5-52 R
NE BRIDGE CORNER	3.00	1	1	1	W5-52 R
SE BRIDGE CORNER	3.00	1	1	1	W5-52 L
TOTAL	12.00	4	4	4	

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9910 SUPPLEMENTAL CONTROL 9911-00-70 LS	650.9920 SLOPE STAKES LF	CATEGORY 0020 650.6500 STRUCTURE LAYOUT B-19-0014 LS
8+00 - 12+00	MAINLINE	360	360	1	375	1
TOTAL		360	360	1	375	1



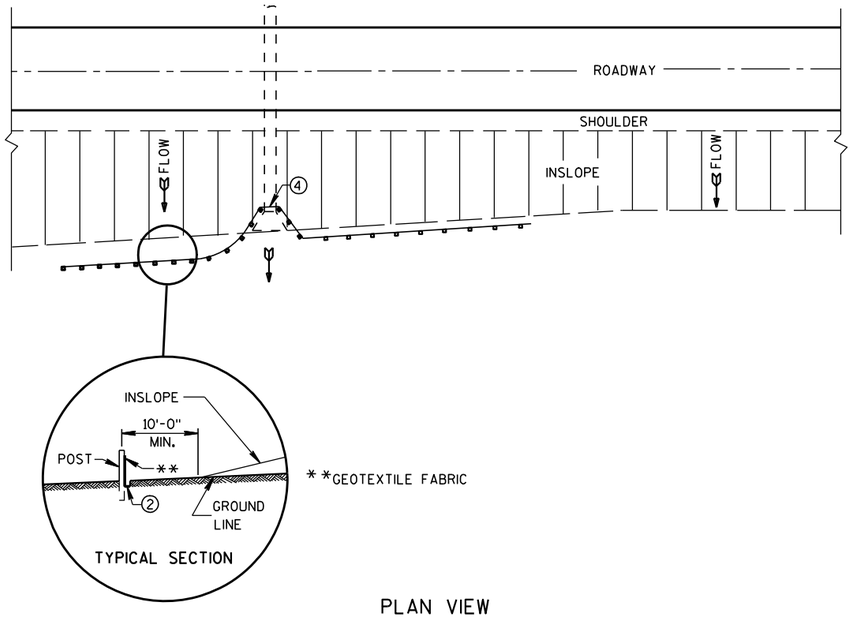
PROJECT NO: 9911-00-70	HWY: ROCK CREEK ROAD	COUNTY: FLORENCE	PLAN AND PROFILE: ROCK CREEK ROAD	SHEET 9	E

FILE NAME : P:\F109-00216 FENCE, TOWN OF-ROCK CREEK ROAD BRIDGE DESIGN\DWGS\9911-00-00 FENCE DESIGN BASE.DWG
LAYOUT NAME - PlanProf 1 IN 40 FT

PLOT DATE : 10/26/2021 1:19 PM PLOT BY : JAKE ALLEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

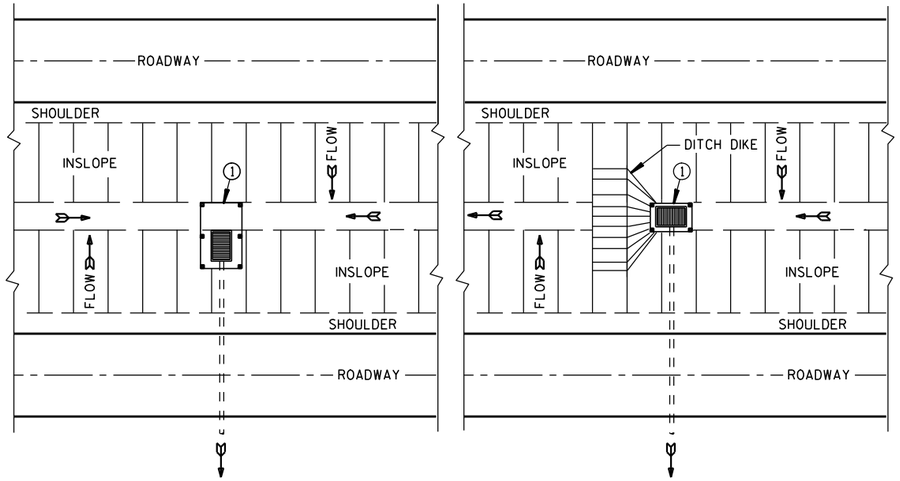
Standard Detail Drawing List

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



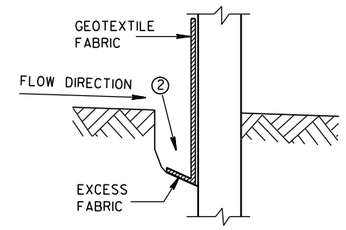
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

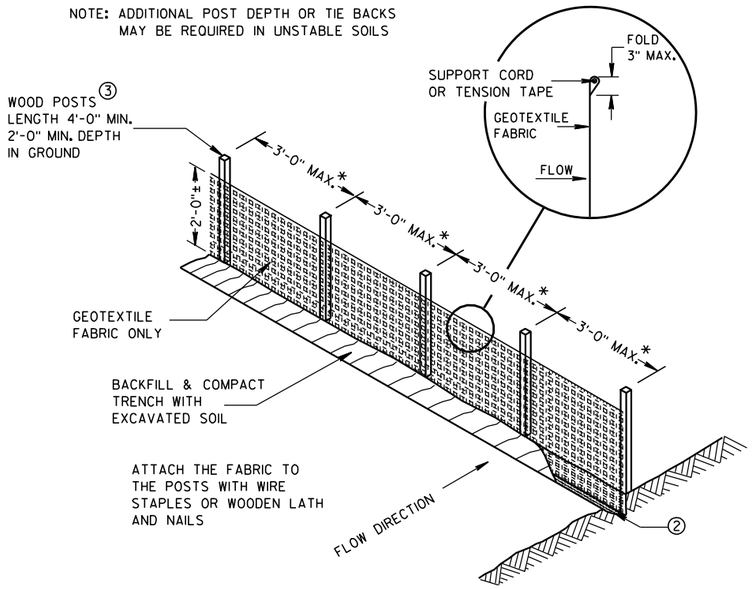
GENERAL NOTES

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

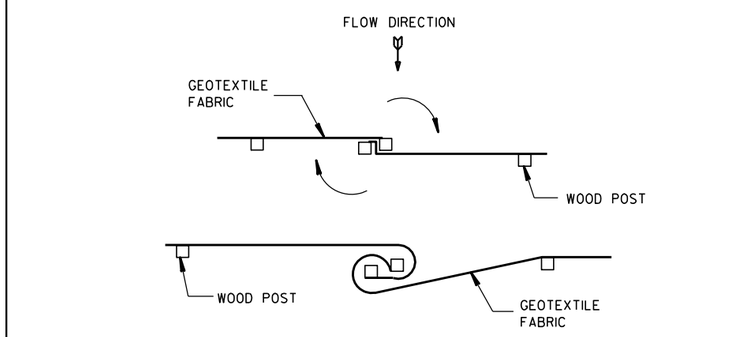
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



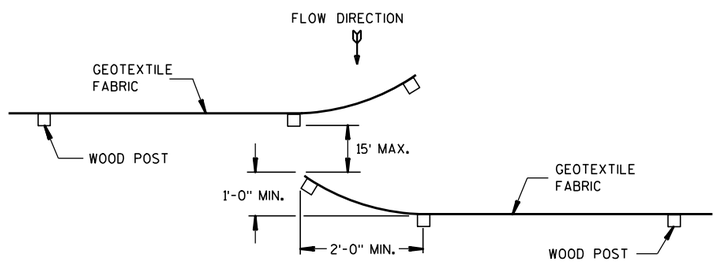
TRENCH DETAIL



SILT FENCE

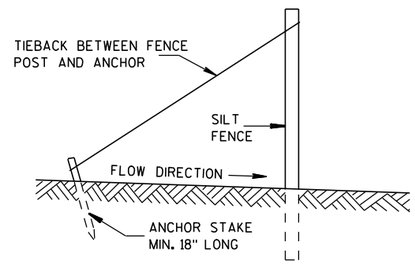


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

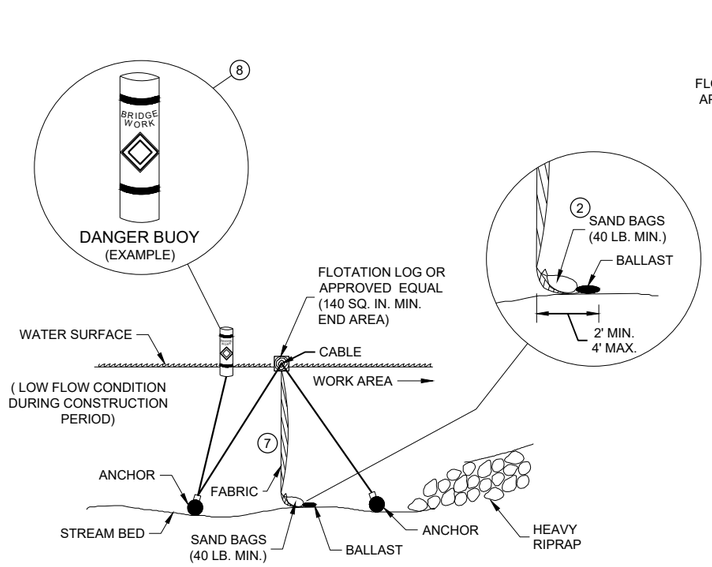
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

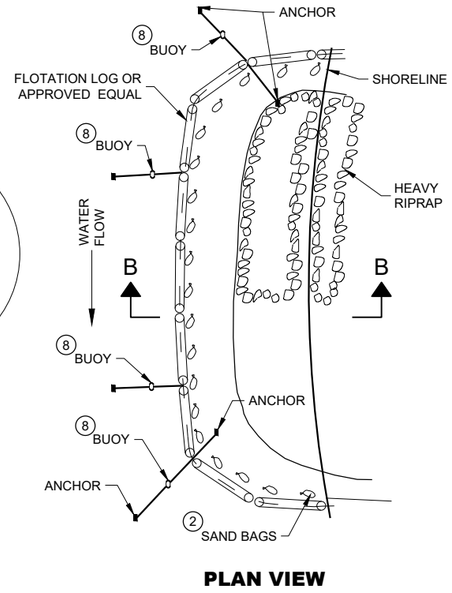
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

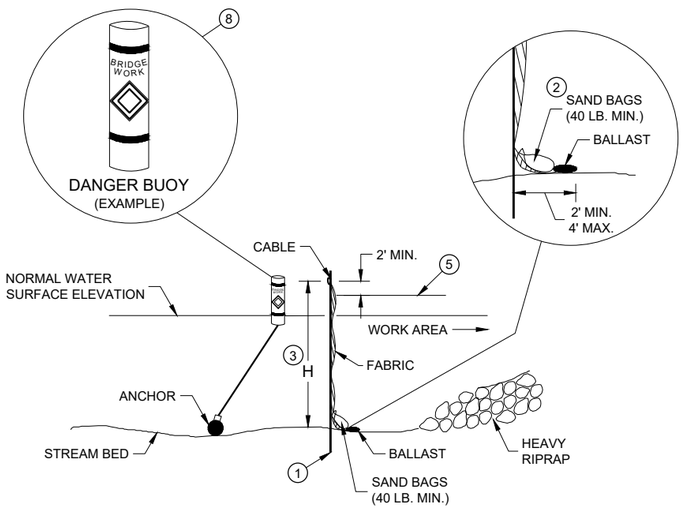


SECTION B - B

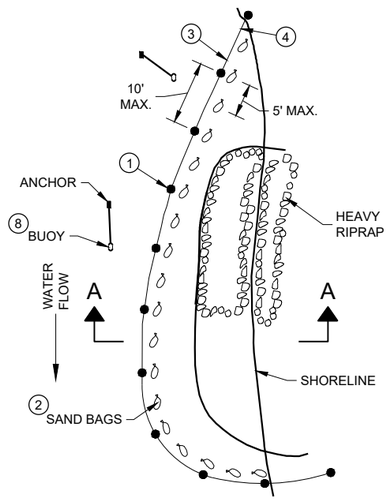


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

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

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

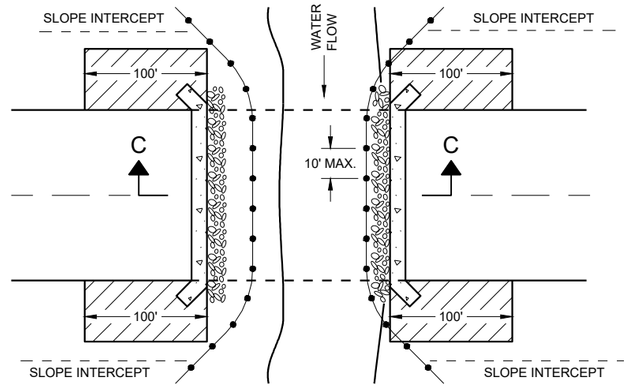
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

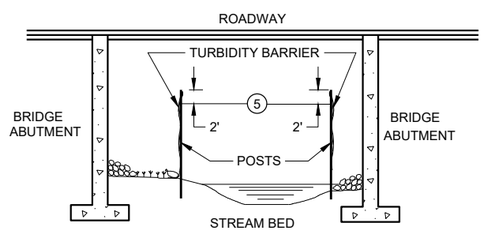
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

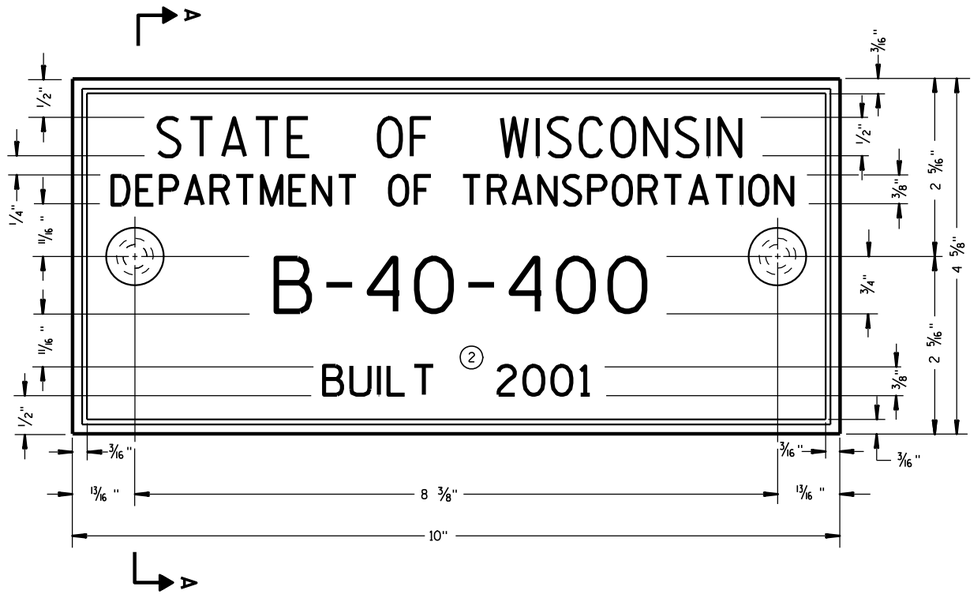
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 08E11 - 02



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

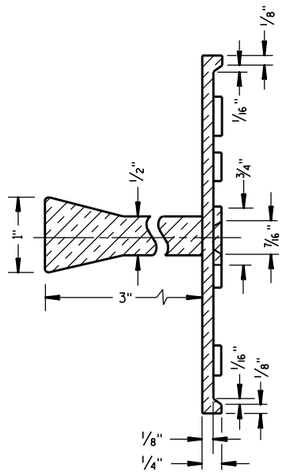
GENERAL NOTES

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

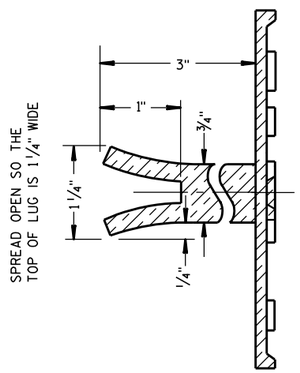
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

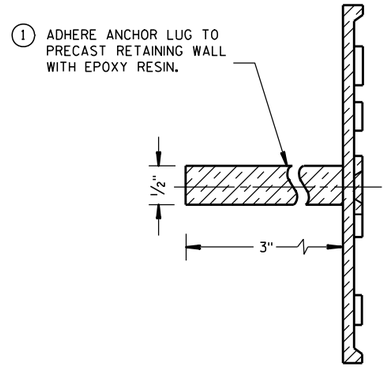
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

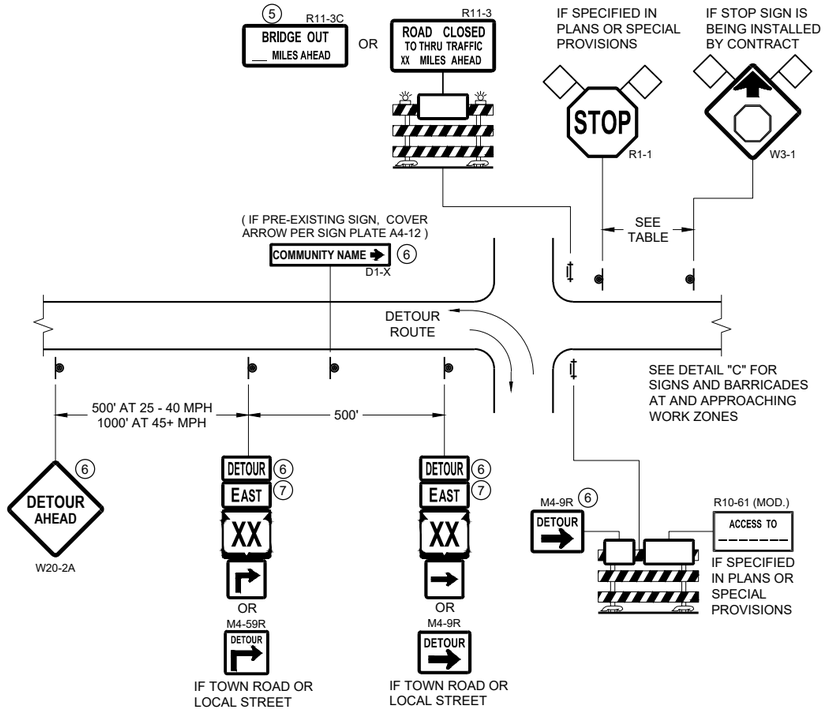
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

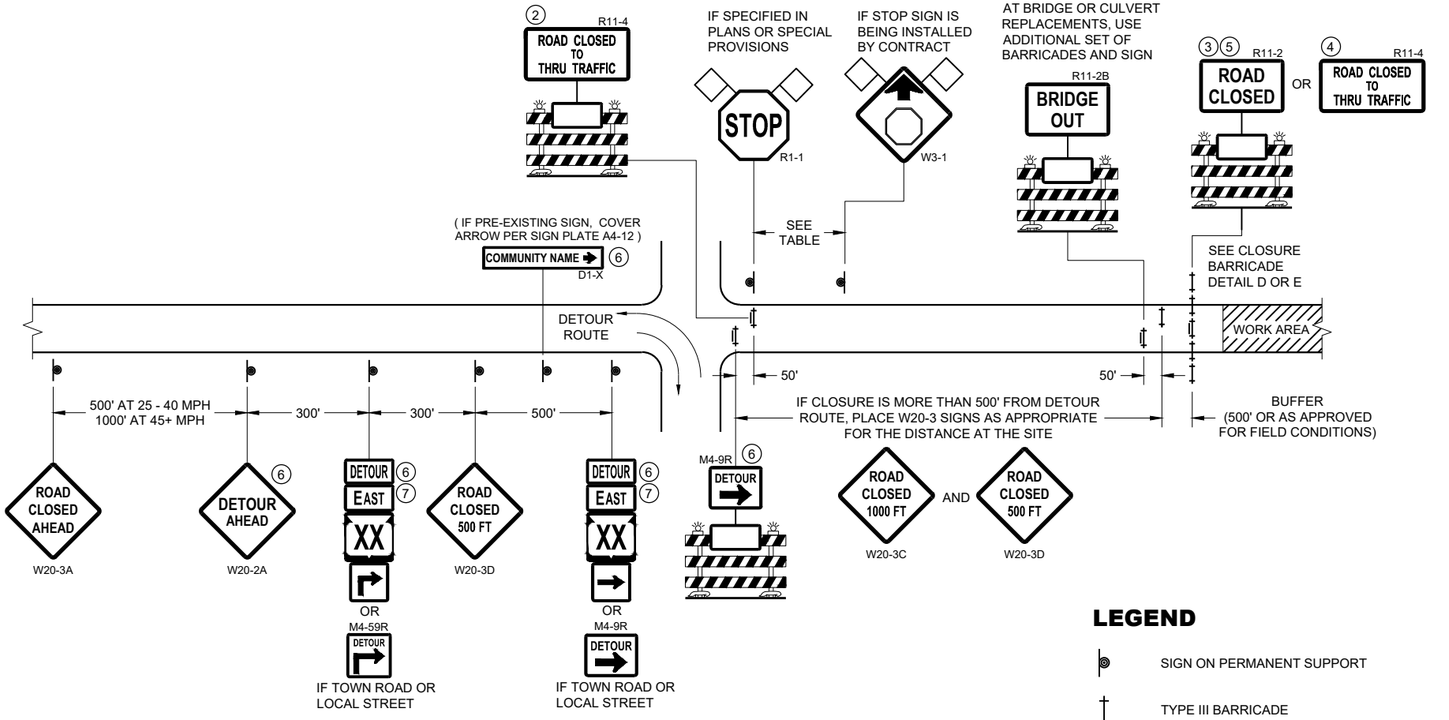
6

S.D.D. 12 A 3-10



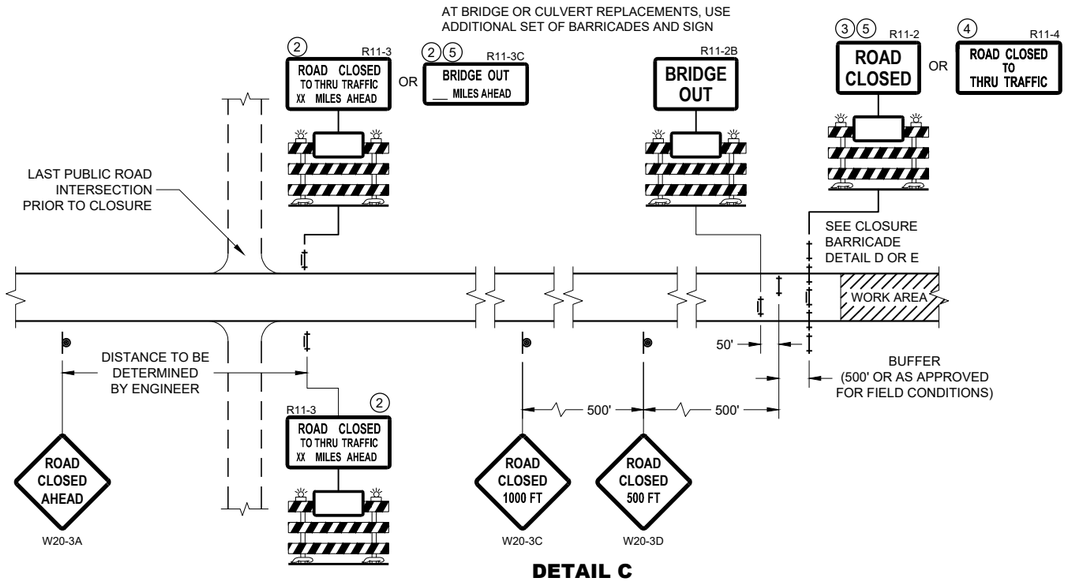
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

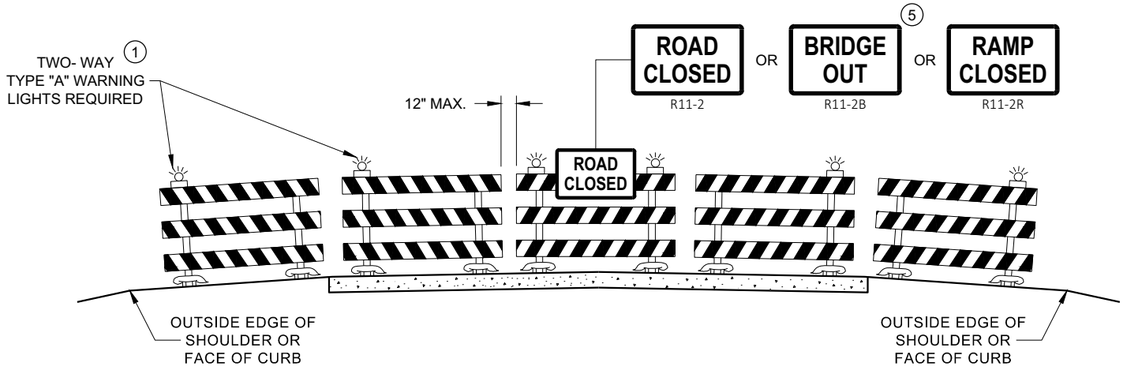
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

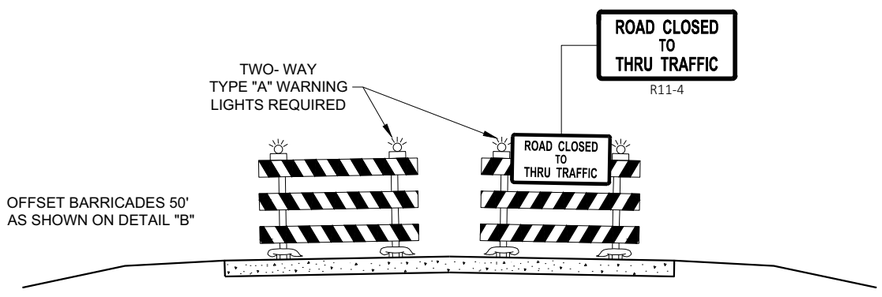
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 08b

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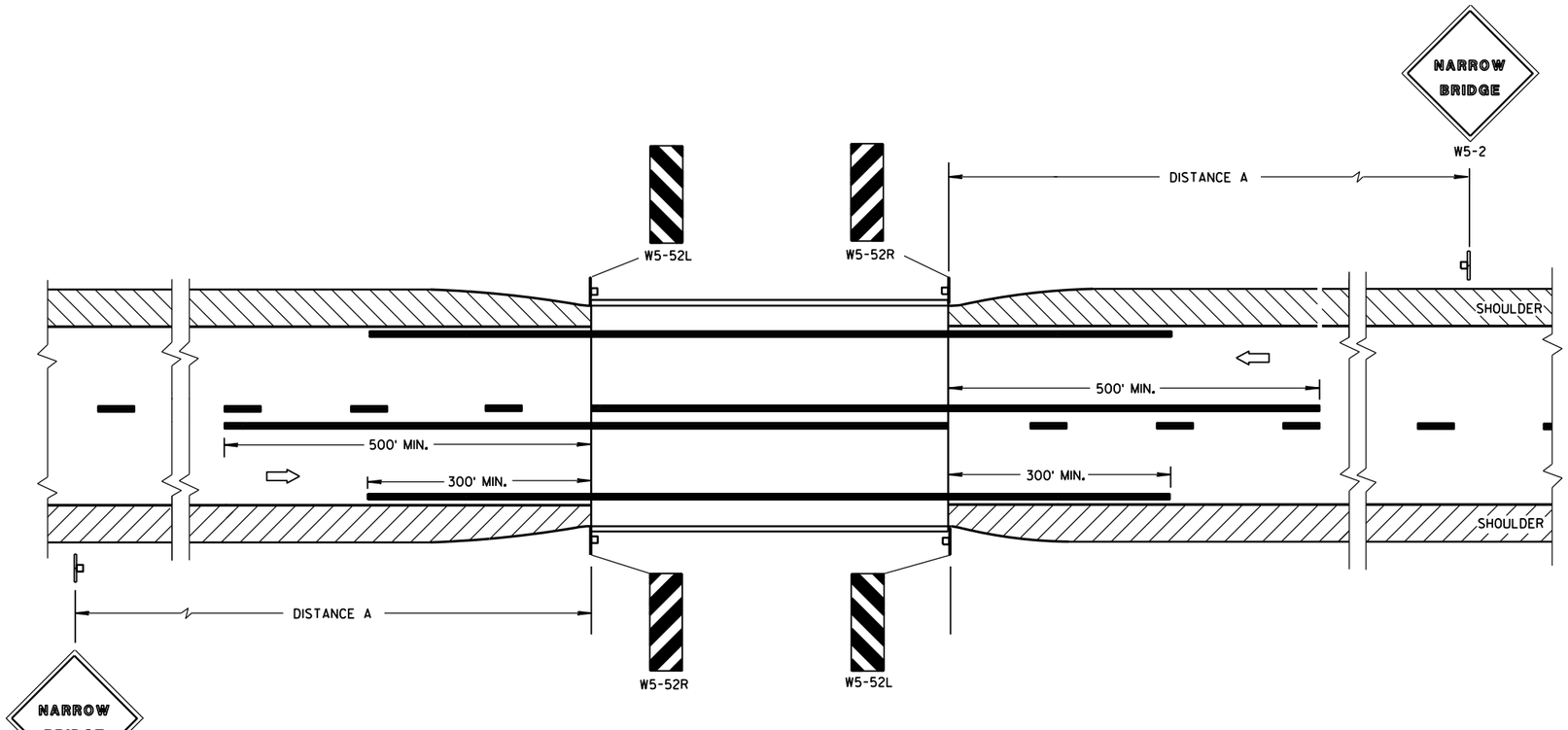
SDD 15C02 - 08b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

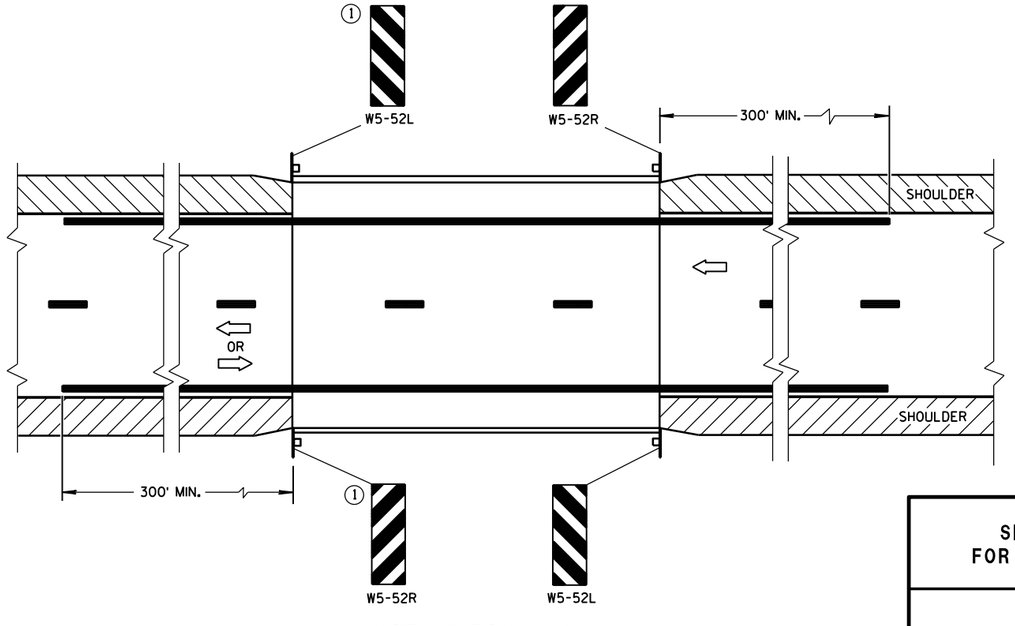
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

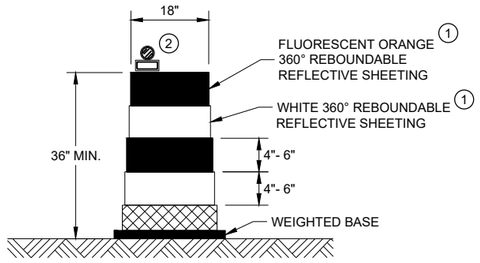
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ...IEER
FHWA

6

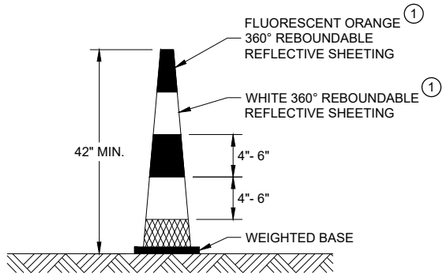
S.D.D. 15 C 6-9

GENERAL NOTES

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

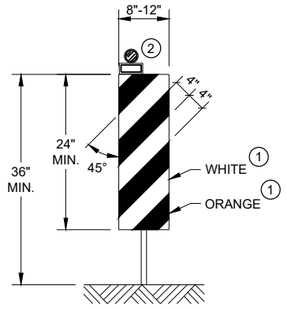


DRUM



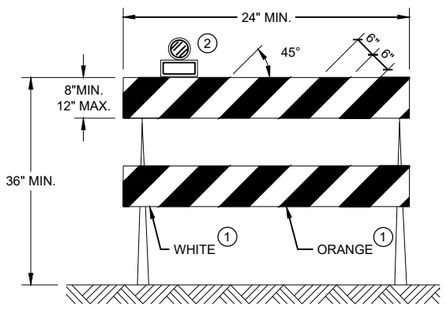
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



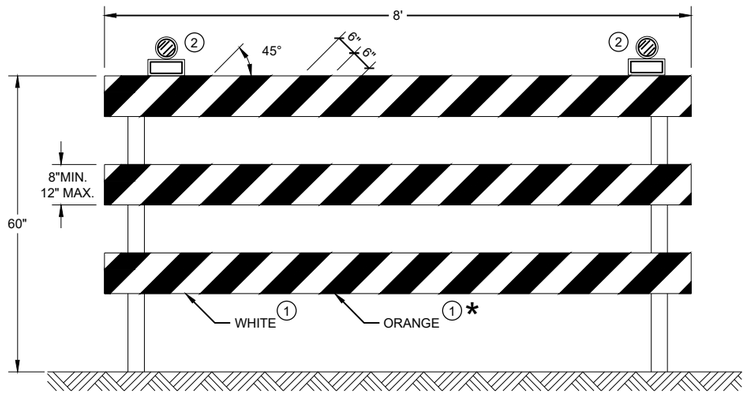
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

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SDD15C11 - 09b

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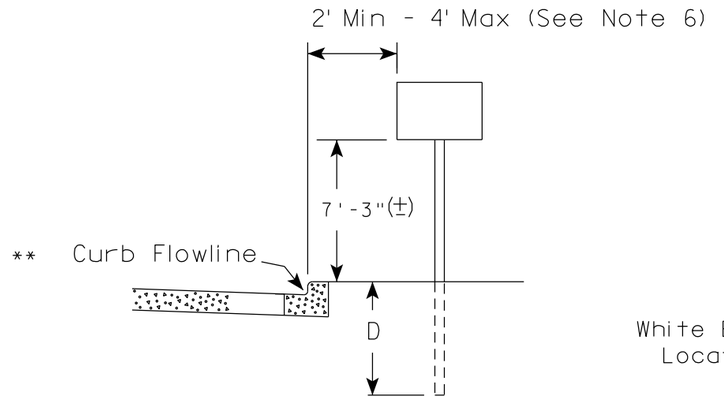
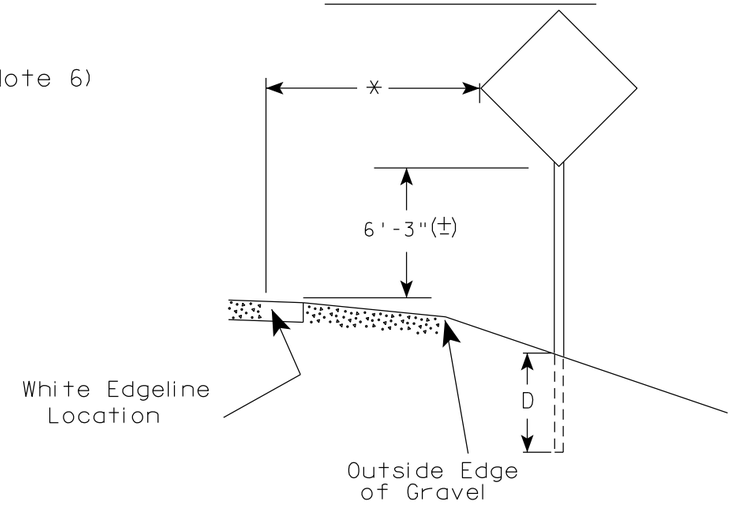
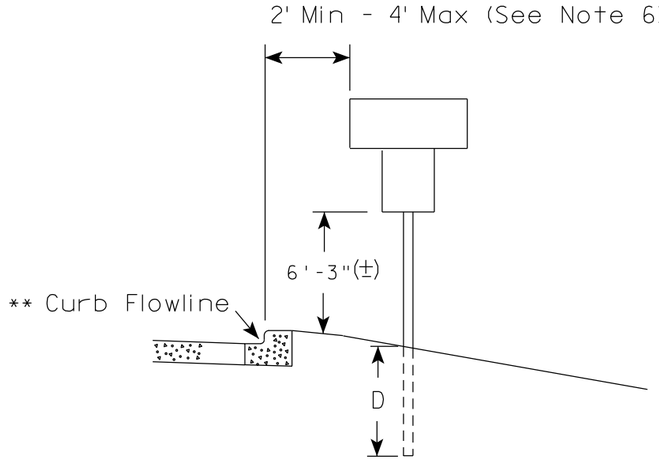
SDD15C11 - 09b

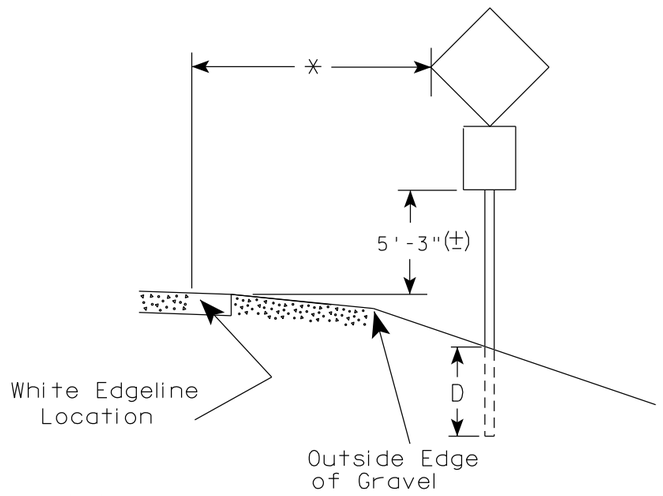
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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 directd by the Engineer.

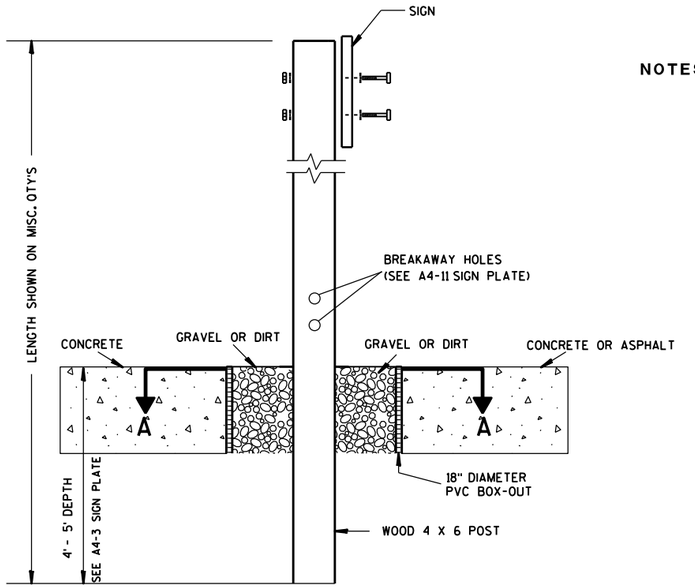
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

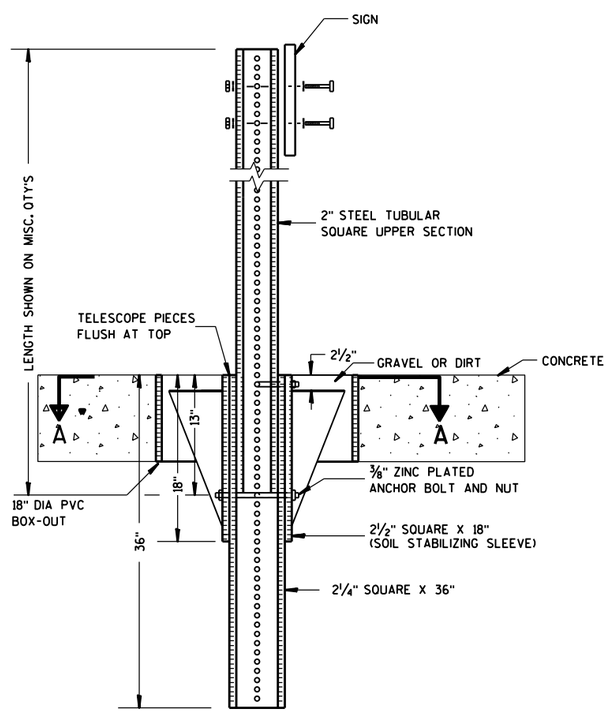
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 18	E



ELEVATION VIEW

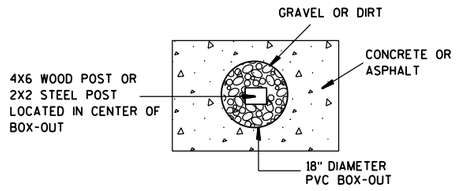
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

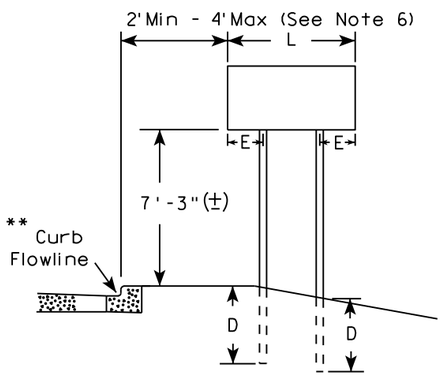
APPROVED Matthew R Rauch
for State Traffic Engineer

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

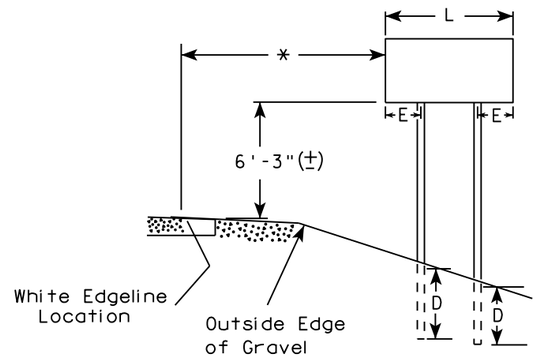
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

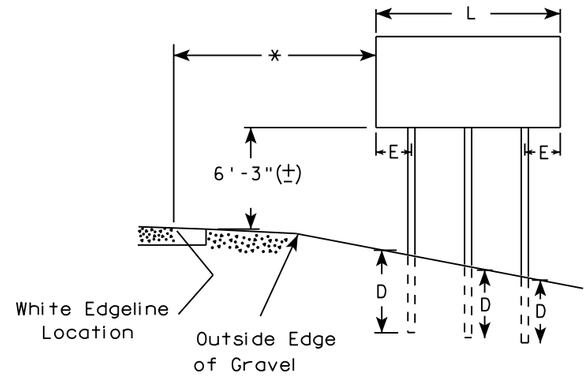
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

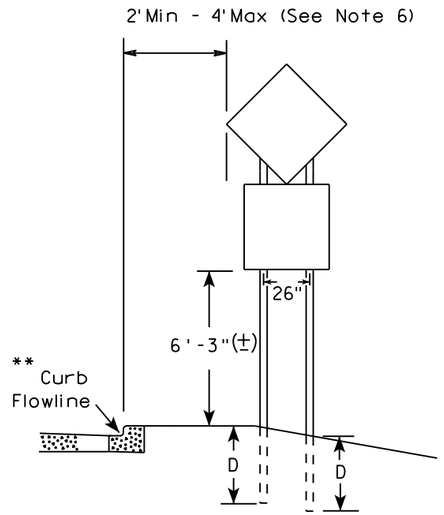
URBAN AREA



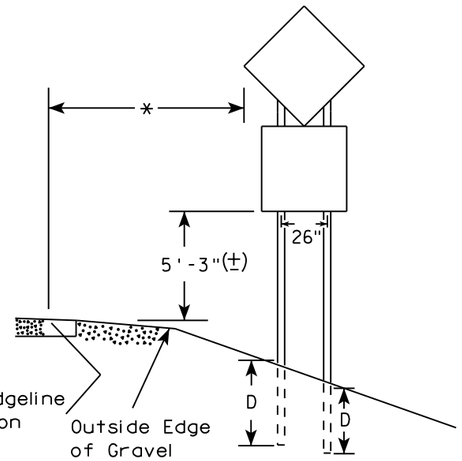
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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"

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

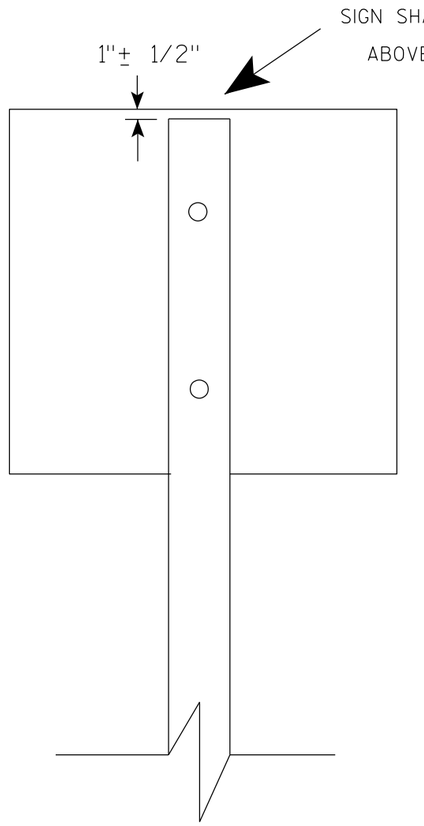
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

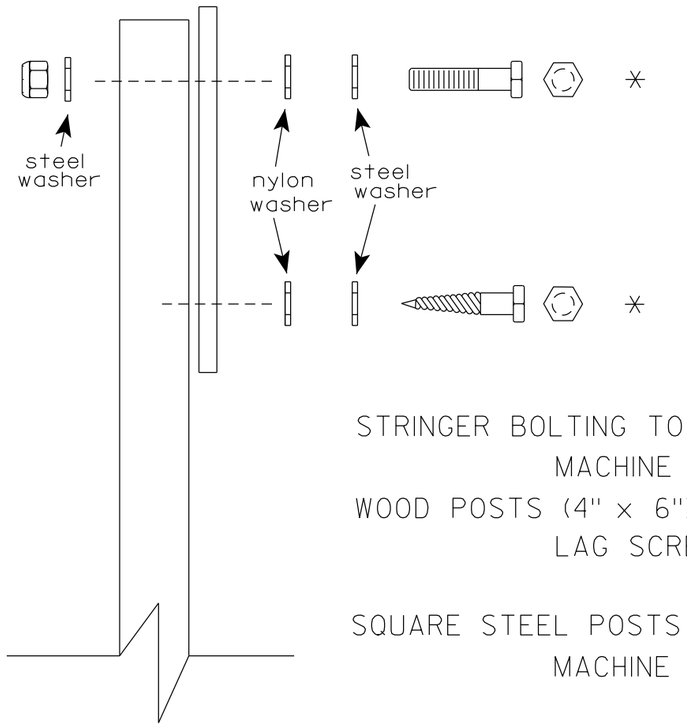
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	E





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

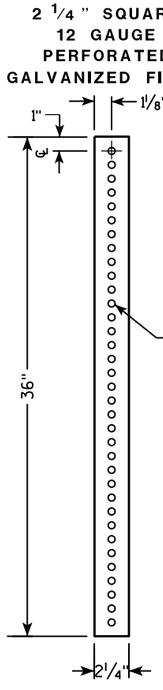
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

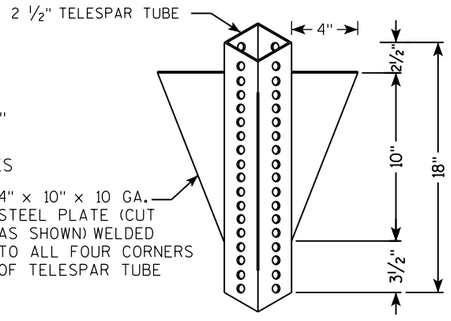
SHEET NO: 21 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

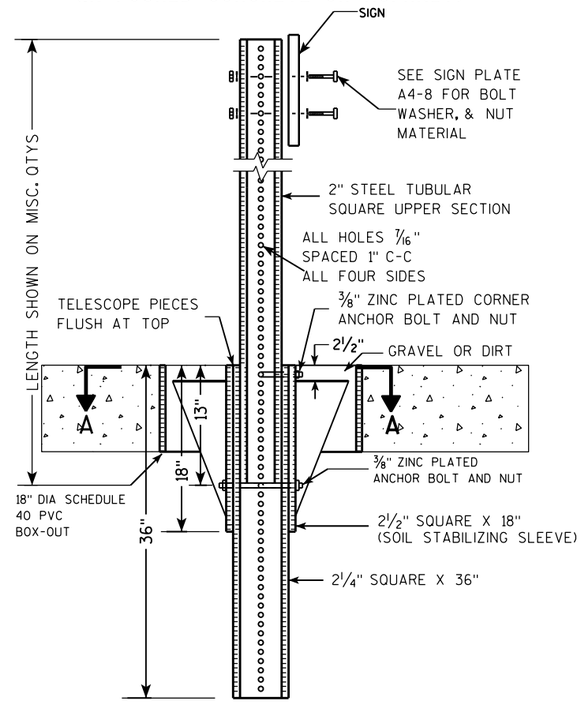
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



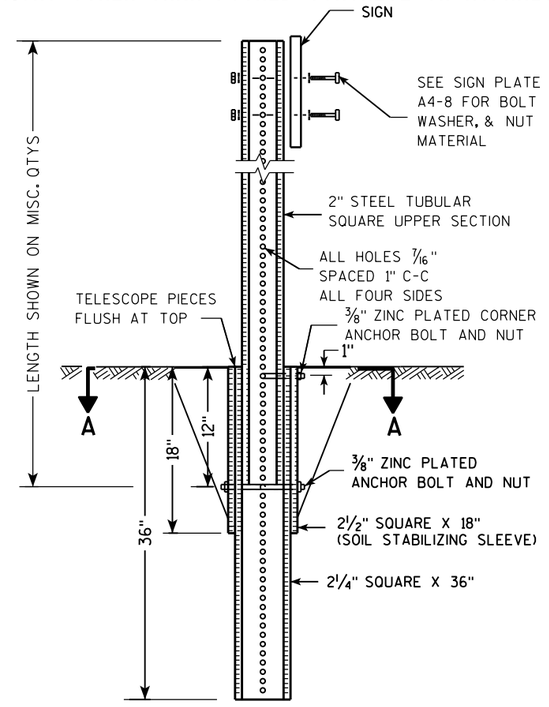
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

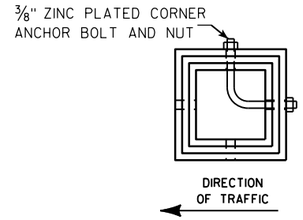


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

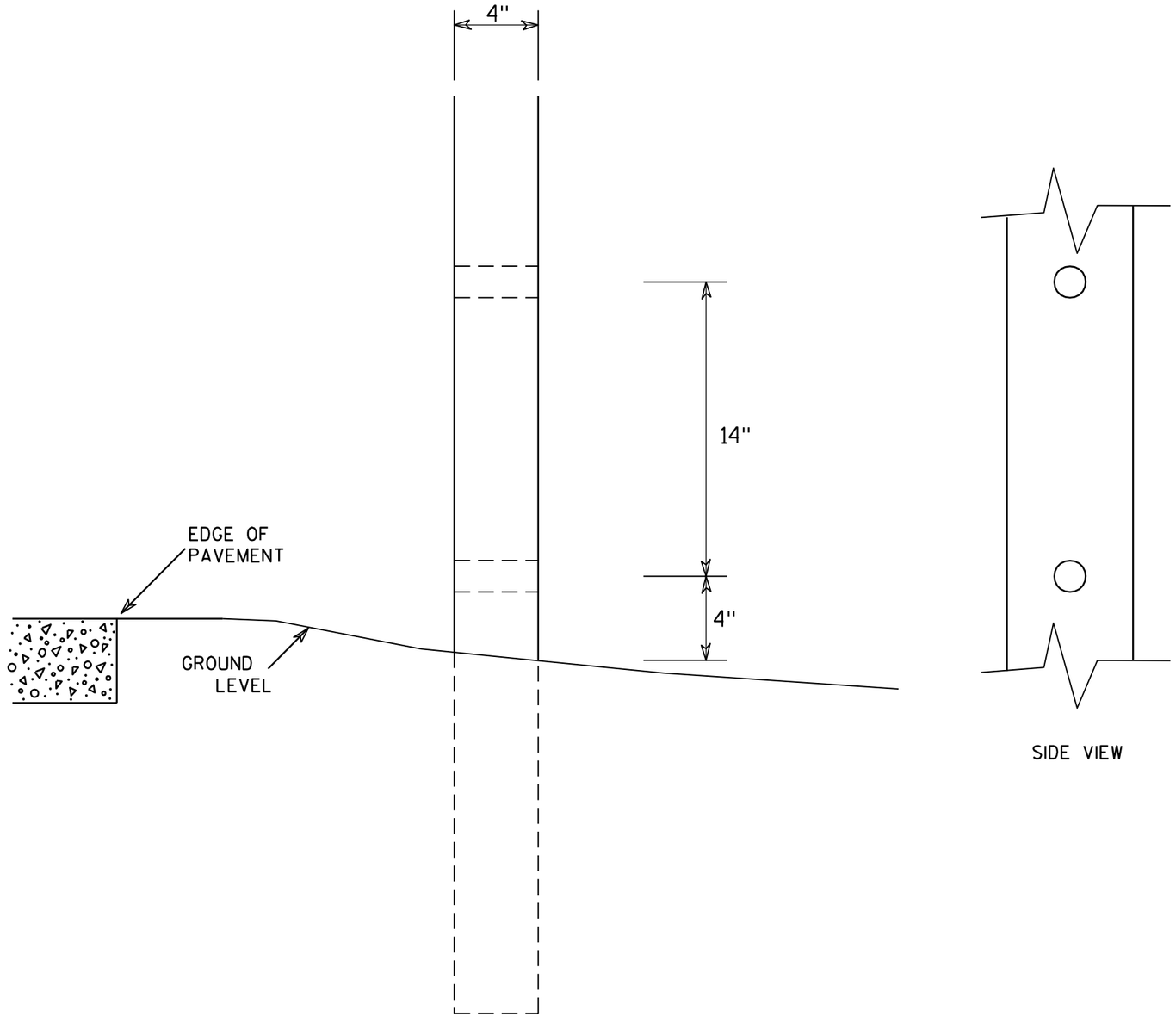
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 22 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

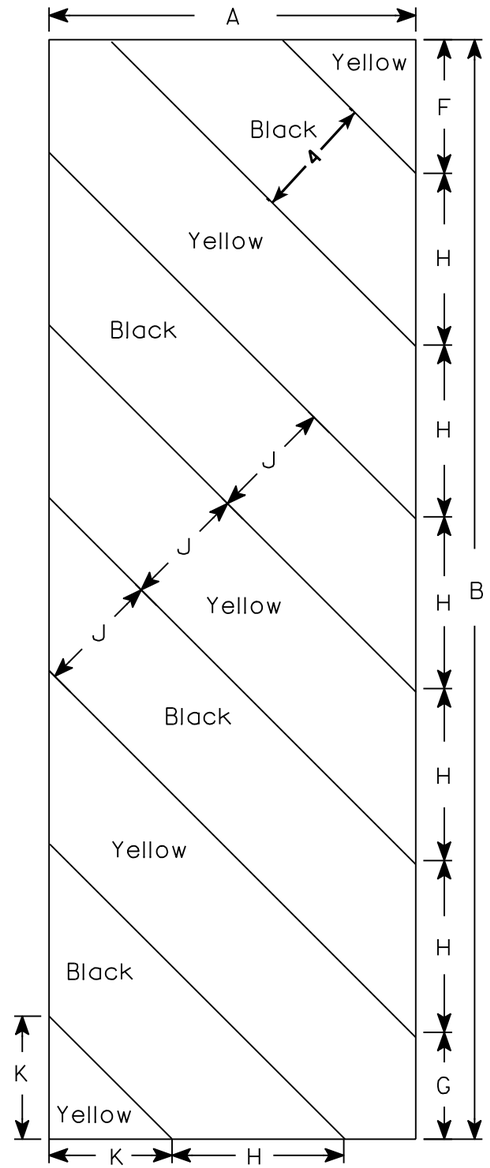
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

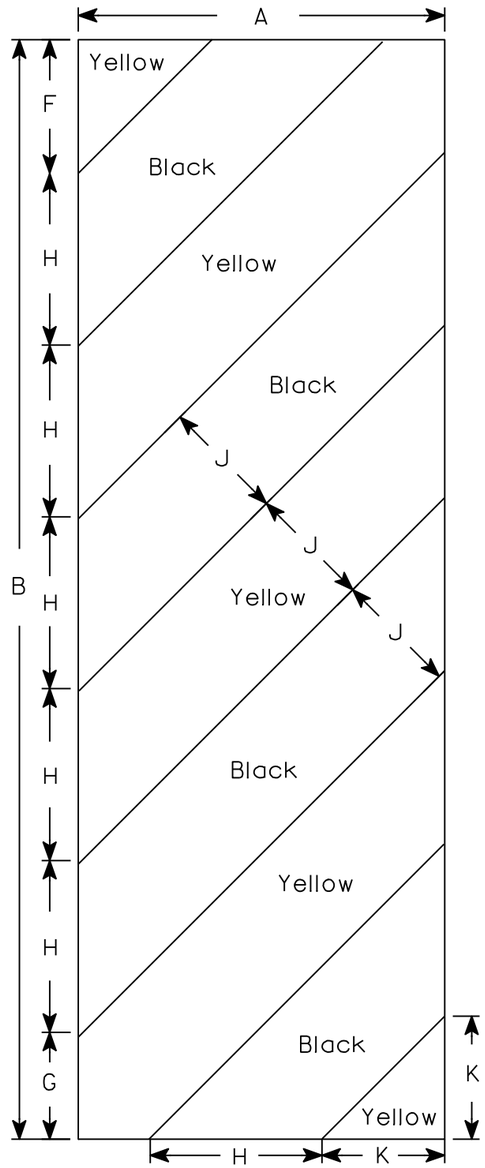
APPROVED Chester J Spang for State Traffic Engineer

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

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



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

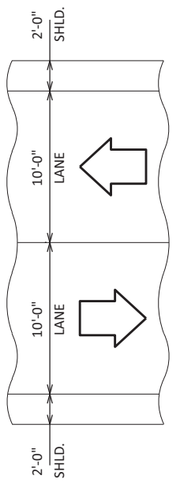
DATE 5/29/12 PLATE NO. W5-52.9

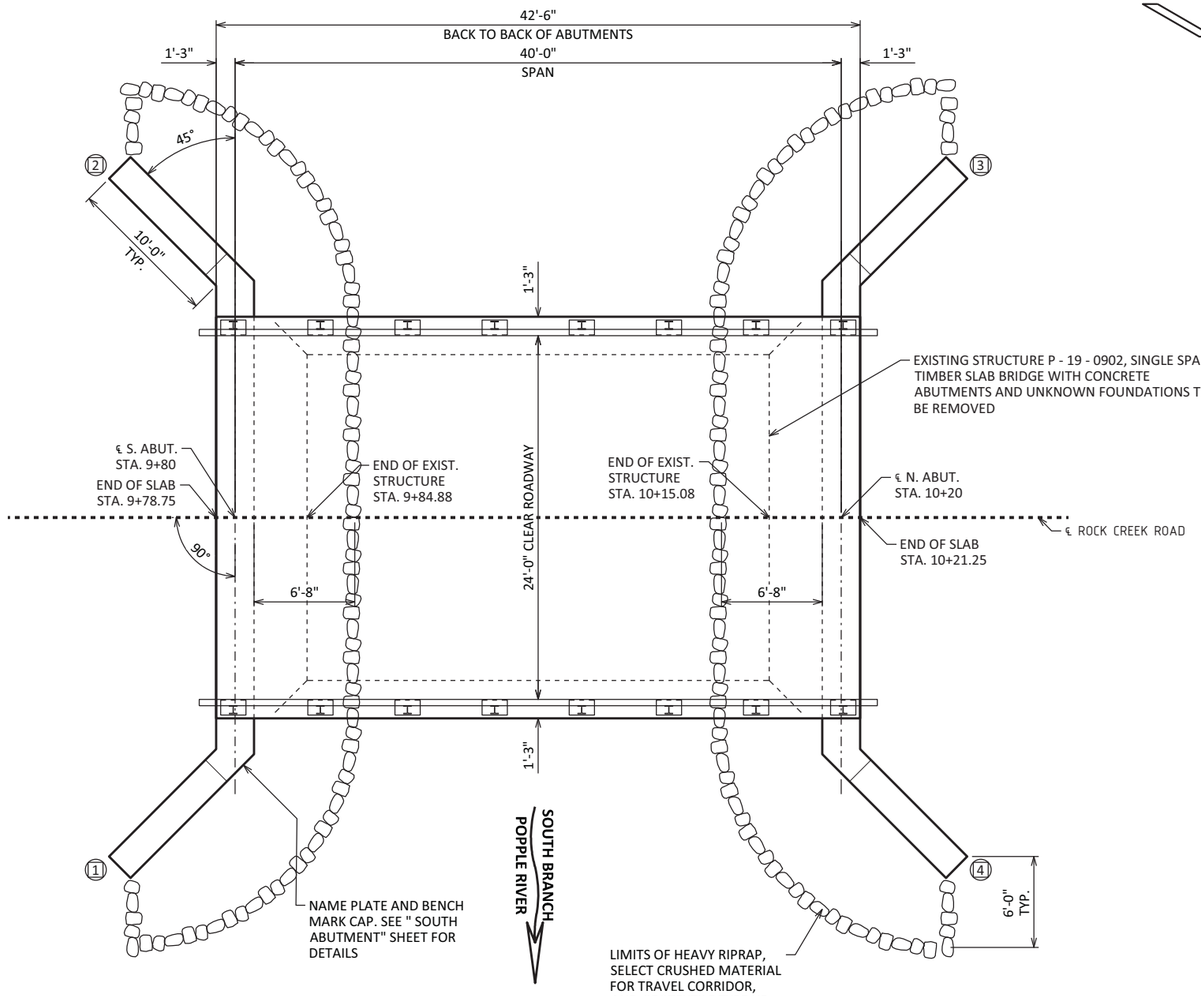
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 24	E

STATE PROJECT NUMBER

9911-00-70

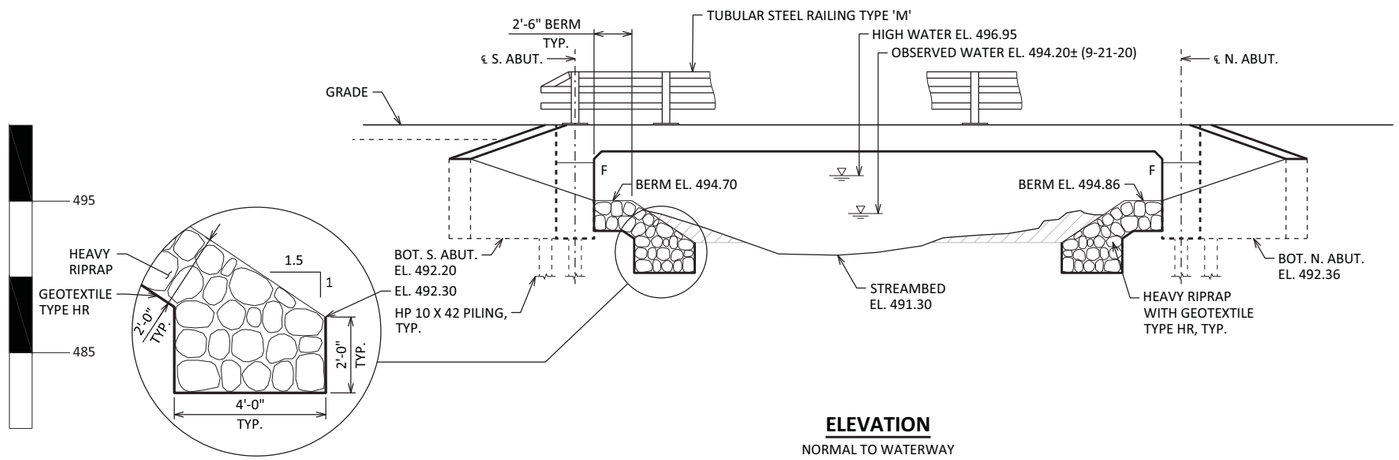
INDICATES WING NUMBER





PLAN

SINGLE SPAN FLAT SLAB



ELEVATION

NORMAL TO WATERWAY

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.11
OPERATING RATING FACTOR: RF = 1.44
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 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS †† PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 30 FEET LONG AT SOUTH ABUTMENT.
PILE POINTS REQUIRED.
ESTIMATED 25 FEET LONG AT NORTH ABUTMENT.
PILE POINTS REQUIRED.

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

TRAFFIC VOLUME

ROCK CREEK ROAD

ADT = 109 (2042)
R.D.S. = 55 M.P.H.

HYDRAULIC DATA

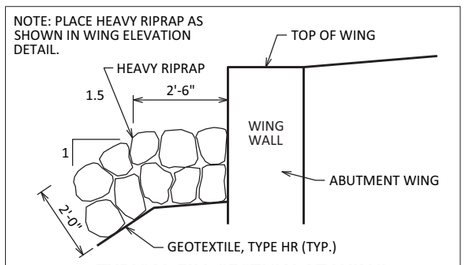
100 YEAR FREQUENCY

Q_{100} = 597 C.F.S.
$VEL._{100}$ = 4.13 F.P.S.
$HW._{100}$ = EL. 496.95
WATERWAY AREA = 144.00 SQ. FT.
DRAINAGE AREA = 31.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 231 C.F.S.
$VEL._2$ = 2.62 F.P.S.
$HW._2$ = EL. 495.37

NOTE: PLACE HEAVY RIPRAP AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

LIST OF DRAWINGS

STRUCTURE DESIGN CONTACTS:

AARON BONK (608)261-0261
GUST JUNTTILA (906)779-0937

THESE PLANS ARE BASED UPON STANDARD BRIDGE PLANS DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION THROUGH THE USE OF THE WISDOT STANDARD BRIDGE DESIGN TOOL. THE UNDERSIGNED DESIGNER CERTIFIES THE ACCURACY OF THE BRIDGE TYPE, SIZE AND LOCATION, HYDRAULICS AND FOUNDATION SUPPORT, AND INFORMATION IN THE PLANS THAT IS NOT PART OF THE STANDARD PLANS SUPPLIED BY THE DEPARTMENT. THE DESIGNER FURTHER CERTIFIES THAT USE OF THE STANDARD BRIDGE DESIGN TOOL FOR DEVELOPMENT OF THIS PLAN IS CONSISTENT WITH THE GUIDANCE PROVIDED IN THE WISDOT BRIDGE MANUAL.

WISCONSIN PROFESSIONAL ENGINEER
GUST B. JUNTTILA
E-45458
IRON MOUNTAIN
MICHIGAN

Gust Junttila
Oct 8 2021 11:00 AM DocuSign

NO.	DATE	REVISION	BY

U.P. ENGINEERS & ARCHITECTS, INC.
ENGINEERING ARCHITECTURE PLANNING SURVEYING ENVIRONMENTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 02/02/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-19-0014

ROCK CREEK ROAD OVER S. BR. POPPLE RIVER

COUNTY	TOWN
FLORENCE	FENCE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
IJS	GBJ	JJA	GBJ

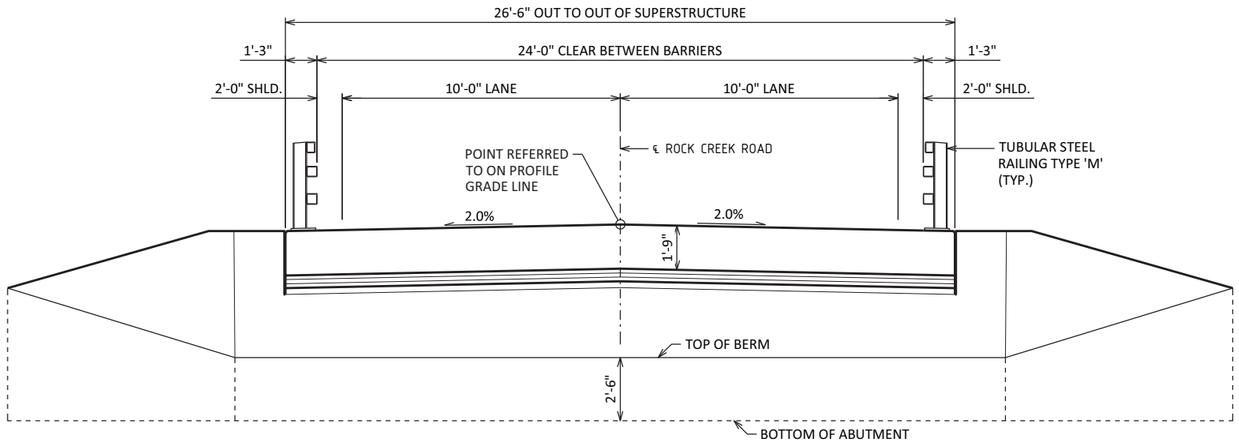
GENERAL PLAN

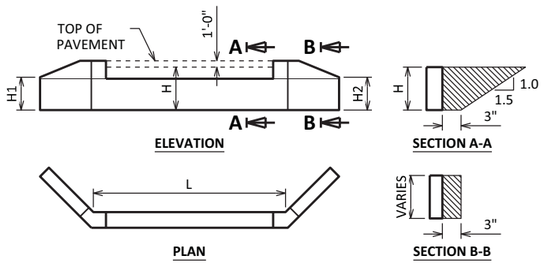
SHEET 1 OF 10
25

SCALE = 5

STATE PROJECT NUMBER

9911-00-70



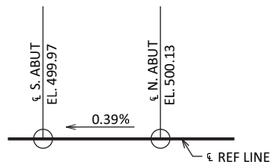


ABUTMENT BACKFILL DIAGRAM

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_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

CROSS SECTION THRU ROADWAY

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)

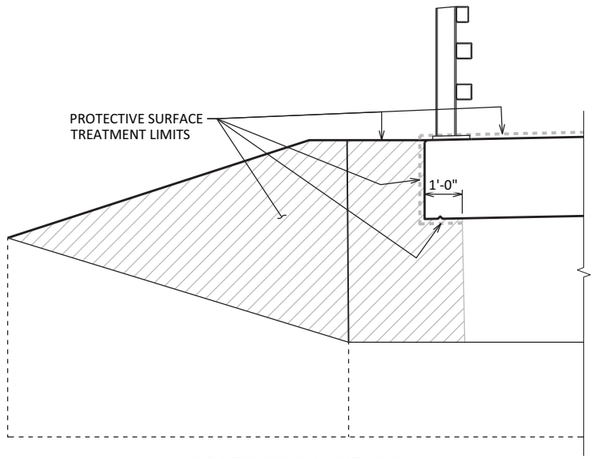


PROFILE GRADE LINE

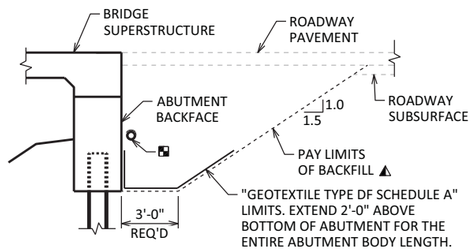
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM DESCRITION	UNIT	SUPER	NORTH ABUT.	SOUTH ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-19-0902	EACH	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-19-0014	LS	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	146	146	292
502.0100	CONCRETE MASONRY BRIDGES	CY	77	27	27	131
502.3200	PROTECTIVE SURFACE TREATMENT	SY	148	16	16	180
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	1,970	1,970	3,940
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,510	1,600	1,600	18,710
513.4061	RAILING TUBULAR TYPE M	LF	90	---	---	90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	5	5	10
550.0500	PILE POINTS	EACH	---	6	6	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	150	180	330
606.0300	RIPRAP HEAVY	CY	---	47	47	94
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	71	71	142
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	29	29	58
645.0120	GEOTEXTILE TYPE HR	SY	---	95	95	190
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	---	20	20	40
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9



PROTECTIVE SURFACE TREATMENT DETAILS



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.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-19-0014" 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.

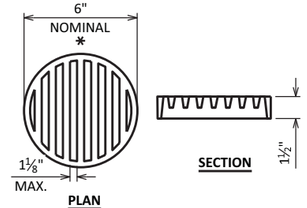
THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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.

THE RIPRAP VOIDS SHALL BE FILLED WITH SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR.

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.

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



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 UNDERDRAING WRAPPED 6-INCH".

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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

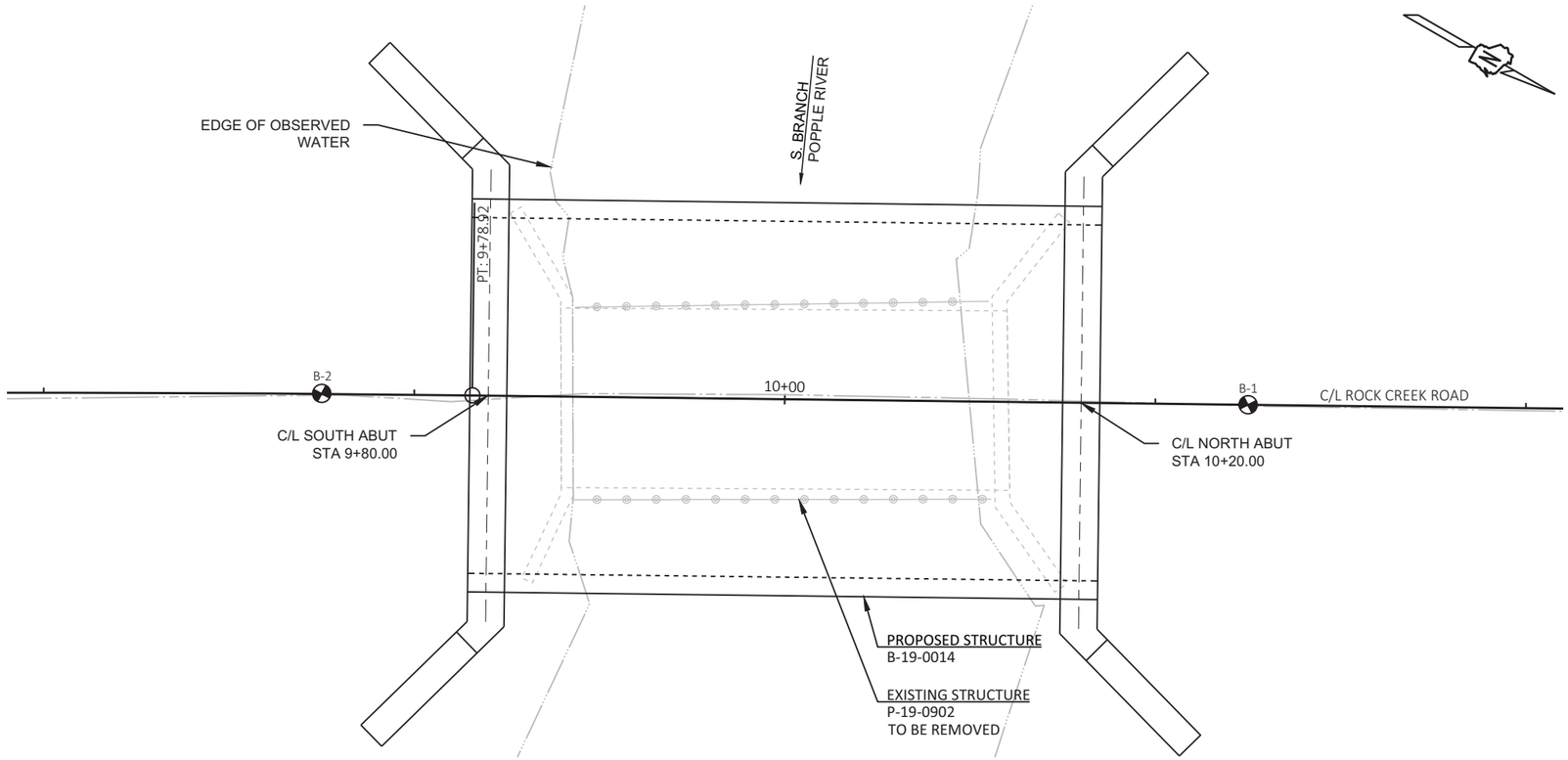
CROSS SECTION & QUANTITIES

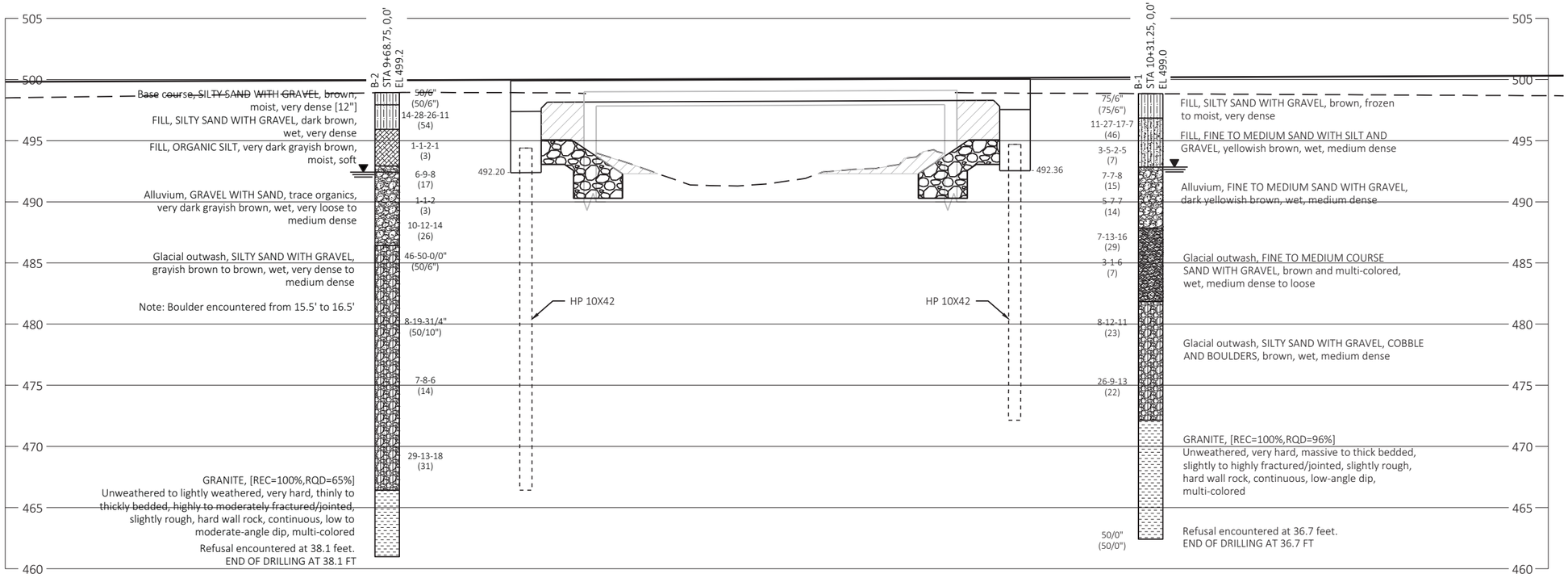
SHEET 2
26

SCALE =

8

8





STATE PROJECT NUMBER

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ABBREVIATIONS

F---FINE	VF---VERY FINE	M---MEDIUM
C---COURSE	WS---WEATHERED	SO---SOUND

MATERIAL SYMBOLS

SILTY SAND; POORLY GRADED SAND; GRANITE 1; POORLY GRADED SAND WITH..; POORLY GRADED GRAVEL; ORGANIC SILT OR CLAY; WELL GRADED SAND

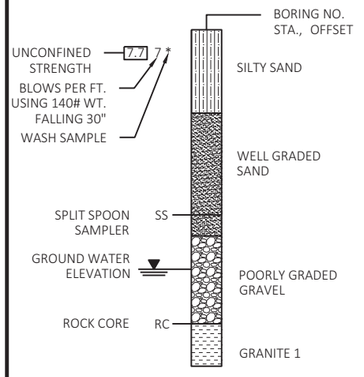
LEGEND OF BORING

75/6" = 75 BLOWS FOR 6" PENETRATION PROBING TAKING WITH 140# WT. FALLING 30" ON A 2" O.D. SS

BORING NO.
STA., OFFSET

REFUSAL 50/0"

LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

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SUBSURFACE EXPLORATION

SHEET 3
27

SCALE =

STATE PROJECT NUMBER

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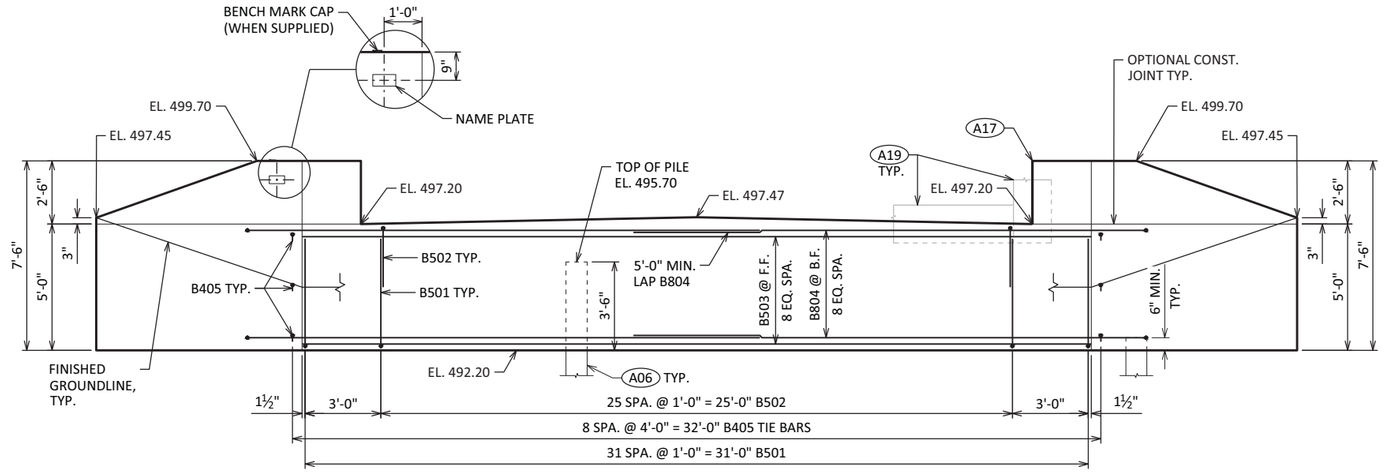
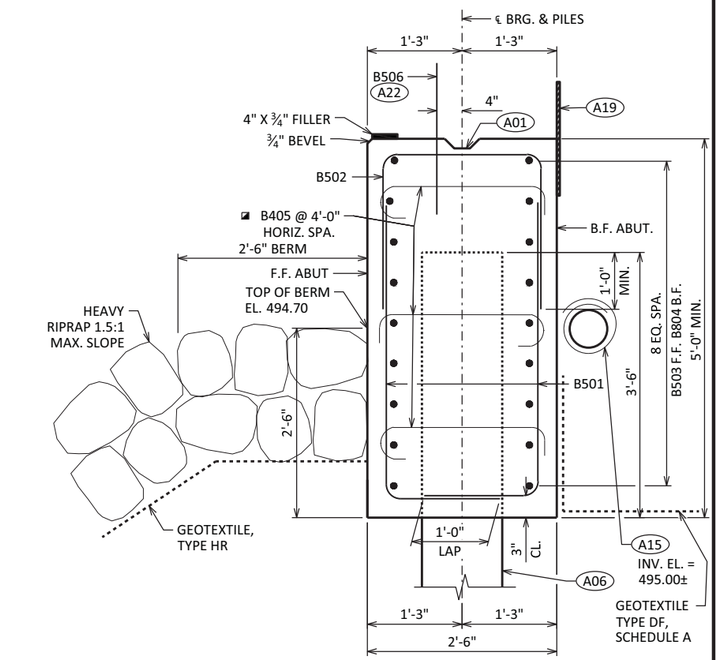
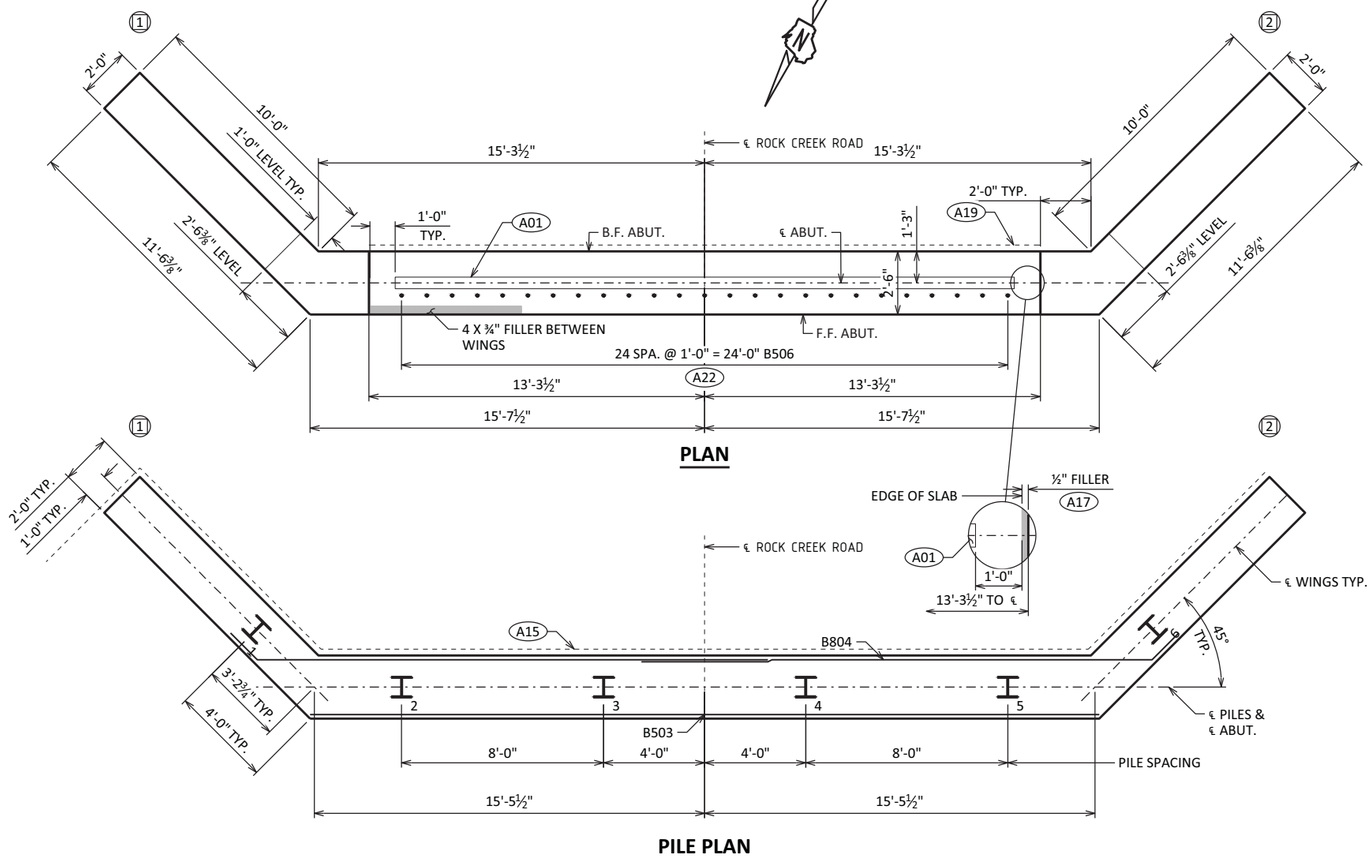


ELEVATION

LOOKING DOWNSTATION



SECTION THRU BODY



PLAN

PILE PLAN

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 30' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180TONS PER PILE. PILE POINTS REQUIRED.

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

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) 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.)

◪ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

(1) (2) INDICATES WING NUMBER

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

SOUTH ABUTMENT

SHEET 4
28

SCALE = 3

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

8

8

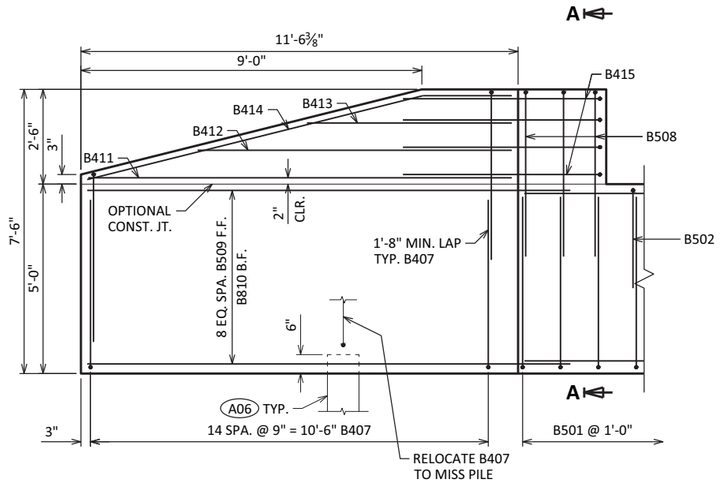
STATE PROJECT NUMBER

9911-00-70

BILL OF BARS

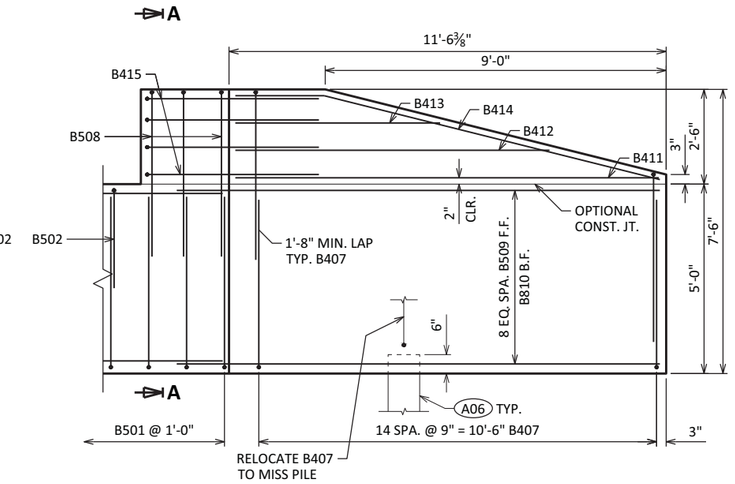
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		64	6'-0"	X		ABUT BODY STIRRUPS
B502		26	7'-1"	X		ABUT BODY STIRRUPS - TOP U-BAR
B503		9	31'-3"			ABUT BODY HORIZ. - F.F.
B804		18	21'-6"	X		ABUT BODY HORIZ. - B.F.
B405		27	3'-0"	X		ABUT BODY TIE BARS
B506	X	25	2'-0"			ABUT BODY DOWEL BARS
B407	X	60	10'-4"	X		WING STIRRUPS
B508	X	6	10'-7"	X		WING CORNER STIRRUPS
B509	X	18	12'-9"	X		WING LOWER HORIZ. - F.F.
B810	X	18	14'-3"	X		WING LOWER HORIZ. - B.F.
B411	X	4	11'-1"			WING UPPER HORIZ.
B412	X	4	8'-2"			WING UPPER HORIZ.
B413	X	4	5'-4"			WING UPPER HORIZ.
B414	X	4	11'-8"	X		WING TOP HORIZ.
B415	X	4	8'-3"	X		WING 1 UPPER HORIZ. CORNER
B416	X	4	8'-3"	X		WING 2 UPPER HORIZ. CORNER



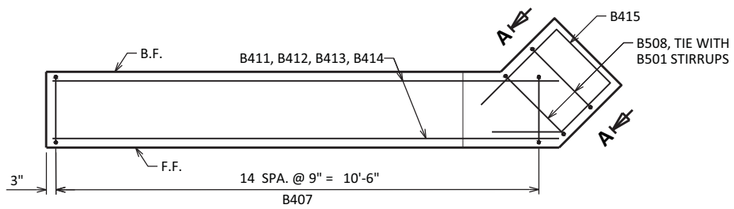
WING 1 ELEVATION

SHOWING F.F. WING



WING 2 ELEVATION

SHOWING F.F. WING

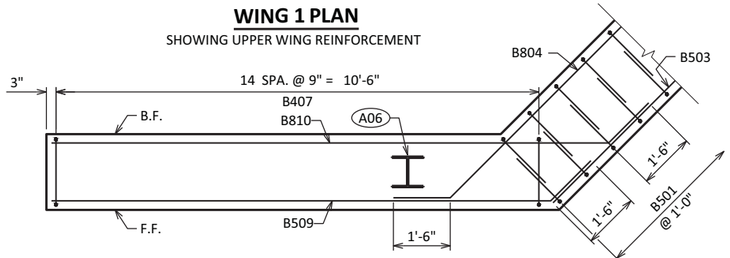


WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT

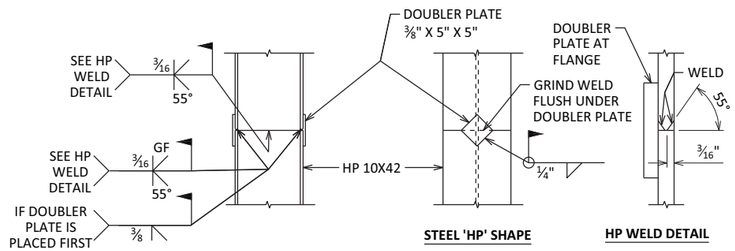
WING 2 PLAN

SHOWING UPPER WING REINFORCEMENT

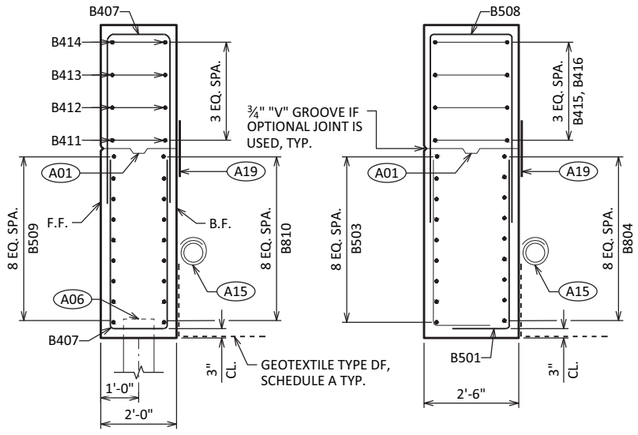


WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



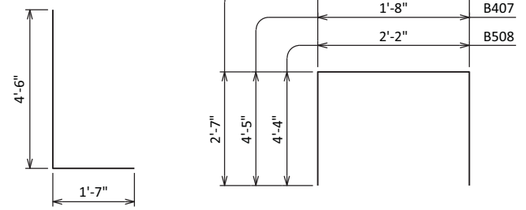
'HP' PILE DETAILS



SECTION THRU WING 1

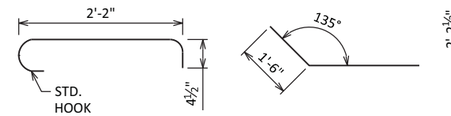
TYPICAL BOTH WINGS

SECTION A-A



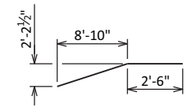
B501

B502, B407, B508

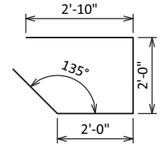


B405

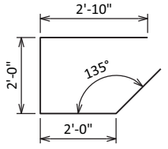
B804, B509, B810



B414



B415



B416

(A01) OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE ¾" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.

(A06) SUPPORT ABUTMENT ON HP 10 X 42 PILING, ESTIMATED 30' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180TONS PER PILE. PILE POINTS REQUIRED.

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

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

SOUTH ABUTMENT DETAILS

SHEET 5
29

SCALE = 2

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

8

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STATE PROJECT NUMBER

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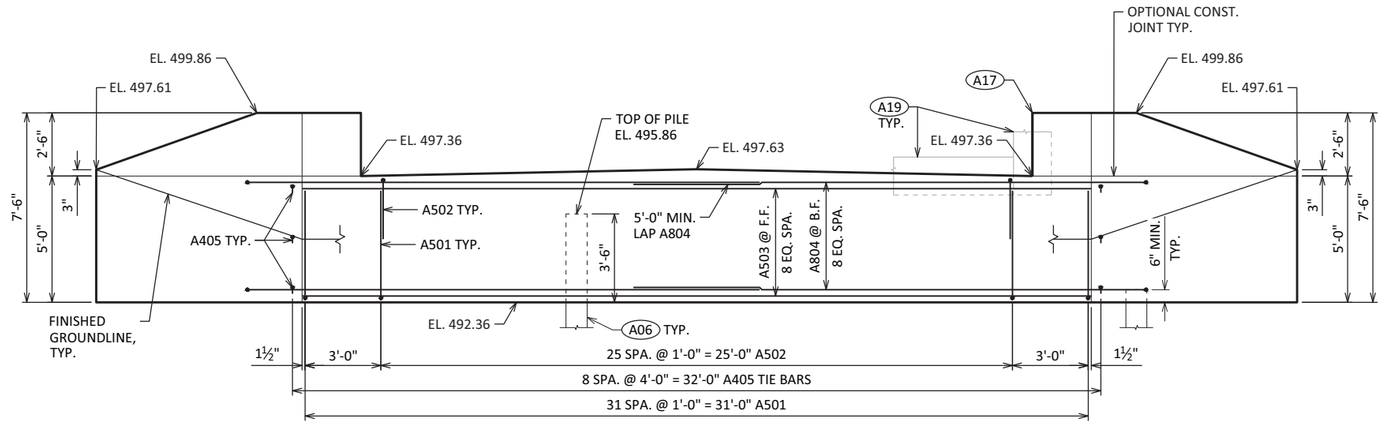
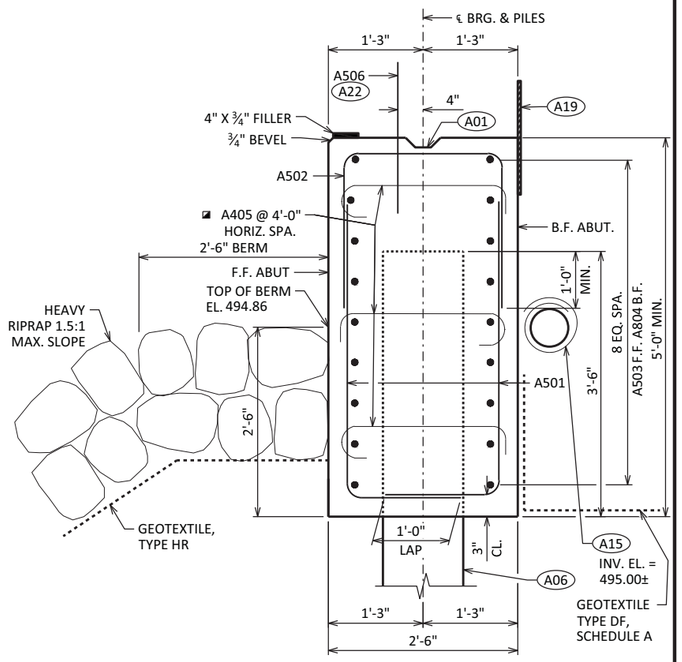
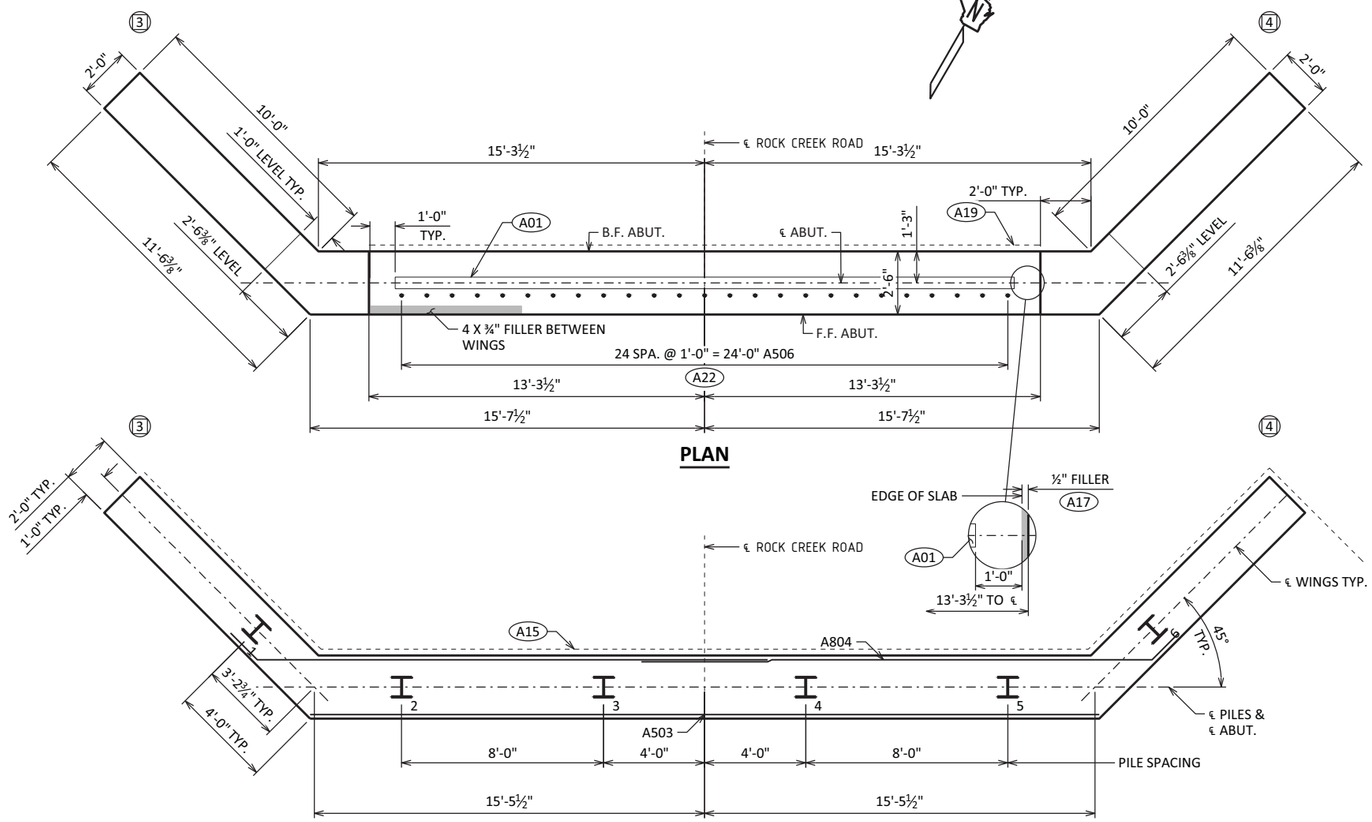


ELEVATION
LOOKING UPSTATION



SECTION THRU BODY



PLAN

PILE PLAN

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 25' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180TONS PER PILE. PILE POINTS REQUIRED.

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

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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

◪ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

(3) INDICATES WING NUMBER

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

NORTH ABUTMENT

SHEET 6
30

SCALE = 3

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

8

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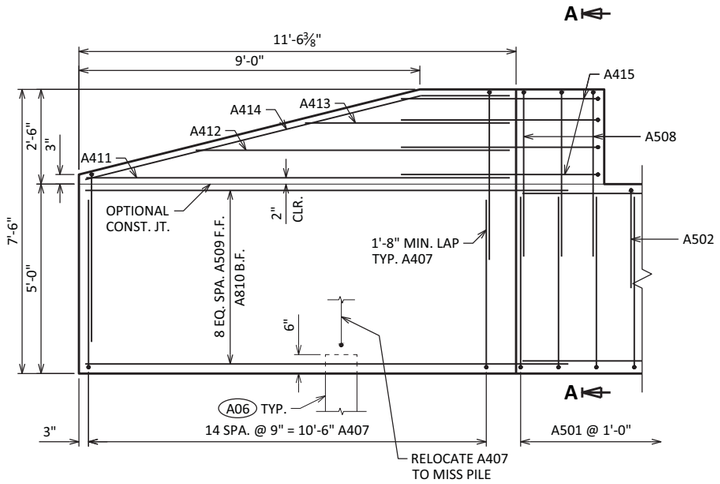
STATE PROJECT NUMBER

9911-00-70

BILL OF BARS

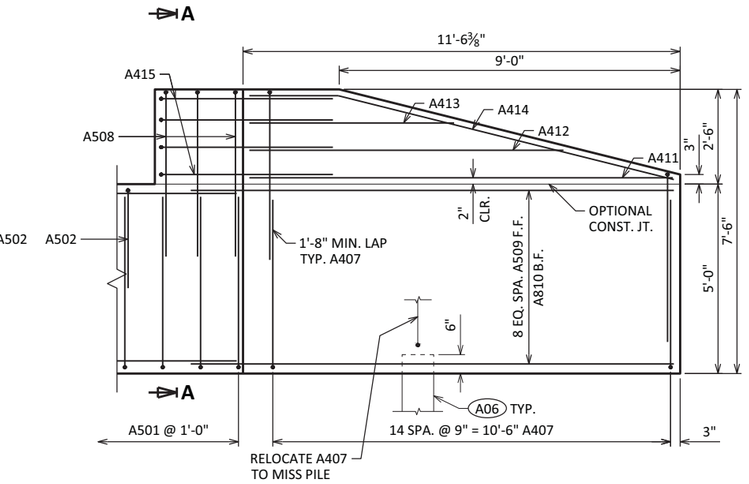
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501		64	6'-0"	X		ABUT BODY STIRRUPS
A502		26	7'-1"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	31'-3"			ABUT BODY HORIZ. - F.F.
A804		18	21'-6"	X		ABUT BODY HORIZ. - B.F.
A405		27	3'-0"	X		ABUT BODY TIE BARS
A506	X	25	2'-0"			ABUT BODY DOWEL BARS
A407	X	60	10'-4"	X		WING STIRRUPS
A508	X	6	10'-7"	X		WING CORNER STIRRUPS
A509	X	18	12'-9"	X		WING LOWER HORIZ. - F.F.
A810	X	18	14'-3"	X		WING LOWER HORIZ. - B.F.
A411	X	4	11'-1"			WING UPPER HORIZ.
A412	X	4	8'-2"			WING UPPER HORIZ.
A413	X	4	5'-4"			WING UPPER HORIZ.
A414	X	4	11'-8"	X		WING TOP HORIZ.
A415	X	4	8'-3"	X		WING 3 UPPER HORIZ. CORNER
A416	X	4	8'-3"	X		WING 4 UPPER HORIZ. CORNER



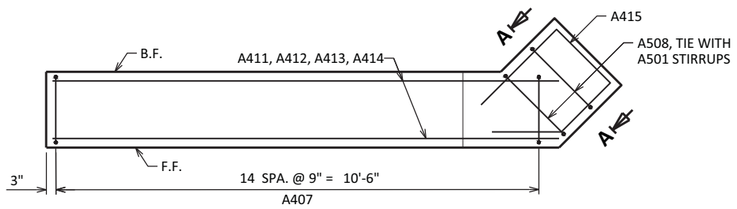
WING 3 ELEVATION

SHOWING F.F. WING



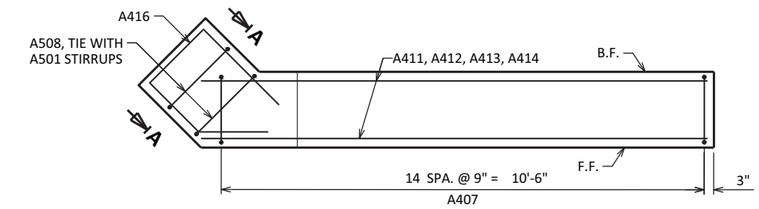
WING 4 ELEVATION

SHOWING F.F. WING



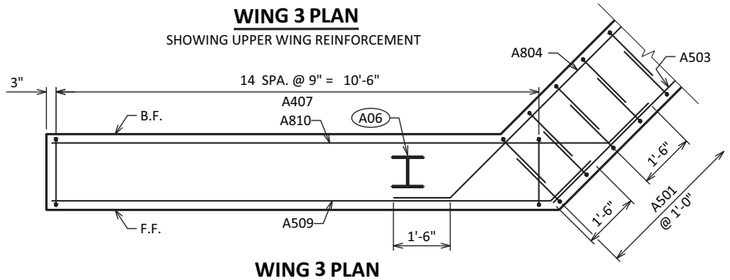
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT



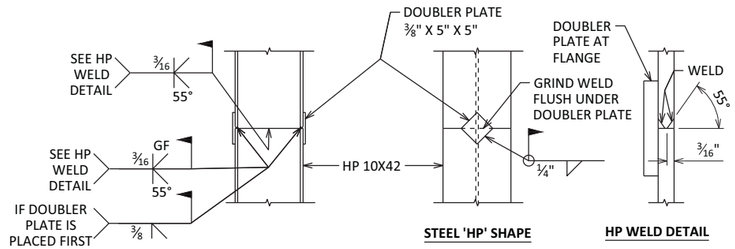
WING 4 PLAN

SHOWING UPPER WING REINFORCEMENT

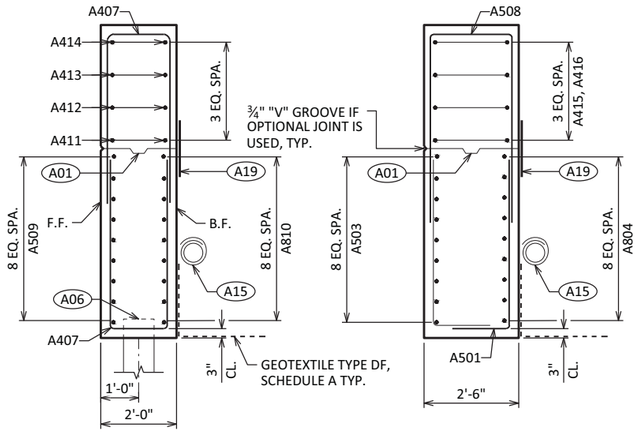


WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR



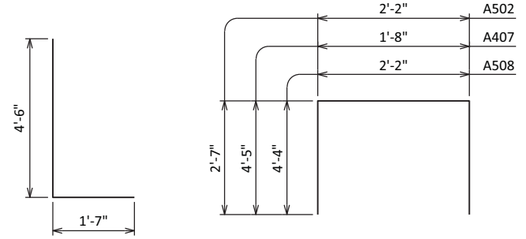
'HP' PILE DETAILS



SECTION THRU WING 3

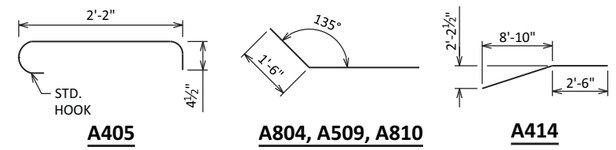
TYPICAL BOTH WINGS

SECTION A-A



A501

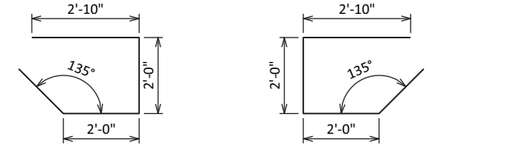
A502, A407, A508



A405

A804, A509, A810

A414



A415

A416

(A01) OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE ¾" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.

(A06) SUPPORT ABUTMENT ON HP 10 X 42 PILING, ESTIMATED 25' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180TONS PER PILE. PILE POINTS REQUIRED.

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

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

NORTH ABUTMENT DETAILS

SHEET 7
31

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

SCALE = 2

8

8

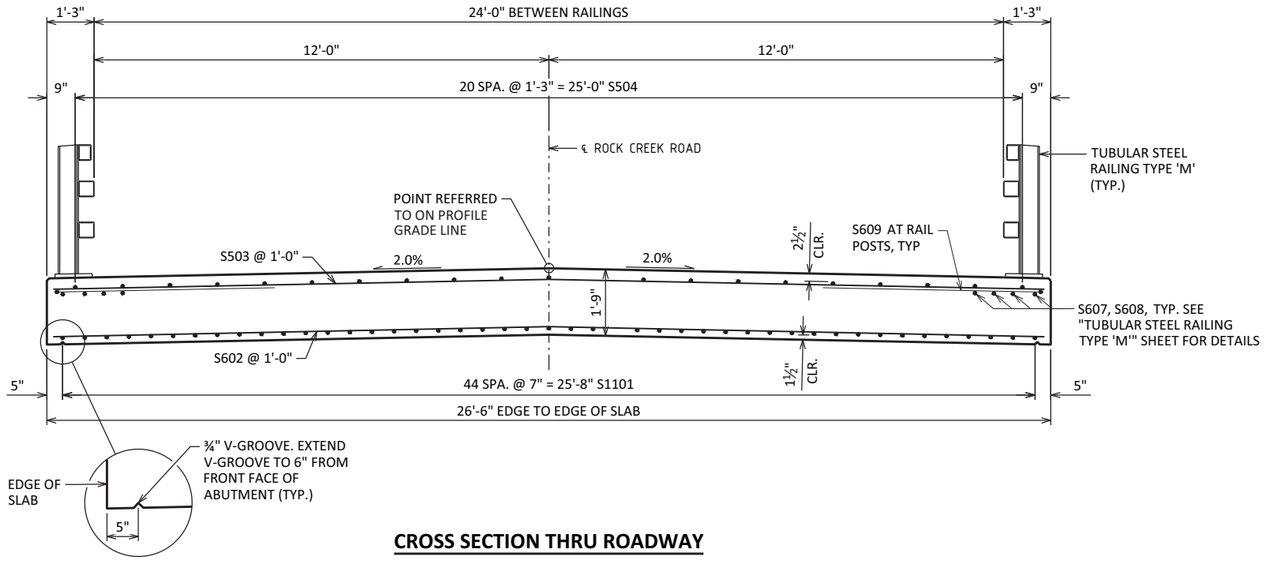
STATE PROJECT NUMBER

9911-00-70

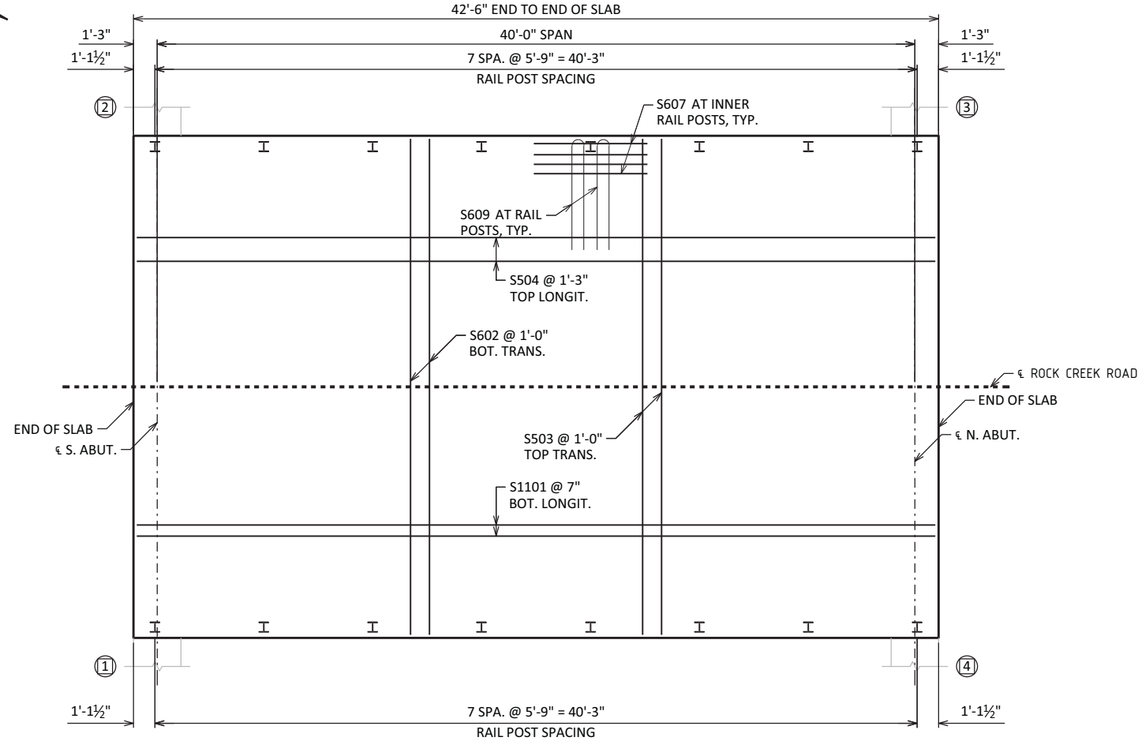
NOTES

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.

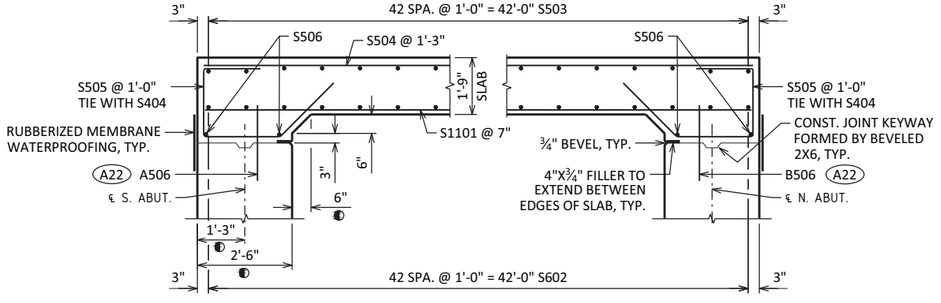
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).



CROSS SECTION THRU ROADWAY



PLAN

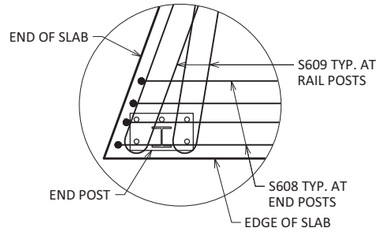


LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO ℄ ROADWAY UNLESS OTHERWISE NOTED.

◐ MEASURED NORMAL TO THE ℄ 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.)



END POST DETAILS

(◯) INDICATES WING NUMBER

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

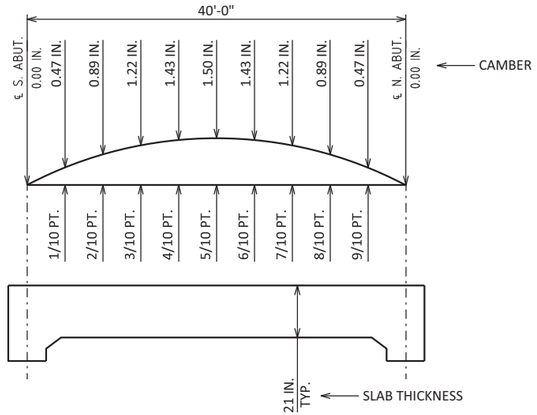
SUPERSTRUCTURE

SHEET 8
32

SCALE = 4

8

8

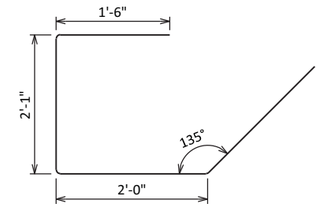


CAMBER AND SLAB THICKNESS DIAGRAM

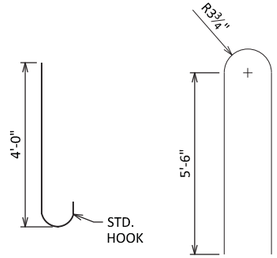
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

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



S505



S608

S609

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S1101	X	45	42'-2"			SLAB BOTTOM LONGITUDINAL
S602	X	43	26'-2"			SLAB BOTTOM TRANSVERSE
S503	X	43	26'-2"			SLAB TOP TRANSVERSE
S504	X	21	42'-2"			SLAB TOP LONGITUDINAL
S505	X	54	7'-4"	X		ABUTMENT DIAPHRAGM STIRRUPS
S506	X	4	26'-2"			ABUTMENT DIAPHRAGM LONGITUDINAL
S607	X	48	6'-0"			SLAB TOP LONGIT. UNDER RAIL POSTS
S608	X	16	4'-8"	X		SLAB TOP LONGIT. UNDER RAIL END POSTS
S609	X	32	12'-0"	X		SLAB TOP HOOKS UNDER RAIL POSTS

TOP OF SLAB ELEVATIONS

	℄ BRG. S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. N. ABUT.
W EDGE OF DECK	499.70	499.72	499.73	499.75	499.76	499.78	499.79	499.81	499.82	499.84	499.86
CROWN OR ℄	499.97	499.99	500.00	500.02	500.03	500.05	500.06	500.08	500.09	500.11	500.13
E EDGE OF DECK	499.70	499.72	499.73	499.75	499.76	499.78	499.79	499.81	499.82	499.84	499.86

SURVEY TOP OF SLAB ELEVATIONS

	ABUTMENT	5/10 PT.	ABUTMENT
W GUTTER			
CROWN OR ℄			
E GUTTER			

PRIOR TO RELEASING SLAB FORMWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄. RECORD ELEVATIONS IN THE TABLE ABOVE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

SUPERSTRUCTURE DETAILS

SHEET 9
33

SCALE =

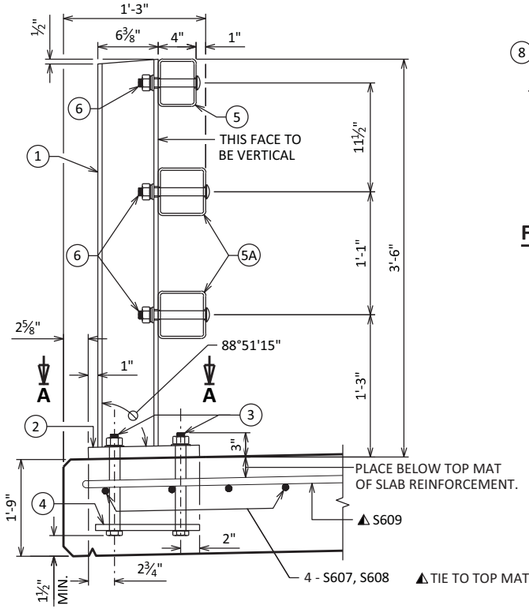
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

8

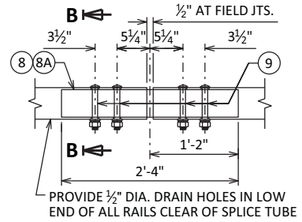
8

STATE PROJECT NUMBER

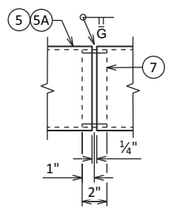
9911-00-70



SECTION THRU RAILING ON DECK

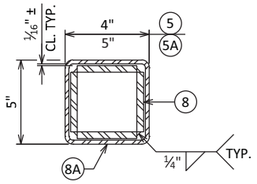


FIELD ERECTION JOINT DETAIL

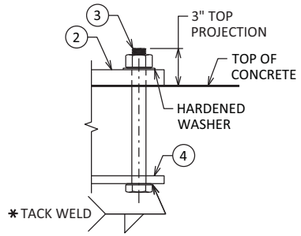


SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS

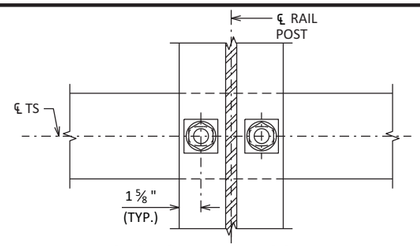


SECTION B-B

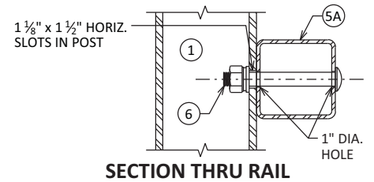


ANCHOR BOLTS

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



SECTION THRU POST WEB



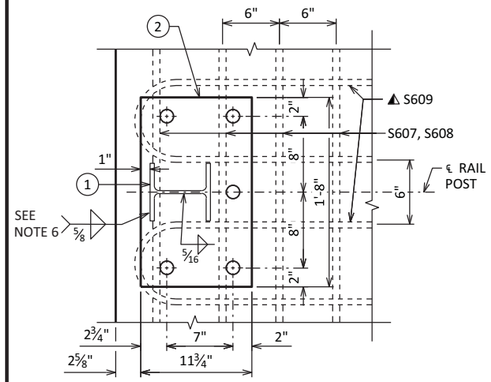
SECTION THRU RAIL

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

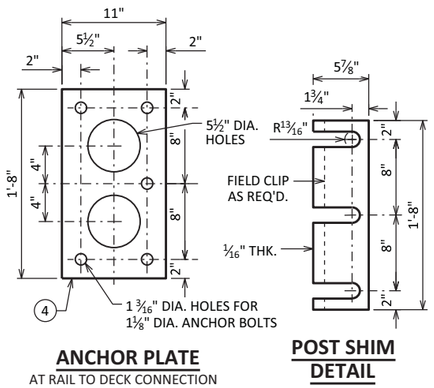
TYPICAL RAIL TO POST CONNECTIONS

LEGEND

1. W6 x 25 WITH 1⅛ " X 1½ " HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1 ¼" x 11 ¾" x 1'-8" WITH 1 7/16" OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1 ⅛" 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 ¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. ⅝" 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. ⅞" 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. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
8. ⅜" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
8A. ⅜" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
9. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" x 1 ¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A AT FIELD JOINTS AND 15/16" X 2 ¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 8A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.



SECTION A-A



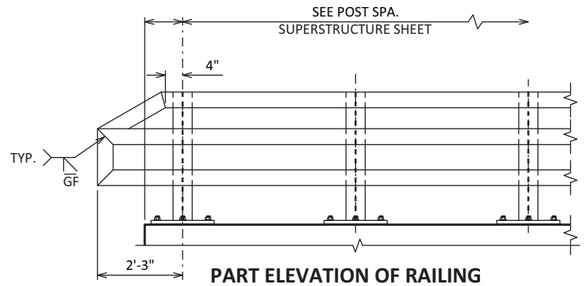
ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. 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.



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-19-0014

DRAWN BY JJA | PLANS CK'D GBJ

TUBULAR STEEL RAILING TYPE 'M'

SHEET 10
34

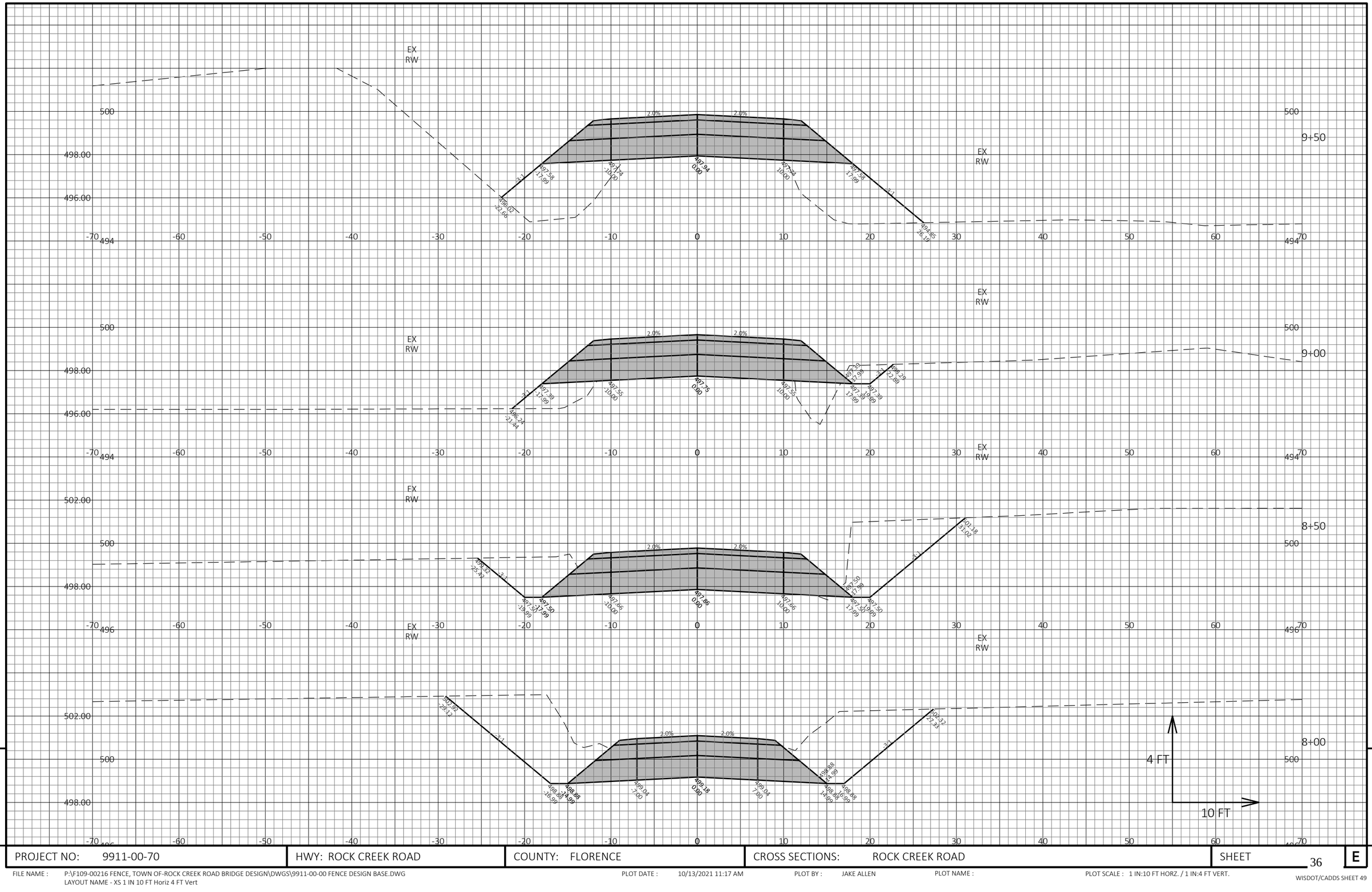
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 0.9

SCALE =

Station	Distance (1)	Area (SFT)			Volume Unadjusted (CYD)			Volume Adjusted (CYD)		Mass Ordinate (2)
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill (Factor 1.25)	
8+00	0	114	0	0	0	0	0	0	0	0
8+25	25	109	0	0	101	0	0	101	0	101
8+50	25	82	0	0	76	0	0	76	0	177
8+75	25	42	0	3	39	0	3	39	3	212
9+00	25	14	0	14	13	0	13	13	16	209
9+25	25	8	0	41	7	0	38	7	47	169
9+50	25	28	0	53	26	0	49	26	61	134
9+75	25	17	0	50	16	0	46	16	58	91
9+79	4	18	0	53	3	0	8	3	10	84

Station	Distance (1)	Area (SFT)			Volume Unadjusted (CYD)			Volume Adjusted (CYD)		Mass Ordinate (2)
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill (Factor 1.25)	
10+22	0	14	0	70	0	0	0	0	0	0
10+50	28	6	0	47	6	0	49	6	61	-55
10+75	25	6	0	28	6	0	26	6	32	-82
11+00	25	18	0	6	17	0	6	17	7	-72
11+25	25	37	0	0	34	0	0	34	0	-38
11+50	25	65	0	0	60	0	0	60	0	23
11+75	25	75	0	0	69	0	0	69	0	92
12+00	25	64	0	0	59	0	0	59	0	151

1. Distance is measured between sequential stations. If the value is zero, it represents the starting point.
2. Mass Ordinate can be a positive or negative value. Positive indicates excess material in that section of roadway, negative indicates a shortage of material for the section.
Mass ordinate is cumulative from station to station and separated on each side of the bridge. Totals shown above.



9

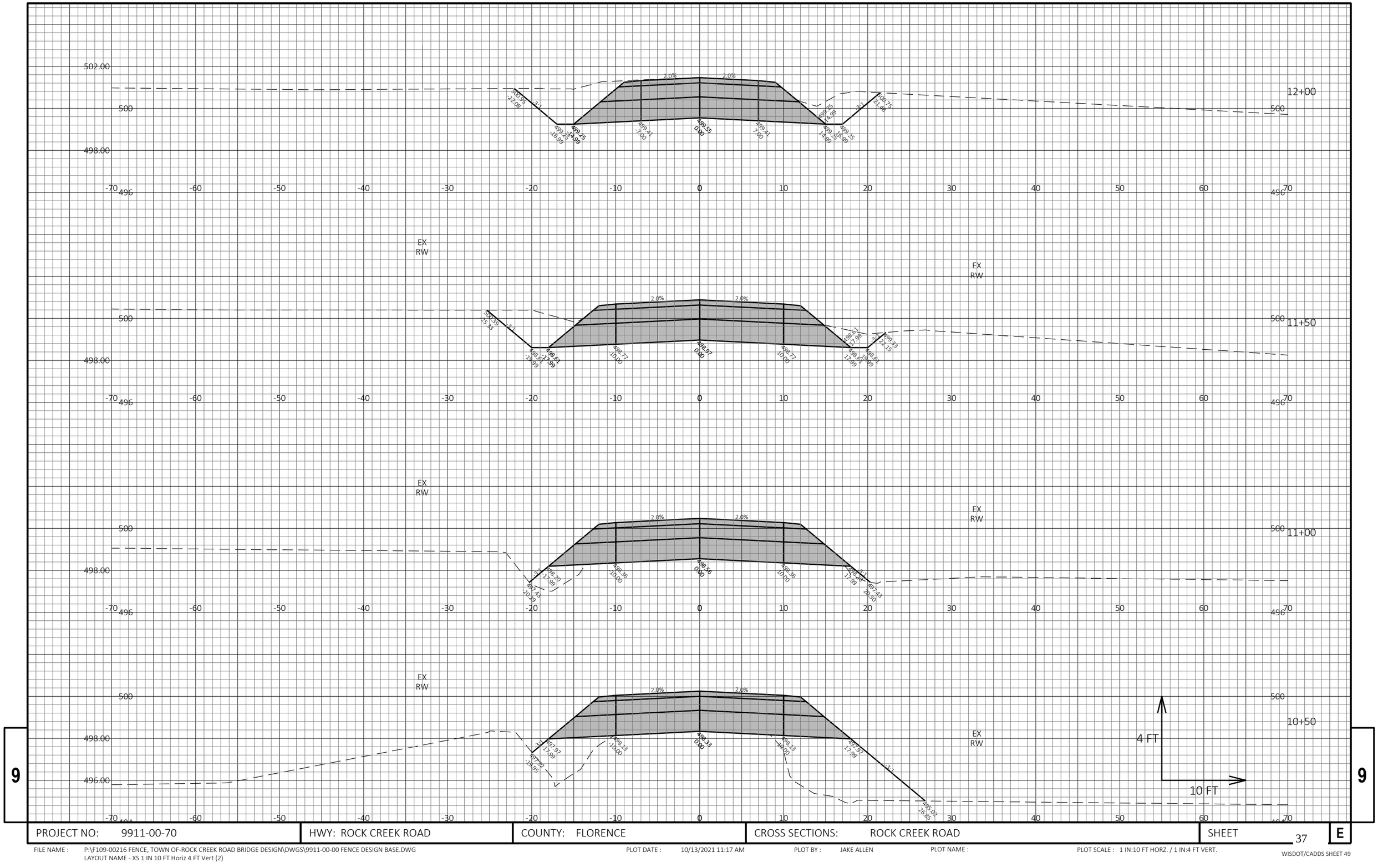
PROJECT NO: 9911-00-70	HWY: ROCK CREEK ROAD	COUNTY: FLORENCE	CROSS SECTIONS: ROCK CREEK ROAD	SHEET 36	E

9

FILE NAME : P:\F109-00216 FENCE, TOWN OF-ROCK CREEK ROAD BRIDGE DESIGN\DWGS\9911-00-00 FENCE DESIGN BASE.DWG
LAYOUT NAME - XS 1 IN 10 FT Horiz 4 FT Vert

PLOT DATE : 10/13/2021 11:17 AM PLOT BY : JAKE ALLEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:4 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 9911-00-70	HWY: ROCK CREEK ROAD	COUNTY: FLORENCE	CROSS SECTIONS: ROCK CREEK ROAD	SHEET 37	E

FILE NAME : P:\F109-00216 FENCE, TOWN OF-ROCK CREEK ROAD BRIDGE DESIGN\DWGS\9911-00-00 FENCE DESIGN BASE.DWG
LAYOUT NAME - XS 1 IN 10 FT Horiz 4 FT Vert (2)

PLOT DATE : 10/13/2021 11:17 AM PLOT BY : JAKE ALLEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:4 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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