

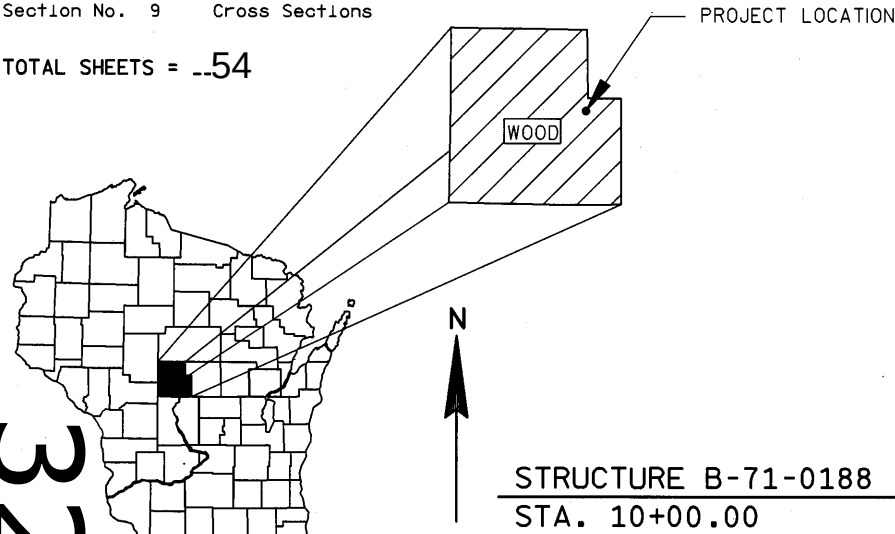
PROJECT ID:
WITH: N/A

6800-02-71

COUNTY: **WOOD**

WOOD

TOTAL SHEETS = 54



A.A.D.T.	2013	=	720
A.A.D.T.	2033	=	800
D.H.V.	2033	=	136
D.D.	2013	=	60/40
T.	2033	=	7.3%
DESIGN SPEED		=	60 MPH
ESALS		=	131,400

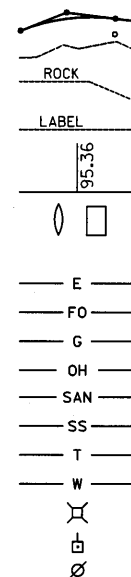
PLAN
CORPORATE LIMITS
PROPERTY LINE
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT
 REFERENCE LINE
 EXISTING CULVERT
 PROPOSED CULVERT
 (Box or Pipe)
 COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA

PROFILE
GRADE LINE
ORIGINAL GROUND
MARSH OR ROCK PROFILE
(To be noted as such)
SPECIAL DITCH
GRADE ELEVATION
CULVERT (Profile View)
UTILITIES
ELECTRIC
FIBER OPTIC
GAS
OVERHEAD
SANITARY SEWER
STORM SEWER
TELEPHONE
WATER
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

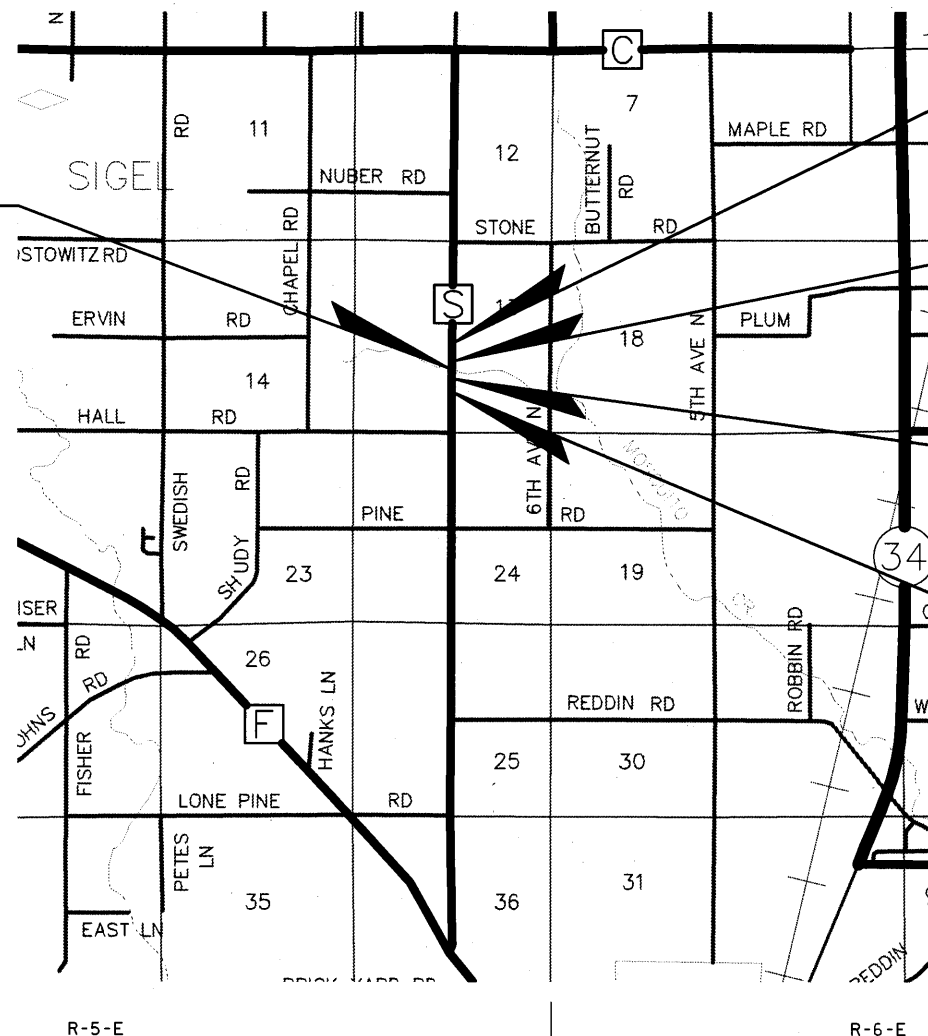


PLAN OF PROPOSED IMPROVEMENT

CTH F - CTH C
BR MOSQUITO CREEK BRIDGE, TN SIGEL
CTH S
WOOD COUNTY

STATE PROJECT NUMBER

6800-02-71



LAYOUT

SCALE 0 0.5 MI. 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.061 MI.

END CONSTRUCTION 6800-02-71

STA. 12+50.00
Y = 481,573.305
X = 721,890.765

END PROJECT 6800-02-71

STA. 11+60.00
Y = 481,483.311
X = 721,889.790

BEGIN PROJECT 6800-02-71

STA. 8+40.00
Y = 481,163.329
X = 721,886.323

BEGIN CONSTRUCTION 6800-02-71

STA. 7+50.00
Y = 481,073.335
X = 721,885.348

STATE PROJECT

6800-02-71

FEDERAL PROJECT

PROJECT

CONTRACT

ACCEPTED FOR

COUNTY of WOOD

DATE: 10-24-12 Debra Kaseem
COUNTY HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

Mead & Hunt



WISCONSIN

WILLIAM A.
KRATT
E-40457
LA CROSSE
WI

PROFESSIONAL ENGINEER

10/23/12 William A. Kratt

TE: (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MEAD & HUNT, INC.
Designer	MEAD & HUNT, INC.
Management Consultant	CEDAR CORPORATION
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 10-30-12 J.M. [Signature]
(Management Consultant Signature)

FILE NAME : X:\23148-10\10001\TECH\CADD\DRAWINGS\010101_TI.DWG

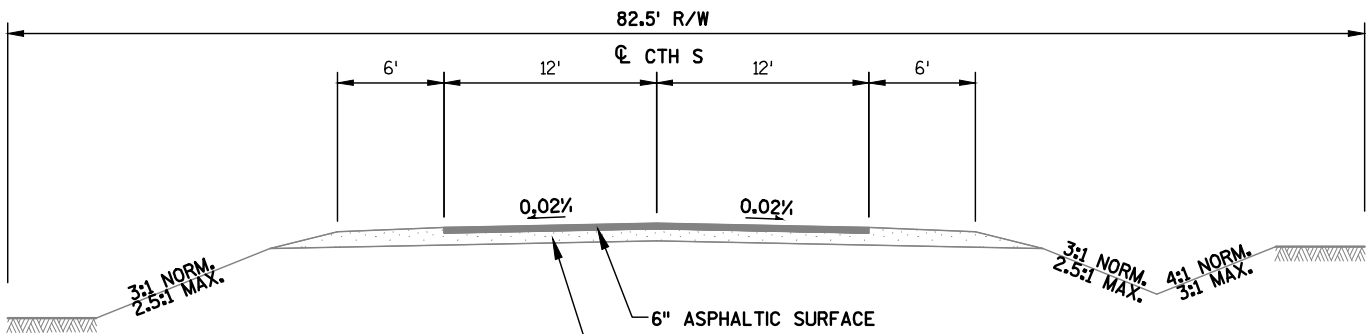
PLOT DATE : 4/13/2011 9:50 AM

PLOT BY : WILL KRATT

PLOT NAME :

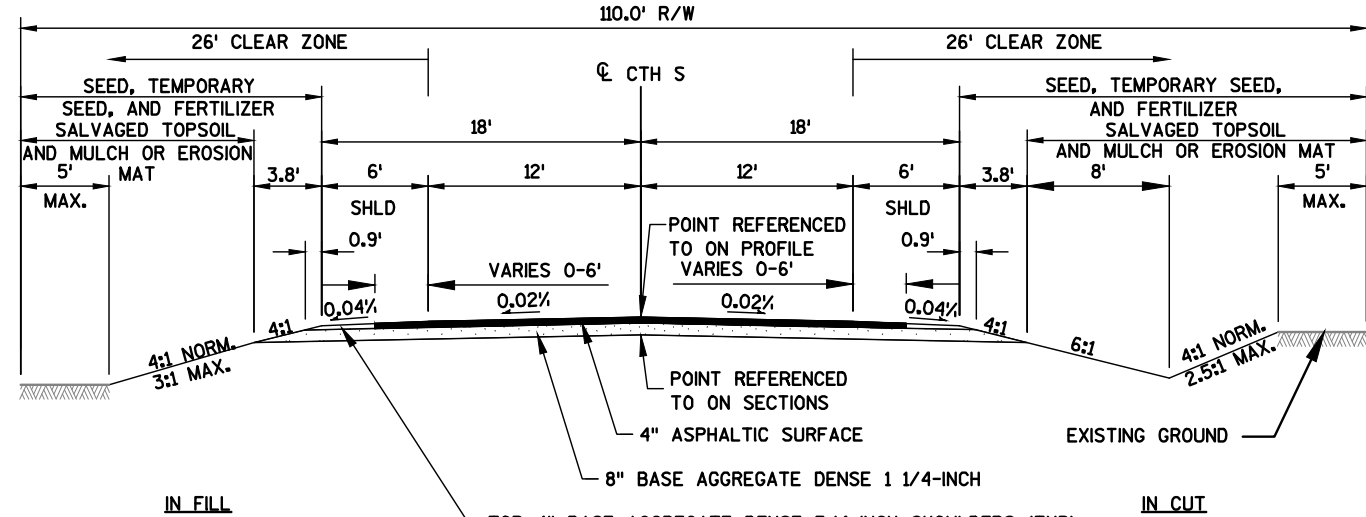
WISDOT/CADDS SHEET 15

11



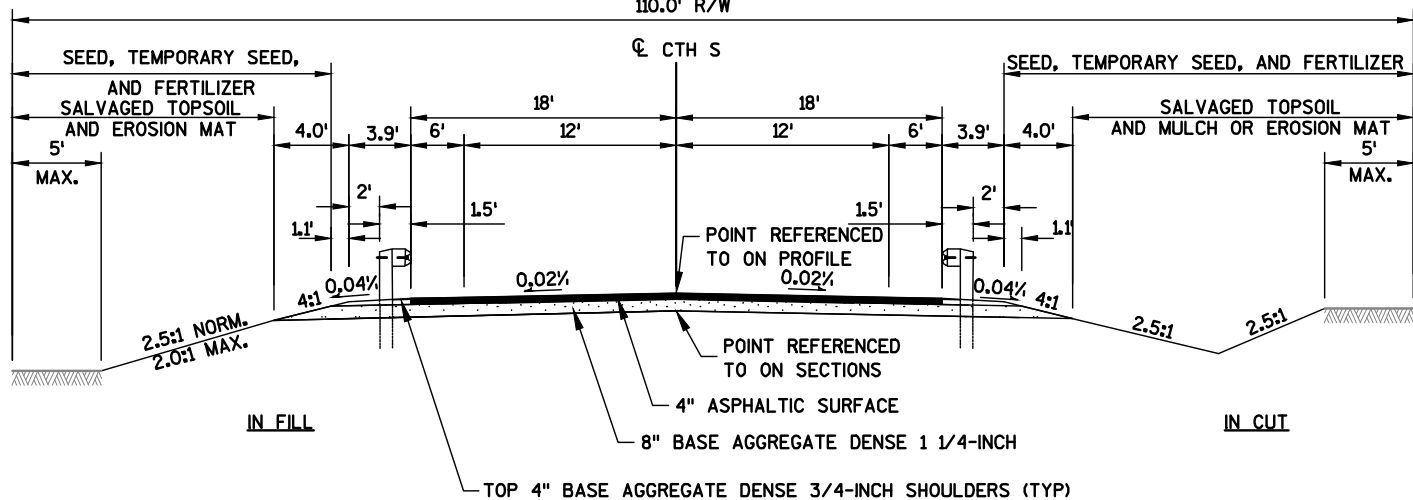
TYPICAL EXISTING SECTION

(CTH S)



TYPICAL FINISHED SECTION

(CTH S)
STA 8+40 - 8+66
STA 11+34 - 11+60



TYPICAL FINISHED BEAM GUARD SECTION

(CTH S)
STA 8+66 - 9+79
STA 10+21 - 11+34

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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

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

4-INCH ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾-INCH UPPER LAYER AND A 2¼-INCH LOWER LAYER.

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

WETLANDS EXIST IN THE PROJECT AREA. THE CONTRACTOR SHALL NOT DISTURB ANY WETLANDS OUTSIDE OF THE SLOPE INTERCEPTS.

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

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION.

WISDOT WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

SAWCUT EXISTING ASPHALTIC PAVEMENT ALONG SHOULDER WIDENING AREAS AS DIRECTED BY THE ENGINEER IN THE FIELD.

"REMOVING ASPHALTIC SURFACE" IS PAYMENT FOR REMOVING EXISTING ASPHALTIC PAVEMENT NEEDED FOR SHOULDER WIDENING. ALL OTHER EXISTING ASPHALTIC PAVEMENT REMOVAL SHALL BE PAID AS "EXCAVATION COMMON"

SHRINKAGE IS ESTIMATED AT 30%.

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NO	NUMBER
ASPH	ASPHALTIC	PI	POINT OF INTERSECTION
BM	BENCH MARK	PL	PROPERTY LINE
CL	CENTERLINE	RHF	RIGHT-HAND FORWARD
CWT	HUNDREDWEIGHT	RT	RIGHT
CY	CUBIC YARD	R/W	RIGHT-OF-WAY
DHV	DESIGN HOURLY VOLUME	SF	SQUARE FOOT
DWY	DRIVEWAY	SHLDR	SHOULDER
EL	ELEVATION	STA	STATION
EXC	EXCAVATION	SY	SQUARE YARD
FT	FOOT	T	TRUCKS (PERCENT OF)
FTG	FOOTING	TLE	TEMPORARY LIMITED EASEMENT
LB	POUND	TYP	TYPICAL
LF	LINEAR FOOT	VAR	VARIABLE
LHF	LEFT-HAND FORWARD	VC	VERTICAL CURVE
LS	LUMP SUM	VPC	VERTICAL POINT OF CURVE
LT	LEFT	VPI	VERTICAL POINT OF INTERSECTION
		VPT	VERTICAL POINT OF TANGENCY



Call 811 3 Work Days Before You Dig
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Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

UTILITIES

ALLIANT ENERGY (ELECTRIC)
2710 JEFFERSON STREET
WISCONSIN RAPIDS, WI 54495
ATTN: TRUDI BAKKEN
TELEPHONE: (715) 424-7048
EMAIL: TRUDIBAKKEN@ALLIANTENERGY.COM

SOLARUS (TELEPHONE AND FIBER OPTIC)
P.O. BOX 8045
WISCONSIN RAPIDS, WI 54495-8045
ATTN: DENNIS PIERCE
TELEPHONE: (715) 421-8172
EMAIL: PIERCE@SOLARUS.NET

ATC (ELECTRIC TRANSMISSION)
801 O'KEEFE ROAD
P.O. BOX 6113
DE PERE, WI 54115-6113
ATTN: MIKE OLSEN
TELEPHONE: (920) 338-6582
EMAIL: MOLSEN@ATCLLC.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
WEST CENTRAL REGION
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
ATTN: MARC HERSHFELD
TELEPHONE: (715) 421-7867
EMAIL: MARC.HERSFELD@WISCONSIN.GOV

WOOD COUNTY

WOOD COUNTY HIGHWAY DEPARTMENT
555 17TH AVENUE NORTH
WISCONSIN RAPIDS, WI 54495
ATTN: DOUGLAS J. PASSINEAU
TELEPHONE: (715) 421-8875
EMAIL: DPASSINEAU@CO.WOOD.WI.US

DESIGN CONSULTANT

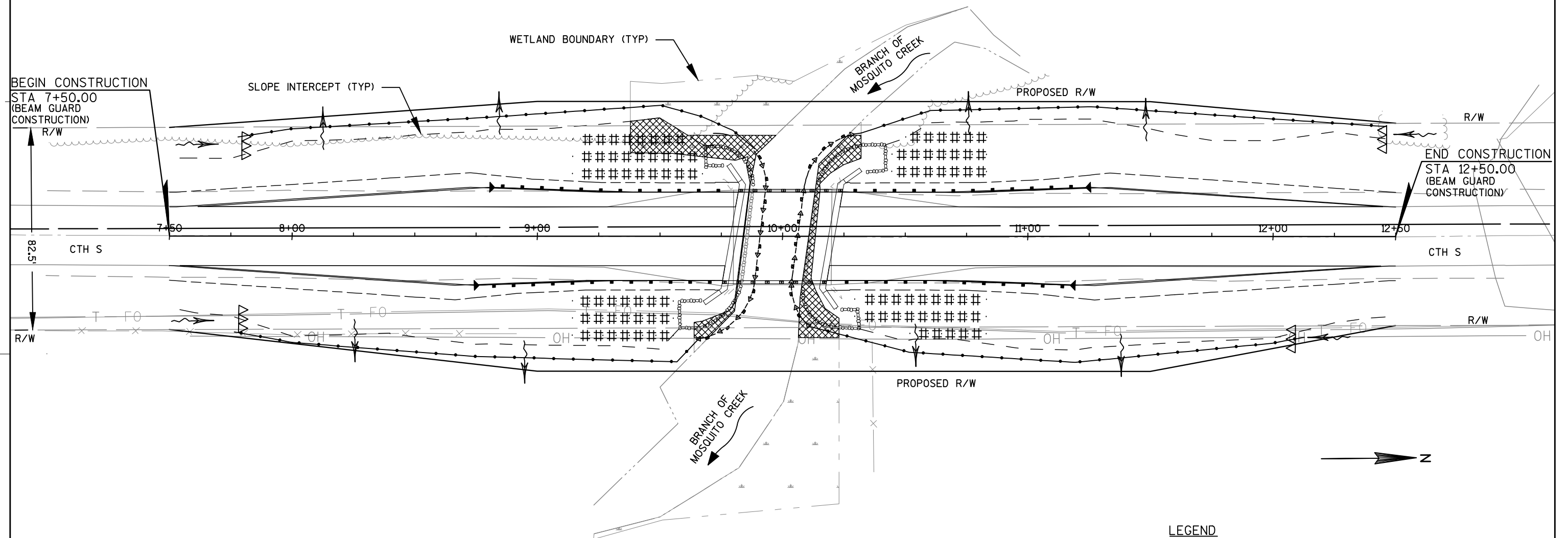


6501 WATTS ROAD
MADISON, WI 53719
ATTN: GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380
EMAIL: GARY.RUCHTI@MEADHUNT.COM

** DENOTES UTILITIES THAT ARE
NOT DIGGERS HOTLINE MEMBERS.

2

2



PROJECT NO:6800-02-71

HWY: CTH S

COUNTY: WOOD

EROSION CONTROL

SHEET	----	E
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FILE NAME : X:\23148-10\10001\TECH\CADD\DRAWINGS\022001_EC.DWG

PLOT DATE : 10/4/2012 2:36 PM

PLOT BY : WILL KRATT

PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

DATE 22JAN13		E S T I M A T E O F Q U A N T I T I E S			
LINE				6800-02-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	CLEARING **P**	STA	3.000	3.000
0020	201.0205	GRUBBING **P**	STA	3.000	3.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 10+00	LS	1.000	1.000
0040	204.0110	REMOVING ASPHALTIC SURFACE	SY	40.000	40.000
0050	205.0100	EXCAVATION COMMON **P**	CY	440.000	440.000
0060	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-71-0188	LS	1.000	1.000
0070	208.0100	BORROW **P**	CY	1,060.000	1,060.000
0080	210.0100	BACKFILL STRUCTURE	CY	280.000	280.000
0090	213.0100	FINISHING ROADWAY (PROJECT) 01. 6800-02-71	EACH	1.000	1.000
0100	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	100.000	100.000
0110	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	890.000	890.000
0120	455.0605	TACK COAT **P**	GAL	32.000	32.000
0130	465.0105	ASPHALTIC SURFACE	TON	290.000	290.000
0140	502.0100	CONCRETE MASONRY BRIDGES **P**	CY	189.000	189.000
0150	502.3200	PROTECTIVE SURFACE TREATMENT **P**	SY	212.000	212.000
0160	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES **P**	LB	5,600.000	5,600.000
0170	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES **P**	LB	25,050.000	25,050.000
0180	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-71-0188	LS	1.000	1.000
0190	516.0500	RUBBERIZED MEMBRANE WATERPROOFING **P**	SY	24.000	24.000
0200	550.0500	PILE POINTS	EACH	16.000	16.000
0210	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	640.000	640.000
0220	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH **P**	LF	30.000	30.000
0230	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH **P**	LF	124.000	124.000
0240	614.2300	MGS GUARDRAIL 3 **P**	LF	50.000	50.000
0250	614.2500	MGS THRIE BEAM TRANSITION **P**	LF	157.600	157.600
0260	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0270	619.1000	MOBILIZATION	EACH	1.000	1.000
0280	625.0500	SALVAGED TOPSOIL **P**	SY	1,910.000	1,910.000
0290	627.0200	MULCHING	SY	2,860.000	2,860.000
0300	628.1504	SILT FENCE	LF	1,030.000	1,030.000
0310	628.1520	SILT FENCE MAINTENANCE	LF	2,060.000	2,060.000
0320	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0330	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0340	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	560.000	560.000
0350	628.6005	TURBIDITY BARRIERS	SY	140.000	140.000
0360	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0370	629.0210	FERTILIZER TYPE B	CWT	2.000	2.000
0380	630.0110	SEEDING MIXTURE NO. 10	LB	50.000	50.000
0390	633.5100	MARKERS ROW	EACH	8.000	8.000
0400	638.2602	REMOVING SIGNS TYPE II	EACH	4.000	4.000
0410	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0420	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0430	643.0100	TRAFFIC CONTROL (PROJECT) 01. 6800-02-71	EACH	1.000	1.000
0440	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,278.000	1,278.000
0450	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,988.000	1,988.000
0460	643.0900	TRAFFIC CONTROL SIGNS	DAY	994.000	994.000
0470	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	360.000	360.000
0480	646.0106	PAVEMENT MARKING EPOXY 4-INCH **P**	LF	1,400.000	1,400.000
0490	650.4500	CONSTRUCTION STAKING SUBGRADE **P**	LF	278.000	278.000

DATE 22JAN13			E S T I M A T E O F Q U A N T I T I E S		
LINE					6800-02-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0500	650.5000	CONSTRUCTION STAKING BASE **P**	LF	278.000	278.000
0510	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-71-0188	LS	1.000	1.000
0520	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 6800-02-71	LS	1.000	1.000
0530	650.9920	CONSTRUCTION STAKING SLOPE STAKES **P**	LF	458.000	458.000
0540	690.0150	SAWING ASPHALT	LF	400.000	400.000
0550	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	1,134.000	1,134.000
0560	SPV.0035	SPECIAL 01. RIPRAP HEAVY SPECIAL	CY	170.000	170.000

CLEARING AND GRUBBING

				201.0105 CLEARING STA	201.0205 GRUBBING STA
STATION	TO	STATION	LOCATION		
8+00	-	11+00	LT	3	3
TOTAL				3	3

REMOVING ASPHALTIC SURFACE

				204.0110 REMOVING ASPHALTIC SURFACE SY
STATION	-	STATION	LOCATION	
7+50	-	8+40	RT	10
7+53	-	8+40	LT	10
11+60	-	12+47	RT	10
11+60	-	12+50	LT	10
TOTAL				40

BASE AGGREGATE

				305.0110 BASE AGGREGATE DENSE 3/4-INCH TONS	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TONS
STATION	TO	STATION	LOCATION		
7+50	-	9+79	LT & RT	50	445
10+21	-	12+50	LT & RT	50	445
TOTAL				100	890

PAVEMENT ITEMS

				455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TONS
STATION	TO	STATION			
7+50	-	9+79		16	145
10+21	-	12+50		16	145
TOTAL				32	290

EARTHWORK

		205.0100 COMMON EXCAVATION CY	PAVEMENT CY	USABLE MATERIAL CY	FILL CY	(1) ADJUSTED FILL CY	208.0100 (2) BORROW CY
STATION - STATION	LOCATION						
7+50 - 9+79	MAINLINE	215	70	145	490	635	490
10+21 - 12+50	MAINLINE	225	70	155	560	725	570
TOTAL		440					1,060

- (1) ADJUSTED FILL = FILL * 1.3
(2) BORROW = ADJUSTED FILL - USABLE MATERIAL

MGS GUARDRAIL

				614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EACH
STATION	TO	STATION	LOCATION			
8+66	-	9+78	RT	12.5	39.4	1
8+73	-	9+84	LT	12.5	39.4	1
10+16	-	11+34	RT	12.5	39.4	1
10+22	-	11+27	LT	12.5	39.4	1
TOTAL				50.0	157.6	4

LANDSCAPING ITEMS

				625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING NO. 10 LB
STATION	TO	STATION	LOCATION				
7+50	-	9+79	LT & RT	910	650	0.7	15
10+21	-	12+50	LT & RT	1,000	810	0.8	16
UNDISTRIBUTED				-	1,400	0.5	19
TOTAL				1,910	2,860	2.0	50

EROSION CONTROL ITEMS

				628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
STATION	TO	STATION	LOCATION	LF	LF	EACH	EACH	SY	SY	LF
7+50	-	9+79	LT	215	430	-	-	140	-	10
7+50	-	9+79	RT	195	390	-	-	120	-	10
9+80	-	10+10	MAINLINE	-	-	-	-	-	140	-
10+21	-	12+50	LT	215	430	-	-	100	-	10
10+21	-	12+50	RT	205	410	-	-	100	-	10
UNDISTRIBUTED				200	400	2	2	100	-	10
TOTAL				1,030	2,060	2	2	560	140	50

RIGHT OF WAY MARKERS

STATION	OFFSET	LOCATION	633.5100 MARKERS ROW EACH
7+50.00	40.40' LT	MAINLINE	1
7+50.00	38.10' RT	MAINLINE	1
9+00.00	55.00' LT	MAINLINE	1
9+00.00	55.00' RT	MAINLINE	1
11+50.00	55.00' LT	MAINLINE	1
11+50.00	55.00' RT	MAINLINE	1
12+50.00	46.18' LT	MAINLINE	1
12+50.00	36.31' RT	MAINLINE	1
TOTAL			8

REMOVING SIGN ITEMS

				638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
STATION				EACH	EACH
9+79	LT			1	1
9+79	RT			1	1
10+21	LT			1	1
10+21	RT			1	1
TOTAL				4	4

TRAFFIC CONTROL ITEMS

				643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY
LOCATION				DAY	DAY	DAY
ADVANCE WARNING				1,278	1,988	994
TOTAL				1,278	1,988	994

PAVEMENT MARKING EPOXY 4-INCH

						646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	REMARKS
STATION	TO	STATION	LOCATION	LF	LF	LF	REMARKS
7+50	-	12+50	CTH S EDGELINE LT	500	500	500	SOLID WHITE
8+40	-	11+60	CTH S MAILINE	400	400	400	SOLID YELLOW (SB) DASHED YELLOW (NB)
7+50	-	12+50	CTH S EDGELINE RT	500	500	500	SOLID WHITE
TOTAL						1,400	

CONSTRUCTION STAKING

				650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
STATION	TO	STATION	CATEGORY	LF	LF	LF
7+50	-	9+79	10	-	-	229
8+40	-	9+79	10	139	139	-
10+21	-	11+60	10	139	139	-
10+21	-	12+50	10	-	-	229
TOTAL				278	278	458

CONSTRUCTION STAKING STRUCTURE LAYOUT

			650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-71-0188) LS
STATION	CATEGORY	LS	LS
10+00	20	1	1
TOTAL			1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

			650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (6800-02-71) LS
PROJECT	CATEGORY	LS	LS
6800-02-71	10	1	1
TOTAL			1

SAWING ASPHALT

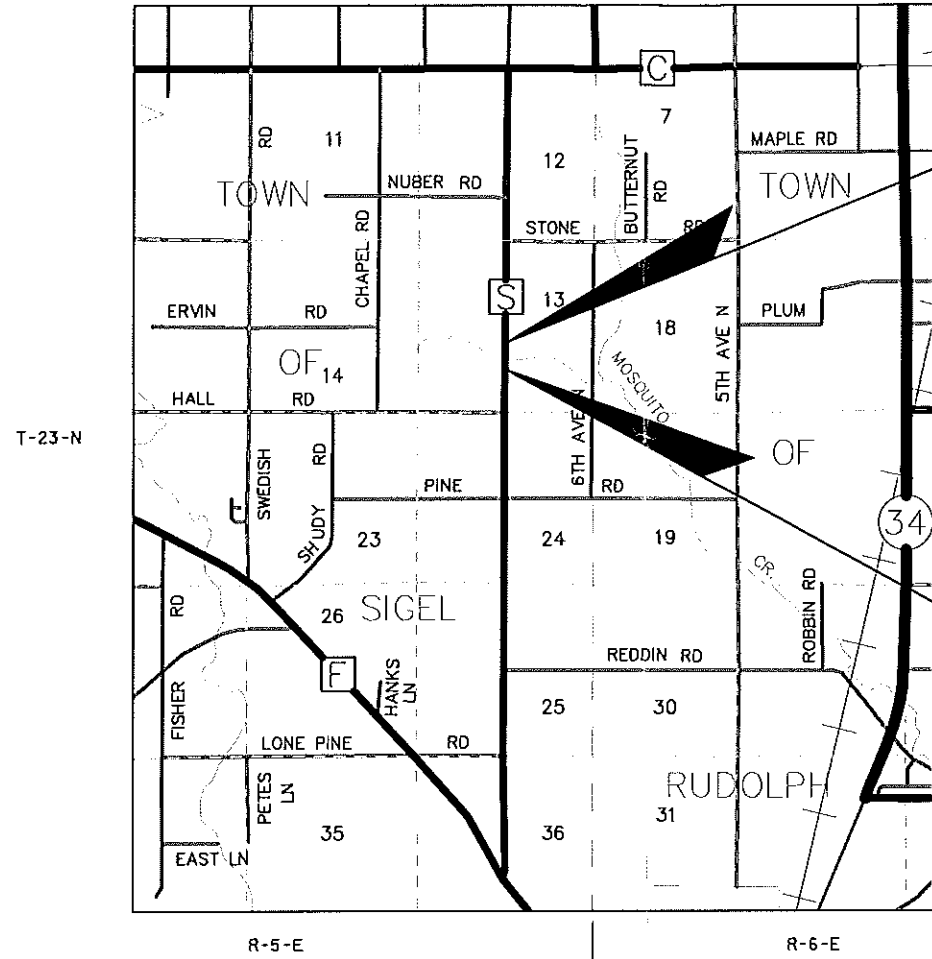
					690.0150 SAWING ASPHALT LF	REMARKS
STATION	-	STATION	LOCATION	LF	LF	REMARKS
7+50	-	8+40	RT	90	90	EDGELINE
7+53	-	8+40	LT	86	86	EDGELINE
8+40			C/L	24	24	MAINLINE
11+60			C/L	24	24	MAINLINE
11+60	-	12+47	RT	86	86	EDGELINE
11+60	-	12+50	LT	90	90	EDGELINE
TOTAL					400	

PROJECT ID: 6800-02-71
WITH: N/A

COUNTY: WOOD

R/W PROJECT NUMBER 6800-02-00	SHEET NUMBER 4.01	TOTAL SHEETS 2
FEDERAL PROJECT NUMBER -----		
PLAT OF RIGHT-OF-WAY REQUIRED FOR CTH F - CTH C BR MOSQUITO CREEK BRIDGE, TN SIGEL CTH S WOOD COUNTY		
CONSTRUCTION PROJECT NUMBER 6800-02-71		

CONVENTIONAL ABBREVIATIONS	
ACCESS POINT/ DRIVEWAY CONNECTION	AP
ACCESS RIGHTS	AR
ACRES	AC.
AND OTHERS	ET./AL.
CENTERLINE	C/L
CERTIFIED SURVEY MAP	CSM
CORNER	CDR.
DOCUMENT	DOC.
EASEMENT	EASE.
HIGHWAY EASEMENT	H.E.
LAND CONTRACT	LC
MONUMENT	MON.
PAGE	P.
PERMANENT LIMITED EASEMENT	P.L.E.
PROPERTY LINE	PL
RECORDED AS	(100)
REFERENCE LINE	R/L
RELEASE OF RIGHTS	REV.
REMAINING	R/M
RIGHT-OF-WAY	R/W
SECTION	SEC.
STATION	STA.
TEMPORARY LIMITED EASEMENT	T.L.E.
VOLUME	V.
CURVE DATA	
LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN
CONVENTIONAL SYMBOLS	
FOUND IRON PIPE/PIN	IP
R/W MONUMENT	(SET)
R/W POINT NOT MONUMENTED	O
R/W STANDARD	ASSET
SIGN	ISGN
SECTION CORNER MONUMENT	SCM
SECTION CORNER SYMBOL	SCS
FEE (HATCH VARIES)	FEE
TEMPORARY LIMITED EASEMENT	TELE
PERMANENT LIMITED EASEMENT	PERM
R/W POINT	43
PARCEL NUMBER	02
UTILITY PARCEL NUMBER	92
SIGN NUMBER (OFF PREMISE)	21
BUILDING	BUILD
PROPOSED R/W LINE	---
EXISTING H.E. LINE	---
PROPERTY LINE	---
LOT & TIE LINES	---
SLOPE INTERCEPTS	---
CORPORATE LIMITS	---
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	---
NO ACCESS (BY ACQUISITION)	---
NO ACCESS (BY STATUTORY AUTHORITY)	---
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
EXISTING CENTERLINE	---
PROPOSED REFERENCE LINE	---
PARALLEL OFFSET	---
CONVENTIONAL UTILITY SYMBOLS	
WATER	---
GAS	---
TELEPHONE	---
OVERHEAD	---
TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
NON COMPENSABLE	---
POWER POLE	---
TELEPHONE POLE	---
TELEPHONE PEDESTAL	---
ELECTRIC TOWER	---



END RELOCATION ORDER
PROJECT 6800-02-00
STA 12+50.00
3,344.26' S AND 19.39' W FROM
N 1/4 COR SEC 13, T-23-N, R-5-E
Y = 481,573.305
X = 721,890.765

BEGIN RELOCATION ORDER
PROJECT 6800-02-00
STA 7+50.00
1,410.82' N AND 13.41' E FROM
S 1/4 COR SEC 13, T-23-N, R-5-E
Y = 481,073.335
X = 721,885.348

LAYOUT
SCALE 0 1 MI.

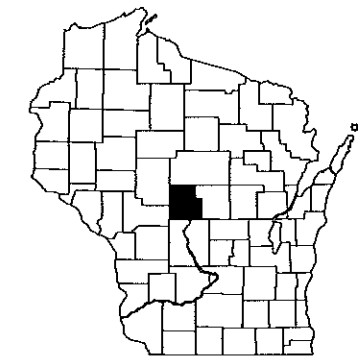
TOTAL NET LENGTH OF CENTERLINE = 0.095 MI.

NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, WOOD COUNTY ZONE, NAD 83 (1991) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE 3/4" X 24" REBAR AND WILL BE 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 SYSTEM OR OTHER SURVEYS OF PUBLIC RECORD.



Mead & Hunt



SEAN M. WALSH
S-2016

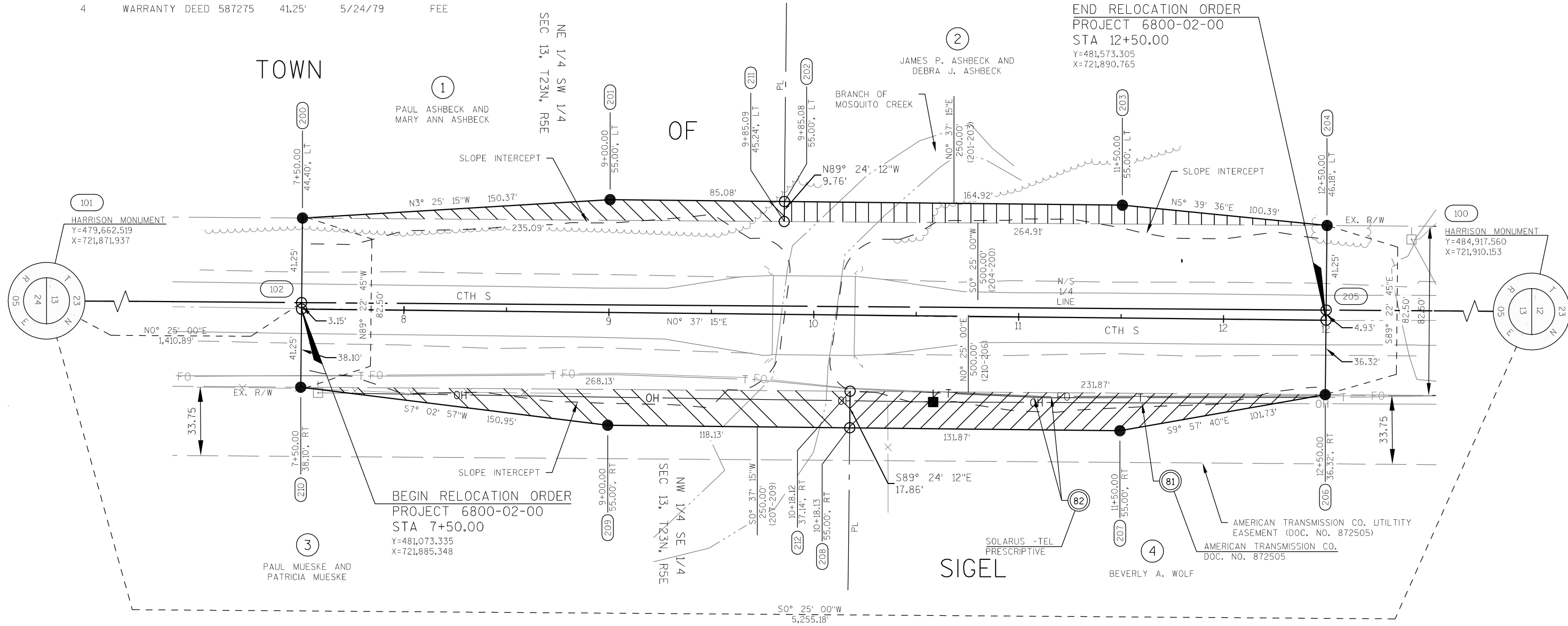
STATE OF WISCONSIN
WOOD COUNTY

APPROVED FOR WOOD COUNTY
DATE: 10/31/12
(Signature)

E

BASIS OF EXISTING R/W

PARCEL NUMBER	DOLLMENT	R/W WIDTH	DATE	INTEREST
1	WARRANTY DEED 587895	41.25'	6/8/79	FEE
2	WARRANTY DEED 588247	41.25'	6/19/79	FEE
3	WARRANTY DEED 587710	41.25'	6/5/79	FEE
4	WARRANTY DEED 587275	41.25'	5/24/79	FEE



OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

SCHEDULE OF LANDS & INTERESTS REQUIRED

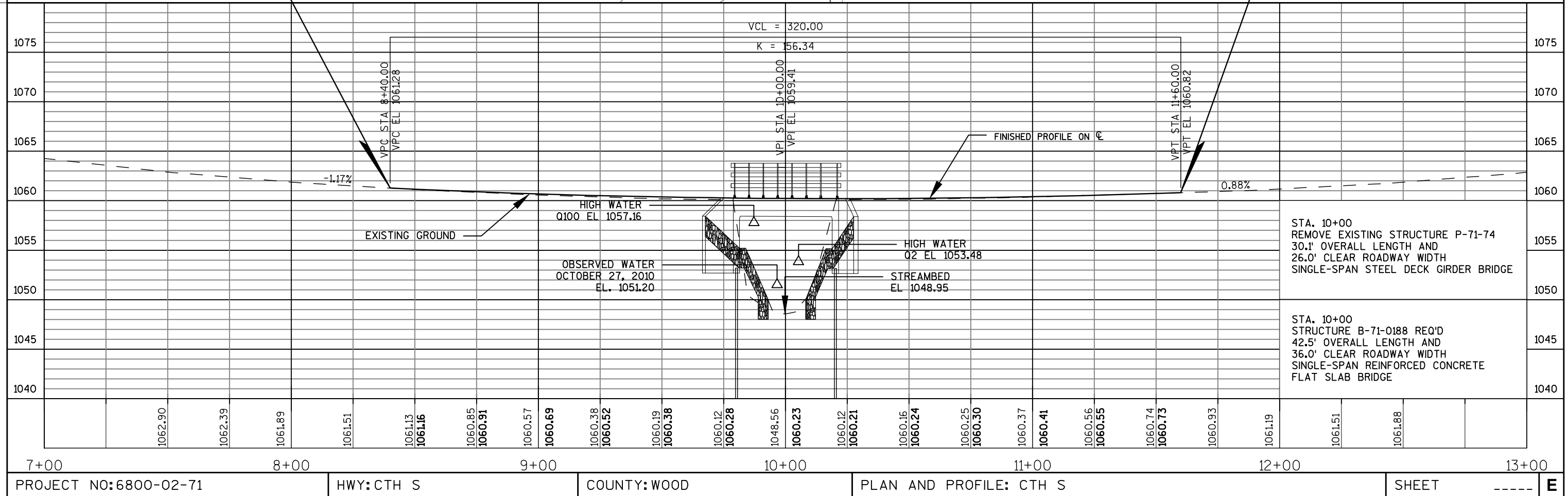
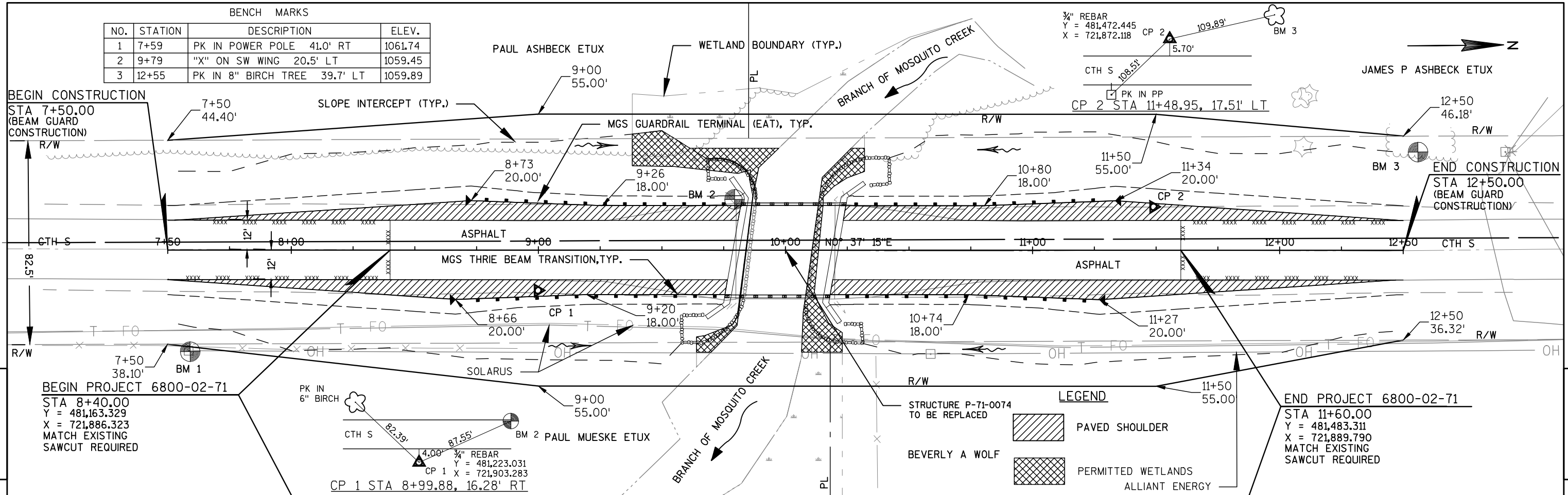
PARCEL NUMBER	SHEET NUMBER	OWNER (S)	INTEREST REQUIRED	RIGHT OF WAY AC REQUIRED		
				NEW	EXISTING	TOTAL
1	4.02	PAUL ASHBECK AND MARY ANN ASHBECK	FEE	0.04	-	0.04
2	4.02	JAMES P. ASHBECK AND DEBRA J. ASHBECK	FEE	0.05	-	0.05
3	4.02	PAUL MUESKE AND PATRICIA MUESKE	FEE	0.08	-	0.08
4	4.02	BEVERLY A. WOLF	FEE	0.08	-	0.08

SCHEDULE OF UTILITY INTERESTS REQUIRED

UTILITY NUMBER	SHEET NUMBER	OWNER (S)	INTEREST REQUIRED
81	4.02	AMERICAN TRANSMISSION CO.	RELEASE OF RIGHTS
82	4.02	SOLARUS	RELEASE OF RIGHTS

POINT	NORTHING (Y)	EASTING (X)
100	484,917.560	721,910.153
101	479,662.519	721,871.937
102	481,073.369	721,882.197
200	481,073.816	721,840.949
201	481,223.922	721,831.976
202	481,309.001	721,832.898
203	481,473.907	721,834.684
204	481,573.806	721,844.585
205	481,573.359	721,885.833
206	481,572.912	721,927.081
207	481,472.715	721,944.678
208	481,340.854	721,943.249
209	481,222.730	721,941.970
210	481,072.922	721,923.445
211	481,308.900	721,842.659
212	481,341.040	721,925.395

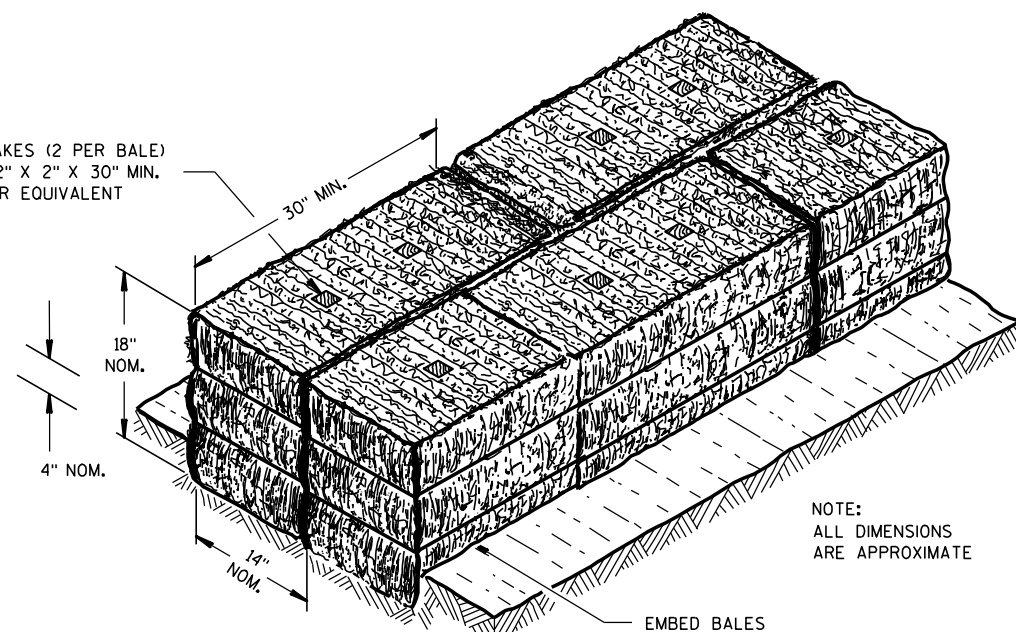
REVISION DATE	DATE 9/26/2012	SCALE, FEET	HWY: CTH S	STATE R/W PROJECT NUMBER 6800-02-00	PLAT SHEET 4.02
	GRID FACTOR 1.000	0 25 50	COUNTY: WOOD	CONSTRUCTION PROJECT NUMBER 6800-02-71	PS&E SHEET



Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-02A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-11	MARKER POST FOR RIGHT-OF-WAY
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-05	SIGNING & MARKING FOR TWO LANE BRIDGES

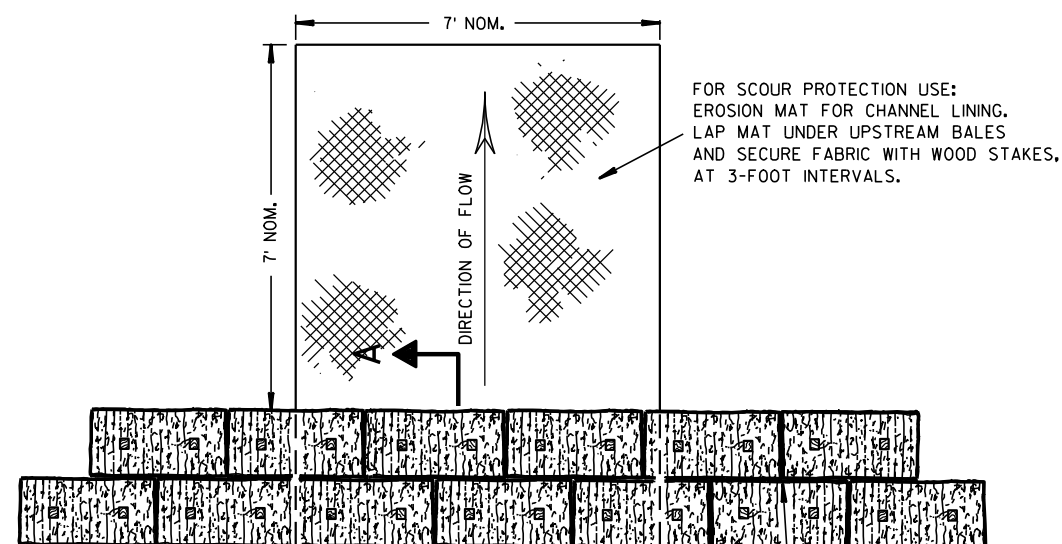
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

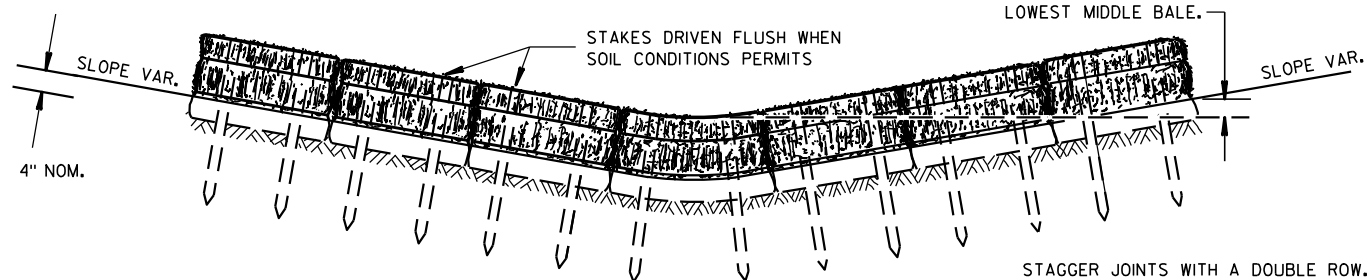
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

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



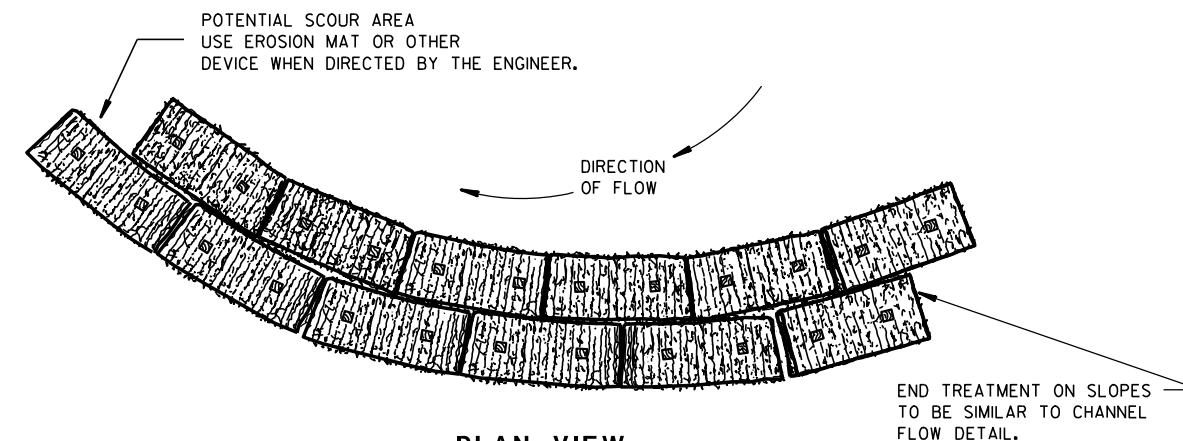
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

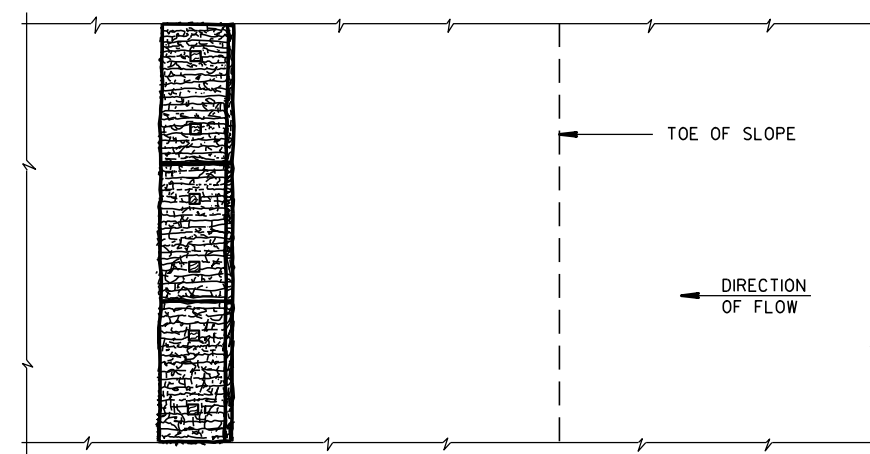
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

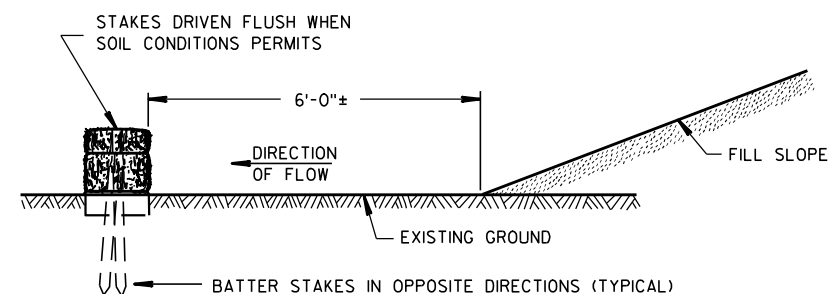


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

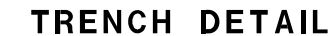
6/04/02
DATE

FHWA

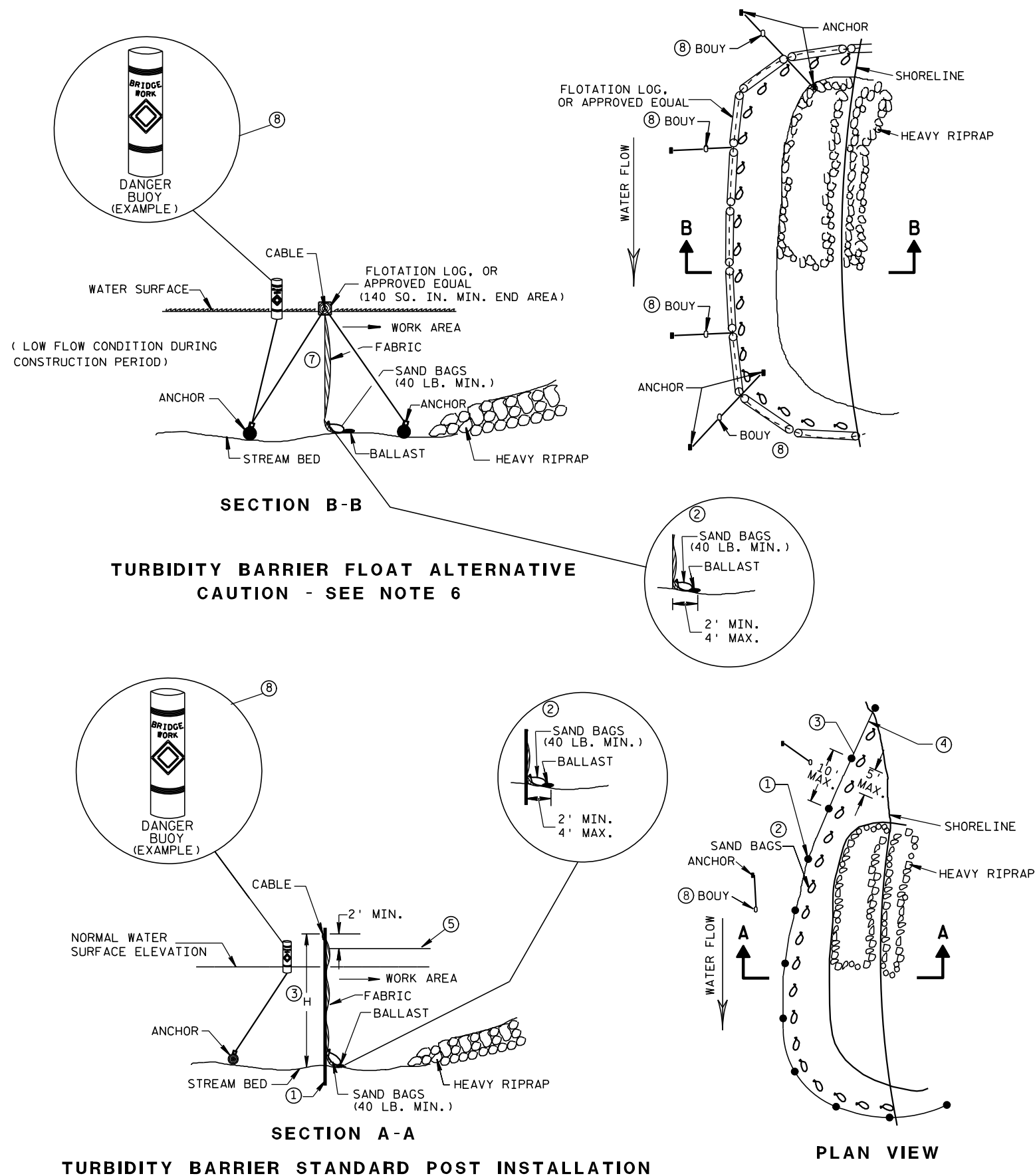
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



- 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 1½" X 1½" 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.



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

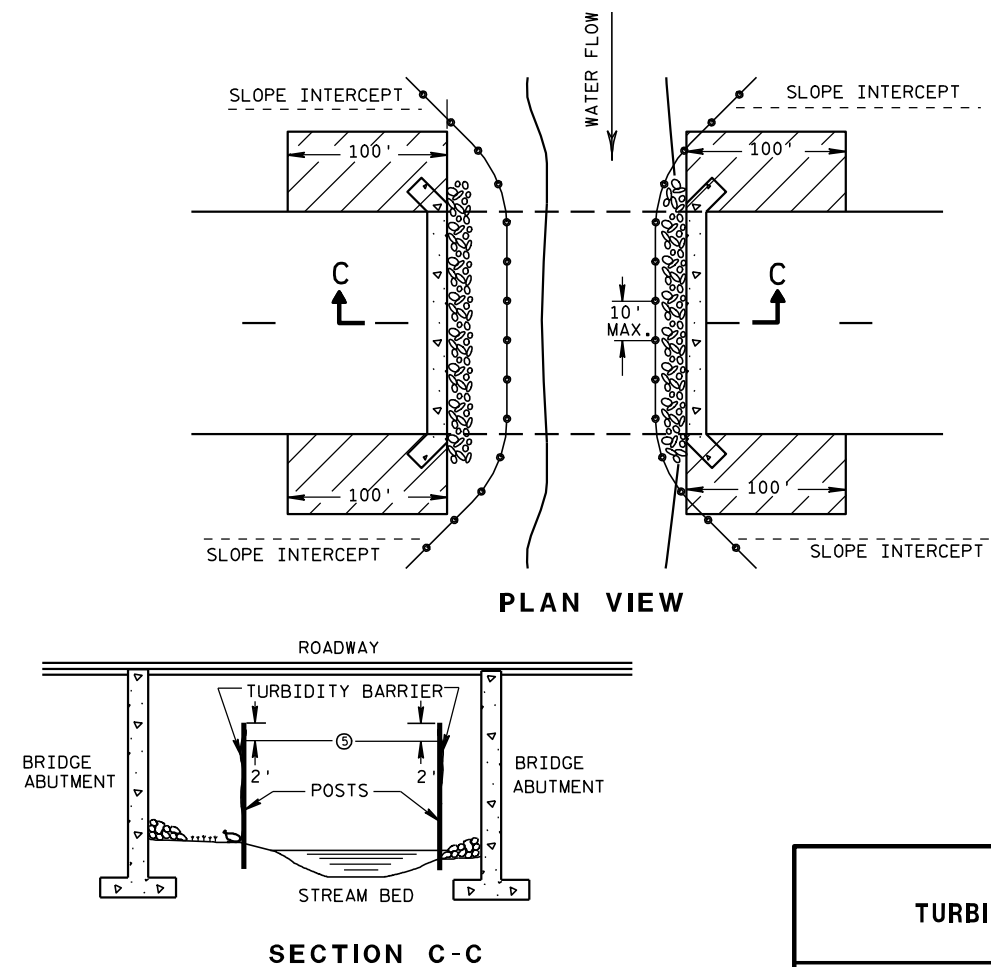


GENERAL NOTES

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

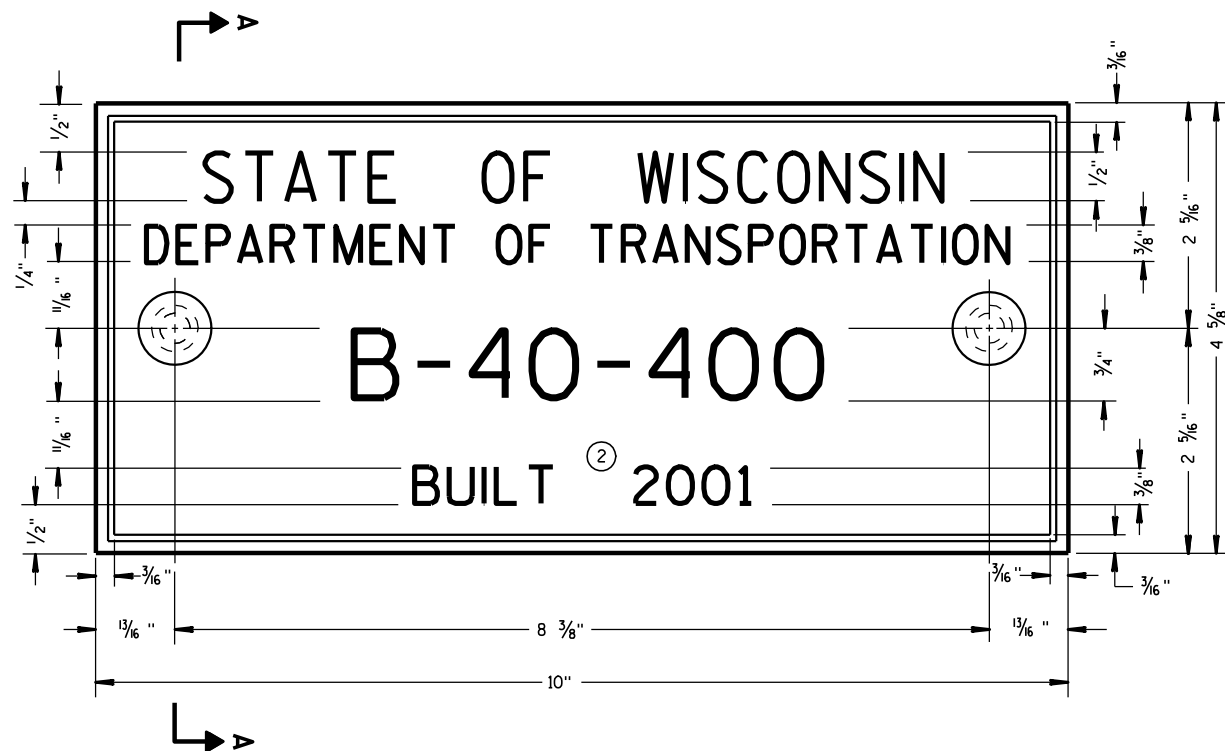
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

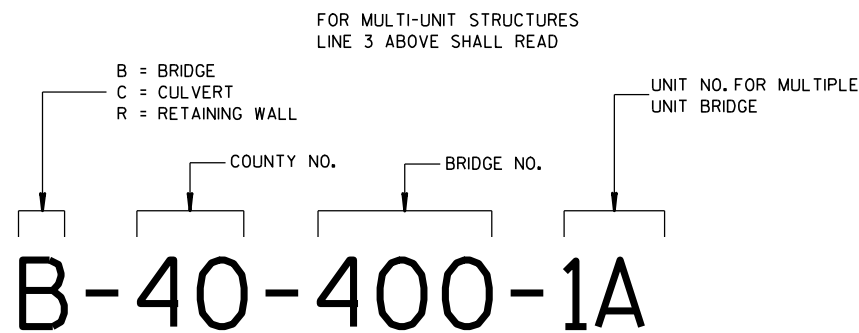
6/04/02
DATE

FHWA

/S/ Beth Connestro
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



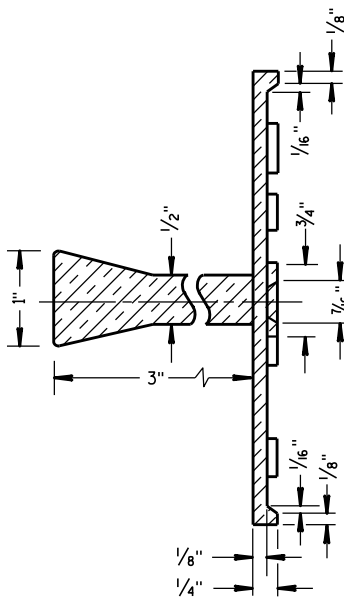
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

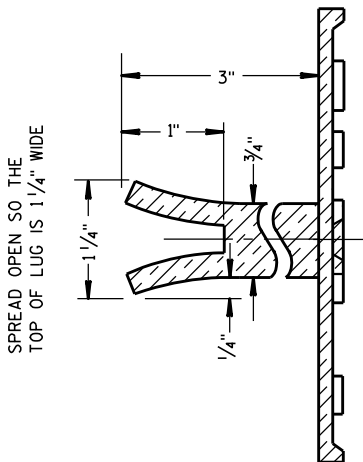
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

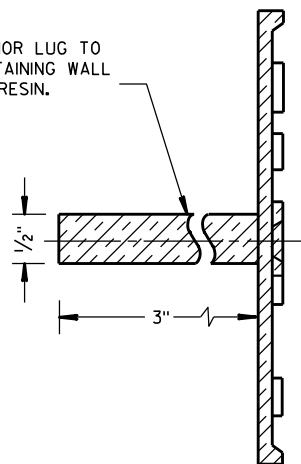


SECTION A-A



ALTERNATE LUG

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

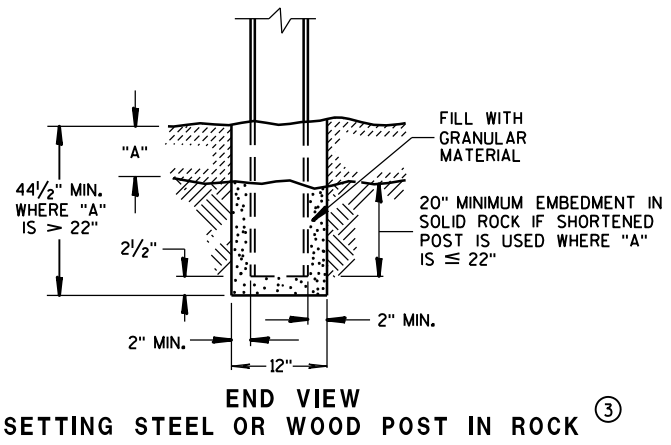


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

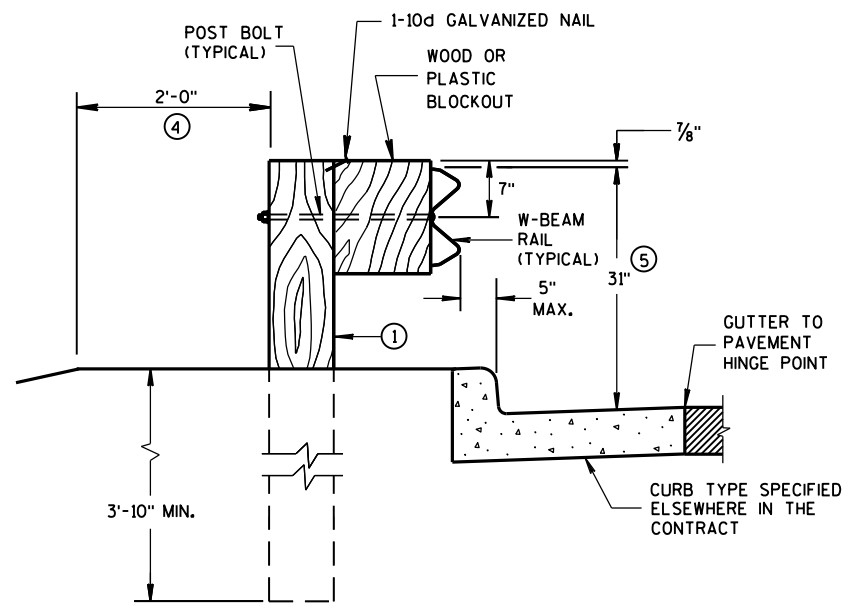
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/26/10 DATE	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

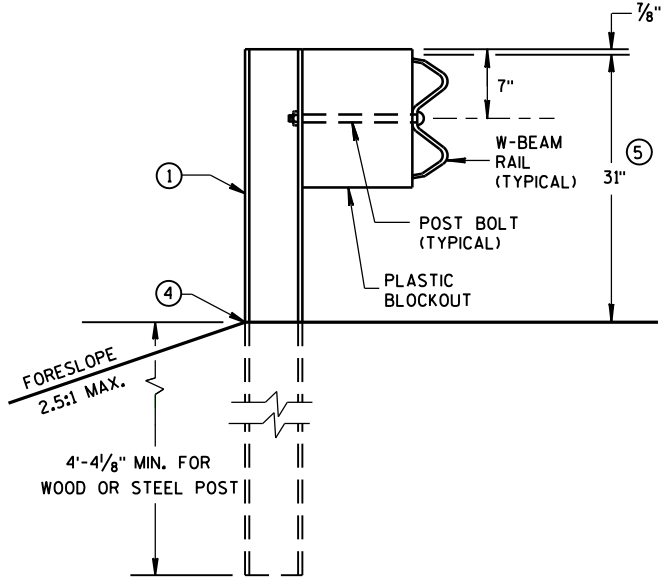
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2 INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".



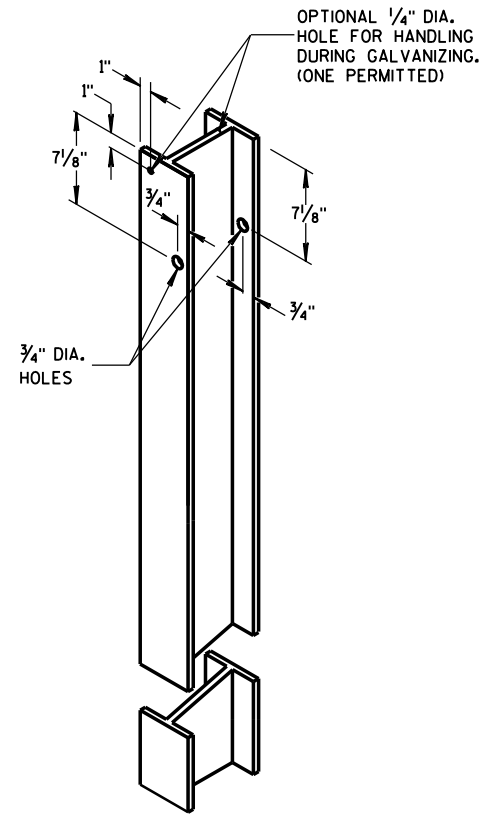
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



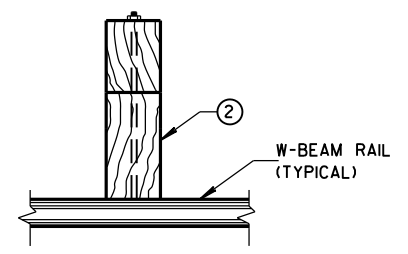
END VIEW
LOCATED ALONG A CURBED ROADWAY



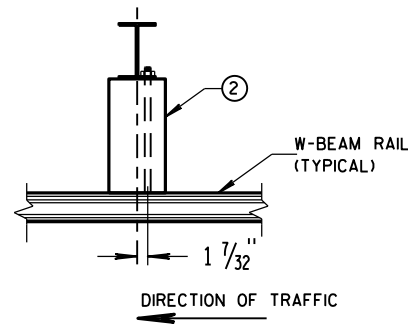
END VIEW
MGS LONGER POST AT HALFPST SPACING W BEAM (K)



STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



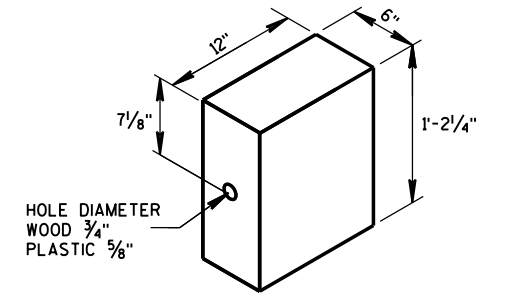
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



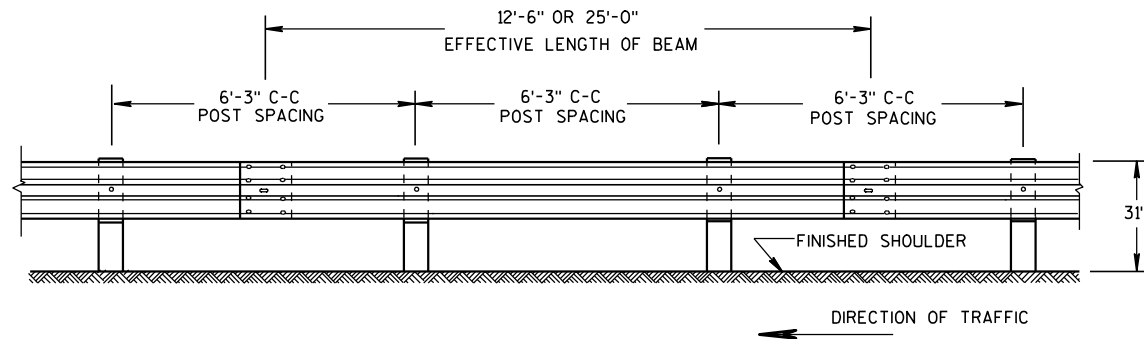
WOOD POST
(6" X 8") NOMINAL ①



WOOD OR
PLASTIC BLOCKOUT ②

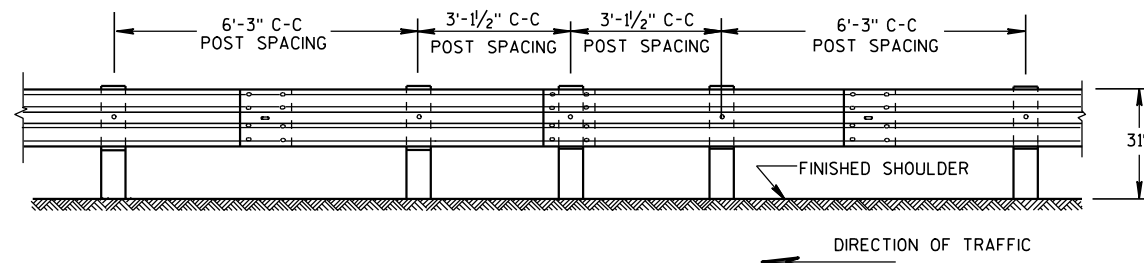
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



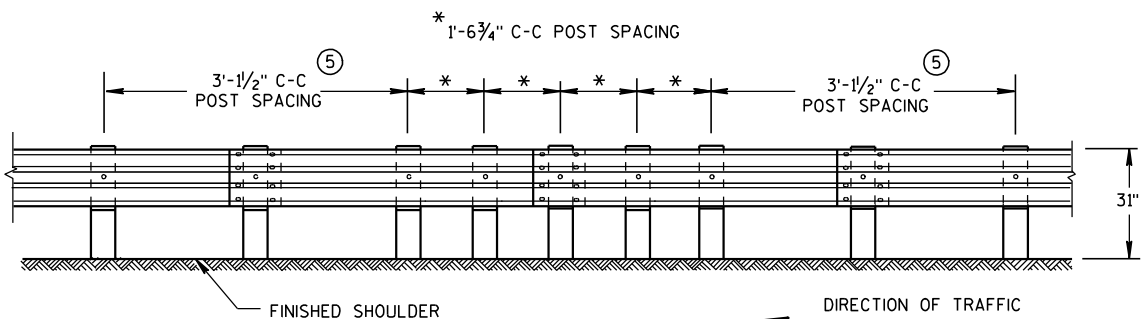
FRONT VIEW

POST SPACING STANDARD INSTALLATION



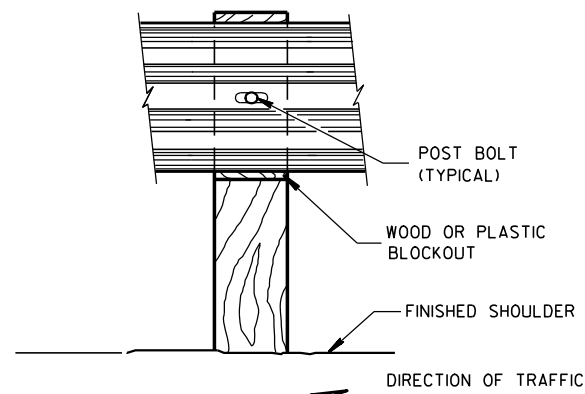
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

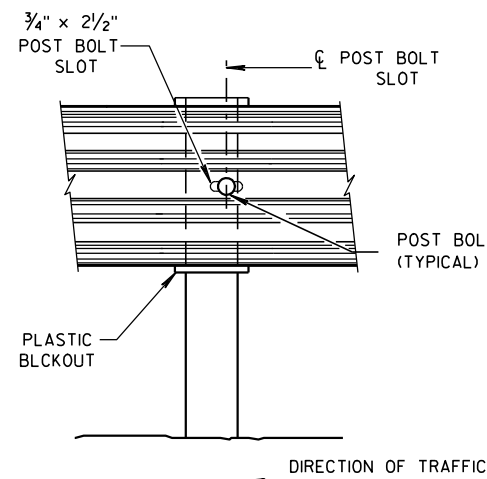


FRONT VIEW

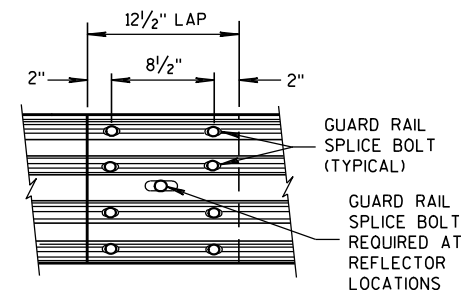
QUARTER POST SPACING (QS)



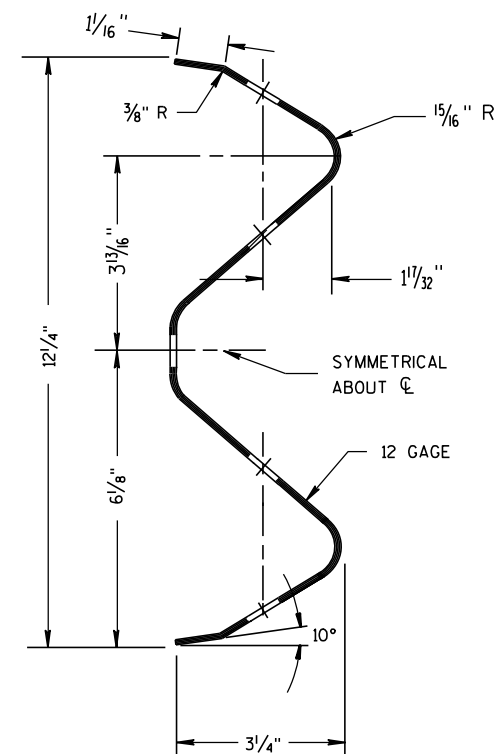
FRONT VIEW AT WOOD POST



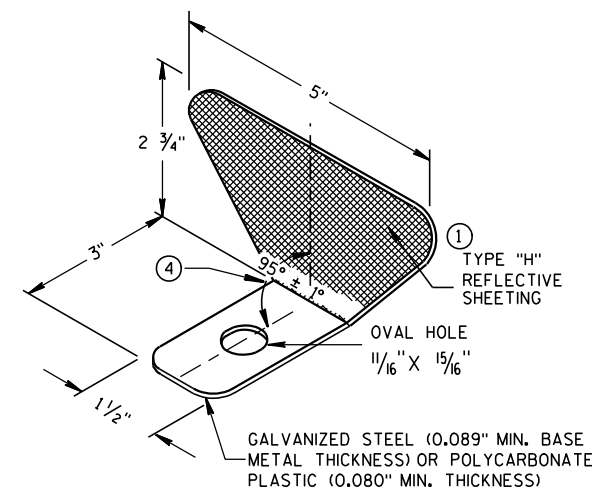
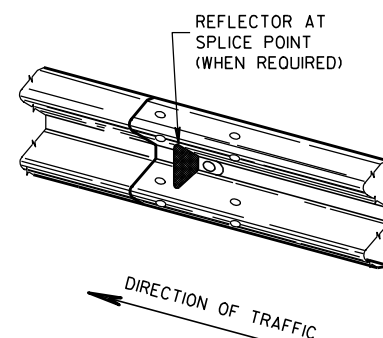
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

- 1 PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
- 2 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
- 3 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- 4 PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- 5 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

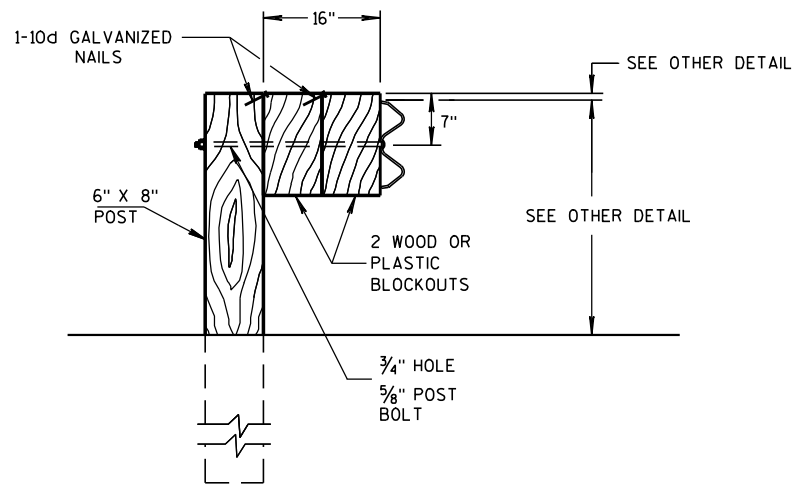
GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	

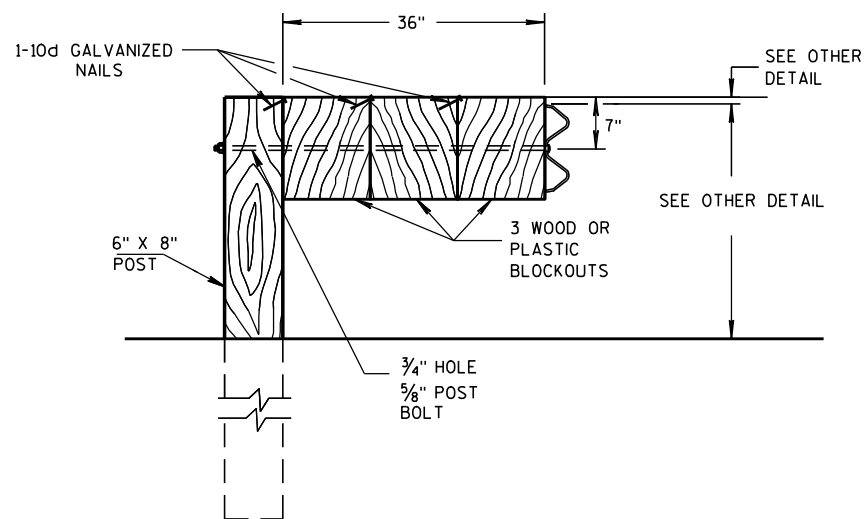
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

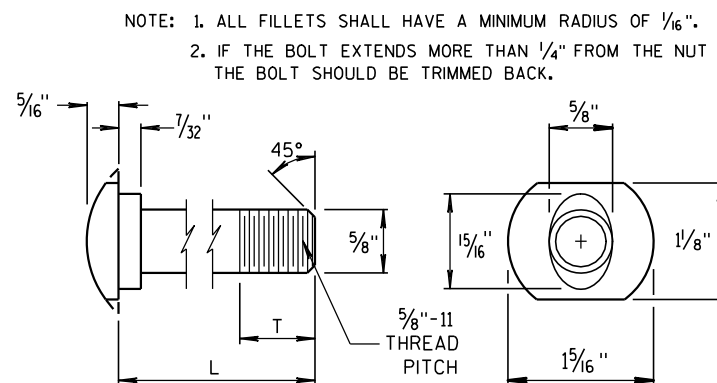
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



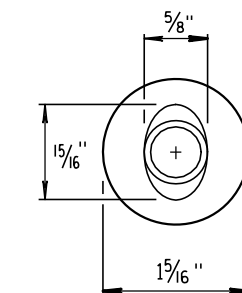
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

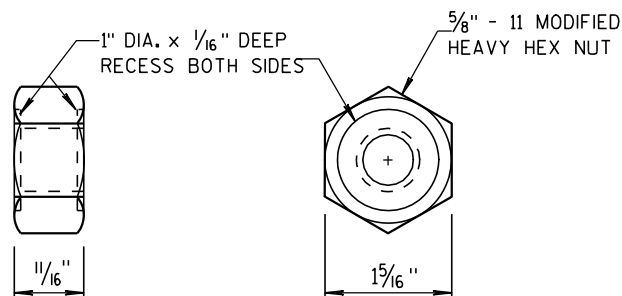
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



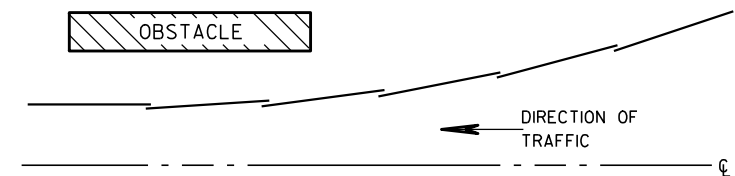
POST BOLT TABLE



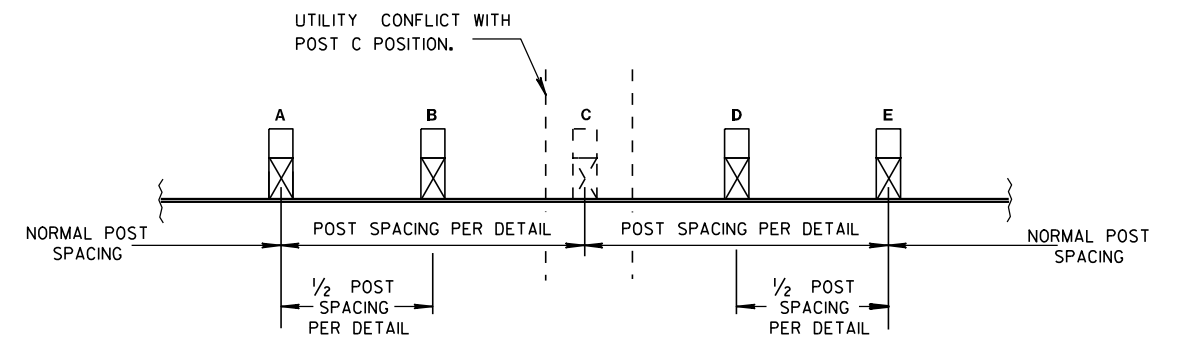
ALTERNATE BOLT HEAD



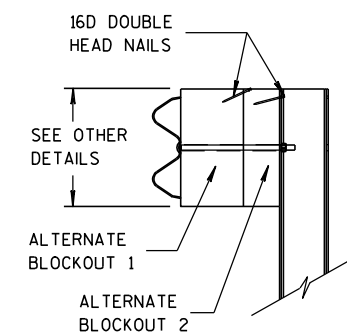
POST BOLT AND RECESS NUT



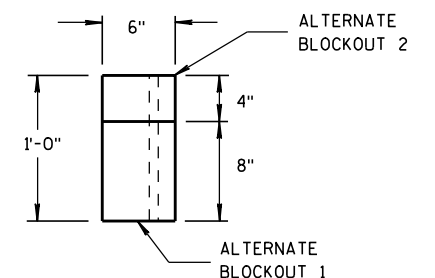
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

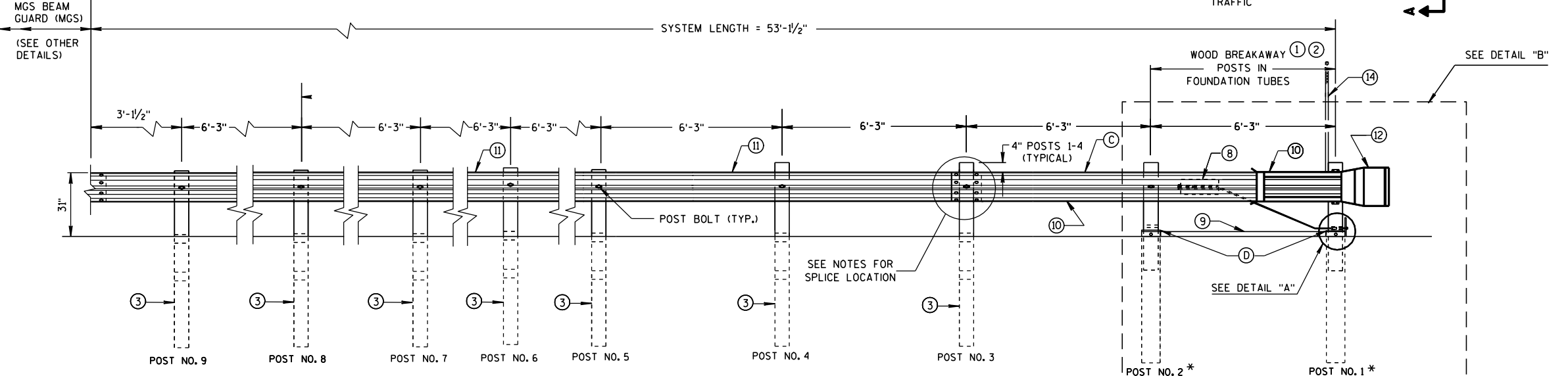
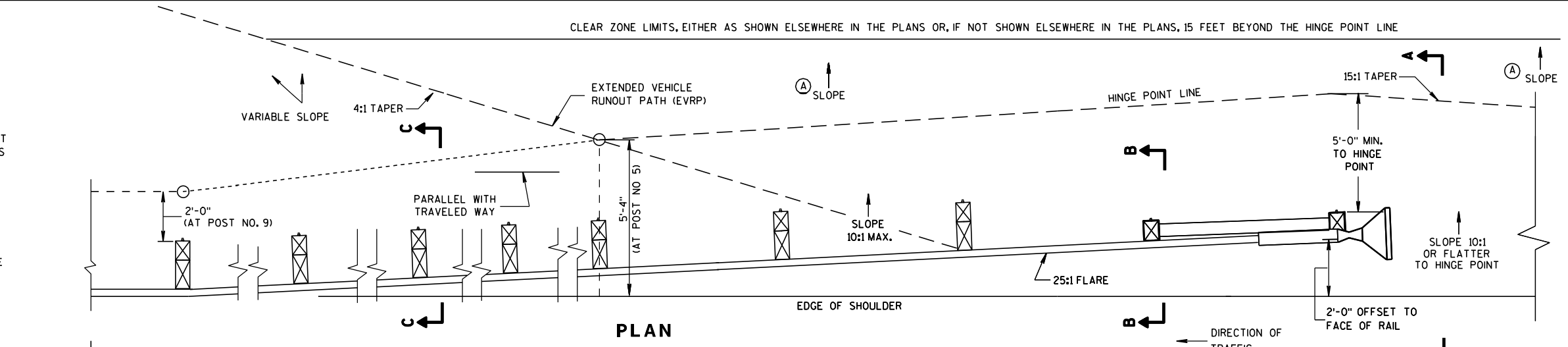
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

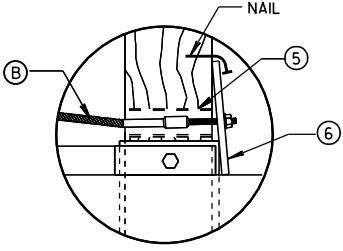
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

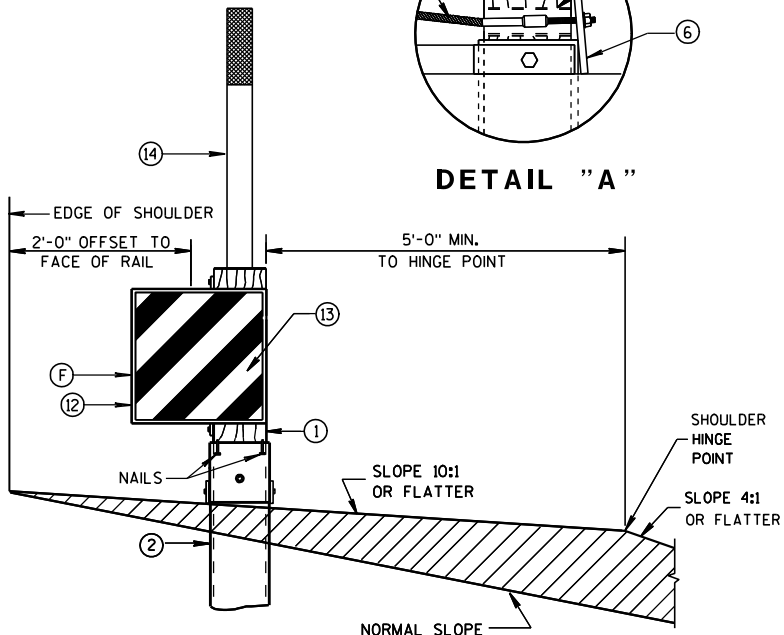
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")



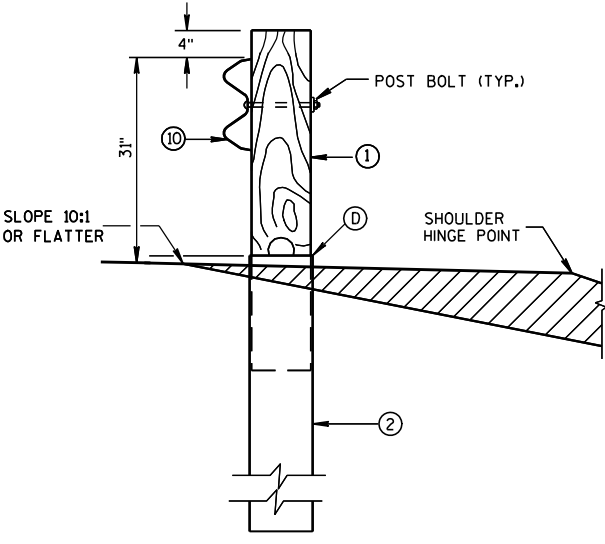
ELEVATION



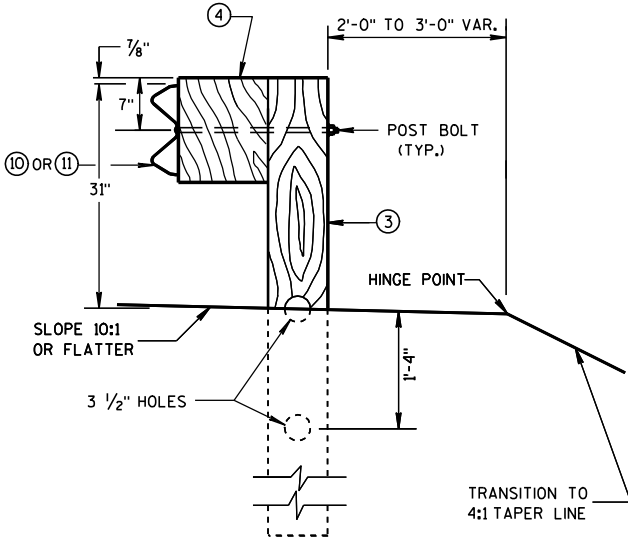
DETAIL "A"



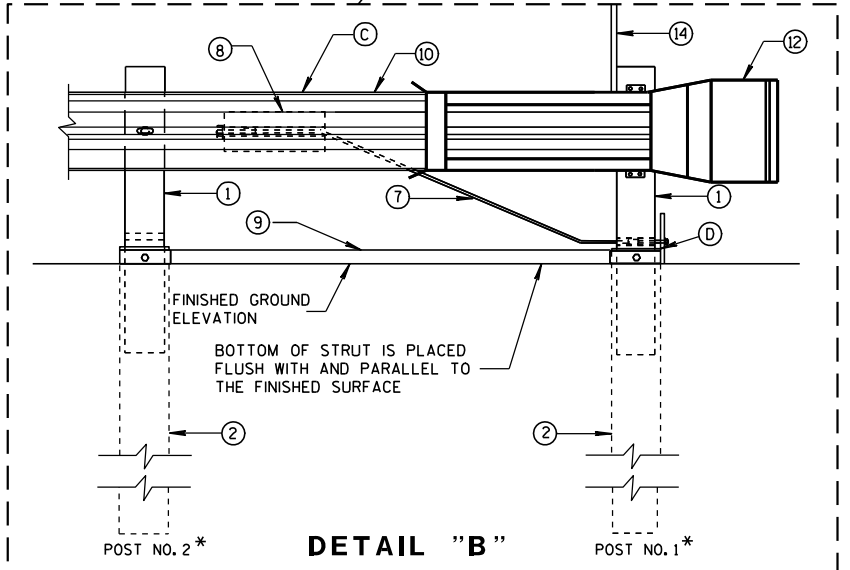
SECTION A-A
TYPICAL AT POST NO. 1*



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION C-C
TYPICAL AT POST NOS. 3-9

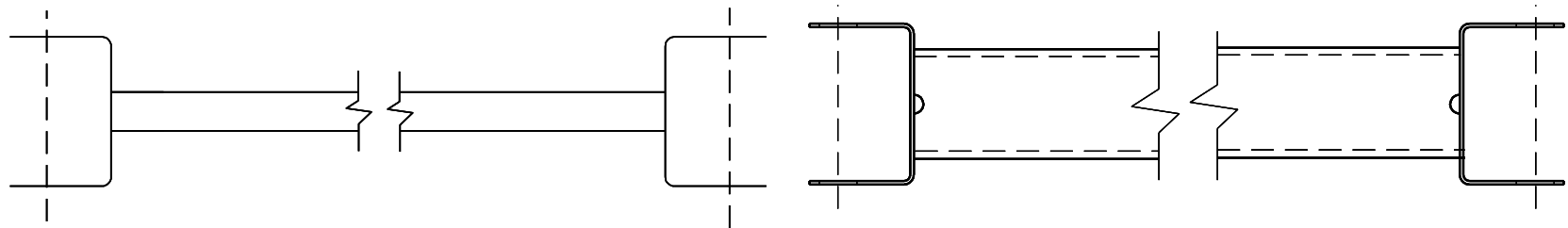


DETAIL "B"

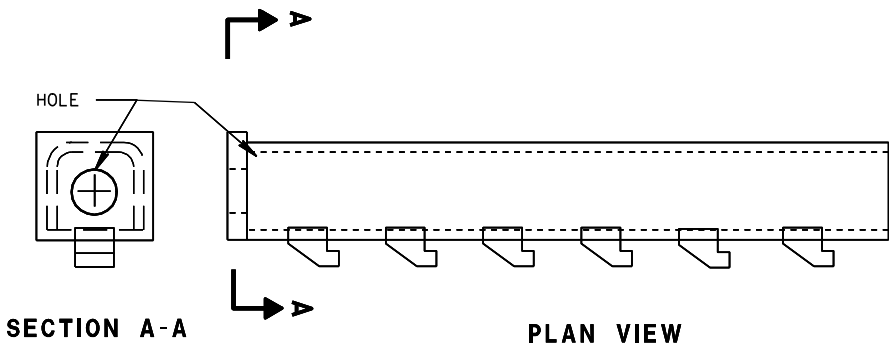
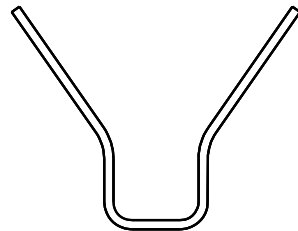
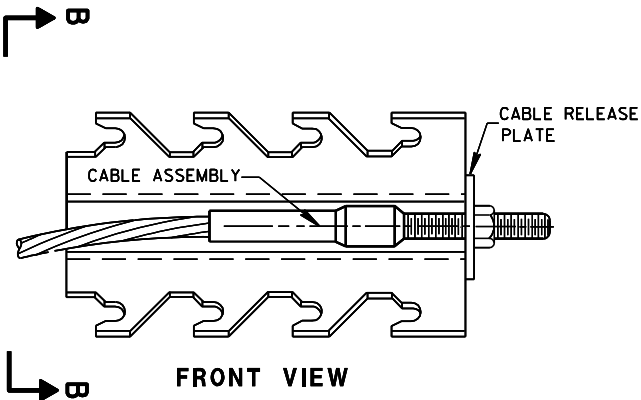
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

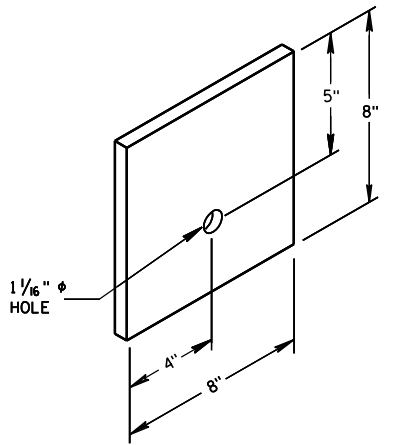
BILL OF MATERIALS	
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL, MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



⑨ ⑨
GENERIC GROUND STRUT



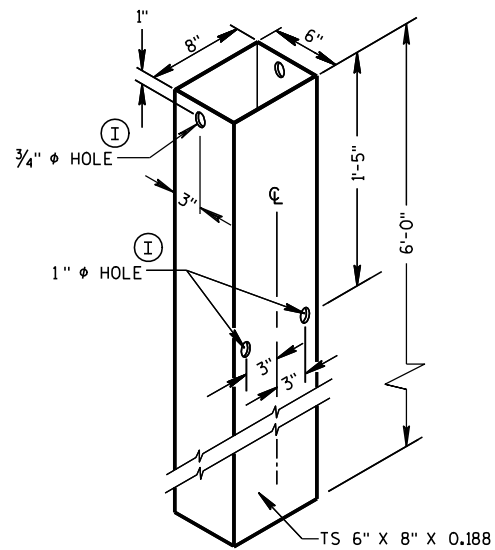
⑧ ⑧
GENERIC ANCHOR CABLE BOX



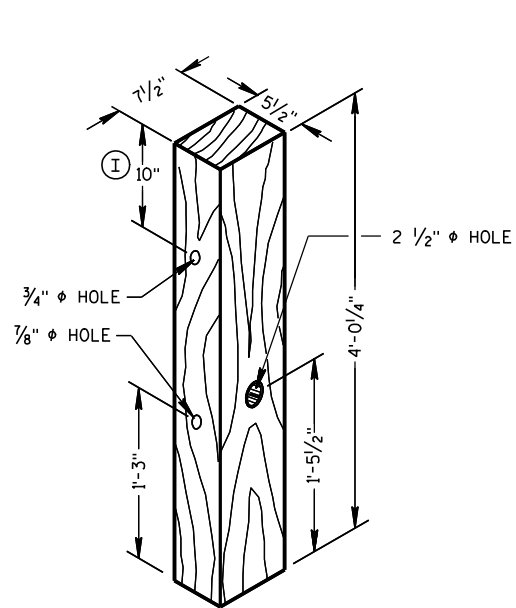
⑥
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

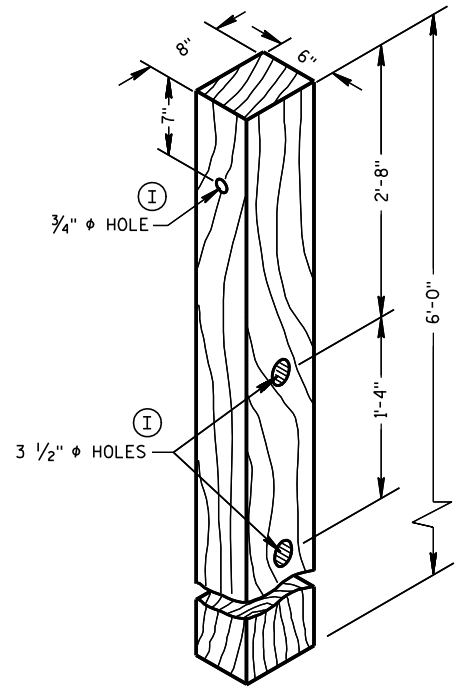
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



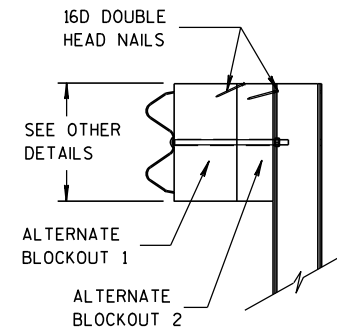
FOUNDATION TUBE ②



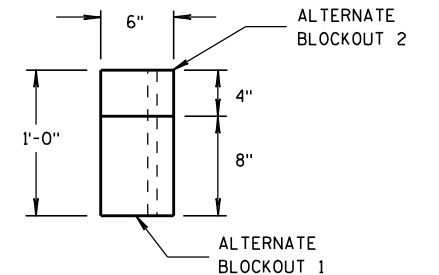
WOOD BREAKAWAY POST ①



WOOD CRT POST ③

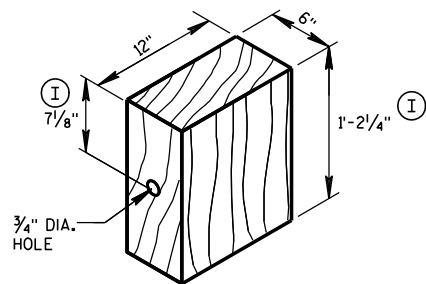


SIDE VIEW



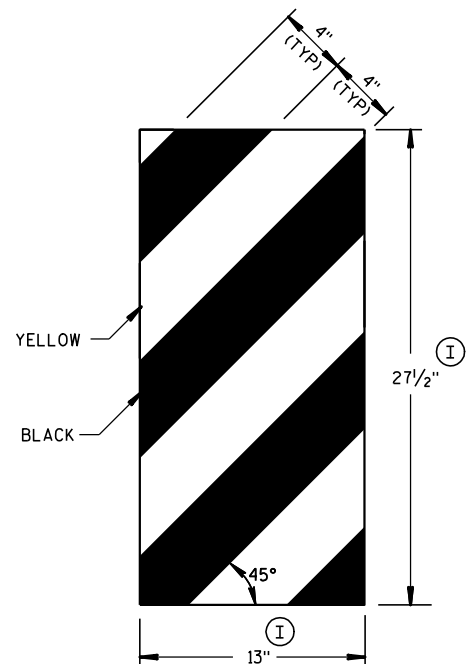
TOP VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

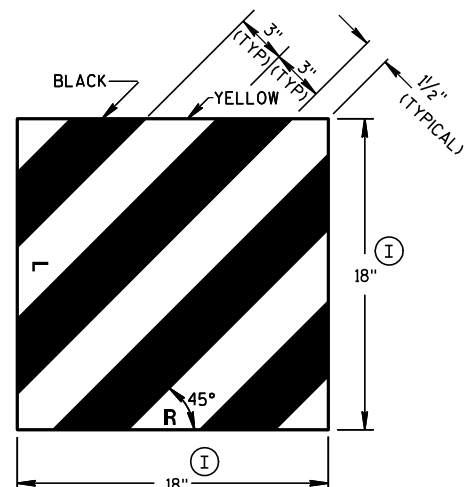


WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING



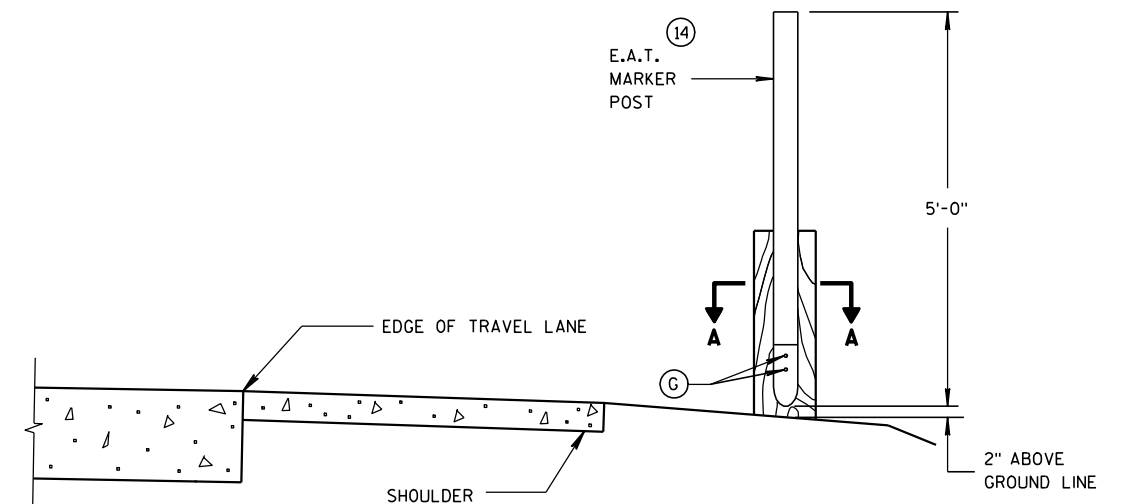
GENERIC REFLECTIVE SHEETING ⑬ ④



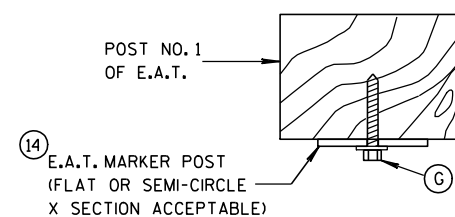
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST ⑭



**TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1**
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

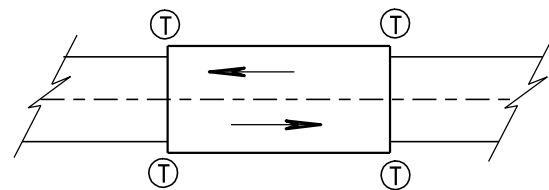
APPROVED

5/23/2011

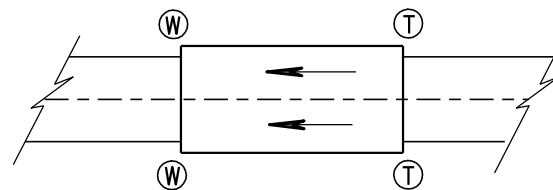
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TWO WAY TRAFFIC



ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

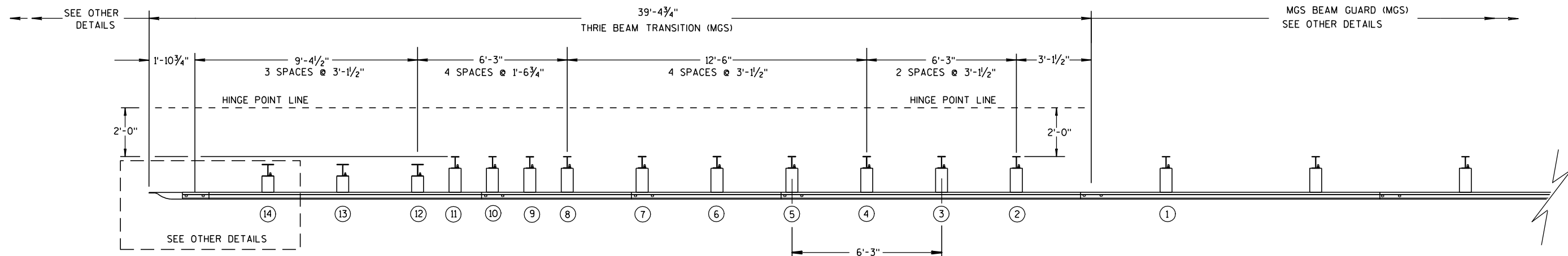
IF ROCK IS ENCOUNTERED DURING EXCAVATION, SEE STANDARD DETAIL DRAWING 14 B 42.

TRANSITION USES STEEL POSTS ONLY.

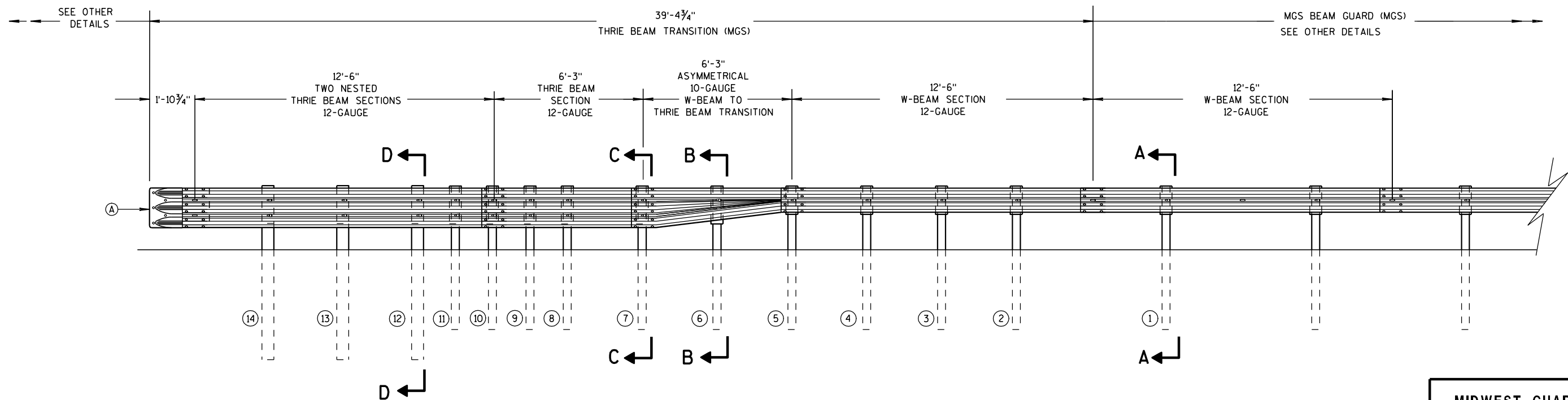
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

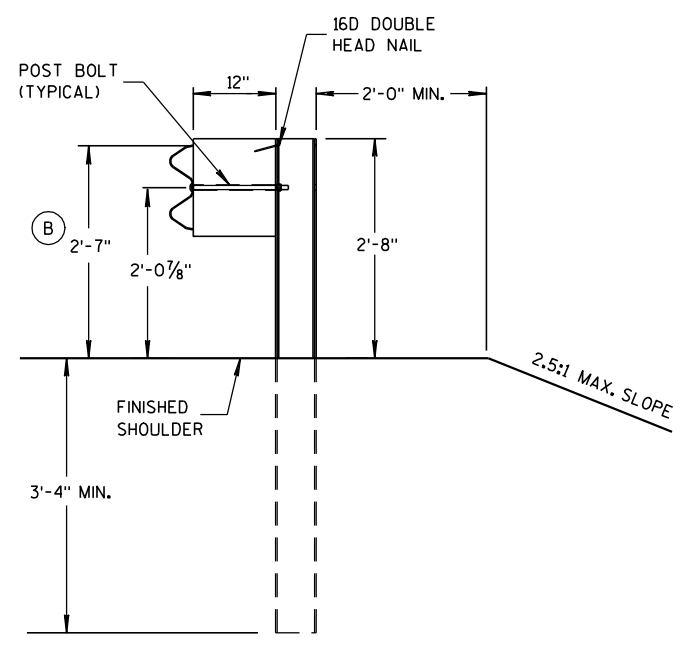
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

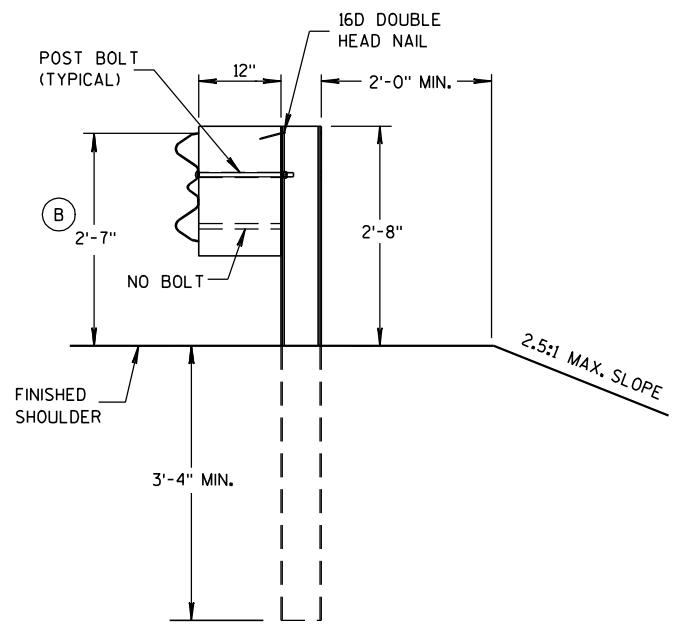
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

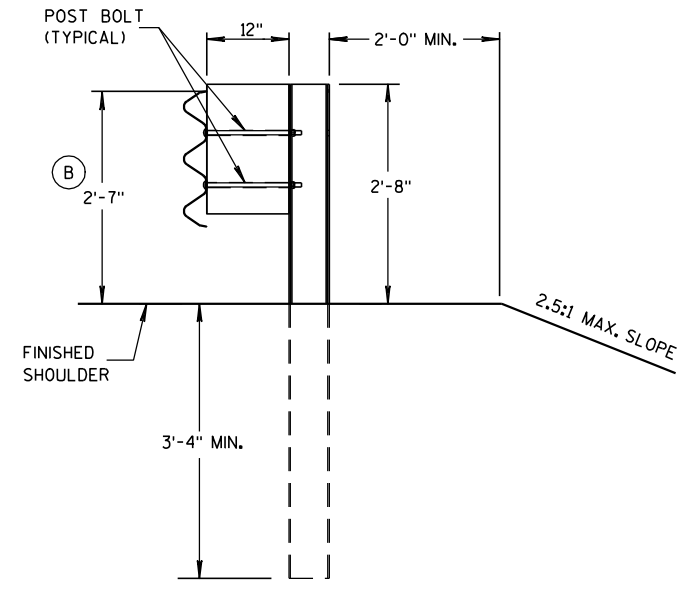
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



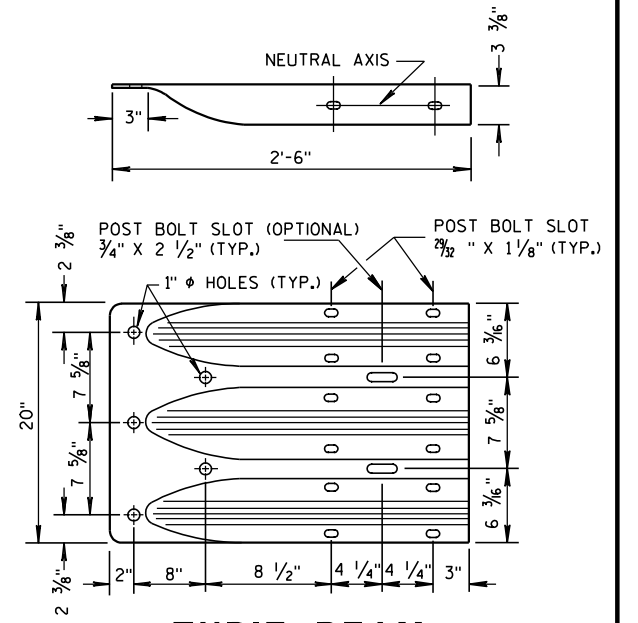
SECTION A-A
POSTS 1-5



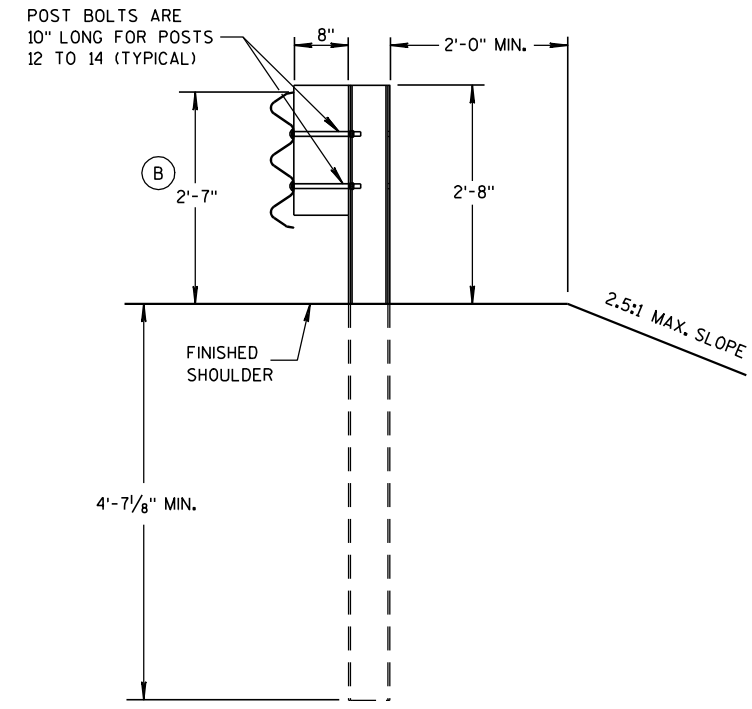
SECTION B-B
POST 6



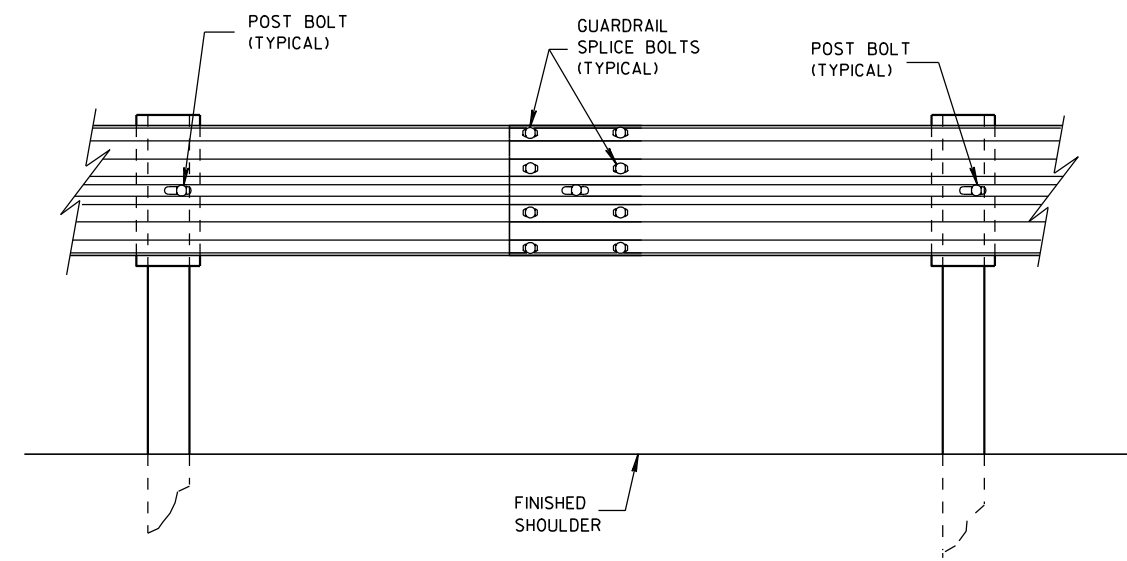
SECTION C-C
POSTS 7-11



THRIE BEAM
TERMINAL CONNECTOR



SECTION D-D
POSTS 12-14



SPLICE DETAIL

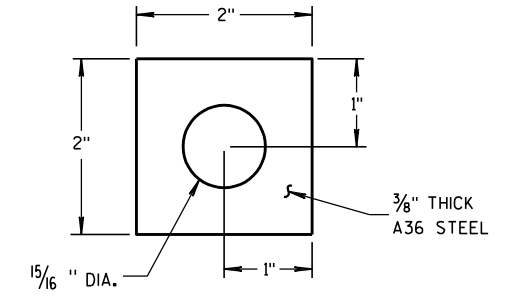
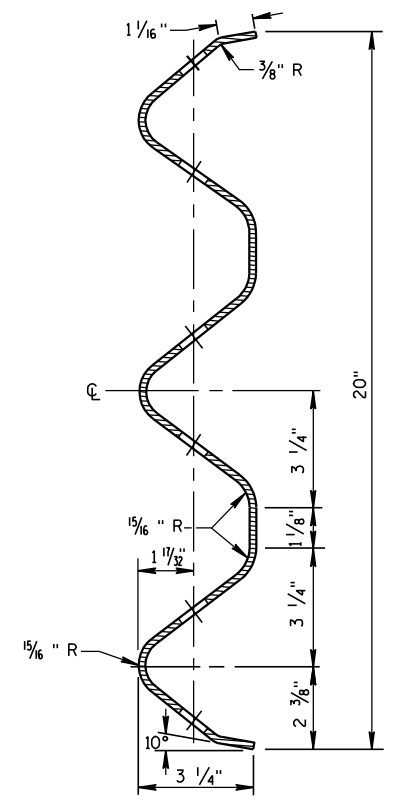


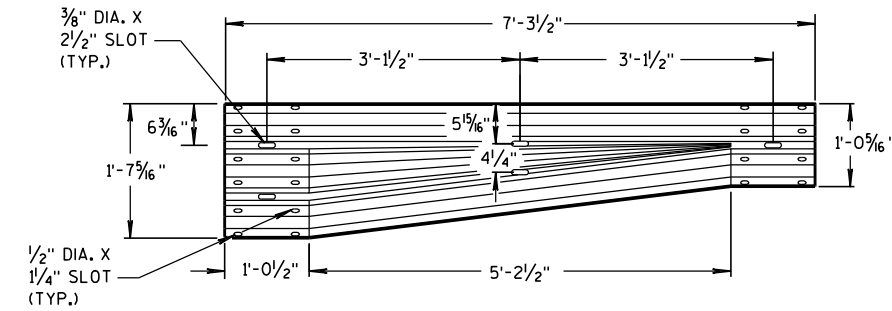
PLATE WASHER DETAIL



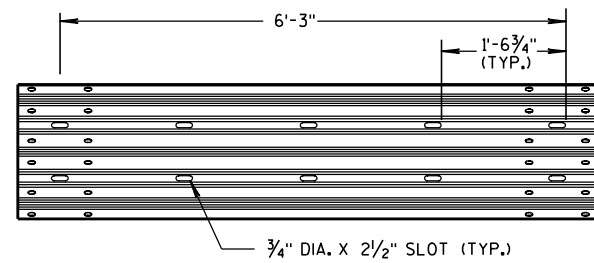
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

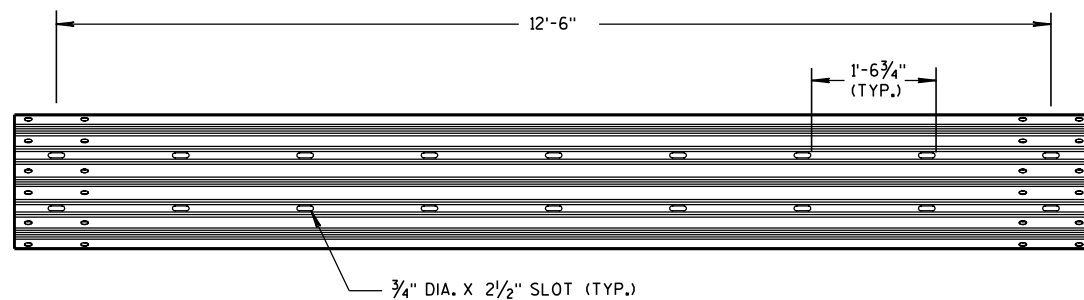
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



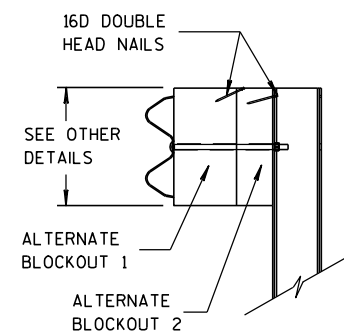
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

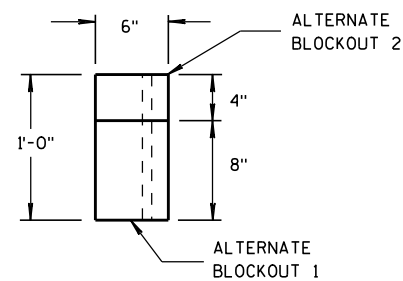


12'-6" THRIE BEAM SECTION

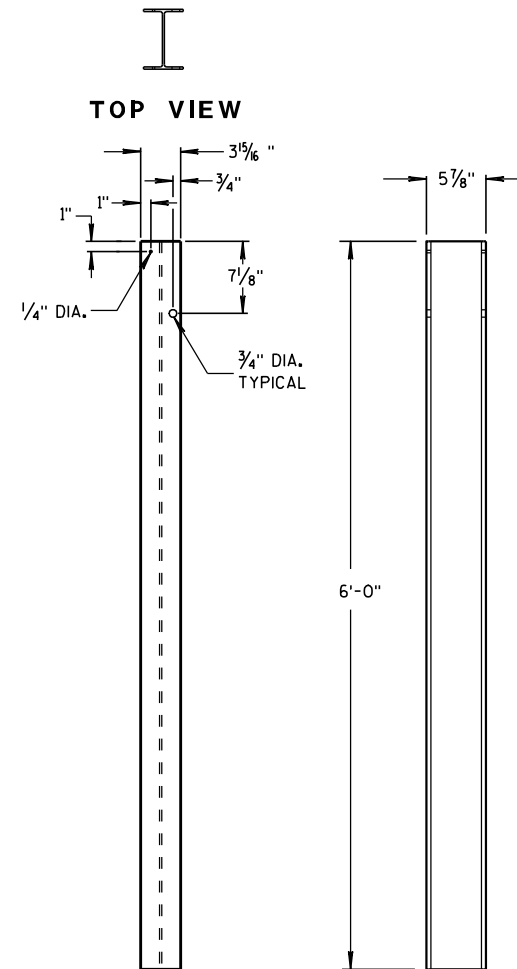


SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL



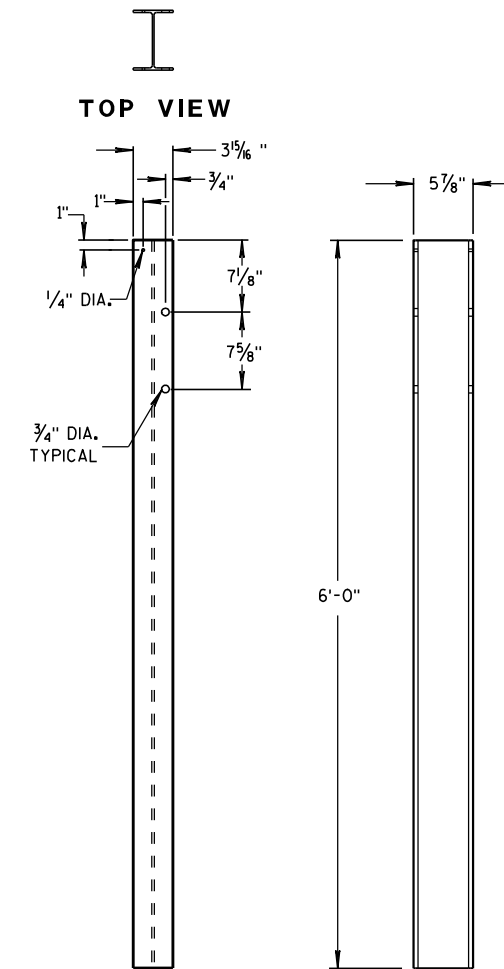
TOP VIEW



FRONT VIEW

SIDE VIEW

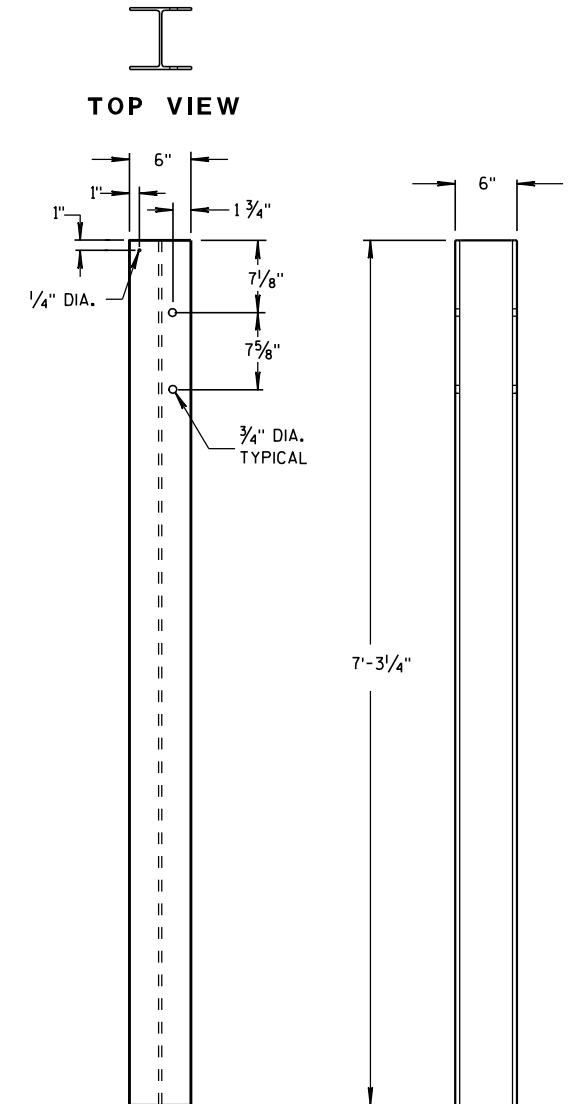
STEEL POSTS 1-5



FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11

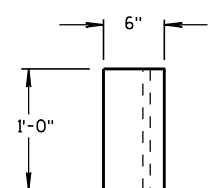


FRONT VIEW

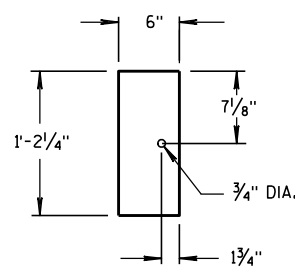
SIDE VIEW

STEEL POSTS 12-14

① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

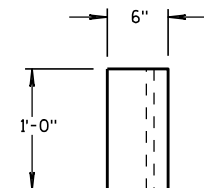


TOP VIEW

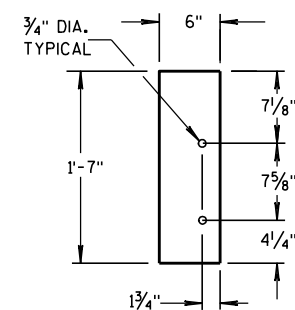


FRONT VIEW

BLOCKOUT
POSTS 1-5

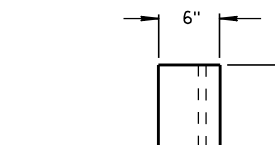


TOP VIEW

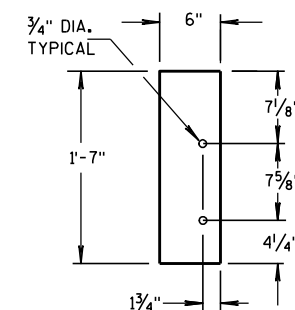


FRONT VIEW

BLOCKOUT
POSTS 6-11



TOP VIEW



FRONT VIEW

BLOCKOUT
POSTS 12-14

STEEL POST SIZES

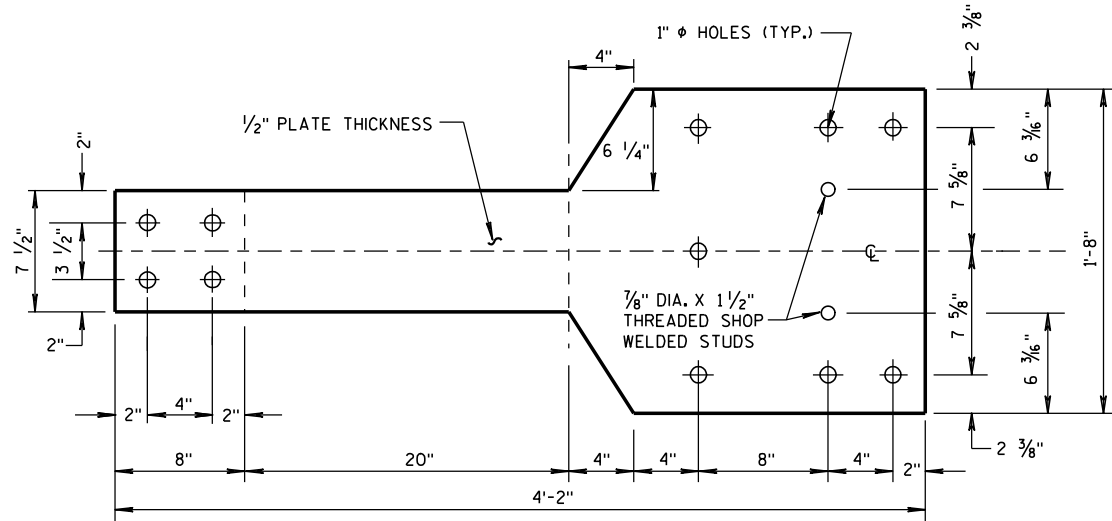
POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 7/8"
⑬	W6x15	87 7/8"
⑭	W6x15	87 7/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

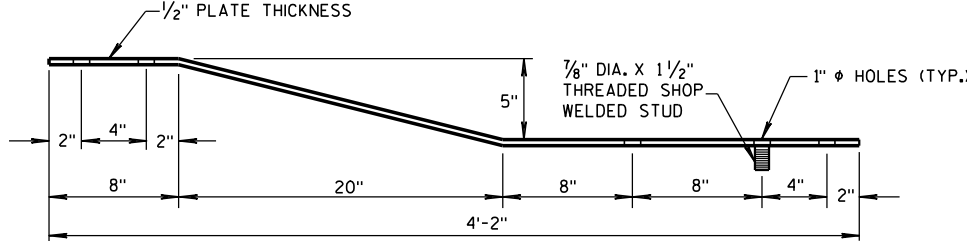
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

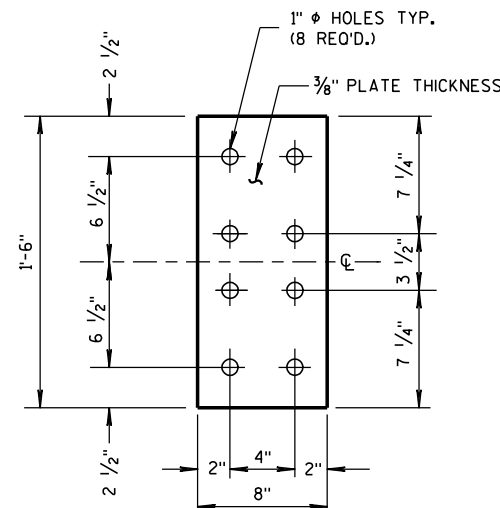
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



FRONT VIEW

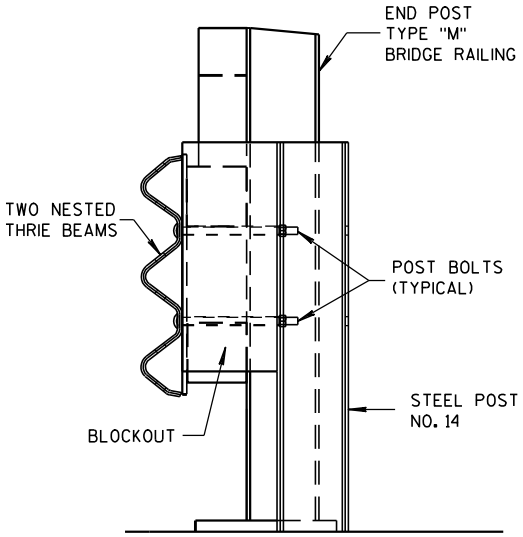


PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"

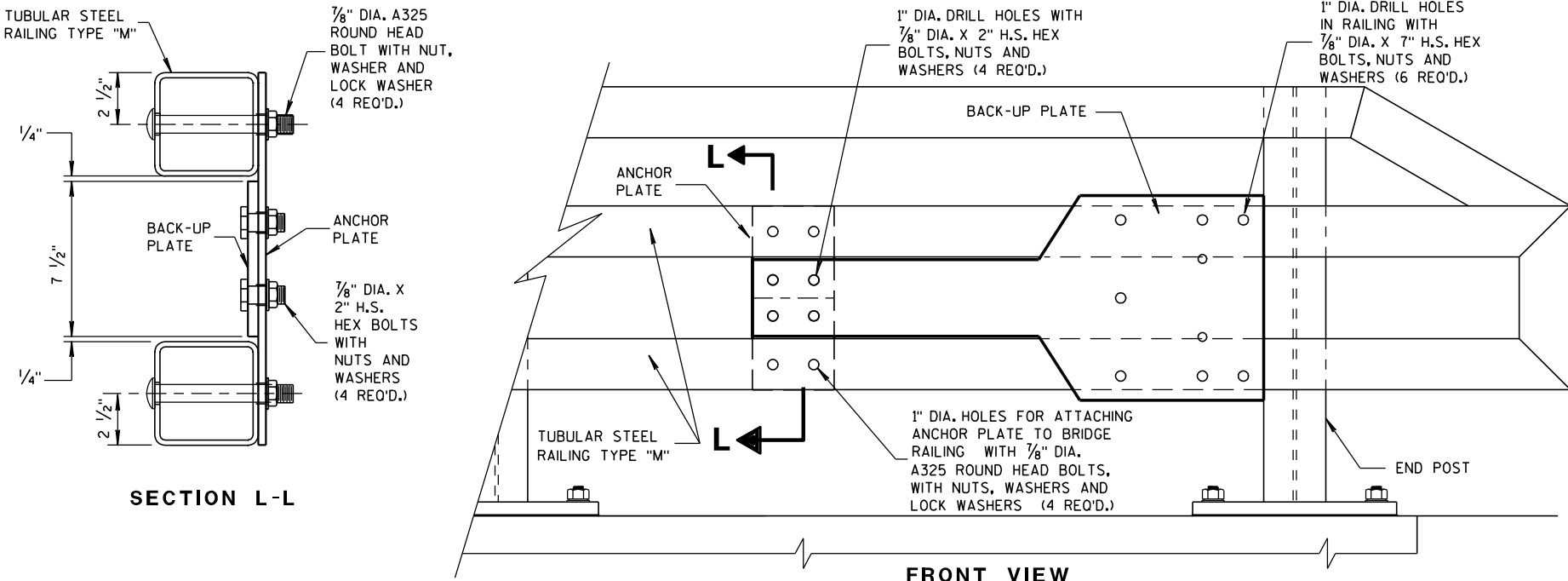


FRONT VIEW

ANCHOR
PLATE DETAIL,
TYPE "M"



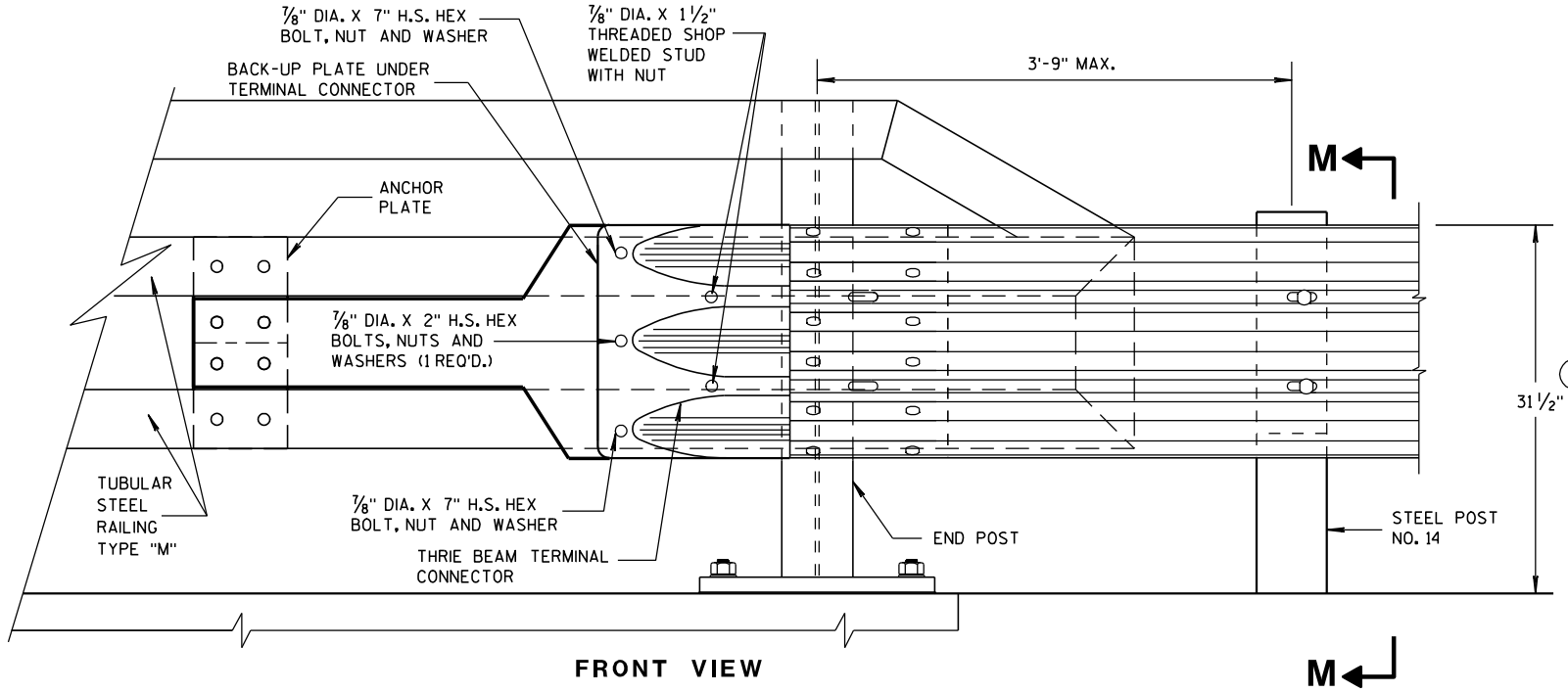
SECTION M-M



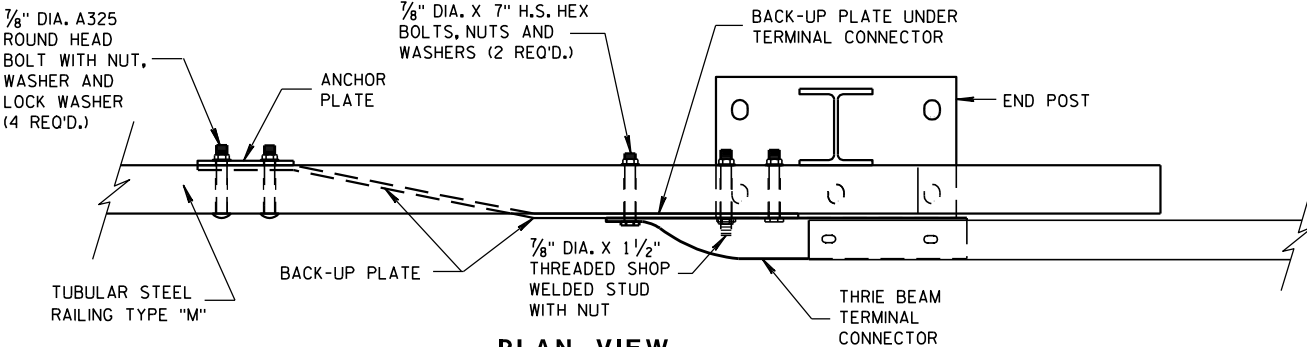
SECTION L-L

FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

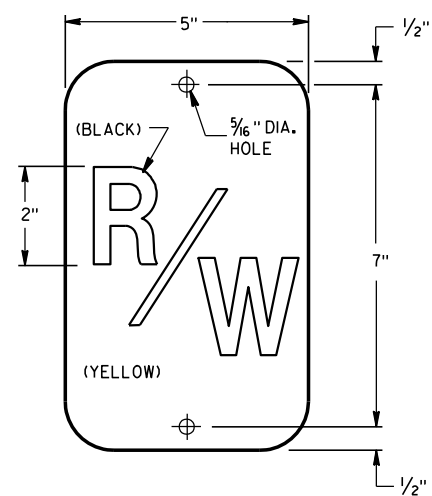
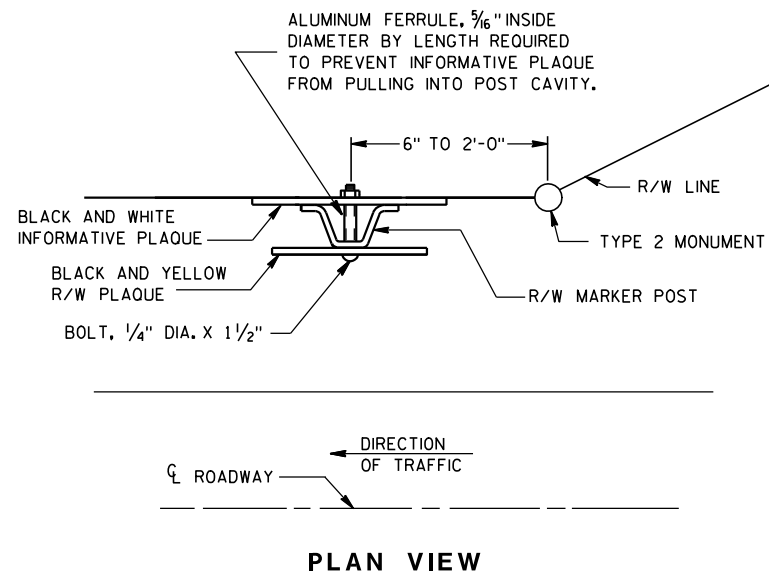
APPROVED

2-8-2012

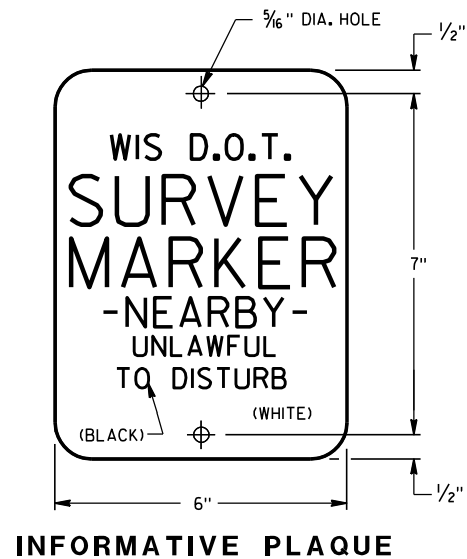
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



GENERAL NOTES

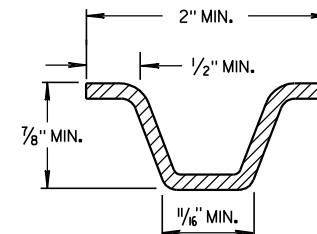
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

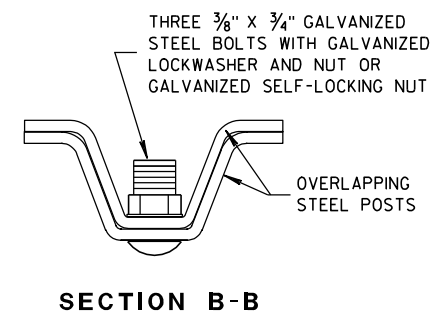
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

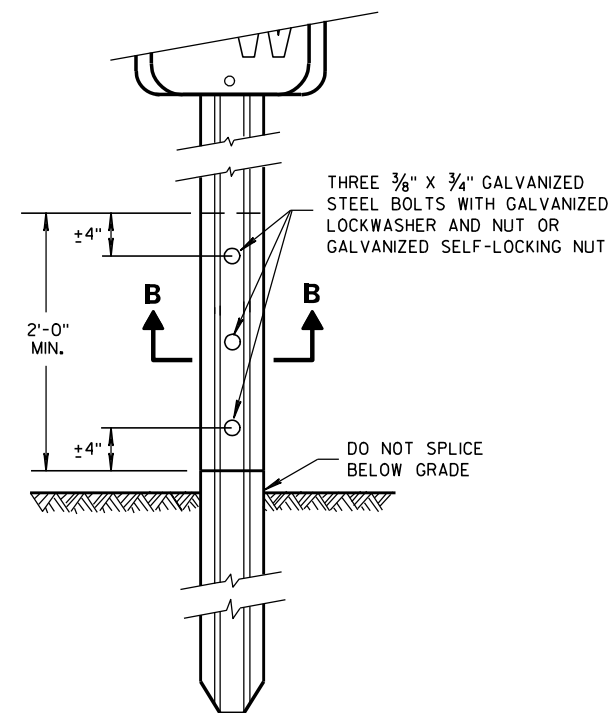
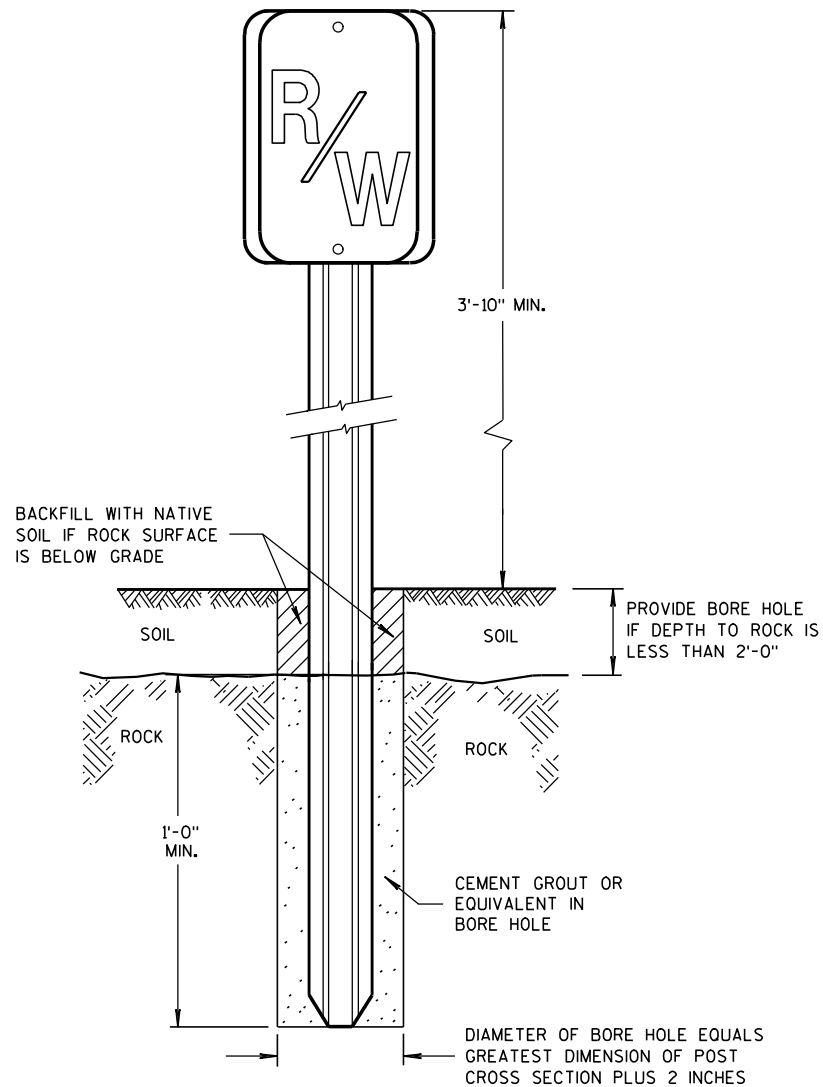
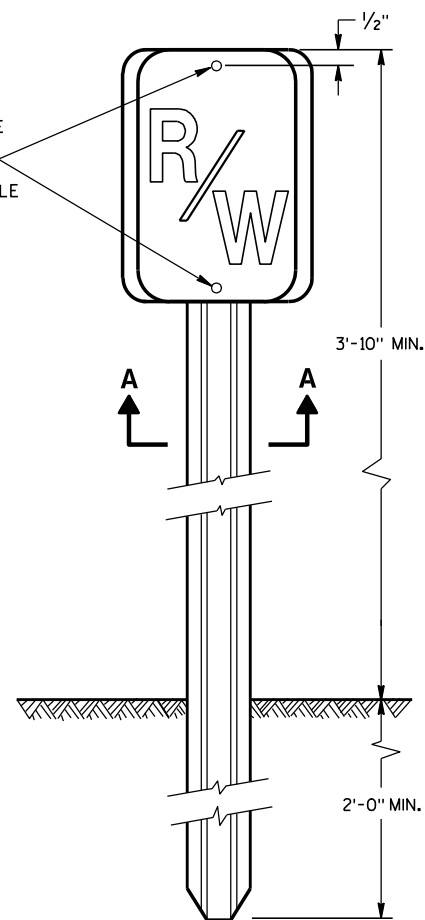
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'-10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



MIN. WEIGHT 1.12 LB./FT.
SECTION A-A



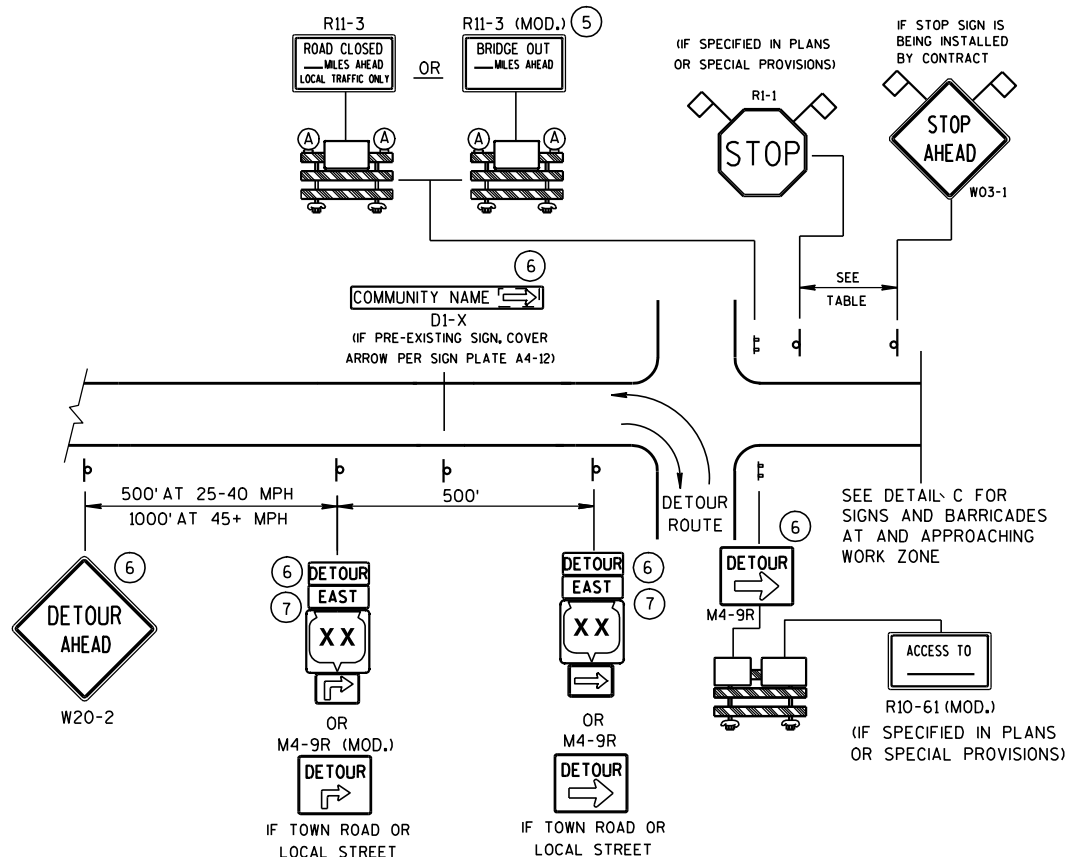
STEEL POSTS SHALL HAVE 2 - $\frac{3}{8}$ " HOLES 7" APART. POST WITH ADDITIONAL HOLES WILL BE ACCEPTABLE



**MARKER POST
FOR RIGHT-OF-WAY**

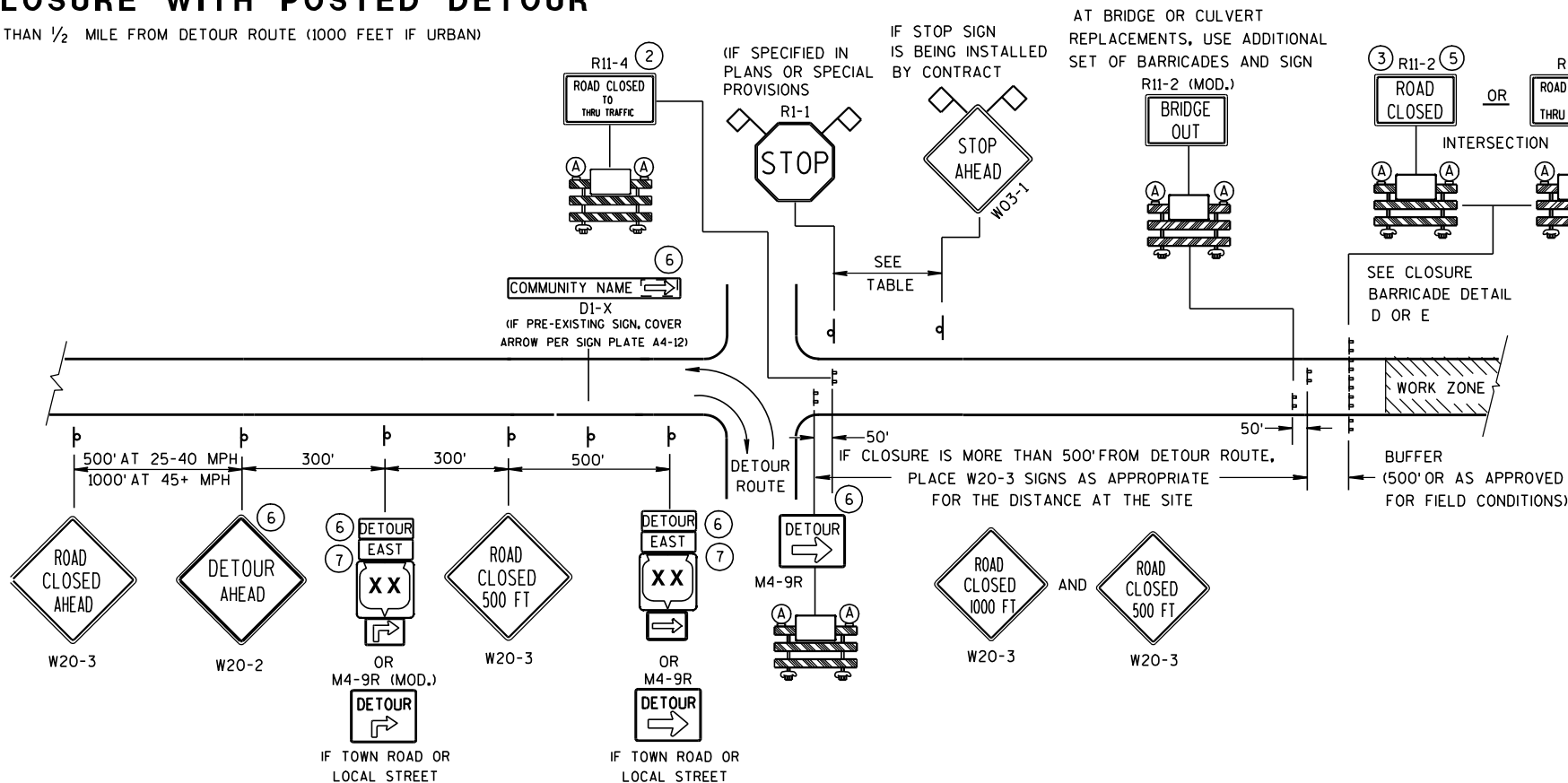
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/27/09 /S/ Ray Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



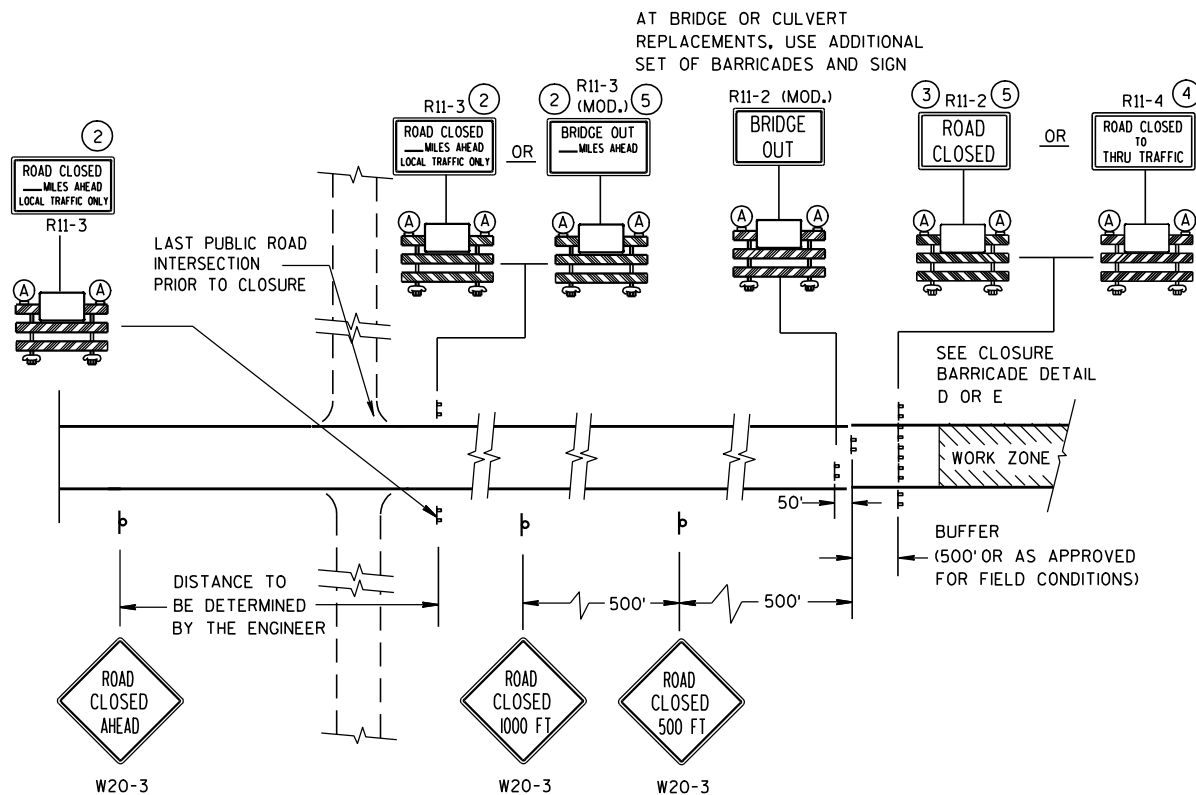
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

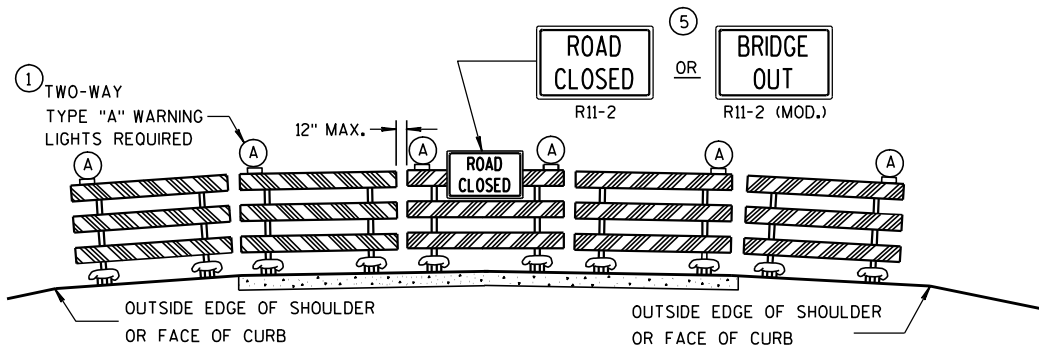
SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

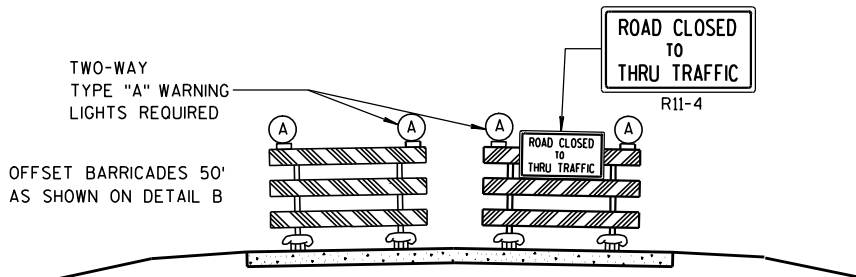
- POST MOUNTED SIGN
- TYPE III BARRICADES
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- MI-4 OR MI-5A OR MI-6
- MO5-1 OR MO6-1
- FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

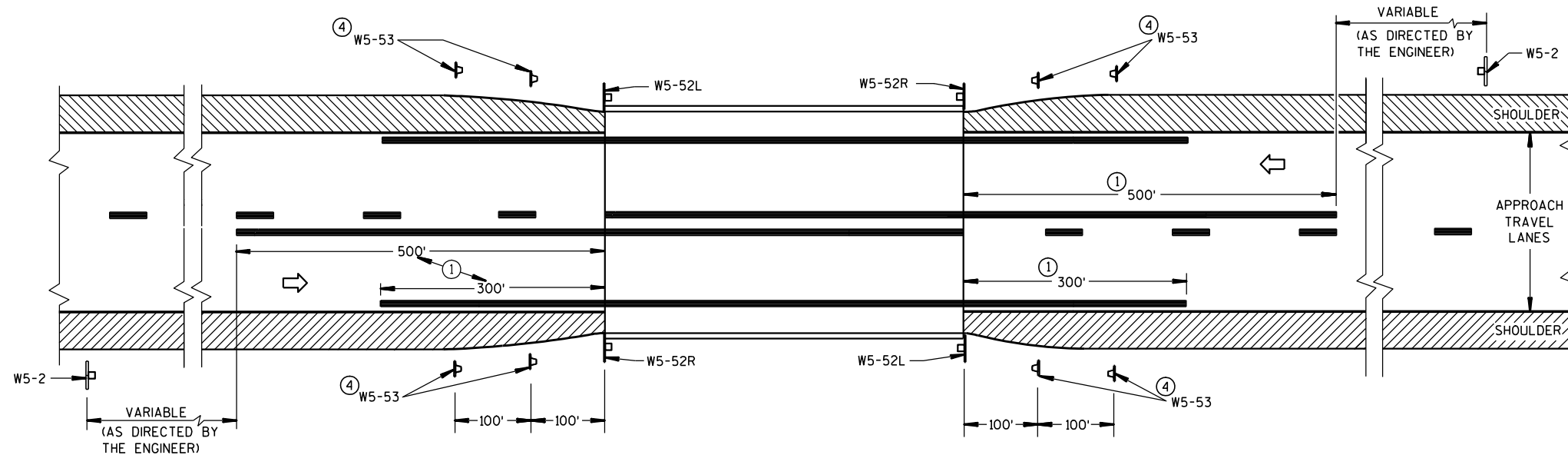
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

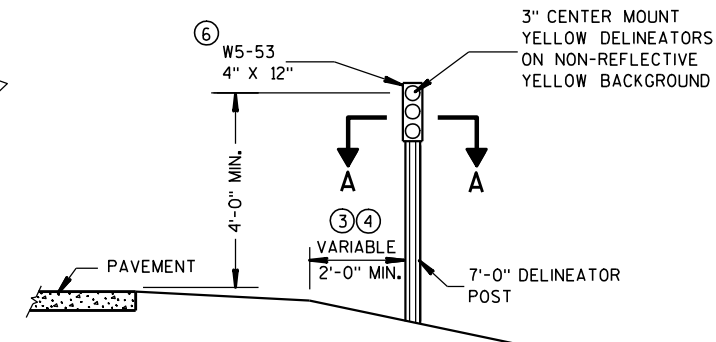
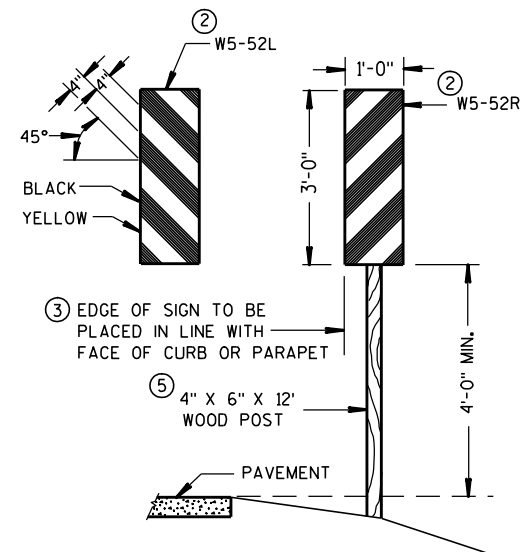
BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/16/03 DATE	/S/ Thomas N. Notbohm CHIEF SIGNS AND MARKING ENGINEER
FHWA	



SITUATION 1

WARRANTING CRITERION:

BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET



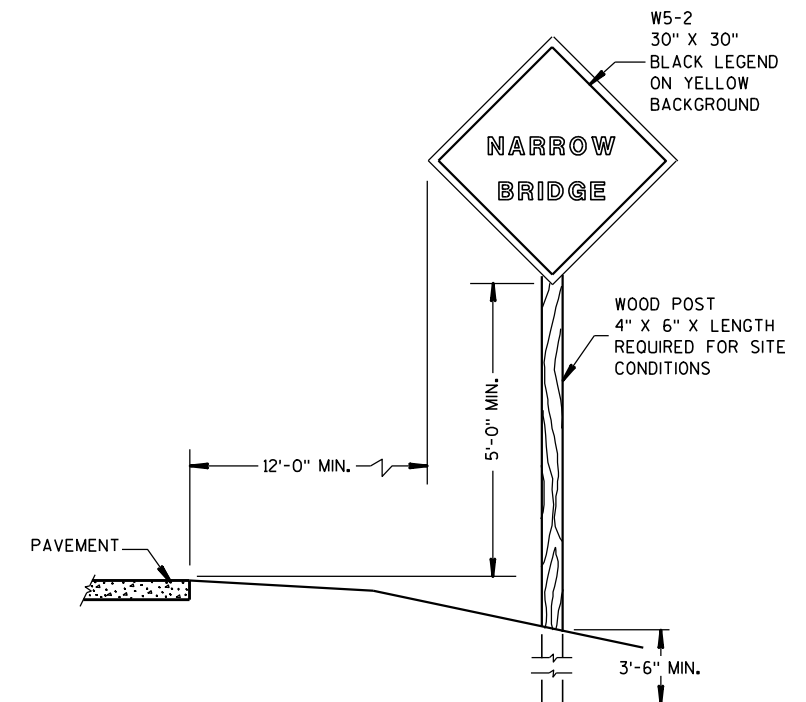
OBJECT MARKER PLACEMENT

GENERAL NOTES

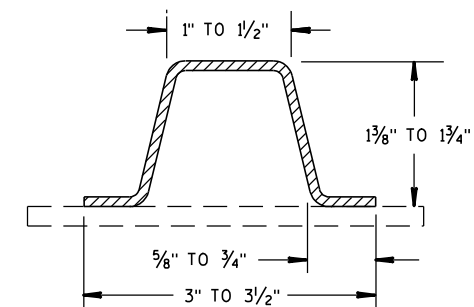
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

- ① MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.
- ② FACE OF OBJECT MARKERS W5-52R AND W5-52L SHALL BE COVERED WITH TYPE H REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.
- ⑤ A 12 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.
- ⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.

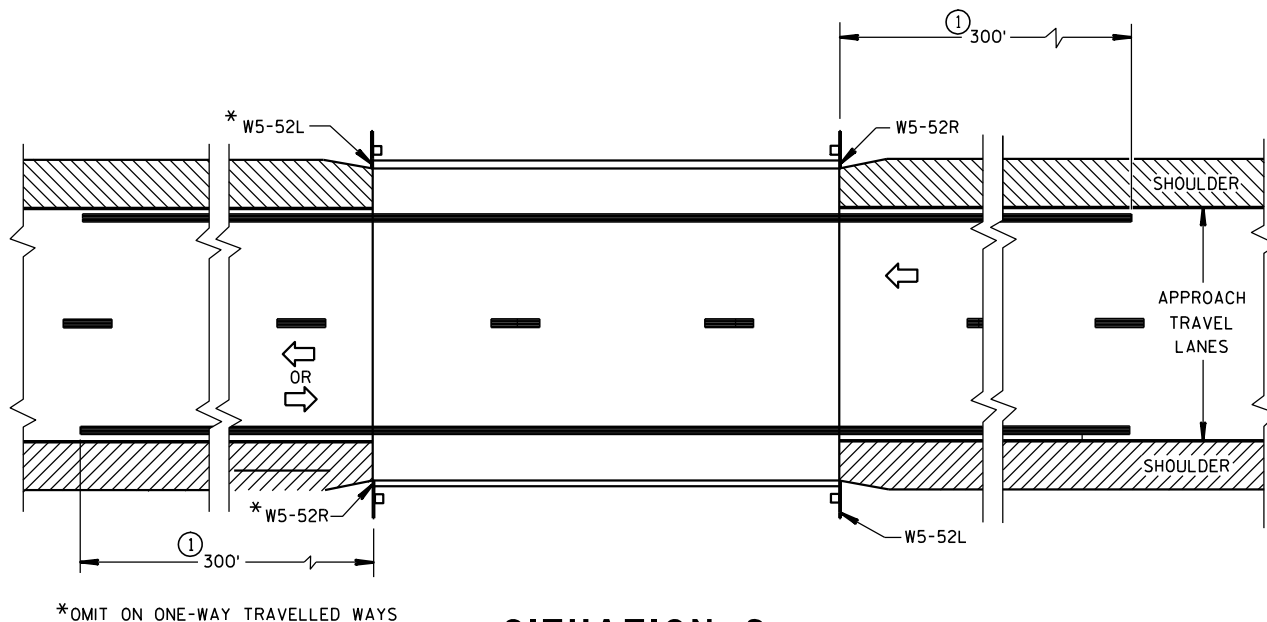


SIGN PLACEMENT



SECTION A-A

(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.

SIGNING & MARKING FOR TWO LANE BRIDGES

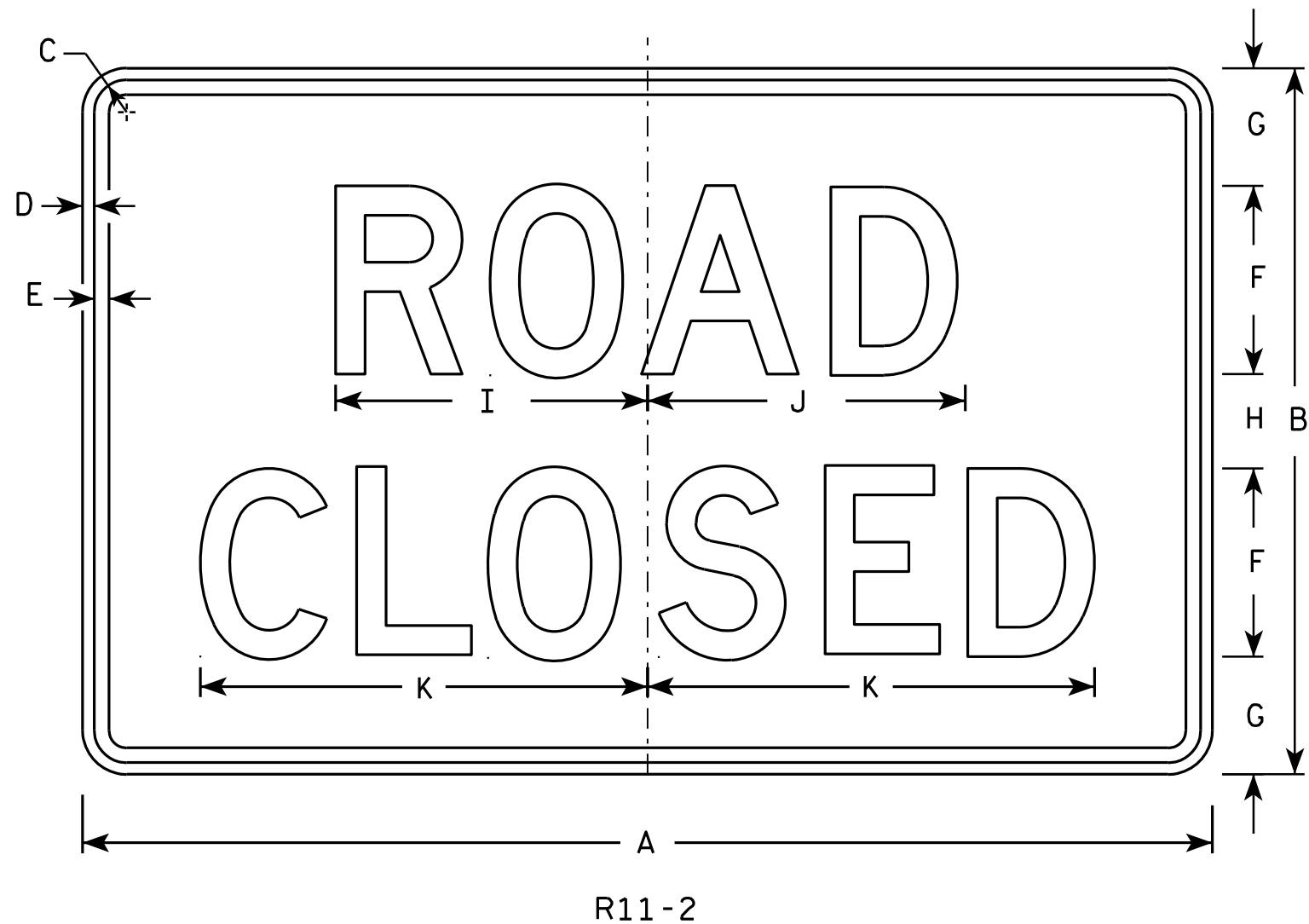
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/5/06
DATE

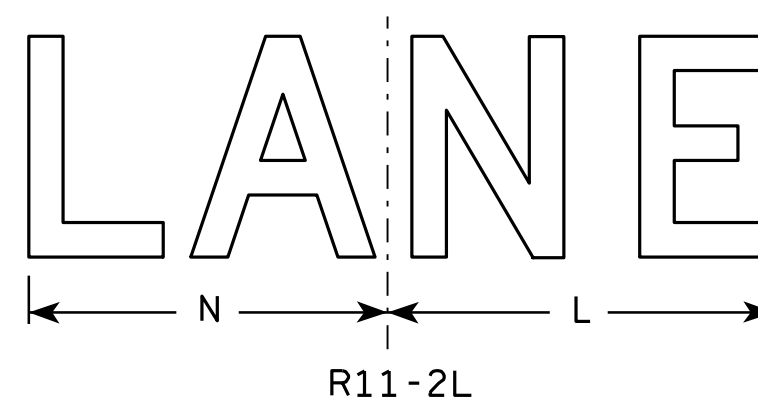
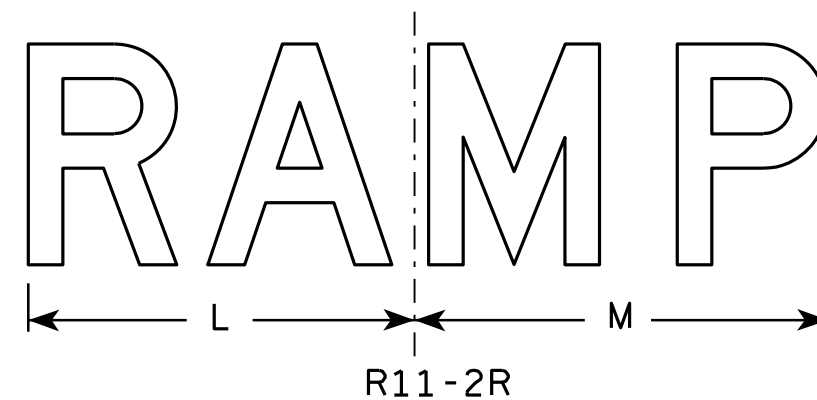
FHWA

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:

HWY:

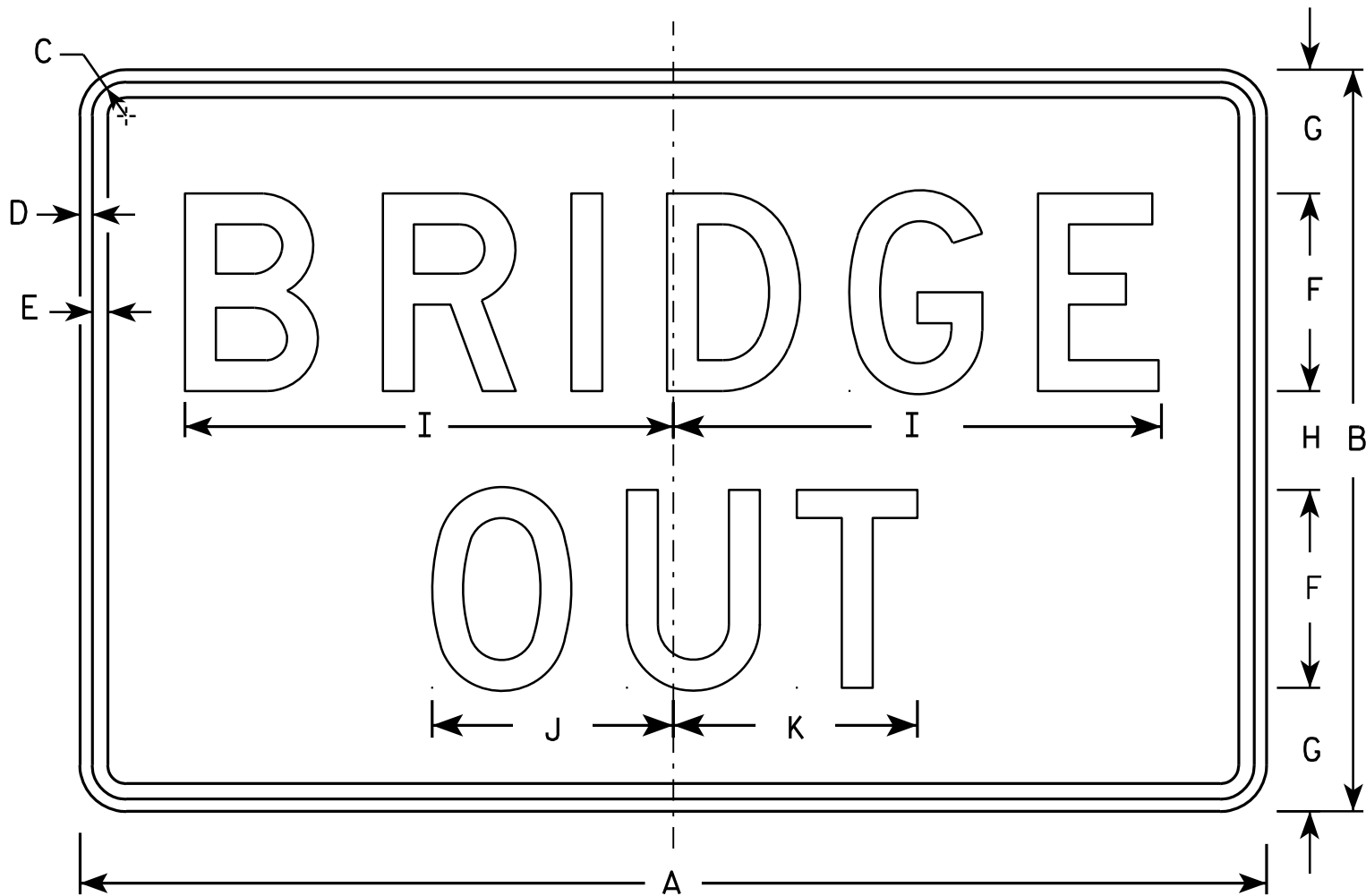
COUNTY:

SHEET NO:

E

NOTES

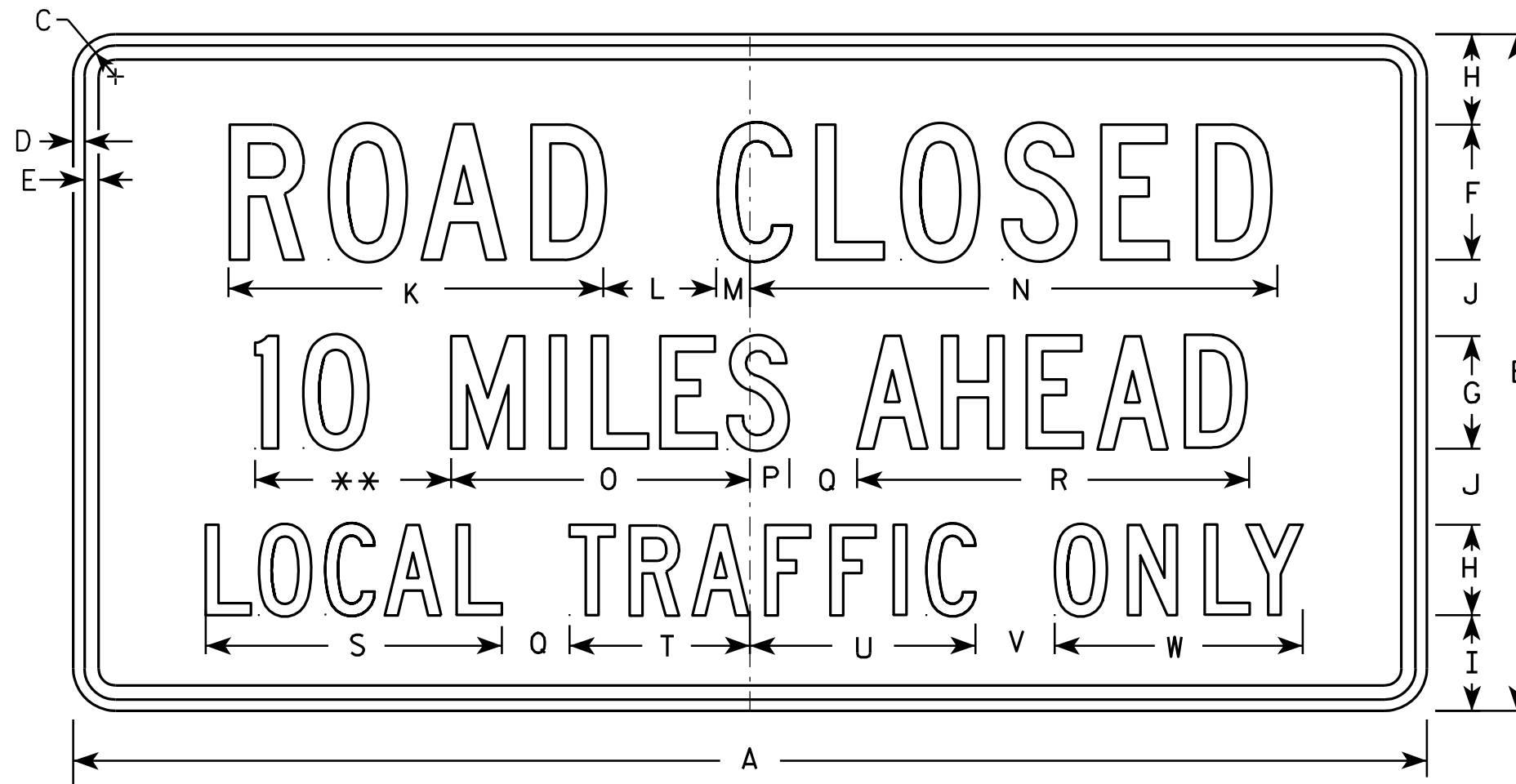
- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall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



R11-2B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN	
R11-2B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-2B.2



R11-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

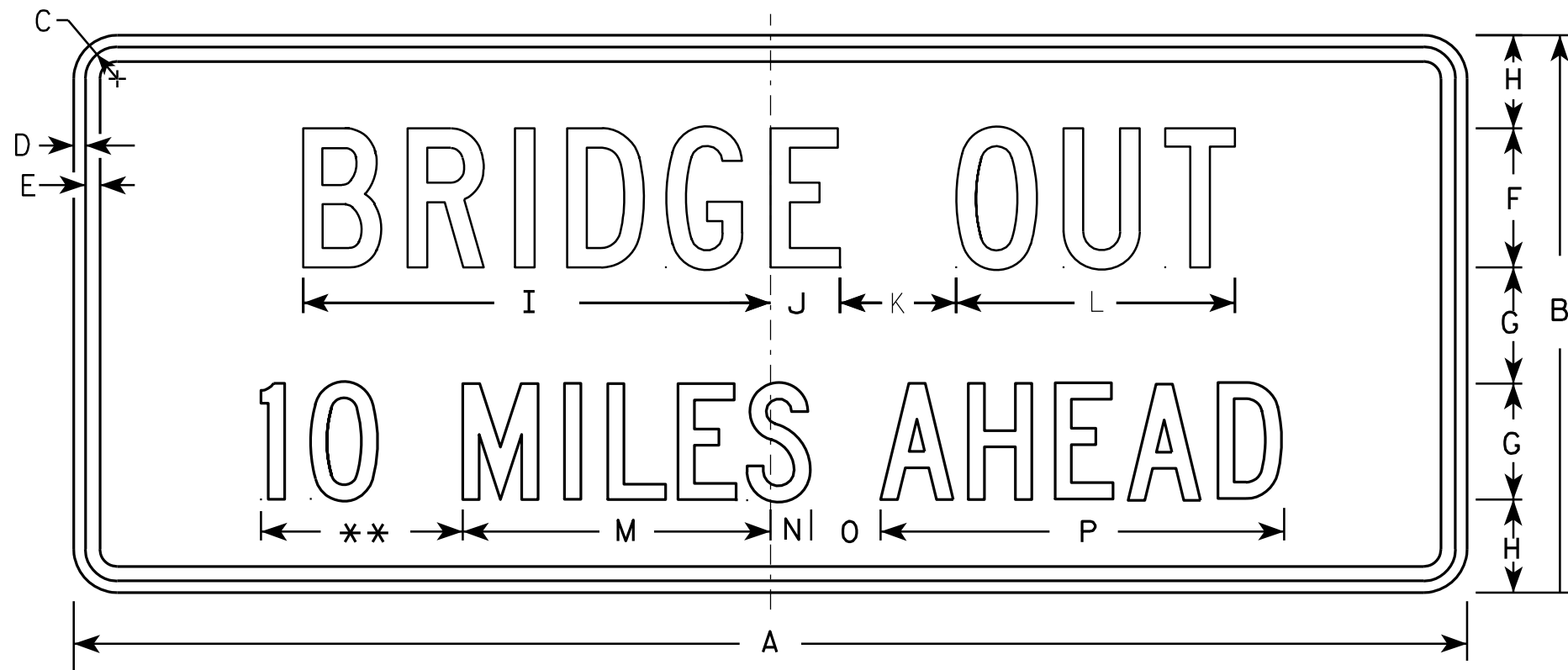
** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

STANDARD SIGN R11-3

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-3.6

PROJECT NO: HWY: COUNTY: SHEET NO: E



R11-3C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3⁄8	1⁄2	5⁄8	4	3	2 1⁄2	13 1⁄4	2 1⁄4	3	8	8	1 1⁄2	2	10 3⁄4											3.75
2S	60	24	1 3⁄8	1⁄2	5⁄8	6	5	4	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8											10.0
2M	60	24	1 3⁄8	1⁄2	5⁄8	6	5	4	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8											10.0
3																											
4																											
5																											

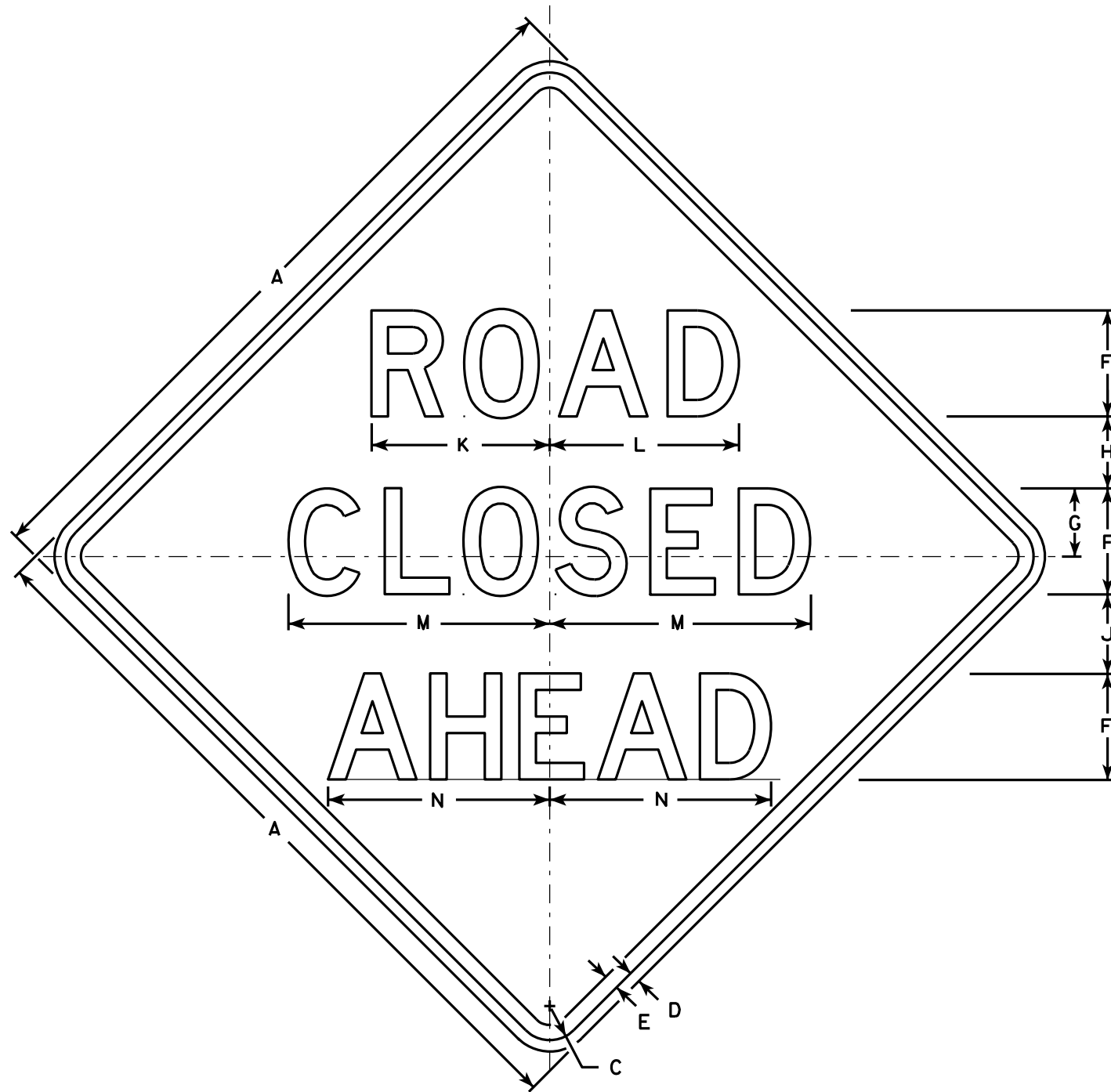
PROJECT NO:																											SHEET NO:	E
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STANDARD SIGN
R11-3C

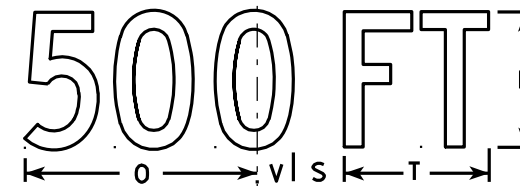
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

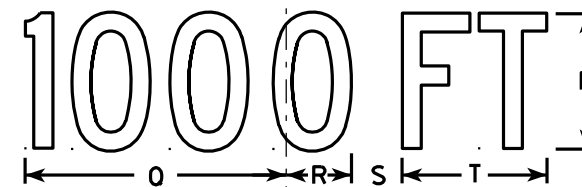
DATE 4/1/11 PLATE NO. R11-3C.2



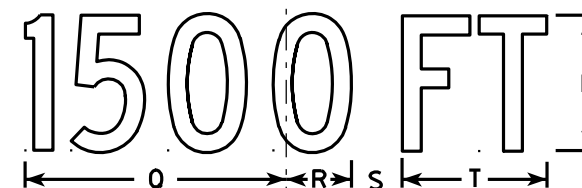
W20-3A



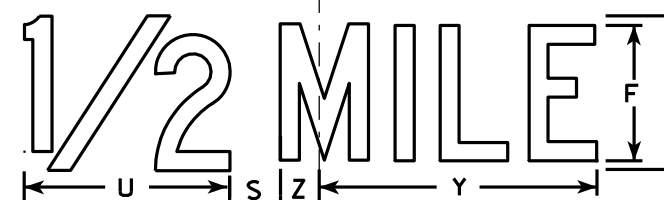
W20-3D



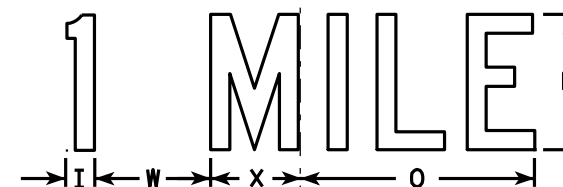
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - see note 5
- 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.
- Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

LIVE LOAD:

DESIGN LOADING _____ HL-93
INVENTORY RATING FACTOR _____ 1.20
OPERATING RATING FACTOR _____ 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) _____ 250 KIPS
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB _____ f'c = 4000 psi
ALL OTHER _____ f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT _____ fy = 60000 psi

FOUNDATION DATA:

ABUTMENTS SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160* TONS PER PILE. ESTIMATED 40'-0" LONG AT BOTH ABUTMENTS. PILE POINTS ARE REQUIRED.

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

HYDRAULIC DATA:

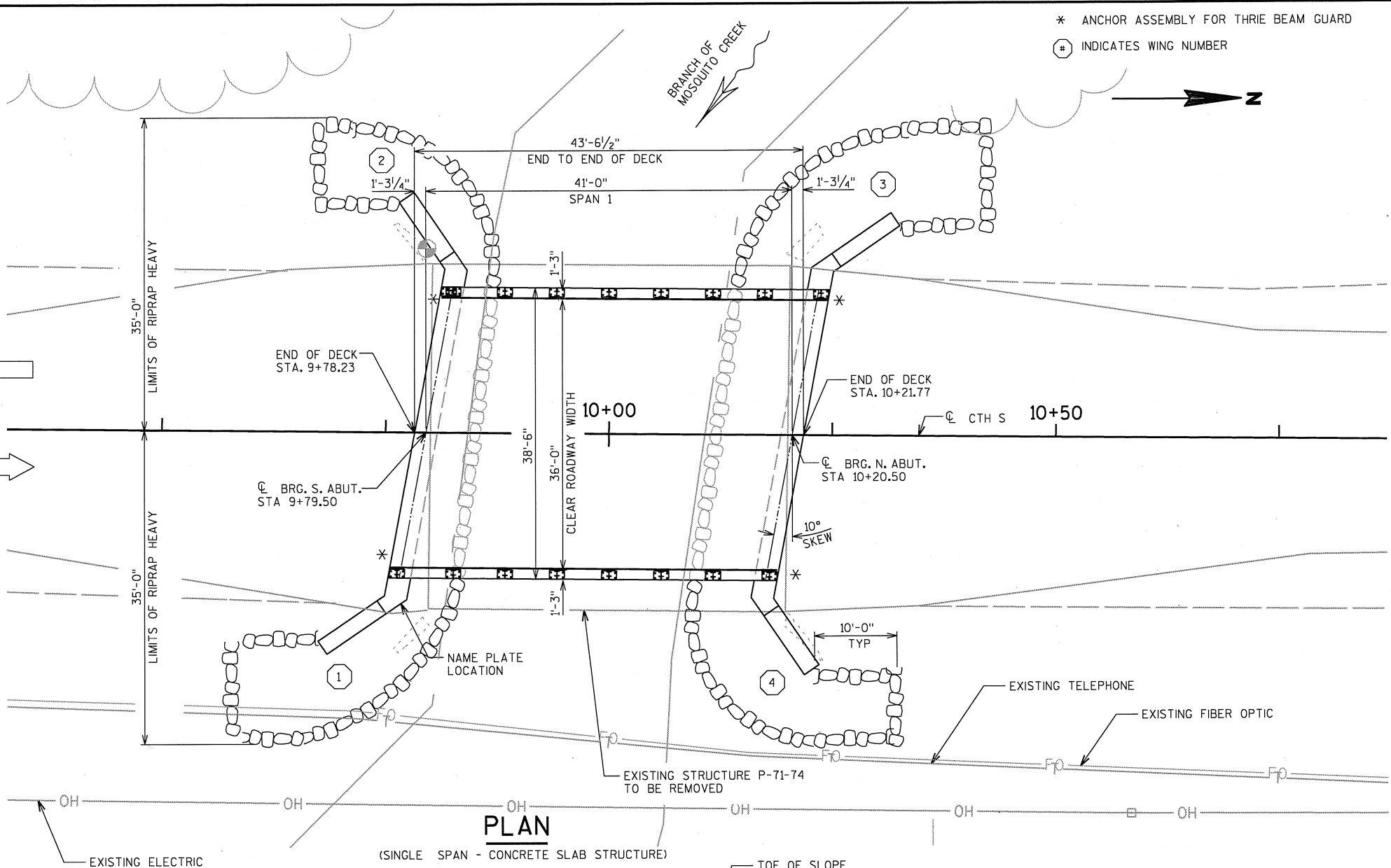
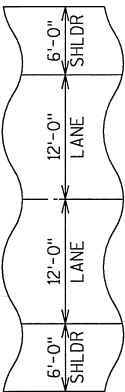
100 YEAR FREQUENCY
Q₁₀₀ _____ 1,450 cfs
VELOCITY _____ 9.3 ft/s
HIGH WATER _____ EL. 1057.16
WATERWAY AREA _____ 156.3 ft²
DRAINAGE AREA _____ 3.64 mi²
SCOUR CRITICAL CODE _____ 8
OVER TOPPING FREQUENCY _____ N/A
2 YEAR FREQUENCY
Q₂ _____ 292 cfs
HIGH WATER _____ EL. 1053.48

TRAFFIC DATA:

ADT (2012) = 720
ADT (2032) = 800
ROADWAY DESIGN SPEED 60 MPH

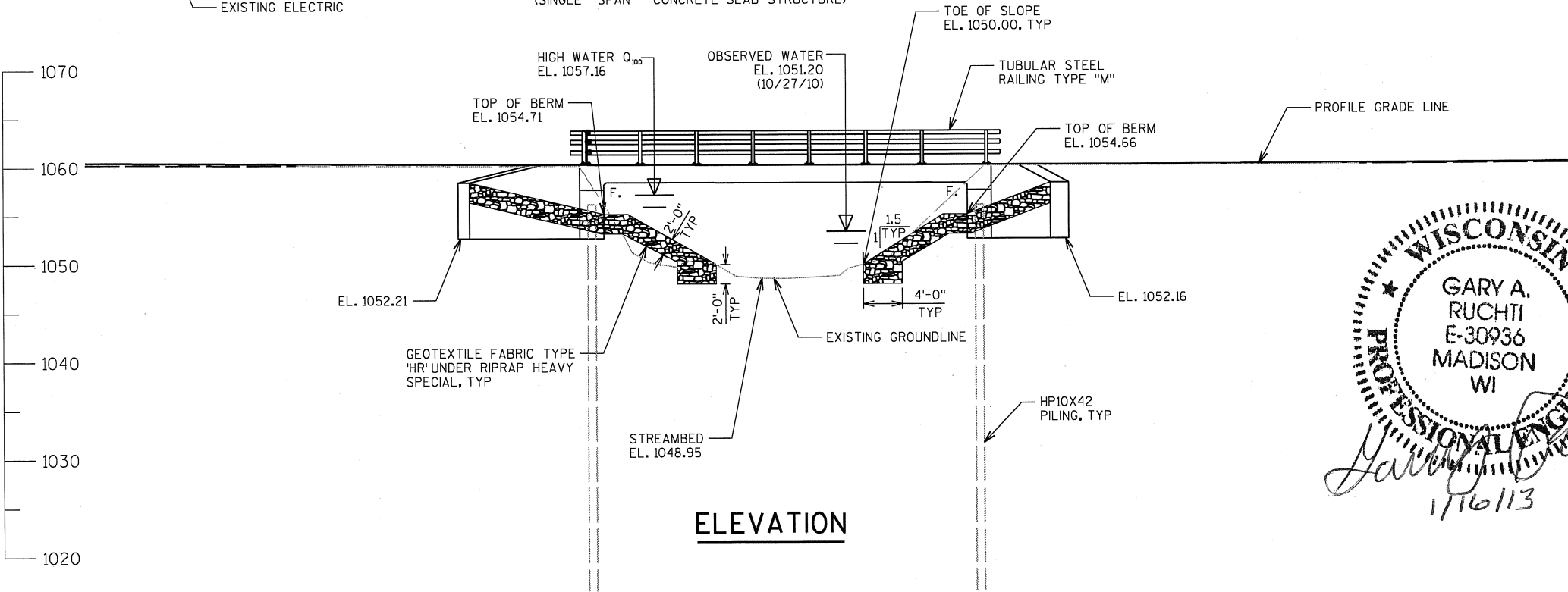
LIST OF DRAWINGS:

GENERAL PLAN _____ 1
CROSS SECTION, QUANTITIES AND GENERAL NOTES _____ 2
SUBSURFACE EXPLORATION _____ 3
SOUTH ABUTMENT _____ 4
SOUTH ABUTMENT DETAILS _____ 5
NORTH ABUTMENT _____ 6
NORTH ABUTMENT DETAILS _____ 7
SUPERSTRUCTURE _____ 8
SUPERSTRUCTURE DETAILS _____ 9
TUBULAR STEEL RAILING TYPE "M" _____ 10

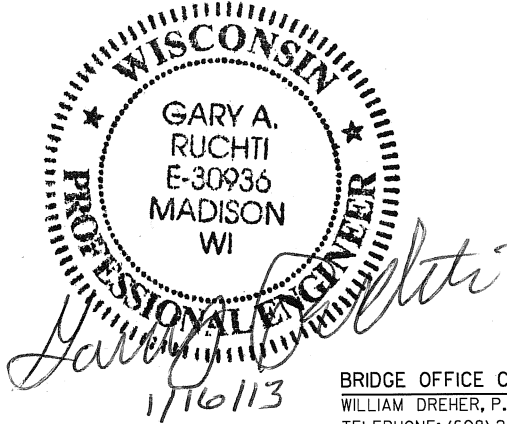


PLAN

(SINGLE SPAN - CONCRETE SLAB STRUCTURE)



ELEVATION



BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489
CONSULTANT CONTACT
GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380

NO.	DATE	REVISION	BY
Mead & Hunt Mead & Hunt, Inc. 6501 Watts Road Madison, WI 53719 608.273.6380 fax: 608.273.6391 www.meadhunt.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Dreher</i> KAR 01/22/13 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-71-0188			
CTH S OVER BRANCH OF MOSQUITO CREEK			
COUNTY	WOOD	TOWN/CITY/VILLAGE	SIGEL
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	MJB CK'D.	DESIGN RCP	DRAWN BY TAV/MJB CK'D. RCP
GENERAL PLAN			SHEET 1 OF 10

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

AT THE BACKFACE OF ABUTMENT ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING STRUCTURE, TO BE REMOVED, IS A 30.1' LONG BY 40.4' CLEAR ROADWAY WIDTH, STEEL GIRDER BRIDGE (P-71-74).

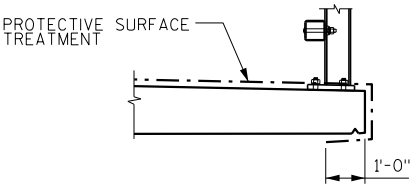
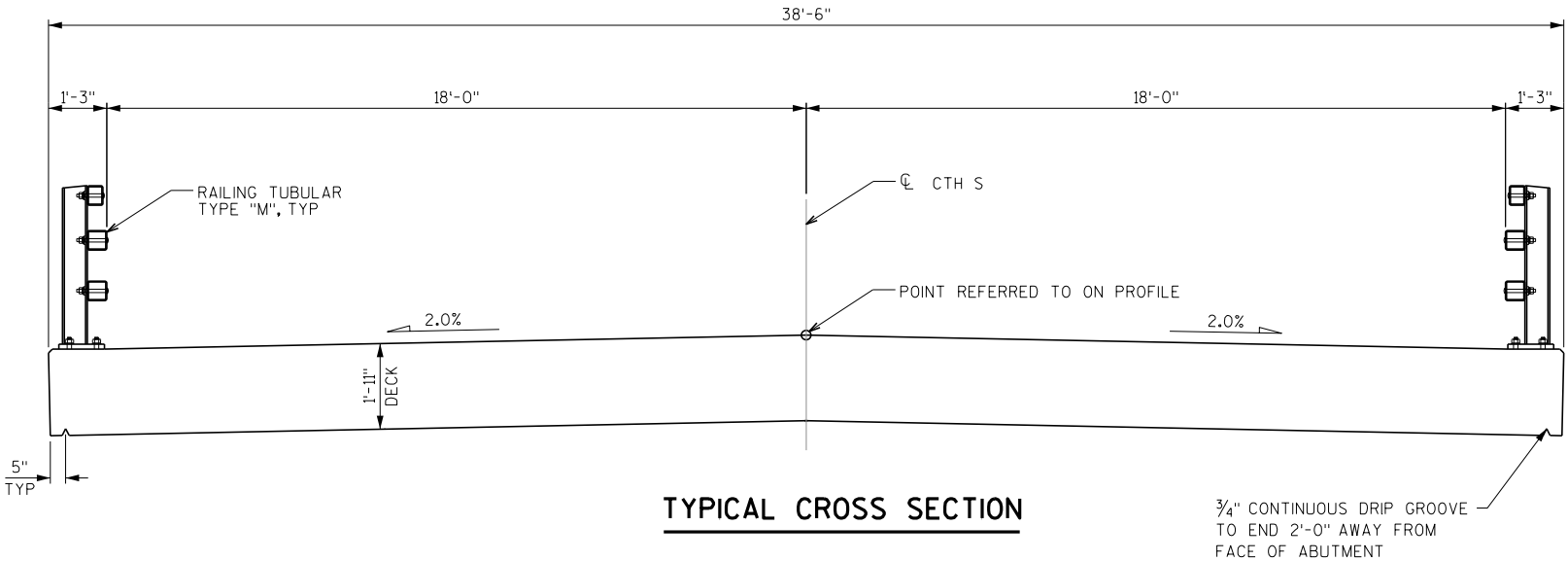
THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURE.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE LIMITS SHOWN IN DETAIL ON THIS SHEET.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

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

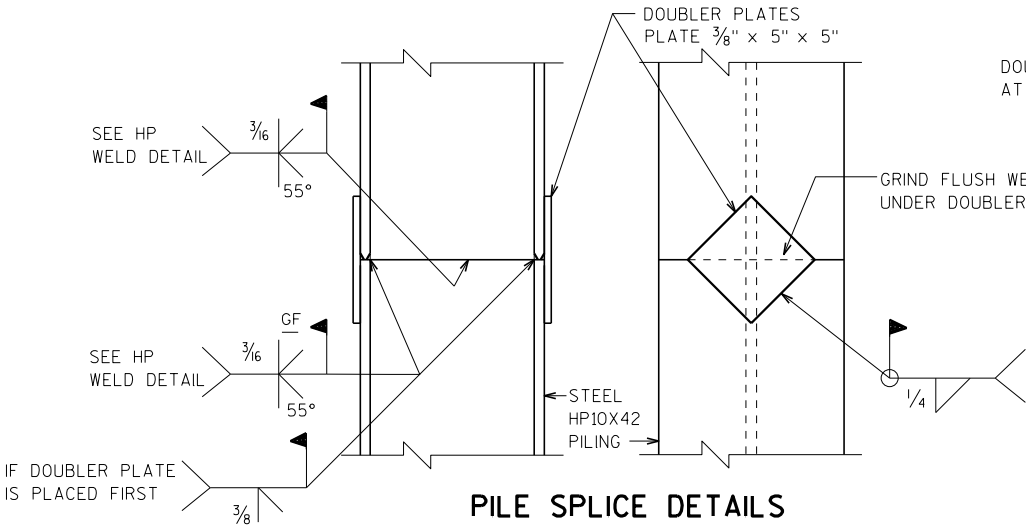
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).



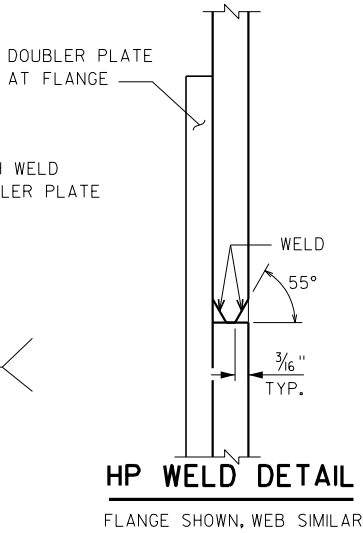
PROTECTIVE SURFACE TREATMENT DETAIL

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	7+59	41' RT	PK IN POWER POLE	1061.74
2	9+79	20.5' LT	"X" ON SW WING	1059.45
3	12+56	39.7' LT	PK IN 8" BIRCH TREE	1059.89

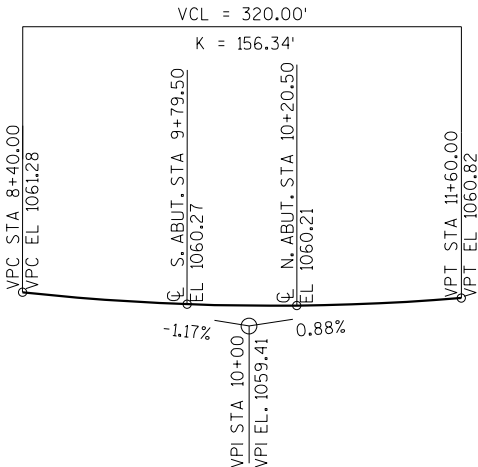


PILE SPLICE DETAILS



HP WELD DETAIL

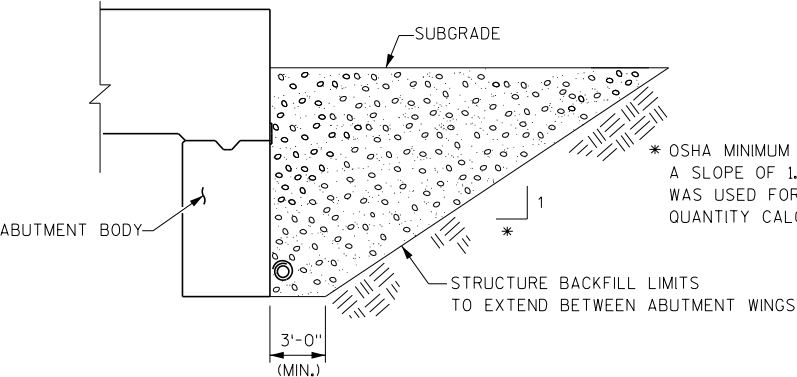
FLANGE SHOWN, WEB SIMILAR



PROFILE GRADE LINE - CTH S

TOTAL ESTIMATED QUANTITIES

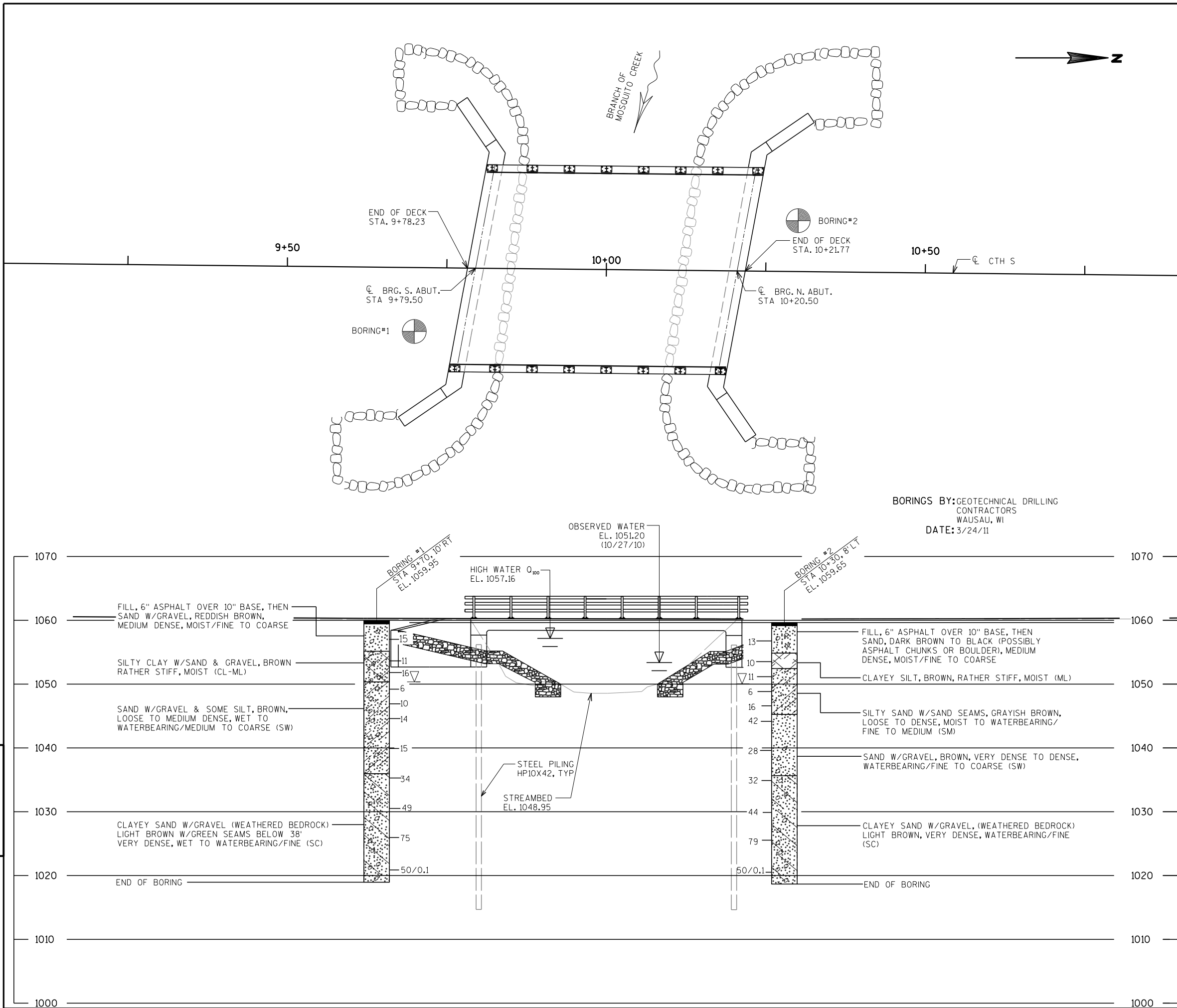
BID ITEM NO.	BID ITEMS	UNIT	S ABUT	N ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 10+00	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-71-0188)	LS	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	140	140	---	280
502.0100	CONCRETE MASONRY BRIDGES	CY	32	32	125	189
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	212	212
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2800	2800	---	5600
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1430	1430	22190	25050
513.4060	RAILING TUBULAR TYPE M (B-71-0188)	LS	---	---	1	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	12	---	24
550.0500	PILE POINTS	EA	8	8	---	16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	320	320	---	640
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	15	15	---	30
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	62	62	---	124
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	180	180	---	360
SPV.0035.01	RIPRAP HEAVY SPECIAL	CY	85	85	---	170
NON BID ITEMS						
	FILLER	SIZE				1/2" & 3/4"



STRUCTURE BACKFILL DETAIL

(TYPICAL AT BOTH ABUTMENTS)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		TAV	PLANS CK'D. RCP
CROSS SECTION, QUANTITIES AND GENERAL NOTES		SHEET 2 OF 10	



STATE PROJECT NUMBER			
6800-02-71			
ABBREVIATIONS			
F— FINE	M— MEDIUM	C— COARSE	
WS— WEATHERED	SO— SOUND		
MATERIAL SYMBOLS			
TOPSOIL	SILT	SANDSTONE	
SAND	PEAT	LIMESTONE	
GRAVEL	CLAY	IGNEOUS ROCK	
LEGEND OF PROBING			
PROBING NO. STA. ELEVATION 7 AVERAGE BLOWS PER FOOT REFUSAL 95/6			
95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.			
LEGEND OF BORING			
BORING NO. STA. ELEV. UNCONFINED STRENGTH 7.7 7 BLOWS PER FT. USING 140# WT. FALLING 30" WASH SAMPLE SHELBY TUBE S.T. GROUND WATER ELEVATION NO GROUND WATER OBSERVED ABOVE THIS ELEVATION			
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CAGED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.			
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION			
TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.			
NO. DATE REVISION BY			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY TAV		PLANS CK'D. RCP	
SUBSURFACE EXPLORATION		SHEET 3 OF 10	

FILE NAME : X:\23148-10\10001\TECH\CADD\080103_se.dgn PLOT DATE : 1/16/2013 PLOT BY : I258MJB PLOT SCALE : 15.0000 s f / in.

NOTES

FOR PILE SPLICE DETAIL, SEE SHEET 2.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT, EL 1052.21, BEFORE DRIVING PILING.

DO NOT PLACE FILL ABOVE ELEVATION 1055.21 UNTIL SUPERSTRUCTURE IS IN PLACE.

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE. ESTIMATED 40'-0" LONG. PILE POINTS REQUIRED.

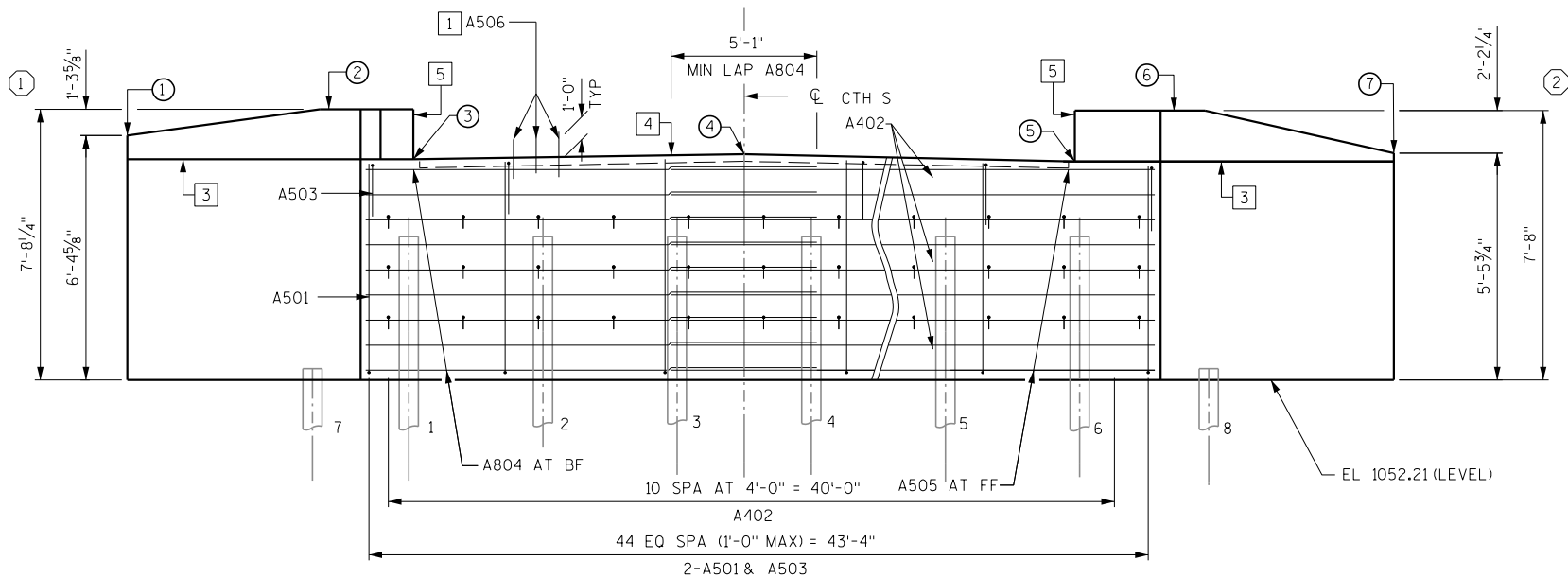
FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAILS, SEE SHEET 2.

- 1 A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- 2 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- 3 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY, PROVIDE $\frac{3}{4}$ " V-GROOVE AT FF OF WING WALL AND RMW ON BF IF OPTIONAL CONSTRUCTION JOINT USED.
- 4 KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY, TERMINATE 1'-0" FROM ABUTMENT ENDS.
- 5 $\frac{1}{2}$ " FILLER - EXTENDED FROM BRIDGE SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF $\frac{1}{2}$ " FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. 1" DEEP AND HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONCRETE.
- 6 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL PIPE UNDERDRAIN.
- 7 PIPE UNDERDRAIN UNPERFORATED 6-INCH (SLOPE TO DRAIN)
- 8 4" x $\frac{3}{4}$ " FILLER LENGTH OF ABUTMENT.
- (X) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

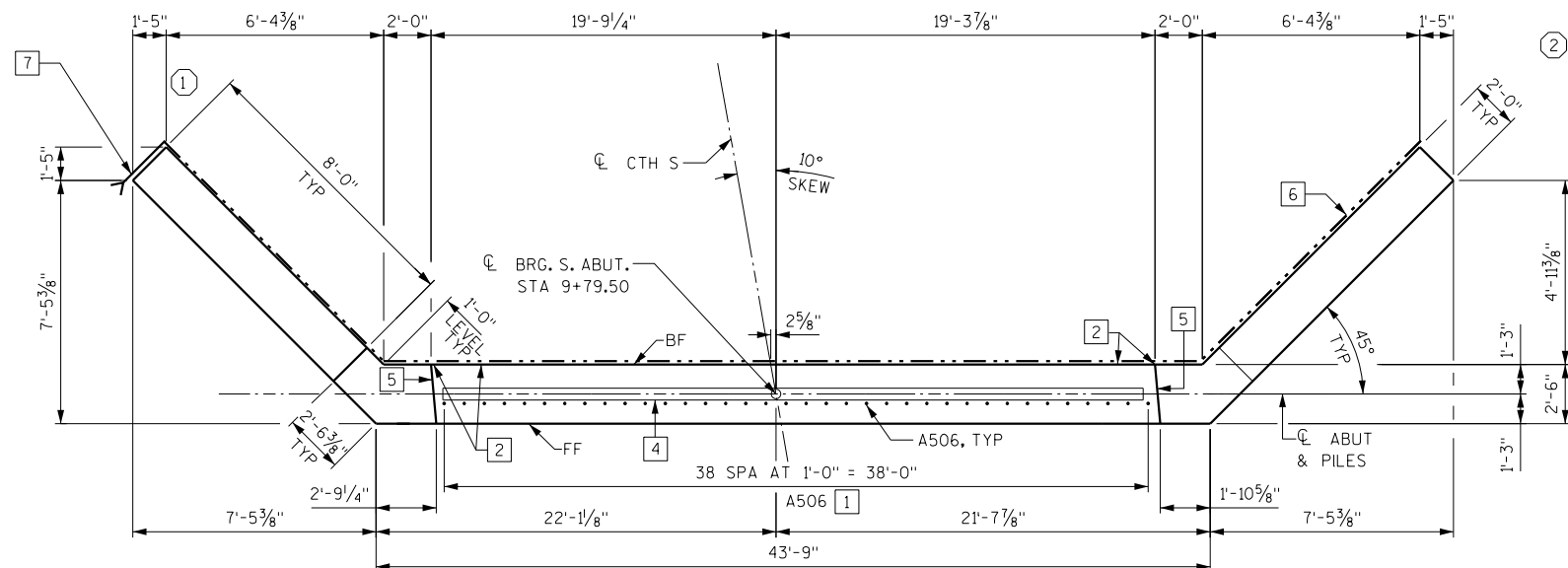
ELEVATIONS

- 1 EL 1058.60 AT WING-1 WT
- 2 EL 1059.90 AT WING-1 BF
- 3 EL 1057.23 AT S ABUT
- 4 EL 1057.60 AT S ABUT
- 5 EL 1057.21 AT S ABUT
- 6 EL 1059.88 AT WING-2 BF
- 7 EL 1057.69 AT WING-2 WT

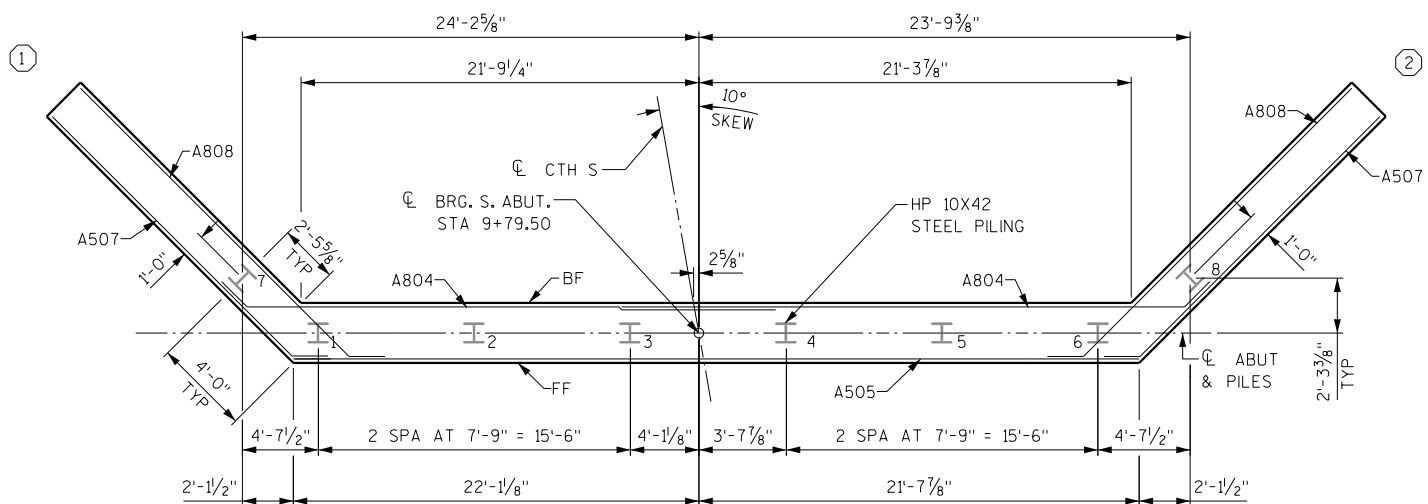


ELEVATION

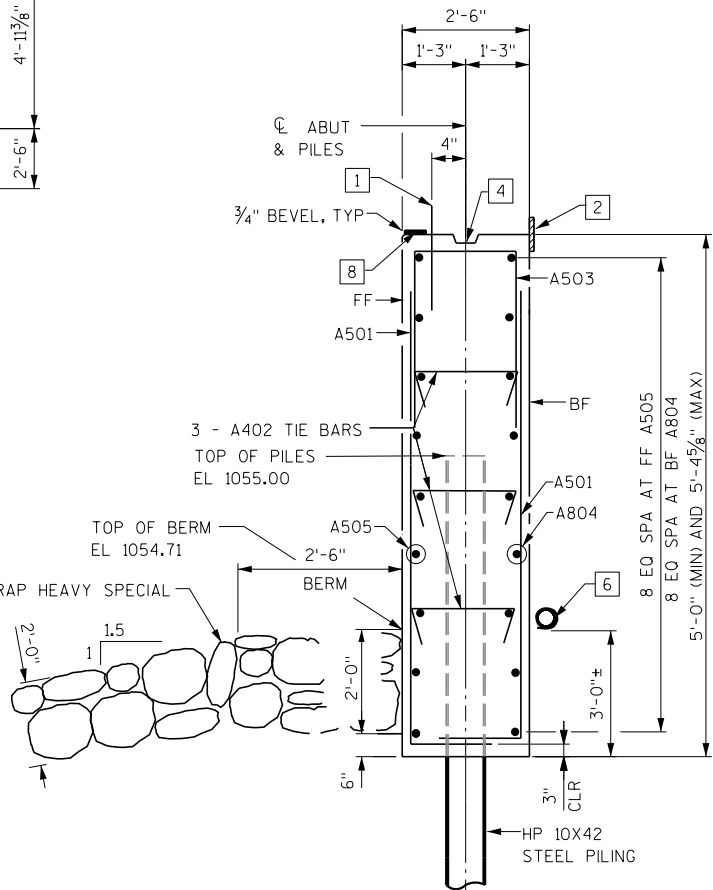
SOUTH ABUTMENT LOOKING SOUTH



PLAN

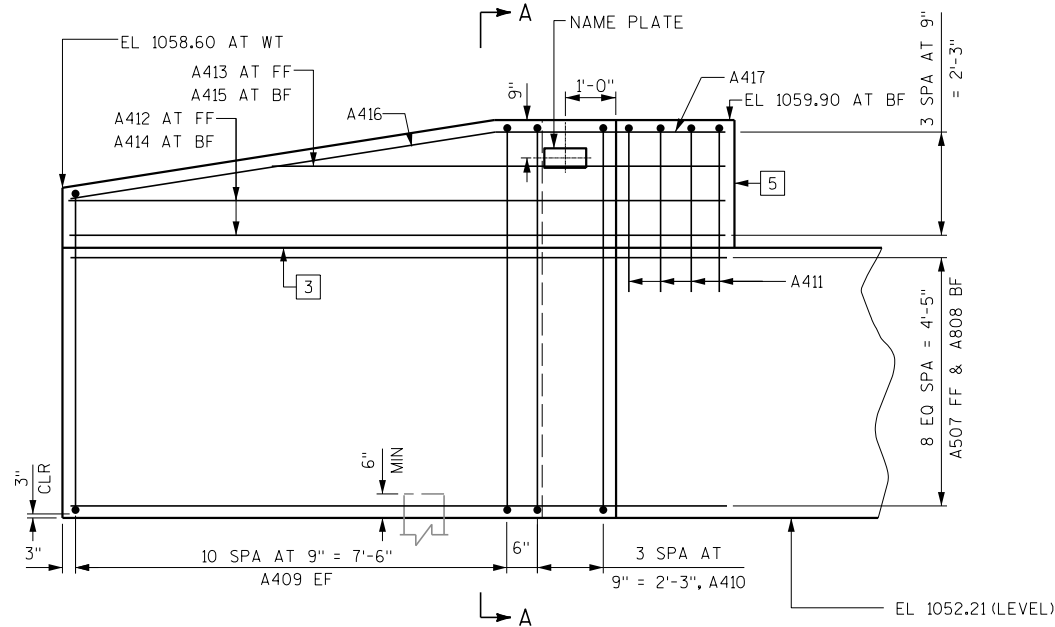


PILE PLAN

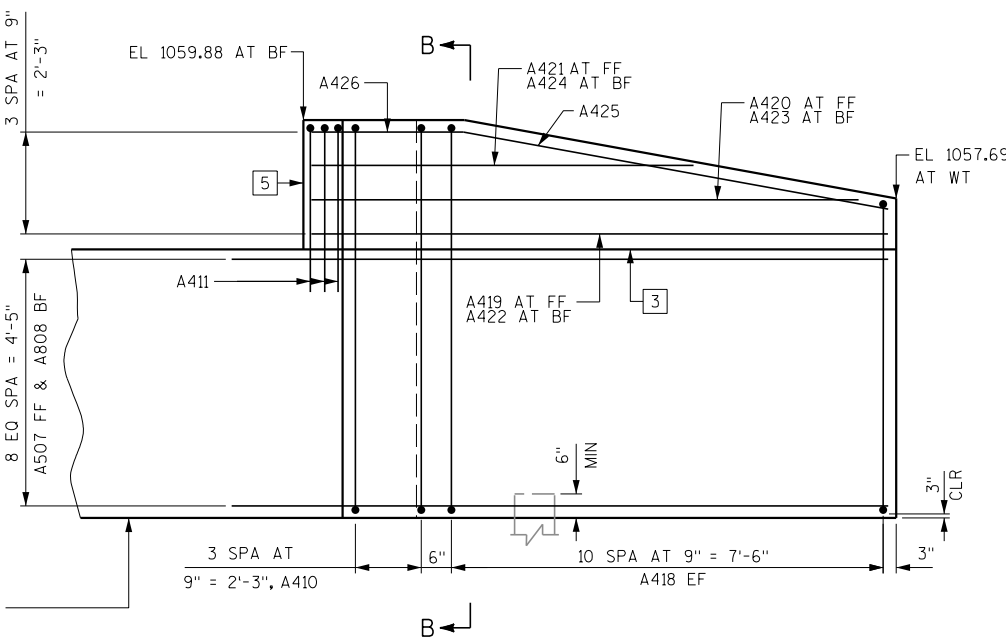


TYP. SECTION THRU ABUTMENT BODY

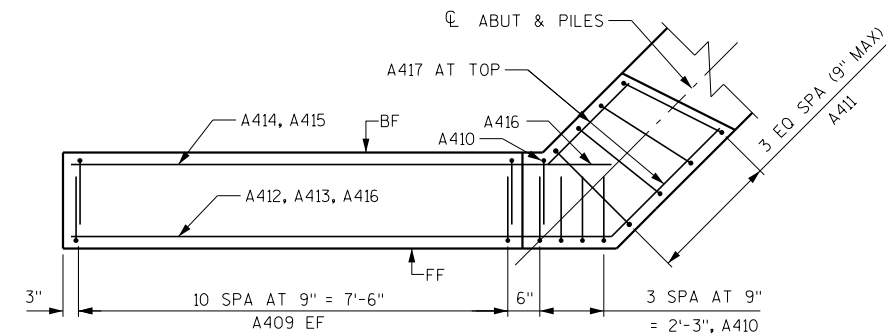
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		MJB	PLANS CK'D. RCP
SOUTH ABUTMENT		SHEET 4 OF 10	



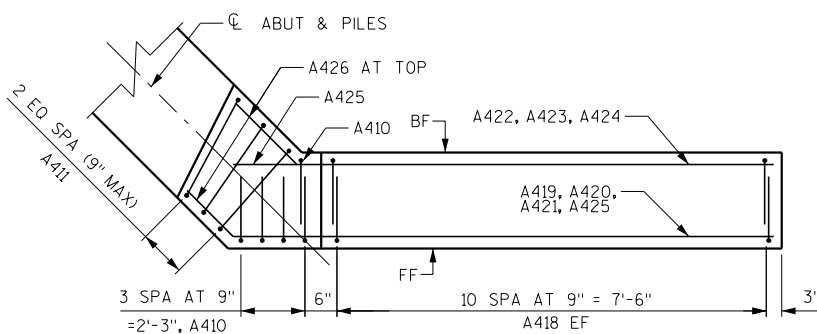
WING 1 ELEVATION



WING 2 ELEVATION



WING 1 PLAN



WING 2 PLAN

BILL OF BARS
SOUTH ABUTMENT

COATED= 1430 LBS.
UNCOATED= 2800 LBS.

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
A 5 01		90	6 - 0	X		ABUTMENT BODY VERT
A 4 02		33	2 - 9	X		ABUTMENT BODY TIES
A 5 03		45	8 - 7	X		ABUTMENT BODY - TOP VERT
A 8 04		18	28 - 3	X		ABUTMENT BODY - BF HORIZ
A 5 05		9	43 - 5			ABUTMENT BODY - FF HORIZ
A 5 06	39		2 - 0			ABUTMENT BODY - DOWELS VERT
A 5 07	18		11 - 8	X		WINGS - FF HORIZ
A 8 08	18		13 - 4	X		WINGS - BF HORIZ
A 4 09	22		9 - 1	X	X	WING 1 - BODY EF VERT
A 4 10	10		9 - 9	X		WING 1 & 2 - BODY VERT
A 4 11	7		9 - 2	X		WING1 & 2 - TOP VERT
A 4 12	2		12 - 8	X		WING 1 - TOP FF HORIZ
A 4 13	1		9 - 10	X		WING 1 - TOP FF HORIZ
A 4 14	2		10 - 9	X		WING 1 - TOP BF HORIZ
A 4 15	1		7 - 11	X		WING 1 - TOP BF HORIZ
A 4 16	2		10 - 5	X		WING 1 - TOP HORIZ
A 4 17	2		2 - 6			WING 1 - TOP (A411 CORNERS) HORIZ
A 4 18	22		8 - 8	X	X	WING 2 - BODY EF VERT
A 4 19	1		11 - 8	X		WING 2 - TOP FF HORIZ
A 4 20	1		9 - 6	X		WING 2 - TOP FF HORIZ
A 4 21	1		6 - 9	X		WING 2 - TOP FF HORIZ
A 4 22	1		10 - 9	X		WING 2 - TOP BF HORIZ
A 4 23	1		8 - 6	X		WING 2 - TOP BF HORIZ
A 4 24	1		5 - 9	X		WING 2 - TOP BF HORIZ
A 4 25	2		10 - 7	X		WING 2 - TOP HORIZ
A 4 26	2		1 - 8			WING 2 - TOP (A411 CORNERS) HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
A409	2 SERIES OF 11	8'-6" TO 9'-8"
A418	2 SERIES OF 11	7'-7" TO 9'-8"

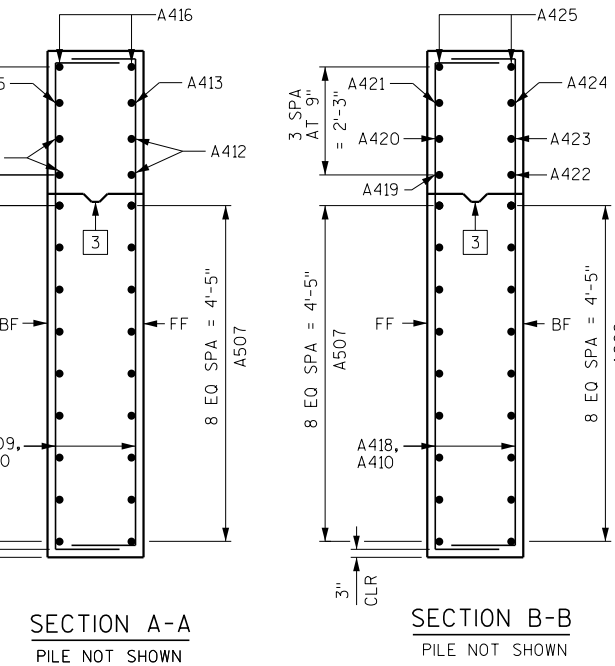
BUNDLE AND TAG EACH SERIES SEPARATELY

▲ LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

3 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY, PROVIDE 3/4" V-GROOVE AT FF OF WING WALL AND RMW ON BF IF OPTIONAL CONSTRUCTION JOINT USED.

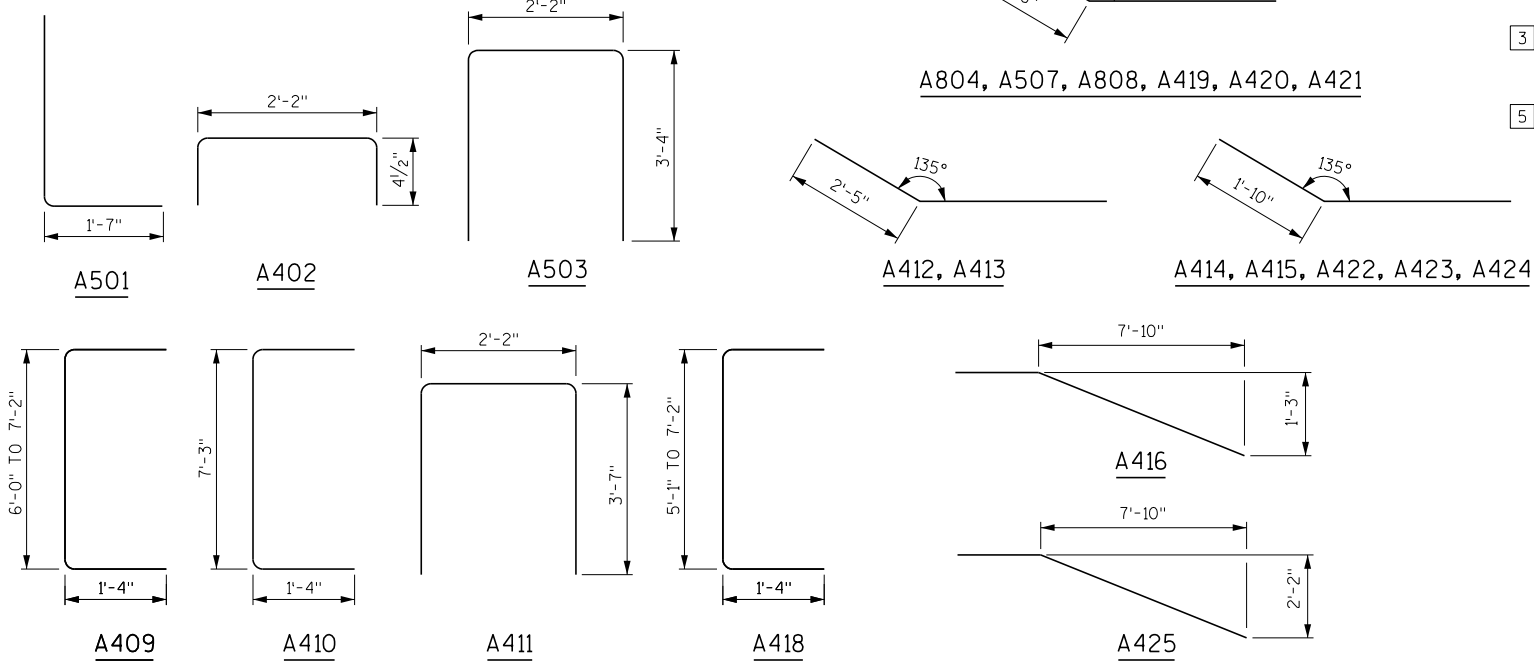
5 1/2" FILLER - EXTENDED FROM BRIDGE SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE



SECTION A-A
PILE NOT SHOWN

SECTION B-B
PILE NOT SHOWN



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		PLANS CK'D.	RCP
SOUTH ABUTMENT DETAILS		SHEET 5 OF 10	

NOTES

FOR PILE SPLICE DETAIL, SEE SHEET 2.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT, EL 1052.16, BEFORE DRIVING PILING.

DO NOT PLACE FILL ABOVE ELEVATION 1055.16 UNTIL SUPERSTRUCTURE IS IN PLACE.

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE. ESTIMATED 40'-0" LONG. PILE POINTS REQUIRED.

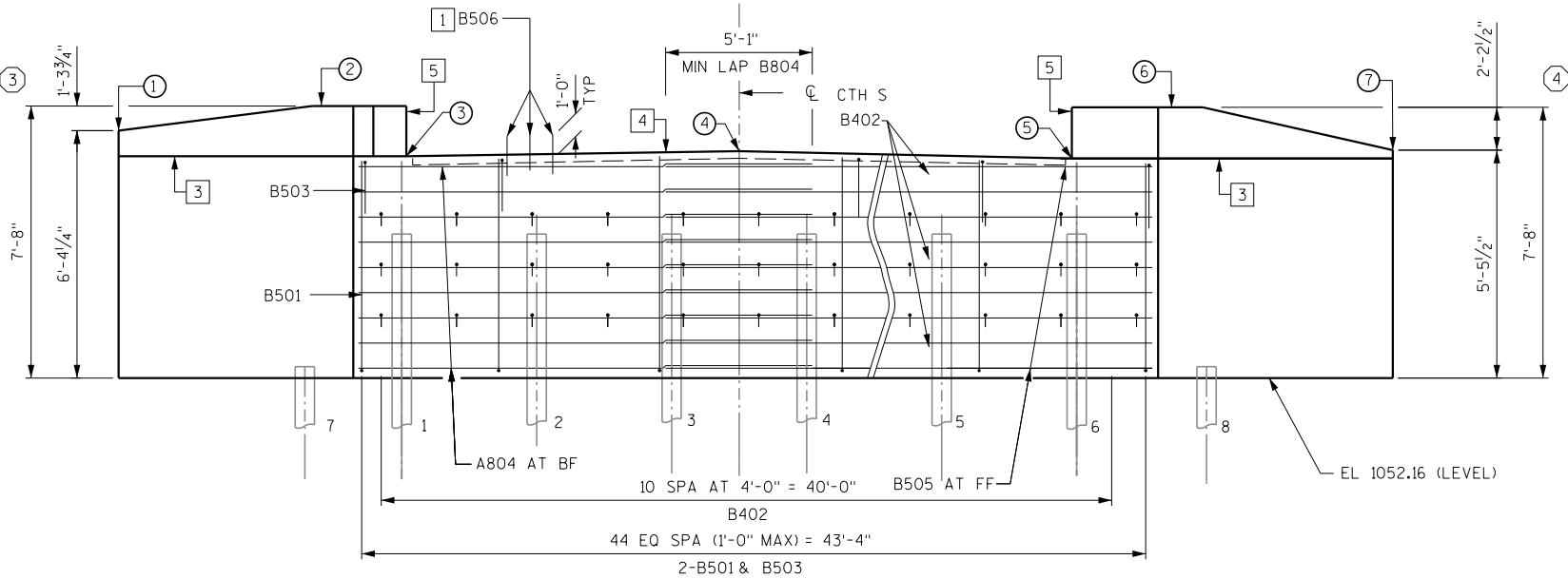
FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAILS, SEE SHEET 2.

- 1 B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- 2 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- 3 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY, PROVIDE 3/4" V-GROOVE AT FF OF WING WALL AND RMW ON BF IF OPTIONAL CONSTRUCTION JOINT USED.
- 4 KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY, TERMINATE 1'-0" FROM ABUTMENT ENDS.
- 5 1/2" FILLER - EXTENDED FROM BRIDGE SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.
- 6 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL PIPE UNDERDRAIN.
- 7 PIPE UNDERDRAIN UNPERFORATED 6-INCH (SLOPE TO DRAIN)
- 8 4" x 3/4" FILLER LENGTH OF ABUTMENT.
- (X) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

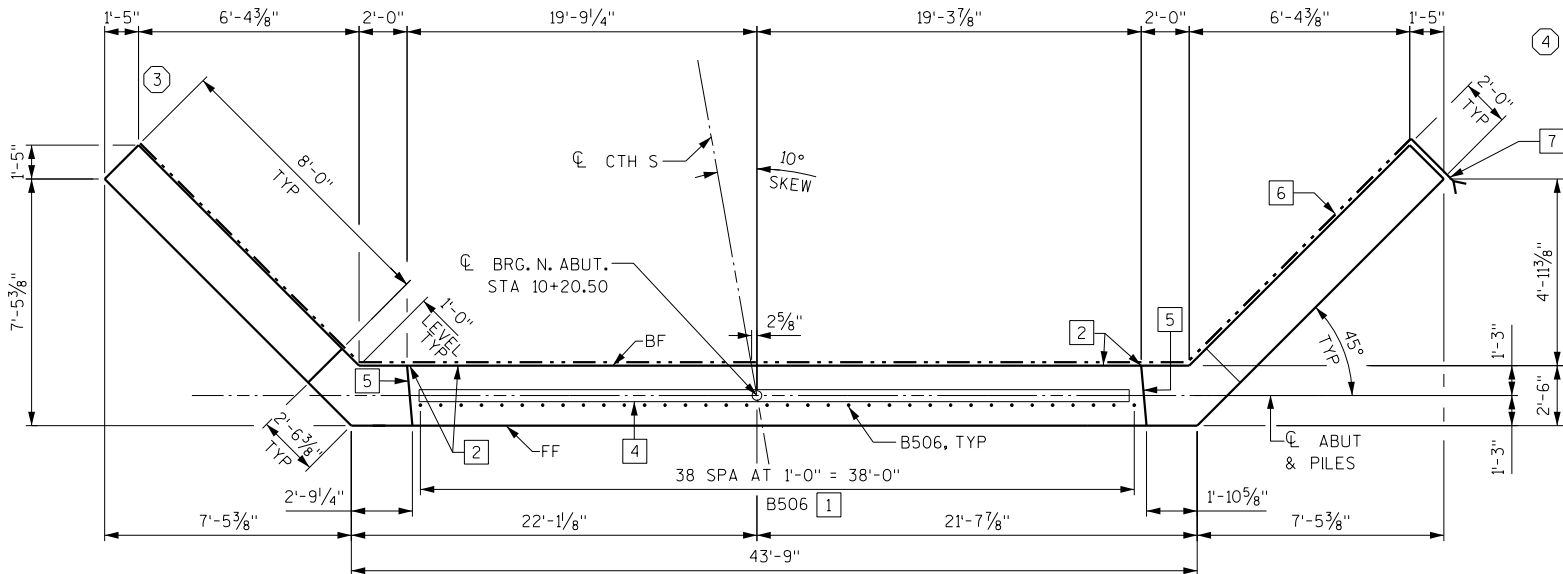
ELEVATIONS

- 1 EL 1058.51 AT WING-3 WT
- 2 EL 1059.83 AT WING-3 BF
- 3 EL 1057.16 AT N ABUT
- 4 EL 1057.54 AT N ABUT
- 5 EL 1057.16 AT N ABUT
- 6 EL 1059.83 AT WING-4 BF
- 7 EL 1057.62 AT WING-4 WT

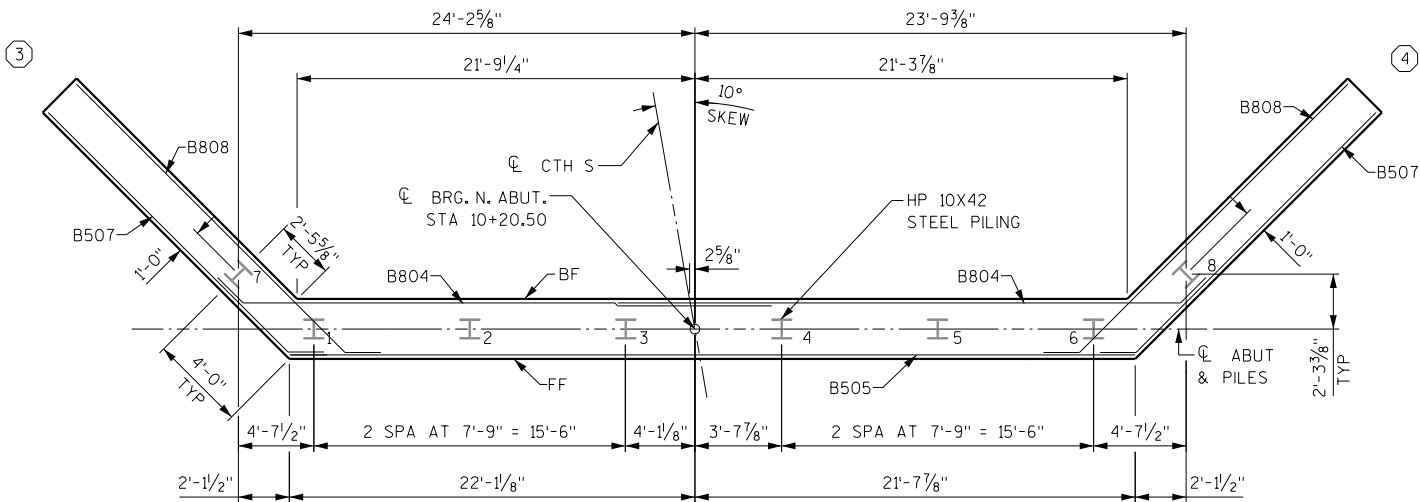


ELEVATION

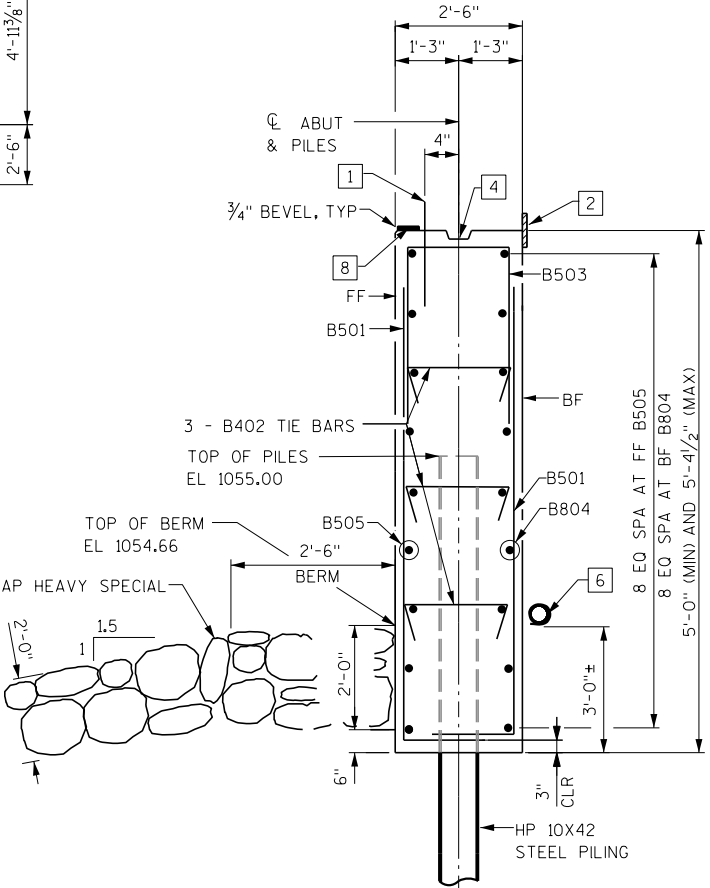
NORTH ABUTMENT LOOKING NORTH



PLAN



PILE PLAN



TYP. SECTION THRU ABUTMENT BODY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		MJB	PLANS CK'D. RCP
NORTH ABUTMENT			SHEET 6 OF 10

BILL OF BARS
NORTH ABUTMENT

COATED= 1430 LBS.
UNCOATED= 2800 LBS.

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
	FT - IN					
B 5 01		90	6 - 0	X		ABUTMENT BODY VERT
B 4 02		33	2 - 9	X		ABUTMENT BODY TIES
B 5 03		45	8 - 7	X		ABUTMENT BODY - TOP VERT
B 8 04		18	28 - 3	X		ABUTMENT BODY - BF HORIZ
B 5 05		9	43 - 5			ABUTMENT BODY - FF HORIZ
B 5 06	39		2 - 0			ABUTMENT BODY - DOWELS VERT
B 5 07	18		11 - 8	X		WINGS - FF HORIZ
B 8 08	18		13 - 4	X		WINGS - BF HORIZ
B 4 09	22		9 - 1	X	X	WING 3 - BODY EF VERT
B 4 10	10		9 - 9	X		WING 3 & 4 - BODY VERT
B 4 11	7		9 - 2	X		WING 3 & 4 - TOP VERT
B 4 12	2		12 - 8	X		WING 3 - TOP FF HORIZ
B 4 13	1		9 - 9	X		WING 3 - TOP BF HORIZ
B 4 14	2		10 - 9	X		WING 3 - TOP BF HORIZ
B 4 15	1		7 - 10	X		WING 3 - TOP BF HORIZ
B 4 16	2		10 - 5	X		WING 3 - TOP HORIZ
B 4 17	2		2 - 6			WING 3 - TOP (B411 CORNERS) HORIZ
B 4 18	22		8 - 8	X	X	WING 4 - BODY EF VERT
B 4 19	1		11 - 8	X		WING 4 - TOP FF HORIZ
B 4 20	1		9 - 6	X		WING 4 - TOP FF HORIZ
B 4 21	1		6 - 10	X		WING 4 - TOP FF HORIZ
B 4 22	1		10 - 9	X		WING 4 - TOP BF HORIZ
B 4 23	1		8 - 7	X		WING 4 - TOP BF HORIZ
B 4 24	1		5 - 11	X		WING 4 - TOP BF HORIZ
B 4 25	2		10 - 7	X		WING 4 - TOP HORIZ
B 4 26	2		1 - 8			WING 4 - TOP (B411 CORNERS) HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

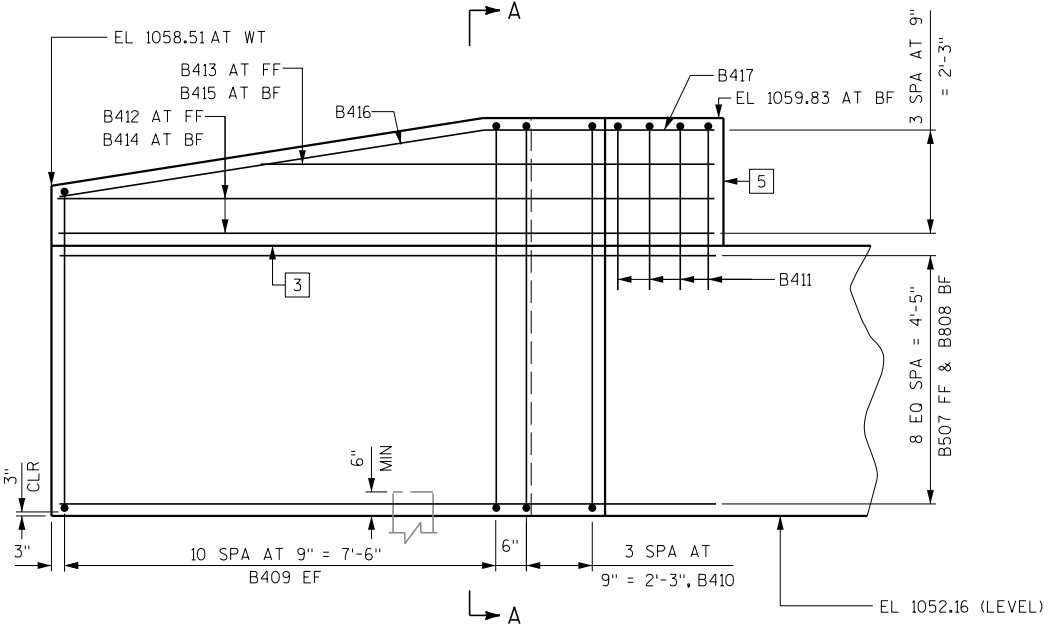
BAR SERIES TABLE

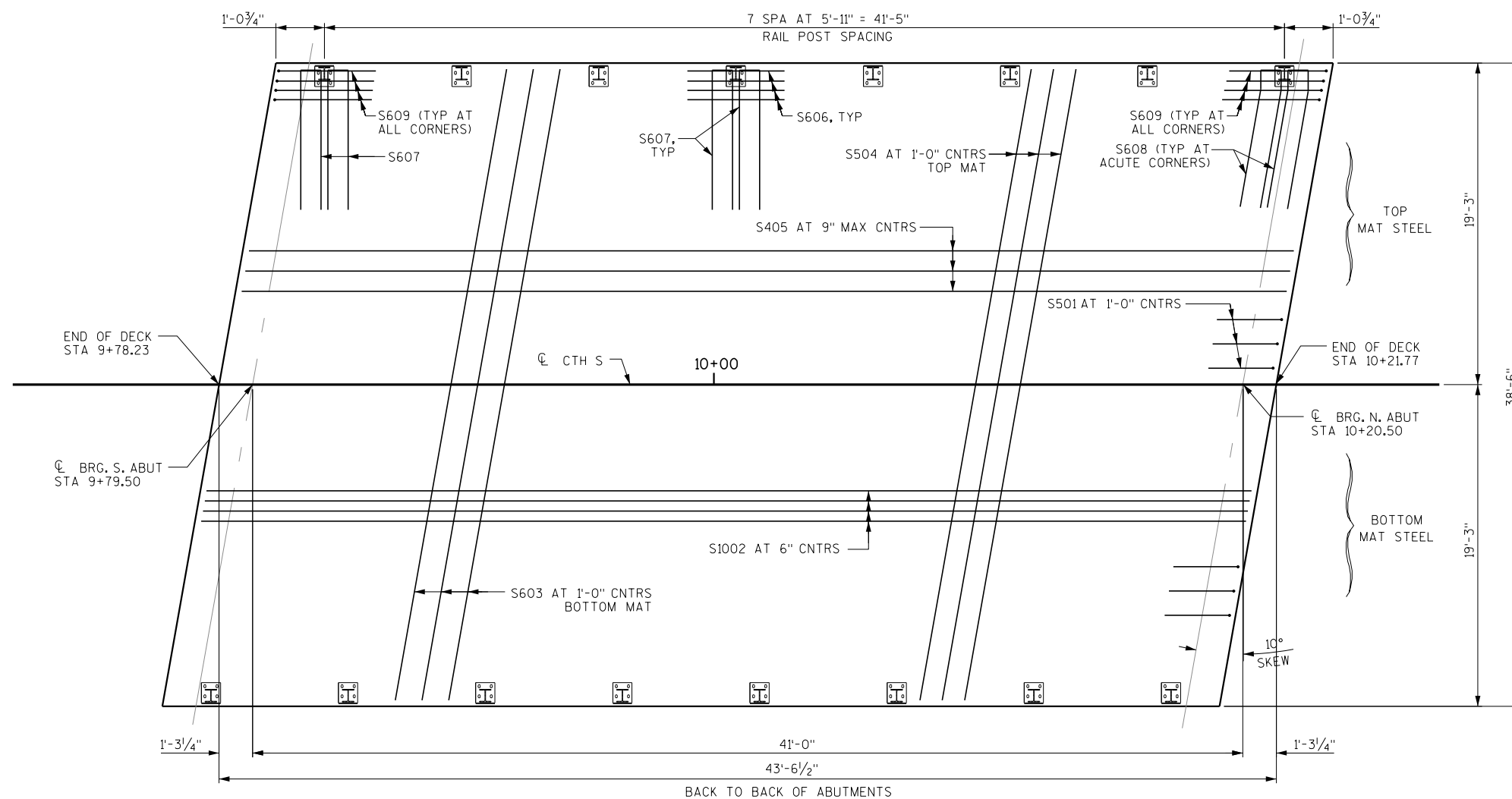
MARK	NO. REQUIRED	LENGTH
B409	2 SERIES OF 11	9'-5" TO 9'-8"
B418	2 SERIES OF 11	7'-7" TO 9'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY

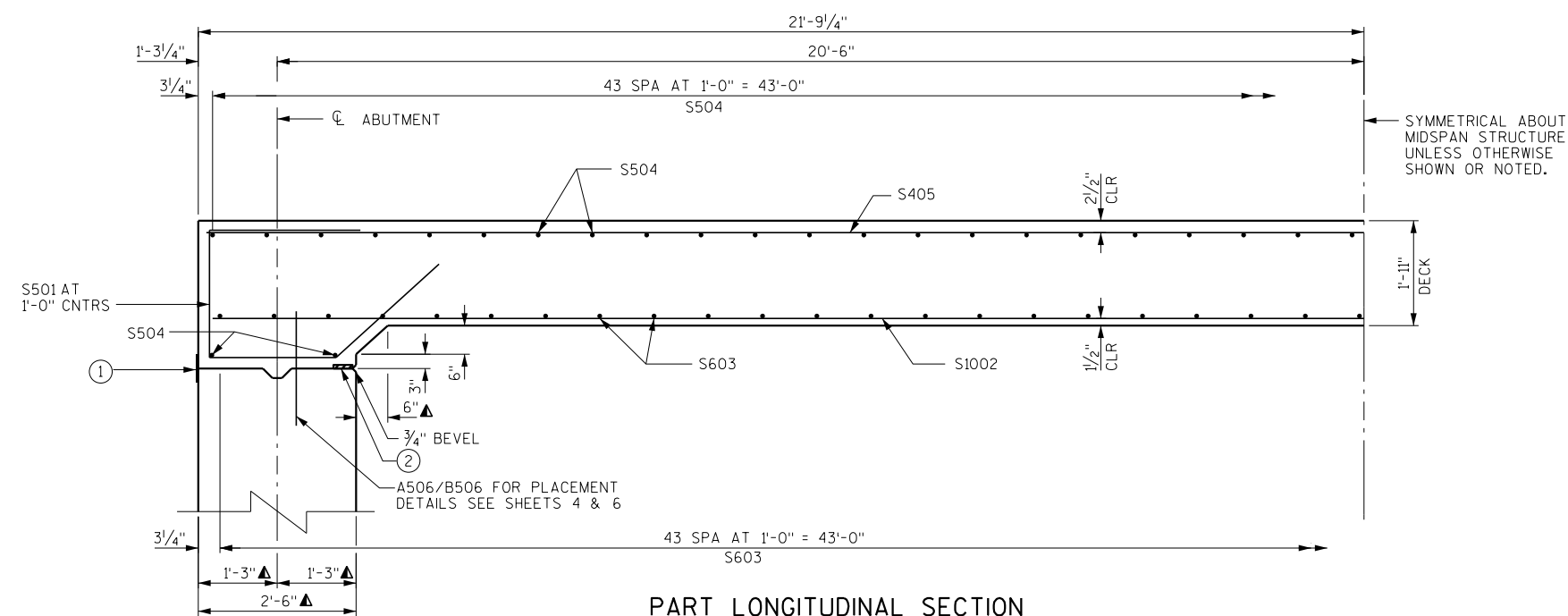
- ▲ LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.
- 3 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY, PROVIDE 3/4" V-GROOVE AT FF OF WING WALL AND RMW ON BF IF OPTIONAL CONSTRUCTION JOINT USED.
- 5 1/2" FILLER - EXTENDED FROM BRIDGE SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE





REINFORCEMENT PLAN



PART LONGITUDINAL SECTION

NOTES

- ① 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ② 4" x 3/4" FILLER LENGTH OF ABUTMENT.
- ▲ DIMENSIONS SHOWN ARE NORMAL TO ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		MJB	PLANS CK'D. RCP
SUPERSTRUCTURE		SHEET 8 OF 10	

BILL OF BARS
SUPERSTRUCTURE

COATED= 22190 LBS.
UNCOATED= 0 LBS.

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION	
	COATED	UNCOATED					
			FT - IN				
S 5 01	78		9 - 0	X		SLAB - ABUTMENT - TIES	LONGIT
S 10 02	77		43 - 2			SLAB - BOTTOM	LONGIT
S 6 03	44		38 - 9			SLAB - BOTTOM	TRANS
S 5 04	48		38 - 9			SLAB - TOP	TRANS
S 4 05	52		43 - 2			SLAB - TOP	LONGIT
S 6 06	48		6 - 0			RAILING ANCHORS	LONGIT
S 6 07	28		12 - 0	X		RAILING ANCHORS	TRANS
S 6 08	4		12 - 0	X		RAILING ANCHORS	TRANS
S 6 09	16		6 - 0	X		RAILING ANCHORS	LONGIT

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

EDGE OF DECK ELEVATIONS

SPAN PT.	WEST EDGE		CENTERLINE/CROWN		EAST EDGE	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
S. ABUT.	9 + 82.89	1059.88	9 + 79.50	1060.27	9 + 76.11	1059.90
0.1	9 + 86.99	1059.87	9 + 83.60	1060.26	9 + 80.21	1059.89
0.2	9 + 91.09	1059.86	9 + 87.70	1060.25	9 + 84.31	1059.88
0.3	9 + 95.19	1059.85	9 + 91.80	1060.24	9 + 88.41	1059.87
0.4	9 + 99.29	1059.85	9 + 95.90	1060.24	9 + 92.51	1059.86
0.5	10 + 03.39	1059.84	10 + 00.00	1060.23	9 + 96.61	1059.85
0.6	10 + 07.49	1059.84	10 + 04.10	1060.22	10 + 00.71	1059.84
0.7	10 + 11.59	1059.83	10 + 08.20	1060.22	10 + 04.81	1059.84
0.8	10 + 15.69	1059.83	10 + 12.30	1060.22	10 + 08.91	1059.83
0.9	10 + 19.79	1059.83	10 + 16.40	1060.22	10 + 13.01	1059.83
N. ABUT.	10 + 23.89	1059.83	10 + 20.50	1060.21	10 + 17.11	1059.83

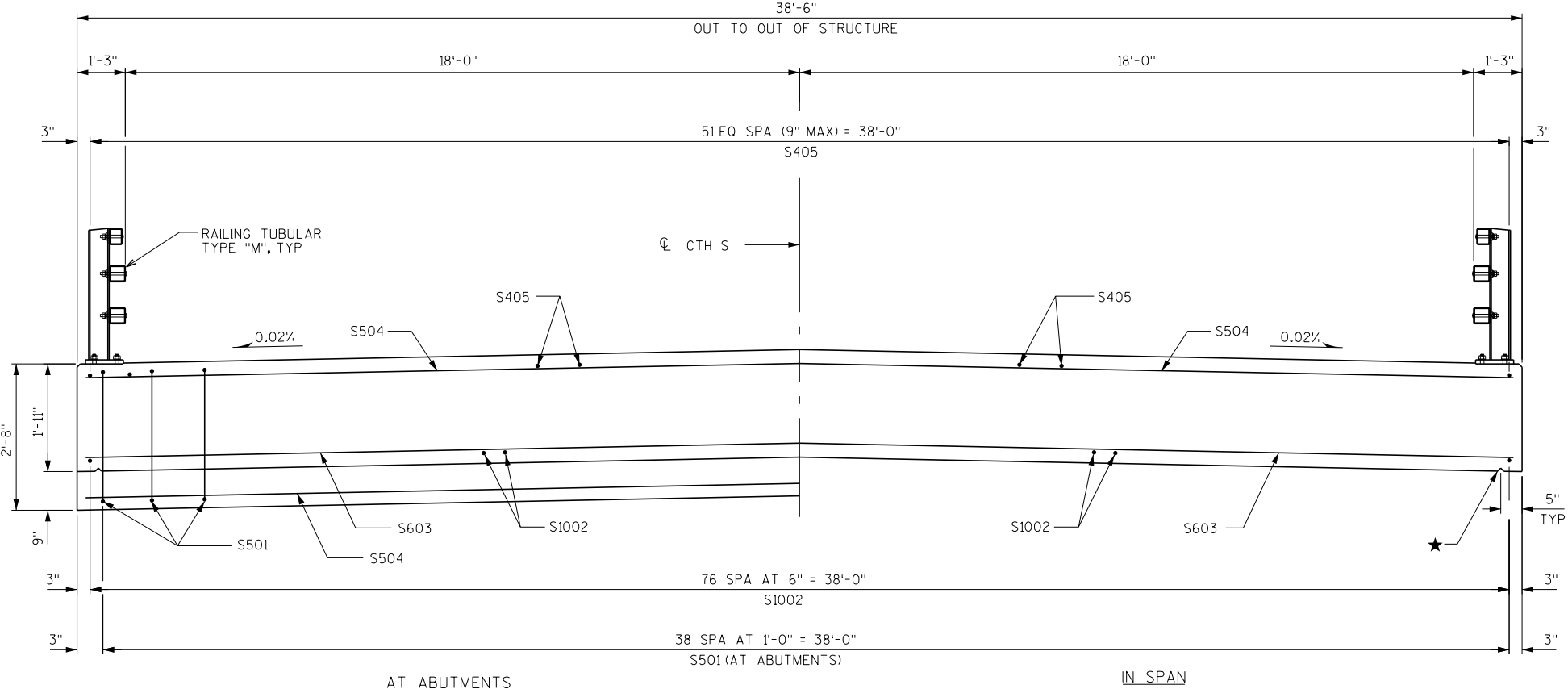
NOTES

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

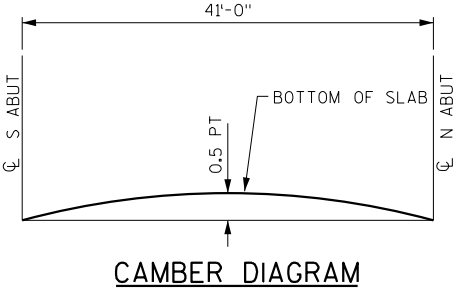
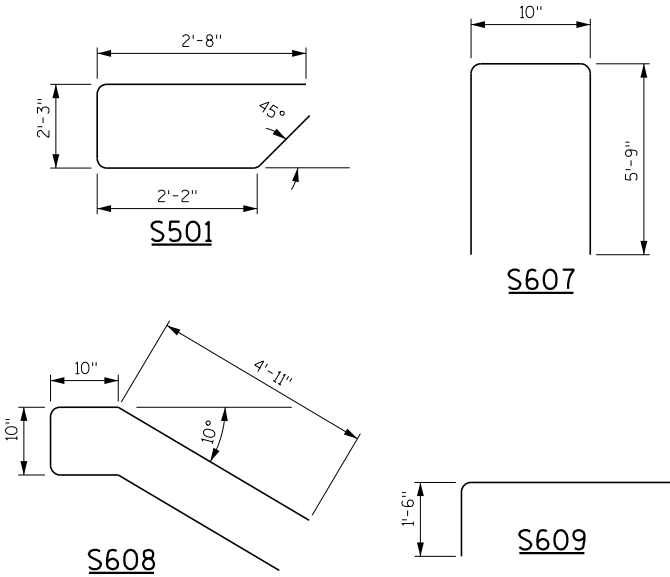
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

★ ¾" CONTINUOUS "V" DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENTS, TYP

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS AND AT ½ PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF DECK AND AT CL.



CROSS SECTION THRU ROADWAY
(LOOKING NORTH)



CAMBER SPAN AS SHOWN (USING VALUES IN TABLE) TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

SPAN (PT)	CAMBER (IN)
CL S ABUT	0
0.1	3/8
0.2	3/4
0.3	1 1/8
0.4	1 3/8
0.5	1 5/8
0.6	1 7/8
0.7	1 7/8
0.8	3/4
0.9	3/8
CL N ABUT	0

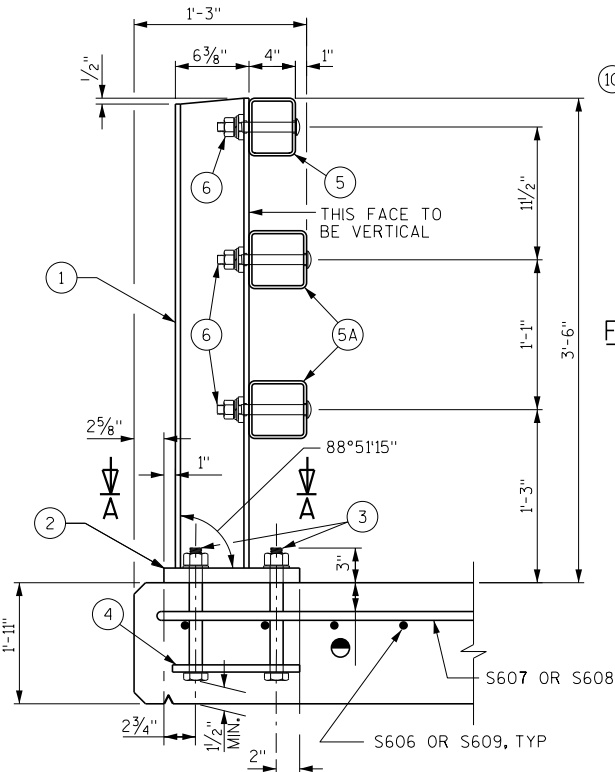
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		PLANS CK'D.	RCP
SUPERSTRUCTURE DETAILS		SHEET 9 OF 10	

LEGEND

- ① W6 x 25 WITH 1/8" X 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1/4" x 11 3/4" x 1'-8" WITH 1 5/16" X 1 5/16" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ③ ASTM A449 - 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. 1'-3" LONG.
- ④ 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A 3/4" x 2 5/8" x 2'-4" PLATE USED IN NO. 5. 3/8" x 3 5/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 1 5/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
- ⑫ 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D.).
- ⑬ 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- ⑮ 1" φ HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

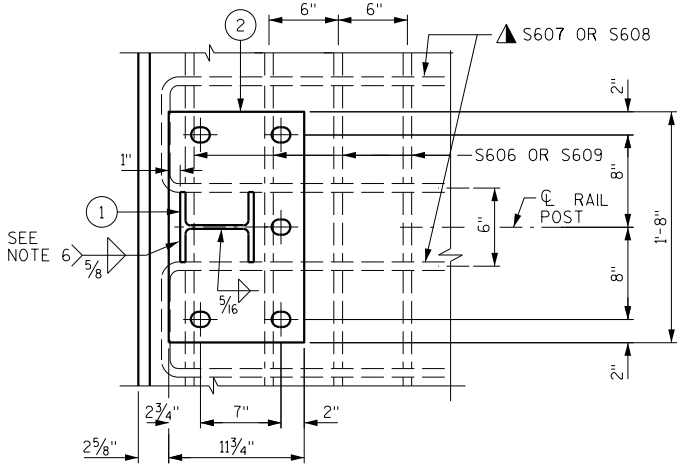
GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M (B-71-0188)" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



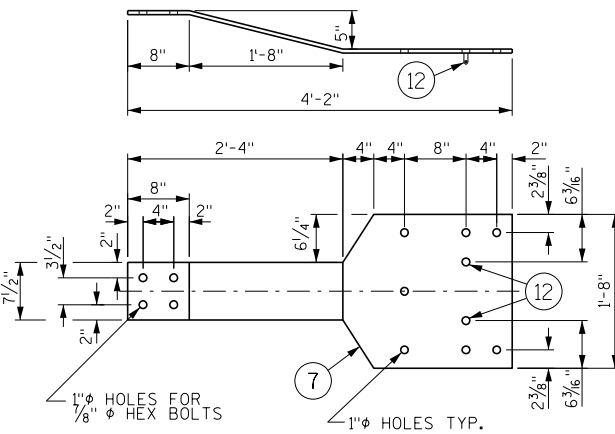
SECTION THRU RAILING ON DECK

● PLACE BELOW TOP MAT OF SLAB REINF.



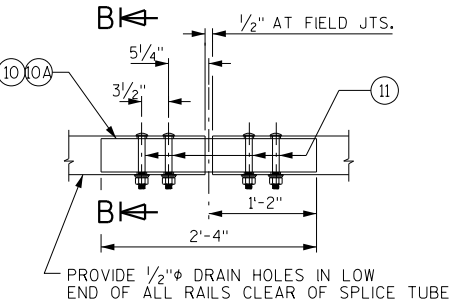
SECTION A-A

▲ TIE TO TOP MAT OF STEEL.

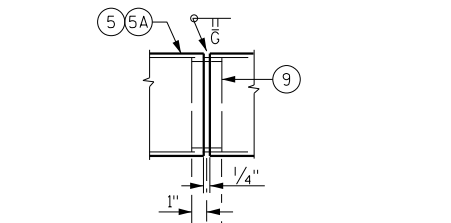


BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT

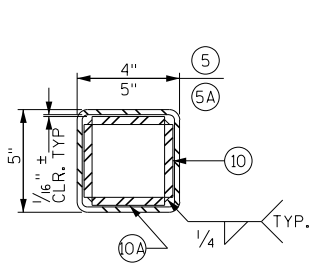


FIELD ERECTION JOINT DETAIL

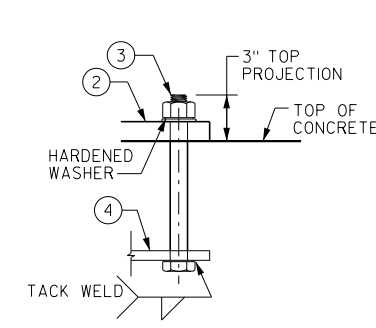


SHOP RAIL SPLICE DETAIL

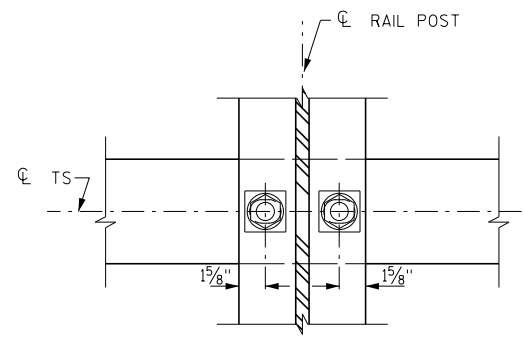
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



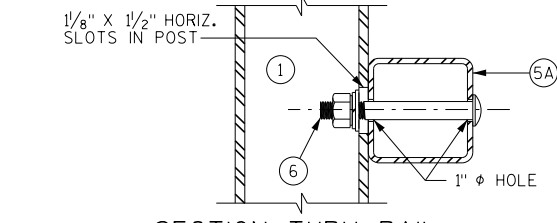
SECTION B-B



ANCHOR BOLTS



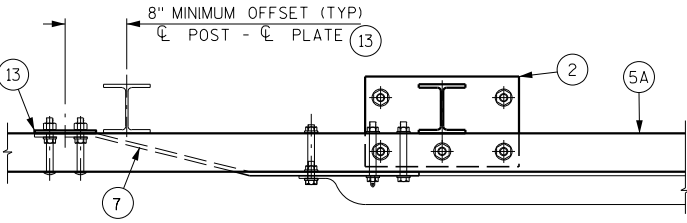
SECTION THRU POST WEB



SECTION THRU RAIL

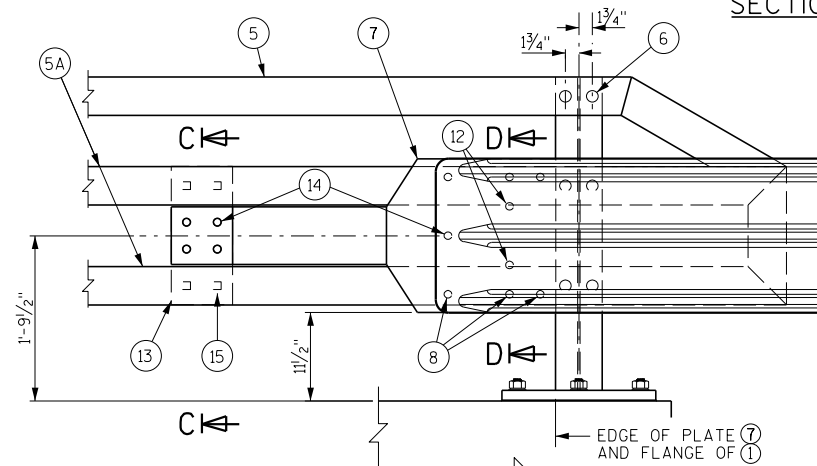
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



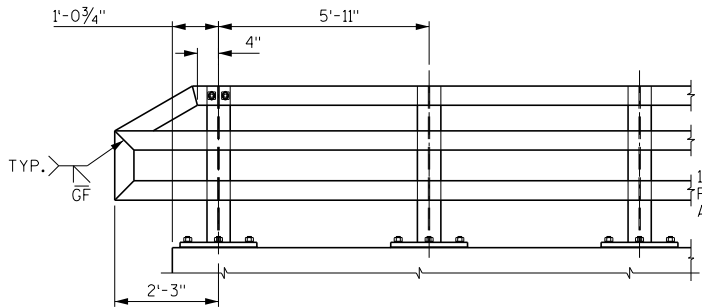
TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

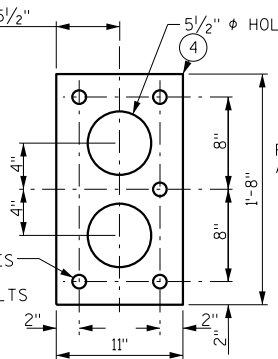


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

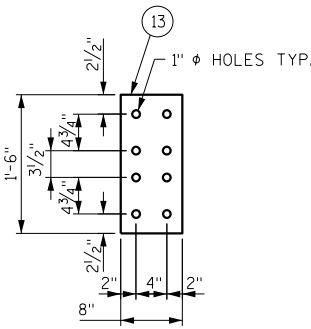


PART ELEVATION OF RAILING



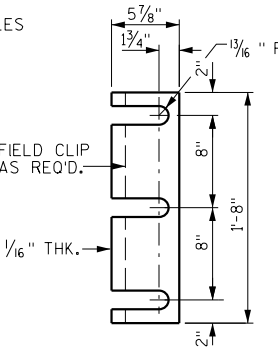
ANCHOR PLATE

AT RAIL TO DECK CONNECTION



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



POST SHIM

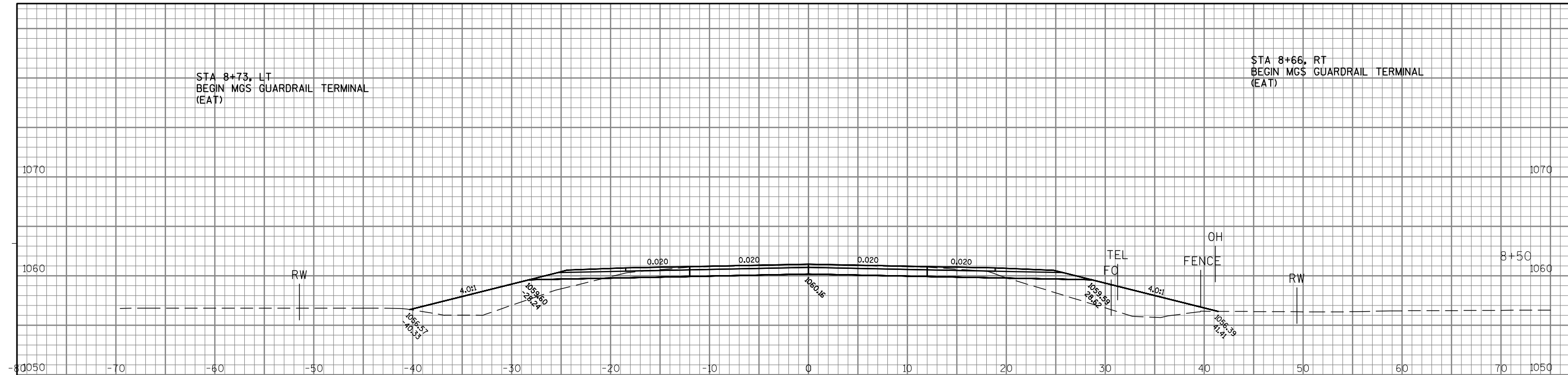
DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-71-0188			
DRAWN BY		PLANS CK'D.	RCP
TUBULAR STEEL RAILING TYPE "M"		SHEET 10 OF 10	

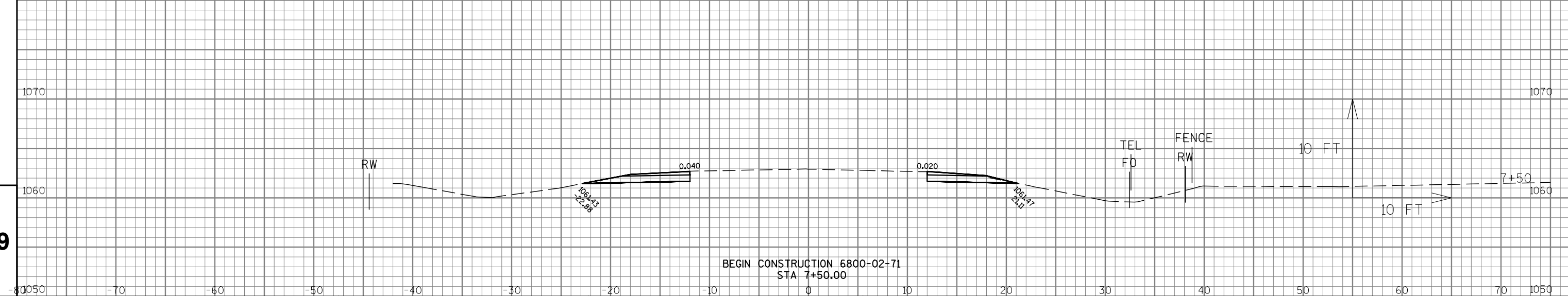
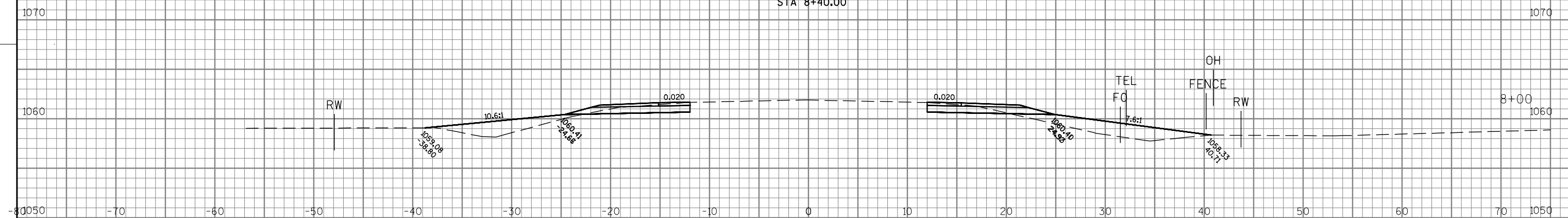
STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)			Mass Ordinate
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Usable Material	Fill	Cut 1.00	Usable Material 1.00	Expanded Fill 1.30	
7+50	14		0								
8+00	12		33	24	0	24	30	24	24	39	-16
8+50	35	12	62	43	11	32	87	67	56	153	-97
8+66	34	12	79	20	7	13	42	87	69	207	-138
8+73	34	12	79	9	3	6	20	96	75	234	-159
8+91	34	12	77	23	8	15	52	119	89	301	-212
8+98	34	12	77	9	3	6	20	128	95	327	-232
9+00	31	12	77	2	1	2	6	130	97	335	-238
9+20	28	12	89	22	9	13	61	152	109	415	-305
9+26	28	12	89	6	3	3	20	158	113	441	-328
9+50	28	12	71	25	11	14	71	182	127	533	-406
9+80	28	12	71	31	13	17	78	213	144	635	-491
10+20	31	12	47								
10+50	31	12	47	34	13	21	52	34	21	68	-47
10+74	33	12	103	28	11	17	67	62	38	155	-117
10+80	33	12	103	7	3	5	23	70	43	185	-142
11+00	34	12	95	25	9	16	73	94	59	280	-221
11+02	34	12	95	3	1	2	7	97	60	289	-228
11+09	34	12	95	9	3	6	25	106	66	321	-255
11+27	37	12	93	24	8	16	63	129	82	402	-320
11+34	37	12	93	10	3	6	24	139	88	433	-345
11+50	35	12	83	21	7	14	52	160	102	501	-399
12+00	11		51	43	11	32	124	204	135	663	-528
12+50	11		0	21	0	21	47	225	156	724	-569

STA 8+73, LT
BEGIN MGS GUARDRAIL TERMINAL
(EAT)

STA 8+66, RT
BEGIN MGS GUARDRAIL TERMINAL
(EAT)



BEGIN PROJECT 6800-02-71
STA 8+40.00



BEGIN CONSTRUCTION 6800-02-71
STA 7+50.00

PROJECT NO:6800-02-71

HWY: CTH S

COUNTY: WOOD

CROSS SECTIONS: CTH S

SHEET

E

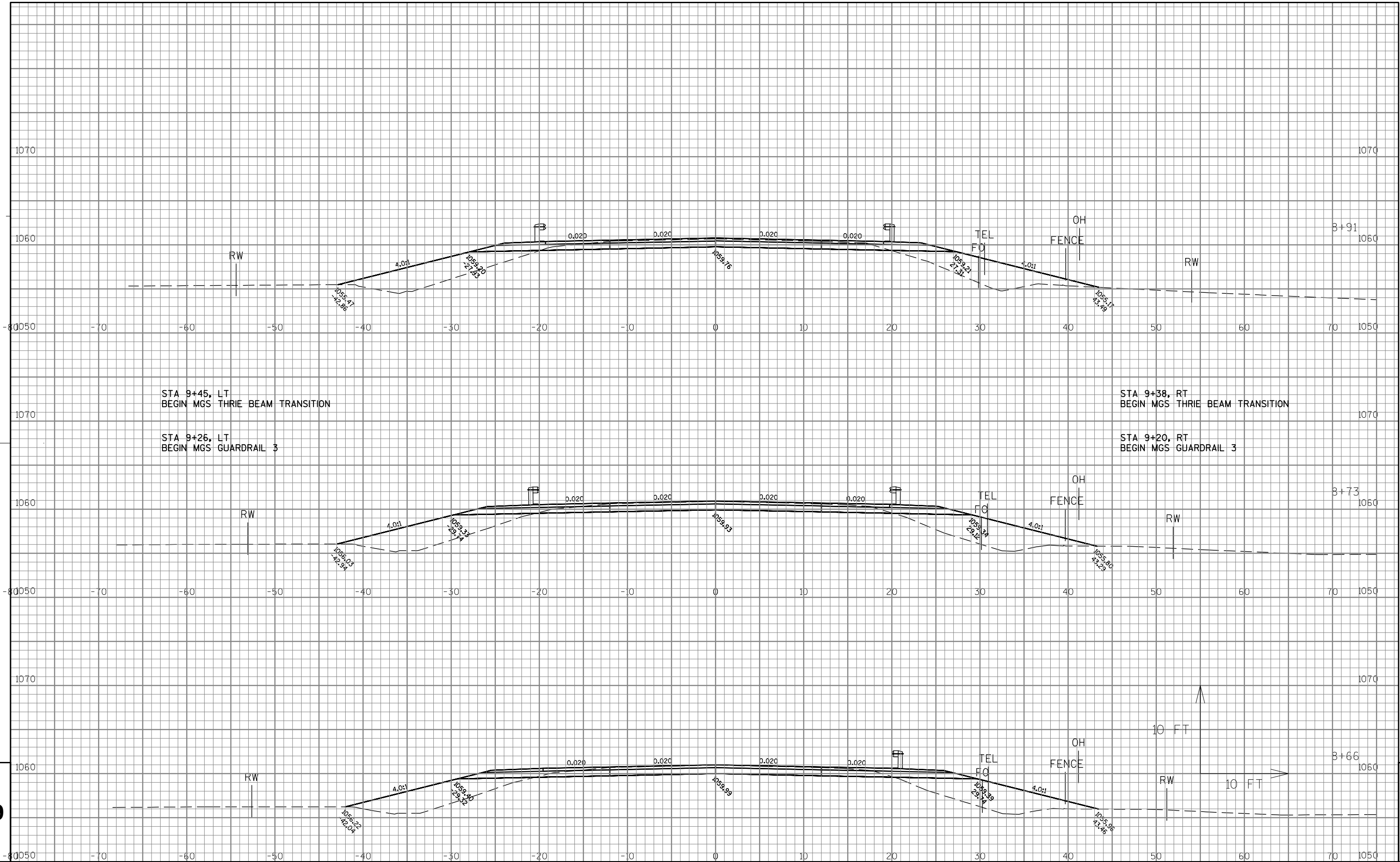
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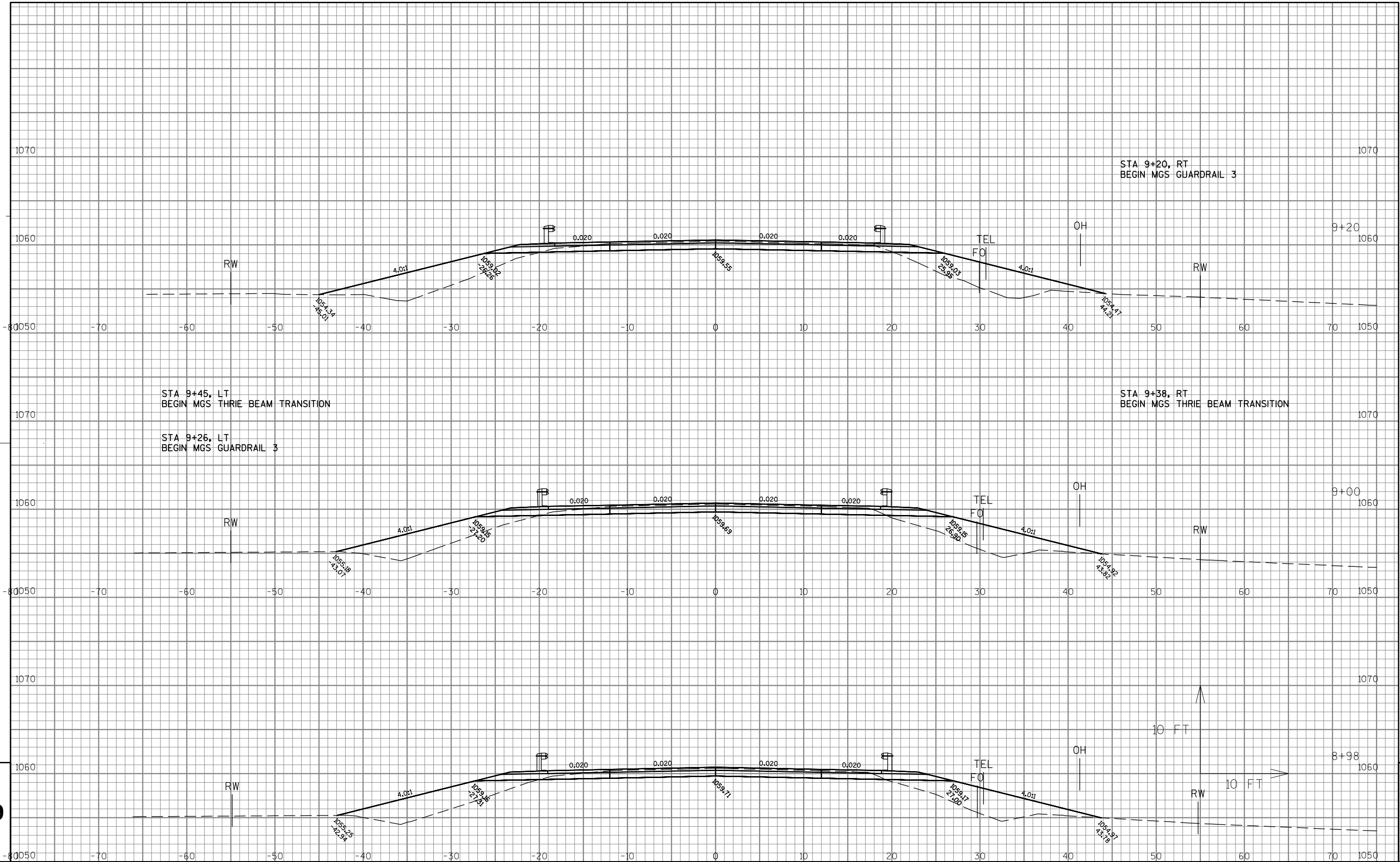
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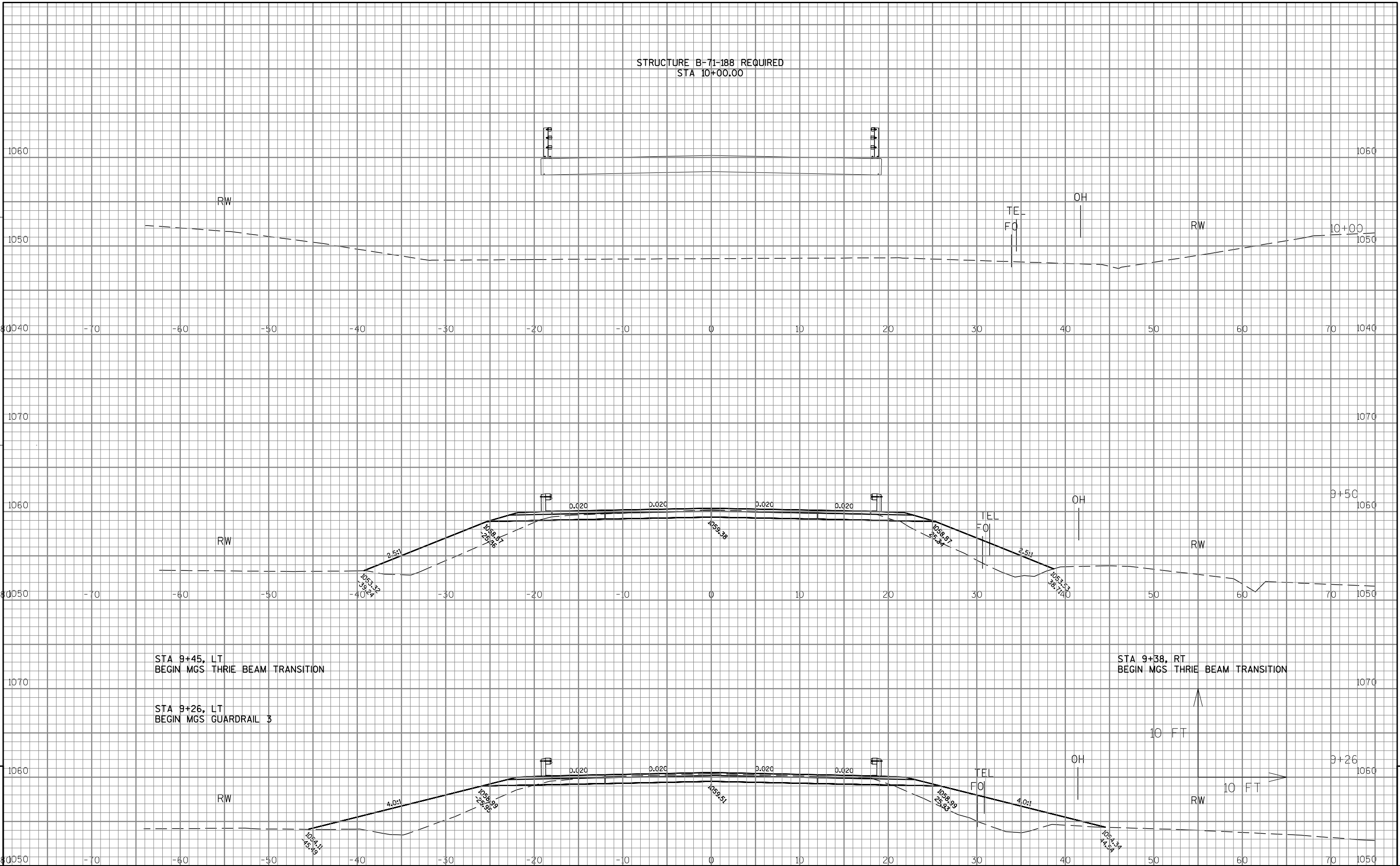
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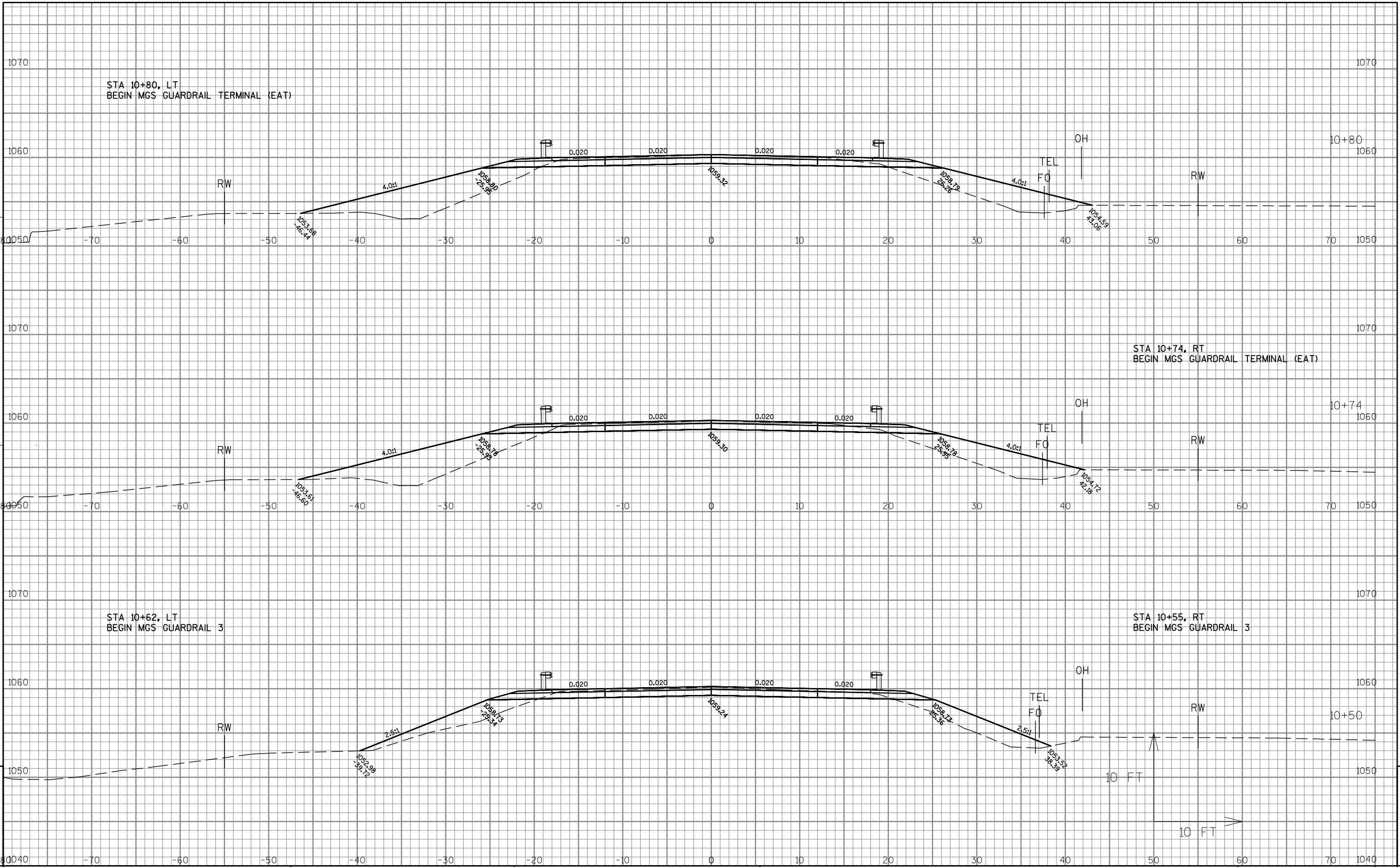
PLOT NAME :

PLOT SCALE : 1"=10' V&E



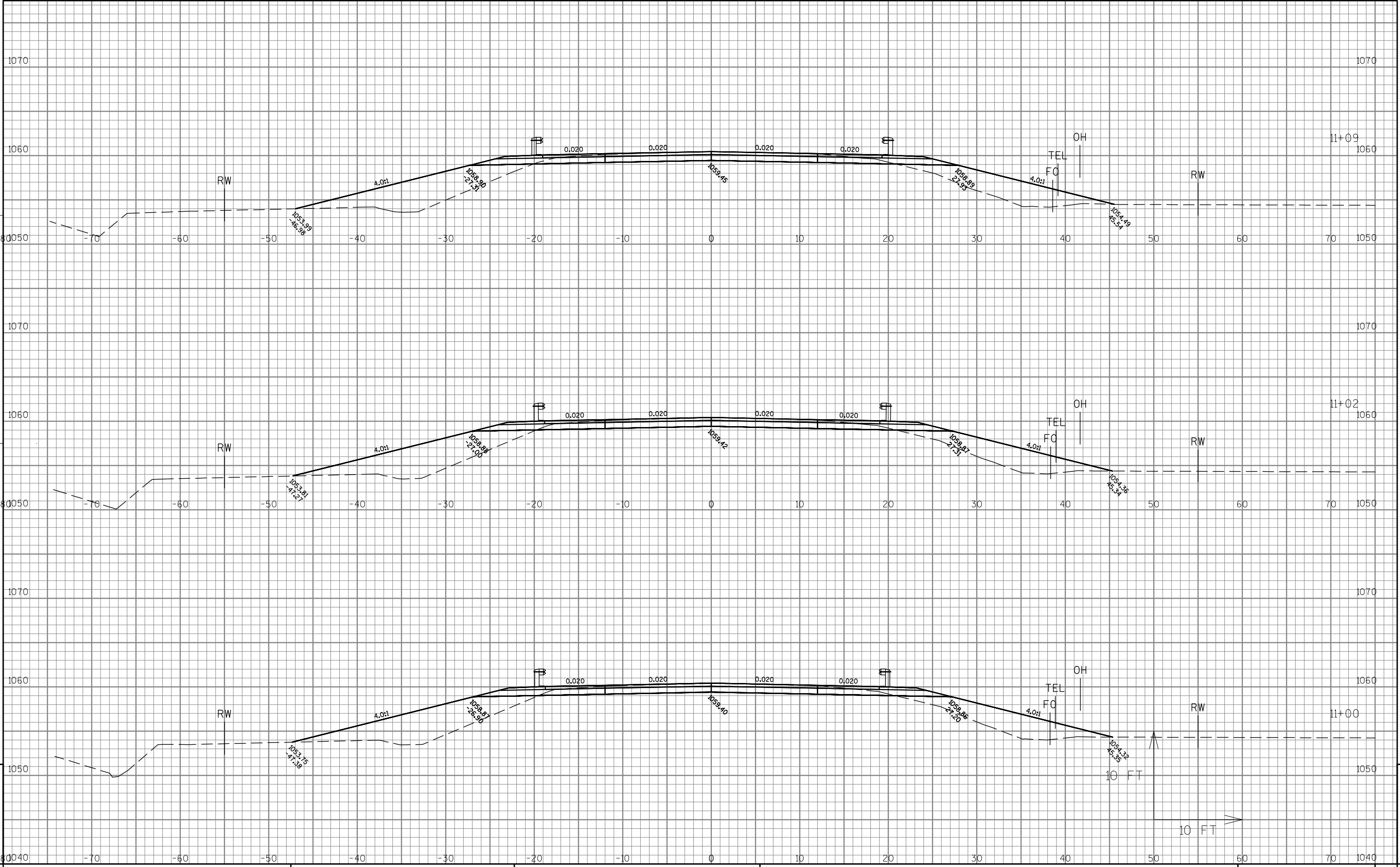






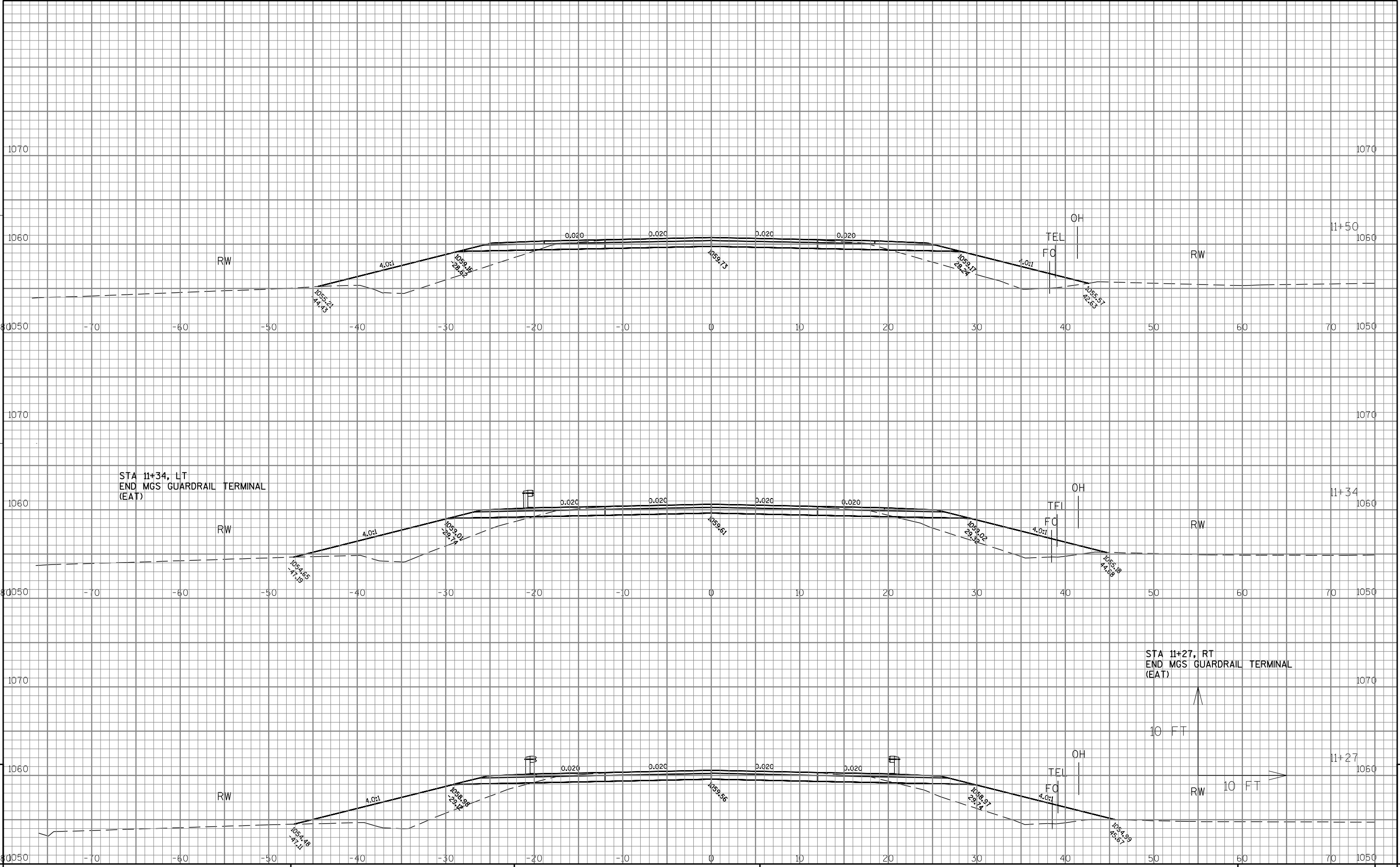
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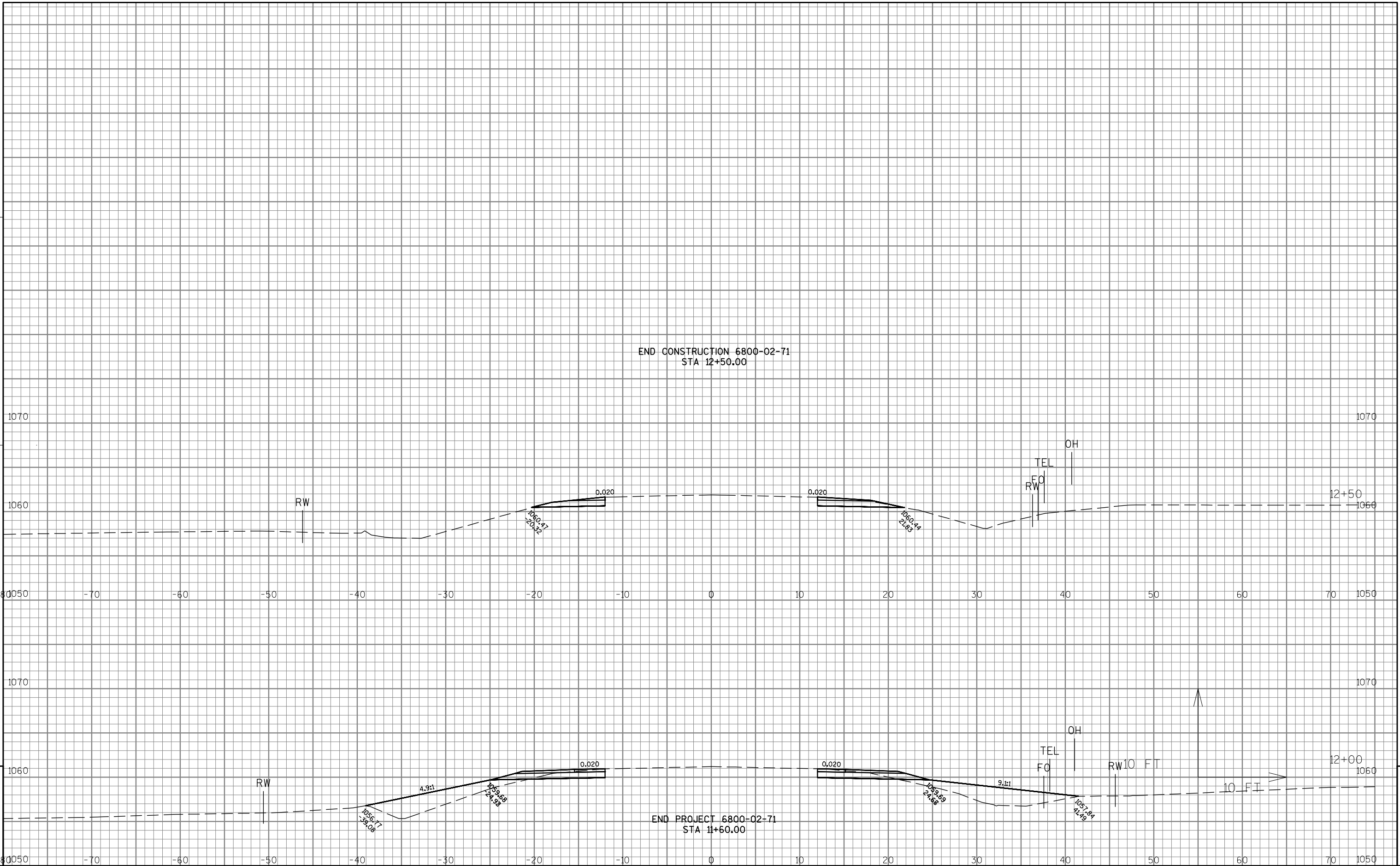
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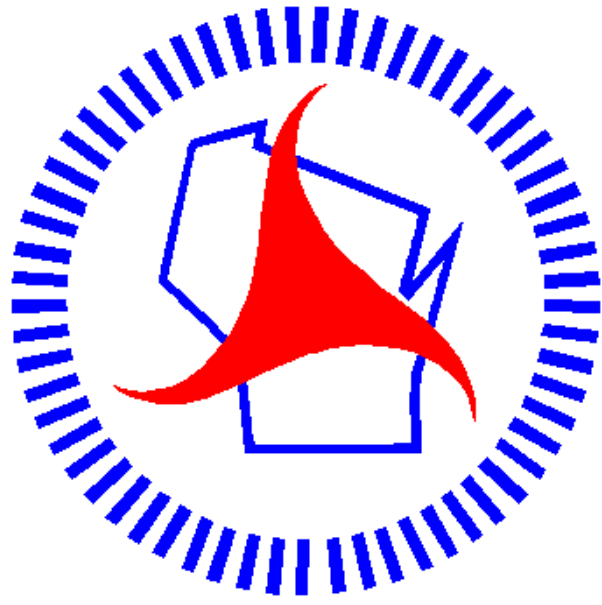


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