

PROJECT
WITH: N/A

8887-03-76

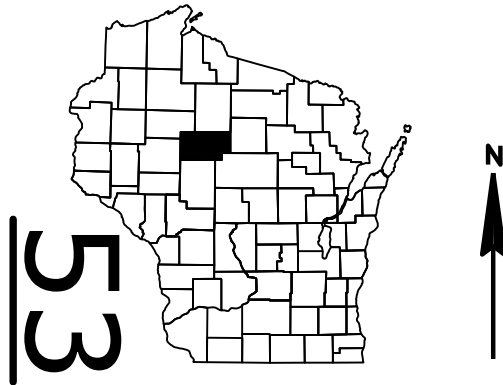
COUNTY:

TAYLOR

NOVEMBER 2024
ORDER OF SHEETS

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









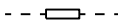
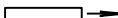



TOTAL SHEETS = 74



DESIGN DESIGNATION

A.A.D.T.	(2025)	=	640
A.A.D.T.	(2045)	=	608
D.H.V.		=	N/A
D.D.		=	50/50
T.		=	7.5%
DESIGN SPEED		=	55 MPH
ESALS		=	88,000

CONVENTIONAL SYMBOLS

<u>PLAN</u>	
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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

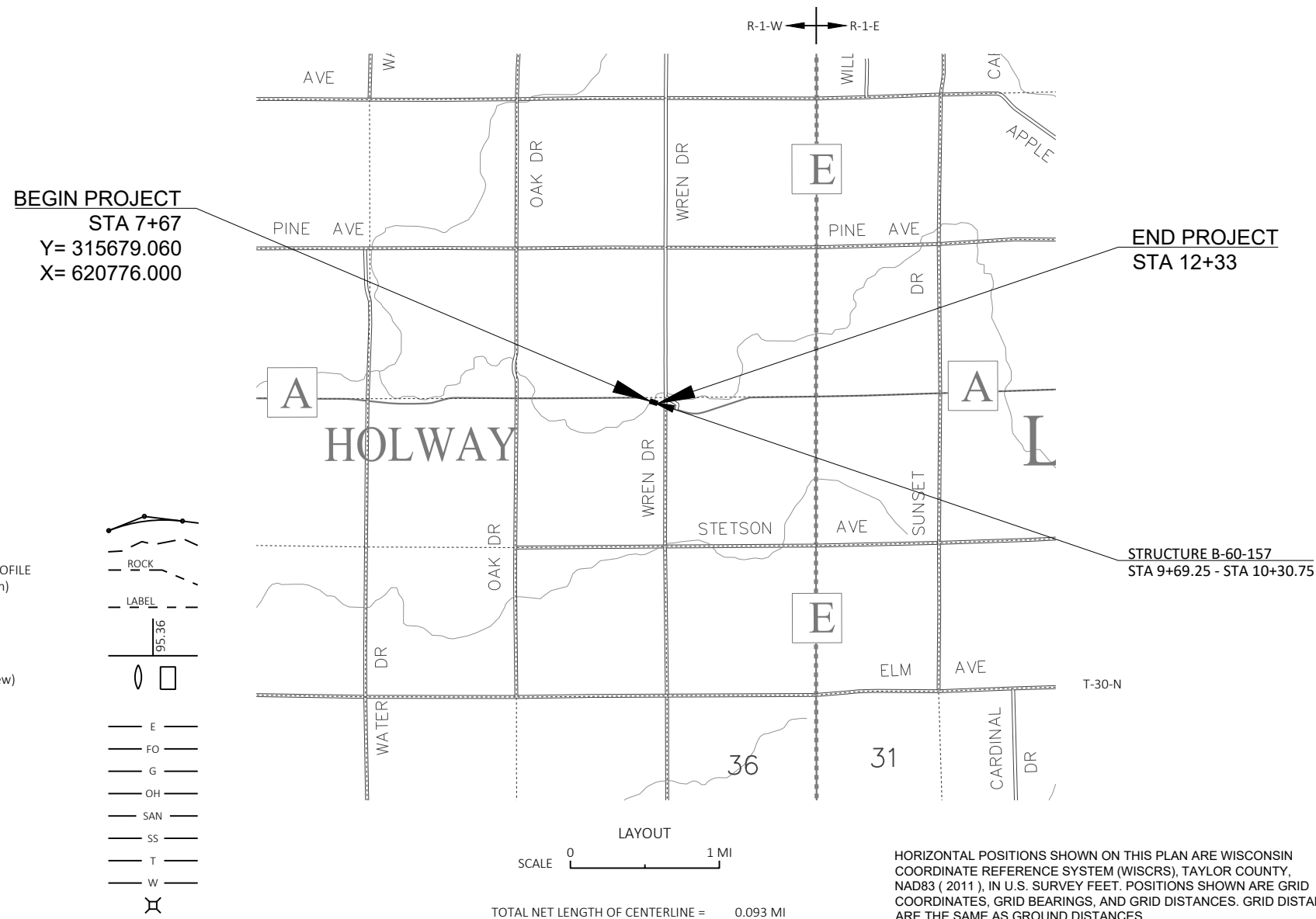
LUBLIN - STETSONVILLE

PINE CREEK BRIDGE B-60-0157

CTH A

TAYLOR COUNTY

STATE PROJECT NUMBER
8887-03-76



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

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


STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8887-03-76	WISC 2025049	1

ACCEPTED FOR

TAYLOR COUNTY

Date 7/30/24 Benjamin Stanfley
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY



CORRE
ENGINEERING

MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUSAU



July 30, 2024

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CORRE, INC
Designer	CORRE, INC
Project Manager	MATTHEW BERG
Regional Examiner	TOU YANG
Regional Supervisor	MATTHEW BERG

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024 
(Signature)

1

GENERAL NOTES

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

D.O.T. BRIDGE BENCHMARK MONUMENT TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

TACK COAT VOLUME CALCULATIONS ARE BASED ON 0.07 GAL/SY.

4-INCH ASPHALTIC SURFACE, SHALL BE CONSTRUCTED WITH 1.75-INCH UPPER LAYER AND 2.25-INCH LOWER LAYER.

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

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

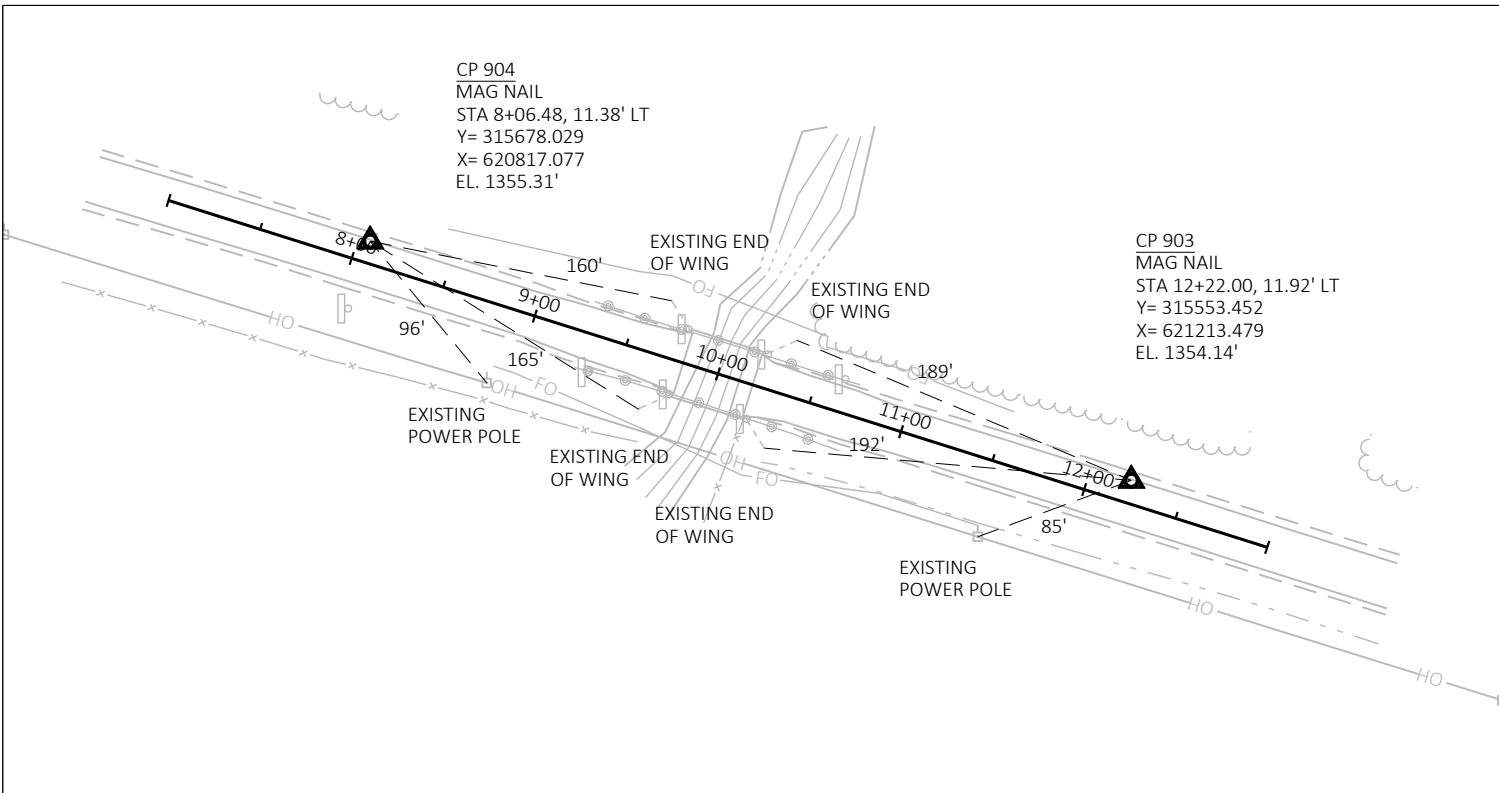
CURVE DATA IS BASED ON THE ARC DEFINITION.

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

BEARINGS SHOWN ON THE PLAN ARE GROUND BEARINGS TO THE NEAREST SECOND.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

CONTROL POINT TIES



RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.07 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.36 ACRES

WISCONSIN DNR LIAISON

WENDY HENNIGES
DNR NORTHERN REGION HQ
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
PHONE: (715) 365-8916
EMAIL: WENDY.HENNIGES@WISCONSIN.GOV

CONSULTANT CONTACT

ERIC PRICE, P.E.
CORRE, INC.
6510 GRAND TETON PLAZA, SUITE 314
MADISON, WI 53719
PHONE: (608) 826-6146
EMAIL: EPRICE@CORREINC.COM

COUNTY HIGHWAY COMMISSIONER

BENJAMIN STANFLEY
TAYLOR COUNTY
PO BOX 89
MEDFORD, WI 54451
PHONE: (715) 748-2456
EMAIL: HWY@CO.TAYLOR.WI.US

UTILITIES CONTACTS

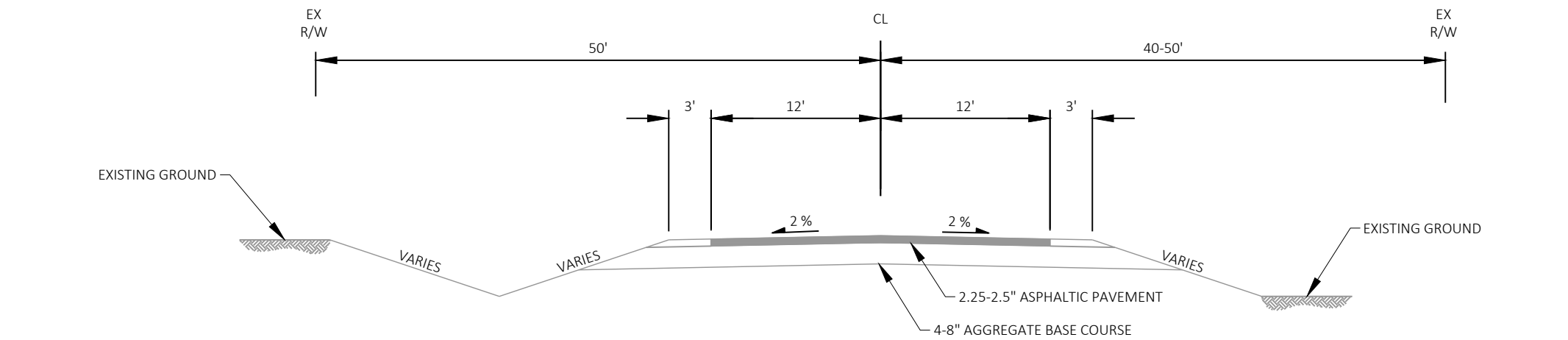
TAYLOR ELECTRIC COOPERATIVE
ELECTRIC
WADE MATYKA
N1831 STH 13
MEDFORD, WI 54451
PHONE: (715) 678-2411
EMAIL: WADE@TAYLORELECTRIC.ORG

TDS TELECOM
FIBER OPTIC
KEVIN SCHEUNENMANN
202 OGDEN ST
MEDFORD, WI 54451
PHONE: (715) 421-9191
EMAIL: KEVIN.SCHEUNENMANN@TDSTELECOM.COM

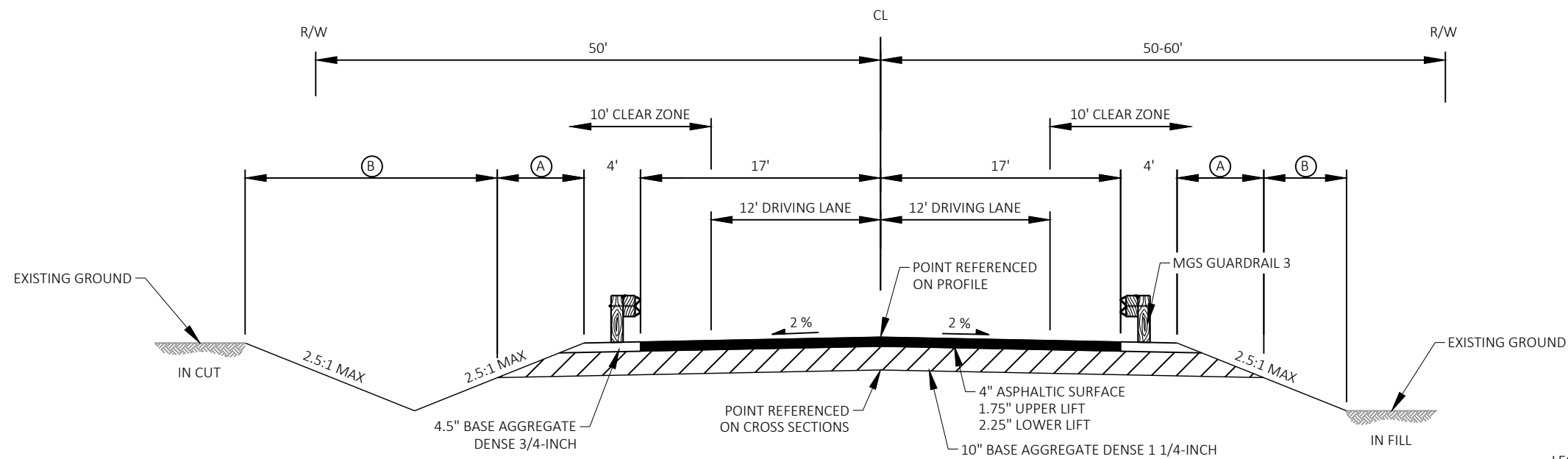


Dial 811 or (800)242-8511

www.DiggersHotline.com

**EXISTING TYPICAL SECTION**

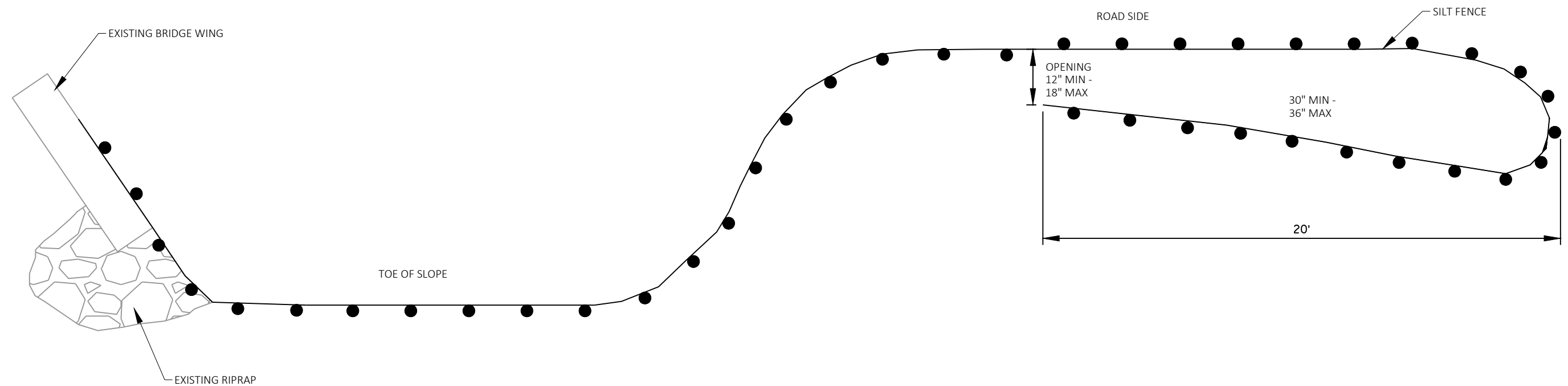
STA 7+67 - 9+81.0±
STA 10+19.0± - 12+33

**FINISHED TYPICAL SECTION**

STA 7+67 - 9+69.25
STA 10+30.75 - 12+33

LEGEND

- (A) FERTILIZER TYPE B, SEEDING NO. 20
- (B) SALVAGED TOPSOIL; EROSION MAT URBAN CLASS I TYPE B; FERTILIZER TYPE B; SEEDING MIXTURE NO. 20

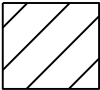


GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE
TURN-AROUND. AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

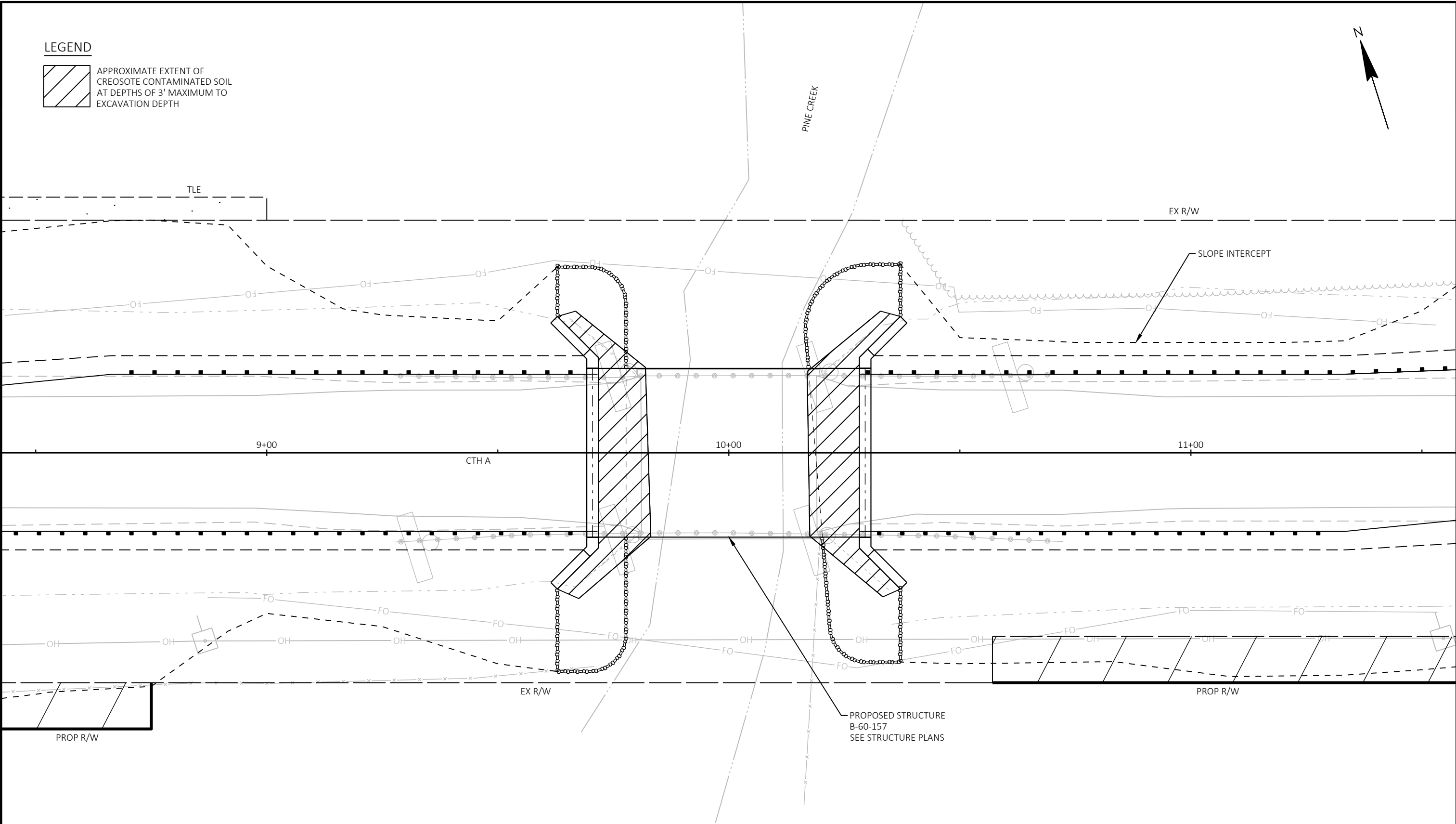
PLAN VIEW

TEMPORARY SMALL ANIMAL TURN-AROUND

LEGEND



APPROXIMATE EXTENT OF
CREOSOTE CONTAMINATED SOIL
AT DEPTHS OF 3' MAXIMUM TO
EXCAVATION DEPTH



NOTE: FINAL LOCATION AND LIMITS OF CREOSOTE CONTAMINATED SOIL TO BE VERIFIED
WITH THE DEPARTMENT RETAINED ENVIRONMENTAL CONSULTANT.

PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	CONSTRUCTION DETAILS - CONTAMINATED SOIL	SHEET	E
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Estimate Of Quantities

8887-03-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-60-14	EACH	1.000	1.000
0008	204.0165	Removing Guardrail	LF	212.000	212.000
0010	205.0100	Excavation Common	CY	690.000	690.000
0012	205.0505.S	Excavation, Hauling, and Disposal of Creosote Contaminated Soil and Management of Contaminated Groundwater	TON	180.000	180.000
0014	206.1001	Excavation for Structures Bridges (structure) 01. B-60-157	EACH	1.000	1.000
0016	208.0100	Borrow	CY	40.000	40.000
0018	210.1500	Backfill Structure Type A	TON	860.000	860.000
0020	213.0100	Finishing Roadway (project) 01. 8887-03-76	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	105.000	105.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,020.000	1,020.000
0026	455.0605	Tack Coat	GAL	100.000	100.000
0028	465.0105	Asphaltic Surface	TON	320.000	320.000
0030	502.0100	Concrete Masonry Bridges	CY	189.000	189.000
0032	502.3200	Protective Surface Treatment	SY	329.000	329.000
0034	503.0137	Prestressed Girder Type I 36W-Inch	LF	240.000	240.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	6,020.000	6,020.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	20,820.000	20,820.000
0040	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0042	506.4000	Steel Diaphragms (structure) 01. B-60-157	EACH	3.000	3.000
0044	513.4061	Railing Tubular Type M	LF	128.000	128.000
0046	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0048	550.0500	Pile Points	EACH	16.000	16.000
0050	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	460.000	460.000
0052	606.0300	Riprap Heavy	CY	185.000	185.000
0054	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000
0056	614.2300	MGS Guardrail 3	LF	150.000	150.000
0058	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0060	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0062	618.0100	Maintenance and Repair of Haul Roads (project) 01. 8887-03-76	EACH	1.000	1.000
0064	619.1000	Mobilization	EACH	1.000	1.000
0066	625.0500	Salvaged Topsoil	SY	1,750.000	1,750.000
0068	628.1504	Silt Fence	LF	1,095.000	1,095.000
0070	628.1520	Silt Fence Maintenance	LF	1,095.000	1,095.000
0072	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0076	628.2008	Erosion Mat Urban Class I Type B	SY	1,750.000	1,750.000
0078	628.6005	Turbidity Barriers	SY	100.000	100.000
0080	629.0210	Fertilizer Type B	CWT	1.110	1.110
0082	630.0120	Seeding Mixture No. 20	LB	48.000	48.000
0084	630.0500	Seed Water	MGAL	40.000	40.000
0086	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0088	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0090	638.2602	Removing Signs Type II	EACH	4.000	4.000
0092	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0094	642.5001	Field Office Type B	EACH	1.000	1.000
0096	643.0420	Traffic Control Barricades Type III	DAY	1,440.000	1,440.000

Estimate Of Quantities

8887-03-76

Line	Item	Item Description	Unit	Total	Qty
0098	643.0705	Traffic Control Warning Lights Type A	DAY	2,240.000	2,240.000
0100	643.0900	Traffic Control Signs	DAY	1,120.000	1,120.000
0102	643.5000	Traffic Control	EACH	1.000	1.000
0104	645.0111	Geotextile Type DF Schedule A	SY	120.000	120.000
0106	645.0120	Geotextile Type HR	SY	315.000	315.000
0108	646.1020	Marking Line Epoxy 4-Inch	LF	1,520.000	1,520.000
0110	650.4500	Construction Staking Subgrade	LF	466.000	466.000
0112	650.5000	Construction Staking Base	LF	466.000	466.000
0114	650.6501	Construction Staking Structure Layout (structure) 01. B-60-157	EACH	1.000	1.000
0116	650.9911	Construction Staking Supplemental Control (project) 01. 8887-03-76	EACH	1.000	1.000
0118	650.9920	Construction Staking Slope Stakes	LF	466.000	466.000
0120	690.0150	Sawing Asphalt	LF	48.000	48.000
0122	715.0502	Incentive Strength Concrete Structures	DOL	1,134.000	1,134.000
0124	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0126	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0128	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5)	MASS ORDINATE +/- (6)	208.0100 BORROW
			CUT (2)	EBS EXCAVATION				FACTOR 1.25		
DIVISION 1 -- CTH A	7+40 TO 12+33	CTH A	690		77	613	522	653	-40	40
DIVISION 1 SUBTOTAL			690	0	77	613	522	653	-40	
GRAND TOTAL			690	0	77	613	522	653	-40	40
TOTAL COMMON EXC			690							

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUALE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUALE PAVEMENT MATERIAL

(5) EXPANDED FILL FACTOR = 1.25

(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

[illegible]

PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	MISCELLANEOUS QUANTITIES	SHEET	E
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				628.1504	628.1520
				SILT FENCE	SILT FENCE
				LF	LF
STATION	TO	STATION	LOCATION		
7+40	-	9+69	WEST APPROACH	562	562
10+31	-	12+33	EAST APPROACH	533	533
TOTAL 0010				1,095	1,095

		628.1905	628.1910
		MOBILIZATIONS	MOBILIZATIONS
		EROSION	EROSION
		CONTROL	CONTROL
		EACH	EACH
PROJECT		5	3
TOTAL 0010		5	3

LOCATION	634.0612	637.2230	REMARKS
	POSTS WOOD	SIGNS TYPE II	
	4X6-INCH X 12-	REFLECTIVE F	
	FT	SF	
	EACH		
PROPOSED STRUCTURE B-60-157	4	12	PROPOSED BRIDGE HASH MARKS; W5-52L & W5-52R
TOTAL 0010	4	12	

NOTE: PLACE BRIDGE HASH MARK SIGNS PER SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES"

STATION	LOCATION	628.6005
		TURBIDITY
		SY
		BARRIERS
9+82	WEST ABUTMENT	50
10+16	EAST ABUTMENT	50
TOTAL 0010		100

LOCATION	638.2602	638.3000	REMARKS
	REMOVING	REMOVING	
	SIGNS TYPE II	SMALL SIGN	
	EACH	SUPPORTS	
EXISTING BRIDGE B-60-14	4	4	EXISTING BRIDGE HASH MARKS
TOTAL 0010	4	4	

LOCATION	DURATION	643.0420	643.0705	643.0900	643.5000
		TRAFFIC	TRAFFIC		
		CONTROL	CONTROL		
		BARRICADES	WARNING	TRAFFIC	TRAFFIC
		TYPE III	LIGHTS TYPE A	CONTROL SIGNS	CONTROL
		DAY	DAY	DAY	EACH
PROJECT	70 DAYS	1,440	2,240	1,120	1
TOTAL 0010		1,440	2,240	1,120	1

STATION	TO	STATION	LOCATION	646.1020
				MARKING LINE
				EPOXY 4-INCH
				LF
7+67	-	12+33	CL (YELLOW)	588
7+67	-	12+33	EDGE LINE (WHITE)	932
TOTAL 0010				1,520

LOCATION	650.6501.01
	CONSTRUCTION
	STAKING
	STRUCTURE
	LAYOUT
	(STRUCTURE)
	(01. B-60-157)
	EACH
B-60-157	1
TOTAL 0020	1

STATION	TO	STATION	LOCATION	650.4500	650.5000	650.9911.01	650.9920
				CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	
				STAKING	STAKING	SUPPLEMENTAL	
				SUBGRADE	BASE	CONTROL	STAKING SLOPE
				LF	LF	(PROJECT) (01.	STAKES
						8887-03-76)	LF
						EACH	
7+67	-	12+33	CTH A	466	466	1	466
TOTAL 0010				466	466	1	466

STATION	LOCATION	690.0150
		SAWING
		ASPHALT
		LF
7+67	BEGIN PROJECT	24
12+33	END PROJECT	24
TOTAL 0010		48

999.2000.S.01

LOCATION	INSTALLING AND
	MAINTAINING
	BIRD DETERRENT
	SYSTEM
	(STATION) (01.
	STA 10+00)
	EACH
B-60-14	1
TOTAL 0010	1

CONVENTIONAL SYMBOLS		
SECTION LINE	---	SECTION CORNER SYMBOL
QUARTER LINE	---	SECTION CORNER MONUMENT
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT
NEW R/W LINE	---	SIGN
EXISTING R/W OR HE LINE	---	OFF-PREMISE SIGN
PROPERTY LINE	---	COMPARABLE
LOT, TIF & OTHER MINOR LINES	---	NON-COMPARABLE
SLOPE INTERCEPT	---	ELECTRIC POLE
CORPORATE LIMITS	---	TELEPHONE POLE
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)
NEW R/W (FEET OR HUNDREDS OF FEET)	---	ACCESS RESTRICTED BY ACQUISITION
TEMPORARY LIMITED EASEMENT AREA	---	NO ACCESS (BY STATUTORY AUTHORITY)
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTRACT)
TRANSMISSION STRUCTURES	---	NO ACCESS (NEW HIGHWAY)
BUILDING TO BE REMOVED	---	PARCEL NUMBER
BRIDGE	---	UTILITY NUMBER
CULVERT	---	PARALLEL OFFSETS

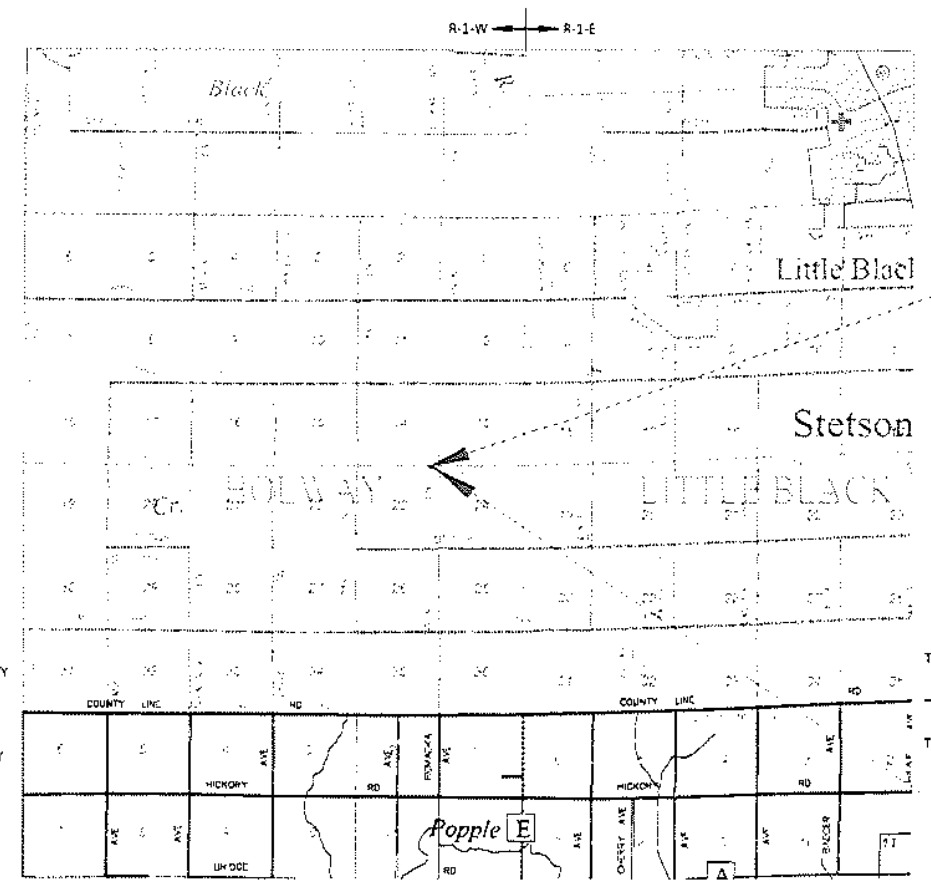
CONVENTIONAL UTILITY SYMBOLS	
WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
ELECTRIC TOWER	---

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

R/W PROJECT NUMBER 8887-03-06	SHEET NUMBER 4.01	TOTAL SHEETS 2
FEDERAL PROJECT NUMBER N/A		
PLAT OF RIGHT OF WAY REQUIRED FOR LUBLIN - STETSONVILLE PINE CREEK BRIDGE B-60-0157		
CTH A	TAYLOR COUNTY	
CONSTRUCTION PROJECT NUMBER 8887-03-06		

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

CURVE DATA ABBREVIATIONS			
LONG CHORD	LC	LONG CHORD BEARING	LCB
RADIUS	R	DEGREE OF CURVE	D
CENTRAL ANGLE	CA	LENGTH OF CURVE	L
TANGENT	T	DIRECTION AHEAD	DA
DIRECTION BACK	DB		



BEGIN RELOCATION ORDER
STA 45+21.79
781.47' WEST AND 71.04' SOUTH OF
THE NORTHEAST CORNER OF SEC 25
T-30-N R-1-W

END RELOCATION ORDER
STA 52+00.00
104.73' WEST AND 275.60' SOUTH OF
THE NORTHEAST CORNER OF SEC 25
T-30-N R-1-W

LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.128 MI.

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), TAYLOR COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1/2" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.
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.
PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.
ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.
INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.
FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT TAYLOR COUNTY.

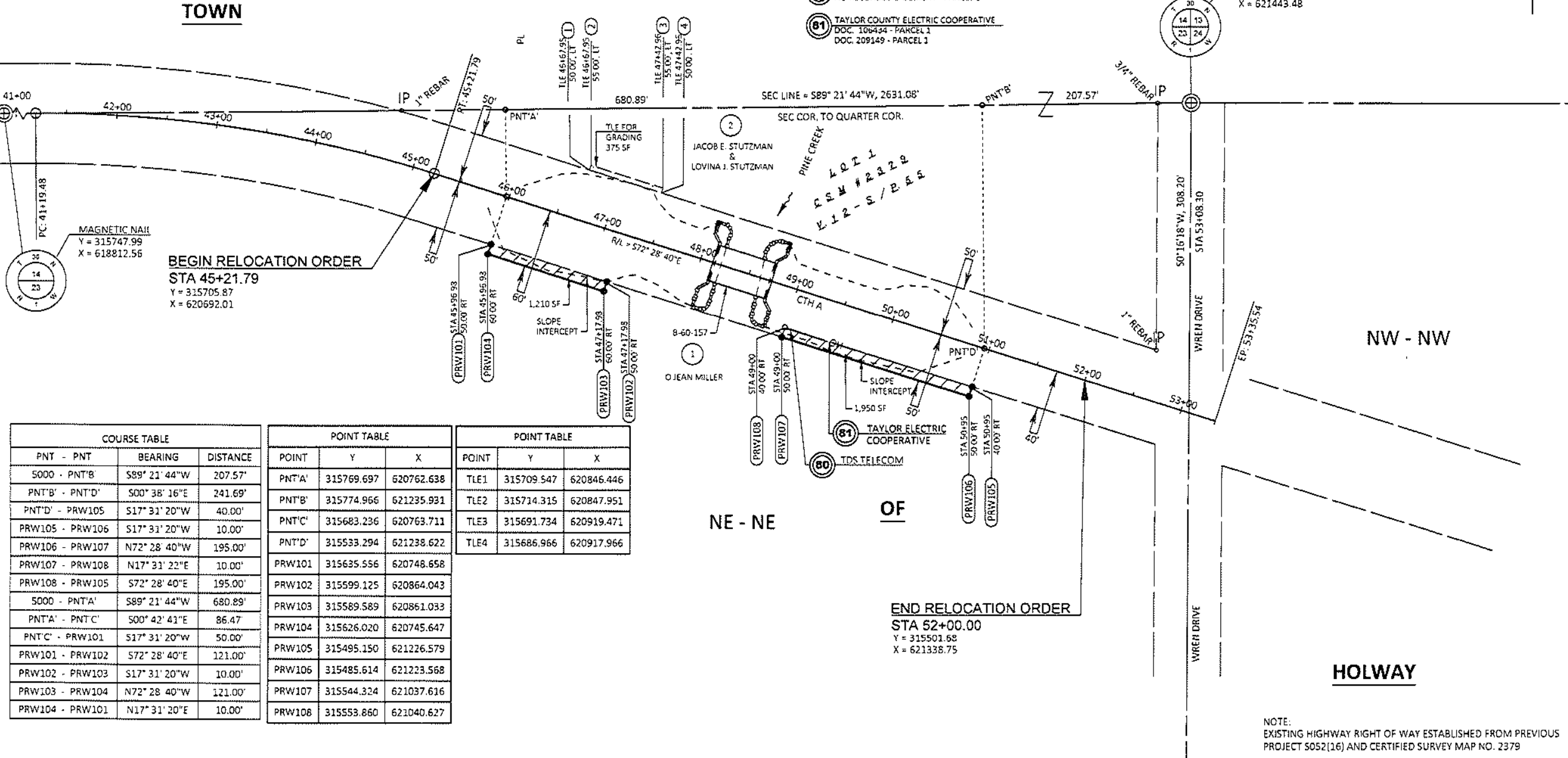
CORRE
ENGINEERING



I, SCOTT J. KOFFARNUS, PROFESSIONAL LAND SURVEYOR, S. 2782, HEREBY CERTIFY THAT I HAVE SURVEYED THE LAND DESCRIBED HEREON AND THAT THE MAP HEREON IS A CORRECT REPRESENTATION OF THAT SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.
DATE: 02/08/2024
Signature: Scott J. Koffarnus
COUNTY OF TAYLOR
APPROVED FOR THE COUNTY
DATE: 2/29/24
Signature: [Signature]
PLOT NAME:

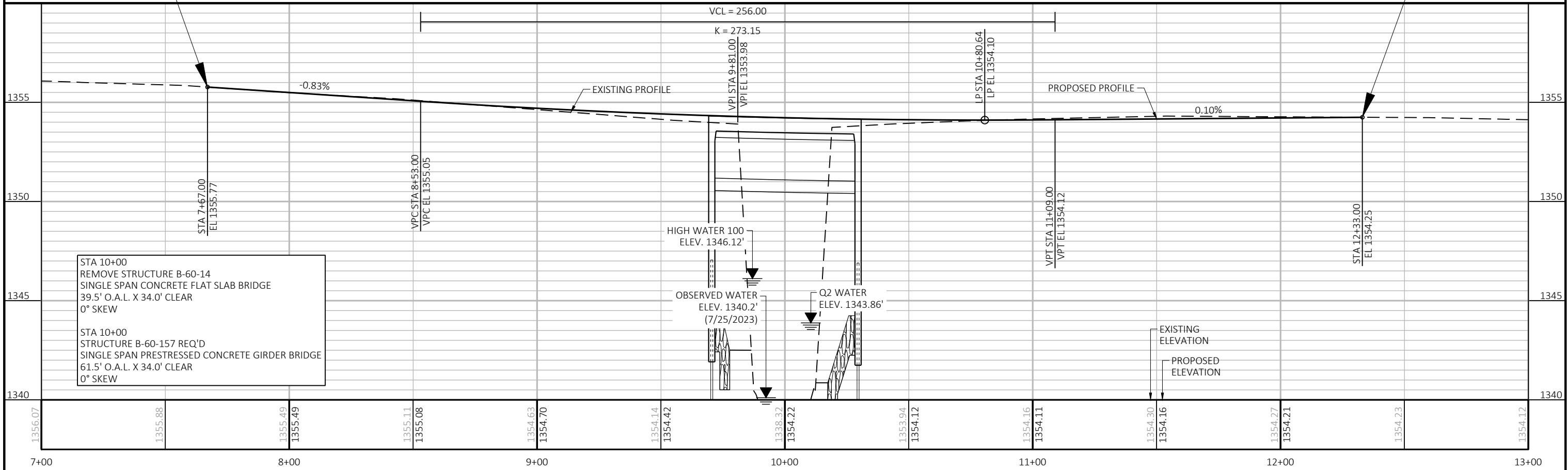
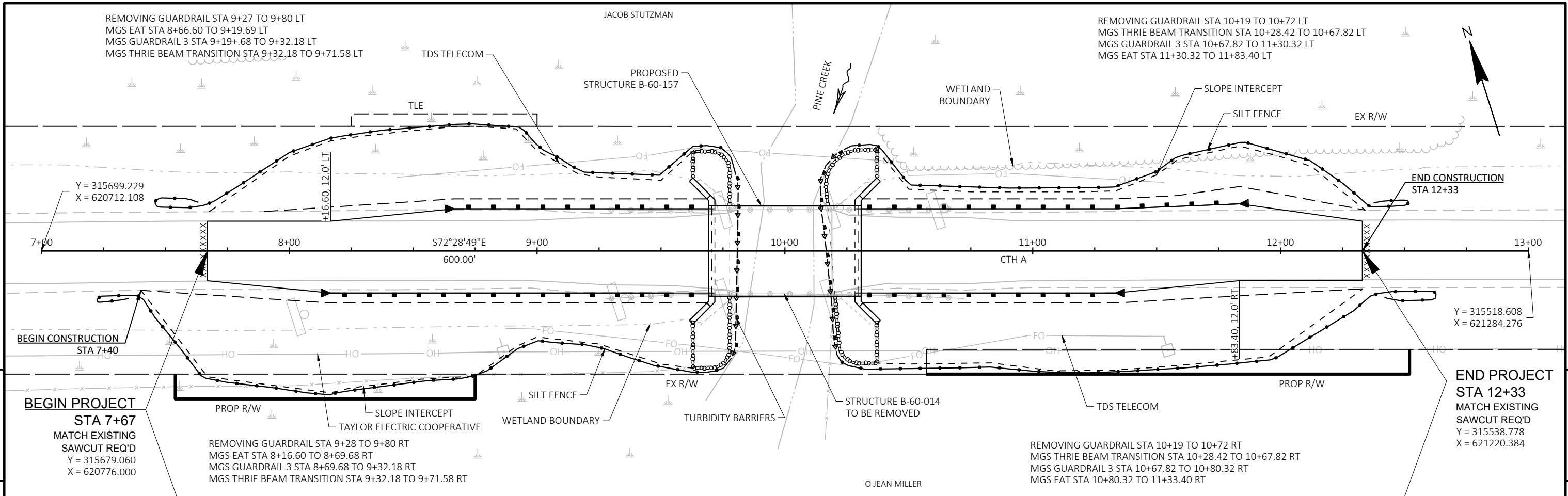
SCHEDULE OF LAND & INTERESTS REQUIRED						
OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.						
PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQ'D	A/W SQUARE FEET REQUIRED		
				NEW (SF)	EXISTING (SF)	TOTAL (SF)
1	4.02	O JEAN MILLER	FEE	3160	---	3160
2	4.02	JACOB E. STUTZMAN AND LOVINA J. STUTZMAN	TLE	---	---	375

UTILITY INTERESTS REQUIRED			
UTILITY NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED
80	4.02	TDS TELECOM	RELEASE OF RIGHTS
81	4.02	TAYLOR COUNTY ELECTRIC COOPERATIVE	RELEASE OF RIGHTS



COURSE TABLE			POINT TABLE			POINT TABLE		
PNT - PNT	BEARING	DISTANCE	POINT	Y	X	POINT	Y	X
5000 - PNT'B	S89° 21' 44"W	207.57'	PNT'A	315769.697	620762.638	TLE1	315709.547	620846.446
PNT'B - PNT'D	S00° 38' 16"E	241.69'	PNT'B	315774.966	621235.931	TLE2	315714.315	620847.951
PNT'D - PRW105	S17° 31' 20"W	40.00'	PNT'C	315683.236	620763.711	TLE3	315691.734	620919.471
PRW105 - PRW106	S17° 31' 20"W	10.00'	PNT'D	315533.294	621238.622	TLE4	315686.966	620917.966
PRW106 - PRW107	N72° 28' 40"W	195.00'	PRW101	315635.556	620748.658			
PRW107 - PRW108	N17° 31' 22"E	10.00'	PRW102	315599.125	620864.043			
PRW108 - PRW105	S72° 28' 40"E	195.00'	PRW103	315589.589	620861.033			
5000 - PNT'A	S89° 21' 44"W	680.89'	PRW104	315626.020	620745.647			
PNT'A - PNT'C	S00° 42' 41"E	86.47'	PRW105	315495.150	621226.579			
PNT'C - PRW101	S17° 31' 20"W	50.00'	PRW106	315485.614	621223.568			
PRW101 - PRW102	S72° 28' 40"E	121.00'	PRW107	315544.324	621037.616			
PRW102 - PRW103	S17° 31' 20"W	10.00'	PRW108	315553.860	621040.627			
PRW103 - PRW104	N72° 28' 40"W	121.00'						
PRW104 - PRW101	N17° 31' 20"E	10.00'						

REVISION DATA	DATE	SCALE: 1"=100'	HWY: CTH A	STATE R/W PROJECT NUMBER: 8887-03-06	PLAT SHEET 4.02
	GRID FACTOR		COUNTY: TAYLOR	CONSTRUCTION PROJECT NUMBER: 8887-03-76	PS&E SHEET
FILE NAME: D:\02-02-RP.DWG					E
LAYOUT NAME: D0107.10					



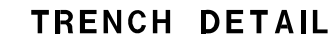
PROJECT NO:	8887-03-76	HWY:	CTH A	COUNTY:	TAYLOR	PLAN AND PROFILE:	CTH A	SCALE, FEET	<div><div></div><div>02040</div></div>	SHEET	E
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Standard Detail Drawing List

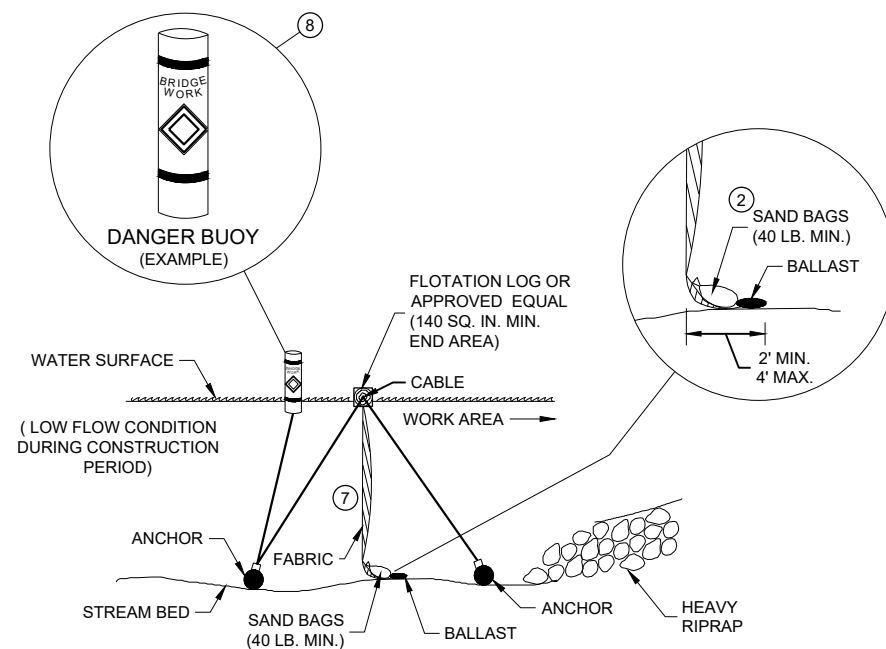
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES



- 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.

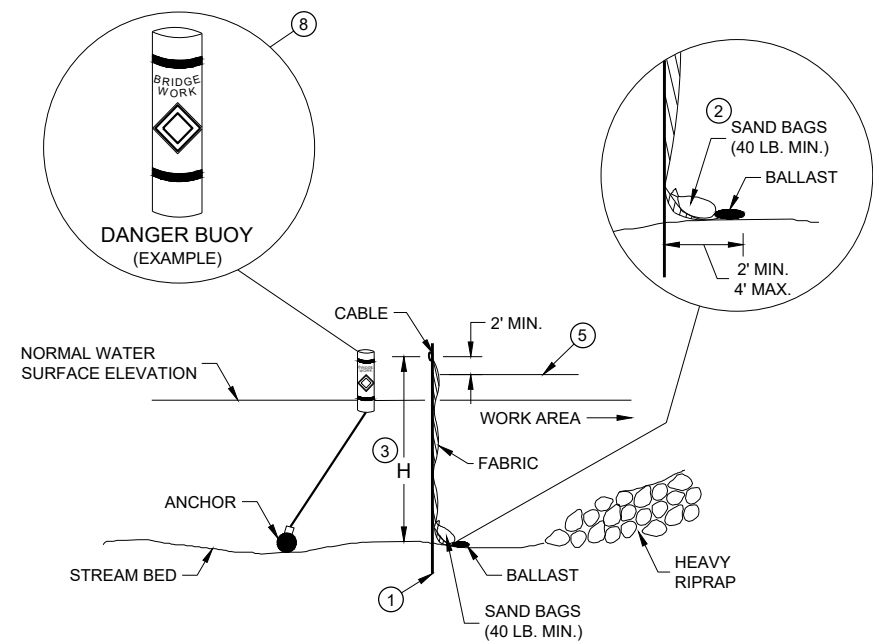


<div style="text-align: center;">SILT FENCE</div>	
<div style="text-align: center;">STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</div>	
APPROVED <u>4-29-05</u> DATE	<u>/S/ Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



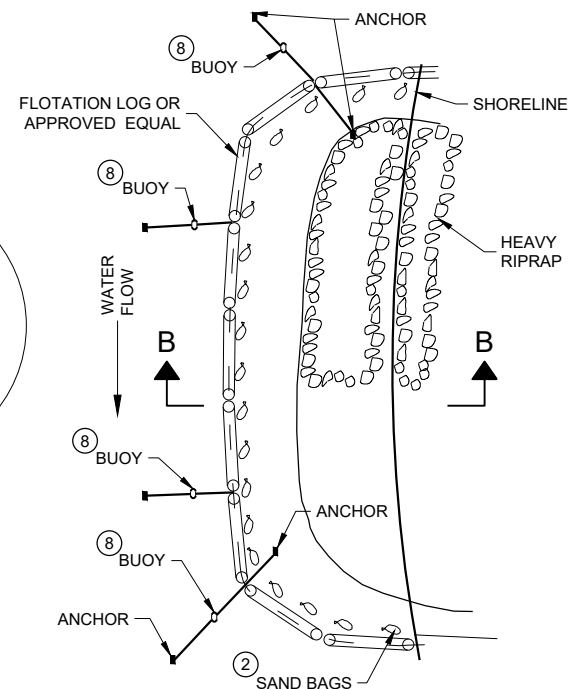
SECTION B - B

TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6

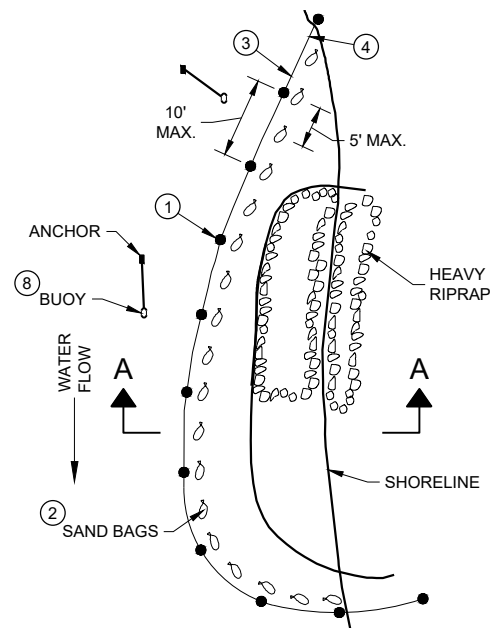


SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW



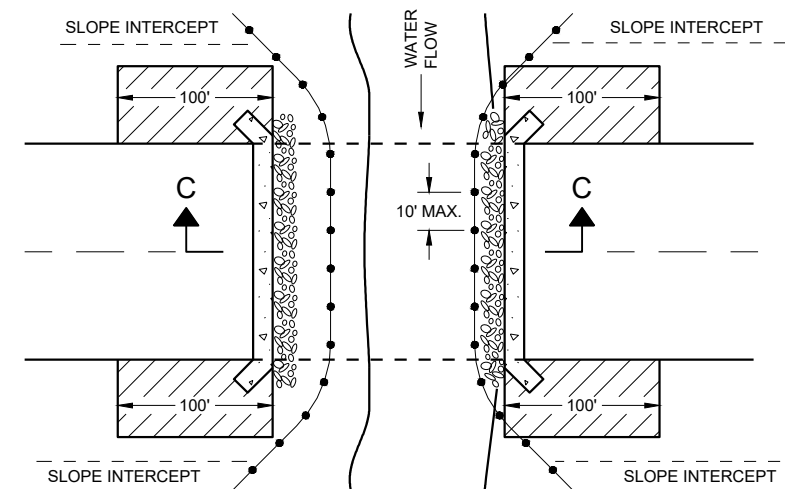
PLAN VIEW

GENERAL NOTES

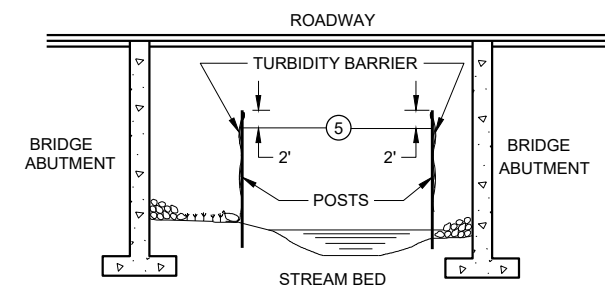
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

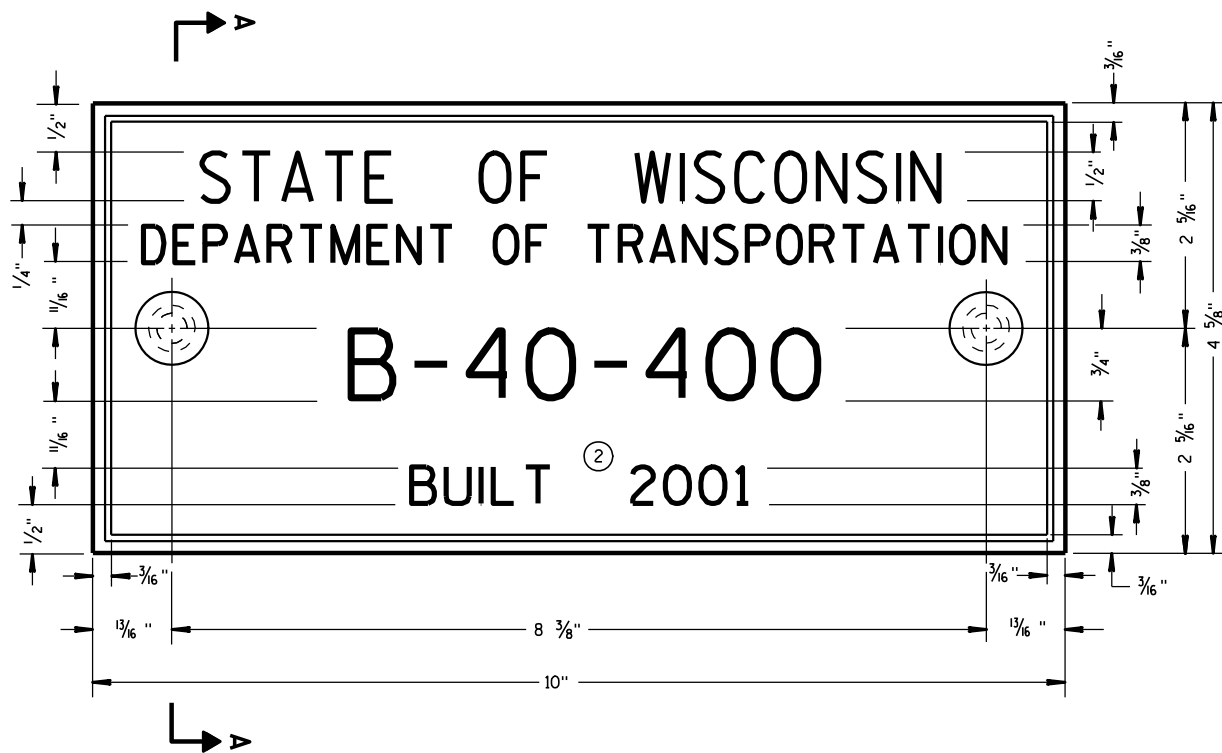
APPROVED

6/4/02

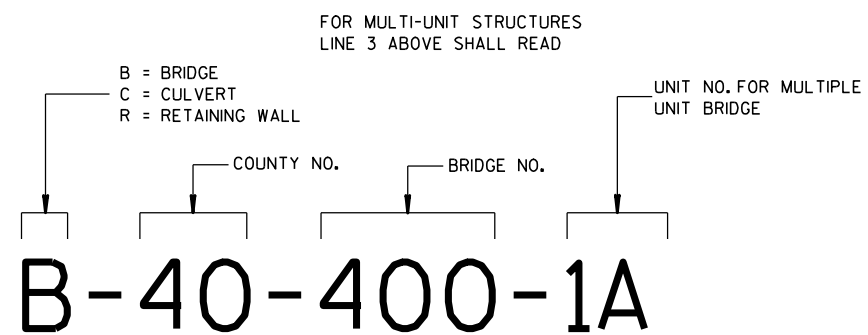
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT
ENGINEER



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



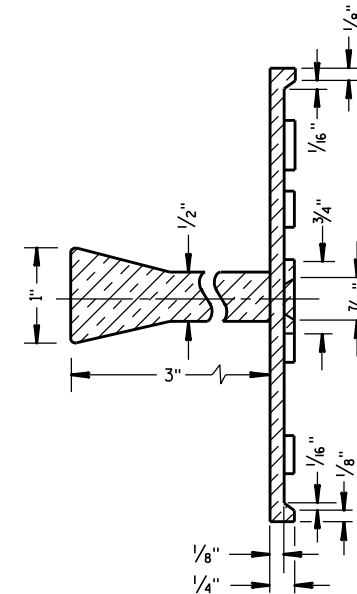
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

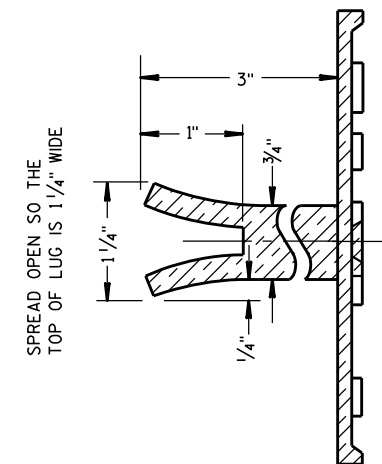
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

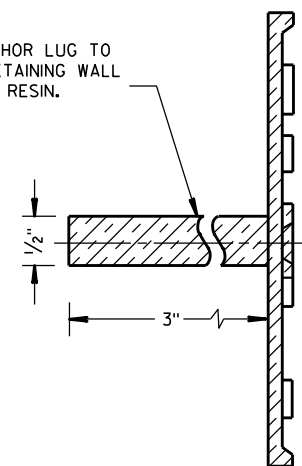


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

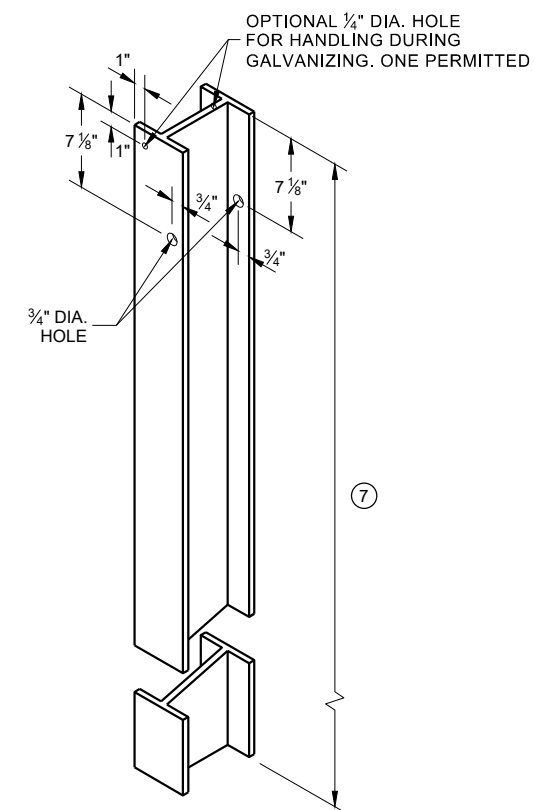
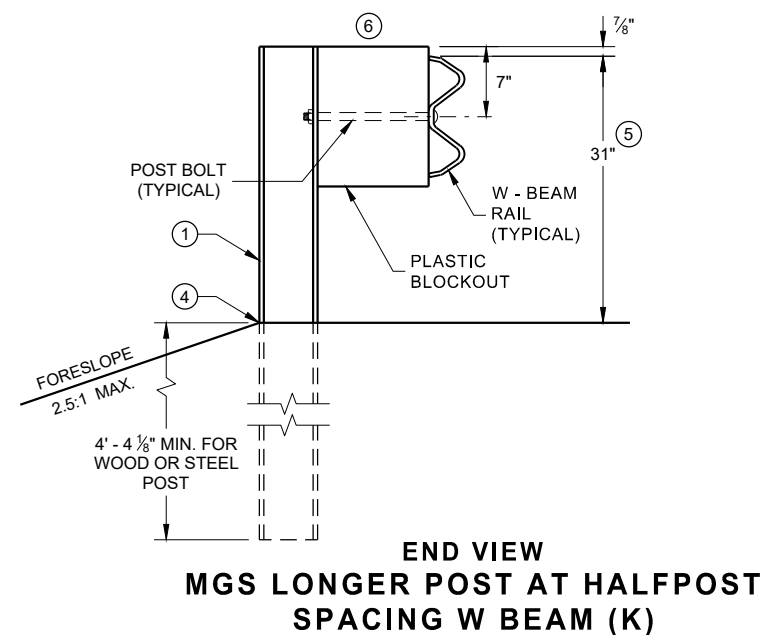
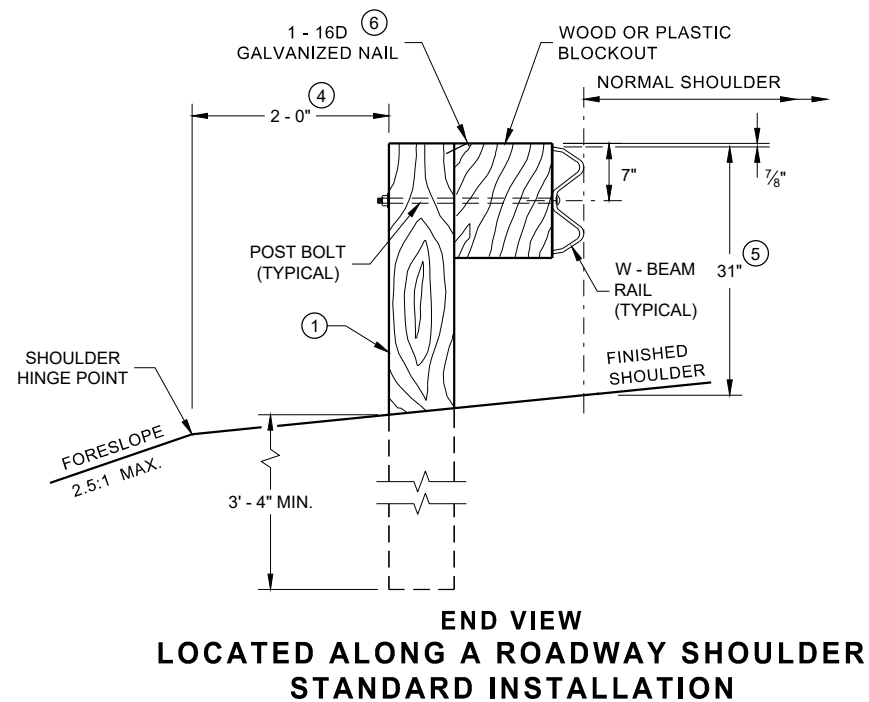
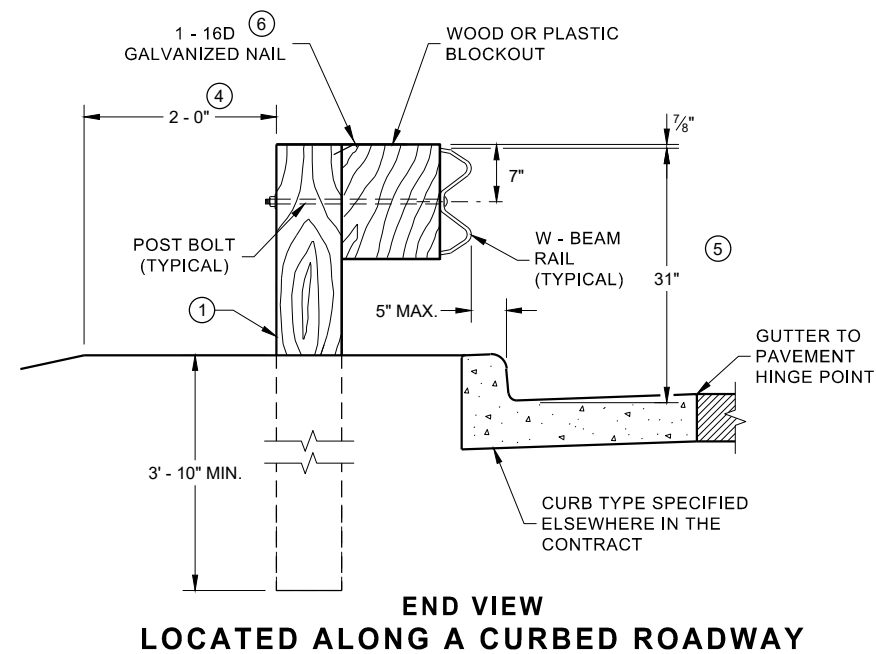
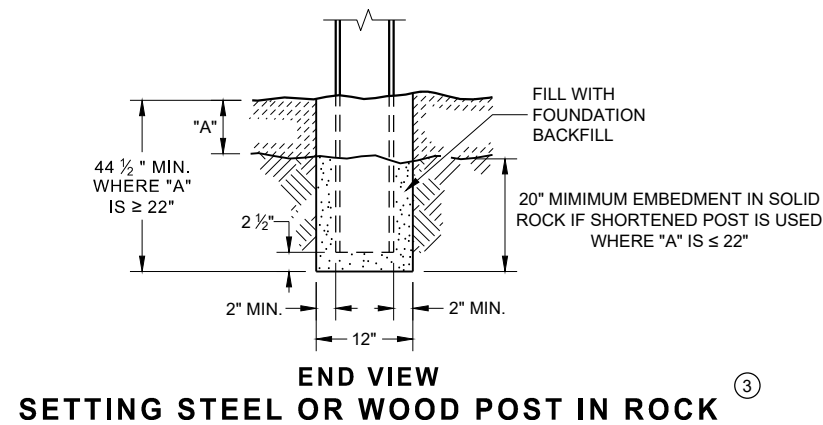
APPROVED

3/26/10
DATE

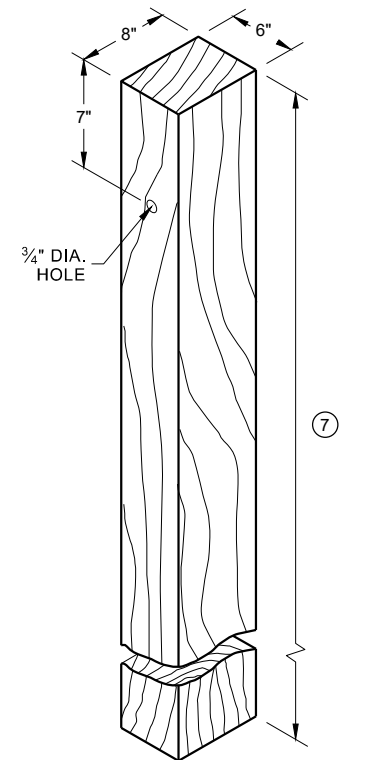
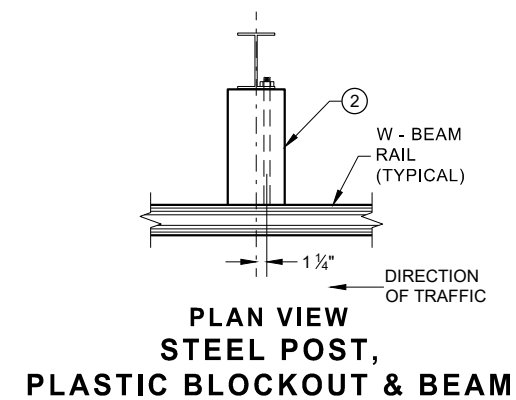
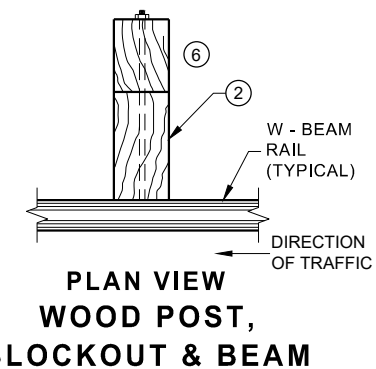
FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

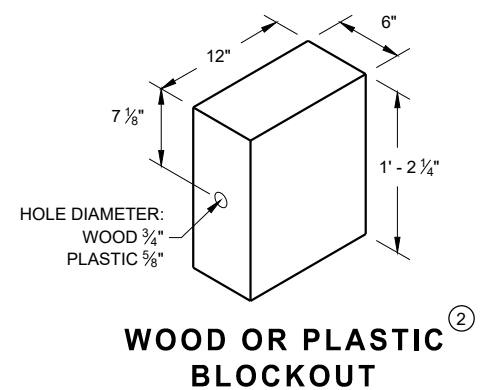
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. 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 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 $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

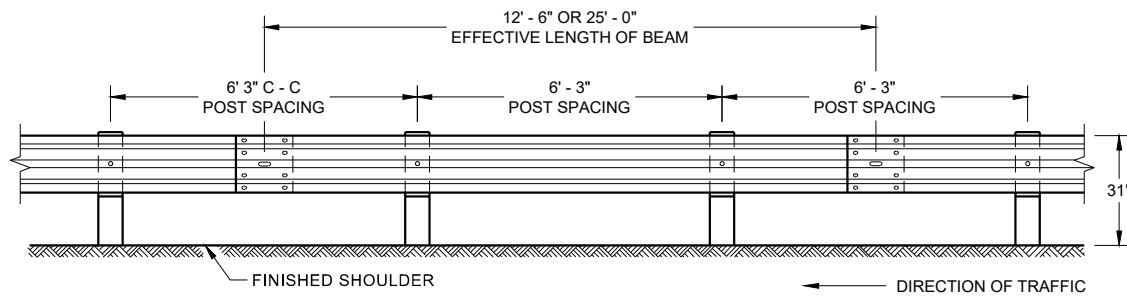


**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**

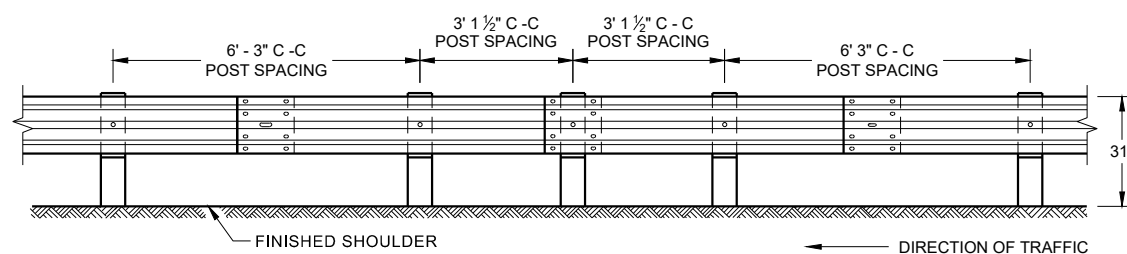


WOOD POST (6" X 8") NOMINAL ⁽¹⁾

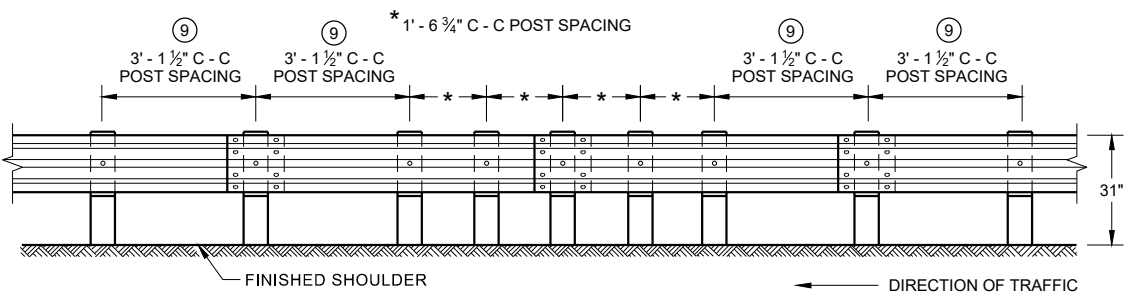




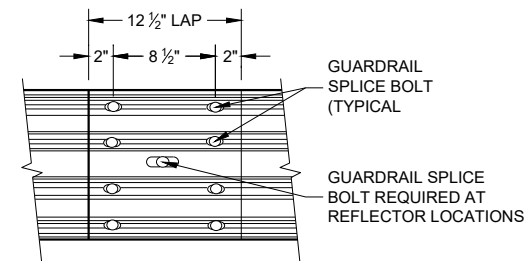
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



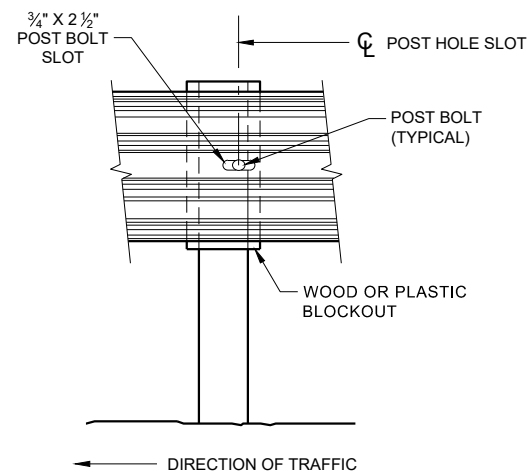
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



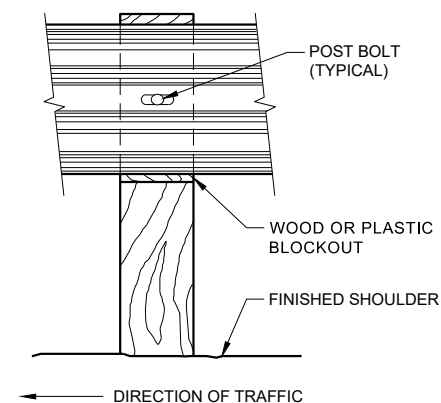
**FRONT VIEW
QUARTER POST SPACING (QS)**



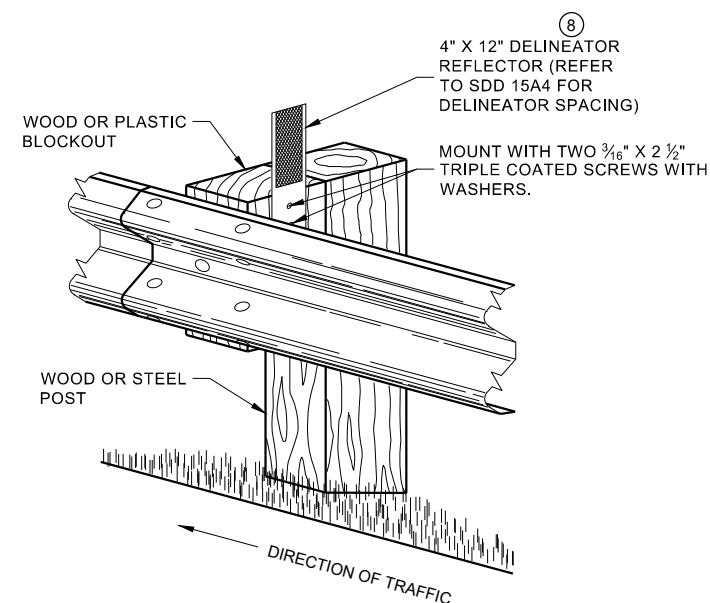
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



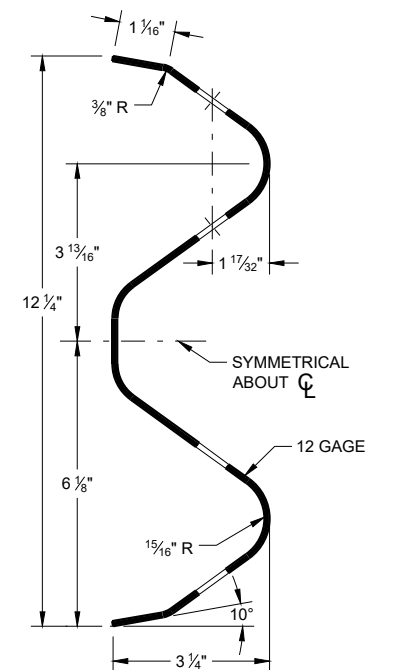
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

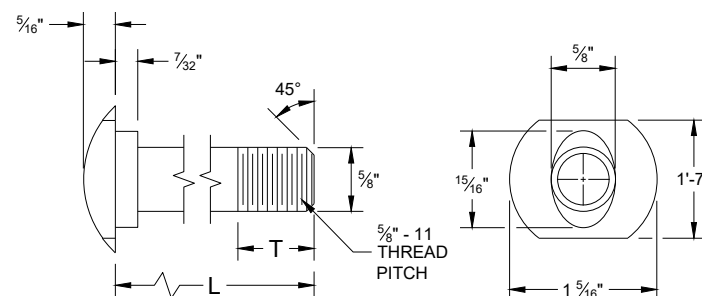


NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

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.

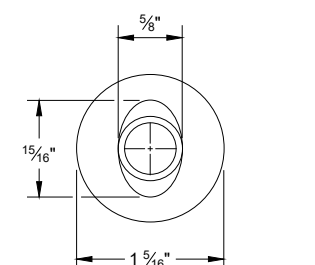
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

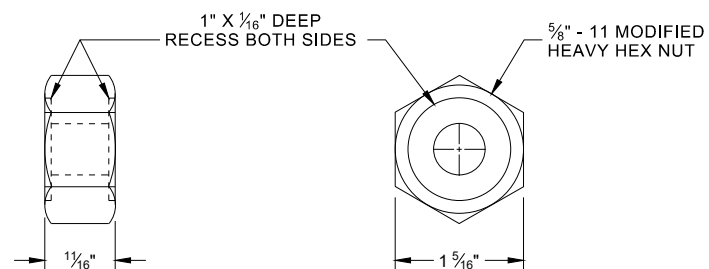


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

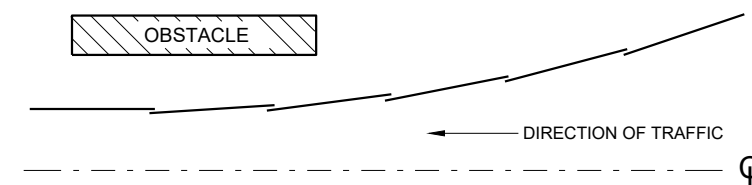


ALTERNATE BOLT HEAD

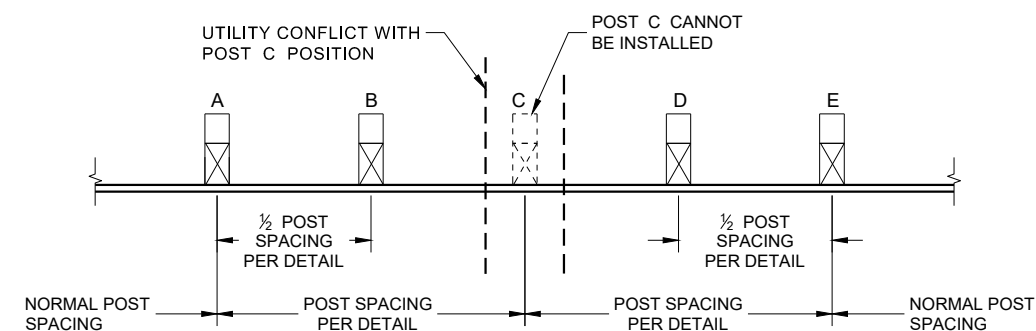


POST BOLT, SPLICE BOLT AND RECESS NUT

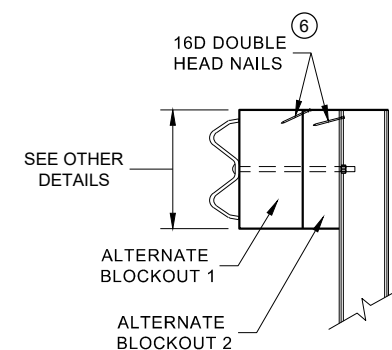
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



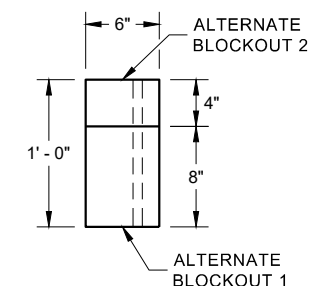
**PLAN VIEW
BEAM LAPPING DETAIL**



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

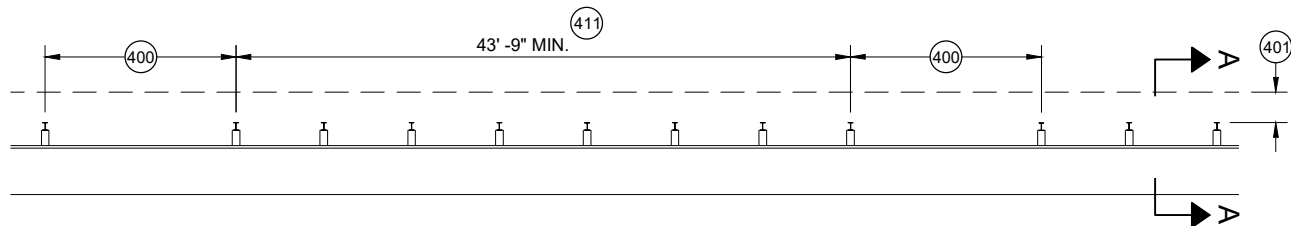


PLAN VIEW

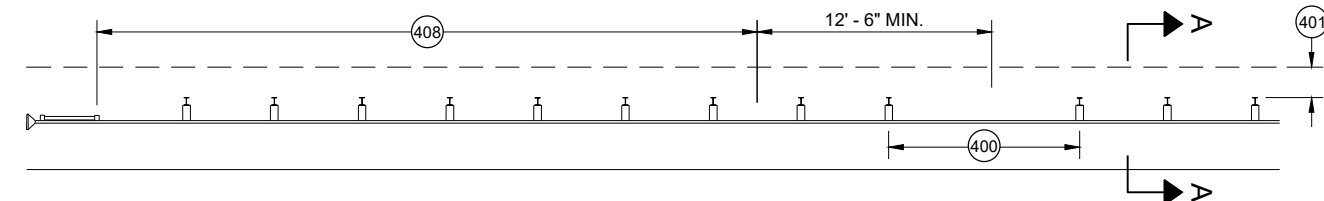
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

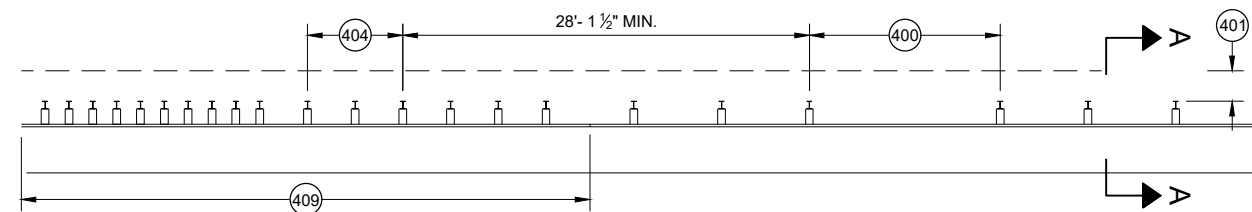
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



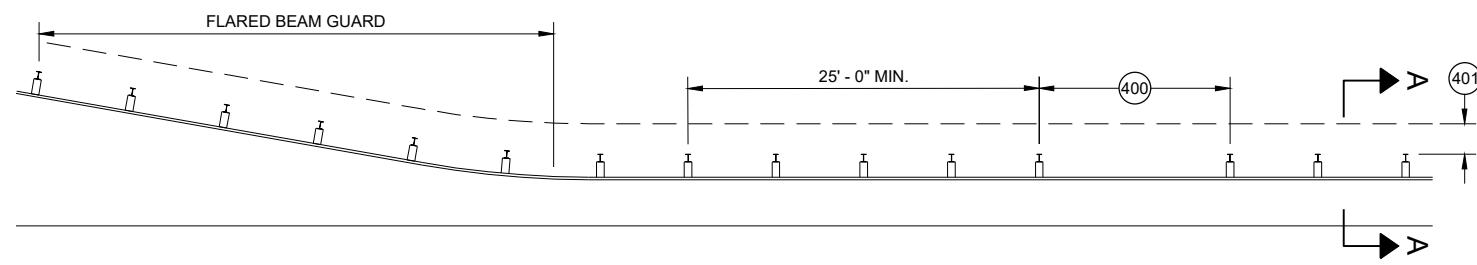
MISSING POST IN MGS GUARDRAIL



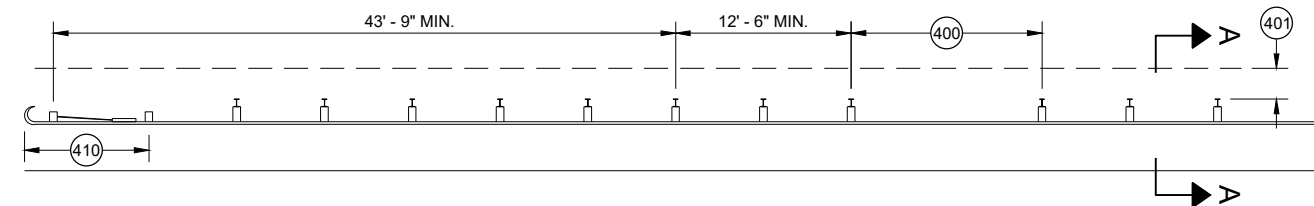
MISSING POST IN MGS GUARDRAIL NEAR EAT



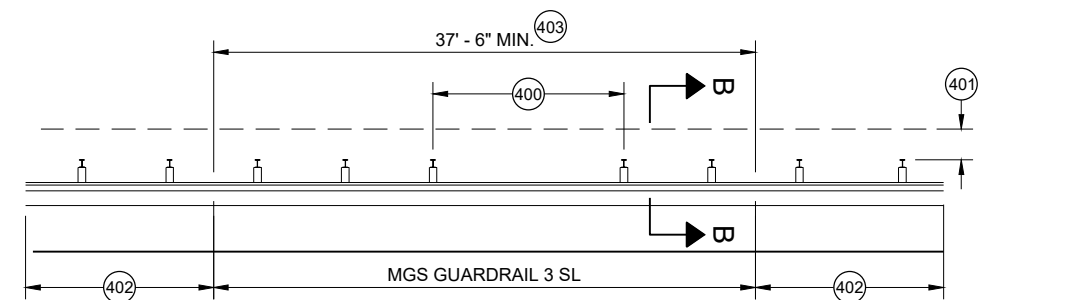
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

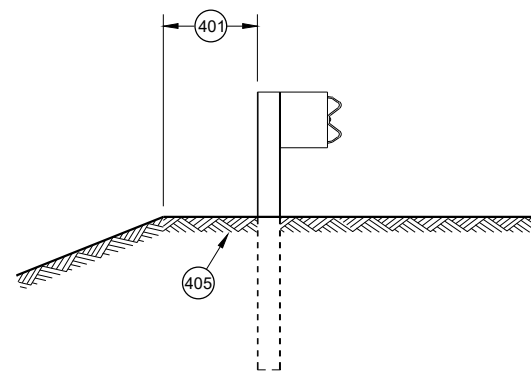


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

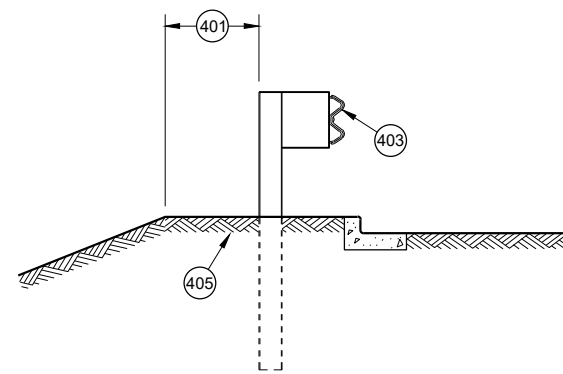


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

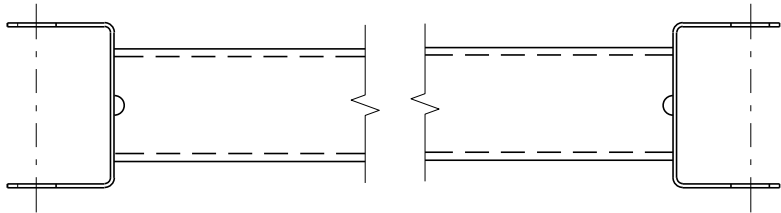
- A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

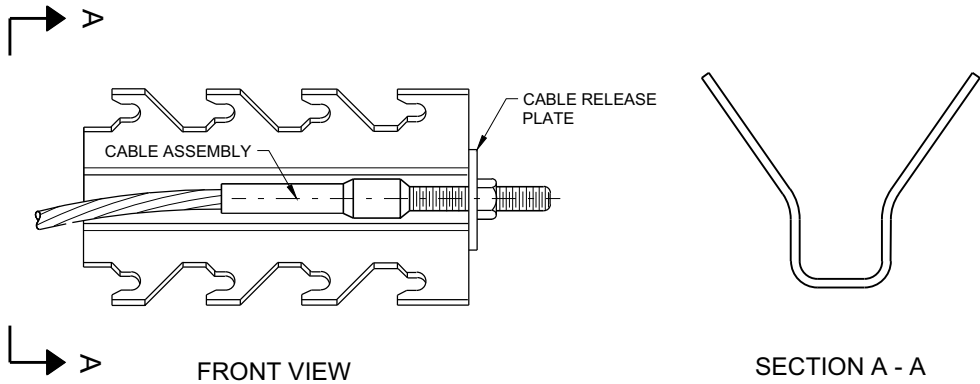


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

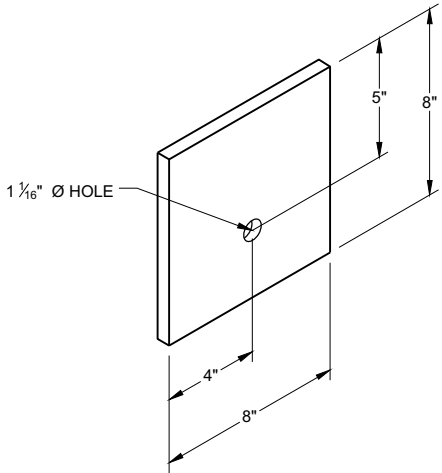


GENERIC GROUND STRUT⁹ ^E

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
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	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



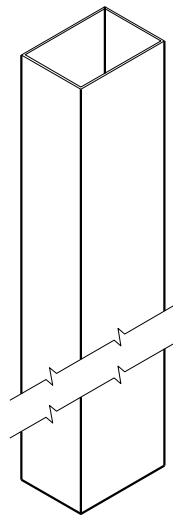
GENERIC ANCHOR CABLE BOX⁹ ^E



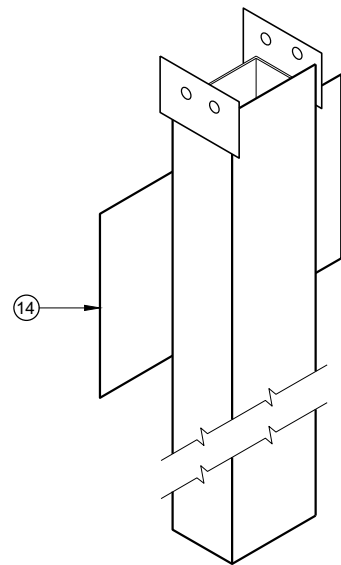
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

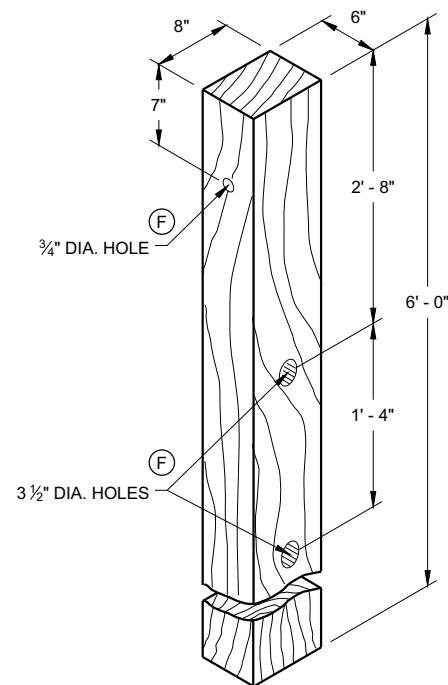
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



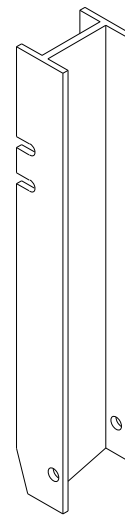
UPPER POST NO. 1 ⁽¹⁾ (E)



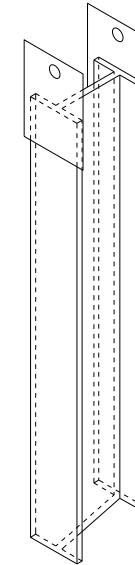
LOWER POST NO. 1 ⁽²⁾ (E)



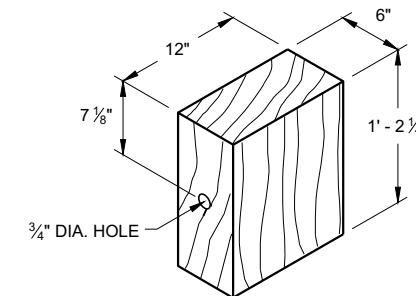
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



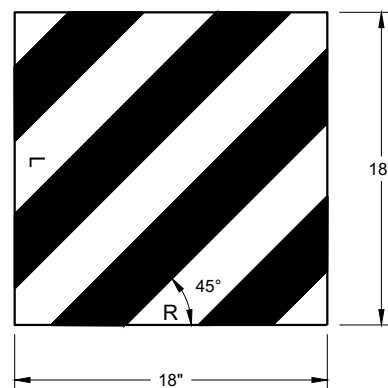
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



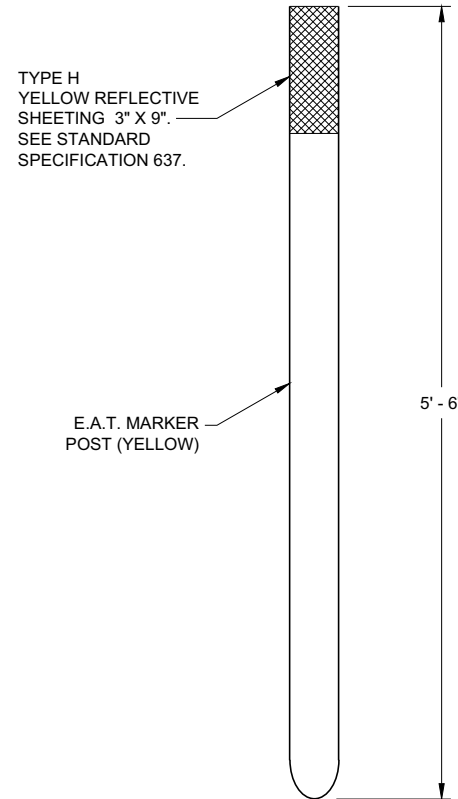
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

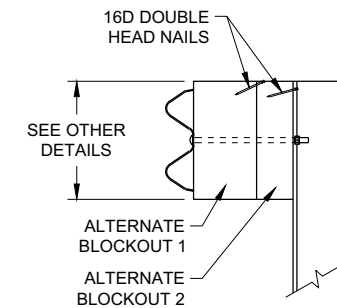


REFLECTIVE SHEETING DETAIL ^(E)



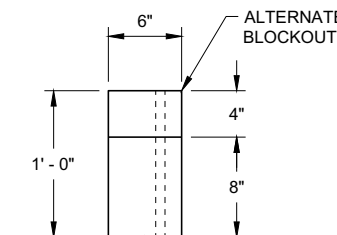
FRONT VIEW SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

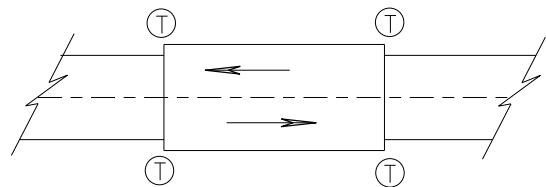


TOP VIEW

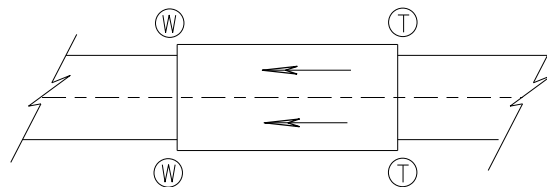
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

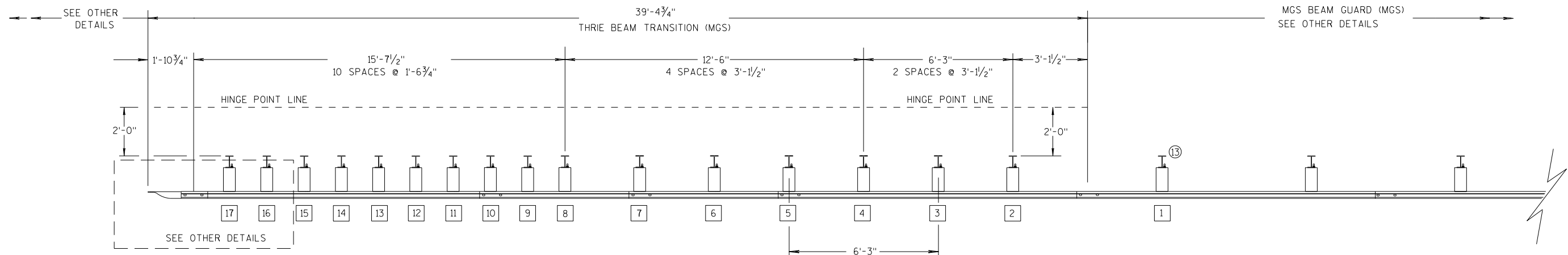
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

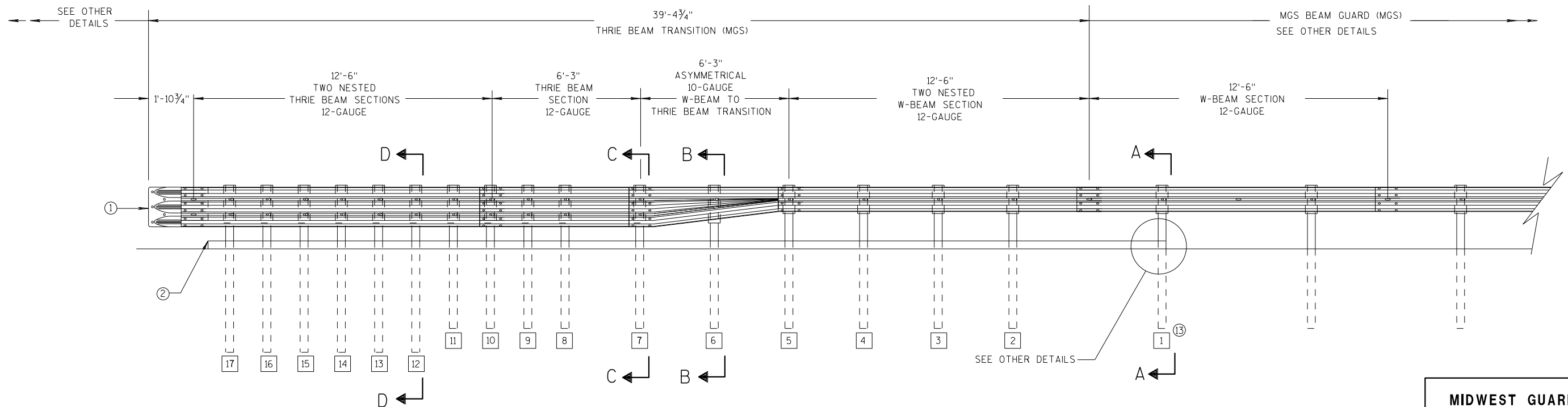
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

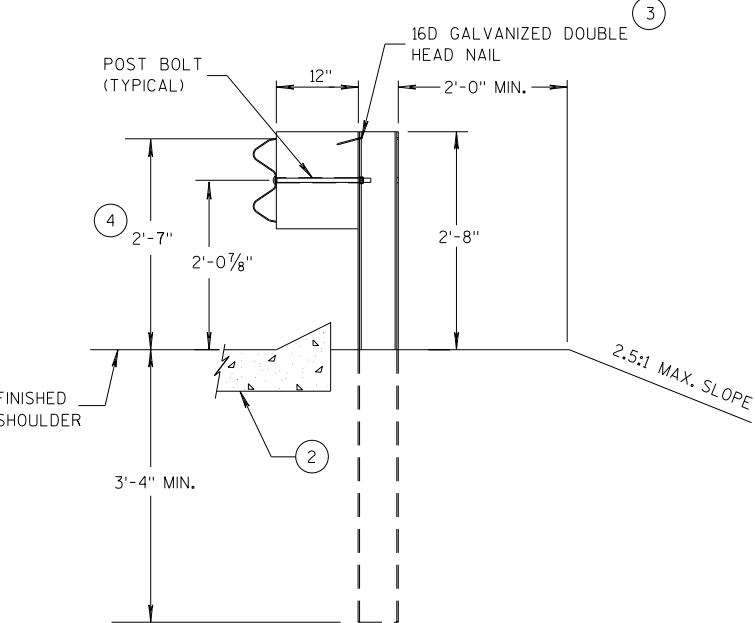
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

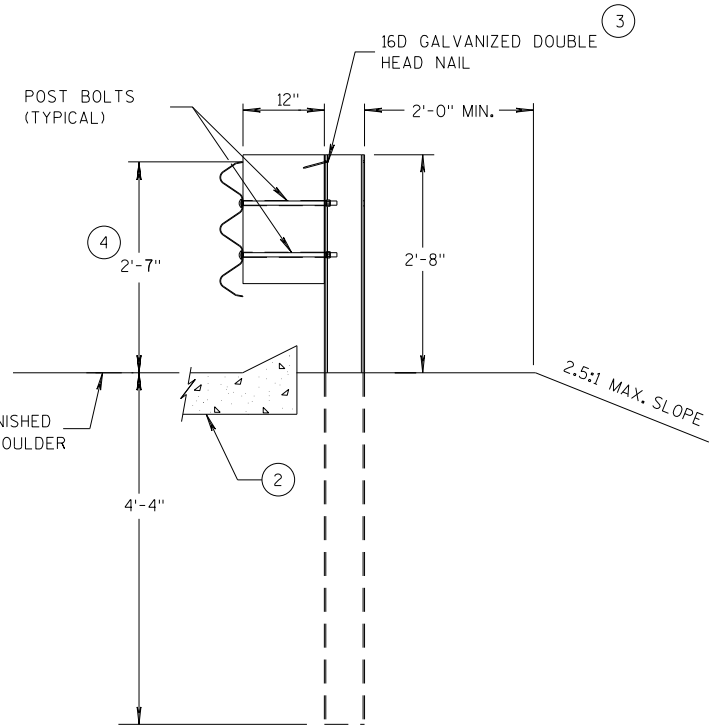
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

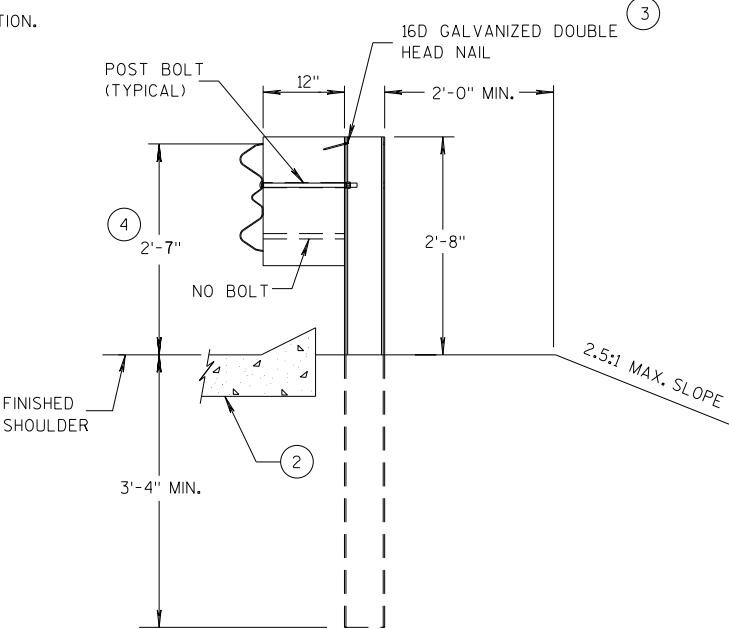
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



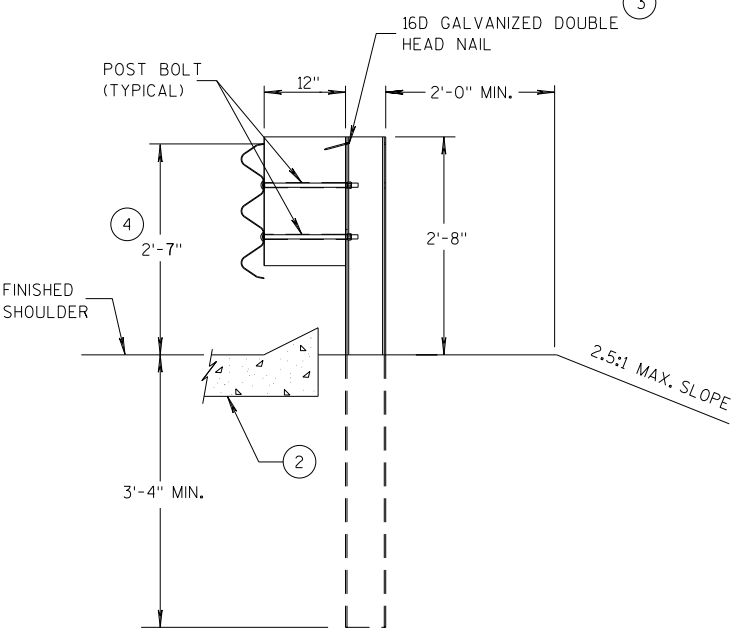
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

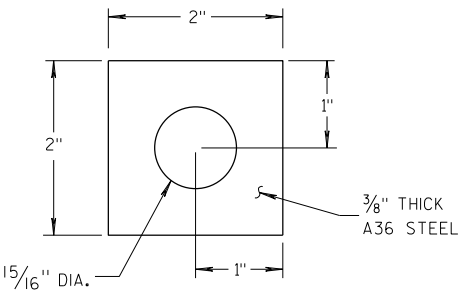
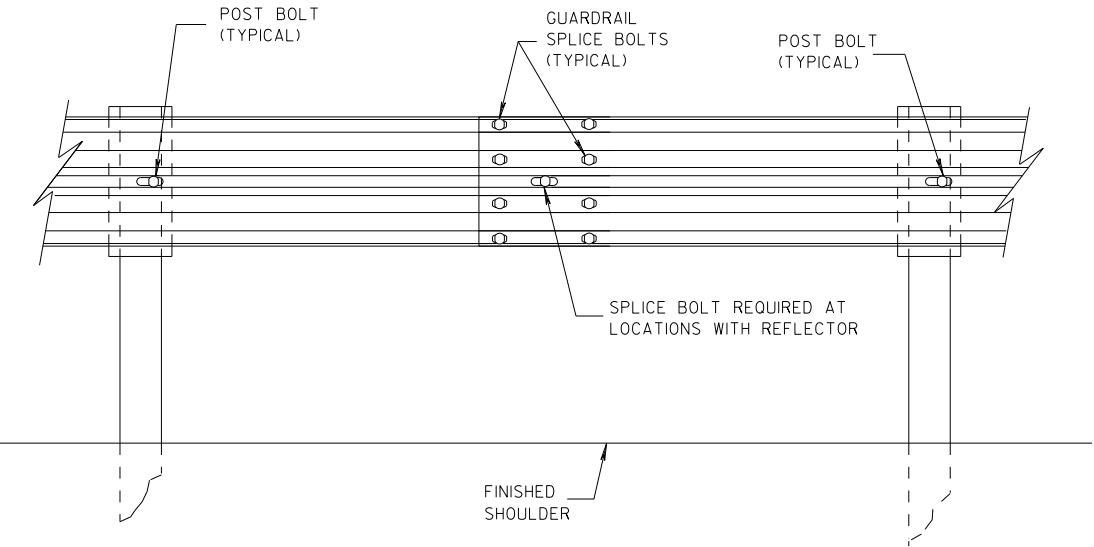
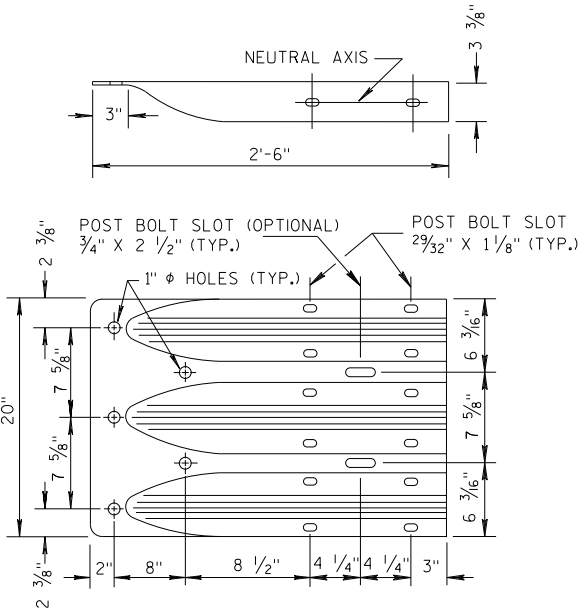


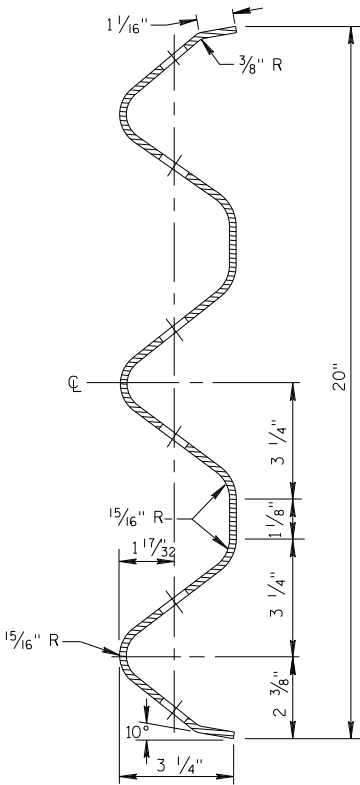
PLATE WASHER DETAIL



SPLICE DETAIL



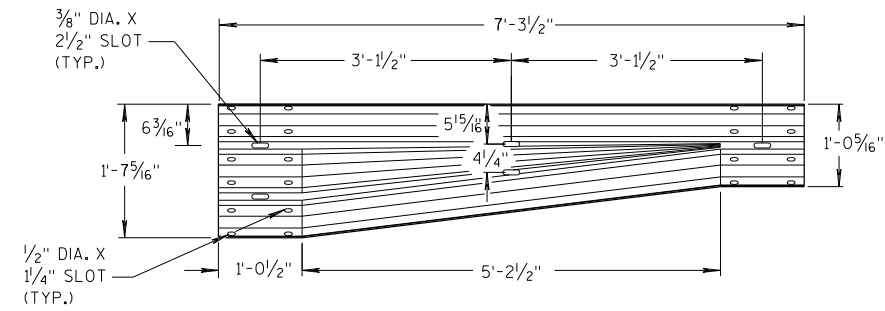
THRIE BEAM
TERMINAL CONNECTOR



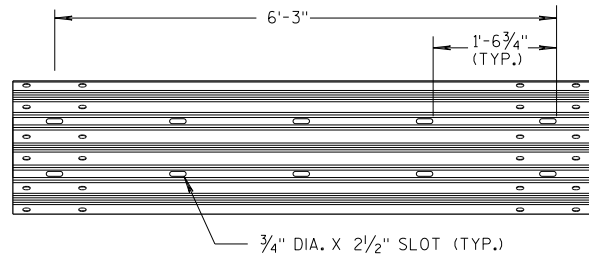
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

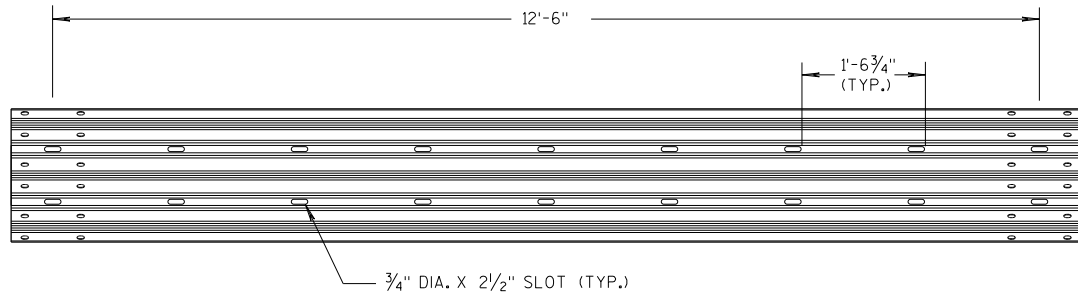
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



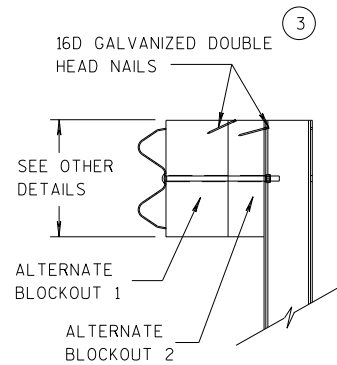
W-BEAM TO THRIE BEAM TRANSITION SECTION



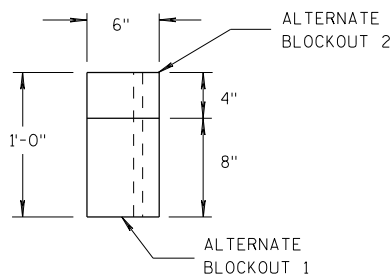
6'-3\"/>



12'-6\"/>

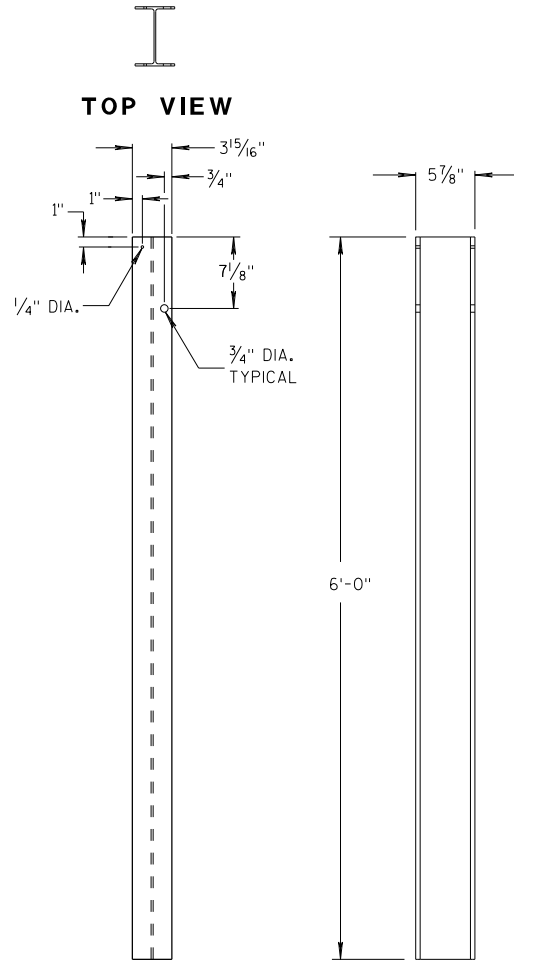


SIDE VIEW



TOP VIEW

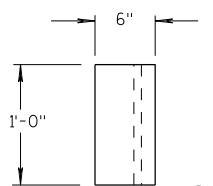
ALTERNATE WOOD BLOCKOUT DETAIL



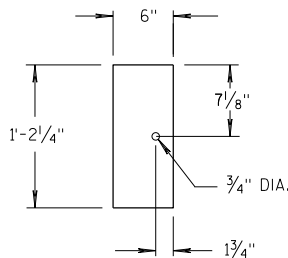
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

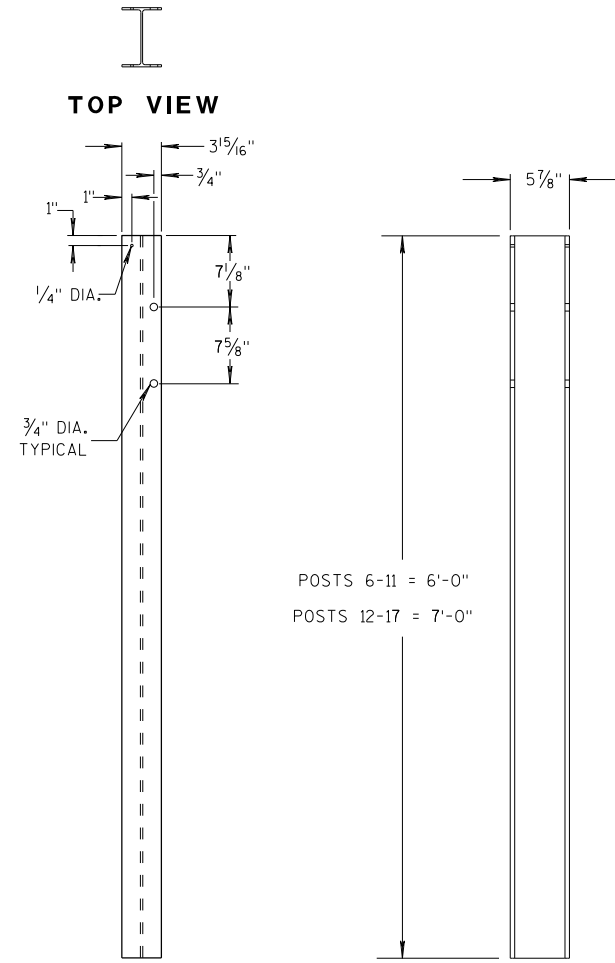


TOP VIEW



FRONT VIEW

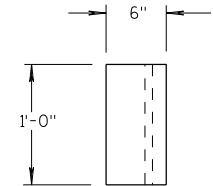
BLOCKOUT POSTS 1-5



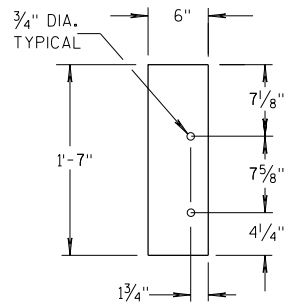
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

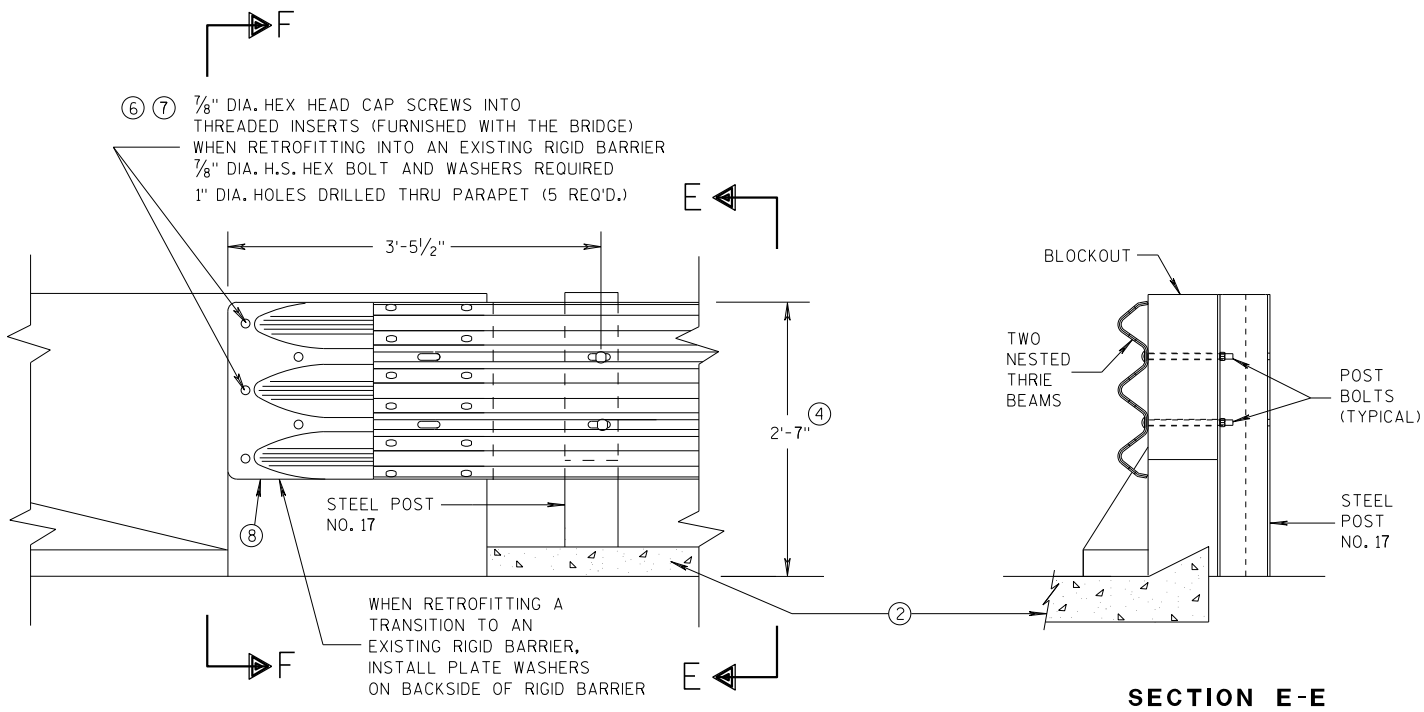
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

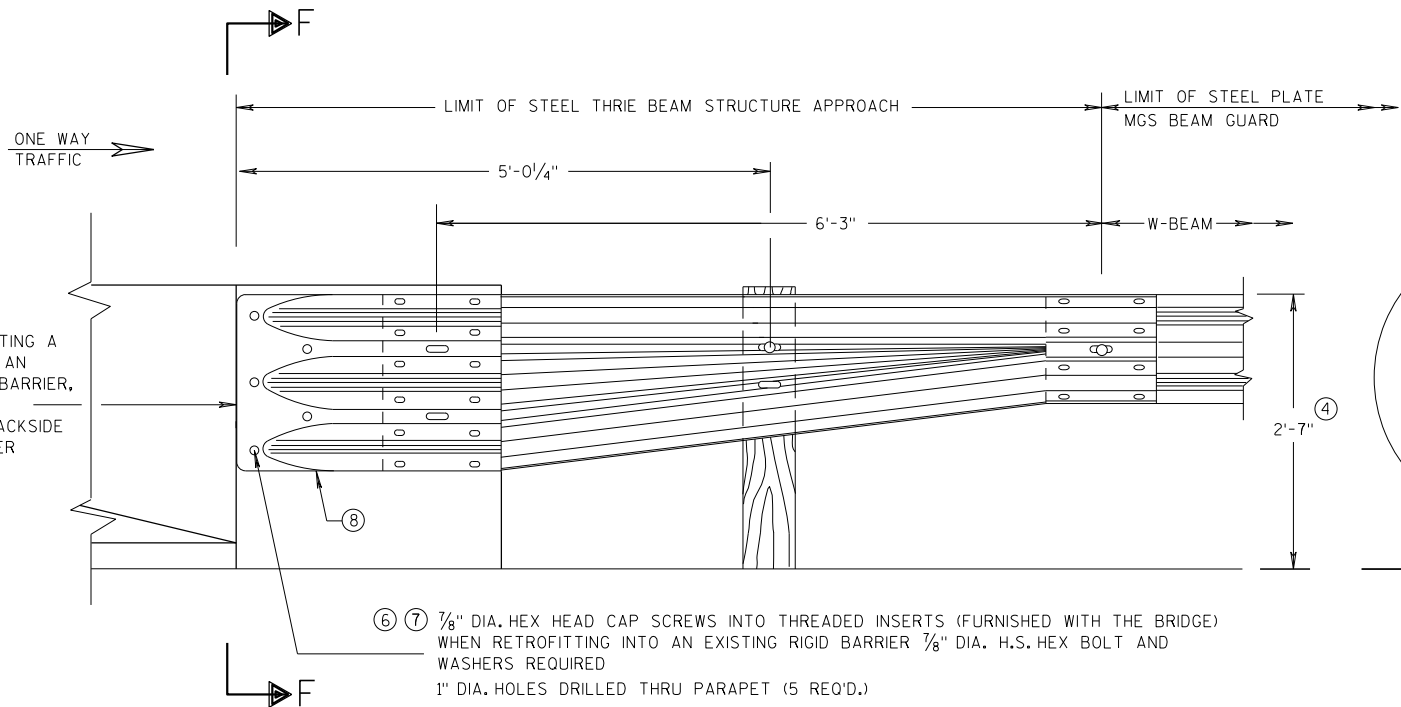
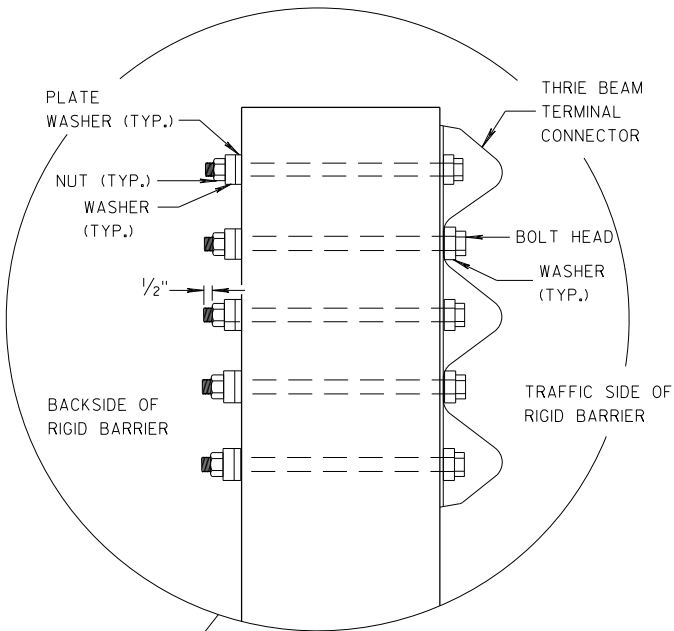
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

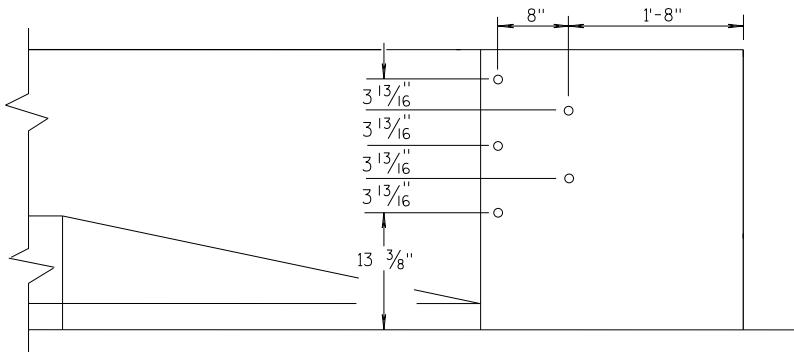


GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



SECTION F-F



**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

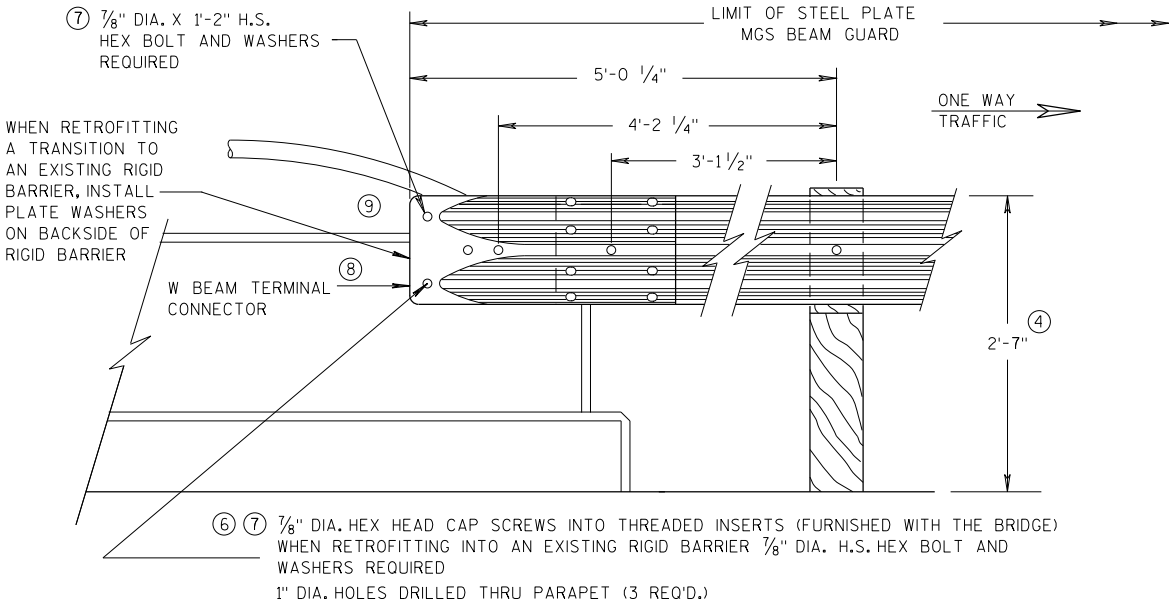
APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

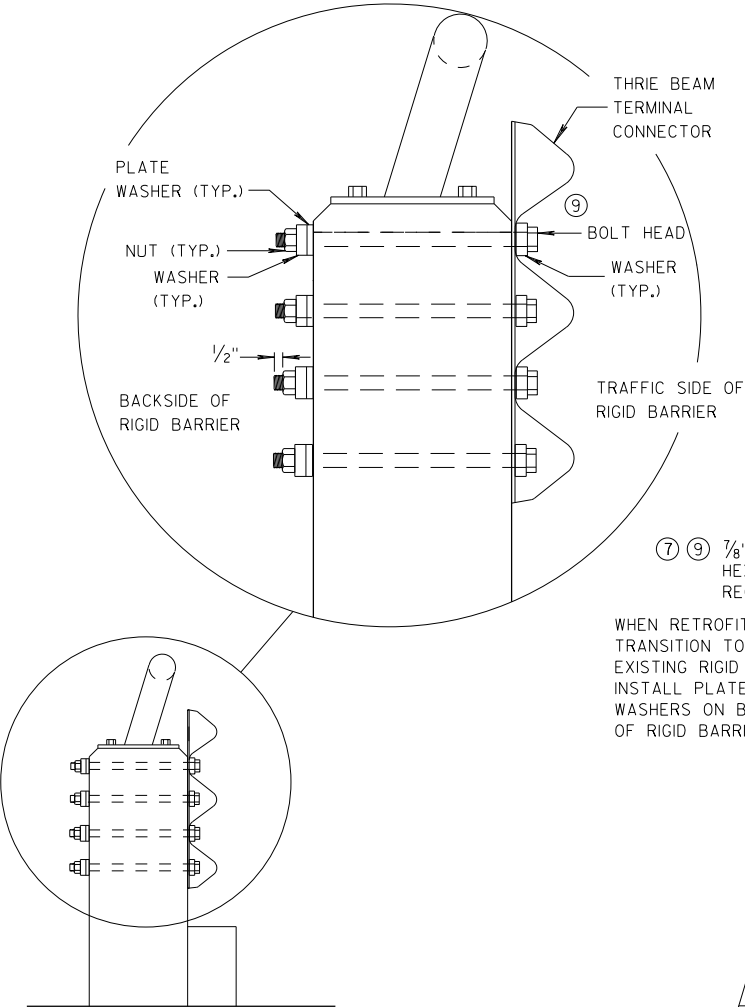
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

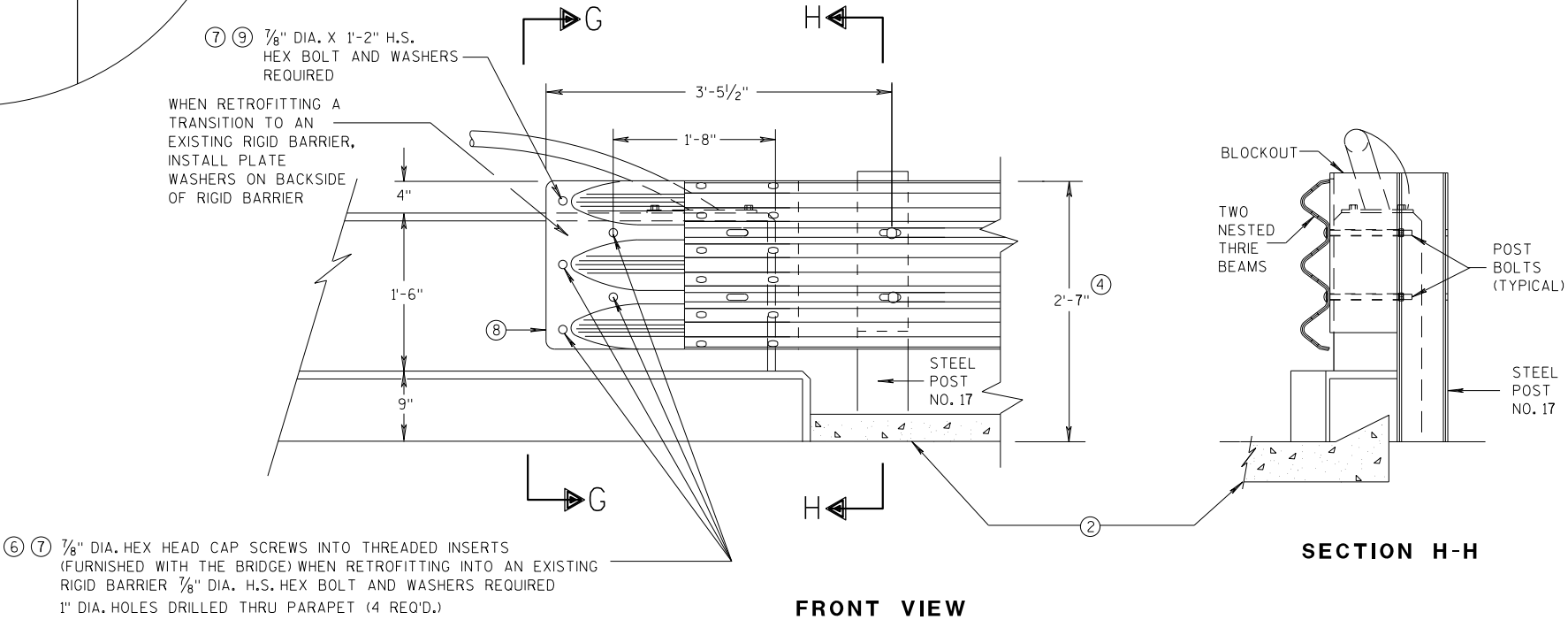
- OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{32}"$ THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}"$.
- BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



FRONT VIEW
W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW

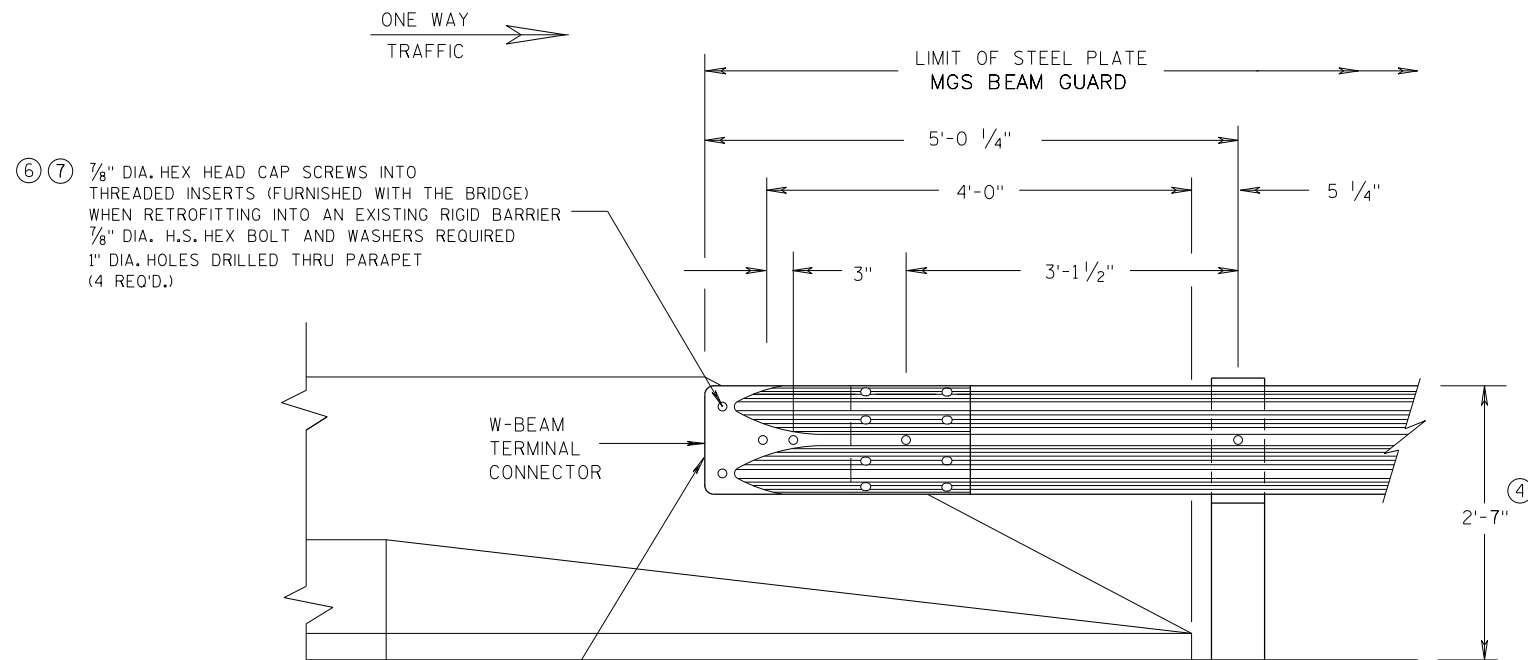
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

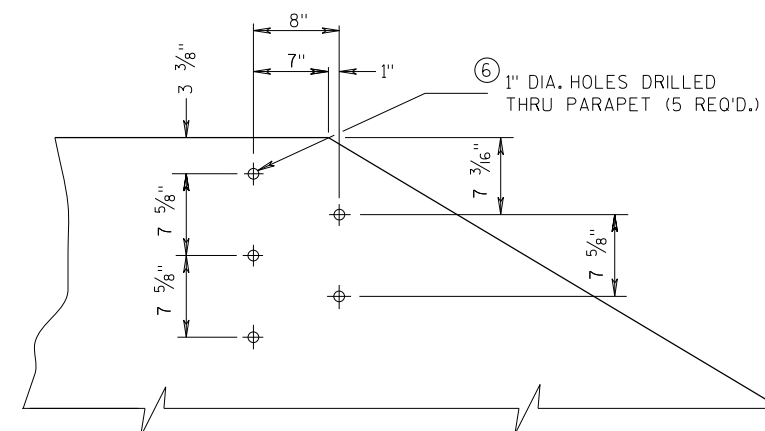
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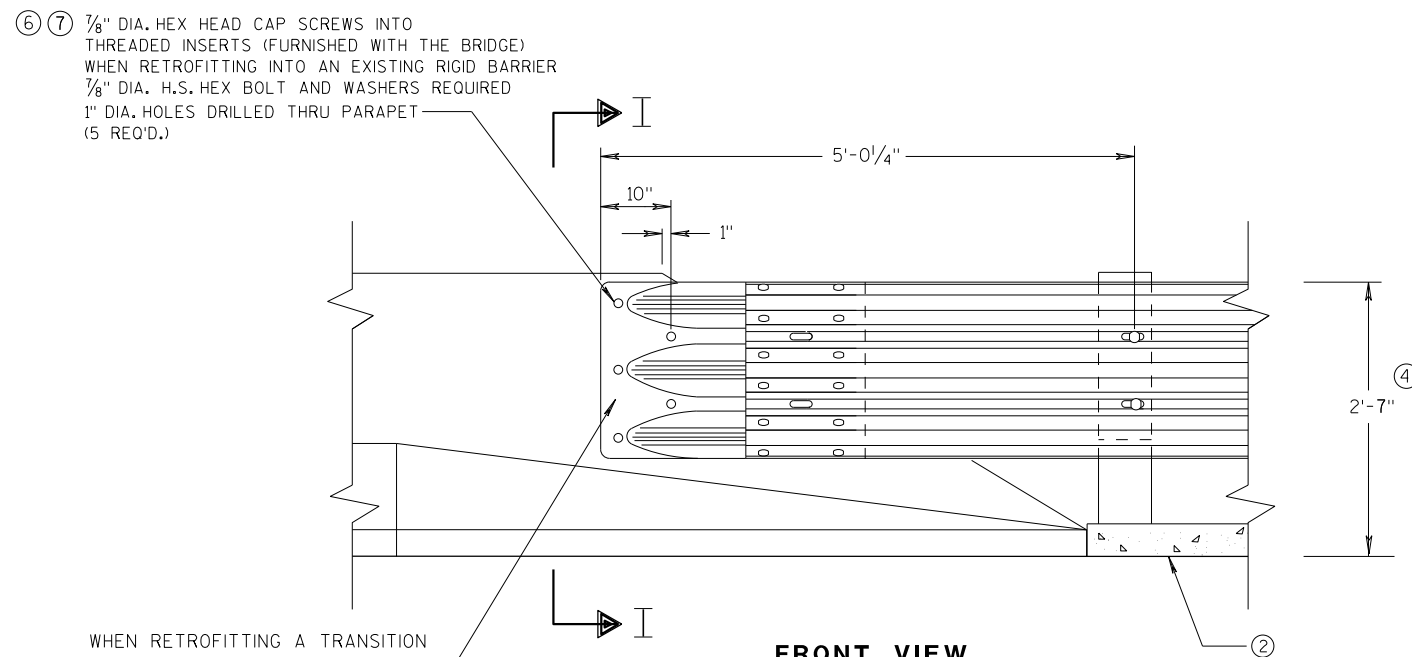
WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)



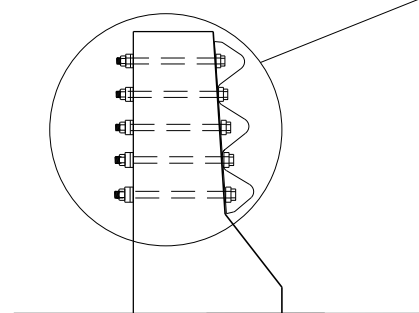
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



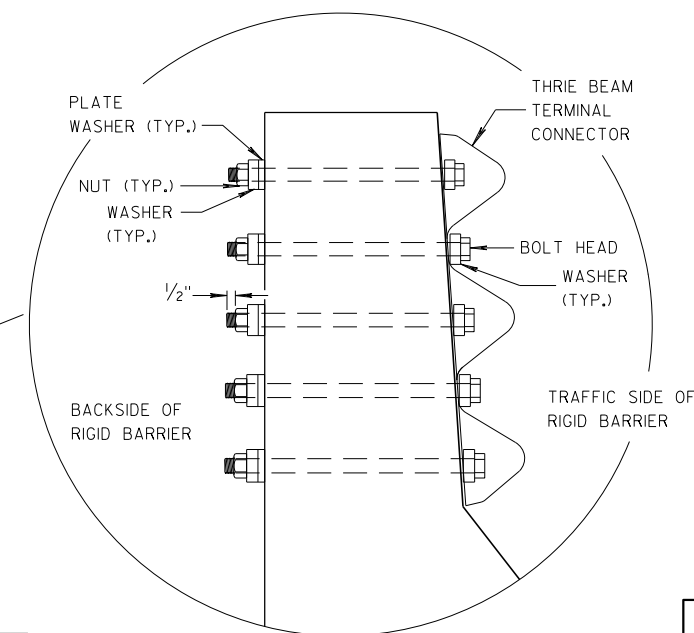
WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS



SECTION I-I



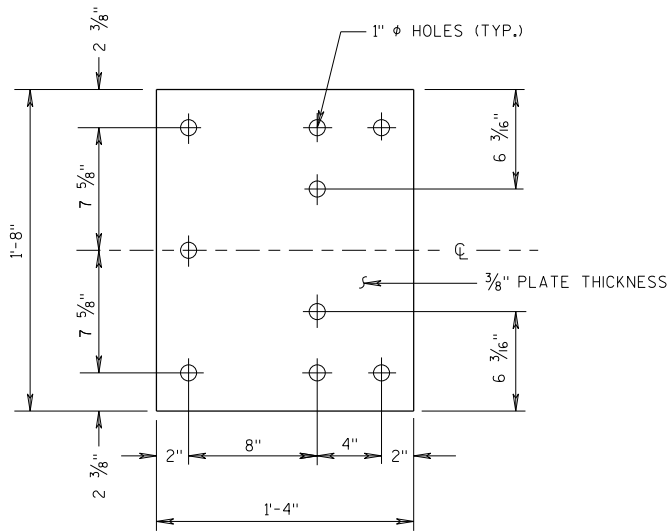
GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

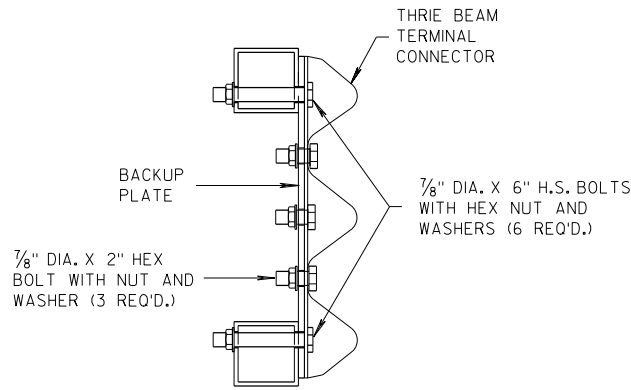
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

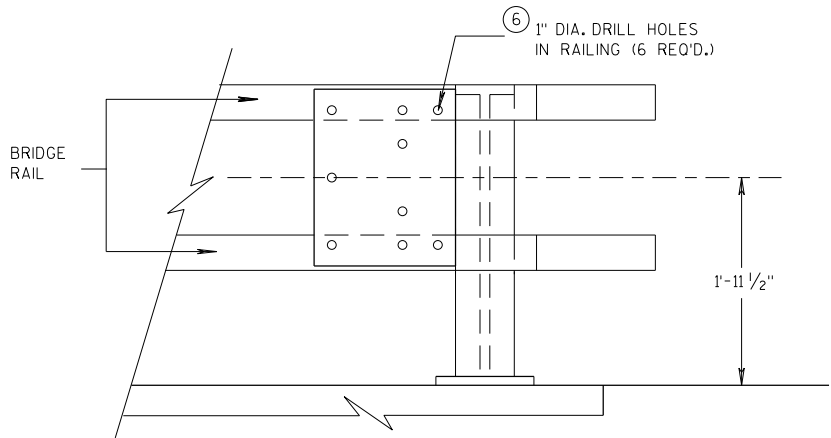
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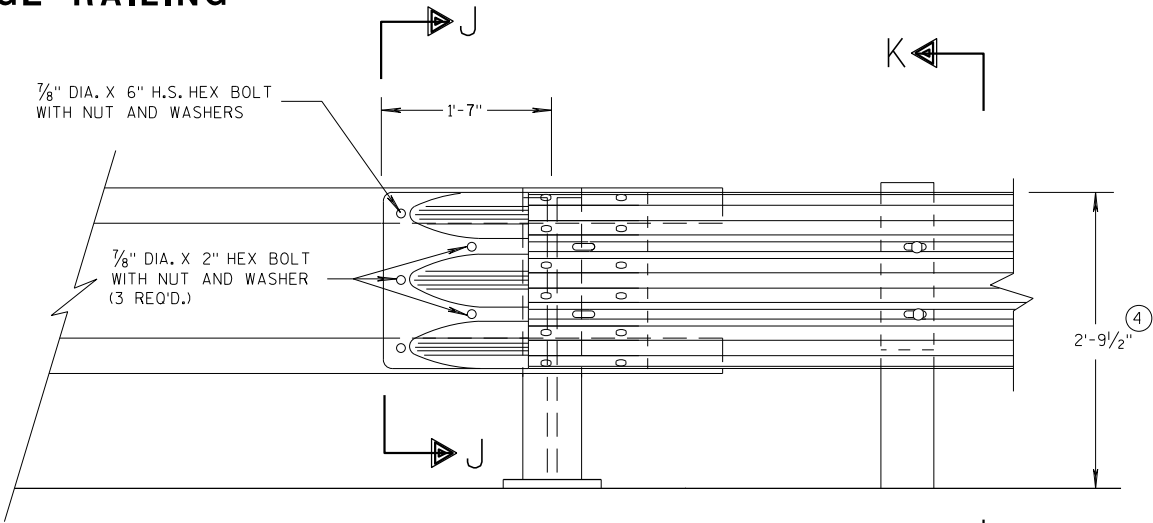
BACK-UP PLATE DETAIL



SECTION J-J

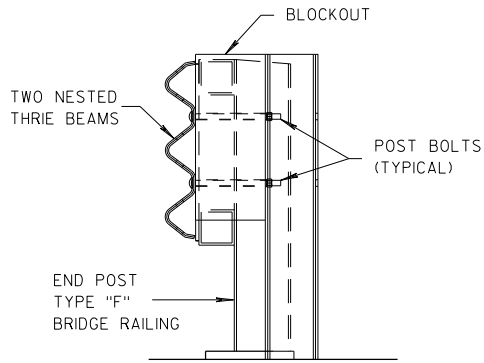


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

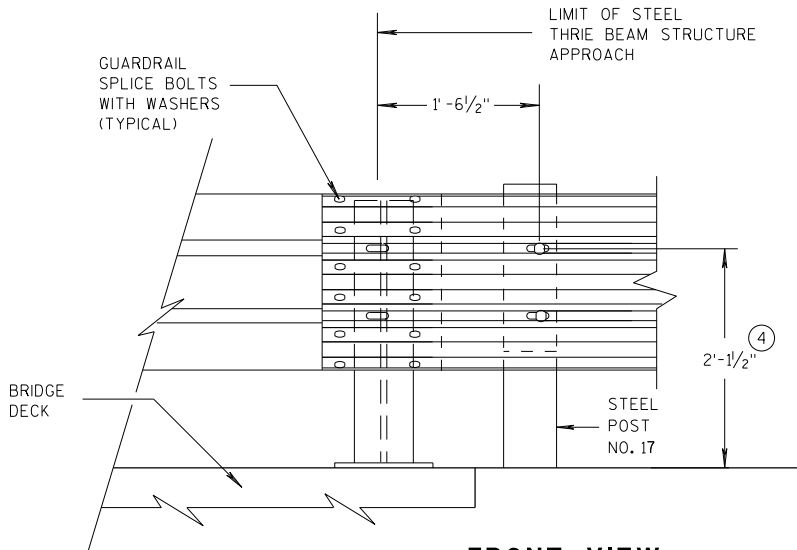
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



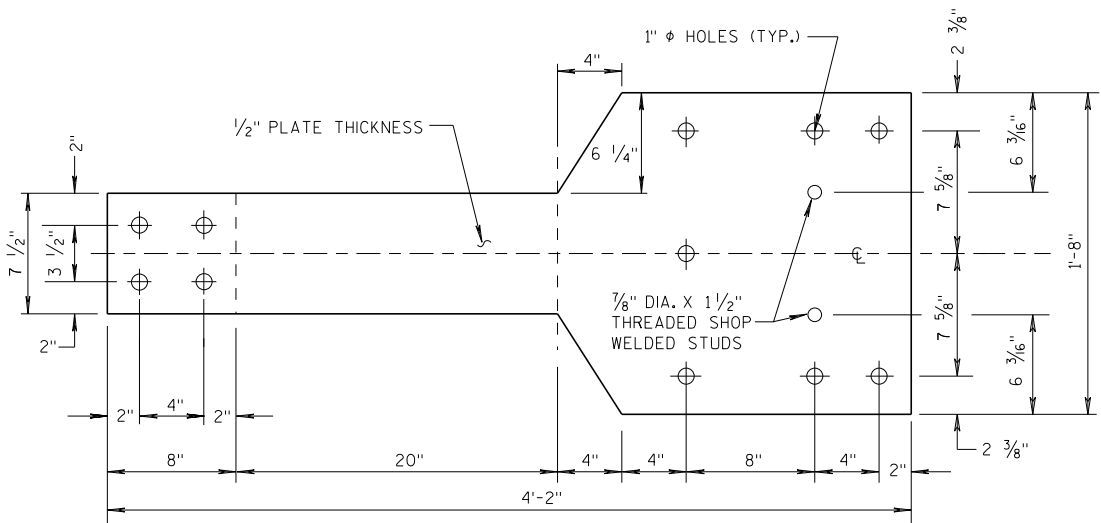
FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

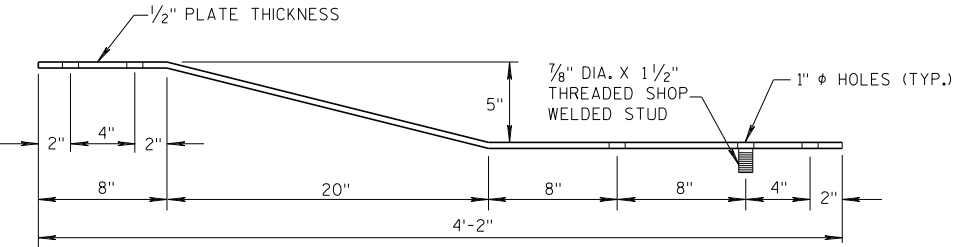
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

GENERAL NOTES

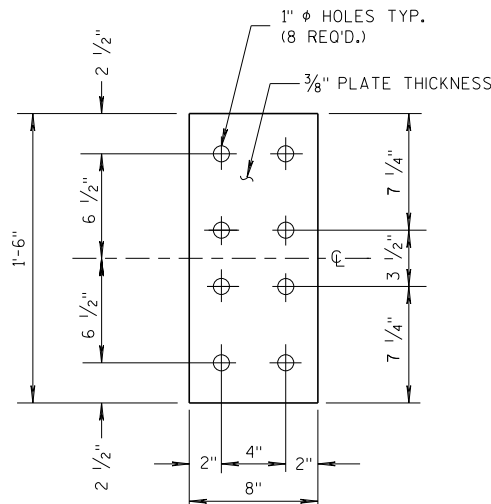
④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

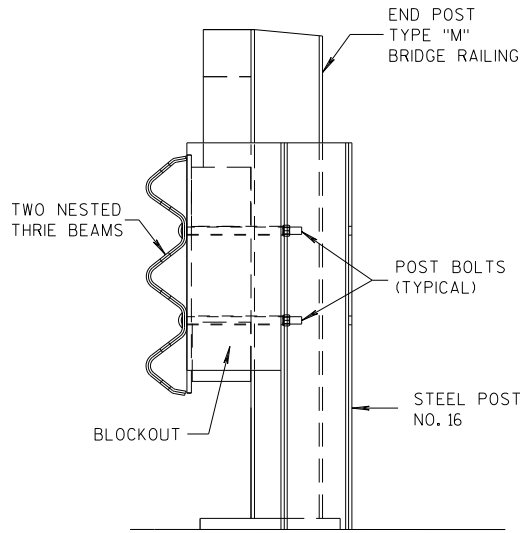


PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"

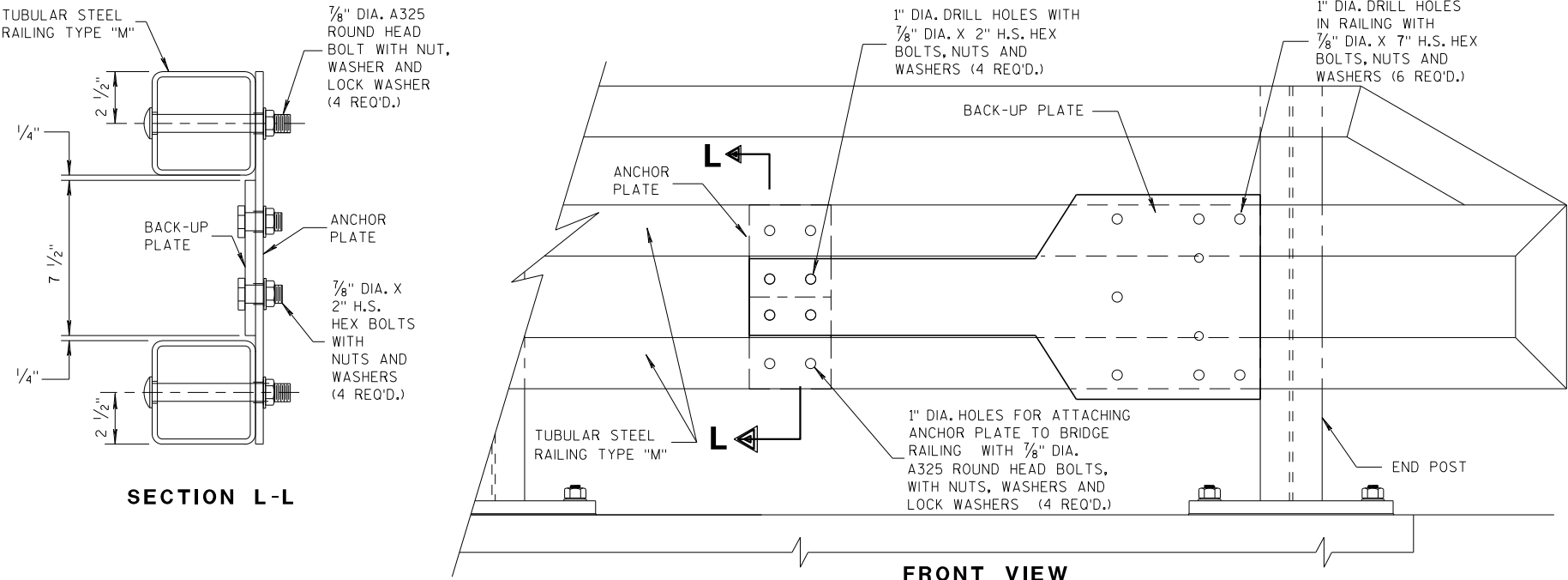


FRONT VIEW

ANCHOR
PLATE DETAIL,
TYPE "M"



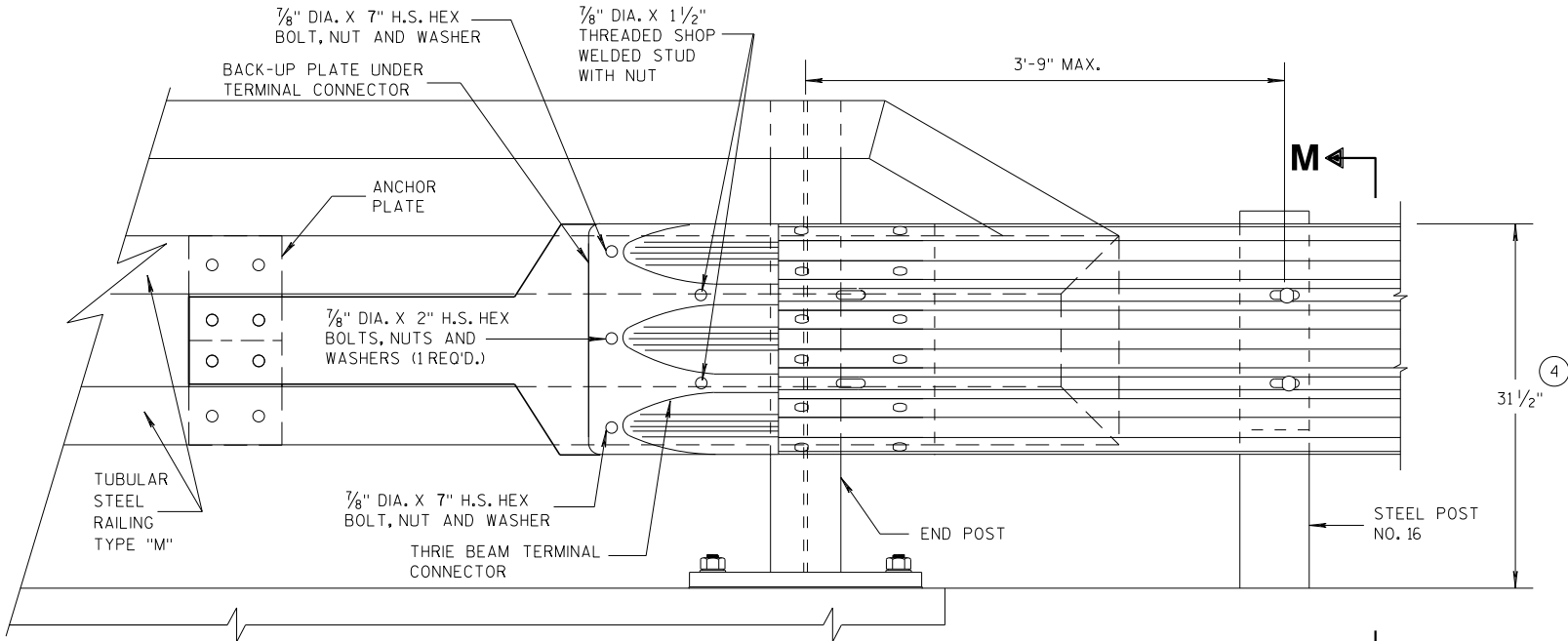
SECTION M-M



SECTION L-L

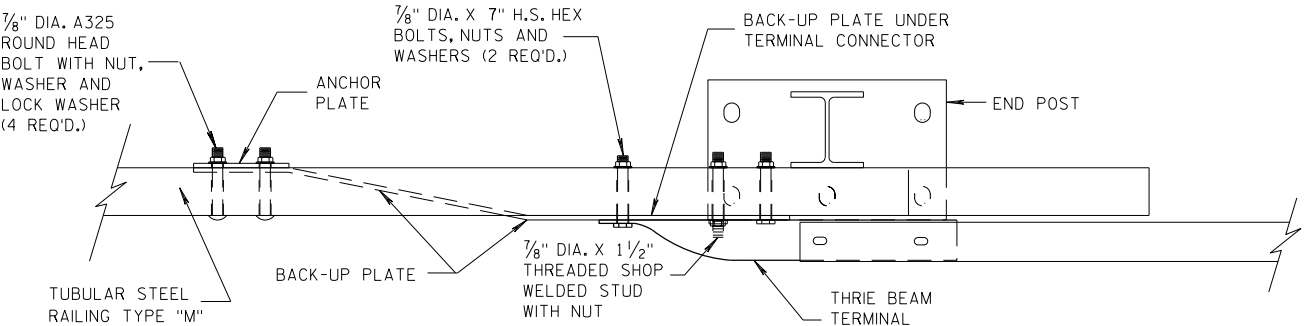
FRONT VIEW

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



FRONT VIEW

M



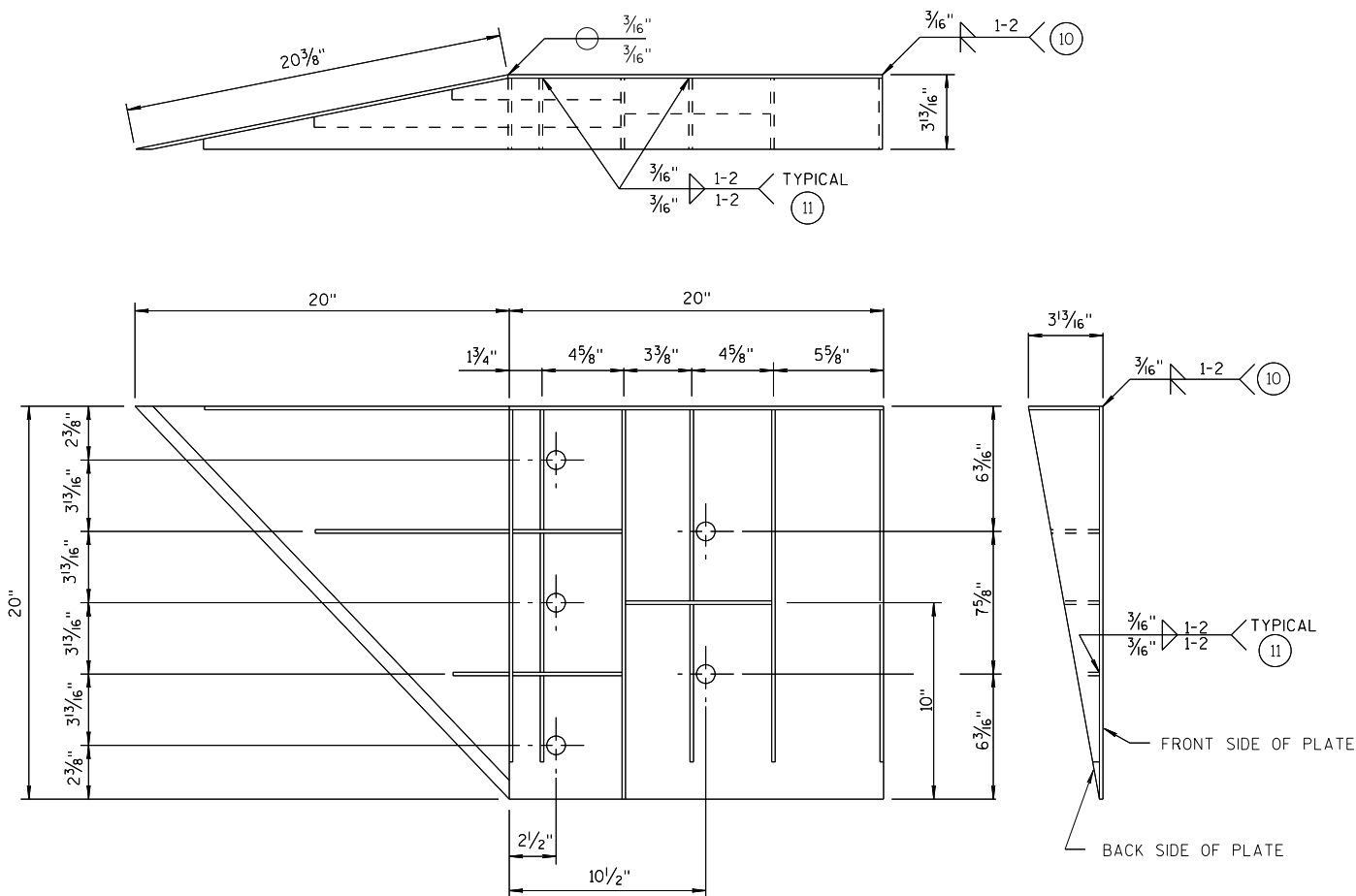
PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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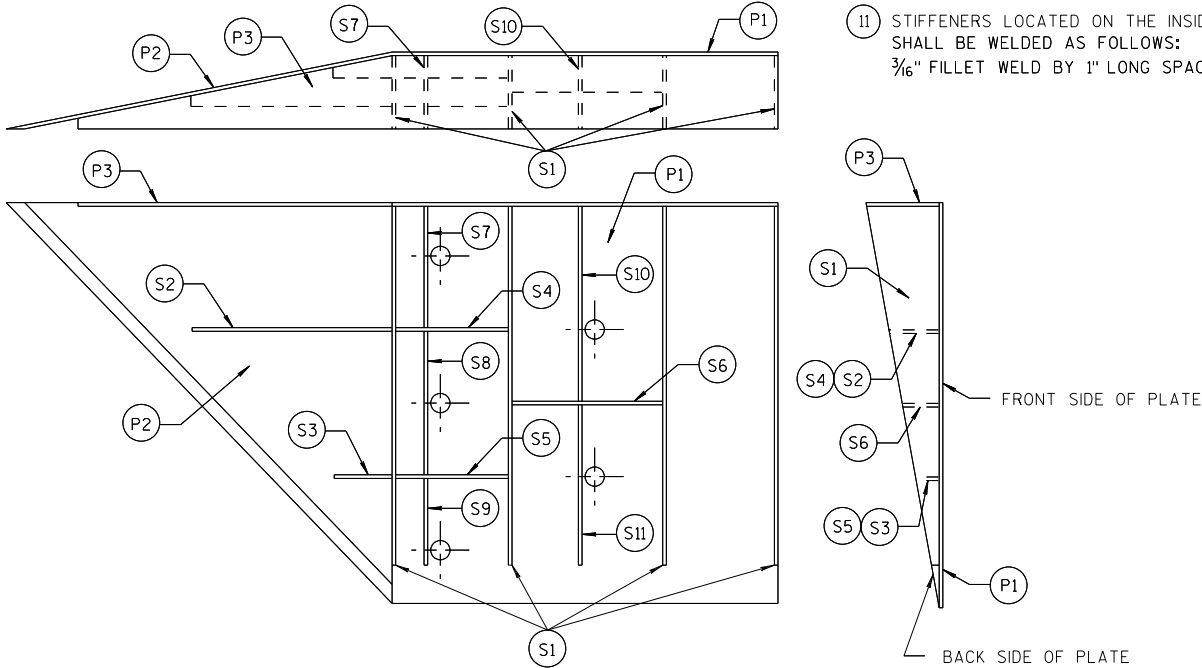


WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

SINGLE SLOPE CONNECTION PLATE

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)



GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

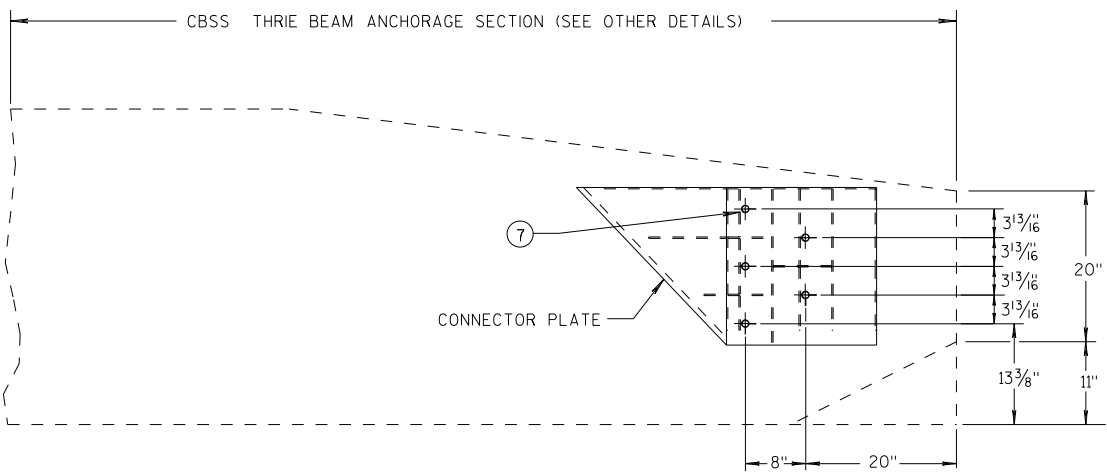
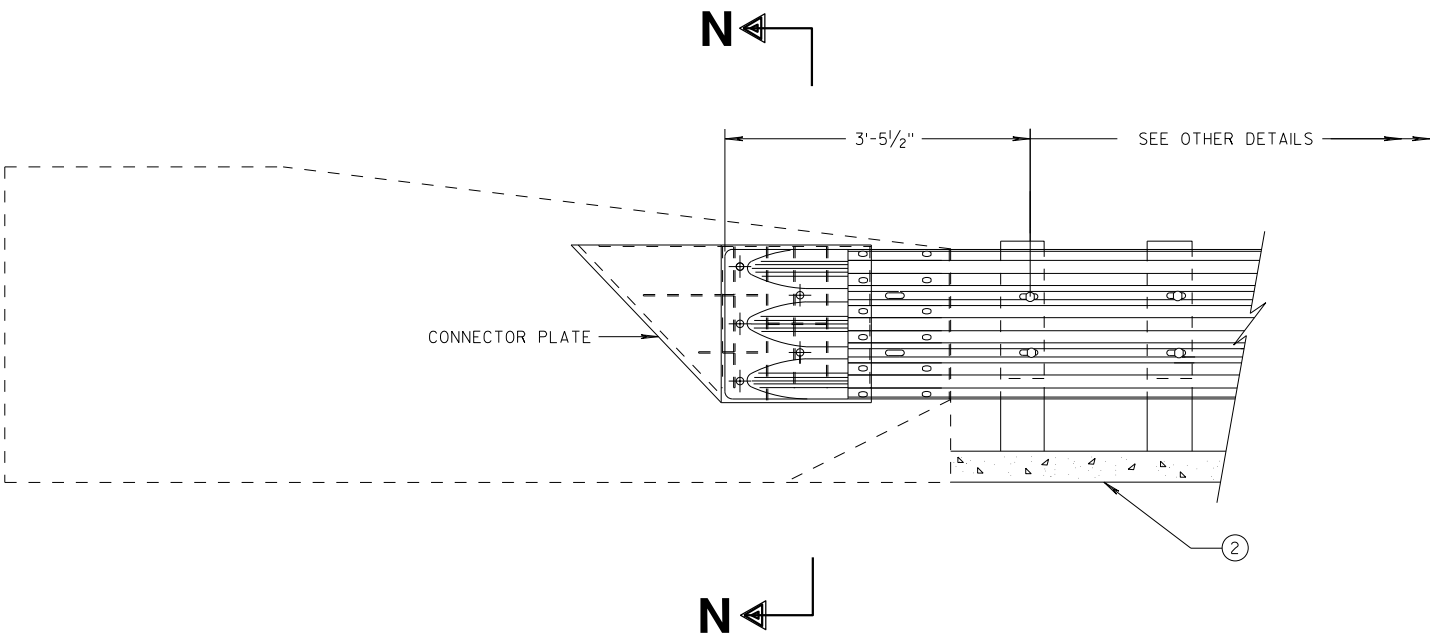
- STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



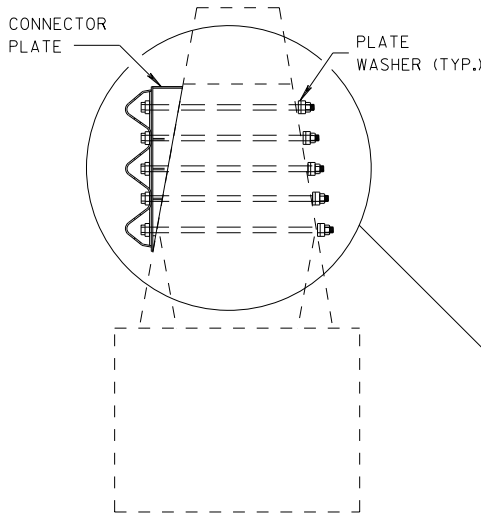
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

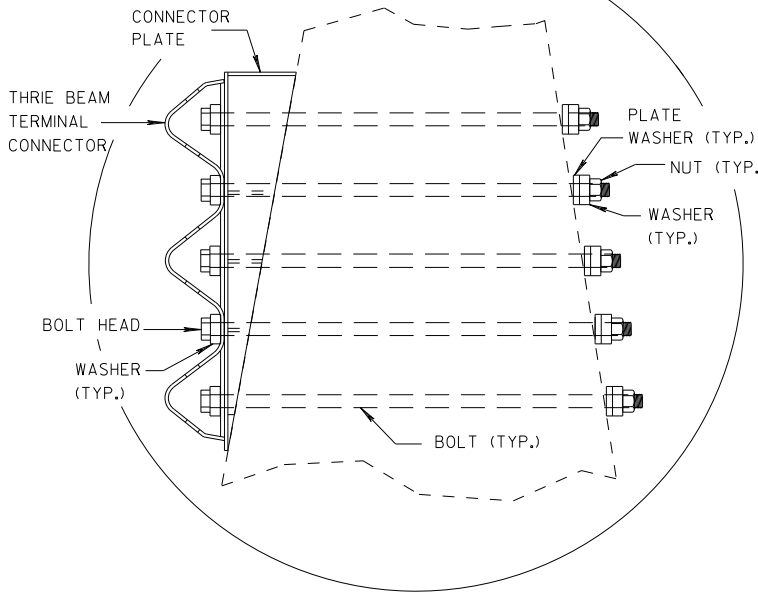
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



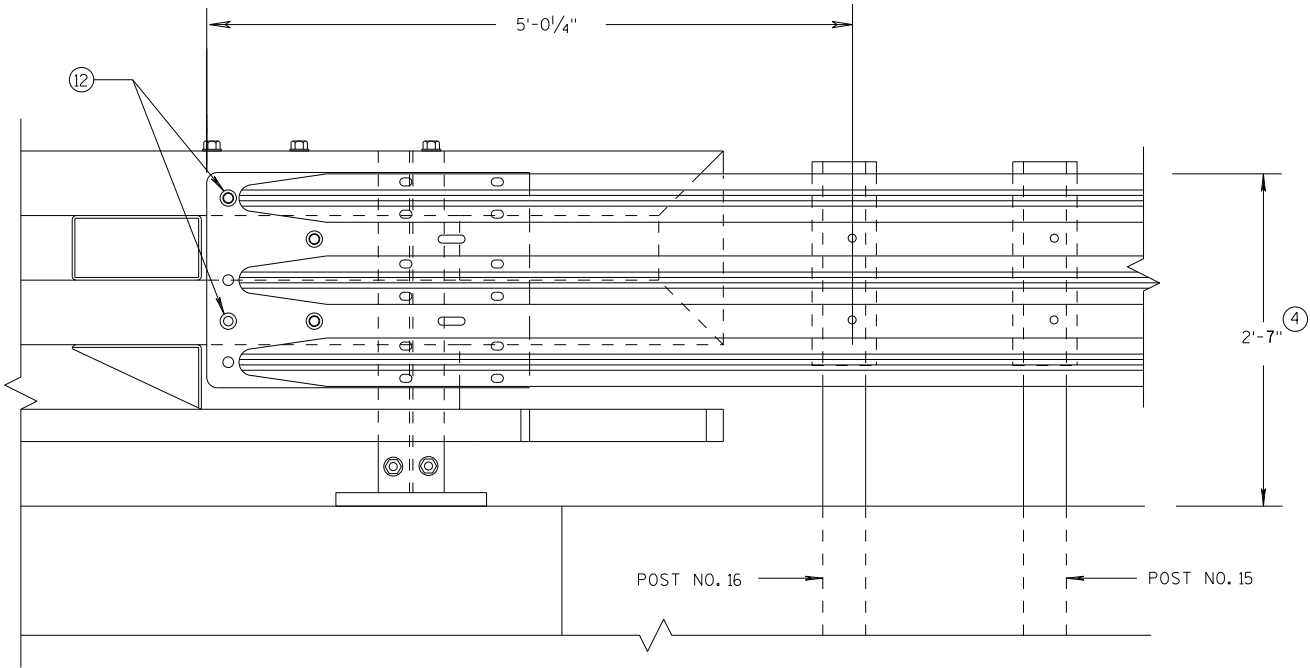
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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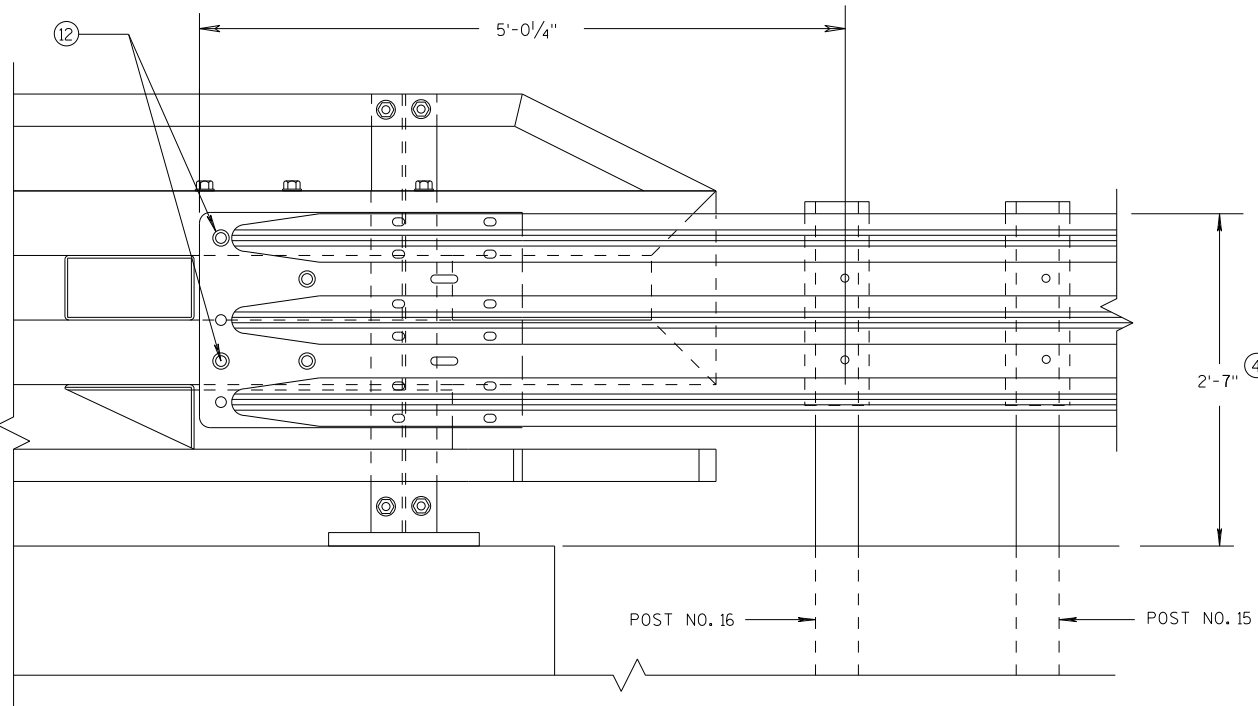
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GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT

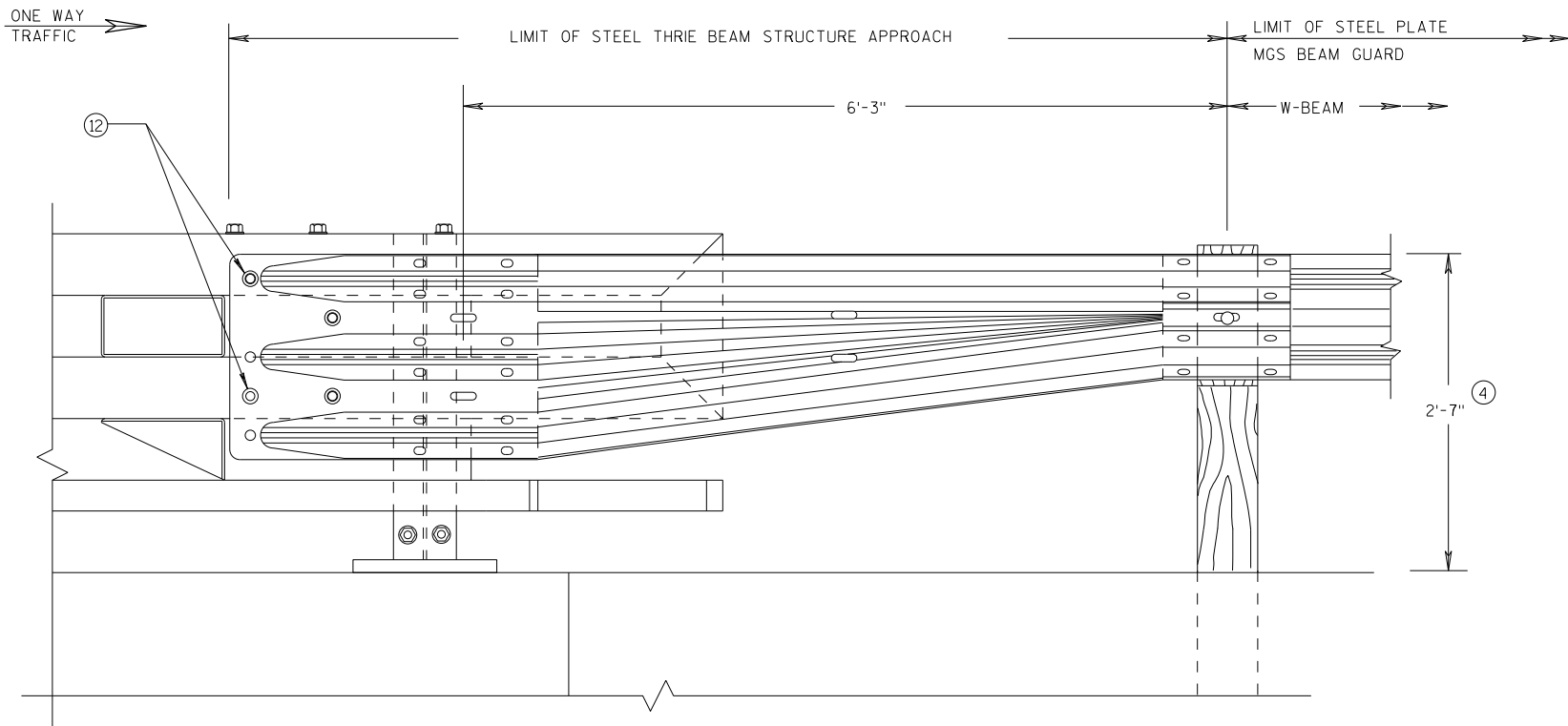


ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

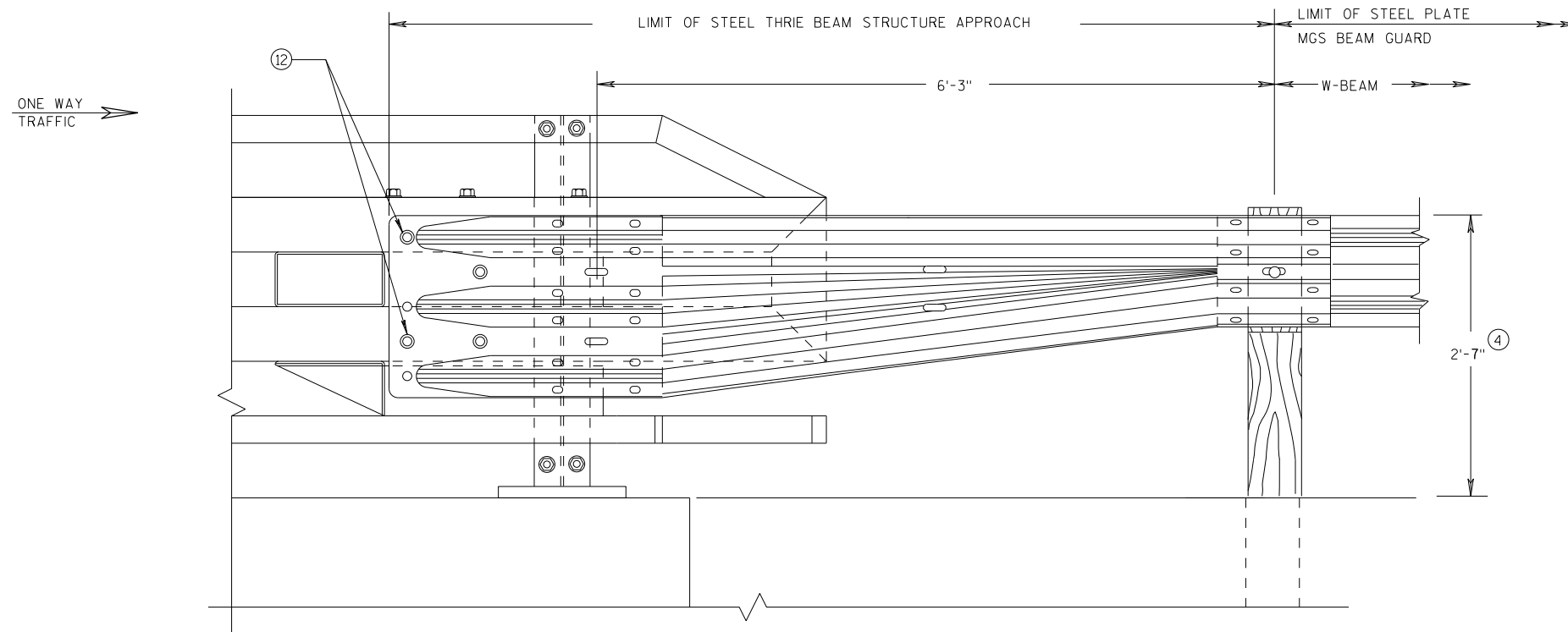
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FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- (12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.

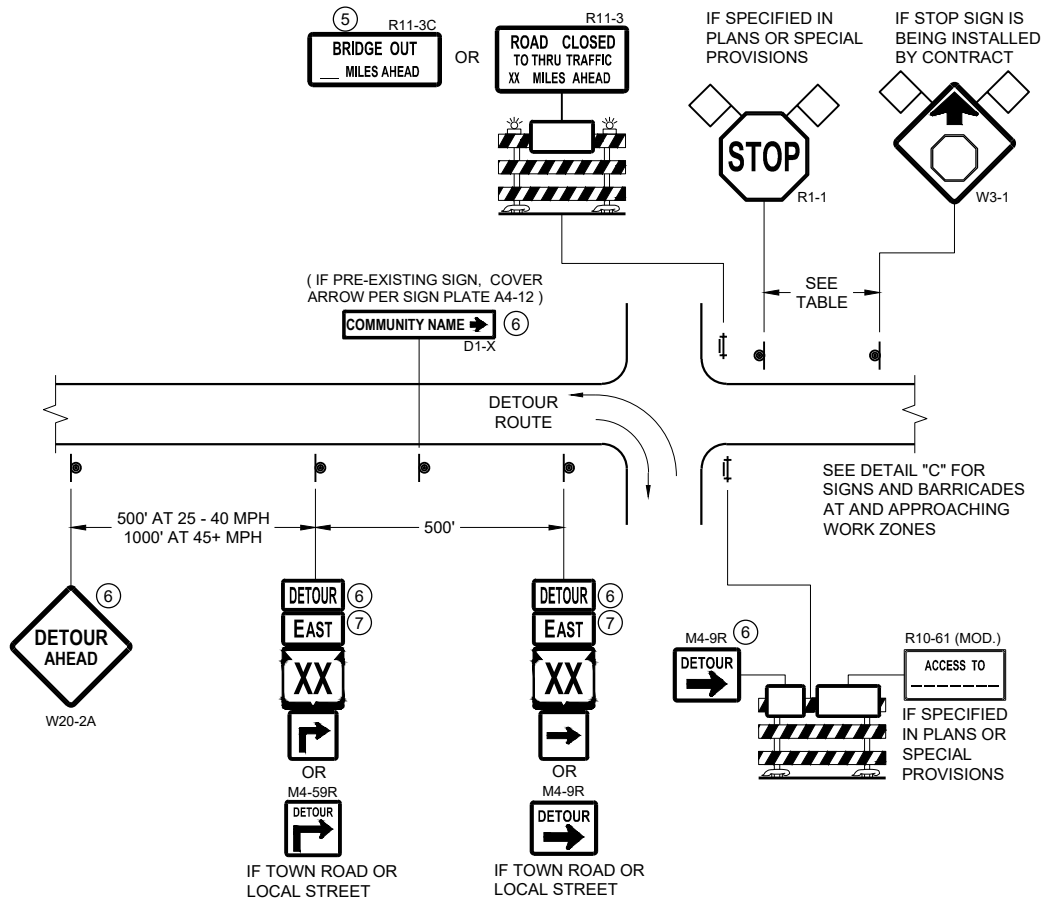


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

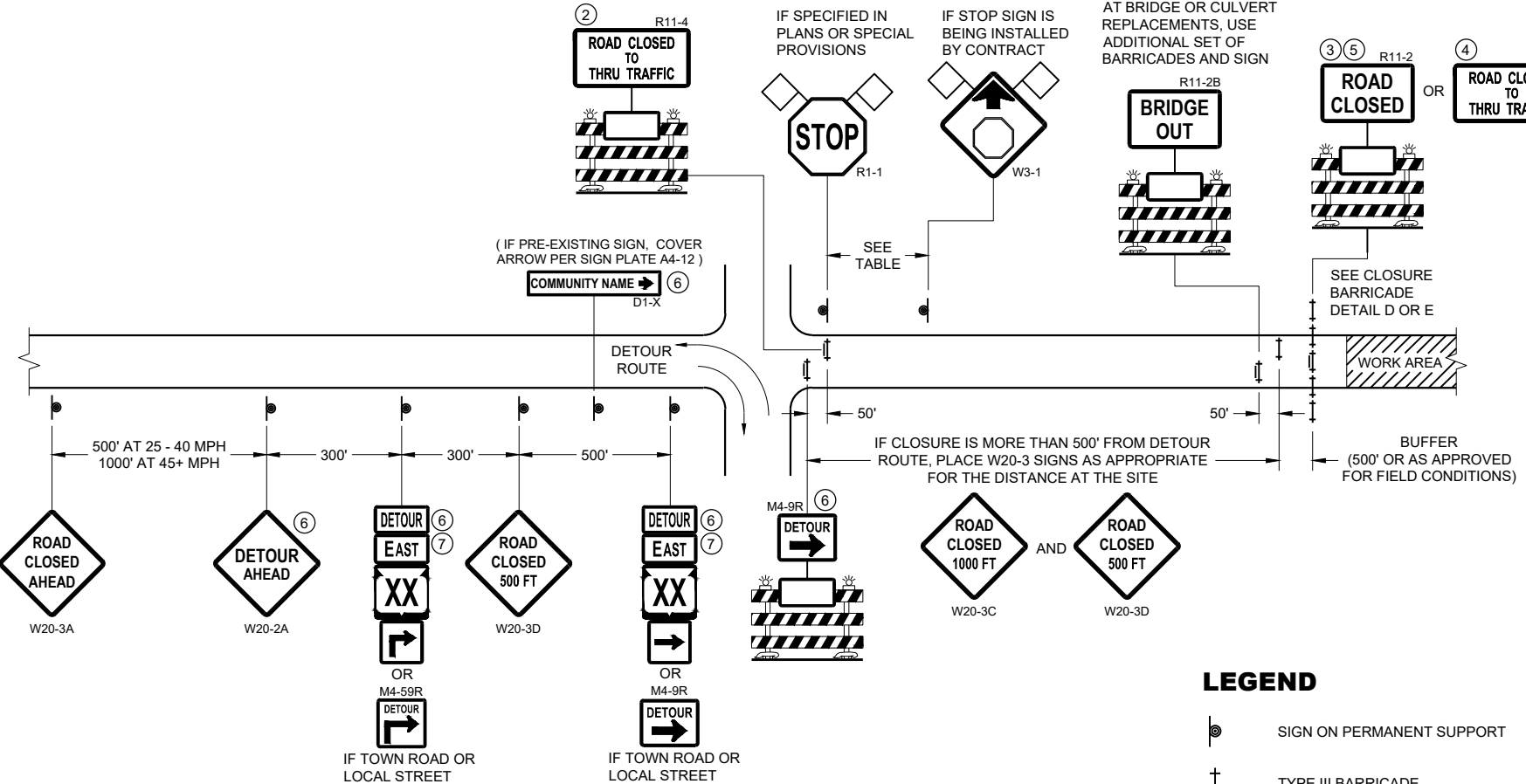
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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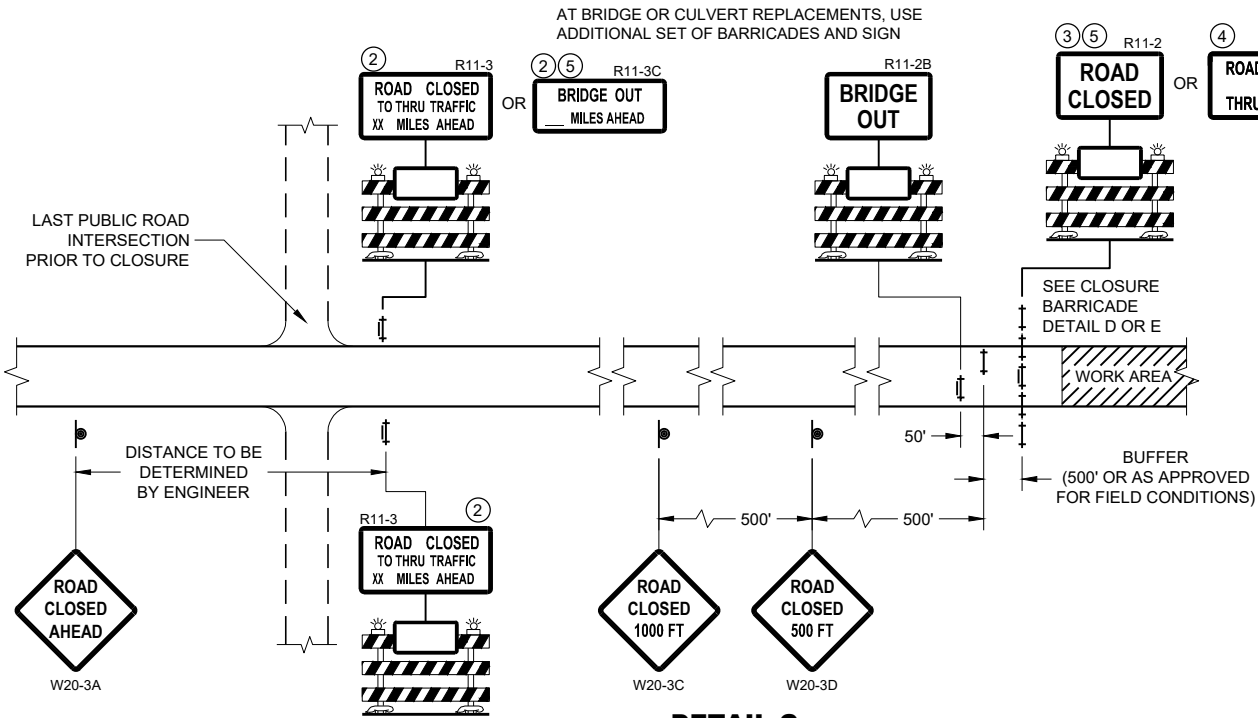
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DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

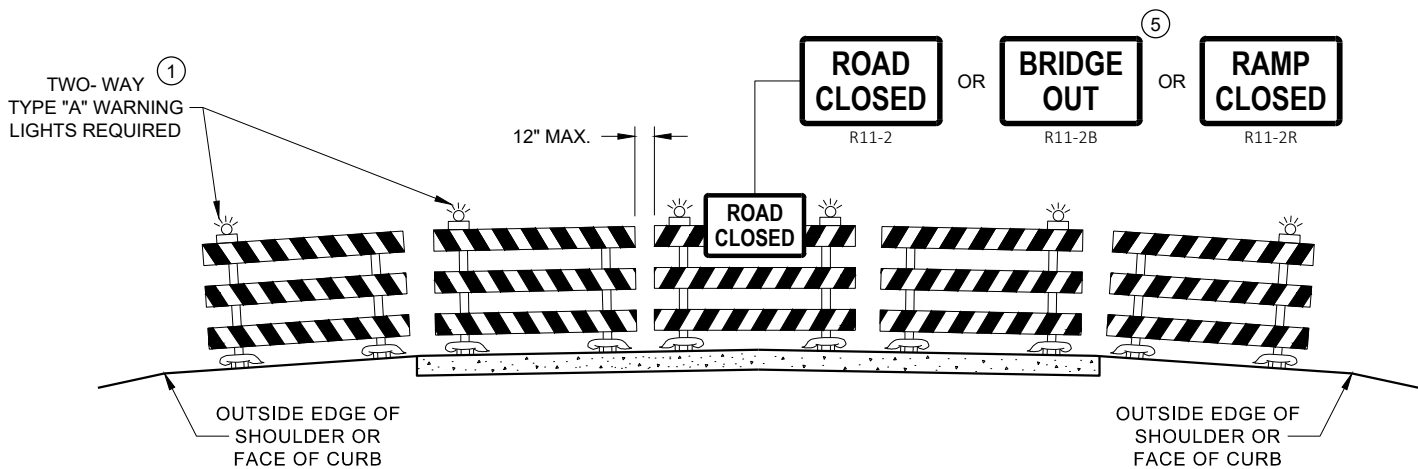
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

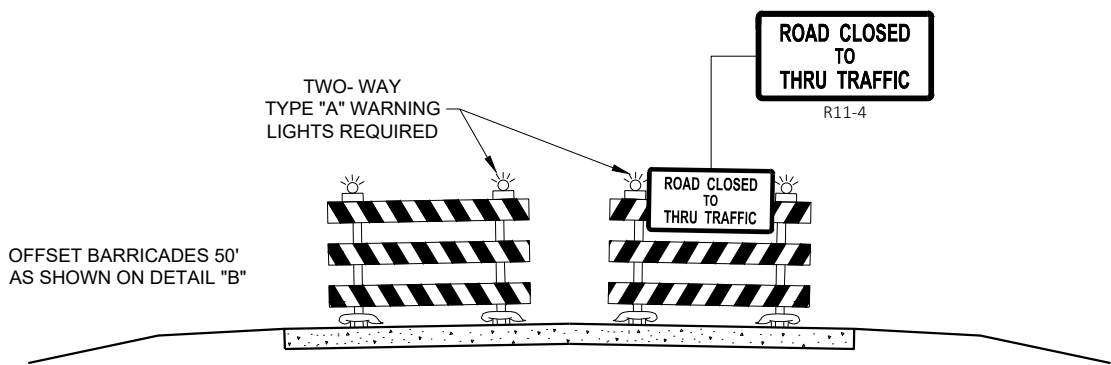
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

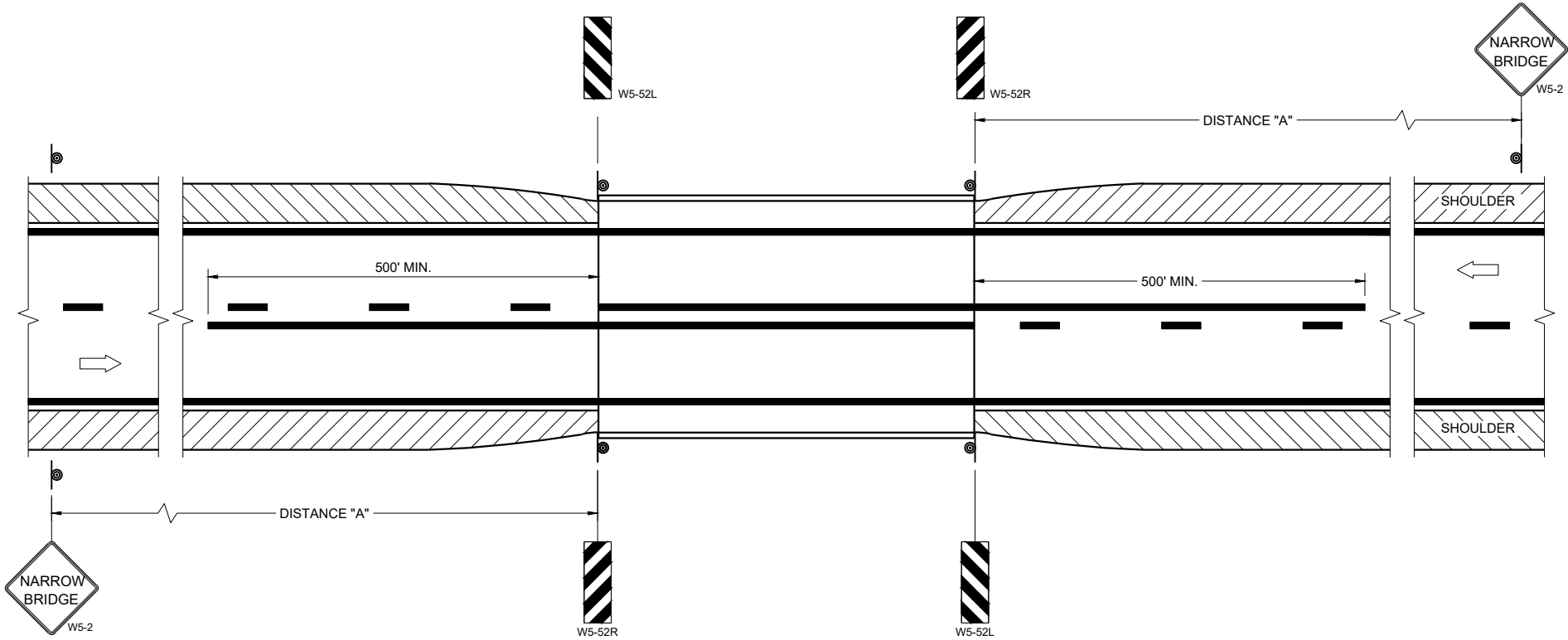
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

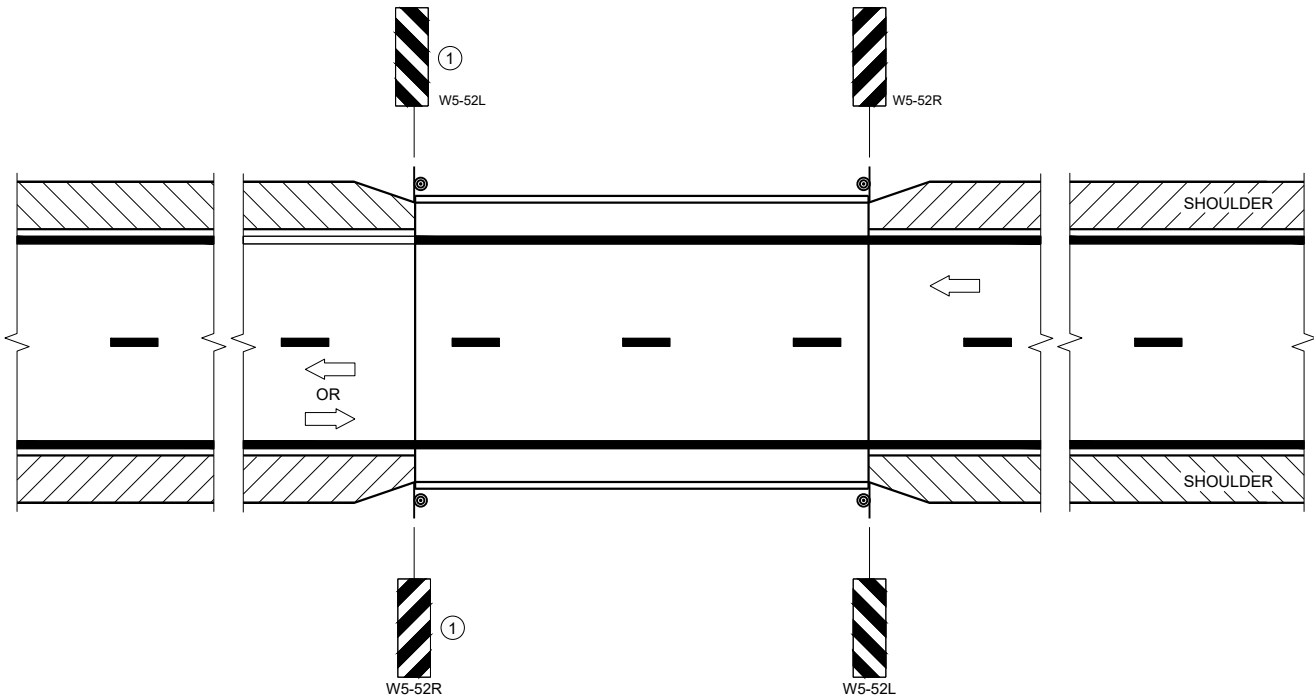
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SITUATION 1
WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

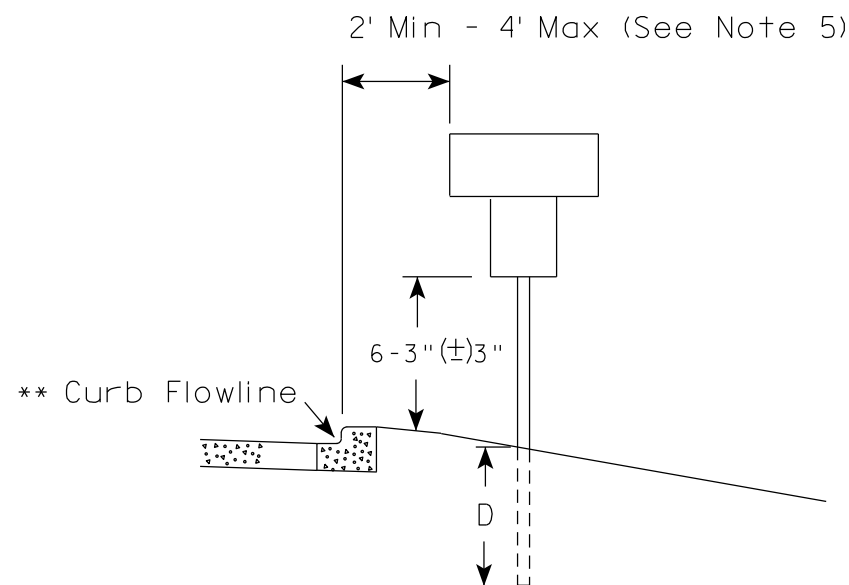
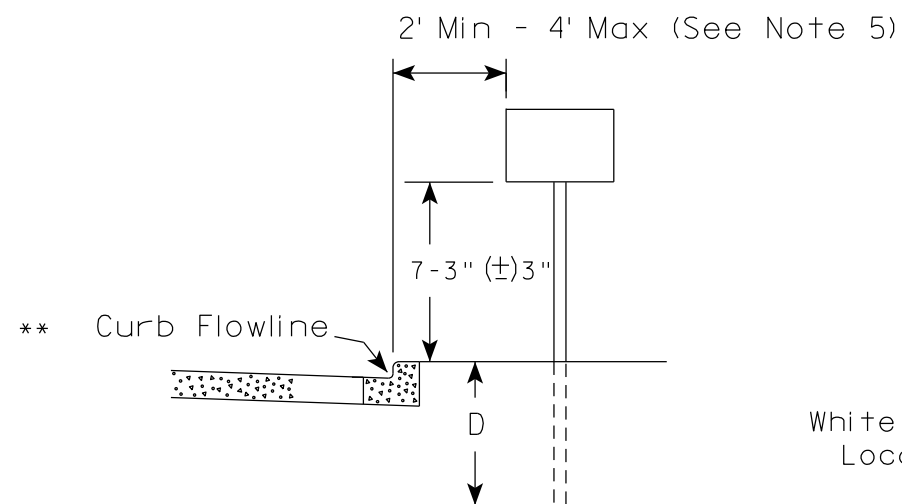
POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

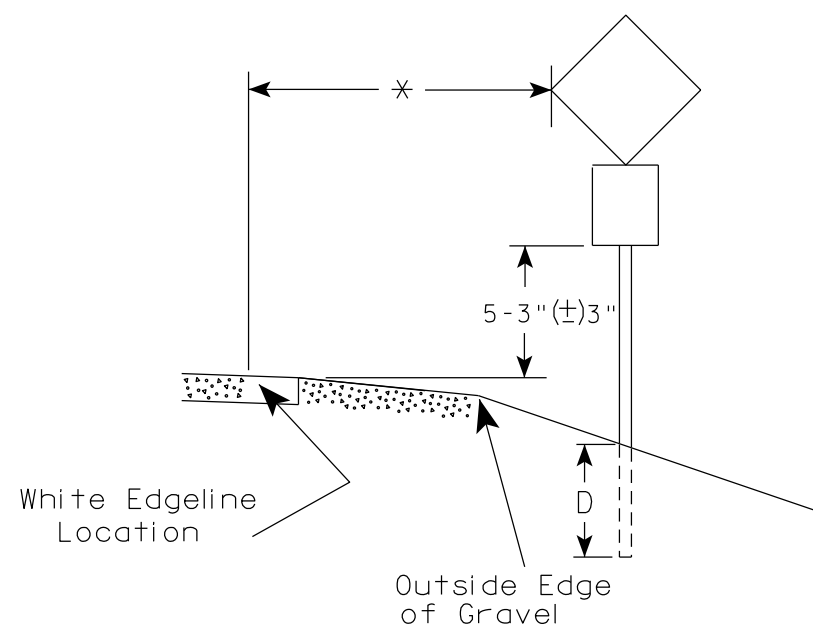
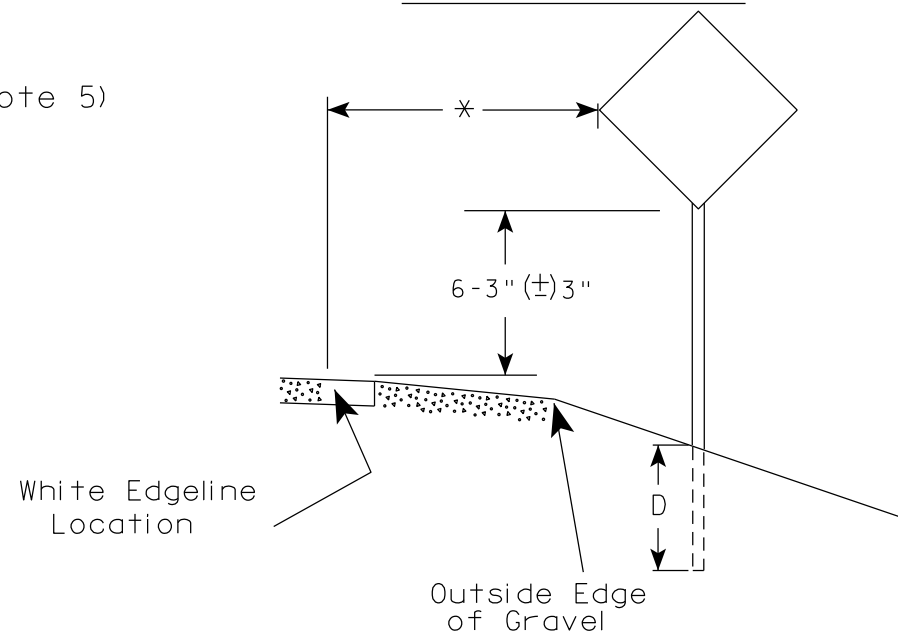
APPROVED
May 2023 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer
FHWA

URBAN AREA



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

RURAL AREA (See Note 2)



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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

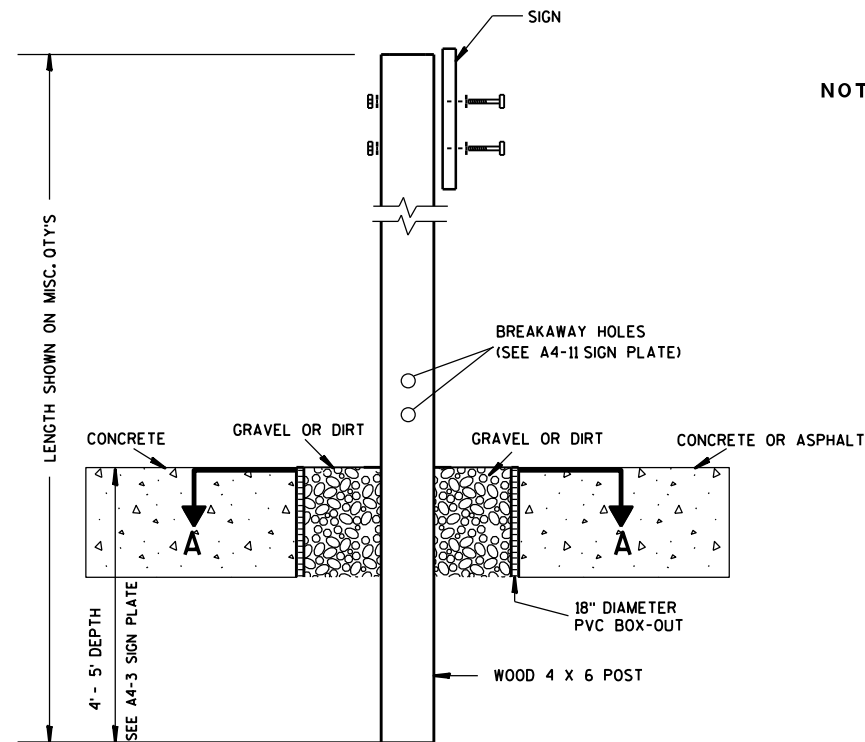
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

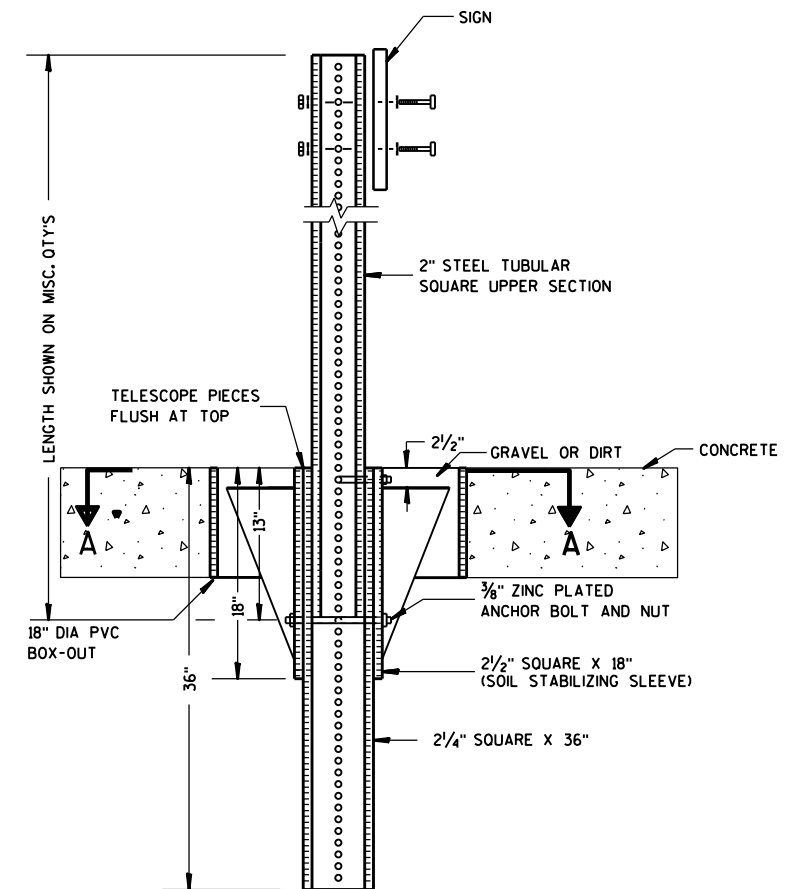
E



ELEVATION VIEW

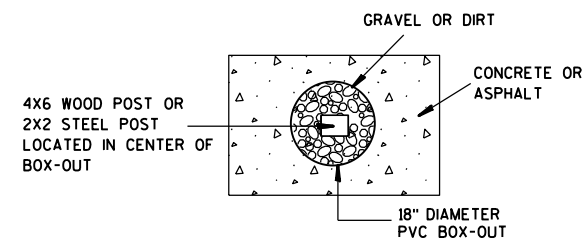
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

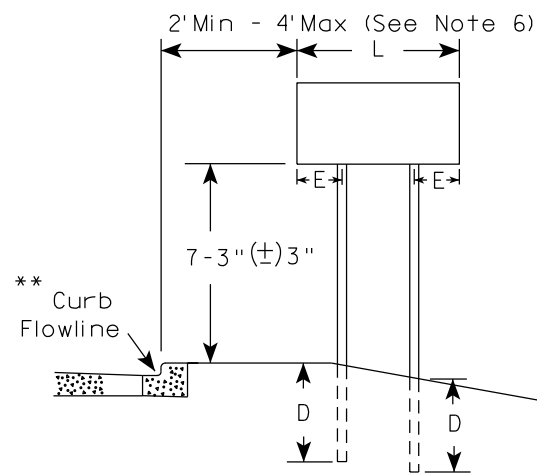
HWY:

COUNTY:

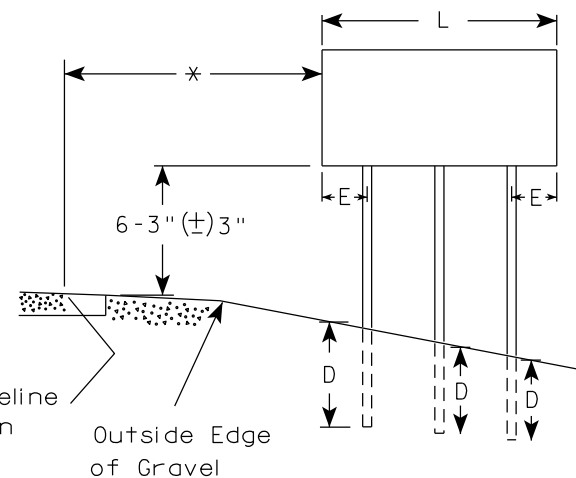
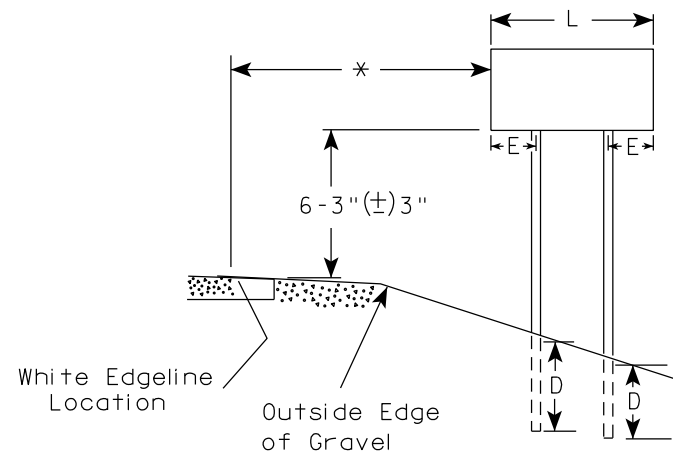
SHEET NO:

E

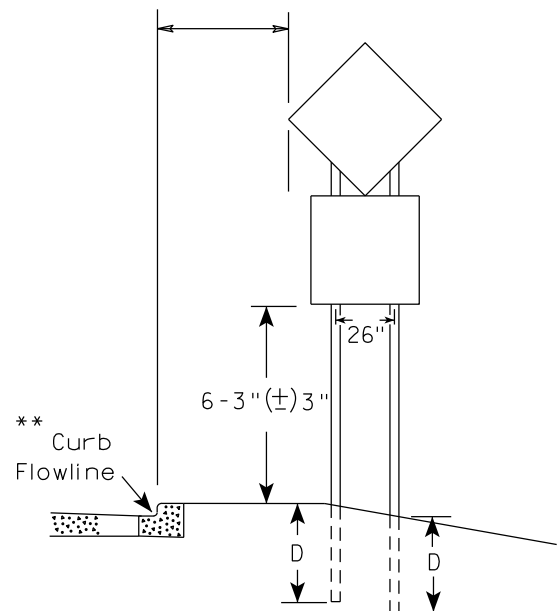
URBAN AREA



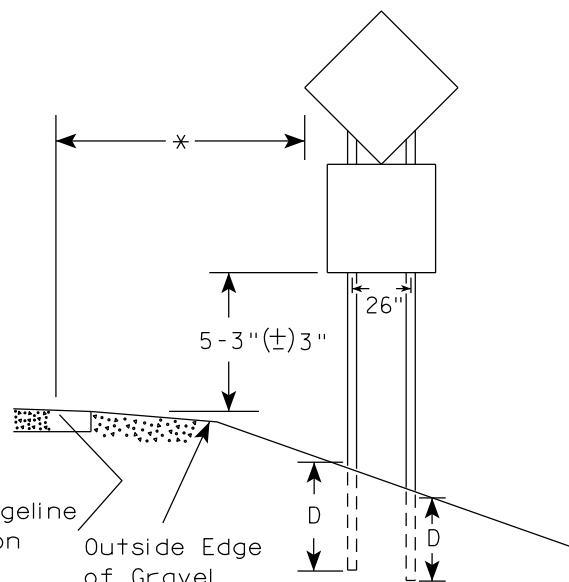
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

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

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

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

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

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

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

POST EMBEDMENT DEPTH

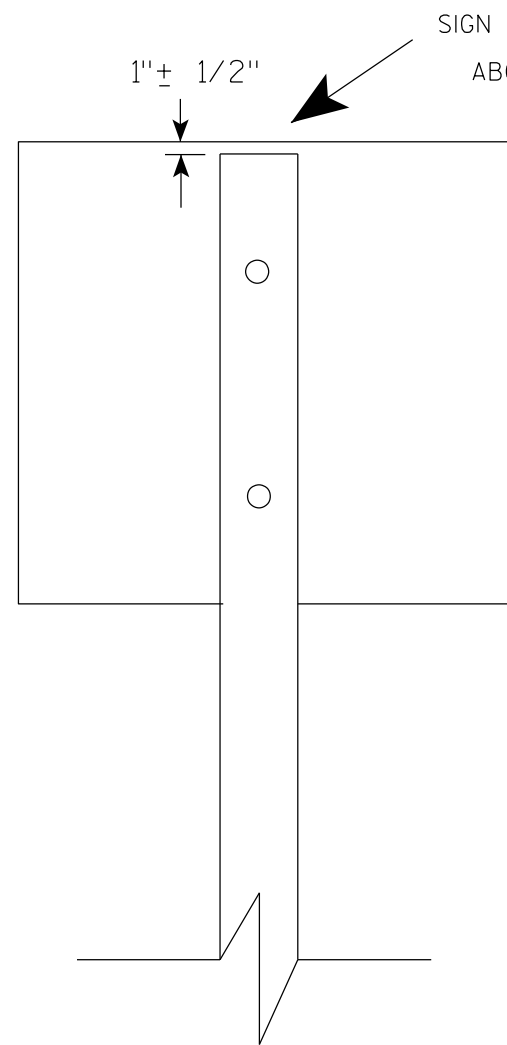
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

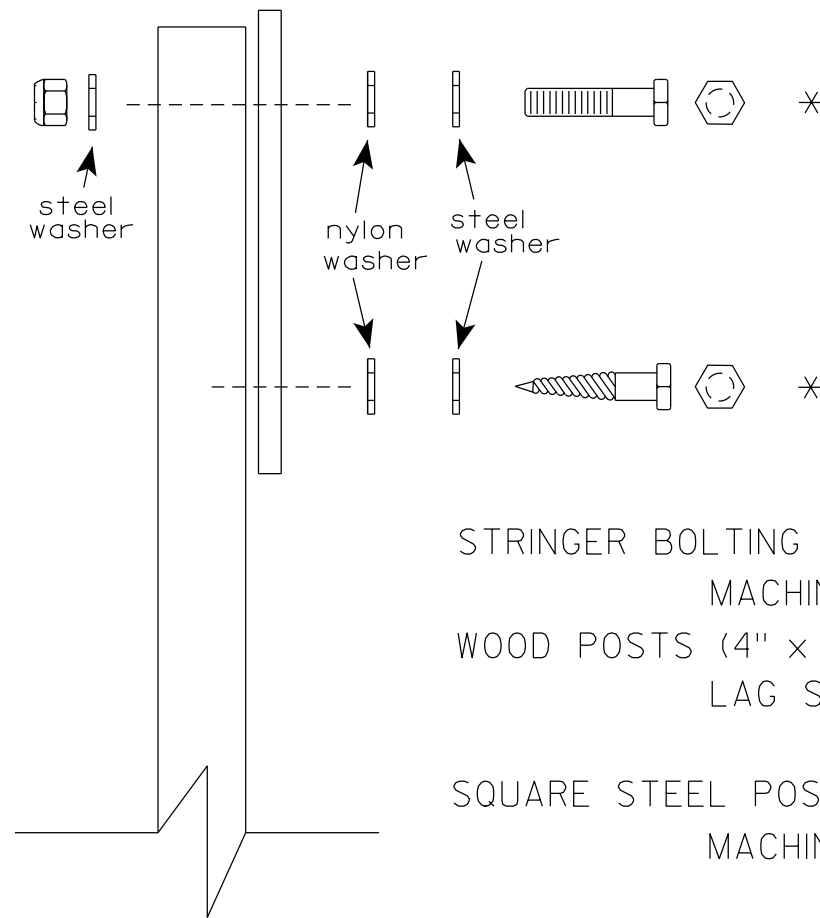
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



SIGN SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST



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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

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

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

Technical drawing of a rectangular plate with the following specifications:

- Overall height: 36"
- Overall width: 2 1/4"
- Top edge offset: 1"
- Top edge offset: 1/8"
- Hole pattern: ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
- Additional text on the right: 4" ST AS TO OF

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

6 inch
C
DES

2 1/2" TELES PAR TUBE

4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELES PAR TUBE

4"

2 1/2"

10"

3 1/2"

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

18" DIA SCHEDULE 40 PVC BOX-OUT

36"

18"

13"

2 1/2"

2 1/4" SQUARE X 36"

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

3/8" ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" GRAVEL OR DIRT

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES

3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT

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

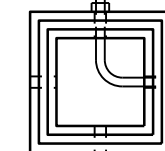
SIGN

Diagram illustrating the construction details of a signpost assembly, showing a cross-section and side view.

Labels and Dimensions:

- TELESCOPE PIECES FLUSH AT TOP
- 2" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 1"
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- SIGN
- 18"
- 12"
- 36"
- LENGTH SHOWN ON MISC. QTY'S

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

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

PROJECT NO:

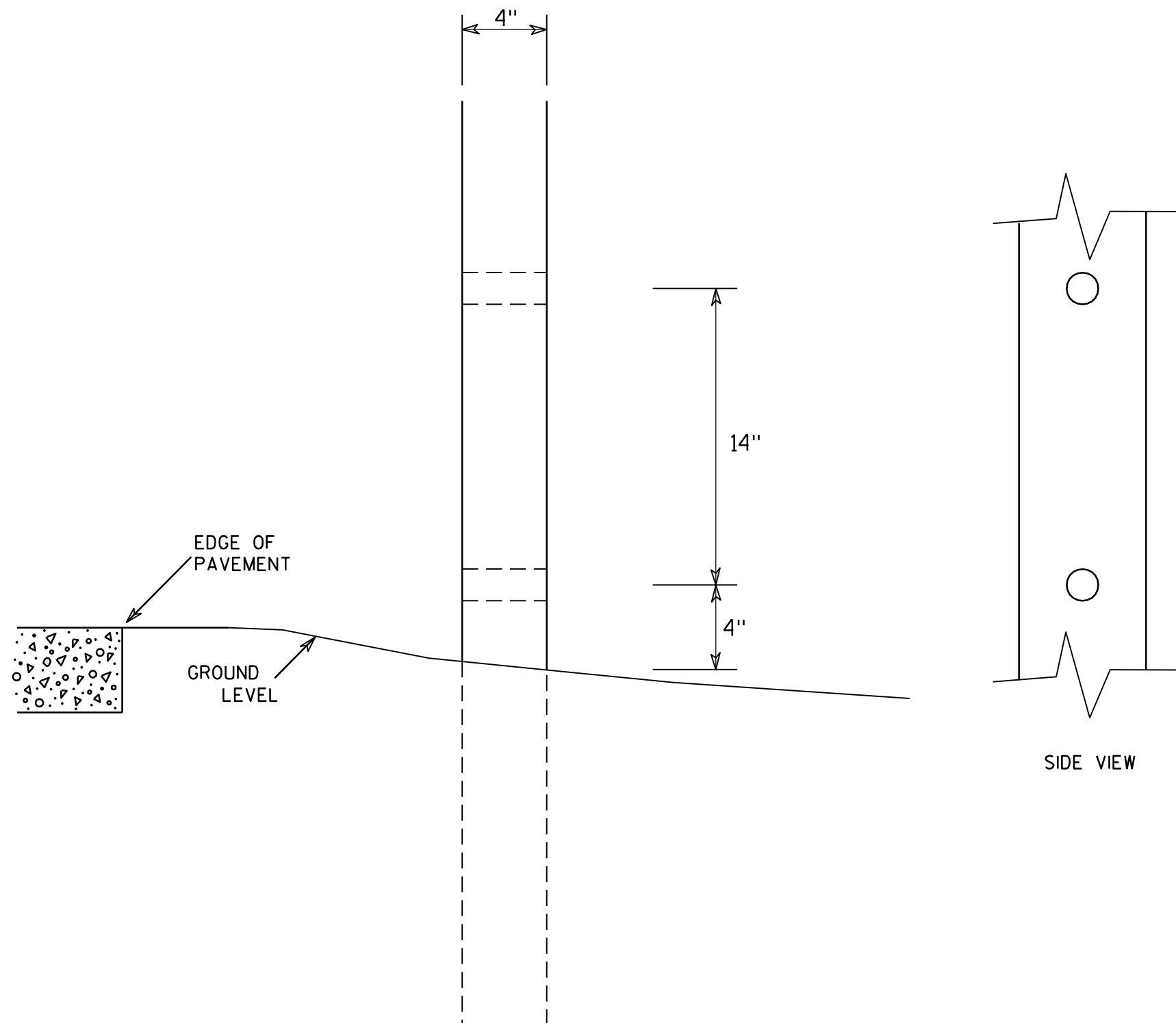
HWY:

COUNTY:

SHEET NO:

T

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

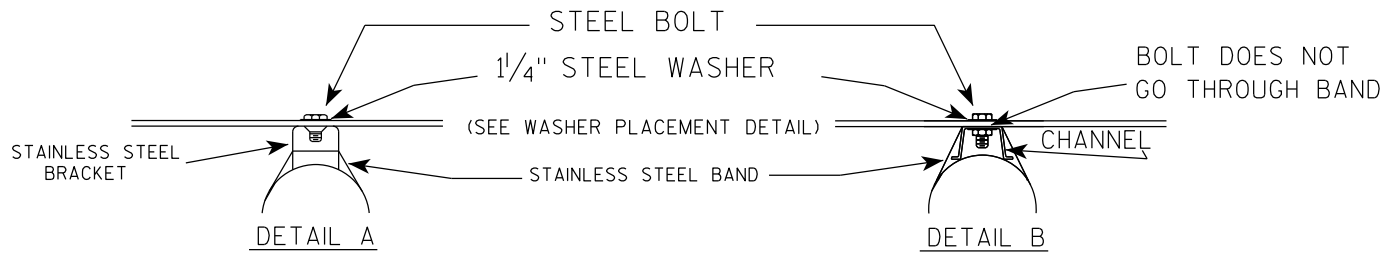
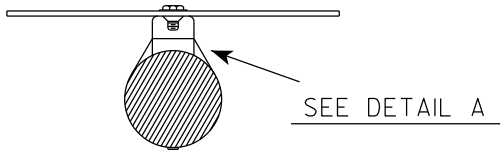
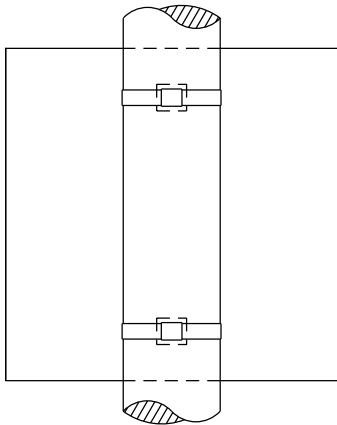
COUNTY:

SHEET NO:

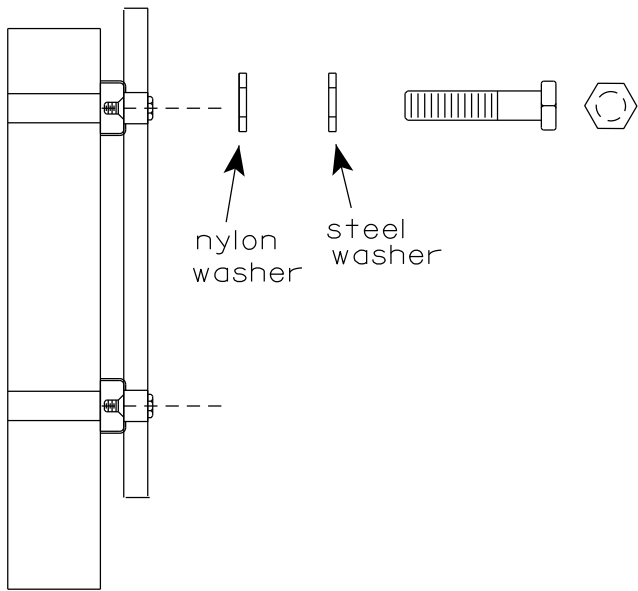
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

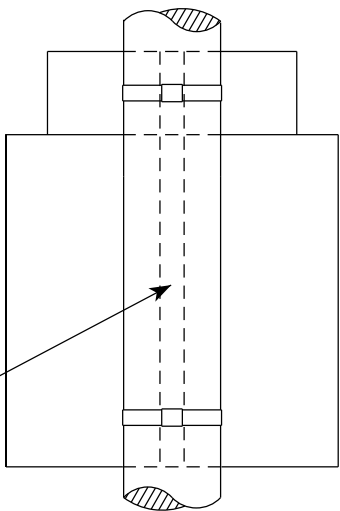


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

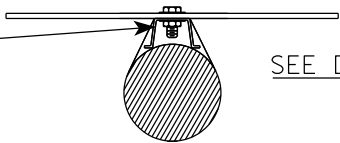
GENERAL NOTES

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

"J" ASSEMBLY



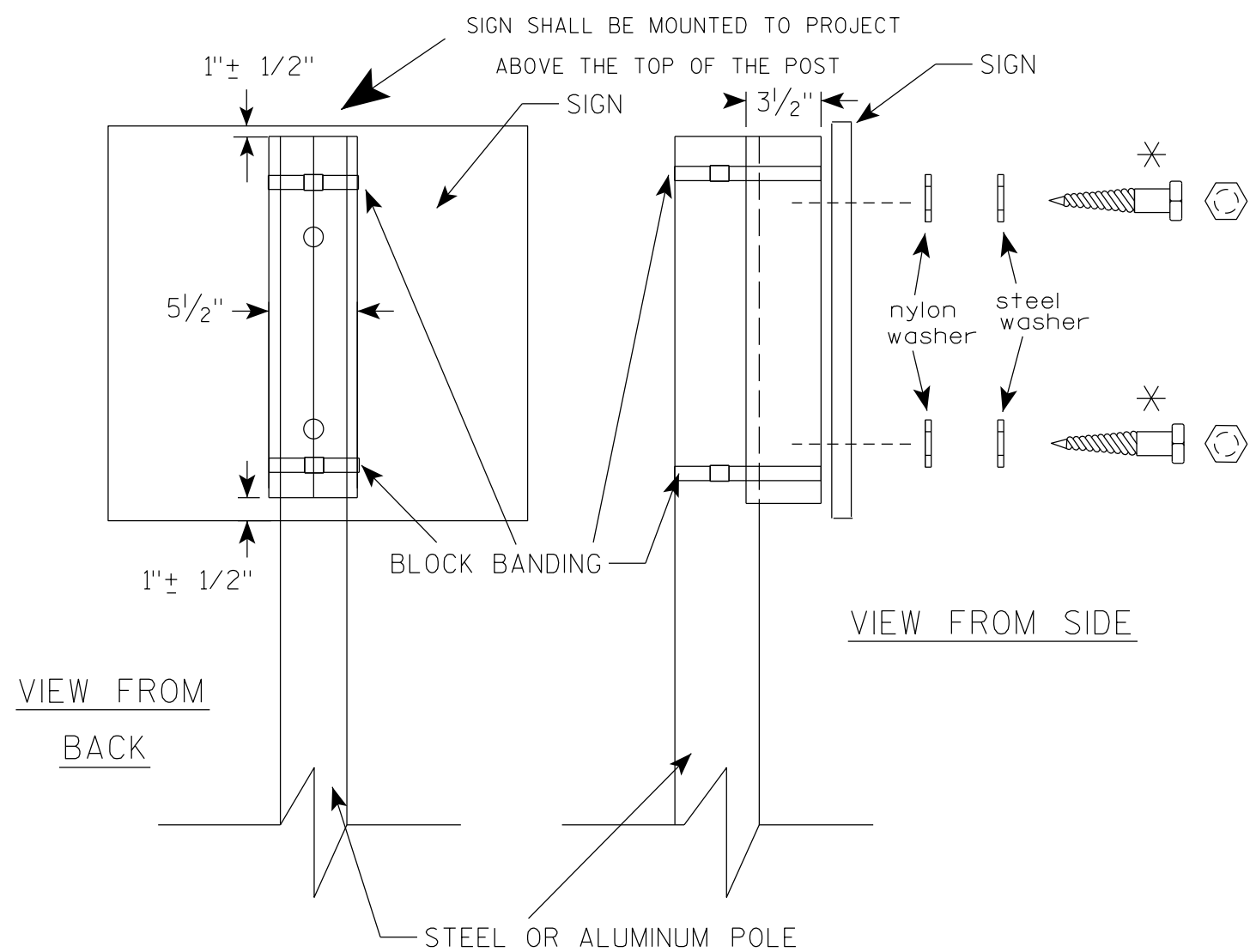
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

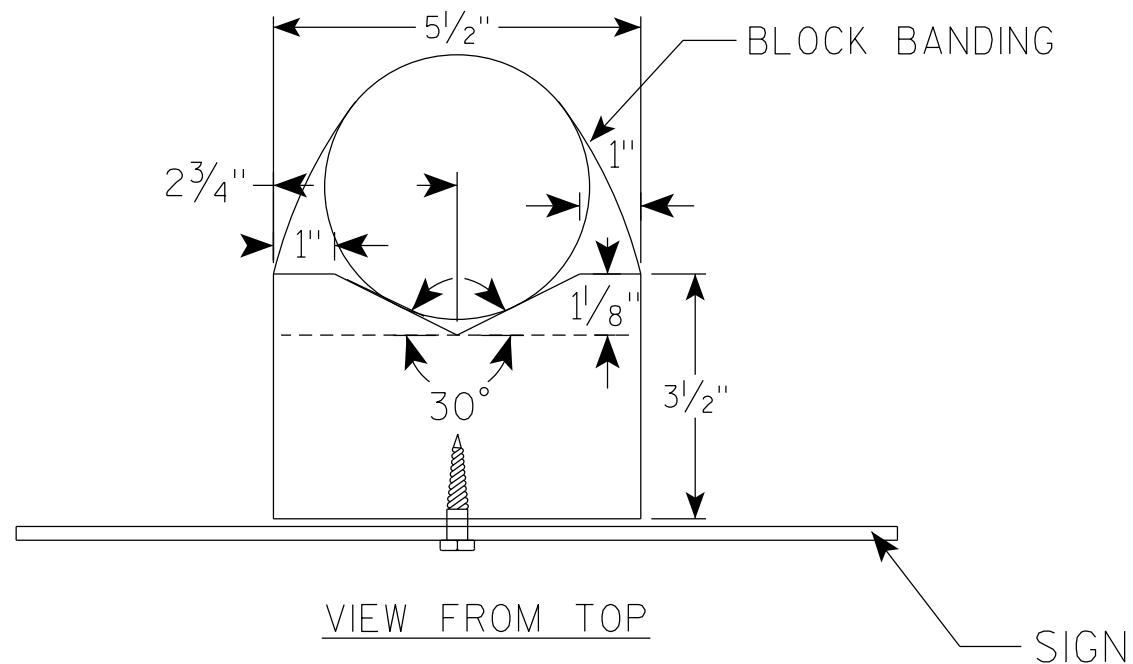
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

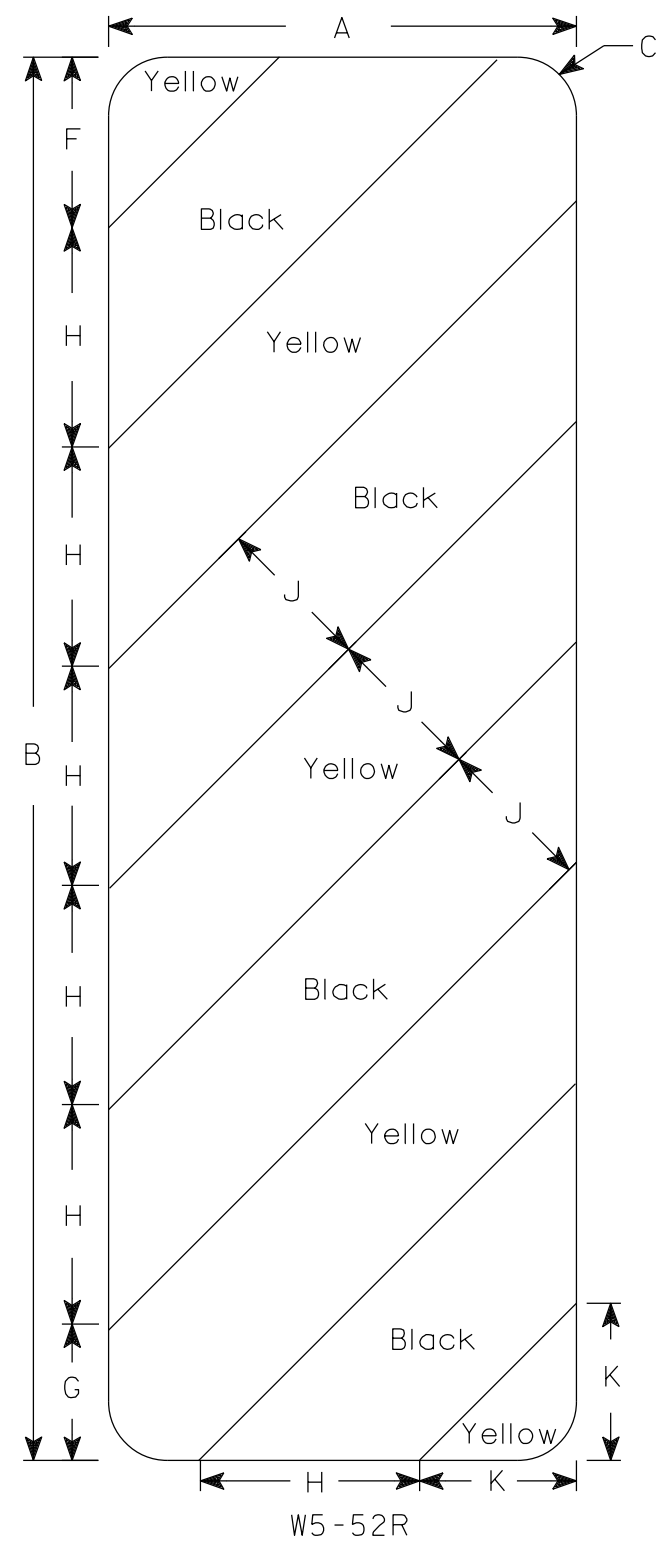
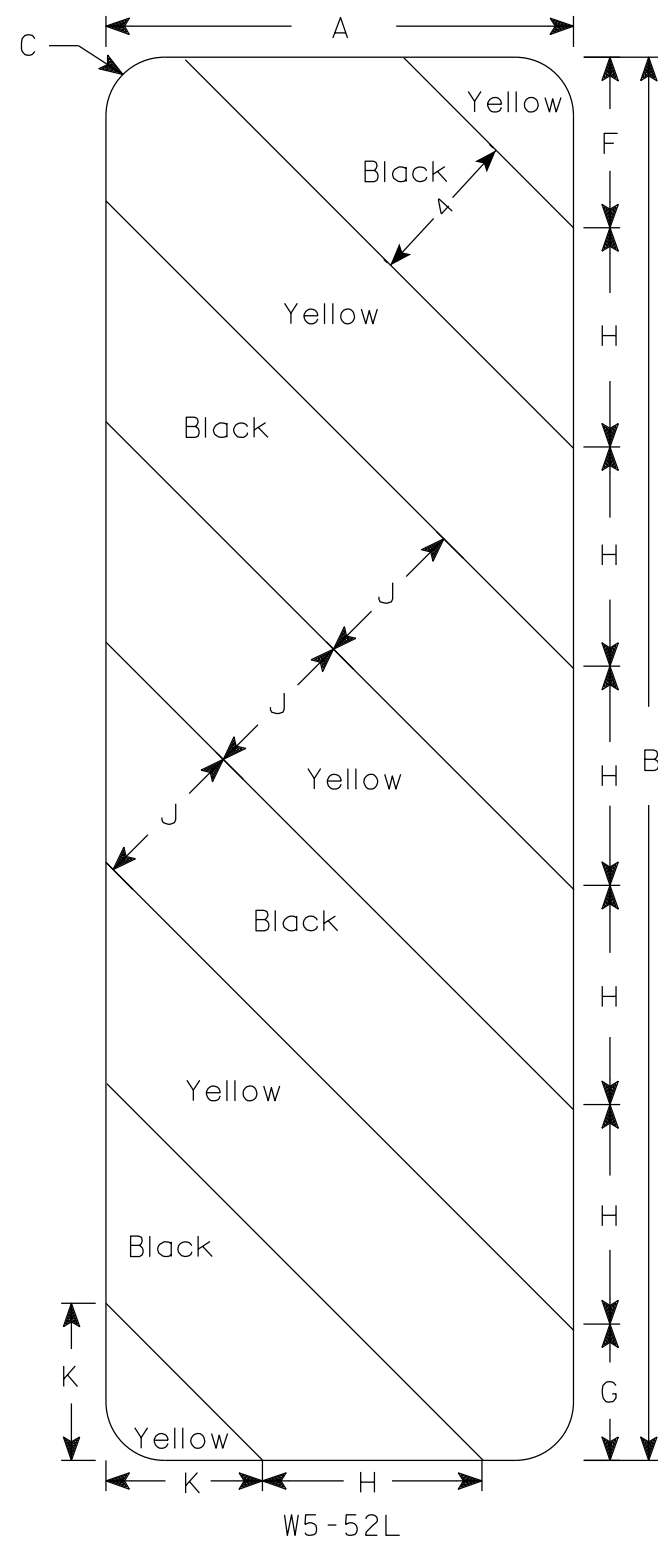
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



NOTES

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

[illegible]

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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INDICATES WING NUMBER

* MGS THRIE BEAM ATTACHMENT

EDGE OF OBSERVED WATER

TDS TELECOM

PINE CREEK

EXIST. STRUCTURE B-60-14 TO BE REMOVED

11'-0" TYP.

END OF EXIST. DECK STA. 9+80.2 ±

C/L BRG. WEST ABUT. STA. 9+70.50

END OF DECK STA. 9+69.25

10+00

10+50

10+50

CTH A

34'-0"

END OF EXIST. DECK STA. 10+19.7 ±

C/L BRG. EAST ABUT. STA. 10+29.50

END OF DECK STA. 10+30.75

PROPOSED STRUCTURE B-60-157

NAME PLATE LOCATION

59'-0" SPAN

61'-6" BACK TO BACK OF ABUTMENTS

PLAN

(SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER BRIDGE)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.09
OPERATING RATING: RF = 1.42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

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

BAR STEEL REINFORCEMENT
GRADE 60 $f_y = 60,000$ PSI

36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY $f'_c = 8,000$ PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 30' LONG AT WEST ABUT.
ESTIMATED 30' LONG AT EAST ABUT.

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

HYDRAULIC DATA

100-YEAR FREQUENCY:

$Q_{100} = 1,845$ C.F.S.
 $V_{100} = 7.9$ F.P.S.
 $HW_{100} =$ EL. 1346.12
WATERWAY AREA = 233 SQ. FT.
DRAINAGE AREA = 15.0 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

$Q_2 = 535$ C.F.S.
 $V_2 = 3.5$ F.P.S.
 $HW_2 =$ EL. 1343.86

STATE PROJECT NUMBER

8887-03-76

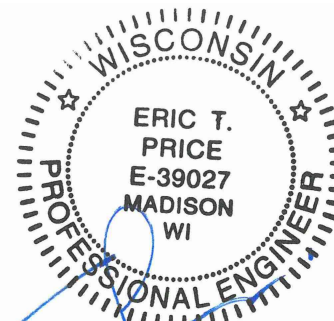
TRAFFIC DATA

CTH A

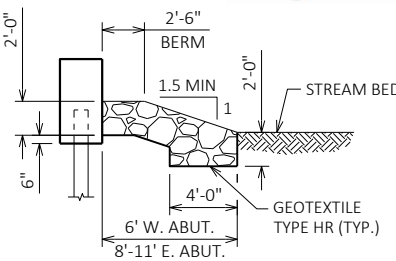
ADT = 640 (2025)
ADT = 608 (2045)
R.D.S. = 55 MPH

LIST OF DRAWINGS:

- GENERAL PLAN
- CROSS SECTION & QUANTITIES
- SUBSURFACE EXPLORATION
- WEST ABUTMENT
- WEST ABUTMENT DETAILS
- EAST ABUTMENT
- EAST ABUTMENT DETAILS
- 36" PRESTRESSED GIRDER DETAILS - 1
- 36" PRESTRESSED GIRDER DETAILS - 2
- STEEL DIAPHRAGMS
- SUPERSTRUCTURE
- SUPERSTRUCTURE DETAILS
- RAILING TUBULAR TYPE M



May 31, 2024



RIPRAP DETAIL

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
CP903	12+22.0, 11.92' LT.	MAG NAIL	1354.14
CP904	8+06.5, 11.38' LT.	MAG NAIL	1355.31

ELEVATION

(LOOKING NORTH)



AREA TO EXCAVATE INCLUDED IN "EXCAVATION FOR STRUCTURES BRIDGES B-60-157"

NO.	DATE	REVISION	BY
CORRE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	SDR 08/14/24		DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-60-157			
CTH A OVER PINE CREEK			
COUNTY	TAYLOR	TOWN/CITY/VILLAGE	HOLWAY
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	SMS	DESIGNED CK'D	SAE
DRAWN BY	SMS	PLANS CK'D	ETP
GENERAL PLAN			SHEET 1 OF 13

STRUCTURE DESIGN CONTACTS:

ERIC PRICE, P.E. 608-826-6146
AARON BONK, P.E. 608-261-0261

I.D. 8887-03-76

DATE:

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-60-157" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.



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

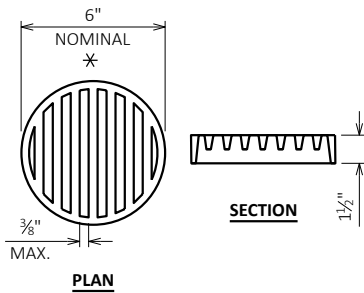
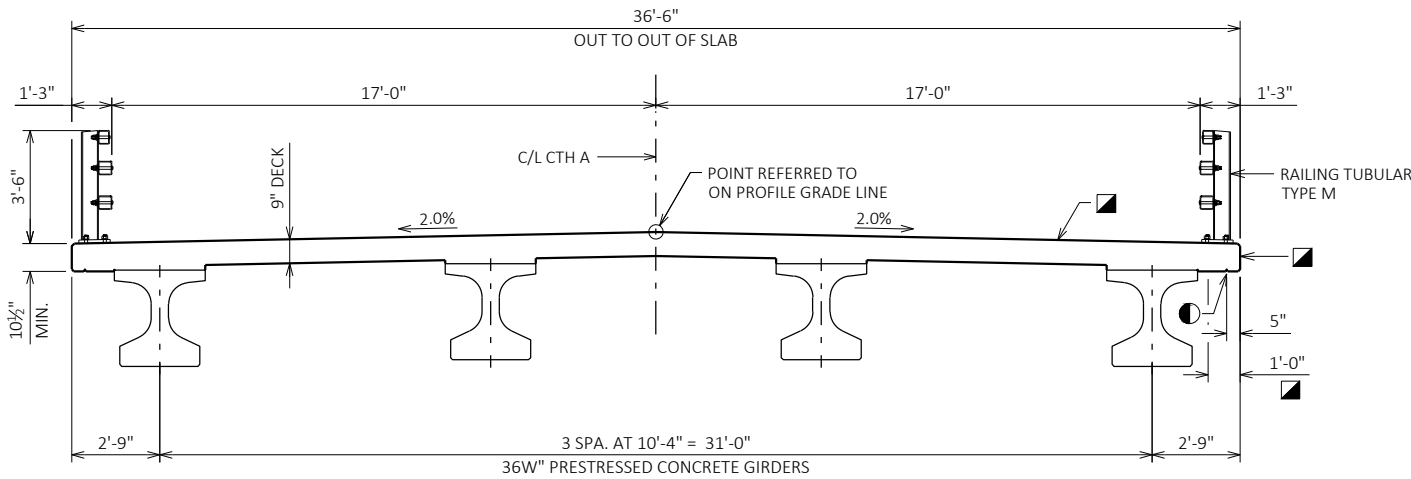
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W" PRESTRESSED GIRDER DETAILS" SHEETS.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF DECK AND WINGS, THE DECK EDGE AND UNDERSIDE OF DECK AS SHOWN, THE EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE ABUTMENT FRONT FACES.

THE EXISTING STRUCTURE B-60-14, TO BE REMOVED, IS A SINGLE SPAN CONCRETE FLAT SLAB BRIDGE, 39.5 FT. LONG WITH A 34.0 FT. CLEAR ROADWAY WIDTH.

LEGEND

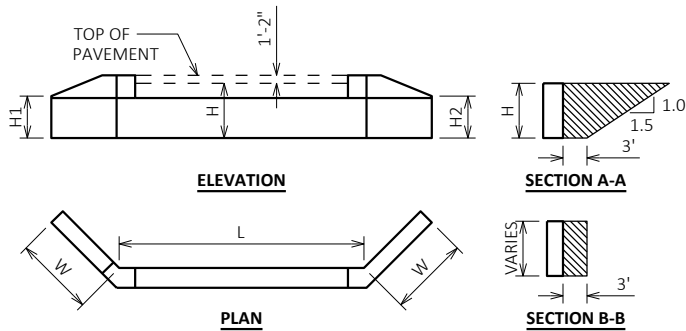
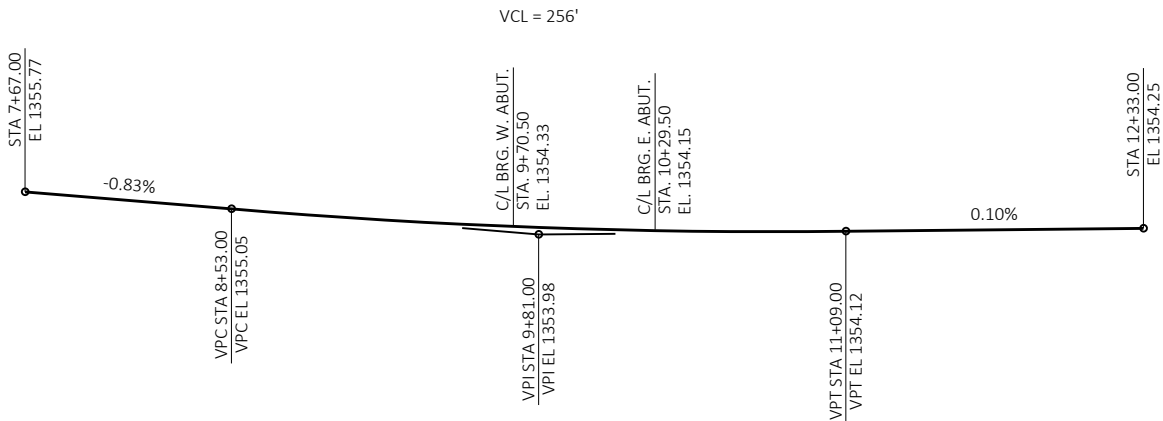
-  $\frac{3}{4}$ " V-GROOVE REQ'D. EXTEND 6" FROM F.F. OF ABUTMENT BODY.
-  COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.



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

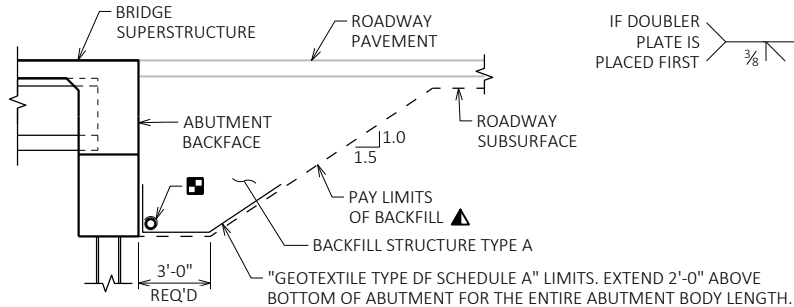
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



ABUTMENT BACKFILL DIAGRAM

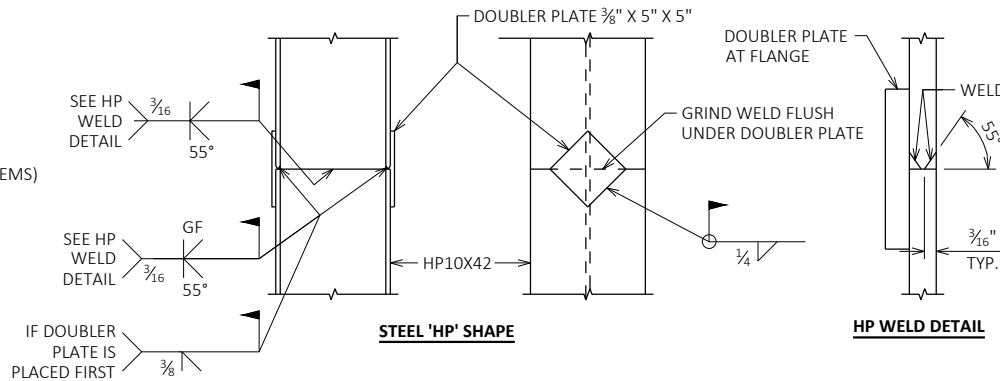
- L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- H1 = WING 1 HEIGHT AT TIP (FT)
- H2 = WING 2 HEIGHT AT TIP (FT)
- W = WING LENGTH (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
- $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$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



TYPICAL SECTION THRU ABUTMENT

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

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

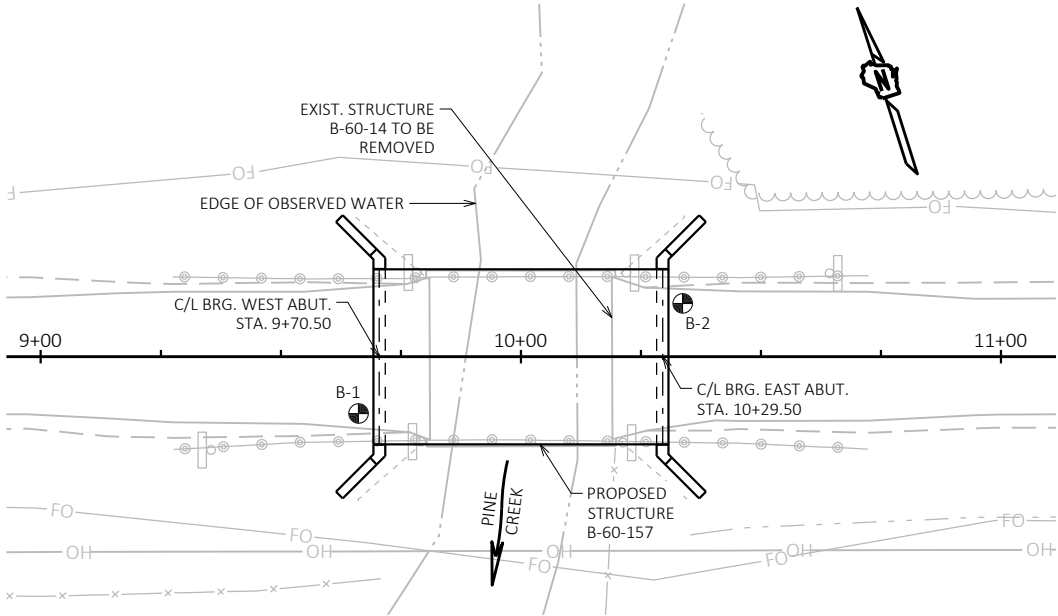


'HP' PILE DETAILS

TOTAL ESTIMATED QUANTITIES

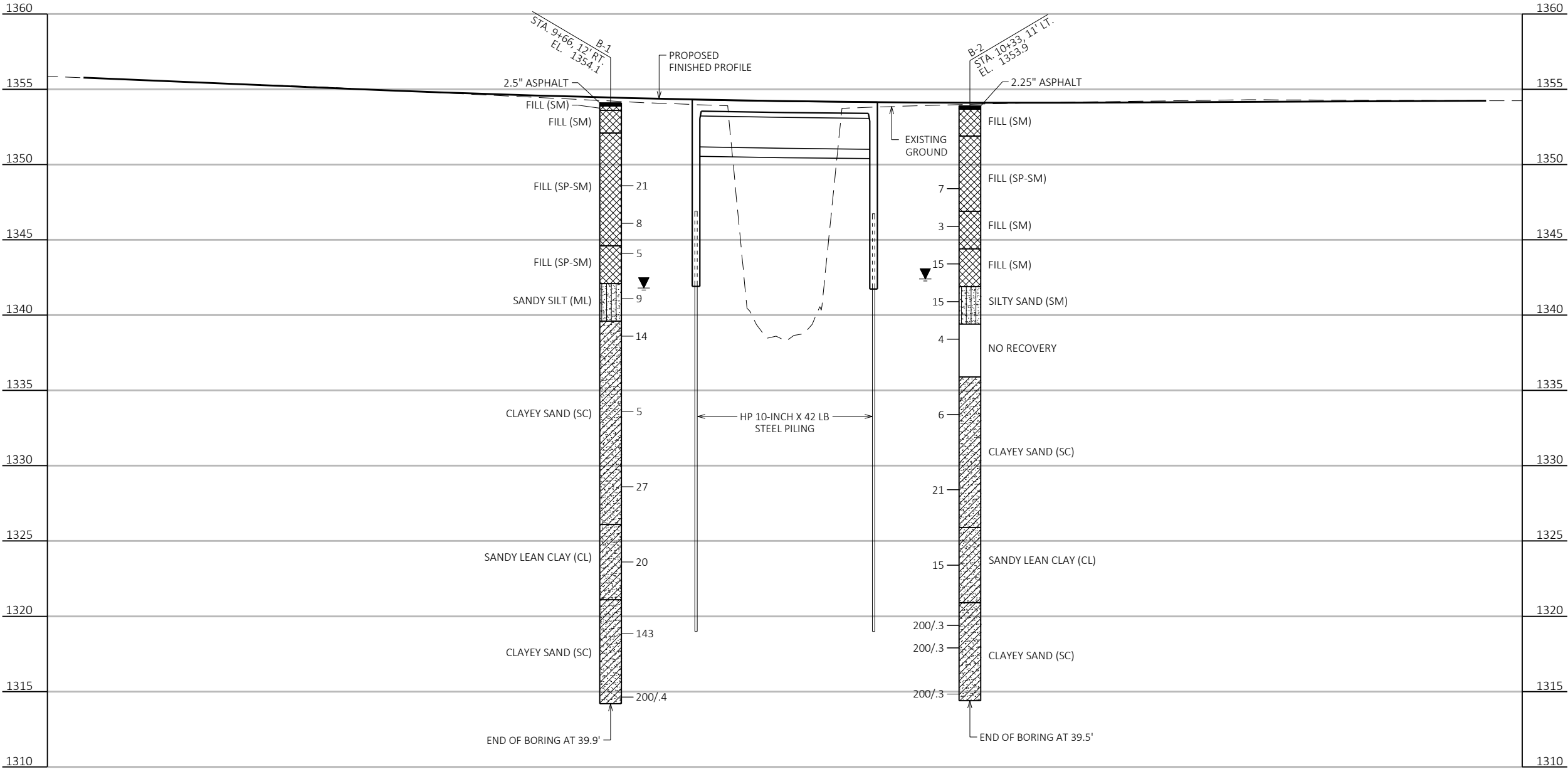
BID ITEM NUMBER	BID ITEM	UNIT	WEST ABUTMENT	EAST ABUTMENT	SUPER.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-60-14	EACH	--	--	--	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-60-157	EACH	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	430	430	--	860
502.0100	CONCRETE MASONRY BRIDGES	CY	50.5	50.5	88.3	189
502.3200	PROTECTIVE SURFACE TREATMENT	SY	28	28	273	329
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	--	--	240	240
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3,010	3,010	--	6,020
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,940	1,940	16,940	20,820
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	4	4	--	8
506.4000	STEEL DIAPHRAGMS B-60-157	EACH	--	--	3	3
513.4061	RAILING TUBULAR TYPE M	LF	--	--	128	128
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	--	18
550.0500	PILE POINTS	EACH	8	8	--	16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	230	230	--	460
606.0300	RIPRAP HEAVY	CY	80	105	--	185
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	110	110	--	220
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	60	60	--	120
645.0120	GEOTEXTILE TYPE HR	SY	140	175	--	315
	NON-BID ITEMS					
	FILLER	SIZE	--	--	--	1/2", 3/4"

ALL ITEMS ARE CATEGORY 0020



SOIL BORINGS COMPLETED BY:

AMERICAN ENGINEERING TESTING
1837 COUNTY HIGHWAY OO
CHIPPewa FALLS, WI 54729
(715) 861-5045
MARCH 8, 2023 (B-1)
MARCH 8, 2023 (B-2)



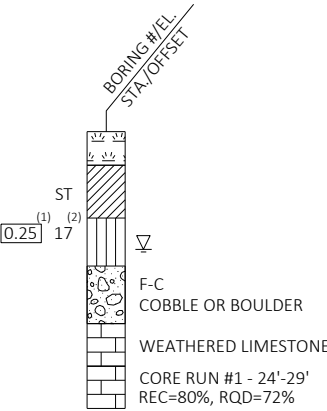
STATE PROJECT NUMBER

8887-03-76

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
-----	------	----------	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-157

DRAWN BY	PFK	PLANS CK'D	ETP
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SUBSURFACE EXPLORATION

SHEET 3 OF 13

SCALE =

LEGEND

- INDICATES WING NUMBER
INDICATES GIRDER NUMBER

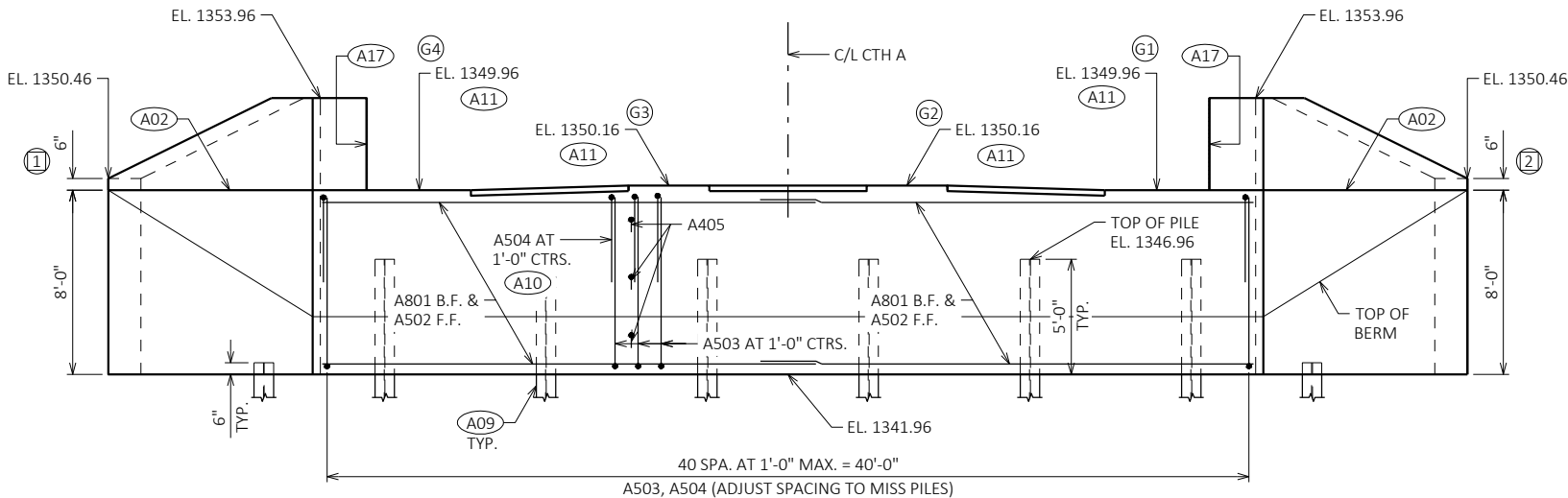
- A02 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6 (18" RMW @ B.F. & "V" GROOVE @ F.F. IF JOINT IS USED, INCIDENTAL TO "CONCRETE MASONRY").
A05 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
A08 SEE BEARING PAD DETAIL ON SUPERSTRUCTURE DETAILS SHEET.
A09 SUPPORT ABUTMENT ON HP 10-INCH X 42 LB PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30' LONG.
A10 PULL UP TO 2" CLEAR
A11 ELEVATION SHOWN AT TOP OF CONCRETE AT C/L OF BRG.
A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

- A17 1/2" FILLER: 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).
A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
A20 STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE
E.F. DENOTES EACH FACE

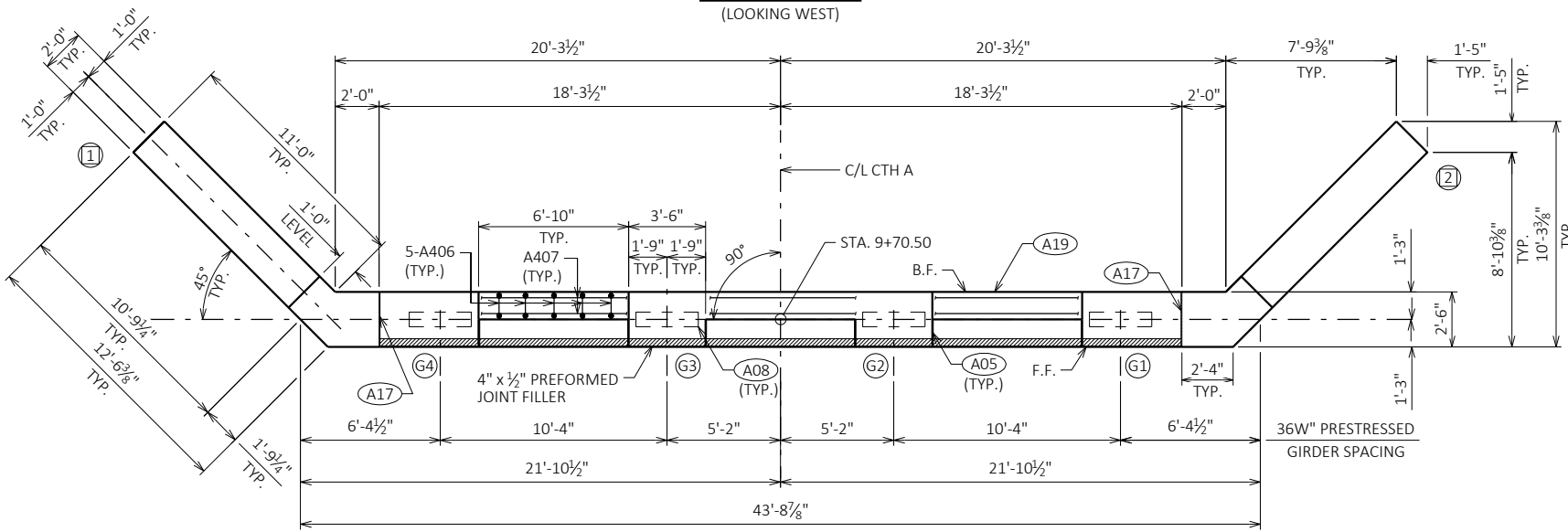
NOTE

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

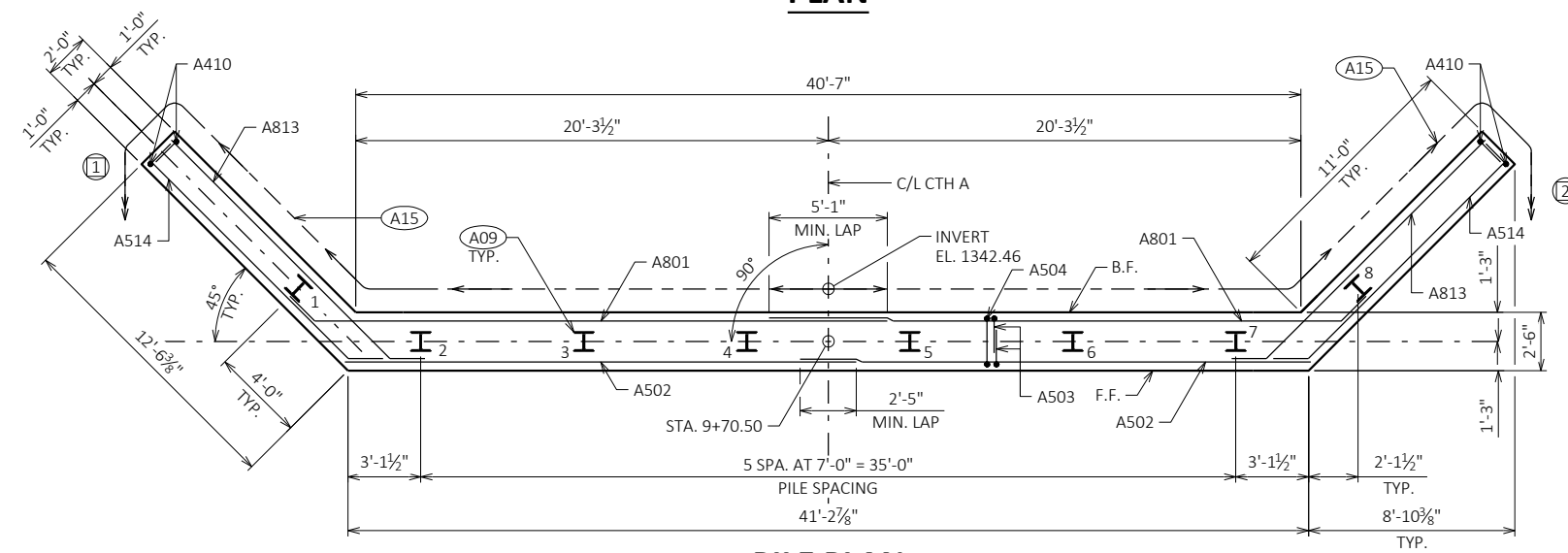


ELEVATION

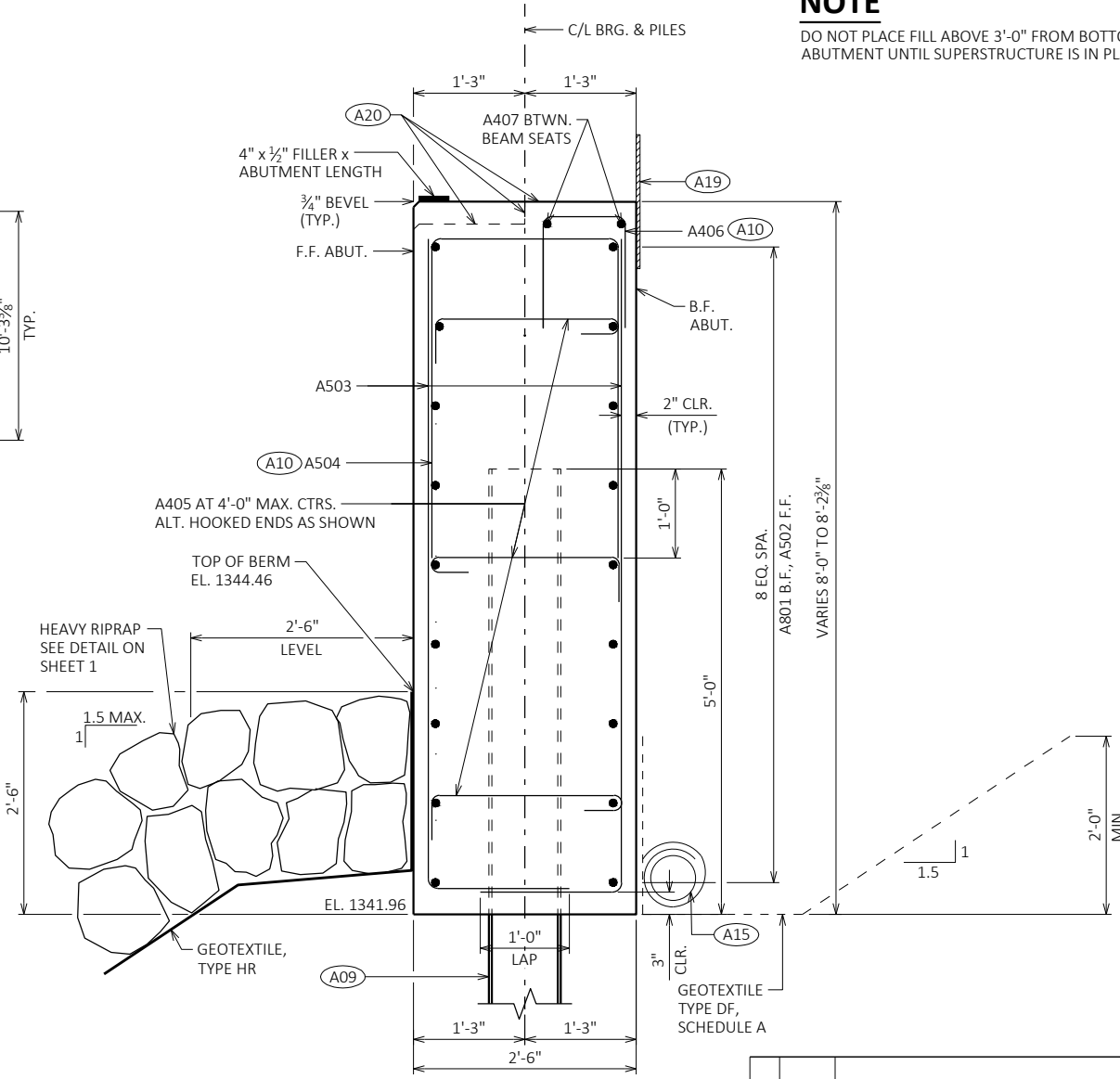
(LOOKING WEST)



PLAN



PILE PLAN



SECTION THRU BODY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
WEST ABUTMENT		SHEET 4 OF 13	

SCALE =

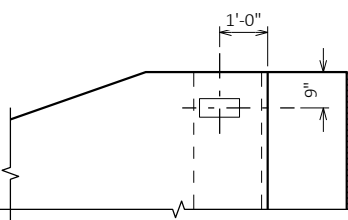
BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
NON-COATED BARS					TOTAL WEIGHT = 3,010 LBS	
A801	18	26'-7"	X		BODY - B.F.	HORIZ.
A502	18	22'-1"			BODY - F.F.	HORIZ.
A503	82	9'-1"	X		BODY - STIRRUPS	VERT.
A504	41	9'-7"	X		BODY - TOP	VERT.
A405	33	3'-0"	X		BODY - TIES	TRANS.
A406	15	3'-3"	X		BODY - NOTCH	VERT.
A407	6	8'-10"			BODY - NOTCH	HORIZ.
COATED BARS					TOTAL WEIGHT = 1,940 LBS	
A410	56	12'-4"	X	X	WINGS - E.F.	VERT.
A411	28	14'-7"	X		WINGS - E.F.	VERT.
A412	12	9'-3"	X		WINGS - CORNERS	HORIZ.
A813	18	15'-4"	X		WINGS - B.F.	HORIZ.
A514	18	13'-10"	X		WINGS - F.F.	HORIZ.
A415	4	11'-4"			WINGS - B.F. & F.F.	HORIZ.
A416	4	9'-8"			WINGS - B.F. & F.F.	HORIZ.
A417	4	7'-8"			WINGS - B.F. & F.F.	HORIZ.
A418	4	5'-8"			WINGS - B.F. & F.F.	HORIZ.
A419	4	3'-8"			WINGS - B.F. & F.F.	HORIZ.
A420	4	12'-9"	X		WINGS - TOP	VERT.

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
A410	4 SERIES OF 14	10'-8" TO 14'-0"

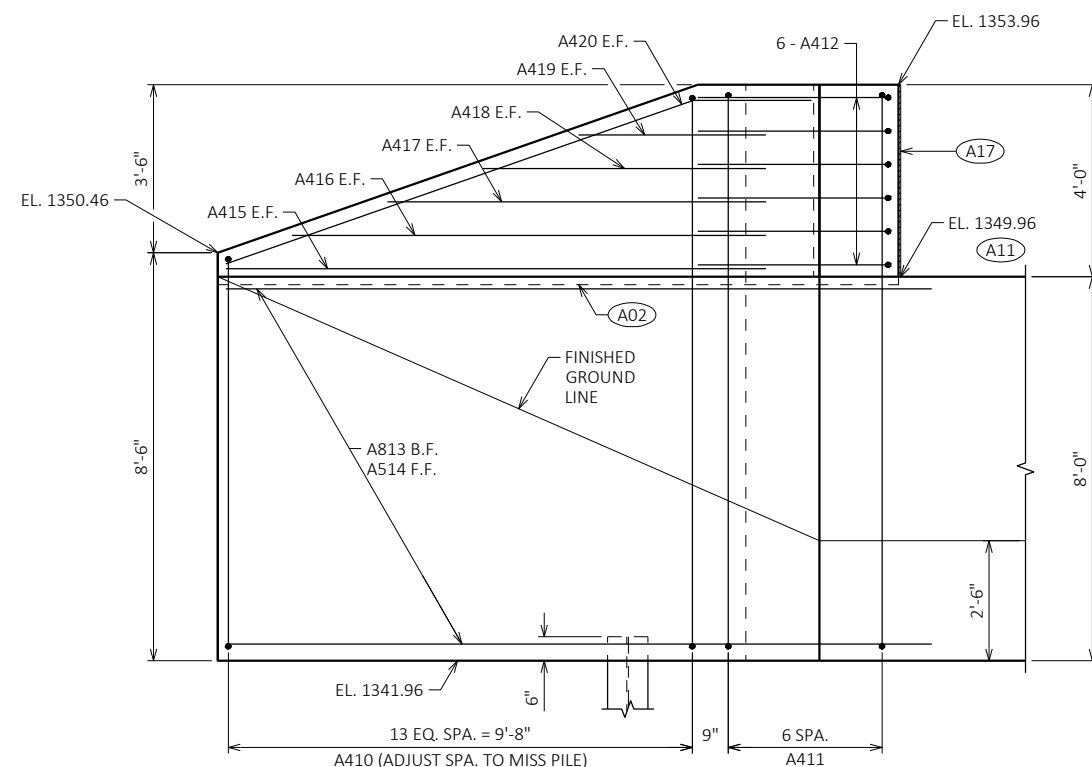
LEGEND

- A02 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6 (18" RMW @ B.F. & "V" GROOVE @ F.F. IF JOINT IS USED, INCIDENTAL TO "CONCRETE MASONRY").
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- A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- A17 ½" FILLER: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).
- A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

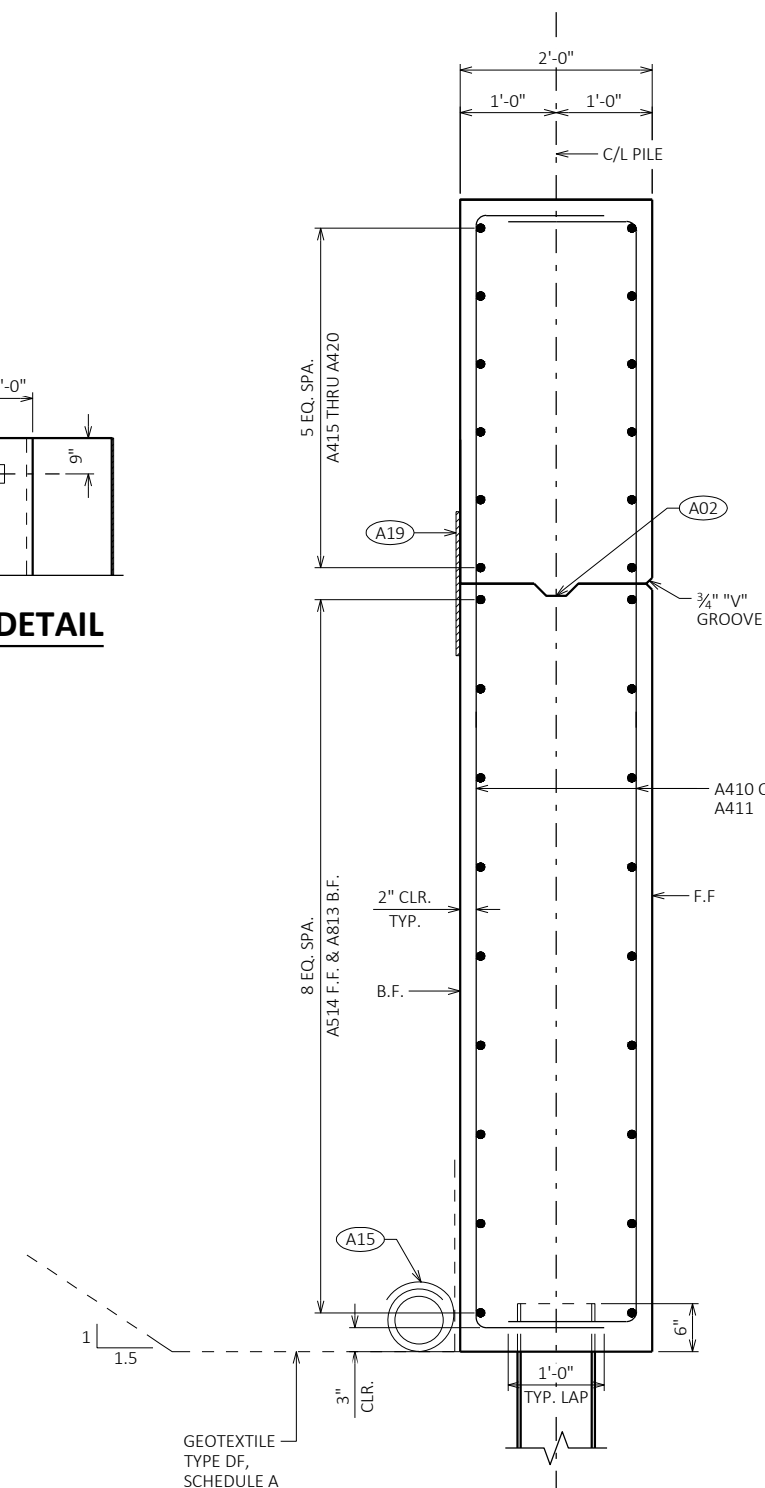


(WING 1 SHOWN, WING 2 SIMILAR)
HORIZONTAL REINF. BELOW SEAT NOT SHOWN
FOR CLARITY. SEE PILE PLAN.

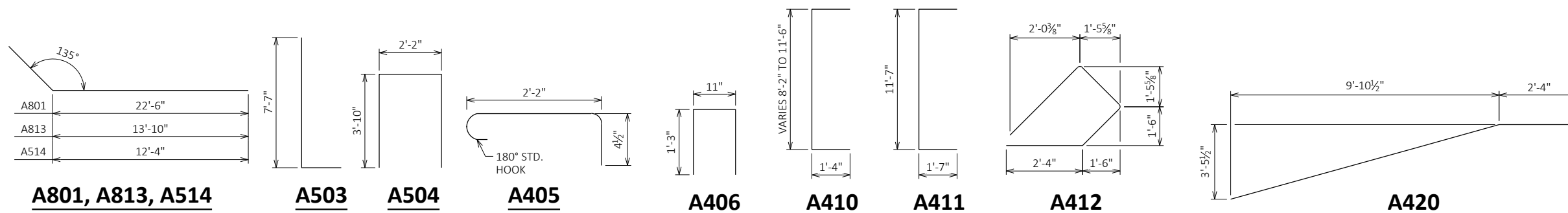
(WING 1 ONLY)



(WING 1 SHOWN, WING 2 SIMILAR)



SECTION THRU WING



LEGEND

- INDICATES WING NUMBER
INDICATES GIRDER NUMBER

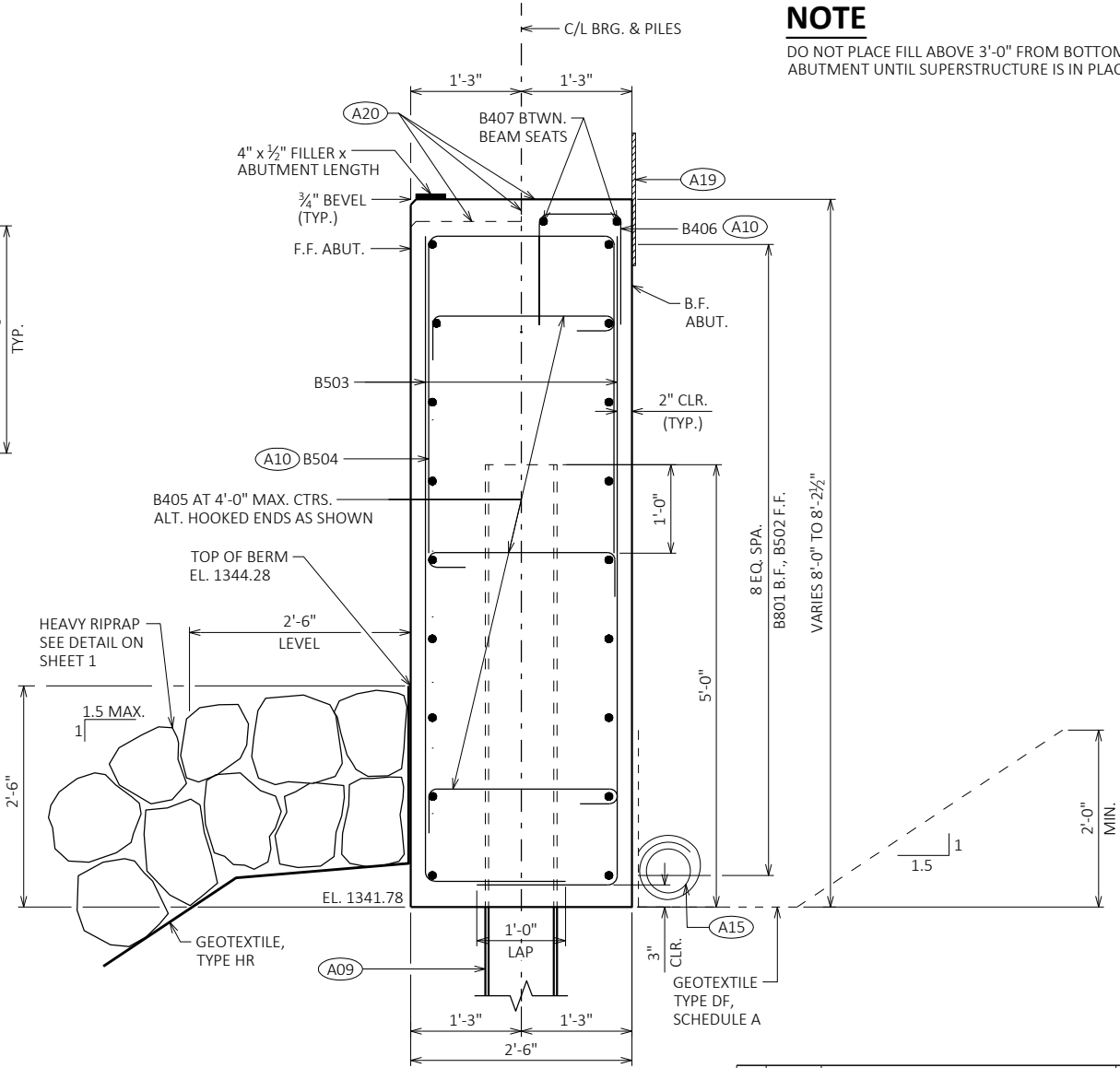
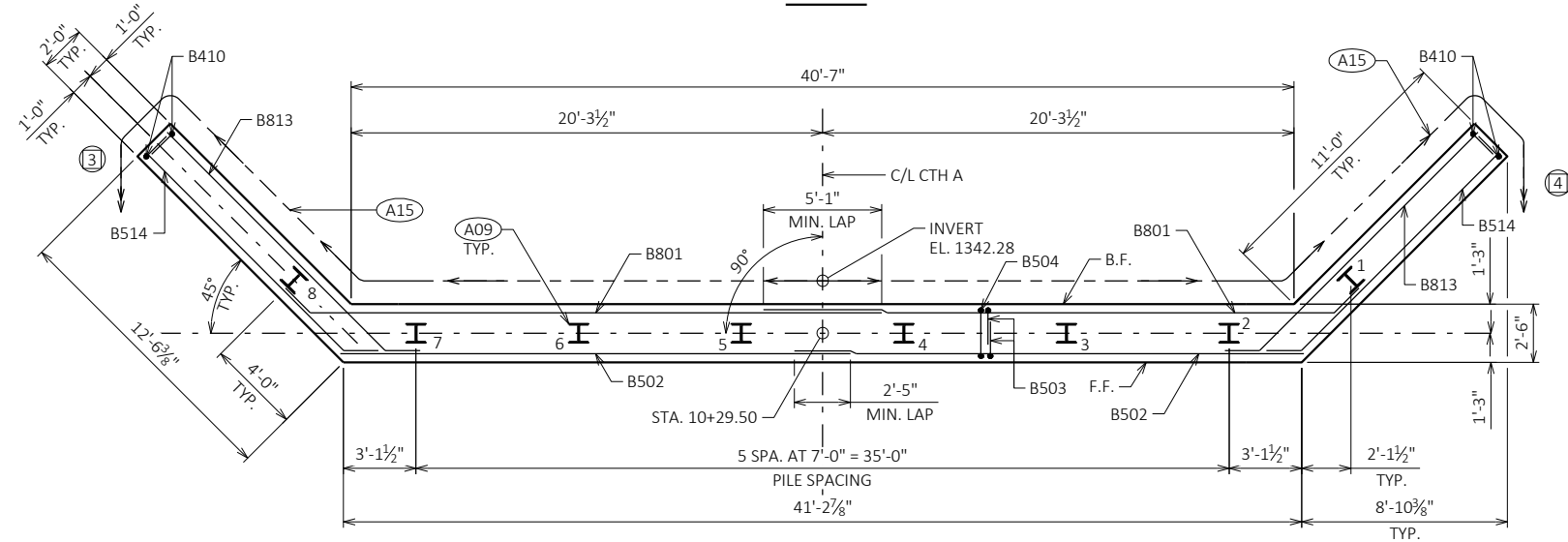
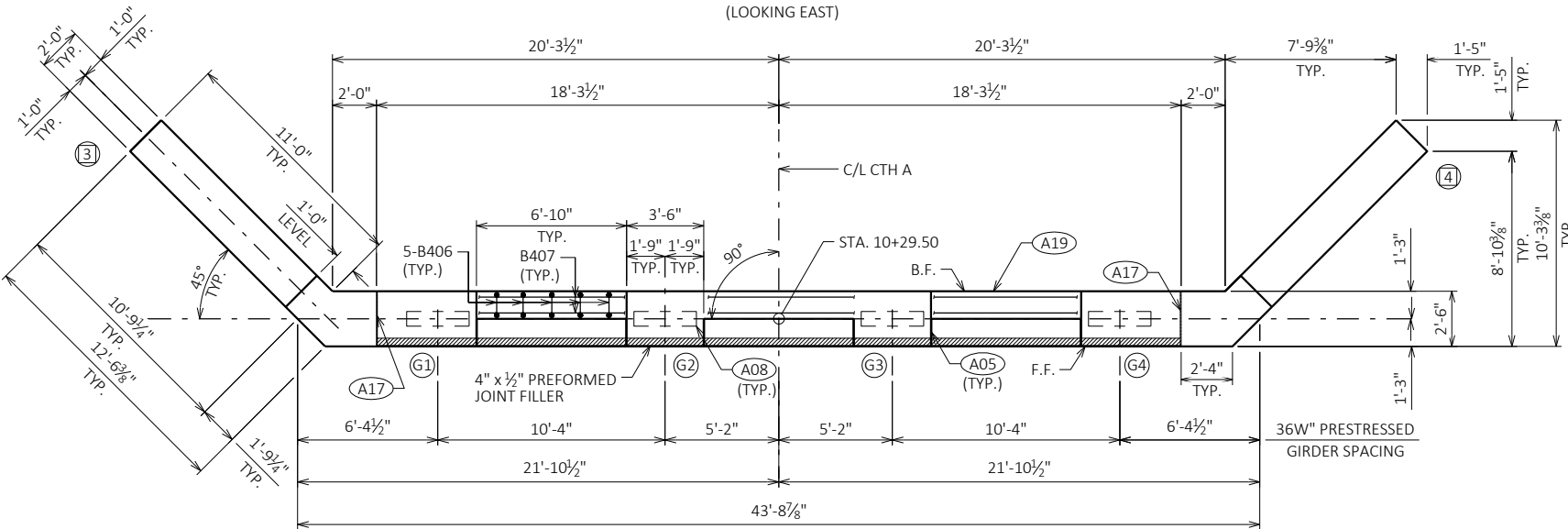
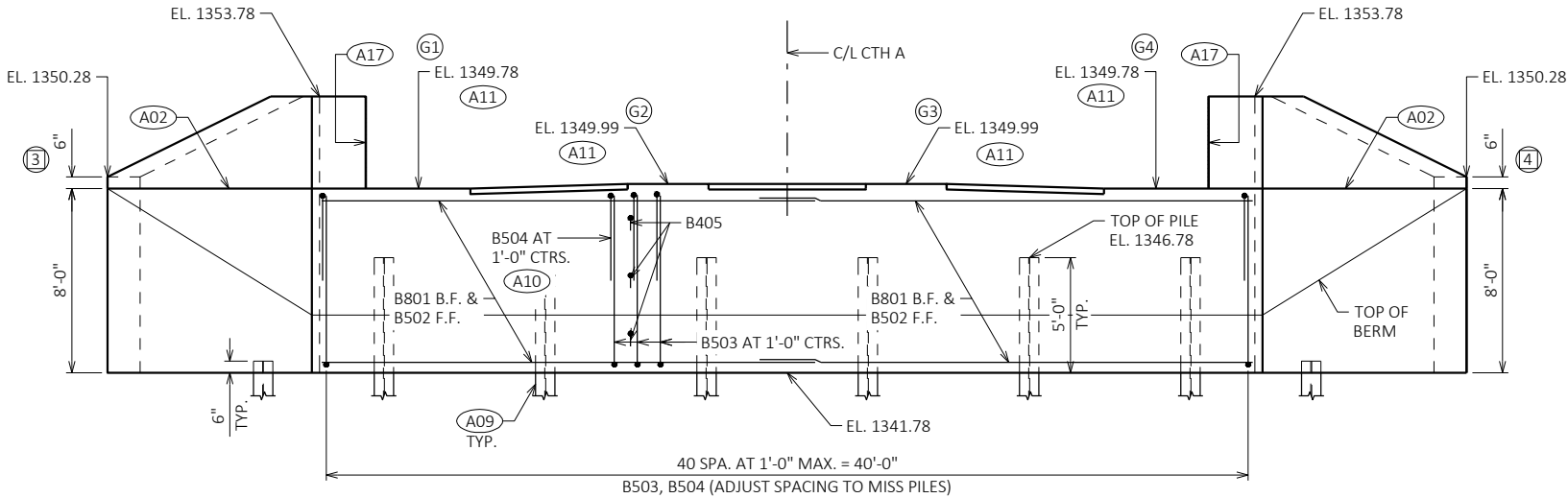
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- A17 1/2" FILLER: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).
A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
A20 STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE
E.F. DENOTES EACH FACE

NOTE

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



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
EAST ABUTMENT		SHEET 6 OF 13	

SCALE =

BILL OF BARS - EAST ABUTMENT

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
NON-COATED BARS					TOTAL WEIGHT = 3,010 LBS	
B801	18	26'-7"	X		BODY - B.F.	HORIZ.
B502	18	22'-1"			BODY - F.F.	HORIZ.
B503	82	9'-1"	X		BODY - STIRRUPS	VERT.
B504	41	9'-7"	X		BODY - TOP	VERT.
B405	33	3'-0"	X		BODY - TIES	TRANS.
B406	15	3'-3"	X		BODY - NOTCH	VERT.
B407	6	8'-10"			BODY - NOTCH	HORIZ.
COATED BARS					TOTAL WEIGHT = 1,940 LBS	
B410	56	12'-4"	X	X	WINGS - E.F.	VERT.
B411	28	14'-7"	X		WINGS - E.F.	VERT.
B412	12	9'-3"	X		WINGS - CORNERS	HORIZ.
B813	18	15'-4"	X		WINGS - B.F.	HORIZ.
B514	18	13'-10"	X		WINGS - F.F.	HORIZ.
B415	4	11'-4"			WINGS - B.F. & F.F.	HORIZ.
B416	4	9'-8"			WINGS - B.F. & F.F.	HORIZ.
B417	4	7'-8"			WINGS - B.F. & F.F.	HORIZ.
B418	4	5'-8"			WINGS - B.F. & F.F.	HORIZ.
B419	4	3'-8"			WINGS - B.F. & F.F.	HORIZ.
B420	4	12'-9"	X		WINGS - TOP	VERT.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

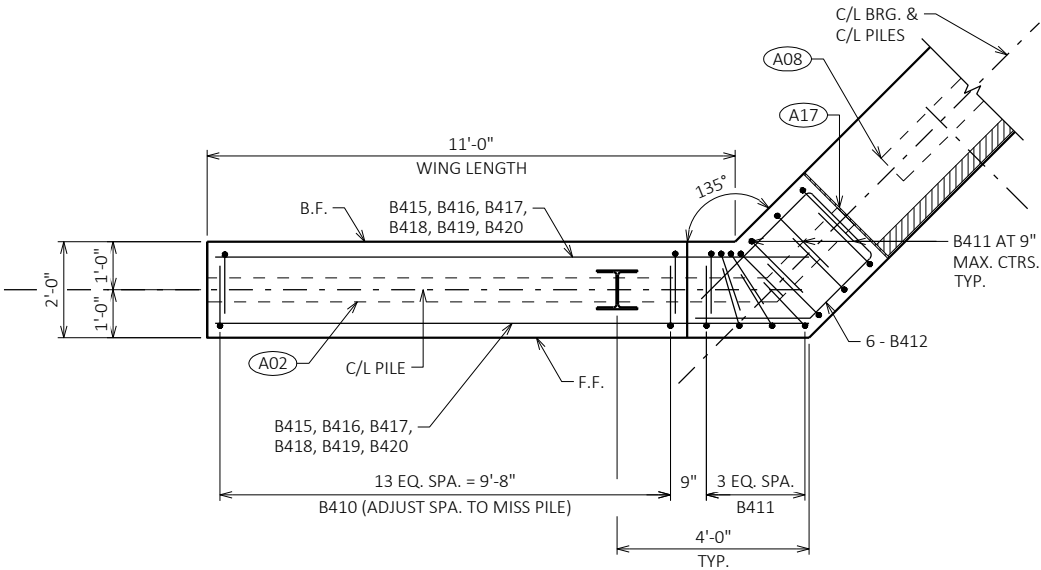
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
B410	4 SERIES OF 14	10'-8" TO 14'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.

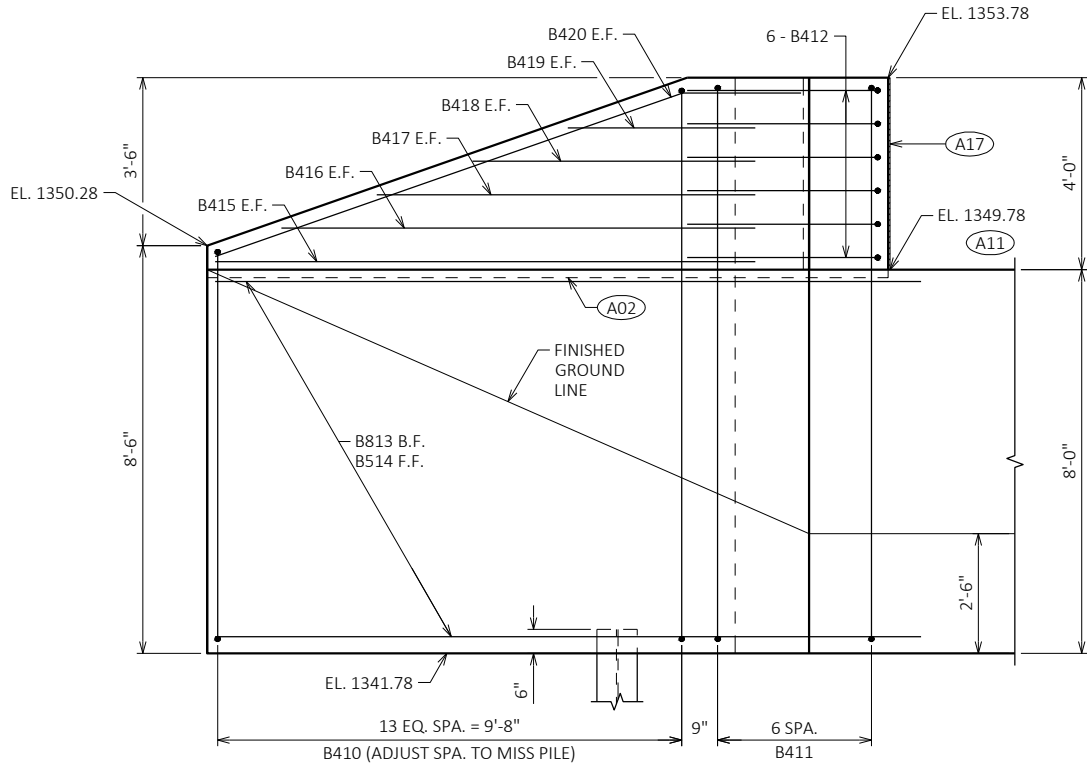
LEGEND

- A02 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6 (18" RMW @ B.F. & "V" GROOVE @ F.F. IF JOINT IS USED, INCIDENTAL TO "CONCRETE MASONRY").
- A08 SEE BEARING PAD DETAIL ON SUPERSTRUCTURE DETAILS SHEET.
- A11 ELEVATION SHOWN AT TOP OF CONCRETE AT C/L OF BRG.
- A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- A17 ½" FILLER: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).
- A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.



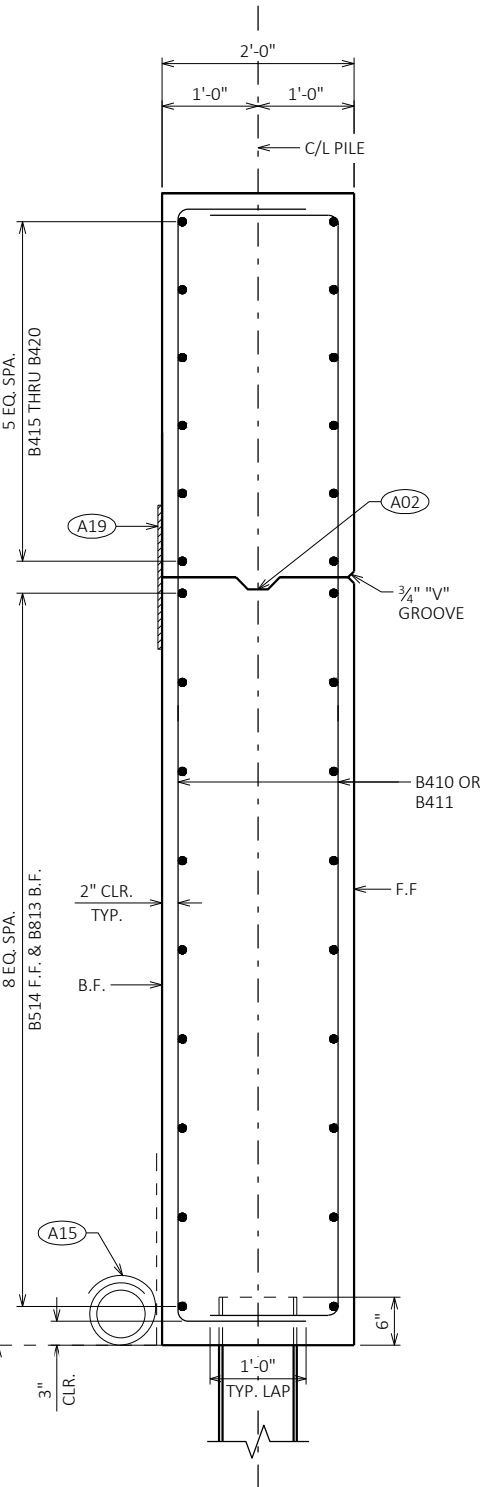
PLAN - WING

(WING 3 SHOWN, WING 4 SIMILAR)
HORIZONTAL REINF. BELOW SEAT NOT SHOWN
FOR CLARITY. SEE PILE PLAN.

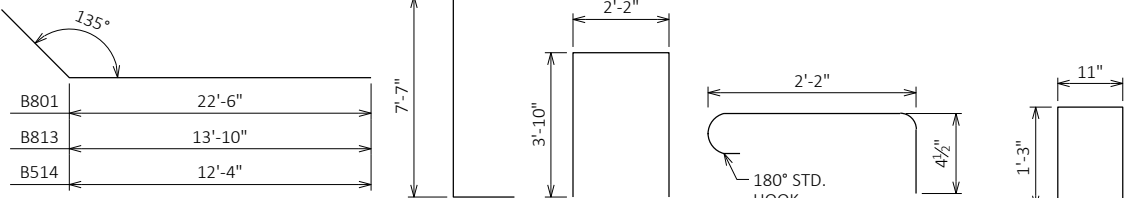


ELEVATION - WING

(WING 3 SHOWN, WING 4 SIMILAR)



SECTION THRU WING



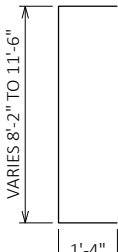
B801, B813, B514

B503

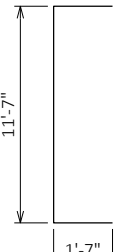
B504

B405

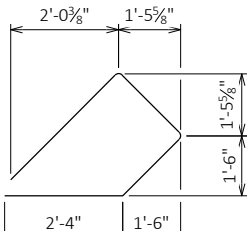
B406



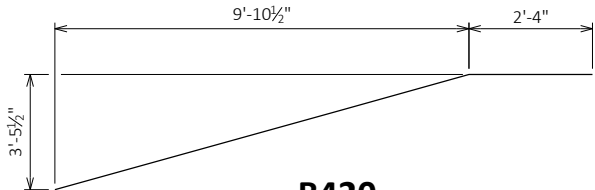
B410



B411



B412



B420

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
EAST ABUTMENT DETAILS		SHEET 7 OF 13	

SCALE =

NOTES

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

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.4 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

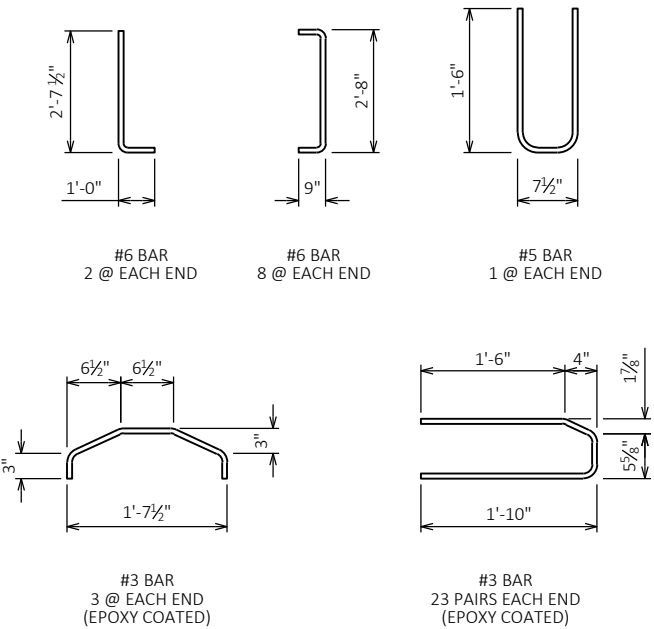
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGMS" SHEET.

FOR STORAGE, HANDLING, AND TRANSPORTING, THIS GIRDER IS REINFORCED TO ALLOW A MAXIMUM OVERHANG FROM THE LIFTING LOCATION OR POINT OF SUPPORT OF UP TO 1/10 THE GIRDER LENGTH. THE CONTRACTOR IS RESPONSIBLE FOR LATERAL STABILITY OF THE GIRDER UNTIL THE DECK IS CURED.



SIDE VIEW & TYPICAL SECTION IN SPAN

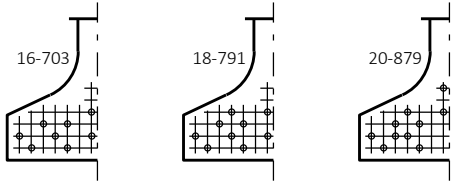
- P01 DETAIL TYP. AT EACH END
- P02 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

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

GIRDER DATA

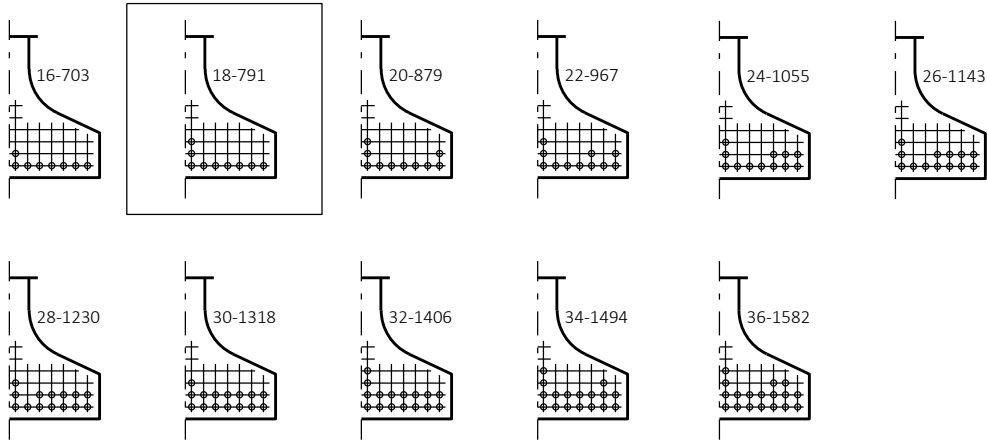
GIRDER DATA																									
SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f _c (P.S.I.)	"P" (IN.)			DIA. OF STRAND (IN.)	DRAPED PATTERN							UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10		1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER		TOTAL NO. OF STRANDS	f _{ci} (P.S.I.) *	(IN.)				TOTAL NO. OF STRANDS	f _{ci} (P.S.I.) *	
																			"A"	"B" MIN.	"B" MAX.	"C"			
1	ALL	60.0	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.2	8,000	7.00	7.00	7.00	0.600	18	6,800	28	10	13	4			

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
36" PRESTRESSED GIRDER DETAILS - 1			SHEET 8 OF 13



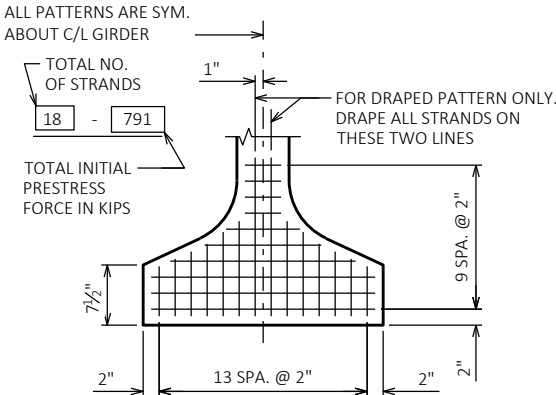
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

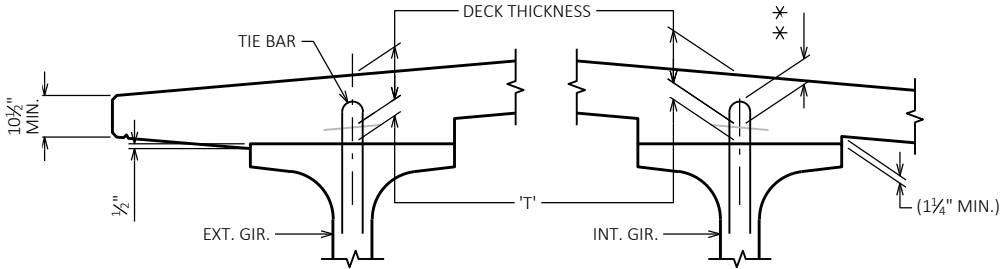


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



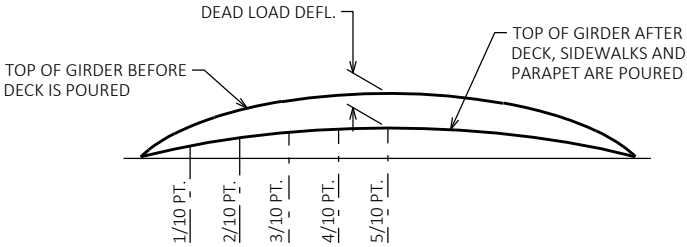
DECK HAUNCH DETAIL

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

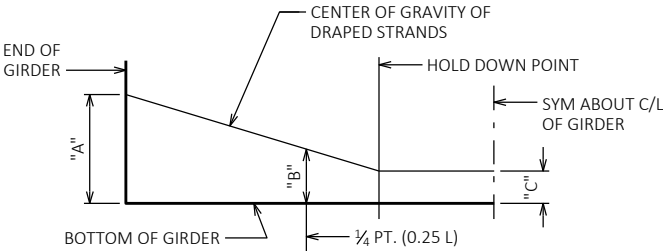
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEAD LOAD DEFLECTION
- DECK THICKNESS
- = HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2 1/2" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



"A" TO BE GIVEN TO THE NEAREST 1"

"B_{MIN}" = 1/4("A" + 3"C")

"B_{MAX}" = "B_{MIN}" + 3

DRAPED STRAND PROFILE

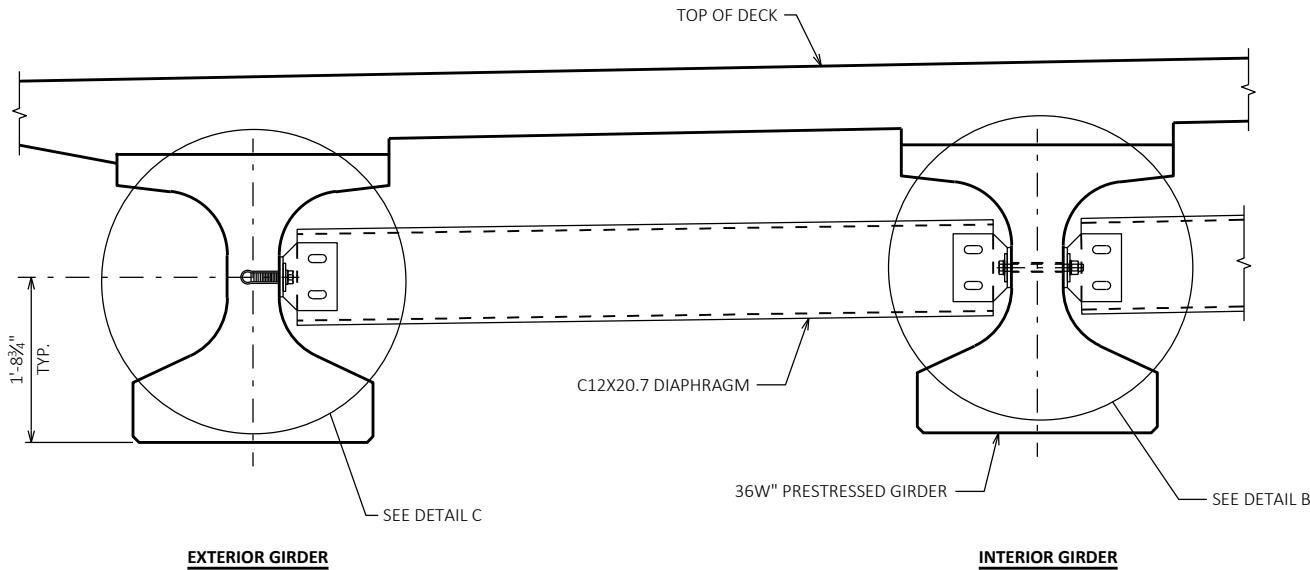
* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	1.2

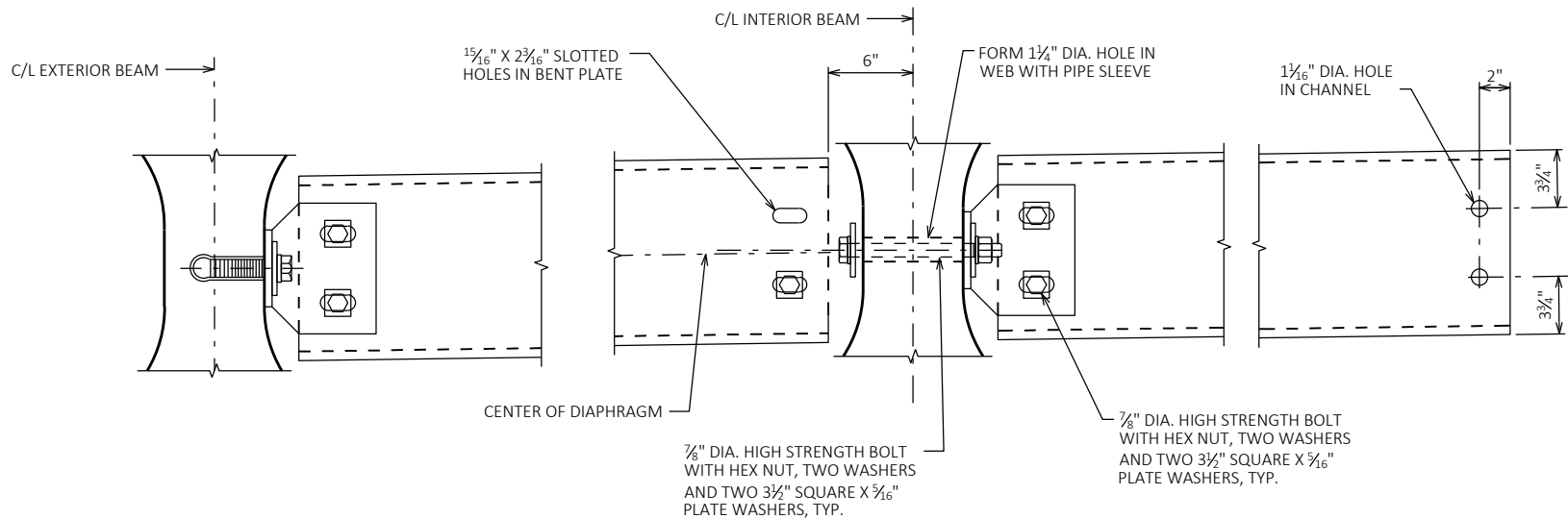
THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
	DRAWN BY	SMS	PLANS CK'D ETP
36" PRESTRESSED GIRDER DETAILS - 2			SHEET 9 OF 13

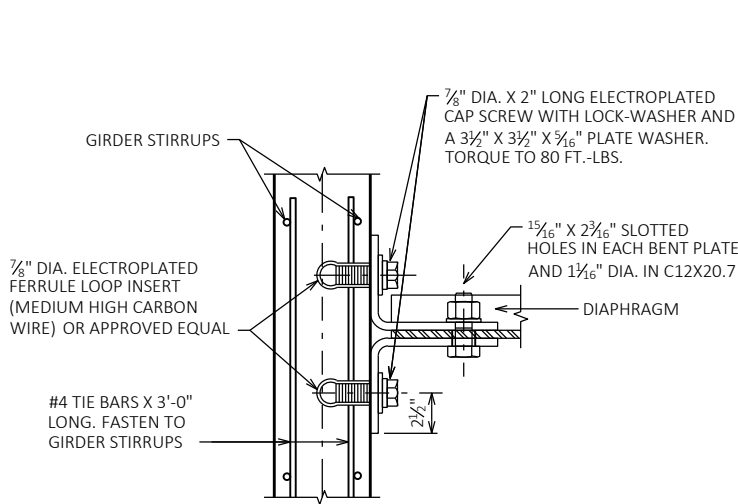


PART TRANSVERSE SECTION AT DIAPHRAGM

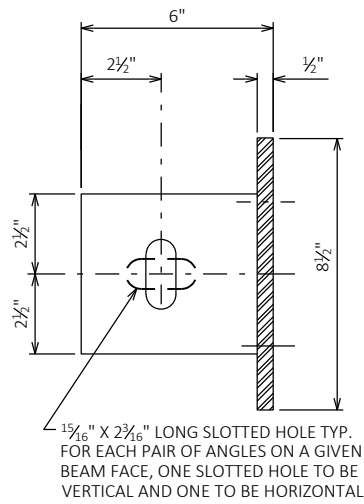


DETAIL C

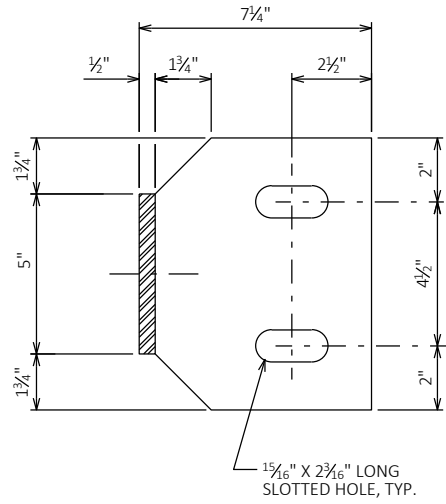
DETAIL B



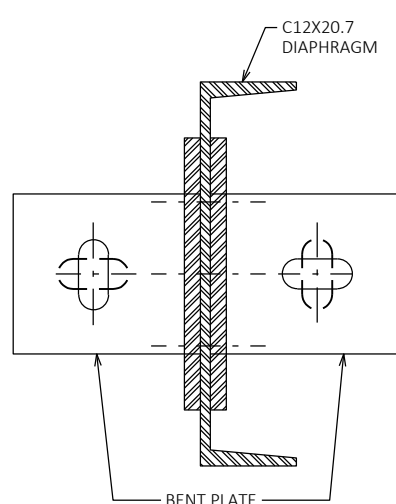
SECTION A-A
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

STATE PROJECT NUMBER

8887-03-76

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-60-157", EACH.

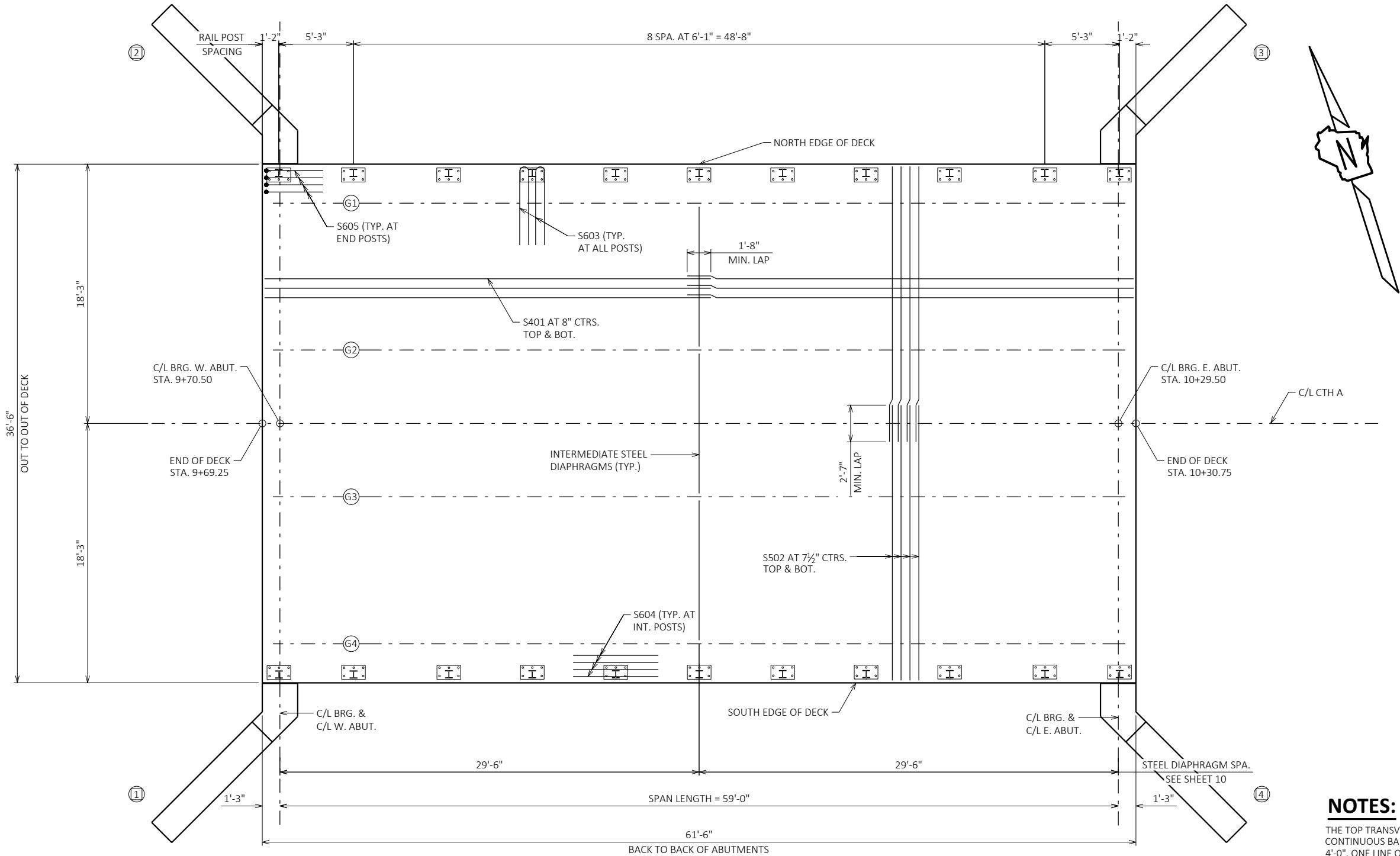
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

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

NO.	DATE	REVISION	BY
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STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
STEEL DIAPHRAGMS		SHEET 10 OF 13	



PLAN

NOTES:

THE TOP TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.

THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.

INDICATES WING NUMBER

TOP OF DECK ELEVATIONS

LOCATION	W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	E. ABUT.
EDGE OF DECK	1353.96	1353.94	1353.92	1353.90	1353.88	1353.86	1353.84	1353.83	1353.81	1353.80	1353.79
GIRDER 1	1354.02	1353.99	1353.97	1353.95	1353.93	1353.91	1353.90	1353.88	1353.87	1353.85	1353.84
GIRDER 2	1354.22	1354.20	1354.18	1354.16	1354.14	1354.12	1354.10	1354.09	1354.07	1354.06	1354.05
CROWN	1354.33	1354.30	1354.28	1354.26	1354.24	1354.22	1354.21	1354.19	1354.18	1354.16	1354.15
GIRDER 3	1354.22	1354.20	1354.18	1354.16	1354.14	1354.12	1354.10	1354.09	1354.07	1354.06	1354.05
GIRDER 4	1354.02	1353.99	1353.97	1353.95	1353.93	1353.91	1353.90	1353.88	1353.87	1353.85	1353.84
EDGE OF DECK	1353.96	1353.94	1353.92	1353.90	1353.88	1353.86	1353.84	1353.83	1353.81	1353.80	1353.79

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
SUPERSTRUCTURE		SHEET 11 OF 13	

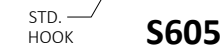
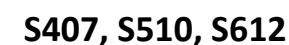
SCALE =

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 16,940 LBS
S401	222	31'-5"			DECK - TOP & BTM. LONGIT.
S502	394	19'-5"			DECK - TOP & BTM. TRANS.
S603	44	11'-4"	X		DECK - TOP - AT RAIL POSTS TRANS.
S604	72	6'-0"			DECK - TOP - AT INT. RAIL POSTS LONGIT.
S605	16	4'-8"	X		DECK - TOP - AT EXT. RAIL POSTS LONGIT.
S406	12	6'-6"			DIAPHRAGMS - BTM. HORIZ.
S407	48	3'-5"	X		DIAPHRAGMS - BTM. VERT.
S508	16	7'-10"	X		DIAPHRAGMS VERT.
S509	66	10'-4"	X		DIAPHRAGMS VERT.
S510	78	6'-11"	X		DIAPHRAGMS - TOP VERT.
S511	12	10'-2"	X		DIAPHRAGMS - EXT. VERT.
S612	8	6'-2"	X		DIAPHRAGMS - EXT. HORIZ.
S413	8	2'-9"			DIAPHRAGMS - EXT. VERT.
S614	36	5'-9"			DIAPHRAGMS - F.F. HORIZ.
S615	20	19'-10"			DIAPHRAGMS - B.F. HORIZ.
S516	16	6'-0"			DIAPHRAGMS - GIRDERS HORIZ.

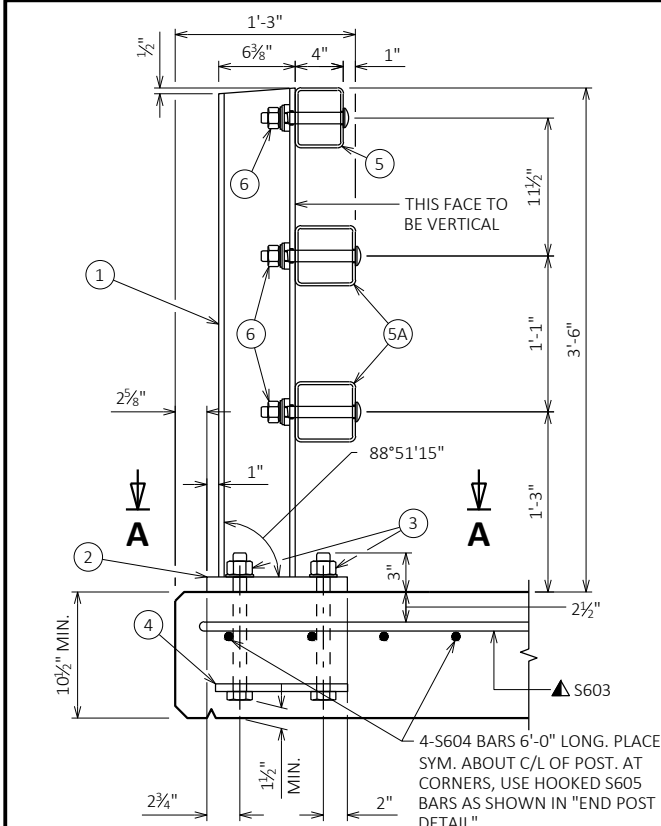
LEGEND

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

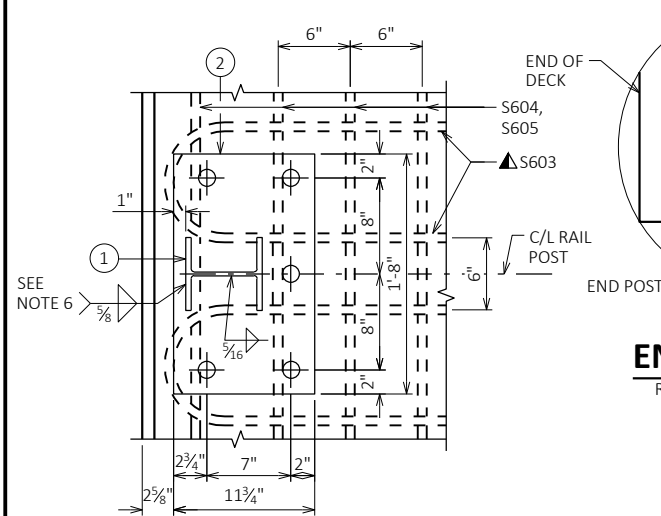
 COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.



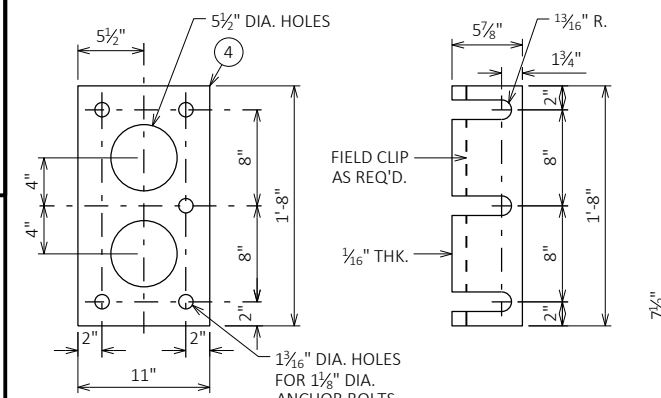
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-157			
DRAWN BY		SMS	PLANS CK'D ETP
SUPERSTRUCTURE DETAILS		SHEET 12 OF 13	



SECTION THRU RAILING ON DECK



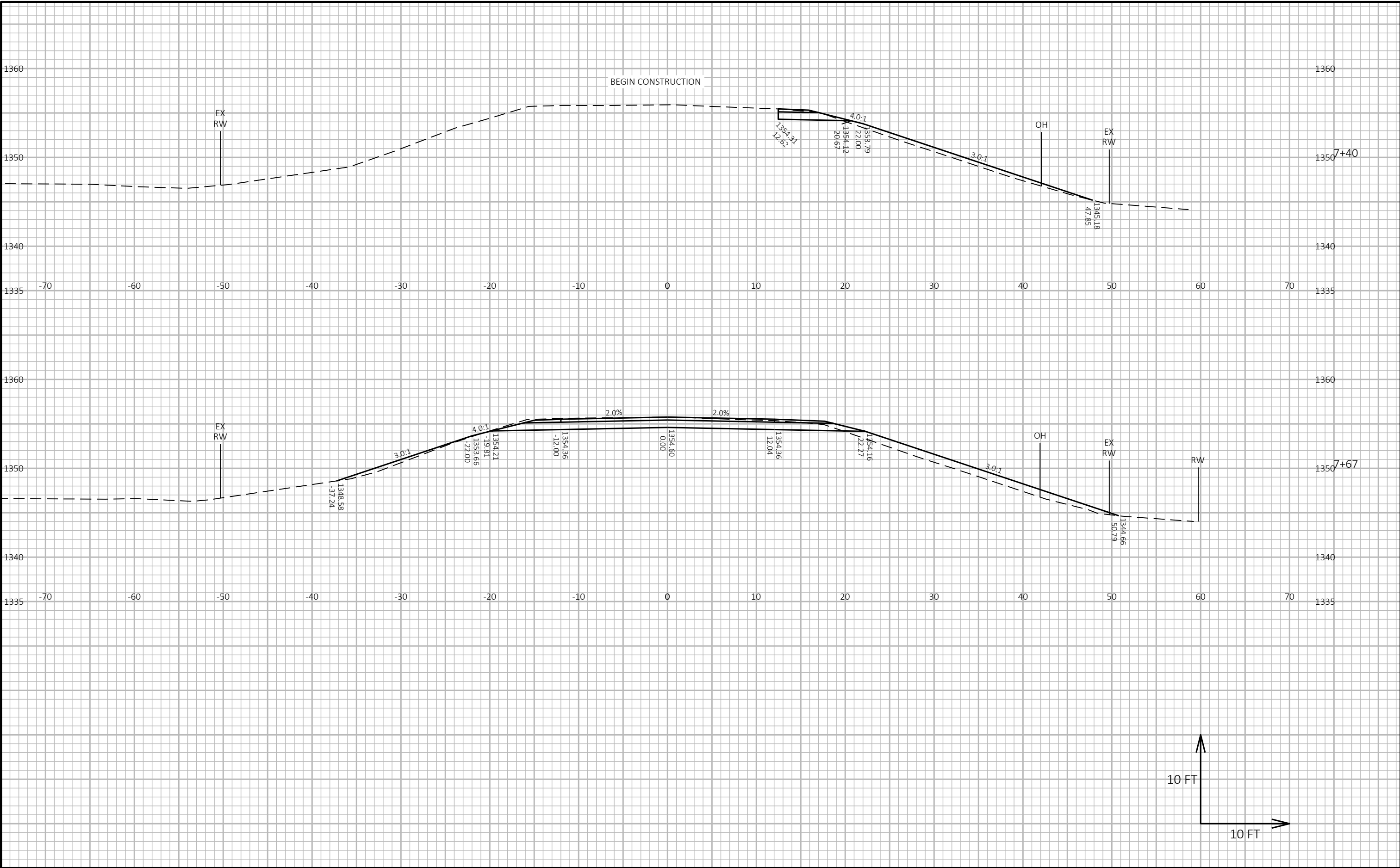
SECTION A-A



DIVISION 1 -- CTH A

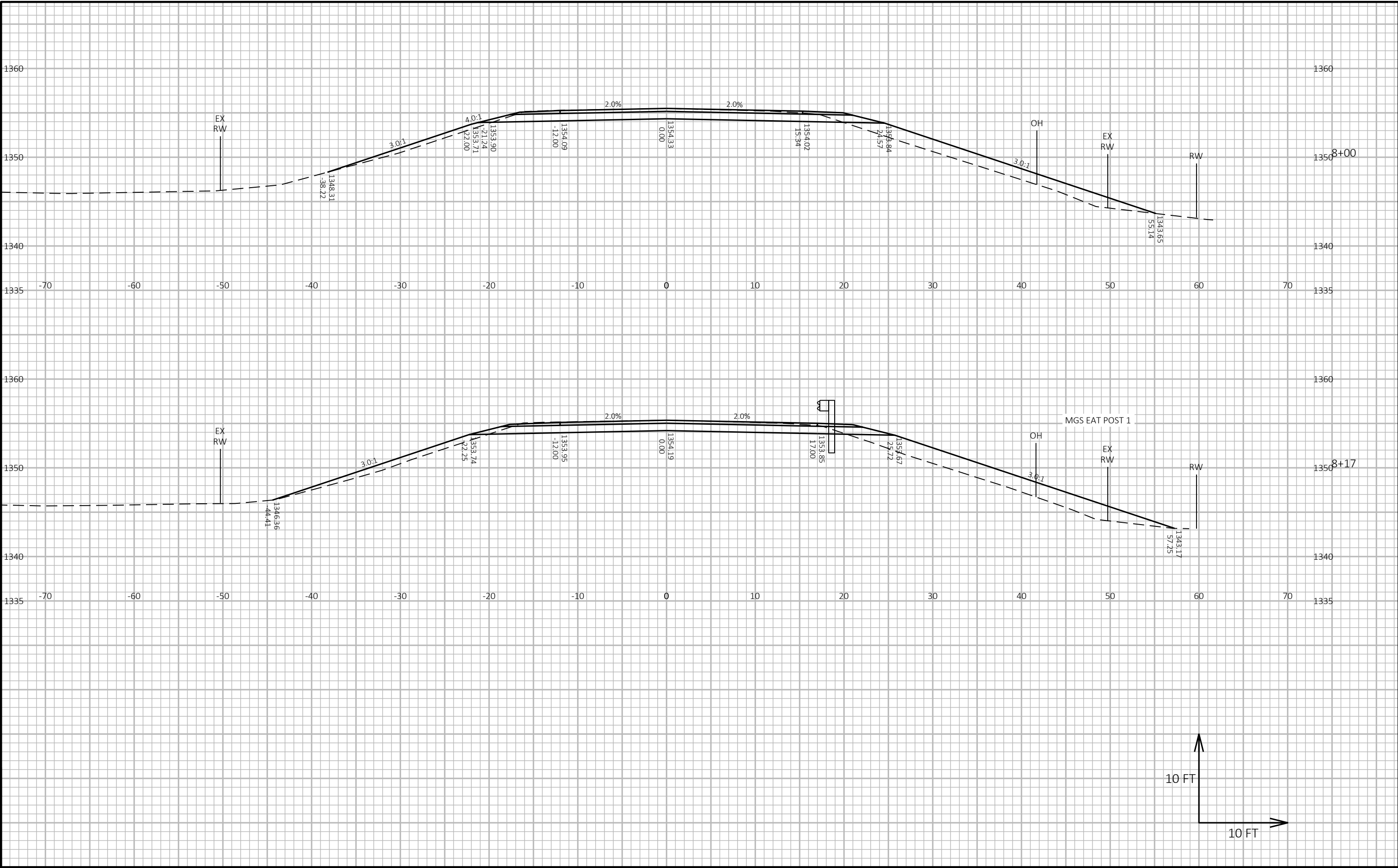
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1	1.25	NOTE 4
7+40	0.00	0.00	0.00	11.32	0	0	0	0	0	0
7+67	27.00	35.68	5.00	23.10	18	3	17	18	21	-6
8+00	33.00	40.72	5.00	47.05	47	6	43	65	75	-19
8+17	16.60	42.26	5.00	65.08	26	3	34	91	118	-39
8+42	24.98	44.49	5.00	65.93	40	5	61	131	194	-80
8+67	25.02	43.67	5.00	46.12	41	5	52	172	259	-109
8+92	24.98	41.81	5.00	29.17	40	5	35	212	303	-118
9+00	8.42	41.20	5.00	18.90	13	2	7	225	311	-115
9+17	16.56	40.24	5.00	10.38	25	3	9	250	323	-105
9+50	33.44	36.31	5.00	14.14	47	6	15	297	341	-82
9+61	11.47	35.10	5.00	37.05	15	2	11	312	355	-83
10+39	0.00	39.57	5.00	28.08	0	0	0	312	355	-83
10+50	11.47	44.17	5.00	22.02	18	2	11	330	369	-81
10+83	33.44	53.68	5.00	21.92	61	6	27	391	403	-60
11+00	16.56	57.20	5.00	29.49	34	3	16	425	423	-49
11+08	8.42	57.70	5.00	34.66	18	2	10	443	435	-45
11+33	24.98	58.83	5.00	38.72	54	5	34	497	478	-39
11+58	25.02	58.04	5.00	40.08	54	5	37	551	524	-36
11+83	24.98	52.30	5.00	52.05	51	5	43	602	578	-44
12+00	16.60	48.82	5.00	39.85	31	3	28	633	613	-51
12+33	33.00	43.95	5.00	12.61	57	6	32	690	653	-40

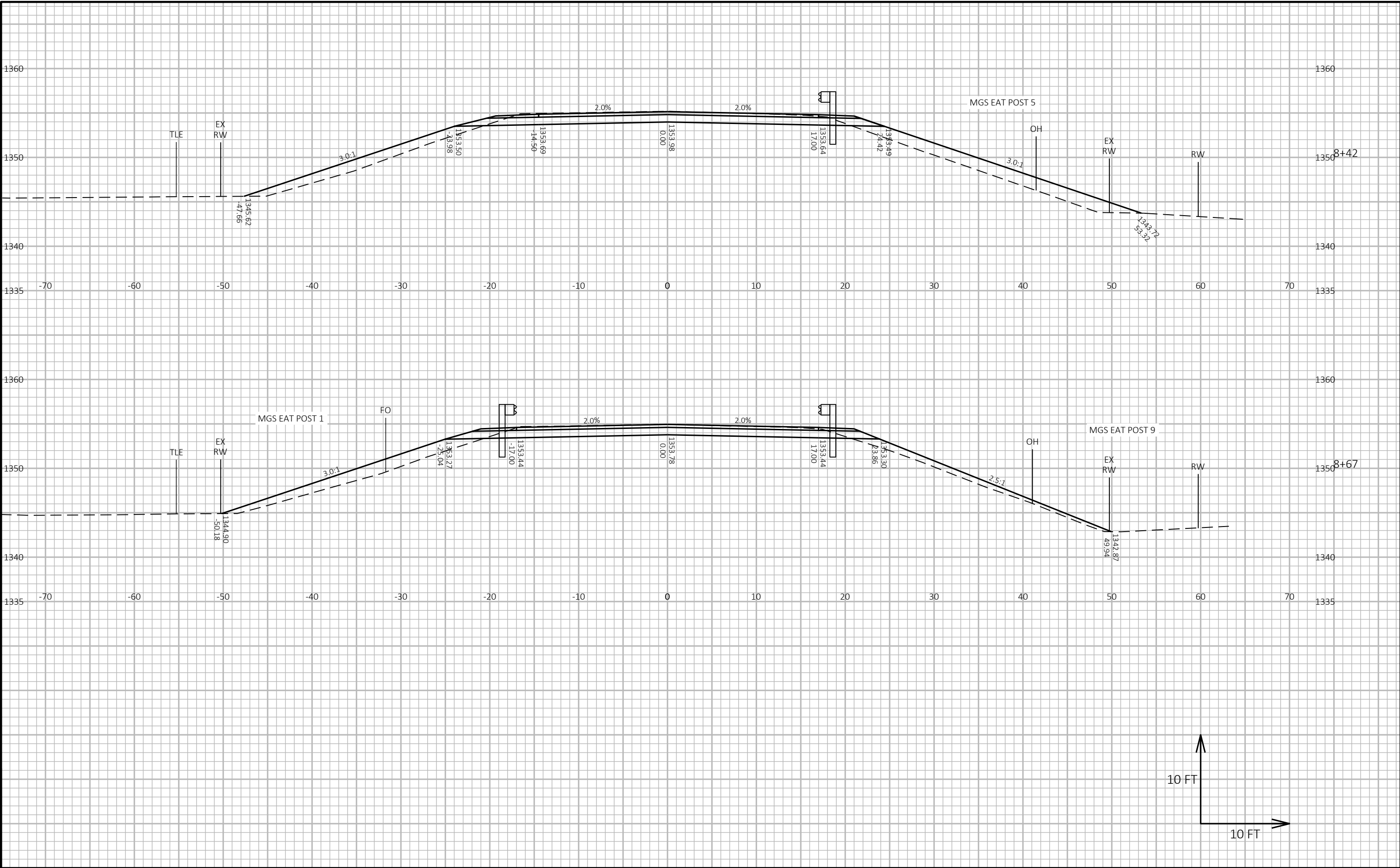
Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL THIS DOES NOT SHOW UP IN CROSS SECTIONS DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME (CUT - SALVAGED PAVT) - (FILL * FILL FACTOR)
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	
3 - FILL	
4 - MASS ORDINATE	



9

9

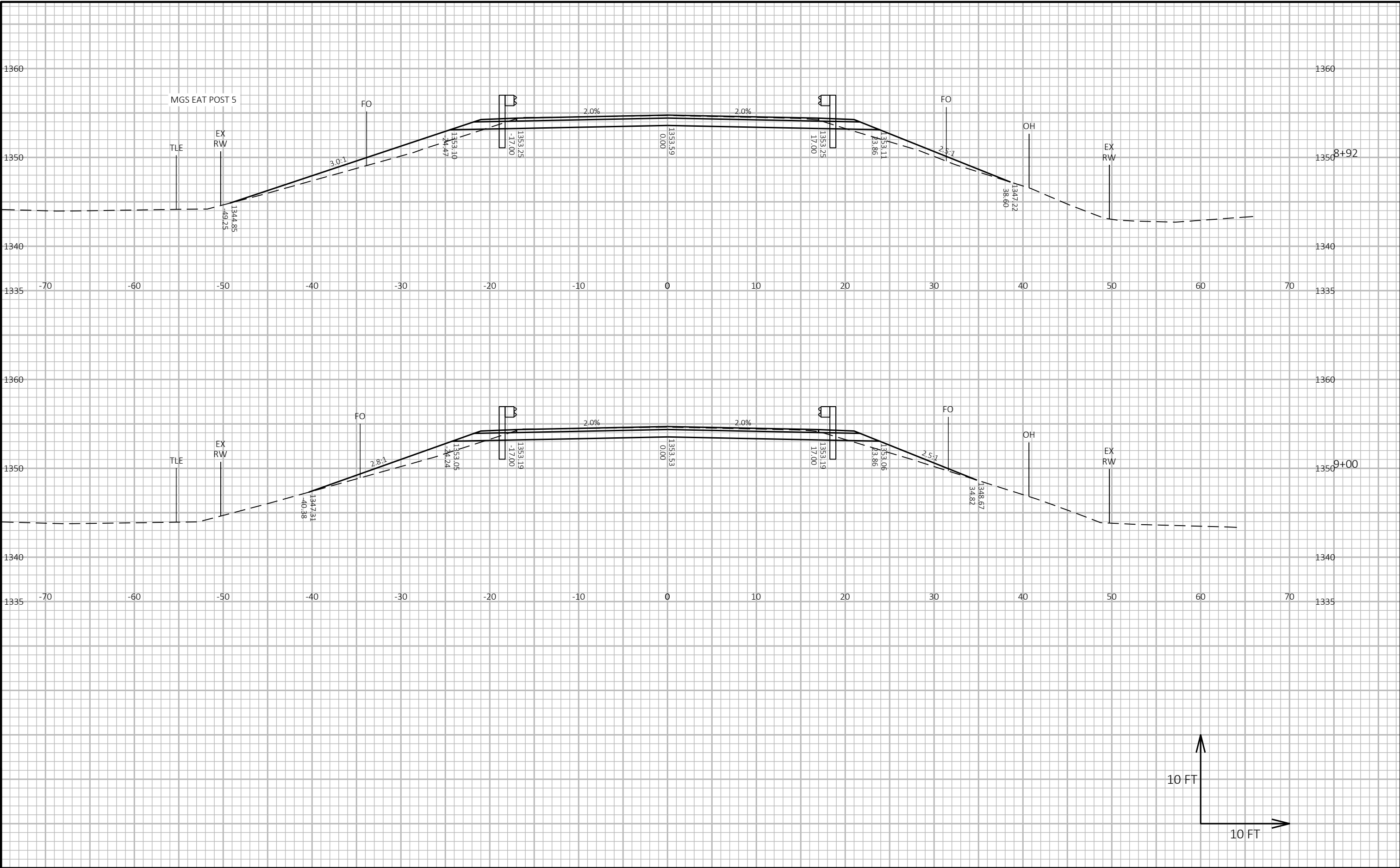


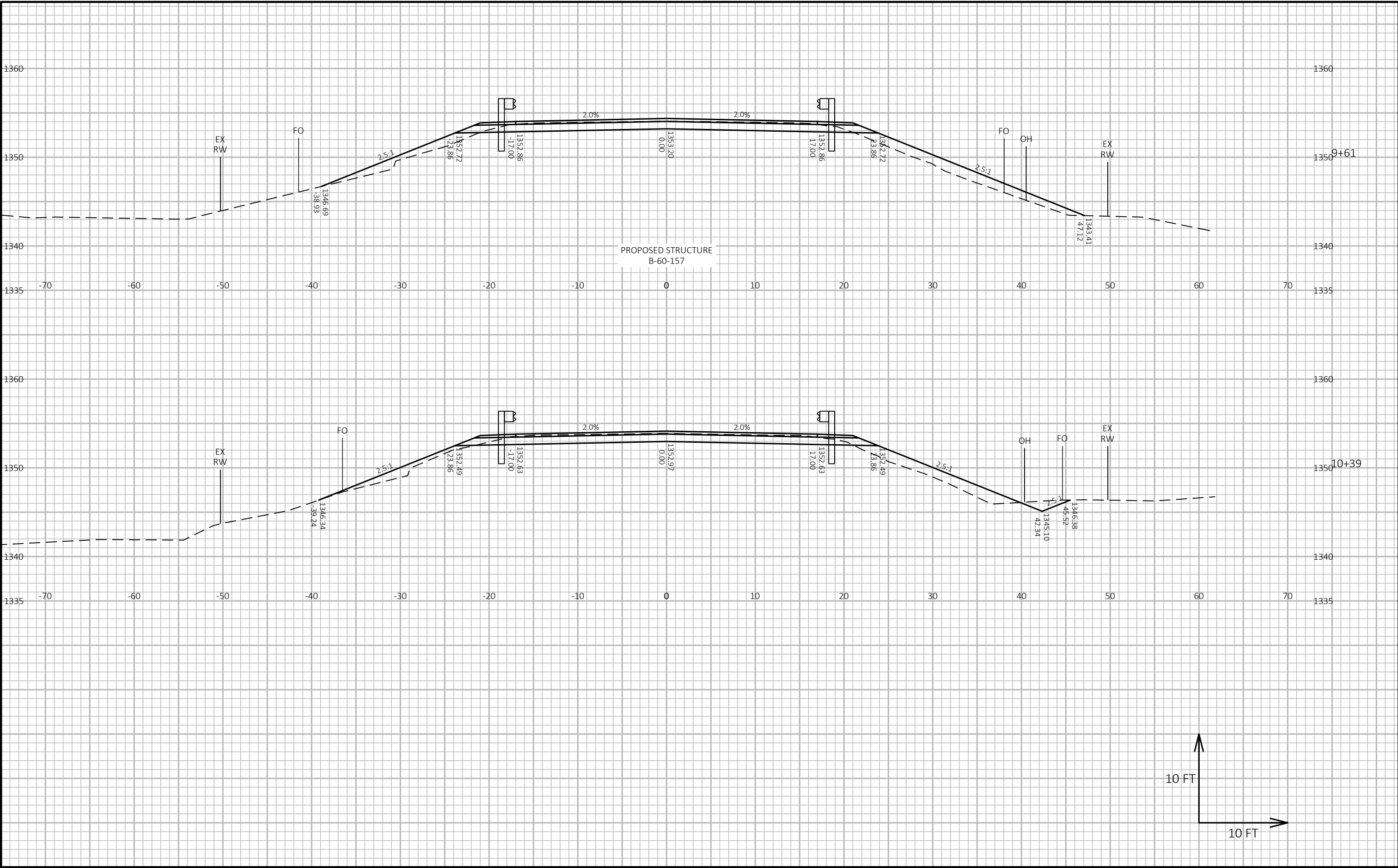


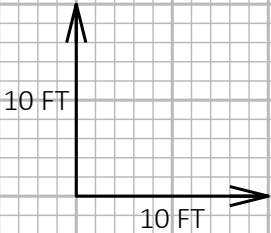
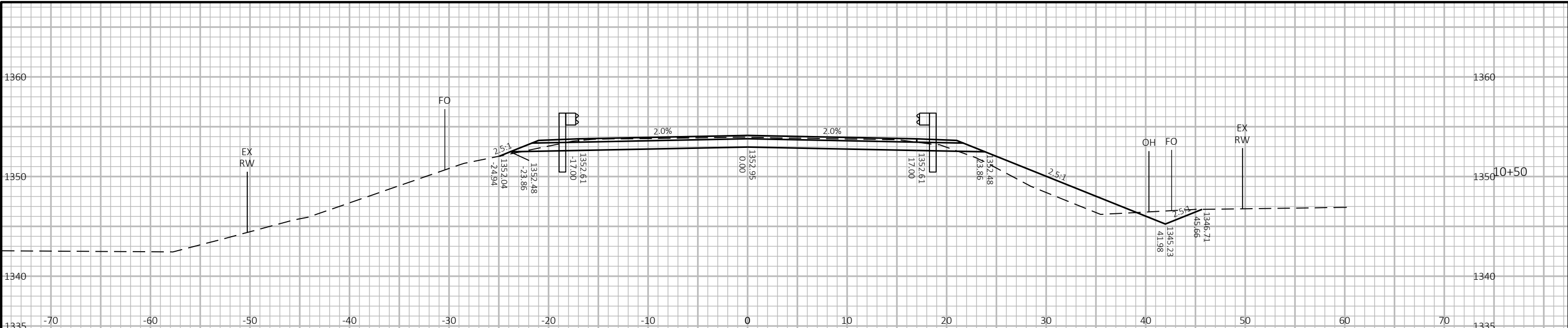
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PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	CROSS SECTIONS: CROSS SECTIONS	SHEET E
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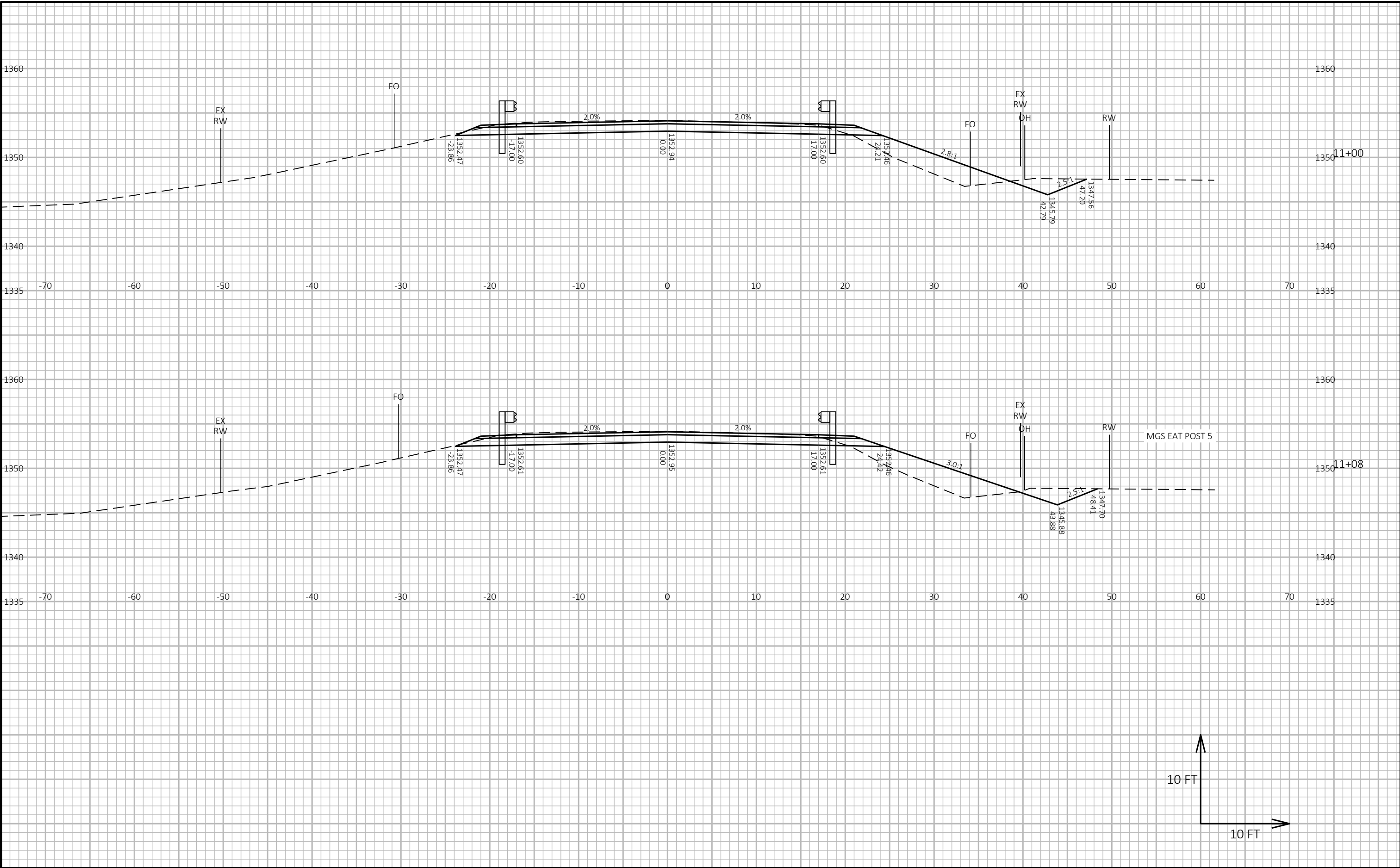




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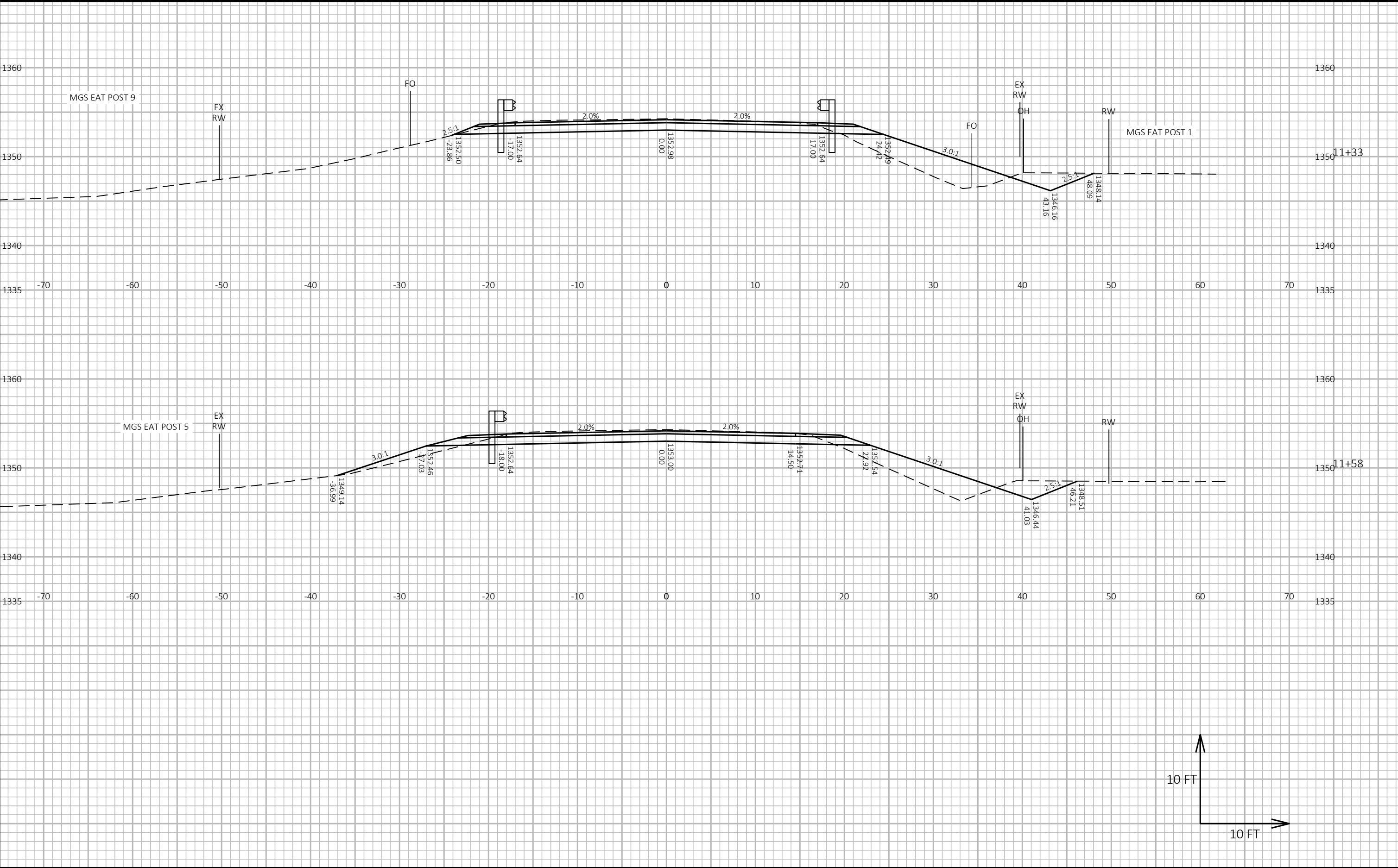
PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	CROSS SECTIONS: CROSS SECTIONS	SHEET E
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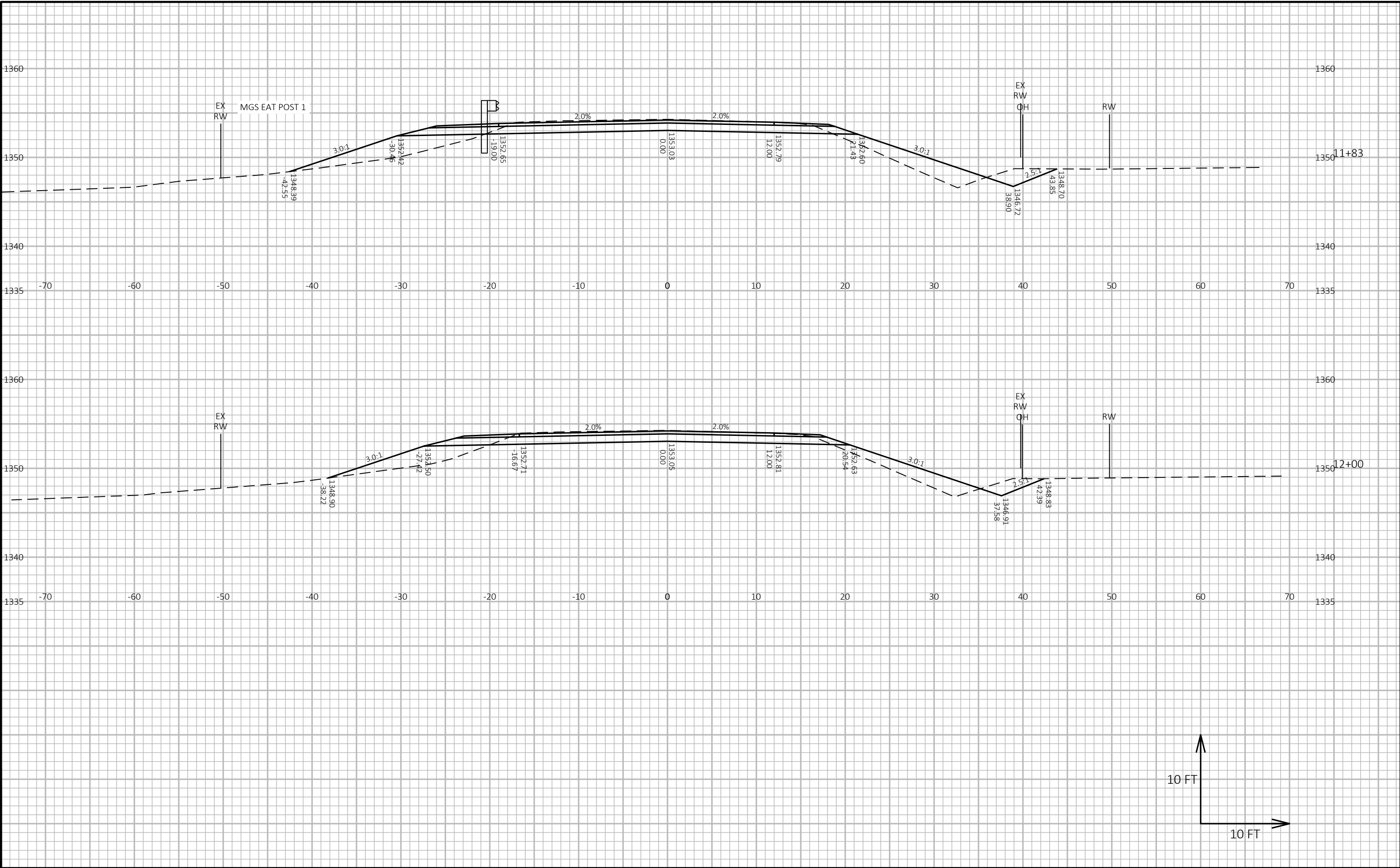


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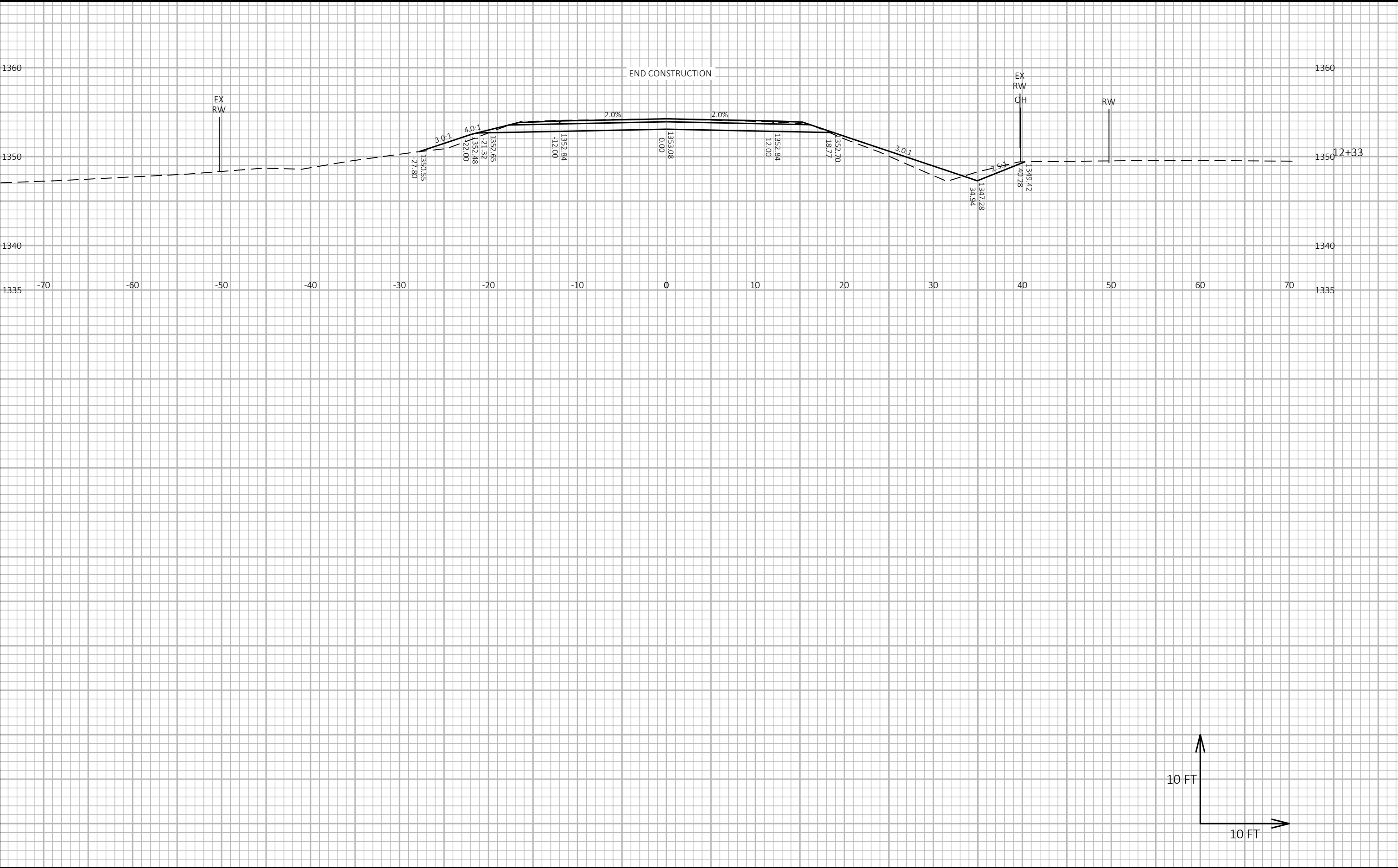
PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	CROSS SECTIONS: CROSS SECTIONS	SHEET E
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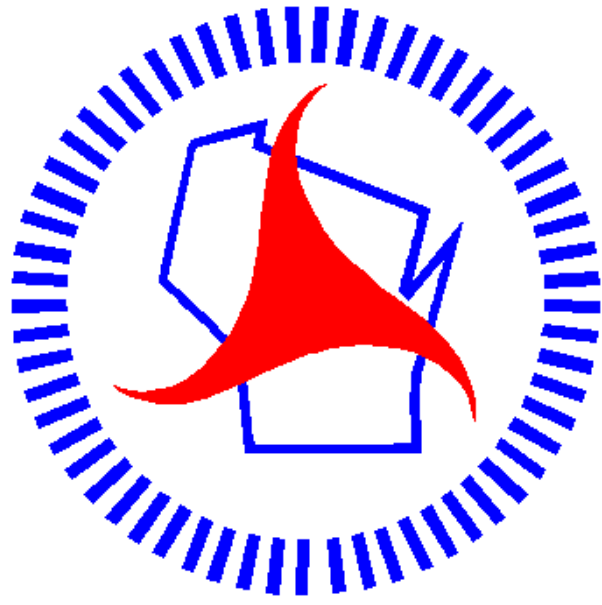


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PROJECT NO: 8887-03-76	HWY: CTH A	COUNTY: TAYLOR	CROSS SECTIONS: CROSS SECTIONS	SHEET E
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Notes



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