MAD

NOVEMBER 2019

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile (Includes Erosion Control Plan)
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 = 48

PROJECT ID: 5699-00-76

WITH: N/A

COUNTY: IOWA

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5699-00-76		

TOWN OF DODGEVILLE, SURVEY ROAD

(BRANCH MINERAL POINT CREEK BRIDGE B-25-187)

TOWN ROAD

IOWA COUNTY

10

N

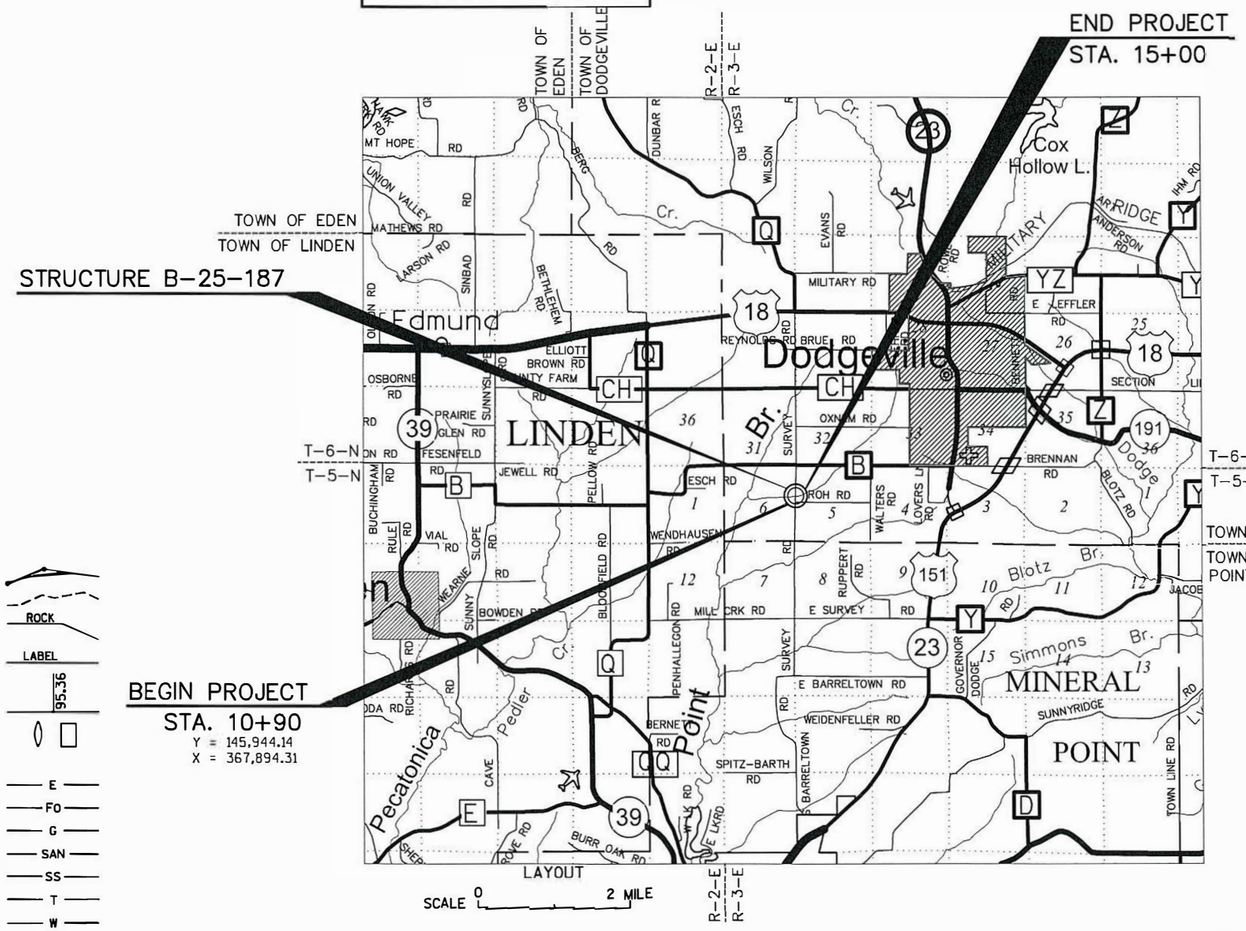
DESIGN DESIGNATION

A.A.D.T. (2020)	=	205
A.A.D.T. (2040)	=	310
D.H.V.	=	28
D.D.	=	60/40
T.	=	10% (ASSUMED)
DESIGN SPEED	=	30 MPH
ESALS	=	66,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

STATE PROJECT NUMBER
5699-00-76



TOTAL NET LENGTH OF CENTERLINE = 0.078 MILES

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), IOWA COUNTY."

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

ACCEPTED FOR

COUNTY of IOWA

4/22/2019 (Date) Carl E Hill (Highway Commissioner)

ACCEPTED FOR

TOWN of DODGEVILLE

4/22/2019 (Date) Curt Peterson (Town Chairman)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.

Engineers - Architects - Surveyors

WISCONSIN ELLERY A. SCHAFFER E-41742-6 SPRING GREEN, WI PROFESSIONAL ENGINEER

4/16/2019 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: JEWELL ASSOCIATES ENGINEERS, INC.

Designer: JEWELL ASSOCIATES ENGINEERS, INC.

APPROVED FOR THE DEPARTMENT

4/22/2019 (Date) Mark Westerveld (Signature)

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left–Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius	T	Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right–Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right–of–Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard
		RDWY	Roadway		

GENERAL NOTES

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

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

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

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED/EMATTED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

WHEN THE QUANITY OF THE ITEM OF BASE AGGREGATE DENSE, BREAKER RUN, OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON. THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE, TEMPORARY DITCH CHECKS AND CULVERT PIPE CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH/EMAT ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT OR STOCKPILE MATERIALS BEYOND THE EXISTING TOE OF SLOPE FROM STA. 11+77 – STA. 12+39, RT.; STA. 12+41 – STA. 12+43, LT.; STA. 12+41 – STA. 12+42, RT.; STA. 12+53 – STA. 13+21, RT.; STA. 12+57 – STA. 12+71, LT.; STA. 12+93 – STA. 13+85, LT.; AND STA. 13+79 – STA. 14+12, RT.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN. 4–INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2 ¼–INCH LOWER LAYER AND A 1 ¾–INCH UPPER LAYER.

INLET & OUTLET ELEVATIONS FOR CULVERT PIPES AS SHOWN ON THE PLAN MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS.

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

CONTACTS

DESIGN CONSULTANT

JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PH: (608) 459–6027
CELL: (608) 341–8159
EMAIL: ellery.schaffer@jewellassoc.com

IOWA COUNTY HIGHWAY DEPARTMENT

1215 NORTH BEQUETTE STREET
DODGEVILLE, WI 53533
ATTN: CRAIG HARDY, COMMISSIONER
PH: (608) 935–3381
CELL: (608) 574–2935
EMAIL: craig.hardy@iowacounty.org

DNR LIAISON

STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ANDY BARTA
PHONE: (608) 275–3308
CELL: (608) 235–2955
EMAIL: Andrew.Barta@wisconsin.gov

TOWN OF DODGEVILLE

108 EAST LEFFLER STREET
DODGEVILLE, WI 53533
ATTN: CURT PETERSON, CHAIRMAN
PH: (608) 935–5808
EMAIL: twnclerk@mhtc.net

UTILITIES

ELECTRIC

ALLIANT ENERGY
4902 NORTH BILTMORE LANE
MADISON, WI 53713
ATTN: MICHAEL BROLIN
OFFICE: (608) 458–4871
EMAIL: michaelbrolin@alliantenergy.com

TELEPHONE

FRONTIER COMMUNICATIONS
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
ATTN: JERRY MOORE
PH: (608) 742–9507
CELL: (608) 346–0353
EMAIL: jerald.r.moore@ftr.com

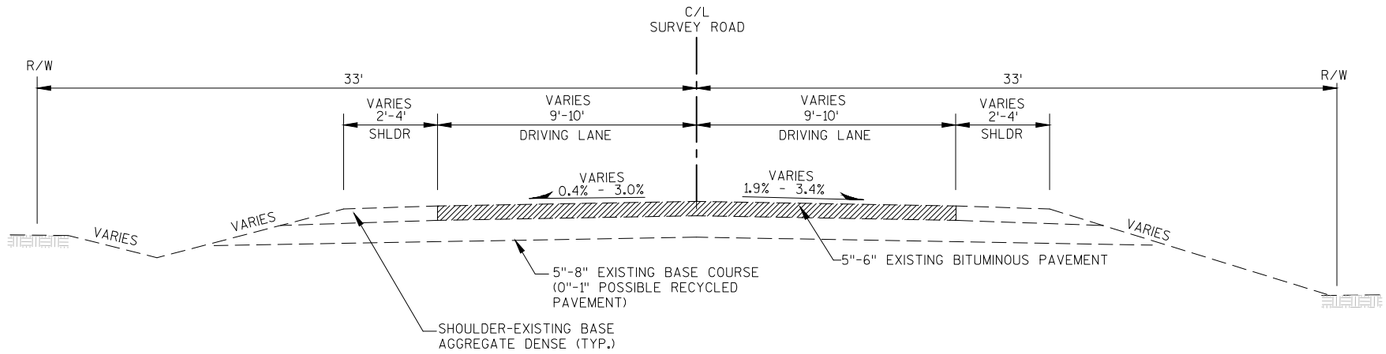
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

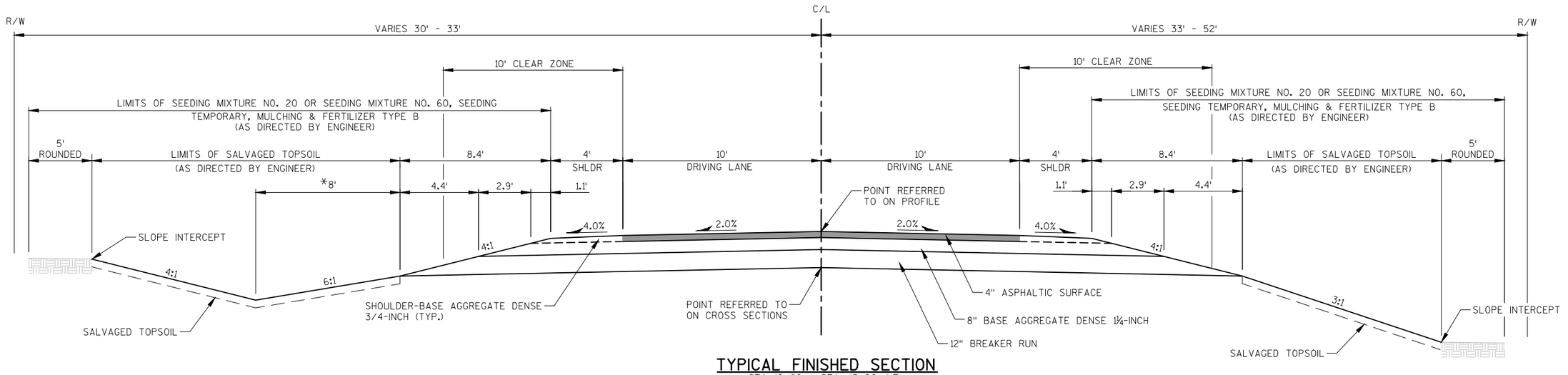
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA= 0.95 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.79 ACRES

2



TYPICAL EXISTING SECTION



TYPICAL FINISHED SECTION

STA. 10+90 - STA. 15+00, LT.
STA. 11+25 - STA. 15+00, RT.
STA. 13+75 - STA. 15+00, RT.
STA. 14+13 - STA. 15+00, LT.

CUT

* VARIES 5'-8' STA. 10+90 - STA. 11+25

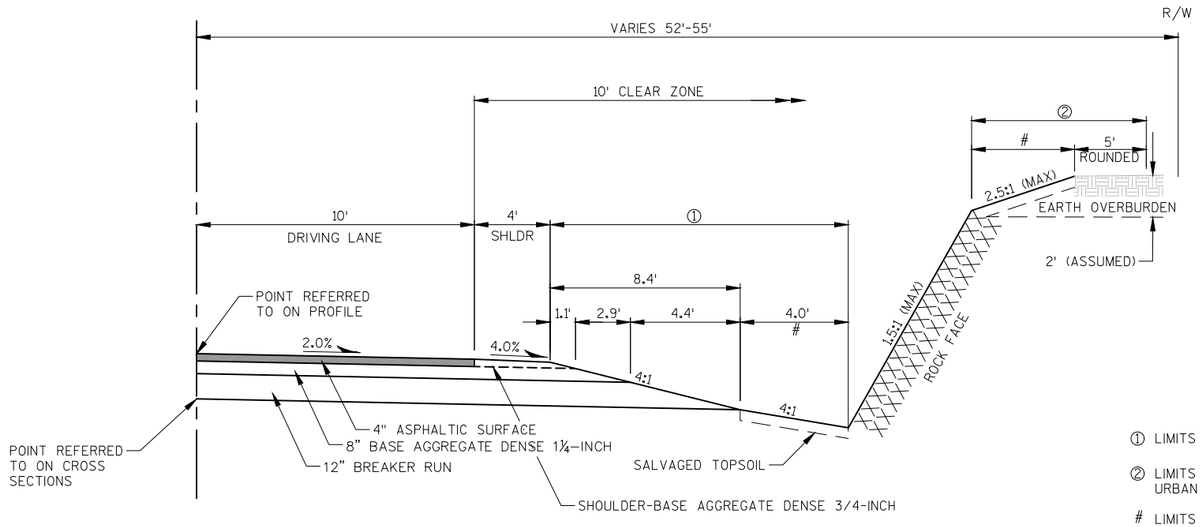
NOTE: 4:1 (MAX) - FORESLOPE
6:1 (MAX) - BACKSLOPE

FILL

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	TYPICAL EXISTING SECTION AND TYPICAL FINISHED SECTION	SHEET 3	E

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\TYPICALS\TYPICAL SECTIONS – SURVEY RD.DWG
LAYOUT : TYP SECTIONS
PLOT DATE : 4/16/2019
PLOT TIME : 8:33:37 AM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

2



TYPICAL FINISHED SECTION

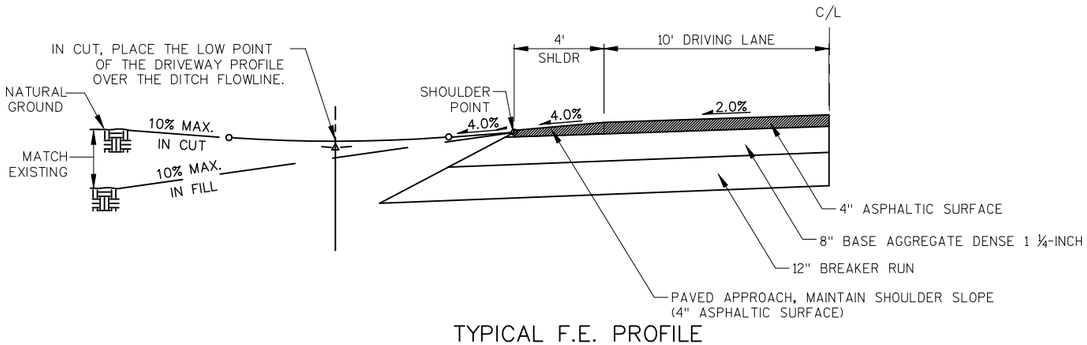
CUT

STA. 10+90 - STA. 11+25, RT.

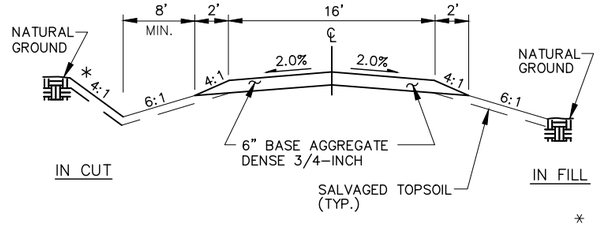
① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, MULCHING & FERTILIZER TYPE B

② LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B & EROSION MAT URBAN CLASS I TYPE B

\# LIMITS OF SALVAGED TOPSOIL



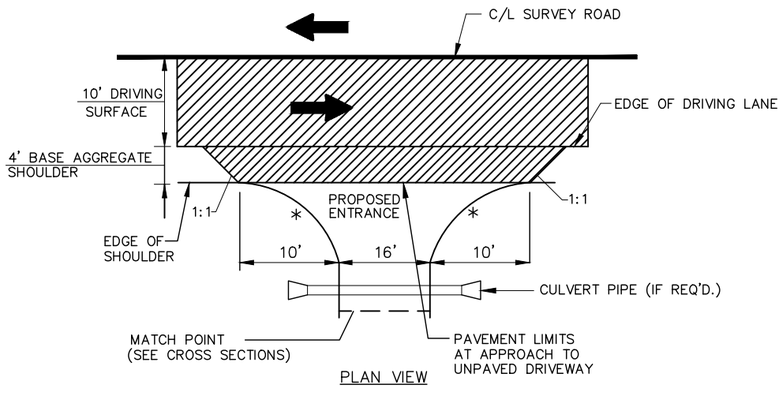
TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.

F.E. - STA. 13+92, LT.
F.E. - STA. 14+25, RT.

* STA. 70'B'+40 - STA. 71'B'+00, LT. - 2.5:1 (MAX) BACKSLOPE



PLAN VIEW

APPROACH AT F.E.

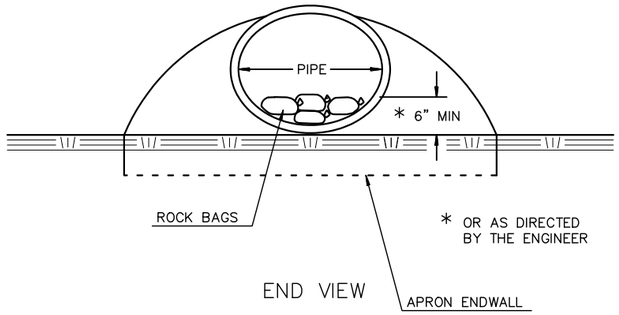
TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

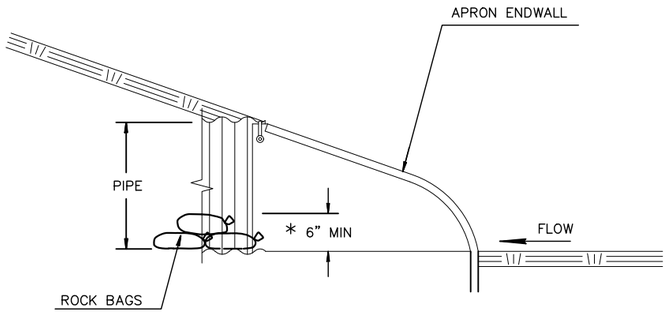
* RADIUS = 10'

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	TYPICAL FINISHED SECTION/CONSTRUCTION DETAILS	SHEET 4	E

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\TYPICALS\TYP SECTION – CONST DET.DWG
LAYOUT : LAYOUT 1
PLOT DATE : 4/16/2019
PLOT TIME : 8:33:58 AM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'



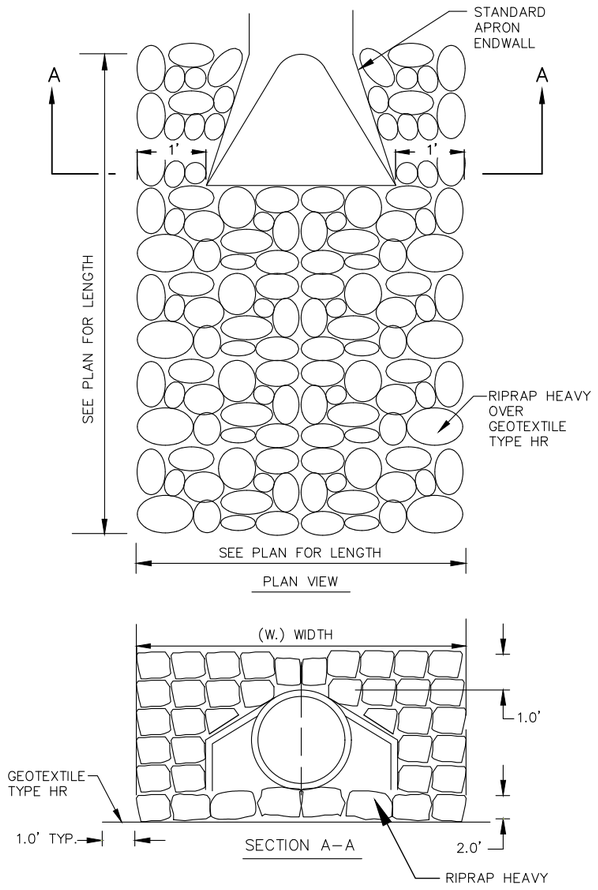
END VIEW



SIDE VIEW

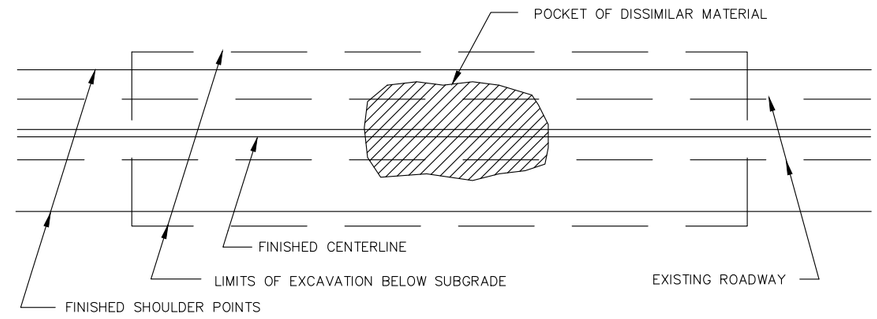
ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19

CULVERT PIPE CHECKS

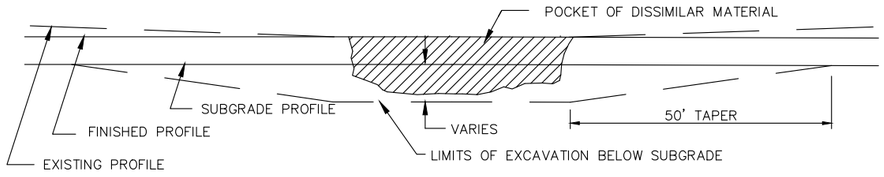


RIPRAP DISCHARGE APRON

(UNLESS NOTED OTHERWISE ON PLAN)

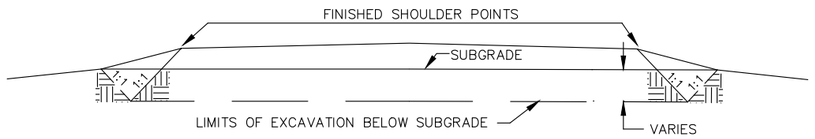


PLAN VIEW



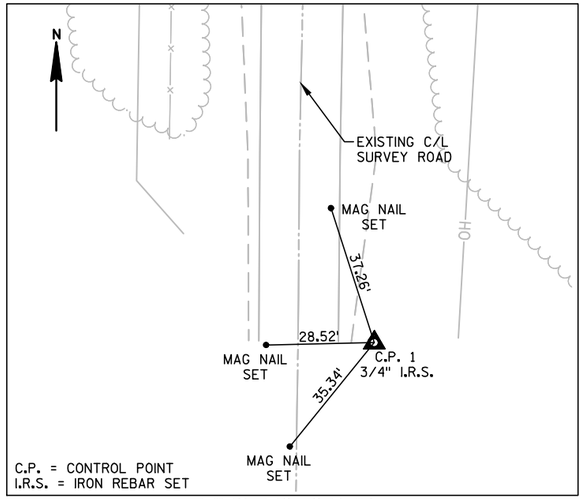
PROFILE VIEW

RURAL EXCAVATION BELOW SUBGRADE (E.B.S.)



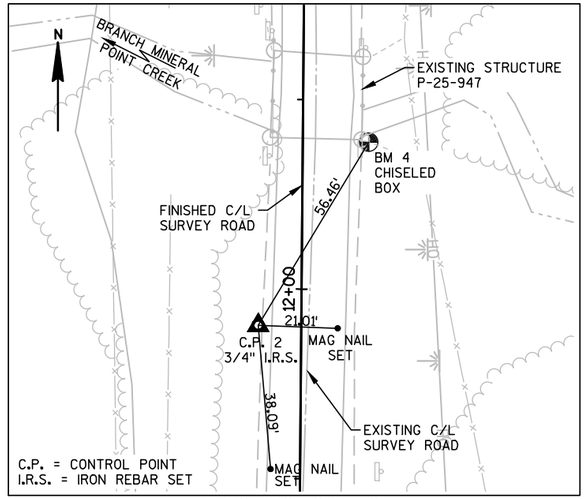
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.



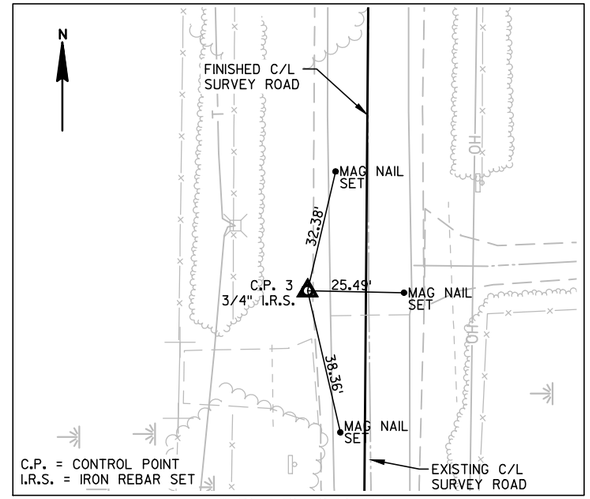
TIES TO C.P.#1

STA. 9+39.62; 18.77' RT.
Y = 145,793.61
X = 367,911.84



TIES TO C.P.#2

STA. 11+90.32; 11.38' LT.
Y = 146,044.55
X = 367,883.76



TIES TO C.P.#3

STA. 14+14.99; 15.42' LT.
Y = 146,269.24
X = 367,881.57

MAINLINE STATION LAYOUT

STATION	Y	X	COMMENTS
10+90.00	145,944.14	367,894.31	BEGIN PROJECT
11+00.00	145,954.14	367,894.40	–
11+50.00	146,004.14	367,894.81	–
12+00.00	146,054.14	367,895.22	–
12+31.83	146,085.96	367,895.48	END OF DECK
12+50.00	146,104.13	367,895.63	–
12+68.33	146,122.46	367,895.78	END OF DECK
13+00.00	146,154.13	367,896.05	–
13+50.00	146,204.13	367,896.46	–
14+00.00	146,254.13	367,896.87	–
14+50.00	146,304.13	367,897.28	–
15+00.00	146,354.12	367,897.70	END OF PROJECT

'A' LINE STATION LAYOUT

STATION	Y	X	COMMENTS
50'A'+00.00	146,246.87	367,806.81	BEGIN CONSTRUCTION
50'A'+50.00	146,246.46	367,856.81	–
50'A'+76.00	146,246.24	367,882.81	END CONSTRUCTION

'B' LINE STATION LAYOUT

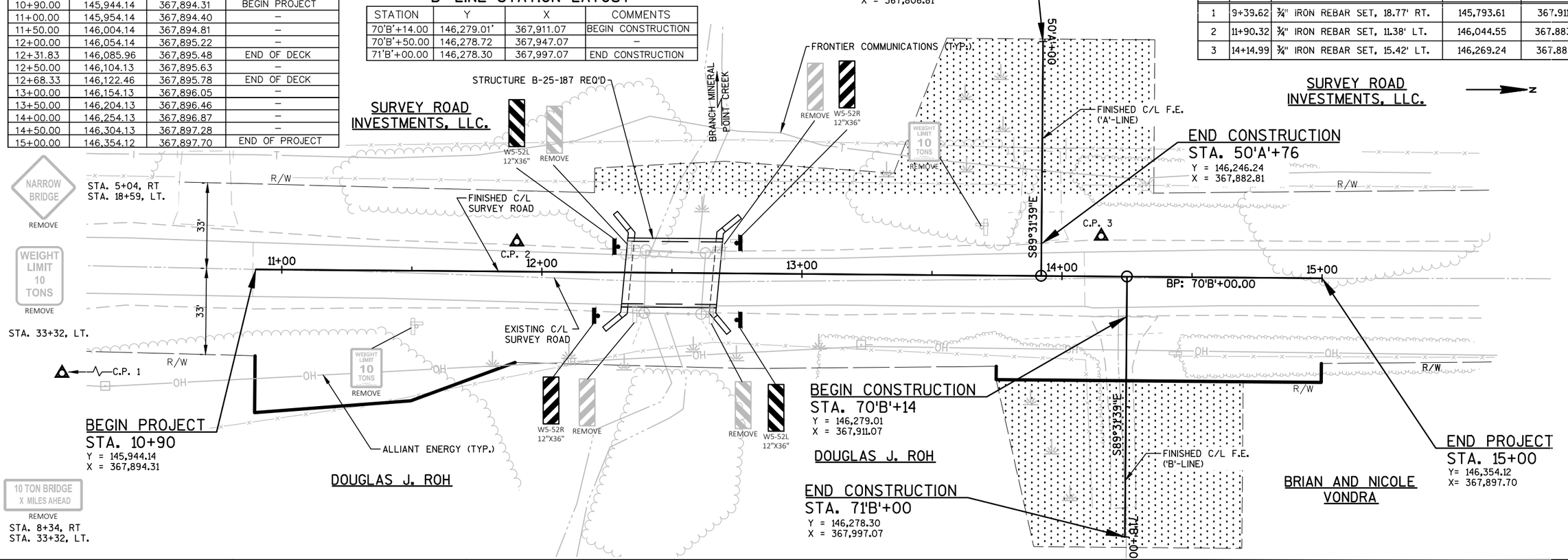
STATION	Y	X	COMMENTS
70'B'+14.00	146,279.01'	367,911.07	BEGIN CONSTRUCTION
70'B'+50.00	146,278.72	367,947.07	–
71'B'+00.00	146,278.30	367,997.07	END CONSTRUCTION

BEGIN CONSTRUCTION
STA. 50'A'+00

Y = 146,246.87
X = 367,806.81

CONTROL POINTS

NO.	STA.	DESCRIPTION	Y	X
1	9+39.62	¾" IRON REBAR SET, 18.77' RT.	145,793.61	367,911.84
2	11+90.32	¾" IRON REBAR SET, 11.38' LT.	146,044.55	367,883.76
3	14+14.99	¾" IRON REBAR SET, 15.42' LT.	146,269.24	367,881.57



PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	ALIGNMENT AND TIES & PERMANENT SIGNING	SHEET 6	E

5699-00-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0006	201.0205	Grubbing	STA	6.000	6.000
0010	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0012	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 12+51	LS	1.000	1.000
0018	205.0100	Excavation Common	CY	1,000.000	1,000.000
0020	205.0200	Excavation Rock	CY	20.000	20.000
0024	206.1000	Excavation for Structures Bridges (structure) 01. B-25-187	LS	1.000	1.000
0026	210.1500	Backfill Structure Type A	TON	250.000	250.000
0028	213.0100	Finishing Roadway (project) 01. 5699-00-76	EACH	1.000	1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	210.000	210.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	650.000	650.000
0036	311.0110	Breaker Run	TON	1,070.000	1,070.000
0038	455.0605	Tack Coat	GAL	45.000	45.000
0040	465.0105	Asphaltic Surface	TON	210.000	210.000
0042	502.0100	Concrete Masonry Bridges	CY	121.000	121.000
0044	502.3200	Protective Surface Treatment	SY	140.000	140.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	4,290.000	4,290.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,900.000	14,900.000
0050	513.4061	Railing Tubular Type M	LF	78.000	78.000
0052	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0054	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0056	520.3318	Culvert Pipe Class III-A 18-Inch	LF	66.000	66.000
0058	550.0500	Pile Points	EACH	14.000	14.000
0060	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	210.000	210.000
0062	606.0300	Riprap Heavy	CY	245.000	245.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0072	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5699-00-76	EACH	1.000	1.000
0076	619.1000	Mobilization	EACH	0.450	0.450
0078	624.0100	Water	MGAL	29.000	29.000
0080	625.0500	Salvaged Topsoil	SY	1,700.000	1,700.000
0082	627.0200	Mulching	SY	2,950.000	2,950.000
0084	628.1504	Silt Fence	LF	1,000.000	1,000.000
0086	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000
0088	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0090	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0092	628.2008	Erosion Mat Urban Class I Type B	SY	105.000	105.000
0094	628.7504	Temporary Ditch Checks	LF	40.000	40.000

5699-00-76

Line	Item	Item Description	Unit	Total	Qty
0096	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0098	629.0210	Fertilizer Type B	CWT	2.000	2.000
0100	630.0120	Seeding Mixture No. 20	LB	80.000	80.000
0102	630.0160	Seeding Mixture No. 60	LB	2.000	2.000
0104	630.0200	Seeding Temporary	LB	40.000	40.000
0106	633.5100	Markers Row	EACH	12.000	12.000
0108	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0110	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0112	638.2602	Removing Signs Type II	EACH	11.000	11.000
0114	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0116	642.5001	Field Office Type B	EACH	0.500	0.500
0118	643.0420	Traffic Control Barricades Type III	DAY	1,030.000	1,030.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	1,600.000	1,600.000
0122	643.0900	Traffic Control Signs	DAY	800.000	800.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0128	645.0120	Geotextile Type HR	SY	490.000	490.000
0132	650.4500	Construction Staking Subgrade	LF	536.000	536.000
0134	650.5000	Construction Staking Base	LF	536.000	536.000
0138	650.6500	Construction Staking Structure Layout (structure) 01. B-25-187	LS	1.000	1.000
0140	650.9910	Construction Staking Supplemental Control (project) 01. 5699-00-76	LS	1.000	1.000
0144	650.9920	Construction Staking Slope Stakes	LF	536.000	536.000
0146	690.0150	Sawing Asphalt	LF	43.000	43.000
0148	715.0502	Incentive Strength Concrete Structures	DOL	726.000	726.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
11+00 - 15+00	MAINLINE	4	4
50'A'+00 - 50'A'+76	A-LINE	1	1
70'B+14 - 71'B'+00	B-LINE	1	1
	TOTALS =	6	6

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	DESCRIPTION	203.0100 (EACH)
50'A'+66	'A'-LINE	18" CMP; L=22'	1
70'B'+22	'B'-LINE	18" CMP; L=53'	1
		TOTAL =	2

EARTHWORK SUMMARY

FROM/TO STA	LOCATION	CATEGORY 010 205.0100 EXCAVATION COMMON CUT (CY)	AVAILABLE MATERIAL (CY) (1)	CATEGORY 010 205.0200 EXCAVATION ROCK (CY)	EXPANDED ROCK (CY) FACTOR 1.1 (2)	UNEXPANDED FILL (CY)	FILL (25%) (3)	MASS ORDINATE +/- (CY) (4)	WASTE (CY)
10+90 - 15+00	MAINLINE	801	801	20	22	110	110	691	691
50'A'+00 - 50'A'+76	A - LINE	42	42	0	0	221	277	-235	-235
70'B'+14 - 71'B'+00	B - LINE	157	157	0	0	127	159	-2	-2
	TOTALS =	1,000	1,000	20	22	458	546		454

NOTES:
1.) AVAILABLE MATERIAL = CUT
2.) EXPANDED ROCK FACTOR = 1.1
3.) FILL 25%: [UNEXPANDED FILL-(ROCK*ROCK FACTOR)]*1.25
4.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

3

BASE AGGREGATE DENSE / BREAKER RUN

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	311.0110 BREAKER RUN (TON)
10+90 - 12+32	MAINLINE	30	248	406
12+68 - 15+00	MAINLINE	55	402	664
50'A'+00 - 50'A'+76	A - LINE	60	--	--
70'B'+14 - 71'B'+00	B - LINE	65	--	--
	TOTALS =	210	650	1070

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
10+90 - 12+32	MAINLINE	17	80
12+68 - 15+00	MAINLINE	28	130
	TOTALS =	45	210

CULVERT PIPES

STATION	LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH (EACH)	520.3318 CULVERT PIPE CLASS III-A 18-INCH (LF)
50'A'+65	A - LINE	2	40
70'B'+32	B - LINE	2	26
	TOTALS =	4	66

PIPE SIZE	MINIMUM THICKNESS (IN.) STEEL	ALUMINUM
18-INCH	0.064	0.060

RIPRAP & GEOTEXTILE

STATION - STATION	LOCATION	606.0300 RIPRAP HEAVY (CY)	645.0120 GEOTEXTILE TYPE HR (SY)
13+57 - 13+67	MAINLINE, LT.	4	14
13+98 - 14+08	MAINLINE, RT.	4	14
14+13 - 15+00	MAINLINE, LT.	52	122
14+40 - 15+00	MAINLINE, RT.	36	86
--	UNDISTRIBUTED	9	14
	TOTALS =	105	250

WATER

LOCATION	624.0100 (MGAL)
MAINLINE	29
TOTALS =	29

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)
10+90 - 15+00	MAINLINE	700	1,570	* 84	1.1	45	** 1.8	23
50'A'+00 - 50'A'+76	A - LINE	285	335	--	0.2	9	--	4
70'B'+14 - 71'B'+00	B - LINE	390	460	--	0.3	12	--	6
--	UNDISTRIBUTED	325	585	21	0.4	14	0.2	7
	TOTALS =	1,700	2,950	105	2.0	80	2.0	40

* STA. 10+90 - STA. 11+25, RT.

** WETLAND AREAS AS NOTED ON GENERAL NOTES SHEET.

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
11+25 - 12+42	MAINLINE, LT.	158	316
11+75 - 12+42	MAINILINE, RT.	102	204
12+57 - 13+48	MAINLINE, LT.	121	242
12+57 - 13+73	MAINLINE, RT.	155	310
50'A'+00 - 50'A'+58	'A'-LINE	168	336
70'B'+31 - 71'B'+00	'B'-LINE	120	240
--	UNDISTRIBUTED	176	352
	TOTALS =	1,000	2,000

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\DETAILS\SURVEY ROAD - MISC QUANTITIES.DWG
LAYOUT : QUANTITIES
PLOT DATE : 4/16/2019
PLOT TIME : 3:06:01 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

3

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
5699-00-76	4	2
TOTALS =	4	2

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
11+00	MAINLINE, LT.	8
11+00	MAINLINE, RT.	8
11+50	MAINLINE, RT.	8
70'B'+75	MAINLINE, LT.	8
-	UNDISTRIBUTED	8
	TOTALS =	40

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 (EACH)
50'A'+63	'A'-LINE, LT.	2
70'B'+32	'B'-LINE, LT.	2
-	UNDISTRIBUTED	2
	TOTALS =	6

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

MARKERS ROW

POINT #	STATION	LOCATION	633.5100 (EACH)
100	10+90.00	MAINLINE, 32.84' LT.	1
101	12+79.95	MAINLINE, 29.50' LT.	1
102	15+00.00	MAINLINE, 33.26' LT.	1
103	15+00.00	MAINLINE, 32.75' RT.	1
104	15+00.00	MAINLINE, 40.00' RT.	1
105	13+75.00	MAINLINE, 40.00' RT.	1
106	13+75.00	MAINLINE, 34.88' RT.	1
107	12+79.93	MAINLINE, 36.51' RT.	1
108	11+90.00	MAINLINE, 34.93' RT.	1
109	11+50.00	MAINLINE, 50.00' RT.	1
110	10+90.00	MAINLINE, 55.00' RT.	1
111	10+90.00	MAINLINE, 33.17' RT.	1
		TOTALS =	12

3

PERMANENT SIGNING

APPROX. STATION	POSITIION	SITE ID	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0612 POSTS WOOD 4X6 INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
5+04	RIGHT	MAINLINE	W5-2	NARROW BRIDGE	30X30	---	---	1	1
8+34	RIGHT	MAINLINE	R12-55	10 TON BRIDGE __MILES AHEAD	48X18	---	---	1	2
11+52	RIGHT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS	24X30	---	---	1	1
12+26	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+28	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+35	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
12+37	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
12+64	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
12+68	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
12+70	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+72	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
13+69	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS	24X30	---	---	1	1
18+59	LEFT	MAINLINE	W5-2	NARROW BRIDGE	30X30	---	---	1	1
33+32	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS	24X30	---	---	1	---
33+32	LEFT	MAINLINE	R12-55	10 TON BRIDGE __MILES AHEAD	48X18	---	---	1	2
					TOTALS =	4	12.00	11	12

TRAFFIC CONTROL

LOCATION	TRAFFIC CONTROL 643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	1,030	1,600	800	1
TOTALS =	1,030	1,600	800	1

CONSTRUCTION STAKING

STATION -STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	*650.6500 STRUCTURE LAYOUT (B-25-187) (L.S.)	650.9910 SUPPLEMENTAL CONTROL (5699-00-76) (L.S.)	650.9920 SLOPES STAKES (L.F.)
10+90 - 12+32	MAINLINE	142	142	---	---	142
12+68 - 15+00	MAINLINE	232	232	---	---	232
50'A'+00 - 50'A'+76	A - LINE	76	76	---	---	76
70'B'+14 - 71'B'+00	B - LINE	86	86	---	---	86
-	PROJECT	---	---	1	1	---
	TOTAL =	536	536	1	1	536

*CATEGORY 020

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
10+90	MAINLINE	21
15+00	MAINLINE	22
	TOTAL =	43

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\DETAILS\SURVEY ROAD - MISC QUANTITIES.DWG
LAYOUT : QUANTITIES
PLOT DATE : 4/16/2019
PLOT TIME : 8:35:23 AM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5699-00-02		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TOWN OF DODGEVILLE, SURVEY ROAD

(BRANCH MINERAL POINT CREEK BRIDGE (B-25-0187)

TOWN ROAD — IOWA COUNTY

CONSTRUCTION PROJECT NUMBER
5699-00-76

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.		
HOUSE	H.		
HOUSE TRAILER	H.T.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER) — o1040
R/W MONUMENT — o ● (SET)
R/W STANDARD — △ ▲ (SET)
SIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
FEE (HATCH VARIES)
TEMPORARY LIMITED EASEMENT
PERMANENT LIMITED EASEMENT
R/W BOUNDARY POINT — RWB20
PARCEL NUMBER — (8)
UTILITY PARCEL NUMBER — (92)
SIGN NUMBER (OFF PREMISE) — 21
BUILDING

PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
LOT & TIE LINES
SLOPE INTERCEPTS
CORPORATE LIMITS
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
NO ACCESS (BY ACQUISITION)
NO ACCESS (BY STATUTORY AUTHORITY)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
PROPOSED REFERENCE LINE
PARALLEL OFFSET
ENCROACHMENT — E-D/TYPE
HIGHWAY EASEMENT

CONVENTIONAL UTILITY SYMBOLS

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE	●	●
TELEPHONE POLE	●	●
TELEPHONE PEDESTAL	⊠	⊠
ELECTRIC TOWER	⊠	

NOTES

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

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

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

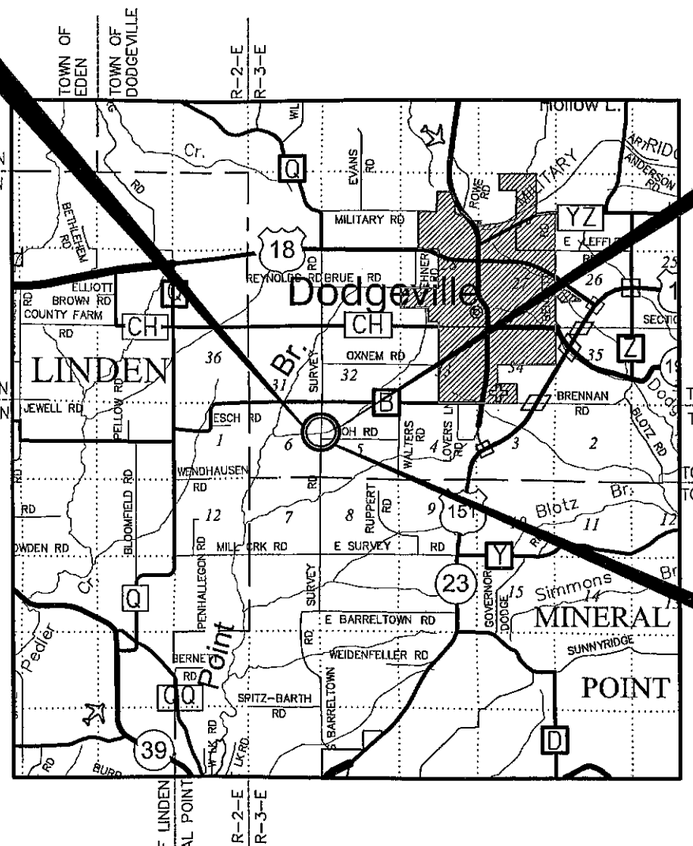
BEGIN RELOCATION ORDER

STA. 10+90

326.00' NORTH AND 3.61' EAST OF THE WEST ¼ CORNER OF SECTION 5, T.5N., R.3E., TOWN OF DODGEVILLE, IOWA COUNTY, WI
Y = 145,944.14
X = 367,894.31

TOWN OF EDEN
TOWN OF LINDEN

STRUCTURE B-25-0187



END RELOCATION ORDER

STA. 15+00

735.98' NORTH AND 7.00' EAST OF THE WEST ¼ CORNER OF SECTION 5, T.5N., R.3E., TOWN OF DODGEVILLE, IOWA COUNTY, WI
Y = 146,354.12
X = 367,897.70

N

LAYOUT

SCALE 0 1 MI. 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.078 MI.

REVISION DATE

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors

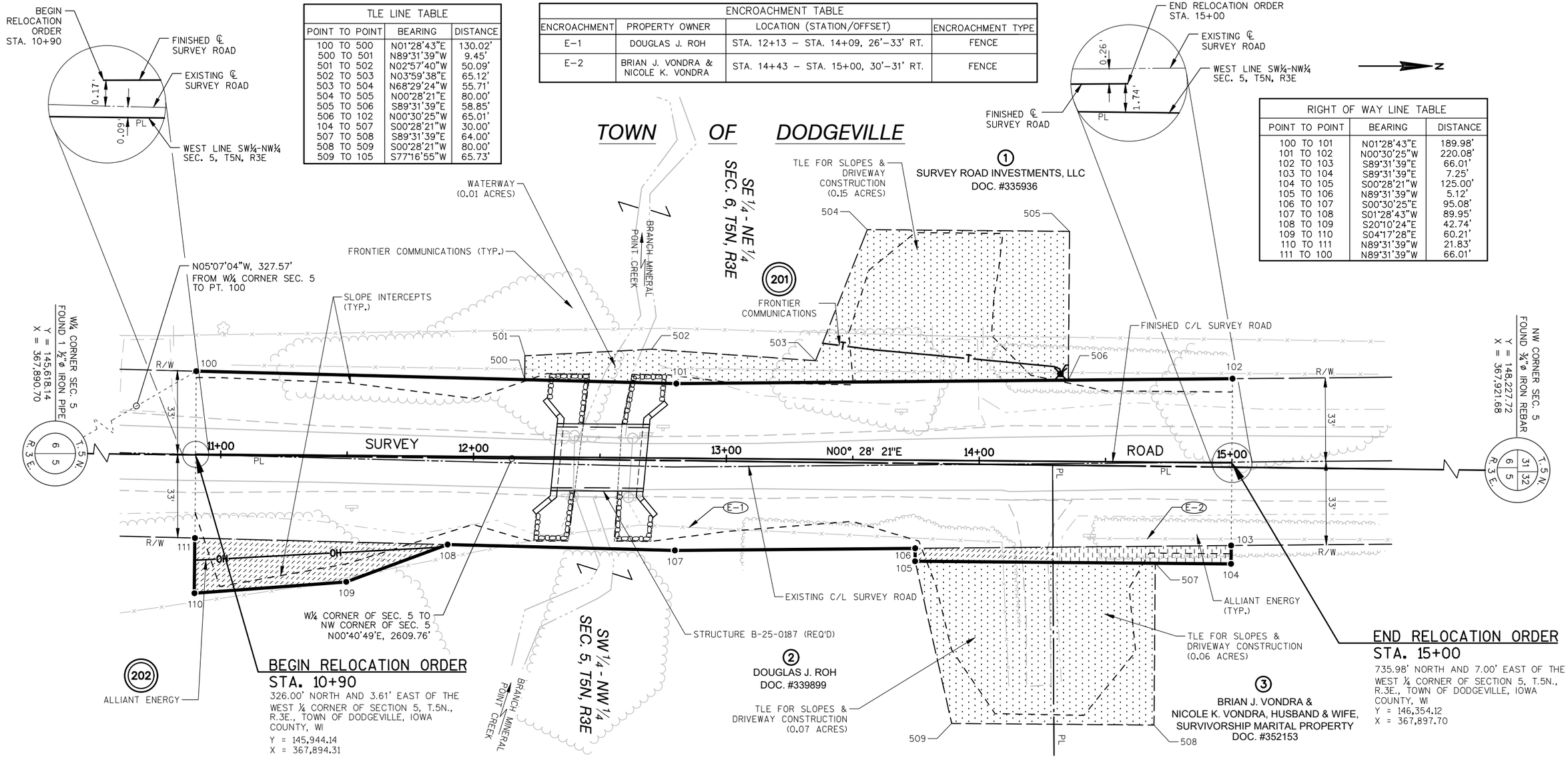
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE TOWN OF DODGEVILLE, IOWA COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
SCOTT D. WARNER
S-2524
RICHLAND CENTER WI
04-02-2019
AND SURVEYOR

APPROVED FOR TOWN OF DODGEVILLE
DATE: 4/2/19 Curt Peterson (NAME/TITLE)
Town Chair

FILE NAME : S:\Projects\K51100 Survey Rd Bridge, Iowa County\RW\56990076_Title.dwg
PLOT DATE : 2/21/2019 1:51 PM
PLOT BY : Strine, Theresa
PLOT NAME :
PLOT SCALE : 1:1
WISDOT/CADDS SHEET 50



TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
100 TO 500	N01°28'43"E	130.02'
500 TO 501	N89°31'39"W	9.45'
501 TO 502	N02°57'40"W	50.09'
502 TO 503	N03°59'38"E	65.12'
503 TO 504	N68°29'24"W	55.71'
504 TO 505	N00°28'21"E	80.00'
505 TO 506	S89°31'39"E	58.85'
506 TO 102	N00°30'25"W	65.01'
104 TO 507	S00°28'21"W	30.00'
507 TO 508	S89°31'39"E	64.00'
508 TO 509	S00°28'21"W	80.00'
509 TO 105	S77°16'55"W	65.73'

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	DOUGLAS J. ROH	STA. 12+13 – STA. 14+09, 26'–33' RT.	FENCE
E-2	BRIAN J. VONDRA & NICOLE K. VONDRA	STA. 14+43 – STA. 15+00, 30'–31' RT.	FENCE

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
100 TO 101	N01°28'43"E	189.98'
101 TO 102	N00°30'25"W	220.08'
102 TO 103	S89°31'39"E	66.01'
103 TO 104	S89°31'39"E	7.25'
104 TO 105	S00°28'21"W	125.00'
105 TO 106	N89°31'39"W	5.12'
106 TO 107	S00°30'25"E	95.08'
107 TO 108	S01°28'43"W	89.95'
108 TO 109	S20°10'24"E	42.74'
109 TO 110	S04°17'28"E	60.21'
110 TO 111	N89°31'39"W	21.83'
111 TO 100	N89°31'39"W	66.01'

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	H.E. ACRES REQUIRED NEW	T.L.E. ACRES REQ.
1	SURVEY ROAD INVESTMENTS, LLC	TLE	--	0.15
2	DOUGLAS J. ROH	H.E., TLE	0.04	0.07
3	BRIAN J. VONDRA & NICOLE K. VONDRA, HUSBAND & WIFE, SURVIVORSHIP MARITAL PROPERTY	H.E., TLE	0.01	0.06
201	FRONTIER COMMUNICATIONS	TEMPORARY CONSTRUCTION EASEMENT		
202	ALLIANT ENERGY	RELEASE OF RIGHTS		

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF DODGEVILLE.

NOTE: EXISTING C/L OF SURVEY ROAD WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR SURVEY ROAD WAS BASED ON COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
500	12+20.00	30.55 LT.	146074.39	367864.83
501	12+20.00	40.00 LT.	146074.46	367855.39
502	12+70.00	43.00 LT.	146124.49	367852.80
503	13+35.00	39.00 LT.	146189.45	367857.34
504	13+55.00	91.00 LT.	146209.88	367805.50
505	14+35.00	91.00 LT.	146289.88	367806.16
506	14+35.00	32.15 LT.	146289.39	367865.01
507	14+70.00	40.00 RT.	146323.80	367937.45
508	14+70.00	104.00 RT.	146323.27	368001.44
509	13+90.00	104.00 RT.	146243.27	368000.78

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
100	10+90.00	32.84 LT.	145944.41	367861.48
101	12+79.95	29.50 LT.	146134.32	367866.38
102	15+00.00	33.26 LT.	146354.40	367864.43
103	15+00.00	32.75 RT.	146353.85	367930.44
104	15+00.00	40.00 RT.	146353.79	367937.69
105	13+75.00	40.00 RT.	146228.80	367936.66
106	13+75.00	34.88 RT.	146228.84	367931.55
107	12+79.93	36.51 RT.	146133.76	367932.39
108	11+90.00	34.93 RT.	146043.85	367930.07
109	11+50.00	50.00 RT.	146003.72	367944.81
110	10+90.00	55.00 RT.	145943.69	367949.31
111	10+90.00	33.17 RT.	145943.87	367927.49

REVISION DATE	DATE: 4/2/2019	SCALE, FEET 0 20 40	HWY: SURVEY ROAD	R/W PROJECT NUMBER: 5699-00-02	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: IOWA	CONSTRUCTION PROJECT NUMBER: 5699-00-76	PS&E SHEET 12 E

FILE NAME : S:\Projects\K51100 Survey Rd Bridge, Iowa County\RW\56990076_Plat Sheets.dwg PLOT DATE : 4/5/2019 9:24 AM PLOT BY : Jonah Drake PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

LEGEND

- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- EDGE OF WATER
- WETLANDS
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS

BEGIN PROJECT
STA. 10+90
Y = 145,944.14
X = 367,894.31

END PROJECT
STA. 15+00
Y= 146,354.12
X= 367,897.70

SURVEY ROAD INVESTMENTS, LLC.

DOUGLAS J. ROH

BRIAN AND NICOLE VONDRA

FRONTIER COMMUNICATIONS (TYP.)
STRUCTURE B-25-187 REQ'D
EXISTING C/L SURVEY ROAD
EXISTING F.E. TO REMAIN
FINISHED C/L SURVEY ROAD
BRANCH MINERAL POINT CREEK
STA. 11+00 - STA. 15+00
CLEARING & GRUBBING REQ'D
TLE REQ'D (TYP.)
FINISHED C/L F.E. ('A'-LINE)
STA. 13+92, LT.
CONSTRUCT F.E. (B.A.D.)
STA. 12+33 OFF. 13'
STA. 12+03 OFF. 10'
STA. 12+69 OFF. 13'
STA. 12+99 OFF. 10'
STA. 14+13 OFF. 28'
STA. 14+13 OFF. 20'
STA. 15+00 OFF. 28'
STA. 15+00 OFF. 20'
BM 2
BM 3
BM 4
BM 5
5'X10'
S89°31'59"E
N00°28'21"E
S89°31'39"E
R/W
33'
10:1
(ASPHALT)
SURVEY ROAD
11+00
12+00
13+00
14+00
15+00
OH
STA. 12+01 OFF. 10'
STA. 12+67 OFF. 13'
STA. 12+97 OFF. 10'
STA. 12+31 OFF. 13'
HIGHWAY EASEMENT REQ'D
ALLIANT ENERGY (TYP.)
REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 12+51 (P-25-947)
SINGLE-SPAN STEEL DECK GIRDER STRUCTURE
24.3' CLEAR ROADWAY WIDTH
26.0' OVERALL DECK WIDTH
24.0' OVERALL LENGTH
SLOPE INTERCEPTS
STA. 12+13 - STA. 14+09, RT.
STA. 14+43 - STA. 15+00, RT.
REMOVING FENCE BY OTHERS
STA. 14+40 OFF. 28'
STA. 14+40 OFF. 36'
STA. 15+00 OFF. 28'
STA. 15+00 OFF. 36'
FINISHED C/L F.E. ('B'-LINE)
STA. 14+25, RT.
CONSTRUCT F.E. (B.A.D.)

STA. 10+90
EL. 1094.46
MATCH EXISTING
-6.12%
PC STA 11+50.00
EL 1090.79
L=350.00'
K=17.00
PI STA 13+25.00
EL 1080.07
FINISHED ℄ PROFILE SURVEY ROAD
EXISTING C/L PROFILE SURVEY ROAD
HIGH WATER100 EL = 1085.51
HIGH WATER2 EL = 1082.02
OBSERVED WATER EL. 1079.49 (11-21-2017)
EXISTING STREAMBED EL. 1078.04
EXISTING C/L ELEVATION
FINISHED C/L ELEVATION
14.46%
PT STA 15+00.00
EL 1105.38
STA. 15+00
EL. 1105.38
MATCH EXISTING

STA. 12+50
STRUCTURE B-25-187 REQ'D.
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB
CLEAR ROADWAY WIDTH = 26.0'
O.A.L. = 36.5'
SKEW = 5° LHF

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
2	11+90	3/4" X 24" IRON REBAR SET, 11.4' LT	1088.31
3	14+15	3/4" X 24" IRON REBAR SET, 15.4' LT	1092.80
4	12+39	CHISELED BOX IN WINGWALL, 17.4' RT	1086.60
5	13+23	COTTON GIN SPINDLE IN PPOL, 27.2' RT	1086.73

EARTHWORK SUMMARY

	MAINLINE	'A'-LINE	'B'-LINE	TOTALS
EXCAVATION COMMON =	801 C.Y.	42 C.Y.	157 C.Y.	1000 C.Y.
FILL =	110 C.Y.	221 C.Y.	127 C.Y.	458 C.Y.
EXCAVATION ROCK =	20 C.Y.	0 C.Y.	0 C.Y.	20 C.Y.
EXCAVATION ROCK (10%)=	22 C.Y.	0 C.Y.	0 C.Y.	22 C.Y.
FILL EXPANSION (25%) =	110 C.Y.	277 C.Y.	159 C.Y.	546 C.Y.
WASTE =	691 C.Y.	-235 C.Y.	-2 C.Y.	454 C.Y.

1094 1092 1090 1088 1086 1084 1082 1080 1078

1108 1106 1104 1102 1100 1098 1096 1094 1092

10+00	10+20	10+40	10+60	10+80	10+90	11+00	11+20	11+40	11+60	11+80	12+00	12+20	12+40	12+60	12+80	13+00	13+20	13+40	13+60	13+80
1098.78	1097.83	1096.87	1095.91	1094.96	1094.46	1094.46	1093.85	1093.85	1092.62	1092.63	1091.41	1091.40	1090.37	1090.20	1089.34	1089.22	1088.55	1088.46	1087.98	1087.94
1087.43	1087.66	1087.22	1087.61	1087.25	1087.80	1087.37	1088.22	1087.70	1088.88	1088.42	1089.77	1089.16	1090.90	1090.68	1092.26					

14+20	14+40	14+60	14+80	15+00	15+20	15+40
1094.42	1095.69	1096.98	1097.76	1099.54	1100.06	1102.44	1102.60	1105.38	1105.38	1108.29	1111.18

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	PLAN AND PROFILE: MAINLINE	SHEET 13	E

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\SURVEY ROAD P&P.DWG
LAYOUT NAME - LAYOUT1
PLOT DATE : 4/16/2019 3:11 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

SURVEY ROAD INVESTMENTS, LLC.

STA. 50'A'+00 - STA. 50'A'+76
CLEARING & GRUBBING REQ'D

REMOVING SMALL PIPE CULVERTS
STA. 50'A'+66
REMOVE 18" CMP

TLE REQ'D

BM 3

N00°28'21"E

14+00

50'A'+00

S89°31'39"E

90°00'00"

EXISTING C/L SURVEY ROAD

FINISHED C/L F.E. ('A'-LINE)

SLOPE INTERCEPTS

FRONTIER COMMUNICATIONS

STA. 50'A'+63
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 5° LHF

R/W

FINISHED C/L SURVEY ROAD

ALLIANT ENERGY

BEGIN CONSTRUCTION
STA. 50'A'+00
Y= 146,246.87
X= 367,806.81

END CONSTRUCTION
STA. 50'A'+76
Y= 146,246.24
X= 367,882.81

LEGEND

- DIRECTION OF FLOW
- SILT FENCE
- EDGE OF WATER
- CULVERT PIPE CHECKS
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- WETLANDS

STA. 70'B'+14 - STA. 71'B'+00
CLEARING & GRUBBING REQ'D

ALLIANT ENERGY

STA. 70'B'+32
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°

REMOVING SMALL PIPE CULVERTS
STA. 70'B'+22
REMOVE 18" CMP

SLOPE INTERCEPTS

FINISHED C/L F.E. ('B'-LINE)

EXISTING C/L F.E. ('B'-LINE)

P.L.

N

BRIAN AND NICOLE VONDRA

DOUGLAS J. ROH

TLE REQ'D

BM 3

N00°28'21"E

14+00

90°00'00"

S89°31'39"E

71'B'+00

EXISTING C/L SURVEY ROAD

BEGIN CONSTRUCTION
STA. 70'B'+14
Y= 146,279.01
X= 367,911.07

END CONSTRUCTION
STA. 71'B'+00
Y= 146,278.30
X= 367,997.07

5

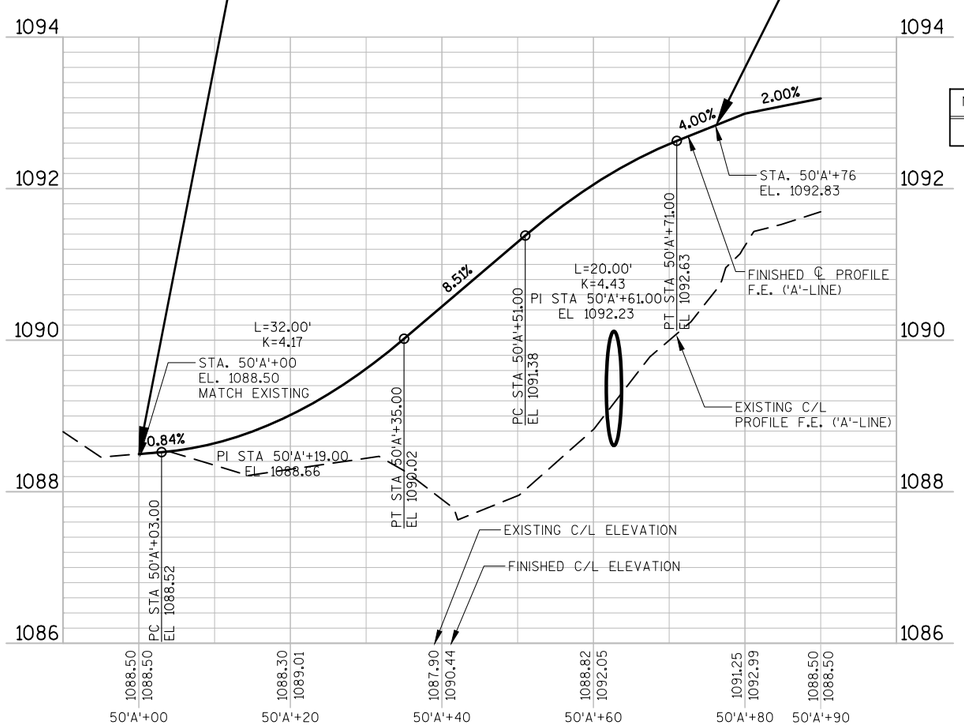
5

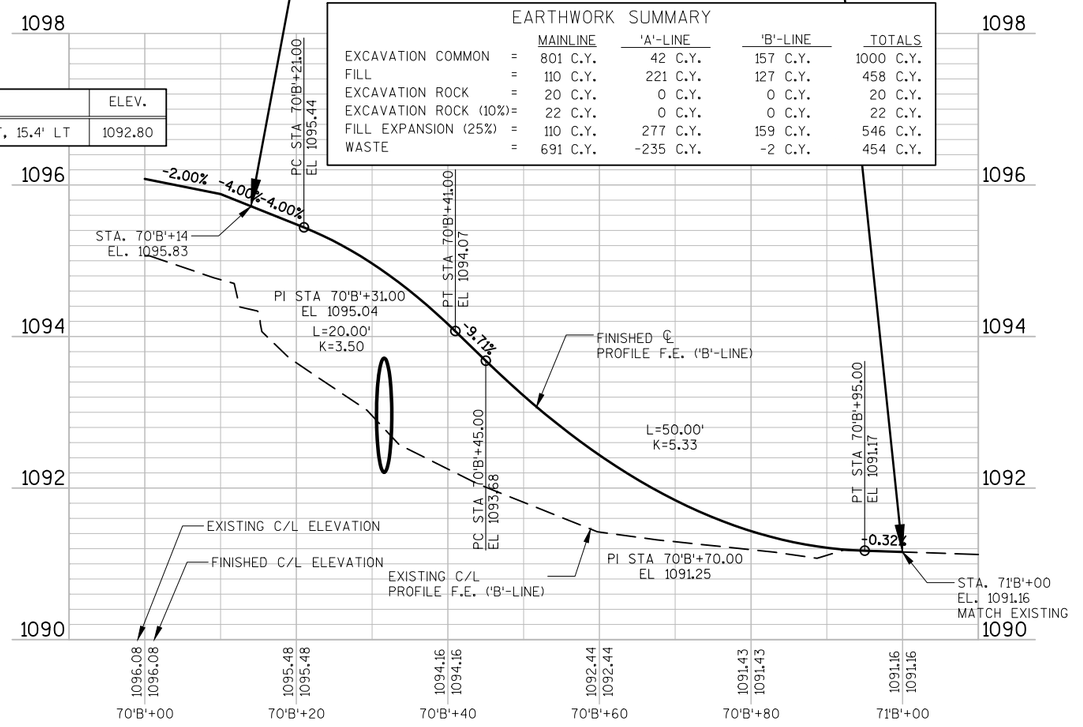
BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
3	14+15	3/4" X 24" IRON REBAR SET, 15.4' LT	1092.80

EARTHWORK SUMMARY

	MAINLINE	'A'-LINE	'B'-LINE	TOTALS
EXCAVATION COMMON =	801 C.Y.	42 C.Y.	157 C.Y.	1000 C.Y.
FILL =	110 C.Y.	221 C.Y.	127 C.Y.	458 C.Y.
EXCAVATION ROCK =	20 C.Y.	0 C.Y.	0 C.Y.	20 C.Y.
EXCAVATION ROCK (10%) =	22 C.Y.	0 C.Y.	0 C.Y.	22 C.Y.
FILL EXPANSION (25%) =	110 C.Y.	277 C.Y.	159 C.Y.	546 C.Y.
WASTE =	691 C.Y.	-235 C.Y.	-2 C.Y.	454 C.Y.





PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	PLAN AND PROFILE: DRIVEWAYS	SHEET 14	E

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\DETAILS\CONSTRUCTION DETAILS.DWG
LAYOUT : DRIVEWAYS

PLOT DATE : 4/16/2019
PLOT TIME : 8:36:33 AM

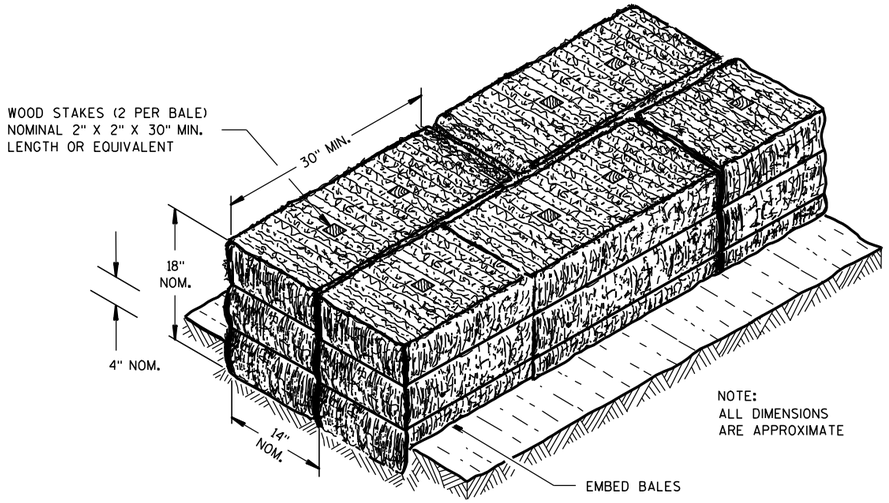
PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'

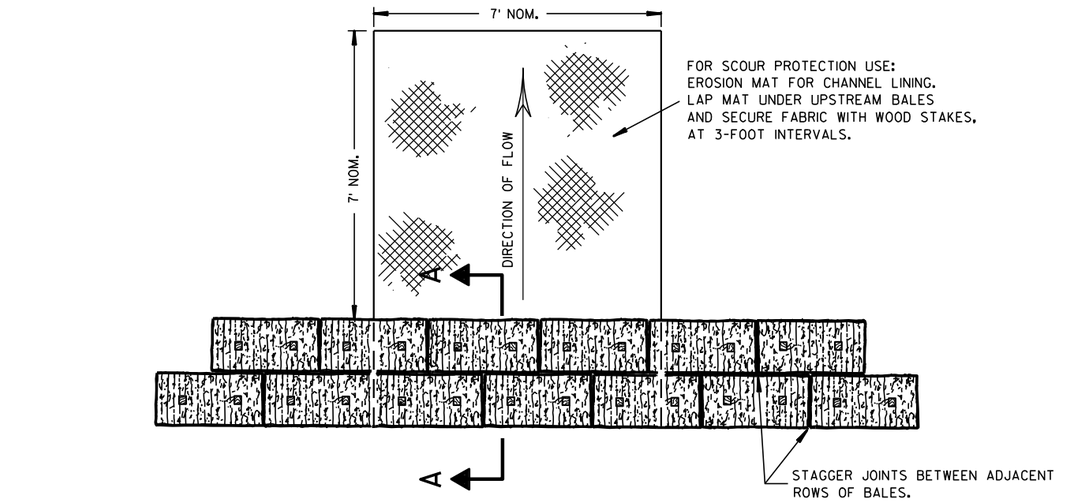
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

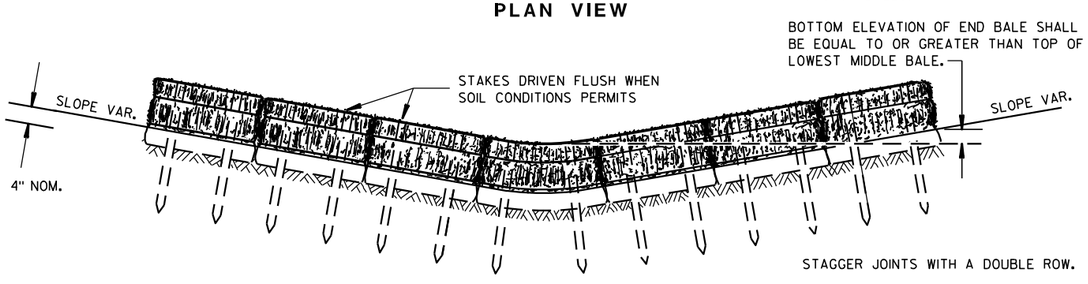
6



SECTION A-A



PLAN VIEW



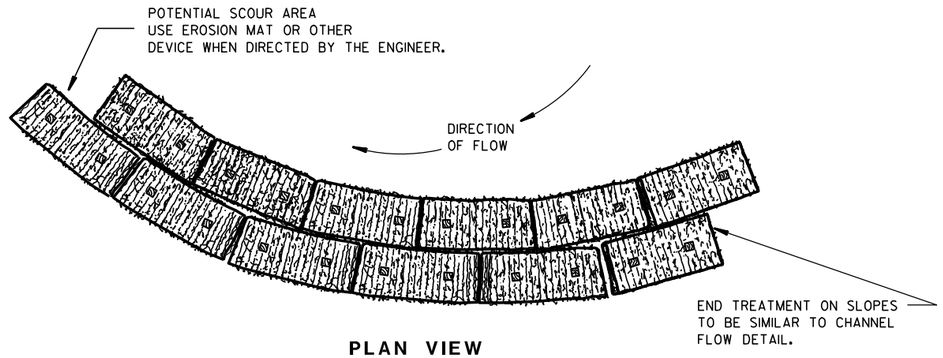
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

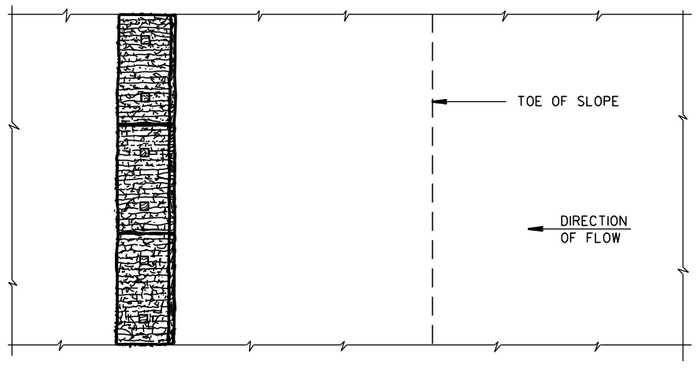
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

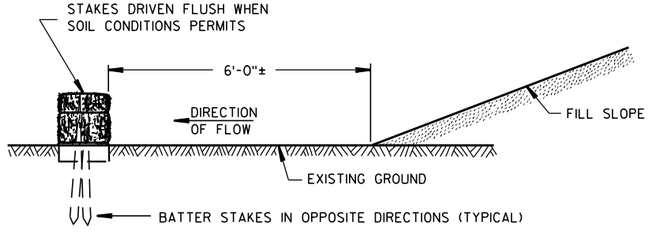


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

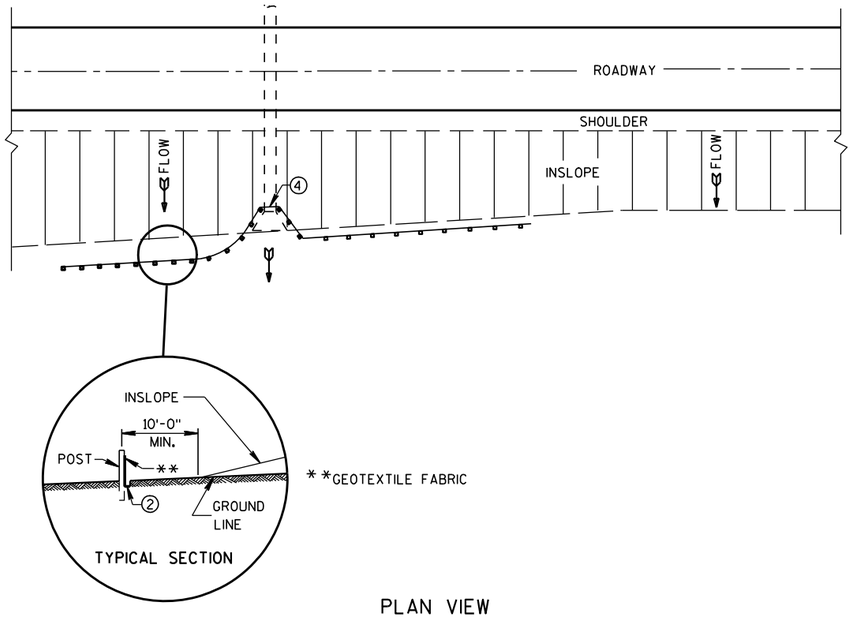
FHWA

6

S.D.D. 8 E 8-3

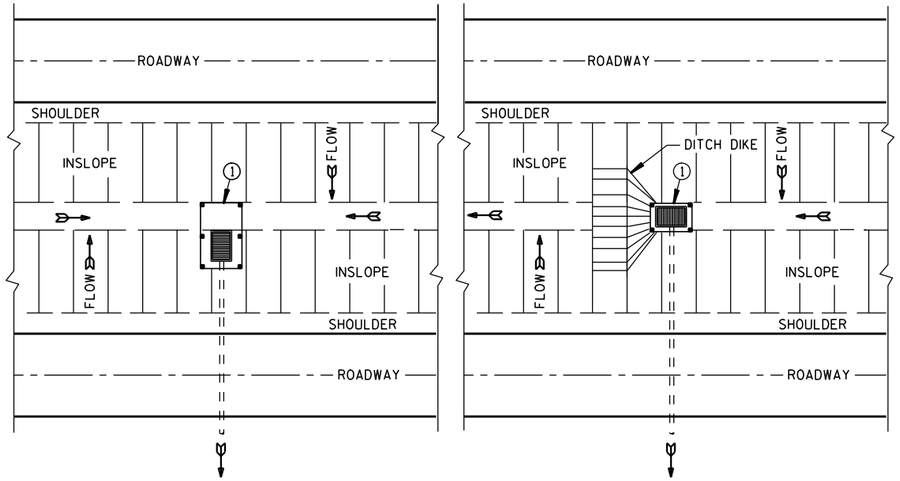
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



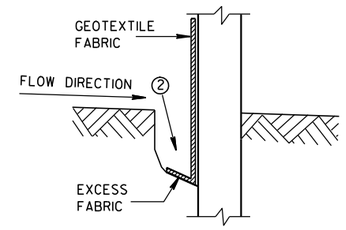
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

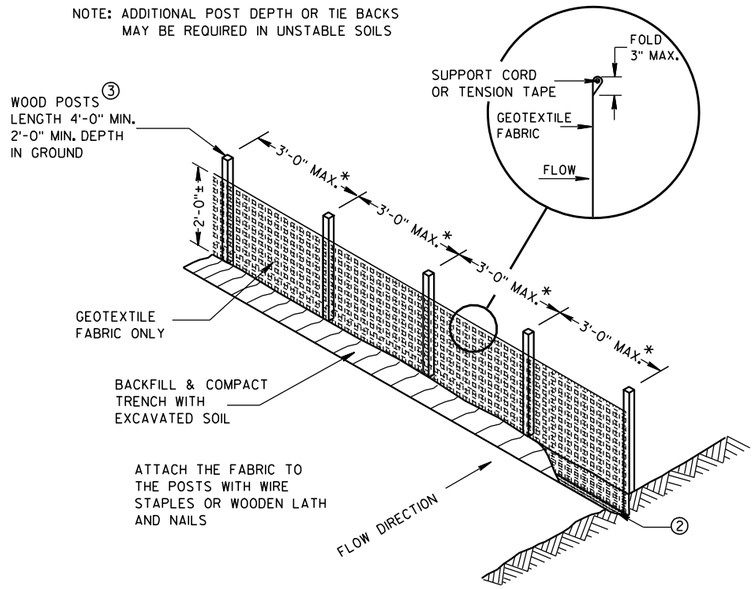
GENERAL NOTES

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

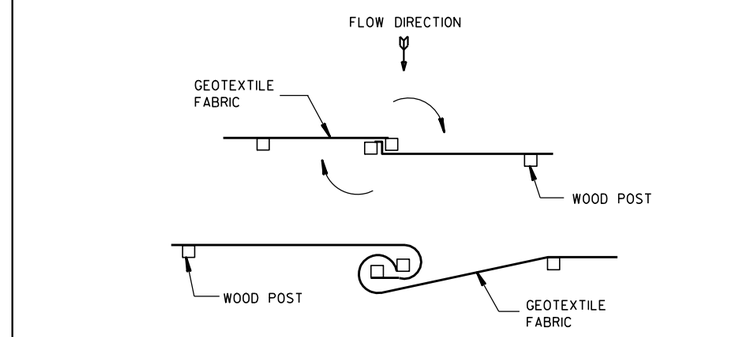
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



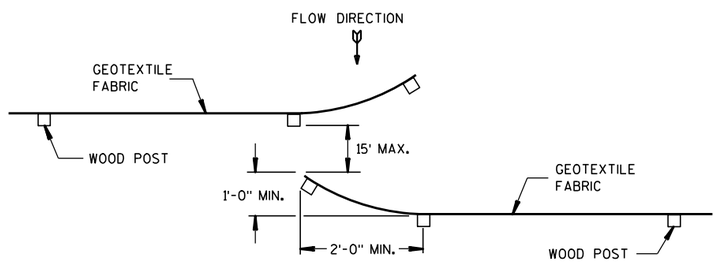
TRENCH DETAIL



SILT FENCE

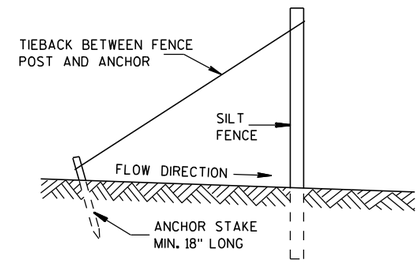


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

METAL APRON ENDWALLS

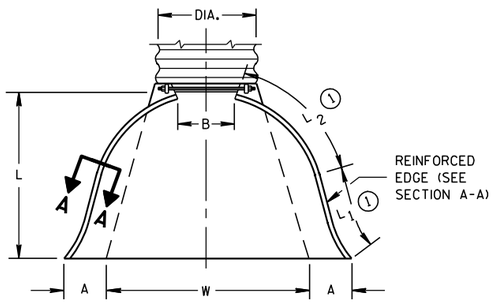
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

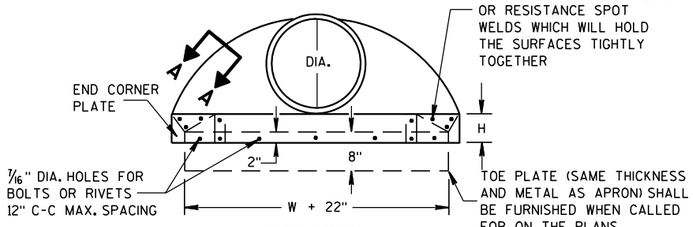
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

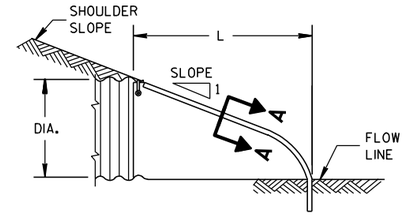
*MINIMUM
**MAXIMUM



PLAN VIEW

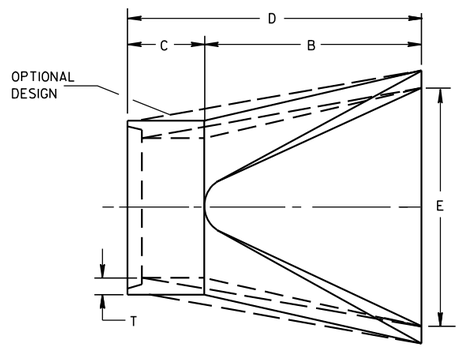


END VIEW

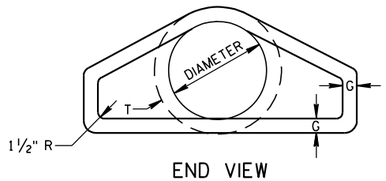


SIDE ELEVATION

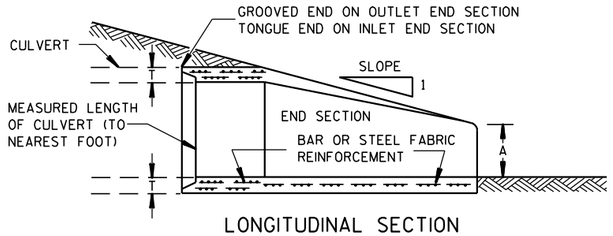
METAL ENDWALLS



PLAN

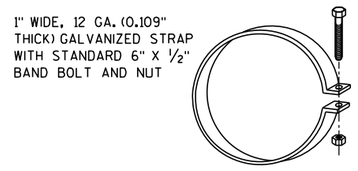


END VIEW



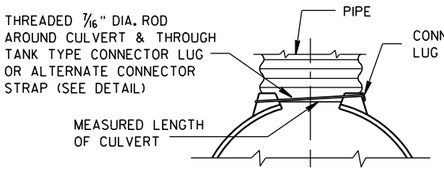
LONGITUDINAL SECTION

CONCRETE ENDWALLS

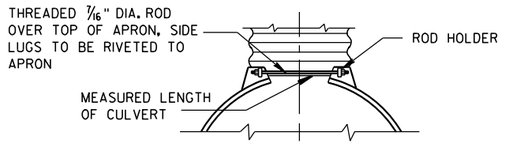


ALTERNATE FOR TYPE 1 CONNECTION

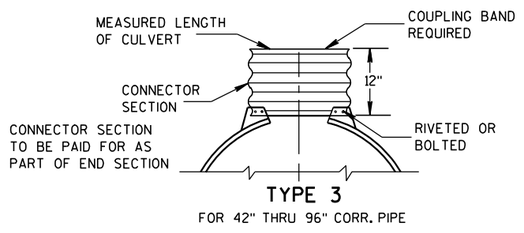
END SECTION CONNECTOR STRAP



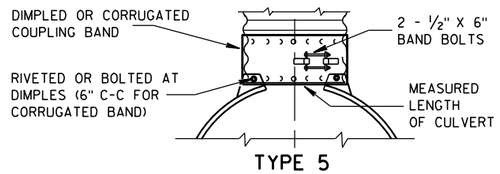
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

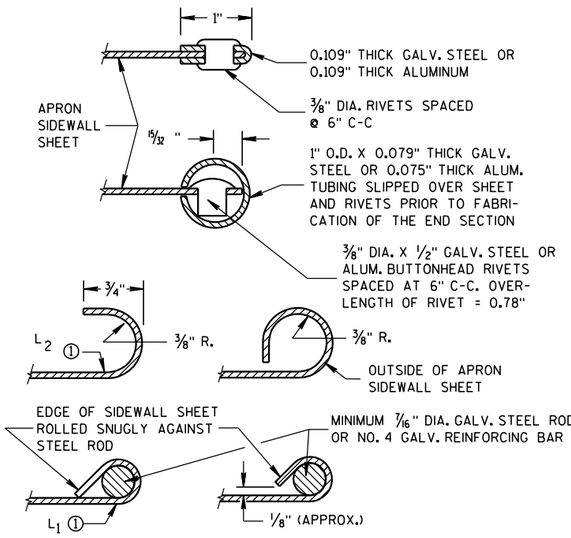
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

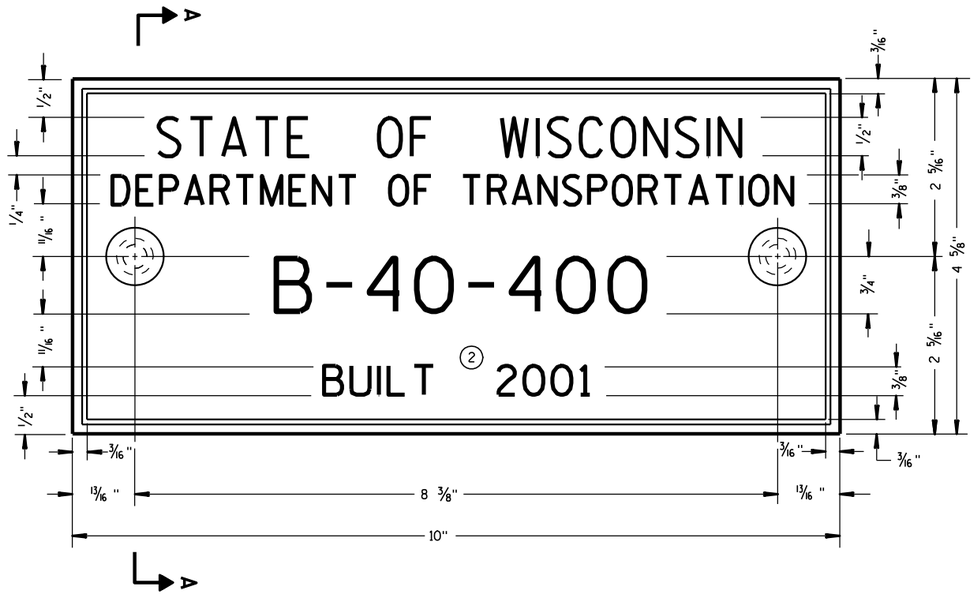
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

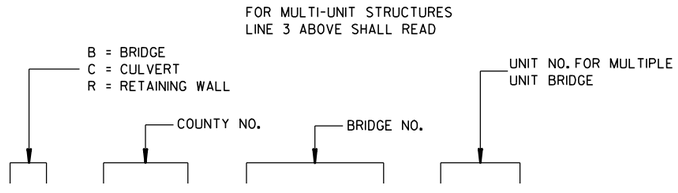
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

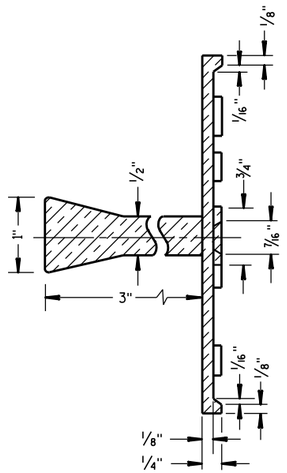
GENERAL NOTES

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.

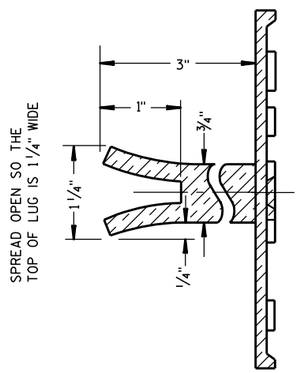
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

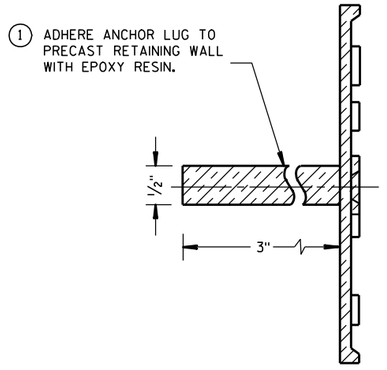
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

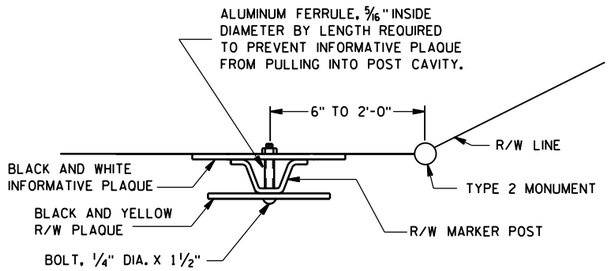
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

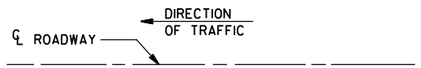
6

S.D.D. 12 A 3-10

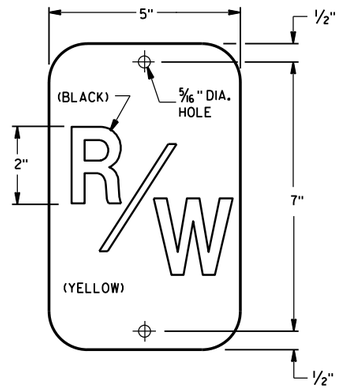
6

S.D.D. 12 A 3-10



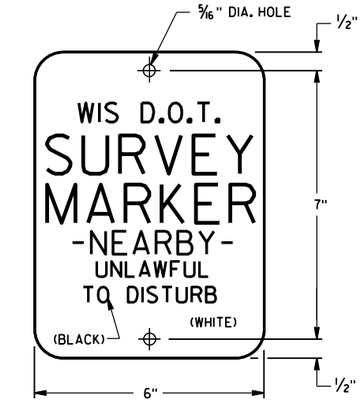


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

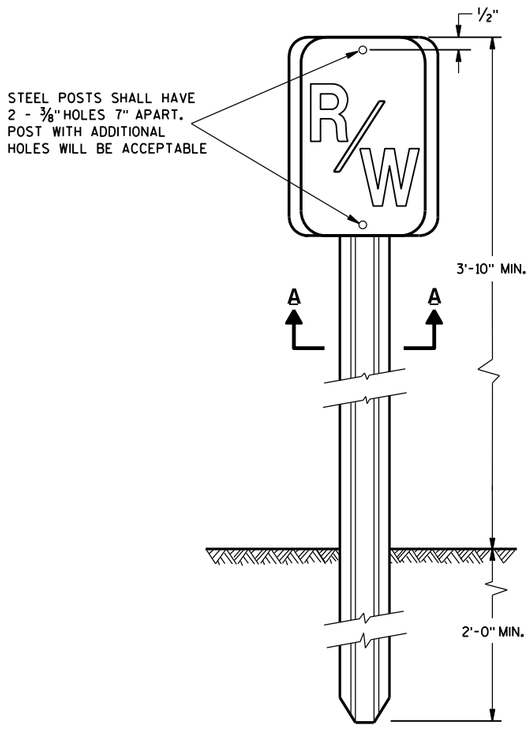
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

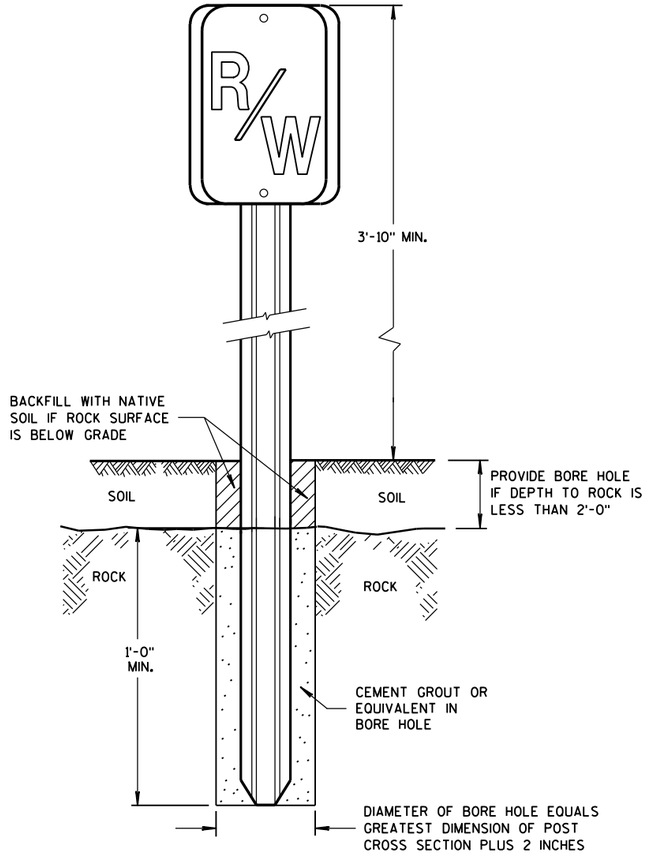
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

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

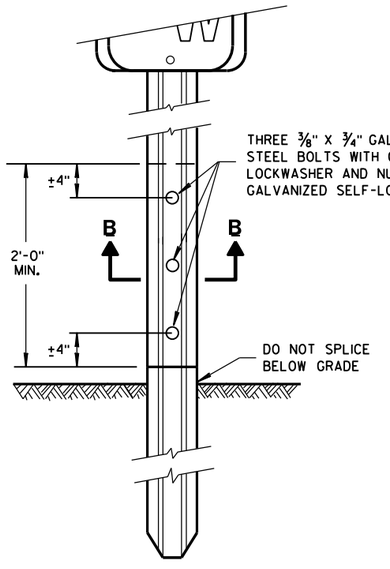
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



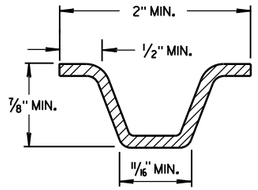
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

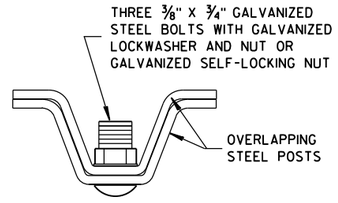


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

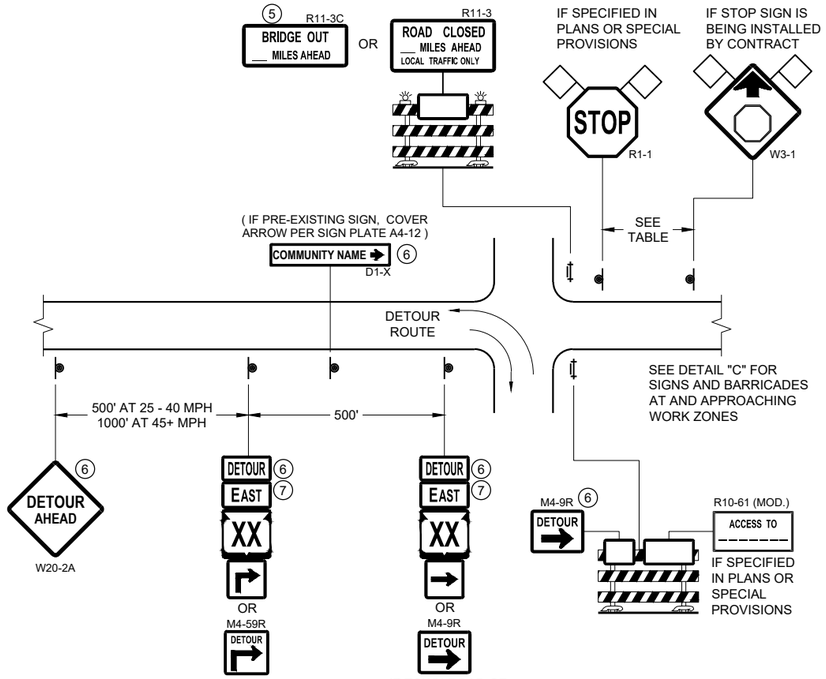
MARKER POST FOR RIGHT-OF-WAY

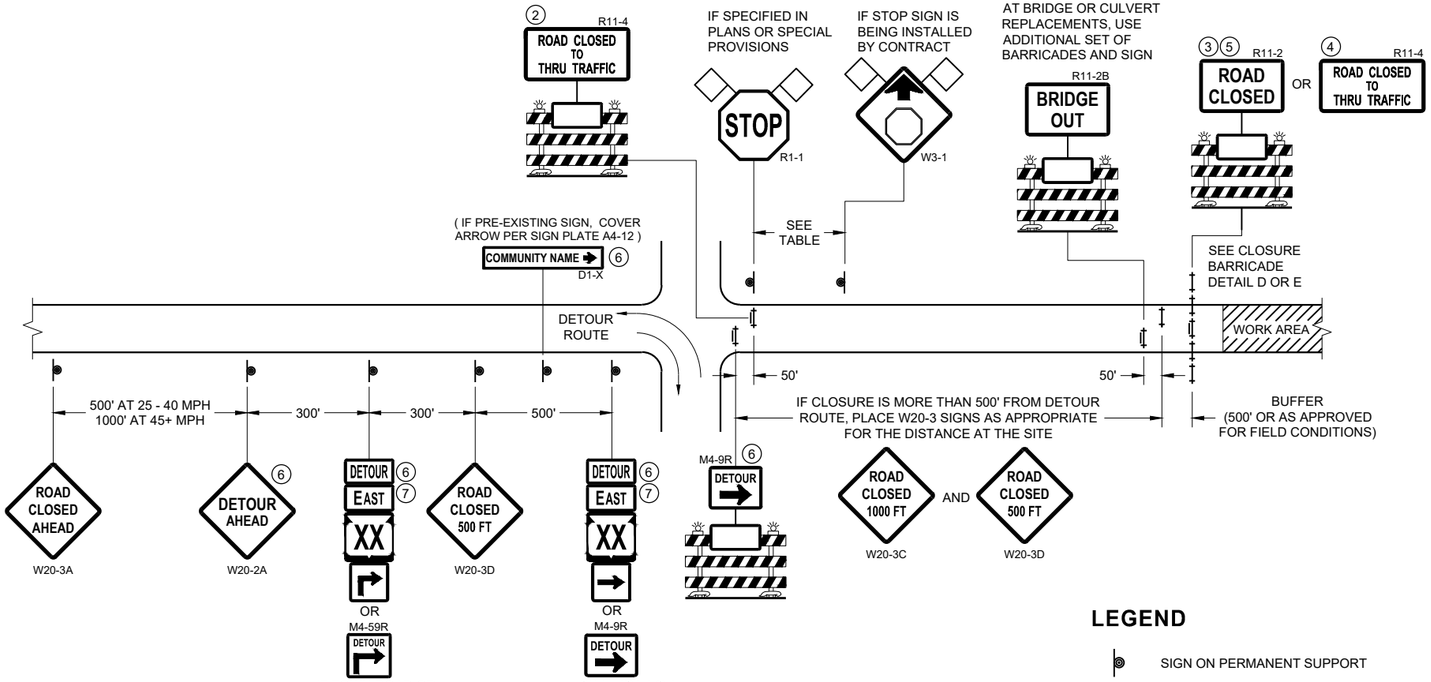
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

6

S.D.D. 15 A 1-13a





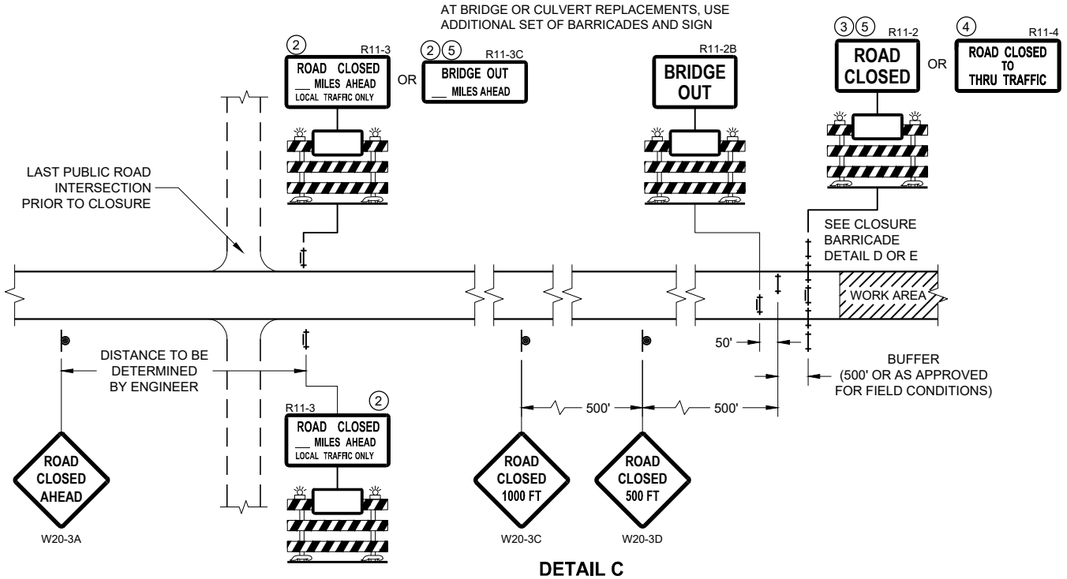
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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

LEGEND

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

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

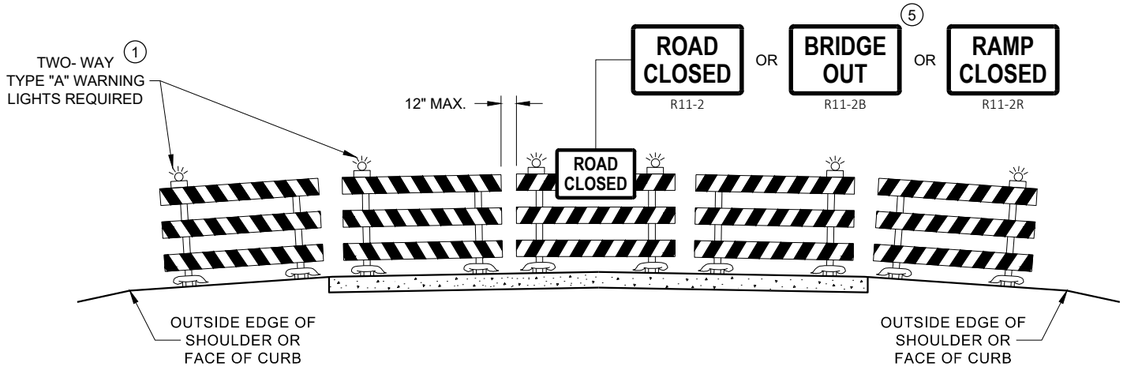
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

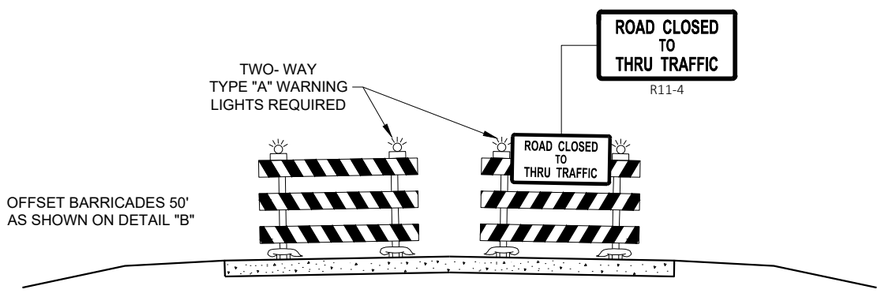
6

SDD 15C02 - 07a

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

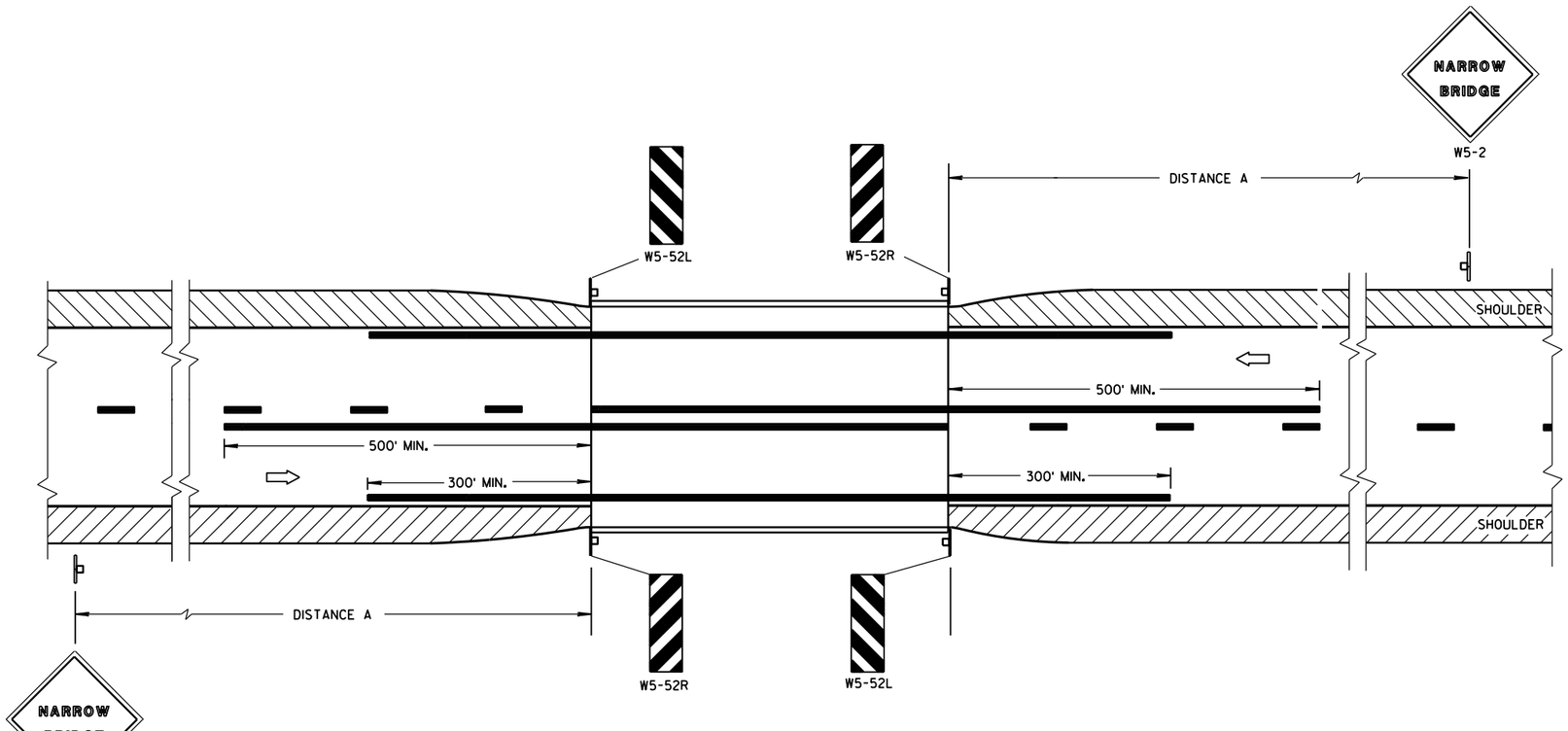
FHWA

6

SDD 15C02 - 07b

6

SDD 15C02 - 07b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

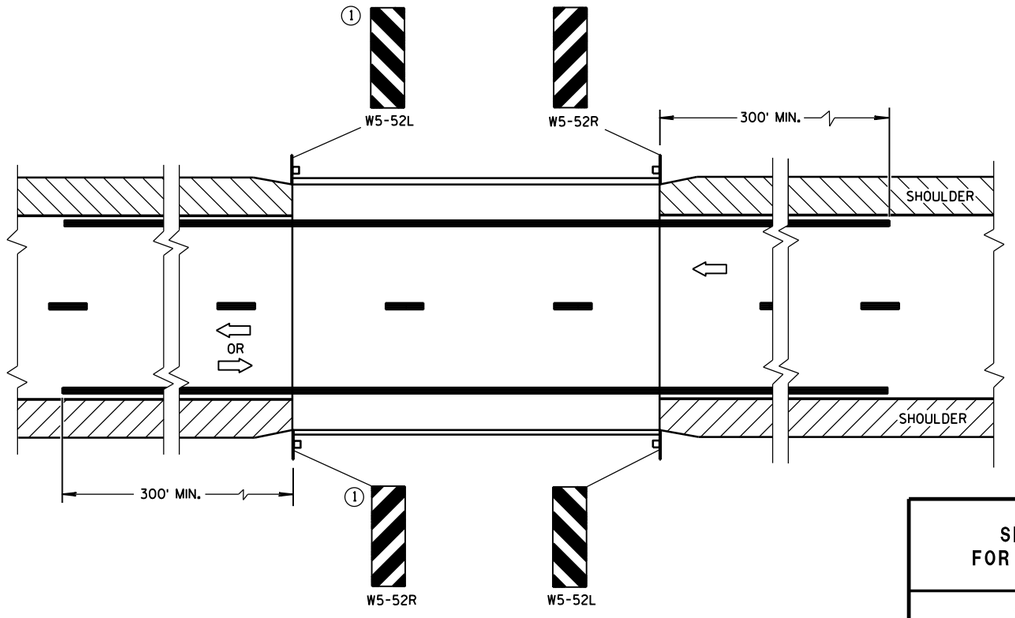
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

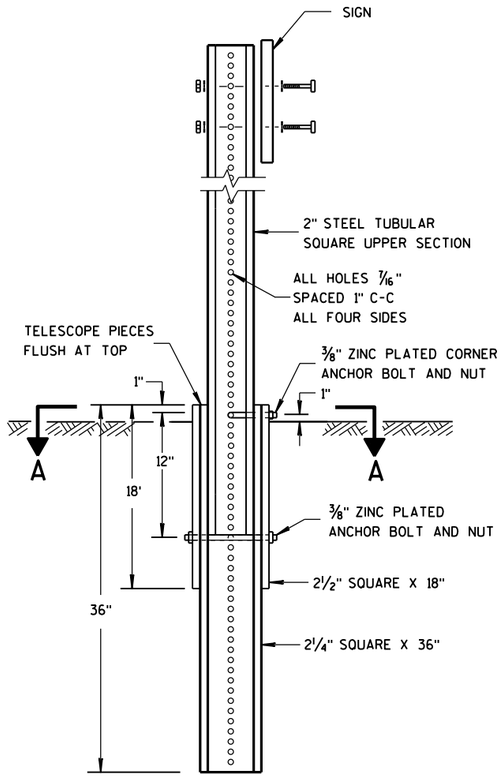
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

6

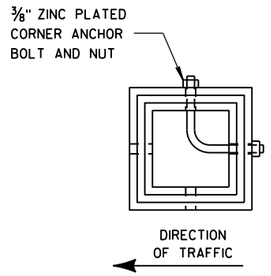
S.D.D. 15 C 6-9

6

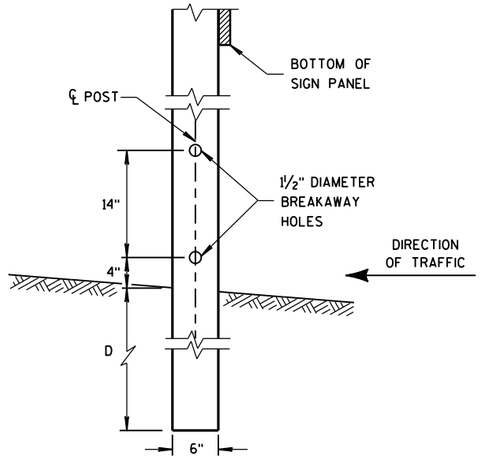
S.D.D. 15 C 6-9



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



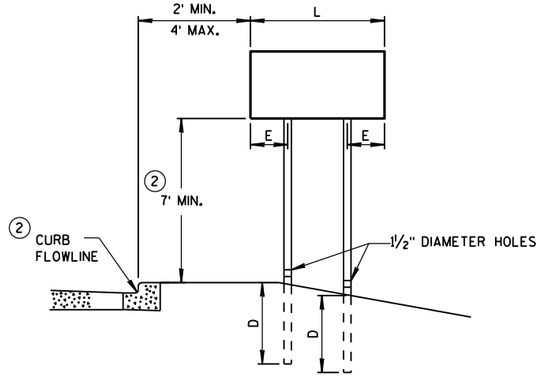
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

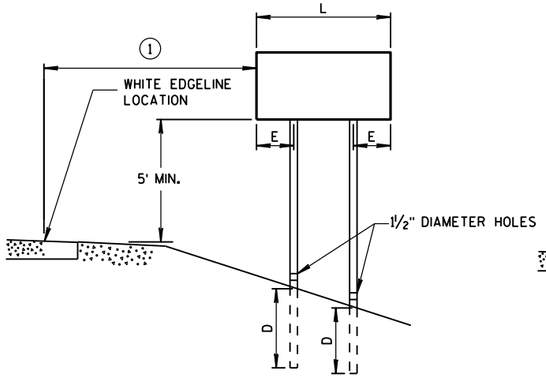
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

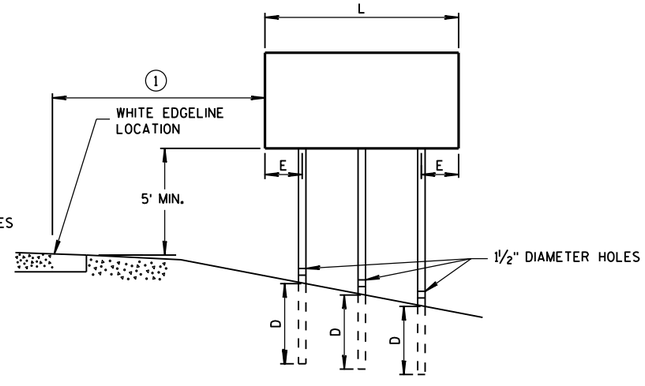
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

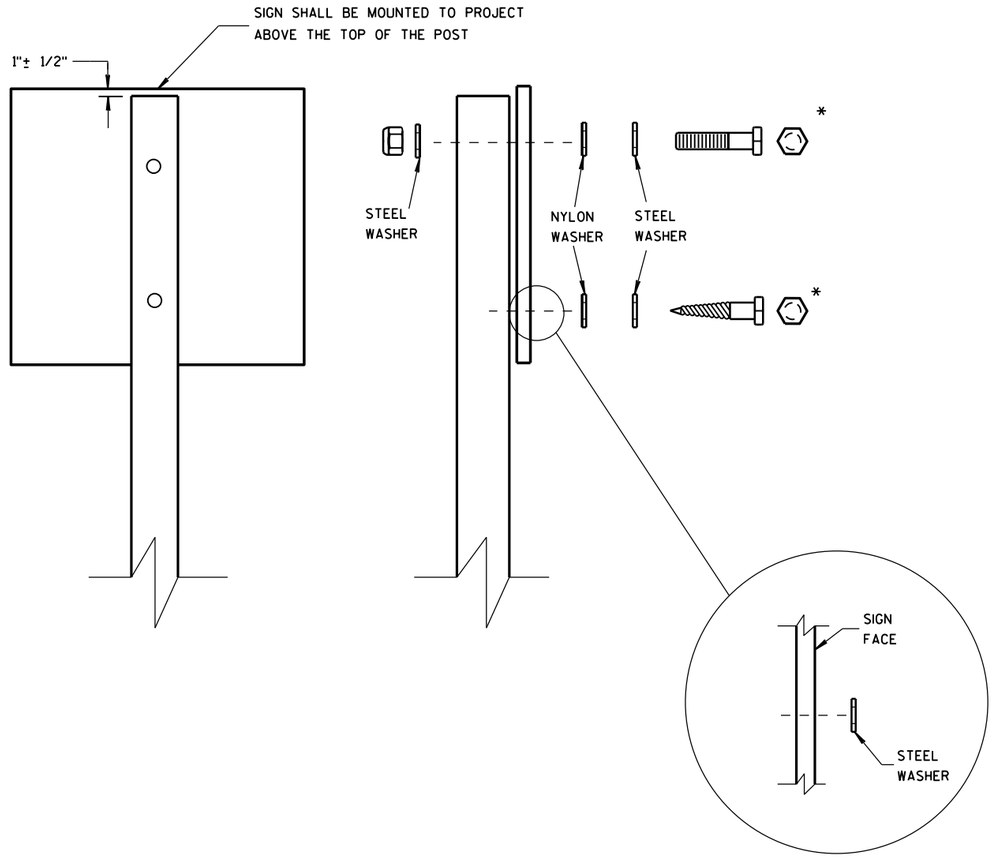
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

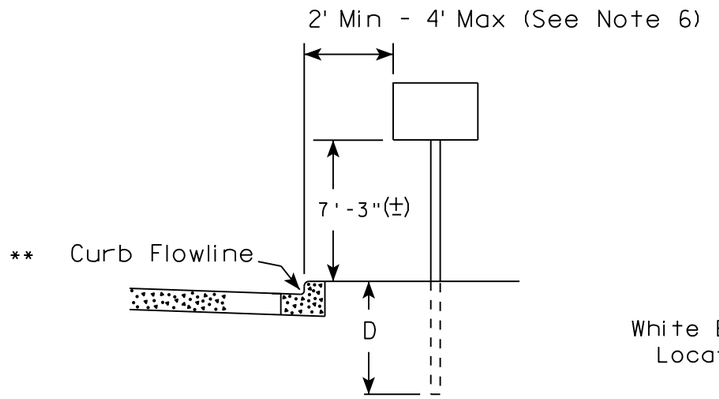
APPROVED

June 2017
DATE

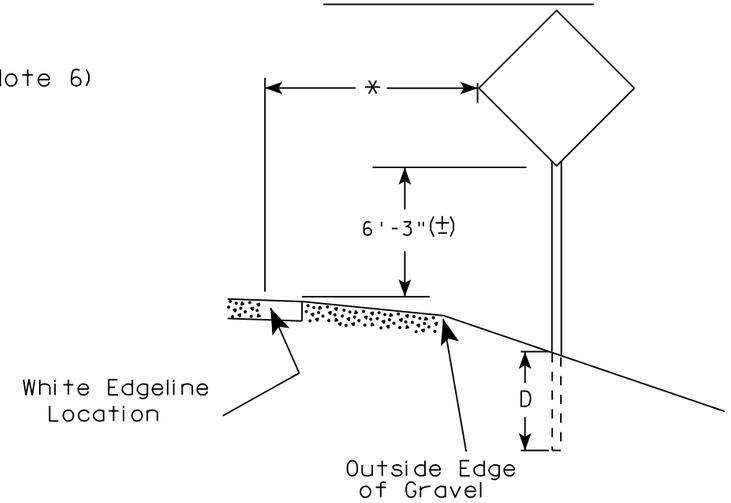
/S/ Andrew Heldtke
WORK ZONE ENG

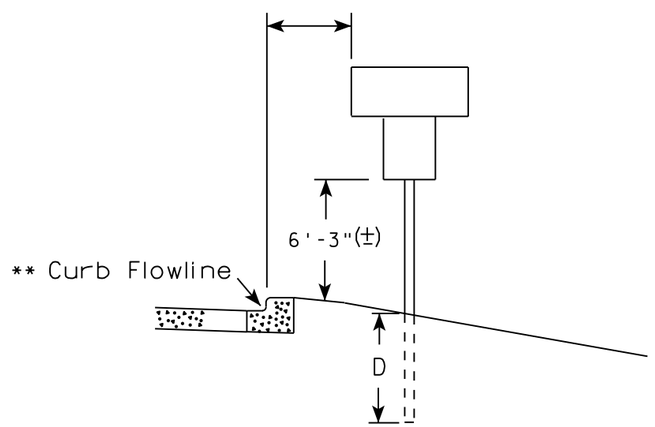
FHWA

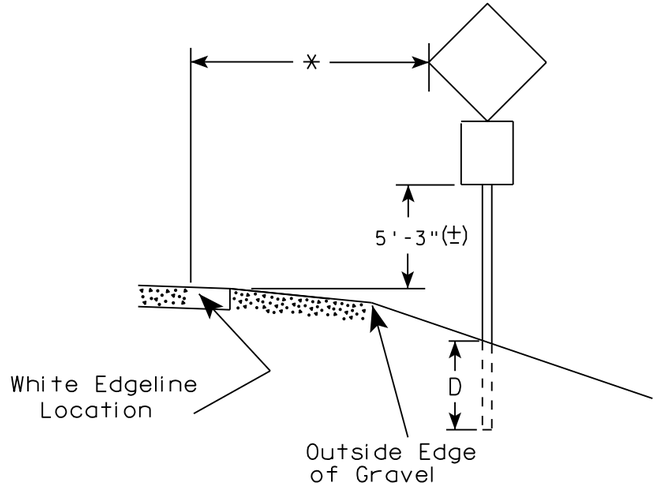
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

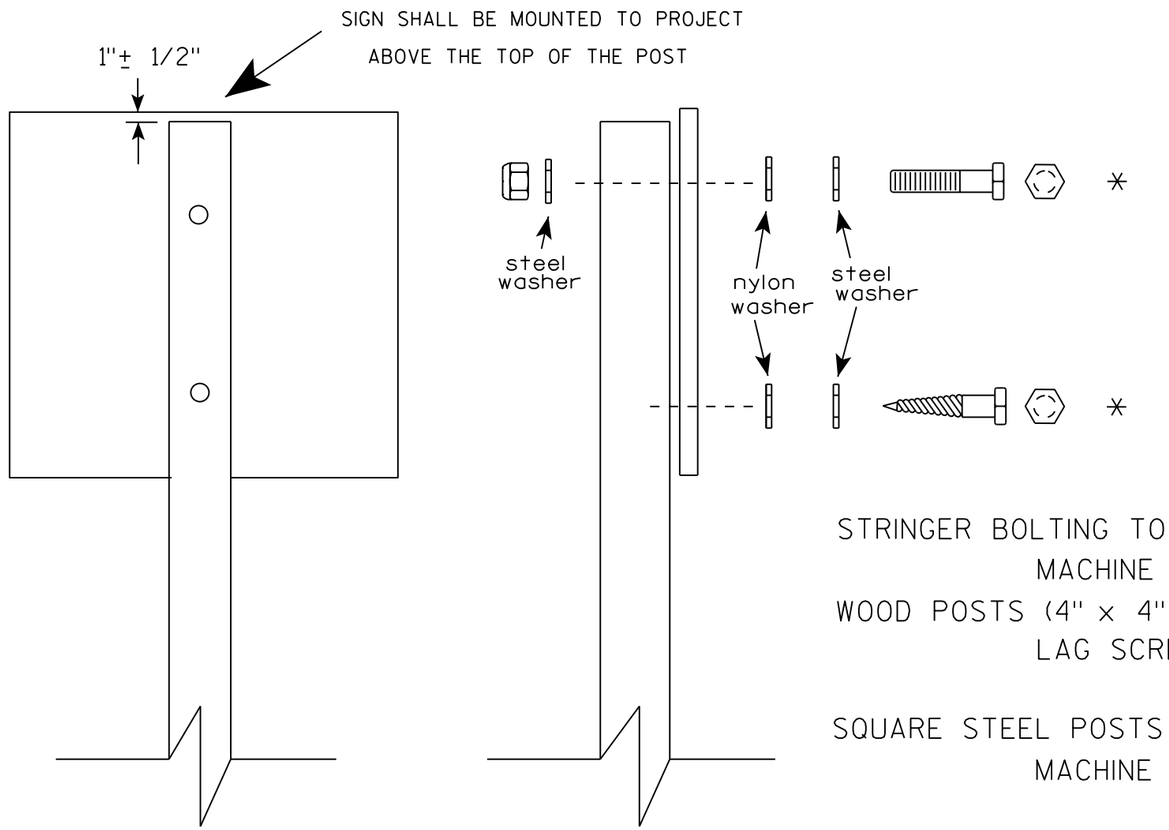
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 26	E



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

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

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

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

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

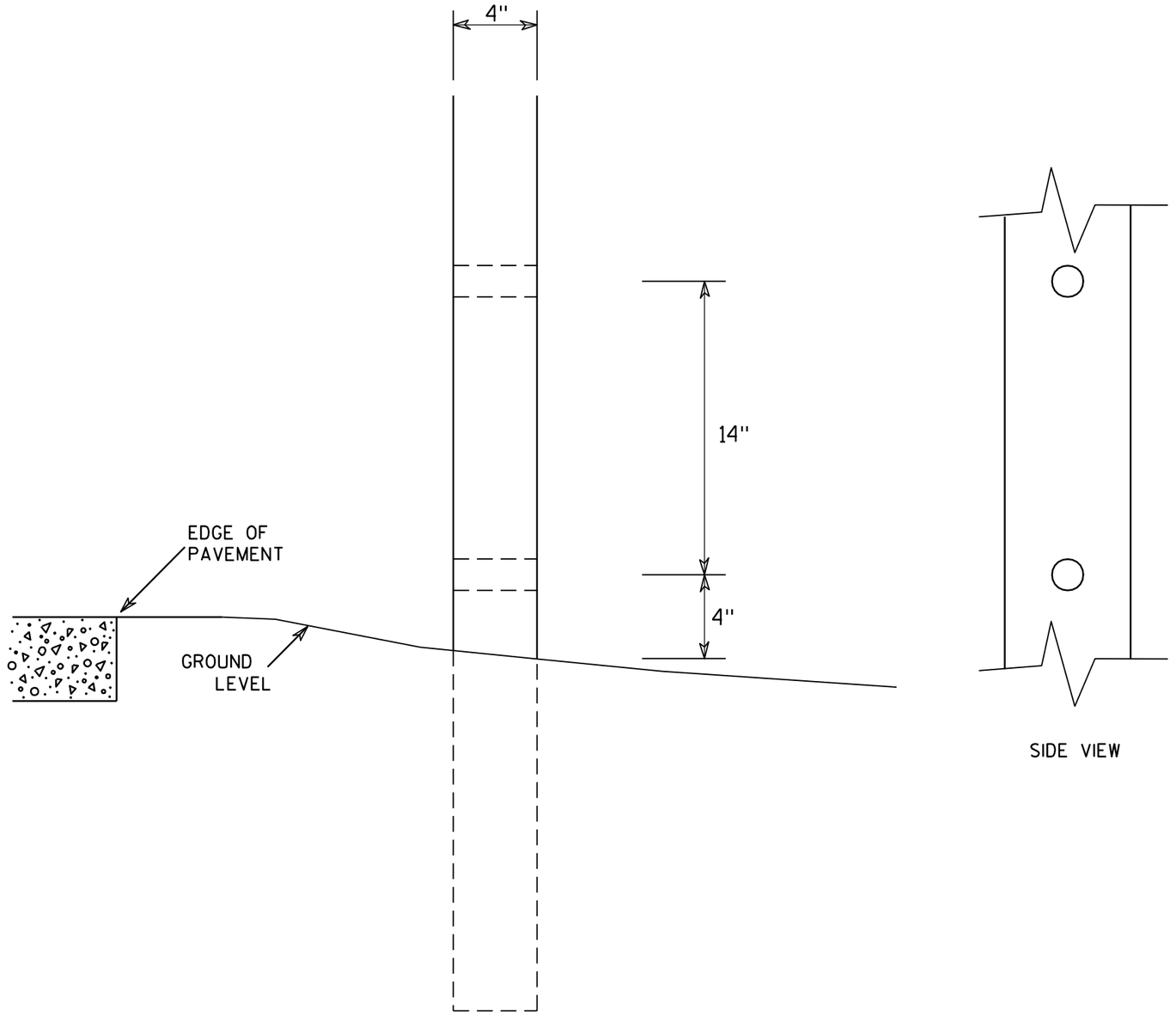
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E



SIDE VIEW

GENERAL NOTES

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

7

7

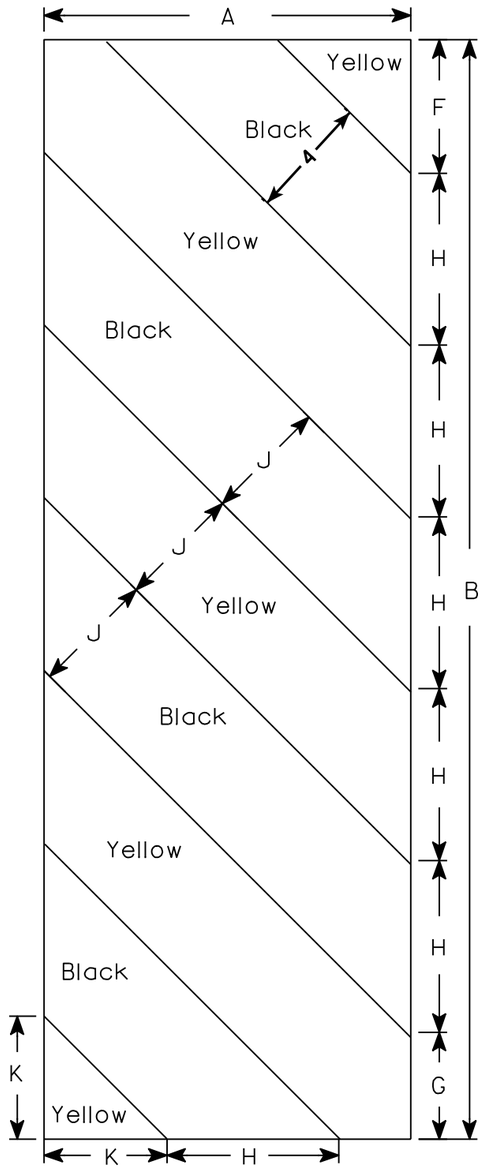
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

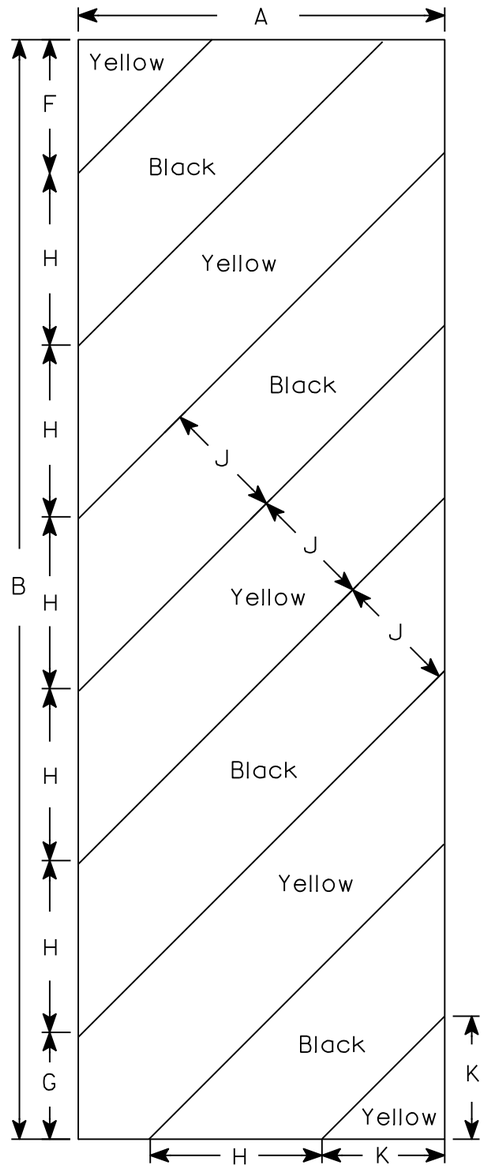
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 28	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

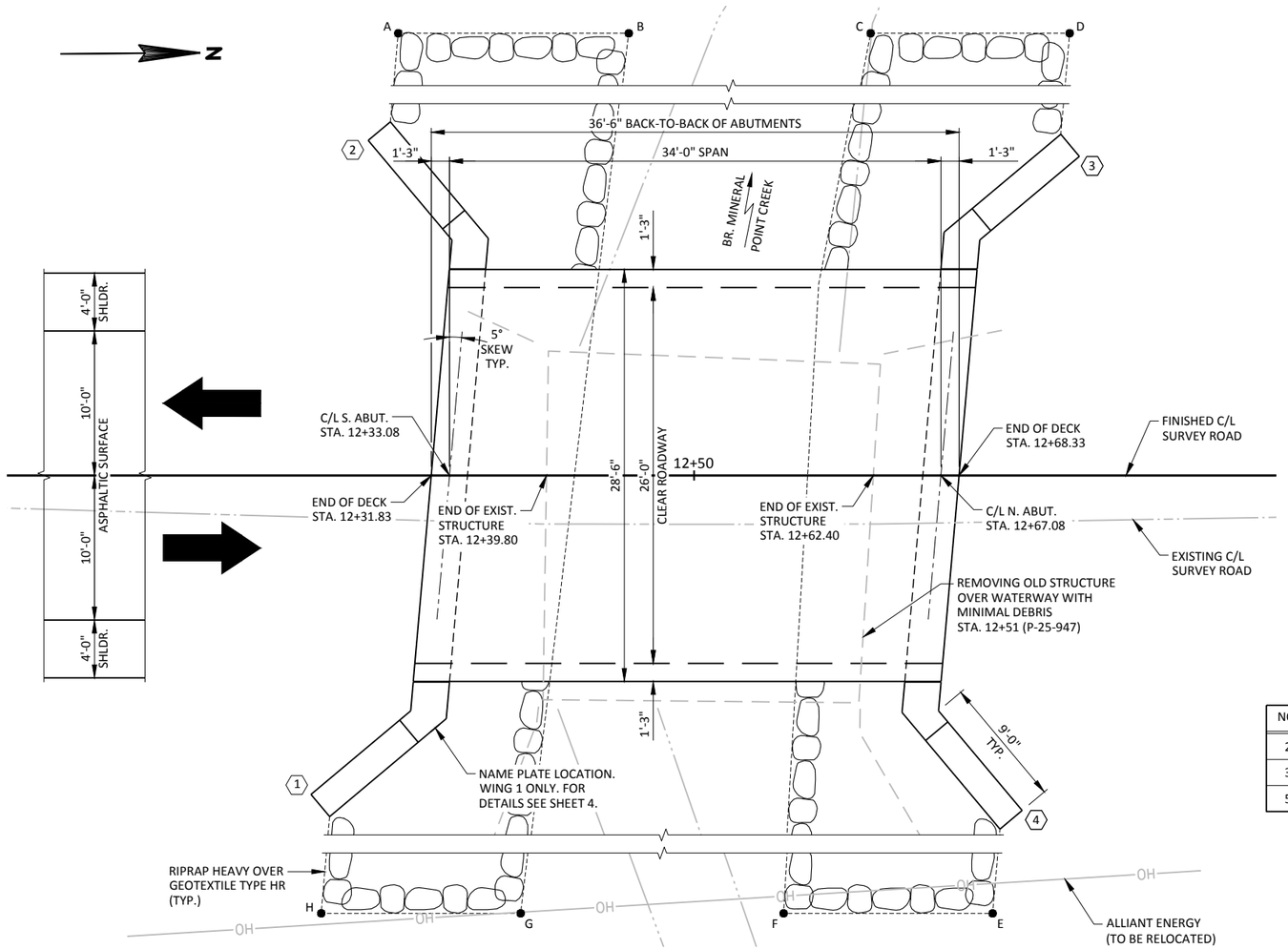
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 29 | E

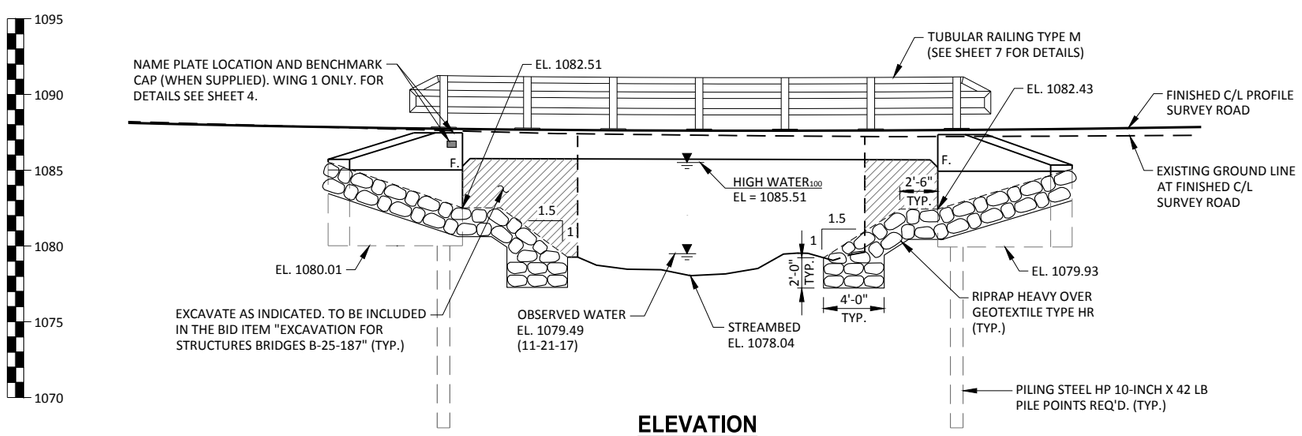
STATE PROJECT NUMBER

5699-00-76



PLAN B-25-187

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO BRANCH MINERAL POINT CREEK)

⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+30	33' LT.
B	12+46	33' LT.
C	12+62	33' LT.
D	12+76	33' LT.
E	12+70	33' RT.
F	12+56	33' RT.
G	12+38	33' RT.
H	12+24	33' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
2	11+90	3/4" IRON REBAR SET, 11.4' LT	1088.31
3	14+15	3/4" IRON REBAR SET, 15.4' LT	1092.80
5	13+23	COTTON GIN SPINDLE IN PPOL, 27.2' RT	1086.73

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.37
OPERATING RATING FACTOR — RF=1.78
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 15 FT PILE LENGTHS AT BOTH ABUTMENTS. PILE POINTS REQ'D. AT ALL LOCATIONS.

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

TRAFFIC DATA

A.D.T. (2020) — 205
A.D.T. (2040) — 310
DESIGN SPEED — 30 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 1.7 SQ. MI.
Q_{100} TOTAL — 910 C.F.S.
THROUGH STRUCTURE — 910 C.F.S.
OVERTOPPING ROADWAY — N/A
VELOCITY - THROUGH STRUCTURE — 8.0 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 113.0 SQ. FT.
HIGH $WATER_{100}$ ELEVATION — 1085.51
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 190 C.F.S.
$VELOCITY_2$ — 3.4 F.P.S.
HIGH $WATER_2$ ELEVATION — 1082.02

LIST OF DRAWINGS

GENERAL PLAN — 1.
CROSS SECTION AND QUANTITIES — 2.
SUBSURFACE EXPLORATION — 3.
ABUTMENTS — 4.
ABUTMENT DETAILS — 5.
SUPERSTRUCTURE — 6.
RAILING TUBULAR TYPE M — 7.

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND E-36303 SPRING GREEN WIS.
Patrick Boland 4-23-19

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN WI 53588
OFFICE 608 588-7288

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 05/06/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-187

SURVEY ROAD OVER BRANCH MINERAL POINT CREEK

COUNTY: IOWA — TOWN/~~CITY/VILLAGE~~: DODGEVILLE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
PTB	RBH	PTB	RBH

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

GENERAL PLAN

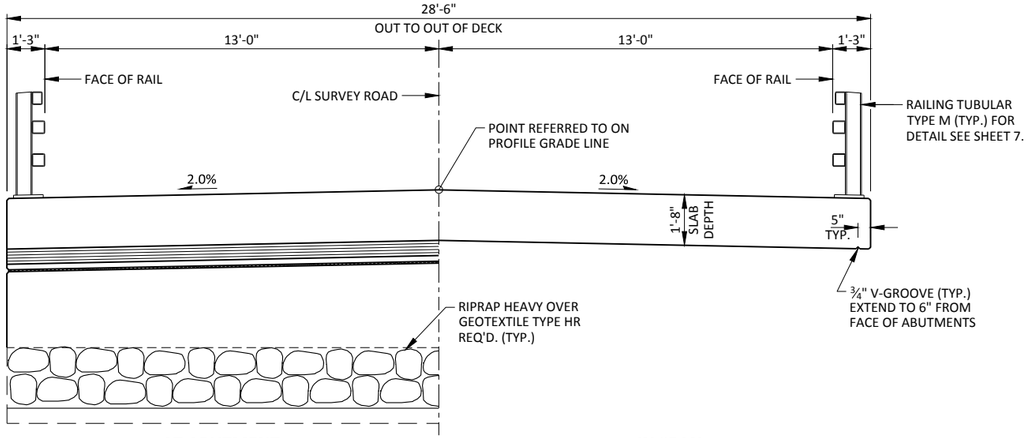
SHEET 1 OF 7
30

8

8

STATE PROJECT NUMBER

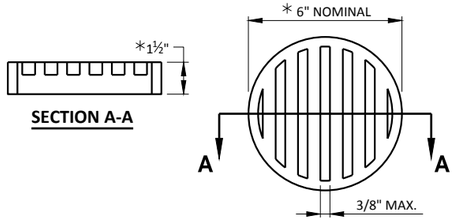
5699-00-76



AT ABUTMENT **IN SPAN**

PROPOSED CROSS-SECTION THROUGH ROADWAY

LOOKING NORTH



RODENT SCREEN

NOTES:

∗ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

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

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

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

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

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

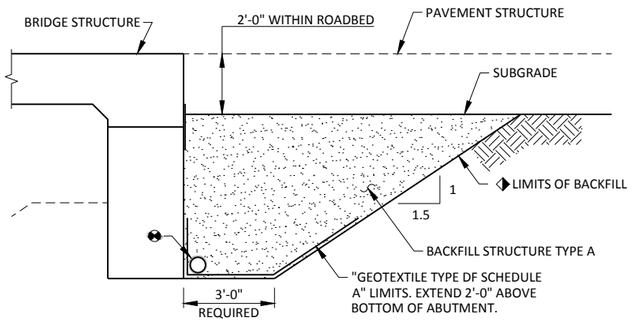
THE EXISTING STRUCTURE (P-25-947) IS A STEEL DECK GIRDER STRUCTURE WITH A CONCRETE DECK SUPPORTED ON CONCRETE ABUTMENTS. THE STRUCTURE HAS A ROADWAY WIDTH BETWEEN RAILINGS OF 24.0 FEET AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

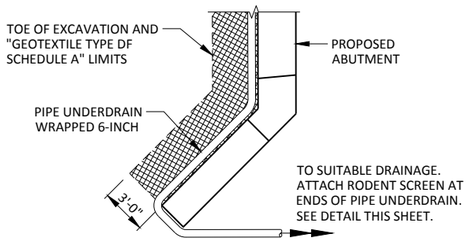


BACKFILL STRUCTURE DETAIL

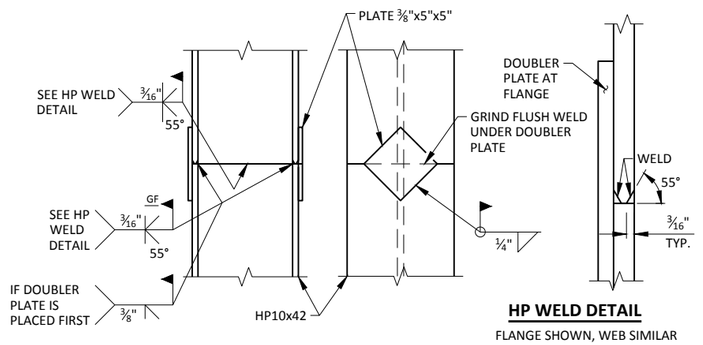
(TYPICAL AT ABUTMENTS. ABUTMENT BODY SHOWN - WING WALLS SIMILAR)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-25-187". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◆ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



PIPE UNDERDRAIN DETAIL



HP WELD DETAIL

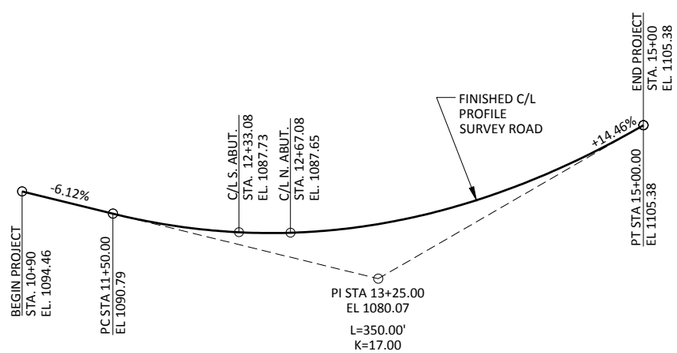
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	SUPER	N. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 12+51	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-25-187	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	125	--	125	250
502.0100	CONCRETE MASONRY BRIDGES	CY	26	69	26	121
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	140	--	140
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,145	--	2,145	4,290
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,355	12,190	1,355	14,900
513.4061	RAILING TUBULAR TYPE M	LF	--	78	--	78
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.0500	PILE POINTS	EACH	7	--	7	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	105	--	105	210
606.0300	RIPRAP HEAVY	CY	70	--	70	140
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	120	--	120	240
	NON-BID ITEMS					
	FILLER	SIZE				½" & ¾"
	NAME PLATE					



PROFILE GRADE LINE

SURVEY ROAD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-187

DRAWN BY PTB | PLANS CK'D. RBH

CROSS SECTIONS AND QUANTITIES

SHEET 2 OF 7

31

8

8

STATE PROJECT NUMBER

5699-00-76

SOIL BORINGS

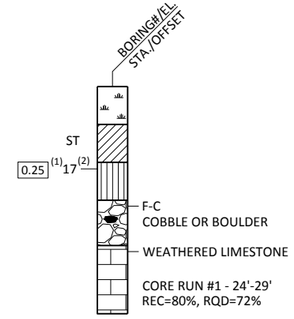
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	03/14/18	146,084.99	367,906.09
2	03/13/18	146,120.44	367,888.15

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
4203 SCHOLFIELD AVENUE, STE 1
SCHOFIELD, WI 54476

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 ELEVATIONS

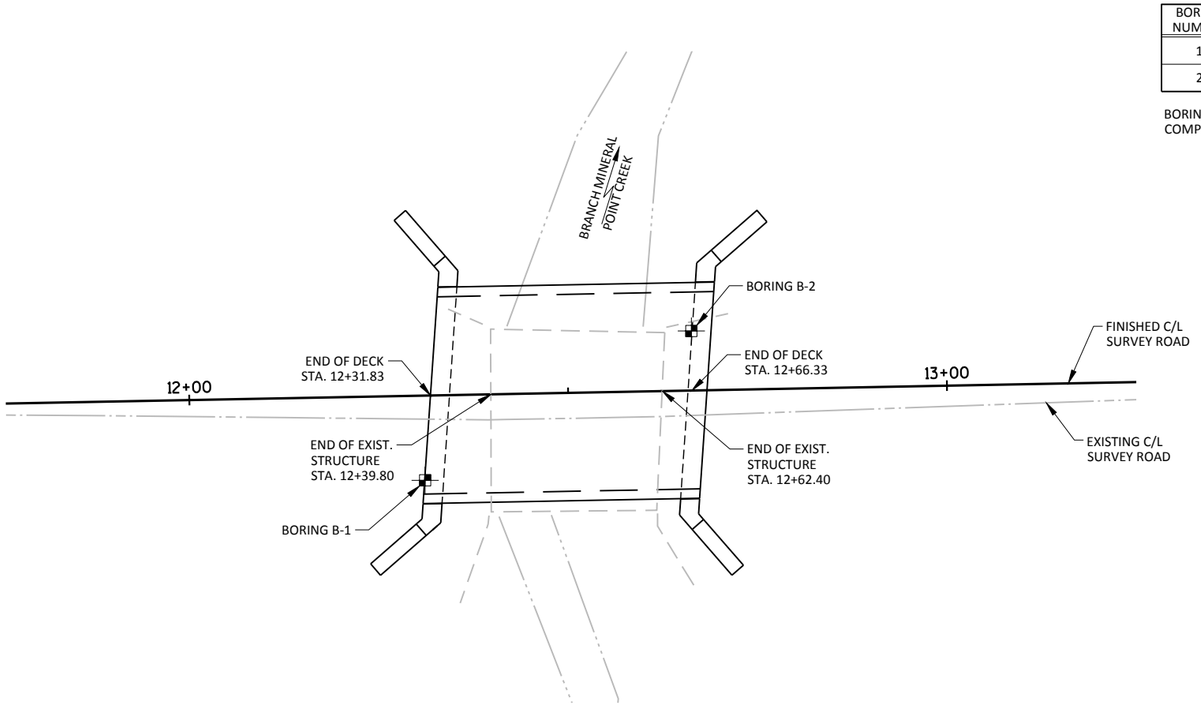
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

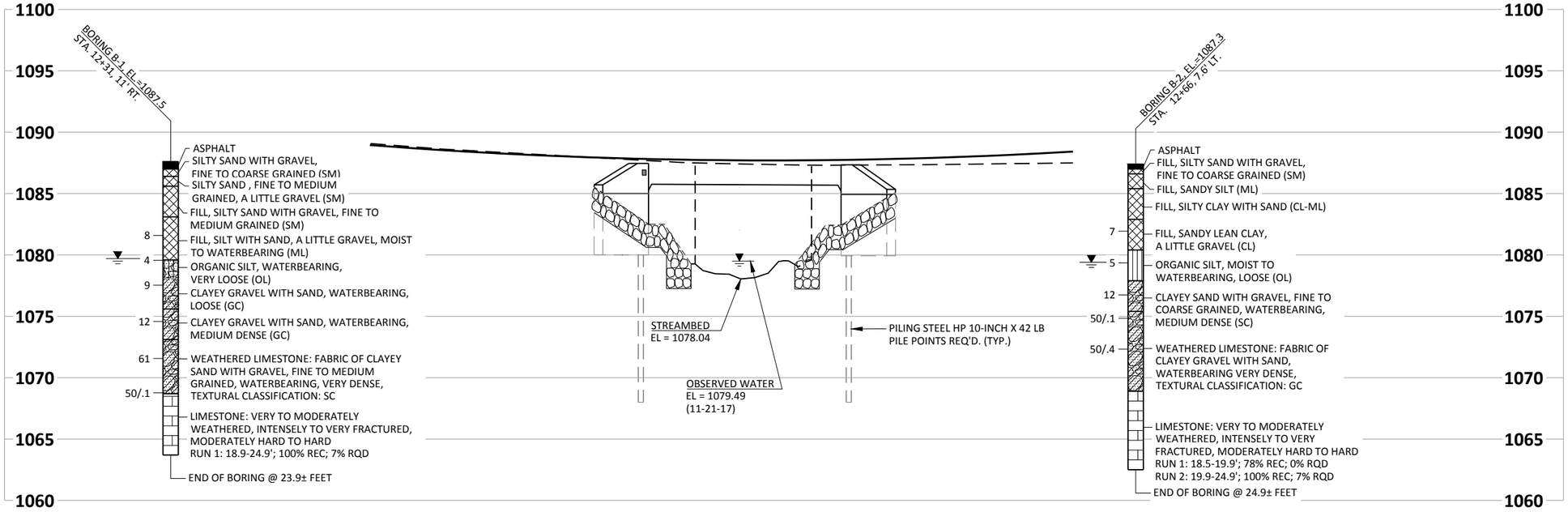
F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

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.



PLAN B-25-187



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-187

DRAWN BY PTB | PLANS CK'D. RBH

SUBSURFACE EXPLORATION

SHEET 3 OF 7

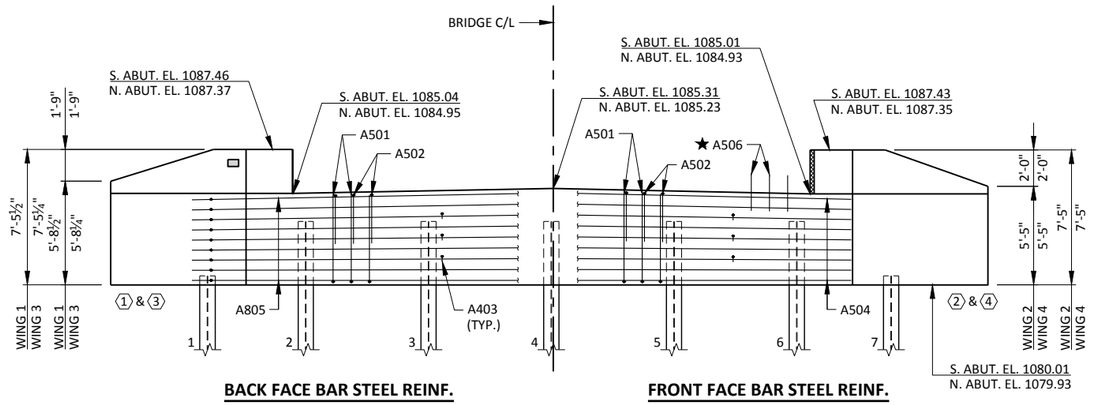
32

8

8

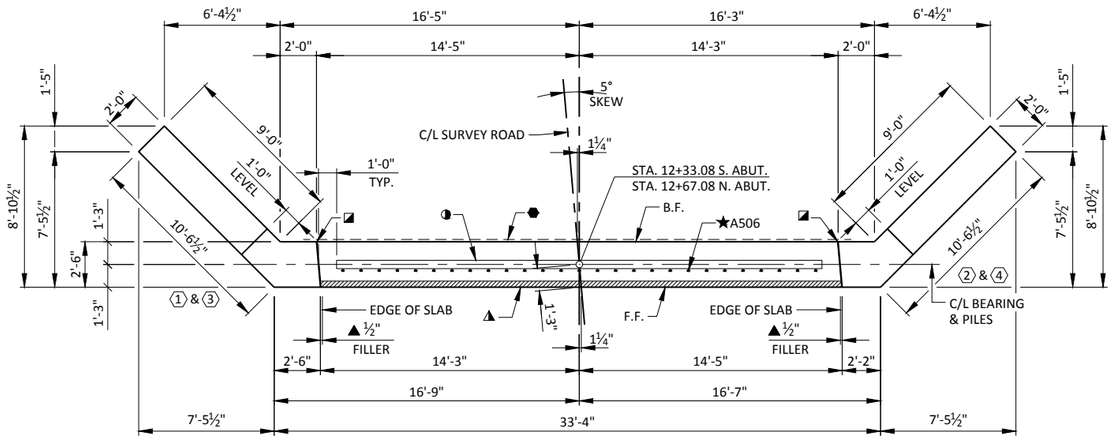
STATE PROJECT NUMBER

5699-00-76

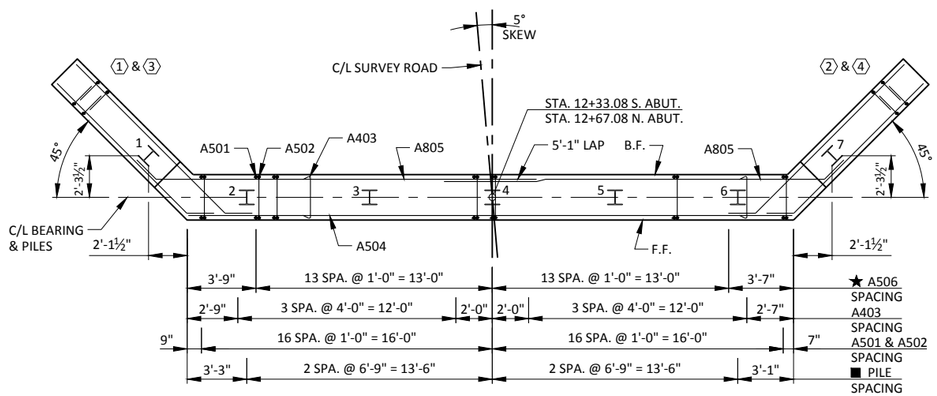


ELEVATION

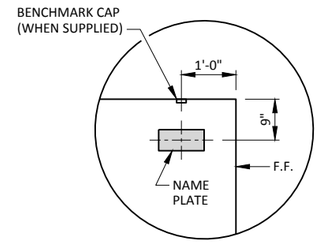
(SOUTH ABUTMENT LOOKING SOUTH)
(NORTH ABUTMENT LOOKING NORTH)



PLAN

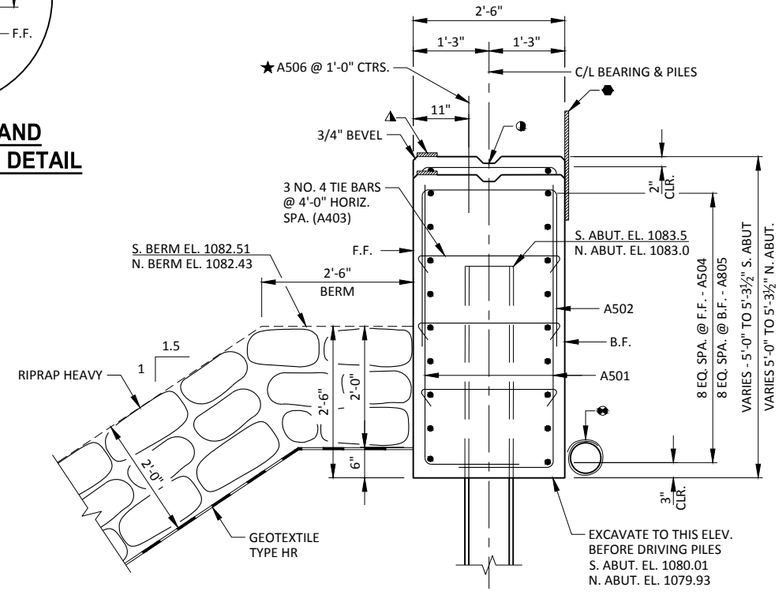


LAYOUT



NAME PLATE AND BENCHMARK CAP DETAIL

(WING 1 ONLY)



ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 15 FT. PILE LENGTHS AT BOTH ABUTMENTS.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬬ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING NEGLECTING THE KEYED CONSTRUCTION JOINT.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-187

DRAWN BY: PTB | PLANS CK'D.: RBH

ABUTMENTS

SHEET 4 OF 7

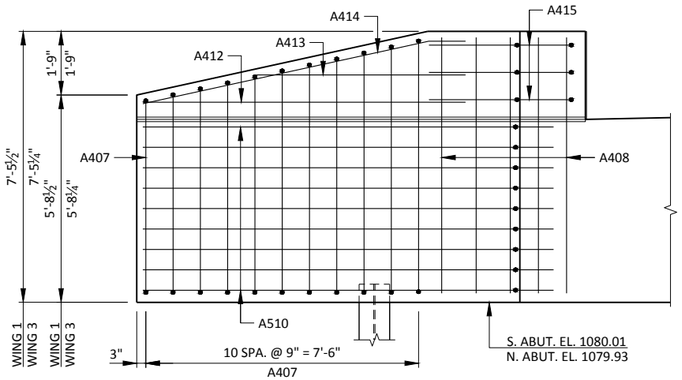
33

8

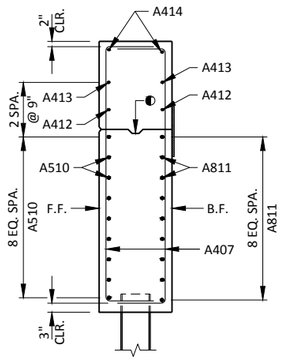
8

STATE PROJECT NUMBER

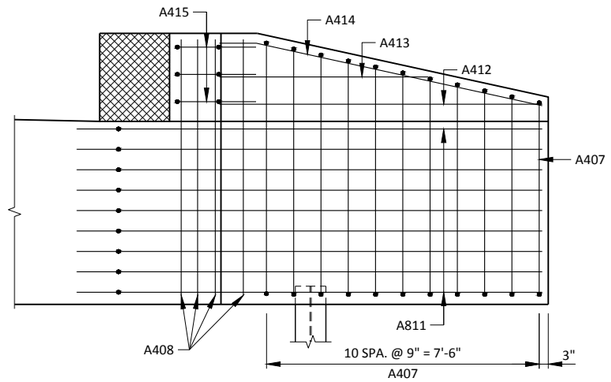
5699-00-76



F.F. ELEVATION - WINGS 1 & 3



SECTION A-A



B.F. ELEVATION - WINGS 1 & 3

BILL OF BARS
TWO ABUTMENTS SHOWN

2,710 LB (COATED)
4,290 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	132	6-1	X			BODY - VERT. - F.F & B.F.
A502	66	8-1	X			BODY - VERT. - TOP
A403	48	2-10	X			TIE BARS
A504	18	33-2				BODY - HORIZ. - F.F.
A805	36	22-9	X			BODY - HORIZ. - B.F.
A506	54	2-0		X		BODY - VERT. - DOWELS
A407	44	8-7	X	X	⚹	WING 1 & 3 - VERT. - F.F. & B.F.
A408	36	7-0		X		WINGS - VERT.
A409	4	3-3		X		WINGS - VERT. - TOP
A510	36	11-9	X	X		WINGS - HORIZ. - F.F.
A811	36	13-3	X	X		WINGS - HORIZ. - B.F.
A412	4	8-10		X		WING 1 & 3 - HORIZ. - F.F. & B.F. - TOP
A413	4	5-9		X		WING 1 & 3 - HORIZ. - F.F. & B.F. - TOP
A414	4	9-0	X	X		WING 1 & 3 - HORIZ. - F.F. & B.F. - TOP
A415	6	9-8	X	X		WING 1 & 3 - HORIZ. - TOP
A416	44	8-6	X	X	⚹	WING 2 & 4 - VERT. - F.F. & B.F.
A417	4	8-2		X		WING 2 & 4 - HORIZ. - F.F. & B.F. - TOP
A418	4	5-2		X		WING 2 & 4 - HORIZ. - F.F. & B.F. - TOP
A419	4	9-1	X	X		WING 2 & 4 - HORIZ. - F.F. & B.F. - TOP
A420	6	9-3	X	X		WING 2 & 4 - HORIZ.- TOP

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

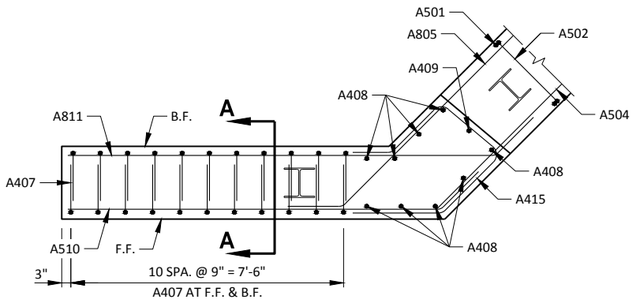
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

⚹ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	4 SERIES OF 11	9-5 TO 7-9
A416	4 SERIES OF 11	9-5 TO 7-7

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WINGS 1 & 3

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

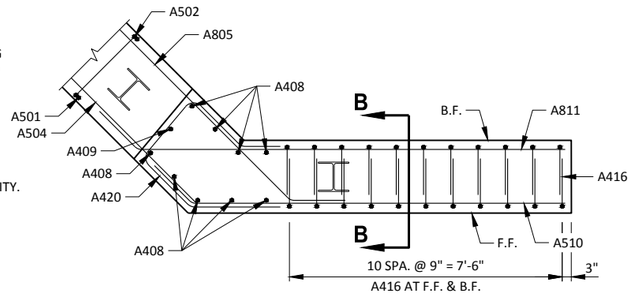
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

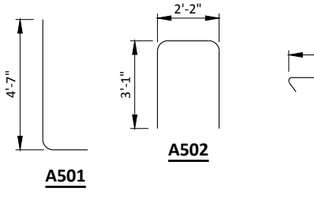
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

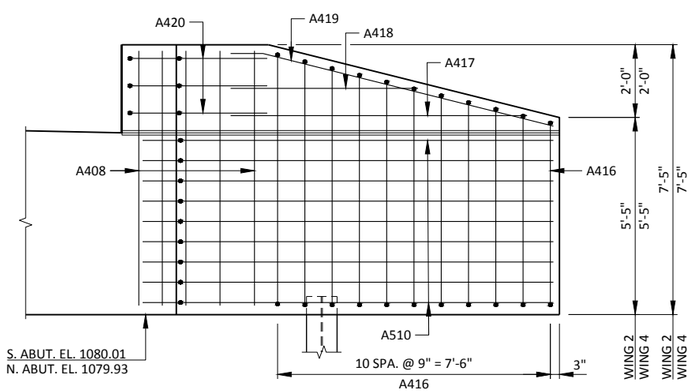
B.F. - BACK FACE



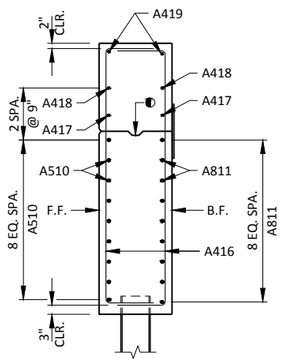
PLAN VIEW - WINGS 2 & 4



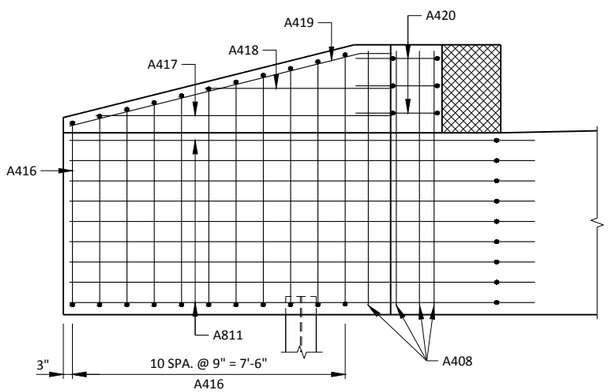
A805, A510 & A811



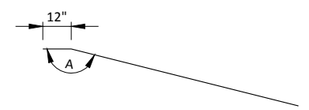
F.F. ELEVATION - WINGS 2 & 4



SECTION B-B



B.F. ELEVATION - WINGS 2 & 4



A414 & A419

MARK	'A'
A414	167°40'
A419	165°57'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-187

DRAWN BY: PTB | PLANS CK'D.: RBH

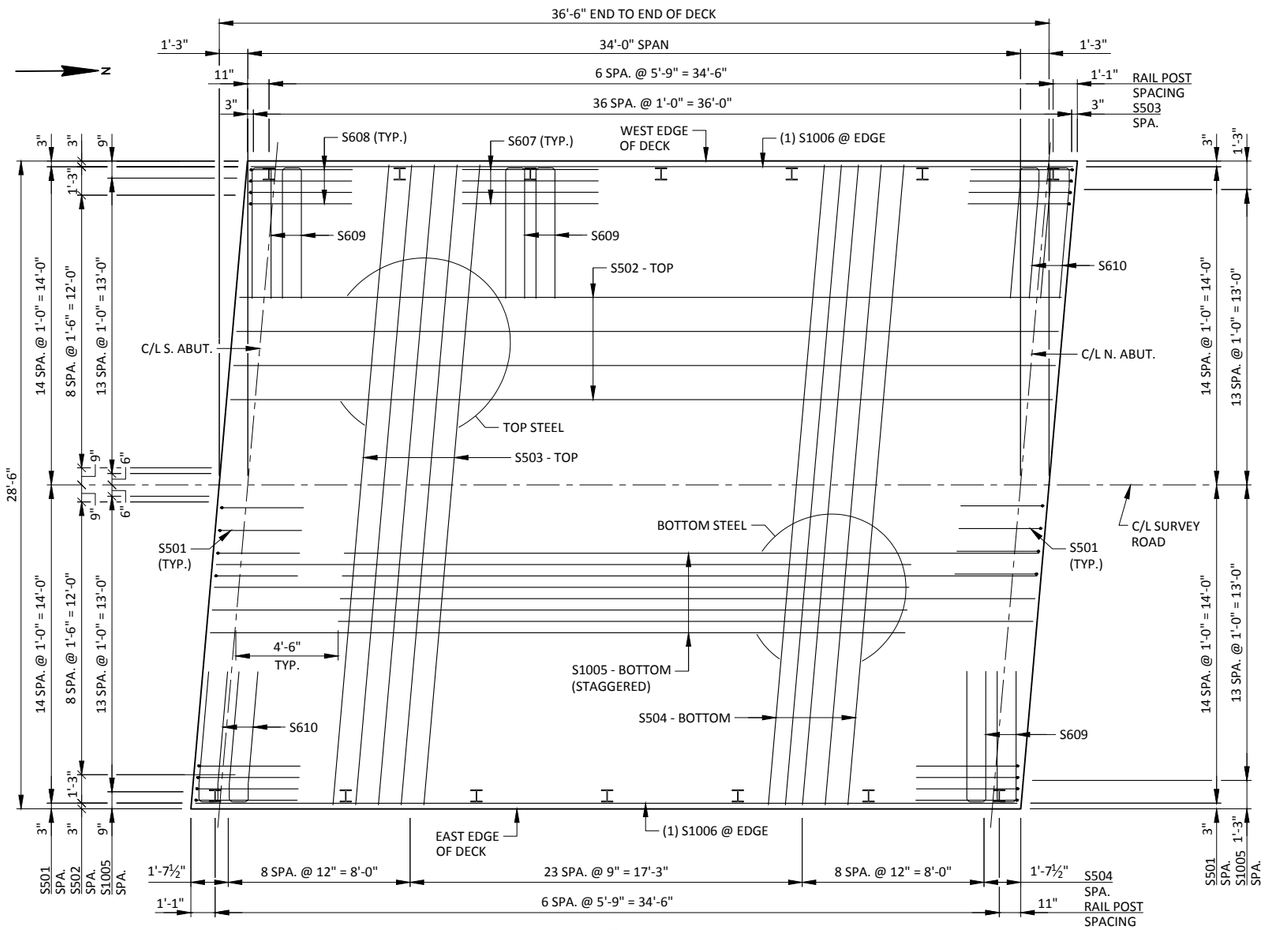
ABUTMENT DETAILS

SHEET 5 OF 7

34

8

8



PLAN

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

SURVEY TOP OF DECK ELEVATIONS

	S. ABUT.	0.50 PT.	N. ABUT.
WEST EDGE OF DECK			
CENTER LINE			
EAST EDGE OF DECK			

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

STATE PROJECT NUMBER

5699-00-76

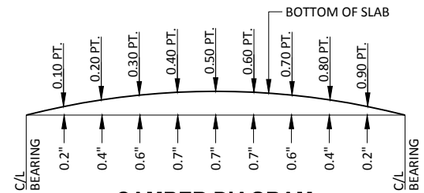
BILL OF BARS SUPERSTRUCTURE — 12,190 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	58	7-6	X	X	ENDS OF DECK
S502	20	36-2		X	SLAB - TOP - LONGIT.
S503	43	28-3		X	SLAB - TOP - TRANS.
S504	40	28-3		X	SLAB - BOTTOM - TRANS.
S1005	55	30-6		X	SLAB - BOTTOM - LONGIT.
S1006	2	36-2		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	40	6-0		X	RAIL POSTS - INTERIOR
S608	16	6-0	X	X	RAIL POSTS - CORNERS
S609	24	12-0	X	X	RAIL POSTS
S610	4	12-0	X	X	RAIL POSTS - CORNERS 1 & 3

NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SOME BARS HAVE BEEN OMITTED FOR CLARITY.

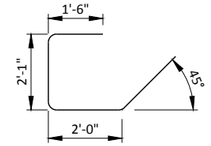


CAMBER DIAGRAM

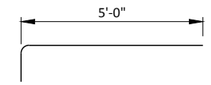
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

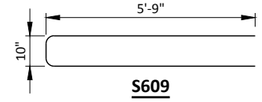
TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.



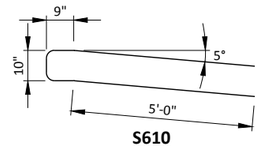
S501



S608



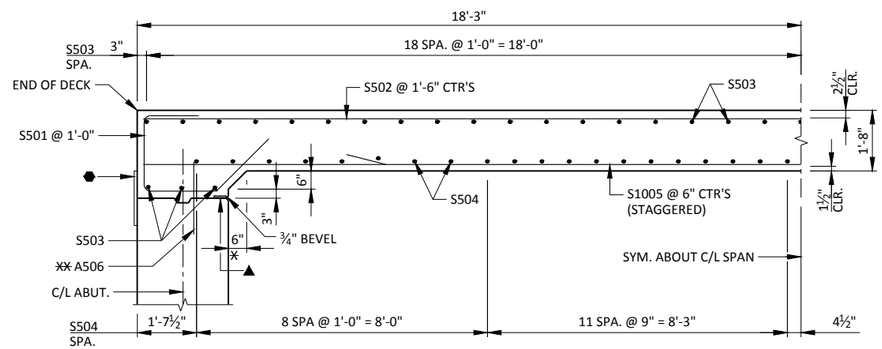
S609



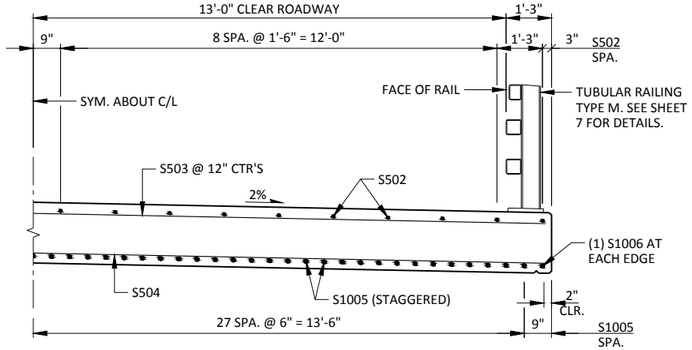
S610

TOP OF DECK ELEVATIONS

	C/L S. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L N. ABUT.
W. EDGE	1087.43	1087.39	1087.36	1087.34	1087.32	1087.31	1087.31	1087.32	1087.33	1087.35	1087.37
C/L	1087.73	1087.69	1087.66	1087.64	1087.62	1087.61	1087.60	1087.60	1087.61	1087.63	1087.65
E. EDGE	1087.46	1087.42	1087.38	1087.36	1087.33	1087.32	1087.31	1087.31	1087.32	1087.33	1087.35



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- X DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- XX SEE SHEET 4 FOR PLACEMENT OF A506 BARS.

NO.	DATE	REVISION	BY

STRUCTURE B-25-187

DRAWN BY PTB | PLANS CK'D. RBH

SUPERSTRUCTURE

SHEET 6 OF 7

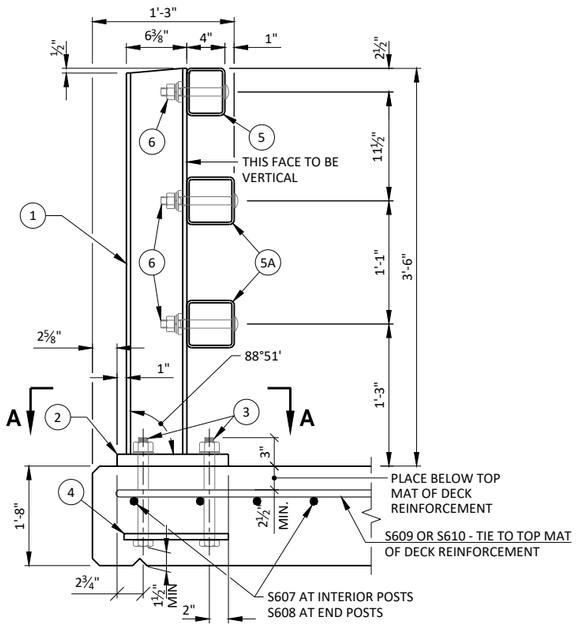
35

8

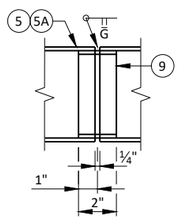
8

STATE PROJECT NUMBER

5699-00-76

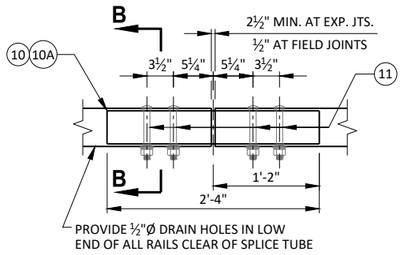


SECTION THROUGH RAILING ON DECK

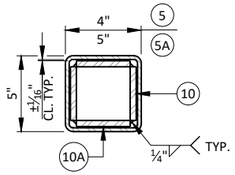


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



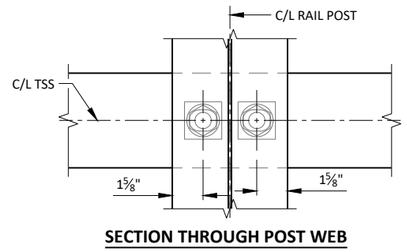
FIELD ERECTION JOINT DETAIL



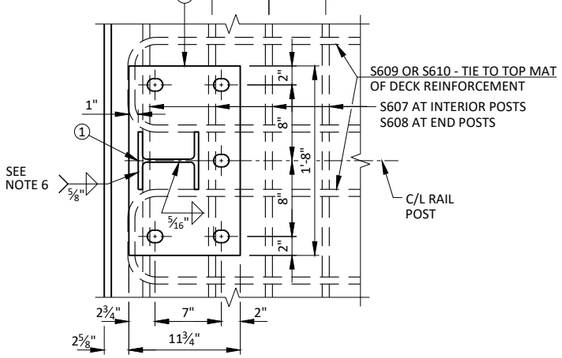
SECTION B-B

LEGEND

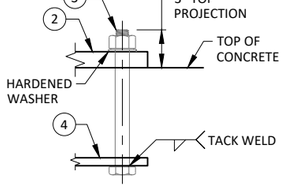
1. W6x25 WITH 1⅛" x 1½" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1½"x11¾"x1'-8" WITH 1⁵⁄₁₆"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG.
4. ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
5. TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆"x1⅝"x1⅞" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜"x3⅜"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅜"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.



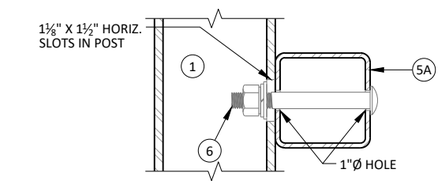
SECTION THROUGH POST WEB



SECTION A-A



ANCHOR BOLTS



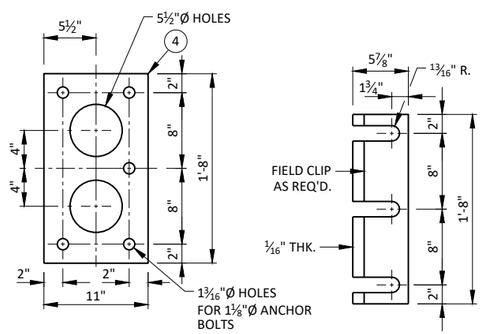
SECTION THROUGH RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

GENERAL NOTES

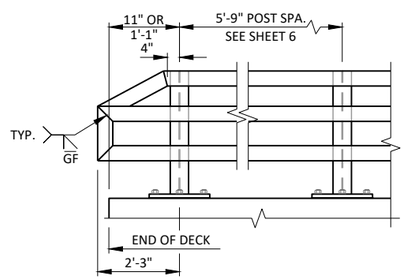
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STRUCTURE B-25-187

DRAWN BY: PTB | PLANS CK'D.: RBH

RAILING TUBULAR TYPE M

SHEET 7 OF 7

36

8

8

EARTHWORK-MAINLINE

	AREA (SF)			INCREMENTAL VOL (CY)					CUMMULATIVE VOLUME (CY)					
STATION	CUT	FILL	ROCK EXC	CUT NOTE 1	FILL NOTE 2	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	MASS ORDINATE NOTE 5
10+90	48	0	0	0	0	0	0	0	0	0	0	0	0	0
11+00	111	0	28	30	0	6	7	-9	30	0	6	7	-9	39
11+50	112	0	0	205	0	14	15	-19	235	0	20	22	-28	263
12+00	78	0	0	175	0	0	0	0	410	0	20	22	-28	438
12+32	78	0	0	91	0	0	0	0	501	0	20	22	-28	529
12+32	0	0	0	0	0	0	0	0	501	0	20	22	-28	529
12+68	0	0	0	0	0	0	0	0	501	0	20	22	-28	529
12+68	33	22	0	0	0	0	0	0	501	0	20	22	-28	529
13+00	33	22	0	41	26	0	0	33	542	26	20	22	5	537
13+50	12	20	0	43	39	0	0	49	585	65	20	22	54	531
14+00	21	2	0	32	20	0	0	25	617	85	20	22	79	538
14+50	65	13	0	80	14	0	0	18	697	99	20	22	96	601
15+00	48	0	0	104	11	0	0	14	801	110	20	22	110	691
			COLUMN SUBTOTALS =	801	110	20	22	110						

EARTHWORK- 'A'-LINE

	AREA (SF)			INCREMENTAL VOL (CY)					CUMMULATIVE VOLUME (CY)					
STATION	CUT	FILL	ROCK EXC	CUT NOTE 1	FILL NOTE 2	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	MASS ORDINATE NOTE 5
50'A'+00	8	0	0	0	0	0	0	0	0	0	0	0	0	0
50'A'+25	4	47	0	6	22	0	0	28	6	22	0	0	28	-22
50'A'+50	0	126	0	2	80	0	0	100	8	102	0	0	128	-120
50'A'+76	37	0	0	34	119	0	0	149	42	221	0	0	277	-235
			COLUMN SUBTOTALS =	42	221	0	0	277						

EARTHWORK- 'B'-LINE

	AREA (SF)			INCREMENTAL VOL (CY)					CUMMULATIVE VOLUME (CY)					
STATION	CUT	FILL	ROCK EXC	CUT NOTE 1	FILL NOTE 2	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 3	FILL (25%) NOTE 4	MASS ORDINATE NOTE 5
70'B'+14	50	52	0	0	0	0	0	0	0	0	0	0	0	0
70'B'+50	50	52	0	67	69	0	0	86	67	69	0	0	86	-19
70'B'+75	69	23	0	55	48	0	0	60	122	117	0	0	146	-24
71'B'+00	8	0	0	35	10	0	0	13	157	127	0	0	159	-2
			COLUMN SUBTOTALS =	157	127	0	0	159						

MAINLINE	801	110	20	22	110	801	110	20	22	110	691
'A'-LINE	42	221	0	0	277	843	331	20	22	387	456
'B'-LINE	157	127	0	0	159	1000	458	20	22	546	454

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - EXPANDED ROCK FACTOR	EXPANDED ROCK FACTOR = 1.1
4 - FILL (25%)	FILL 25%: (UNEXPANDED FILL - (ROCK * ROCK FACTOR))*1.25
5 - MASS ORDINATE	(CUT - FILL (25%))

9

9

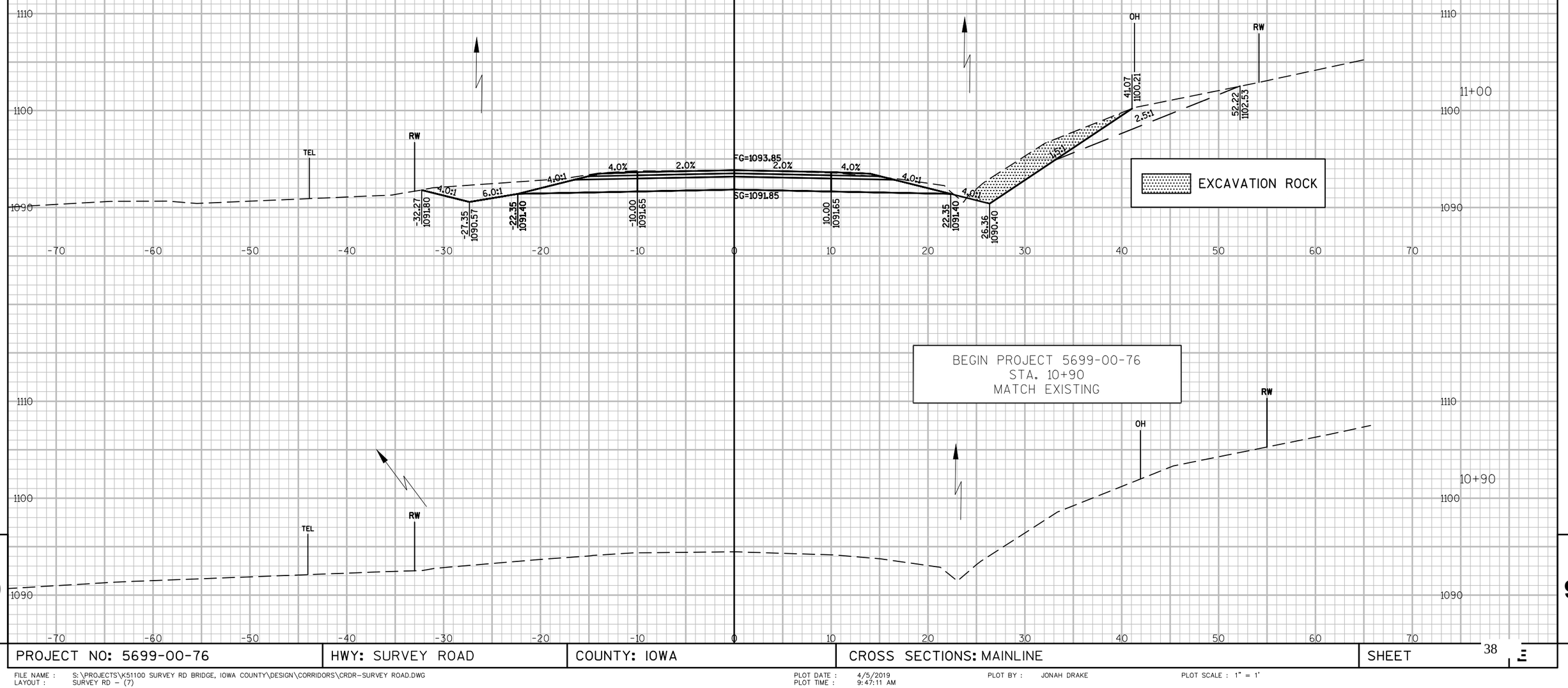
PROJECT NO: 5699-00-76 | HWY: SURVEY ROAD | COUNTY: IOWA | EARTHWORK | SHEET 37 | E

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\SHEETSPLAN\DETAILS\EARTHWORK.DWG
LAYOUT : LAYOUT1

PLOT DATE : 4/16/2019
PLOT TIME : 4:15:42 PM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'



9

9

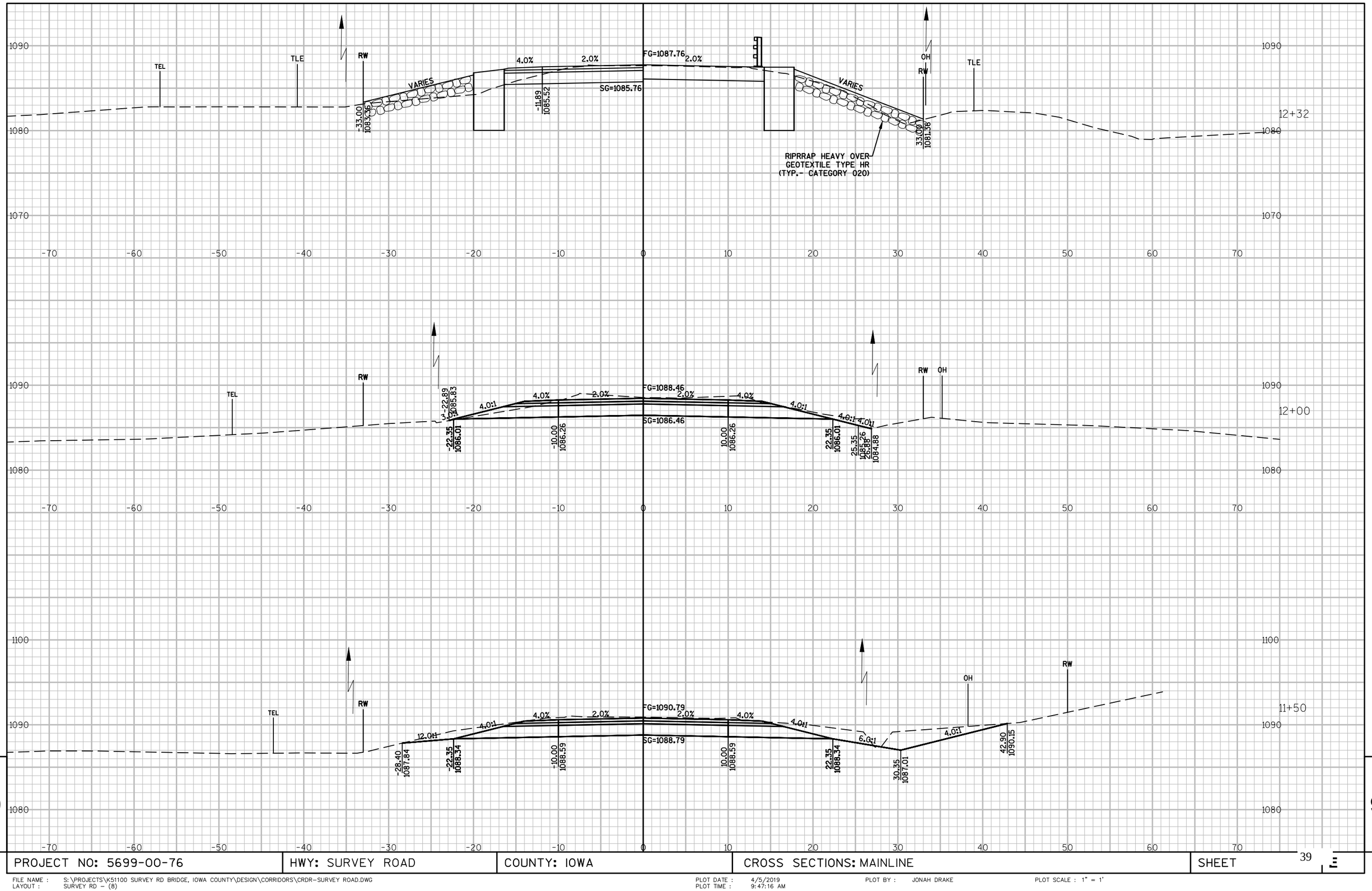
PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : SURVEY RD - (7)

PLOT DATE : 4/5/2019
PLOT TIME : 9:47:11 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'



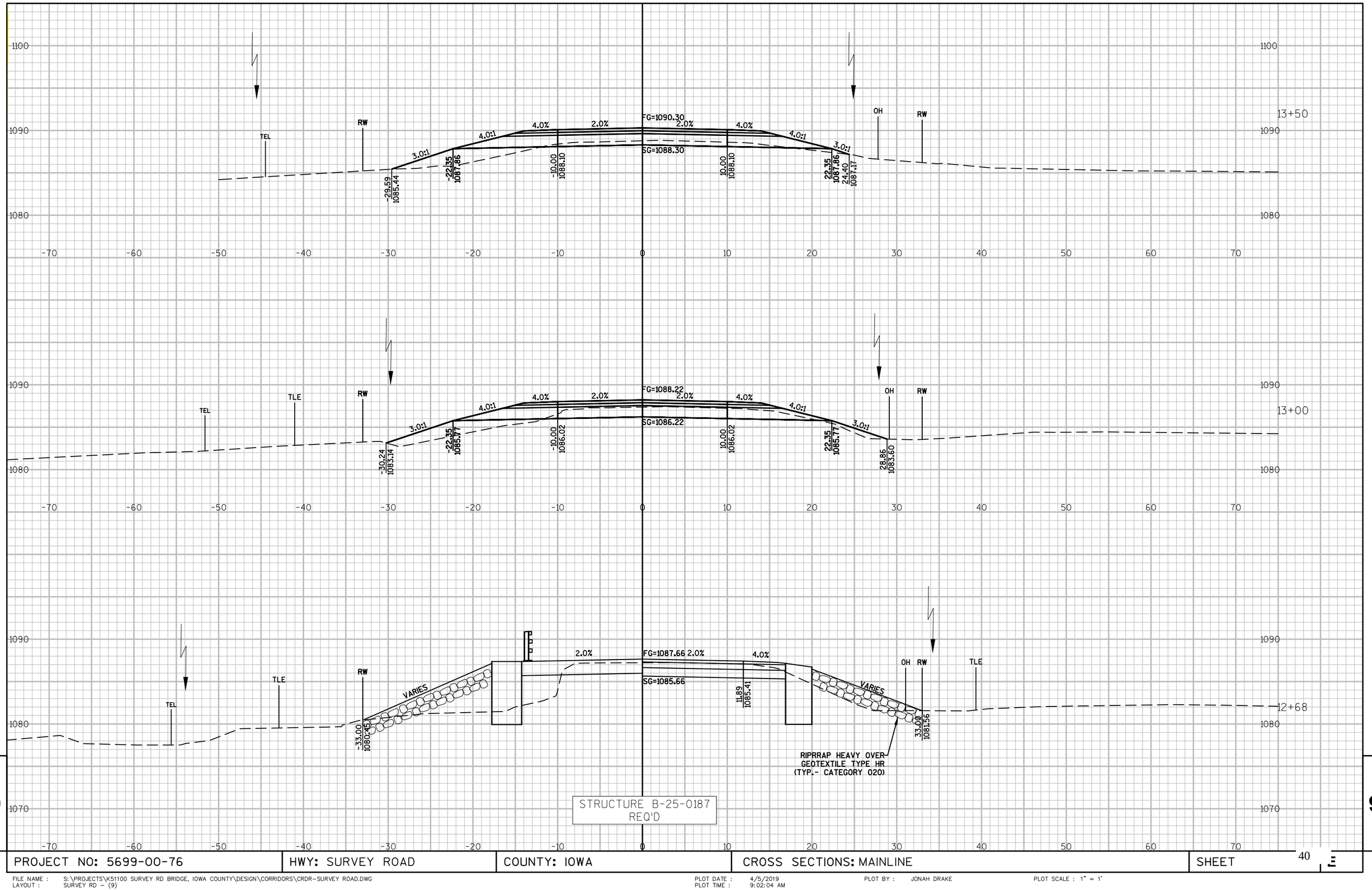
PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : SURVEY RD - (8)

PLOT DATE : 4/5/2019
PLOT TIME : 9:47:16 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'



9

9

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET

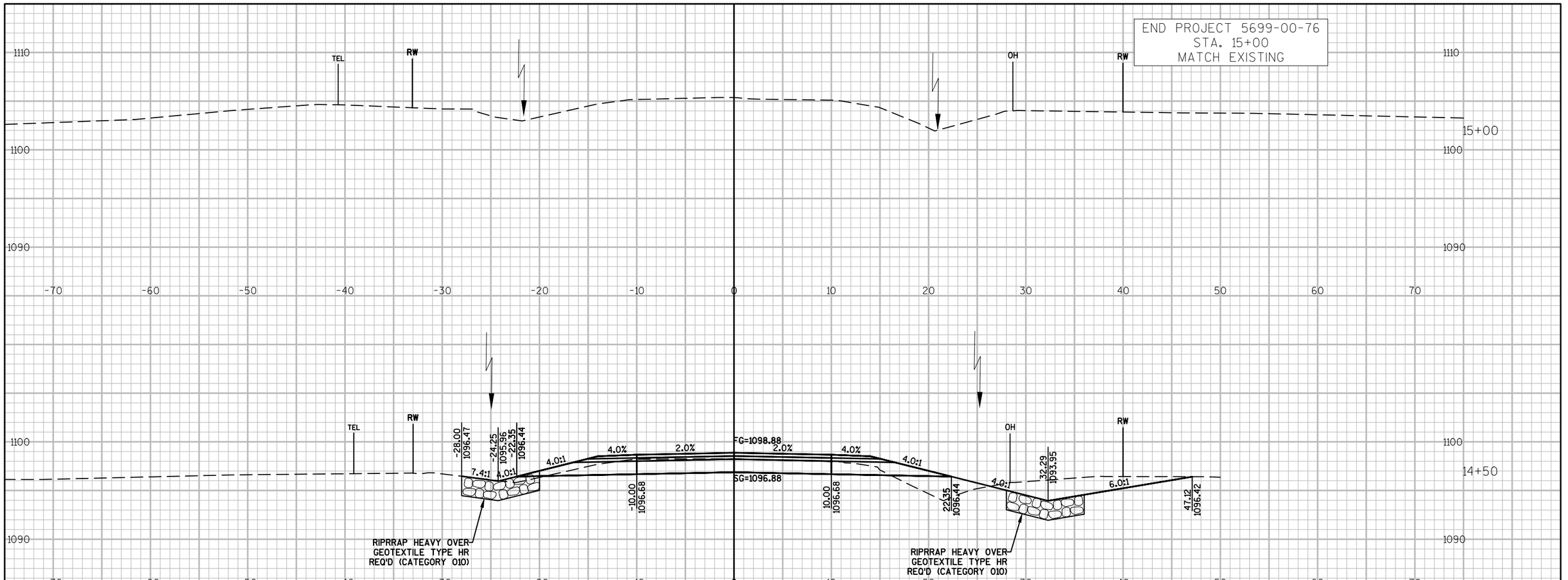
FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : SURVEY RD - (9)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:04 AM

PLOT BY : JONAH DRAKE

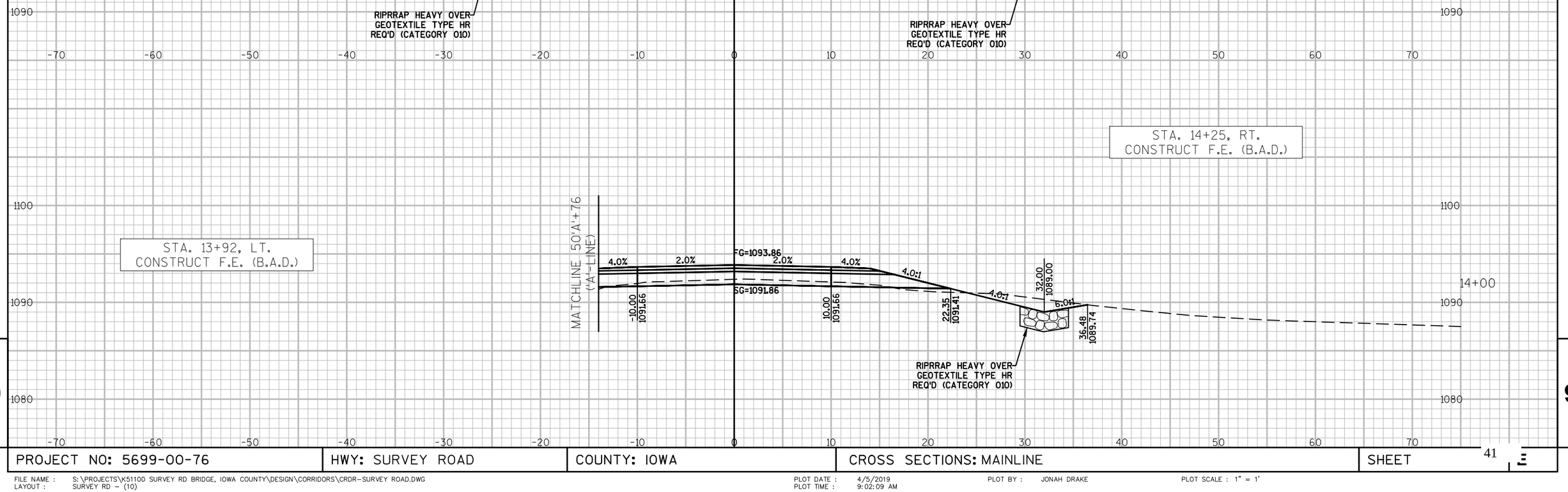
PLOT SCALE : 1" = 1'

END PROJECT 5699-00-76
STA. 15+00
MATCH EXISTING



STA. 13+92, LT.
CONSTRUCT F.E. (B.A.D.)

STA. 14+25, RT.
CONSTRUCT F.E. (B.A.D.)



9 9

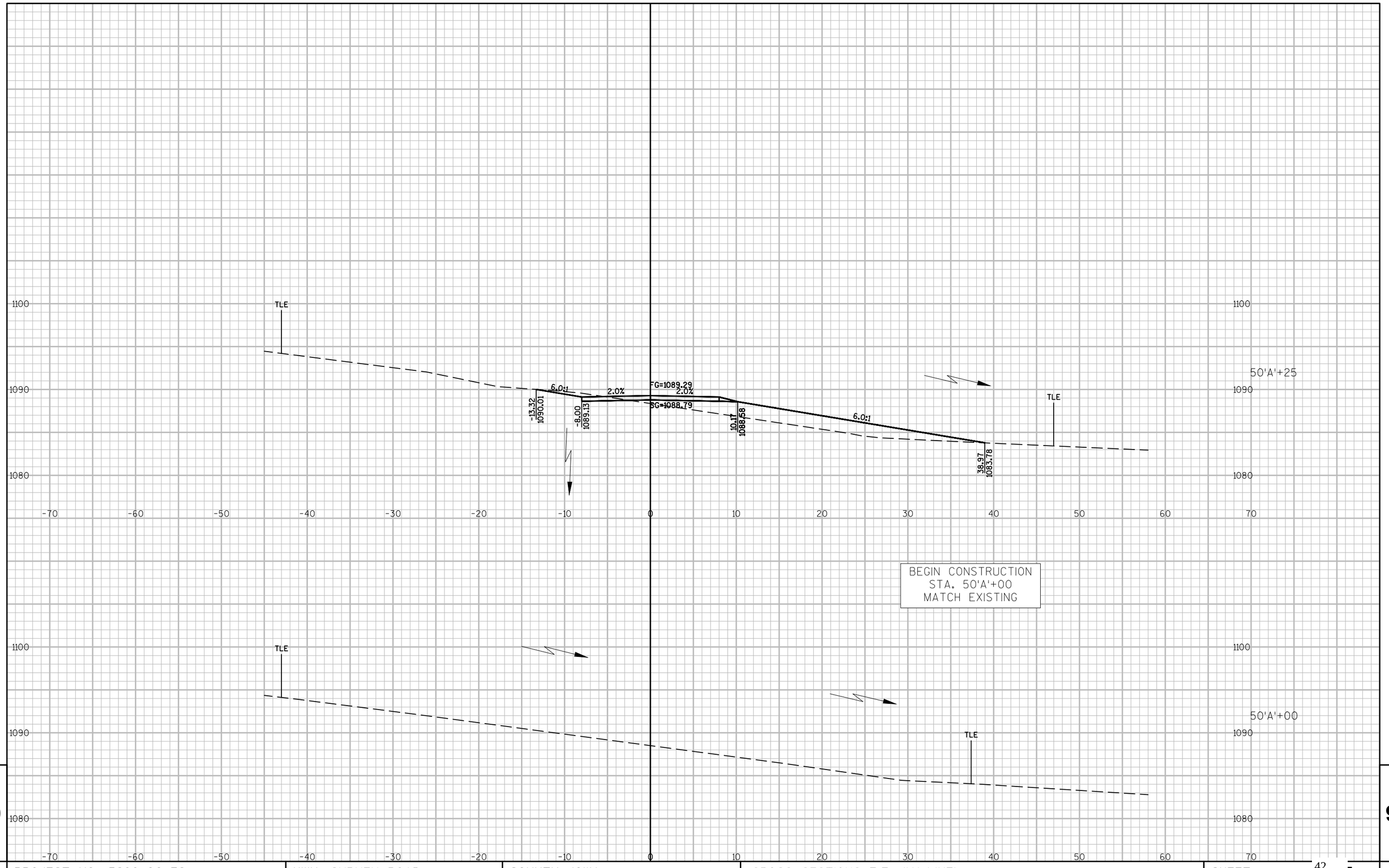
PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET 41

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : SURVEY RD - (10)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:09 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'



PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('A'-LINE)	SHEET

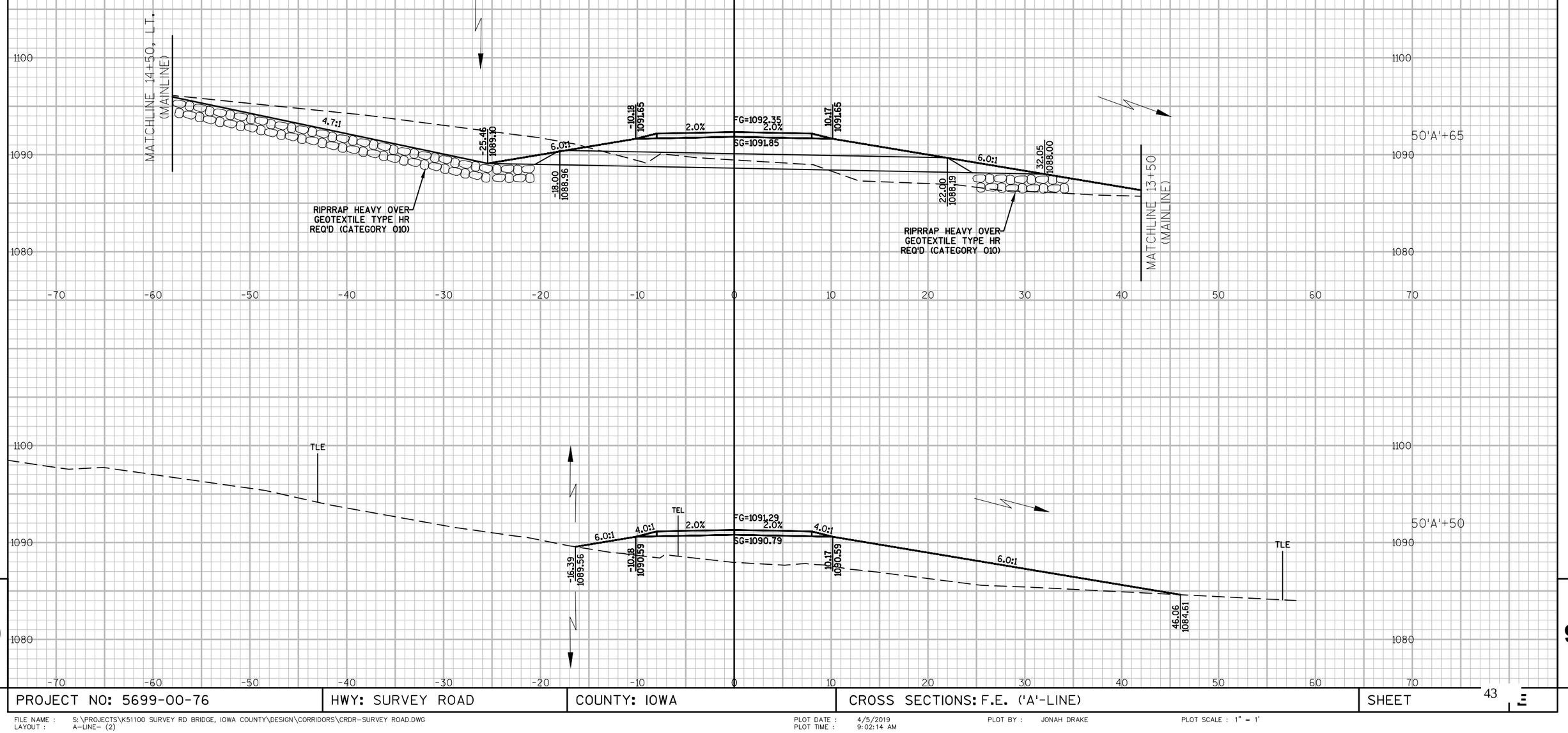
FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : A-LINE- (1)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:24 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'

STA. 50'A'+63
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 5° LHF



PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('A'-LINE)	SHEET 43

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : A-LINE- (2)
PLOT DATE : 4/5/2019
PLOT TIME : 9:02:14 AM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

END CONSTRUCTION
STA. 50'A'+76

MATCHLINE 14+50
(MAINLINE)

VARIES

FG=1092.83

SG=1090.83

VARIES

MATCHLINE 13+50
(MAINLINE)

50'A'+76

1100
1090
1080

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

9

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('A'-LINE)	SHEET

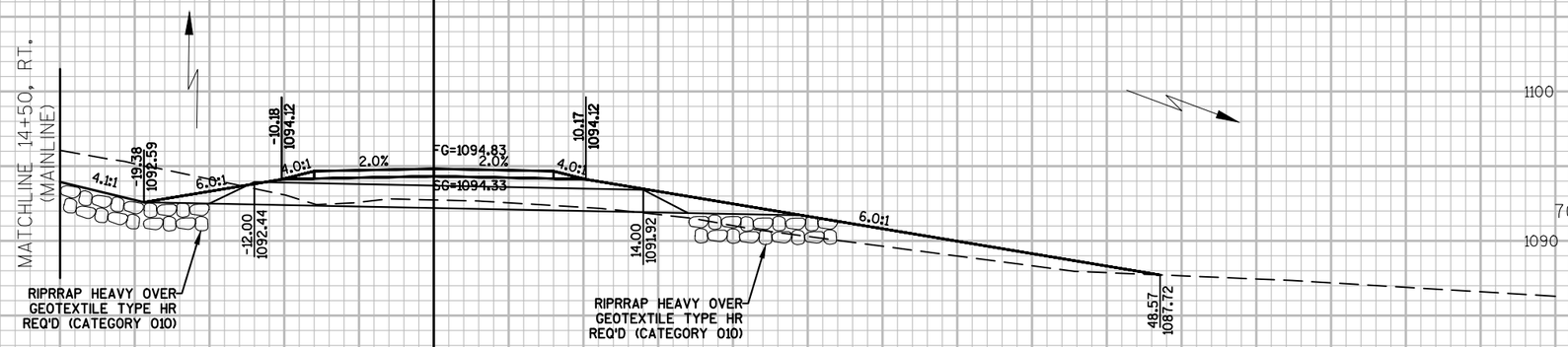
FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : A-LINE- (3)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:19 AM

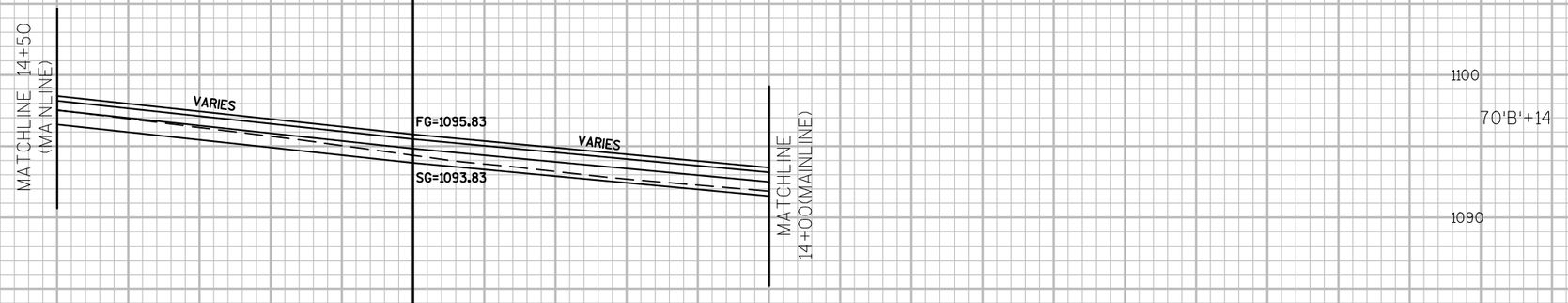
PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'

STA. 70'B'+32
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°

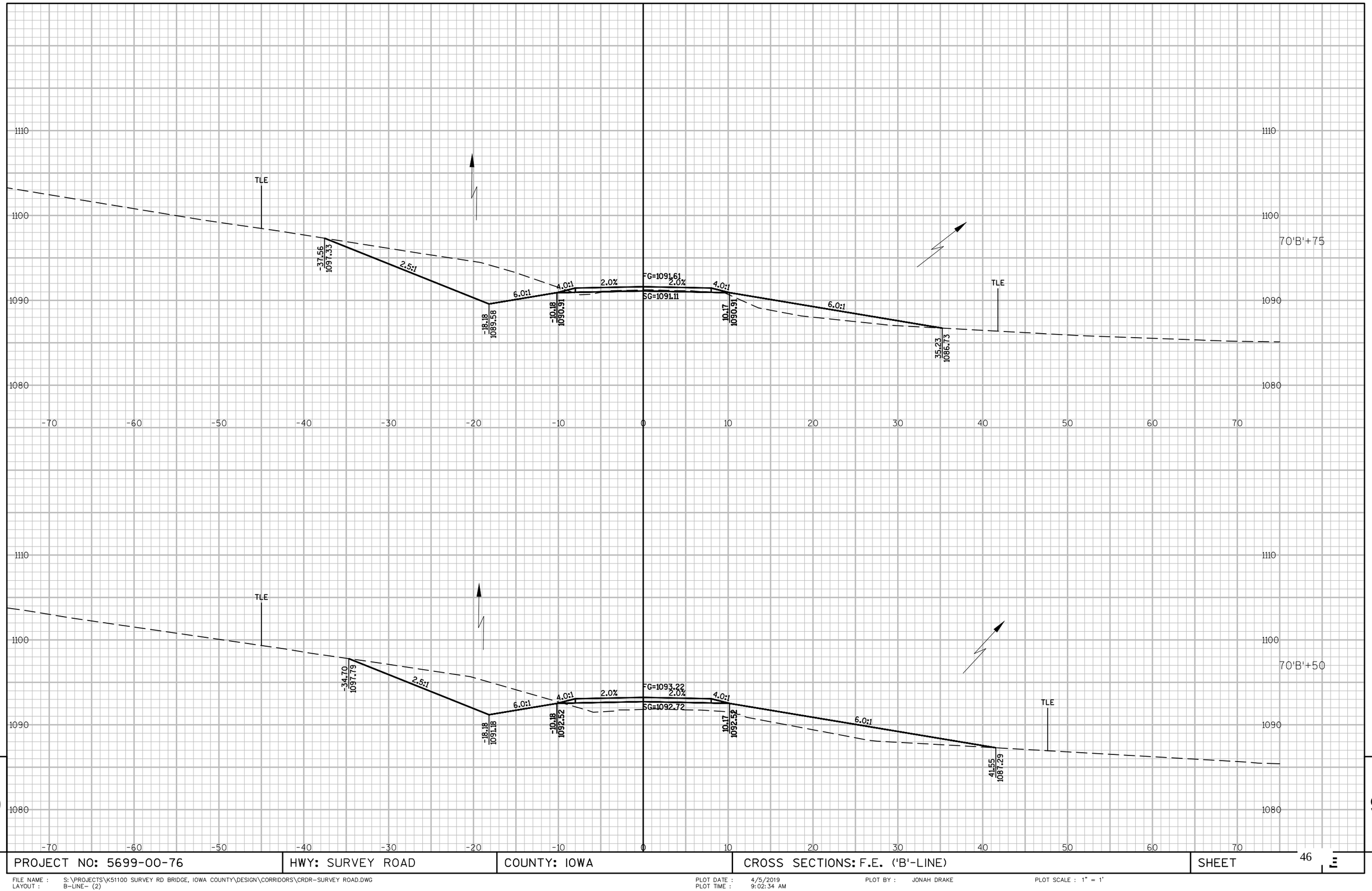


BEGIN CONSTRUCTION
STA. 70'B'+14



PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('B'-LINE)	SHEET

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : B-LINE- (1)
PLOT DATE : 4/5/2019
PLOT TIME : 9:02:29 AM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'



9

9

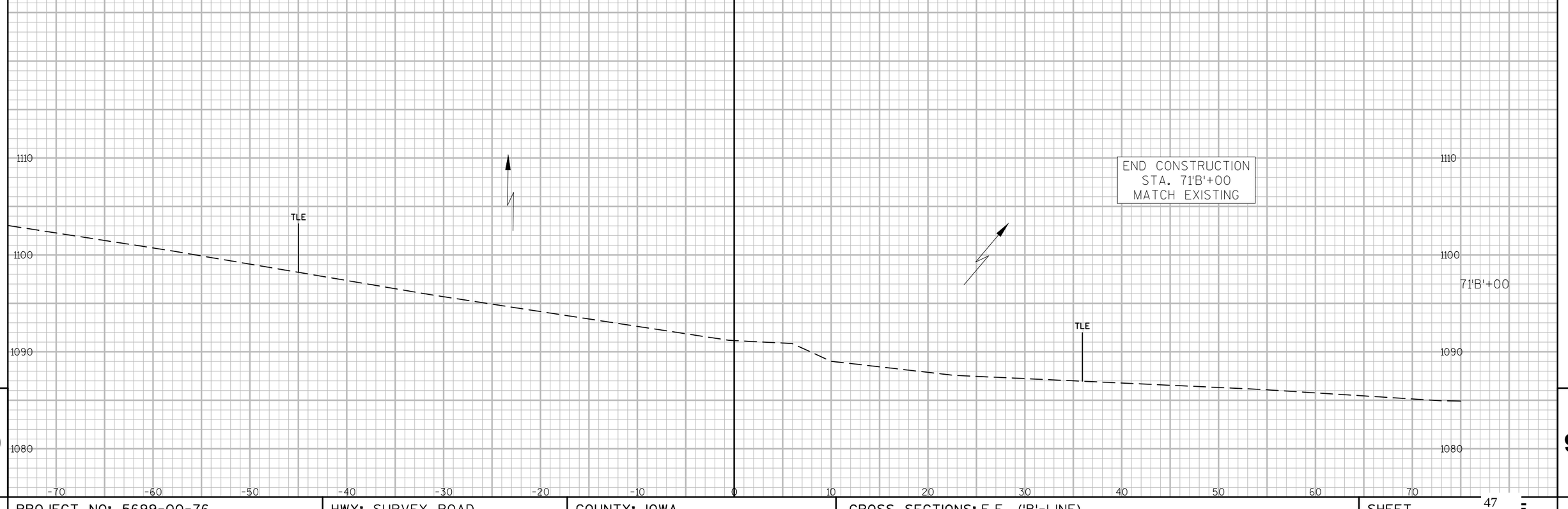
PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('B'-LINE)	SHEET

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : B-LINE- (2)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:34 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'



9

9

PROJECT NO: 5699-00-76	HWY: SURVEY ROAD	COUNTY: IOWA	CROSS SECTIONS: F.E. ('B'-LINE)	SHEET 47

FILE NAME : S:\PROJECTS\K51100 SURVEY RD BRIDGE, IOWA COUNTY\DESIGN\CORRIDORS\CRDR-SURVEY ROAD.DWG
LAYOUT : B-LINE- (3)

PLOT DATE : 4/5/2019
PLOT TIME : 9:02:39 AM

PLOT BY : JONAH DRAKE

PLOT SCALE : 1" = 1'

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

MAD

NOVEMBER 2019

PROJECT ID: 5921-00-74

WITH: N/A

COUNTY: IOWA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile (Includes Erosion Control Plan)
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 = 66

10

N

DESIGN DESIGNATION

A.A.D.T.	(2019)	= 140
A.A.D.T.	(2039)	= 150
D.H.V.	(2039)	= 14
D.D.		= 60/40
T.		= 8.8%
DESIGN SPEED		= 40 MPH
ESALS		= 22,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

USH 151 - STH 191

(DODGE BRANCH BRIDGE B-25-179)

CTH Y

IOWA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5921-00-74		

STATE PROJECT NUMBER 5921-00-74

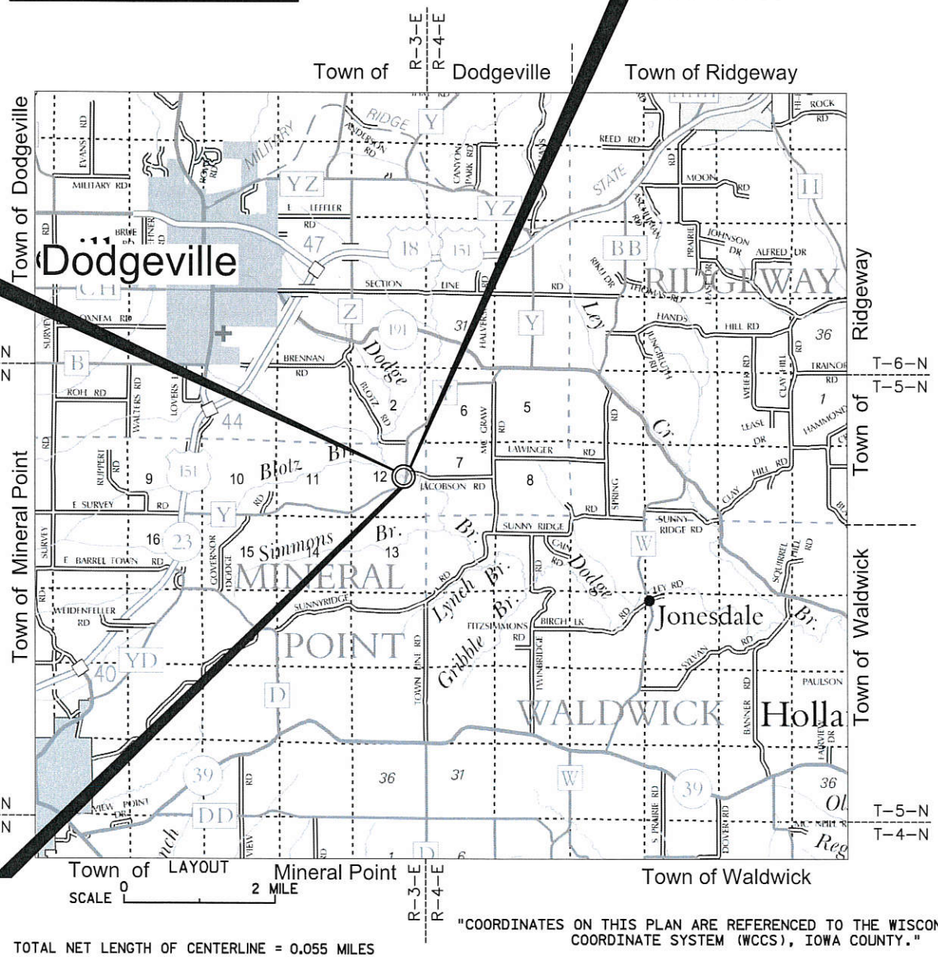
END PROJECT STA. 14+80

STRUCTURE B-25-0179

BEGIN PROJECT STA. 11+90

Y = 140,253.33

X = 393,133.91



TOTAL NET LENGTH OF CENTERLINE = 0.055 MILES

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), IOWA COUNTY."

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

ACCEPTED FOR COUNTY of IOWA

4/22/2019 (Date) Gene Ruff (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.

Engineers - Architects - Surveyors

WISCONSIN PROFESSIONAL ENGINEER ELLERY A. SCHAFFER E-41742-6 SPRING GREEN, WI

4/16/2019 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: JEWELL ASSOCIATES ENGINEERS, INC.

Designer: JEWELL ASSOCIATES ENGINEERS, INC.

APPROVED FOR THE DEPARTMENT

4/22/2019 (Date) Mark Westervelt (Signature)

E

2

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left–Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius	T	Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right–Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right–of–Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard
		RDWY	Roadway		

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

TOTAL PROJECT AREA= 0.76 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.54 ACRES

GENERAL NOTES

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

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

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

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE, BREAKER RUN OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT OR STOCKPILE MATERIALS BEYOND THE EXISTING TOE OF SLOPE FROM STA. 13+02 – STA. 13+07, RT., STA. 13+03 – STA. 13+07, LT., STA. 13+39 – STA. 13+41, RT., STA. 13+47 – STA. 13+54, LT.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN.

4–INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1 ¾–INCH UPPER LAYER AND A 2 ¼–INCH LOWER LAYER.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

CONTACTS

DESIGN CONSULTANT:
JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PHONE: (608) 588-7484
CELL: (608) 341-8194
EMAIL: ellery.schaffer@jewellassoc.com

IOWA COUNTY HIGHWAY DEPARTMENT:
1215 NORTH BEQUETTE STREET
DODGEVILLE, WI 53533
ATTN: CRAIG HARDY, COMMISSIONER
PH: (608) 935–3381
CELL: (608) 574–2935
EMAIL: craig.hardy@iowacounty.org

DNR LIAISON:
STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ANDY BARTA
PHONE: (608) 275-3308
CELL: (608) 235-2955
EMAIL: andrew.barta@wisconsin.gov

UTILITIES

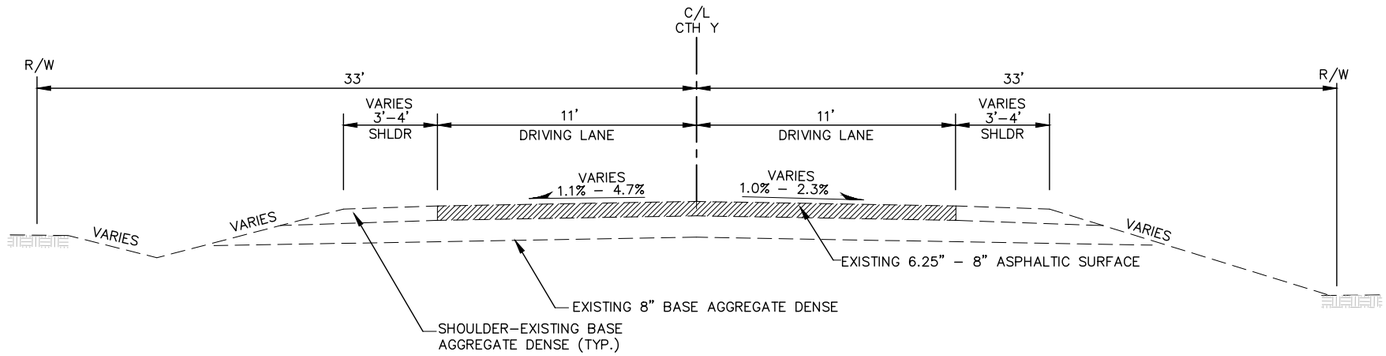
ELECTRIC
ALLIANT ENERGY
4902 NORTH BILTMORE LANE
MADISON, WI 53713
ATTN: MICHAEL BROLIN
OFFICE: (608) 458–4871
EMAIL: michaelbrolin@alliantenergy.com

TELEPHONE
FRONTIER COMMUNICATIONS
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
ATTN: JERRY MOORE
PH: (608) 742–9507
CELL: (608) 346–0353
EMAIL: jerald.r.moore@ftr.com

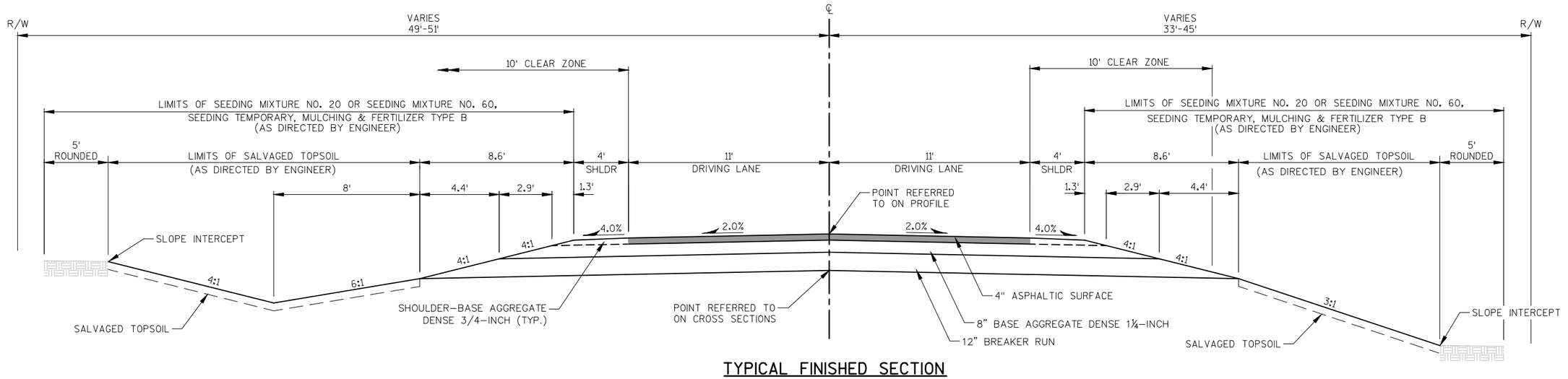
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

2



TYPICAL EXISTING SECTION



TYPICAL FINISHED SECTION

CUT

FILL

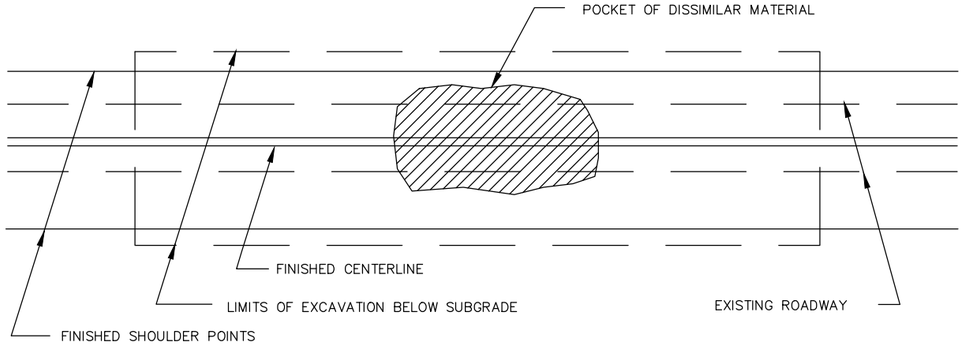
PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	TYPICAL EXISTING & FINISHED SECTIONS	SHEET 3	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\SHEETSPLAN\TYPICALS\PROP AND EXIST TYP.DWG
LAYOUT : LAYOUT1

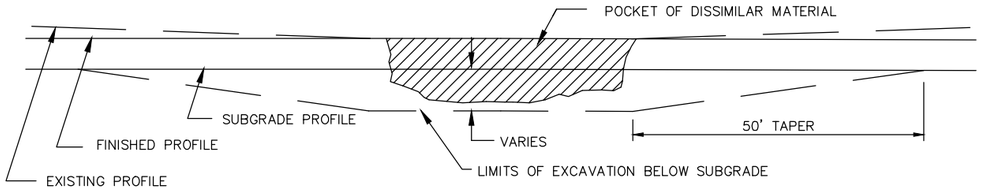
PLOT DATE : 4/16/2019
PLOT TIME : 2:24:08 PM

PLOT BY : JONAH DRAKE

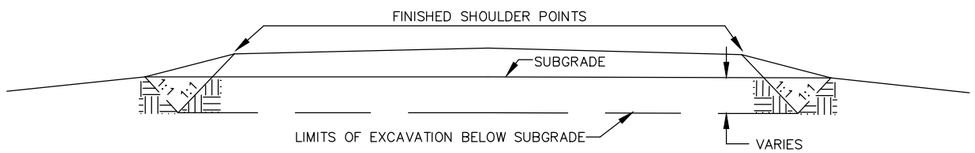
PLOT SCALE : 1" = 1'



PLAN VIEW



PROFILE VIEW



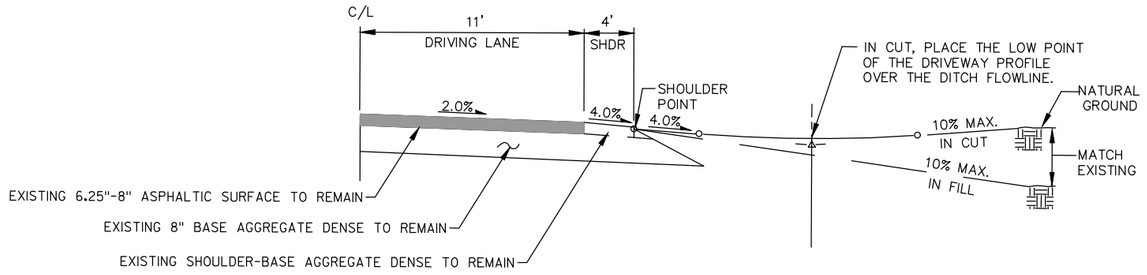
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

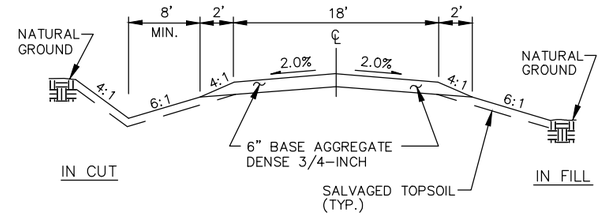
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

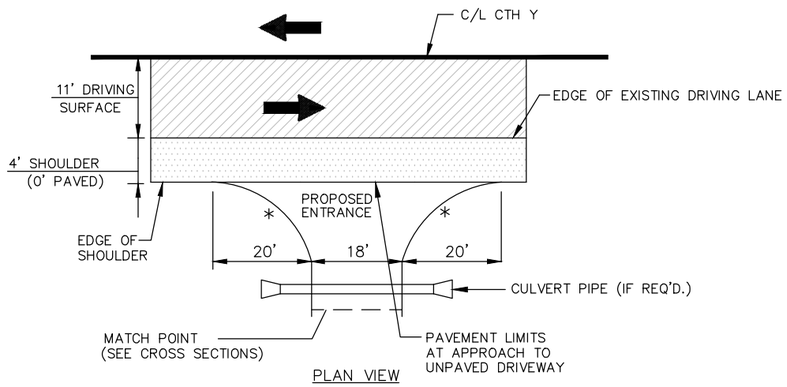
EXCAVATION BELOW SUBGRADE (E.B.S.)



TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.



APPROACH AT F.E.

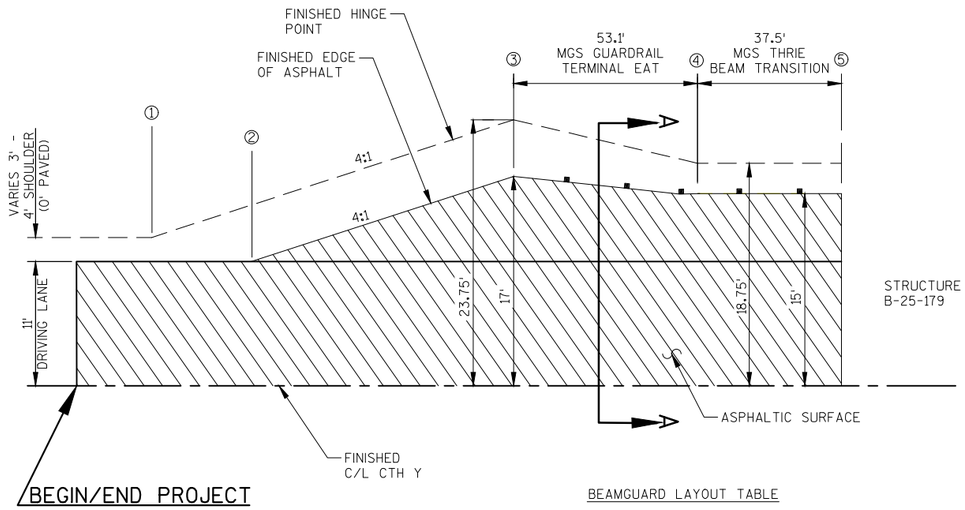
TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF EXISTING ASPHALTIC SURFACE

* RADIUS = 20'

PROJECT NO:5921-00-74	HWY:CTH Y	COUNTY:IOWA	CONSTRUCTION DETAILS	SHEET 4 E

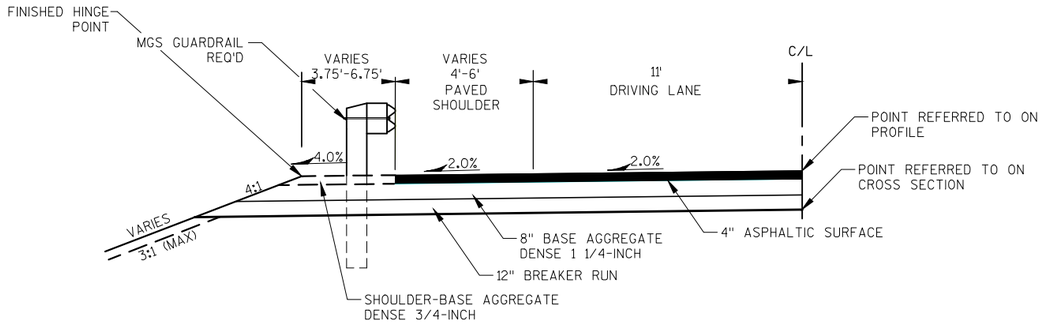
FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\SHEETSPLAN\DETAILS\CONST DETAILS.DWG
LAYOUT : MODEL
PLOT DATE : 4/16/2019
PLOT TIME : 2:33:32 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 0.830110



BEAMGUARD LAYOUT TABLE

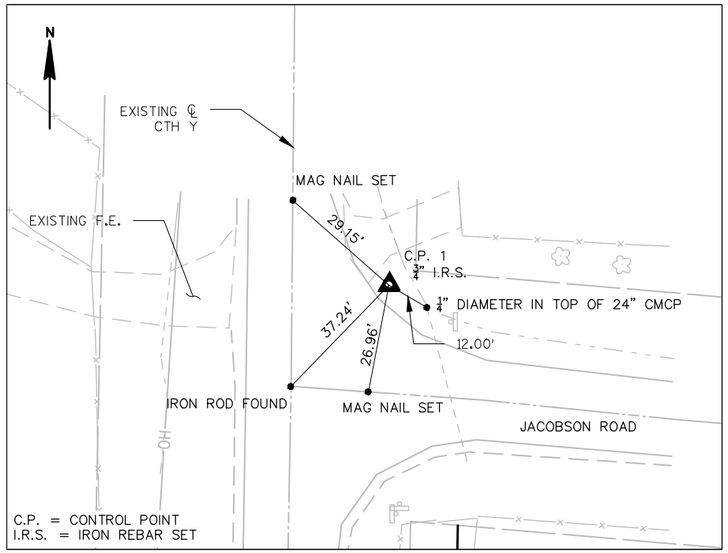
QUADRANT	LOCATION	STATION ①	②	③	④	⑤
SOUTHWEST	MAINLINE, LT.	11+76	11+86	12+10	12+63	13+01
SOUTHEAST	MAINLINE, RT.	11+76	11+86	12+10	12+63	13+01
NORTHWEST	MAINLINE, LT.	14+74	14+65	14+39	13+86	13+48
NORTHEAST	MAINLINE, RT.	14+74	14+65	14+39	13+86	13+48

BEAMGUARD LAYOUT DETAIL



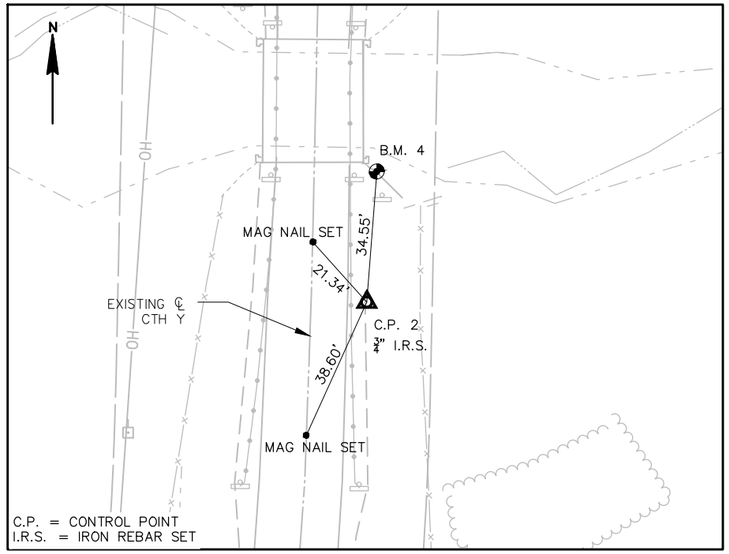
SECTION A–A

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY – CTH Y\SHEETSPLAN\DETAILS\BEAM GUARD.DWG
LAYOUT : MODEL
PLOT DATE : 4/16/2019
PLOT TIME : 2:34:57 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 0.830110



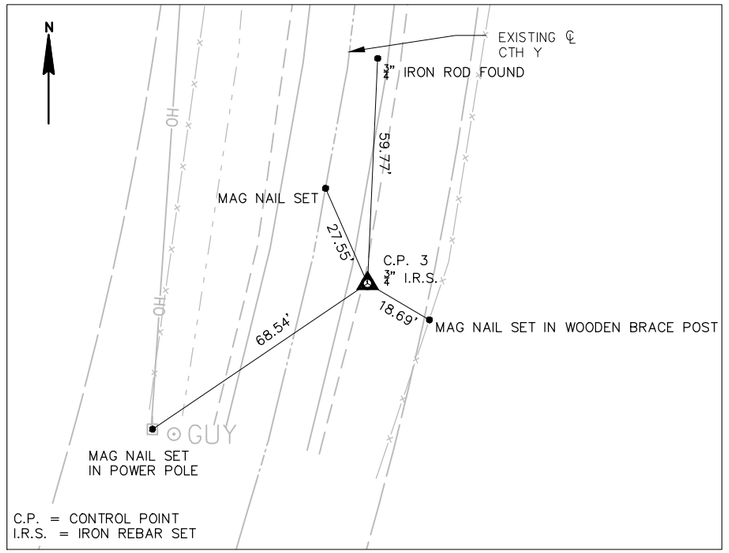
TIES TO C.P.#1

STA. 16+02.26; 25.62' RT.
Y = 140,665.17
X = 393,170.54



TIES TO C.P.#2

STA. 12+72.23; 16.73' RT.
Y = 140,335.08
X = 393,153.47



TIES TO C.P.#3

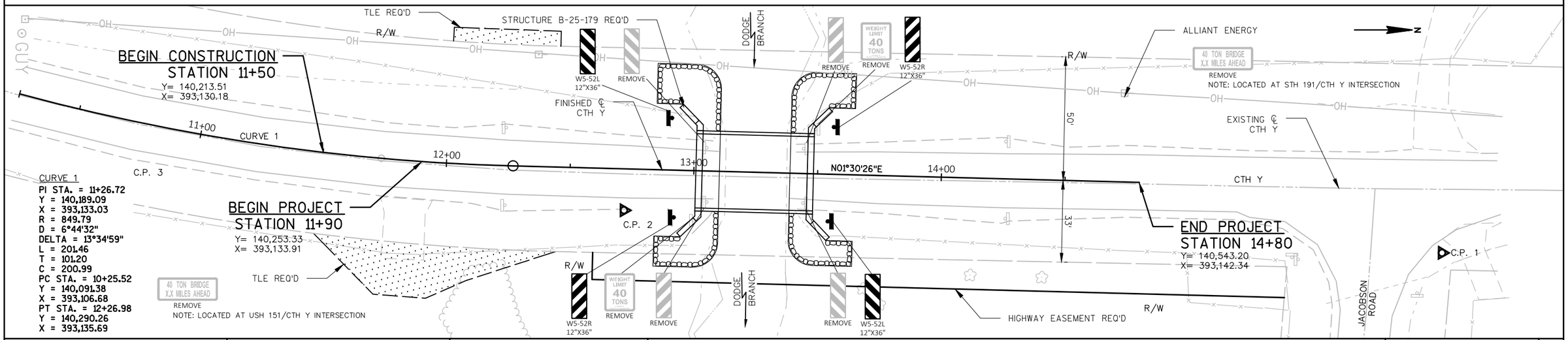
STA. 10+70.37; 16.27' RT.
Y = 140,131.59
X = 393,132.99

⚠ CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
1	16+02.26	3/4" REBAR SET 25.62' RT.	140,665.17	393,170.54
2	12+72.23	3/4" REBAR SET 16.73' RT.	140,335.08	393,153.47
3	10+70.37	3/4" REBAR SET 16.27' RT.	140,131.59	393,132.99

CTH Y STATION LAYOUT

STATION	Y	X	COMMENTS
11+50	140,213.51	393,130.18	BEGIN CONSTRUCTION
11+90	140,253.33	393,133.91	BEGIN PROJECT
12+00	140,263.31	393,134.55	–
12+50	140,313.28	393,136.29	–
13+00	140,363.26	393,137.61	–
13+00.82	140,364.08	393,137.63	END OF DECK
13+48.32	140,411.56	393,138.88	END OF DECK
13+50	140,413.24	393,138.92	–
14+00	140,463.23	393,140.24	–
14+50	140,513.21	393,141.55	–
14+80	140,543.20	393,142.34	END PROJECT



PROJECT NO: 5921-00-74	HWY: CTH Y	COUNTY: IOWA	ALIGNMENT & TIES & PERMANENT SIGNING	SHEET 6	E

5921-00-74

Line	Item	Item Description	Unit	Total	Qty
0004	201.0120	Clearing	ID	26.000	26.000
0008	201.0220	Grubbing	ID	26.000	26.000
0014	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. 13+25	LS	1.000	1.000
0016	204.0180	Removing Delineators and Markers	EACH	4.000	4.000
0018	205.0100	Excavation Common	CY	630.000	630.000
0022	206.1000	Excavation for Structures Bridges (structure) 02. B-25-179	LS	1.000	1.000
0026	210.1500	Backfill Structure Type A	TON	540.000	540.000
0030	213.0100	Finishing Roadway (project) 02. 5921-00-74	EACH	1.000	1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	115.000	115.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	610.000	610.000
0036	311.0110	Breaker Run	TON	970.000	970.000
0038	455.0605	Tack Coat	GAL	45.000	45.000
0040	465.0105	Asphaltic Surface	TON	200.000	200.000
0042	502.0100	Concrete Masonry Bridges	CY	214.000	214.000
0044	502.3200	Protective Surface Treatment	SY	200.000	200.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	5,180.000	5,180.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	24,530.000	24,530.000
0050	513.4061	Railing Tubular Type M	LF	100.000	100.000
0052	516.0500	Rubberized Membrane Waterproofing	SY	13.000	13.000
0058	550.0500	Pile Points	EACH	14.000	14.000
0060	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	330.000	330.000
0062	606.0300	Riprap Heavy	CY	230.000	230.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0066	614.0920	Salvaged Rail	LF	344.000	344.000
0068	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0070	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0074	618.0100	Maintenance And Repair of Haul Roads (project) 02. 5921-00-74	EACH	1.000	1.000
0076	619.1000	Mobilization	EACH	0.550	0.550
0078	624.0100	Water	MGAL	26.000	26.000
0080	625.0500	Salvaged Topsoil	SY	650.000	650.000
0082	627.0200	Mulching	SY	1,350.000	1,350.000
0084	628.1504	Silt Fence	LF	770.000	770.000
0086	628.1520	Silt Fence Maintenance	LF	1,540.000	1,540.000
0088	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0090	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0094	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0098	629.0210	Fertilizer Type B	CWT	1.000	1.000

5921-00-74

Line	Item	Item Description	Unit	Total	Qty
0100	630.0120	Seeding Mixture No. 20	LB	40.000	40.000
0102	630.0160	Seeding Mixture No. 60	LB	0.500	0.500
0104	630.0200	Seeding Temporary	LB	20.000	20.000
0106	633.5100	Markers Row	EACH	9.000	9.000
0108	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0110	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0112	638.2602	Removing Signs Type II	EACH	8.000	8.000
0114	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0116	642.5001	Field Office Type B	EACH	0.500	0.500
0118	643.0420	Traffic Control Barricades Type III	DAY	1,070.000	1,070.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	1,660.000	1,660.000
0122	643.0900	Traffic Control Signs	DAY	890.000	890.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0128	645.0120	Geotextile Type HR	SY	380.000	380.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	580.000	580.000
0132	650.4500	Construction Staking Subgrade	LF	243.000	243.000
0134	650.5000	Construction Staking Base	LF	243.000	243.000
0136	650.6500	Construction Staking Structure Layout (structure) 02. B-25-179	LS	1.000	1.000
0142	650.9910	Construction Staking Supplemental Control (project) 02. 5921-00-74	LS	1.000	1.000
0144	650.9920	Construction Staking Slope Stakes	LF	243.000	243.000
0146	690.0150	Sawing Asphalt	LF	45.000	45.000
0148	715.0502	Incentive Strength Concrete Structures	DOL	1,284.000	1,284.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

CLEARING & GRUBBING

STATION	LOCATION	201.0120 CLEARING (ID)	201.0220 GRUBBING (ID)
14+12	MAINLINE, RT.	17	17
14+41	MAINLINE, RT.	9	9
	TOTALS =	26	26

REMOVING DELINEATORS & MARKERS

STATION	LOCATION	204.0180 (EACH)
12+23	MAINLINE, LT.	1
12+23	MAINLINE, RT.	1
14+27	MAINLINE, LT.	1
14+27	MAINLINE, RT.	1
	TOTALS =	4

EARTHWORK SUMMARY

CATEGORY	FROM/TO STA	LOCATION	205.0100 COMMON EXCAVATION CUT (2) (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (2)	MASS ORDINATE +/- (CY) (3)	WASTE (CY)
010	11+90 - 14+80	MAINLINE	610	610	390	490	120	120
-	11+85	F.E. - MAINLINE, RT.	20	20	0	0	20	20
		TOTALS =	630	630	390	490	140	140

NOTES:
1.) AVAILABLE MATERIAL=CUT
2.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL)*1.25
3.) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

BASE AGGREGATE DENSE / BREAKER RUN

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	311.0110 BREAKER RUN (TON)
11+90 - 13+01	MAINLINE	38	293	447
13+48 - 14+80	MAINLINE	39	317	523
11+85	MAINLINE, RT. - F.E.	38	-	-
	TOTALS =	115	610	970

SALVAGED RAIL

STATION-STATION	LOCATION	614.0920 (LF)
12+23 - 13+09	MAINLINE, LT	86
12+23 - 13+09	MAINLINE, RT	86
13+41 - 14+27	MAINLINE, LT	86
13+41 - 14+27	MAINLINE, RT	86
	TOTALS =	344

BEAM GUARD

STATION - STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
12+10 - 13+01	SW QUADRANT	40	1
12+10 - 13+01	SE QUADRANT	40	1
13+48 - 14+39	NW QUADRANT	40	1
13+48 - 14+39	NE QUADRANT	40	1
	TOTALS =	160	4

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
11+90 - 13+01	MAINLINE	22	95
13+48 - 14+80	MAINLINE	23	105
	TOTALS =	45	200

WATER

PROJECT	624.0100 (MGAL)
5921-00-74	26
TOTAL =	26

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)
11+90 - 14+80	MAINLINE	520	1,115	0.7	32	*0.2	16
-	UNDISTRIBUTED	130	235	0.3	8	0.3	4
	TOTALS =	650	1,350	1.0	40	0.50	20

*WETLAND AREAS AS NOTED ON GENERAL NOTES SHEET.

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
12+45 - 13+12	MAINLINE, LT.	100	200
11+55 - 13+12	MAINLINE, RT.	212	424
13+38 - 14+80	MAINLINE, LT.	160	320
13+38 - 14+45	MAINLINE, RT.	150	300
-	UNDISTRIBUTED	148	296
	TOTALS =	770	1,540

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5921-00-74	4	2
TOTALS =	4	2

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (EACH)
12+10	MAINLINE, LT.	8
14+50	MAINLINE, RT.	8
-	UNDISTRIBUTED	8
	TOTALS =	24

MARKERS ROW

PT. NO.	STATION	OFFSET FROM FINISHED C/L	633.5100 (EACH)
100	11+50.00	50.01 LT.	1
101	12+49.68	48.88 LT.	1
102	15+40.55	50.51 LT.	1
103	15+40.55	32.49 RT.	1
104	15+39.81	45.00 RT.	1
105	12+60.00	45.00 RT.	1
106	12+60.00	34.07 RT.	1
107	12+50.15	34.12 RT.	1
108	11+50.00	32.99 RT.	1
		TOTALS =	9

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

PERMANENT SIGNING

APPROX. STATION	POSITION	SITE ID	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIGN SIZE	634.0612 POSTS WOOD 4X6-INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
-	RIGHT	MAINLINE	R12-55	40 TON BRIDGE___ MILES AHEAD		48X18	---	---	1	1
12+96	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	1	3.00	---	---
12+96	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	1	3.00	---	---
13+00	RIGHT	MAINLINE	R12-1	WEIGHT LIMIT	40	24X30	---	---	1	1
13+05	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	---	---	1	1
13+05	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	---	---	1	1
13+48	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	---	---	1	1
13+48	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	---	---	1	1
13+50	LEFT	MAINLINE	R12-1	WEIGHT LIMIT	40	24X30	---	---	1	1
13+54	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	1	3.00	---	---
13+54	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	1	3.00	---	---
-	LEFT	MAINLINE	R12-55	40 TON BRIDGE___ MILES AHEAD		48X18	---	---	1	1
					TOTALS =		4	12.00	8	8

TRAFFIC CONTROL

	TRAFFIC CONTROL			
LOCATION	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	1,070	1,660	890	1
TOTALS =	1,070	1,660	890	1

3

MARKING LINE EPOXY 4-INCH

STATION - STATION	LOCATION	TYPE	646.1020 (L.F.)
11+90 - 14+80	MAINLINE	DOUBLE YELLOW CENTERLINE	580
		TOTALS =	580

CONSTRUCTION STAKING

		CONSTRUCTION STAKING				
STATION -STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	*650.6500 STRUCTURE LAYOUT (L.S.)	650.9910 SUPPLEMENTAL CONTROL (5921-00-74) (L.S.)	650.9920 SLOPES STAKES (L.F.)
11+90 - 13+01	MAINLINE	111	111	-	-	111
13+48 - 14+80	MAINLINE	132	132	-	-	132
-	MAINLINE	-	-	1	1	-
	TOTAL =	243	243	1	1	243

*CATEGORY 020

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
11+90	MAINLINE	22
14+80	MAINLINE	23
	TOTAL =	45

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5921-00-04		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

USH 151 – STH 191

(DODGE BRANCH BRIDGE B-25-0179)

CTH Y IOWA COUNTY

CONSTRUCTION PROJECT NUMBER
5921-00-74

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.	CURVE DATA	
HOUSE	H.	LONG CHORD	LCH
HOUSE TRAILER	H.T.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
		TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	o 1040	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	o • (SET)	PROPERTY LINE	
R/W STANDARD	△ ▲ (SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
		CORPORATE LIMITS	
SECTION CORNER MONUMENT	⊕	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
SECTION CORNER SYMBOL		NO ACCESS (BY ACQUISITION)	
		NO ACCESS (BY STATUTORY AUTHORITY)	
FEE (HATCH VARIES)		SECTION LINE	
TEMPORARY LIMITED EASEMENT		QUARTER LINE	
		SIXTEENTH LINE	
PERMANENT LIMITED EASEMENT		EXISTING CENTERLINE	
R/W BOUNDARY POINT	RWB20	PROPOSED REFERENCE LINE	
PARCEL NUMBER	8	PARALLEL OFFSET	
UTILITY PARCEL NUMBER	92	ENCROACHMENT	E TYPE
SIGN NUMBER (OFF PREMISE)	21		
BUILDING		HIGHWAY EASEMENT (H.E.)	

CONVENTIONAL UTILITY SYMBOLS

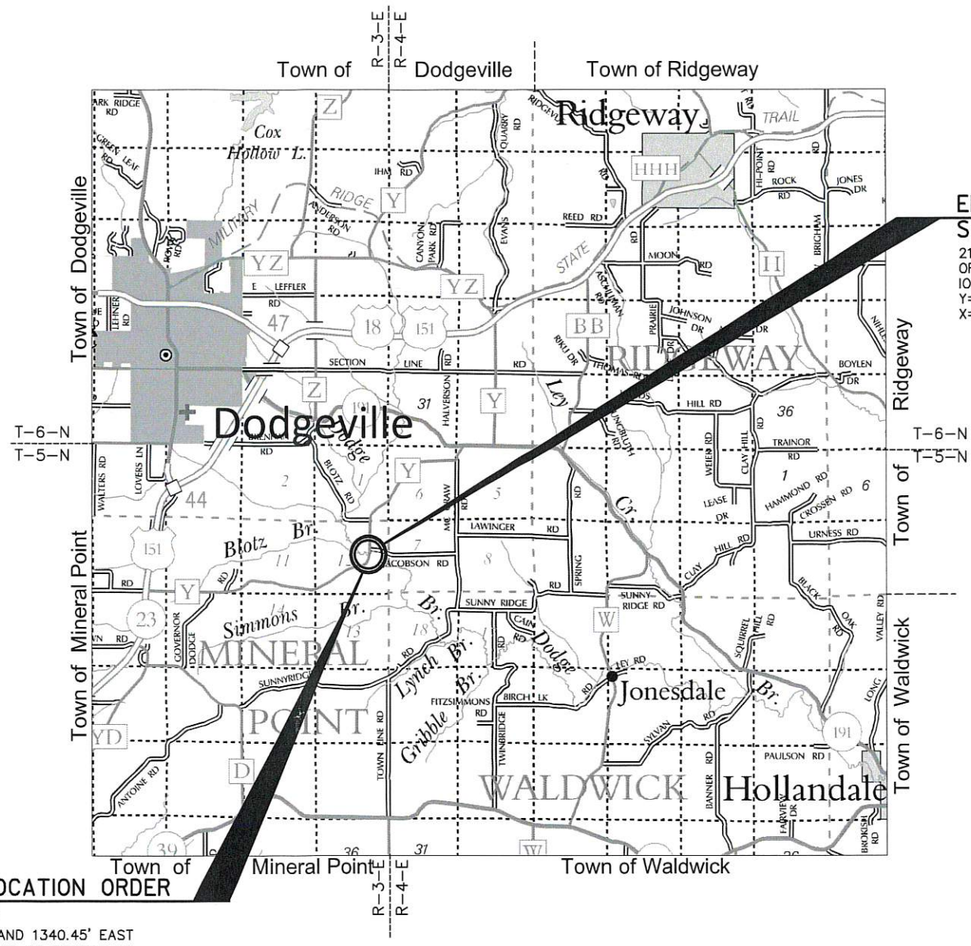
WATER	W	SANITARY SEWER	SAN
GAS	G	STORM SEWER	SS
TELEPHONE	T		
OVERHEAD TRANSMISSION LINES	OH	NON COMPENSABLE	COMPENSABLE
		POWER POLE	
ELECTRIC	E	TELEPHONE POLE	
CABLE TELEVISION	TV	TELEPHONE PEDESTAL	
FIBER OPTIC	FO	ELECTRIC TOWER	

NOTES

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

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

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



END RELOCATION ORDER
STA. 15+40.55
2110.78' SOUTH AND 1354.21' EAST OF THE N¼ CORNER OF SECTION 12, T.5N., R.3E., TOWN OF MINERAL POINT, IOWA COUNTY, WI
Y= 140,603.73
X= 393,143.94

BEGIN RELOCATION ORDER
STA. 11+50
2501.00' SOUTH AND 1340.45' EAST OF THE N¼ CORNER OF SECTION 12, T.5N., R.3E., TOWN OF MINERAL POINT, IOWA COUNTY, WI
Y= 140,213.51
X= 393,130.18

N

LAYOUT
SCALE 0 1 Mi. 2 Mi.

TOTAL NET LENGTH OF CENTERLINE = 0.074 MI.

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

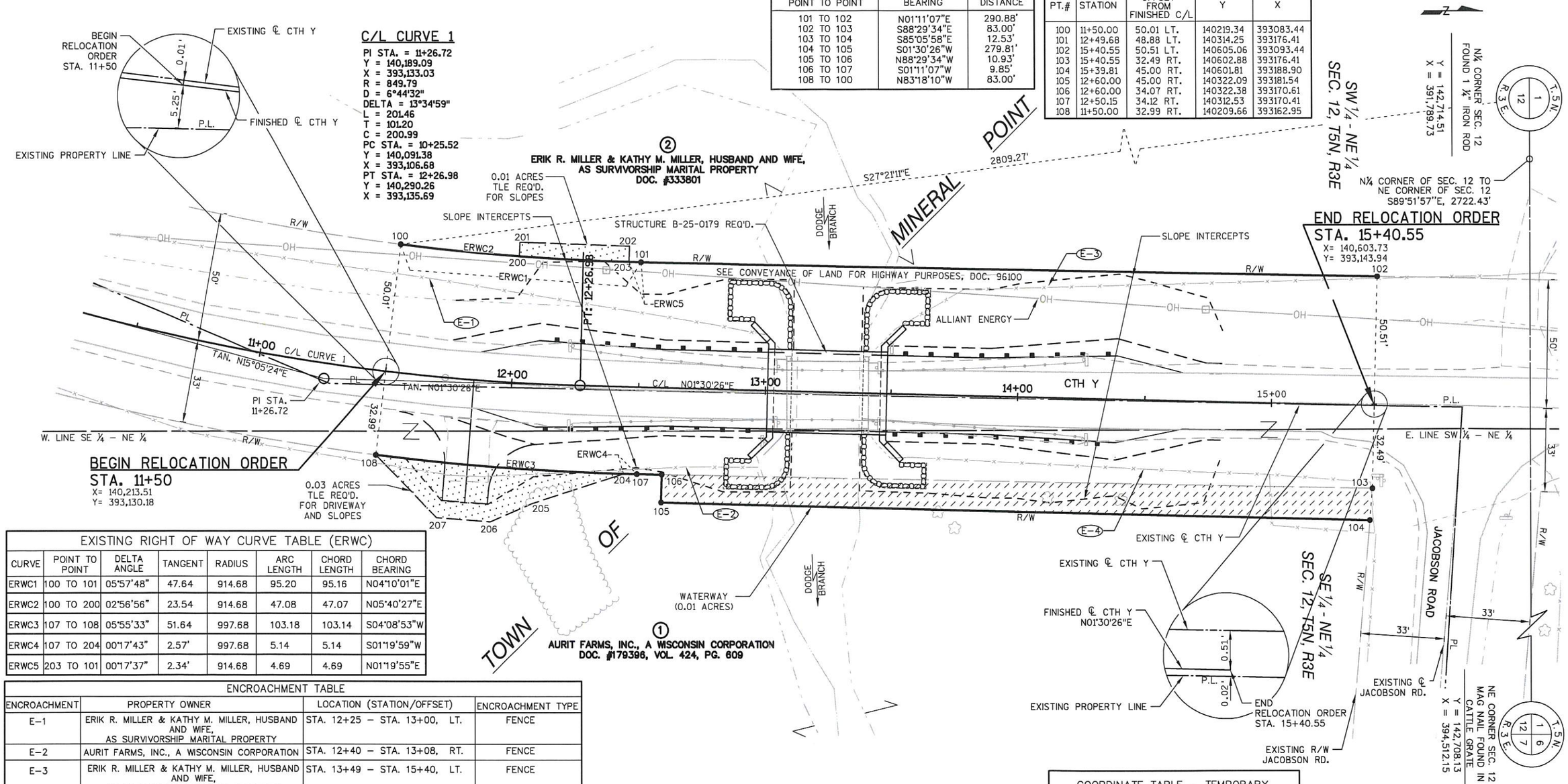
I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR IOWA COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
SCOTT D. WARNER
S-2524
RICHLAND CENTER, WI
8-28-2017
LAND SURVEYOR

REVISION DATE

APPROVED FOR IOWA COUNTY
DATE: 9/21/2017 (NAME/TITLE)
Highway Commissioner

E



RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
101 TO 102	N01°11'07"E	290.88'
102 TO 103	S88°29'34"E	83.00'
103 TO 104	S85°05'58"E	12.53'
104 TO 105	S01°30'26"W	279.81'
105 TO 106	N88°29'34"W	10.93'
106 TO 107	S01°11'07"W	9.85'
108 TO 100	N83°18'10"W	83.00'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
100	11+50.00	50.01 LT.	140219.34	393083.44
101	12+49.68	48.88 LT.	140314.25	393176.41
102	15+40.55	50.51 LT.	140605.06	393093.44
103	15+40.55	32.49 RT.	140602.88	393176.41
104	15+39.81	45.00 RT.	140601.81	393188.90
105	12+60.00	45.00 RT.	140322.09	393181.54
106	12+60.00	34.07 RT.	140322.38	393170.61
107	12+50.15	34.12 RT.	140312.53	393170.41
108	11+50.00	32.99 RT.	140209.66	393162.95

EXISTING RIGHT OF WAY CURVE TABLE (ERWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
ERWC1	100 TO 101	05°57'48"	47.64	914.68	95.20	95.16	N04°10'01"E
ERWC2	100 TO 200	02°56'56"	23.54	914.68	47.08	47.07	N05°40'27"E
ERWC3	107 TO 108	05°55'33"	51.64	997.68	103.18	103.14	S04°08'53"W
ERWC4	107 TO 204	00°17'43"	2.57'	997.68	5.14	5.14	S01°19'59"W
ERWC5	203 TO 101	00°17'37"	2.34'	914.68	4.69	4.69	N01°19'55"E

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E–1	ERIK R. MILLER & KATHY M. MILLER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	STA. 12+25 – STA. 13+00, LT.	FENCE
E–2	AURIT FARMS, INC., A WISCONSIN CORPORATION	STA. 12+40 – STA. 13+08, RT.	FENCE
E–3	ERIK R. MILLER & KATHY M. MILLER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	STA. 13+49 – STA. 15+40, LT.	FENCE
E–4	AURIT FARMS, INC., A WISCONSIN CORPORATION	STA. 13+53 – STA. 15+40, RT.	FENCE

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	HE ACRES REQUIRED NEW	TLE ACRES REQ.
1	AURIT FARMS, INC., A WISCONSIN CORPORATION	HE, TLE	0.08	0.03
2	ERIK R. MILLER & KATHY M. MILLER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	TLE	–	0.01

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO IOWA COUNTY.

NOTE: EXISTING C/L OF CTH Y AND JACOBSON ROAD WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH Y AND JACOBSON ROAD WAS BASED ON DOCUMENT 96100 AND OTHER COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
108	11+50.00	32.99 RT.	140209.66	393162.95
200	12+00.00	49.47 LT.	140266.18	393085.16
201	12+00.00	55.00 LT.	140266.50	393079.64
202	12+45.00	55.00 LT.	140309.72	393081.18
203	12+45.00	48.86 LT.	140309.56	393087.32
204	12+45.00	34.14 RT.	140307.39	393170.29
205	12+10.00	47.00 RT.	140271.12	393182.02
206	11+95.00	55.00 RT.	140254.80	393189.13
207	11+75.00	55.00 RT.	140233.57	393187.52

TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
200 TO 201	N86°40'26"W	5.53'
201 TO 202	N02°02'16"E	43.25'
202 TO 203	S88°29'34"E	6.14'
204 TO 205	S17°55'47"E	38.12'
205 TO 206	S23°32'53"E	17.80'
206 TO 207	S04°20'15"W	21.30'
207 TO 108	S45°47'27"W	34.29'

REVISION DATE	DATE 8/28/17	SCALE, FEET 0 20 40	HWY: CTH Y	STATE R/W PROJECT NUMBER: 5921–00–04	PLAT SHEET 4.02	
	GRID FACTOR N/A		COUNTY: IOWA	CONSTRUCTION PROJECT NUMBER: 5921–00–74	PS&E SHEET 12	E

LEGEND

- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- EDGE OF WATER
- WETLANDS
- EXISTING RIPRAP TO REMAIN
- TEMPORARY DITCH CHECKS

CURVE 1 DATA

PI STA. = 11+26.72
Y = 140,189.09
X = 393,133.03
R = 849.79
D = 6°44'32"
DELTA = 13°34'59"
L = 201.46
T = 101.20
C = 200.99
PC STA. = 10+25.52
Y = 140,091.38
X = 393,106.68
PT STA. = 12+26.98
Y = 140,290.26
X = 393,135.69

STA. 12+25 - STA. 13+00, LT.
STA. 13+49 - STA. 15+40, LT.
REMOVING FENCE BY OTHERS

N

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 13+25 (P-25-121)
SINGLE-SPAN STEEL DECK GIRDER STRUCTURE
19.3' CLEAR ROADWAY WIDTH
26.7' OVERALL DECK WIDTH
32.6' OVERALL LENGTH

ERIK AND KATHY MILLER

ERIK AND KATHY MILLER

DODGE BRANCH

ALLIANT ENERGY

SLOPE INTERCEPTS

BM 5

R/W

PT: 12+26.98

FINISHED C/L CTH Y

EDGE OF ASPHALT (TYP.)

50'

EXISTING C/L CTH Y

11+00

CURVE 1

BM 3

(ASPHALT)

12+00

N01°30'26"E

13+00

14+00

(ASPHALT)

CTH Y

33'

JACOBSON ROAD

BM 1

EXISTING C/L JACOBSON ROAD

BM 2

R/W

BM 4

STRUCTURE B-25-179 REQ'D.

TLE REQ'D.

SHOULDER HINGE POINT (TYP.)

MGS GUARDRAIL TERMIANL E.A.T. REQ'D.

HIGHWAY EASEMENT REQ'D.

PROPOSED MGS GUARDRAIL (TYP.)

WETLAND LIMITS (TYP.)

BEGIN CONSTRUCTION
STA. 11+50
X= 140,213.51
Y= 393,130.18

AURIT FARMS INC.

STA. 11+85, RT.
CONSTRUCT F.E. (B.A.D)

STA. 12+40 - STA. 13+08, RT.
STA. 13+53 - STA. 15+40, RT.
REMOVING FENCE BY OTHERS

AURIT FARMS INC.

END PROJECT
STA. 14+80
X= 140,543.20
Y= 393,142.34

BEGIN PROJECT
STA. 11+90
X= 140,253.33
Y= 393,133.91

FINISHED ℄ PROFILE CTH Y

4.45%

PT STA 14+74.00
EL 969.24

STA. 14+80
EL. 969.51
MATCH EXISTING

EXISTING C/L PROFILE CTH Y

HIGH WATER$_{100}$
EL = 964.17

0.30%

STA. 11+90
EL. 962.79
MATCH EXISTING

PC STA 12+04.00
EL 962.83

L=270.00'
K=65.14

PI STA 13+39.00
EL 963.24

HIGH WATER$_2$
EL = 957.77

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

STA. 13+25
STRUCTURE B-25-0179 REQ'D.
SINGLE SPAN FLAT SLAB
CLEAR ROADWAY WIDTH = 30.0'
O.A.L. = 47.5'
SKEW = 0°
OBSERVED WATER EL. = 952.68 (5-12-2016)
STREAMBED EL. = 951.44

EARTHWORK SUMMARY

EXCAVATION COMMON	= 630 C.Y.
FILL	= 390 C.Y.
FILL EXPANSION (25%)	= 490 C.Y.
WASTE	= 140 C.Y.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	16+02	3/4" X 24" IRON REBAR SET, 25.6' RT	973.71
2	12+72	3/4" X 24" IRON REBAR SET, 16.7' RT	963.01
3	10+70	3/4" X 24" IRON REBAR SET, 16.3' RT	962.62
4	13+07	CHISELED "+" H-BEAM SE WINGWALL, 18.5' RT	963.77
5	12+37	COTTON GIN SPINDLE IN PPOL, 45.2' LT	960.65

970 968 966 964 962 960 958 956 954

962.93 962.82 962.72 962.68 962.61 962.66 962.70 962.75 962.79 962.79 962.82 962.82 962.87 962.90 963.04 963.04 963.25 963.24 963.46 963.51 963.60 963.83 963.92 964.22 964.30 964.66 964.66 965.17 965.16 965.74 965.93 966.37 966.71 967.07 967.61 967.82 968.57 968.64 969.51 969.51 970.40 971.30 972.17 973.11 974.09 975.00 975.92

10+40 10+60 10+80 11+00 11+20 11+40 11+60 11+80 12+00 12+20 12+40 12+60 12+80 13+00 13+20 13+40 13+60 13+80 14+00 14+20 14+40 14+60 14+80 15+00 15+20 15+40 15+60 15+80 16+00 16+20

PROJECT NO: 5921-00-74	HWY: CTH Y	COUNTY: IOWA	PLAN AND PROFILE: MAINLINE	SHEET 13	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\SHEETSPLAN\PLAN & PROFILE SHEETS\050101-PP.DWG
LAYOUT NAME - 5-PLAN & PROFILE

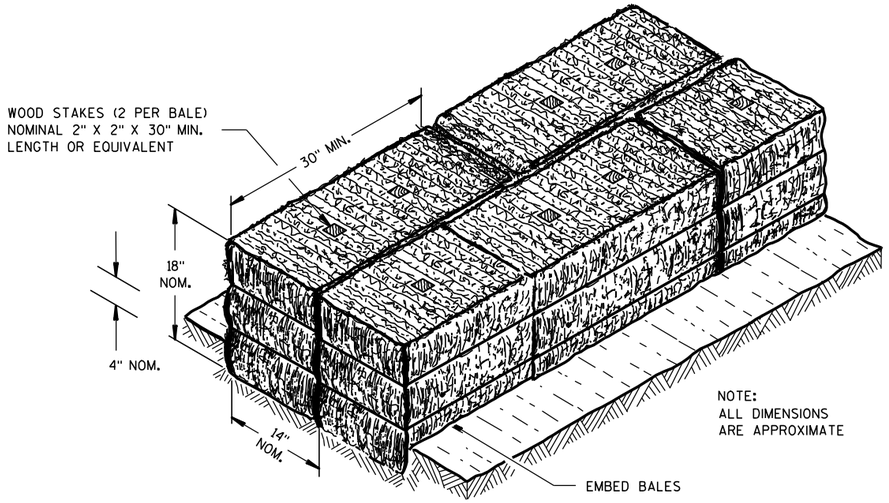
PLOT DATE : 4/16/2019 3:57 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

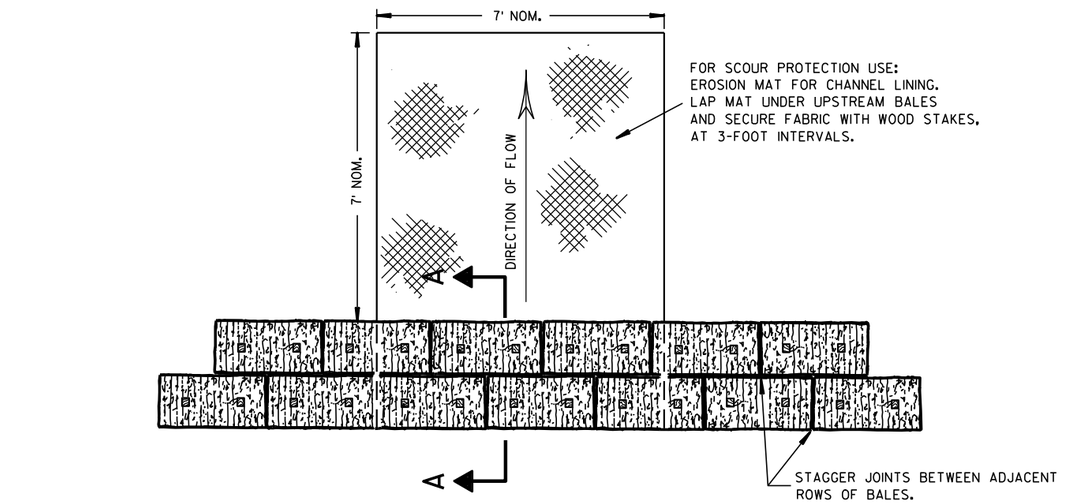
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	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)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

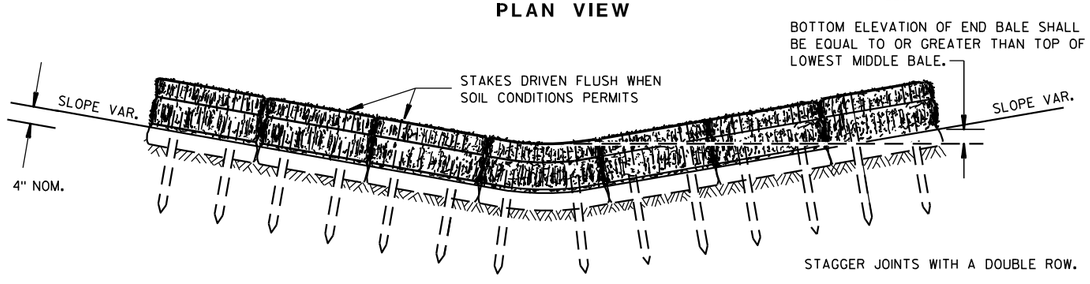
6



SECTION A-A



PLAN VIEW



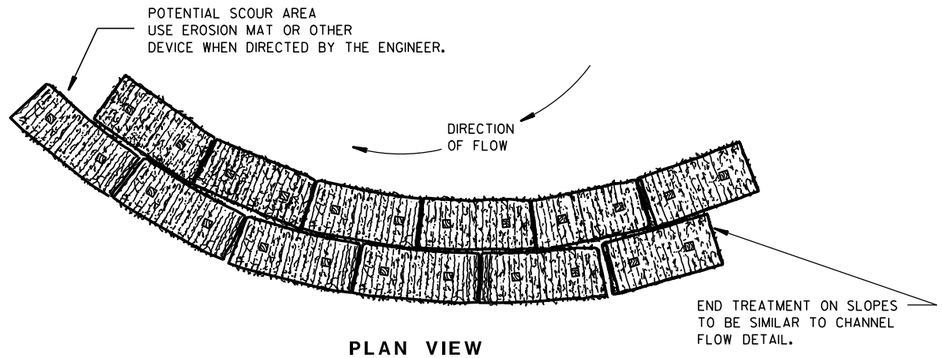
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

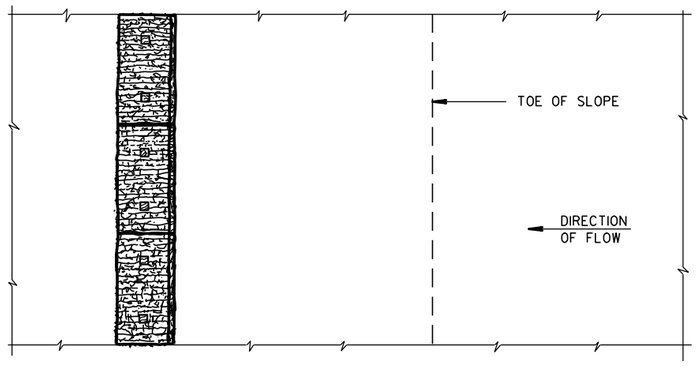
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

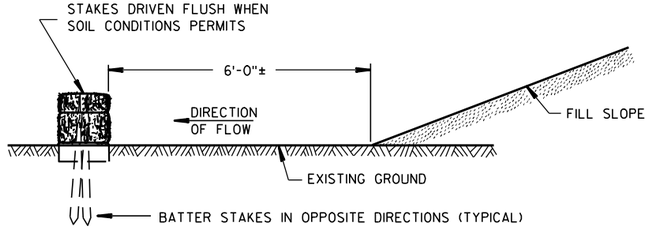


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

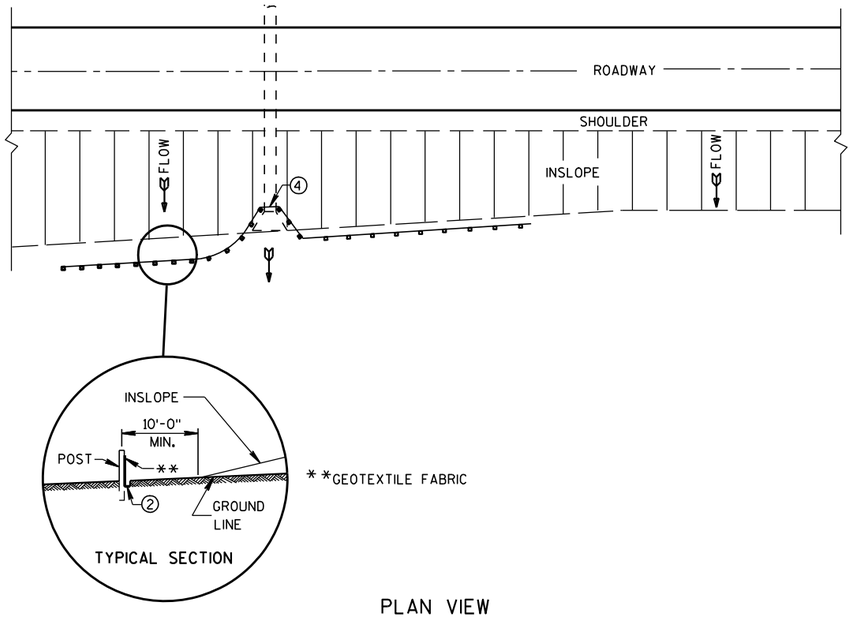
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

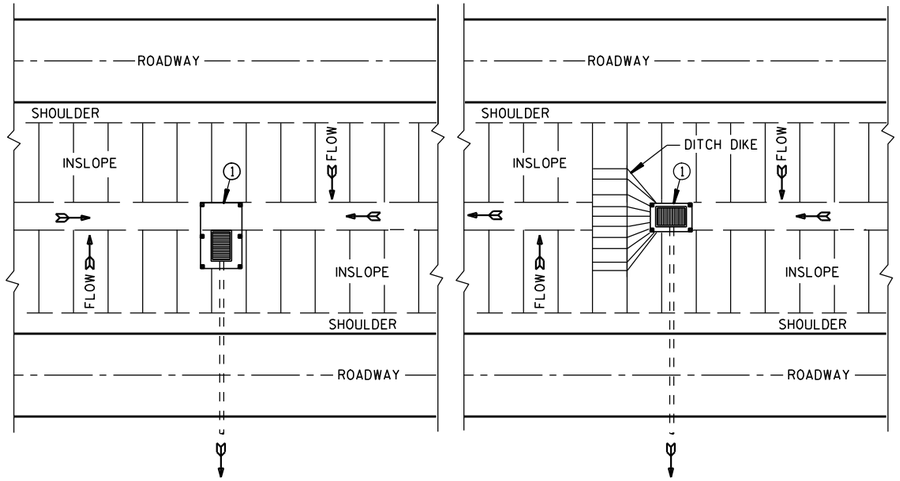
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 8-3



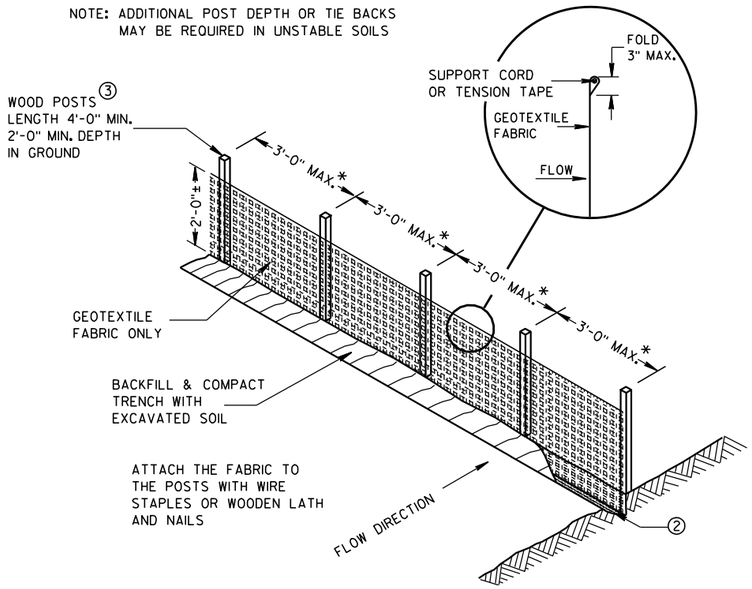
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



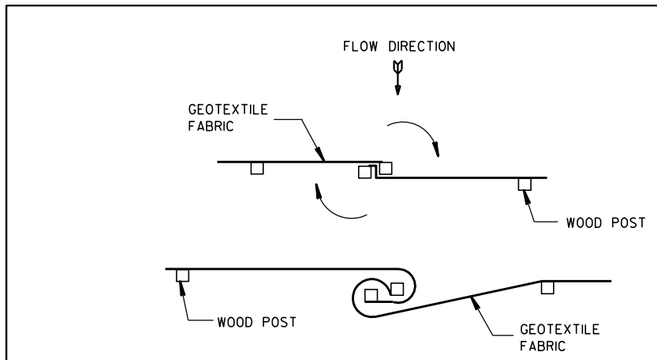
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

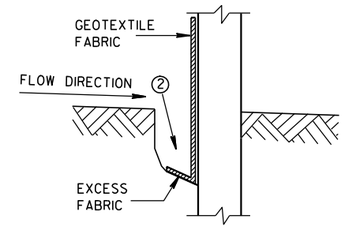


JOINING TWO LENGTHS OF SILT FENCE 5

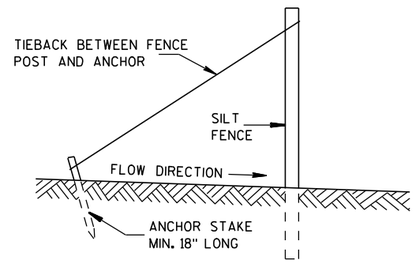
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

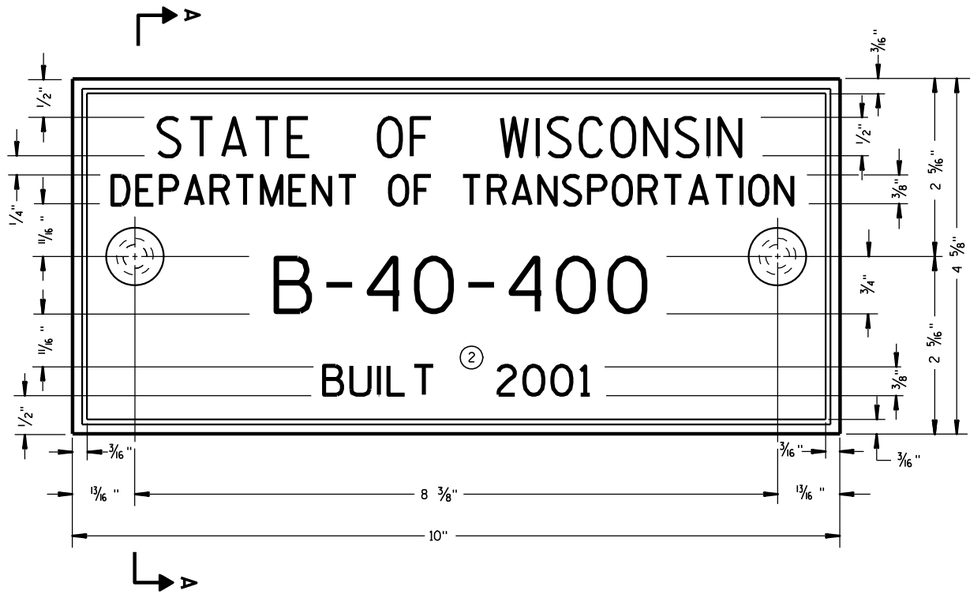
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

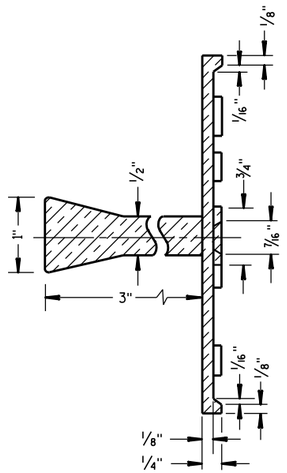
GENERAL NOTES

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.

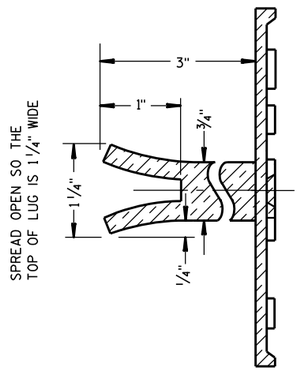
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

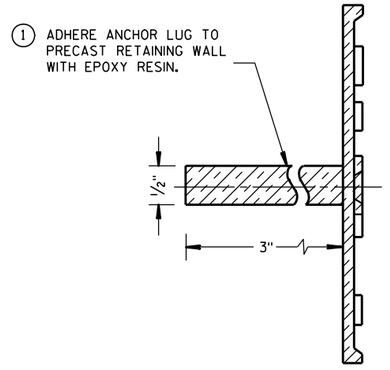
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

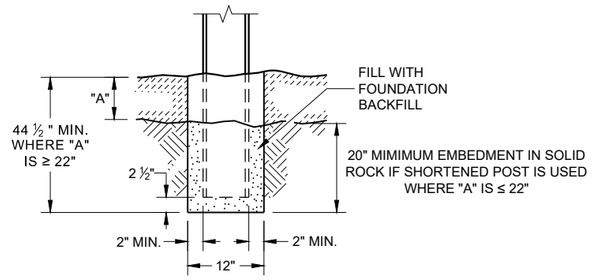
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

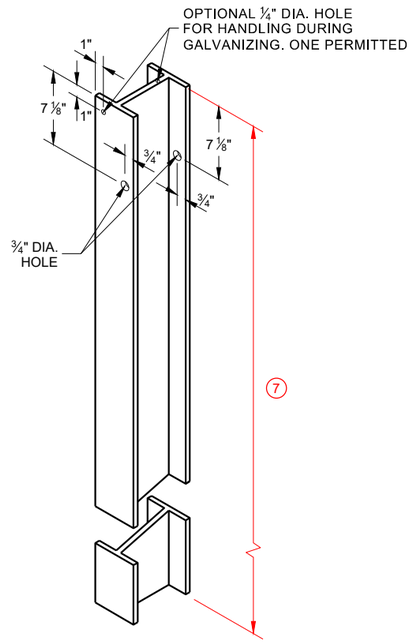
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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.

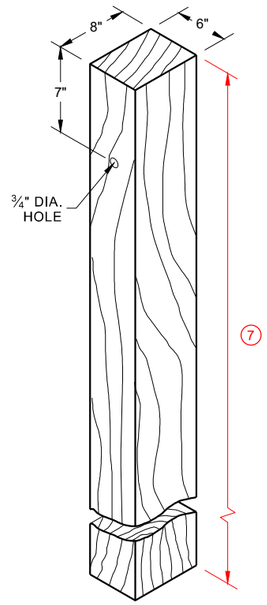
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



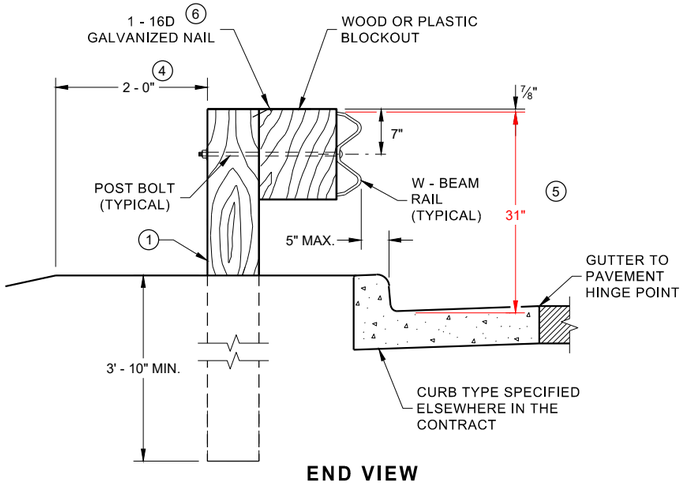
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



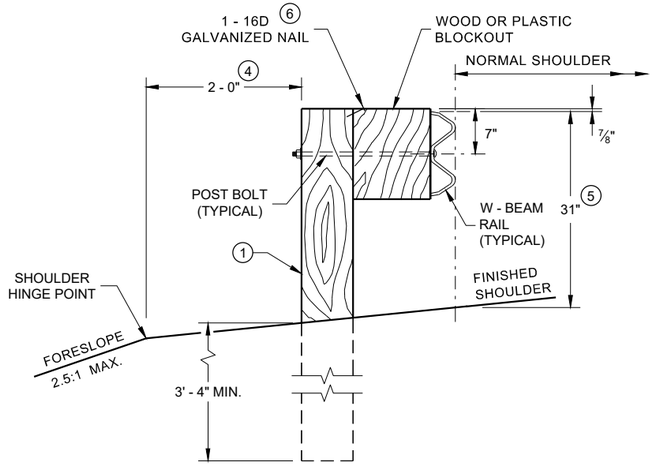
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



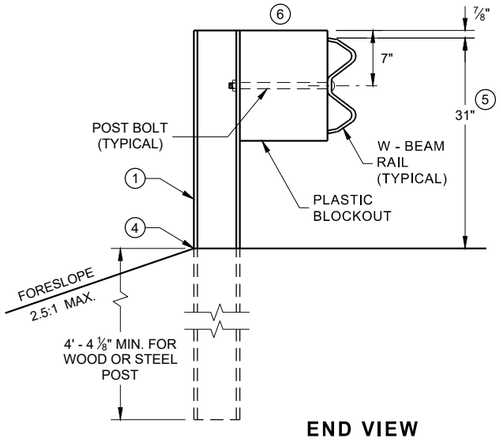
WOOD POST (6" X 8") NOMINAL (1)



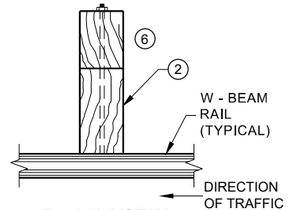
END VIEW
LOCATED ALONG A CURBED ROADWAY



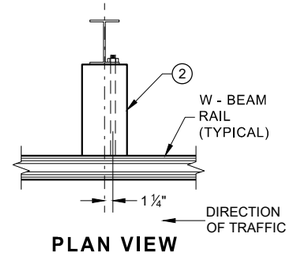
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



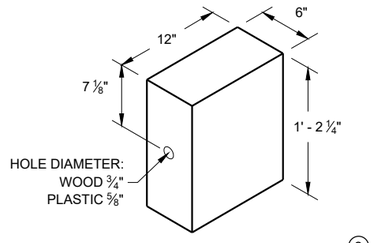
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



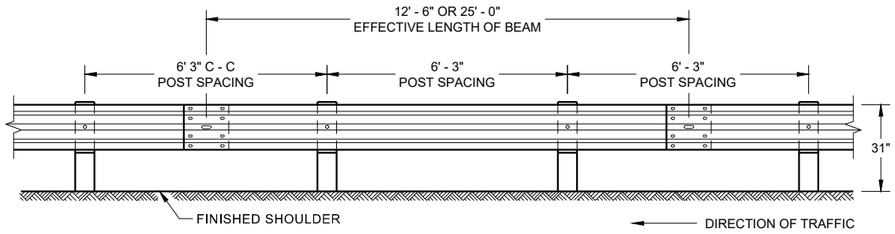
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

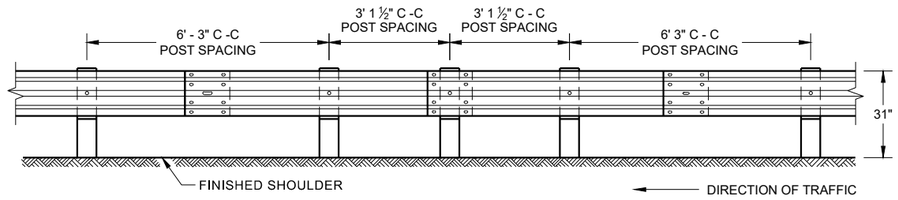
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

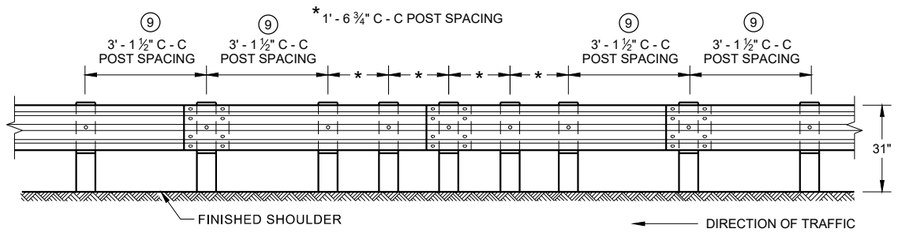
SDD 14B42 - 06a



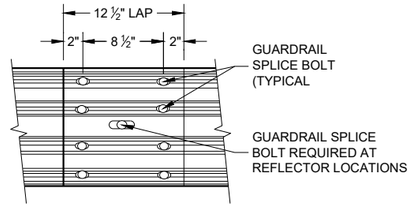
FRONT VIEW
POST SPACING STANDARD INSTALLATION



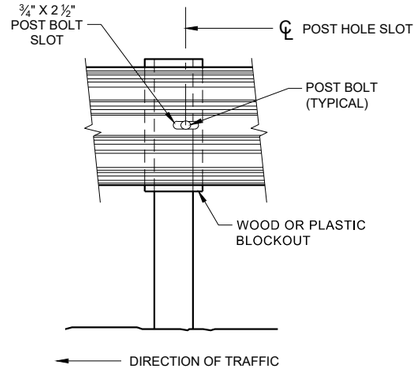
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



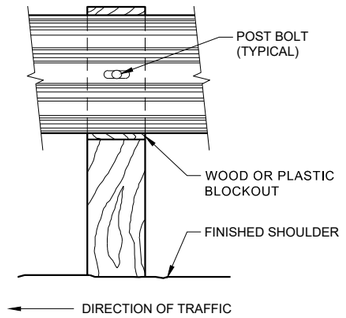
FRONT VIEW
QUARTER POST SPACING (QS)



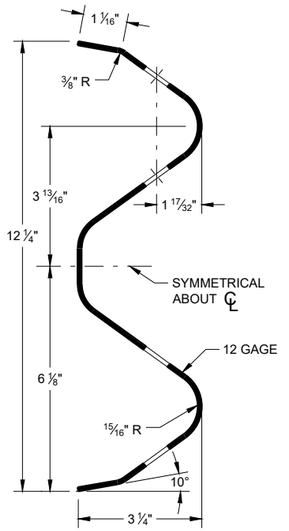
FRONT VIEW
MID-SPAN BEAM SPLICE



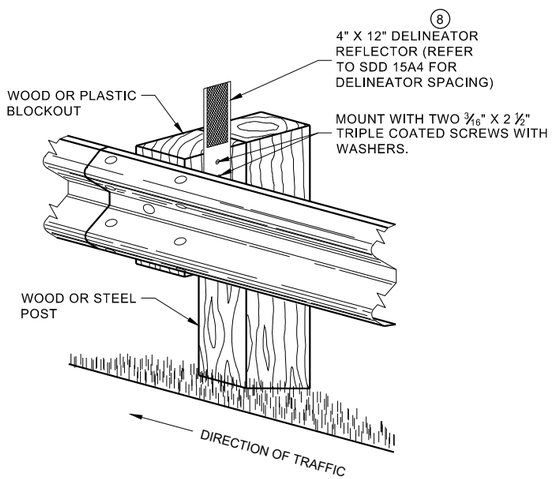
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

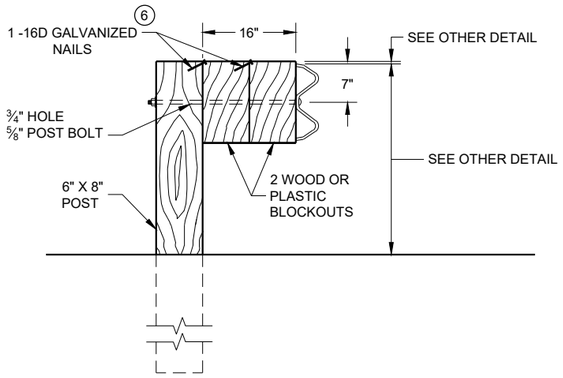
POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

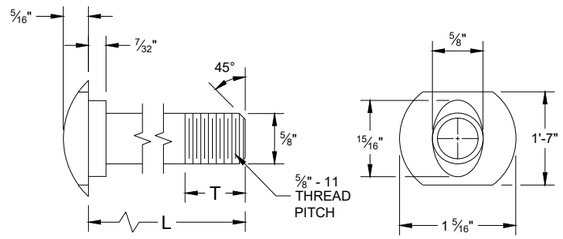


DETAIL FOR 16" BLOCKOUT DEPTH

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

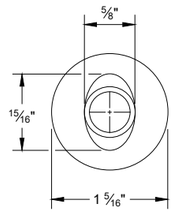
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

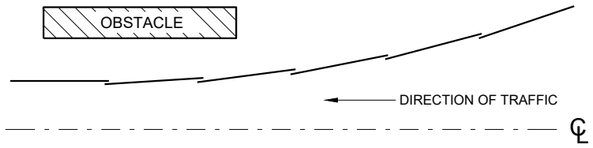


POST BOLT TABLE

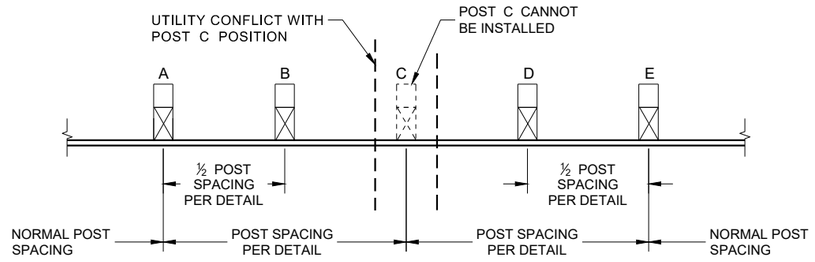
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



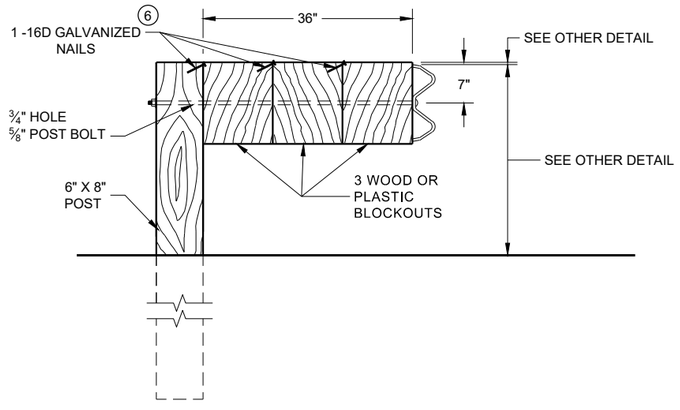
ALTERNATE BOLT HEAD



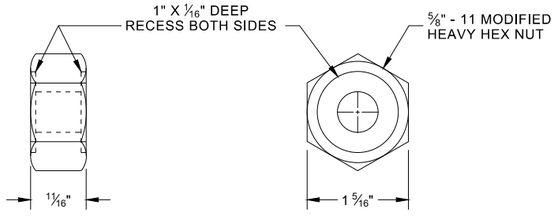
PLAN VIEW
BEAM LAPPING DETAIL



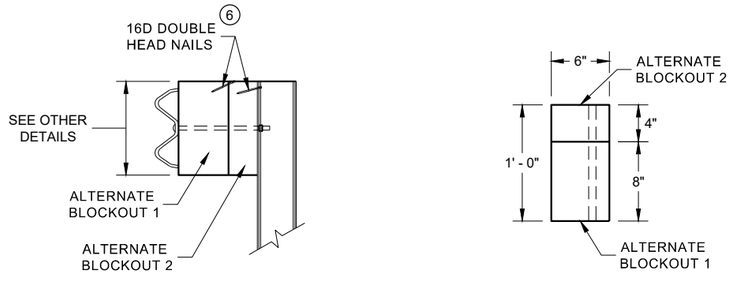
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

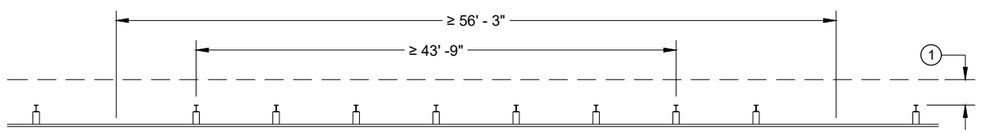
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

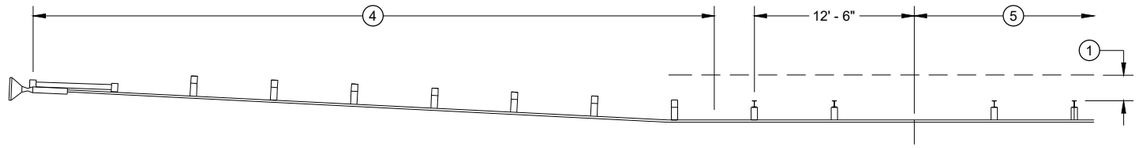
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

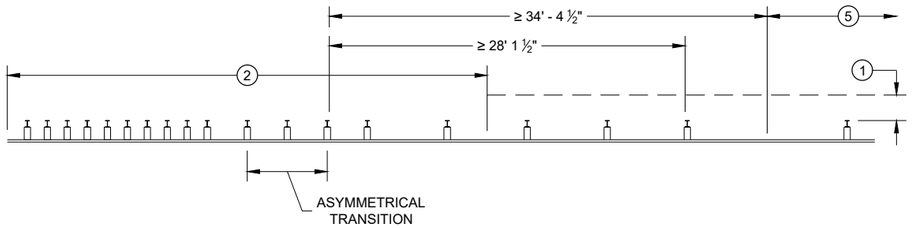
SDD 14B42 - 06c



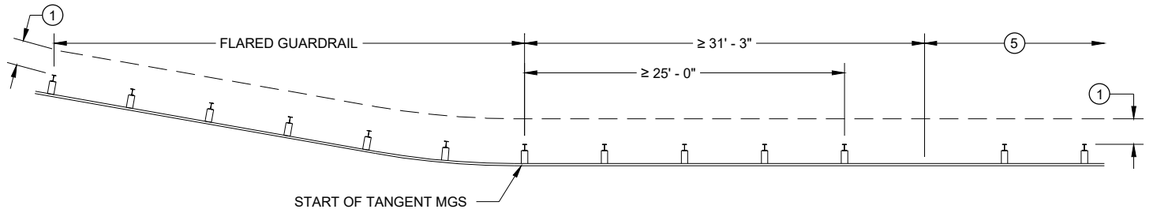
MISSING POST IN NORMAL BEAM GUARD RUN



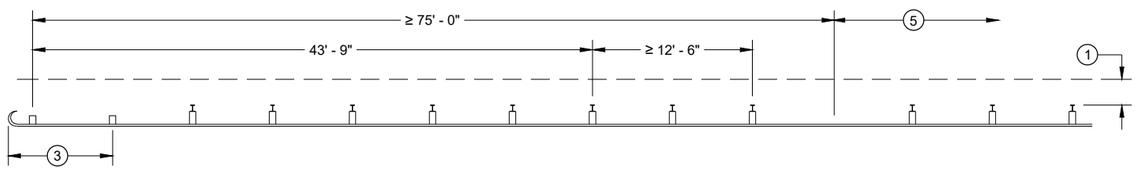
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



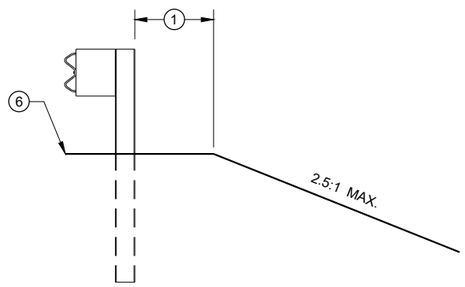
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

(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.

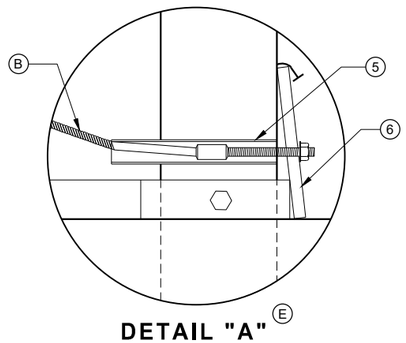
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

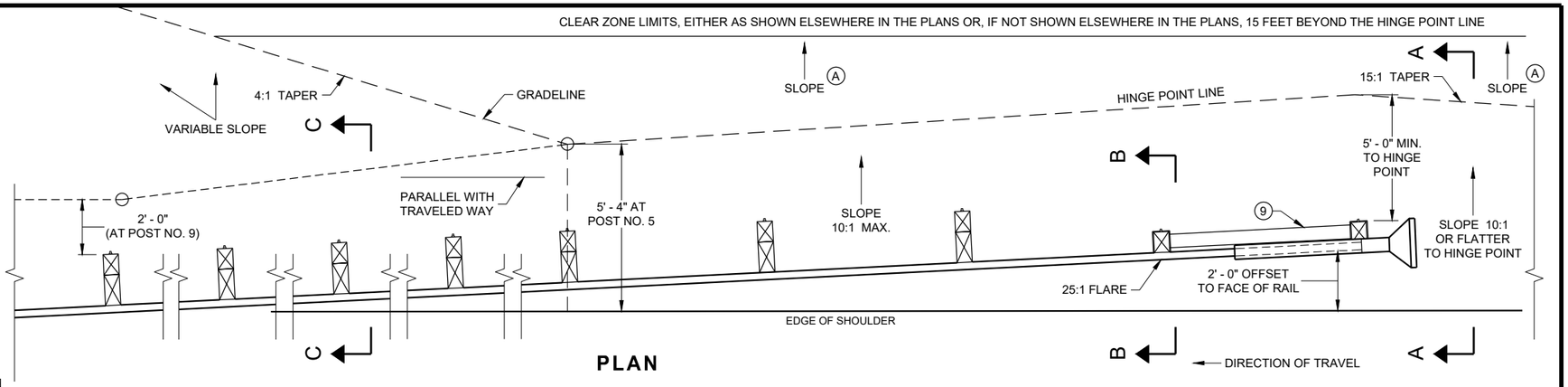
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

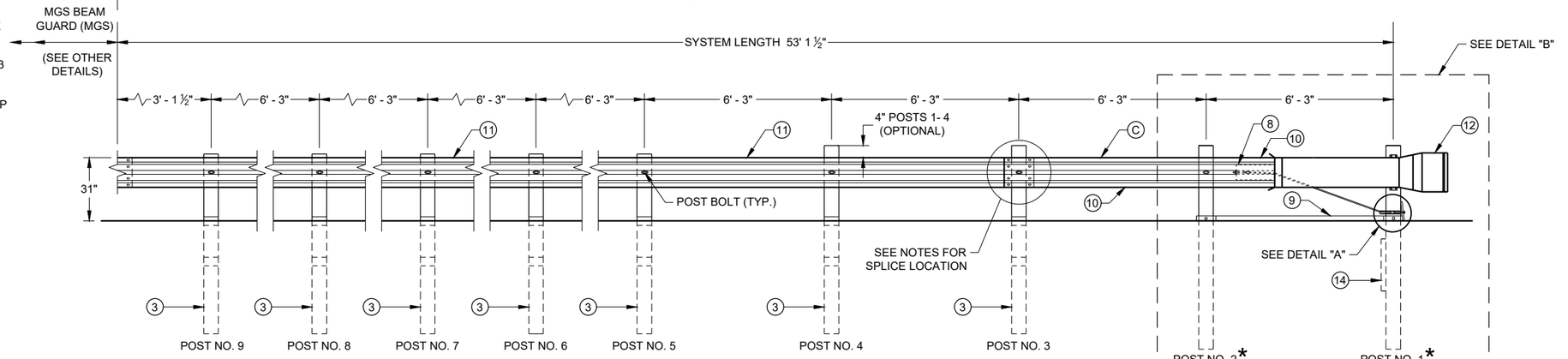
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



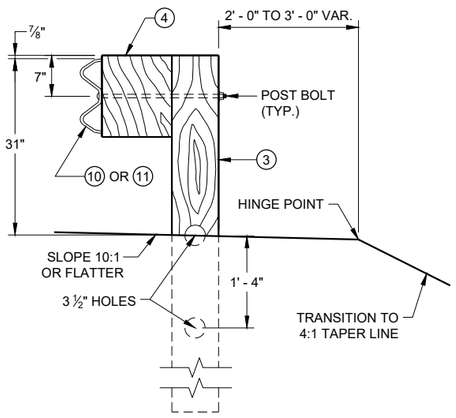
DETAIL "A" (E)



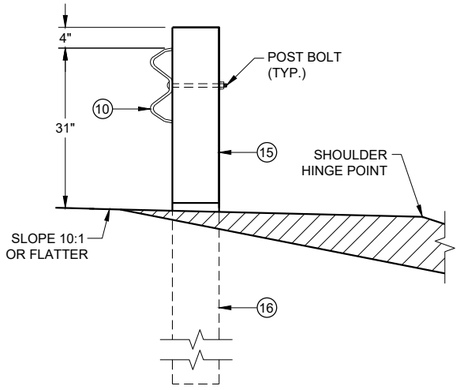
PLAN



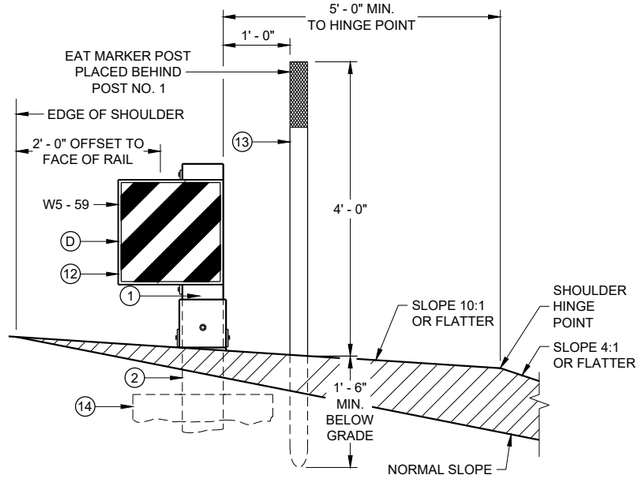
ELEVATION



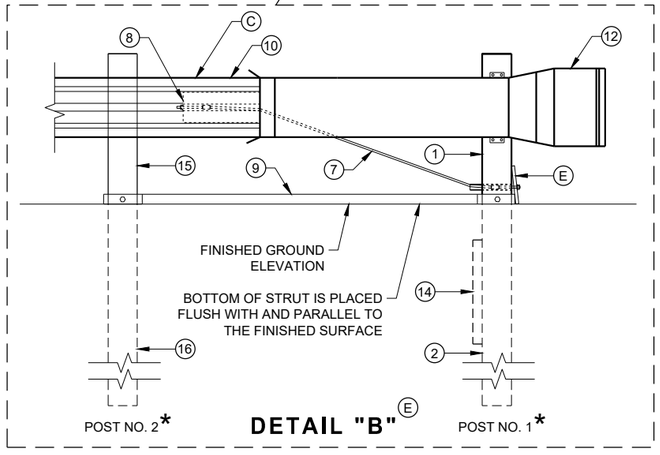
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



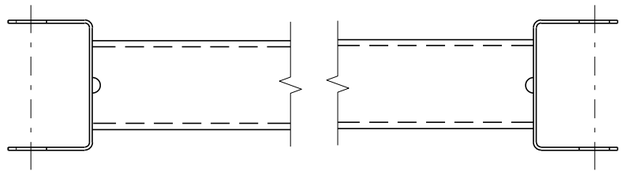
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

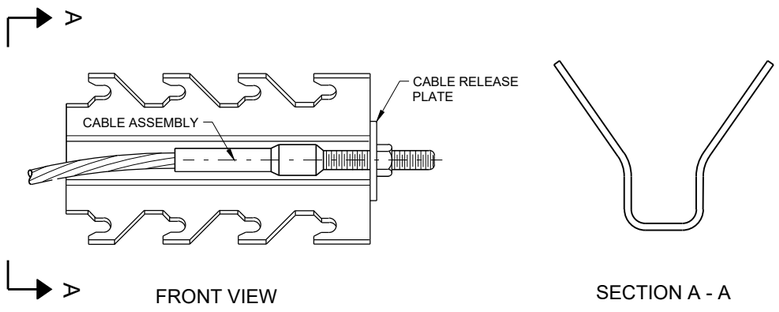
SDD 14B44 - 04a



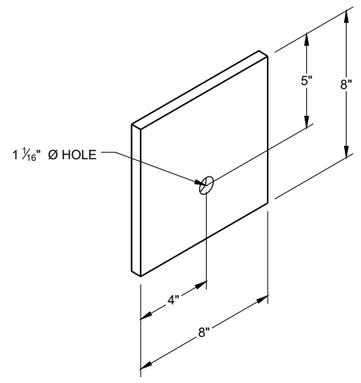
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'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 BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

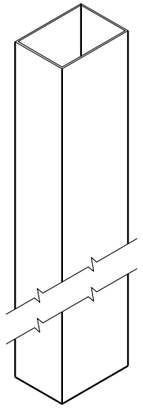
6

SDD 14B44 - 04b

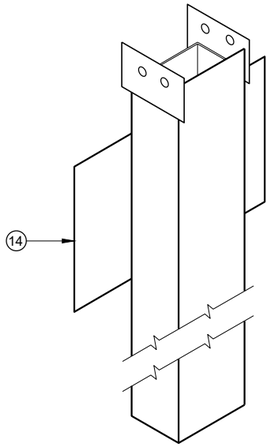
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

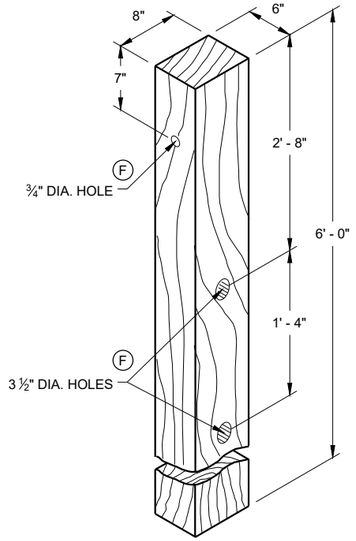
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



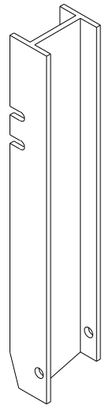
UPPER POST NO. 1 (1) (E)



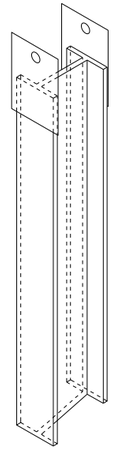
LOWER POST NO. 1 (2) (E)



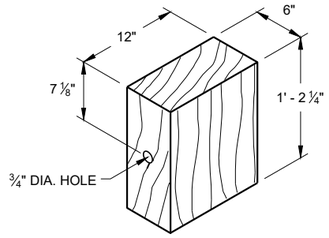
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



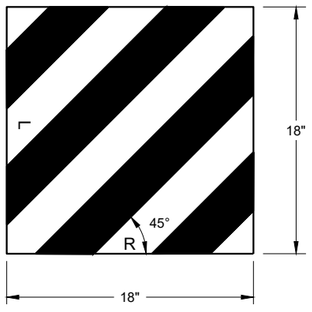
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

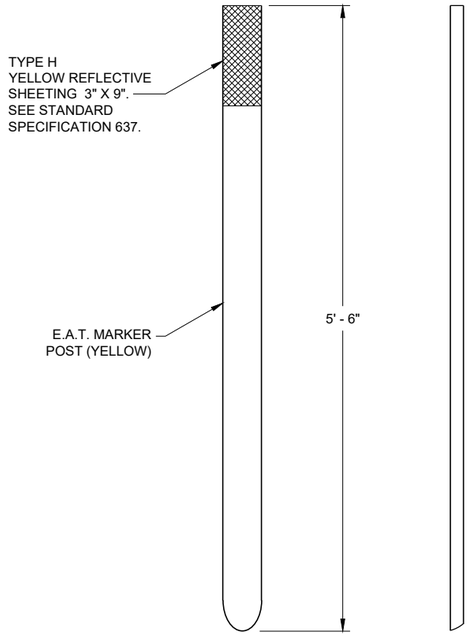


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



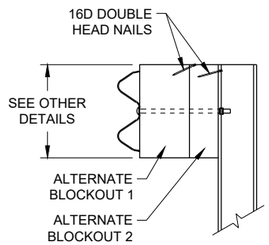
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

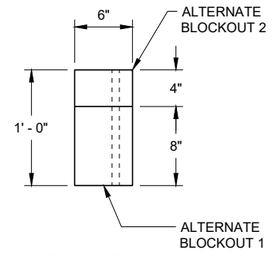


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

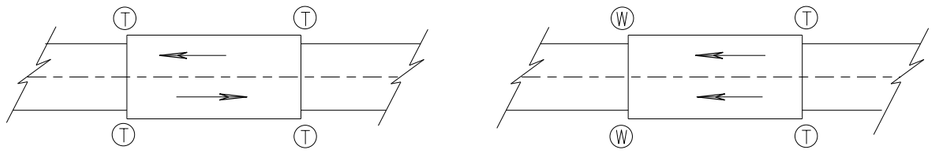
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B44 - 04c



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.

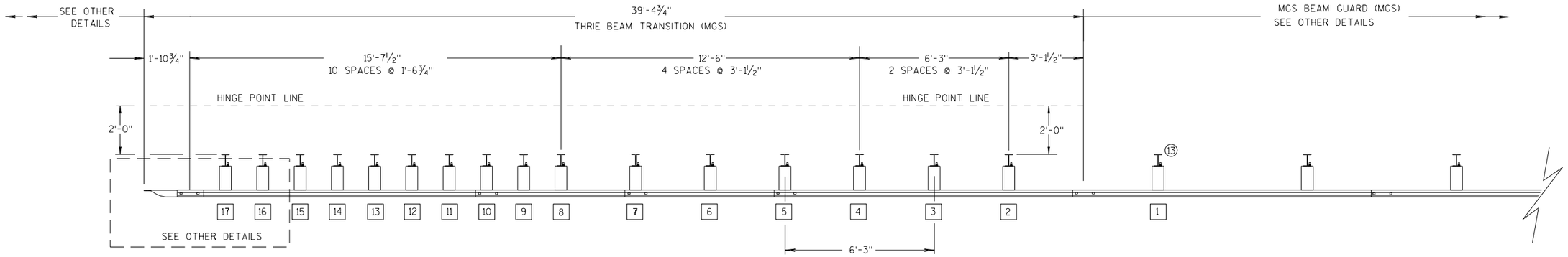
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

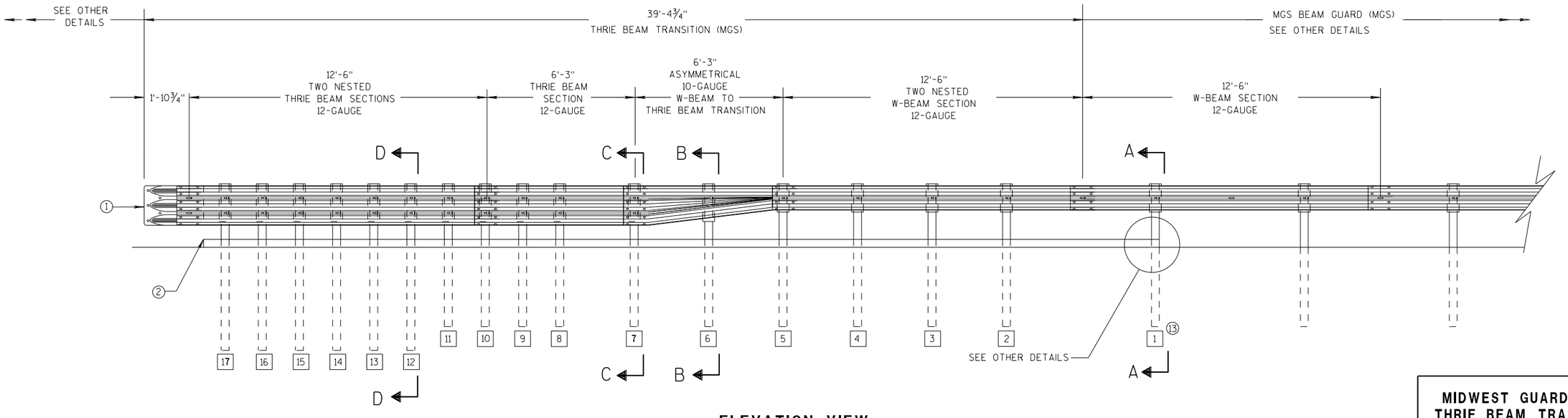
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 TRANSPOR 25

6

S.D.D. 14 B 45-5a

6

S.D.D. 14 B 45-5a

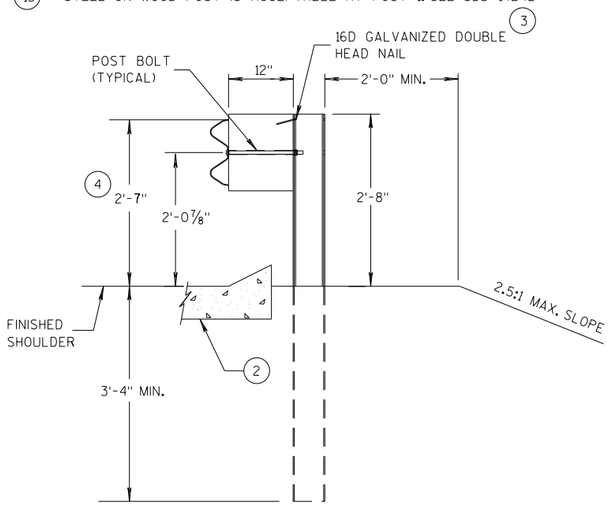
GENERAL NOTES

(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.

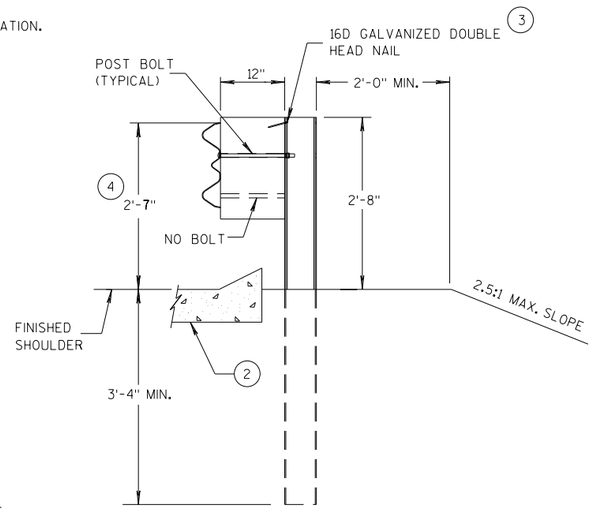
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



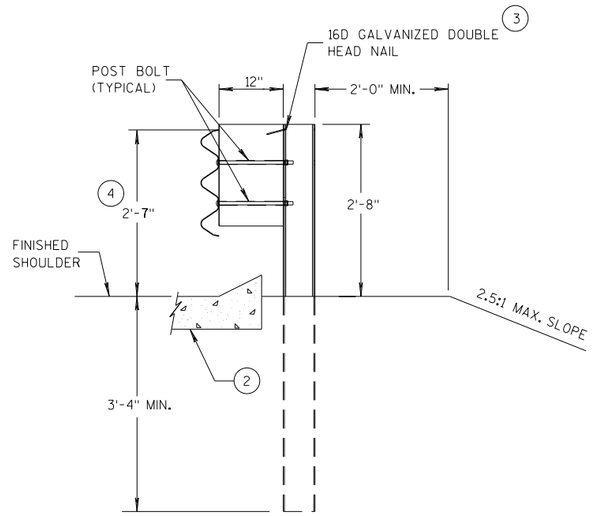
SECTION A-A (13)

POSTS 1-5



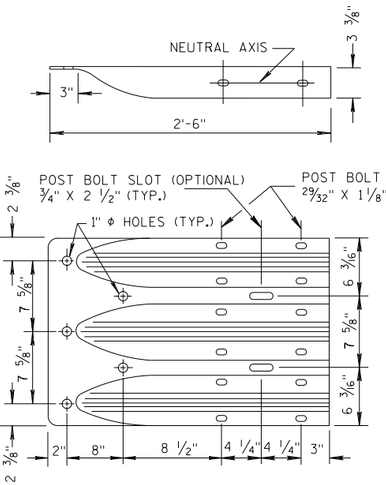
SECTION B-B

POST 6

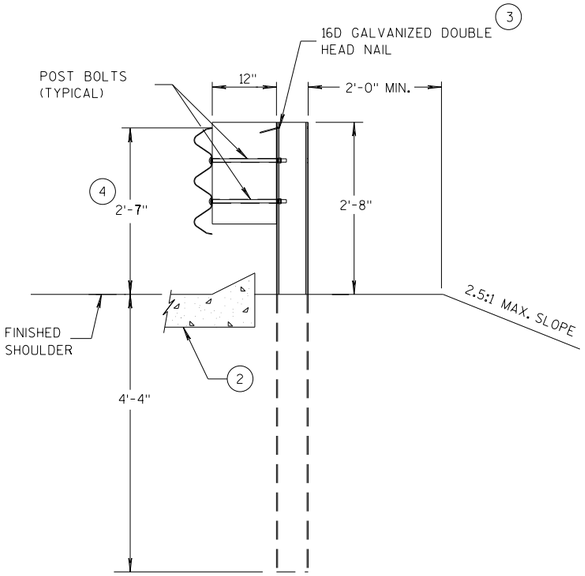


SECTION C-C

POSTS 7-11

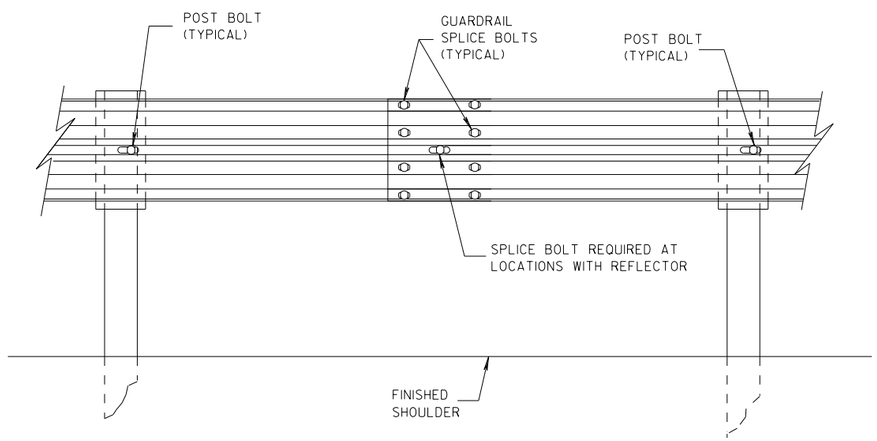


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

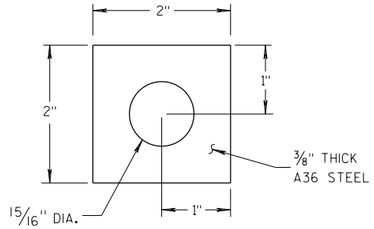
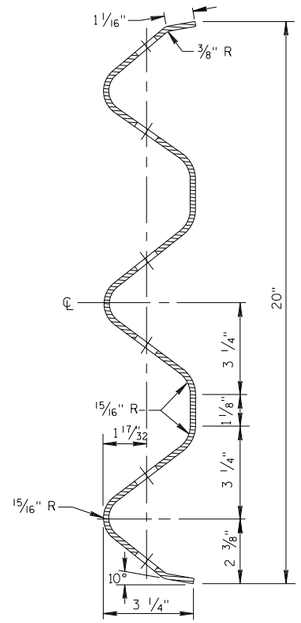


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

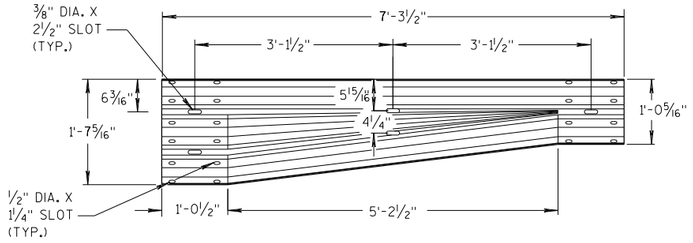
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 26

6

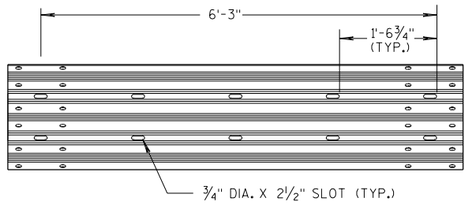
S.D.D. 14 B 45-5b

6

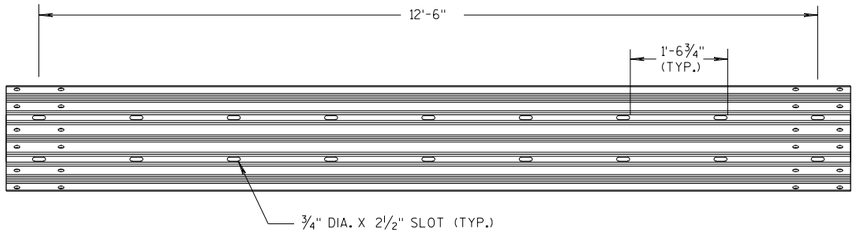
S.D.D. 14 B 45-5b



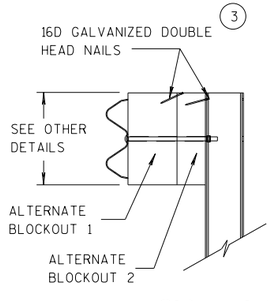
W-BEAM TO THRIE BEAM TRANSITION SECTION



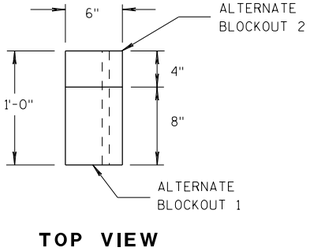
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

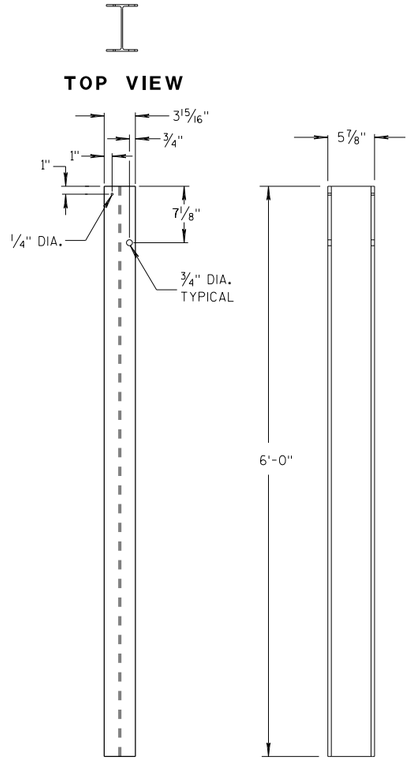


SIDE VIEW



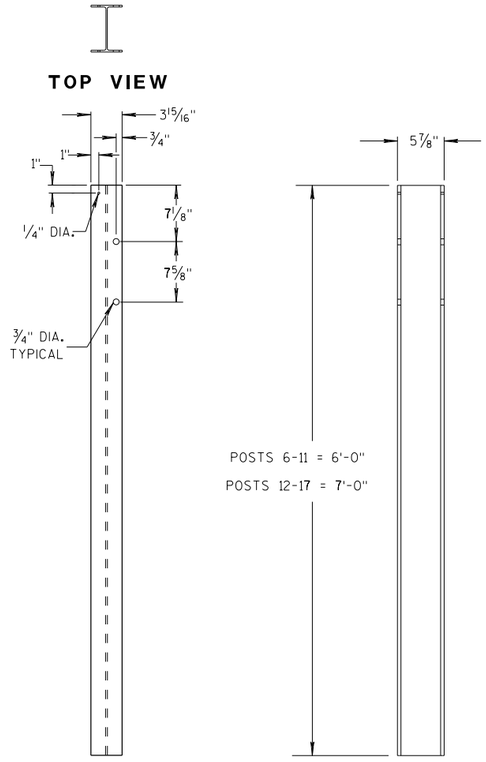
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



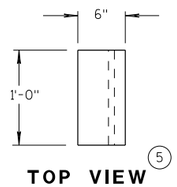
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

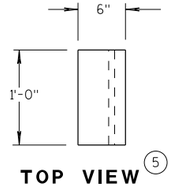


FRONT VIEW SIDE VIEW

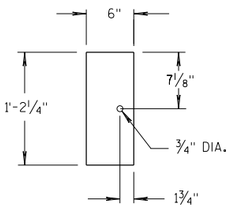
STEEL POSTS 6-17



TOP VIEW (5)

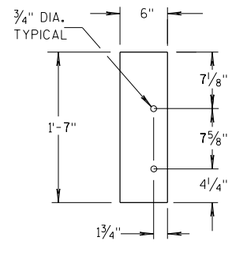


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



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.

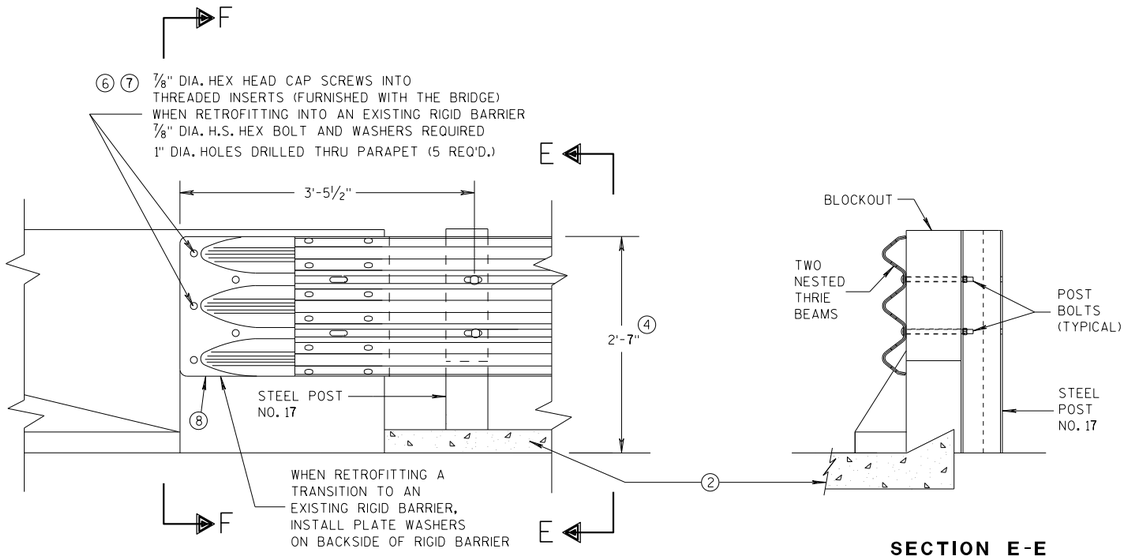
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(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 TRANSPOR 27

6
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

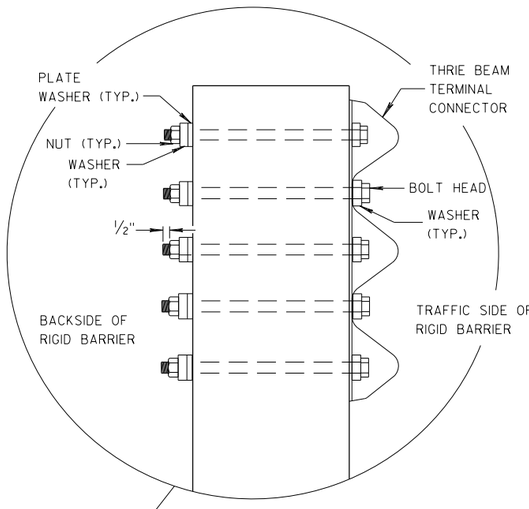
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

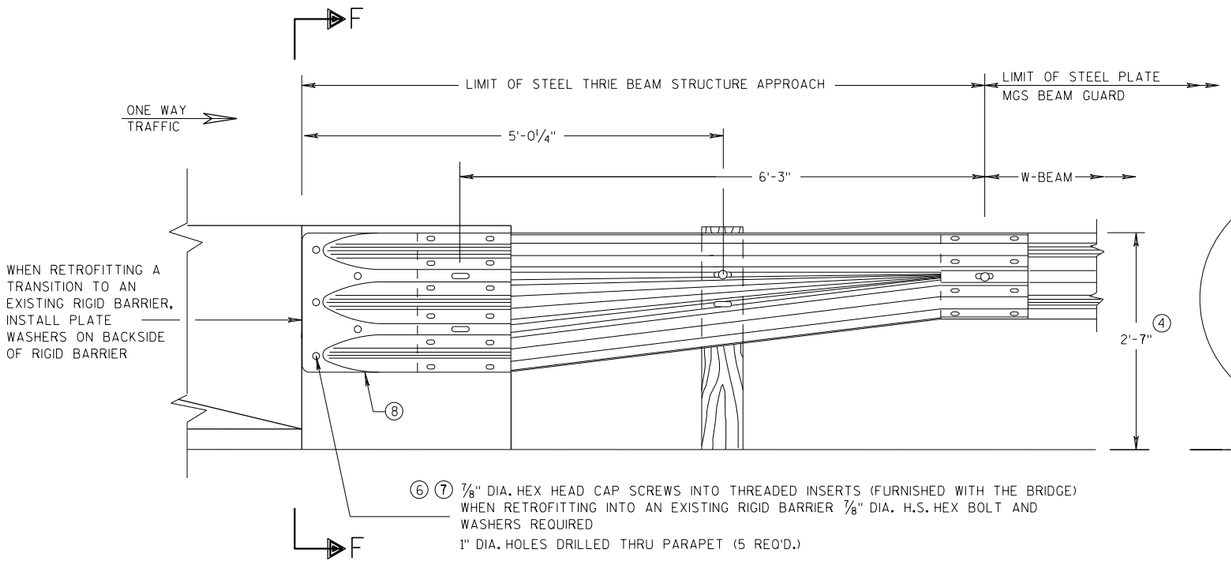
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

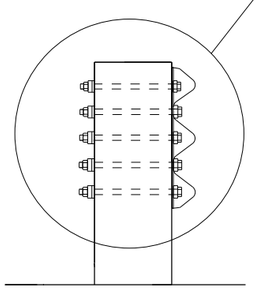
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" 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".

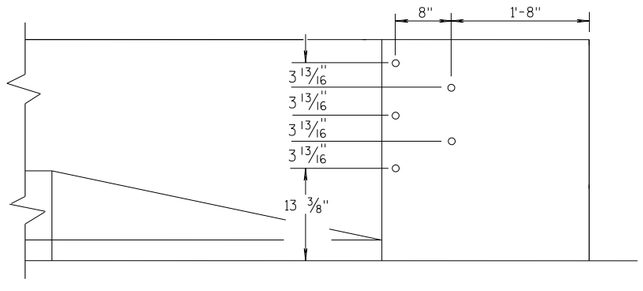




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVI[illegible] — [illegible]NT
FHWA

6

S.D.D. 14 B 45-5d

6

S.D.D. 14 B 45-5d

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.

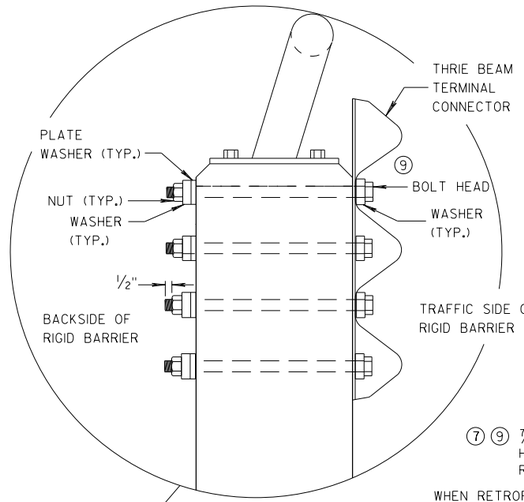
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

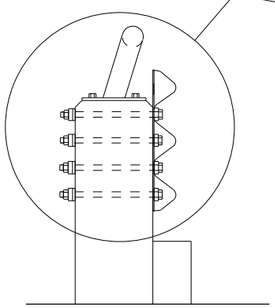
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

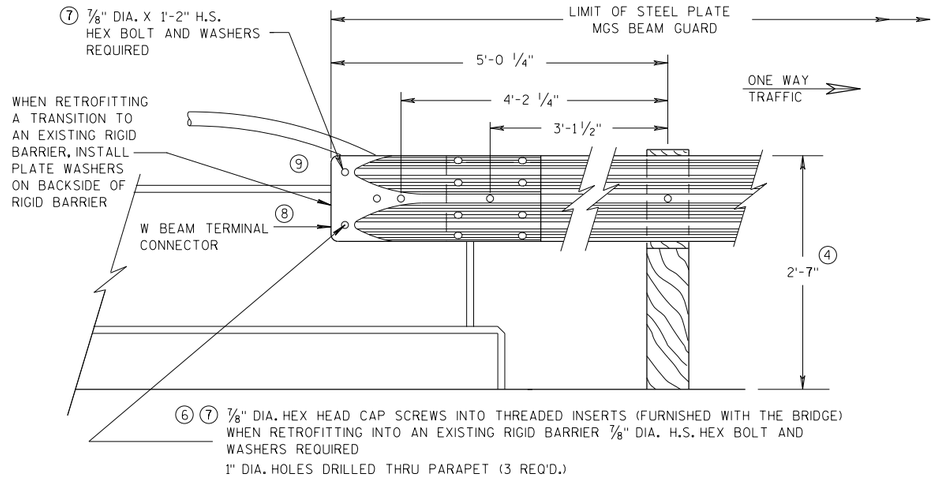
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) 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.





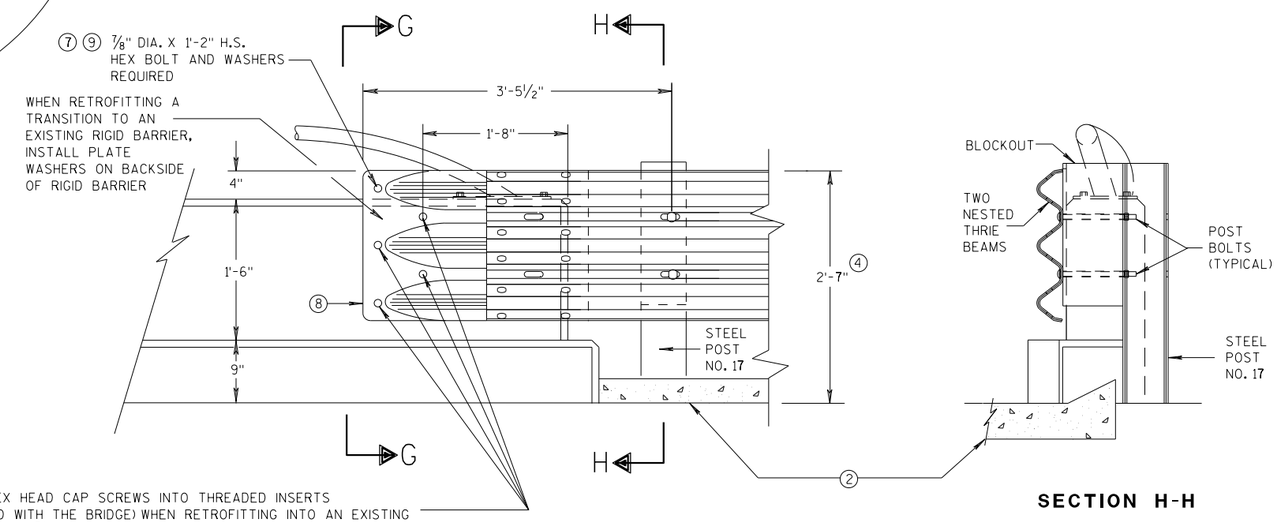
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

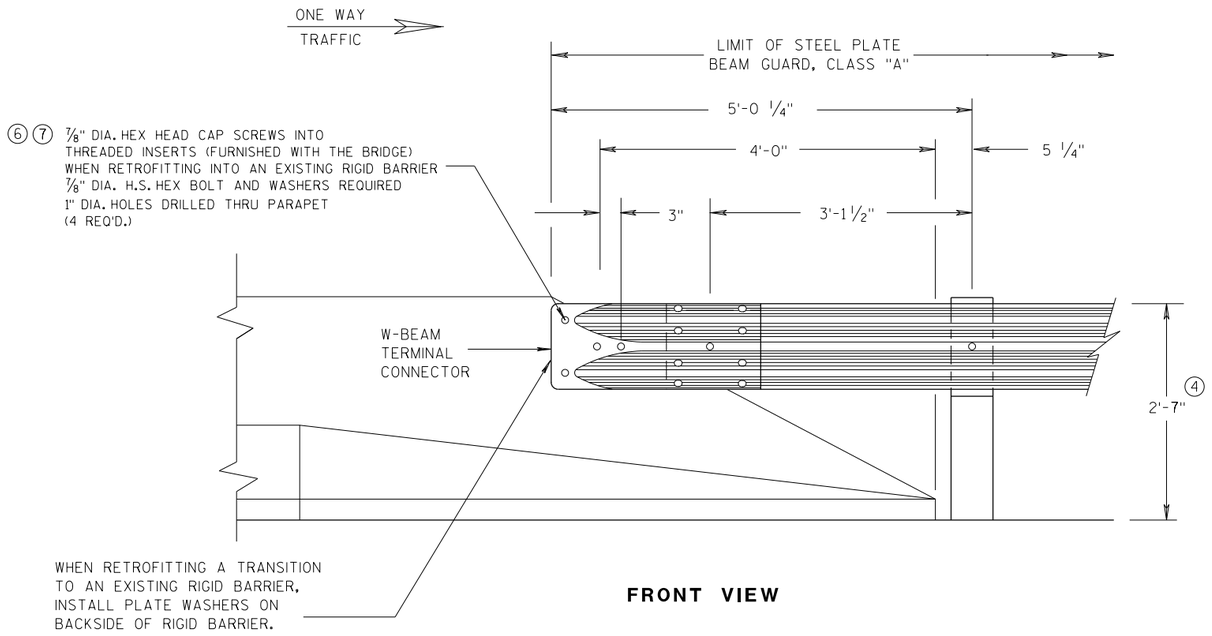
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS
NT
FHWA

6

S.D.D. 14 B 45-5e

6

S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

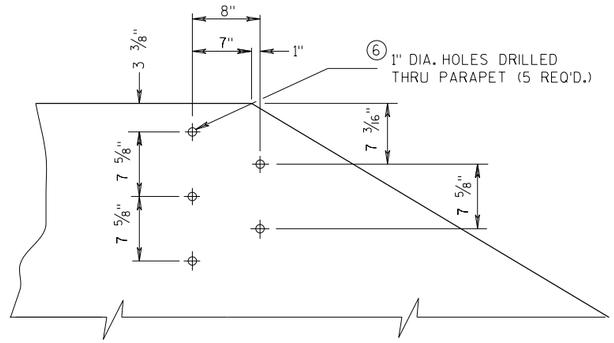
GENERAL NOTES

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

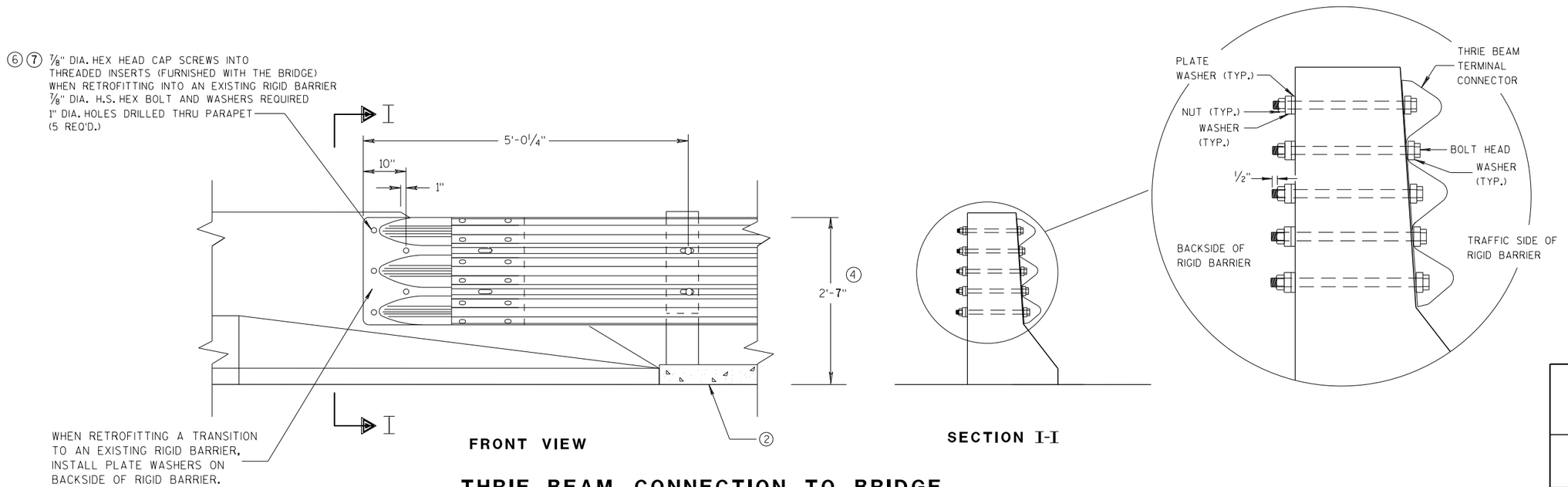
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

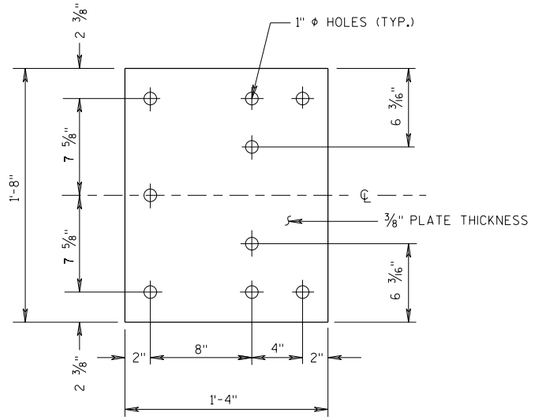
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

6

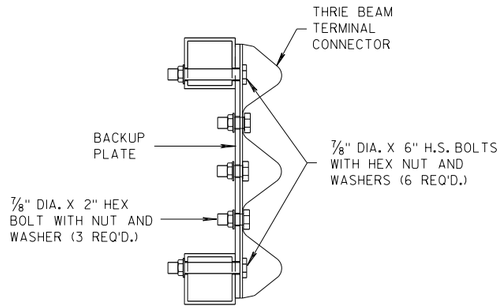
S.D.D. 14 B 45-5f

6

S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL

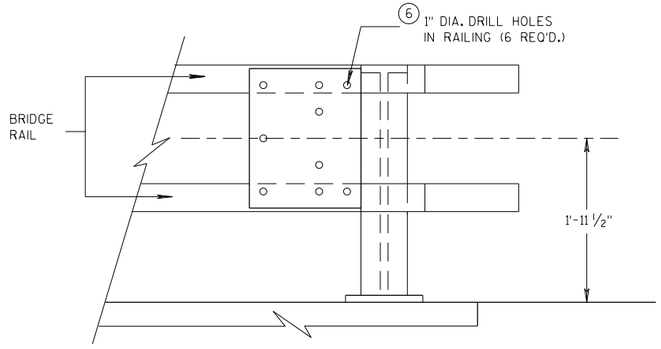


SECTION J-J

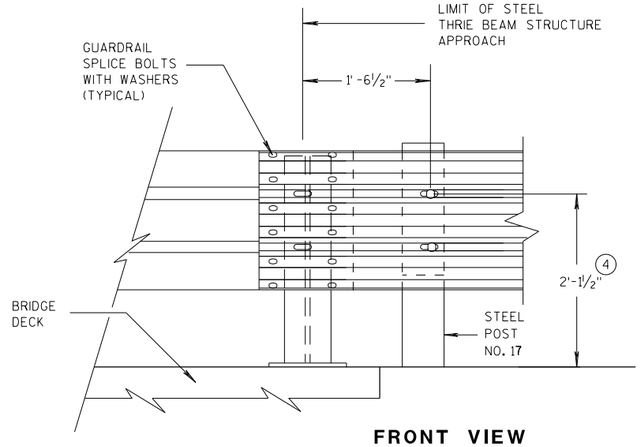
GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(6) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

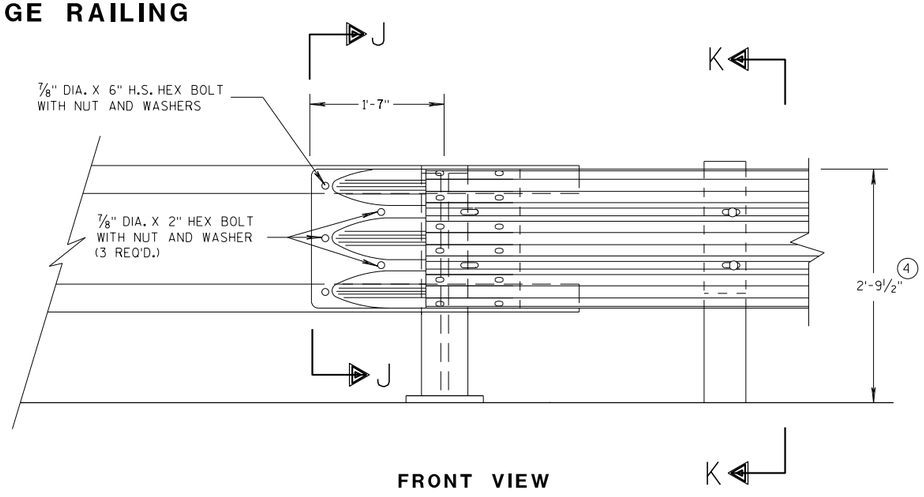


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

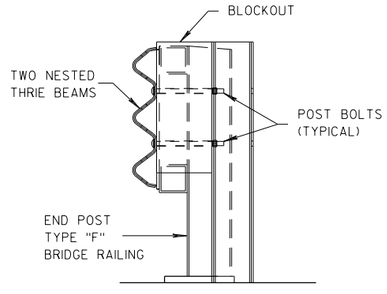


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

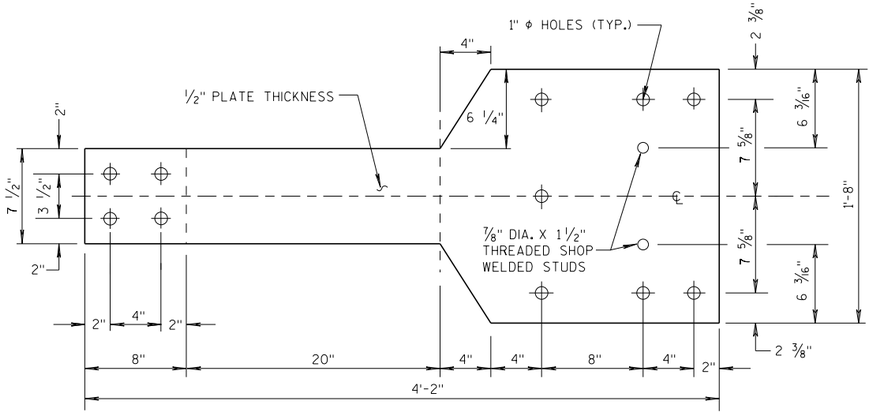
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
31
FHWA

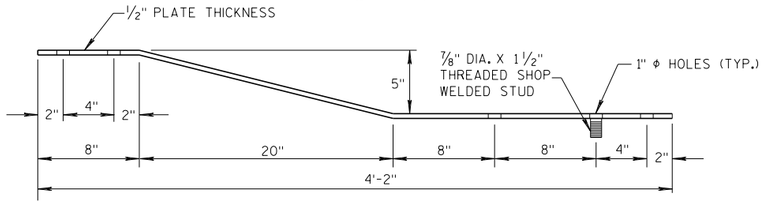
6
S.D.D. 14 B 45-5g

GENERAL NOTES

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

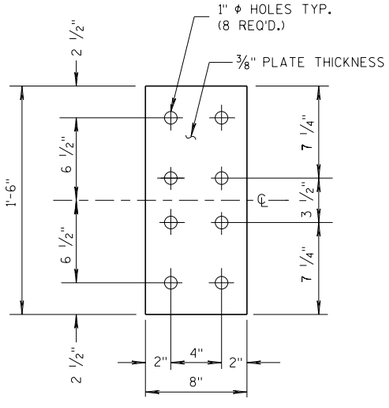


FRONT VIEW



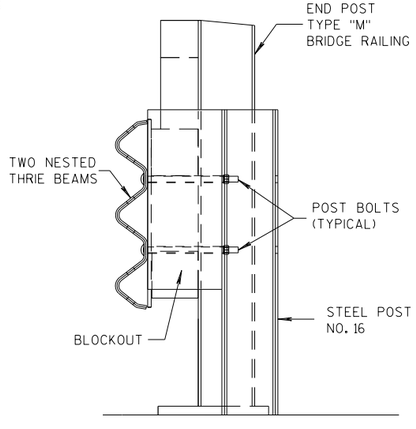
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

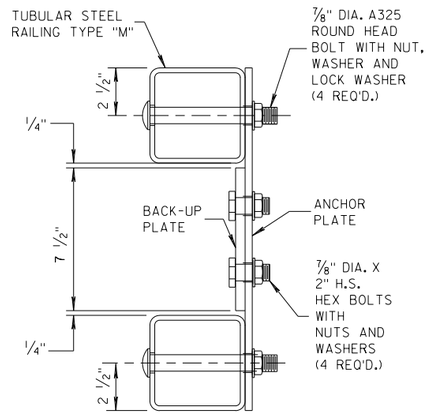


FRONT VIEW

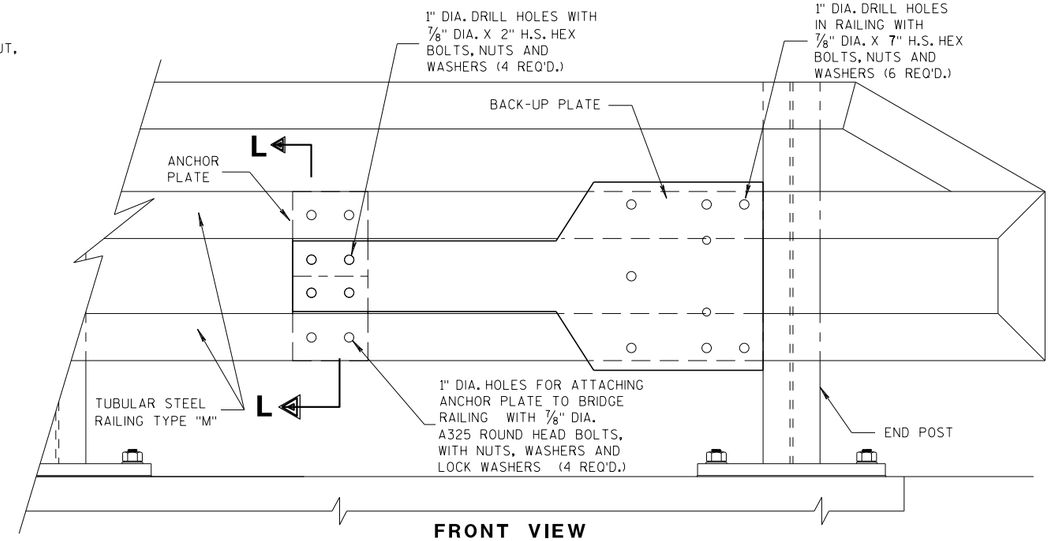
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

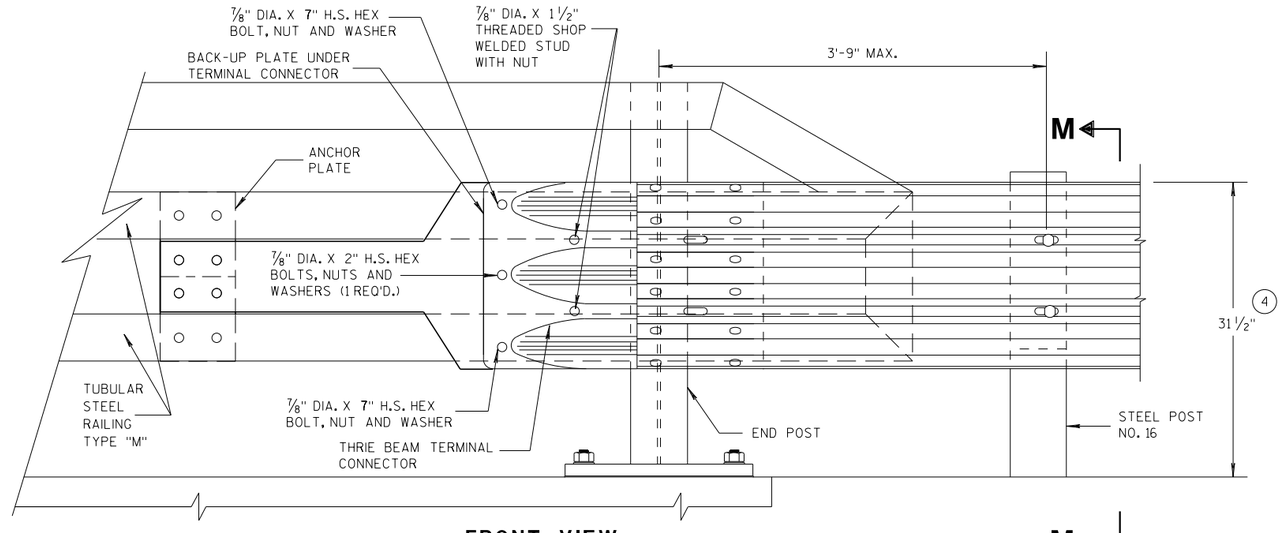


SECTION L-L

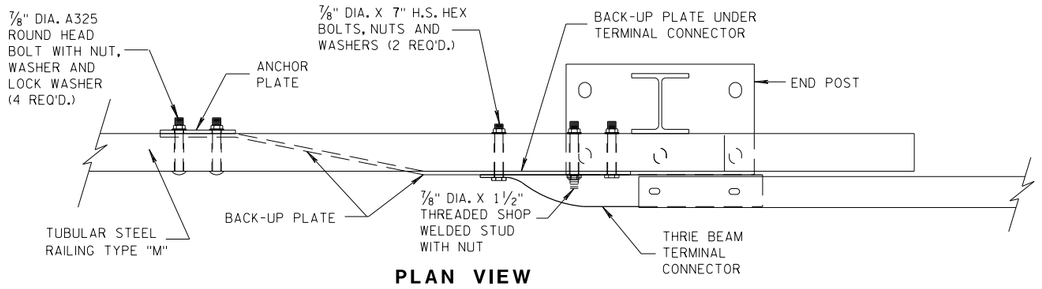


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

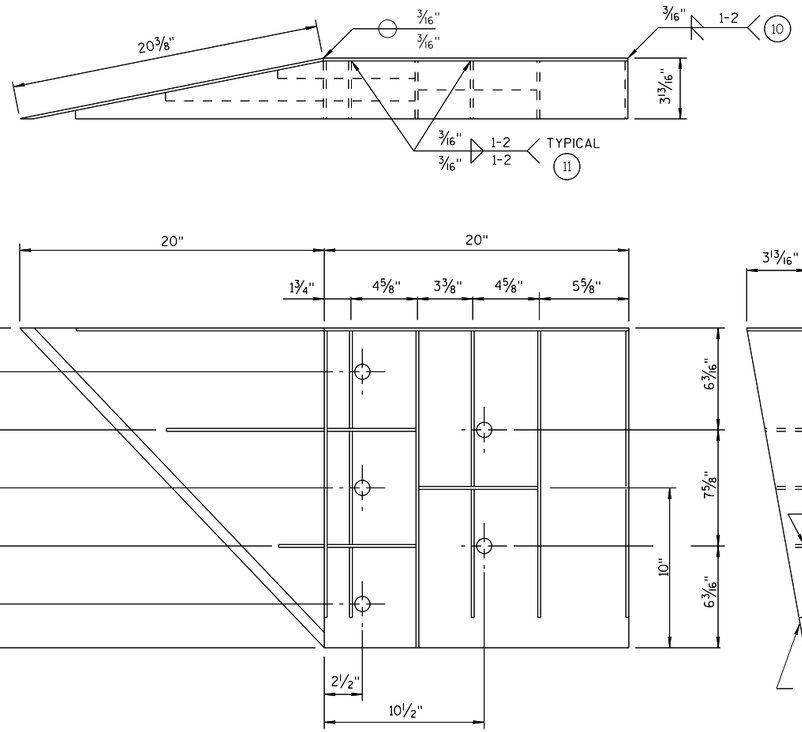
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

S.D.D. 14 B 45-5h

6

S.D.D. 14 B 45-5h



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

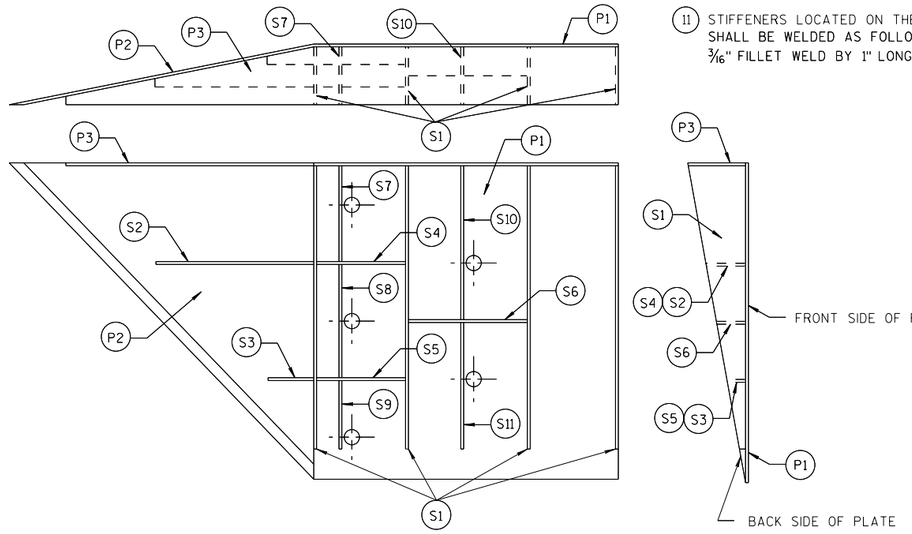


PLATE AND STIFFENER IDENTIFICATION

(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.

(10) 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.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

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 9/16"	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 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" 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 9/16" 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 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

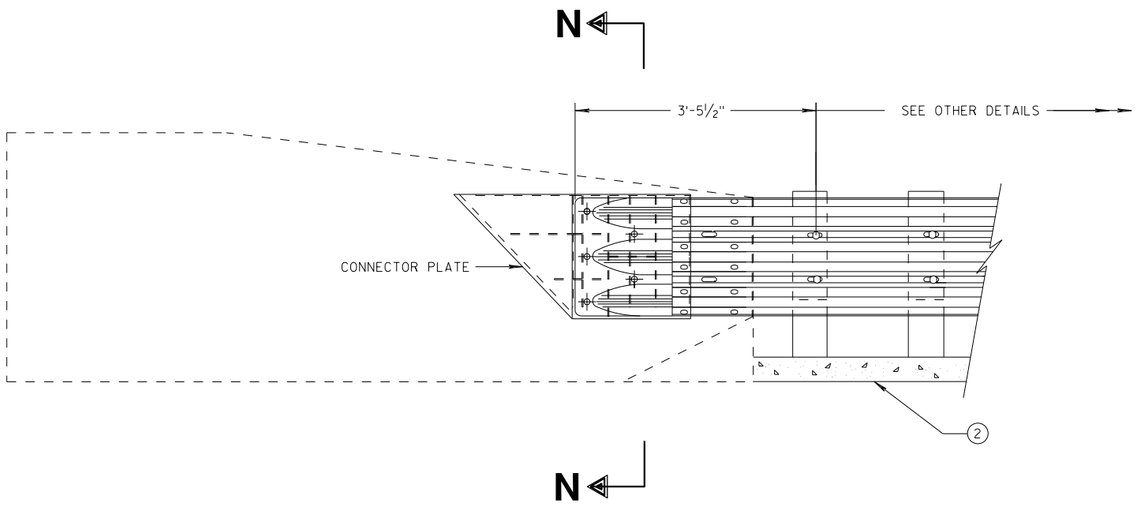
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

6

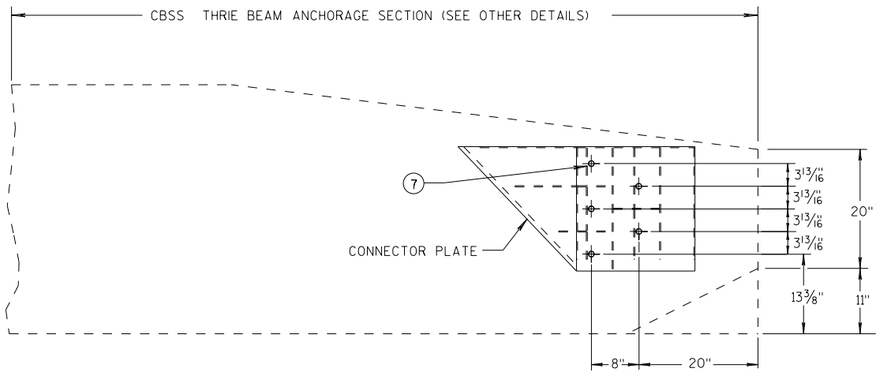
S.D.D. 14 B 45-5i

6

S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



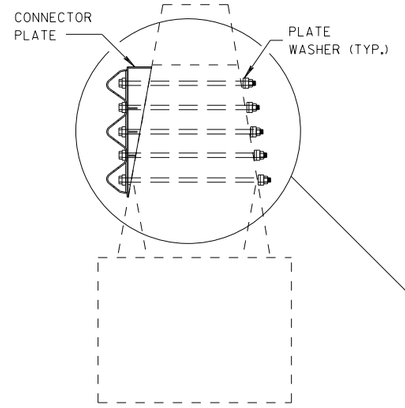
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

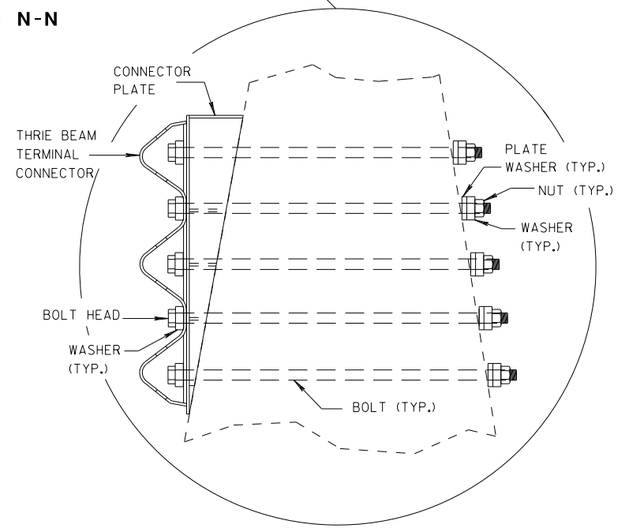
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 ⅝" 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
DEPARTMENT OF TRANSPORTATION

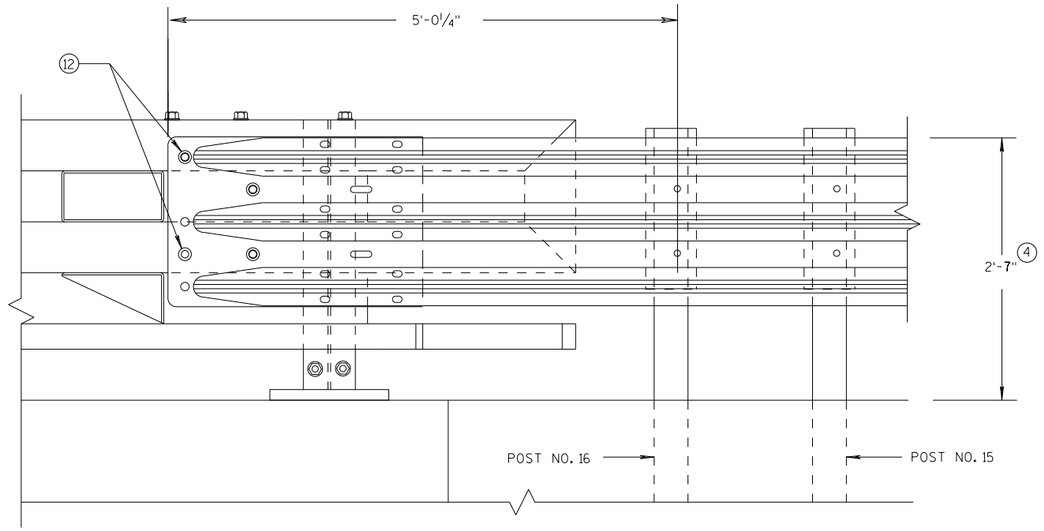
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS NT
FHWA

6

S.D.D. 14 B 45-5j

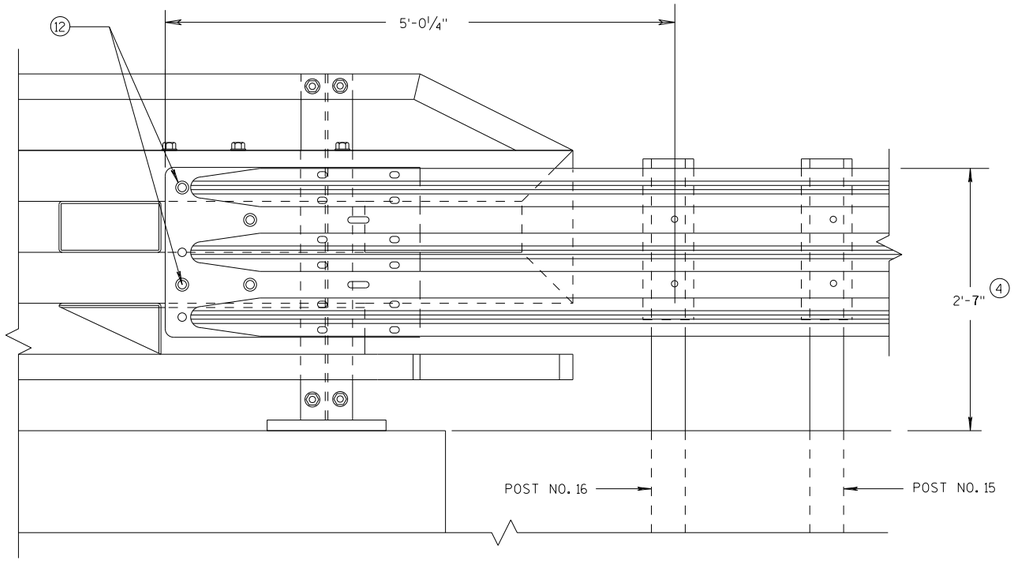
6

S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 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 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

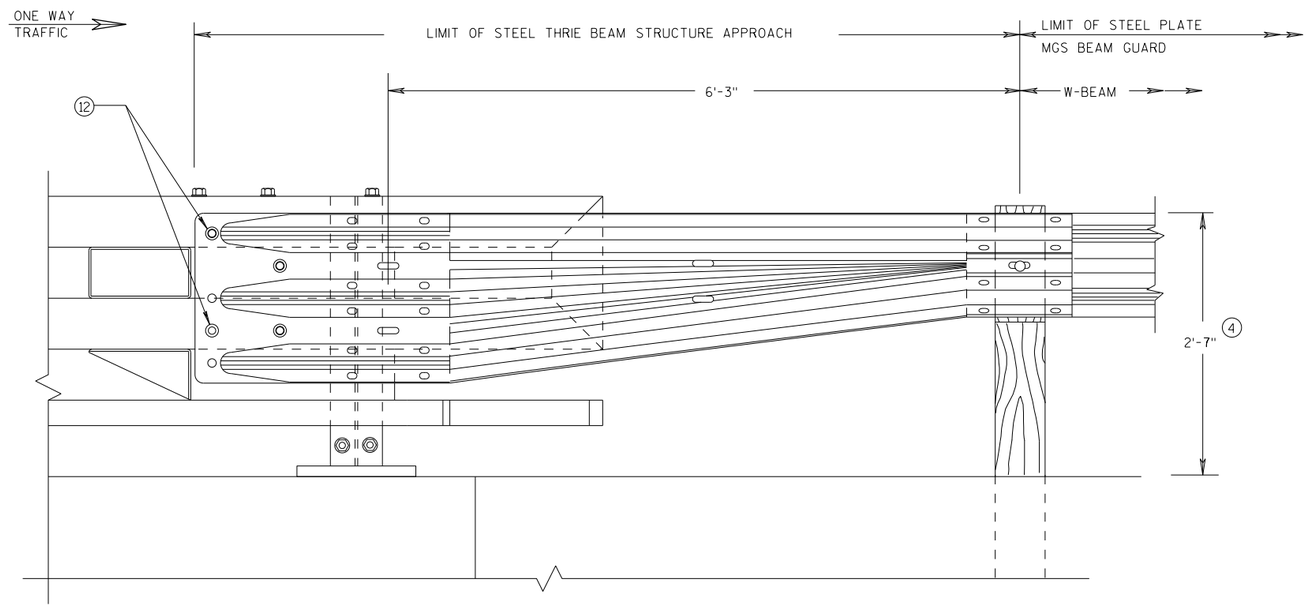
/S/ Rodney Taylor
ROADWAY STANDARDS D 35 NT
UNIT SUPERVIS

6

S.D.D. 14 B 45-5k

6

S.D.D. 14 B 45-5k



FRONT VIEW

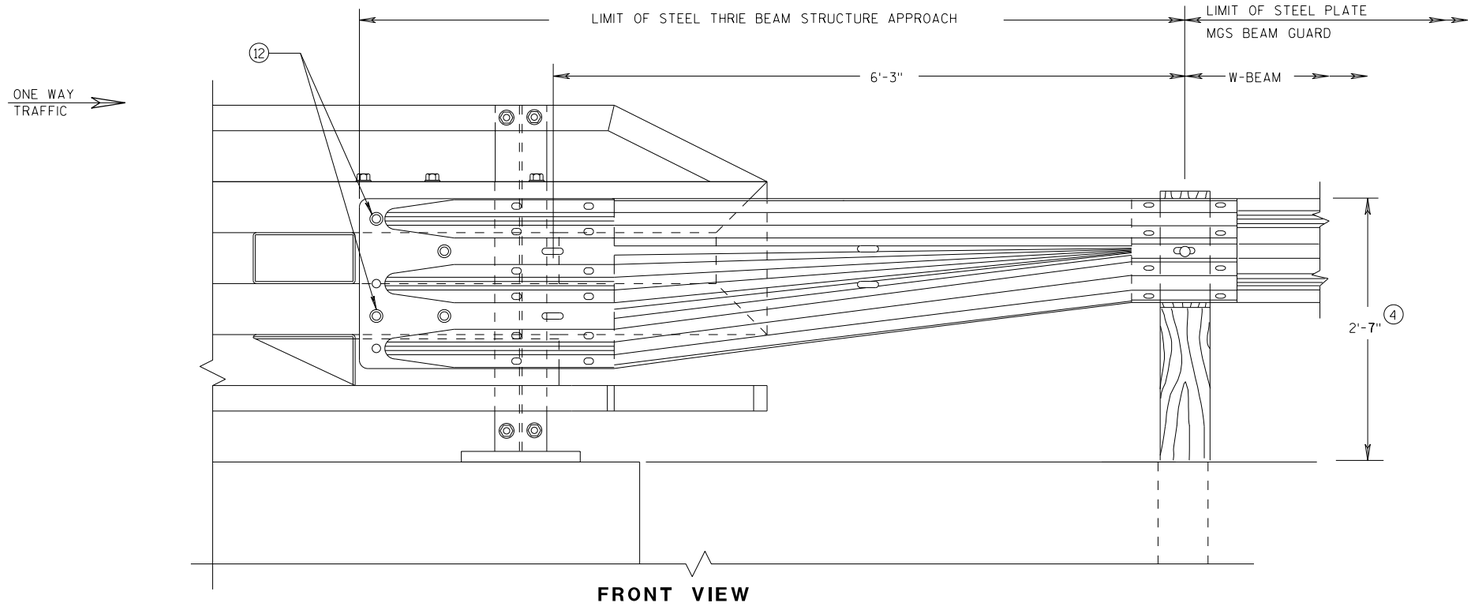
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 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 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
DEPARTMENT OF TRANSPORTATION

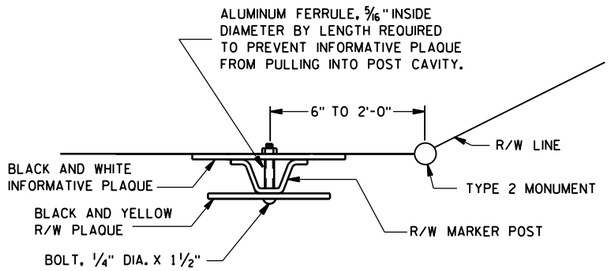
APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
NT
FHWA

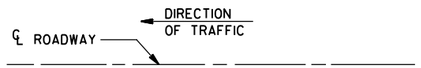
6

S.D.D. 14 B 45-5L

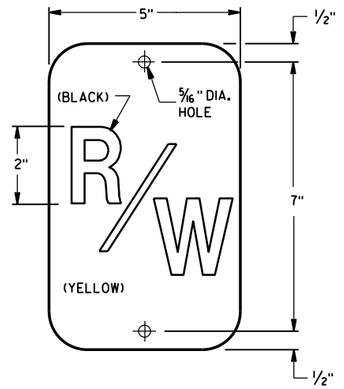
6

S.D.D. 14 B 45-5L



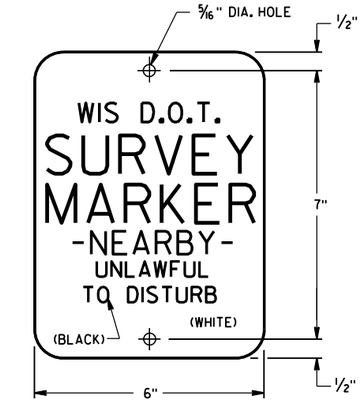


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

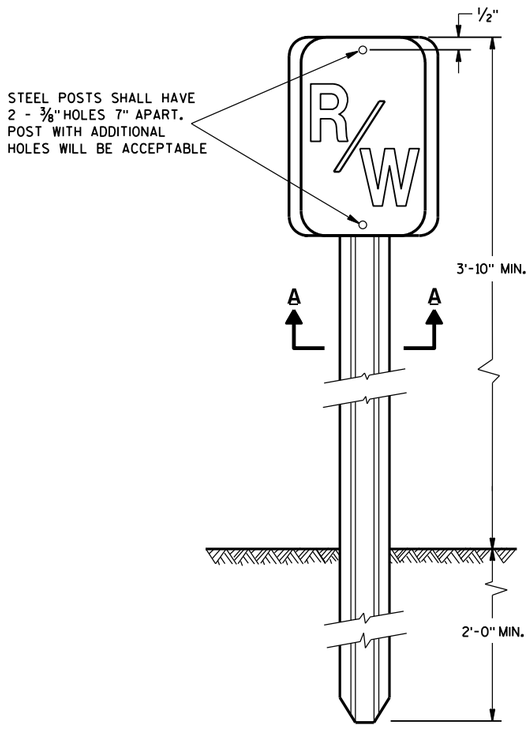
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

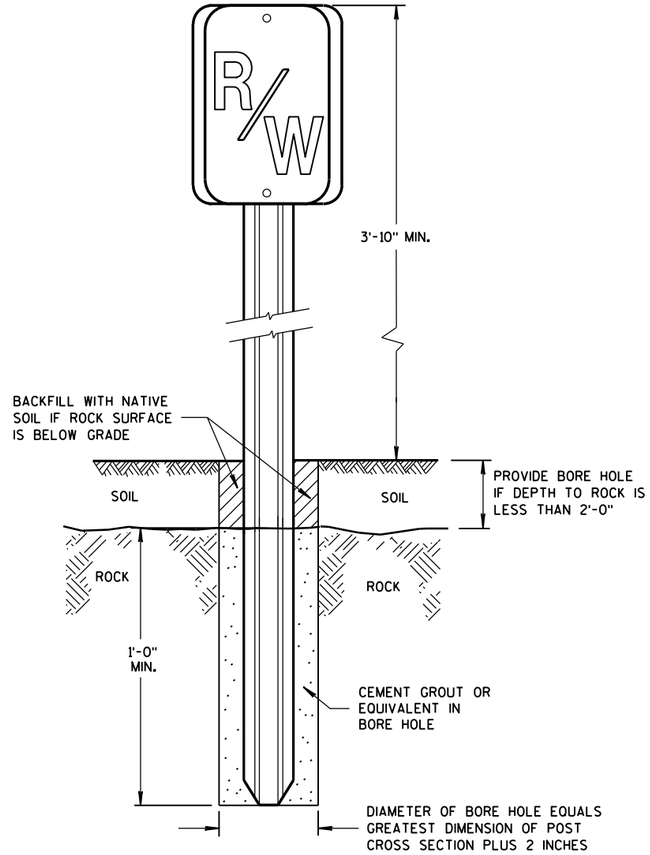
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

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

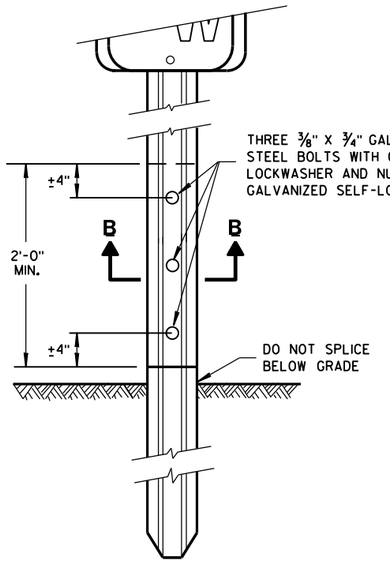
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



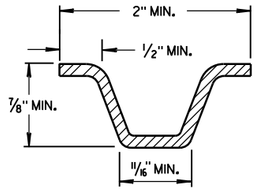
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

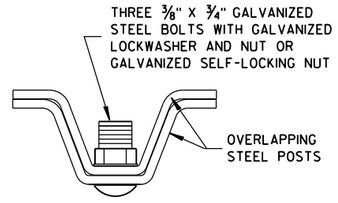


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

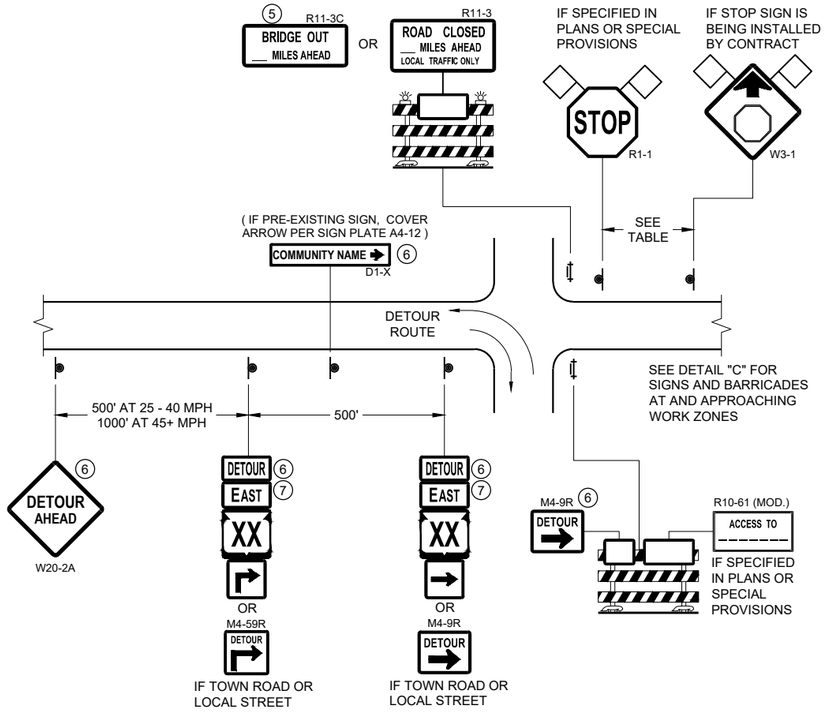
APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

6

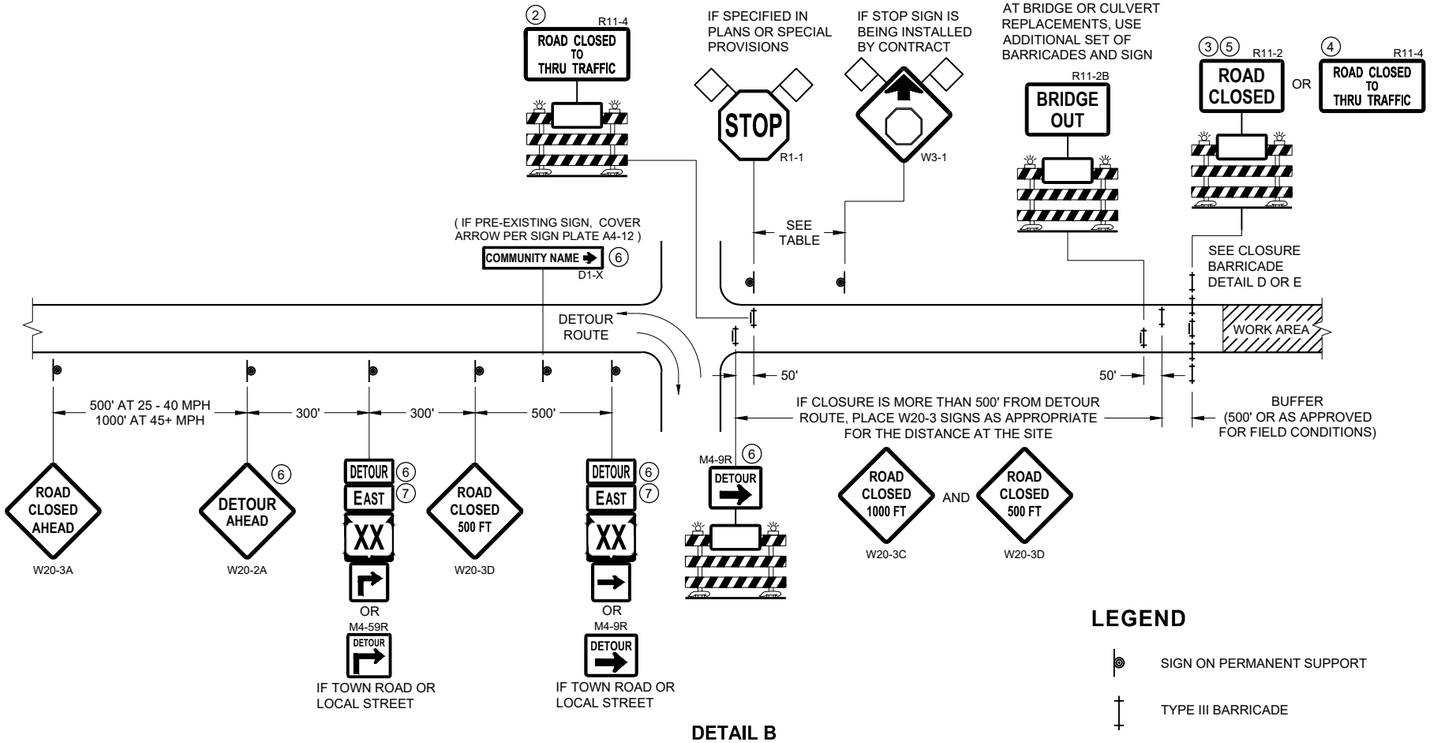
S.D.D. 15 A 1-13a

6

S.D.D. 15 A 1-13a



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)

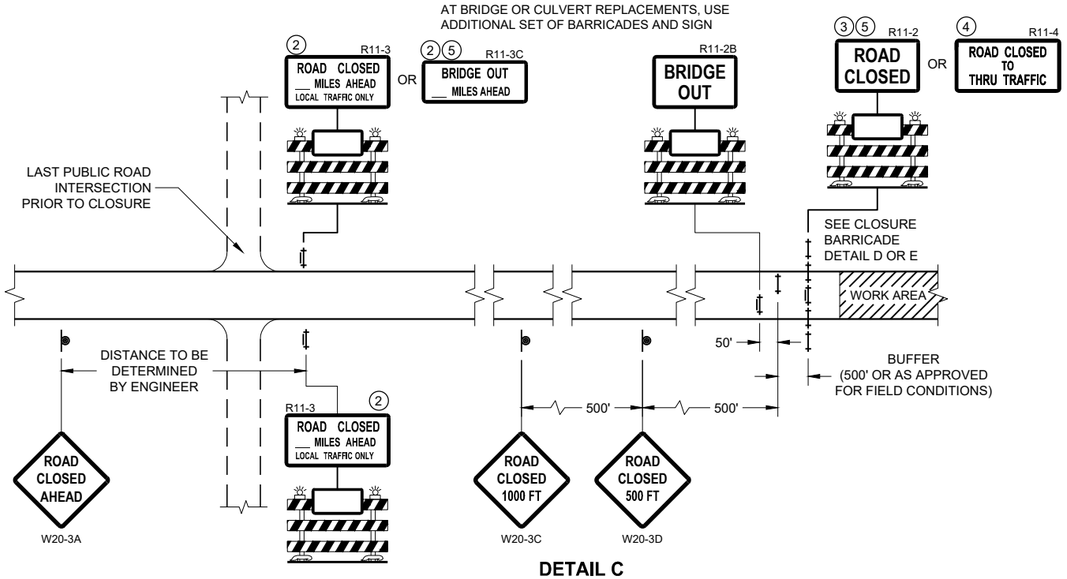
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

LEGEND

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

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

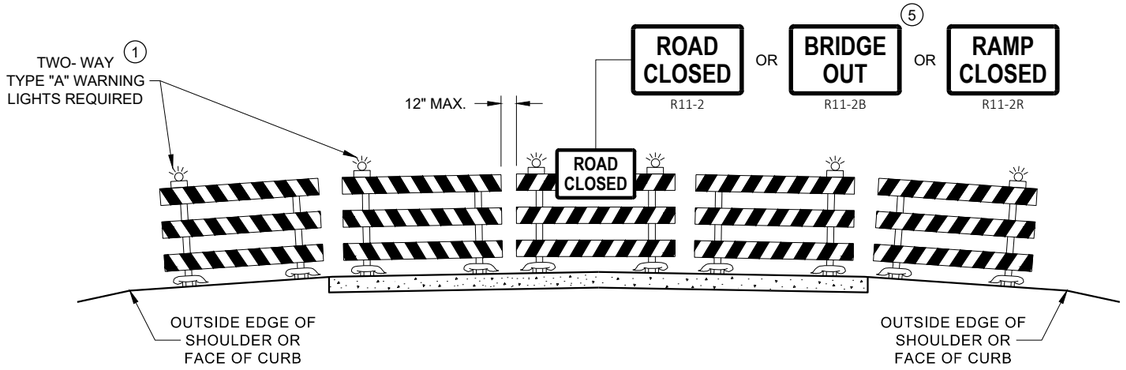
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

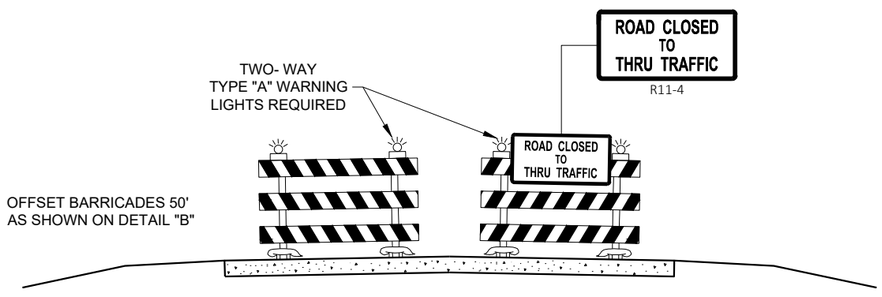
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

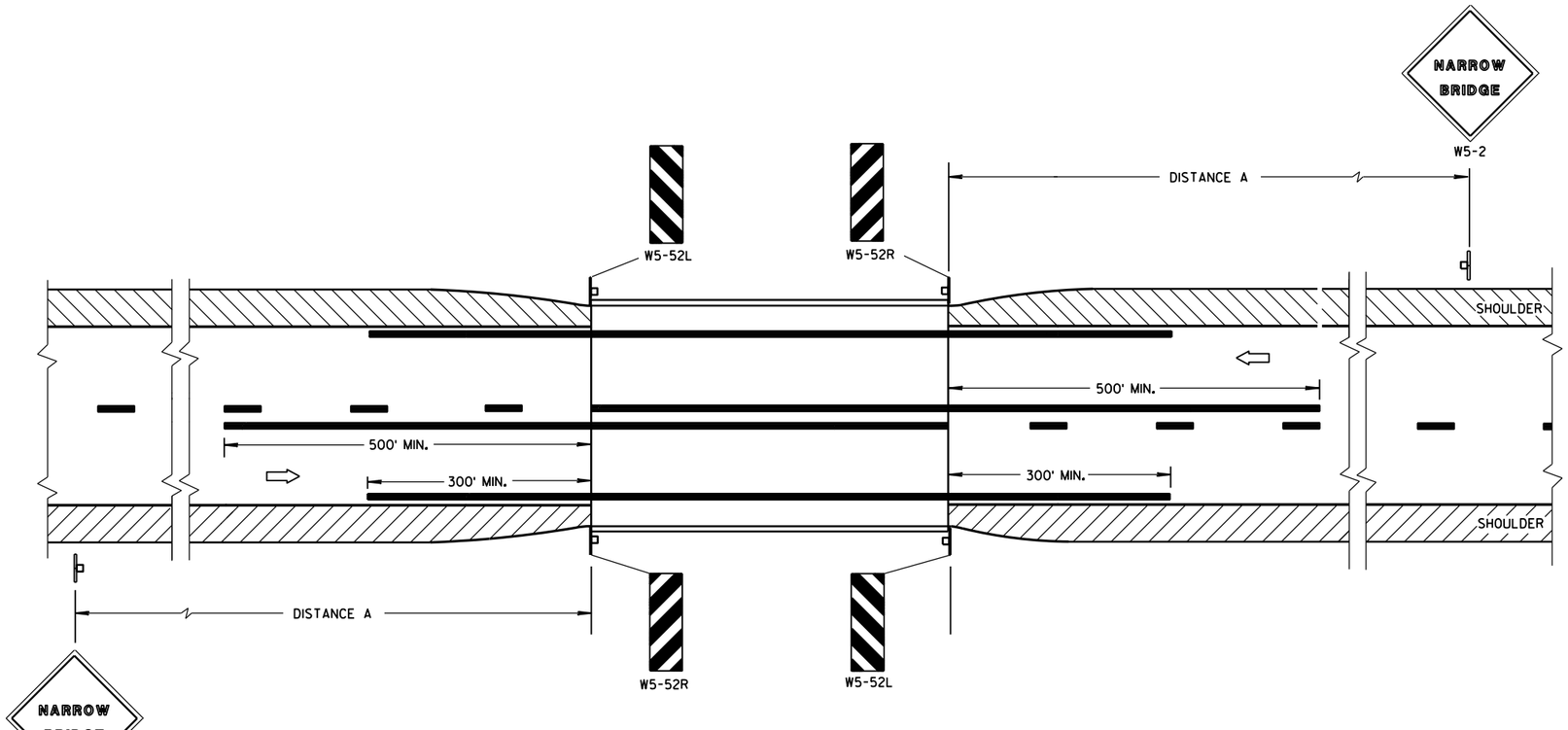
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 07b

6

SDD 15C02 - 07b



SITUATION 1

WARRANTING CRITERIA:

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

DISTANCE TABLE

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

GENERAL NOTES

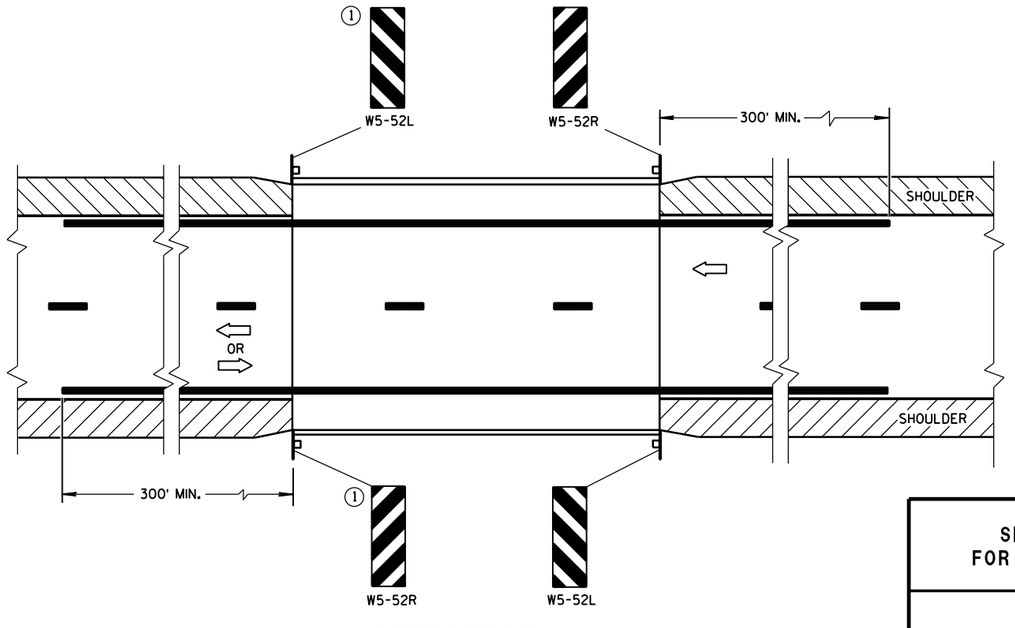
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

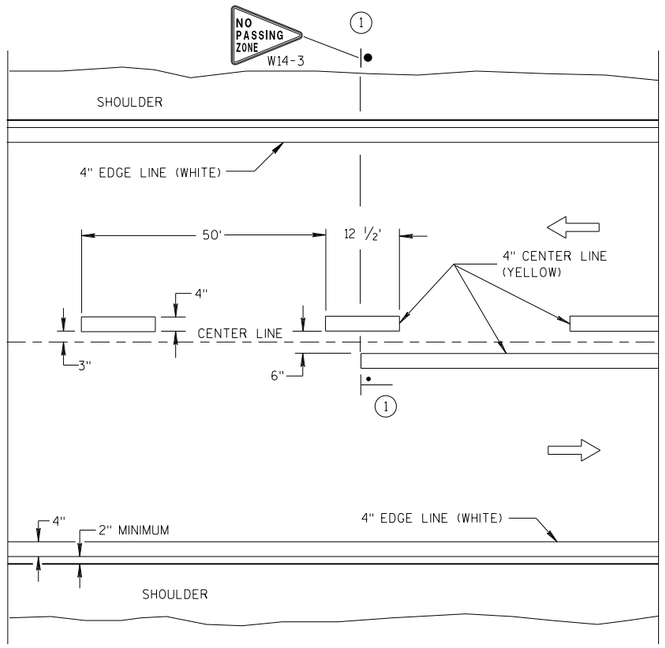
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

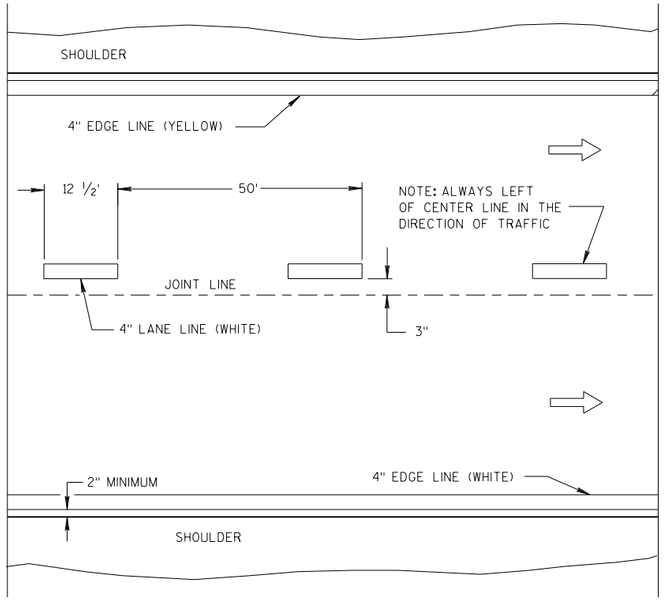
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

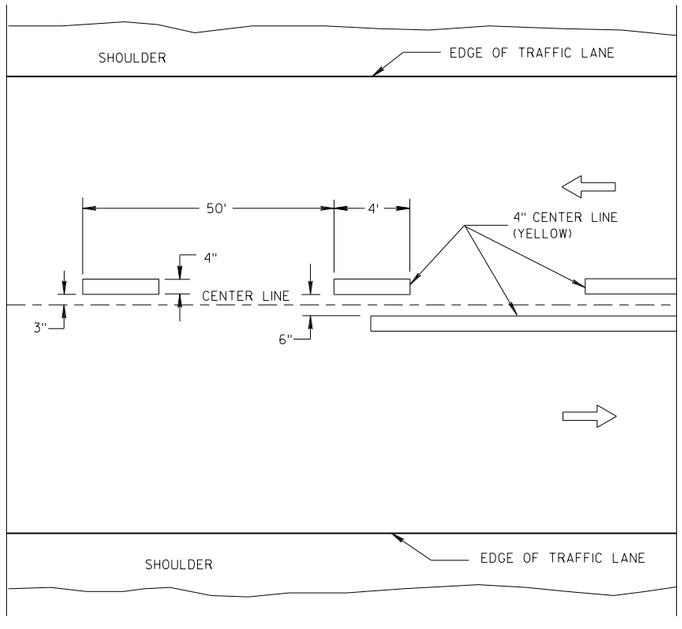
GENERAL NOTES

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

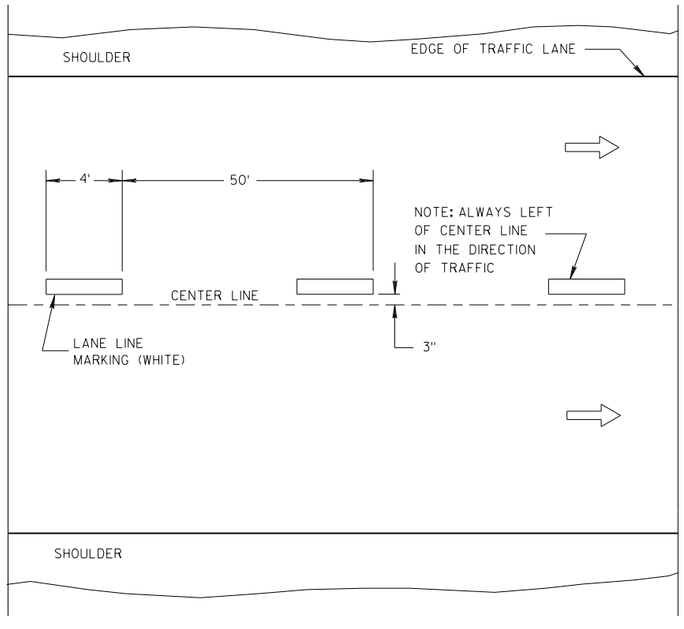
(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LEGEND

"T" MARKING

POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

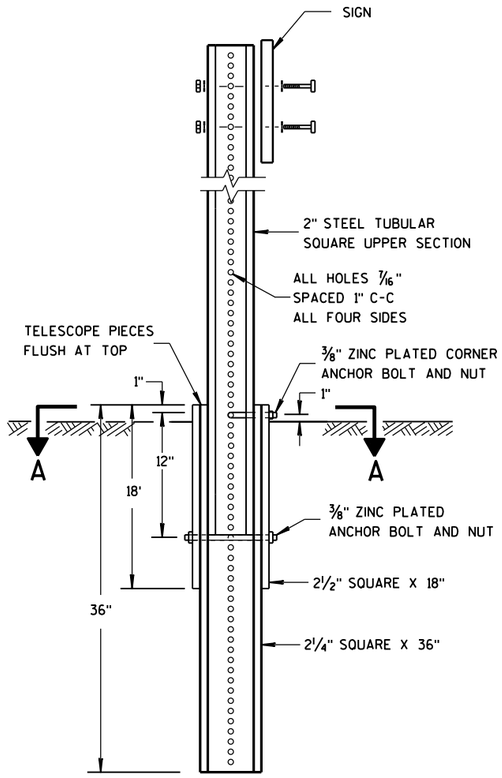
FHWA

6

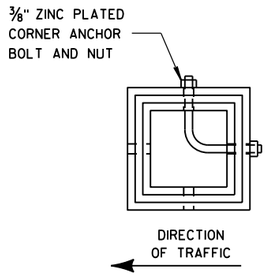
S.D.D. 15 C 8-19a

6

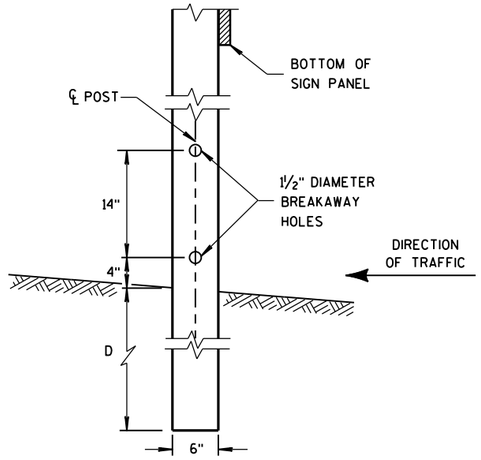
S.D.D. 15 C 8-19a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



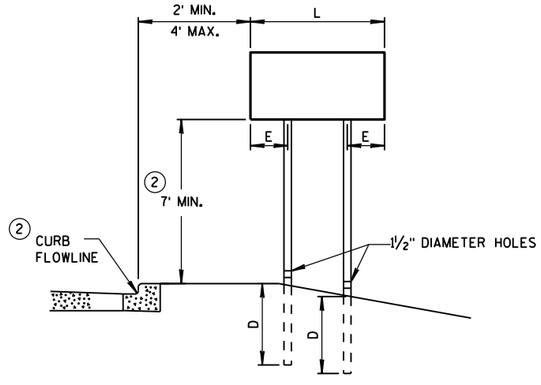
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

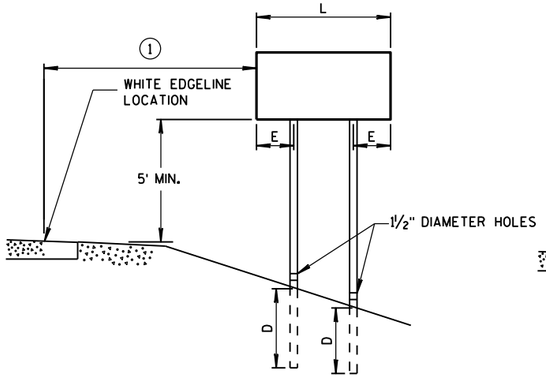
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

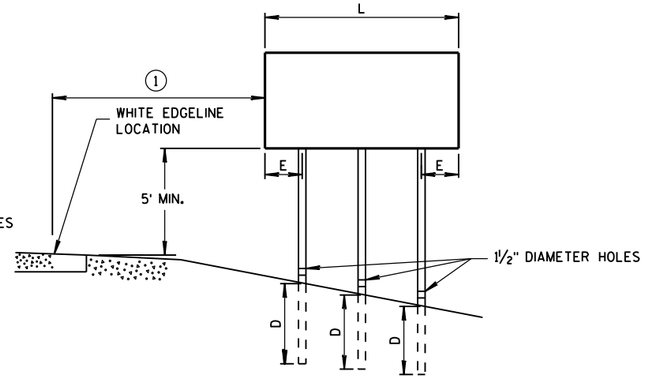
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

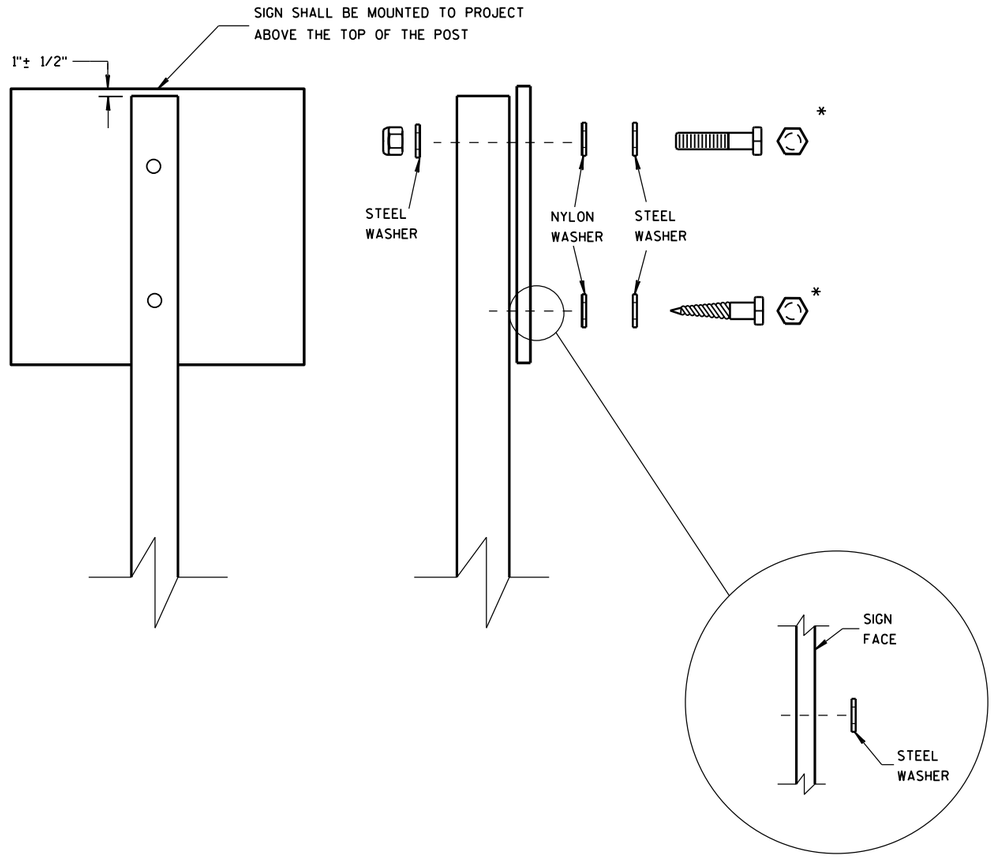
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

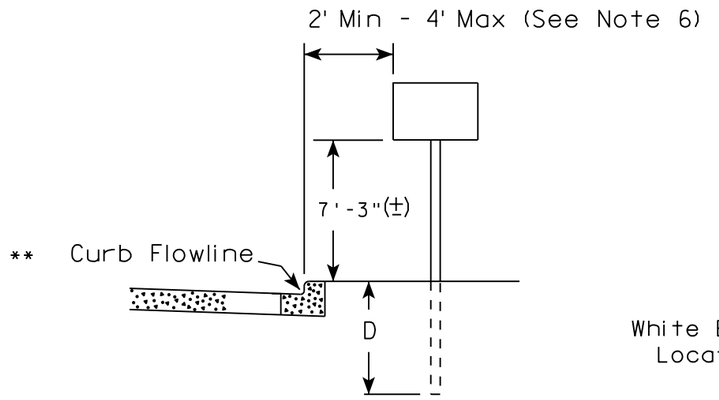
APPROVED

June 2017
DATE

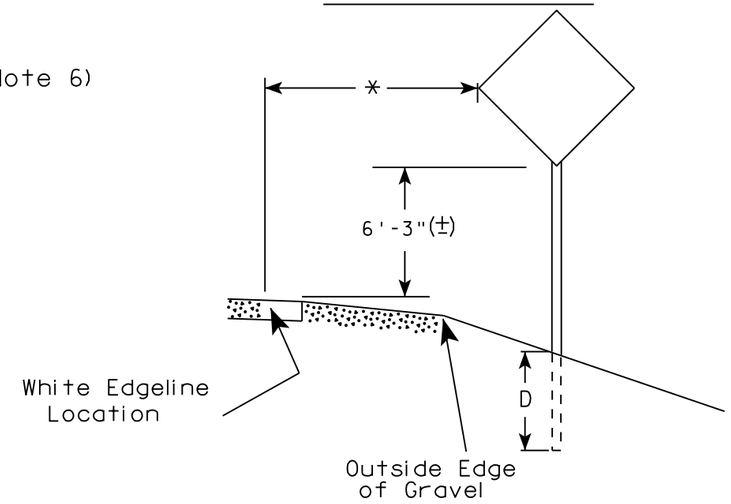
/S/ Andrew Heldtke
WORK ZONE ENG

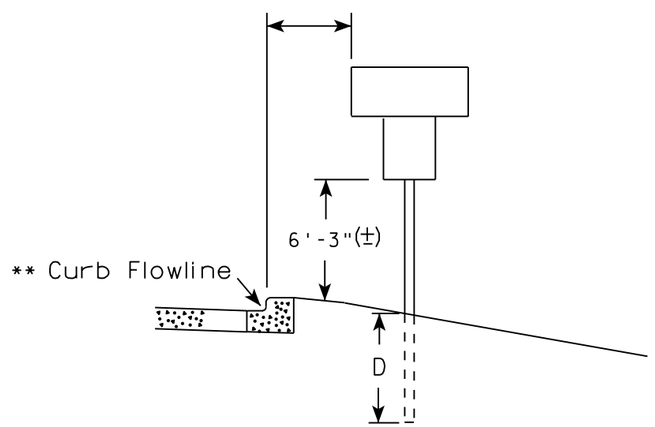
FHWA

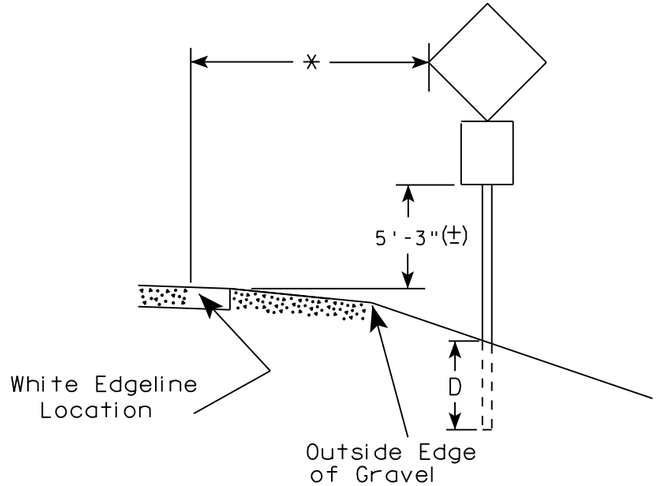
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

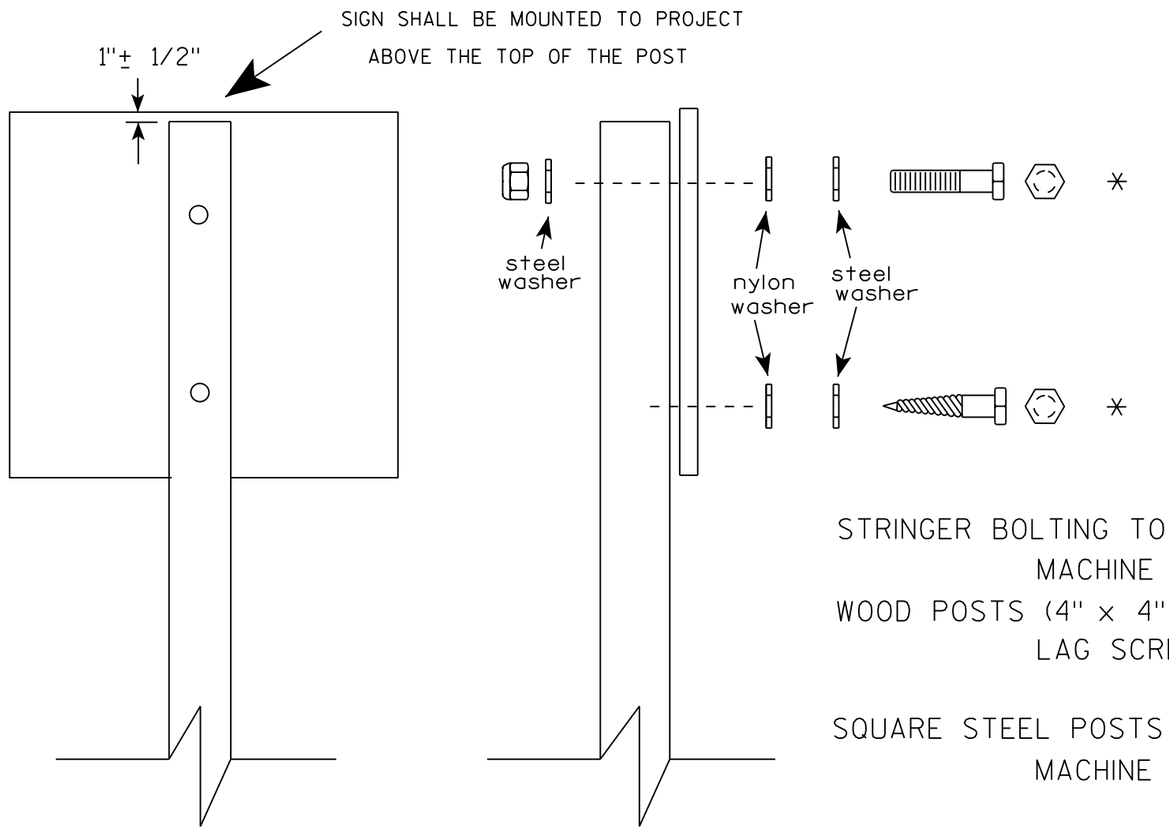
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E



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

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

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

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

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

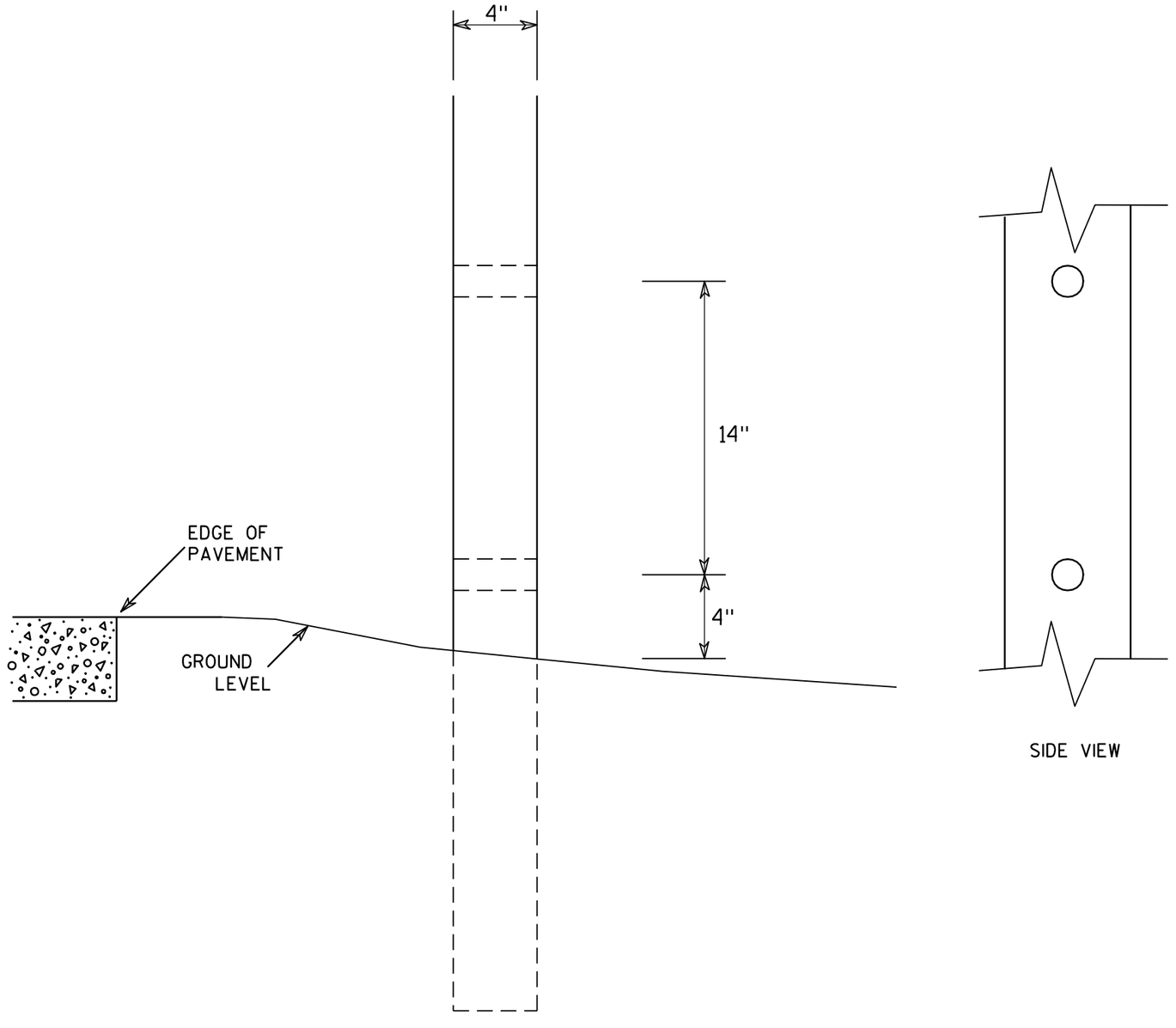
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E



SIDE VIEW

GENERAL NOTES

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

7

7

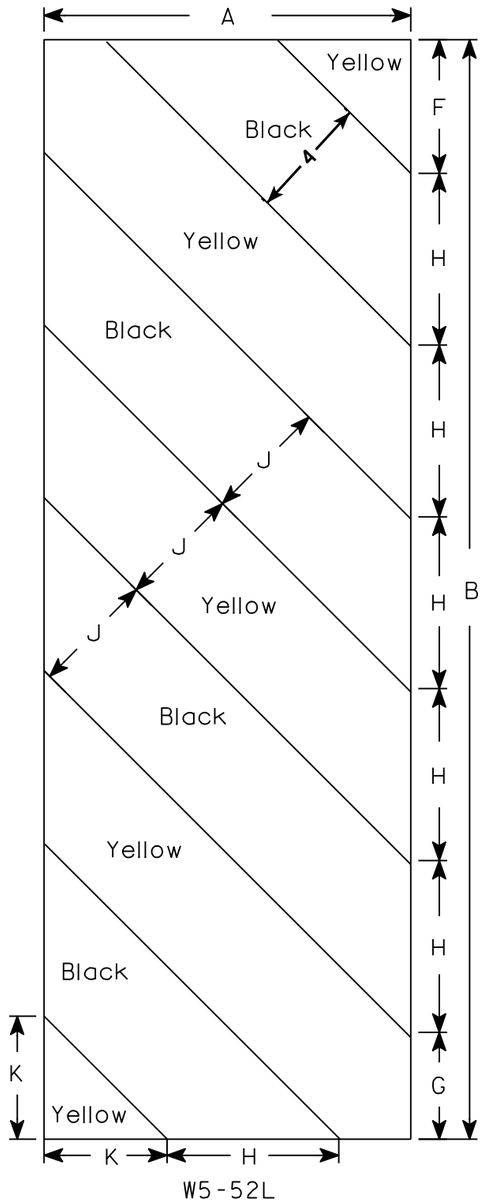
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

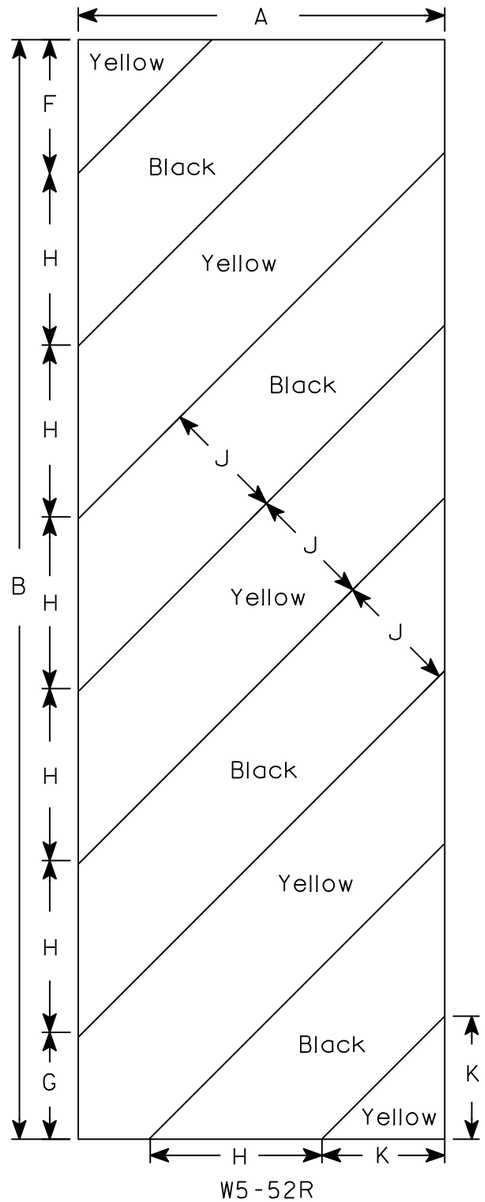
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

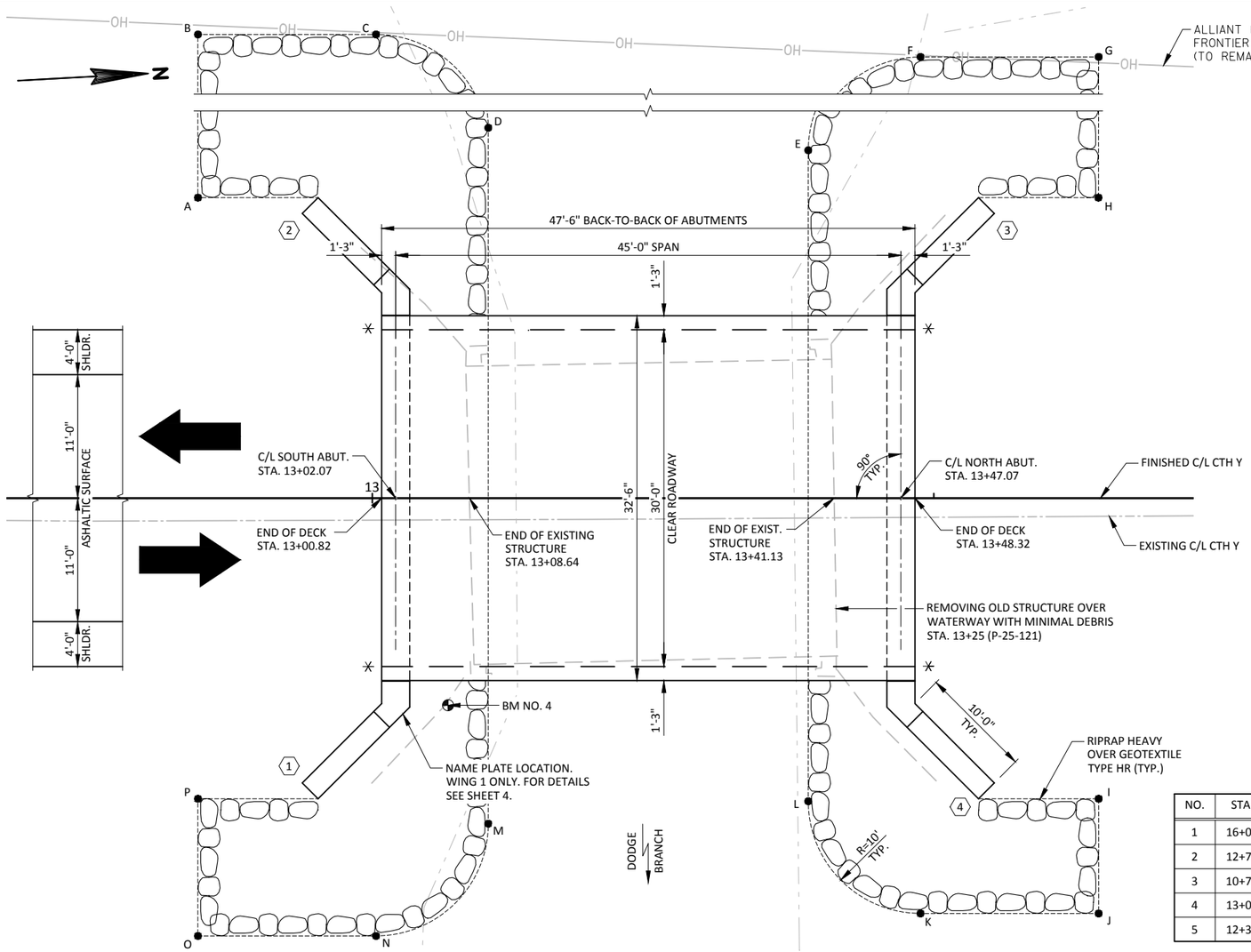
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 47	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

7



PLAN B-25-179

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)

⬡ INDICATES WING NUMBER

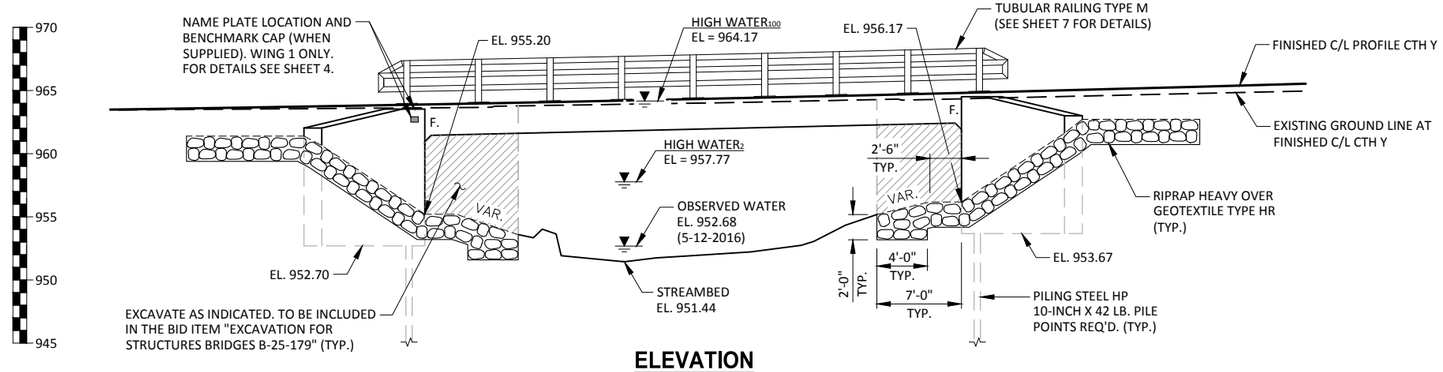
✳ THRIE BEAM RAIL ATTACHMENT

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+84	27' LT.
B	12+84	43' LT.
C	13+00	43' LT.
D	13+10	33' LT.
E	13+39	31' LT.
F	13+49	41' LT.
G	13+65	41' LT.
H	13+65	27' LT.
I	13+65	27' RT.
J	13+65	37' RT.
K	13+49	37' RT.
L	13+39	27' RT.
M	13+10	29' RT.
N	13+00	39' RT.
O	12+84	39' RT.
P	12+84	27' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	16+02	3/4" IRON REBAR SET, 25.6' RT	973.71
2	12+72	3/4" IRON REBAR SET, 16.7' RT	963.01
3	10+70	3/4" IRON REBAR SET, 16.3' RT	962.62
4	13+07	CHISELED "+" VERT. H BEAM SE WING, 18.5' RT	963.77
5	12+37	COTTON GIN SPINDLE IN PPOL, 45.2' LT	960.65



ELEVATION

(NORMAL TO DODGE BRANCH)

STATE PROJECT NUMBER

5921-00-74

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF=1.33
OPERATING RATING FACTOR	RF=1.72
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB	f'c = 4,000 P.S.I.
ALL OTHER	f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 25 FT PILE LENGTHS AT BOTH ABUTMENTS. PILE POINTS ARE REQUIRED AT ALL LOCATIONS.

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

TRAFFIC DATA

A.D.T. (2018)	140
A.D.T. (2038)	150
DESIGN SPEED	40 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY	
DRAINAGE AREA	19.3 SQ. MI.
Q_{100} TOTAL	4,310 C.F.S.
THROUGH STRUCTURE	3,100 C.F.S.
OVERTOPPING ROADWAY	1,210 C.F.S.
VELOCITY - THROUGH STRUCTURE	8.7 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE	357 SQ. FT.
HIGH WATER$_{100}$ ELEVATION	964.17
SCOUR CRITICAL CODE	5
DESIGN ROADWAY OVERFLOW FREQUENCY	
ROADWAY OVERFLOW FREQUENCY	27 YEARS
Q_{27}	2,950 C.F.S.
HIGH WATER$_{27}$ ELEVATION	962.65
EROSION CONTROL	
Q_2	800 C.F.S.
HIGH WATER$_2$ ELEVATION	957.77
Q_2 VELOCITY	5.02 F.P.S.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.
SUBSURFACE EXPLORATION	3.
ABUTMENTS	4.
ABUTMENT DETAILS	5.
SUPERSTRUCTURE	6.
RAILING TUBULAR TYPE M	7.

WISCONSIN
PATRICK
T. BOLAND
E-36303
SPRING GREEN
WIS.
5-7-19
PROFESSIONAL ENGINEER

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 05/09/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-179

CTH Y OVER DODGE BRANCH

COUNTY	IOWA
TOWN/~~CITY/VILLAGE~~	MINERAL POINT
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JZ	PTB	JZ	PTB

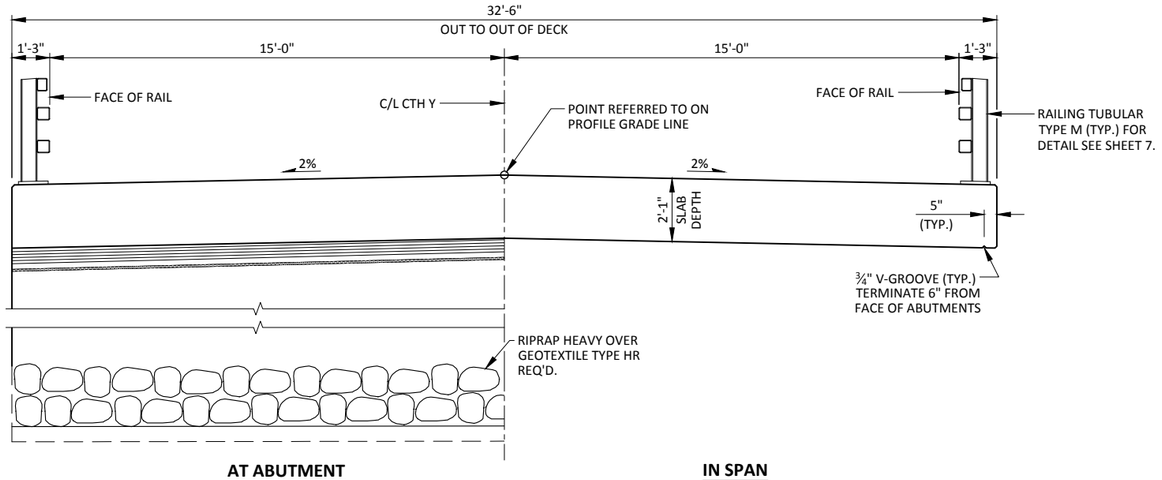
GENERAL PLAN

SHEET 1 OF 7

48

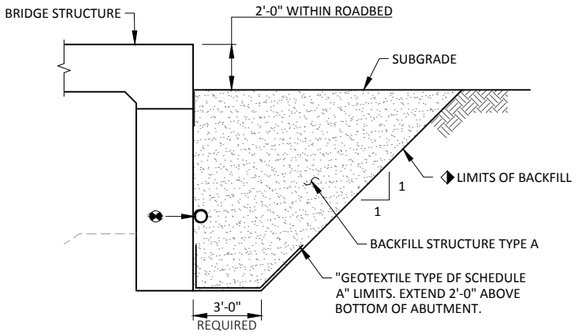
STATE PROJECT NUMBER

5921-00-74



PROPOSED CROSS-SECTION THROUGH ROADWAY

LOOKING NORTH

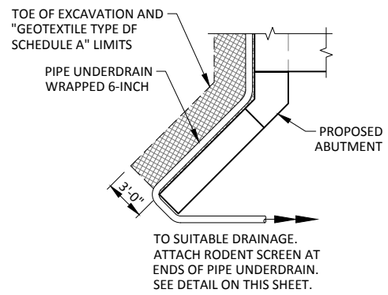


BACKFILL STRUCTURE DETAIL

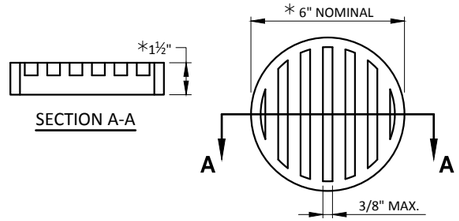
(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-25-179". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◓ PIPE UNDERDRAIN WRAPPED 6-INCH, SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



PIPE UNDERDRAIN DETAIL



RODENT SCREEN

NOTES:

∗ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

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

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

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

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

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

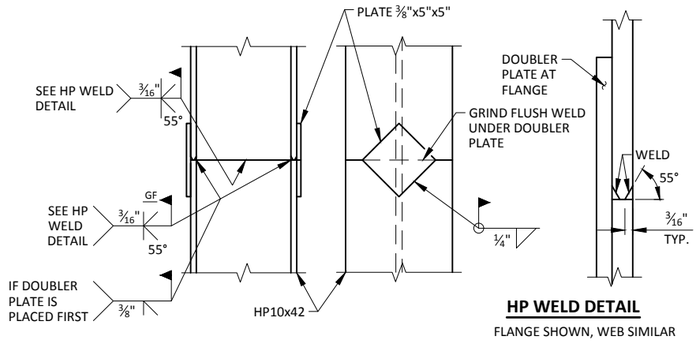
THE EXISTING STRUCTURE (P-25-121) IS A SINGLE-SPAN STEEL GIRDER, CONCRETE DECK STRUCTURE SUPPORTED ON TIMBER ABUTMENTS. THE STRUCTURE HAS AN OVERALL WIDTH OF 26.7' AND AN OVERALL LENGTH OF 32.6' AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



HP WELD DETAIL

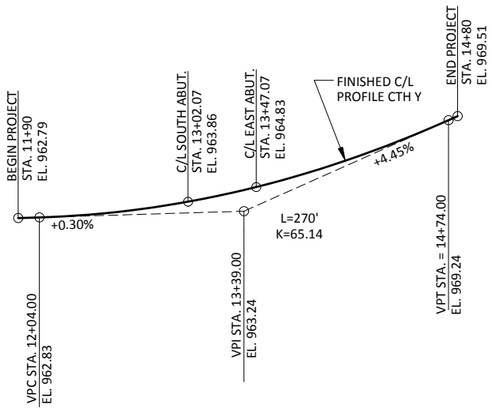
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	SUPER.	N. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MIN. DEBRIS STA. 13+25	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-25-179	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	270	--	270	540
502.0100	CONCRETE MASONRY BRIDGES	CY	45	124	45	214
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	200	--	200
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,590	--	2,590	5,180
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,635	21,260	1,635	24,530
513.4061	RAILING TUBULAR TYPE M	LF	--	100	--	100
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6.5	--	6.5	13
550.0500	PILE POINTS	EACH	7	--	7	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	165	--	165	330
606.0300	RIPRAP HEAVY	CY	120	--	110	230
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	--	90	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	200	--	180	380
	NON-BID ITEMS					
	FILLER	SIZE	--	--	--	½" & ¾"
	NAME PLATE					



PROFILE GRADE LINE

CTH Y

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-179

DRAWN BY JZ | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 7

49

STATE PROJECT NUMBER

5921-00-74

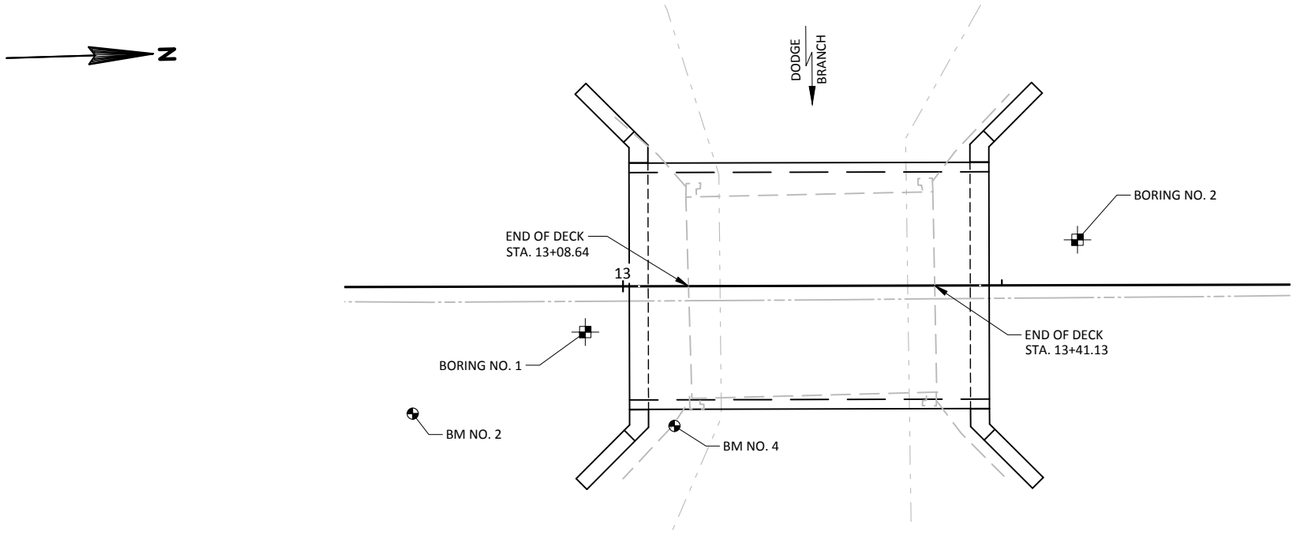
SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/14/16	140,358.1	393,143.5
2	10/14/16	140,423.4	393,133.2

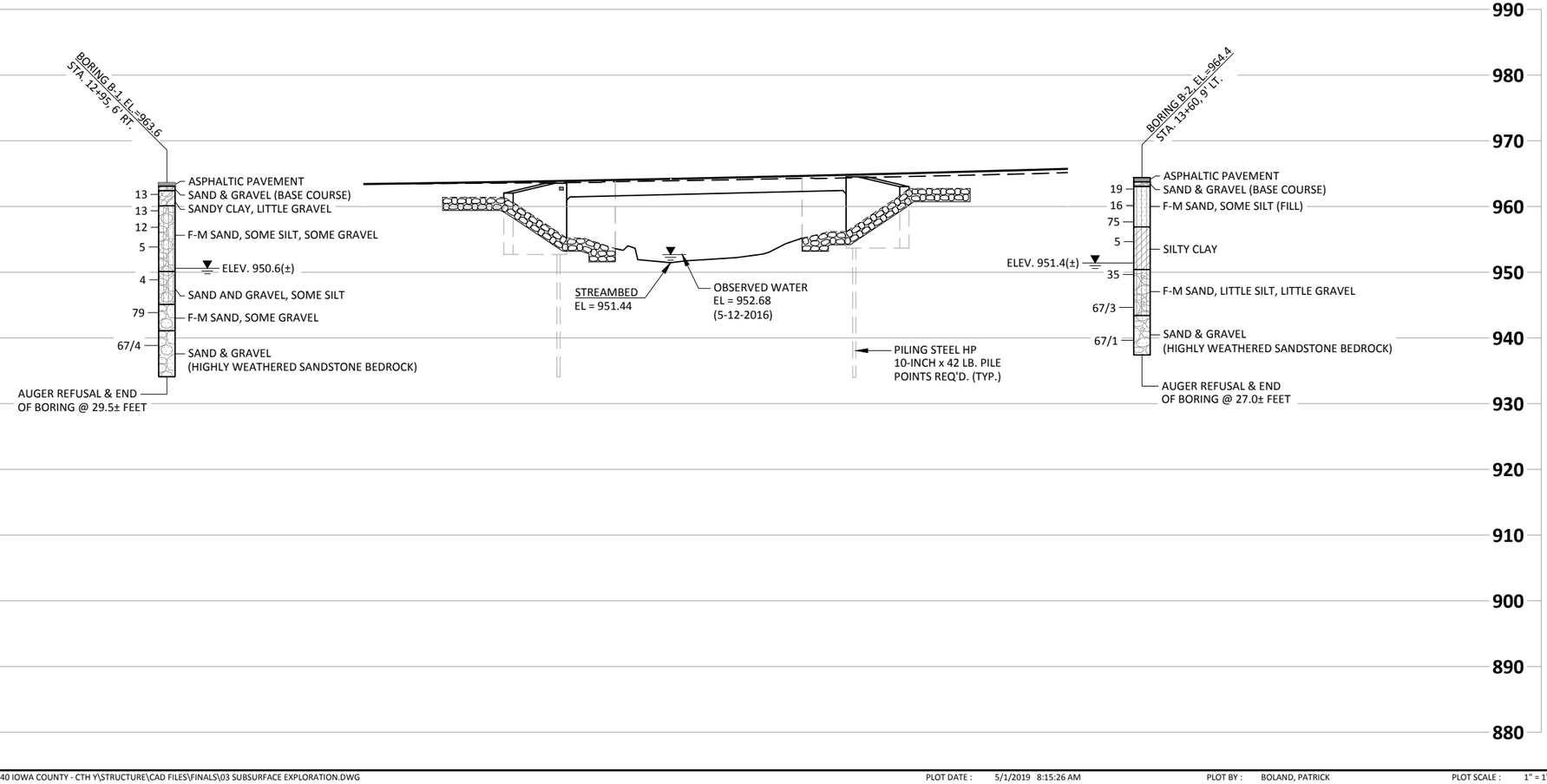
BORINGS & REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC. (NTS)
5620 WOODLAND DRIVE
WAUNAKEE, WI 53597

MATERIAL SYMBOLS

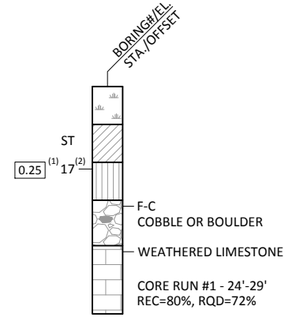
Asphalt · Topsoil · Peat
Concrete · Fill · Gravel
Sand · Clay · Silt
Boulders or Cobbles · Limestone · Bedrock (unknown)
Shale · Sandstone · Igneous/ meta



PLAN B-25-179



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 ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE 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-25-179

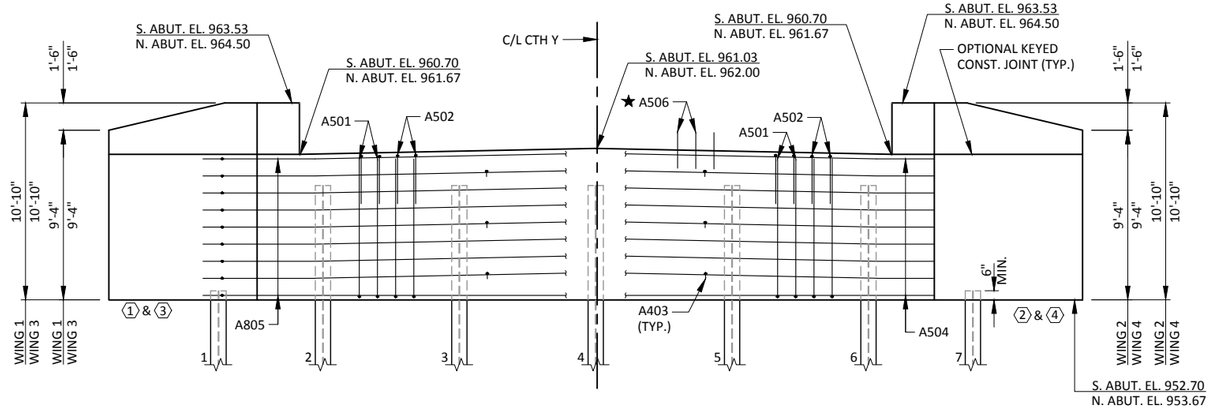
DRAWN BY JZ | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 7

50

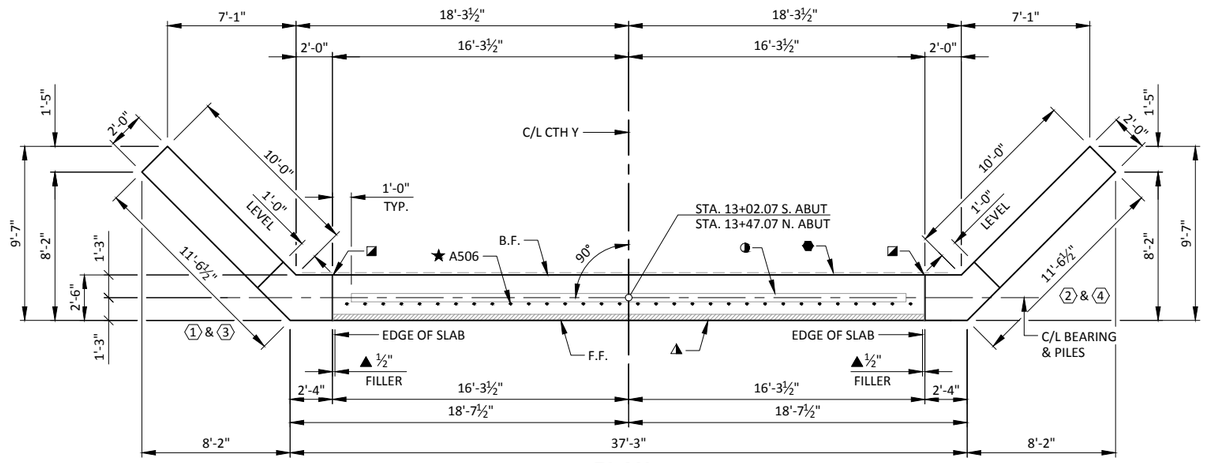
STATE PROJECT NUMBER
5921-00-74



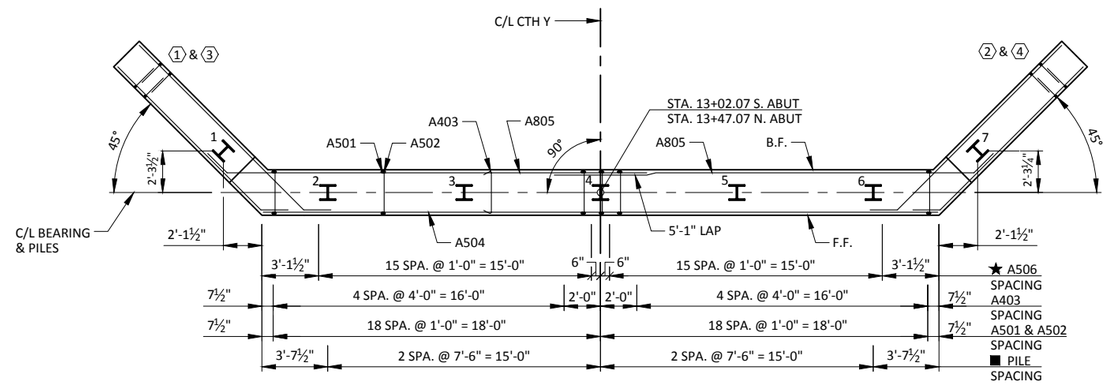
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

(SOUTH ABUTMENT LOOKING SOUTH)
(NORTH ABUTMENT LOOKING NORTH)



PLAN



LAYOUT

NOTES

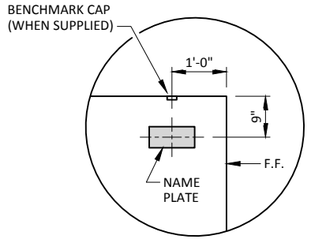
SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

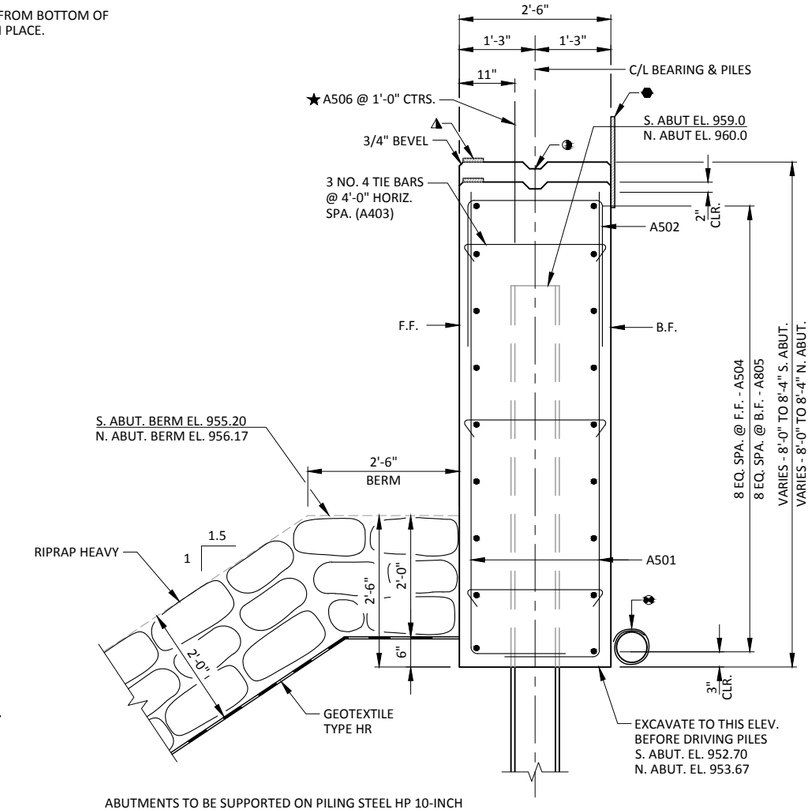
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



NAME PLATE AND BENCHMARK CAP DETAIL



ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 25 FT PILE LENGTHS AT BOTH ABUTMENTS. PILE POINTS ARE REQUIRED AT ALL LOCATIONS.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬙ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-179

DRAWN BY	JZ	PLANS CK'D.	PTB

ABUTMENTS

SHEET 4 OF 7
51

8

STATE PROJECT NUMBER

5921-00-74

BILL OF BARS
TWO ABUTMENTS SHOWN

3,270 LB (COATED)
5,180 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	148	9-1	X			BODY - VERT. - F.F & B.F.
A502	74	7-11	X			BODY - VERT. - TOP
A403	60	2-8	X			TIE BARS
A504	18	37-0				BODY - HORIZ. - F.F.
A805	36	24-7	X			BODY - HORIZ. - B.F.
A506	64	2-0		X		BODY - VERT. - DOWELS
A407	96	12-1	X	X	⚹	WINGS - VERT. - F.F. & B.F.
A408	32	10-5		X		WINGS - VERT.
A409	4	3-6		X		WINGS - VERT. - TOP
A510	36	12-9	X	X		WINGS - HORIZ. - F.F.
A811	36	14-3	X	X		WINGS - HORIZ. - B.F.
A412	8	9-10		X		WINGS - HORIZ. - F.F. & B.F.
A413	8	9-6		X		WINGS - HORIZ. - F.F. & B.F.
A414	8	5-0		X		WINGS - HORIZ. - F.F. & B.F.
A415	8	9-11	X	X		WINGS - HORIZ. - F.F. & B.F. - TOP
A416	16	9-6	X	X		WINGS - HORIZ. - TOP

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

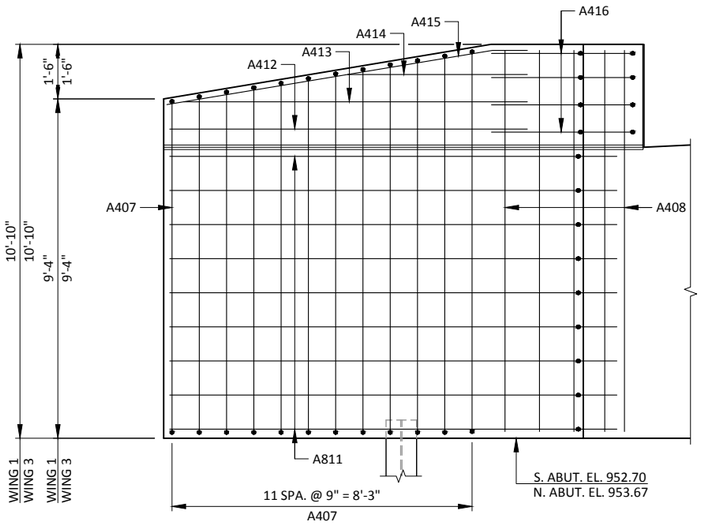
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

⚹ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

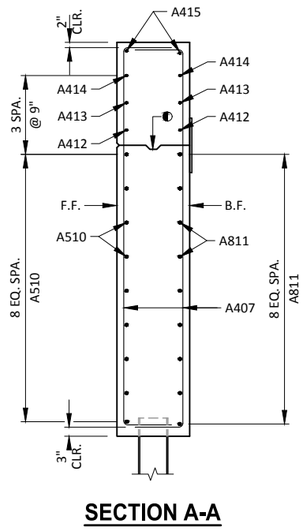
BAR MARK	NO. REQ'D.	LENGTH
A407	8 SERIES OF 12	12-9 TO 11-5

BUNDLE AND TAG EACH SERIES SEPARATELY.

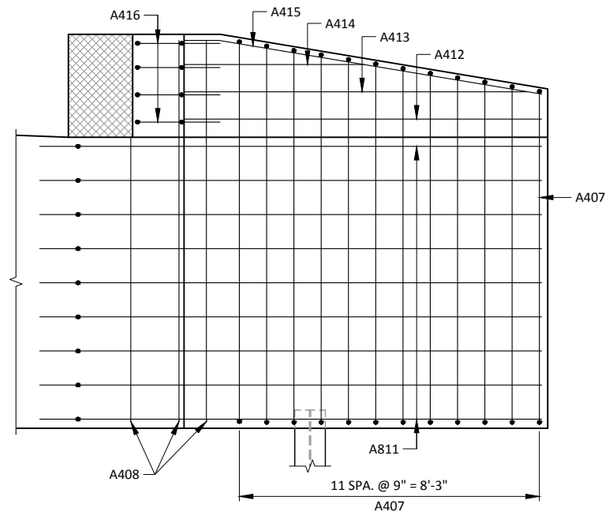


F.F. ELEVATION - WINGS 1 & 3

WINGS 1 & 3 SHOWN. WINGS 2 & 4 SIMILAR

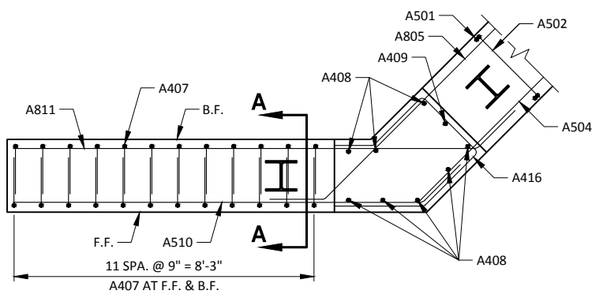


SECTION A-A



B.F. ELEVATION - WINGS 1 & 3

WINGS 1 & 3 SHOWN. WINGS 2 & 4 SIMILAR



PLAN VIEW - WINGS 1 & 3

WINGS 1 & 3 SHOWN. WINGS 2 & 4 SIMILAR

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

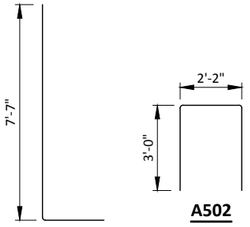
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



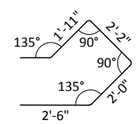
A501

A502

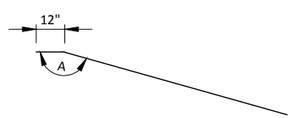
A403

A407

A805, A510 & A811



A416



A415

MARK	'A'
A415	170°32'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-179

DRAWN BY JZ | PLANS CK'D. PTB

ABUTMENT DETAILS

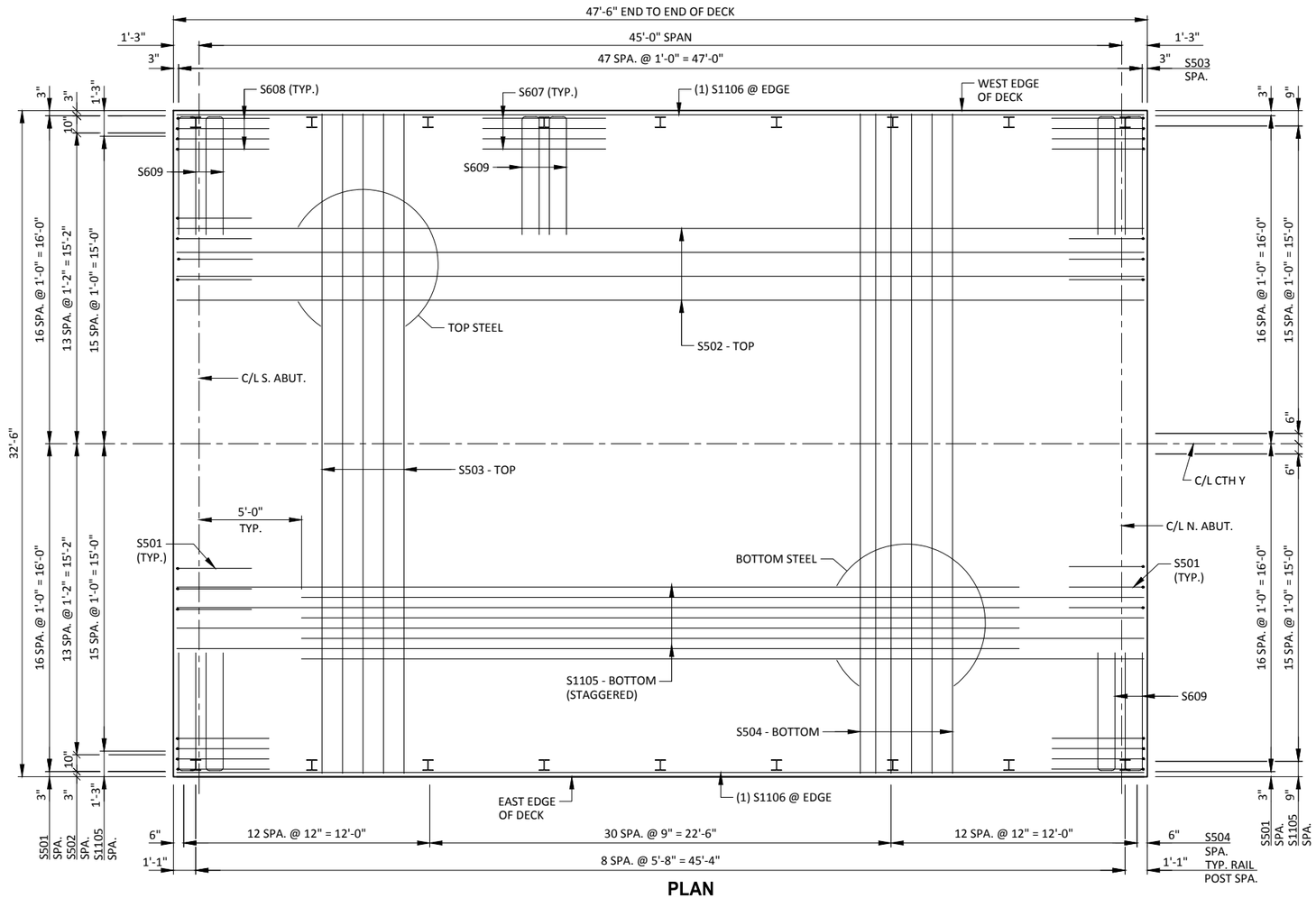
SHEET 5 OF 7

52

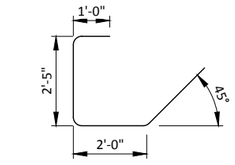
8

STATE PROJECT NUMBER

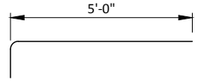
5921-00-74



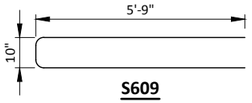
PLAN



S501



S608



S609

BILL OF BARS
SUPERSTRUCTURE

21,260 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	66	7-6	X	X	END OF DECK
S502	29	47-2		X	SLAB - TOP - LONGIT.
S503	54	32-2		X	SLAB - TOP - TRANS.
S504	55	32-2		X	SLAB - BOTTOM - TRANS.
S1105	63	41-1		X	SLAB - BOTTOM - LONGIT.
S1106	2	47-2		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	56	6-0		X	RAIL POSTS - INTERIOR
S608	16	6-0	X	X	RAIL POSTS - ENDS
S609	36	12-0	X	X	RAIL POSTS

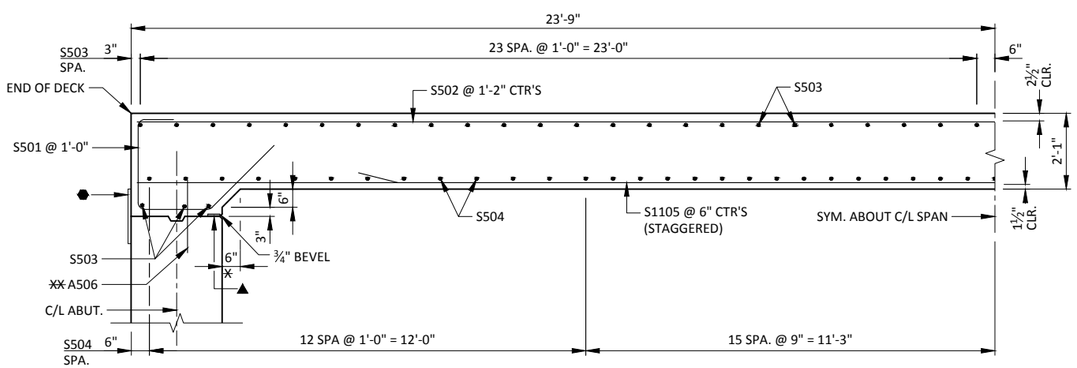
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

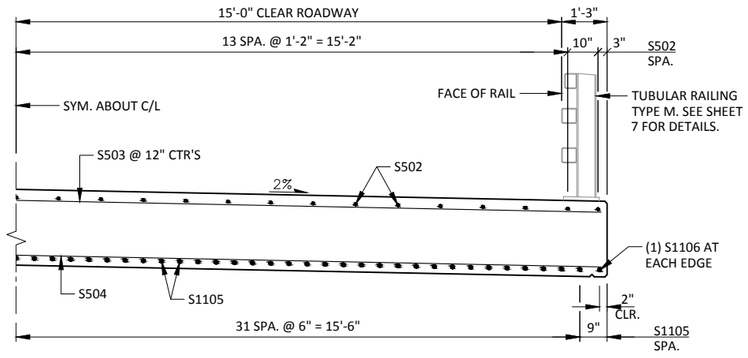
SOME BARS HAVE BEEN OMITTED FOR CLARITY.

TOP OF DECK ELEVATIONS

	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
W. EDGE	963.53	963.62	963.70	963.79	963.88	963.98	964.08	964.18	964.28	964.39	964.50
C/L	963.86	963.95	964.03	964.12	964.21	964.31	964.41	964.51	964.61	964.72	964.83
E. EDGE	963.53	963.62	963.70	963.79	963.88	963.98	964.08	964.18	964.28	964.39	964.50

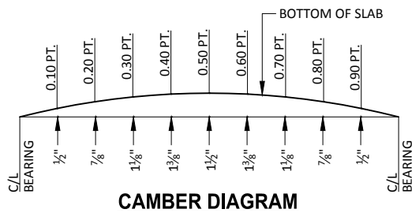


PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

BOTTOM OF SLAB



CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF DECK ELEVATIONS

	S. ABUT.	0.50 PT.	N. ABUT.
WEST EDGE OF DECK			
CENTER LINE			
EAST EDGE OF DECK			

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

LEGEND

- ⬢ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ✕ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- XX SEE SHEET 4 FOR PLACEMENT OF A506 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-179

DRAWN BY JZ | PLANS CK'D. PTB

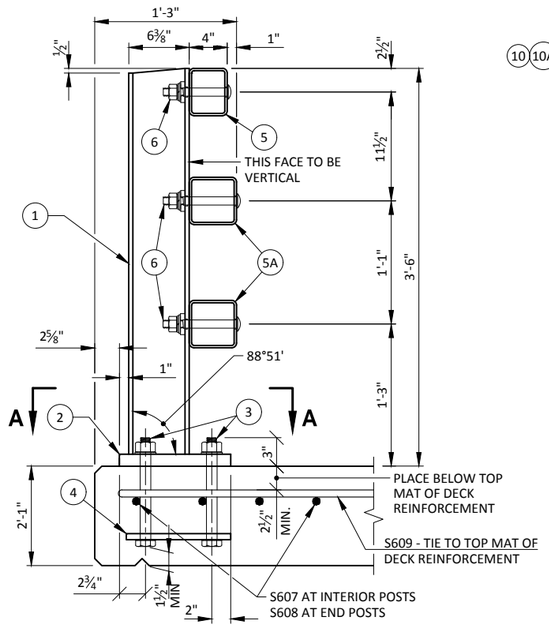
SUPERSTRUCTURE

SHEET 6 OF 7

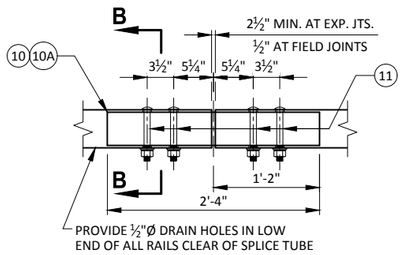
53

8

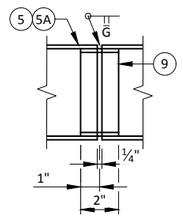
8



SECTION THROUGH RAILING ON DECK

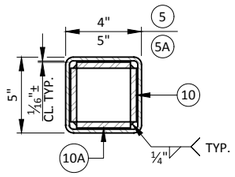


FIELD ERECTION JOINT DETAIL

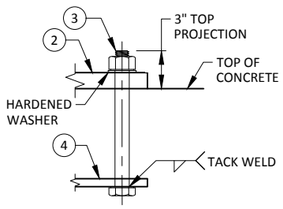


SHOP RAIL SPLICE DETAIL

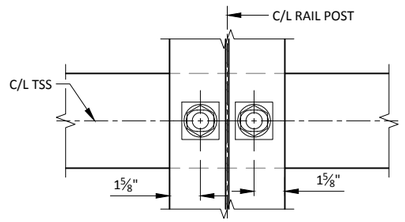
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



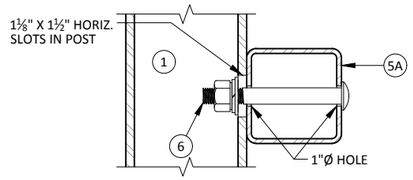
SECTION B-B



ANCHOR BOLTS



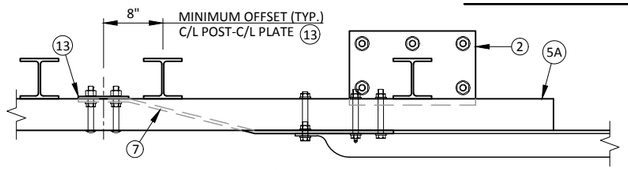
SECTION THROUGH POST WEB



SECTION THROUGH RAIL

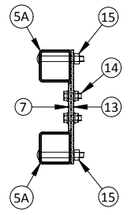
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

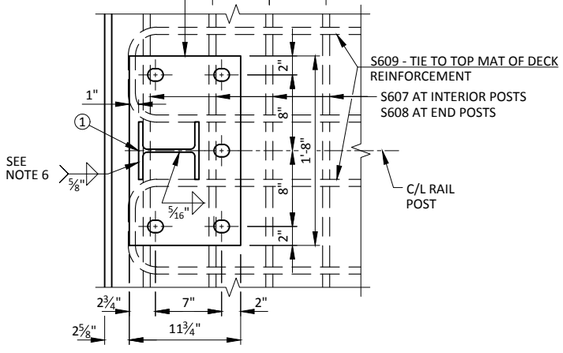


TOP VIEW AT END POST

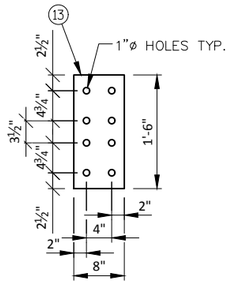
(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

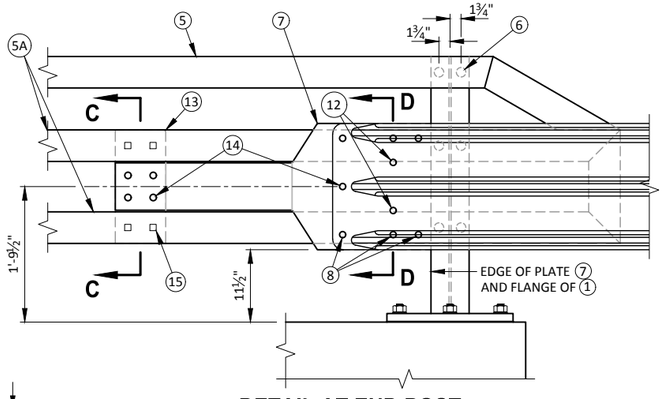


SECTION A-A



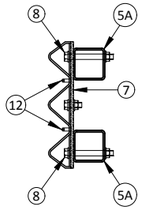
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

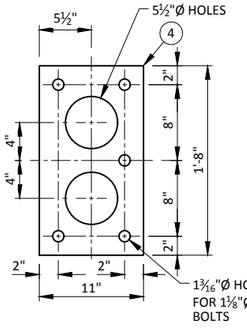


DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

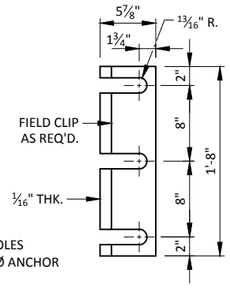


SECTION D-D

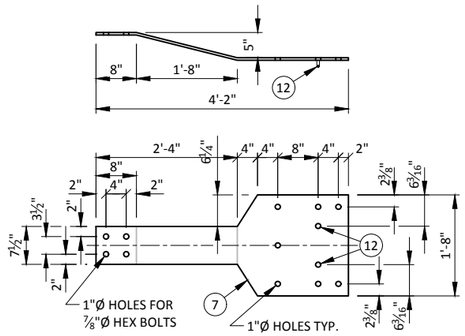


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

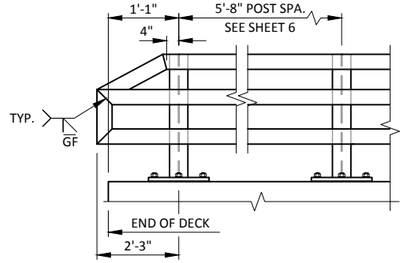


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

1. W6x25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼ "x11¾"x1'-8" WITH 1⁵⁄₁₆"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1½" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). FIVE REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 1'-4" USE 1'-3" LONG.
4. ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TSS 5x4x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆"x1⅝"x1⅝" WASHER, AND LOCK WASHER (TWO REQ'D. AT EACH RAIL TO POST LOCATION).
7. ½" THK. BACK-UP PLATE WITH (2) ⅞"x1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. SIX HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜"x3⅝"x2'-4" PLATE. TWO PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅝"x2'-4" PLATE USED IN NO. 5A. TWO PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. BY 1½" LONG THREADED SHOP WELDED STUDS (TWO REQ'D).
13. ⅜"x8"x1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (FIVE REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (FOUR REQ'D.). FOUR HOLES IN TUBES.

GENERAL NOTES

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

STATE PROJECT NUMBER

5921-00-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-179

DRAWN BY JZ | PLANS CK'D. PTB

RAILING TUBULAR TYPE M

SHEET 7 OF 7

54

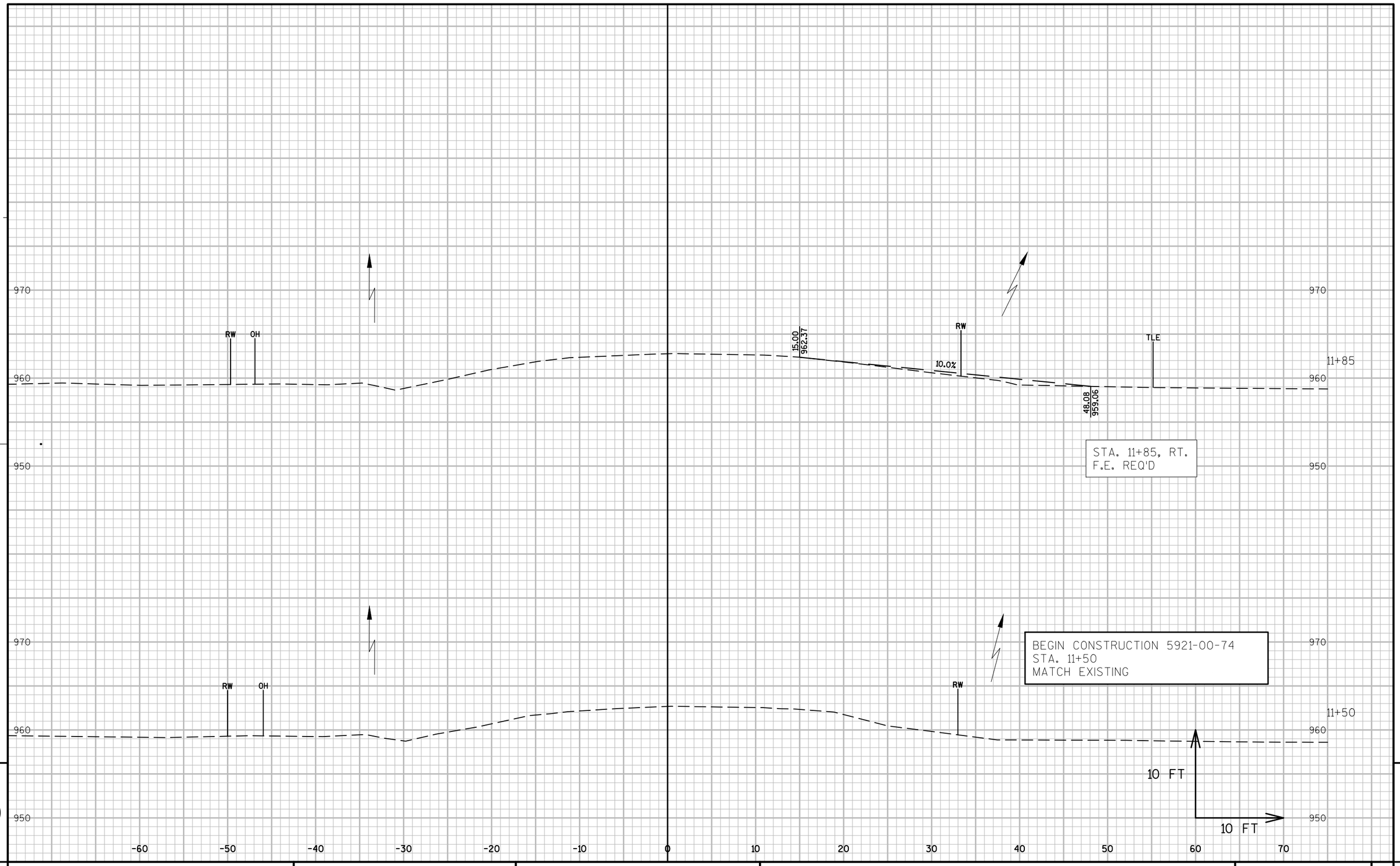
EARTHWORK-MAINLINE

STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOL (CY) CUT NOTE 1	INCREMENTAL VOL (CY) FILL NOTE 2	INCREMENTAL VOL (CY) FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 4
11+90	39	0	0	0	0	0	0	0	0
12+00	83	10	23	2	2	23	2	2	21
12+50	82	14	154	22	28	177	24	30	148
13+00	58	104	131	109	137	308	133	167	142
13+01	58	104	2	3	4	310	136	170	140
13+01	0	0	0	0	0	310	136	170	140
13+48	0	0	0	0	0	310	136	170	140
13+48	62	70	0	0	0	310	136	170	140
13+50	62	70	4	4	5	314	140	175	139
14+00	55	61	108	122	153	422	262	328	94
14+50	78	48	123	101	126	545	363	454	91
14+80	39	0	65	27	36	610	390	490	120
COLUMN SUBTOTALS =			610	390	490	610	390	490	120
MAINLINE =			610	390	490	610	390	490	120
F.E. - STA. 11+85, RT.			20	0	0	630	390	490	140
COLUMN TOTALS =			630	390	490	630	390	490	140

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - FILL (25%)	FILL 25%: (UNEXPANDED FILL)*1.25
4 - MASS ORDINATE	(CUT - FILL (25%))

9

9



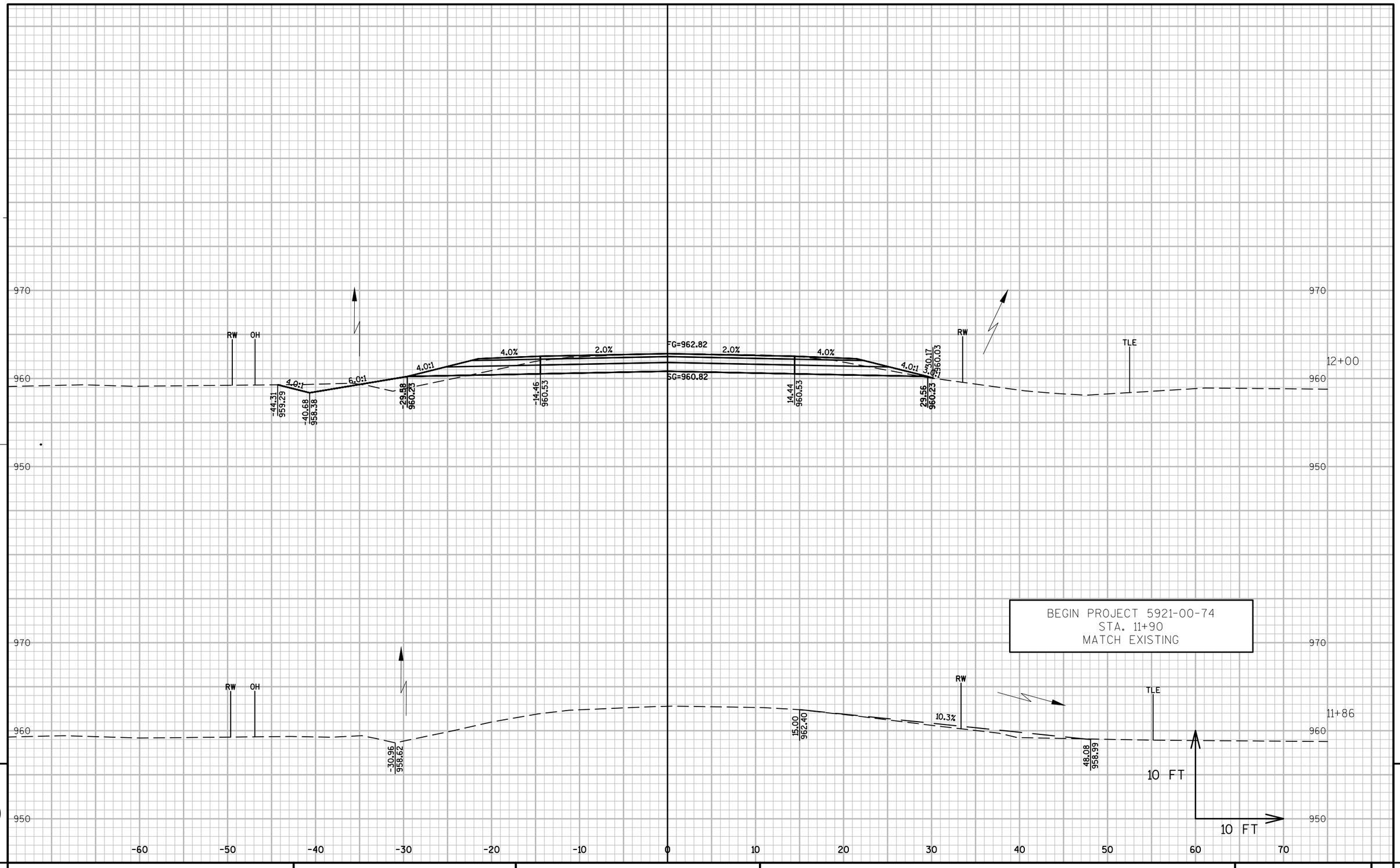
9

9

PROJECT NO: 5921-00-74	HWY: CTH Y	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET 56	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

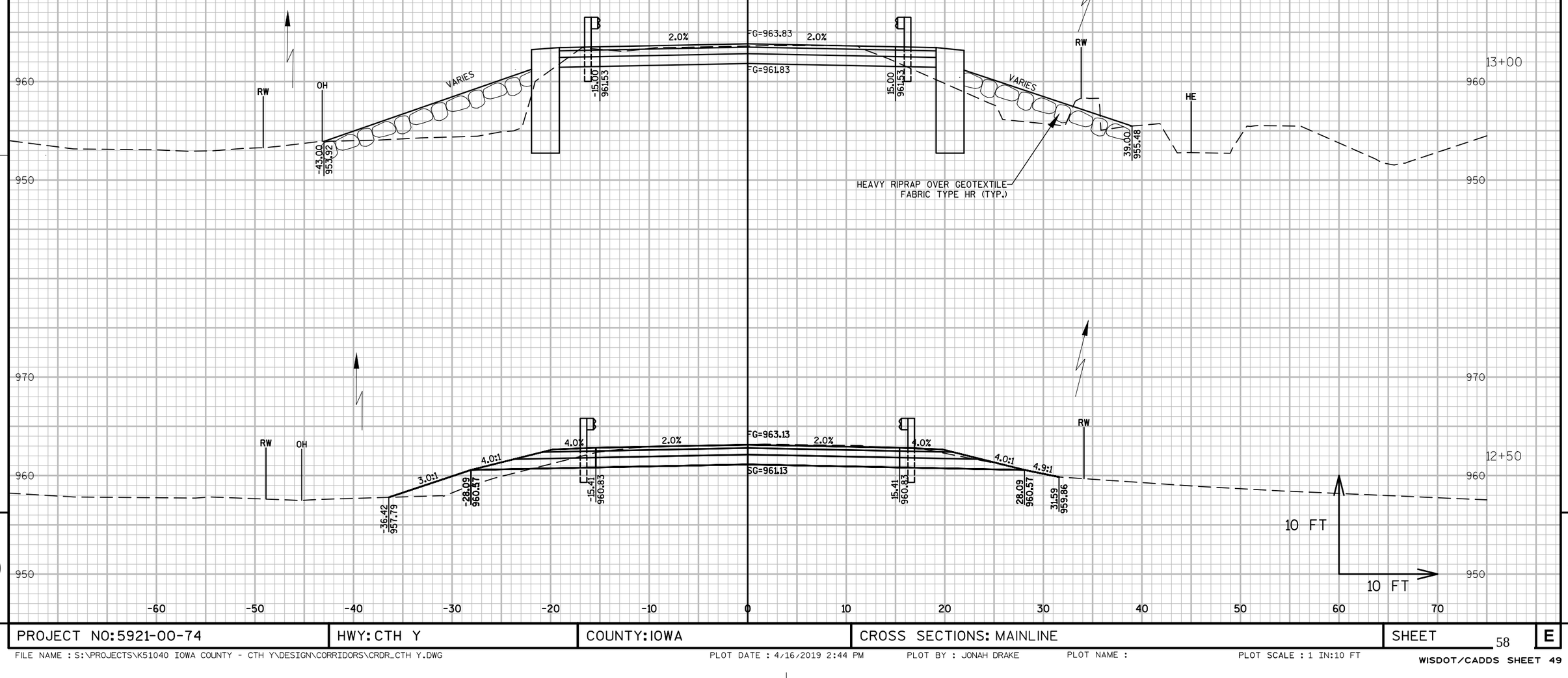
WISDOT/CADDS SHEET 49



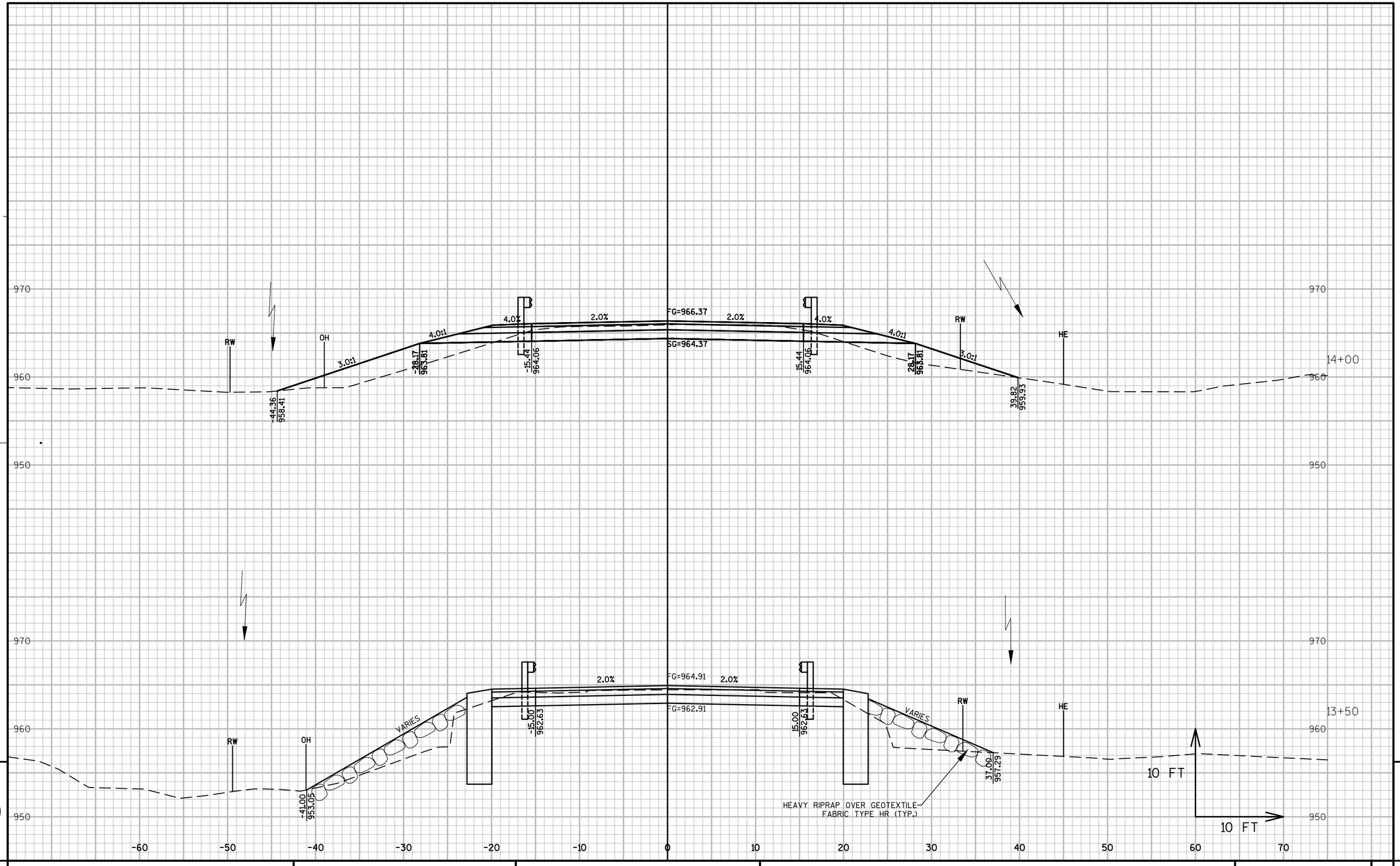
PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE	SHEET 57	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

STRUCTURE B-25-179
REQ'D



PROJECT NO: 5921-00-74	HWY: CTH Y	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET 58	E



PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE	SHEET 59	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

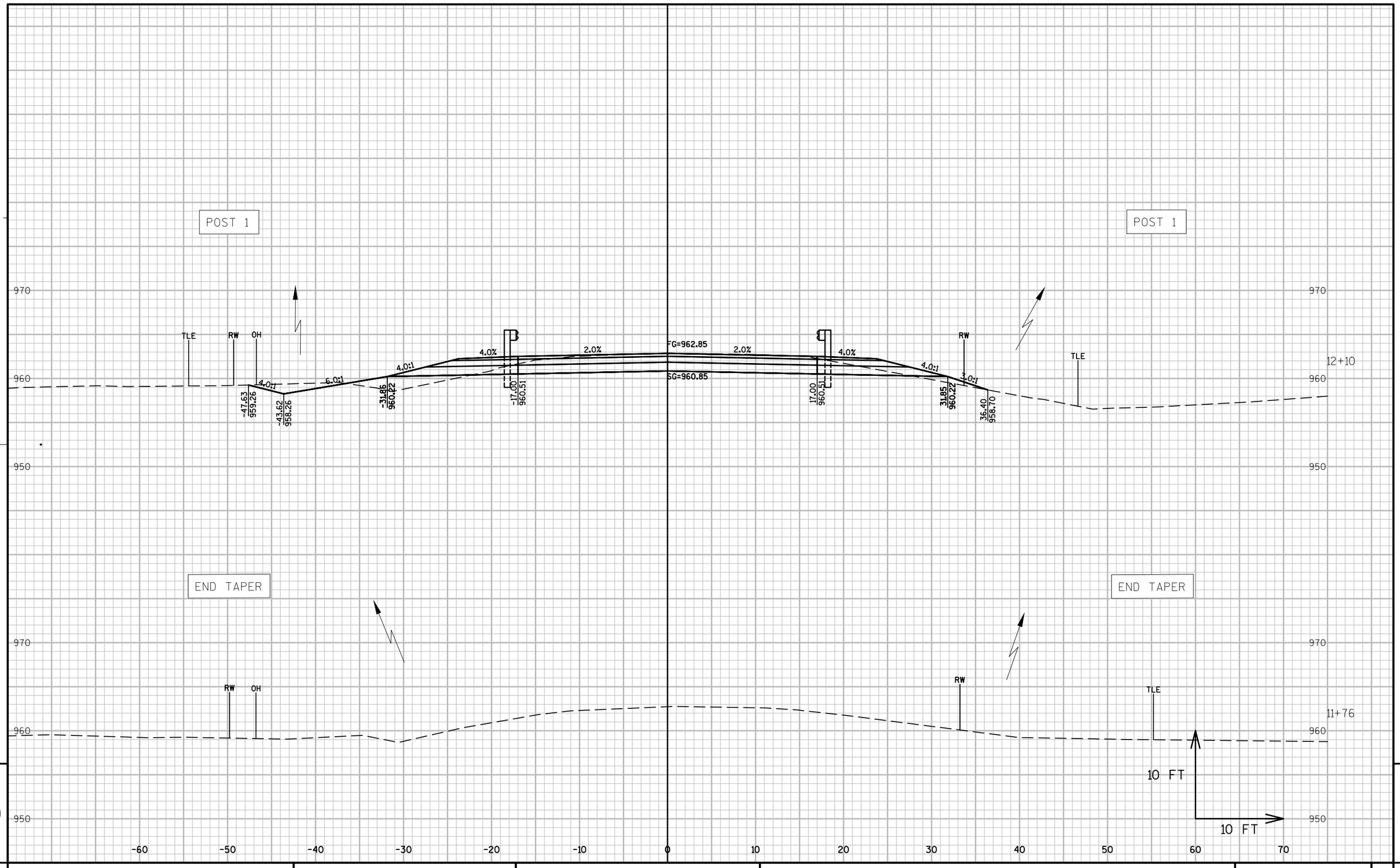
WISDOT/CADDS SHEET 49

END PROJECT 5921-00-74
STA. 14+80
MATCH EXISTING

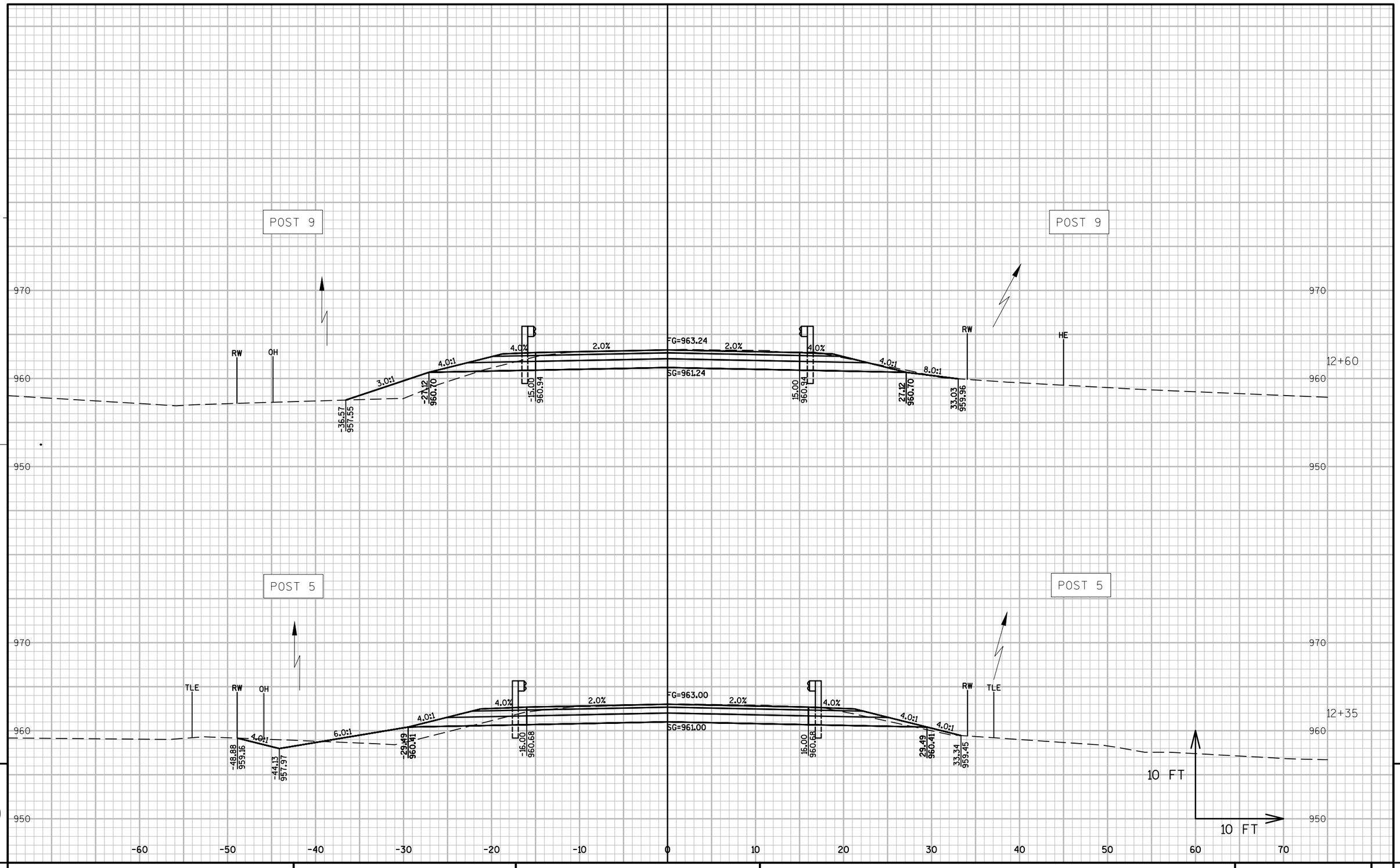
RW
OH
RW
HE
RW
HE
FG=968.22
SG=966.22
4.0%
2.0%
2.0%
4.0%
4.0:1
3.0:1
6.0:1
4.0:1
-29.12 965.64
-14.47 965.93
14.47 965.93
29.12 965.64
37.17 964.30
42.79 965.70
-46.62 959.80
970
960
950
14+80
14+50
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
10 FT
10 FT

9

PROJECT NO: 5921-00-74	HWY: CTH Y	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET 60	E



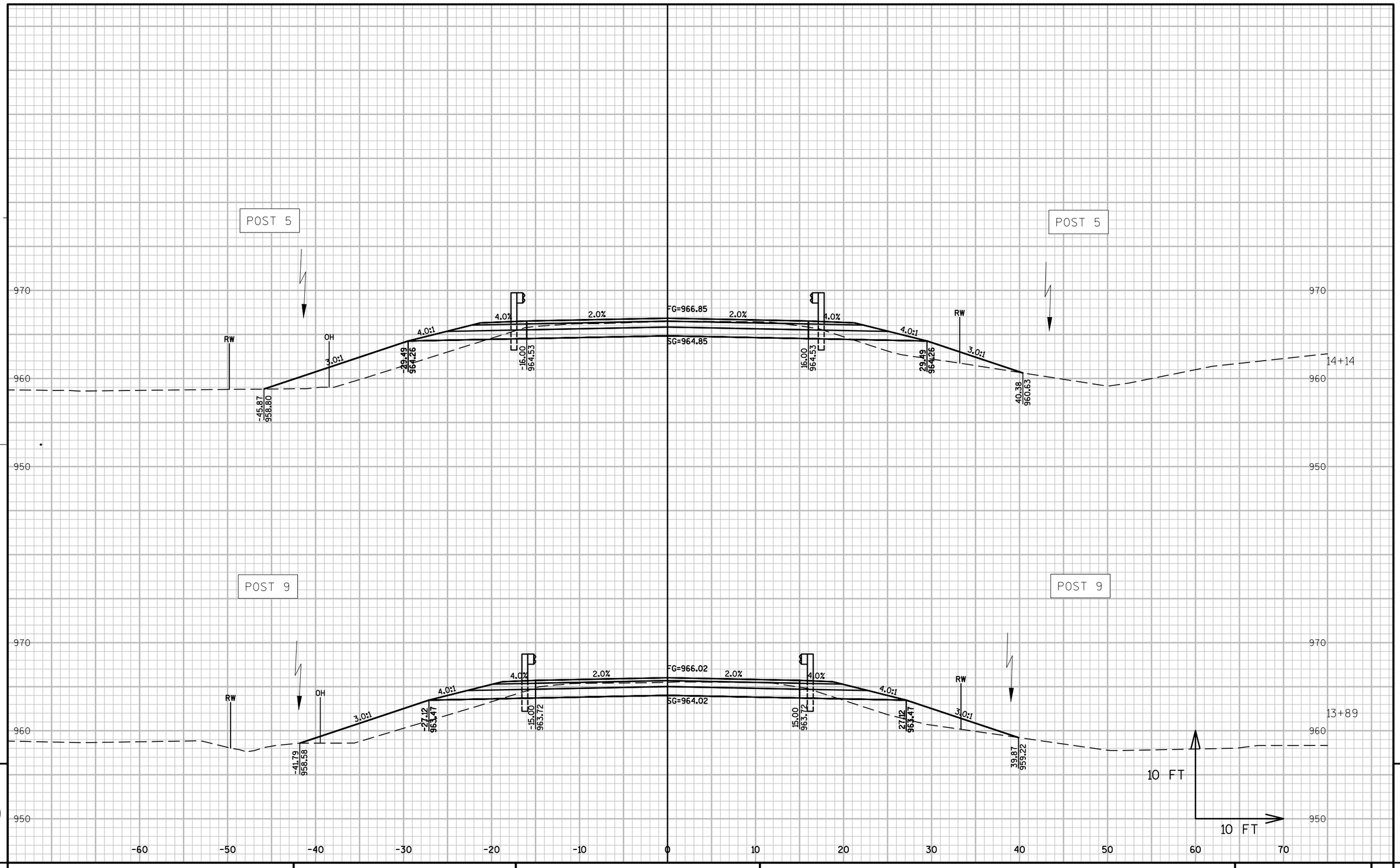
PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 61	E



PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 62 E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



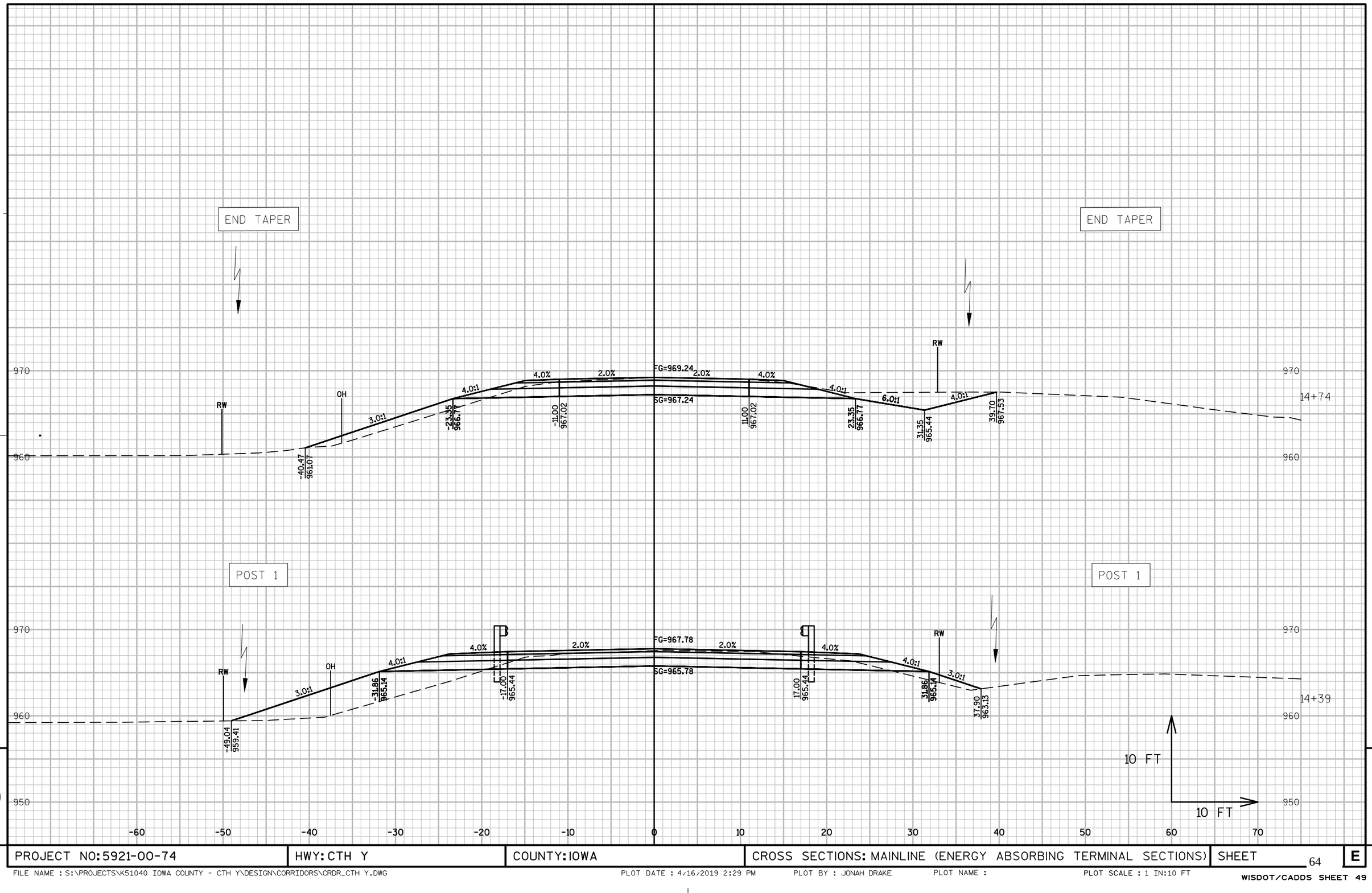
9

9

PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE (ENERGEY ABSORBING TERMINAL SECTIONS)	SHEET 63	E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO:5921-00-74	HWY: CTH Y	COUNTY:IOWA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 64 E

FILE NAME : S:\PROJECTS\K51040 IOWA COUNTY - CTH Y\DESIGN\CORRIDORS\CRDR_CTH Y.DWG PLOT DATE : 4/16/2019 2:29 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov