

SUP

FEBRUARY 2020

PROJECT ID:
WITH: N/A

8439-00-72

COUNTY:

RUSK

ORDER OF SHEETS

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

TOTAL SHEETS = 50

PROJECT LOCATION



DESIGN DESIGNATION

A.A.D.T.	2020	=	90 (EST.)
A.A.D.T.	2040	=	110 (EST.)
D.H.V.		=	<15 (EST.)
D.D.		=	50/50 (EST.)
T		=	10% (EST.)
DESIGN SPEED		=	45 MPH
ESALS		=	36,500

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
	STORM SEWER
	TELEPHONE
	WATER
MARSH AREA	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE
WOODED OR SHRUB AREA	

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T STUBBS, S HUTCHINSON ROAD

SOFT MAPLE CREEK BRIDGE B540127

LOC STR
RUSK COUNTY

STATE PROJECT NUMBER

8439-00-72

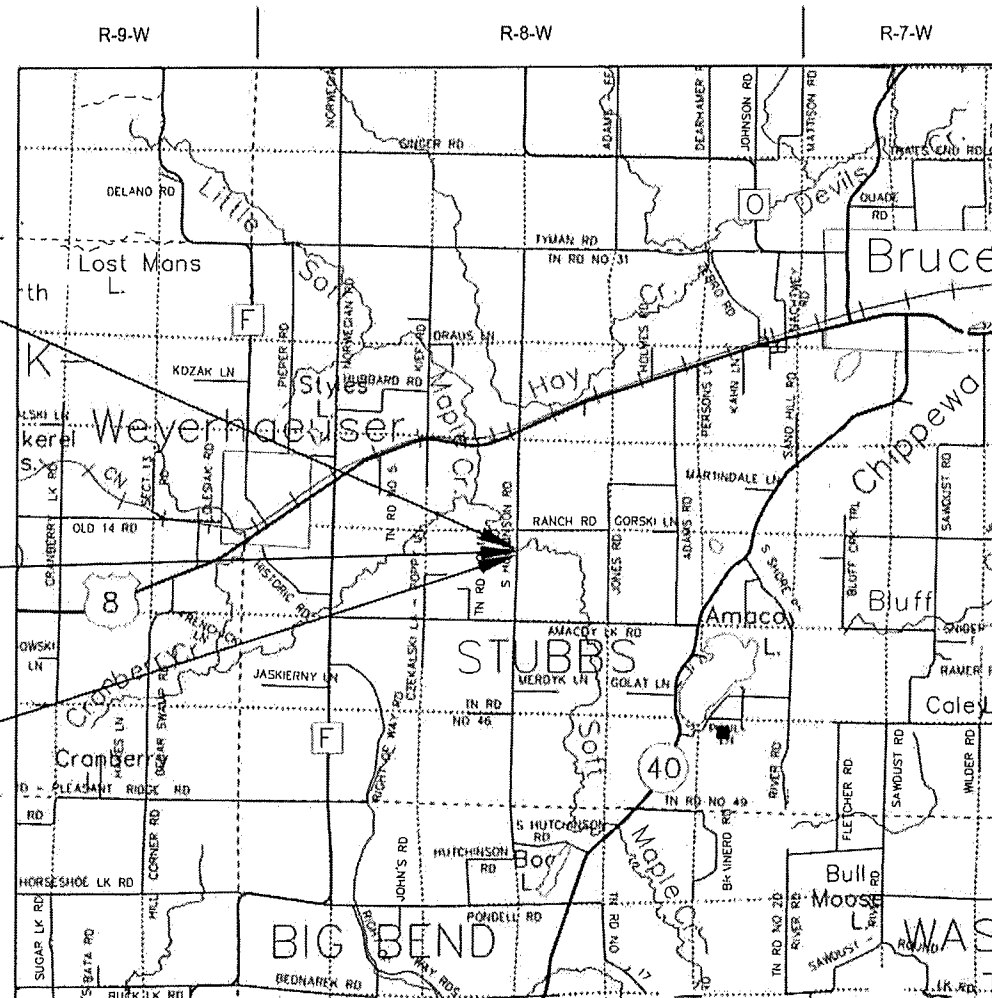
END PROJECT

STA 10+80
Y = 546,460.28
X = 747,016.65

STRUCTURE
B-54-127

BEGIN PROJECT

STA 9+20
Y = 546,300.29
X = 747,018.29



LAYOUT

SCALE 0 2.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.030 MI

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

STATE PROJECT

8439-00-72

FEDERAL PROJECT

PROJECT

WISC 2020055

CONTRACT

1

ACCEPTED FOR

TOWN of STUBBS

7/9/19
(Date) *[Signature]*
CHAIRMAN

ACCEPTED FOR

COUNTY of RUSK

7/9/19
(Date) *[Signature]*
HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY



146 North Central Ave Marshfield, WI 54449
715-384-2133 1-800-362-4505 Fax: 715-384-9787



DATE: 7/3/2019
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor MSA PROFESSIONAL SERVICES, INC.
Designer MSA PROFESSIONAL SERVICES, INC.
Project Manager MATTHEW VAN NATTA, PE
Regional Examiner N/A
Regional Supervisor ANDREW STENSLAND

APPROVED FOR THE DEPARTMENT
DATE: 7/29/19 *[Signature]*
(Signature)

E

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED).

THE 3½" ASPHALTIC SURFACE SHALL CONSIST OF A 1¾" UPPER LAYER WITH NO. 4 (12.5 MM) NOMINAL SIZE AGGREGATE AND A 1¾" LOWER LAYER WITH NO. 4 (12.5 MM) NOMINAL SIZE AGGREGATE.

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		2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25 0.32	0.30 0.40
SIDE SLOPE TURF			0.25			0.27			0.28			0.30 0.38
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 0.43 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.36 ACRES

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
146 NORTH CENTRAL AVE., SUITE 201
MARSHFIELD, WI 54449
ATTN: SEAN SPROMBERG, PE
PHONE: (715) 304-0451
sspromberg@msa-ps.com

UTILITIES

OVERHEAD ELECTRIC:
XCEL ENERGY
310 HICKORY HILLS LANE
PHILLIPS, WI 54555
ATTN: KATHY SCHANTNER
PHONE: (715) 737-1102
kathleen.r.schantner@xcelenergy.com

BURIED TELEPHONE:
BRUCE TELEPHONE COMPANY
620 N. ALVEY STREET, P.O. BOX 100
BRUCE, WI 54819
ATTN: CURTIS KEMMITZ
PHONE: (715) 868-5111
ckb101@brucetel.net

TOWN CONTACT

TOWN OF STUBBS
N4868 PIEPER ROAD
WEYERHAEUSER, WI 54895
ATTN: LYLE LIEFFRING, CHAIRMAN
PHONE: (715) 296-0649
sftmpale@bevcomm.net

COUNTY CONTACT

RUSK COUNTY HIGHWAY DEPARTMENT
N4711 HIGHWAY 27
LADYSMITH, WI 54848
ATTN: SCOTT EMCH, HIGHWAY COMMISSIONER
PHONE: (715) 532-2633
semch@ruskcounty.wi.us

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
1300 WEST CLAIREMOUNT AVENUE
EAU CLAIRE, WI 54701
LEAH NICOL
PHONE: (715) 934-9014
leah.nicol@wisconsin.gov

DOT CONTACT

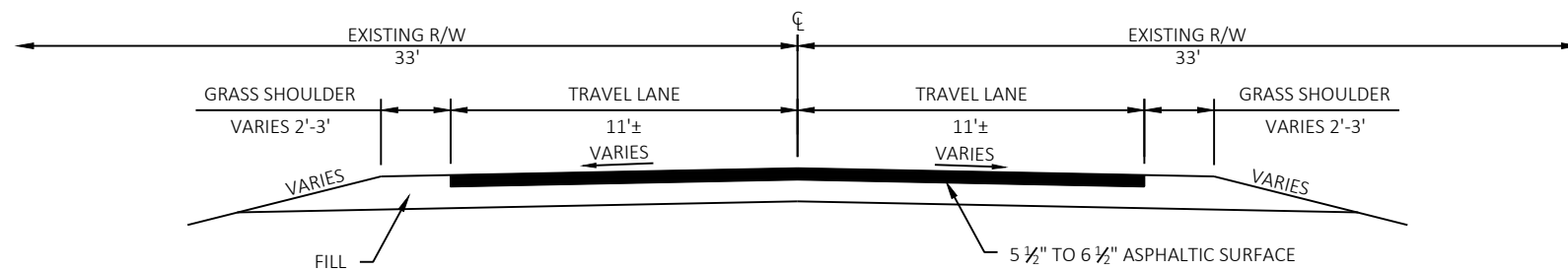
WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION
1701 NORTH 4TH STREET
SUPERIOR, WI 54880
ATTN: MATTHEW VAN NATTA, PE
PHONE: (715) 392-7934
matthew.vannatta@dot.wi.gov

* - NOT A MEMBER OF DIGGERS HOTLINE



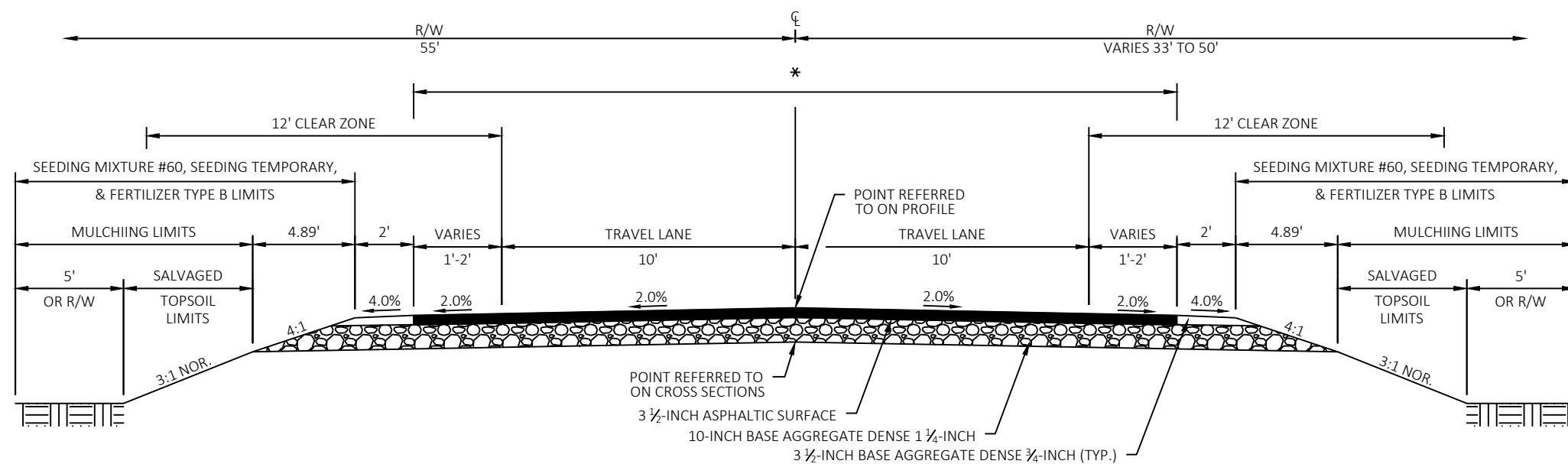
Dial 811 or (800)242-8511

www.DiggersHotline.com



EXISTING TYPICAL SECTION

S HUTCHINSON ROAD
STA. 9+20 - STA. 10+80



FINISHED TYPICAL SECTION

S HUTCHINSON ROAD
STA. 9+20 - STA. 9+65.75
STA. 10+30.25 - STA. 10+80

* TAPER PAVEMENT FROM 22.0' AT ENDS OF PROJECT TO 24.0' AT ENDS OF BRIDGE.

PROJECT NO: 8439-00-72

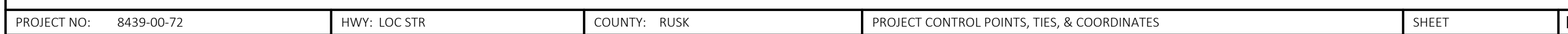
HWY: LOC STR

COUNTY: RUSK

TYPICAL SECTIONS

SHEET

E



Estimate Of Quantities

8439-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0008	204.0170	Removing Fence	LF	253.000	253.000
0010	205.0100	Excavation Common	CY	114.000	114.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-54-127	LS	1.000	1.000
0014	208.0100	Borrow	CY	41.000	41.000
0016	210.1500	Backfill Structure Type A	TON	350.000	350.000
0018	213.0100	Finishing Roadway (project) 01. 8439-00-72	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	9.000	9.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	190.000	190.000
0024	455.0605	Tack Coat	GAL	12.000	12.000
0026	465.0105	Asphaltic Surface	TON	47.000	47.000
0028	465.0310	Asphaltic Curb	LF	16.000	16.000
0030	465.0315	Asphaltic Flumes	SY	12.000	12.000
0032	502.0100	Concrete Masonry Bridges	CY	137.000	137.000
0034	502.3200	Protective Surface Treatment	SY	210.000	210.000
0036	502.3210	Pigmented Surface Sealer	SY	65.000	65.000
0038	503.0137	Prestressed Girder Type I 36W-Inch	LF	252.000	252.000
0040	505.0400	Bar Steel Reinforcement HS Structures	LB	4,000.000	4,000.000
0042	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	17,150.000	17,150.000
0044	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0046	506.4000	Steel Diaphragms (structure) 01. B-54-127	EACH	3.000	3.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0050	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	690.000	690.000
0052	606.0300	Riprap Heavy	CY	445.000	445.000
0054	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0056	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0058	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8439-00-72	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	624.0100	Water	MGAL	4.000	4.000
0064	625.0500	Salvaged Topsoil	SY	660.000	660.000
0066	627.0200	Mulching	SY	820.000	820.000
0068	628.1504	Silt Fence	LF	350.000	350.000
0070	628.1520	Silt Fence Maintenance	LF	350.000	350.000
0072	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000

Estimate Of Quantities

8439-00-72

Line	Item	Item Description	Unit	Total	Qty
0076	628.6005	Turbidity Barriers	SY	367.000	367.000
0078	629.0210	Fertilizer Type B	CWT	0.650	0.650
0080	630.0160	Seeding Mixture No. 60	LB	13.000	13.000
0082	630.0200	Seeding Temporary	LB	28.000	28.000
0084	630.0500	Seed Water	MGAL	24.000	24.000
0086	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0088	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0090	638.2602	Removing Signs Type II	EACH	8.000	8.000
0092	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0094	642.5001	Field Office Type B	EACH	1.000	1.000
0096	643.0420	Traffic Control Barricades Type III	DAY	1,480.000	1,480.000
0098	643.0705	Traffic Control Warning Lights Type A	DAY	2,220.000	2,220.000
0100	643.0900	Traffic Control Signs	DAY	1,110.000	1,110.000
0102	643.5000	Traffic Control	EACH	1.000	1.000
0104	645.0111	Geotextile Type DF Schedule A	SY	124.000	124.000
0106	645.0120	Geotextile Type HR	SY	755.000	755.000
0108	650.4500	Construction Staking Subgrade	LF	95.000	95.000
0110	650.5000	Construction Staking Base	LF	95.000	95.000
0112	650.6500	Construction Staking Structure Layout (structure) 01. B-54-127	LS	1.000	1.000
0114	650.9910	Construction Staking Supplemental Control (project) 01. 8439-00-72	LS	1.000	1.000
0116	650.9920	Construction Staking Slope Stakes	LF	95.000	95.000
0118	690.0150	Sawing Asphalt	LF	44.000	44.000
0120	715.0502	Incentive Strength Concrete Structures	DOL	822.000	822.000
0122	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	400.000	400.000
0124	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

CLEARING AND GRUBBING					
		201.0105 CLEARING		201.0205 GRUBBING	
STATION	-	STATION	LOCATION	STA	STA
9+20	-	10+80	RT & LT	3	3
TOTALS:				3	3

REMOVING FENCE				
				204.0170 REMOVING FENCE
STATION	-	STATION	LOCATION	LF
9+20	-	9+75	LT	63
9+40	-	10+50	RT	121
10+11	-	10+80	LT	69
TOTAL:				253

ROADWAY EXCAVATION AND BORROW					
		205.0100 EXC. COMMON	FILL	EXPANDED FILL	208.0100 BORROW
LOCATION		CY (3)	CY (1)	CY (2)	CY
STA 9+20 - STA. 9+65.75		55	50	66	-11
STA 10+30.25 - STA 10+80		59	38	50	9
UNUSABLE PAVEMENT					39
TOTALS:		114	88	116	-2
					41

- (1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS. SEE EARTHWORK TABLE.

BASE AGGREGATE				
		305.0110 BASE AGGREGATE DENSE 3/4-INCH	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	624.0100 WATER
STATION	-	STATION	TON	MGAL
9+20.00	-	9+65.75	4	2
10+30.25	-	10+80.00	5	2
TOTALS:			9	4

TACK COAT & ASPHALTIC SURFACE			
		455.0605 TACK COAT	465.0105 ASPHALTIC SURFACE
STATION	-	STATION	TON
9+20	-	9+65.75	6
10+30.25	-	10+80	24
TOTALS:			47

FLUMES			
		465.0315 ASPHALTIC FLUMES	465.0310 ASPHALTIC CURB
STATION	LOCATION	SY	LF
9+55	RT	6	8
9+55	LT	6	8
TOTAL:		12	16

EROSION CONTROL								
			625.0500 SALVAGED TOPSOIL	627.0200 MULCHING	629.0210 FERTILIZER	630.0160 SEEDING MIXTURE NO. 60	630.0200 SEEDING TEMPORARY	630.0500 SEED WATER
STATION	-	STATION	LOCATION	SY	SY	CWT	LB	MGAL
9+20	-	9+65.75	RT	70	95	0.05	2	3
9+20	-	9+65.75	LT	100	120	0.10	2	3
10+30.25	-	10+80	RT	50	80	0.05	1	2
10+30.25	-	10+80	LT	120	150	0.10	2	4
UNDISTRIBUTED				320	375	0.35	6	12
TOTALS:				660	820	0.65	13	24

SILT FENCE					
			628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	
STATION	-	STATION	LOCATION	LF	LF
9+20	-	9+66	LT	70	70
9+20	-	9+76	RT	75	75
10+18	-	10+80	LT	85	85
10+19	-	10+80	RT	70	70
UNDISTRIBUTED			-	50	50
TOTALS:				350	350

TURBIDITY BARRIERS				
				628.6005 TURBIDITY BARRIERS
STATION	-	STATION	LOCATION	SY
9+66	-	9+93	LT & RT	176
10+02	-	10+19	LT & RT	156
UNDISTRIBUTED			-	35
TOTAL:				367

SIGNING								
		637.2230 SIGNS TYPE II REFLECTIVE F	634.0612 WOOD POSTS	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS			
STATION	LOCATION	SIGN CODE	SIZE	SF	EACH	EACH	EACH	COMMENTS
9+70	RT	-	-	-	-	1	1	EXISTING BUMP SIGN
9+76	RT	-	-	-	-	1	1	EXISTING WEIGHT LIMIT POSTING SIGN
9+70	LT	W5-52L	12"x36"	3	1	-	-	OBJECT MARKER
9+81	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
9+83	RT	W5-52R	12"x36"	3	1	-	-	OBJECT MARKER
9+81	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+23	LT	W5-52R	12"x36"	3	1	-	-	OBJECT MARKER
10+19	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+35	RT	W5-52L	12"x36"	3	1	-	-	OBJECT MARKER
10+19	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+27	LT	-	-	-	-	1	1	EXISTING WEIGHT LIMIT POSTING SIGN
10+34	LT	-	-	-	-	1	1	EXISTING BUMP SIGN
TOTALS:				12	4	8	8	

TRAFFIC CONTROL ITEMS							
		TRAFFIC CONTROL BARRICADES TYPE III	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL SIGNS	643.0900 TRAFFIC CONTROL SIGNS
LOCATION	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
AMACOY LAKE RD INTERSECTION	74	2	148	4	296	5	370
BEGINNING OF PROJECT	74	7	518	10	740	2	148
END OF PROJECT	74	7	518	10	740	2	148
RANCH RD INTERSECTION	74	2	148	4	296	4	296
UNDISTRUBUTED	74	2	148	2	148	2	148
TOTALS:			1,480		2,220		1,110

CONSTRUCTION STAKING					
		650.4500 SUBGRADE	650.5000 BASE	650.9920 SLOPE STAKES	
STATION	-	STATION	LF	LF	LF
9+20	-	9+65.75	45	45	45
10+30.25	-	10+80	50	50	50
TOTALS:			95	95	95

SAWING ASPHALT	
690.0150 SAWING ASPHALT	
STATION	LF
9+20	22
10+80	22
TOTAL:	44

CONVENTIONAL SYMBOLS

SECTION LINE	----	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	----	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	----	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	----	SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	----	SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE	----	PARCEL NUMBER	25	NON-COMPENSABLE	
PROPERTY LINE	----	UTILITY NUMBER	40		
LOT, TIE & OTHER MINOR LINES	----	PARALLEL OFFSETS			
SLOPE INTERCEPT	----				
CORPORATE LIMITS	----				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	----				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	----				
TEMPORARY LIMITED EASEMENT AREA	----				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	----				
TRANSMISSION STRUCTURES	----				
BUILDING	----				
BRIDGE	----				

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY	CO	SECTION	SEC
COUNTY TRUNK HIGHWAY	CTH	SEPTIC VENT	SEPV
DISTANCE	DIST	SQUARE FEET	SF
CORNER	COR	STATE TRUNK HIGHWAY	STH
DOCUMENT NUMBER	DOC	STATION	STA
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED	TLE
GAS VALVE	GV	EASEMENT	
GRID NORTH	GN	TRANSPORTATION PROJECT	TPP
HIGHWAY EASEMENT	HE	PLAT	
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

NOTES:

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

RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND ARE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

END RELOCATION

ORDER STA. 10+80.00

Y = 546,460.28

X = 747,016.65

1,117.34 FEET SOUTH OF AND 26.75 FEET EAST OF THE NORTHWEST CORNER OF SECTION 22, T-34-N, R-08-W, TOWN OF STUBBS, RUSK COUNTY, WI

BEGIN RELOCATION

ORDER STA. 9+20.00

Y = 546,300.29

X = 747,018.29

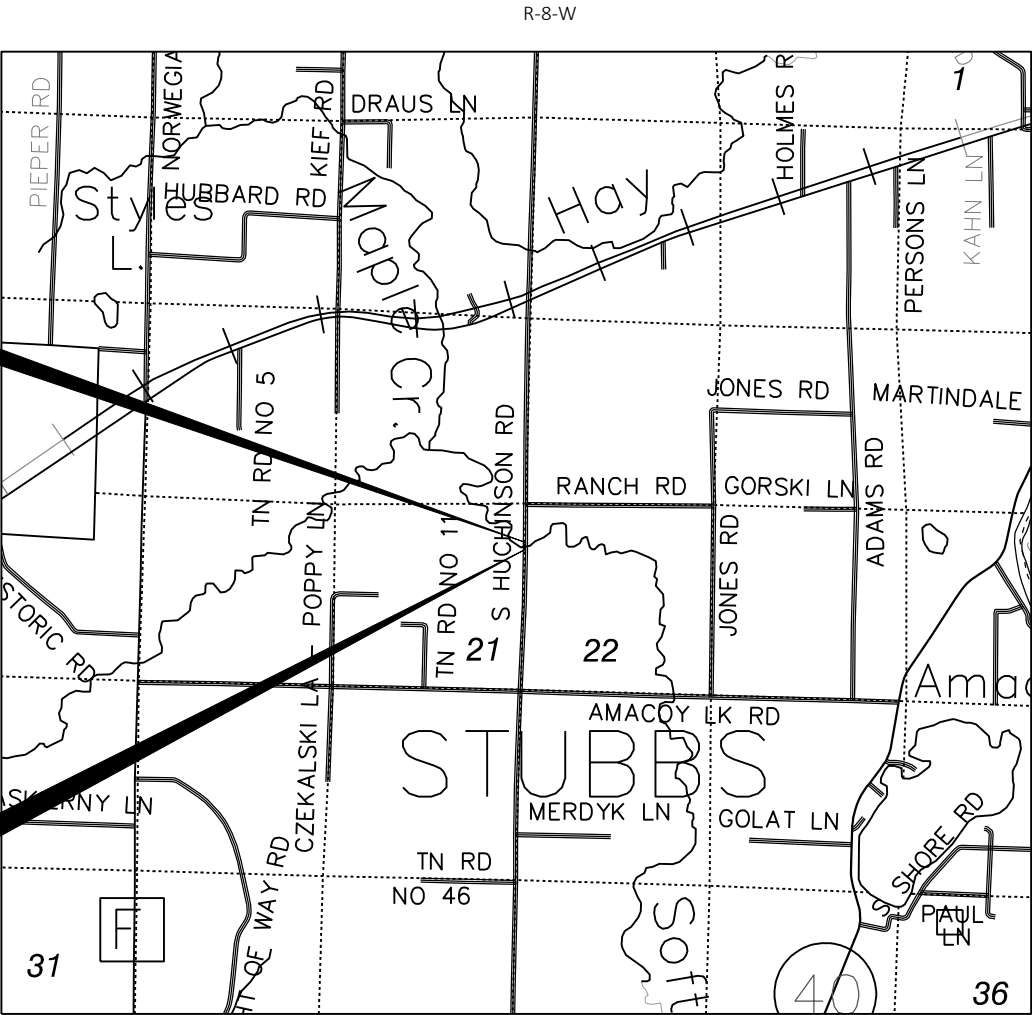
1,257.16 FEET NORTH OF AND 18.81 FEET EAST OF THE WEST QUARTER CORNER OF SECTION 22, T-34-N, R-08-W, TOWN OF STUBBS, RUSK COUNTY, WI

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD	—OH—
TRANSMISSION LINES	—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—



CAUTION
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS
MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.



LAYOUT
SCALE 0 1 MILE
TOTAL NET LENGTH OF CENTERLINE = 0.030 MI

R/W PROJECT NUMBER 8439-00-02	SHEET NUMBER 4.01	TOTAL SHEETS 2
CONSTRUCTION PROJECT NUMBER 8439-00-72		
PLAT OF RIGHT OF WAY REQUIRED FOR T STUBBS S HUTCHINSON ROAD SOFT MAPLE CREEK BRIDE B-54-0127 LOCAL STREET RUSK COUNTY		

ORIGINAL PLAT PREPARED BY

1835 N. Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116



11-19-2018
(Date) (Professional Land Surveyor)

REVISION DATE
APPROVED FOR RUSK COUNTY HIGHWAY DEPARTMENT
DATE: (Signature)

SCHEDULE OF LANDS
& INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF
LAND INTERESTS TO THE RUSK COUNTY HIGHWAY DEPARTMENT.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE
			NEW	EXISTING	TOTAL	ACRES
1	DAVID R. WIERZBA & LYNN E. WIERZBA	FEE	0.06	0.03	0.09	---
2	DAWN M. KOWALSKI	FEE	0.02	0.01	0.03	---
3	DEBORAH M. TINSMAN	FEE	0.05	0.19	0.24	---
4	KYLE J. WALLACE	FEE	0.01	0.01	0.02	---
40	BRUCE TELEPHONE COMPANY	RELEASE OF RIGHTS	---	---	---	---

CAUTION

THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS
MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

EXISTING HIGHWAY R/W BASED ON THE CENTERLINE OF EXISTING ROADWAY,
PLATS OF SURVEY, RECORDED CSM'S IN THE AREA, OBSERVED PHYSICAL EVIDENCE,
AND WISCONSIN STAT STATUTE 82.31.

R/W COURSE TABLE

START PT #	END PT #	BEARING	DISTANCE
101	102	S89° 24' 57"W	9.84'
102	103	S89° 24' 57"W	21.60'
103	115	N00° 35' 03"W	120.65'
115	116	N89° 59' 25"E	21.75'
116	119	N89° 59' 25"E	10.47'
116	102	S00° 30' 47"E	120.43'
115	104	N00° 35' 03"W	39.35'
104	105	N89° 24' 57"E	21.79'
105	116	S00° 30' 53"E	39.57'
116	119	N89° 59' 25"E	10.47'
105	106	N89° 24' 57"E	10.68'
106	119	S00° 13' 00"E	39.68'
119	120	S00° 13' 00"E	110.00'
120	101	S00° 13' 00"E	12.96'
108	109	S00° 30' 53"E	30.00'
109	110	N89° 24' 57"E	17.24'
110	118	S00° 35' 03"E	120.64'
118	117	N89° 49' 46"W	17.39'
117	109	N00° 30' 53"W	120.41'
118	111	S00° 35' 03"E	9.36'
111	112	S89° 24' 57"W	17.40'
112	117	N00° 30' 03"W	9.59'
117	120	N89° 49' 46"W	56.11'

R/W POINT COORDINATES

PT. NO.	Y	X
100	546300.292'	747018.285'
101	546300.052'	746994.729'
102	546299.952'	746984.886'
103	546299.731'	746963.288'
104	546459.723'	746961.657'
105	546459.945'	746983.449'
106	546460.054'	746994.124'
107	546460.284'	747016.654'
108	546460.618'	747049.446'
109	546430.619'	747049.715'
110	546430.795'	747066.957'
111	546300.802'	747068.283'
112	546300.625'	747050.879'
115	546420.373'	746962.058'
116	546420.376'	746983.805'
117	546310.212'	747050.797'
118	546310.160'	747068.187'
119	546420.378'	746994.274'
120	546310.379'	746994.690'

ALIGNMENT DATA

Tangent Data

Description	PT Station	Y	X
Start:	8+00.000	546180.294	747018.963
End:	9+00.00	546280.292	747018.489
Length:	100.00'	Course:	N 00° 16' 16" W

Tangent Data

Description	PT Station	Y	X
Start:	9+00.00	546280.292	747018.489
End:	12+50.00	546630.272	747014.920
Length:	350.00'	Course:	N 00° 35' 03" W

TOWN

STUBBS

APPROXIMATE SIXTEENTH LINE

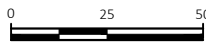
APPROXIMATE SIXTEENTH LINE

REVISION DATE			

DATE 11/19/2018

GRID FACTOR

SCALE, FEET



HWY: LOCAL STREET

COUNTY: RUSK

STATE R/W PROJECT NUMBER 8439-00-02

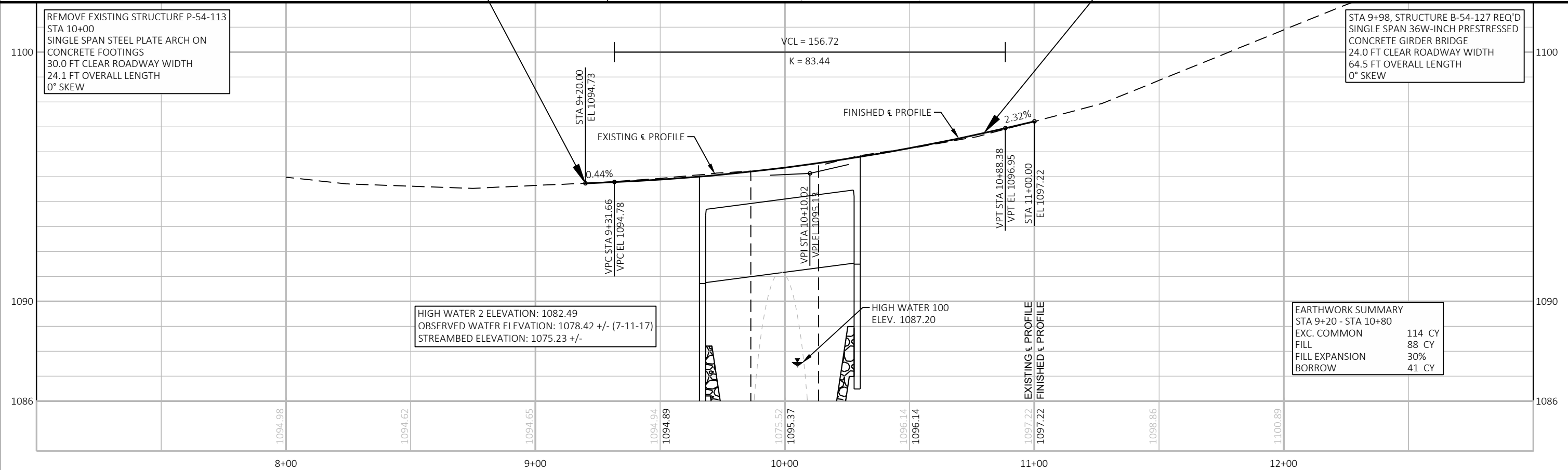
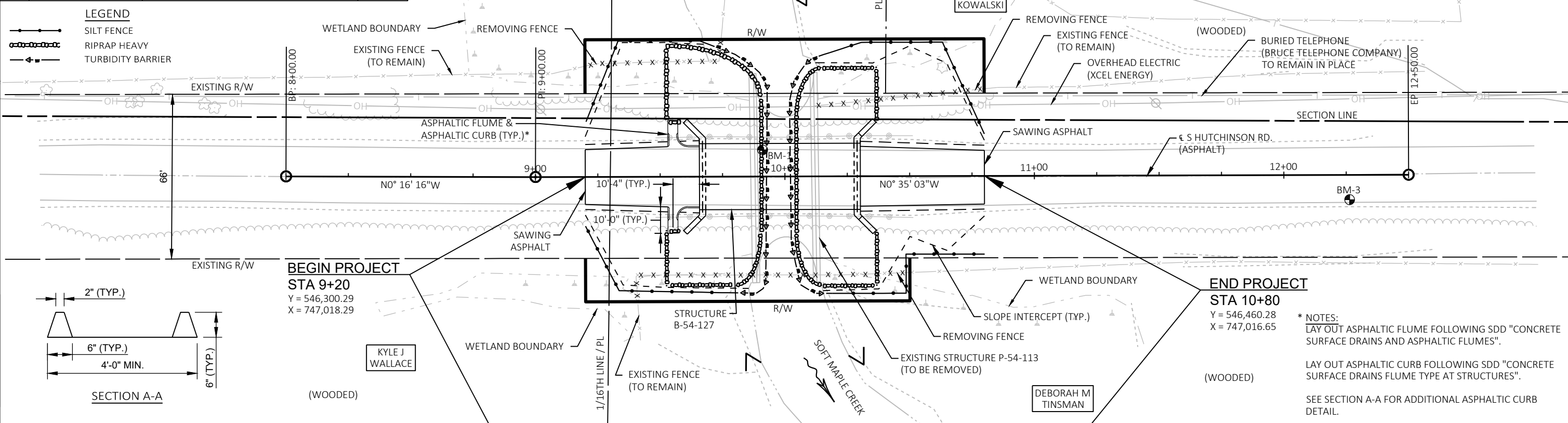
CONSTRUCTION PROJECT NUMBER 8439-00-72

PLAT SHEET 4.02

PS&E SHEET

E

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	9+91.06, 10.6' LT	PK NAIL IN WEST EDGE OF ASPHALT	1095.24
2	6+58, 23.5' RT	SPIKE IN 10" ASPEN TREE	1094.97
3	12+26.35, 9.9' RT	PK NAIL IN EAST EDGE OF ASPHALT	1101.76

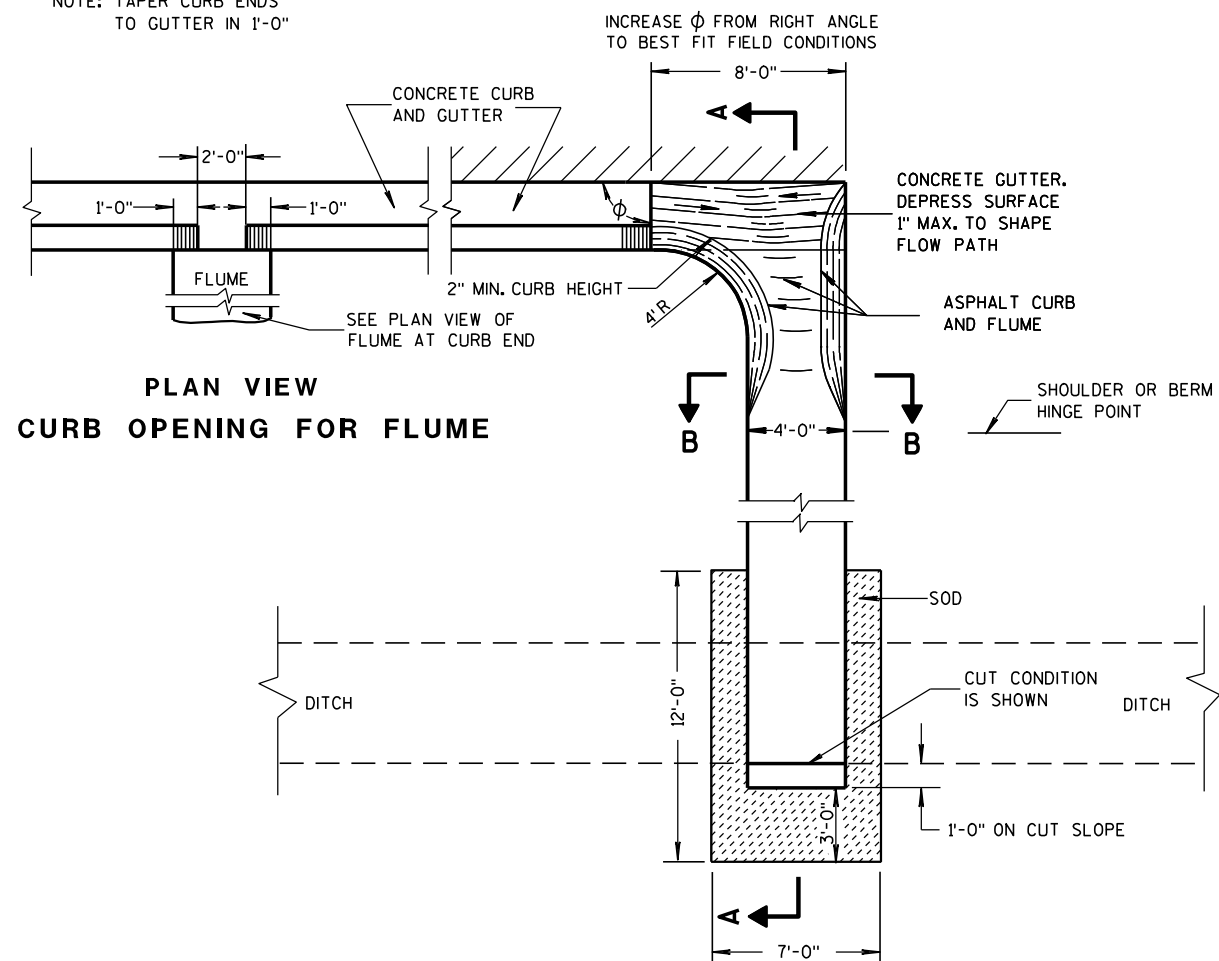


Standard Detail Drawing List

08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

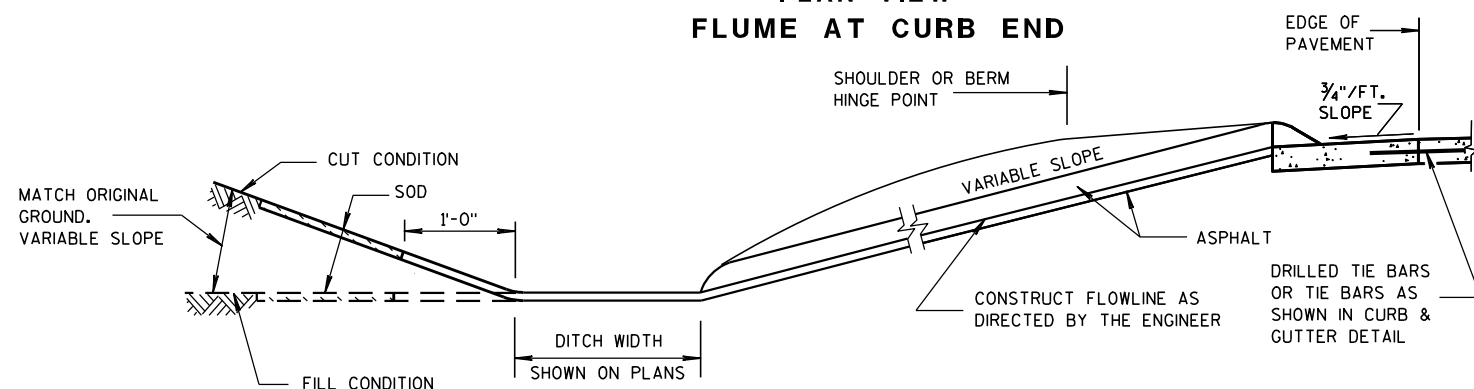
ASPHALTIC FLUME

NOTE: TAPER CURB ENDS
TO GUTTER IN 1'-0"

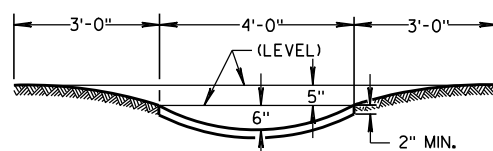


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

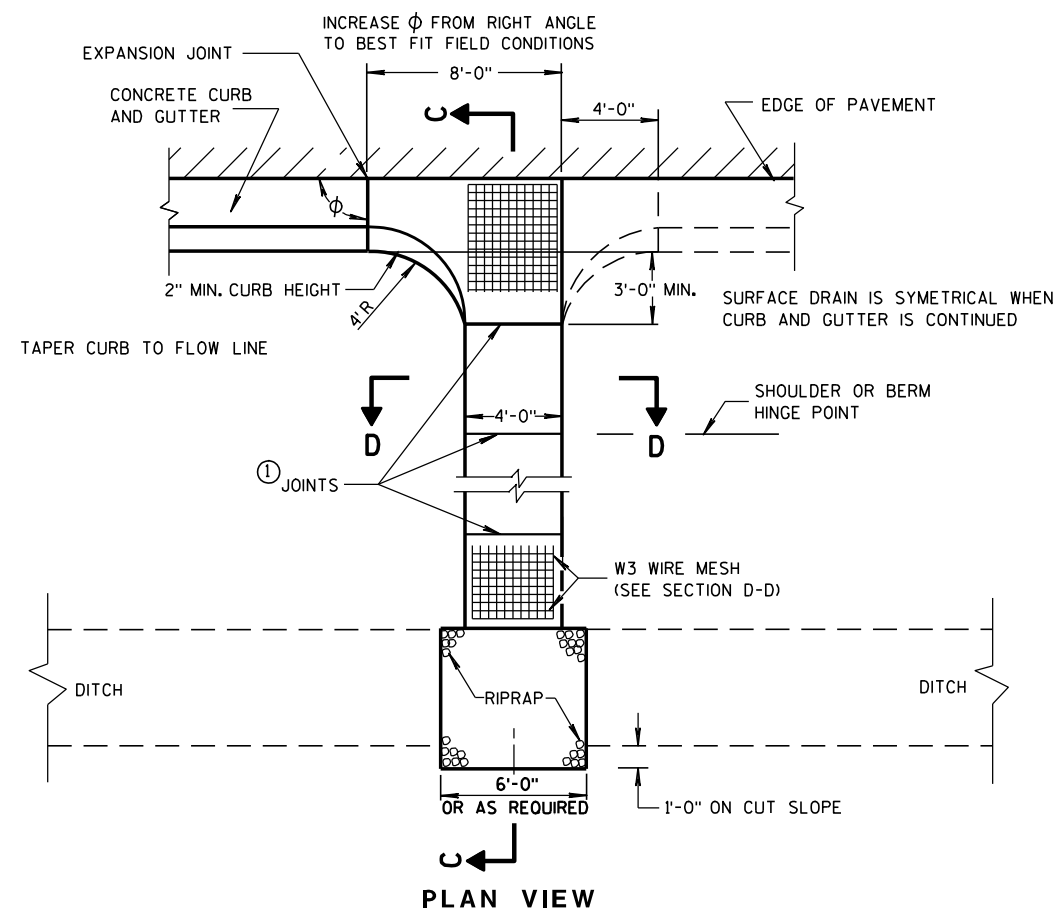
GENERAL NOTES

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

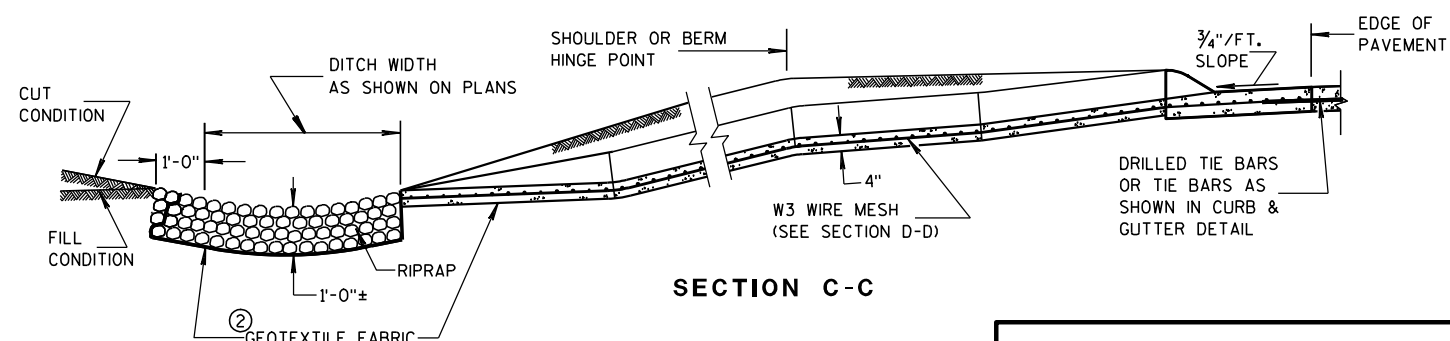
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

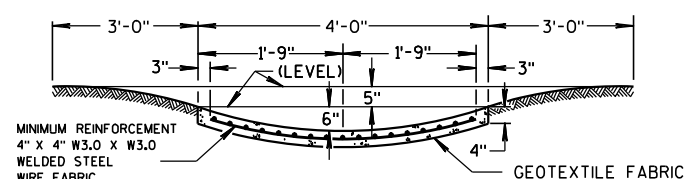
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

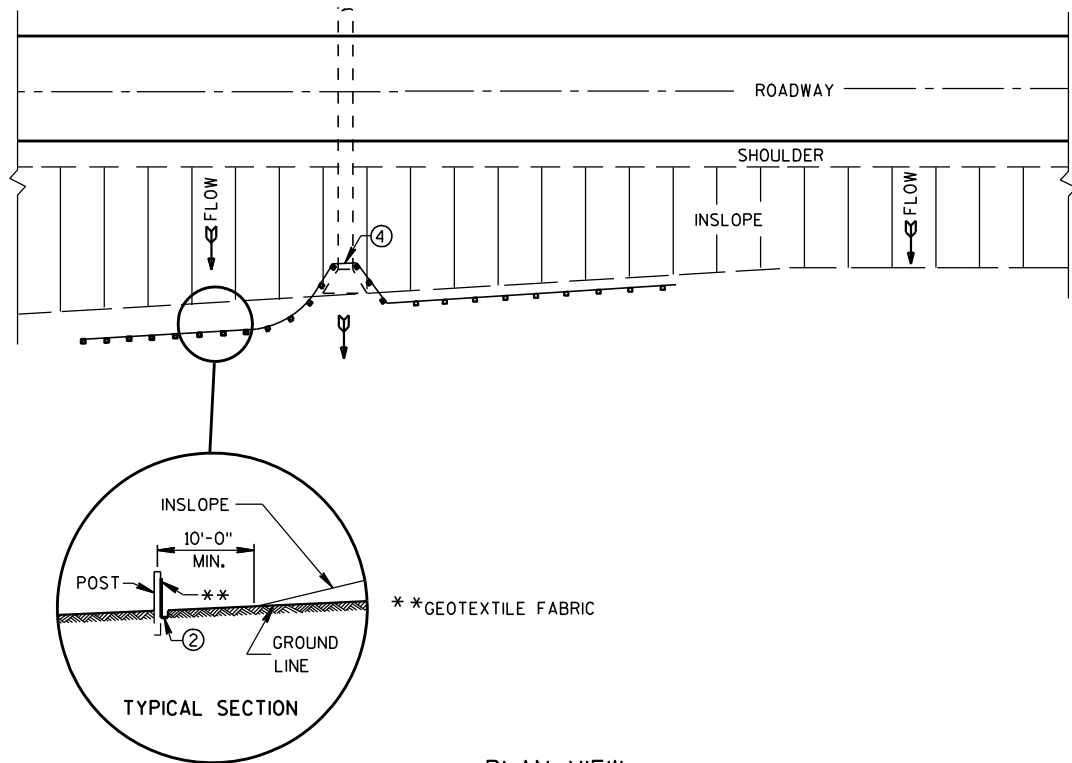
APPROVED

9-4-08

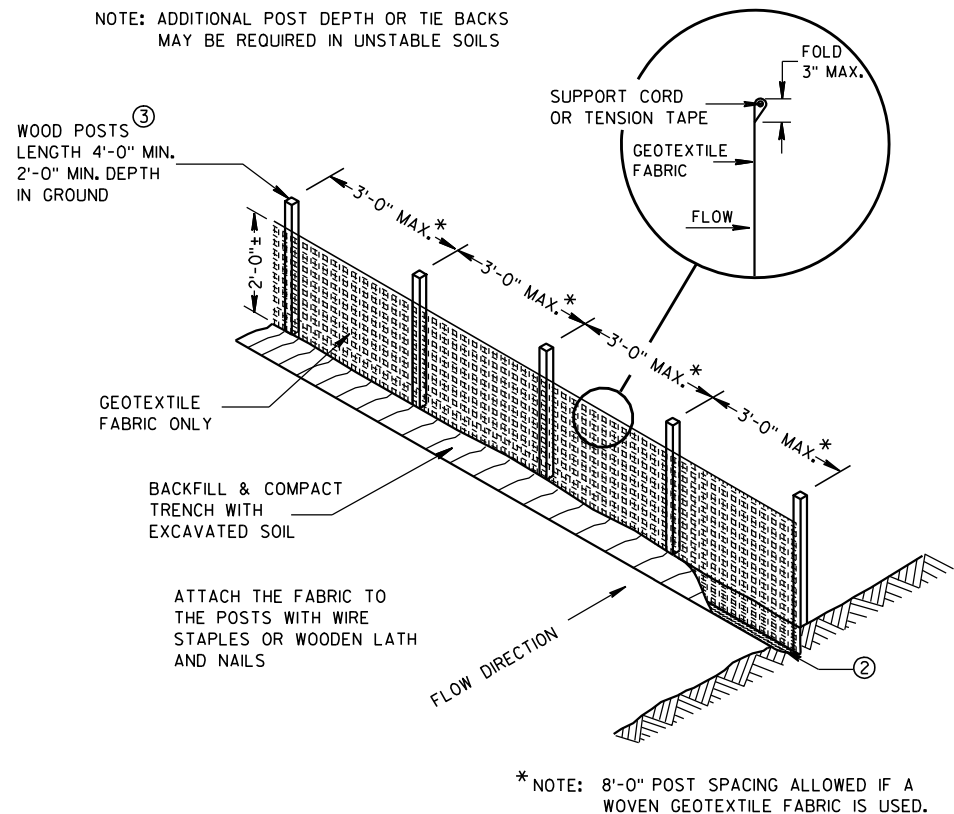
DATE

FHWA

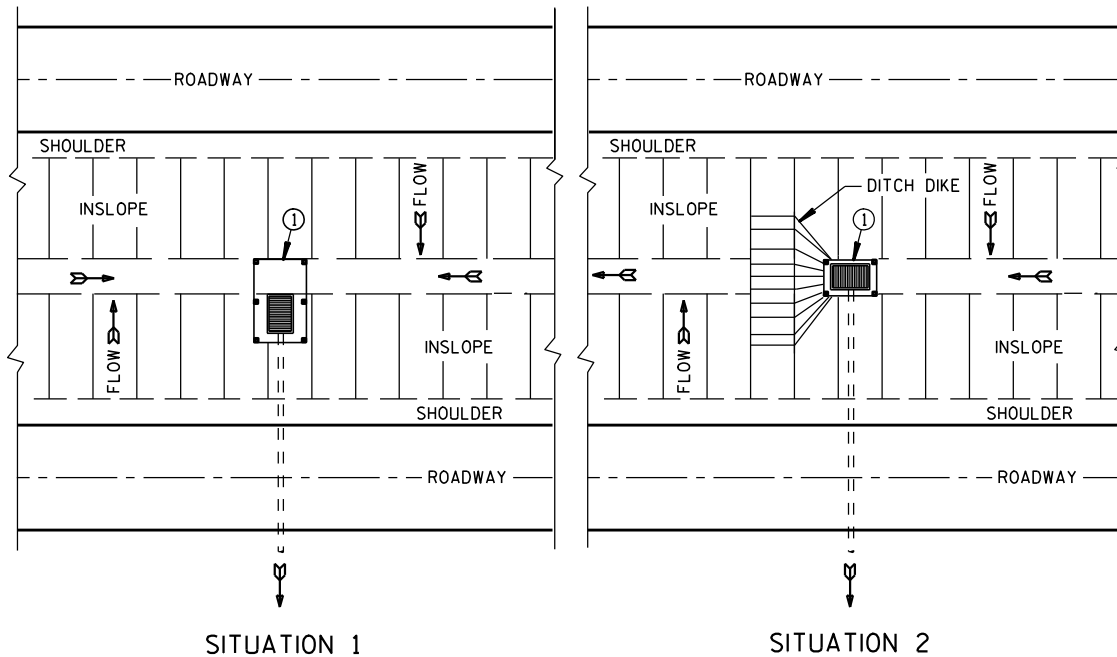
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



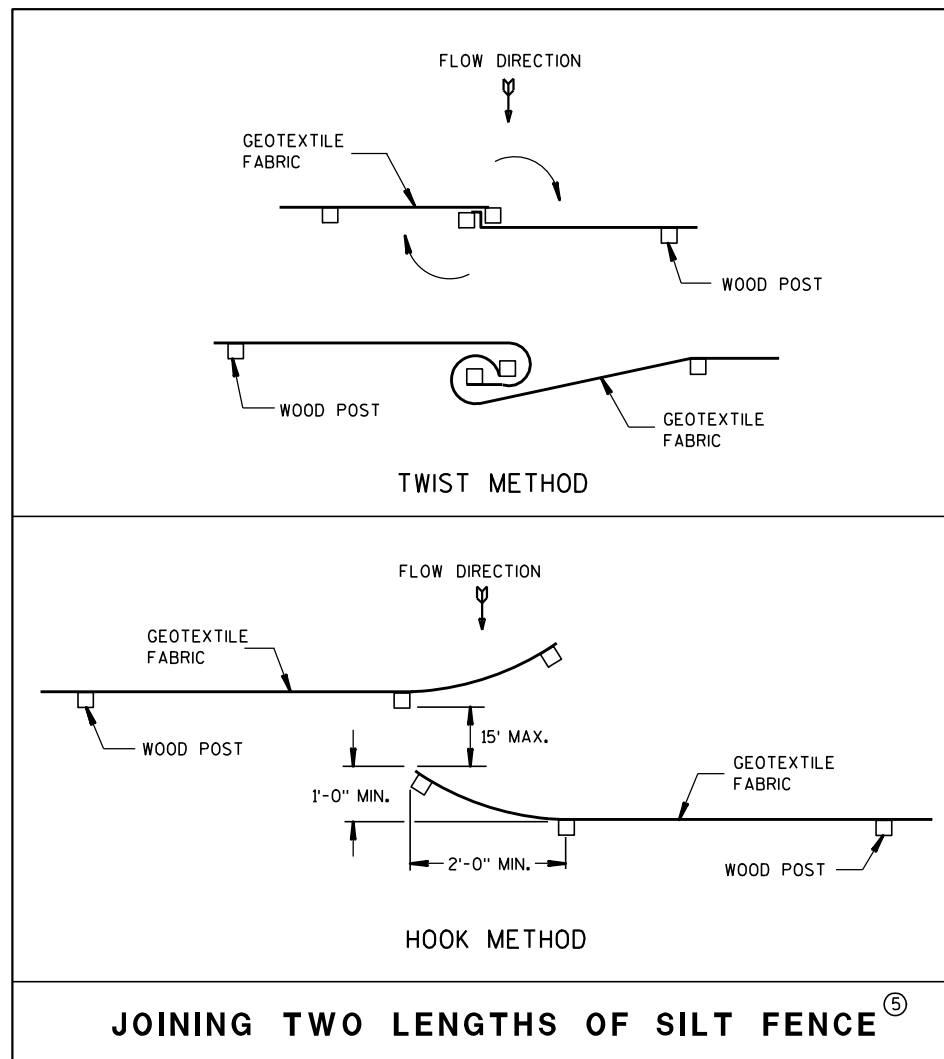
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

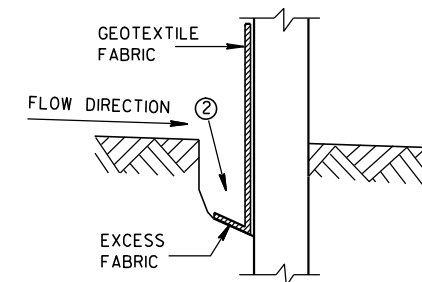


JOINING TWO LENGTHS OF SILT FENCE (5)

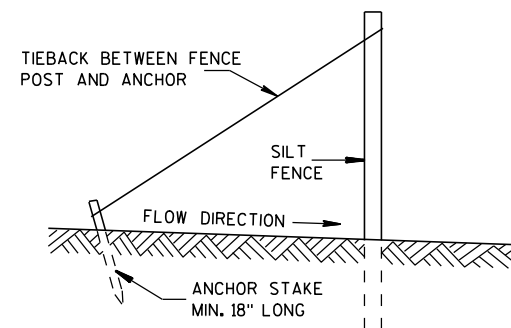
GENERAL NOTES

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

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

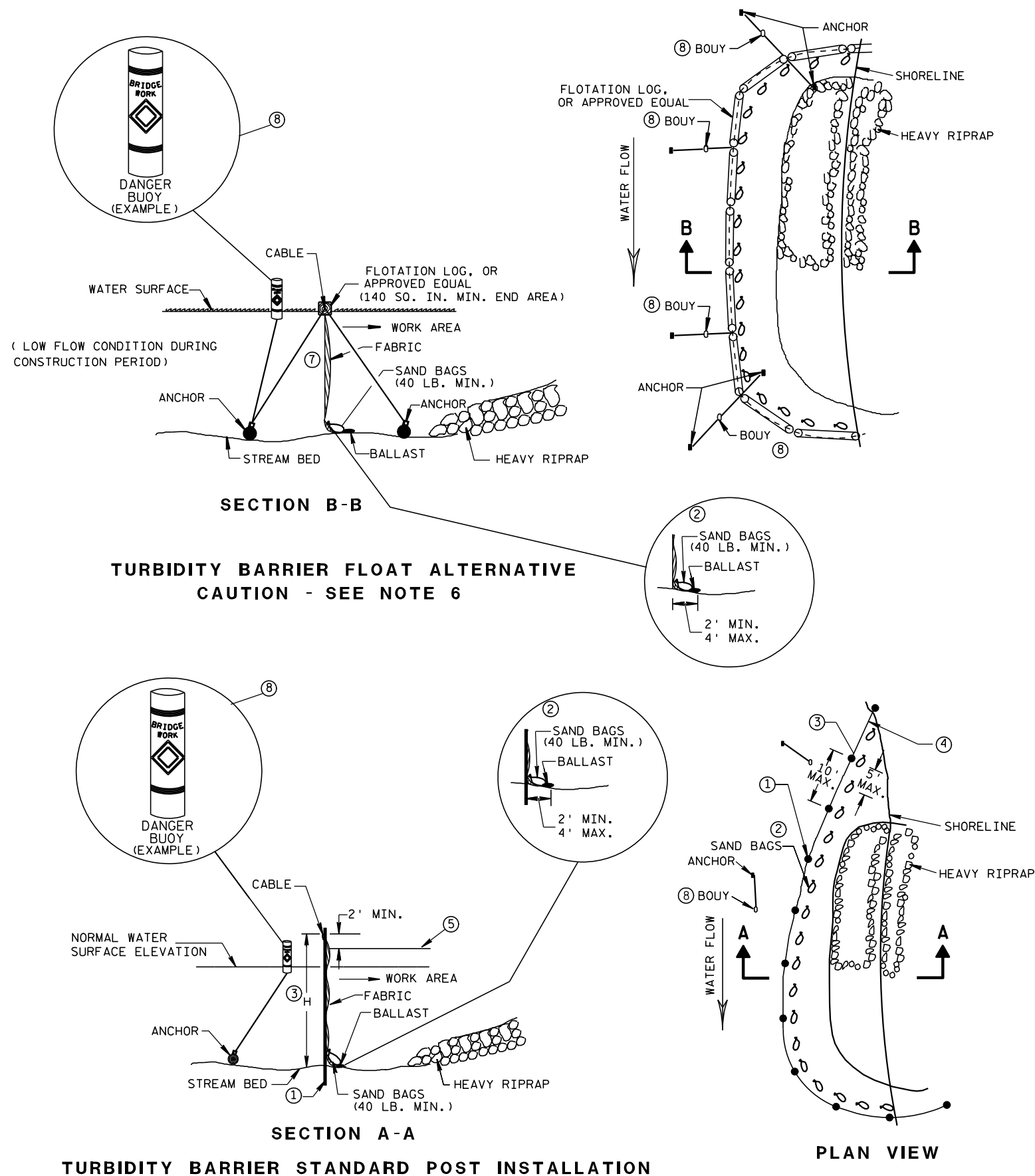


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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

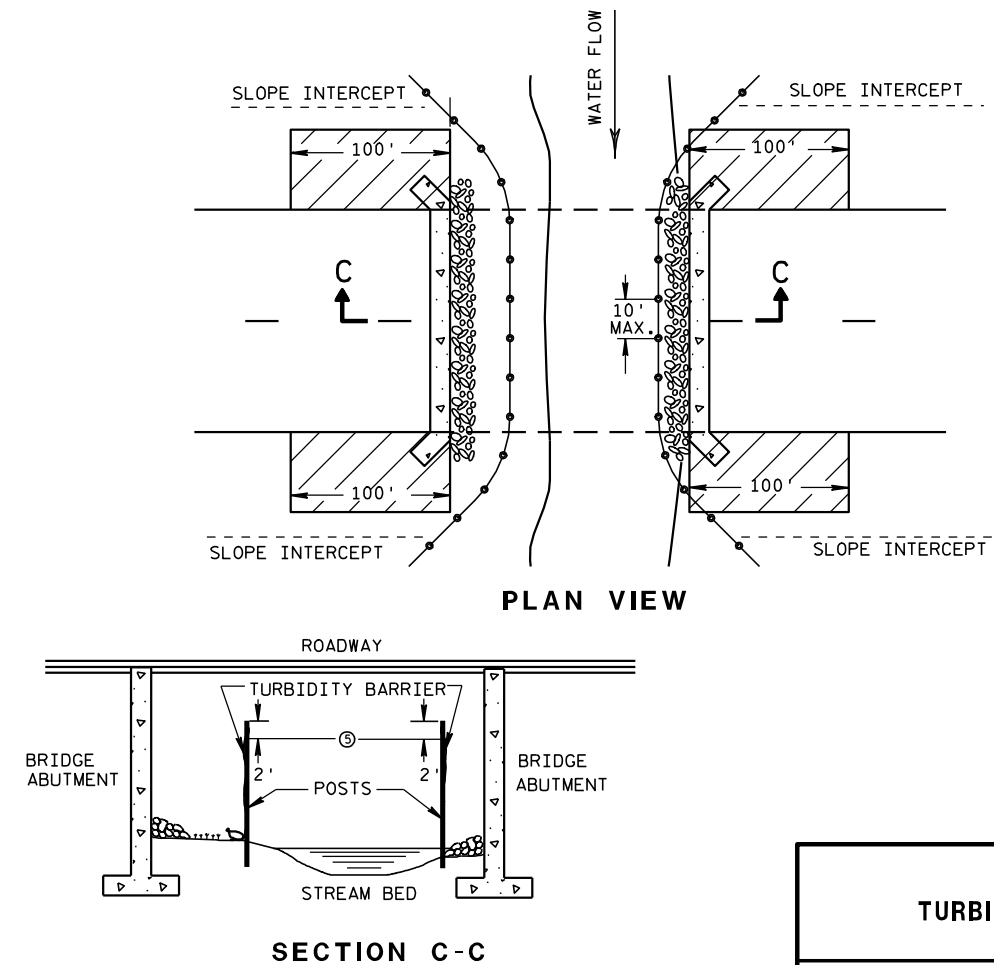


GENERAL NOTES

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

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

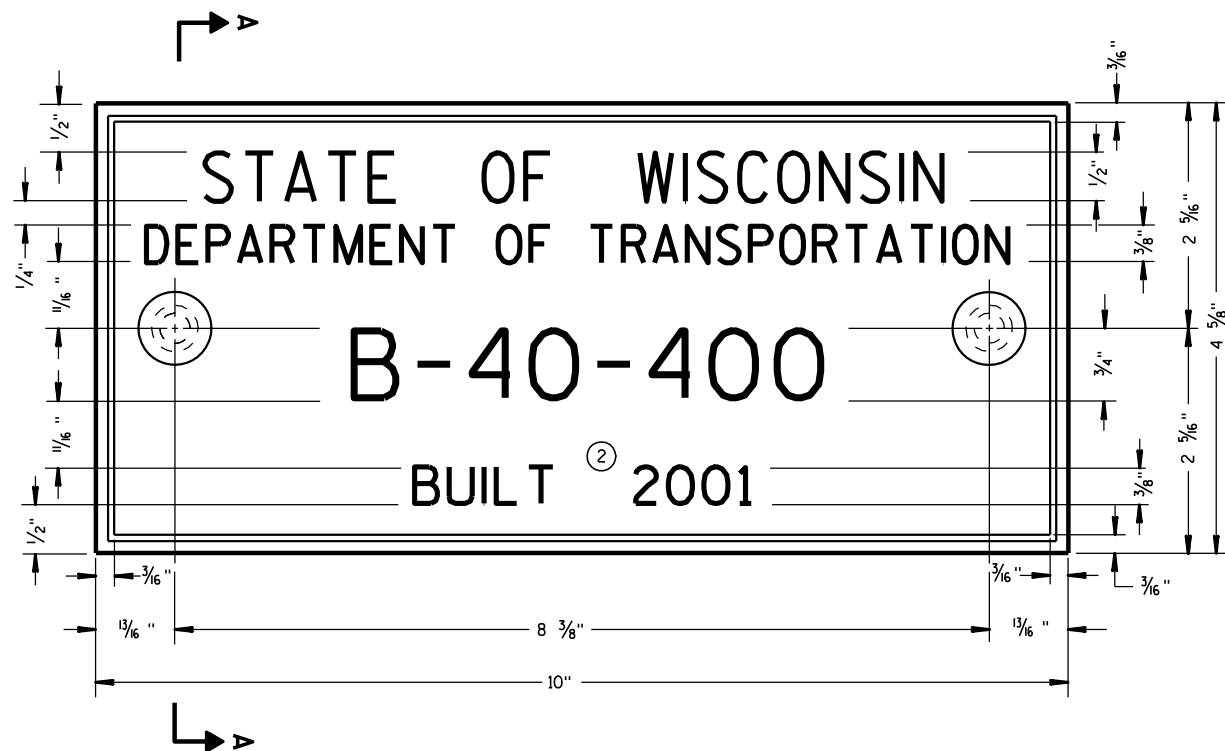
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

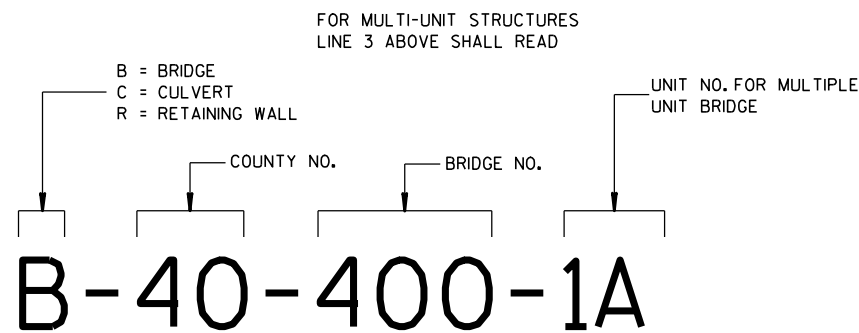
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



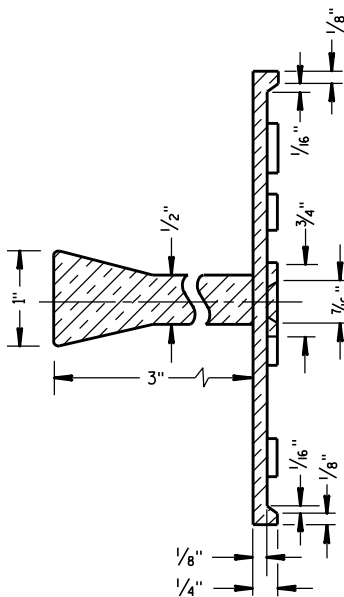
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

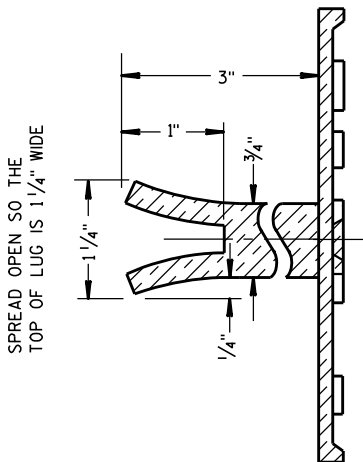
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

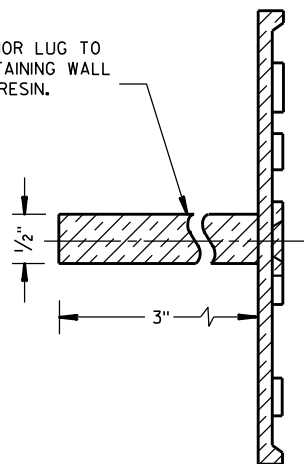


SECTION A-A



ALTERNATE LUG

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

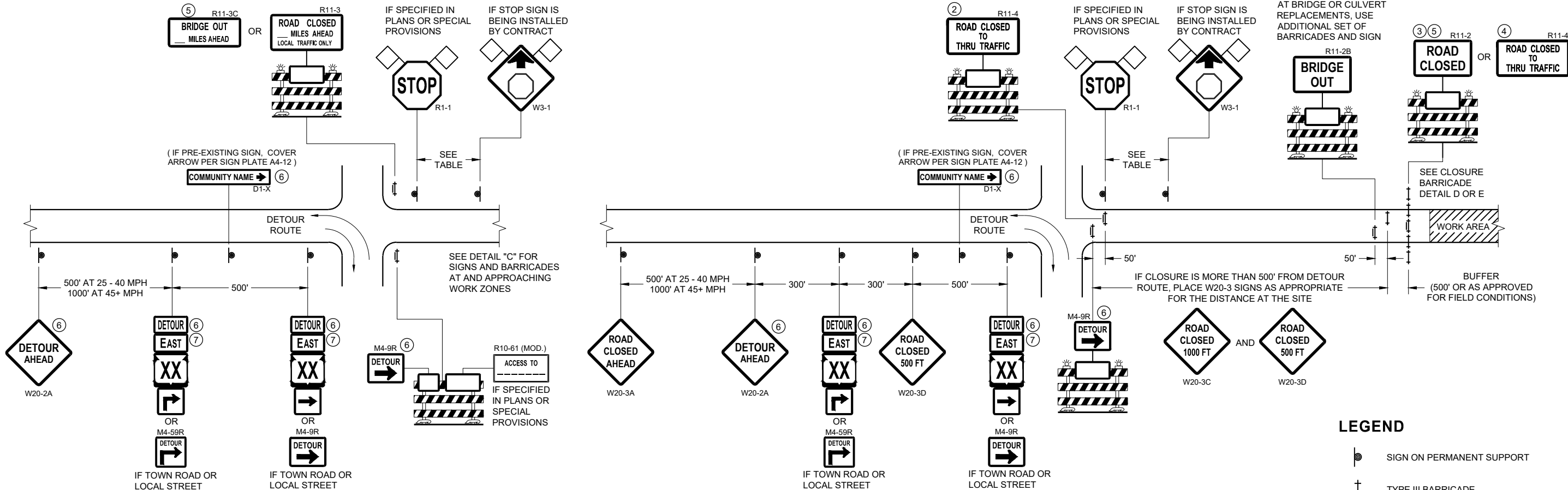


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



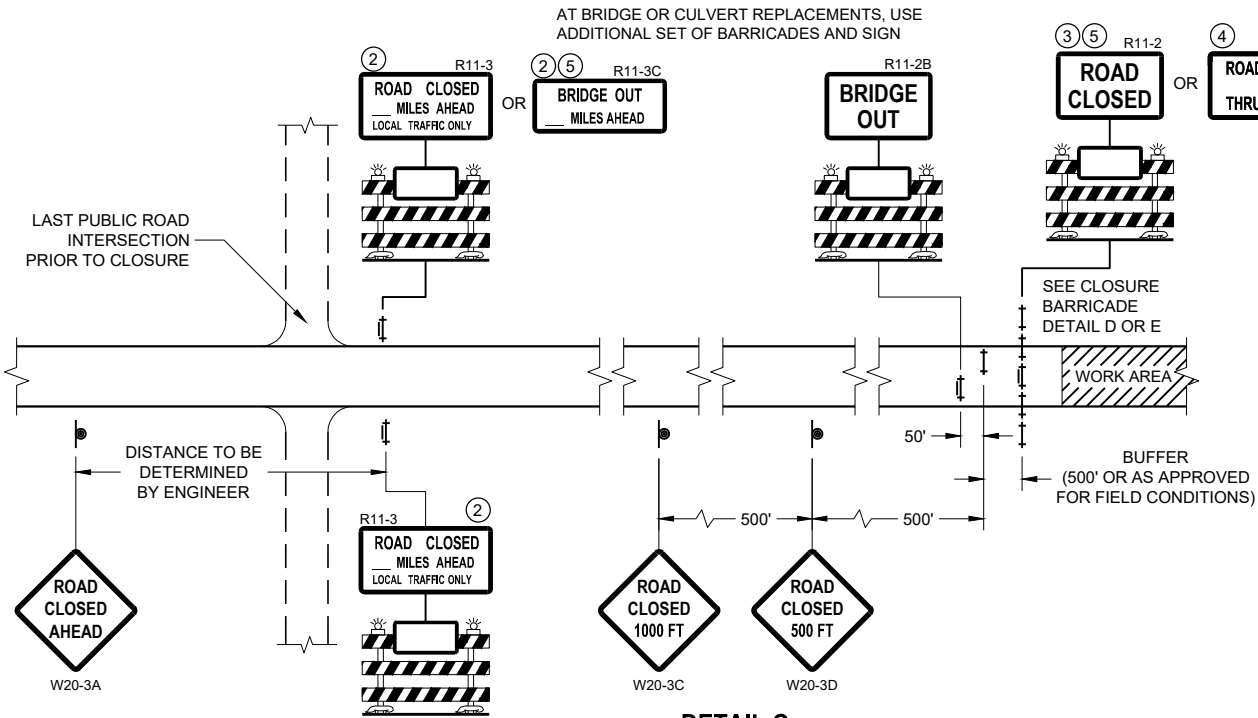
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- 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)

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

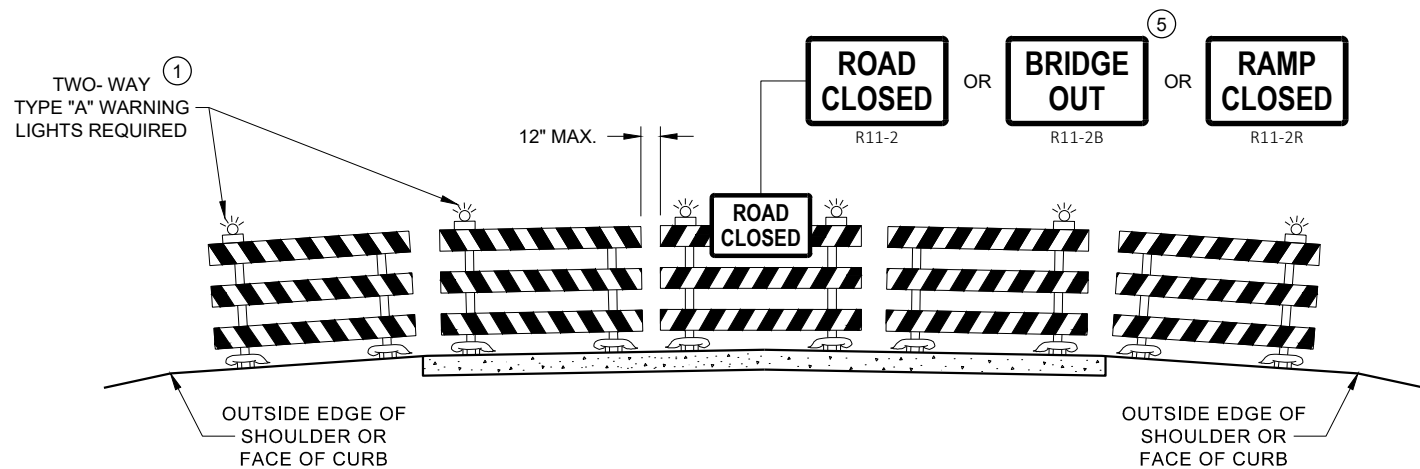
SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

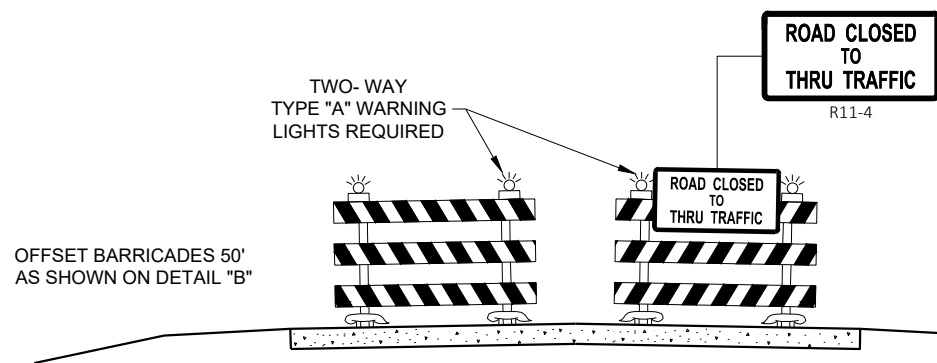
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

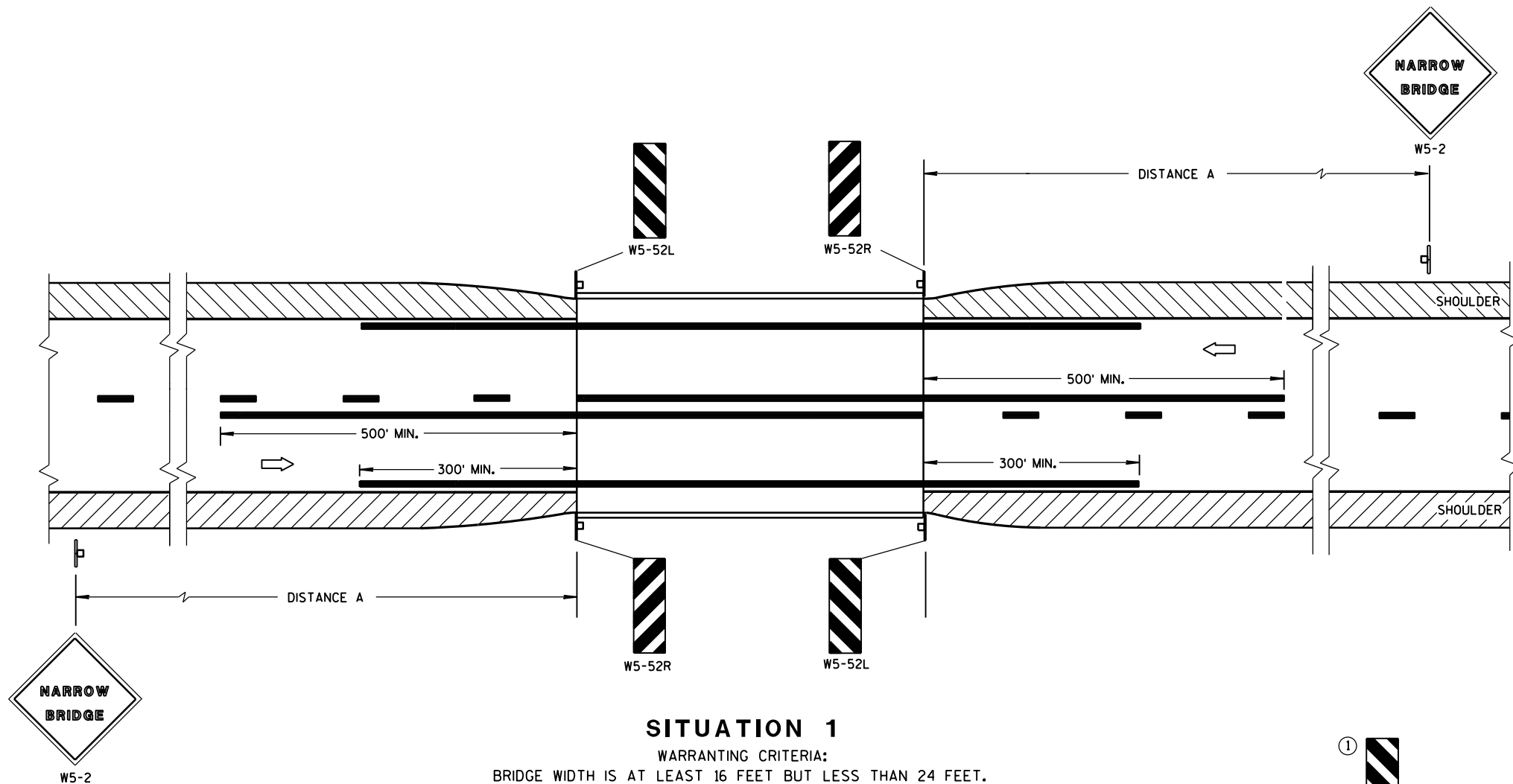
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

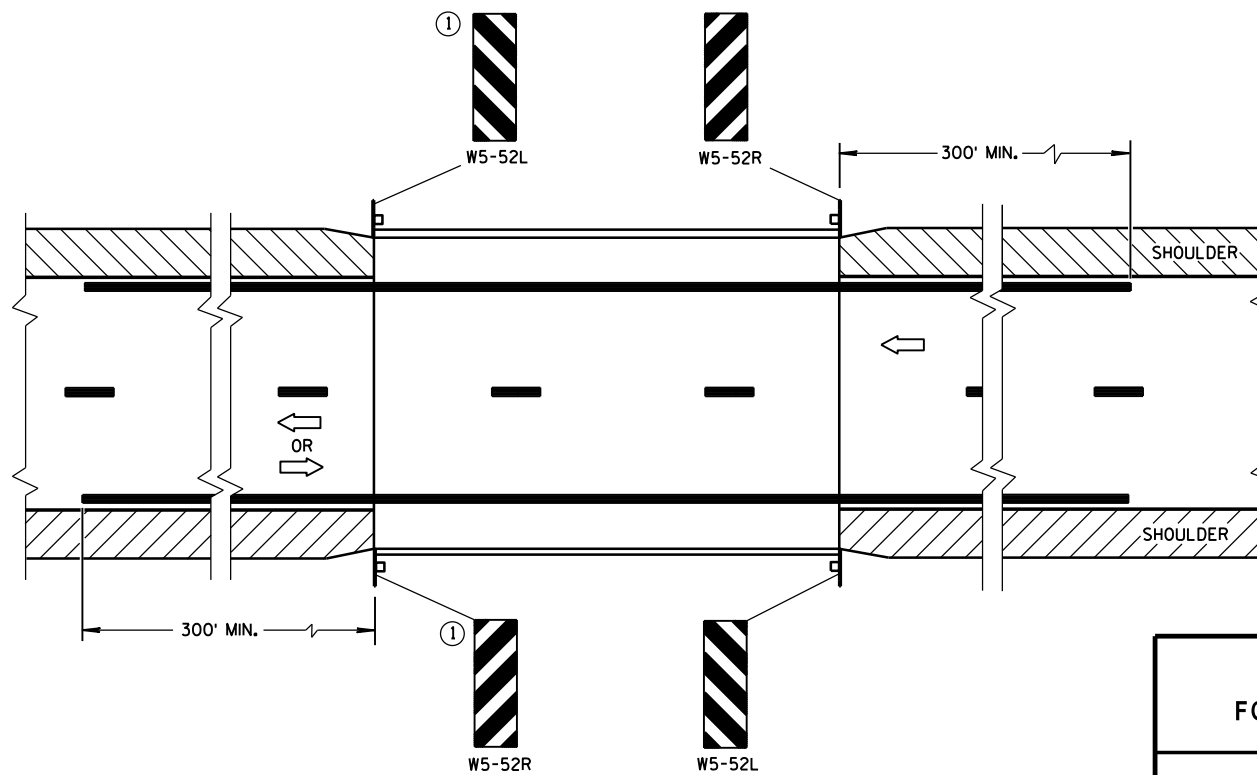
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



SITUATION 2

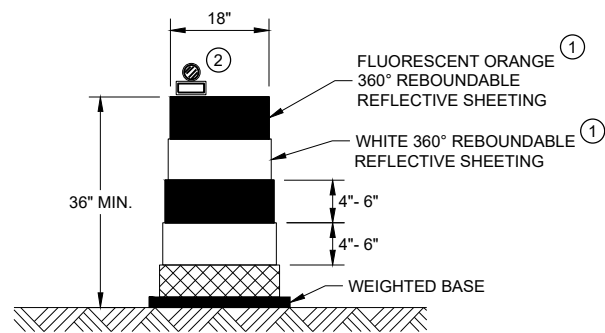
WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

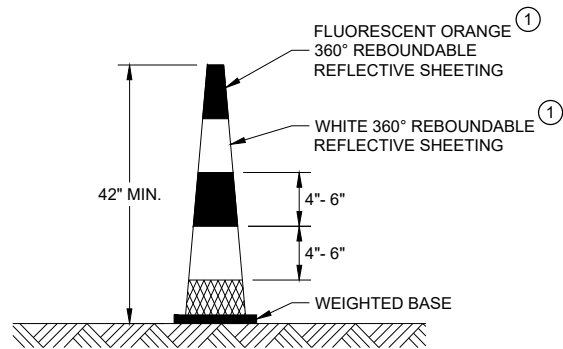
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

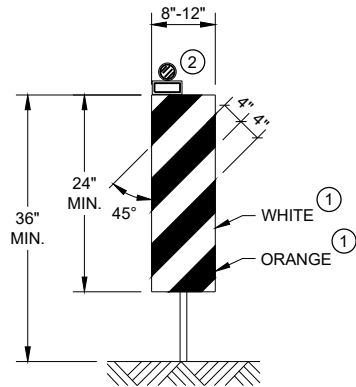


DRUM



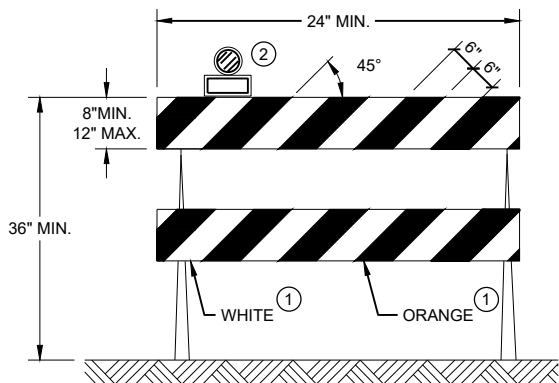
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



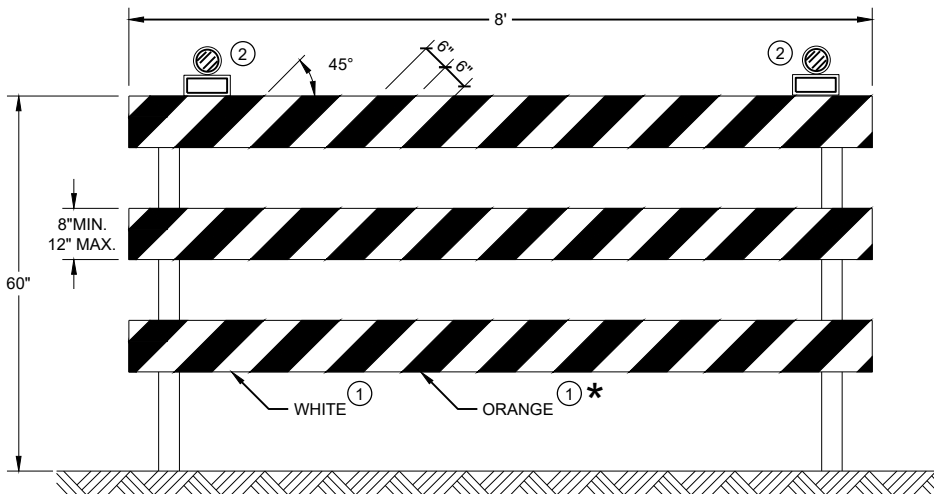
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

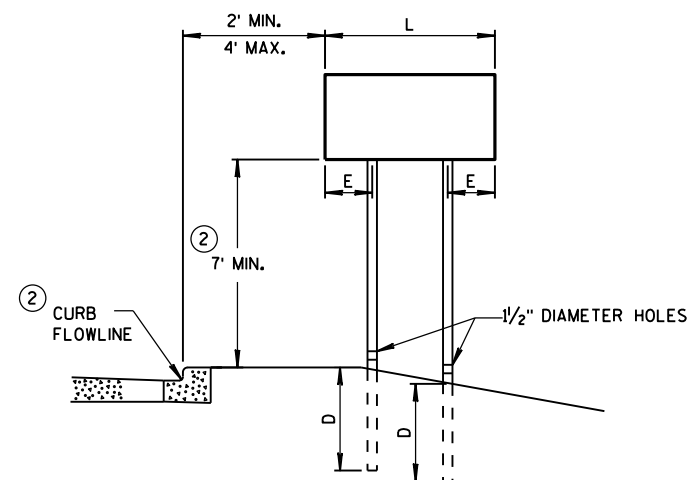
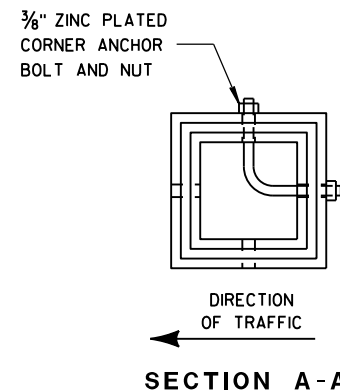


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

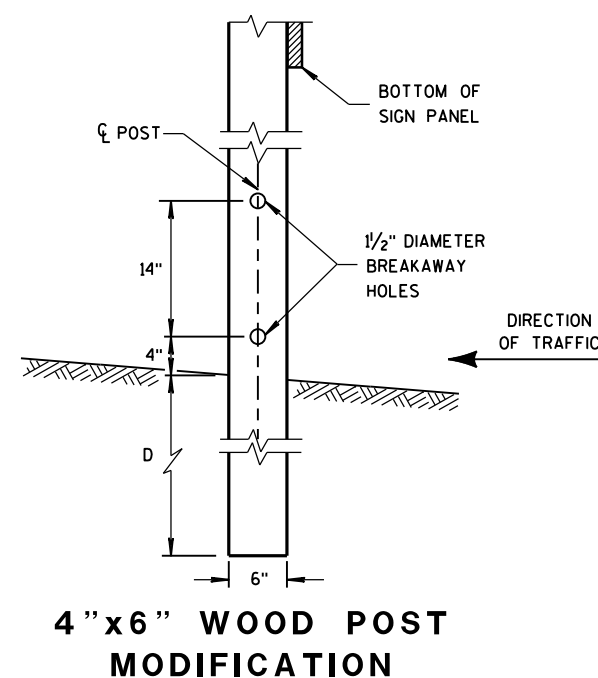
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



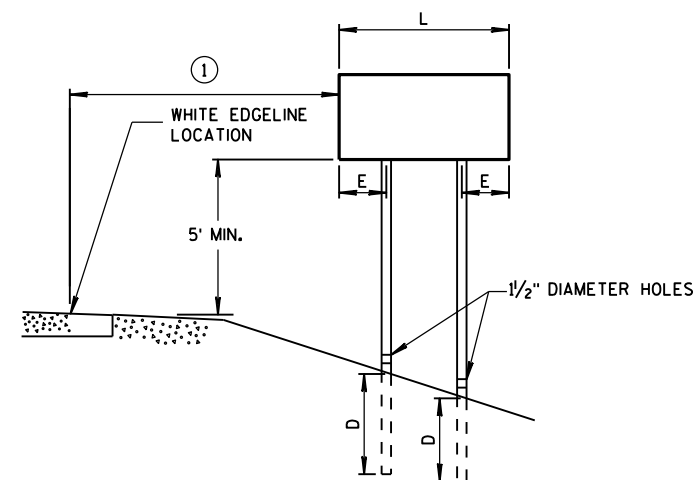
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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

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

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

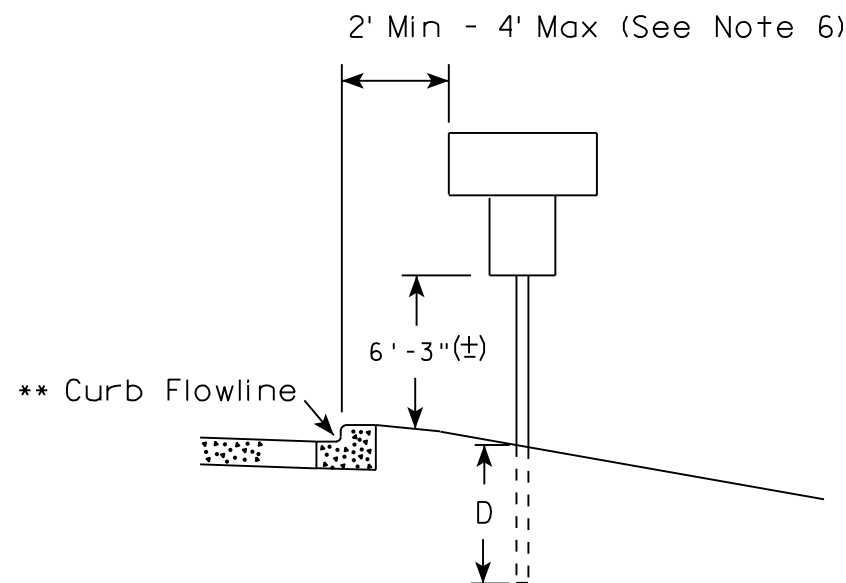
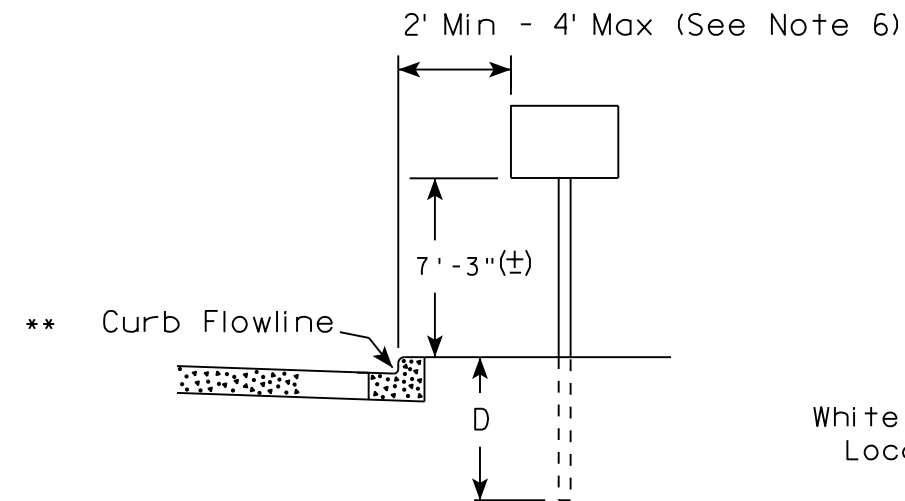
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

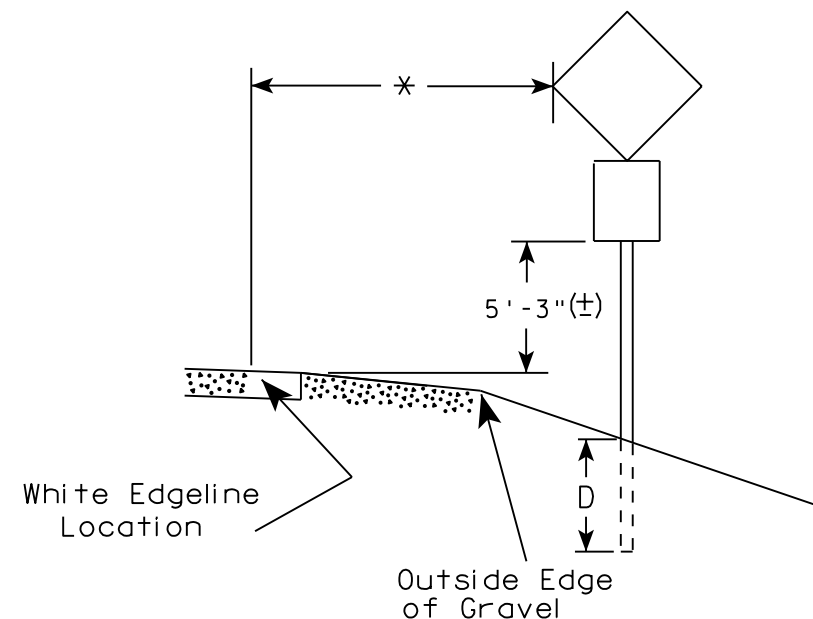
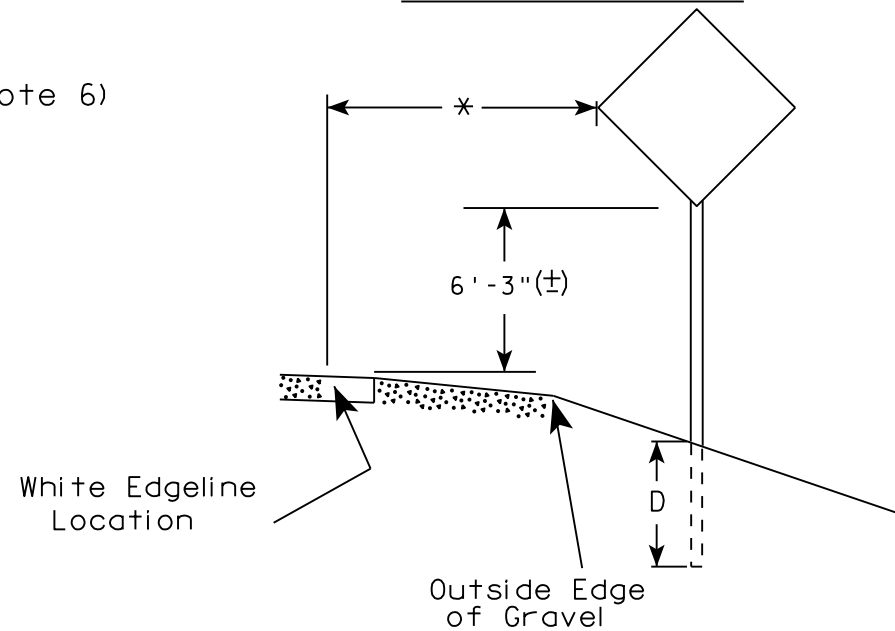
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

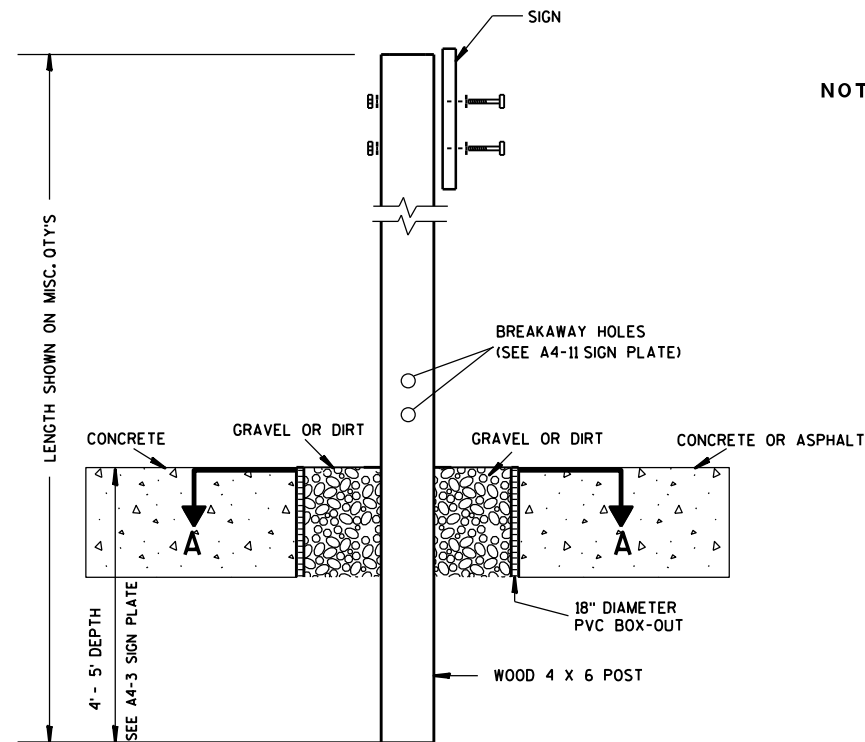
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

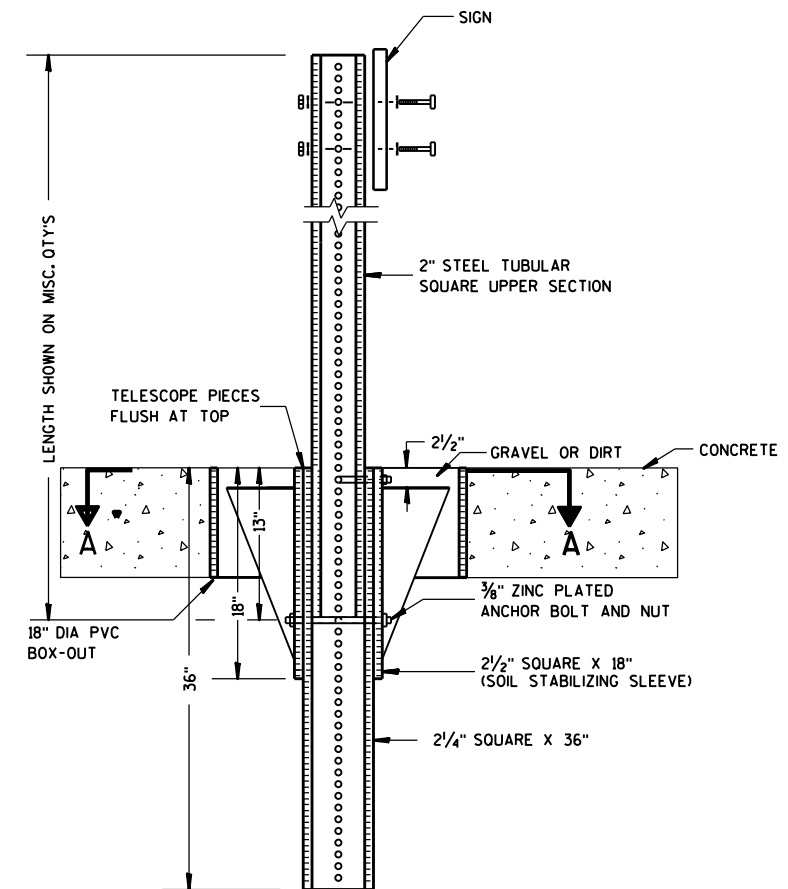
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

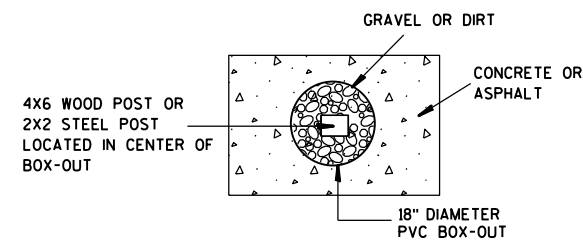
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

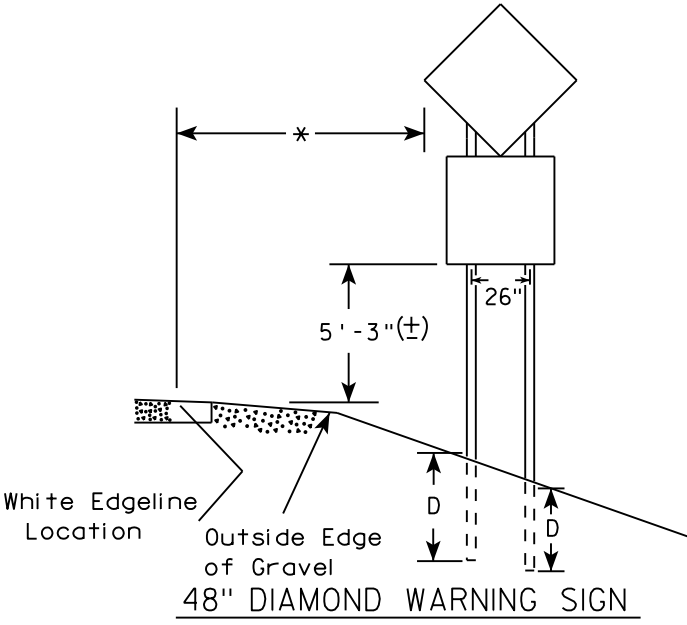
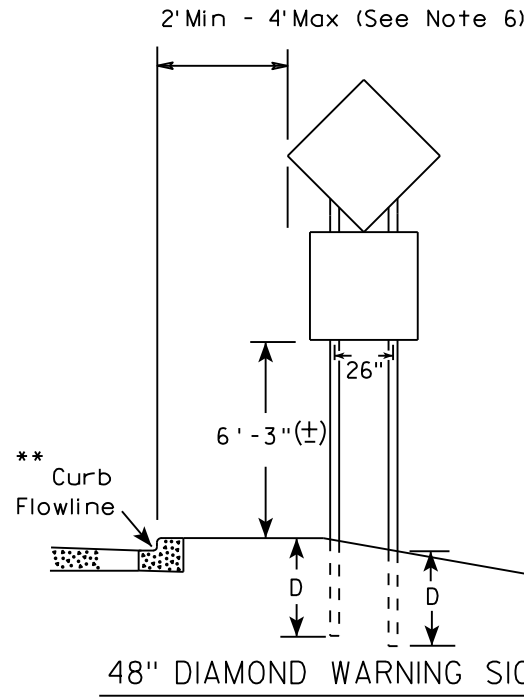
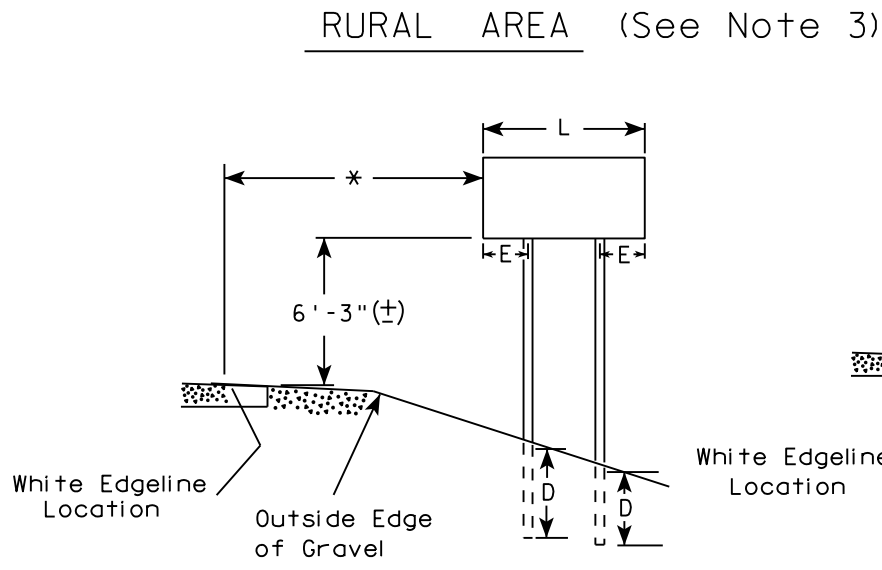
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- 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.

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 :

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

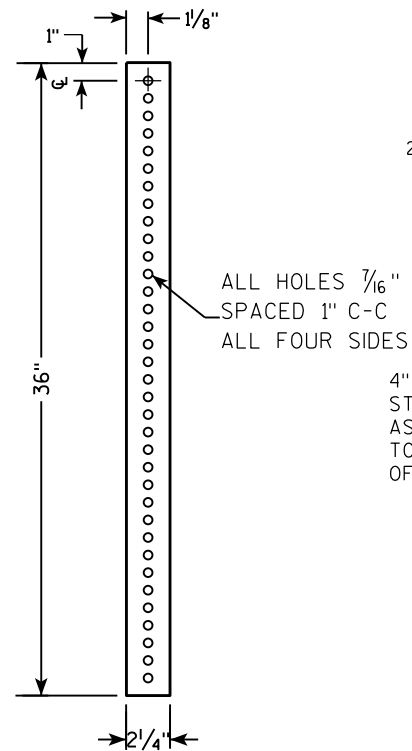
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

TELESCOPE PIECES FLUSH AT TOP

18"

12"

36"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

A

B

C

DIRECTION
OF TRAFFIC

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

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
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PLOT DATE : 05-FEB-2015 17:09

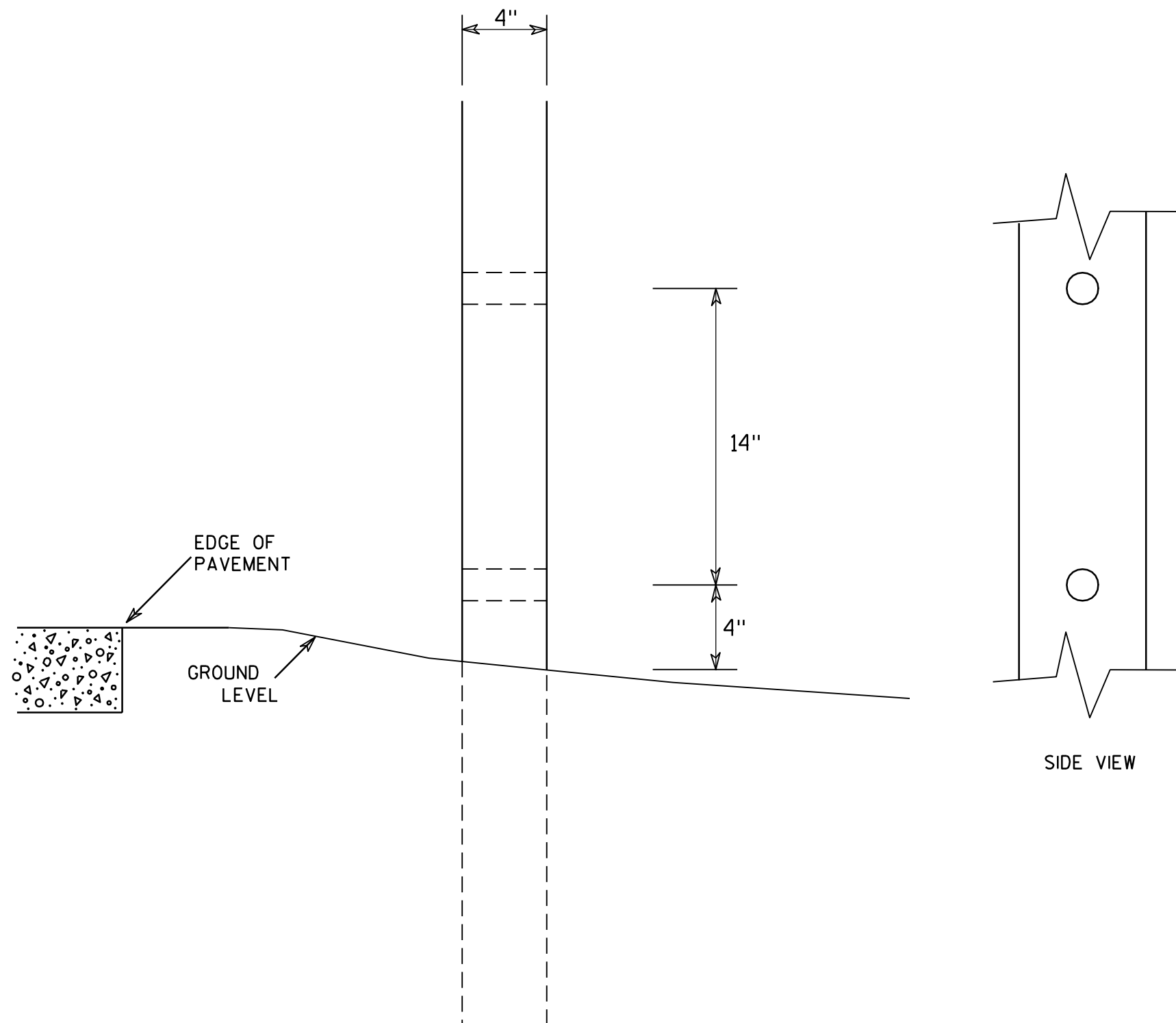
PLOT BY : mscs_ja

PLOT NAME :

PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

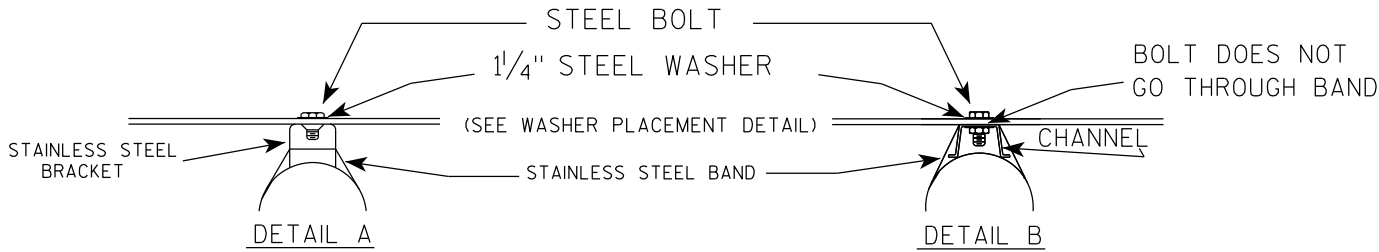
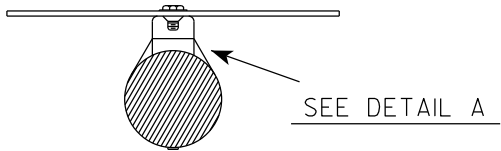
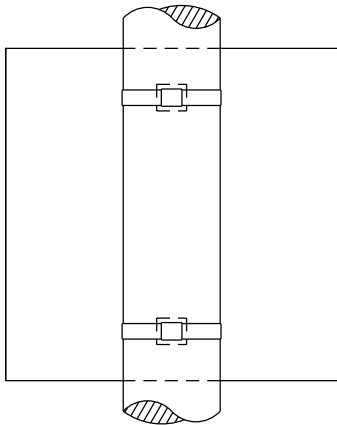
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SHEET NO:

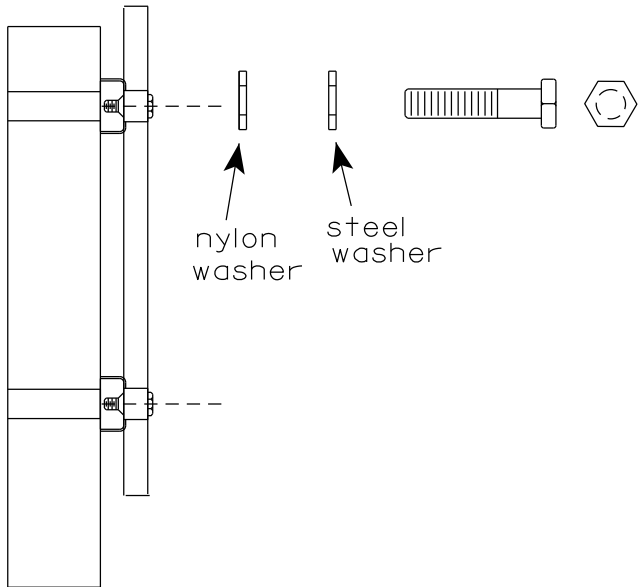
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

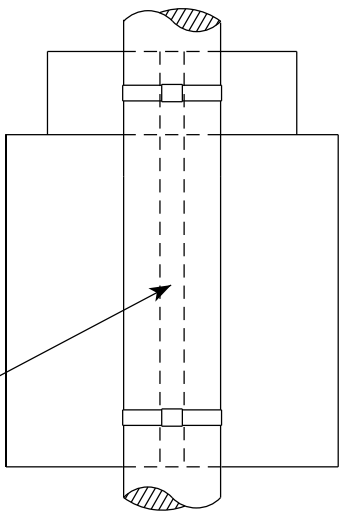


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

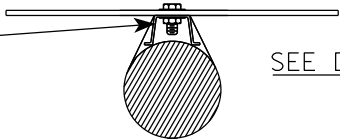
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 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

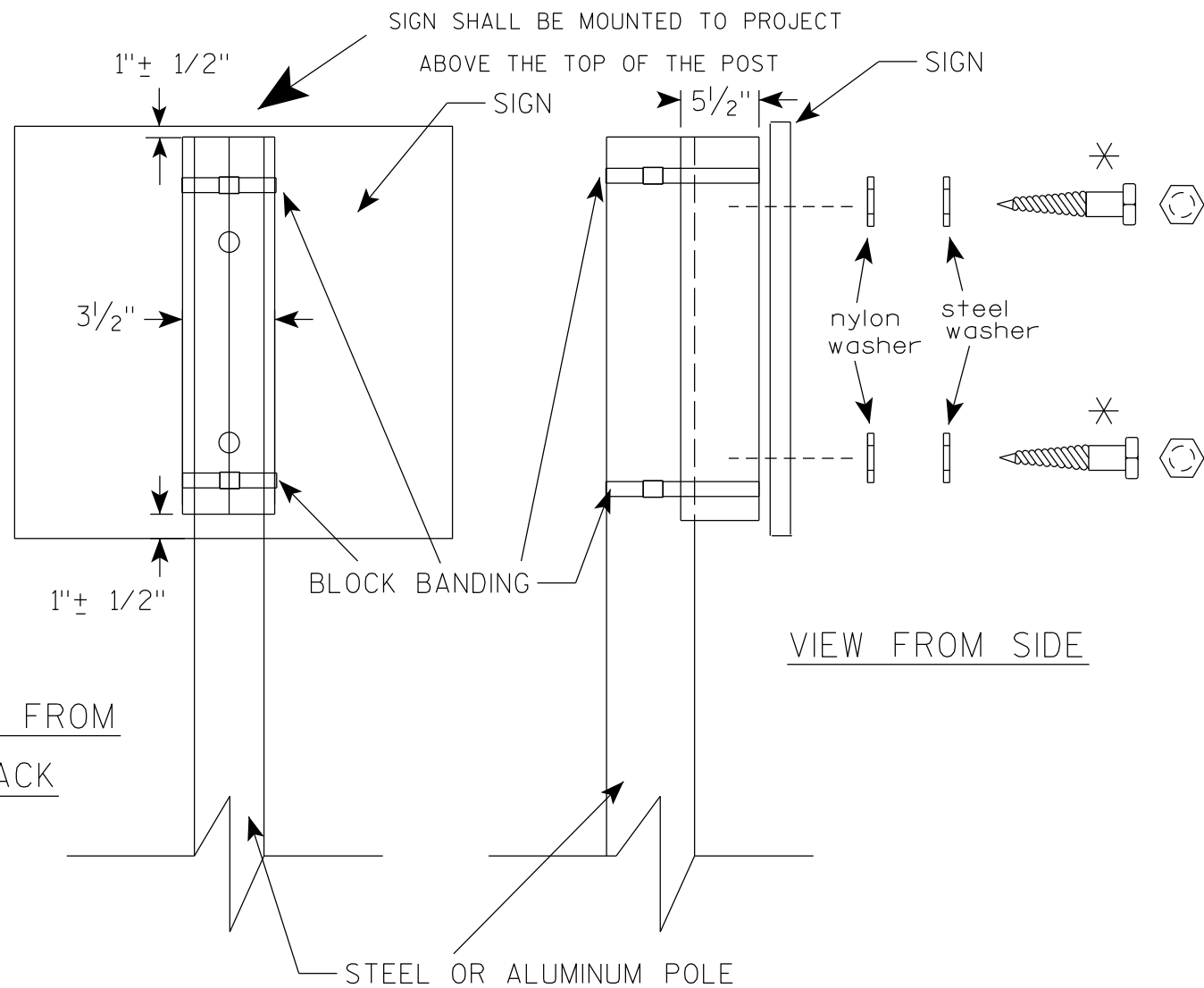


STANDARD SIGN
SIGN BANDING DETAILS

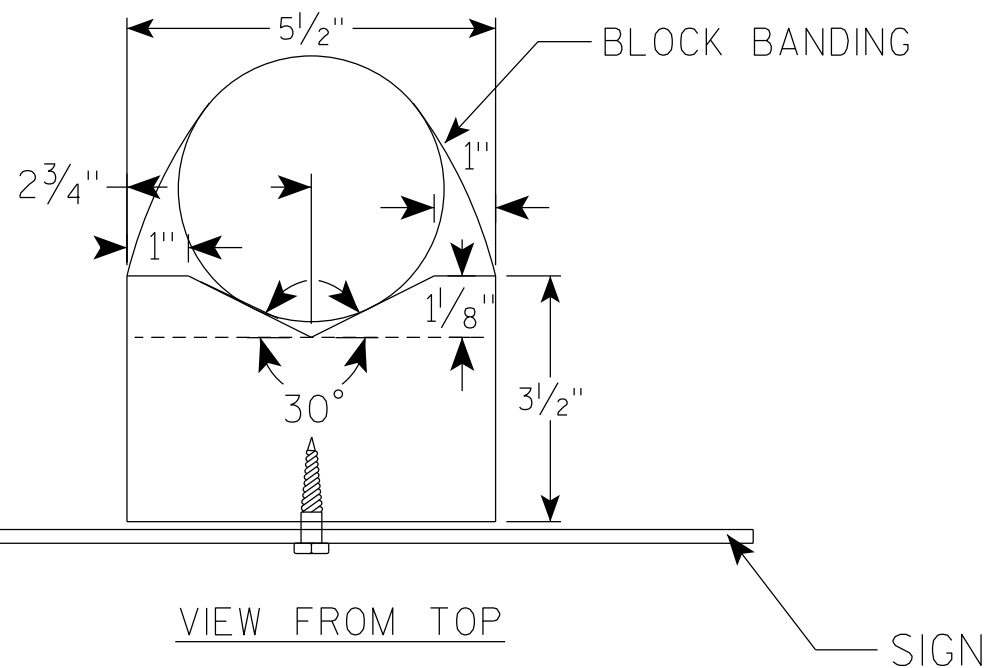
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



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, $\frac{3}{4}$ " 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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

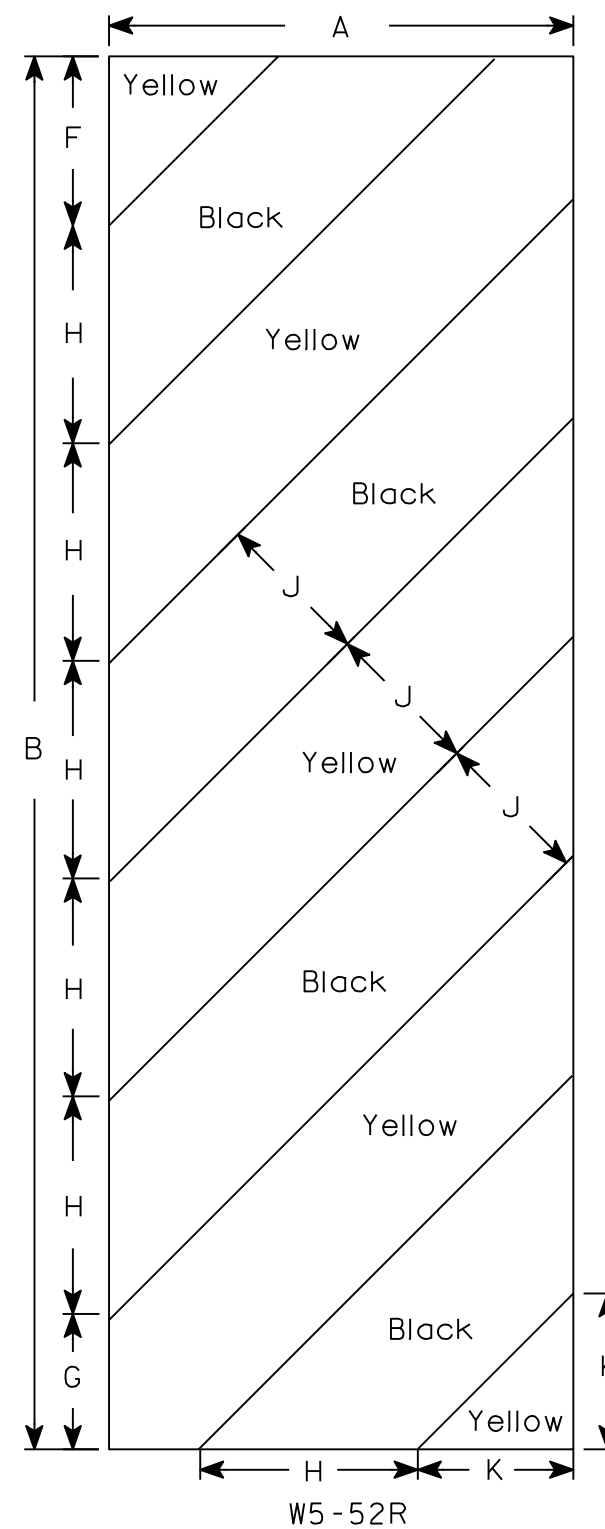
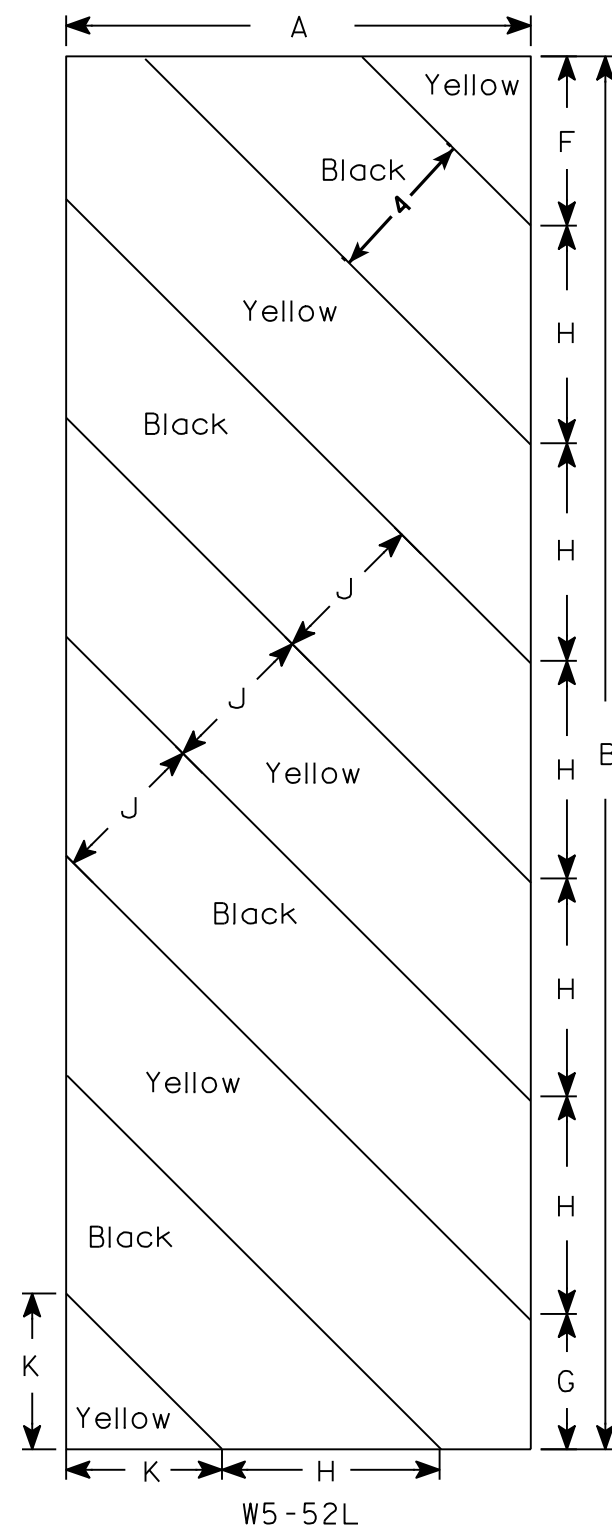
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO:

E



NOTES

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

[illegible]

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

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	9+91.06, 10.6' LT	PK NAIL IN WEST EDGE OF ASPHALT	1095.24
2	6+58, 23.5' RT	SPIKE IN 10" ASPEN TREE	1094.97
3	12+26.35, 9.9' RT	PK NAIL IN EAST EDGE OF ASPHALT	1101.76

DESIGN DATA

LIVE LOAD: DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.15
OPERATIONAL RATING FACTOR: 1.57
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

TRAFFIC DATA: A.A.D.T. (2020) = 90
A.A.D.T. (2040) = 110
R.D.S. = 45 MPH
MATERIAL PROPERTIES: CONCRETE MASONRY, SUPERSTRUCTURE $f'_c = 4,000$ P.S.I.
ALL OTHER $f'_c = 3,500$ P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
36W-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY $f'_c = 6,000$ P.S.I.
STRANDS - 0.60" ϕ WITH AN ULTIMATE TENSILE STRENGTH OF $f_y = 270,000$ P.S.I.

FOUNDATION DATA: ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS FOR THE SOUTH ABUTMENT ARE 55'-0". ESTIMATED PILE LENGTHS FOR THE NORTH ABUTMENT ARE 60'-0".

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

HYDRAULIC DATA: 100 YEAR FREQUENCY
DRAINAGE AREA 31.2 SQ. MI.
 Q_{100} 2,850 C.F.S.
VELOCITY 10.86 FT./SEC.
WATERWAY AREA 262 SQ. FT.
SCOUR CRITICAL CODE 5
HIGH WATER 100 ELEVATION 1087.20
 Q_2 750 C.F.S.
 Q_2 ELEVATION 1082.49
 Q_2 VELOCITY 4.09 FT./SEC.
ROADWAY OVERFLOW DESIGN FREQUENCY
OVERTOPPING FREQUENCY > 100 YEARS

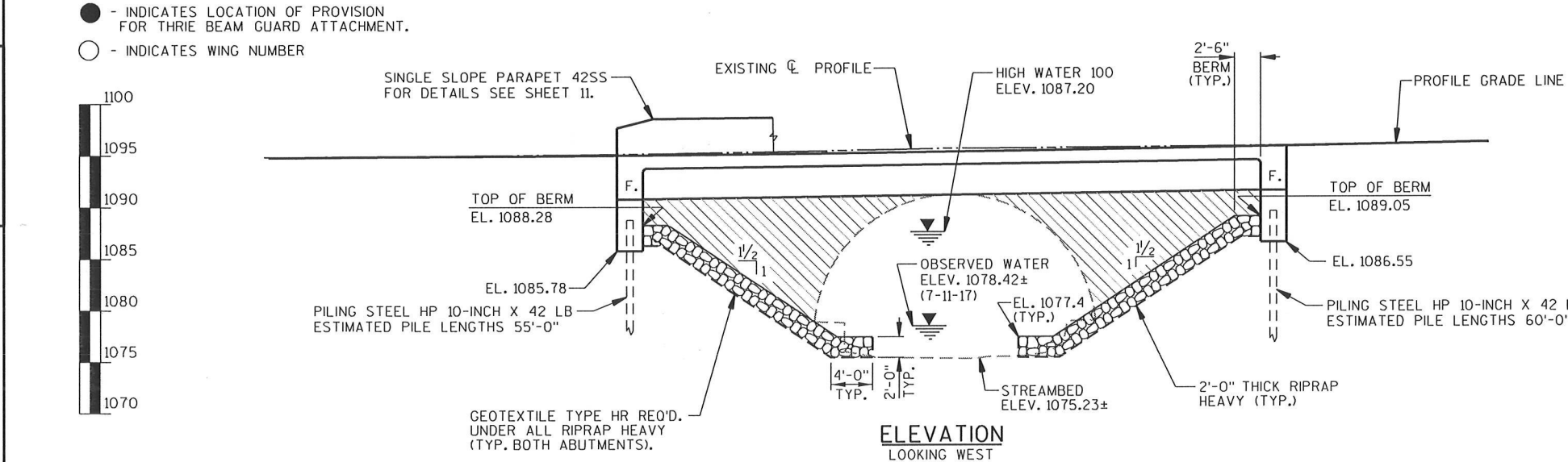
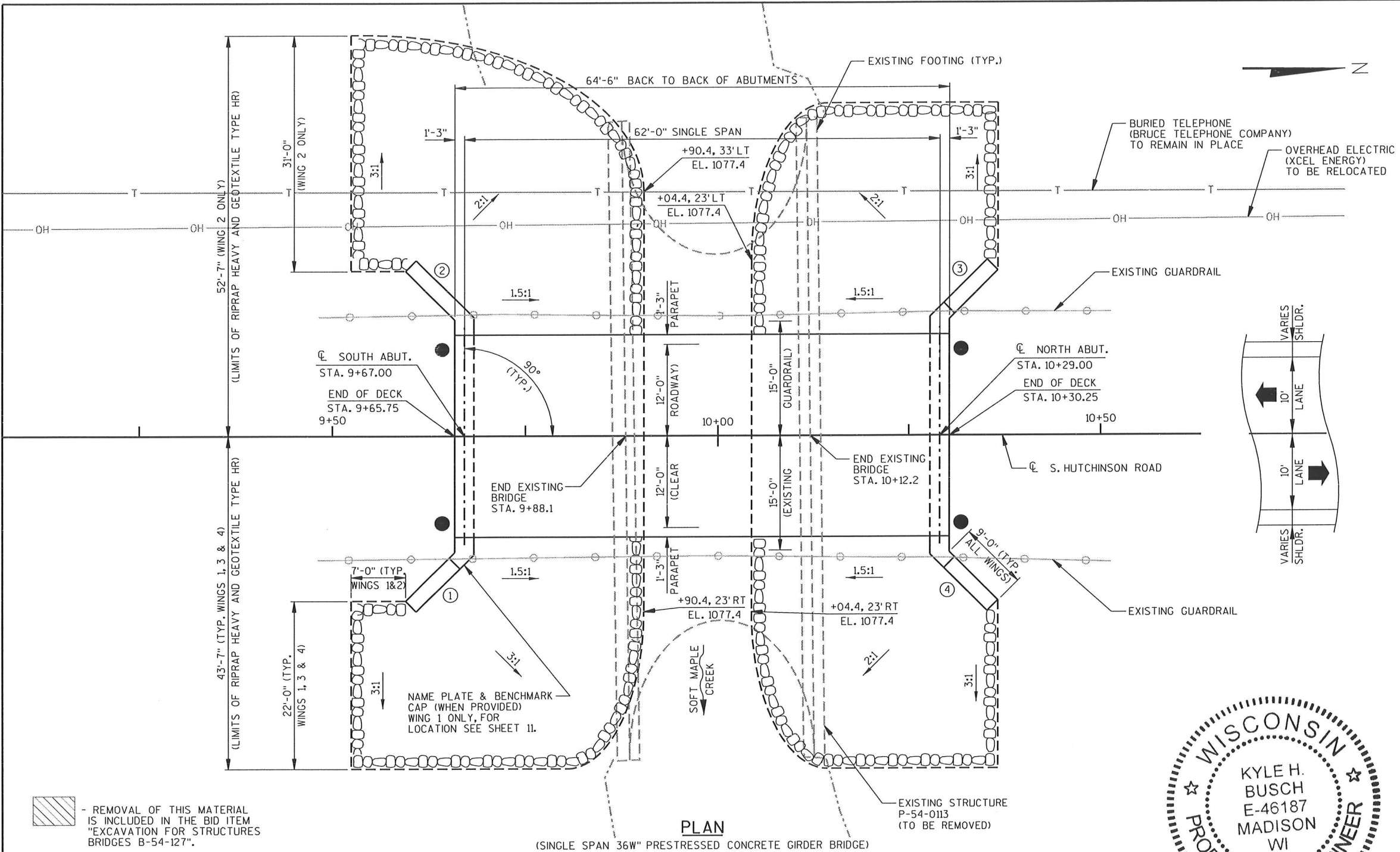
CONSULTANT DESIGN CONTACT: KYLE BUSCH (608) 216-2063
BRIDGE OFFICE CONTACT: WILLIAM DREHER (608) 266-8489



5/31/2019

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. 36W" PRESTRESSED GIRDER DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE SECTIONS & DETAILS
11. SINGLE SLOPE PARAPET 42SS
12. STEEL DIAPHRAGM



NO.	DATE	REVISION	BY
1	08/26/19		

ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANKATZ STREET, MADISON WI 53704
(608) 242-7779 www.msa-ps.com
© MSA Professional Services, Inc.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED *William C. Dreher* **08/26/19**
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-54-127
S. HUTCHINSON ROAD OVER SOFT MAPLE CREEK
COUNTY RUSK TOWN/CITY/VILLAGE STUBBS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
DESIGNED BY KHB DESIGN CK'D. DHW DRAWN BY RLR PLANS CK'D. KHB

GENERAL PLAN SHEET 1 OF 12

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS, OR AS DIRECTED BY THE ENGINEER.

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

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

THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, P-54-113, A 24.1 FT. LONG, SINGLE SPAN STEEL PLATE ARCH ON CONCRETE FOOTINGS, WITH A 48.0 FT. BARREL LENGTH, AND A 30.0 FT. CLEAR ROAD WIDTH TO BEAM GUARD.

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

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET.

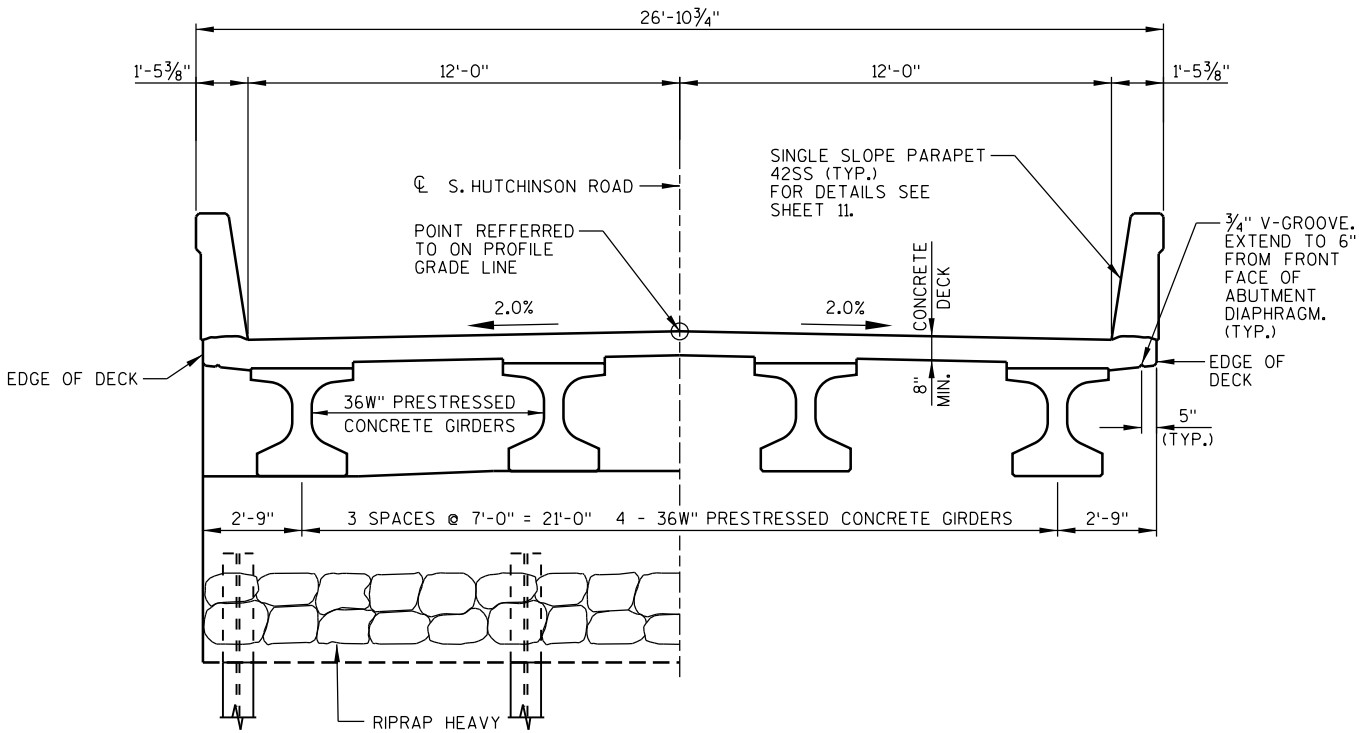
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK, TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS, AND TO THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE ENDS OF THE PARAPETS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

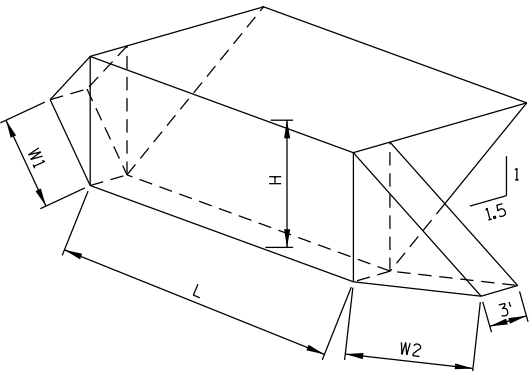
THE HAUNCH CONCRETE QUANTITIY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE SUPERSTRUCTURE SHEET.



AT ABUTMENTS IN SPAN
CROSS SECTION THRU BRIDGE
(LOOKING NORTH)

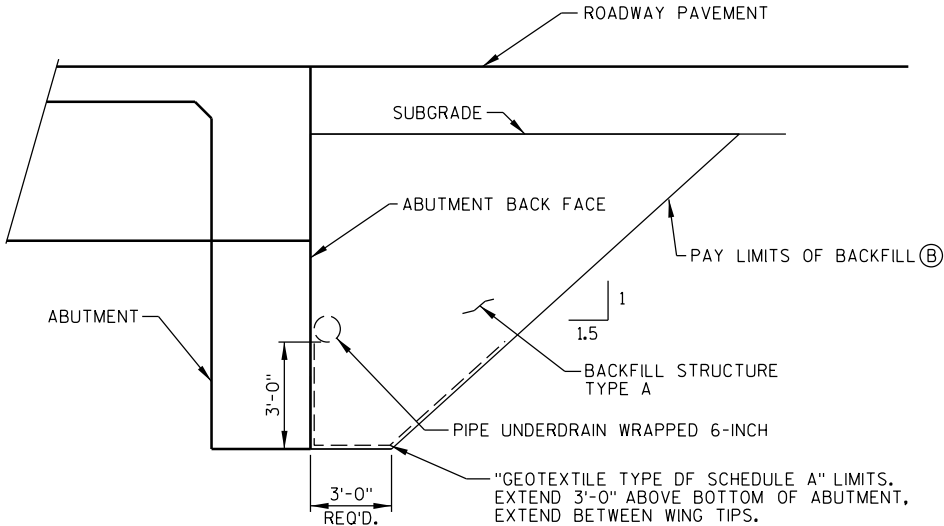
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURE BRIDGES B-54-127	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	175	175	-	350
502.0100	CONCRETE MASONRY BRIDGES	CY	28	28	81	137
502.3200	PROTECTIVE SURFACE TREATMENT	SY	19	19	172	210
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	65	65
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-	-	252	252
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2000	2000	-	4000
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1555	1555	14040	17150
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	8	8
506.4000.01	STEEL DIAPHRAGMS B-54-127	EACH	-	-	3	3
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-	20
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	330	360	-	690
606.0300	RIPRAP HEAVY	CY	240	205	-	445
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	-	160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	62	62	-	124
645.0120	GEOTEXTILE TYPE HR	SY	405	350	-	755
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				1/2" & 3/4"

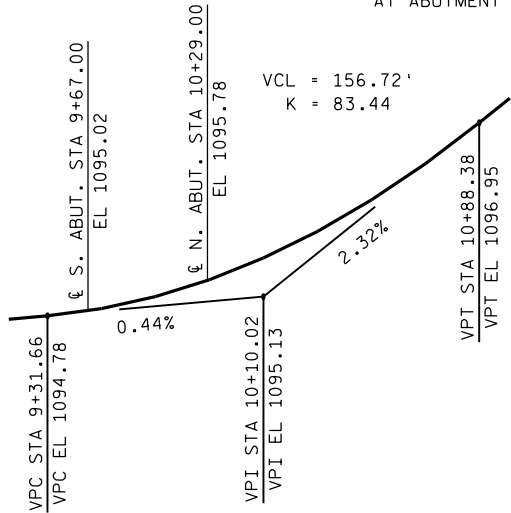


ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT
H = AVERAGE ABUTMENT FILL HEIGHT
W1 = WING 1 LENGTH
W2 = WING 2 LENGTH
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (0.5)(H)(W1+W2)(3.0')$
 $V_{TON} = V_{CF} (2.0)/27$



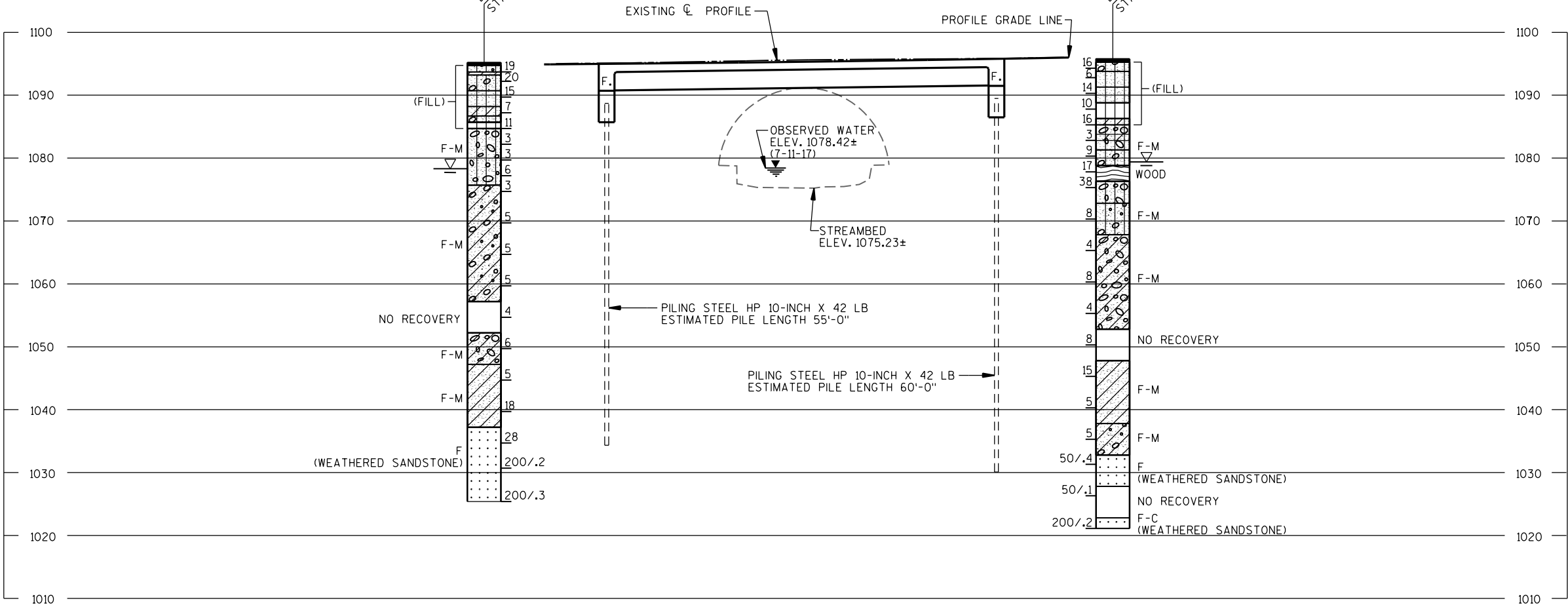
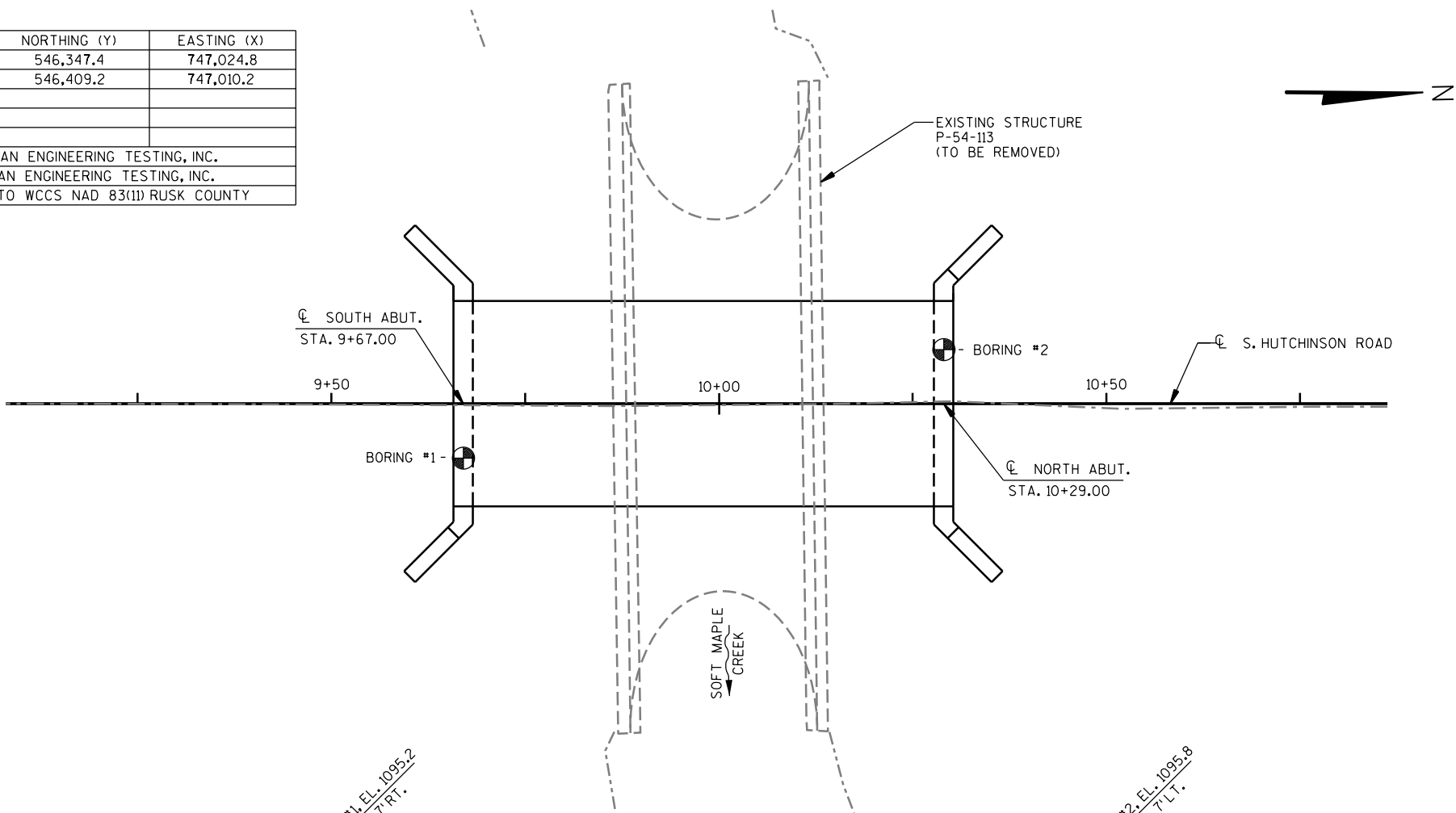
STRUCTURE BACKFILL DETAIL
AT ABUTMENT BACK FACE



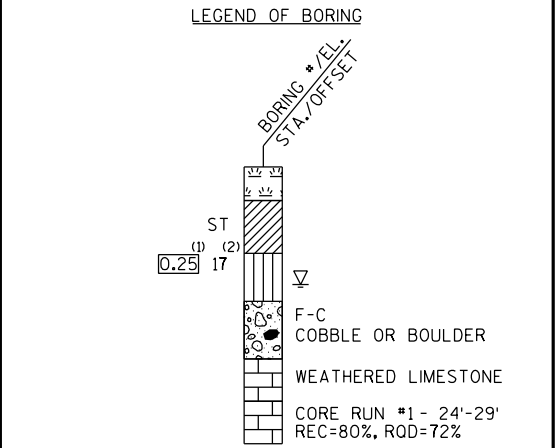
PROFILE GRADE LINE - S. HUTCHINSON ROAD

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-127			
DRAWN BY RLR		PLANS CK'D. KHB	
CROSS SECTION, QUANTITIES & NOTES		SHEET 2 OF 12	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10-17-2017	546,347.4	747,024.8
2	10-16-2017	546,409.2	747,010.2
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) RUSK COUNTY			



STATE PROJECT NUMBER		
8439-00-72		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META



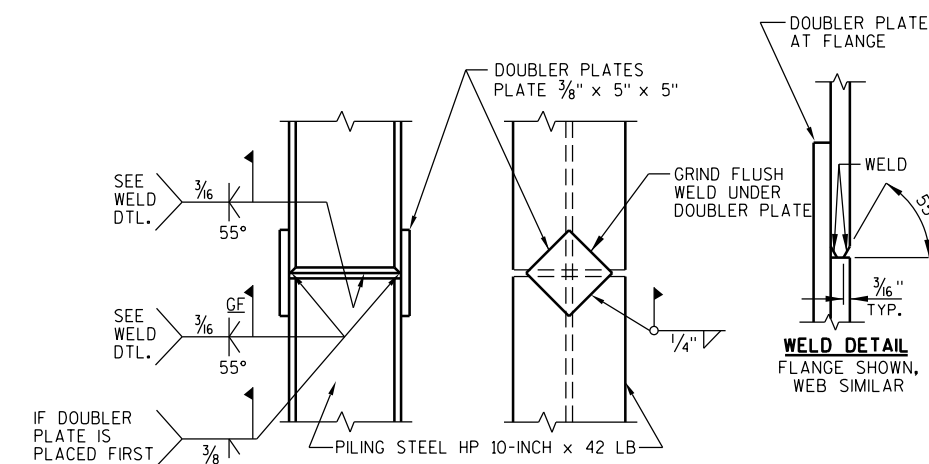
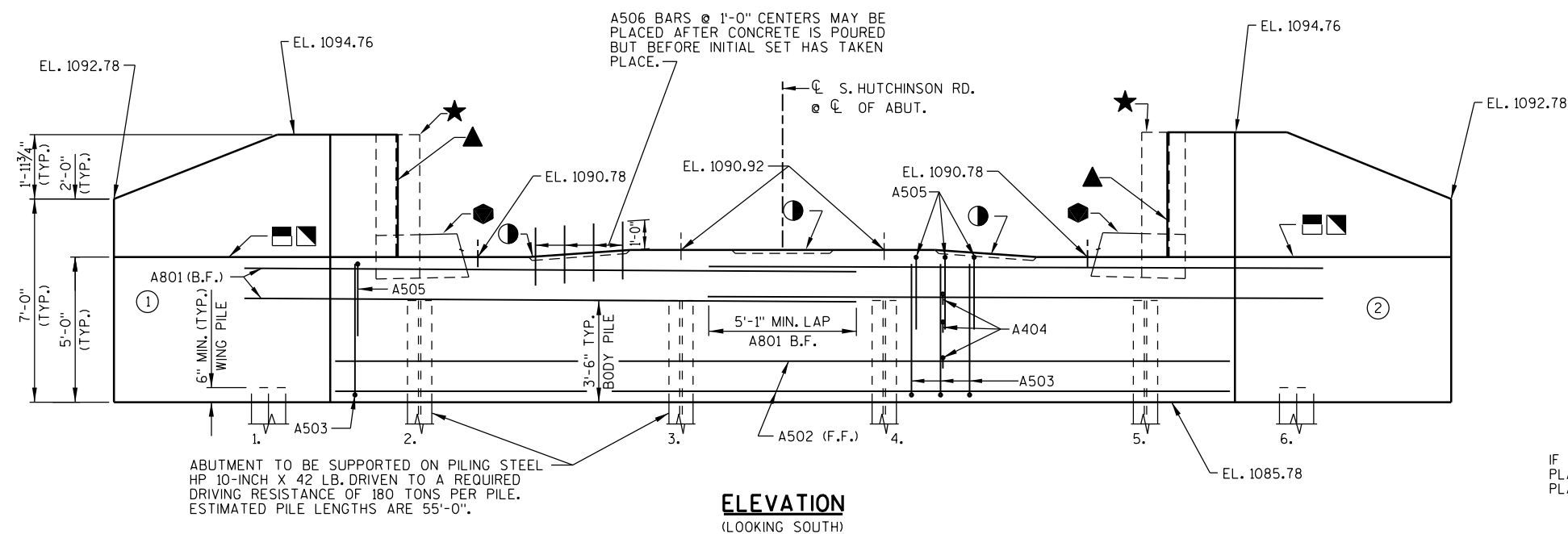
- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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-54-127	
DRAWN BY		RLR	PLANS CK'D. KHB
SUBSURFACE EXPLORATION		SHEET 3 OF 12	



PILE SPLICE DETAILS

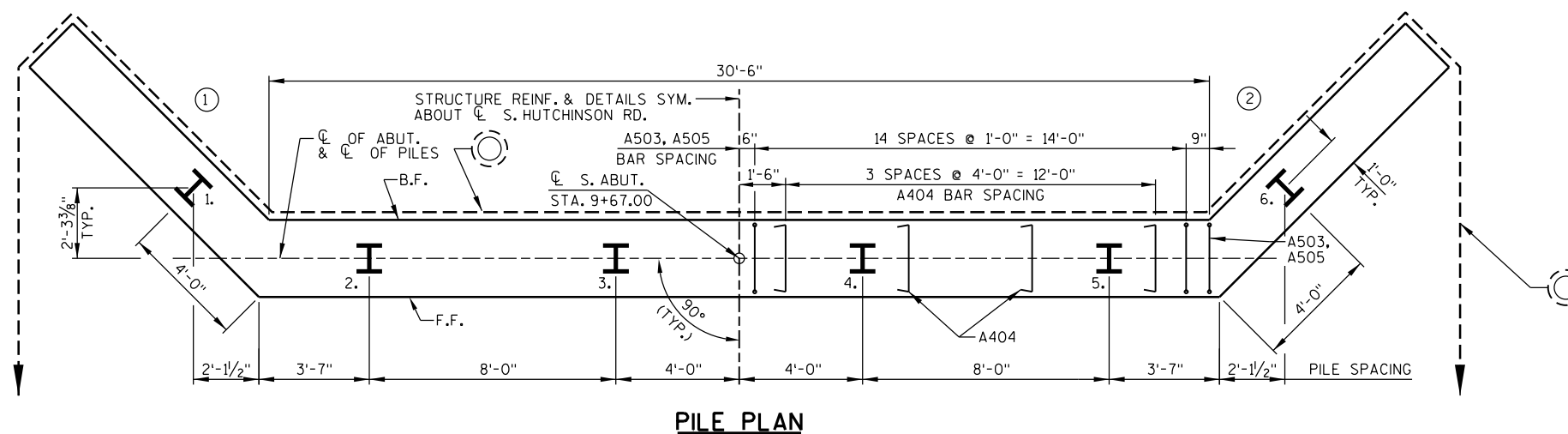
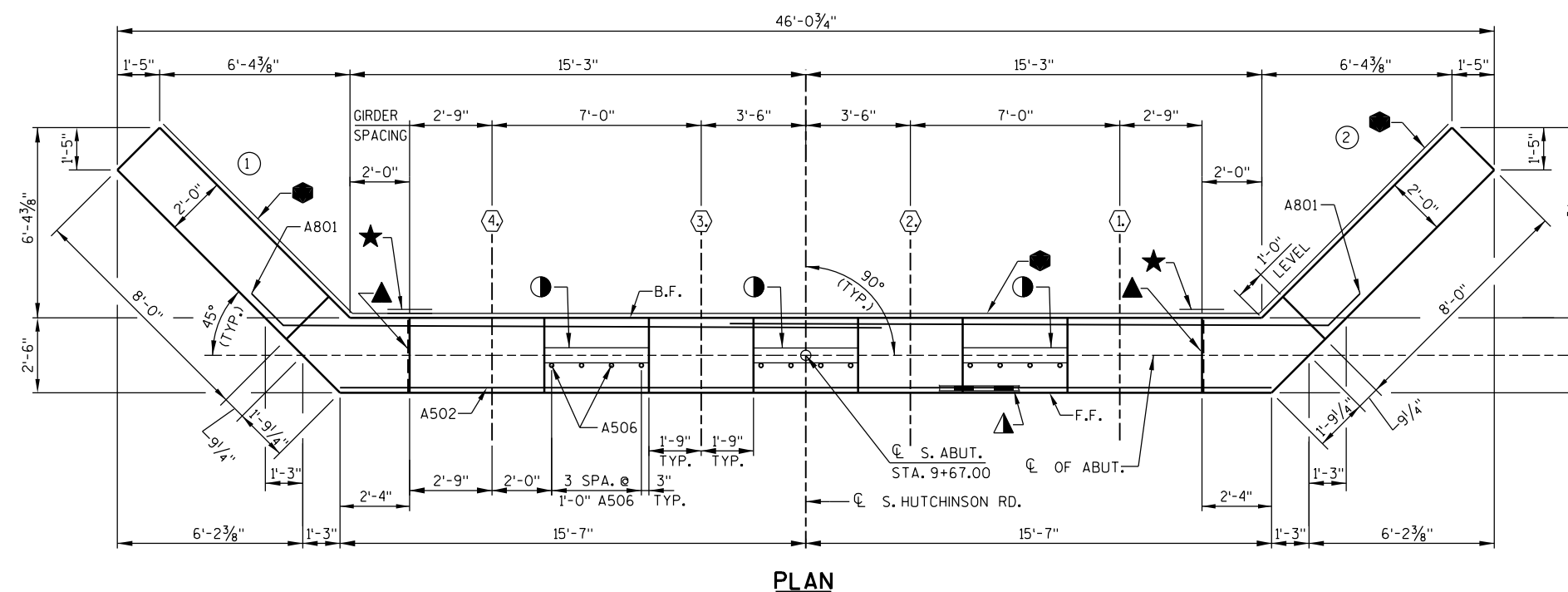
NOTES

FOR WING DETAILS SEE SHEET 5.

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

LEGEND

- — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
 - ▲ — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
 - ▲ — 4"x 1/2" FILLER; EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF DECK.
 - ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
 - — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TIPS.
 - — KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2 X 6. POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ● ON B.F. OF WING.
 - — 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONST. JOINT IS USED.
 - ⊙ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE.
- — INDICATES WING NUMBER ○ — INDICATES GIRDER NUMBER
- F.F. — FRONT FACE
- B.F. — BACK FACE
- CL. — CLEAR

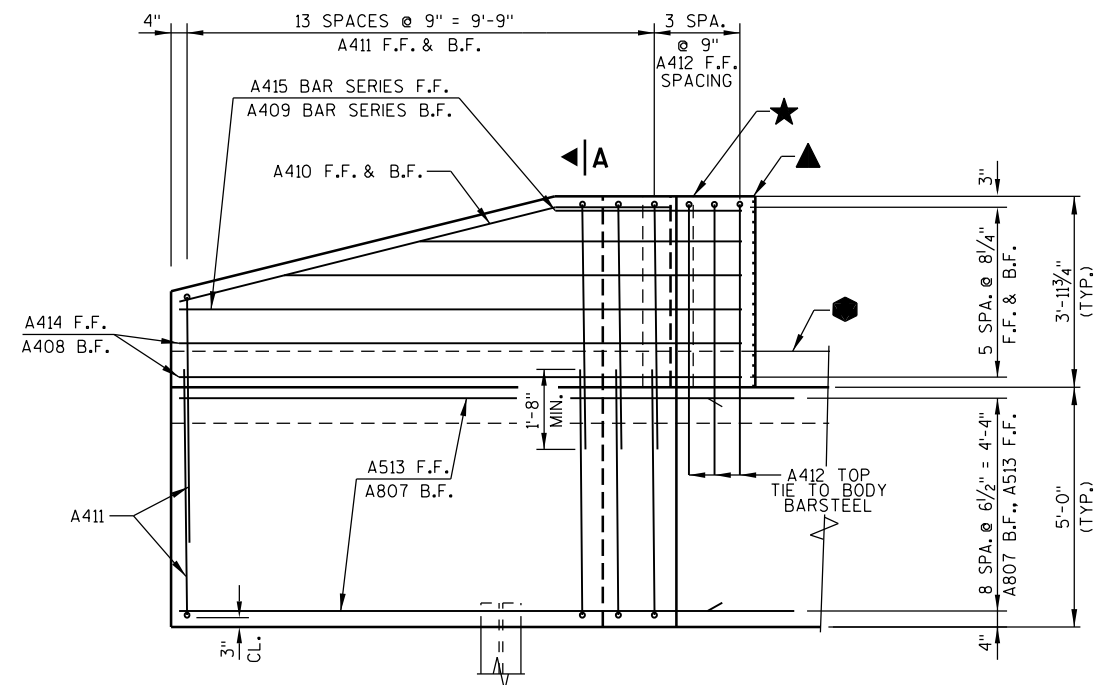


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-54-127	
DRAWN BY		RLR	PLANS CK'D. KHB
SOUTH ABUTMENT		SHEET 4 OF	

UNCOATED 2000 LBS.
COATED 1555 LBS.

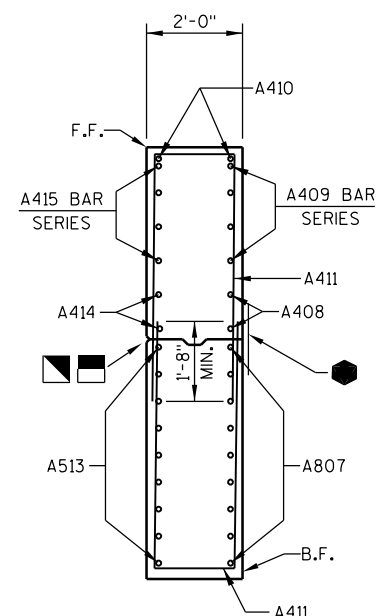
MARK	NUMBER COATED	REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
A801	-	18	21'-5"	X		ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	31'-0"			ABUTMENT BODY - F.F. - HORIZ.
A503	-	64	6'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	24	2'-8"	X		ABUTMENT BODY - TIES - HORIZ.
A505	-	32	7'-1"	X		ABUTMENT BODY - TOP - VERT.
A506	12	-	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
A807	18	-	13'-3"	X		WINGS - B.F. - HORIZ.
A408	4	-	10'-9"	X		WINGS - B.F. - HORIZ.
A409	8	-	7'-0"	X	Ⓢ	WINGS - B.F. - HORIZ.
A410	4	-	10'-5"	X		WINGS - F.F. & B.F. - TOP - HORIZ.
A411	56	-	11'-10"	X		WINGS - F.F. & B.F. - VERT.
A412	6	-	13'-4"	X		WINGS - F.F. & B.F. - VERT.
A513	18	-	11'-9"	X		WINGS - F.F. - HORIZ.
A414	4	-	12'-3"	X		WINGS - F.F. - HORIZ.
A415	8	-	8'-6"	X	Ⓢ	WINGS - F.F. - HORIZ.

⑤ - LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.



◀|A
ELEVATION
(LOOKING AT F.F. OF WINGS)

NOTE:
WING 1 SHOWN,
WING 2 SIMILAR.



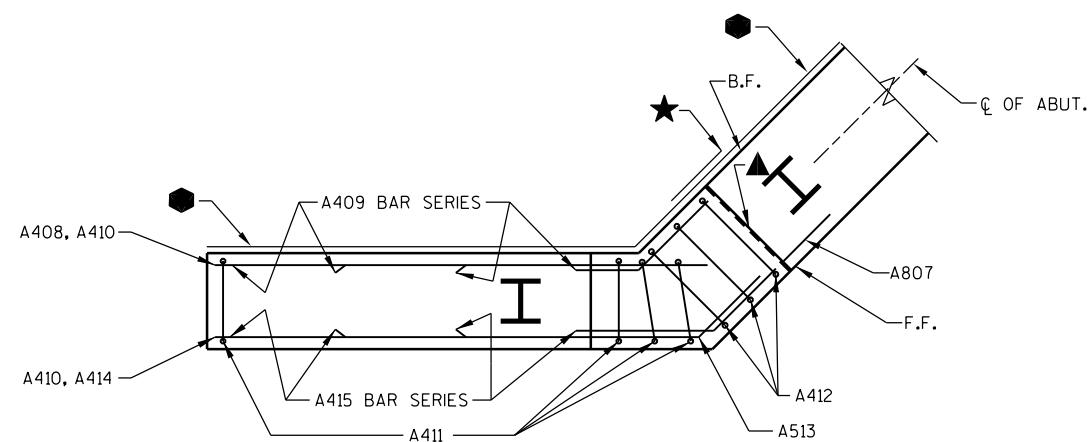
SECTION A-A THRU WING

BAR MARK	NO. REQ'D.	LENGTH
A409	2 SERIES OF 4	3'-3" TO 10'-9"
A415	2 SERIES OF 4	4'-9" TO 12'-3"

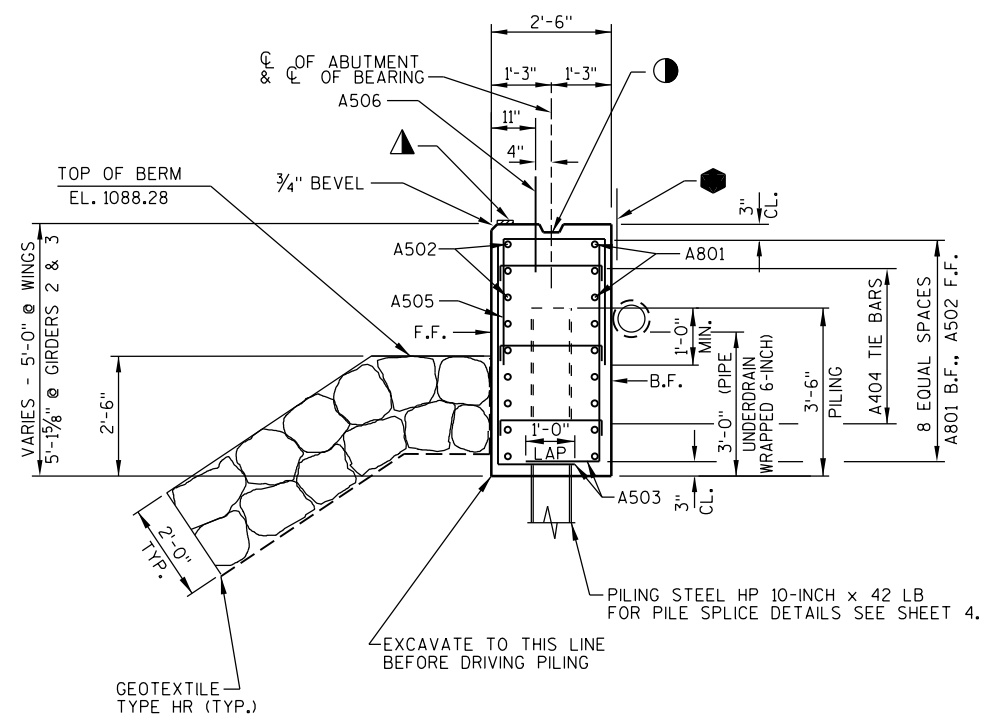
BAR SERIES TABLE



A801

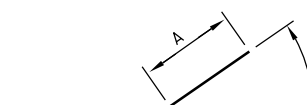


PLAN

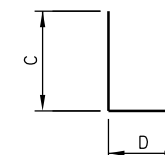


TYPICAL SECTION THRU ABUTMENT

MARK	A	B
A807 A513	1'-6"	45°
A408 A409	1'-10"	45°
A410	2'-5"	14°
A414 A415	2'-0"	45°



A503



MARK	C	D
A404	4½"	2'-1"
A505	2'-7"	2'-2"
A411	5'-2"	1'-8"
A412	5'-8"	2'-2"

SEE LEGEND ON SHEET
4 FOR DESCRIPTION OF
















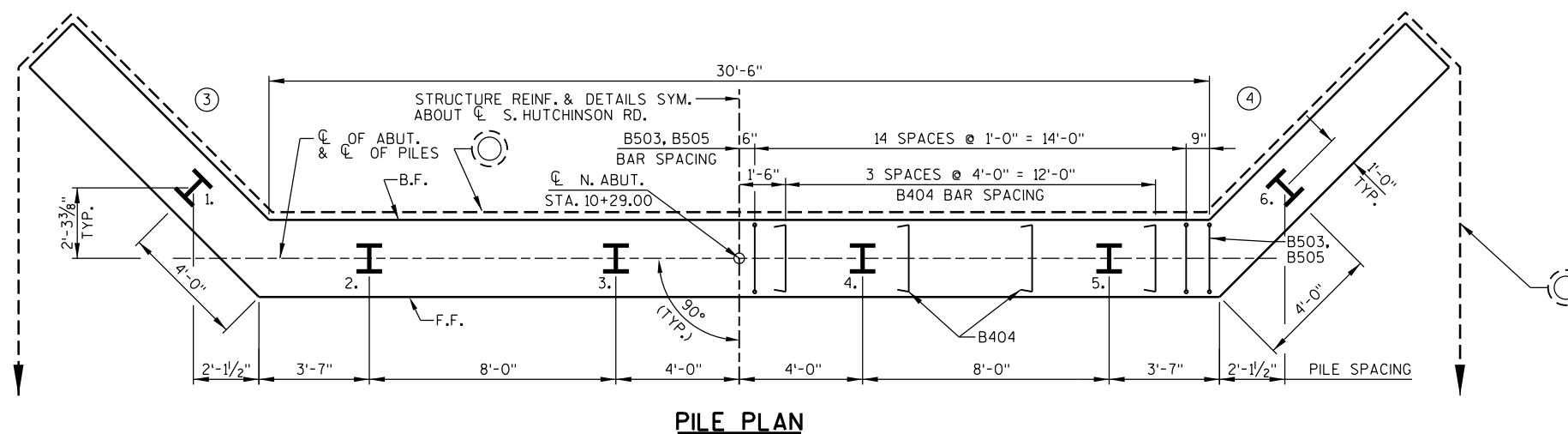
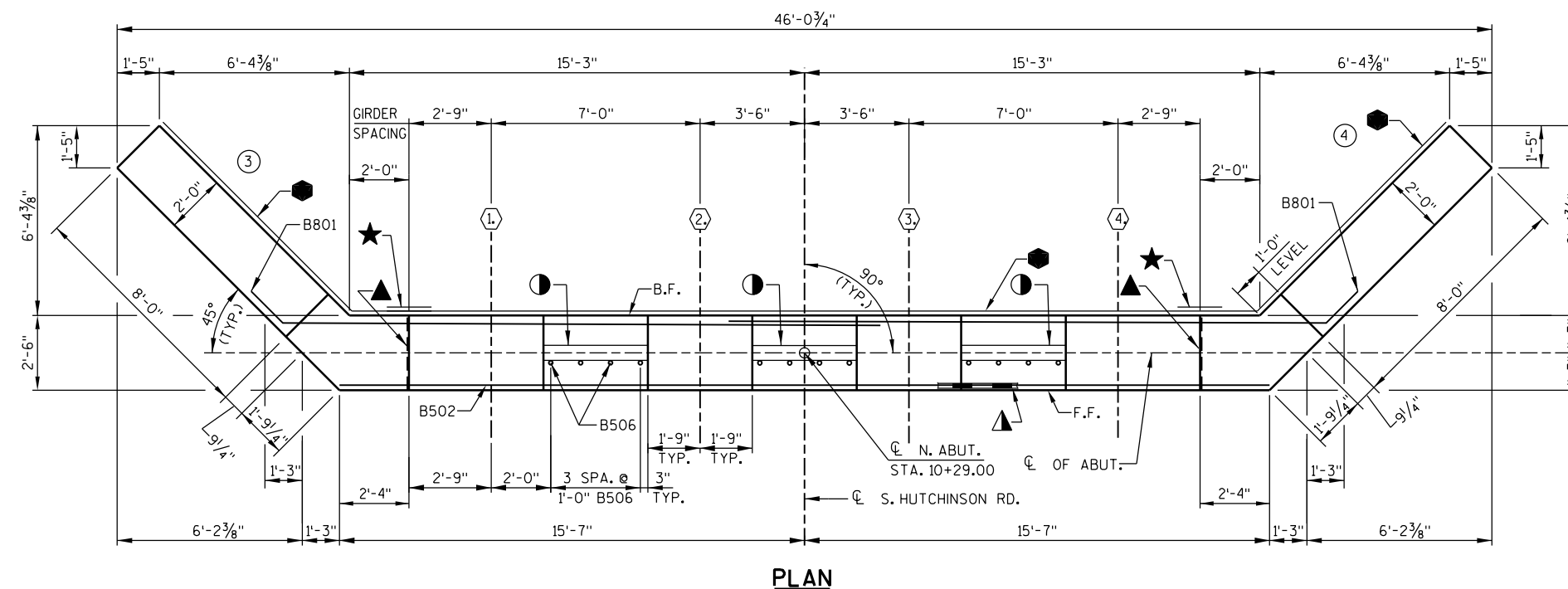





NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-54-127	
		DRAWN BY	RLR
		PLANS CK'D.	KHB
SOUTH ABUTMENT DETAILS		SHEET 5 OF 12	



-  — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
 -  — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
 -  — 4"x 1/2" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF DECK.
 -  — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
 -  — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TIPS.
 -  — KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2 X 6. POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE  ON B.F. OF WING.
 -  — 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONST. JOINT IS USED.
 -  — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE.
-  — INDICATES WING NUMBER  — INDICATES GIRDER NUMBER
- F.F.— FRONT FACE
 B.F.— BACK FACE
 CL. — CLEAR



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-54-127	
DRAWN BY		RLR	PLANS CK'D. KHB
NORTH ABUTMENT		SHEET 6 OF 12	

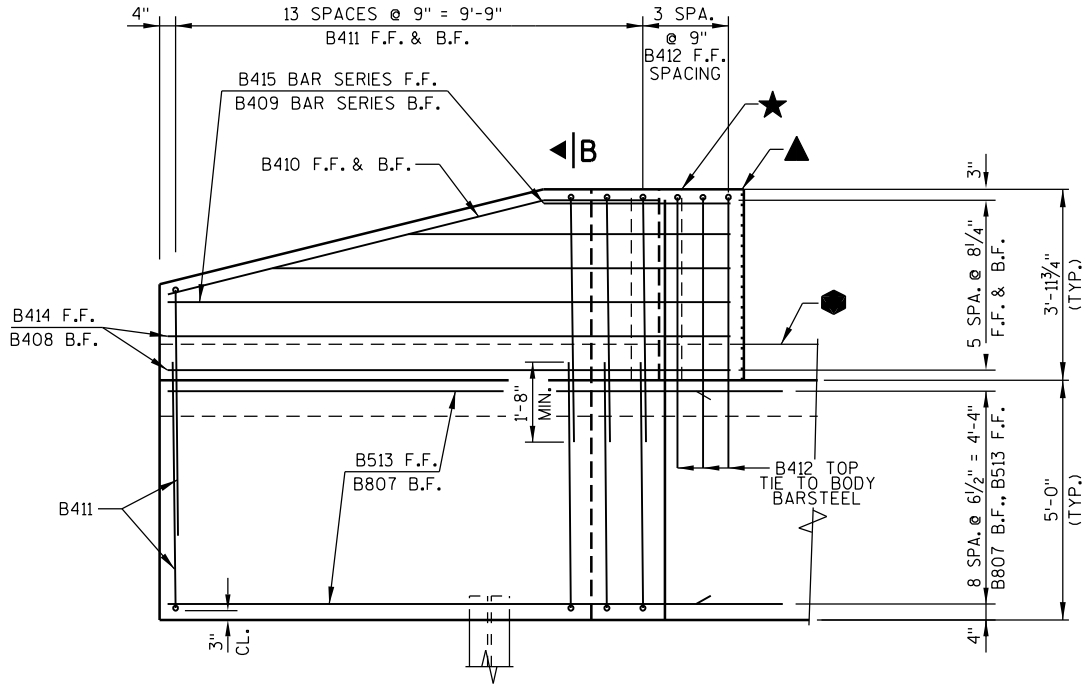
UNCOATED 2000 LBS.
COATED 1555 LBS.

BILL OF BARS (NORTH ABUTMENT)

MARK	NUMBER COATED	REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
B801	-	18	21'-5"	X		ABUTMENT BODY - B.F. - HORIZ.
B502	-	9	31'-0"			ABUTMENT BODY - F.F. - HORIZ.
B503	-	64	6'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
B404	-	24	2'-8"	X		ABUTMENT BODY - TIES - HORIZ.
B505	-	32	7'-1"	X		ABUTMENT BODY - TOP - VERT.
B506	12	-	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
B807	18	-	13'-3"	X		WINGS - B.F. - HORIZ.
B408	4	-	10'-9"	X		WINGS - B.F. - HORIZ.
B409	8	-	7'-0"	X	Ⓢ	WINGS - B.F. - HORIZ.
B410	4	-	10'-5"	X		WINGS - F.F. & B.F. - TOP - HORIZ.
B411	56	-	11'-10"	X		WINGS - F.F. & B.F. - VERT.
B412	6	-	13'-4"	X		WINGS - F.F. & B.F. - VERT.
B513	18	-	11'-9"	X		WINGS - F.F. - HORIZ.
B414	4	-	12'-3"	X		WINGS - F.F. - HORIZ.
B415	8	-	8'-6"	X	Ⓢ	WINGS - F.F. - HORIZ.

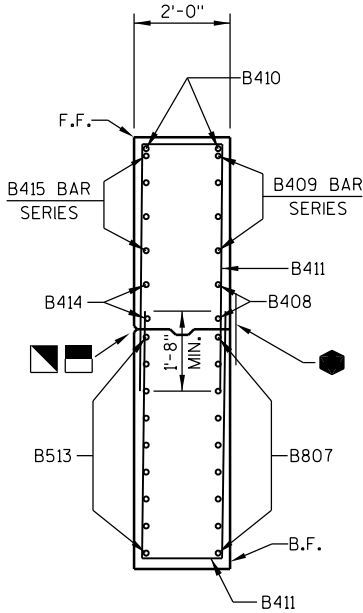
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

Ⓢ - LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.



ELEVATION
(LOOKING AT F.F. OF WINGS)

NOTE:
WING 3 SHOWN,
WING 4 SIMILAR.



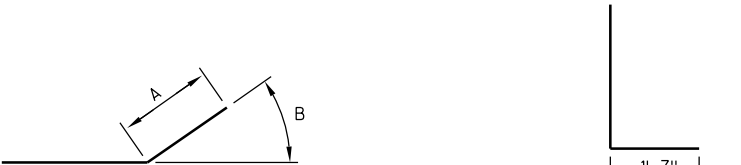
SECTION B-B THRU WING

BAR MARK	NO. REQ'D.	LENGTH
B409	2 SERIES OF 4	3'-3" TO 10'-9"
B415	2 SERIES OF 4	4'-9" TO 12'-3"

BAR SERIES TABLE



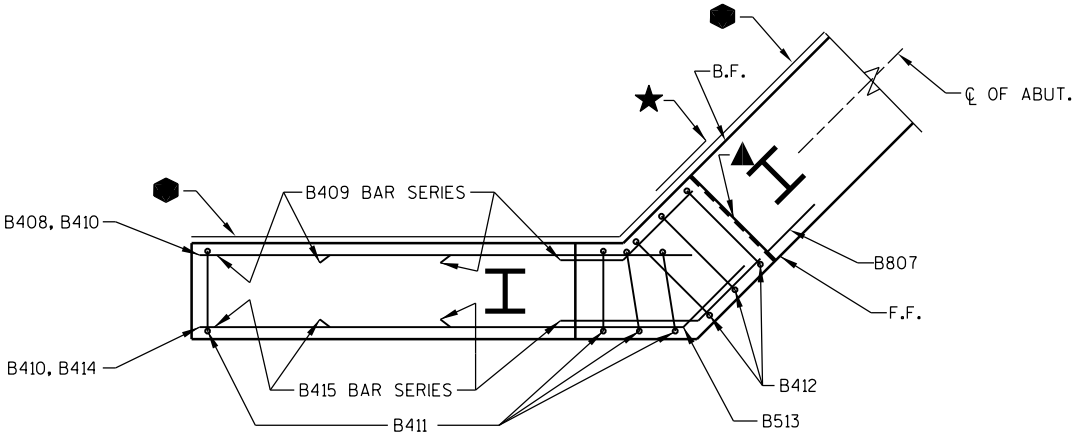
B801



B503

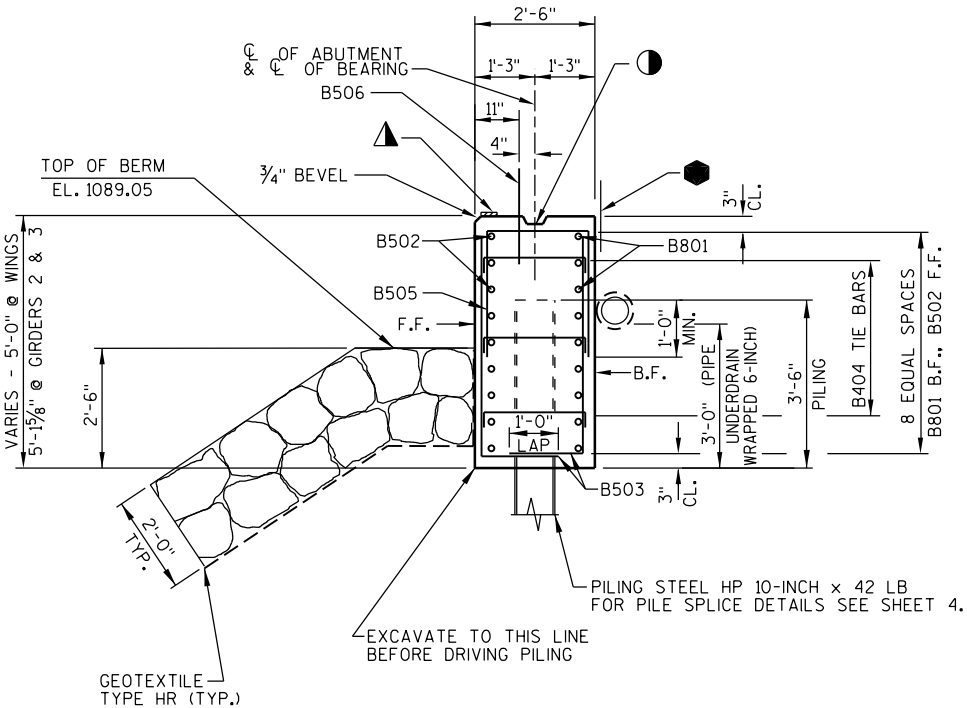
MARK	A	B
B807 B513	1'-6"	45°
B408 B409	1'-10"	45°
B410	2'-5"	14°
B414 B415	2'-0"	45°

MARK	C	D
B404	4 1/2"	2'-1"
B505	2'-7"	2'-2"
B411	5'-2"	1'-8"
B412	5'-8"	2'-2"



PLAN

SEE LEGEND ON SHEET
6 FOR DESCRIPTION OF
▲ ★ ● ▣ ▢ ▣ ▣



TYPICAL SECTION THRU ABUTMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-127			
DRAWN BY RLR		PLANS CK'D. KHB	
NORTH ABUTMENT DETAILS		SHEET 7 OF 12	

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECTION 503.3.3 OF THE STANDARD SPECIFICATIONS FOR GUIDANCE.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

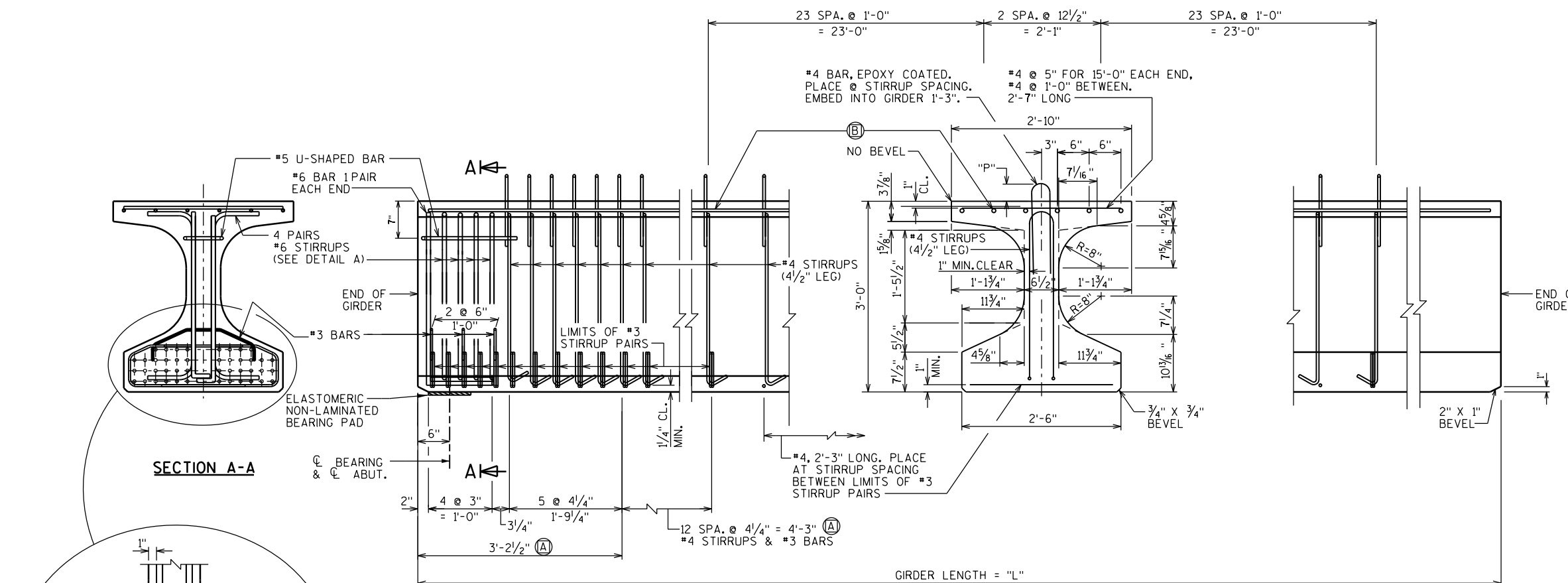
STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE SHEET 12.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

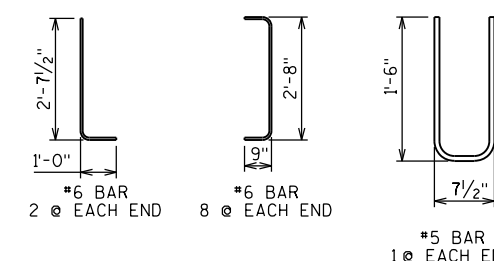
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.



THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN. VALUES INCLUDE A MAGNIFICATION FACTOR OF 1.4 TO ACCOUNT FOR CREEP BETWEEN RELEASE AND INSTALLATION.

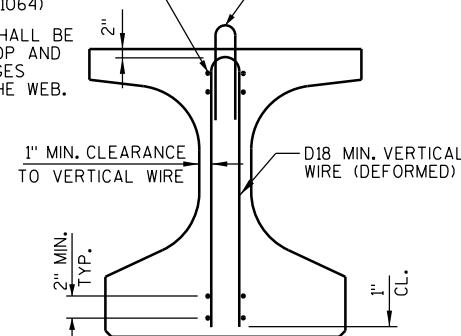
SPAN	CAMBER (IN.)
1	1 1/4

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

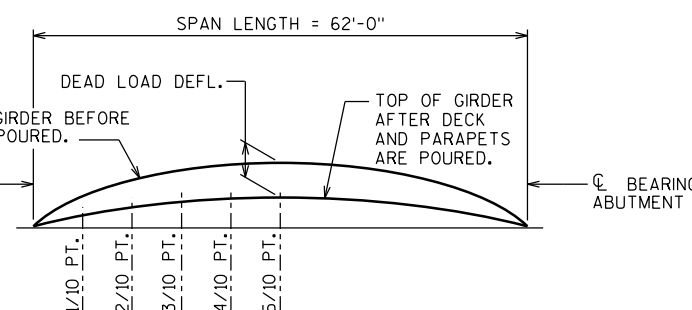


NO. 4 BAR, EPOXY COATED. PLACE AT STIRRUP SPACING REQUIRED FOR NON WWF STIRRUPS. EMBED INTO GIRDER 1'-3".

AREA OF HORIZ. WIRE SHALL BE > 40% OF VERT. WIRE AREA (ASTM A1064)
HORIZ. WIRES SHALL BE LOCATED IN TOP AND BOTTOM FLANGES AND NOT IN THE WEB.

**SECTION THRU GIRDER**

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A497 (Fy = 70 Ksi)

**DEAD LOAD DEFLECTION DIAGRAM**

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

GIRDER DATA																							
SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (P.S.I.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN					UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	5/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) * (IN.)	"A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS
1	1-4	63'-0"	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.2	6000	7.5"	7"	7.5"	0.6	-	-	-	-	-	16	4800

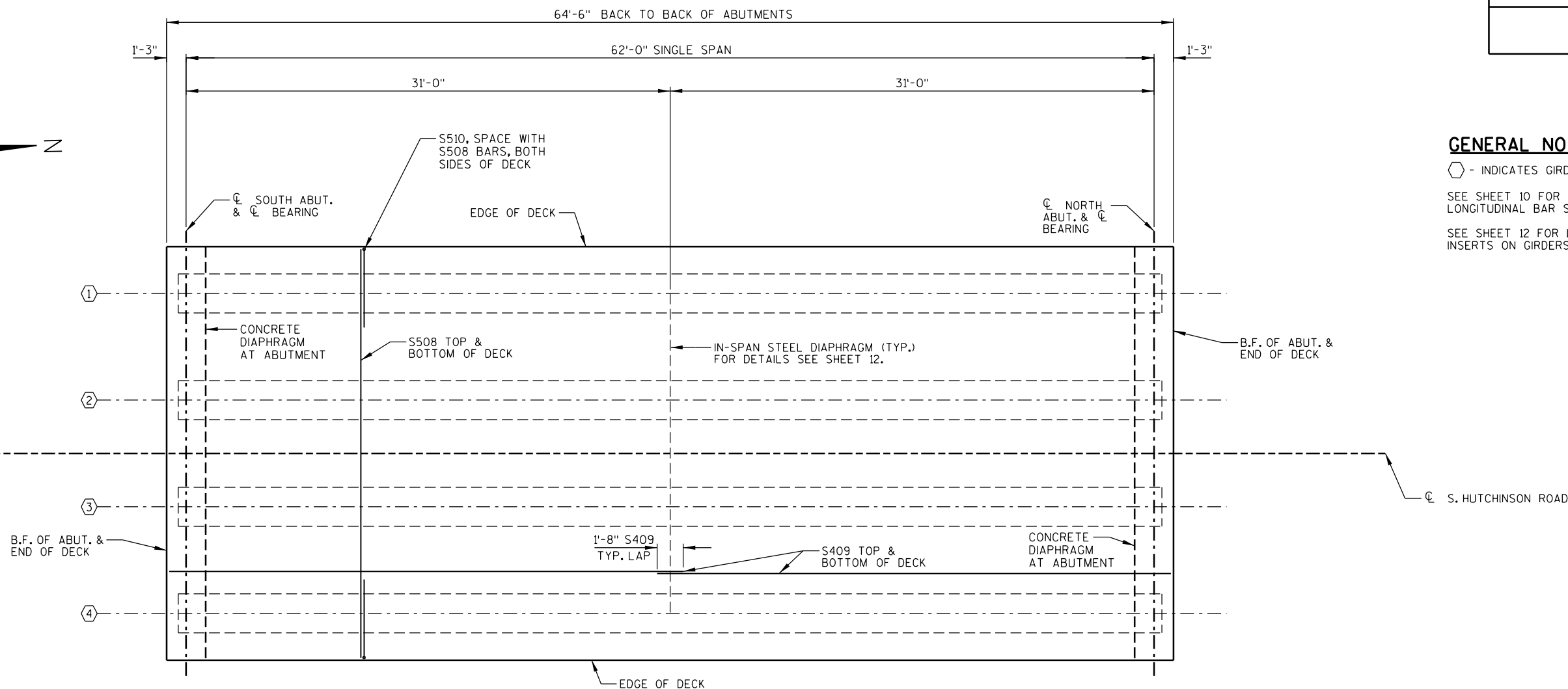
TYP. STRAND PATTERN

GENERAL NOTES

◻ - INDICATES GIRDER NUMBER

SEE SHEET 10 FOR TRANSVERSE AND LONGITUDINAL BAR SPACING.

SEE SHEET 12 FOR LOCATION OF DIAPHRAGM INSERTS ON GIRDERS.

**PLAN**

TO DETERMINE '+', ELEV. OF TOP OF GIRDERS AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF THE SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION (SEE SHEET 8)
- DECK THICKNESS

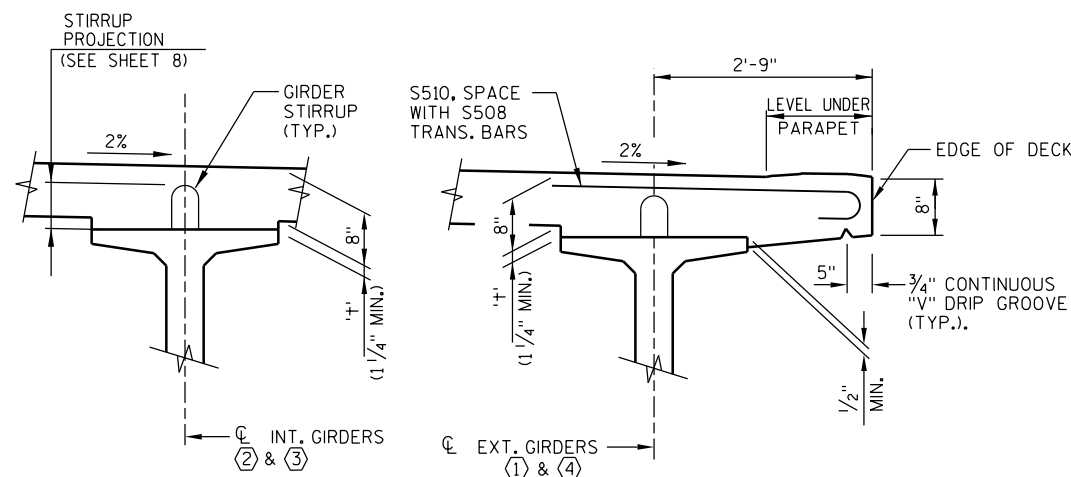
= HAUNCH HEIGHT '+'

IF 1 1/4" MINIMUM HAUNCH HEIGHT '+' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN AND PROFILE BY MORE THAN 1/2" OR IF 3" MINIMUM DECK EMBEDMENT OF THE BAR CANNOT BE OBTAINED.

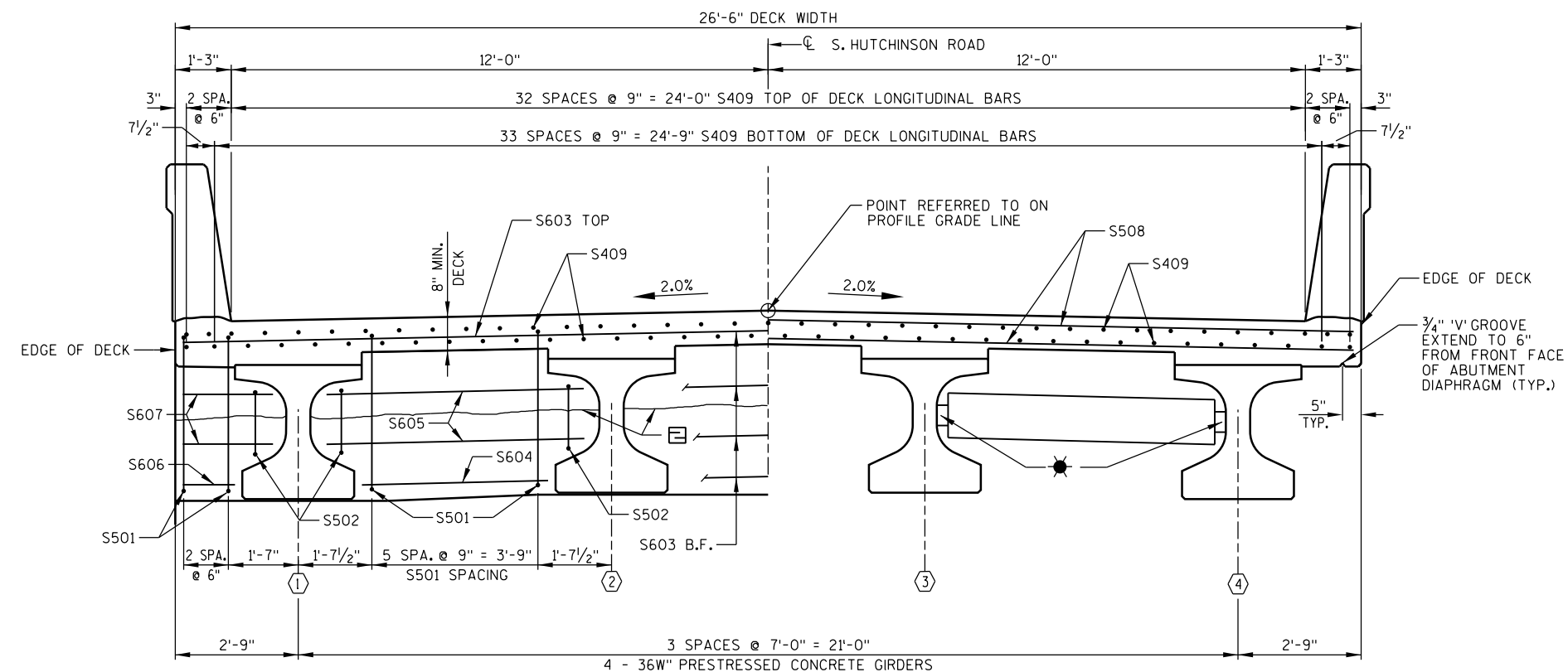
NOTE: AN AVERAGE HAUNCH ('+') OF 2 7/8" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES."

TOP OF DECK ELEVATIONS

LOCATION	SPAN POINT	EAST DECK EDGE	C/L GIRDER 4	C/L GIRDER 3	C/L S. HUTCHINSON ROAD	C/L GIRDER 2	C/L GIRDER 1	WEST DECK EDGE
S. ABUT.	1	1094.75	1094.81	1094.95	1095.02	1094.95	1094.81	1094.75
	1.1	1094.81	1094.86	1095.00	1095.07	1095.00	1094.86	1094.81
	1.2	1094.87	1094.92	1095.06	1095.13	1095.06	1094.92	1094.87
	1.3	1094.93	1094.99	1095.13	1095.20	1095.13	1094.99	1094.93
	1.4	1095.00	1095.06	1095.20	1095.27	1095.20	1095.06	1095.00
	1.5	1095.08	1095.13	1095.27	1095.34	1095.27	1095.13	1095.08
	1.6	1095.16	1095.21	1095.35	1095.42	1095.35	1095.21	1095.16
	1.7	1095.24	1095.29	1095.43	1095.50	1095.43	1095.29	1095.24
	1.8	1095.33	1095.38	1095.52	1095.59	1095.52	1095.38	1095.33
	1.9	1095.42	1095.47	1095.61	1095.68	1095.61	1095.47	1095.42
N. ABUT.	2	1095.52	1095.57	1095.71	1095.78	1095.71	1095.57	1095.52

**DECK HAUNCH DETAIL**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-127			
DRAWN BY RLR		PLANS CK'D. KHB	
SUPERSTRUCTURE		SHEET 9 OF 12	



AT ABUTMENTS

IN SPAN

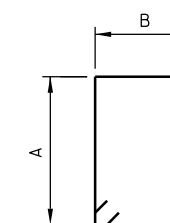
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

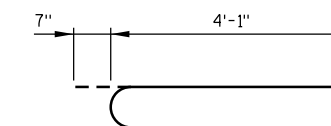
BILL OF BARS (COATED) 10,390 LBS.

MARK	NUMBER REQ'D.	LENGTH	BENT	DESCRIPTION
S501	48	12'-0"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S502	16	7'-8"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S603	10	26'-2"		DIAPH. @ ABUT. - B.F. & TOP - HORIZ.
S604	6	4'-2"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S605	12	5'-9"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S606	4	1'-2"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S607	8	2'-0"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S508	183	26'-2"		DECK - TOP & BOTTOM - TRANS.
S409	146	32'-11"		DECK - TOP & BOTTOM - LONGIT.
S510	184	4'-8"	X	DECK - TOP - EDGE - TRANS.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR REINFORCEMENT.

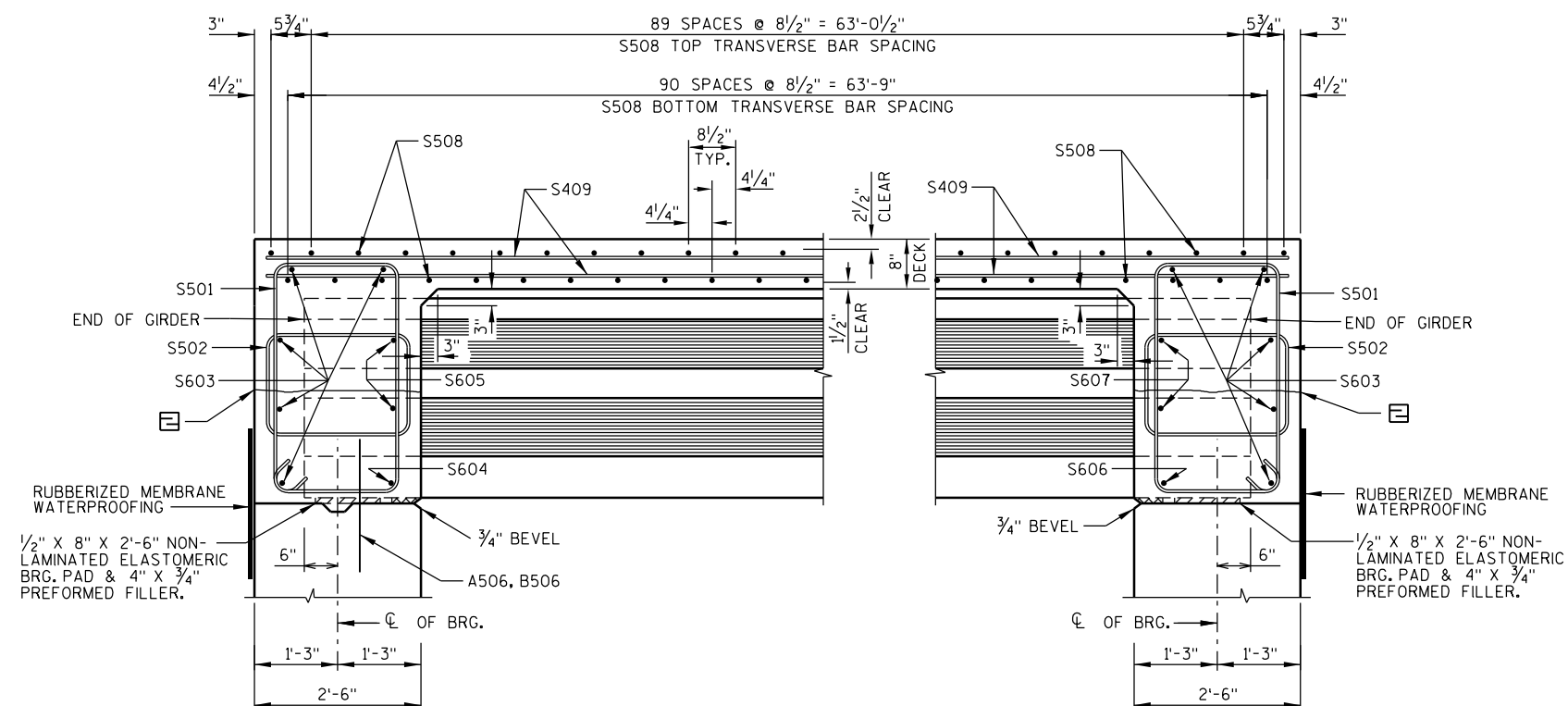


MARK	A	B
S501	3'-6"	2'-2"
S502	1'-4"	2'-2"



S510

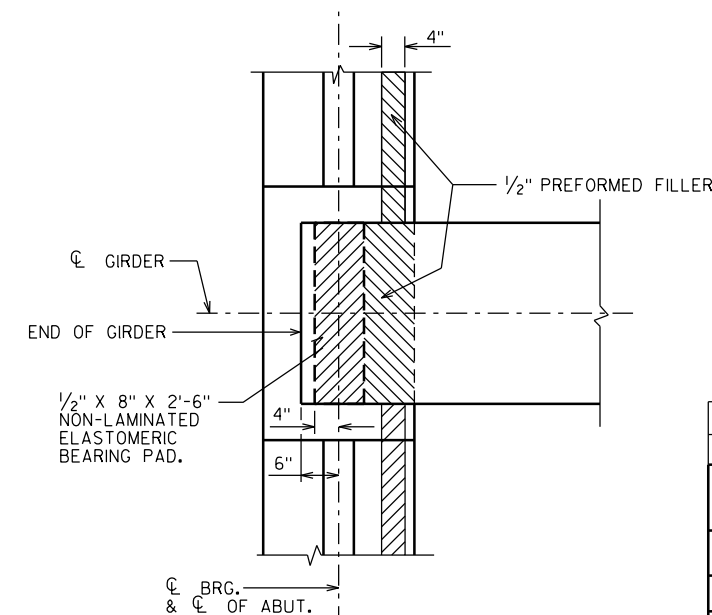
STD. 180° HOOK



AT ABUTMENT INTERIOR BAYS

AT ABUTMENT ENDS

PART LONGITUDINAL SECTION

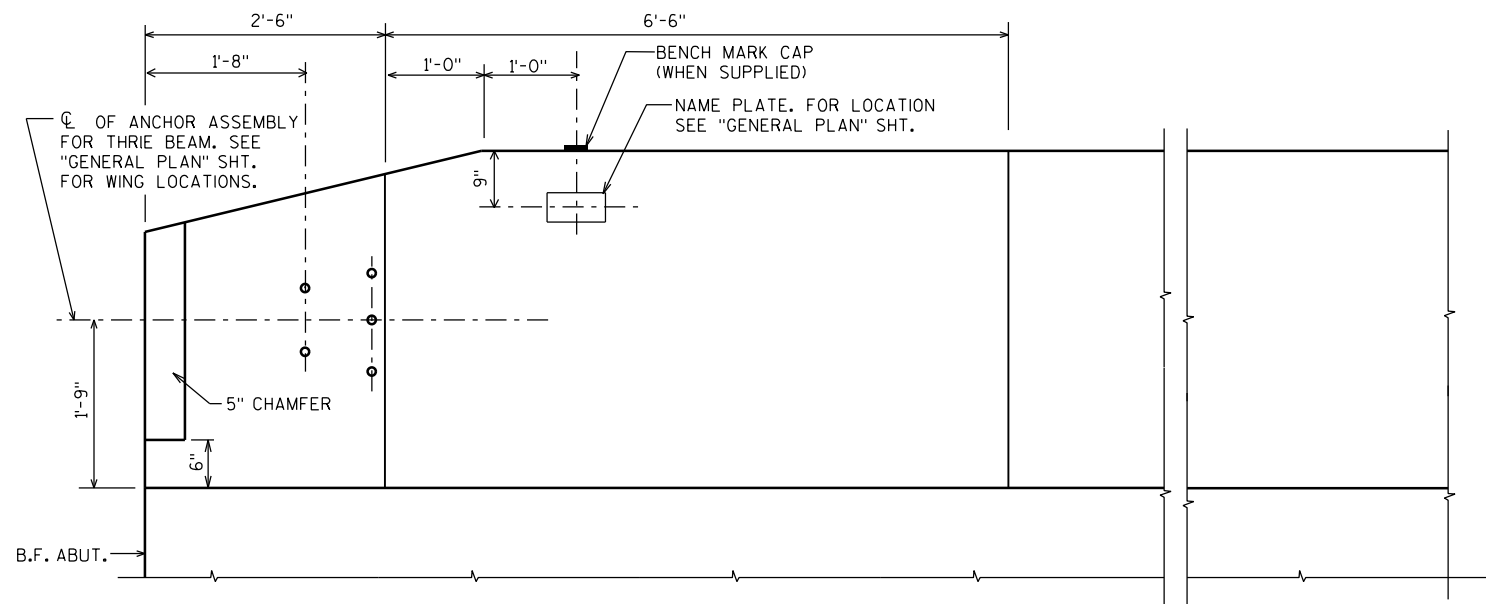


BEARING PAD DETAIL

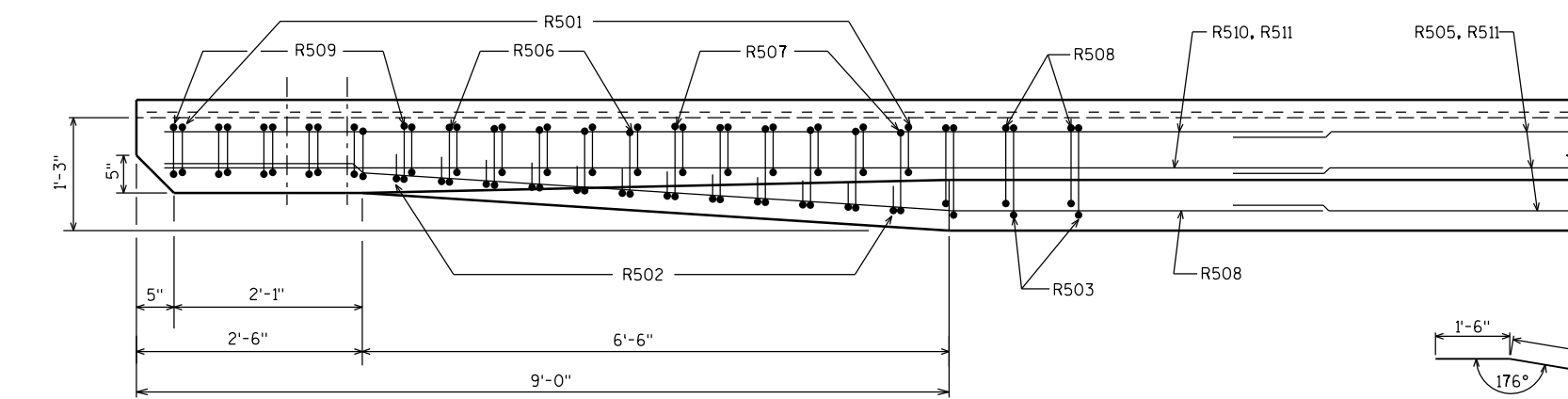
LEGEND

- - INDICATES GIRDER NUMBER
- - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDERS. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- ★ - FOR DETAILS OF STEEL DIAPHRAGMS AND DIAPHRAGM INSERTS, SEE SHEET 12. FOR LAYOUT OF STEEL DIAPHRAGMS, SEE PLAN SHEET 9.
- F.F. - FRONT FACE
- B.F. - BACK FACE

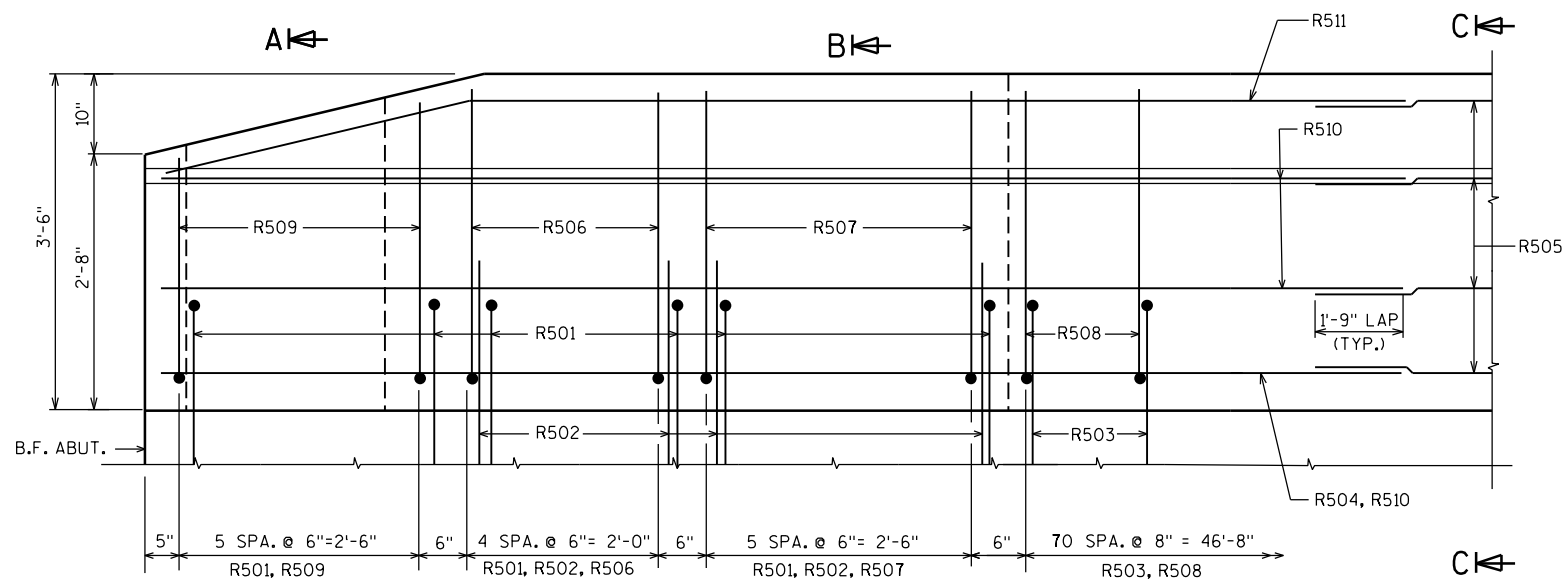
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-127			
DRAWN BY RLR		PLANS CK'D. KHB	
SUPERSTRUCTURE SECTIONS & DETAILS			SHEET 10 OF 12



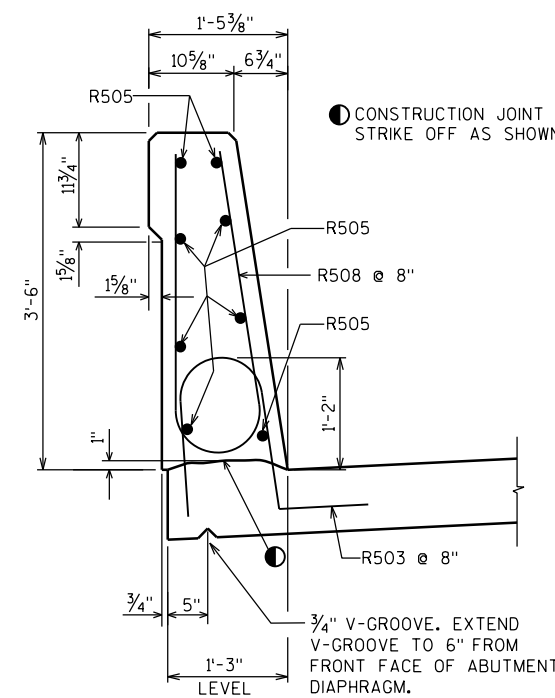
INSIDE ELEVATION



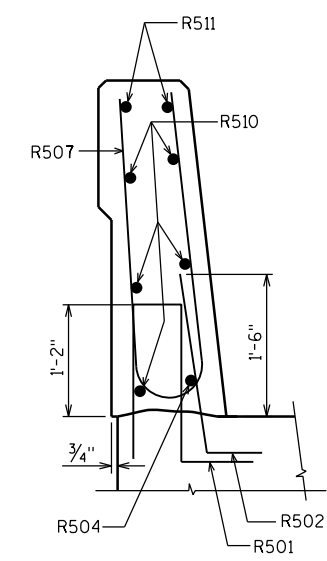
PLAN



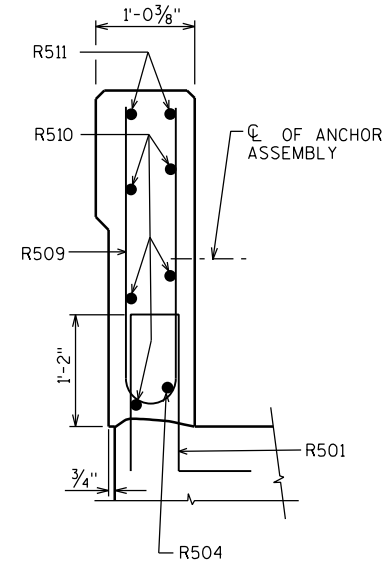
OUTSIDE ELEVATION



SECTION C-C
THRU PARAPET



SECTION B-B
AT END OF PARAPET

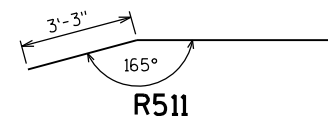
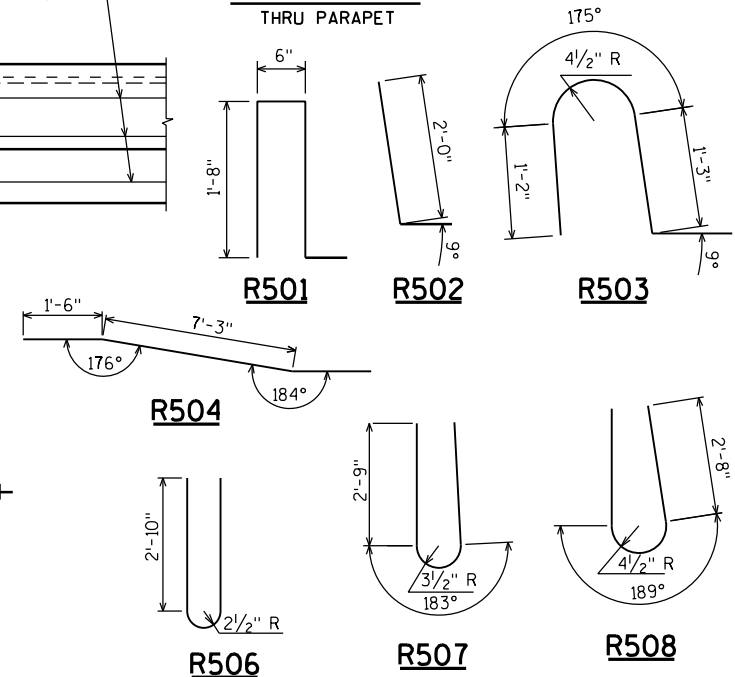


SECTION A-A
AT END OF PARAPET

BILL OF BARS (COATED) 3,650 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	68	4'-4"	X		DECK & PARAPET END - STIRRUP - VERT.
R502	48	2'-9"	X		DECK & PARAPET END - VERT.
R503	142	4'-5"	X		DECK & PARAPET - STIRRUP - VERT.
R504	4	12'-11"	X		PARAPET END - BOTTOM - LONGIT.
R505	16	42'-0"			PARAPET - LONGIT.
R506	20	6'-5"	X		PARAPET END - STIRRUP - VERT.
R507	24	6'-6"	X		PARAPET END - STIRRUP - VERT.
R508	142	6'-8"	X		PARAPET - STIRRUP - VERT.
R509	24	5'-5"	X		PARAPET END - STIRRUP - VERT.
R510	20	12'-10"			PARAPET TOP - LONGIT.
R511	8	12'-11"	X		PARAPET END - TOP - LONGIT.

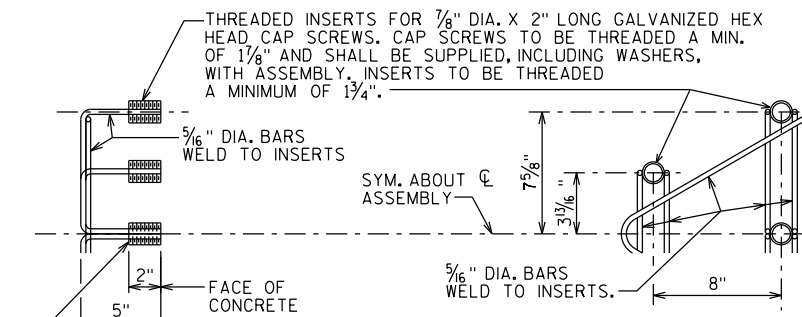
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR. EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BEND BAR AFTER CUTTING.



BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-54-127	
DRAWN BY		RLR	PLANS CK'D. KHB
SINGLE SLOPE PARAPET 42SS		SHEET 11 OF 12	

NOTES

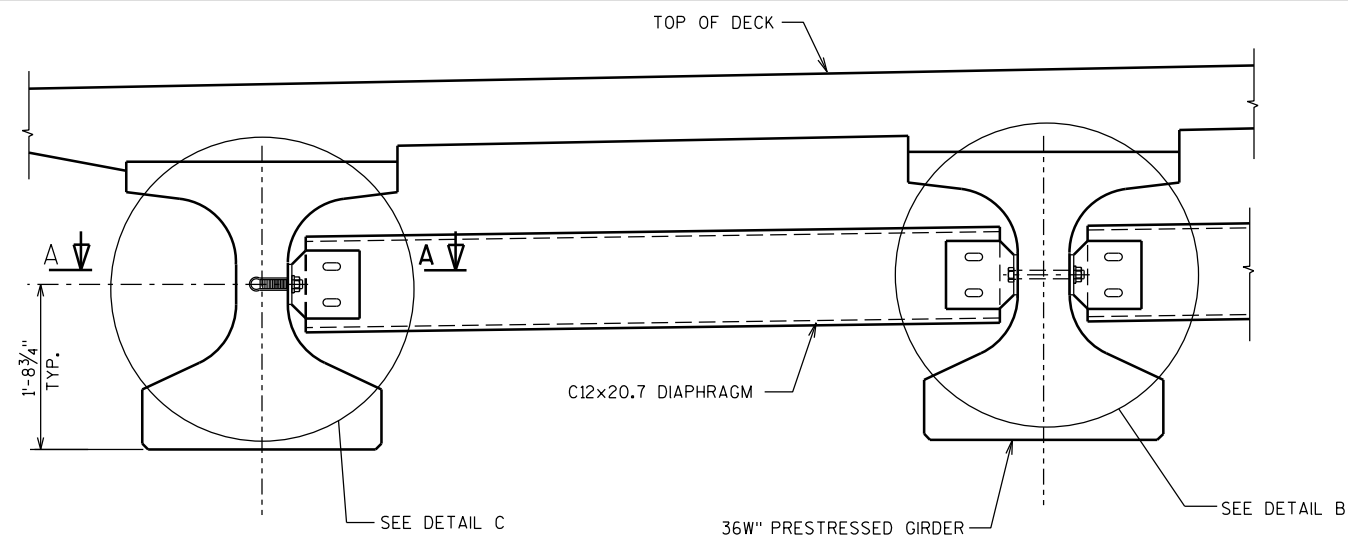
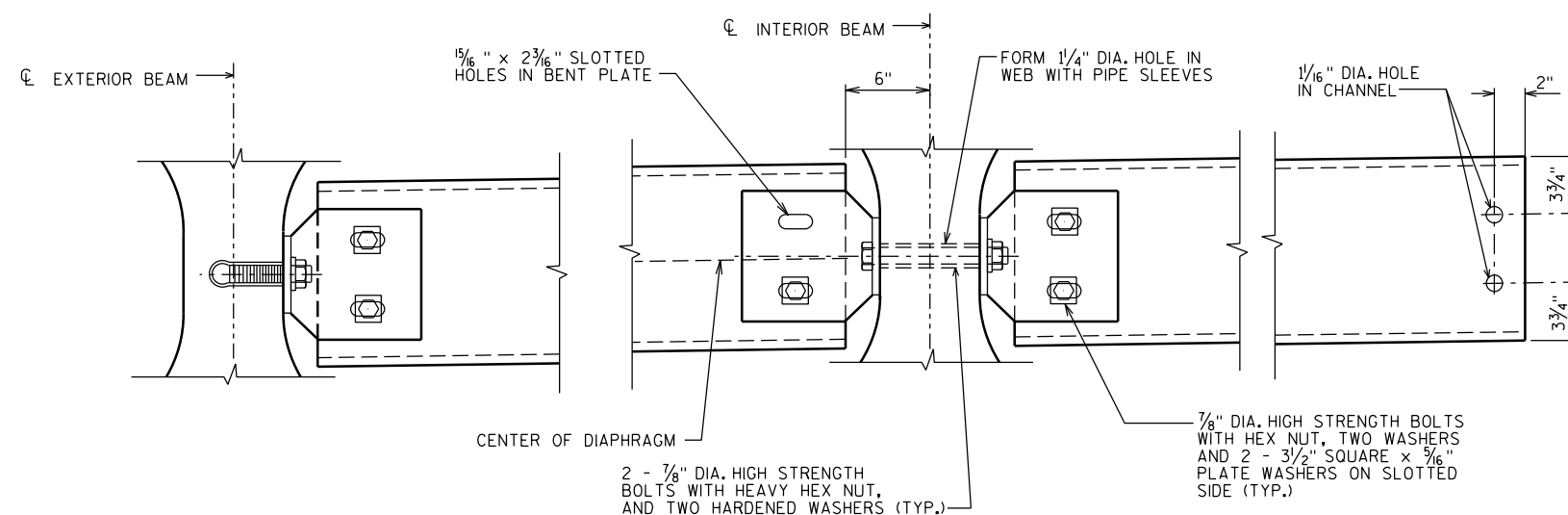
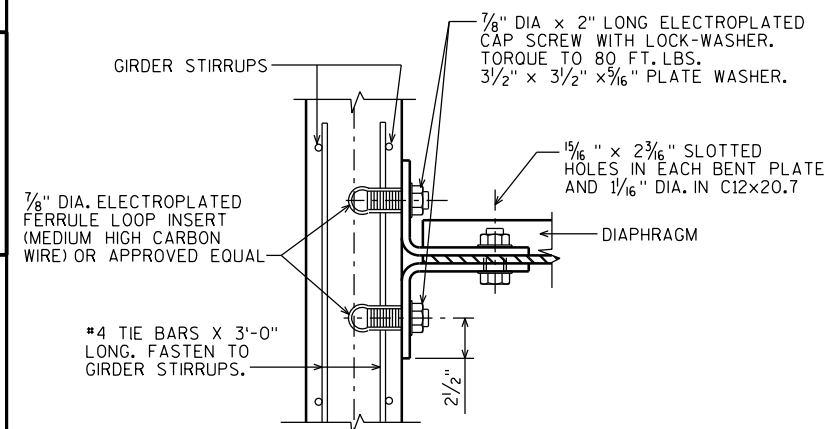
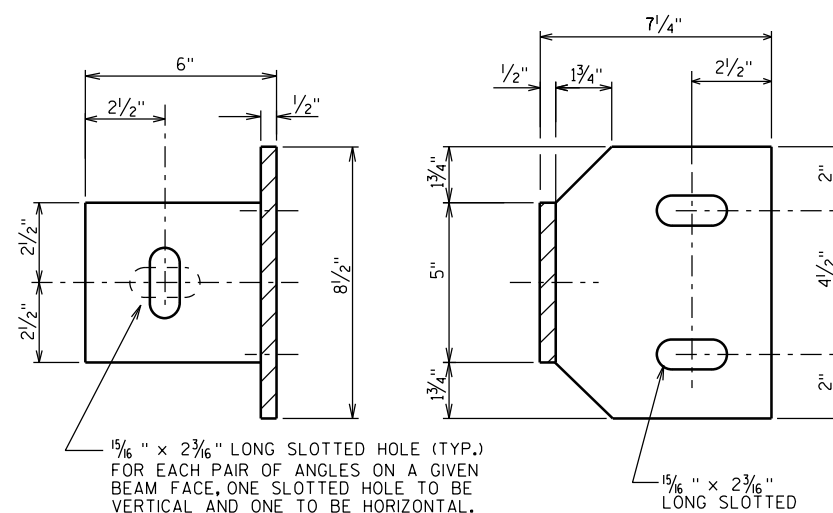
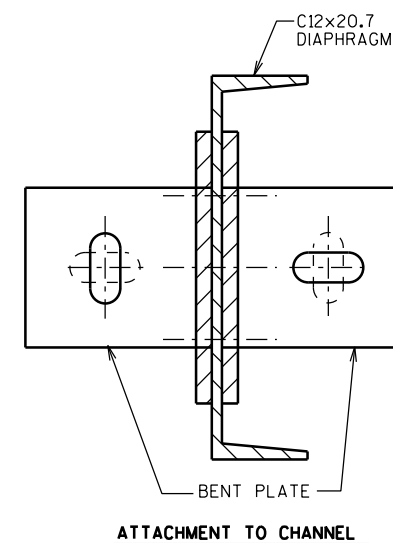
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-54-127", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

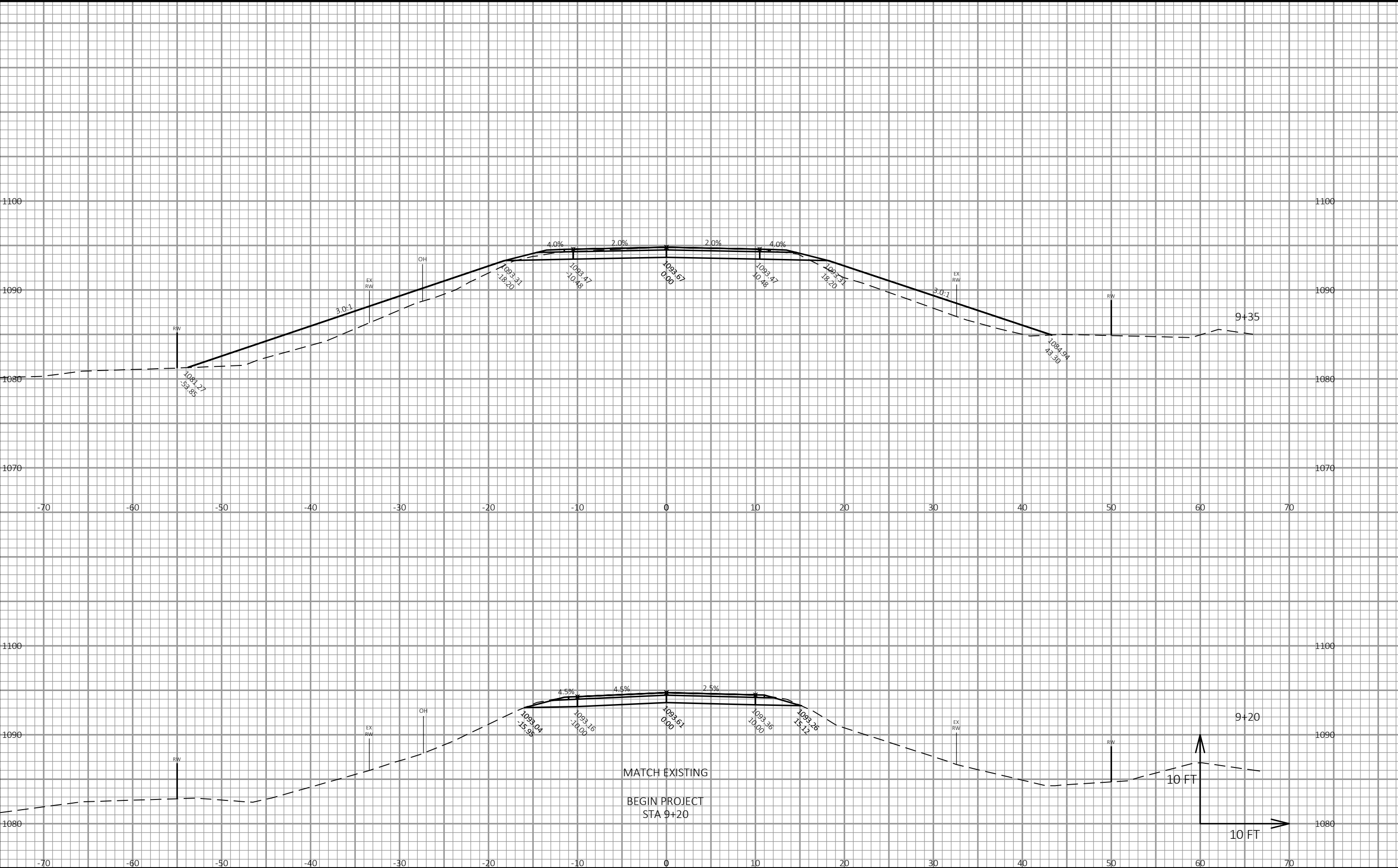
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS $\frac{1}{4}$ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

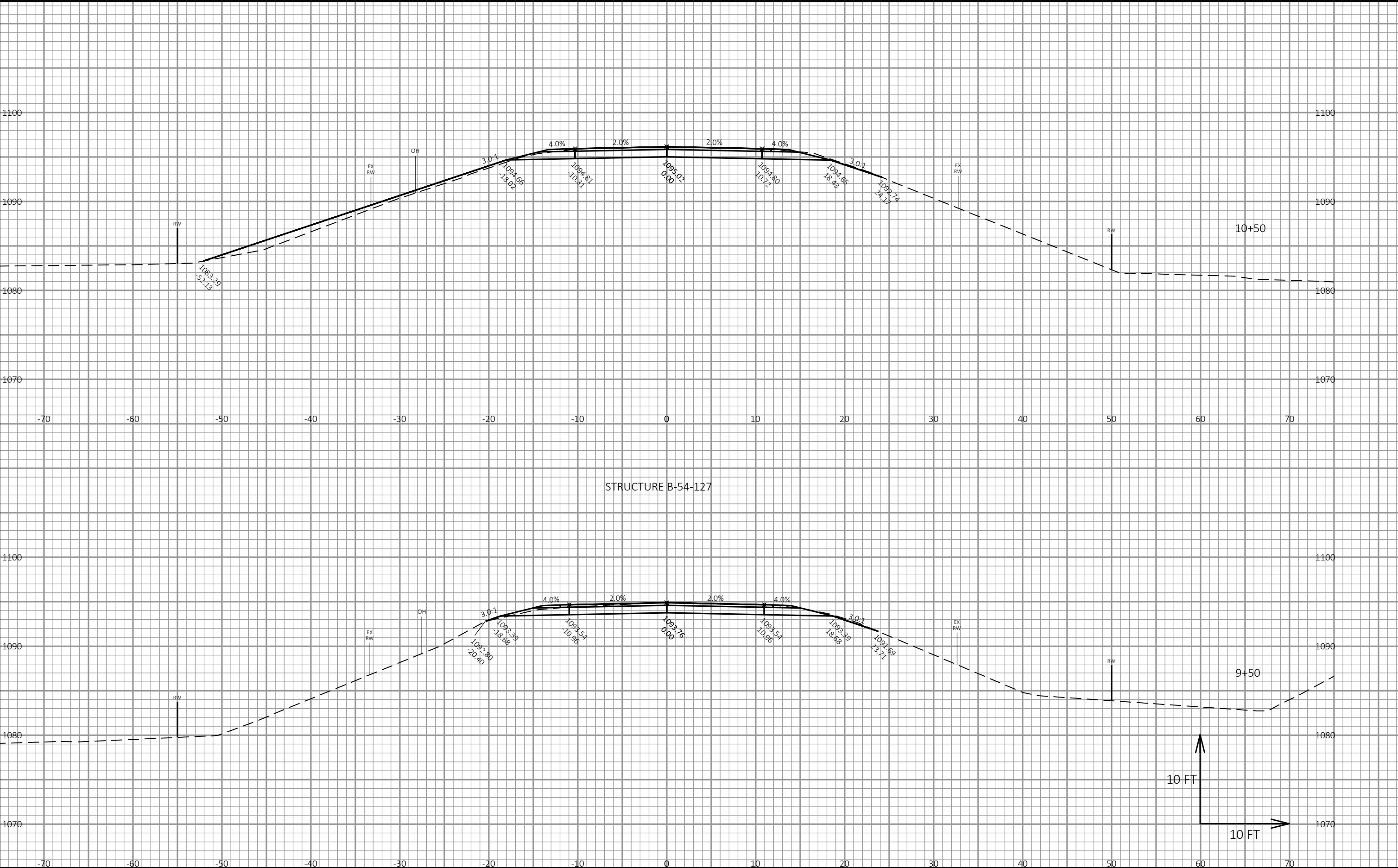
EXTERIOR GIRDERINTERIOR GIRDER**PART TRANSVERSE SECTION AT DIAPHRAGM**DETAIL CDETAIL B**SECTION A-A**
(FOR EXTERIOR ATTACHMENT)BEAM FACEDIAPHRAGM FACEATTACHMENT TO CHANNEL

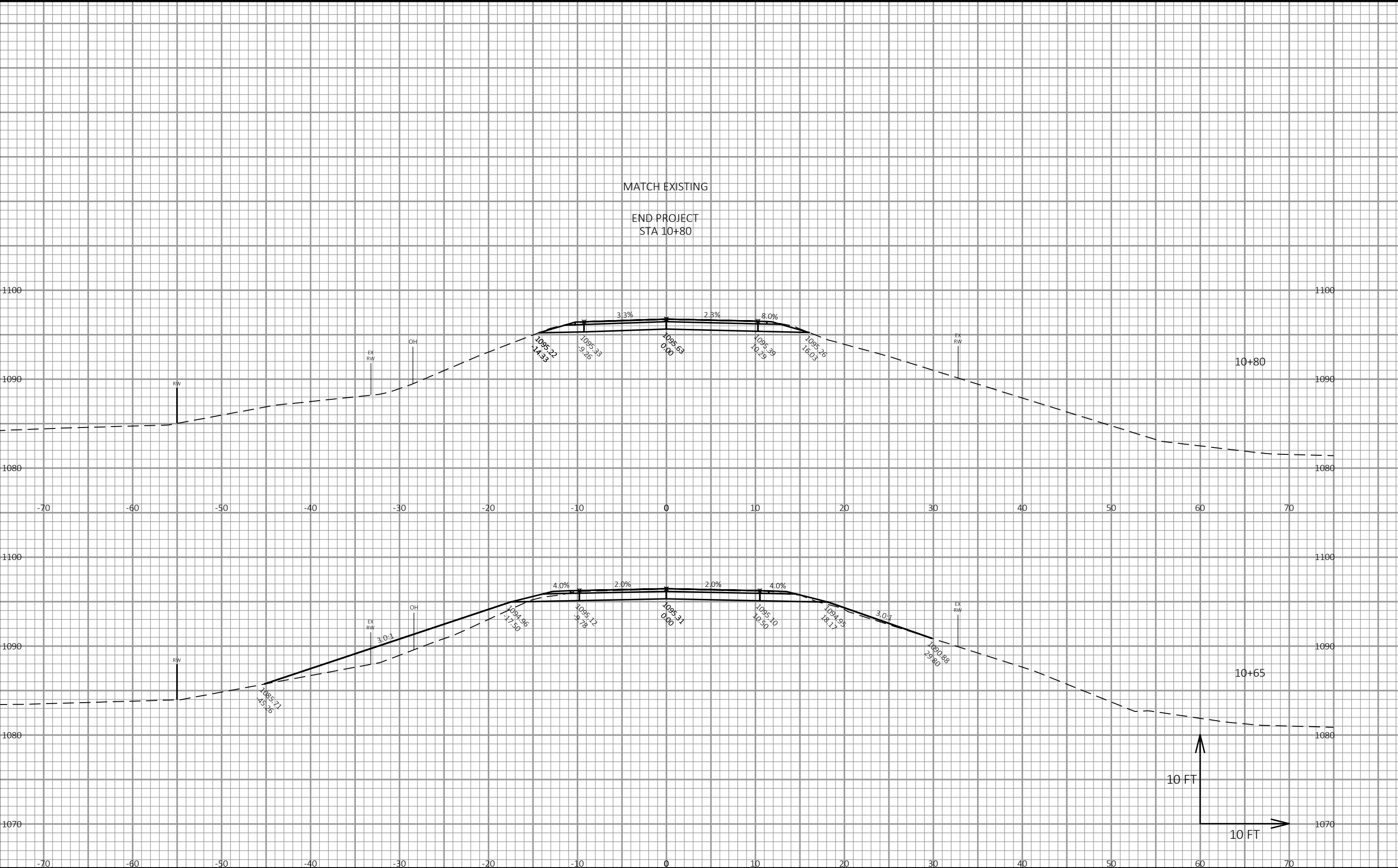
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-127			
DRAWN BY RLR		PLANS CK'D. KHB	
STEEL DIAPHRAGM			SHEET 12 OF 12

PROJECT I.D. 8439-00-72 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
9+20.00	17	0	25	33	-16	16
9+35.00	18	0	25	33	-15	15
9+50.00	20	0	0	0	20	-20
9+65.75	STRUCTURE B-54-127					
10+30.25	25	0	12	16	9	-9
10+50.00	18	0	15	20	-2	2
10+65.00	16	0	11	14	2	-2
10+80.00						
SUBTOTALS						
S. APPROACH	55	0	50	66	-11	11
N. APPROACH	59	0	38	50	9	-9
UNUSABLE PAVEMENT (3)						39
TOTALS	114	0	88	116	-2	41
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY. (2) - FILL EXPANSION 30% (3) - EXISTING PAVEMENT BASED ON AVE THK OF 5.5" AT THE S. APPR AND 6.5" AT THE N. APPR OF ASPHALT PER BORING LOG.						







Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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