SEPTEMBER 2017 ORDER OF SHEETS

Section No. 2

Section No. 1

Typical Sections and Details Estimate of Quantities Section No. 3 Miscellaneous Quantities Section No. 3

Section No. 5 Plan and Profile Section No. 6 Standard Detail Drawings

Section No. 7 Section No. 8

Section No. 9 Computer Earthwork Data Section No. 9 Cross Sections

TOTAL SHEETS = 140

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

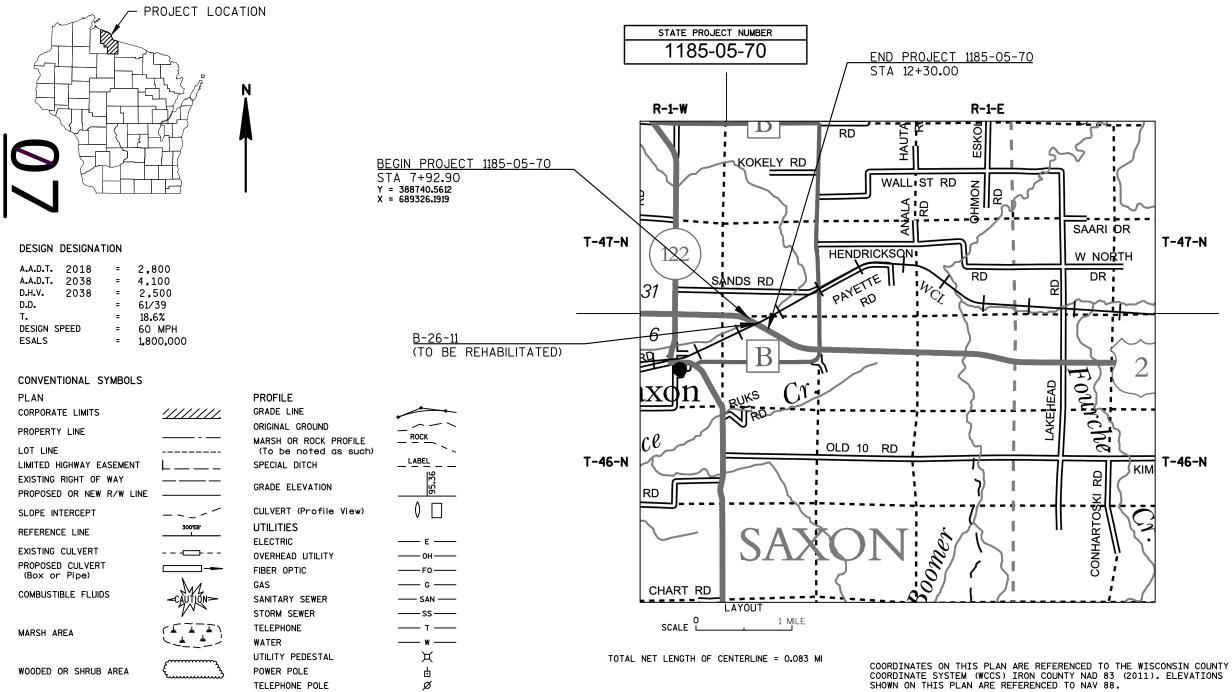
PLAN OF PROPOSED IMPROVEMENT

SAXON - HURLEY

WCL RAILROAD BRIDGE, B-26-0011

USH 2

IRON COUNTY



FEDERAL PROJECT STATE PROJECT **PROJECT** CONTRACT 1185-05-70 WISC 2017454

ORIGINAL PLANS PREPARED BY **AECOM**



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY AECOM Surveyor AECOM CHERYL SIMON MIKE WENDT

APPROVED FOR THE DEPARTMENT DATE: 4/18/2017

POWER POLE

TELEPHONE POLE

₫

Ε

WOODED OR SHRUB AREA

GENERAL NOTES PROJECT OVERVIEW TYPICAL SECTIONS

ORDER OF SECTION 2 SHEETS

CONSTRUCTION DETAILS PAVEMENT MARKING PLAN TRAFFIC CONTROL

UTILITIES

CARLOS RAMOS MERIT NETWORK INC. - COMMUNICATION LINE 1000 OAKBROOK DRIVE SUITE 200 ANN ARBOR, MI 48104 PHONE: (734) 527-5767 EMAIL: CRAMOSJR@MERIT.EDU

CONTACTS

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

JON SIMONSEN DNR NORTHERN REGION HQ 107 SUTLIFF AVENUE RHINELANDER, WI 54501 OFFICE: (715) 365-8916 CELL: (715) 367-1936

EMAIL: JONATHAN.SIMONSEN@WISCONSIN.GOV

RUNOFF COEFFICIENT TABLE

GENERAL NOTES

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE

THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS

SULFUR PAVEMENT MATERIALS ARE LOCATED BELOW EXISTING SURFACE PAVEMENT. FOR FORM WORK PAVEMENT REMOVAL AT THE APPROACH SLAB REPLACEMENT (AS NOTED IN THE PLANS), REMOVE AND STOCKPILE ANY SULFUR MATERIALS ON SITE UNTIL FINAL PAVEMENT IS PLACED. USE ALL SULFUR MATERIAL AS BASE COURSE PRIOR TO NEW BASE AGGREGATE AND FINAL PAVING OPERATIONS.

APPROXIMATE.

OTHERWISE NOTED IN THE PLANS.

NOT SHOWN.

		HYDROLOGIC SOIL GROUP										
		Α			В		С			D		
	SLOPE	RANGE	(PERCENT)	SLOPE	SLOPE RANGE (PERCENT)		SLOPE	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	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
TURF	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-			.25			.27			.28			.30
TURF			.32			.34			.36			.38
PAVEMENT:						•			•			
ASPHALT						.7095						
CONCRETE						.8095						
BRICK						.7080						
DRIVES, WALKS						.7585						
ROOFS						.7595						
GRAVEL ROADS,	SHOULDE	ERS				.4060						

TOTAL PROJECT AREA = 0.682 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.682 ACRES

PROJECT NO: 1185-05-70

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

COUNTY: IRON GENERAL NOTES. UTILITIES & STANDARD ABBREVIATIONS

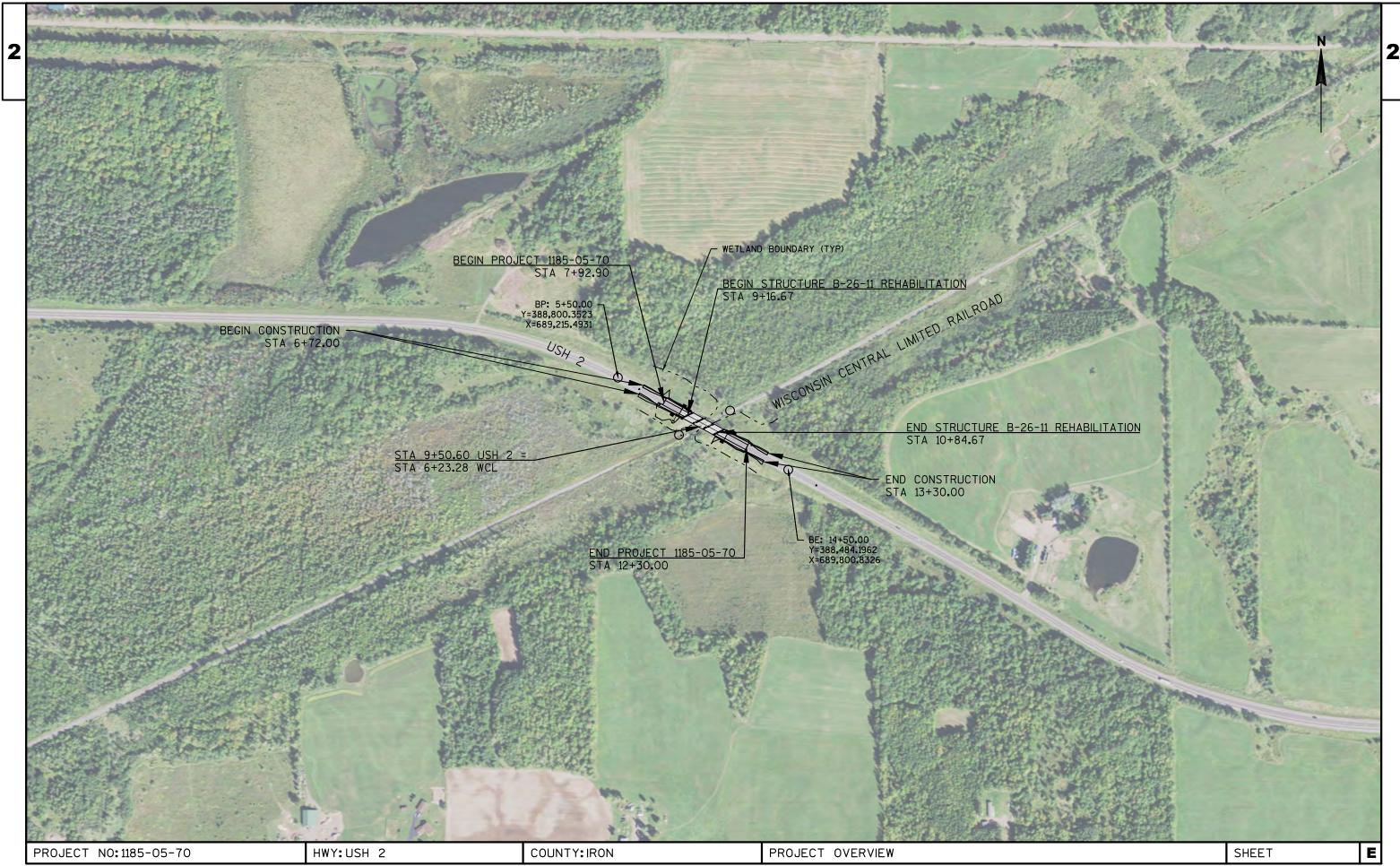
SHEET

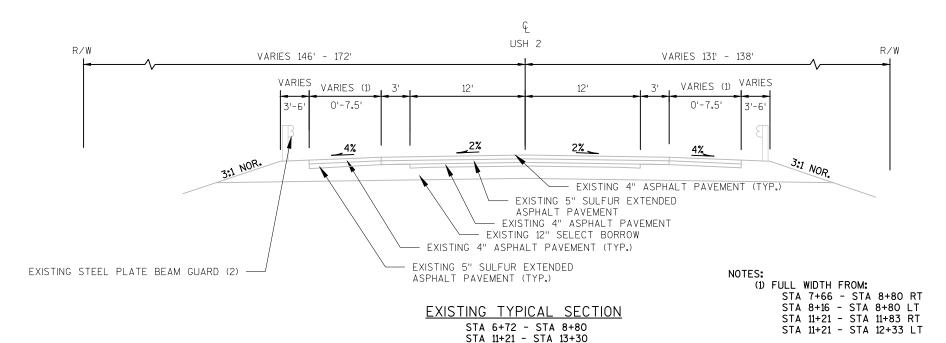
FILE NAME: \\USSTV1FP001\DATA\PROJECTS\60479693\900_WORK\910-CAD\915_SHEETSPLAN\020101_GN.DWG LAYOUT NAME - 020101_GN

HWY: USH 2

PLOT BY: LANCELLE, JESSICA PLOT NAME:

PLOT DATE: 2/9/2017 10:45 AM





PROJECT NO:1185-05-70 HWY: USH 2 COUNTY: IRON TYPICAL SECTIONS - EXISTING

STA 6+72 - STA 8+80 STA 11+21 - STA 13+30

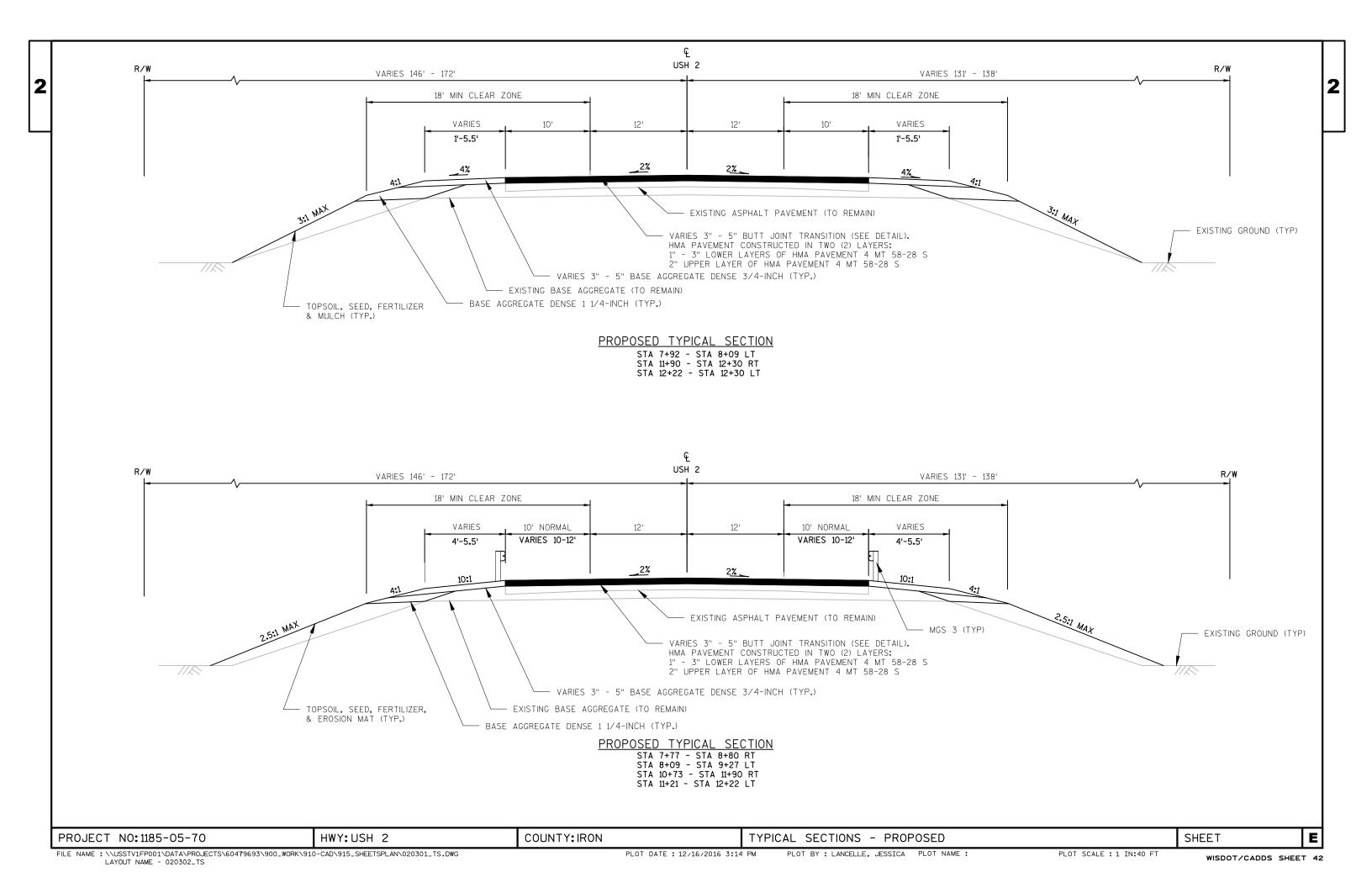
(2) BEAM GUARD PRESENT:

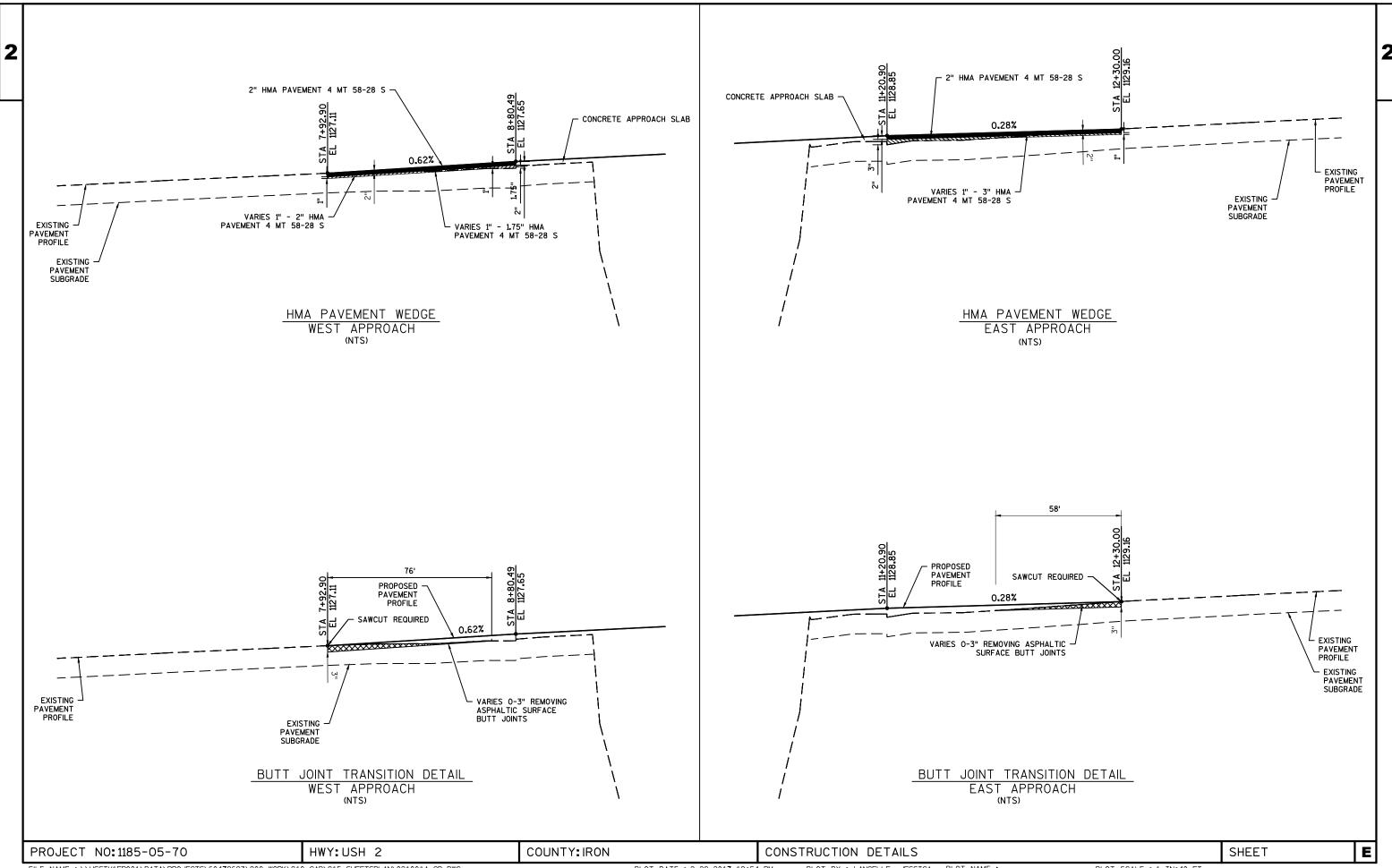
STA 7+72 - STA 8+93 RT STA 8+04 - STA 9+26 LT STA 10+75 - STA 11+96 RT STA 11+07 - STA 12+28 LT

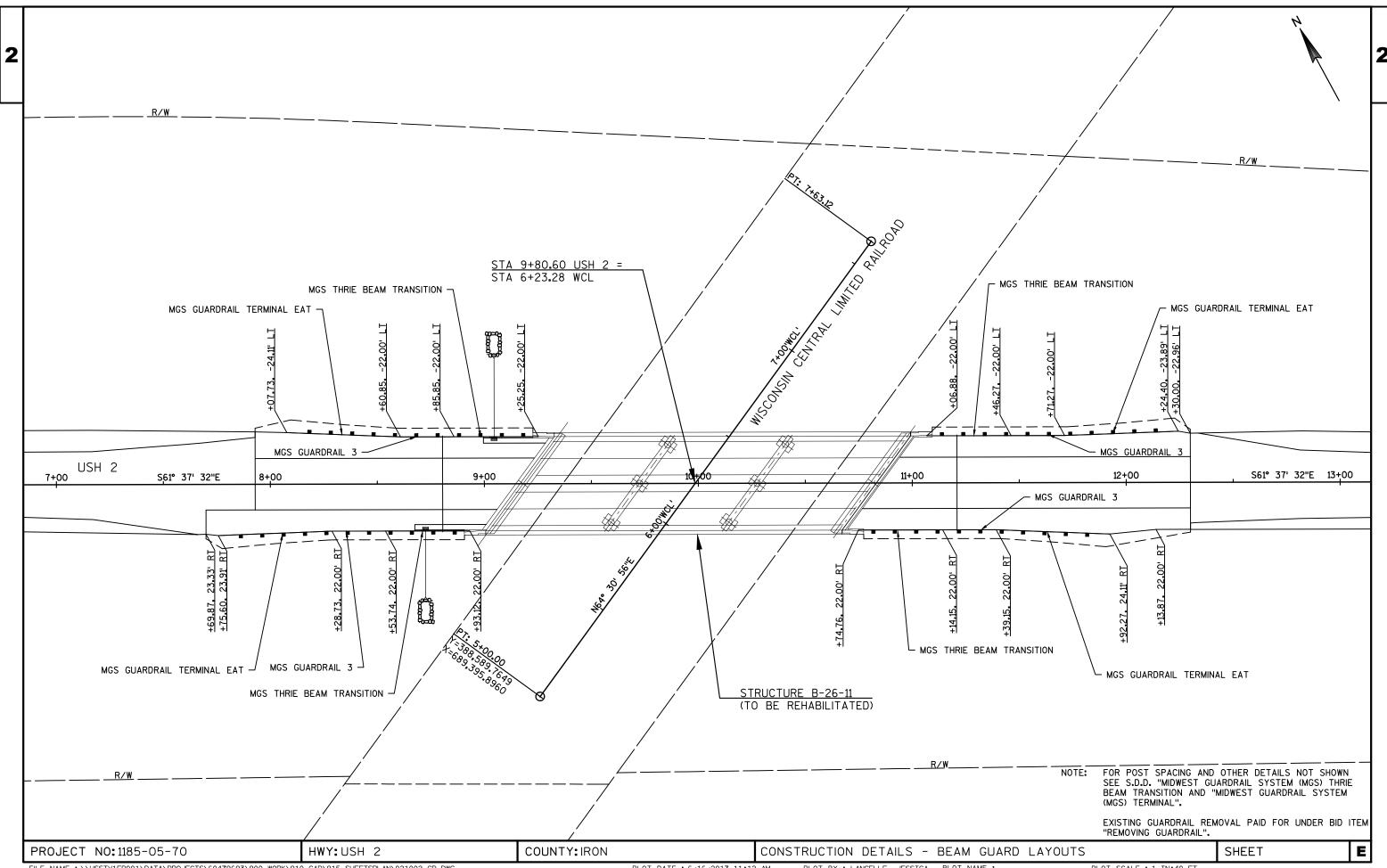
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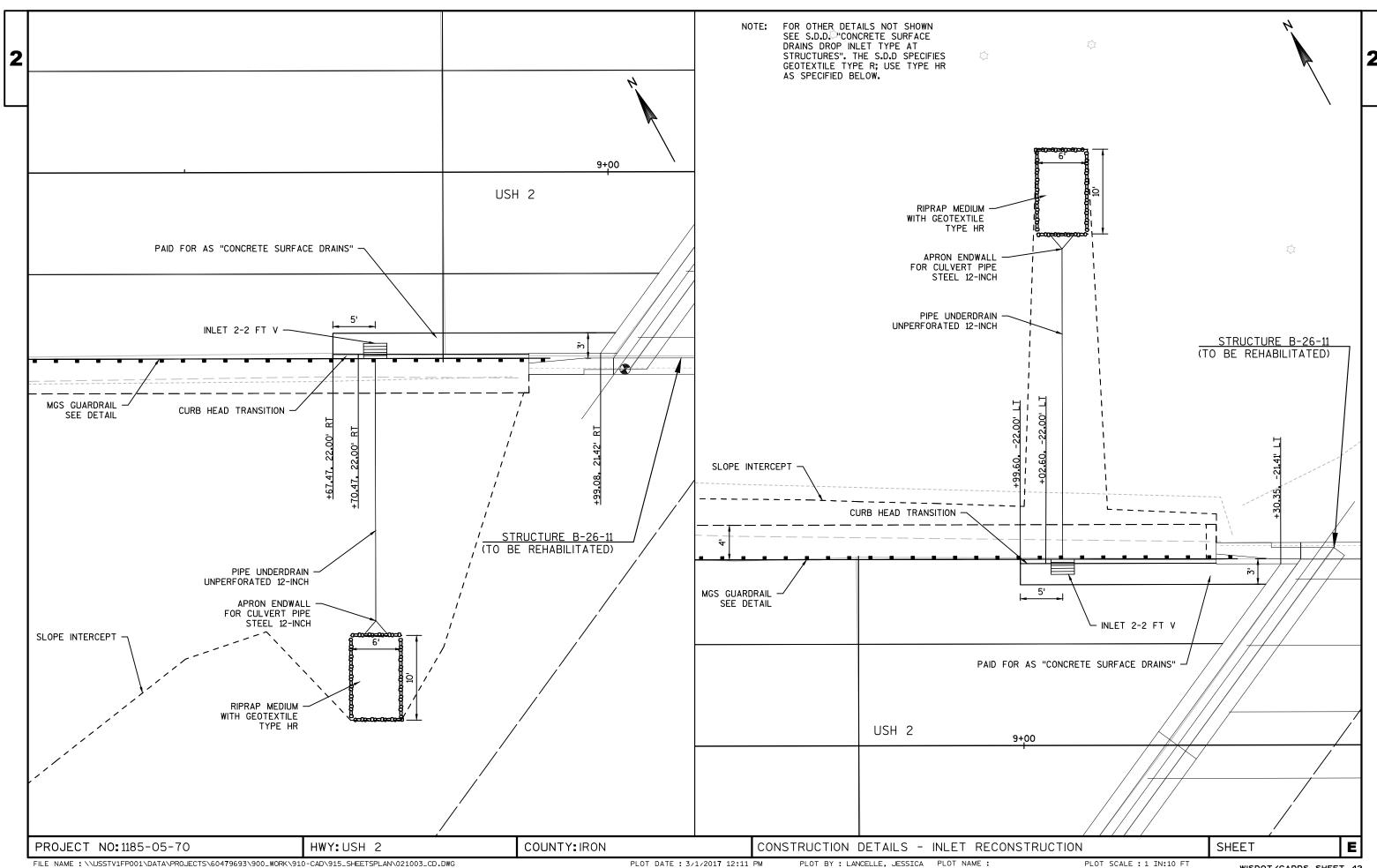
E

WISDOT/CADDS SHEET 42



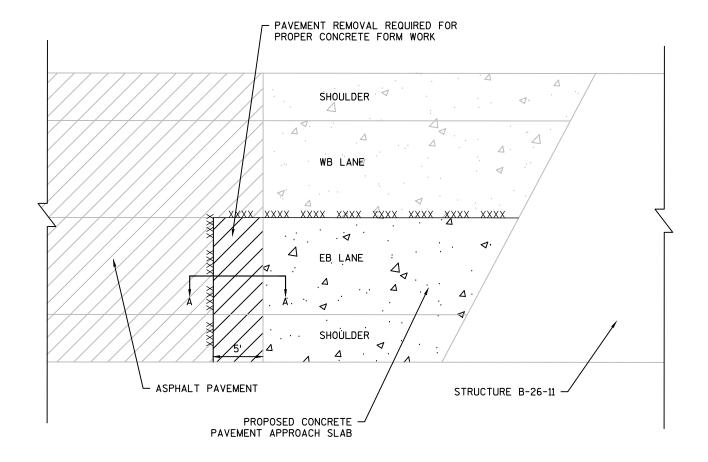


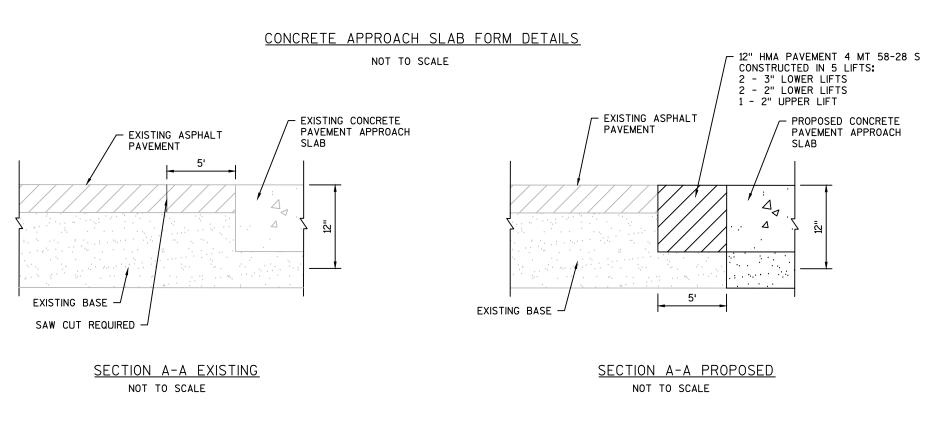




NOTE: STAGE 1 EASTBOUND LANE APPROACH SHOWN. MIRROR DETAIL FOR WESTBOUND APPROACH AND STAGE 2.

SEE STANDARD DETAIL "CONCRETE PAVEMENT APPROACH SLAB" FOR APPROACH SLAB CONSTRUCTION.





HWY: USH 2

PROJECT NO: 1185-05-70

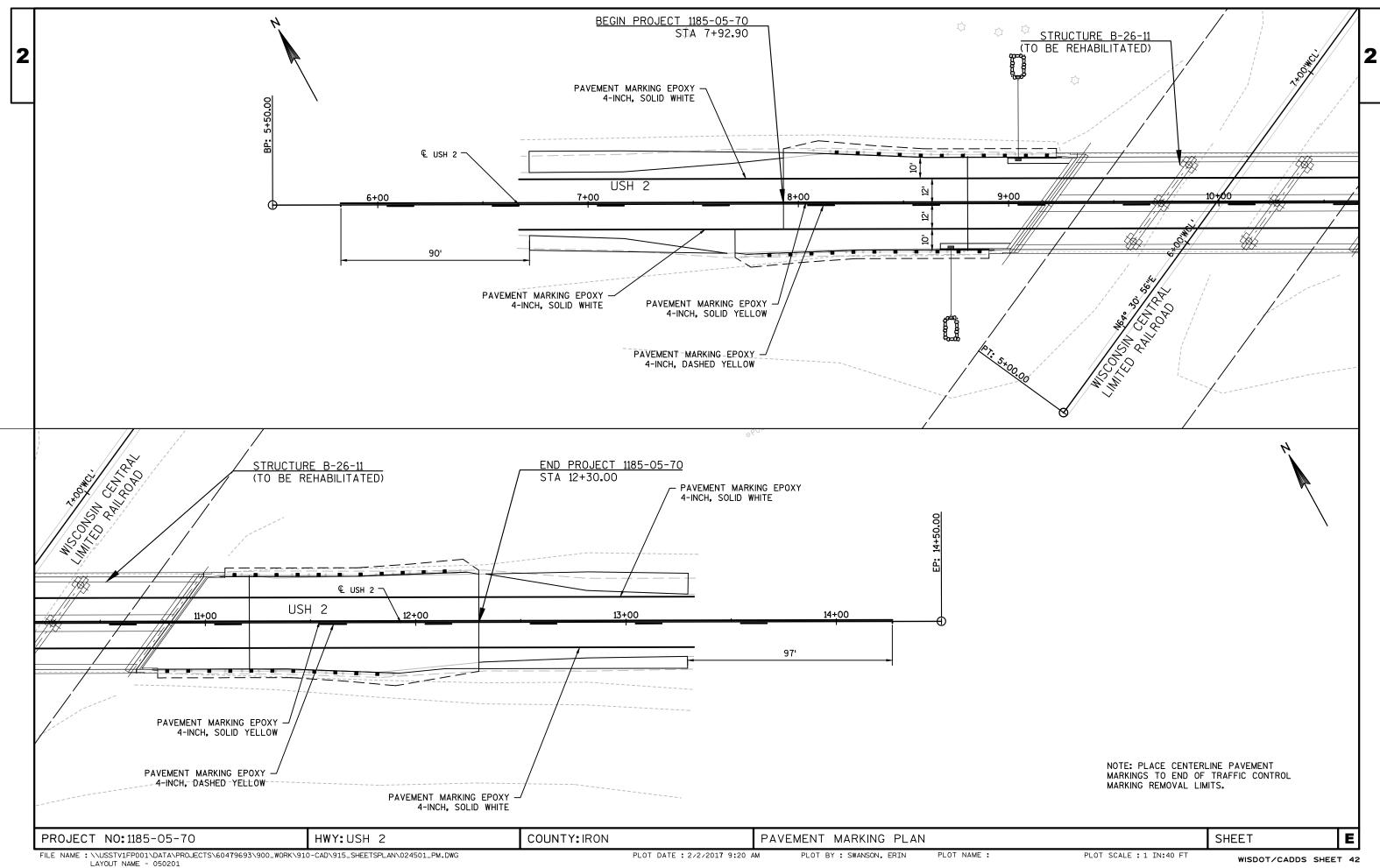
COUNTY: IRON

CONSTRUCTION DETAILS - APPROACH SLAB FORM WORK

SHEET

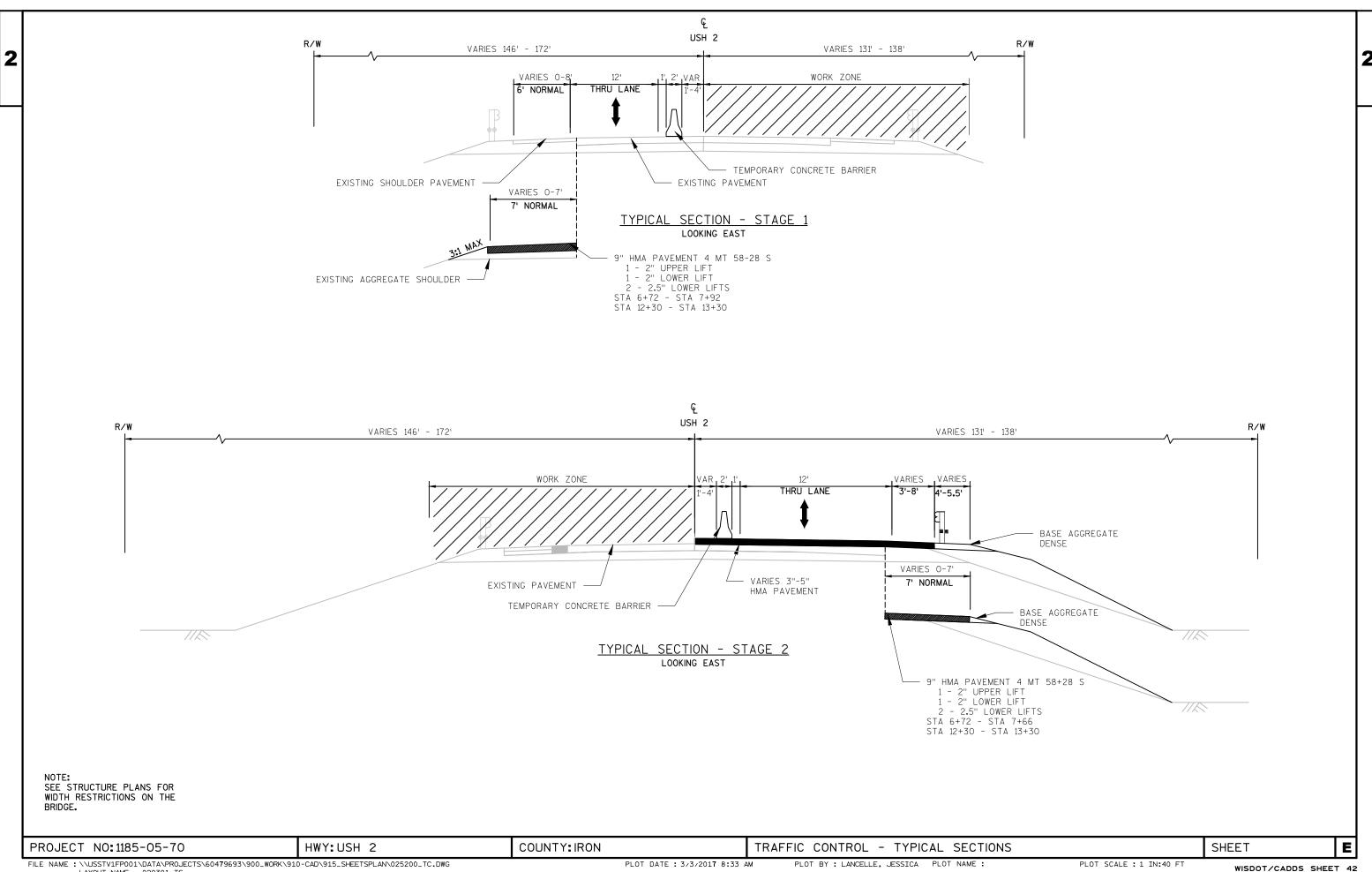
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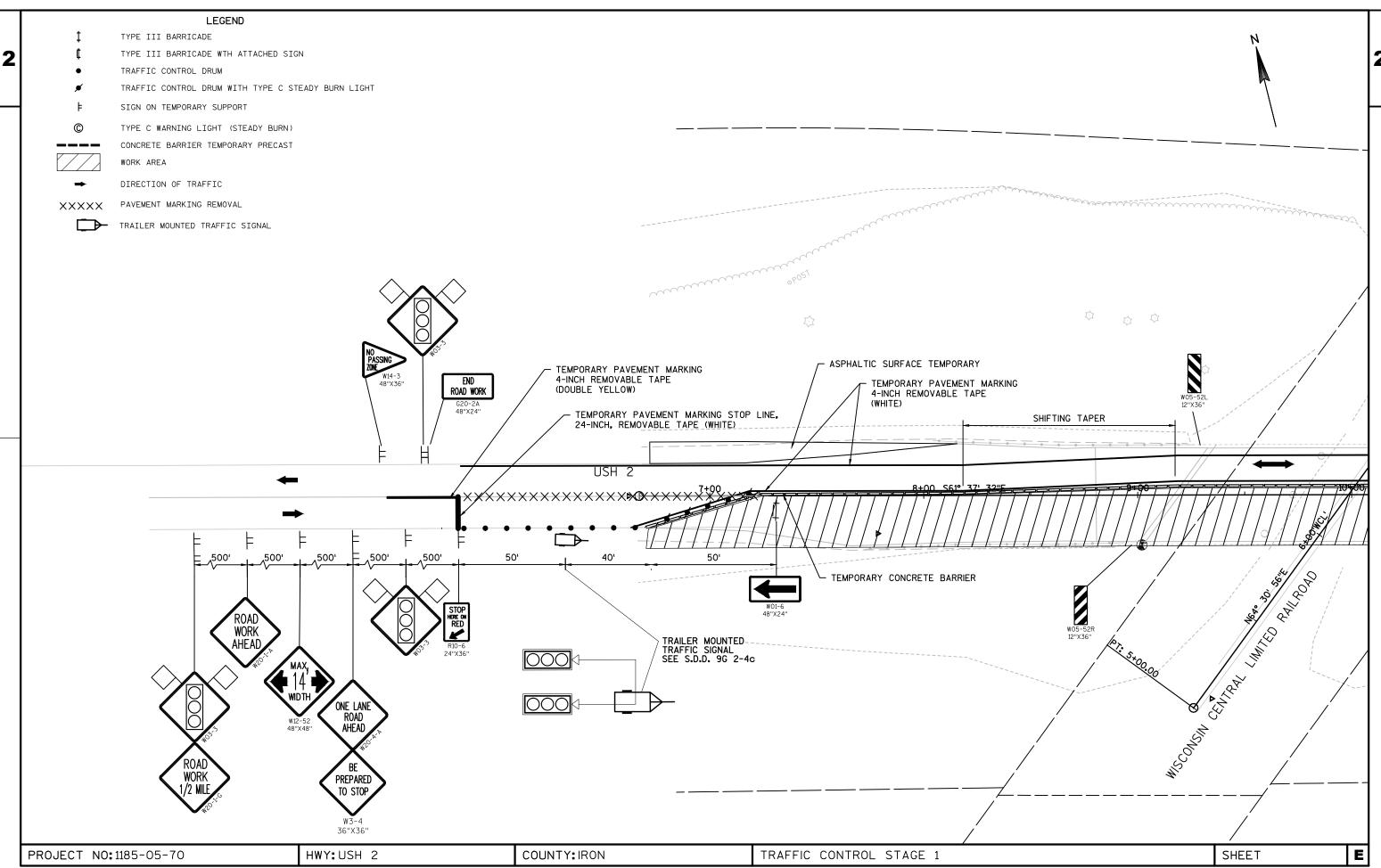
SEQUENCE OF OPERATION PHASE 1 PHASE 2 <── EB USH 2 SIGNALS Υ R R WB USH 2 SIGNALS R R DURATION (S) 25***** 5 25***** 5 MINIMUM GREEN TIME (S) 10 10 MAXIMUM GREEN TIME (S) 70 90 EXTENSION TIME (S/VEH) 3 3 * THE CONTRACTOR SHALL MONITOR TRAFFIC AND INCREASE THE ALL RED TIME IF VEHICLES FAIL TO CLEAR THE WORK ZONE DURING THE ALL RED TIME. NOTES: PHASE 1 AND PHASE 2 WILL EACH ACTIVATE ONLY WHEN CALLED. 2. PHASE 1 AND PHASE 2 WILL EACH REST IN RED WHEN NO DEMAND IS PRESENT. TEMPORARY TRAFFIC SIGNALS - IRON COUNTY LOCATION COUNTY: IRON TEMPORARY TRAFFIC SIGNALS - SEQUENCE OF OPERATIONS Ε PROJECT NO: 1185-05-70 HWY: USH 2 SHEET FILE NAME : T:\Greuel\USH 2\USH 2 Temporary Signal\CADD\Temp Signal Sequence.dgn PLOT DATE: 12/15/2016 PLOT BY: \$\$...plotuser...\$\$ PLOT NAME: PLOT SCALE: 1:40 WISDOT/CADDS SHEET 42

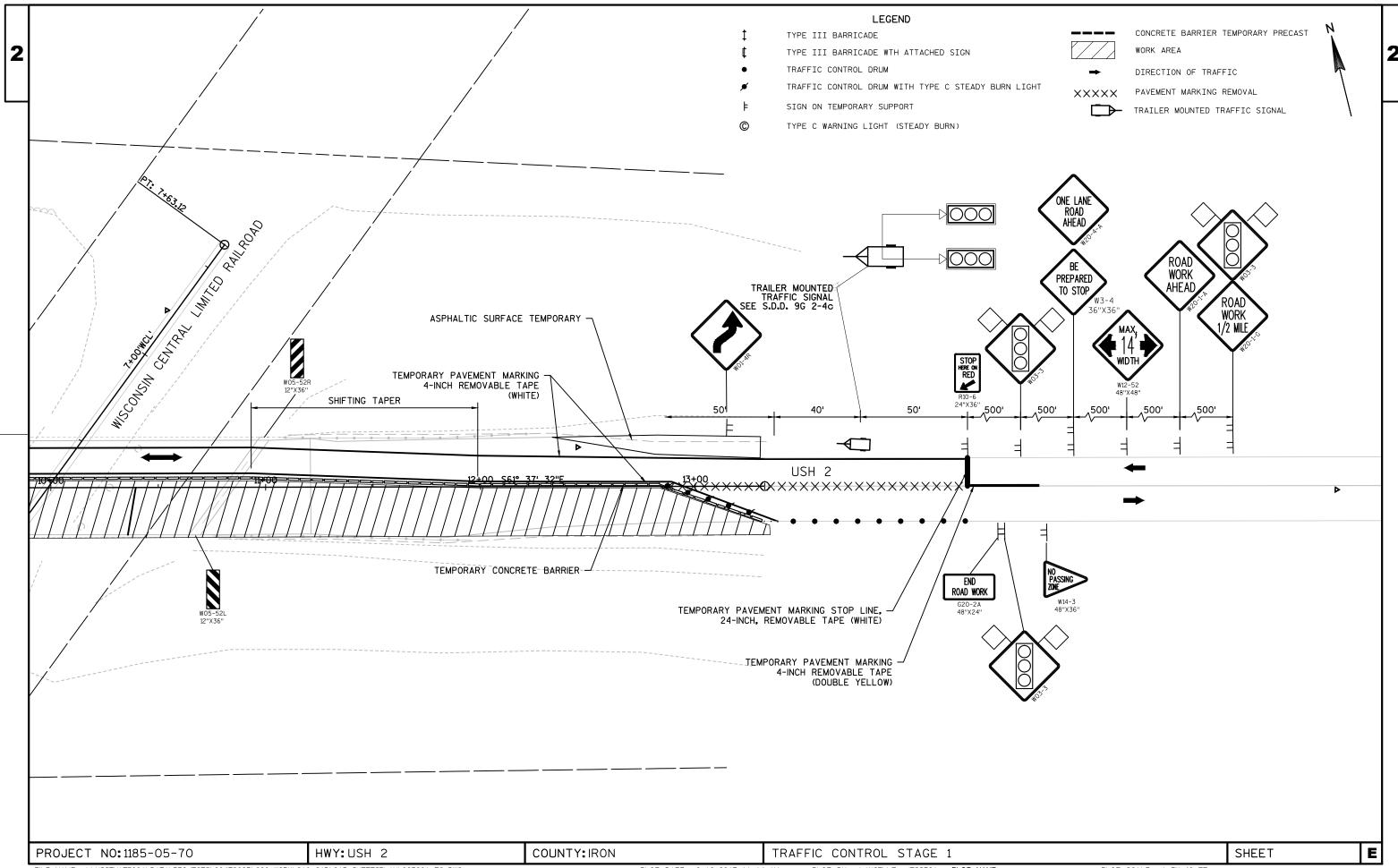


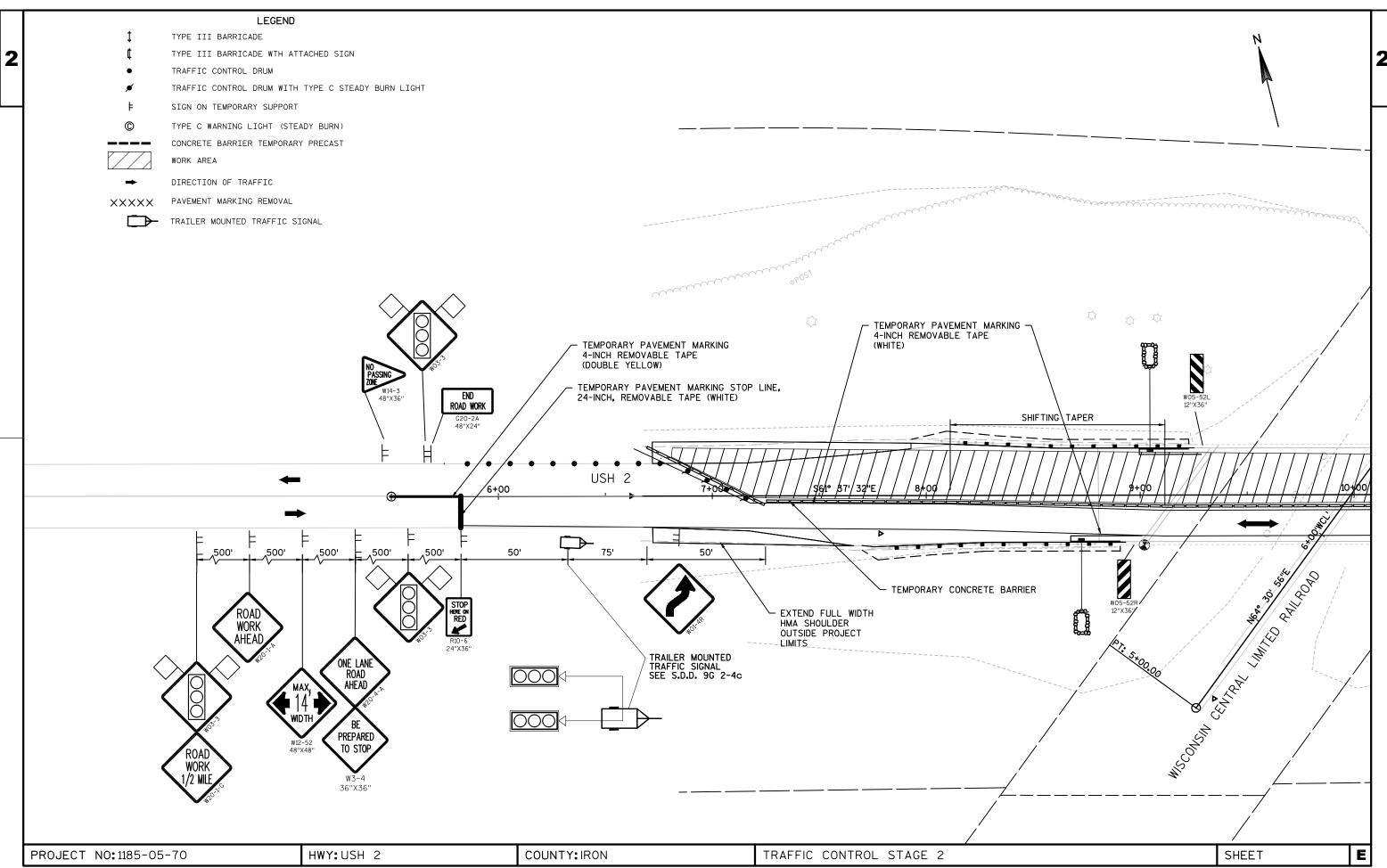
PLOT SCALE : 1 IN:40 FT

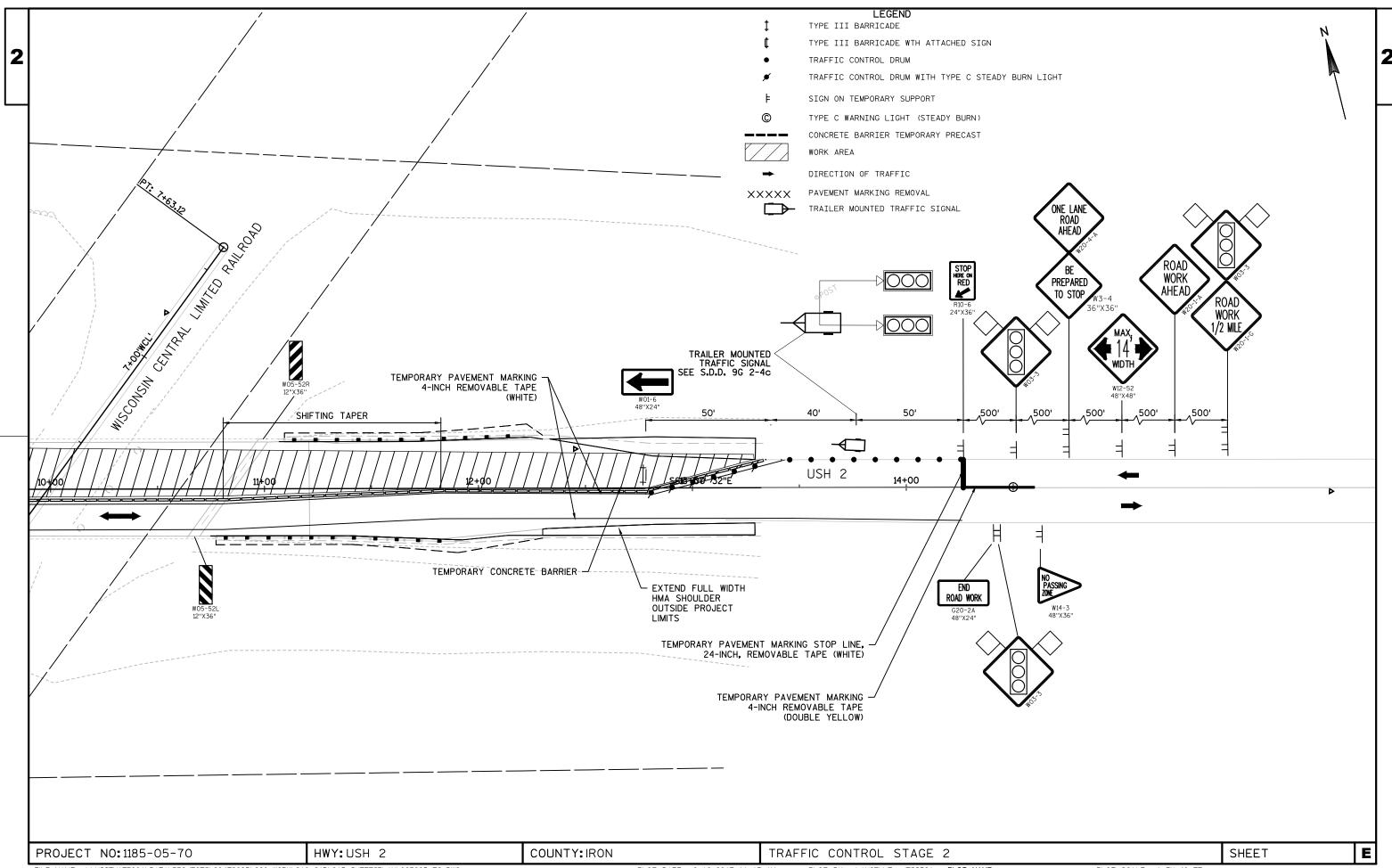
WISDOT/CADDS SHEET 42

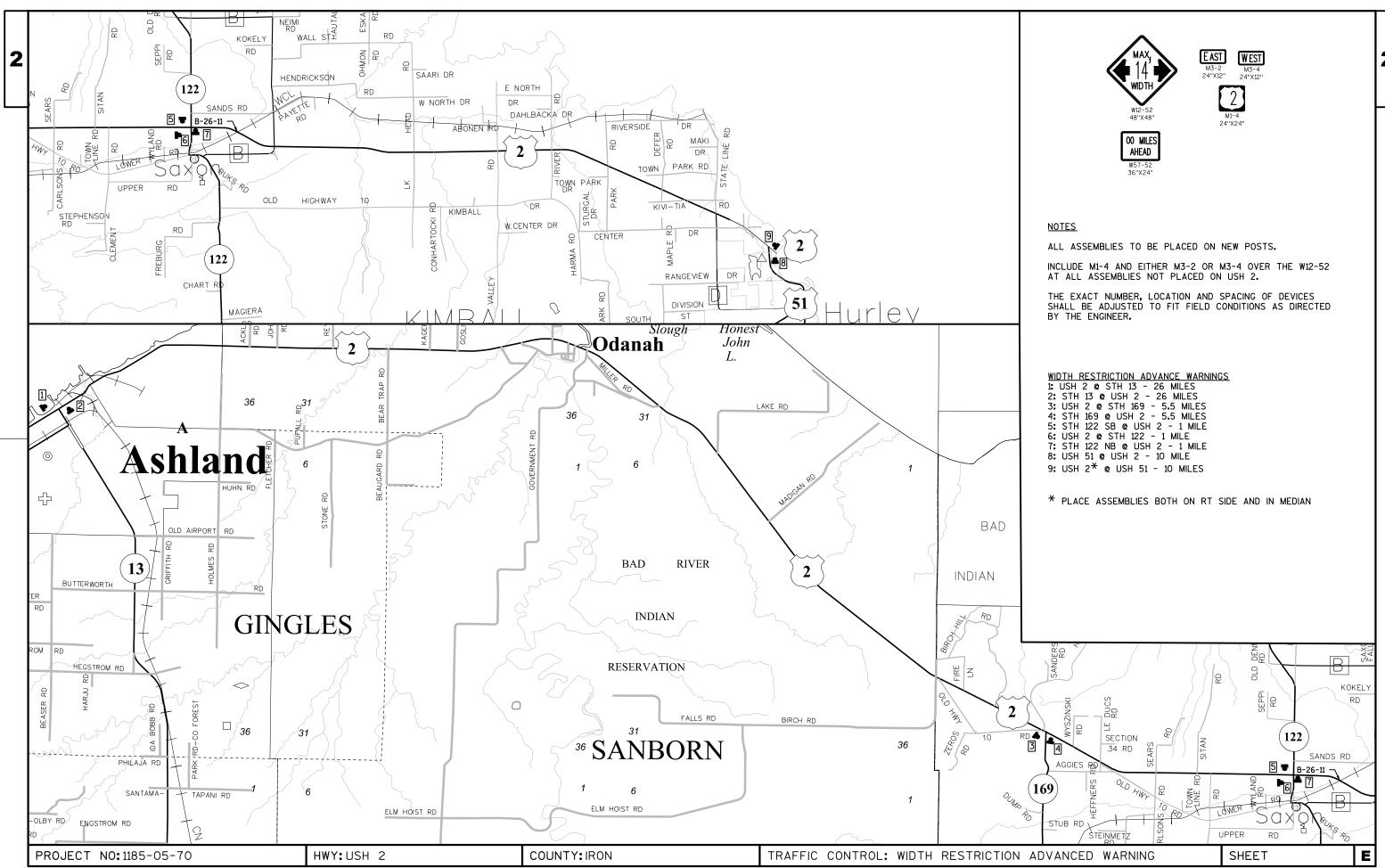












Estimate Of Quantities

1	1	25	-05	-7	Λ
		α :	-(): 1	-/	.,

					1105-05-70
Line	Item	Item Description	Unit	Total	Qty
0002	203.0200	Removing Old Structure (station) 01. 10+00	LS	1.000	1.000
0004	203.0225.S	Debris Containment (structure) 01. B-26-0011	LS	1.000	1.000
0006	204.0100	Removing Pavement	SY	402.000	402.000
8000	204.0115	Removing Asphaltic Surface Butt Joints	SY	652.000	652.000
0010	204.0165	Removing Guardrail	LF	485.000	485.000
0012	204.0220	Removing Inlets	EACH	2.000	2.000
0014	204.9090.S	· · · · · ·	LF	80.000	80.000
0016	205.0100	Excavation Common	CY	114.000	114.000
0018	206.1000	Excavation for Structures Bridges (structure) 01. B-26-0011	LS	1.000	1.000
0020	208.0100	Borrow	CY	2.000	2.000
0022	210.1500	Backfill Structure Type A	TON	248.000	248.000
0024	213.0100	Finishing Roadway (project) 01. 1185-05-70	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	72.000	72.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	64.000	64.000
0030	415.0410	Concrete Pavement Approach Slab	SY	349.000	349.000
0032	416.1010	Concrete Surface Drains	CY	4.000	4.000
0032	450.4000	HMA Cold Weather Paving	TON	92.000	92.000
0034	455.0605	Tack Coat	GAL	92.000	92.000
0038	460.2000	Incentive Density HMA Pavement	DOL	240.000	240.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	367.000	367.000
			CY		
0042	502.0100	Concrete Masonry Bridges		279.000	279.000
0044	502.3100	Expansion Device (structure) 01.B-26-0011	LS	1.000	1.000
0046	502.3200	Protective Surface Treatment	SY	840.000	840.000
0048	502.3210	Pigmented Surface Sealer	SY	200.000	200.000
0050	502.4204	Adhesive Anchors No. 4 Bar	EACH	8.000	8.000
0052	502.4205	Adhesive Anchors No. 5 Bar	EACH	94.000	94.000
0054	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	74,320.000	74,320.000
0056	506.2610	Bearing Pads Elastomeric Laminated	EACH	6.000	6.000
0058	506.4000	Steel Diaphragms (structure) 01. B-26-0011	EACH	15.000	15.000
0060	506.7050.S	Removing Bearings (structure) 01. B-26-0011	EACH	6.000	6.000
0062	511.1200	Temporary Shoring (structure) 01. B-26-0011	SF	90.000	90.000
0064	516.0500	Rubberized Membrane Waterproofing	SY	11.000	11.000
0066	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0068	603.8000	Concrete Barrier Temporary Precast Delivered	LF	737.000	737.000
0070	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,474.000	1,474.000
0072	604.0600	Slope Paving Select Crushed Material	SY	680.000	680.000
0074	606.0200	Riprap Medium	CY	6.000	6.000
0076	611.0654	Inlet Covers Type V	EACH	2.000	2.000
0078	611.3220	Inlets 2x2-FT	EACH	2.000	2.000
3010	011.0220	HIIOGO ZAZ I I	L/\O	2.000	2.000

2		

					1185-05-70
Line	Item	Item Description	Unit	Total	Qty
0080	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	70.000	70.000
0082	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0084	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0086	614.2300	MGS Guardrail 3	LF	100.000	100.000
0088	614.2500	MGS Thrie Beam Transition	LF	156.000	156.000
0090	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0092	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1185-05-70	EACH	1.000	1.000
0094	619.1000	Mobilization	EACH	1.000	1.000
0096	624.0100	Water	MGAL	3.300	3.300
0098	625.0100	Topsoil	SY	1,023.000	1,023.000
0100	627.0200	Mulching	SY	1,023.000	1,023.000
0102	628.1504	Silt Fence	LF	265.000	265.000
0104	628.1520	Silt Fence Maintenance	LF	265.000	265.000
0104	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0110	628.2002	Erosion Mat Class I Type A	SY	590.000	590.000
0110	628.7020	Inlet Protection Type D	EACH	14.000	14.000
0112	629.0210	• •	CWT	5.000	5.000
		Fertilizer Type B			
0116	630.0120	Seeding Mixture No. 20	LB	29.000	29.000
0118	634.0418	Posts Wood 4x4-Inch X 18-FT	EACH	20.000	20.000
0120	642.5001	Field Office Type B	EACH	1.000	1.000
0122	643.0100	Traffic Control (project) 01.1185-05-70	EACH	1.000	1.000
0124	643.0300	Traffic Control Drums	DAY	3,468.000	3,468.000
0126	643.0420	Traffic Control Barricades Type III	DAY	204.000	204.000
0128	643.0705	Traffic Control Warning Lights Type A	DAY	306.000	306.000
0130	643.0715	Traffic Control Warning Lights Type C	DAY	1,224.000	1,224.000
0132	643.0900	Traffic Control Signs	DAY	7,956.000	7,956.000
0134	645.0111	Geotextile Type DF Schedule A	SY	140.000	140.000
0136	645.0120	Geotextile Type HR	SY	22.000	22.000
0138	645.0130	Geotextile Type R	SY	680.000	680.000
0140	646.0106	Pavement Marking Epoxy 4-Inch	LF	3,232.000	3,232.000
0142	646.0600	Removing Pavement Markings	LF	280.000	280.000
0144	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	5,860.000	5,860.000
0146	649.1400	Temporary Pavement Marking Stop Line Removable Tape 24-Inch	LF	28.000	28.000
0148	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0150	650.6500	Construction Staking Structure Layout (structure) 01. B-26-0011	LS	1.000	1.000
0152	650.9910	Construction Staking Supplemental Control (project) 01. 1185-05-70	LS	1.000	1.000

Estimate Of Quantities Page 3

					1185-05-70
Line	Item	Item Description	Unit	Total	Qty
0154	650.9920	Construction Staking Slope Stakes	LF	491.000	491.000
0156	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-26-0011	LS	1.000	1.000
0158	690.0150	Sawing Asphalt	LF	144.000	144.000
0160	690.0250	Sawing Concrete	LF	75.000	75.000
0162	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0164	715.0502	Incentive Strength Concrete Structures	DOL	1,674.000	1,674.000
0166	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0168	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

REMOVING PAVEMENT

204.0100 REMOVING

PAVEMENT

STAGE	LOCATION	STATION - STATION	SY
1	WEST ABUTMENT APPROACH SLAB	8+75 9+20	85
2	WEST ABUTMENT APPROACH SLAB	8+75 9+20	107
1	EAST ABUTMENT APPROACH SLAB	10+80 11+25	124
2	EAST ABUTMENT APPROACH SLAB	10+80 11+25	86
		TOTAL	402

REMOVING ASPHALTIC SURFACE BUTT JOINTS

204.0115

REMOVING

ASPHALTIC

SURFACE

BUTT JOINTS

STAGE	LOCATION	STATION	- STATION	SY		
1	WEST APPROACH	7+92.90	8+68.00	184		
1	EAST APPROACH	11+72.00	12+30.00	142		
2	WEST APPROACH	7+92.90	8+68.00	184		
2	EAST APPROACH	11+72.00	12+30.00	142		
	TOTAL					

REMOVING GUARDRAIL

204.0165 REMOVING

					GUARDRAIL
STAGE	STATION	-	STATION	OFFSET	LF
1	7+72.92		8+92.12	23' RT	120
	10+75.22		11+95.58	23' RT	121
2	8+04.37		9+26.08	23' LT	122
	11+06.56		12+28.01	23' LT	122
	TOTAL				485

REMOVING STORM SEWER

						204.0220	*204.9090.S
						REMOVING	REMOVING
						INLETS	PIPE UNDERDRAIN
_	STAGE	STATION	-	STATION	OFFSET	EACH	LF
	1	8+88		8+92	RT	1	40
	2	9+19		9+23	LT	1	40
-		TOTAL				2	80
							*UNDISTRIBUTED

FINISHING ROADWAY

213.0100 FINISHING ROADWAY

1185-05-70

LOCATION	EACH
PROJECT	1
TOTAL	1

PROJECT NUMBER: 1185-05-70

HWY: USH 2

COUNTY: IRON

MISCELLANEOUS QUANTITIES

SHEET NO:

FILE NAME: P:\60479693\900_Work\910-CAD\915_SheetsPlan\1185-05-70_MQ.pptx

ORIGINATOR: JESSICA LANCELLE

ORIG. DATE: March 1, 2017

PLOTTED DATE: 6/16/2017 11:46 AM

EARTHWORK

Division	From/To Station	Location	Common Excavation (1)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Borrow
			205.0100)			Factor		
			Cut (2)			1.25		(item #208.0100)
	1 6+73 to 13+30	Stage 1	114	114	88	110	4	
Stage 1 Subtotal		-	114	114	88	110	4	
	2 6+73 to 13+30	Stage 2	0	0	5	6	-6	
Stage 2 Subtotal		-	0	0	5	6	-6	2
Grand Total			114	114	93	117	-2	2
		Total Common						
		Exc	114					

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 5) Available Material = Cut Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- 14) The Mass Ordinate + or Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

PROJECT NUMBER: 1185-05-70 HWY: USH 2 COUNTY: IRON MISCELLANEOUS QUANTITIES SHEET NO: E

PAVEMENT

				305.0110 BASE	305.0120 BASE	455.0605	460.6224	624.0100
				AGGREGATE	AGGREGATE		НМА	
				DENSE	DENSE	TACK	PAVEMENT	
				3/4-INCH	1 1/4-INCH	COAT	4 MT 58-28 S	WATER
STAGE	LOCATION	STA	- STA	TON	TON	GAL	TON	MGAL
1	SHOULDER LT	6+72.00	8+13.00	4	-	11	54	0.1
	TC SHOULDER EXTENSION RT	6+72.00	7+66.00	3	-	6	26	0.1
	MAINLINE	7+92.90	8+80.49	-	6	7	25	0.2
	SHOULDER RT	7+69.86	8+80.49	14	9	7	23	0.5
	MAINLINE	11+20.90	12+30.00	-	6	9	32	0.2
	SHOULDER RT	11+20.90	12+30.00	17	12	7	26	0.6
•	SHOULDER LT	12+33.00	13+30.00	3	-	8	38	0.1
	TC SHOULDER EXTENSION RT	12+30.00	13+30.00	3	-	8	40	0.1
2	SHOULDER LT	7+92.90	8+80.49	14	10	6	20	0.5
	MAINLINE	7+92.90	8+80.49	-	6	7	25	0.2
	SHOULDER LT	11+20.90	12+30.00	14	9	7	26	0.5
	MAINLINE	11+20.90	12+30.00	-	6	9	32	0.2
	TOTAL			72	64	92	367	3.3

CONCRETE PAVEMENT APPROACH SLAB

415.0410 CONCRETE PAVEMENT

APPROACH SLAB

ST	AGE S	TATION	-	STATION	SY
	1	8+80		9+17	66
	1	10+85		11+21	112
	2	8+80		9+17	98
	2	10+85		11+21	73
		TOTAL			349

STORM SEWER

					416.1010	521.1012	611.0654	611.3220	612.0212	606.0200	645.0120	650.4000
					CONCRETE	APRON ENDWALLS	INLET	INLETS	PIPE UNDERDRAIN			CONSTRUCTION
					SURFACE DRAINS	FOR CULVERT PIPE	COVERS	2X2-FT	UNPERFORATED	RIPRAP	GEOTEXTILE	STAKING
						STEEL 12-INCH	TYPE V		12-INCH	MEDIUM	TYPE HR	STORM SEWER
STAGE	STATION	OFFSET	- STATION	OFFSET	CY	EACH	EACH	EACH	LF	CY	SY	EACH
1	9+00	LT	9+30	LT	2	-	-	-	-	-	-	-
1	9+05	LT	-	-	-	1	1	1	38	3	11	2
2	8+67	RT	8+99	RT	2	-	-	-	-	-	-	-
2	8+72	RT	-	-	-	1	1	1	32	3	11	2
	TOTAL				4	2	2	2	70	6	22	4

PROJECT NUMBER: 1185-05-70

HWY: USH 2

COUNTY: IRON

MISCELLANEOUS QUANTITIES

SHEET NO:

FILE NAME: P:\60479693\900_Work\910-CAD\915_SheetsPlan\1185-05-70_MQ.pptx

ORIGINATOR: JESSICA LANCELLE

ORIG. DATE: March 1, 2017

PLOTTED DATE: 6/16/2017 11:46 AM

HMA	COLD	WEATHER	PAVING
-----	------	----------------	---------------

450.4000 HMA COLD

WEATHER PAVING

	LOCATION	TON	
	PROJECT	92	
-	ТОТ	AL 92	

MGS	GUARDRAI
-----	-----------------

MGS MGS MGS THRIE BEAM GUARDRAIL 3 GUARDRAIL

TRANSITION

614.2500

TERMINAL EAT

614.2610

LF LF EACH

SHEET NO:

614.2300

STAGE	STATION	-	STATION	LT/RT	LF	LF	EACH
1	7+76	-	8+29	RT	-	-	1
	8+29	-	8+54	RT	-	25	-
	8+54	-	8+93	RT	39	-	-
	10+75	-	11+14	RT	39	-	-
	11+14	-	11+39	RT	-	25	-
	11+39	-	11+92	RT	-	-	1
2	8+08	-	8+61	LT	-	-	1
	8+61	-	8+86	LT	-	25	-
	8+86	-	9+25	LT	39	-	-
	11+07	-	11+46	LT	39	-	-
	11+46	-	11+71	LT	-	25	-
	11+71	-	12+24	LT	-	-	1
	TOTAL				156	100	4

TRAFFIC CONTROL

		643.0100	603.8000	603.8125	643.0300	643.0420	643.0705	643.0715	643.0900	634.0418		
			CONCRETE	CONCRETE			TRA	FFIC				
			BARRIER	BARRIER		TRAFFIC		ITROL		POSTS		
		TRAFFIC	TEMPORARY	TEMPORARY	TRAFFIC	CONTROL	WAR	NING	TRAFFIC	WOOD		
		CONTROL	PRECAST	PRECAST	CONTROL	BARRICADES	LIC	GHTS	CONTROL	4X4-INCH		
		1185-05-70	DELIVERED	INSTALLED	DRUMS	TYPE III	TYPE A	TYPE C	SIGNS	X 18-FT	NO. OF	
		EACH	LF	LF	EACH DAYS	EACH DAYS	EACH DAYS	EACH DAYS	EACH DAYS	EACH	CLOSURES	REMARKS
STAGE	LOCATION											
1	PROJECT	-	670	670	28 1,428	1 51	2 102	10 510	28 1,428	-	1	51 DAYS
2	PROJECT	-	-	670	28 1,428	1 51	2 102	10 510	28 1,428	-	1	51 DAYS
1 & 2	ADVANCED WARNING	-	-	-					40 4,080	20	1	102 DAYS
	UNDISTRIBUTED (10%)	1	67	134	6 612	1 102	1 102	2 204	10 1,020	-	1	102 DAYS
	TOTALS	1	737	1,474	3,468	204	306	1,224	7,956	20		

HWY: USH 2

COUNTY: IRON

MISCELLANEOUS QUANTITIES

LANDSCAPING

					625.0100	627.0200	629.0210 FERTILIZER	630.0120 SEEDING MIXTURE
					TOPSOIL	MULCHING	TYPE B	NO. 20
STAGE	STATION	ТО	STATION	LT/RT	SY	SY	CWT	LB
1	6+72		8+90	RT	585	585	1	16
	10+77		13+30	RT	135	135	1	4
2	6+72		9+23	LT	145	145	1	4
	11+09		13+30	LT	65	65	1	2
	UNDISTRIBUT	ED (10	%)		93	93	1	3
	TOTAL				1.023	1.023	5	29

MOBILIZATIONS EROSION CONTROL

	628.1905	628.1910
		MOBILIZATIONS
	MOBILIZATIONS	EMERGENCY
	EROSION	EROSION
	CONTROL	CONTROL
STAGE	EACH	EACH
1	3	2
2	3	2
TOTAL	6	4

EROSION CONTROL

				628.1504	628.1520	628.2002	628.7020	
						EROSION		
					SILT	MAT	INLET	
				SILT	FENCE	CLASS I	PROTECTION	
				FENCE	MAINTENANCE	TYPE A	TYPE D	
STAGE	STATION -	STATION	LT/RT	LF	LF	SY	EACH	NOTE
1	7+55	8+81	RT	135	135	-	-	
	10+56	11+02	RT	50	50	-	-	
	7+70	8+90	RT	-	-	485	-	
	10+77	11+00	RT	-	-	45	-	
	8+72		RT	-	-	-	1	PROPOSED
	8+90		RT	-	-	-	1	EXISTING
2	8+80	9+28	LT	50	50	-	-	
	9+04		LT	-	-	-	1	PROPOSED
	9+20		LT	-	-	-	1	EXISTING
	UNDISTRIBUT	TED (10%)		30	30	60	10	
	TOTAL			265	265	590	14	

PAVEMENT MARKING

646.0106
PAVEMENT MARKING
EPOXY 4-INCH

				WHITE	YELLOW	YELLOW DASH
STAGE	LOCATION	STA -	STA	LF	LF	LF
3	LEFT LANE EDGE	6+67.00	13+32.00	665	-	-
3	CENTERLINE	-	-	-	845	212
3	RIGHT LAND EDGE	6+67.00	13+32.00	665	-	-
	TOTAL			1330	845	212
					3232	

PROJECT NUMBER: 1185-05-70 HWY: USH 2 COUNTY: IRON MISCELLANEOUS QUANTITIES SHEET NO:

REMOVING PAVEMENT MARKING

646.0600 REMOVING PAVEMENT MARKING STAGE LOCATION STATION -STATION LF BEGIN PROJECT 5+80 7+20 140

12+90

TOTAL

14+30

140

280

END PROJECT

TEMPORARY PAVEMENT MARKING

649.0400 649.1400 TEMPORARY **TEMPORARY** PAVEMENT MARKING PAVEMENT MARKING REMOVABLE TAPE STOP LINE 4-INCH REMOVABLE TAPE DOUBLE YELLOW SOLID WHITE 24-INCH STAGE LOCATION STA STA LF LF LF BEGIN MARKINGS 5+82.00 1400 STOP BAR 5+82.00 14 LT EDGE LINE 5+82.00 14+27.00 845 RT EDGE LINE 6+65.00 13+40.00 685 STOP BAR 14+27.00 14 **END MARKINGS** 14+27.00 1400 LT EDGE LINE 6+65.00 13+40.00 685 RT EDGE LINE 5+82.00 14+27.00 845 **TOTAL** 2,800 3,060 28 5,860

HWY: USH 2

CONSTRUCTION STAKING

	650.9910	650.9920	650.6500
	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
	STAKING	STAKING	STAKING
	SUPPLEMENTAL CONTROL	SLOPE	STRUCTURE LAYOUT
	1185-05-70	STAKES	B-26-0011
LOCATION	LS	LF	LS
PROJECT	1	491	1
TOTAL	1	491	1

TEMPORARY SIGNALS

661.0100

TEMPORARY TRAFFIC SIGNAL

FOR BRIDGES B-26-0011

LOCATION	LS
PROJECT 1185-05-70	1
TOTAL	1

SAWING PAVEMENT

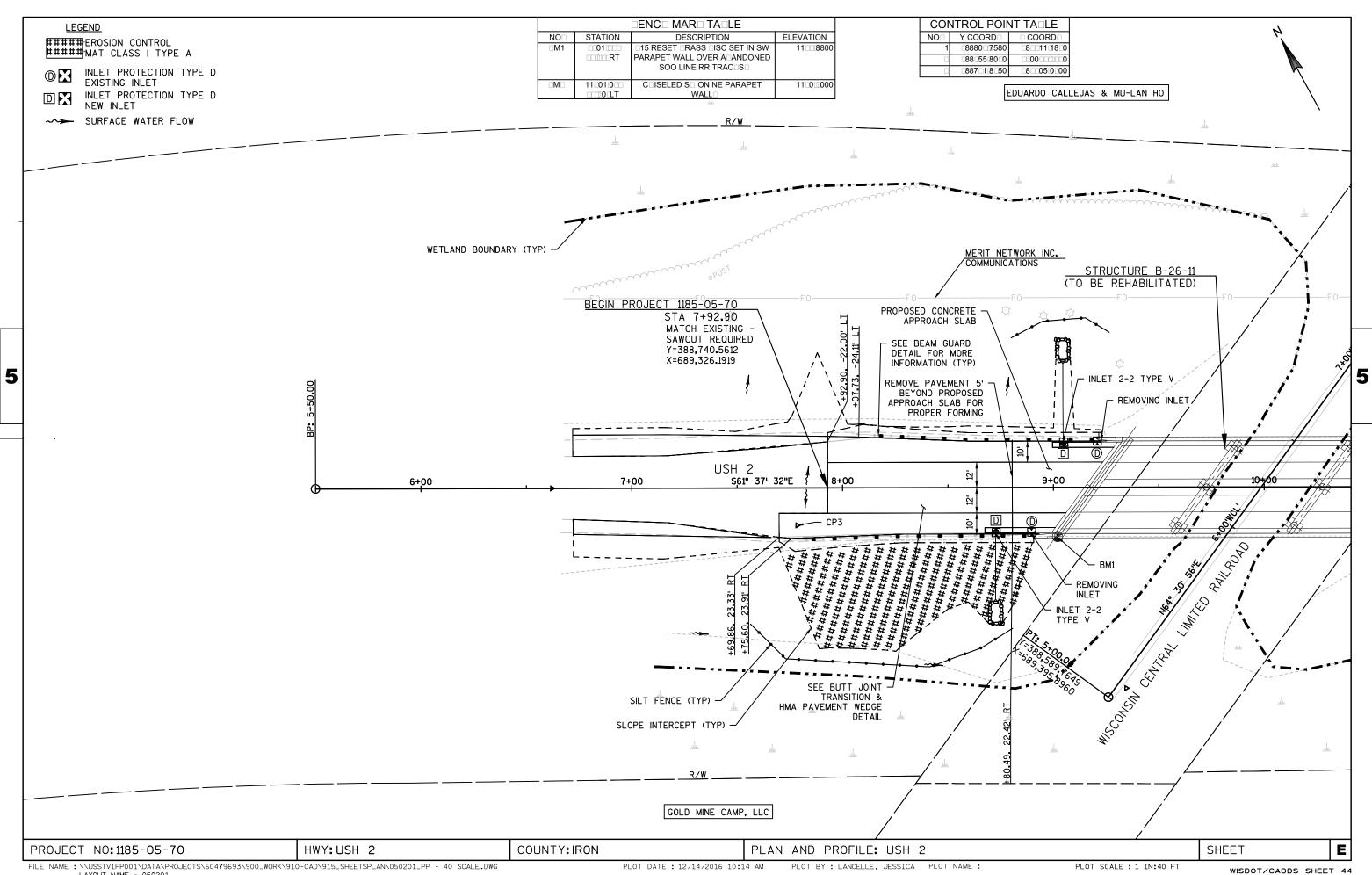
				690.0150	690.0250
				SAWING	SAWING
				ASPHALT	CONCRETE
STAGE	STATION	STATION	LT/RT	LF	LF
1	7+92.90	-	RT	23	-
1	8+80.00	-	RT	22	-
1	8+75.00	9+17.00	CL	5	37
1	10+83.00	11+26.00	CL	5	38
1	11+26.00	-	RT	22	-
1	12+30.00	-	RT	22	-
2	7+92.90	-	LT	23	-
2	12+30.00	-	LT	22	-
OTAL				144	75

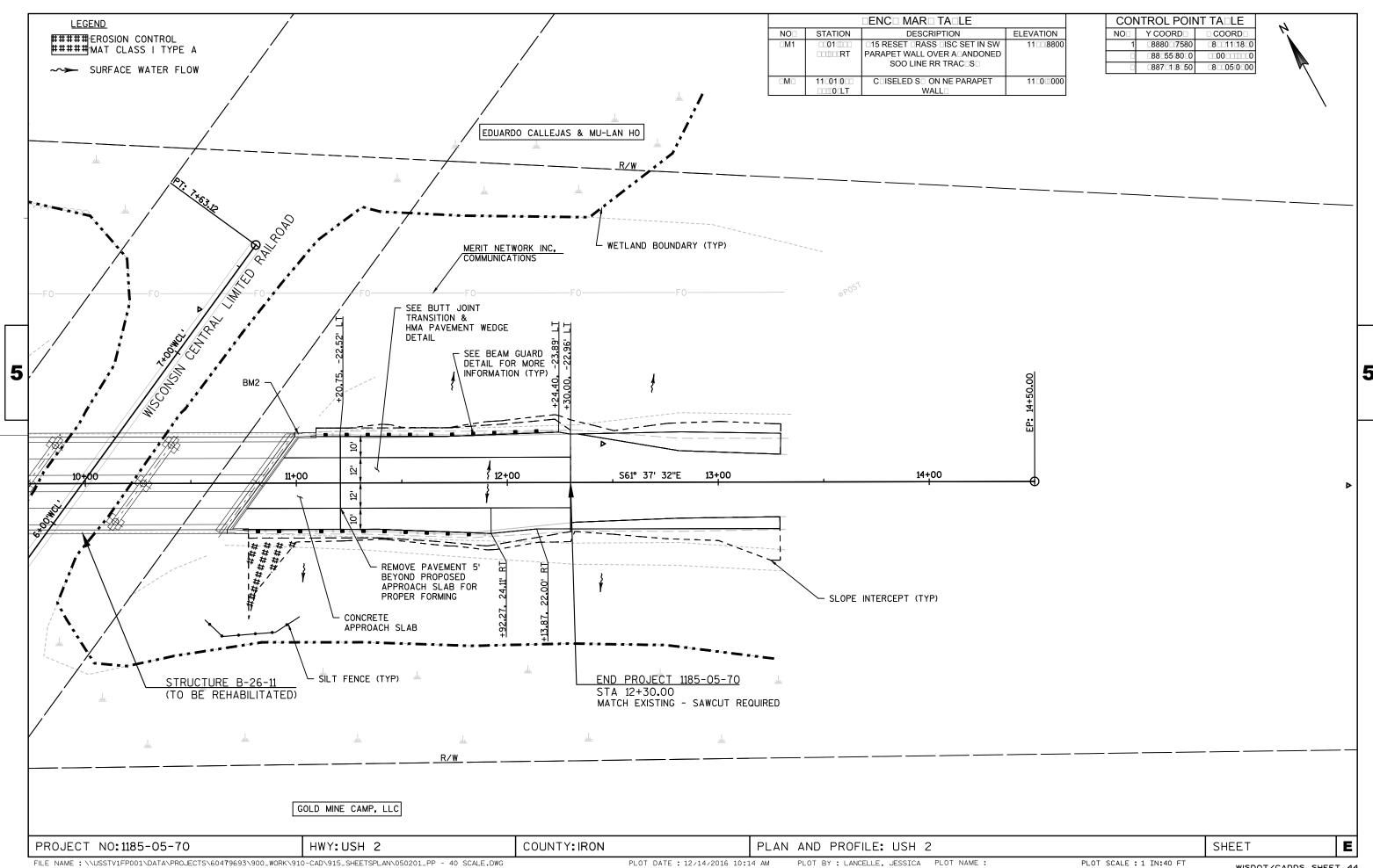
SHEET NO:

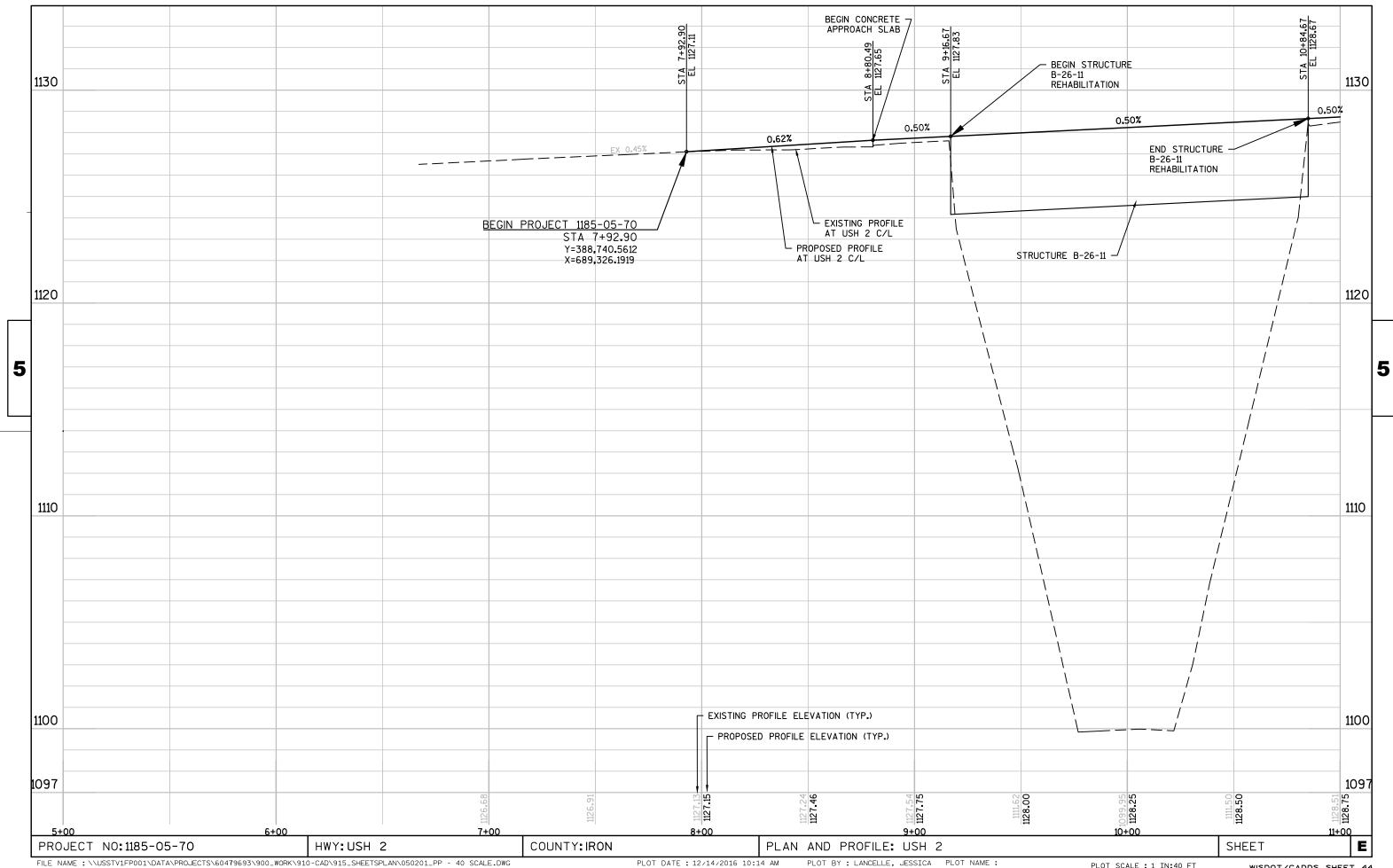
PROJECT NUMBER: 1185-05-70

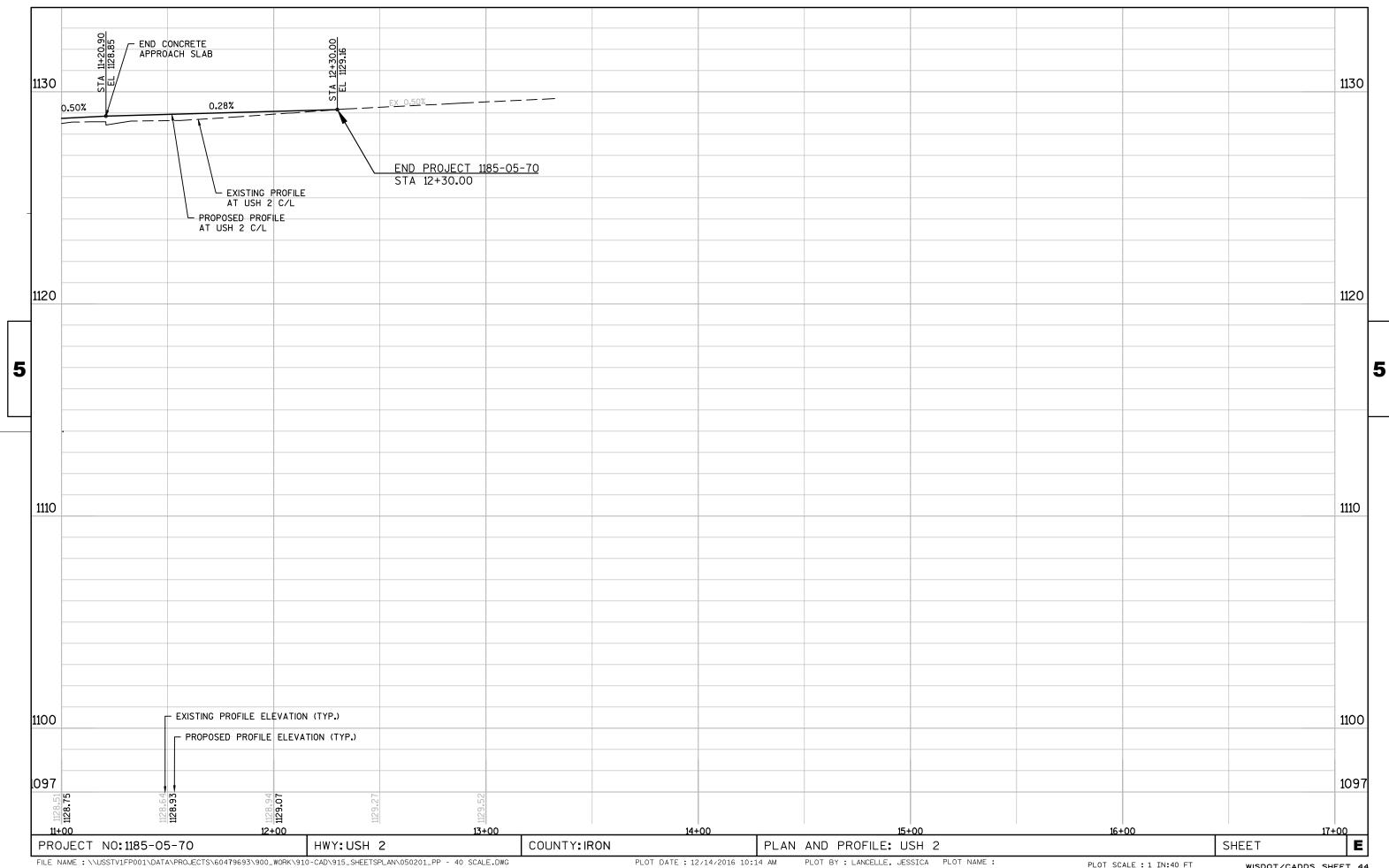
COUNTY: IRON

MISCELLANEOUS QUANTITIES





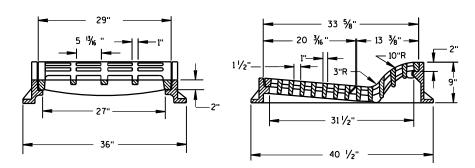




Standard Detail Drawing List

08A05-19C 08C07-02 08D03-06	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09G02-04C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G 14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H 14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THREE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MI DWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C08-17A	LONGI TUDI NAL MARKI NG (MAI NLI NE)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D33-04	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

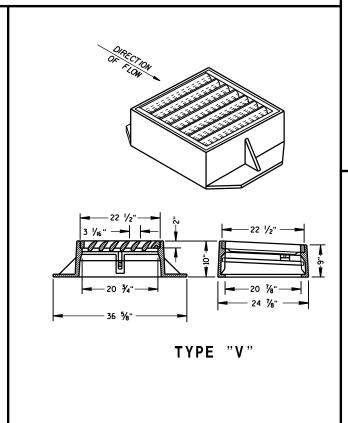
6



TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

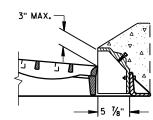
25 ½" 23 ½" 23 ½" 23 ½" 23 ½" 23 ½" 23 ½" 23 ½" 23 ½" 25 ½" 23 ½" 25 ½" 25 ½" 26 ½" 27 ½" 28 ½" 28 ½" 29 ½" 20 ½"



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.

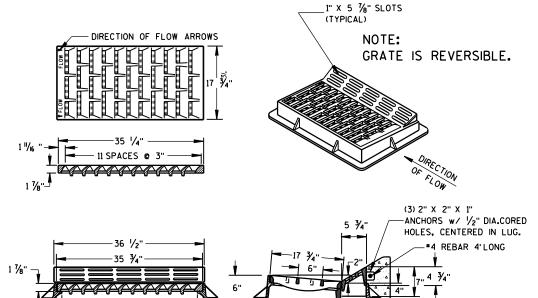
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

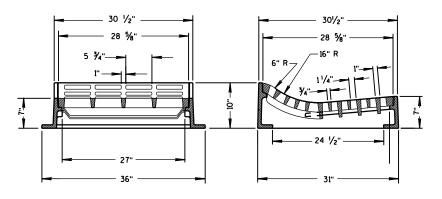
NOIE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE



TYPE "HM"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



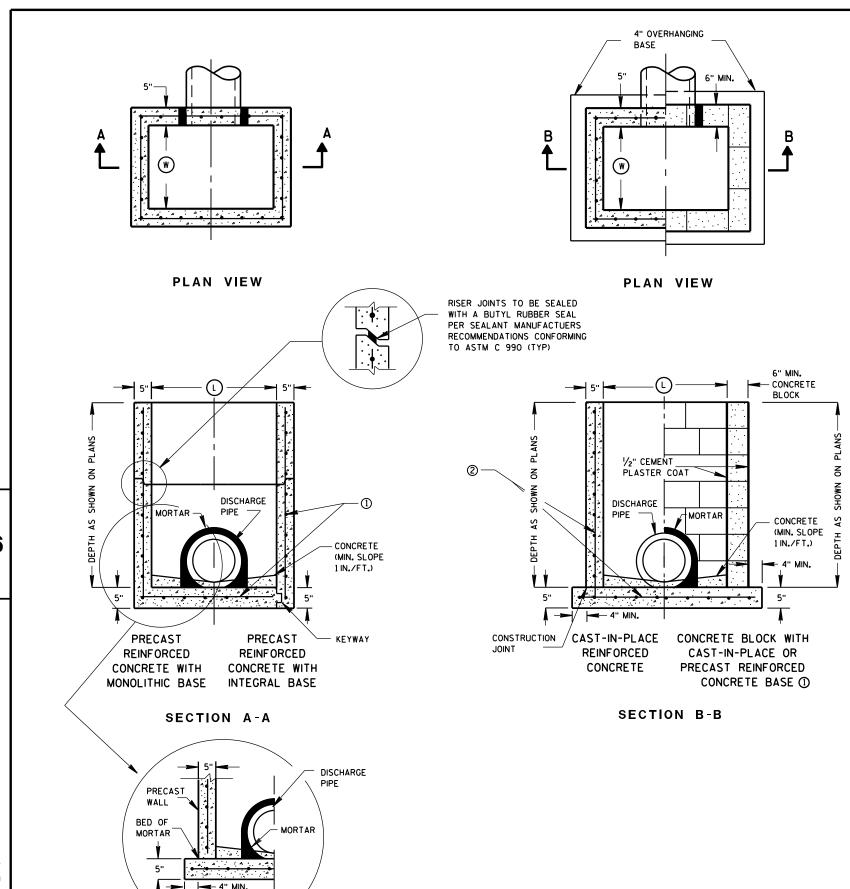
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

II/27/2013
DATE / /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

A 5-19

D.D. 8



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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.

OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

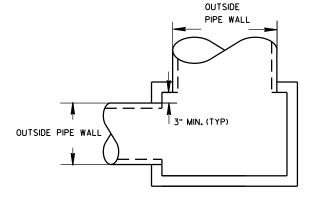
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	т	٧	WW
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	Х	х				Х		х	
2X2.5-FT	2	2.5			Х			Х	Х	Х	Х
2X3-FT	2	3					Х	·			·
2.5X3-FT	2.5	3				Х					

PIPE MATRIX

	MAXIMUM I	NSIDE PIPE METER
INLET SIZE	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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APPROVED

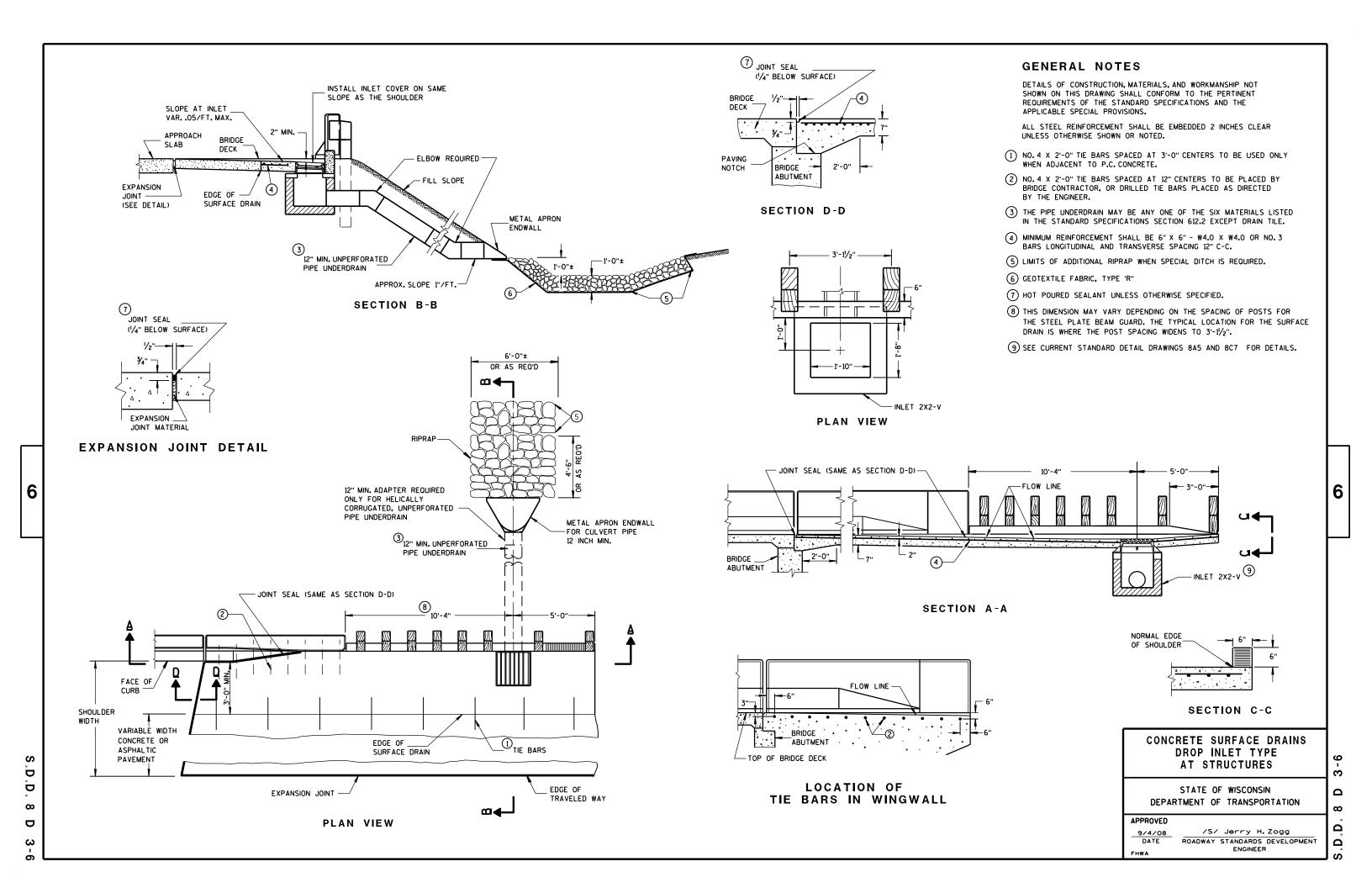
Sept...2016 /S/ Rodney Taylor

DATE ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

SEPARATE PRECAST REINFORCED

CONCRETE BASE OPTION



TYPICAL APPLICATION OF SILT FENCE

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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.

- \bigcirc 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 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Cannestra

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

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D.D. 8 E 9





INLET PROTECTION, TYPE A

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- (2) FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- (3) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE, THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02

/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER 6

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	METAL APRON ENDWALLS										
PIPE	MIN. 1	THICK.			DIMENS	SIONS (I	nches)			APPROX.	
DIA.	(Incl		A	В	Н	L	Γį	L ₂	W	SLOPE	BODY
(IN.)	STEEL	ALUM.	(±1")	(MAX.)	(±1")	(±1 ½")	①	0	(±2")	320.2	
12	.064	.060	6	6	6	21	12	171/2	24	2½+o 1	1Pc.
15	.064	.060	7	8	6	26	14	213/4	30	2½to 1	1Pc.
18	.064	.060	8	10	6	31	15	281/4	36	21/2+o 1	1Pc.
21	.064	.060	9	12	6	36	18	295/8	42	21/2+o 1	1Pc.
24	.064	.075	10	13	6	41	18	371/4	48	21/2+o 1	1Pc.
30	.079	.075	12	16	8	51	18	521/4	60	21/2+0 1	1Pc.
36	.079	. 105	14	19	9	60	24	59¾	72	21/2+o 1	2 Pc.
42	.109	.105	16	22	11	69	24	75%	84	21/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 ¹ / ₄ +o 1	3 Pc.
54	.109	.105	18	30	12	84	30	851/2	102	2 ¹ / ₄ †o 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	11/2+0 1	3 Pc.
84	.109×	.105×	18	45	12	87	_	_	138	11/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	_	_	144	11/2+0 1	3 Pc.
96	.109×	.105×	18	35	12	87	_	_	150	1/2+0 1	3 Pc.

	REINFORCED CONCRETE APRON ENDWALLS						.LS	
PIPE		APPROX.						
DIA.	T	A	В	С	D	Ε	G	SLOPE
12	2	4	24	48 1/8	721/8	24	2	3 to 1
15	21/4	6	27	46	73	30	21/4	3 to 1
18	21/2	9	27	46	73	36	21/2	3 to 1
21	23/4	9	36	371/2	731/2	42	23/4	3 to 1
24	3	91/2	431/2	30	731/2	48	3	3 to 1
27	31/4	101/2	491/2	24	731/2	54	31/4	3 to 1
30	$3\frac{1}{2}$	12	54	193/4	731/2	60	31/2	3 to 1
36	4	15	63	34¾	97¾	72	4	3 to 1
42	$4\frac{1}{2}$	21	63	35	98	78	41/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	51/2		65	**************************************	8 ¹ / ₄ - 100	90	51/2	2% to 1
60	6	* * * 30-35	60	39	99	96	5	2 to 1
66	61/2	* * * 24-30	* * * 72-78	* * * 21-27	99	102	51/2	2 to 1
72	7	* ** 24-36	78	21	99	108	6	2 to 1
78	71/2	* ** 24-36	78	21	99	114	61/2	2 to 1
84	8	36	901/2	21	1111/2	120	61/2	1½+o 1
90	81/2	41	871/2	24	1111/2	132	61/2	11/2+0 1

THREADED %6" DIA. ROD CONNECTOR AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL) MEASURED LENGTH OF CULVERT TYPE 1 FOR 12" THRU 24" CORR. PIPE







NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL.

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

DIMPLED BAND MAY BE USED WITH HELICALLY

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.

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT ALTERNATE FOR TYPE 1 CONNECTION END SECTION CONNECTOR STRAP

* EXCEPT CENTER PANEL SEE GENERAL NOTES





SHOULDER

SLOPE



SIDE ELEVATION METAL ENDWALLS



**MAXIMUM





CONCRETE ENDWALLS

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

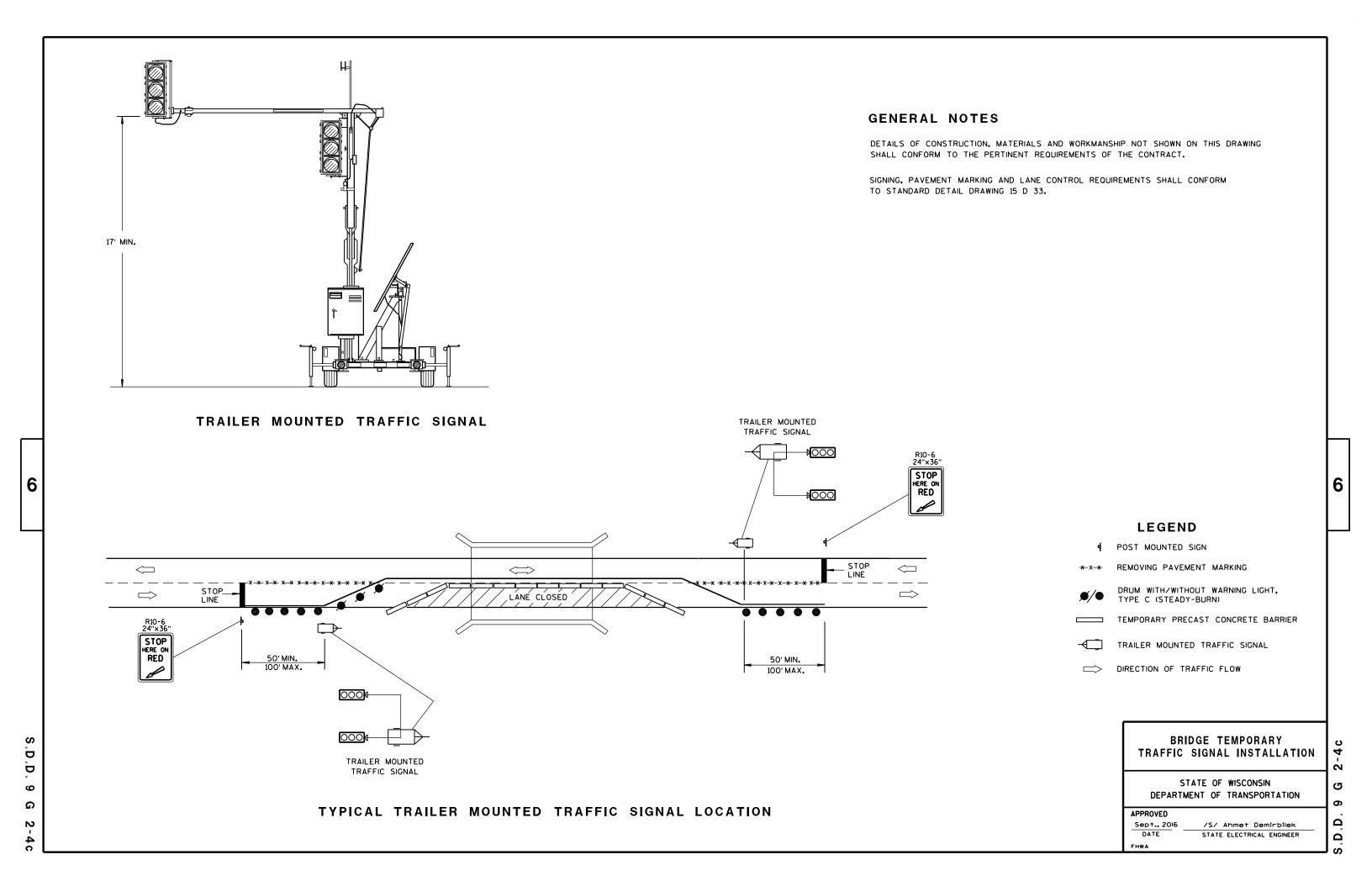
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES. THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES.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



11/30/94 /S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER







TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

GENERAL NOTES

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

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

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



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

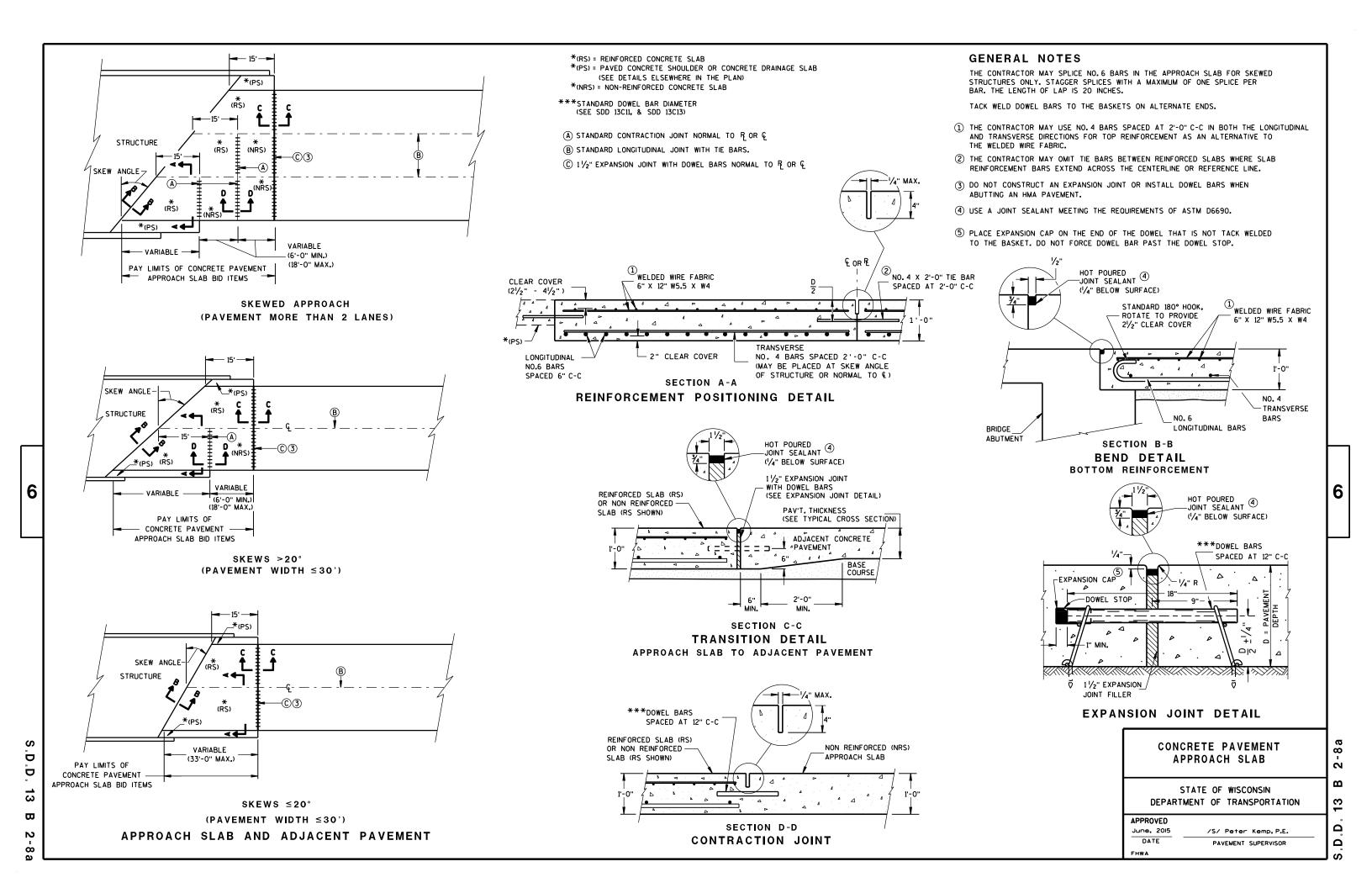
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3/26/IO /S/ SCOT BECKET

CHIEF STRUCTURAL DEVELOPMENT ENGINEER

D.D. 12 A

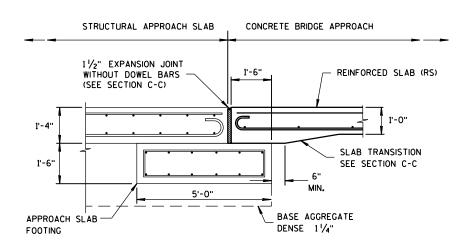
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ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- 1 SEE BRIDGE PLAN.
- (2) CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.
- 3 DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- © 11/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO P OR &
- D 1 1/2" EXPANSION JOINT (NO DOWELS)

BRIDGE APPROACHES



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015
DATE
PAVEMENT SUPERVISOR
FHWA

.D.D. 13 B 2-8b

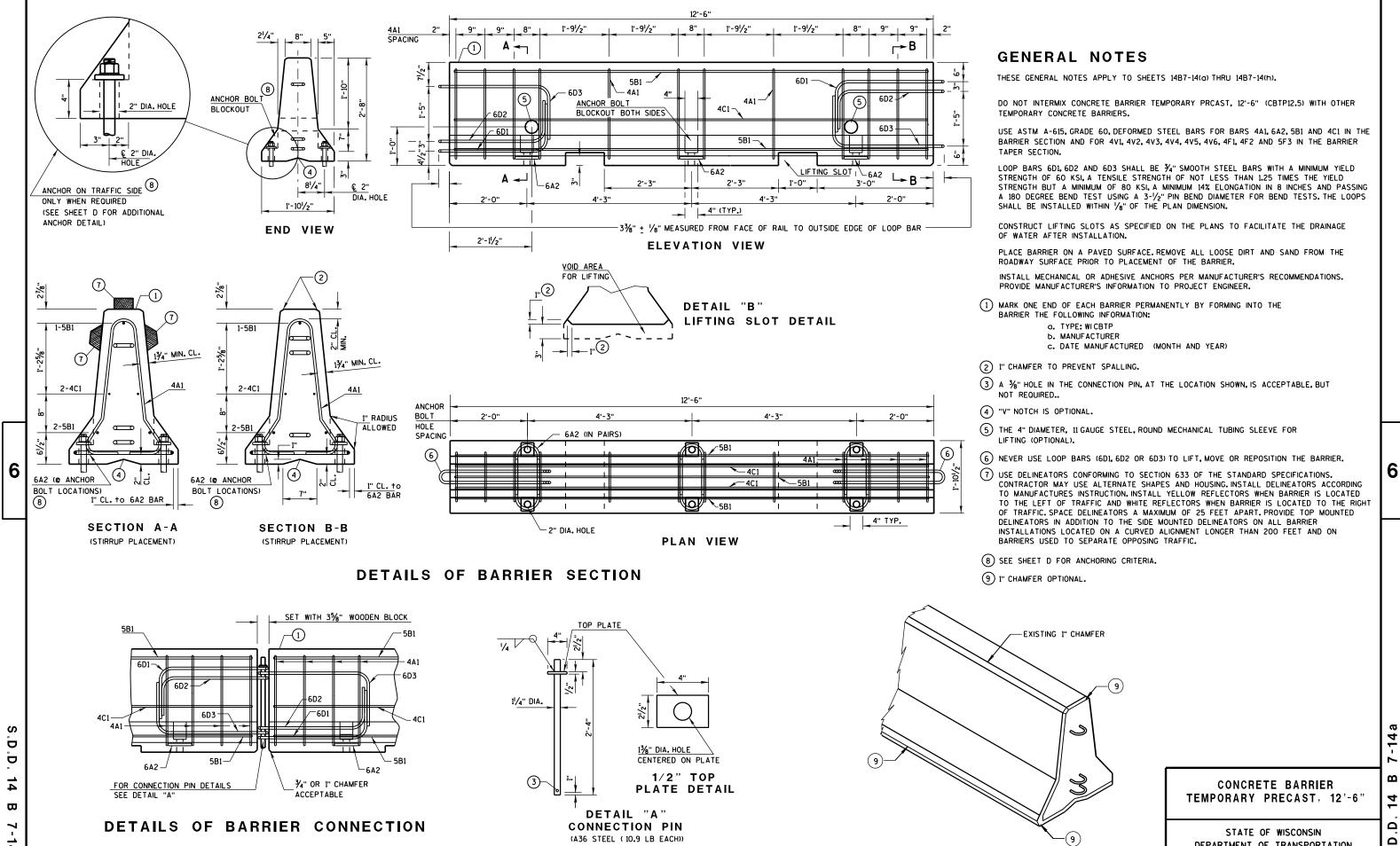
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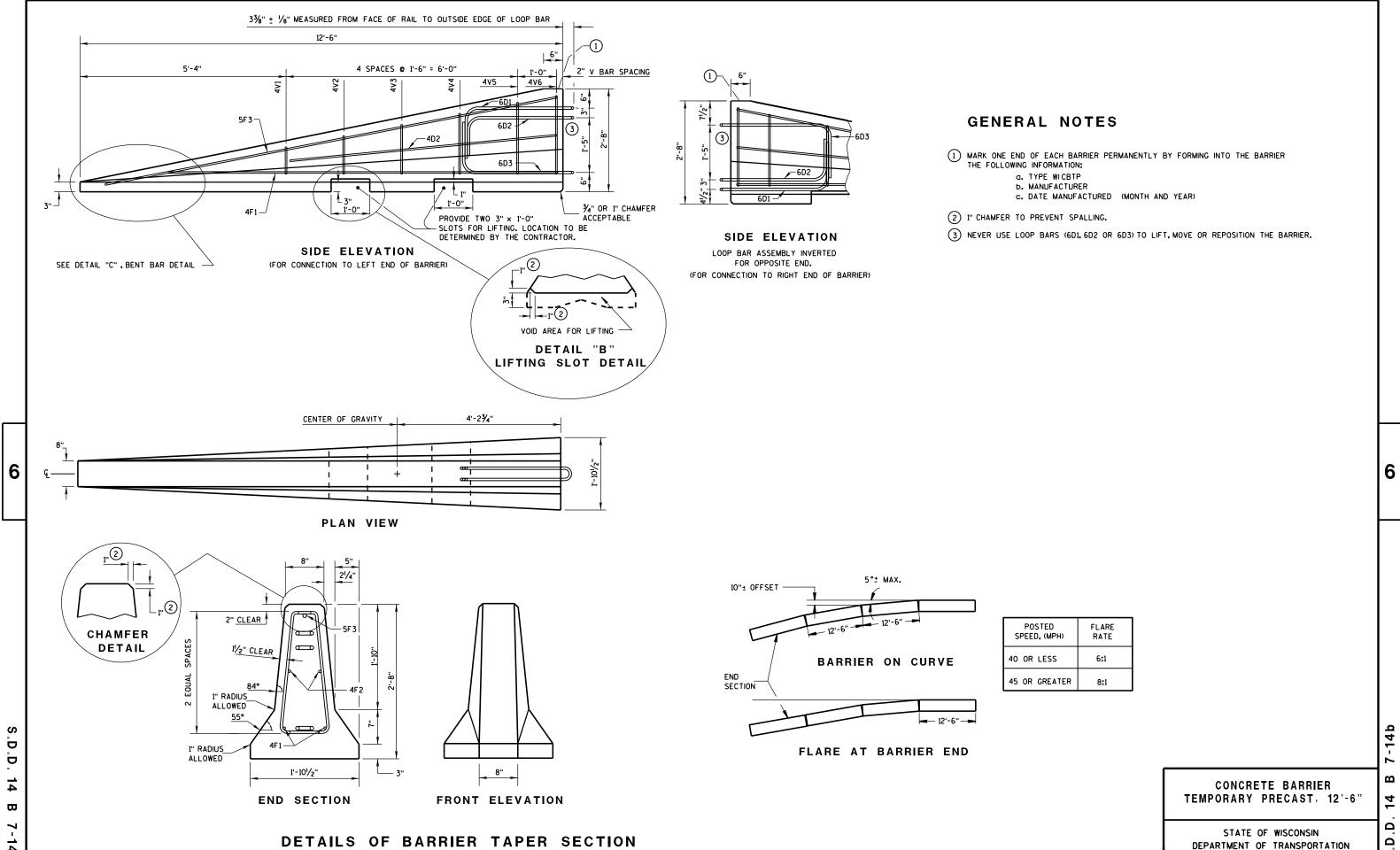
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DEPARTMENT OF TRANSPORTATION



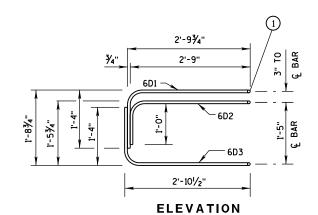
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1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

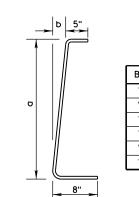
BARRIER TAPER SECTION BILL OF MATERIALS

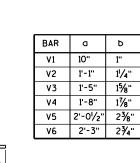
(PER 12'-6" BARRIER TAPER SECTION)

WENTE O BANNEN TAKEN SECTION						
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.			
4V1	4	2	1'-11"			
4V2	4	2	2'-2"			
4٧3	4	2	2'-6"			
4V4	4	2	2'-9"			
4V5	4	2	3'-2"			
4V6	4	2	3'-4"			
4F1	4	2	12'-0"			
4F2	4	2	7'-6"			
5F3	5	1	11'-9"			
L	LOOP ASSEMBLY					
6D1	6	1	8'-5"			
6D2	6	1	7'-7"			
6D3	6	1	8'-6"			
		•	•			



LOOP BAR ASSEMBLY





DETAIL "C" BENT BAR DETAIL

2" MIN. CLEAR

2" MIN. CLEAR

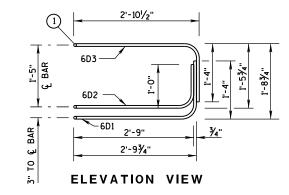
4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

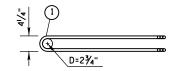
TAPER BARRIER SECTION

BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

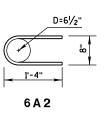
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
L	OOP AS	SSEMBL	Υ
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

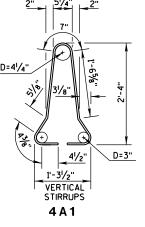




PLAN VIEW Loop bar assembly

(MARKED END SHOWN, INVERT FOR OTHER END)





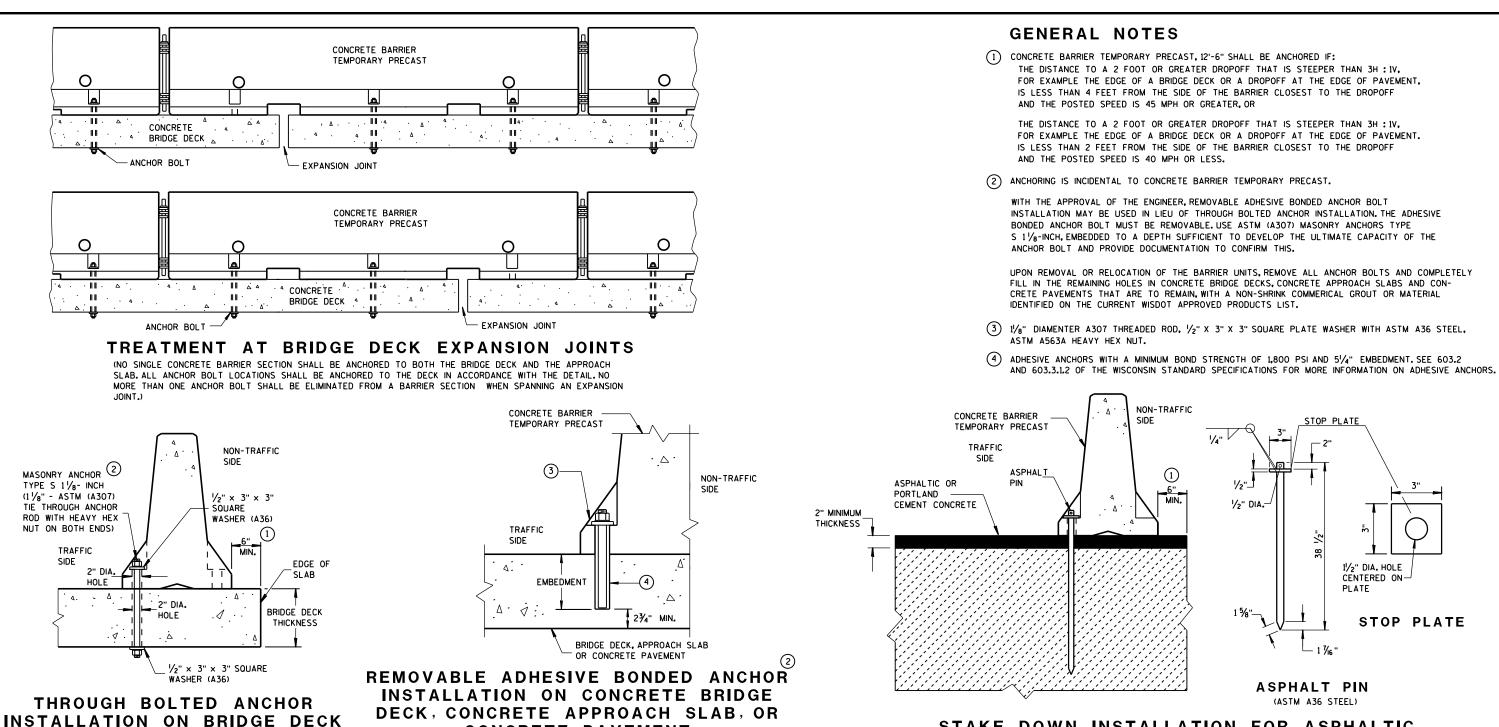
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

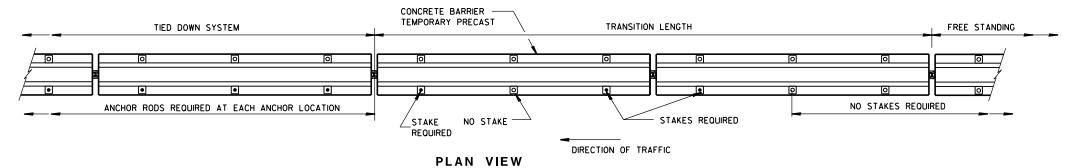
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STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY, IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN,)

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

11/2" DIA. HOLE

CENTERED ON-

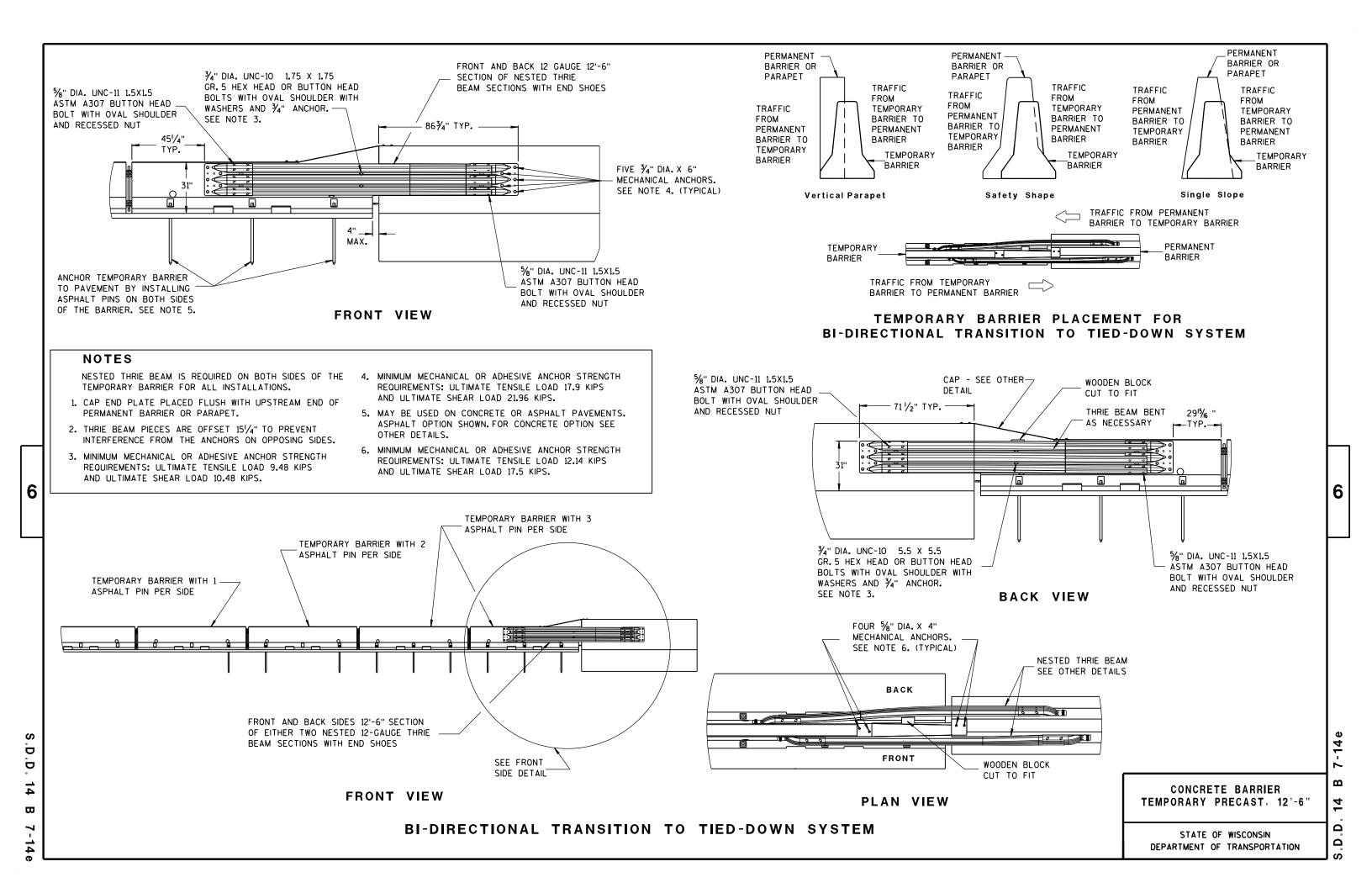
STOP PLATE

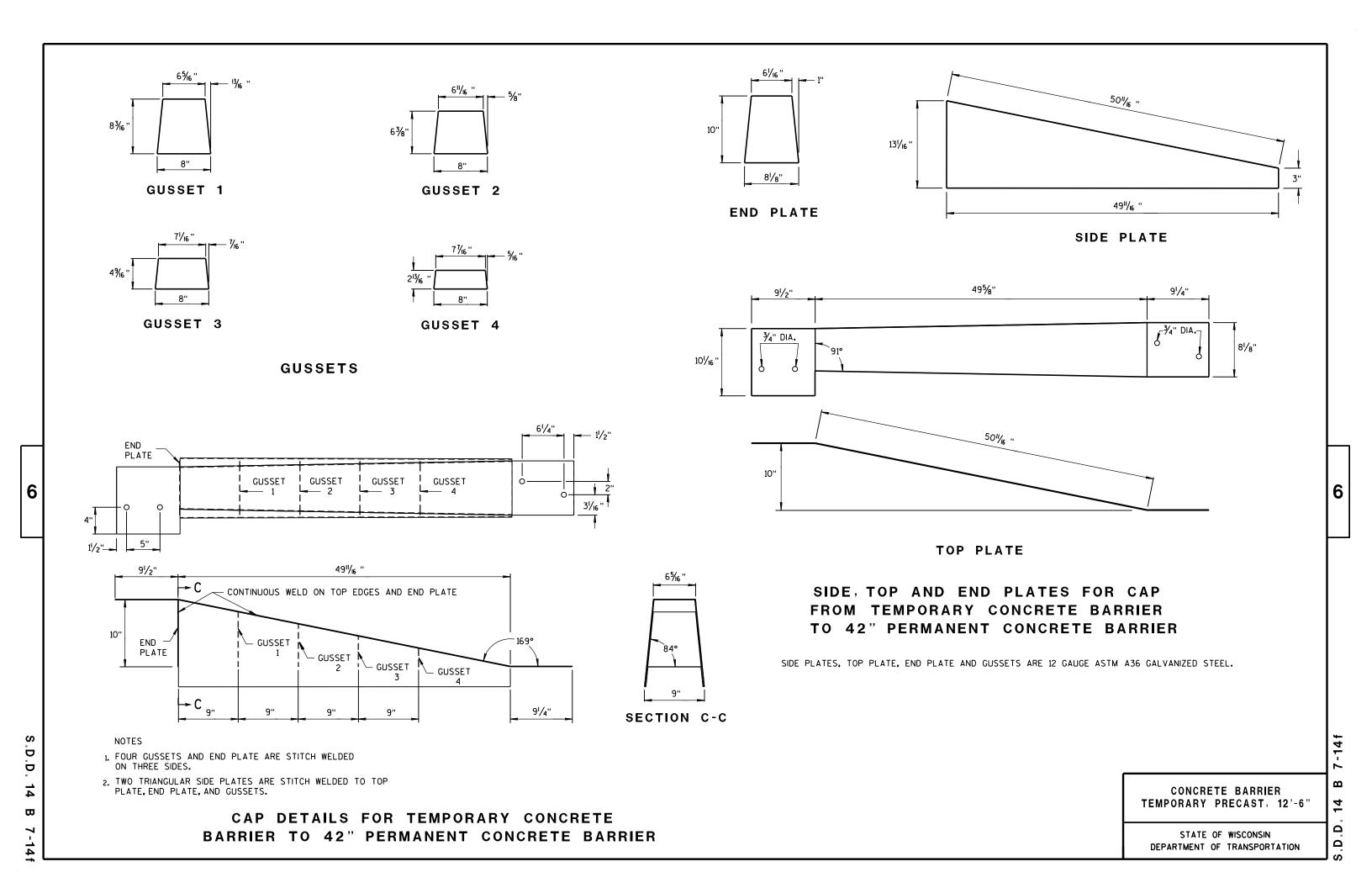
PLATE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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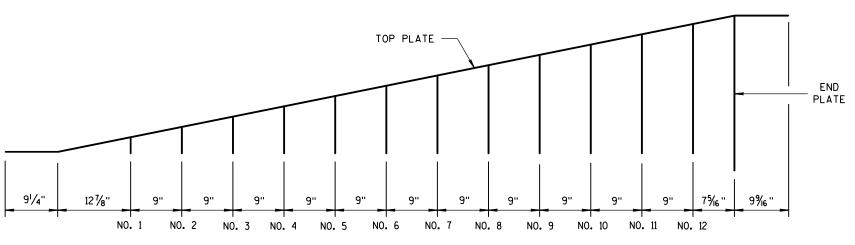
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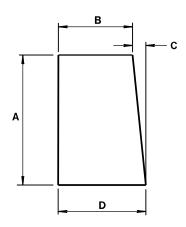
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GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER



GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS					
GUSSET No.	A	В	С	D	
1	21/8"	73/4"	1/4"	8	
2	4"/16 "	7% "	1/2"	8	
3	61/2"	73/8"	11/16 "	81/16 "	
4	85/16"	73/16"	7∕8"	8½ ₆ "	
5	101/8"	7"	1 ½ ₆ "	81/16 "	
6	11 ¹⁵ / ₁₆ ''	6 ¹³ / ₁₆ "	1 1/4"	81/16"	
7	13¾"	65%"	1 ½6"	81/16"	
8	15% "	6¾6"	1 % "	81/16"	
9	173/8"	61/4"	1 ¹³ / ₁₆ ''	8½6"	
10	193/6"	6½ ₆ "	1 15/16 "	81/16 "	
11	21"	57/8"	23/6"	8½ ₆ "	
12	22 ¹³ / ₁₆ "	5 ¹¹ / ₁₆ "	25/6"	81/16"	

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

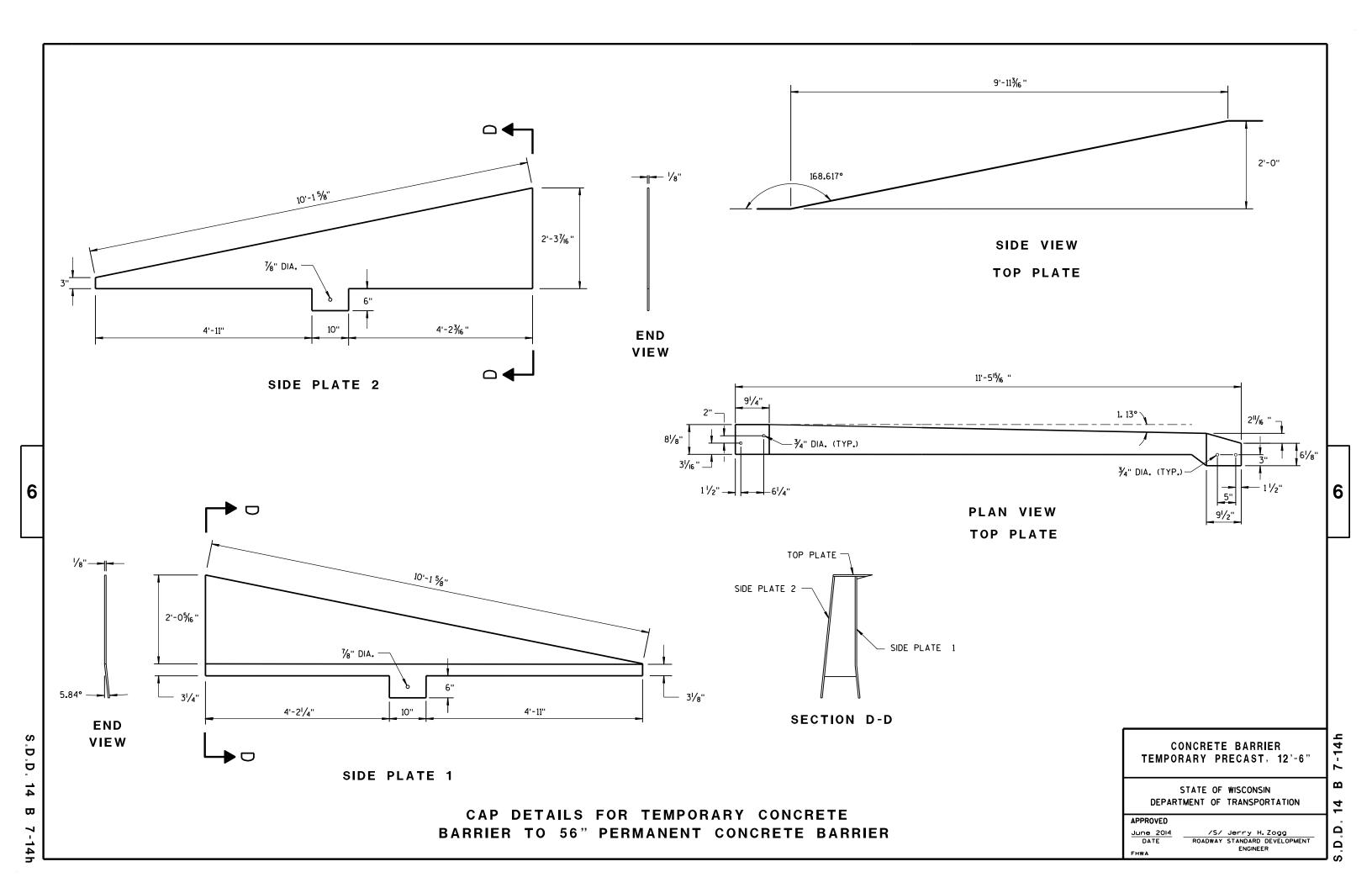
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.

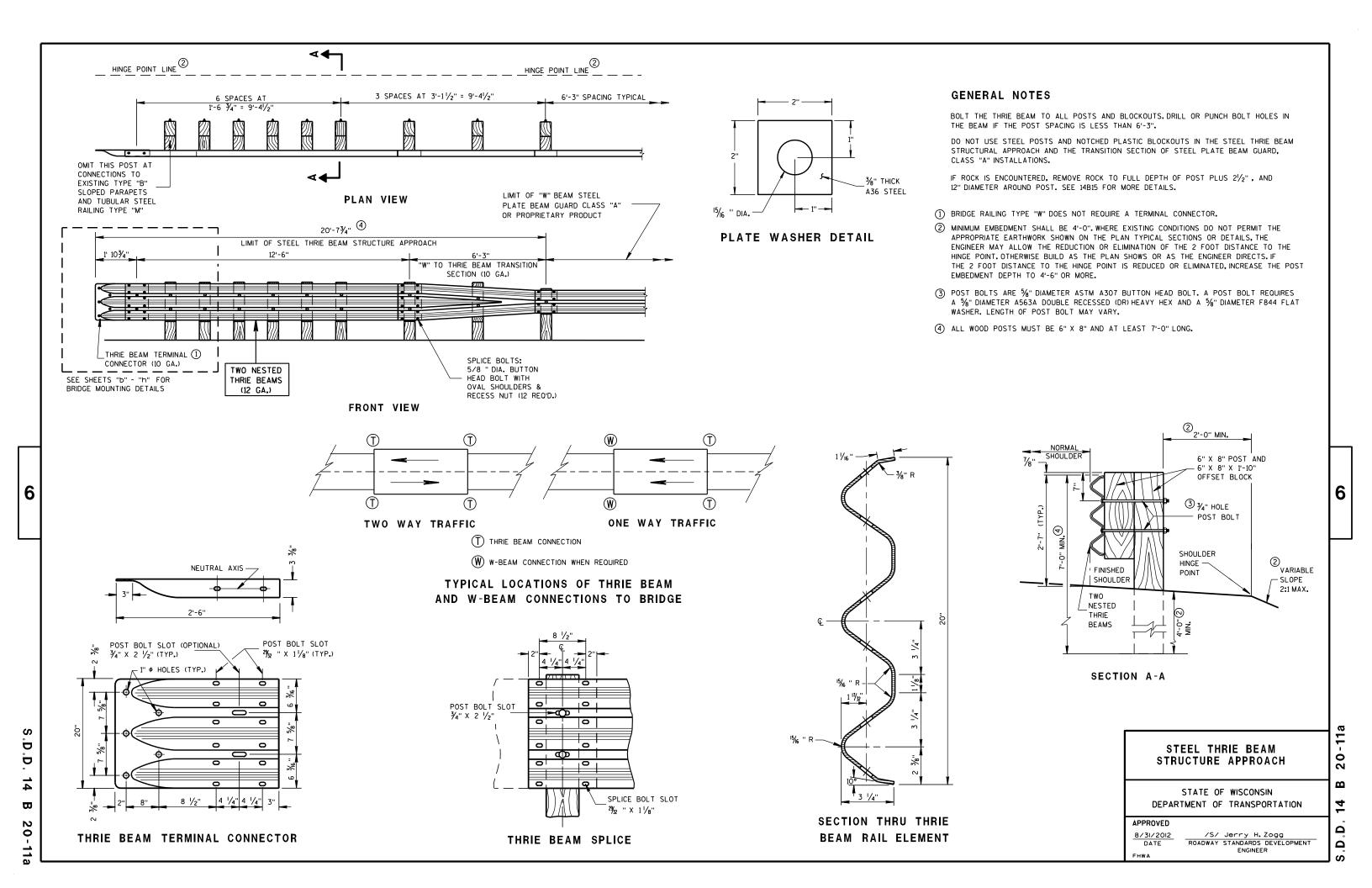
> CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

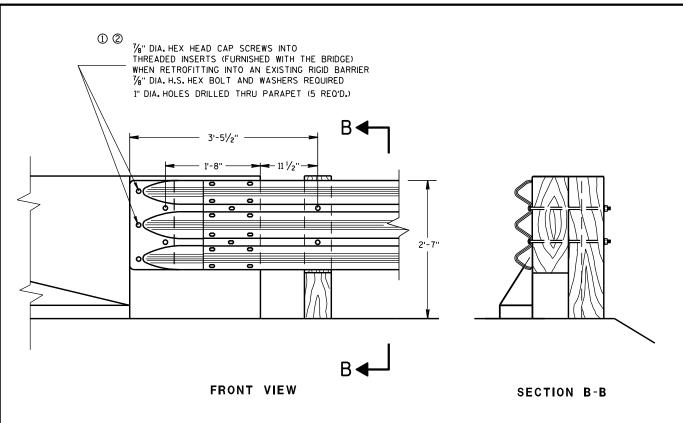
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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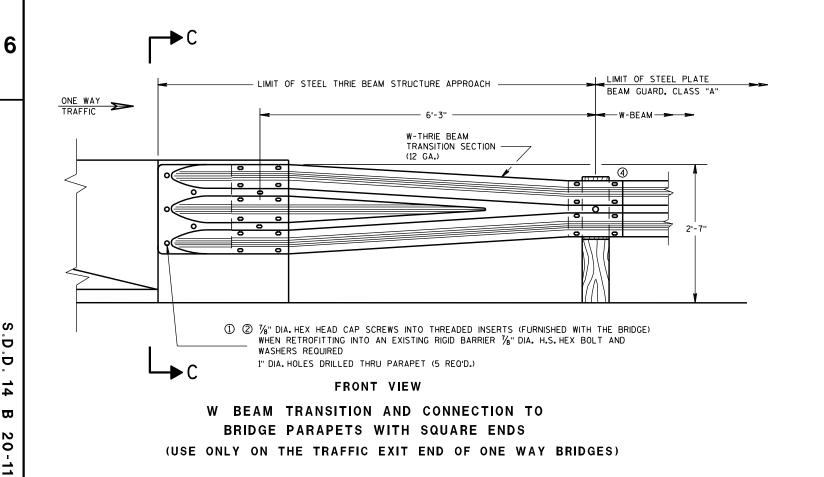
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THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



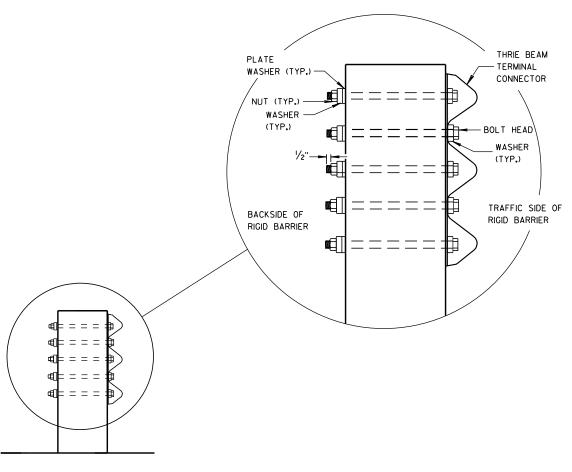
GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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 TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}$ " THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- 3 THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}$ ".
- 4 W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 ROADWAY STANDARDS DEVELOPMENT ENGINEER

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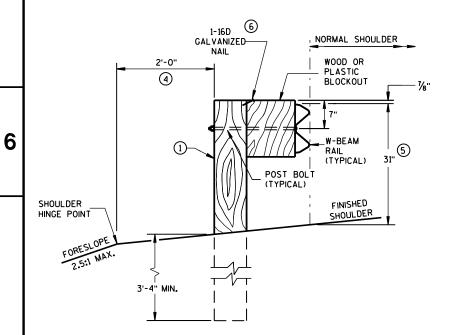
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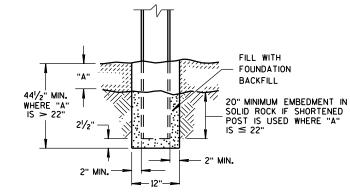
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- 2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- (3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 21/2 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.
- 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 273/4" TO 32".
- (6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



END VIEW

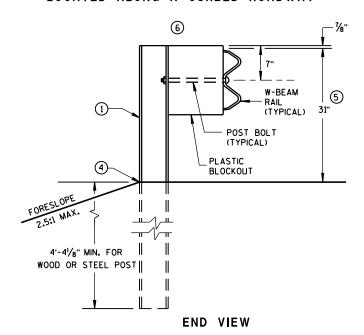
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



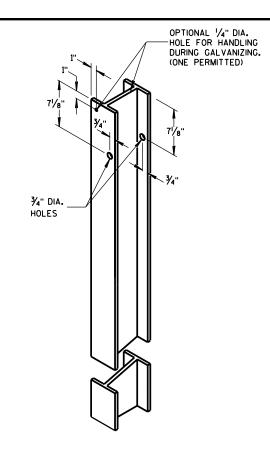
END VIEW SETTING STEEL OR WOOD POST IN ROCK 3



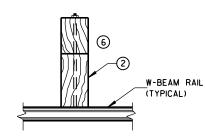
END VIEW LOCATED ALONG A CURBED ROADWAY



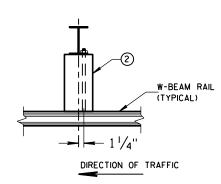
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



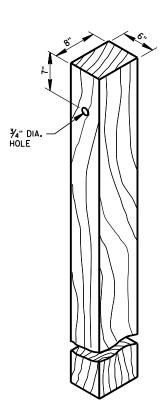
STEEL POST & HOLE PUNCHING DETAIL (w6X9)^①



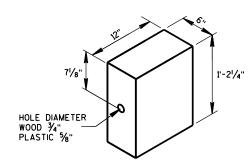
PLAN VIEW WOOD POST, **BLOCKOUT & BEAM**



PLAN VIEW STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD POST (6" X 8") NOMINAL



WOOD OR PLASTIC BLOCKOUT

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

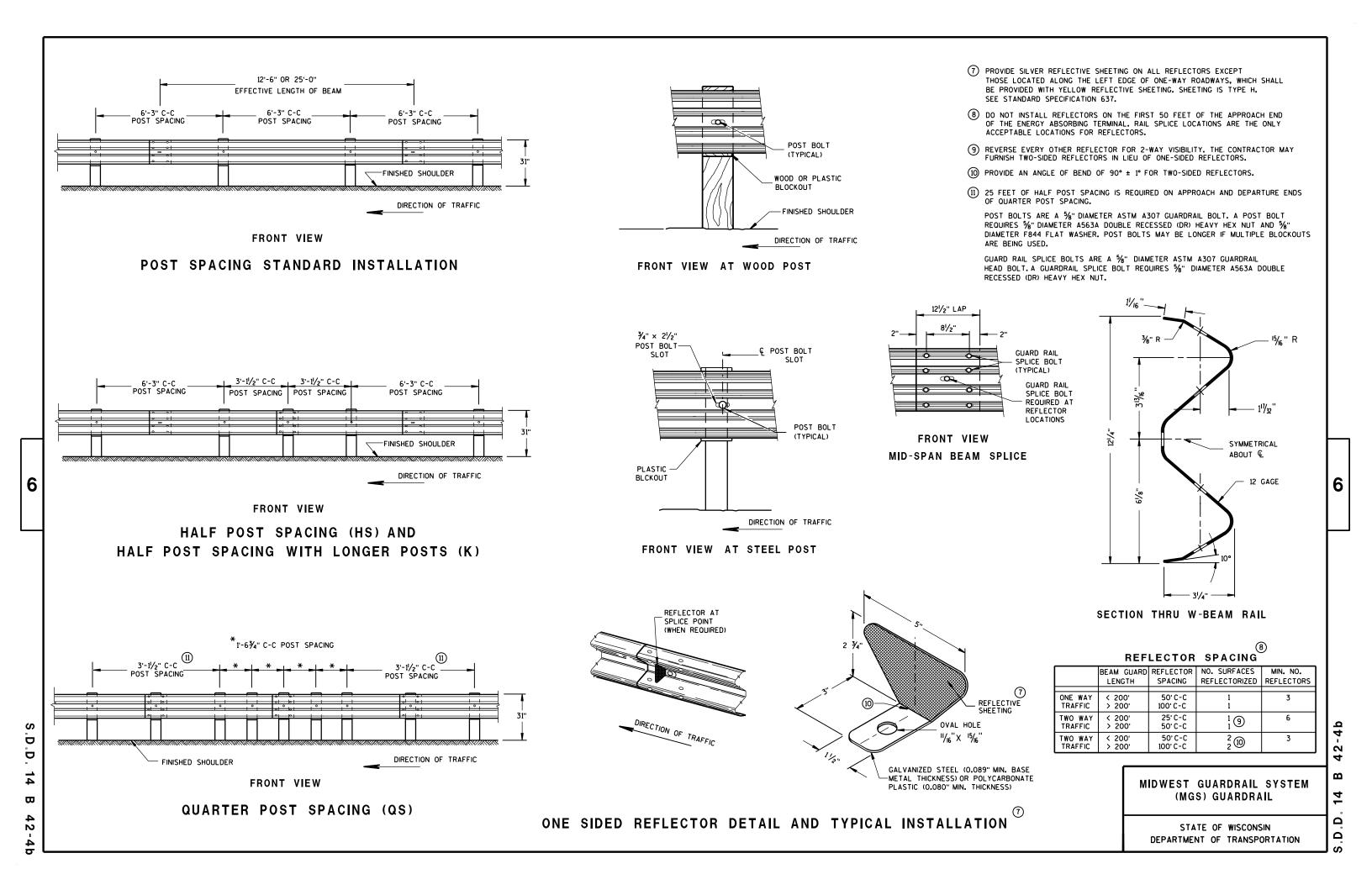
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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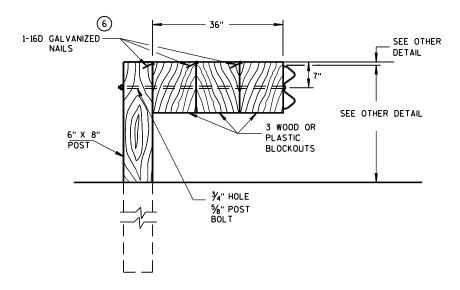
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DETAIL FOR 16" BLOCKOUT DEPTH

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

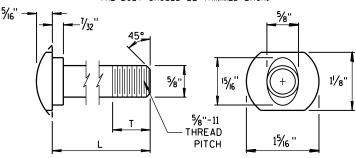


DETAIL FOR 36" BLOCKOUT DEPTH

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

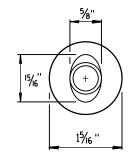
> DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16". 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

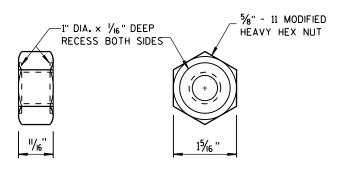


POST BOLT TABLE

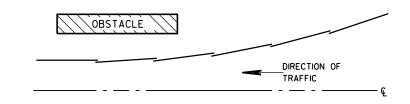
11/8"
1/8
13/4"
4"
4½ ₆ "
4"
41/16"
4"



ALTERNATE BOLT HEAD

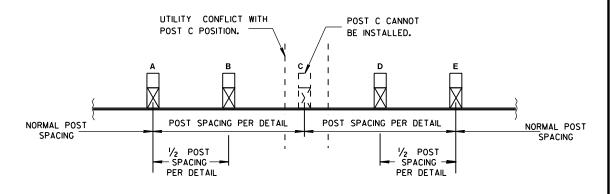


POST BOLT, SPLICE BOLT AND RECESS NUT



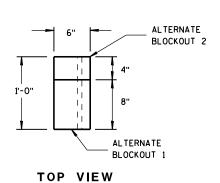
PLAN VIEW

BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION





SIDE VIEW

ALTERNATE WOOD **BLOCKOUT DETAIL**

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

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SECTION A-A SECTION B-B

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PLAN VIEW

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
1	WOOD BREAKAWAY POST
2	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1AND 2
3	WOOD CRT
4	WOOD BLOCKOUT
(5)	PIPE SLEEVE
6	BEARING PLATE
7	BCT CABLE ASSEMBLY
8	ANCHOR CABLE BOX
9	GROUND STRUT
10	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL.MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
12	END SECTION EAT
(3)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



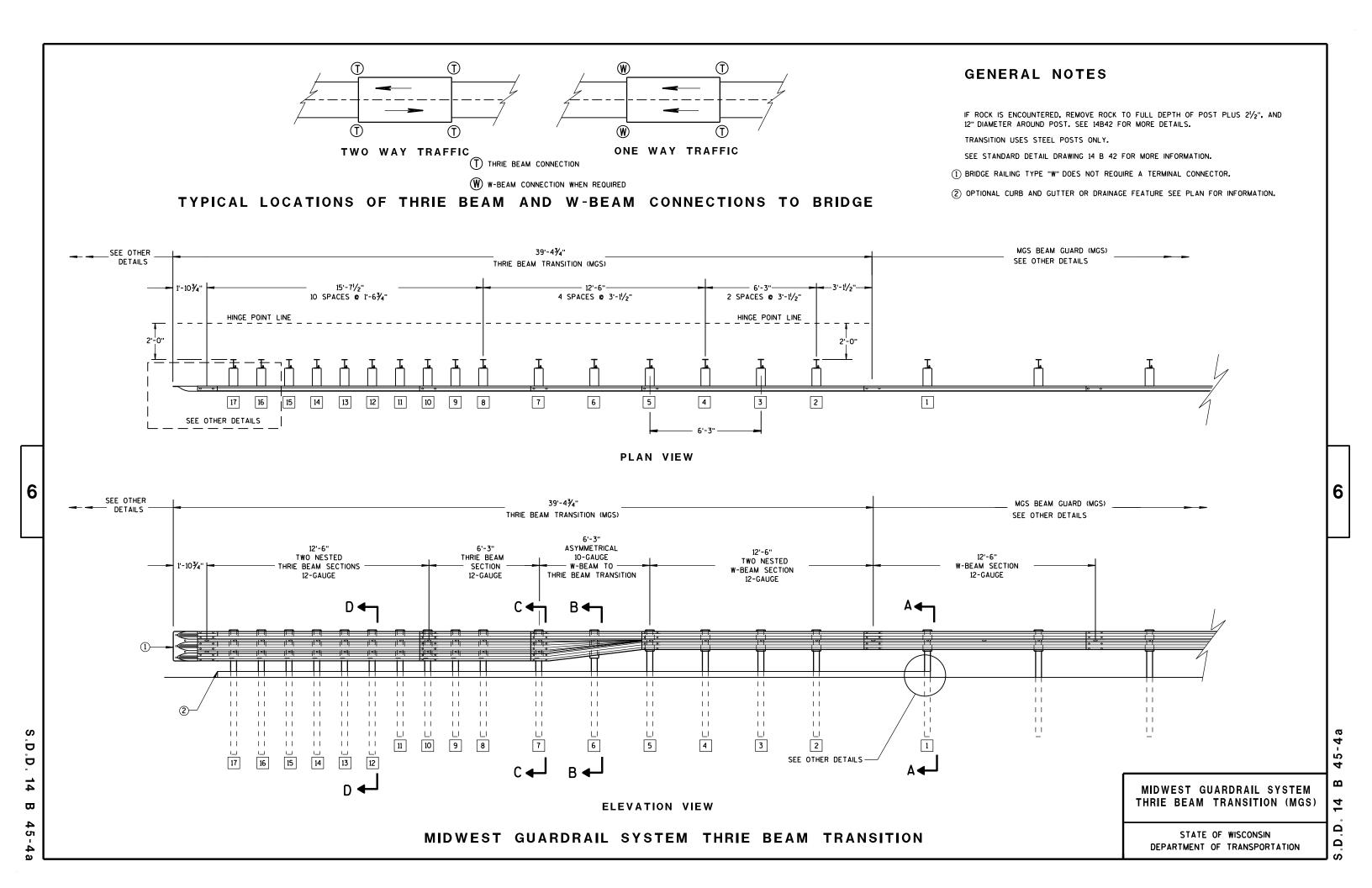
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

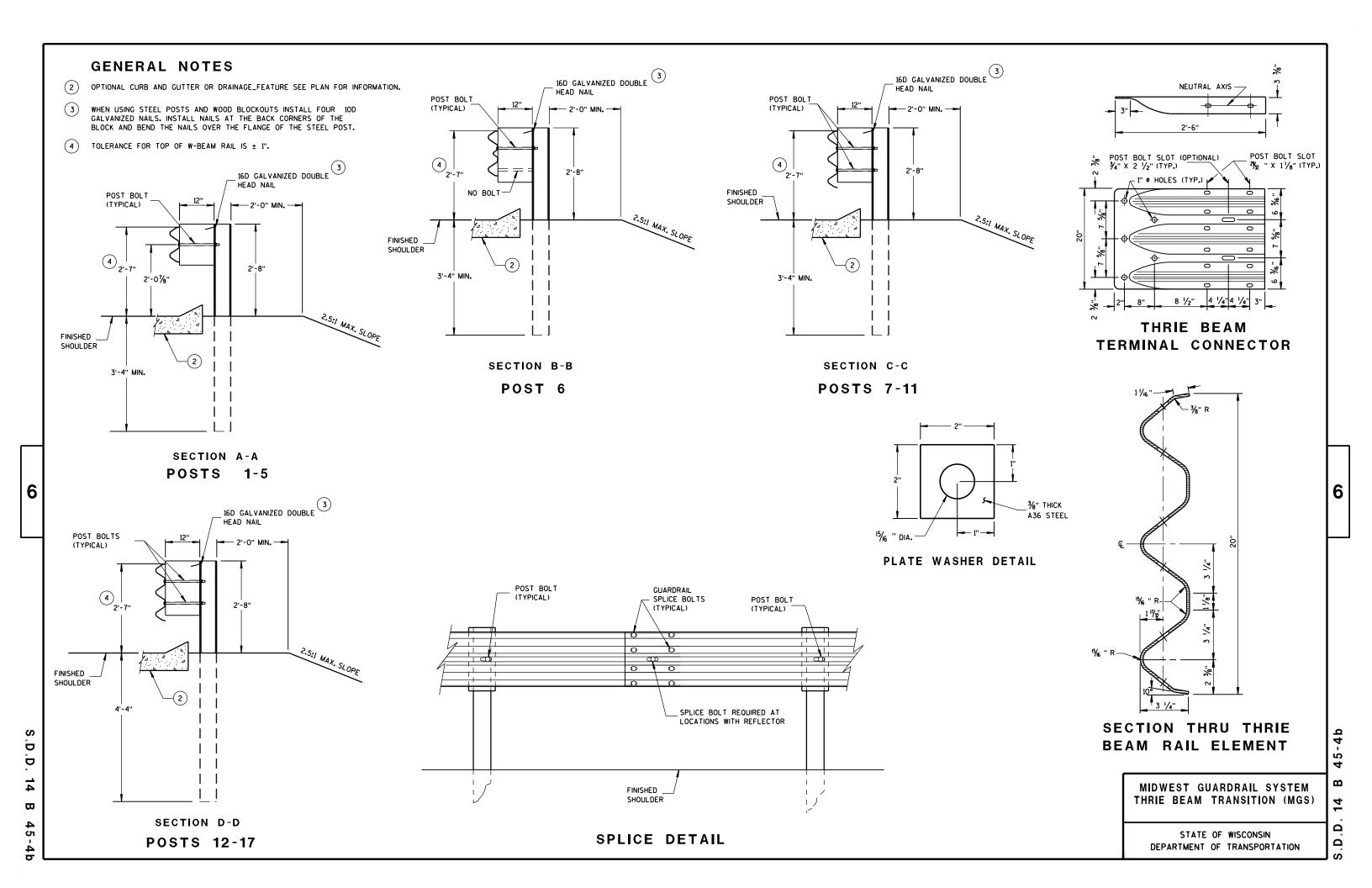
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

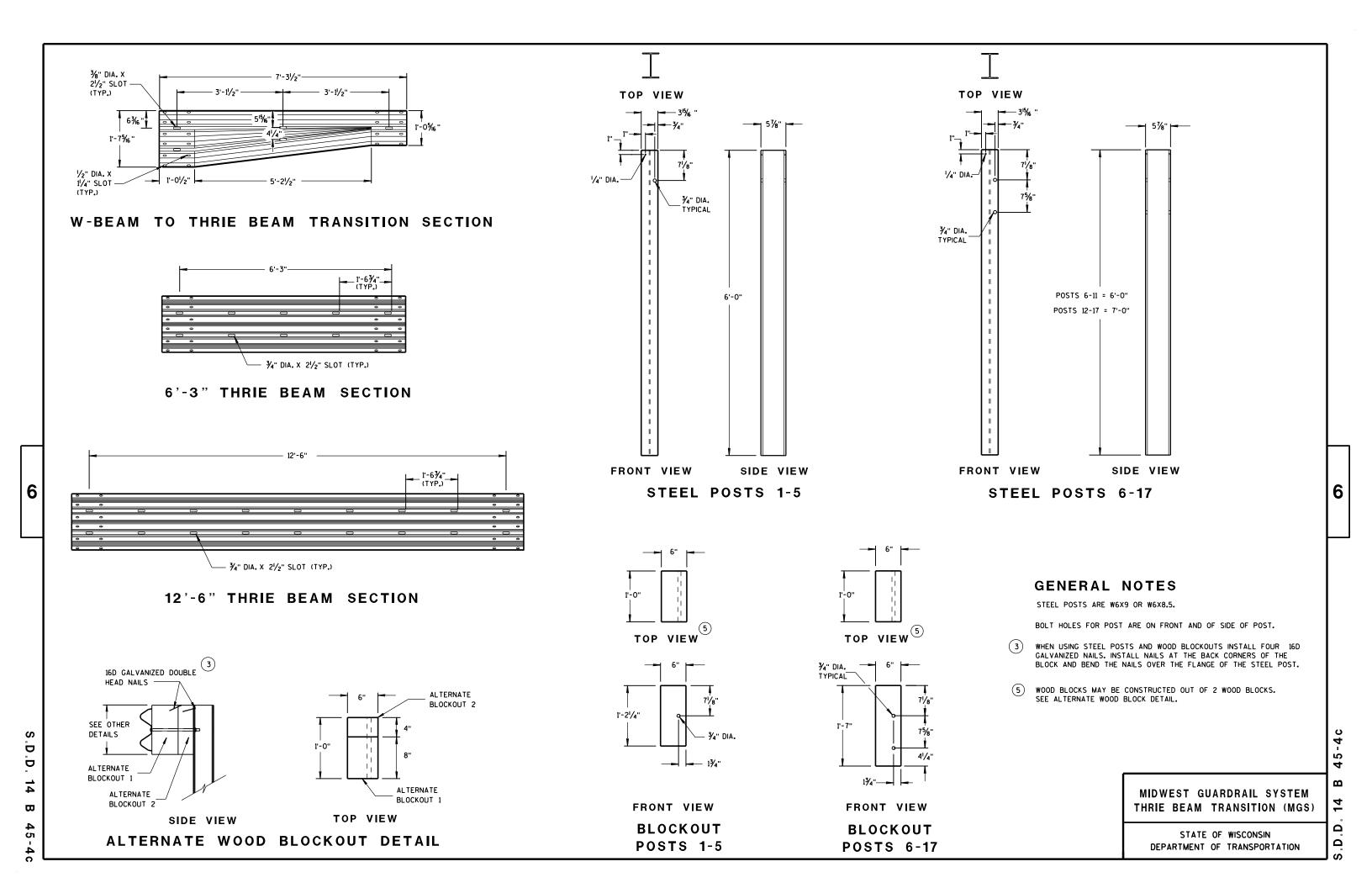
44-2b

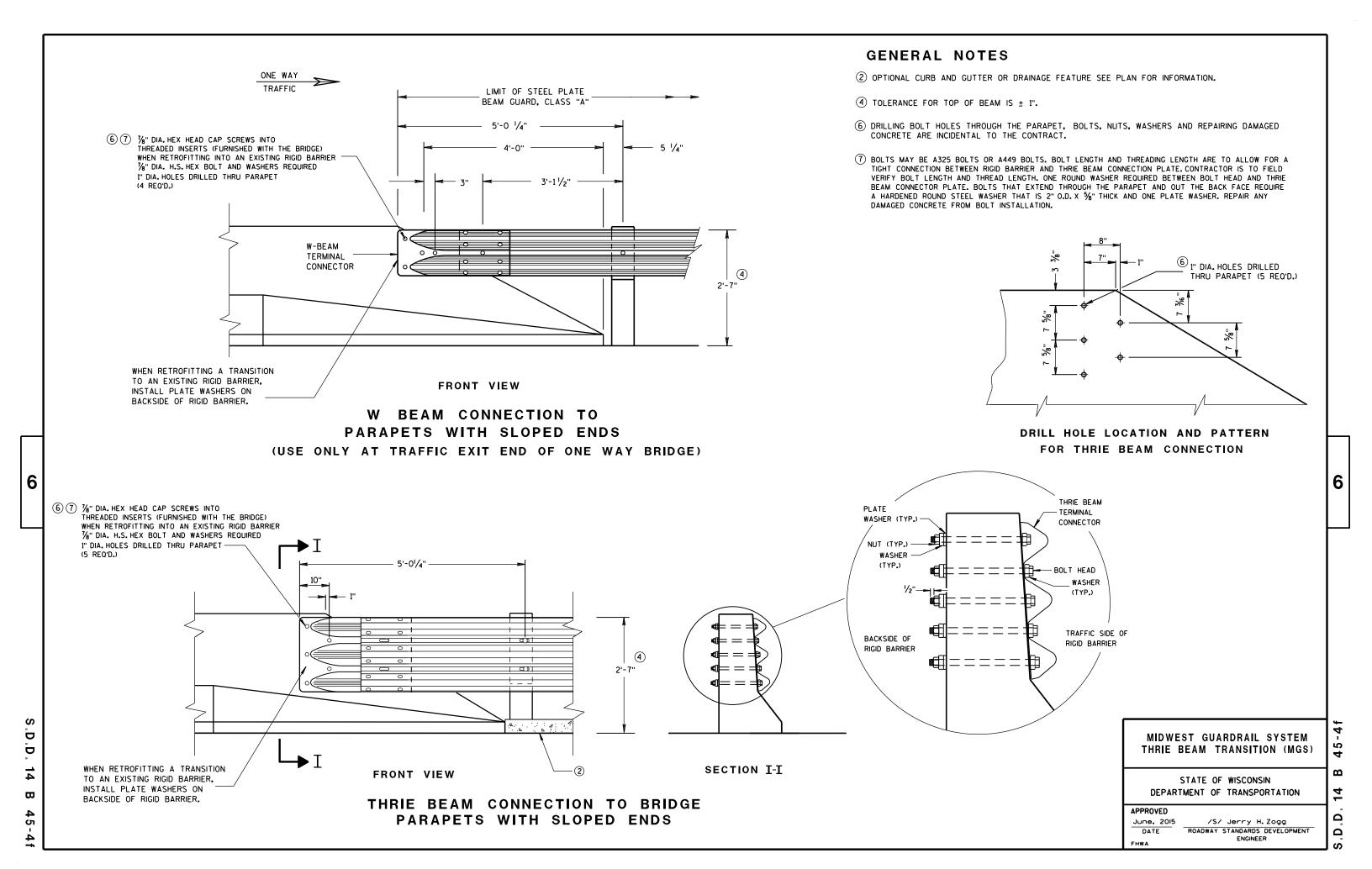
 $\mathbf{\omega}$ 14 ٠٠ ت

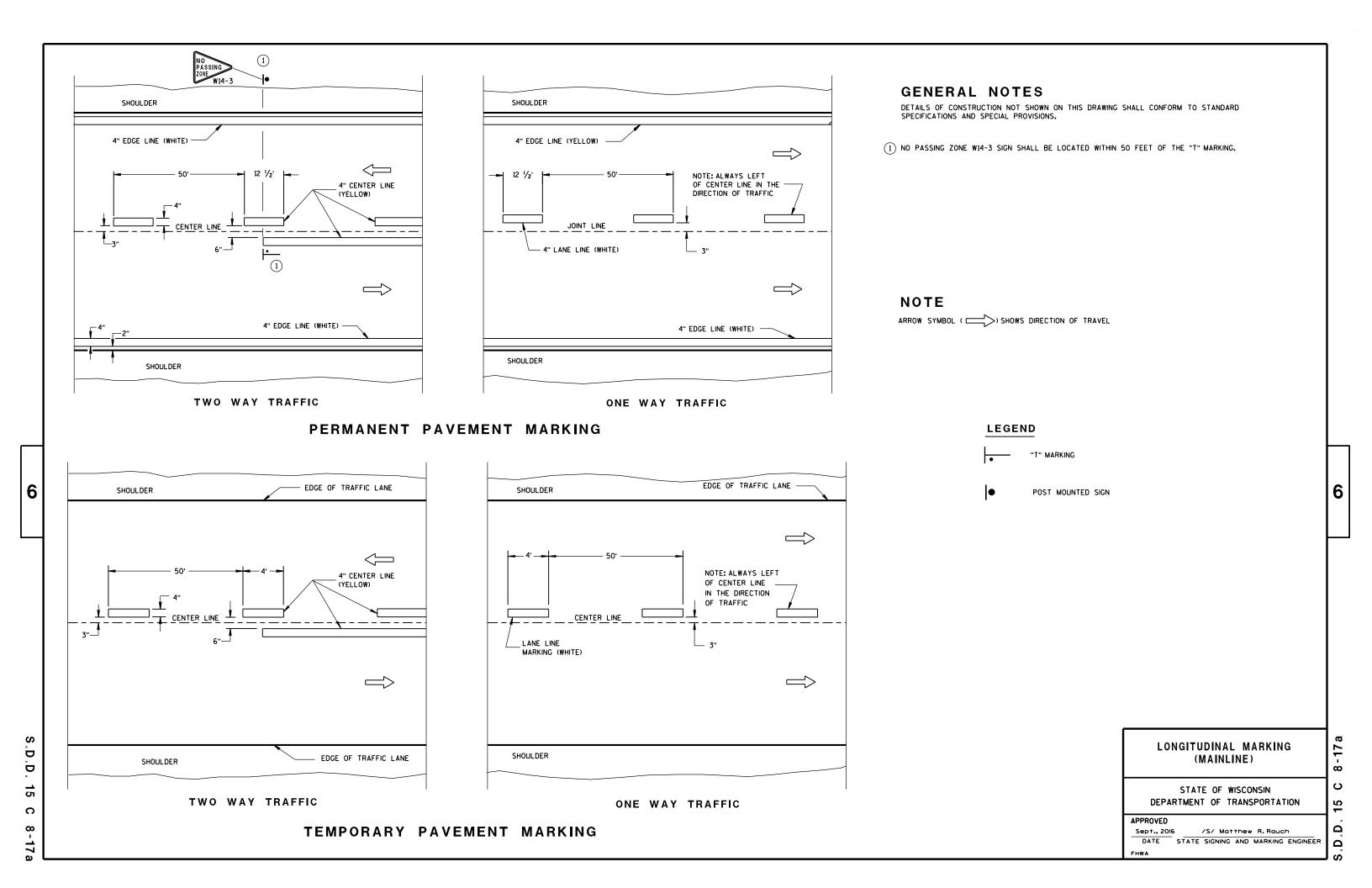


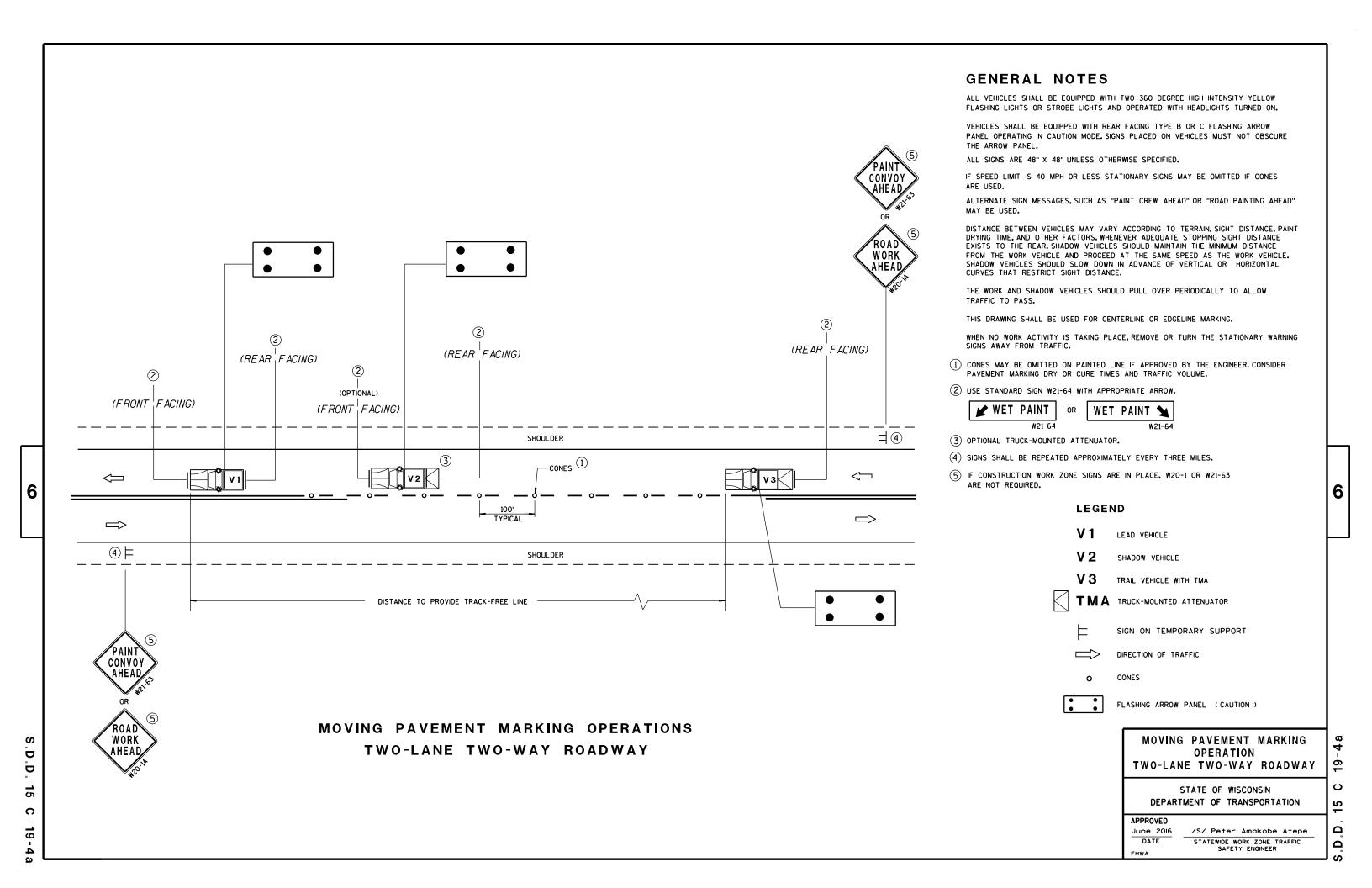


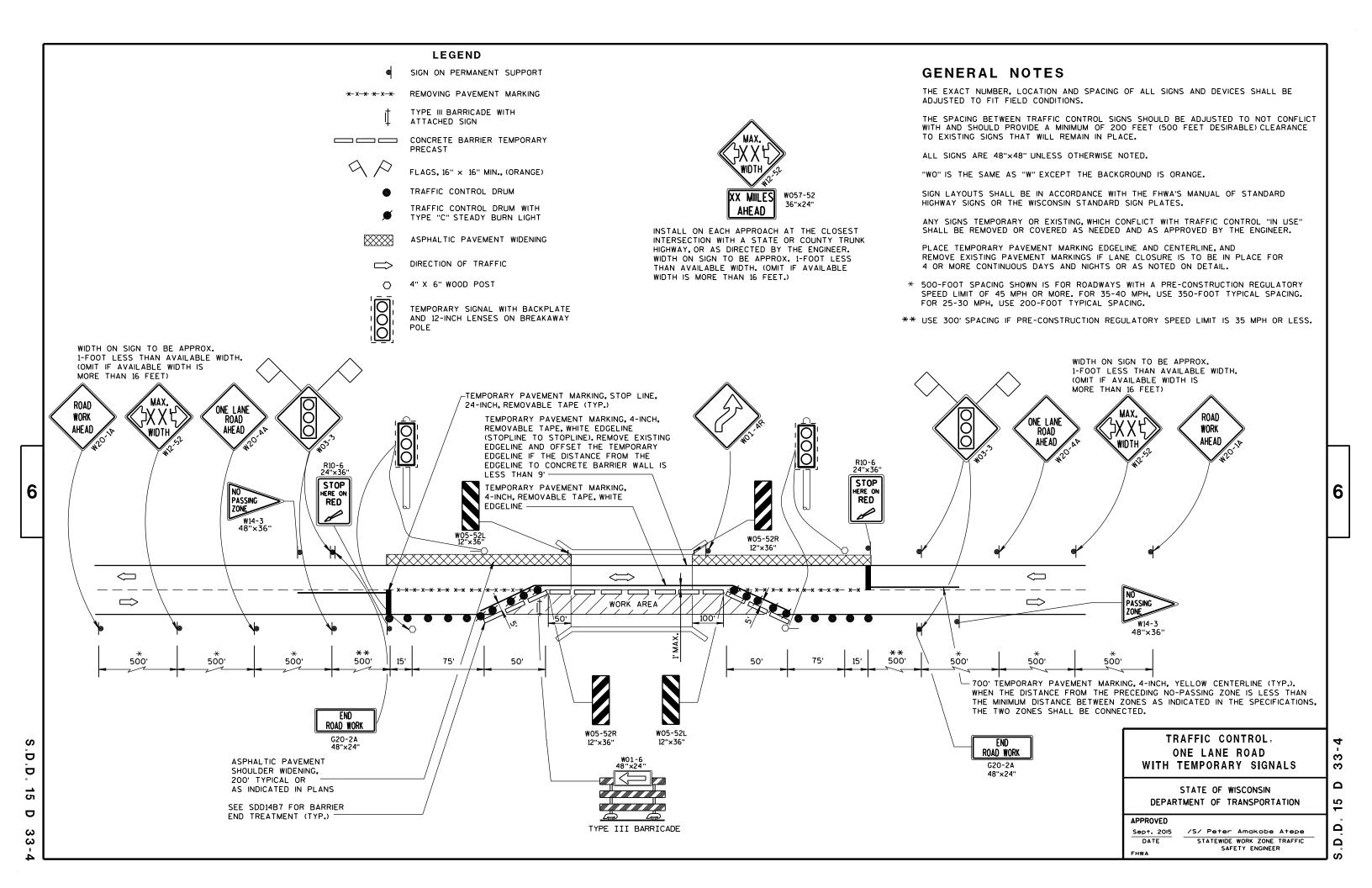












URBAN ARFA



RURAL AREA (See Note 2)



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



5'-3"(生) D^{-1} Outside Edae of Gravel

White Edgeline Location

** 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.

HWY:

* 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.

PLOT BY : mscj9h

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 $7'-3''(\pm)$ or 6'-3" (±) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) is $7'-3''(\pm)$ or $6'-3''(\pm)$ per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is 5' - 3'' (\pm).
- 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'' (\pm) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (\pm) . 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'' (\pm).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

for State Traffic Engineer

DATE 7/23/15

PLATE NO. <u>A4-3.20</u>

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN

PROJECT NO:

PLOT DATE: 23-JUL-2015 15:21

COUNTY:

PLOT NAME :

PLOT SCALE: 99.237937:1.000000

WISDOT/CADDS SHEET 42



NOTES: 1. ALL MATERIAL TO BE APPROVED

BY ENGINEER PRIOR TO INSTALLATION

- 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
- 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

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



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

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

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

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

APPROVED

WISDOT/CADDS SHEET 42

GENERAL NOTES

- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways, mounting height is 7'-3'' (±) or 6'-3'' (±) depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3'' (±) or 6'-3'' (±) per urban or rural detail respectively.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8). Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

URBAN AREA RURAL AREA (See Note 3) 2'Min - 4'Max (See Note 6) ₩E# FF# 6'-3"(±) 6'-3"(±) 7'-3"(±) ** Curb ****\ Flowline D **7000** White Edgeline D 11 White Edgeline, Location Outside Edae Location

2' Min - 4' Max (See Note 6) 6'-3"(±) Curb Flowline. - 11

48" DIAMOND WARNING SIGN

HWY:

_ 26" 5 ' - 3 "(±) White Edgeline Location Outside Edge of Gravel 48" DIAMOND WARNING SIGN

COUNTY:

Outside Edge

of Gravel

	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E	
* * *	Greater than 48" Less than 60"	12"	
	60" to 120"	L/5	l

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)				
L	E			
Greater than 120" less than 168"	12"			

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)				
L	E			
168" and greater	12"			

POST EMBEDMENT DEPTH

of Gravel

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

Matther

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN

PROJECT NO:

PLOT DATE: 23-JUL-2015 15:23

PLOT SCALE: 107.021305:1.000000

WISDOT/CADDS SHEET 42

PLOT NAME :

PLOT BY: mscj9h

WISCONSIN DEPT OF TRANSPORTATION APPROVED

For State Traffic Engineer

PLATE NO. 44-4.14 DATE 7/23/15



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

Nather R Raw
For State Traffic Engineer

DATE <u>8/11/16</u>

PLATE NO. <u>44-8.8</u>

PROJECT NO:

FILE NAME : C:\CAFfiles\Projects\tr stdplote\A48 DCN

PLOT DATE . 11-416-2016 11:35

PINT RY * \$\$ nintuser \$\$

SHEET NO:

| | |



PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



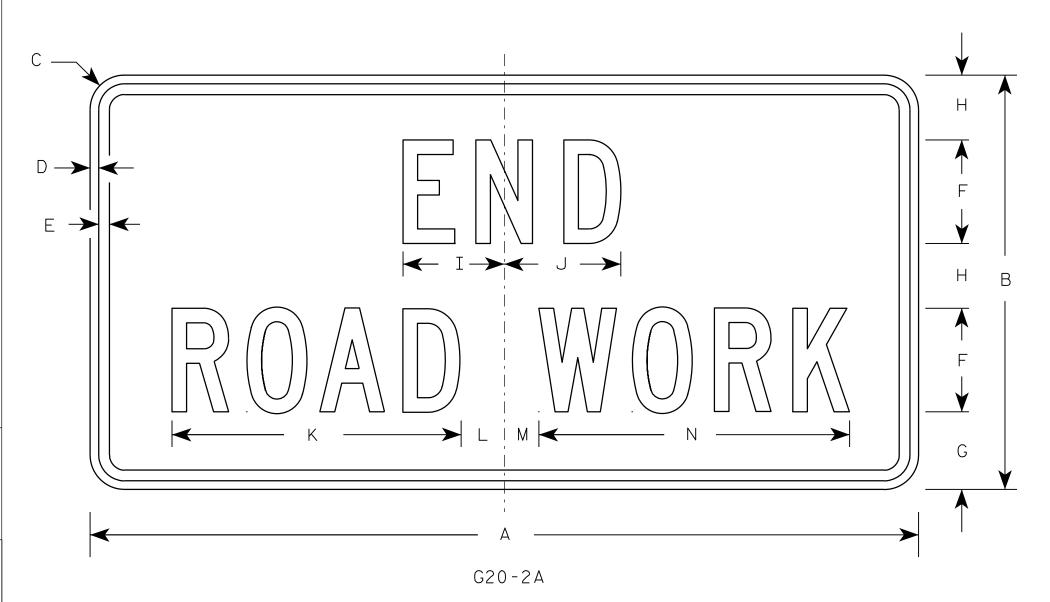
NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.

2. Color:

Background - Orange Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Metric equivalent for this sign is:

SIZE					
1	900	mm	Χ	450	mm
2	1200	mm	Х	600	mm
3	1200	mm	Х	600	mm
4	1200	mm	Χ	600	mm
5	1200	mm	Х	600	mm

PROJECT NO:

SIZE	Α	В	С	D	E	F	G	Ι	I	J	K	L	М	N	0	Р	a	R	S	T	U	٧	W	Х	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 ½	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 ½	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 1/8	6 3/4	16 ¾	2 1/2	1 3/4	18 1/2													8.0	0.72

COUNTY:

STANDARD SIGN G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Ra

For State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\G202A.DGN

HWY:

PLOT DATE: 30-SEP-2009 09:31

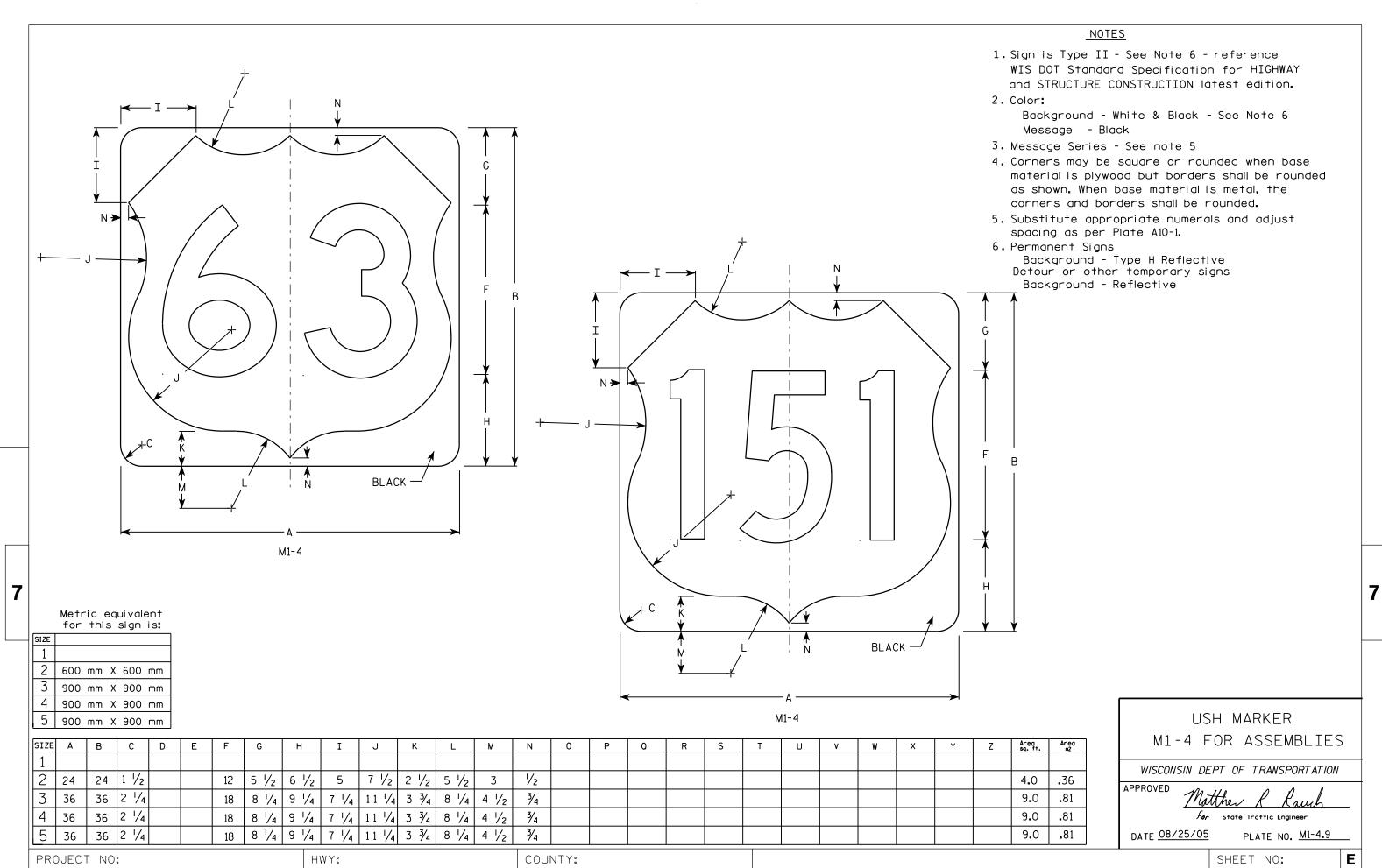
PLOT BY: ditjph

PLOT NAME :

PLOT SCALE: 5.561773:1.000000

WISDOT/CADDS SHEET 42

Ε



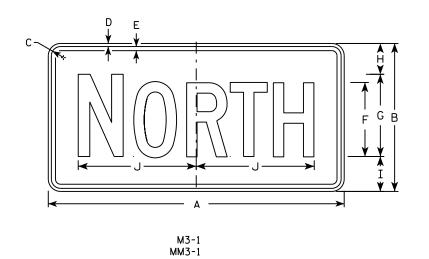
FILE NAME : C:\Users\Projects\tr_stdplate\M14.DGN

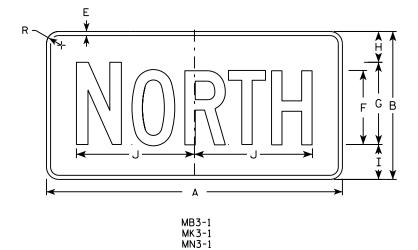
PLOT DATE: 13-OCT-2005 14:52

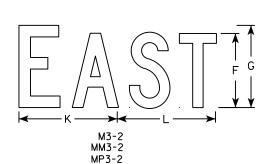
PLOT BY : DITJPH PLOT NAME :

PLOT SCALE: 5.960833:1.000000

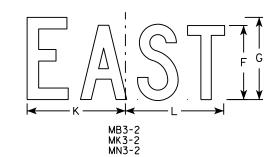
WISDOT/CADDS SHEET 42

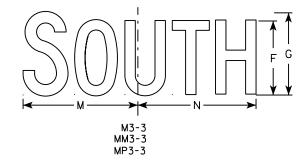


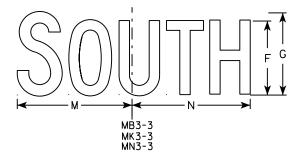


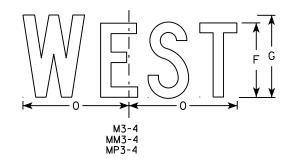


MP3-1

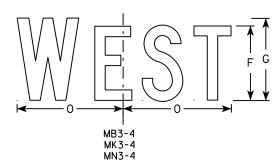








HWY:



NOTES

- 1. All Signs Type II Type H
- 2. Color:

Background - See note 5 Message - See note 5

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

5. M3-1 thru M3-4 Background - White Message - Black

MB3-1 thru MB3-4 Background - Blue

Message - White

MK3-1 thru MK3-4 Background - Green

Message - White

MM3-1 thru MM3-4 Background - White

Message - Green

MN3-1 thru MN3-4 Background - Brown

Message - White

MP3-1 thru MP3-4 Background - White

Message - Blue

6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	0	R	S	Т	U	V	W	Х	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 1/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

COUNTY:

STANDARD SIGNS M3-1 thur M3-4 **SERIES**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

DATE 10/15/15 PLATE NO. M3-1.14

Ε

SHEET NO:

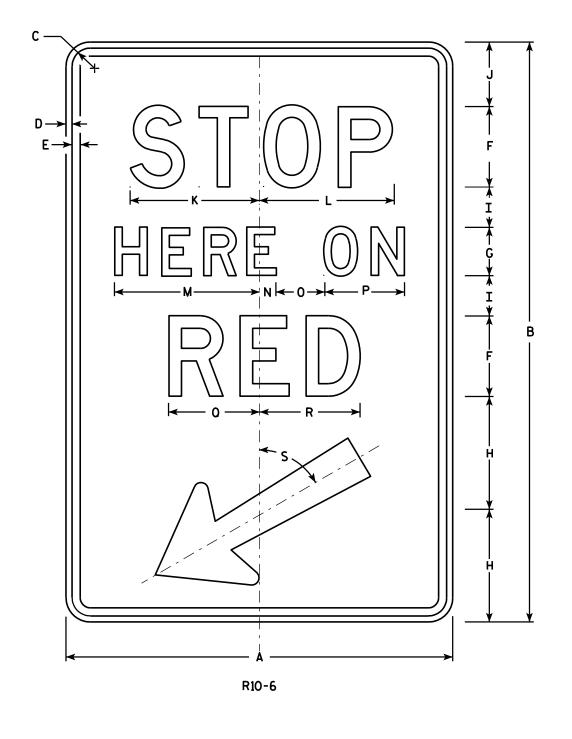
FILE NAME · C·\CAFfiles\Projects\tr stdolote\M31 DCN

PROJECT NO:

PLOT DATE . 01-DEC-2015 17:54

PLOT RY . \$\$ plotuser \$\$ PLOT NAME :

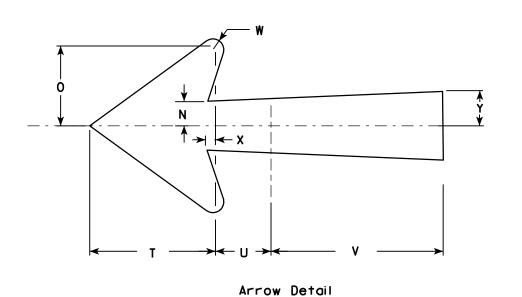
PLOT SCALE . 11 675051.1 000000



- 1. Sign is Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - White Message - Black

- 3. Message Series D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	0	R	S	T	U	٧	W	х	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 %	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 %	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

SHEET NO:

DATE 4/5/11

PLATE NO. R10-6.6

COUNTY:

PLOT BY: mscj9h

PLOT NAME :

PLOT SCALE: 5.959043:1.000000

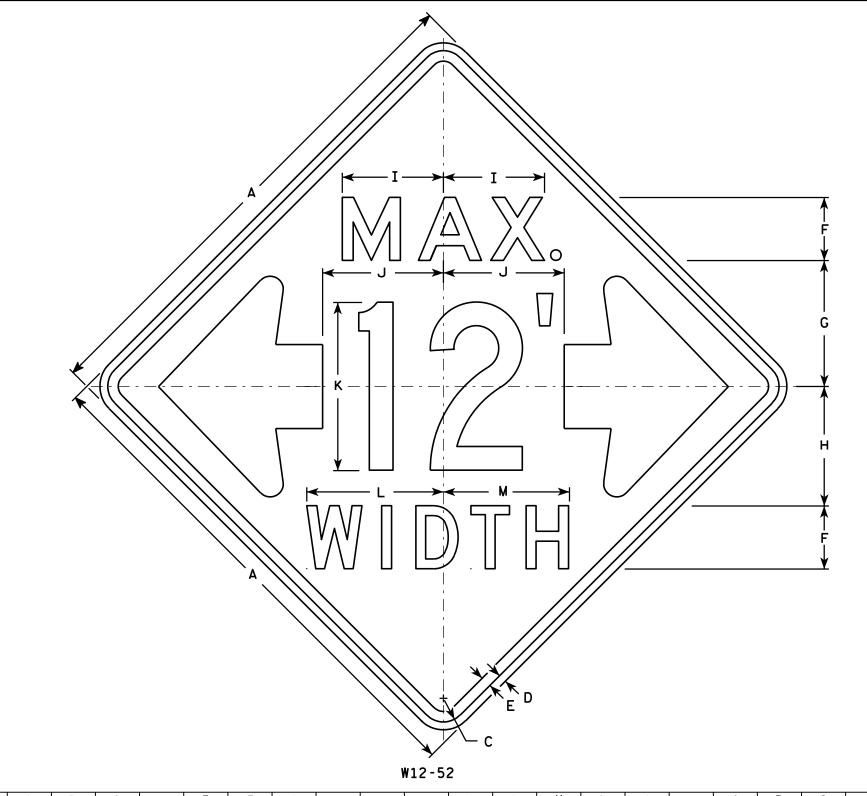
WISDOT/CADDS SHEET 42

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN

PROJECT NO:

HWY:

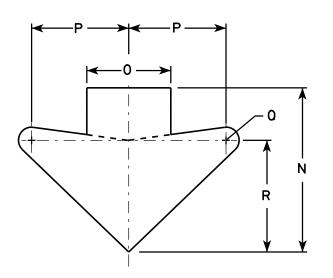
PLOT DATE: 05-APR-2011 09:50



- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series See note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. The top line is series E, the numerals are series C, and the bottom line is series D.
- 6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

CT TE			T					ш			1/		1.4		_		_		_					· ·	·	7	Area
SIZE	Α	В	L	ט	-	F	G	Н	l I	J	K	L	M	N	U	P	U	R	>	1	U	V	W	X	T		Area sq. ft.
1																											
25	48		2 1/4	₹4	1	6	12	11 3/8	9 %	11 1/2	16	13	12	15 %	8	9 1/4	1 1/4	10 %									16.0
2M	48		2 1/4	₹4	1	6	12	11 3/8	9 %	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 %									16.0
3																											
4																											
5																											

COUNTY:

STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

SHEET NO:

HWY:

PROJECT NO:

PLOT NAME :



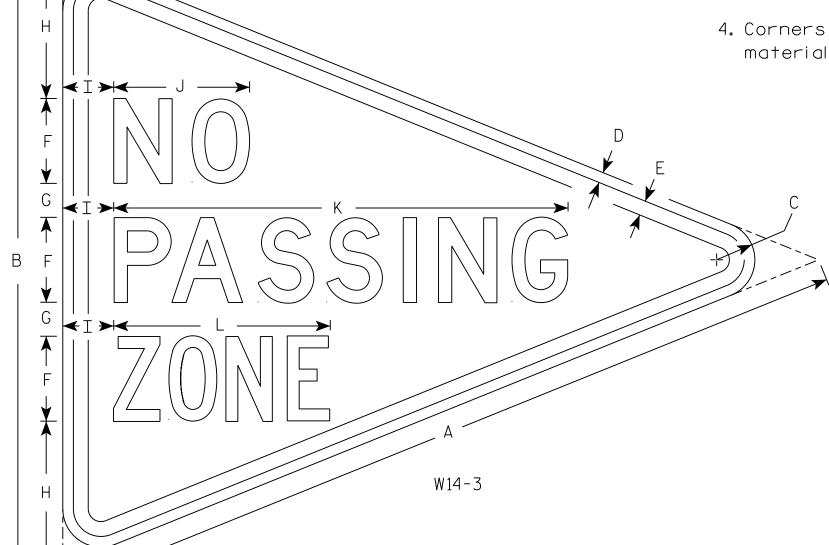
- 1. Sign is Type II Type F Reflective
- 2. Color:

Background - Yellow

Message – Black

3. Message Series - Lines 1 and 2 are Series D. Line 3 is series C.

4. Corners and borders shall be rounded on all base materials for this sign.



			,																								
SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	<i>7</i> ⁄8	5	2	8 ½	3	8	26 ¾	12 3/4															5.56
2M																											
3																											
4																											
5																											
PRC	JECT	NO:					Н	WY:					COL	INTY:													

STANDARD SIGN W14-3

WISCONSIN DEPT OF TRANSPORTATION

500 3/21/17

E 3/21/17 PLATE NO. W14-3

SHEET NO:

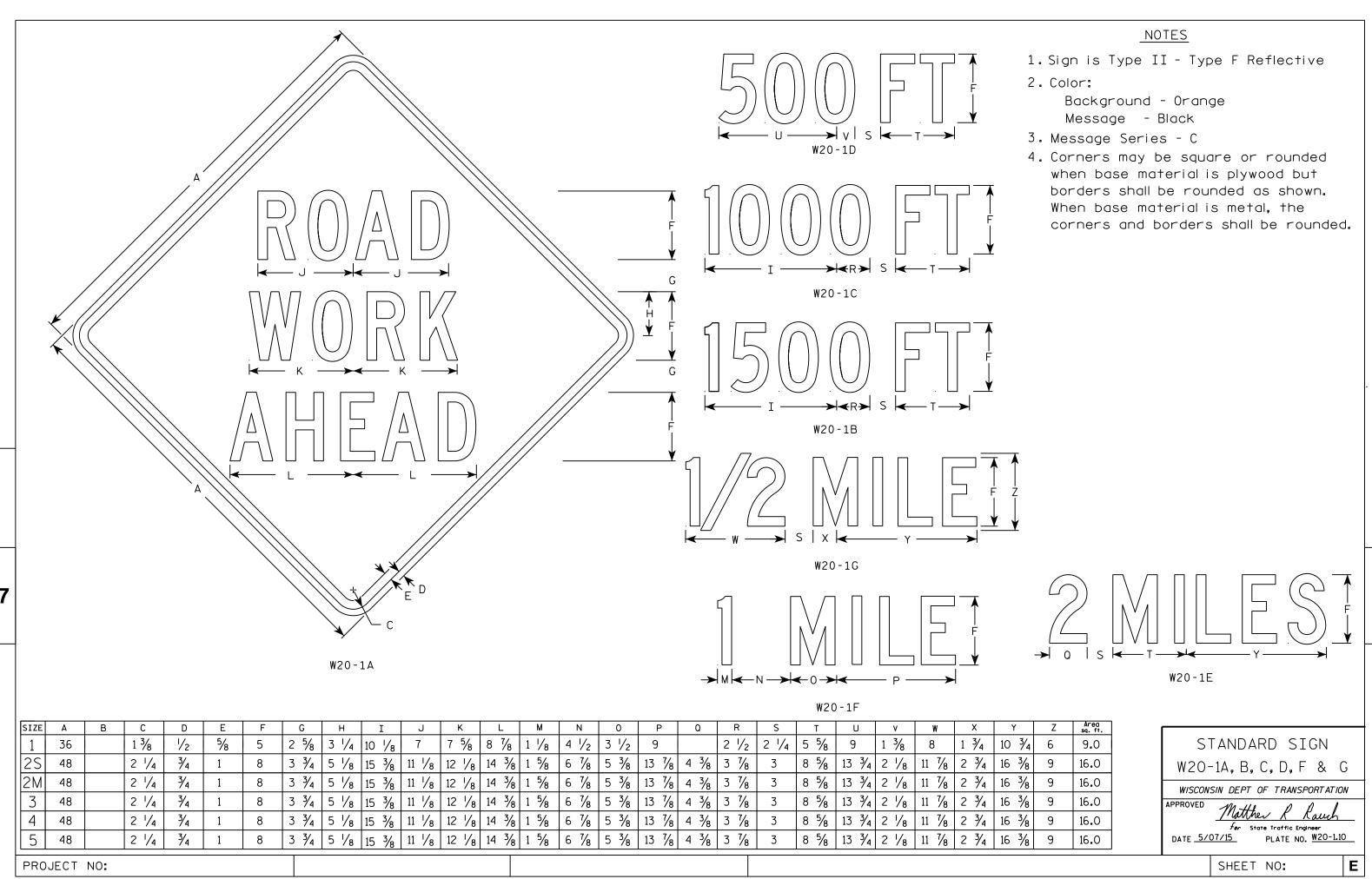
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W143.DGN

PLOT DATE: 21-MAR-2017 08:48

PLOT BY: \$\$...plotuser...\$\$ PLOT NAME:

PLOT SCALE : 5.650195:1.000000

WISDOT/CADDS SHEET 42



FILE NAME . C.\CAFfiles\Projects\tr stdolote\W201 DCN

PLOT DATE . 01-DEC-2015 18.24

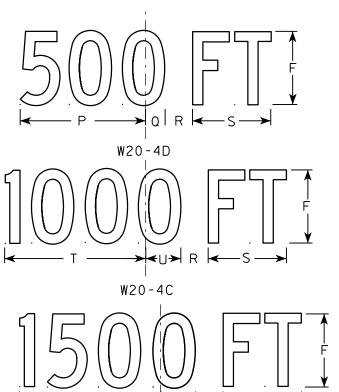
PIOT RY * \$\$ plotuser \$\$

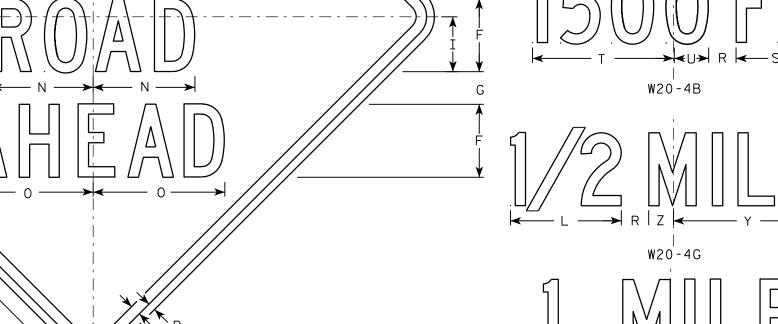


- Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.





SIZE	Α	В	С	D	E	F	G	Н	I	J K	L	М	Z	0	Р	0	R	S	T	U	٧	W	Х	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8 2 3/8	8	13 1/2	7	8 %	9	1 3/8	1 1/8	5 %	10 1/8	2 1/2	1 1/8	4 1/2	3 ½	10 ¾	1 3/4	9.0
25	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8 3 1/4	10 %	17 ¾	9 3/4	12 %	12	1 1/8	2 %	7 1/2	13 ½	3 3/8	1 1/2	6	4 %	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8 3 1/4	10 %	17 ¾	9 3/4	12 %	12	1 1/8	2 %	7 1/2	13 1/2	3 %	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8 3 1/4	10 %	17 ¾	9 3/4	12 %	12	1 1/8	2 %	7 1/2	13 1/2	3 %	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8 3 1/4	10 %	17 ¾	9 3/4	12 %	12	1 1/8	2 %	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8 3 1/4	10 %	17 ¾	9 3/4	12 %	12	1 1/8	2 %	7 1/2	13 1/2	3 %	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

W20-4A

STANDARD SIGN W20-4A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Rauch

For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-4.9

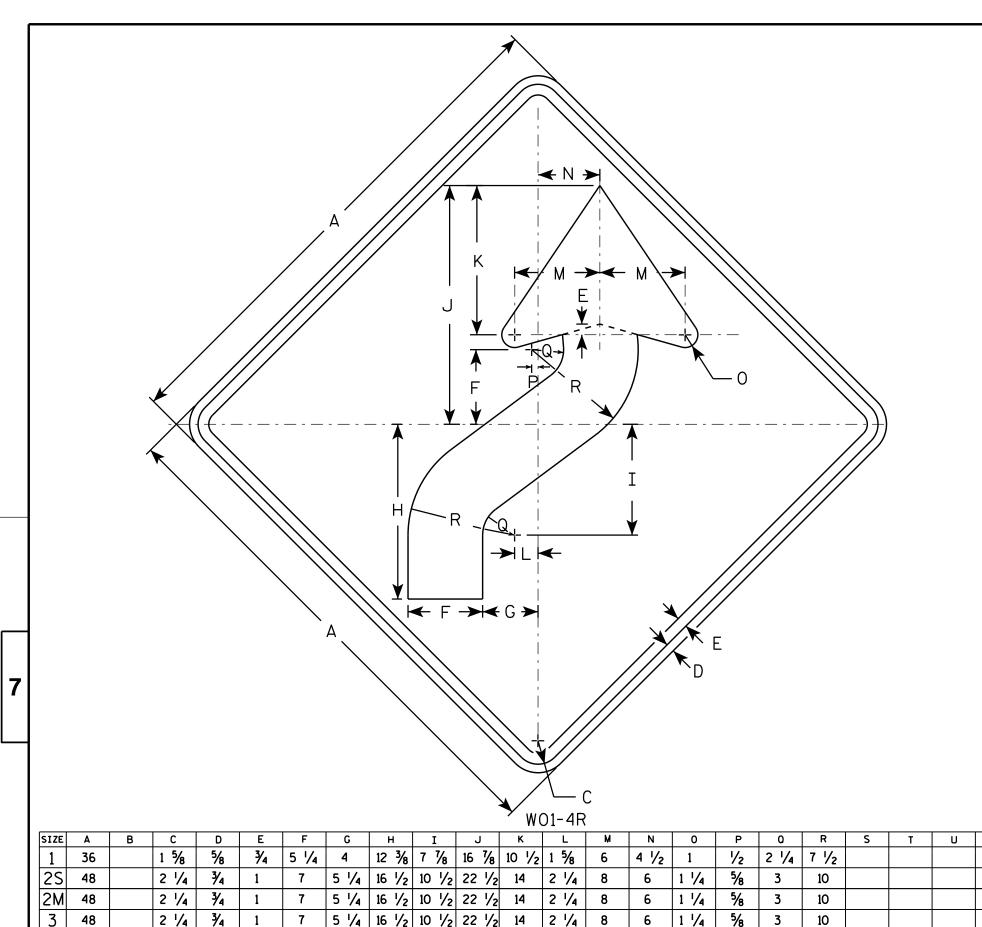
SUEET NO.

SHEET NO:

PROJECT NO:

W20-4F

Ε



5 1/4 16 1/2 10 1/2 22 1/2 14

5 1/4 16 1/2 10 1/2 22 1/2 14

HWY:

2 1/4

2 1/4

NOTES

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange 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. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

9.0 16.0 16.0 16.0 16.0 STANDARD SIGN W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch

For State Traffic Engineer

DATE <u>11/18/1</u>3

PLATE NO. WO1-4.1
SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN

48

48

PROJECT NO:

2 1/4 3/4

2 1/4 | 3/4

PLOT DATE : 28-FEB-2014 11:35

10

1 1/4

1 1/4

COUNTY:

5/8

PLOT NAME :

PLOT BY: mscj9h

PLOT SCALE: 6.755110:1.000000

WISDOT/CADDS SHEET 42

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange 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.

c —	
D → ←	
K L L L L L L L L L L L L L L L L	
M —	→ I ← I
N	Н — Н
l⊸ MO	1-6

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 ¾													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 ¾													12.5

COUNTY:

STANDARD SIGN WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch
For State Traffic Engineer

DATE <u>11/18/13</u>

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN

HWY:

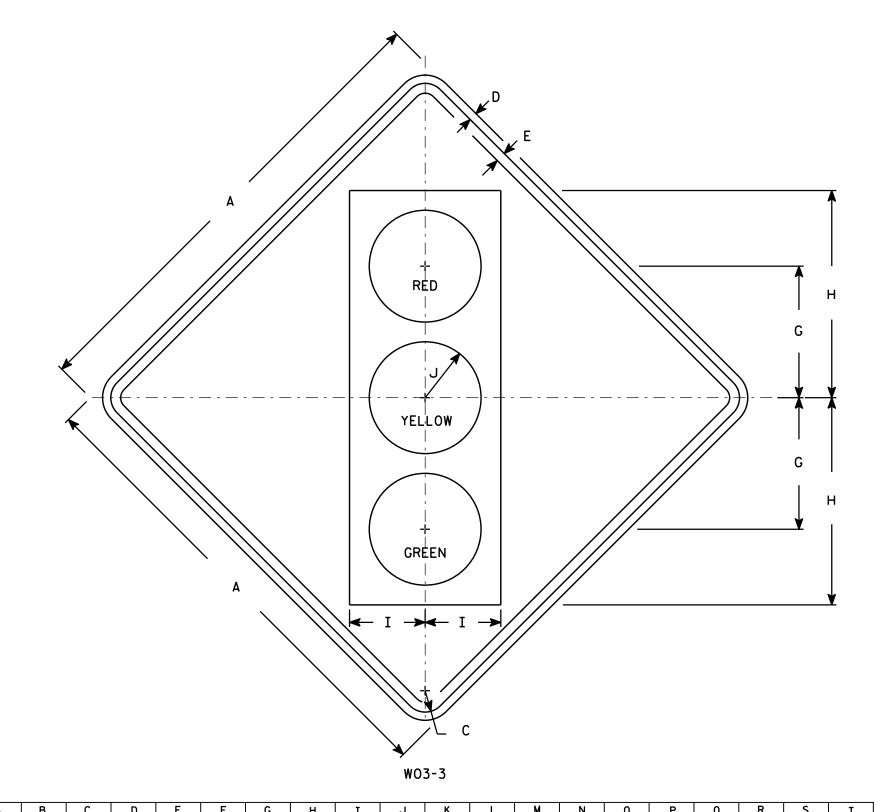
PROJECT NO:

PLOT DATE: 28-FEB-2014 11:37

PLOT NAME :

PLOT BY: mscj9h

PLOT SCALE: 5.837526:1.000000



- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - See Note 4

- 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. Symbol and border are non-reflective black. Top circle - Type H Reflectorized Red Center circle - Same as background Bottom circle - Type H Reflectorized Green

1																											
SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	Т	U	٧	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		10	15 ¾	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		2 1/4	3∕4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3∕4	1		12 1/2	20	7 1/2	5																	16.0

COUNTY:

STANDARD SIGN WO3 - 3

WISCONSIN DEPT OF TRANSPORTATION

DATE 11/20/13 PLATE NO. WO3-3.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W033.DGN

HWY:

PROJECT NO:

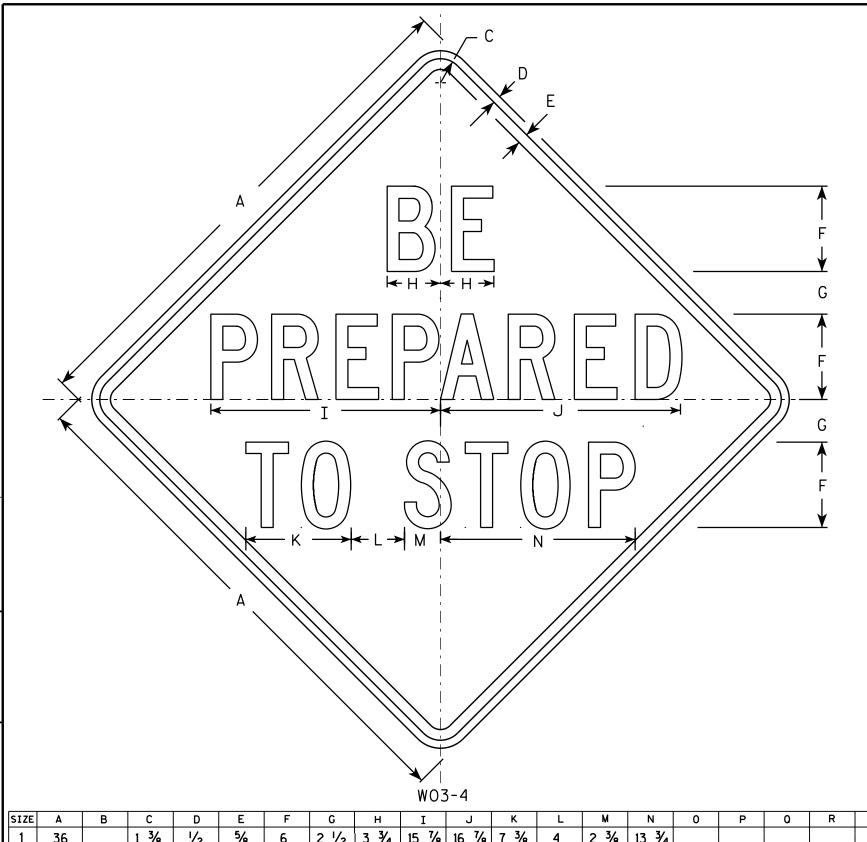
PLOT DATE: 20-NOV-2013 11:26

PLOT NAME :

PLOT BY: mscsja

WISDOT/CADDS SHEET 42

PLOT SCALE: 7.296908:1.000000



- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

1 3/8 5/8 2 3/8 | 13 3/4 1/2 2 1/2 15 % 16 % 7 % 9.0 3/4 21 1/2 22 1/2 9 7/8 5 3 3/8 18 1/4 48 2 1/4 16.0 2 1/4 3/4 21 1/2 22 1/2 9 7/8 5 3 3/8 | 18 1/4 16.0 48 3/4 21 1/2 22 1/2 9 7/8 5 3 3/8 18 1/4 2 1/4 16.0 48 4 21 1/2 22 1/2 9 7/8 5 3 3/8 18 1/4 2 1/4 3/4 48 8 16.0 5 3/4 21 1/2 22 1/2 9 7/8 3 3/8 18 1/4 48 2 1/4 8 16.0

COUNTY:

STANDARD SIGN W03 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

DATE 12/02/13

PLATE NO. W03-4.1 SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W034.DGN

HWY:

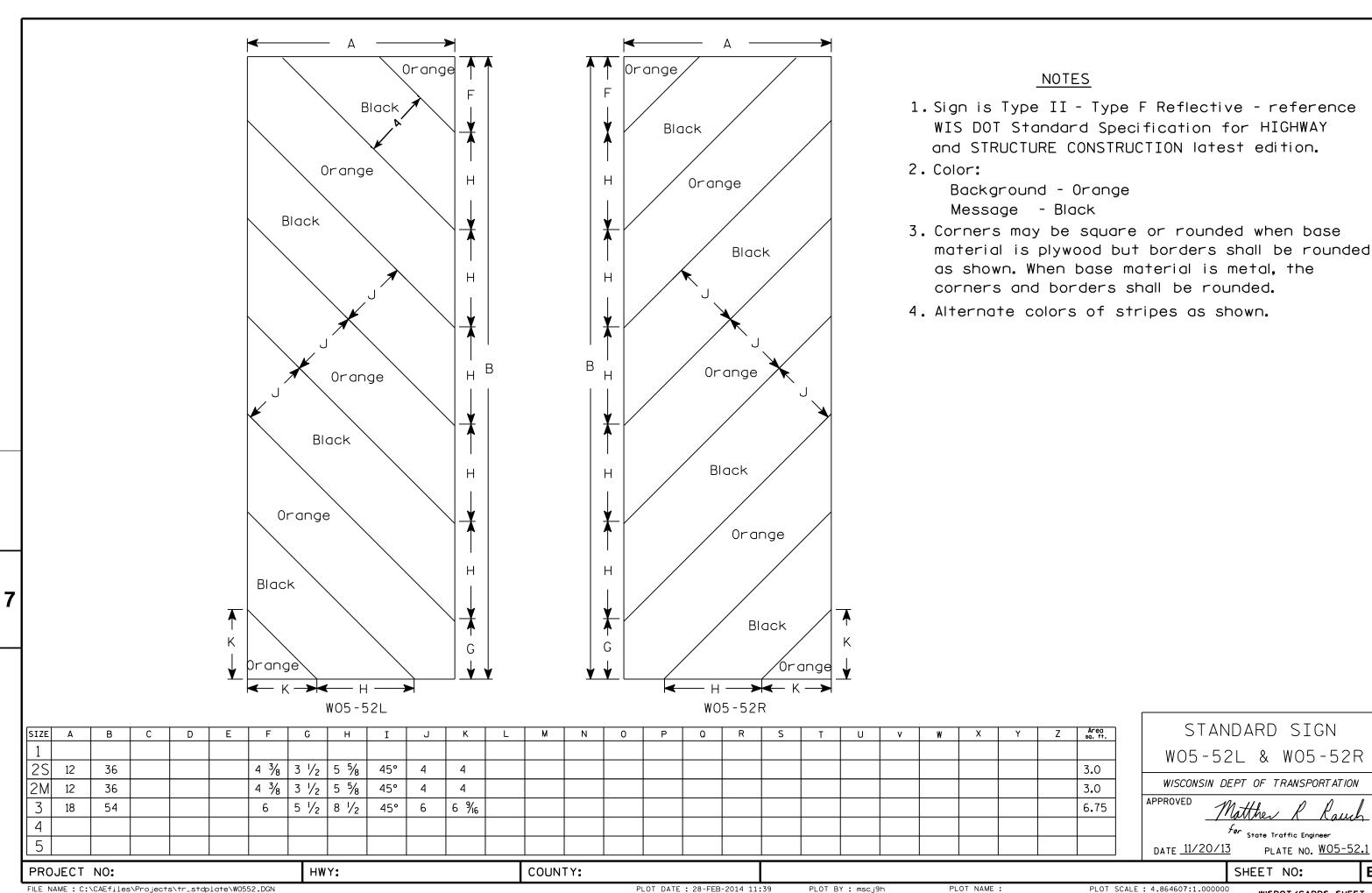
PROJECT NO:

PLOT DATE: 02-DEC-2013 14:02

PLOT NAME :

WISDOT/CADDS SHEET 42

PLOT SCALE: 8.999518:1.000000



PLOT NAME : PLOT SCALE: 4.864607:1.000000

- 1. Sign is Type II Type F Reflective
- 2. Color:

Background - Orange Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

W057-52

HWY:

* See note 5

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 %	10 %	11 3/8	2	12													6.0
25	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 ½	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 ½	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 ½	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 ½	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6	19 ½	14	15	2 3/4	16 3/8													12.0

COUNTY:

STANDARD SIGN W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

SHEET NO:

DATE 3/21/17

PLATE NO. W057-52.2

....

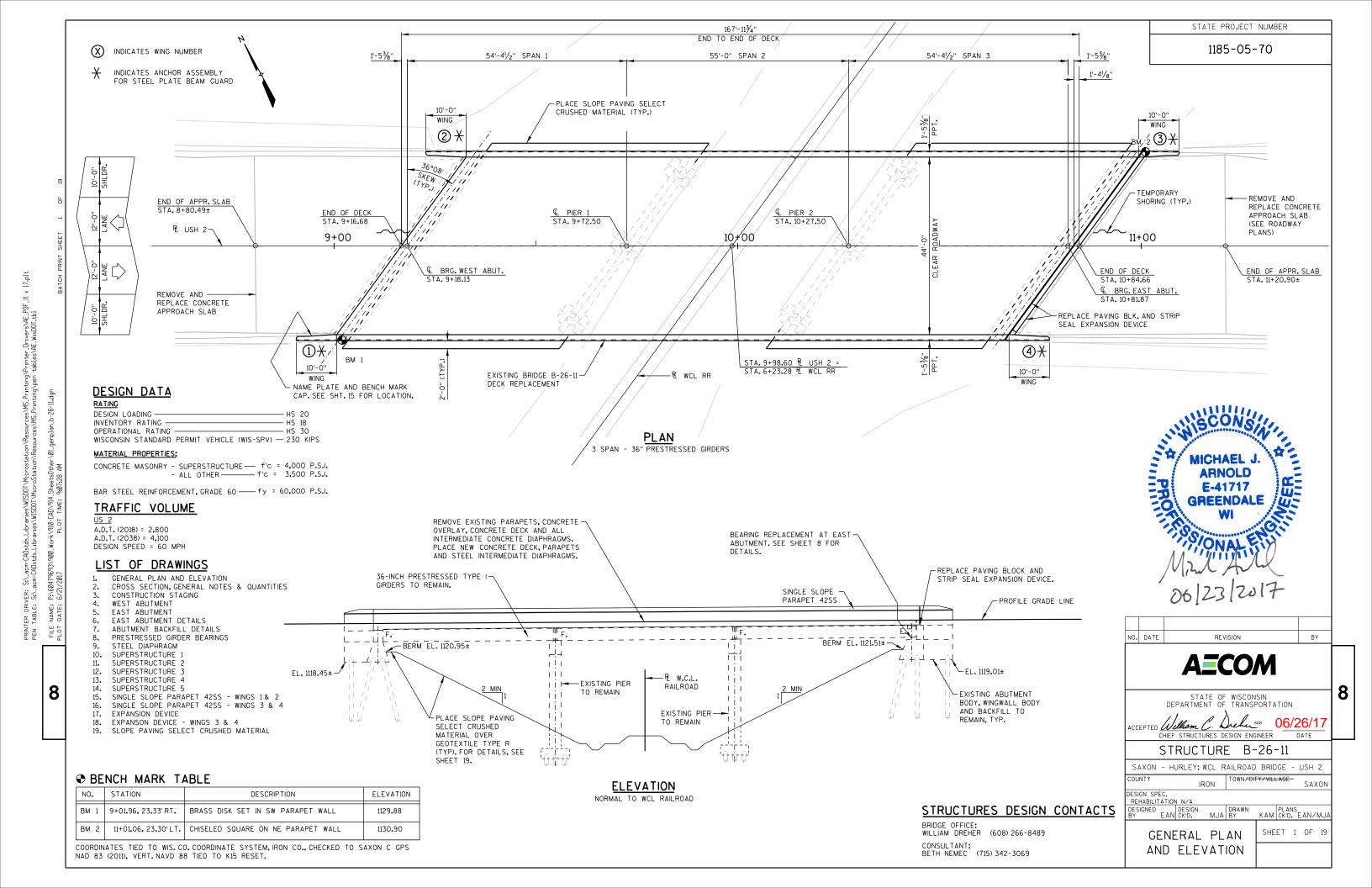
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN

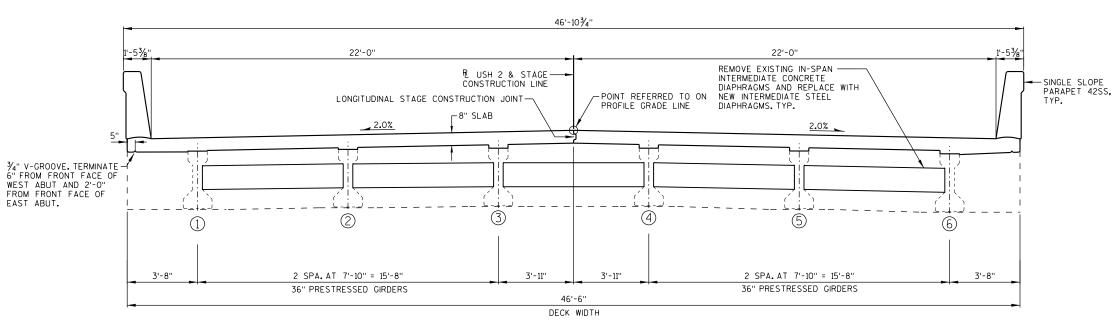
PROJECT NO:

PLOT DATE: 21-MAR-2017 08:53

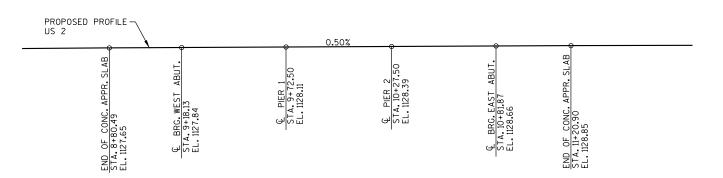
PLOT BY: \$\$...plotuser...\$\$ PLOT NAME:

PLOT SCALE: 8.139174:1.000000





CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE, USH 2

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	WEST ABUTMENT	PIER 1	PIER 2	EAST ABUTMENT	SUPER.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 10+00	LS				ABOTMENT		1
203 . 0225 . S	DEBRIS CONTAINMENT B-26-11	LS	 			† <u> </u>		1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-26-11	LS	 			†		1
210.1500	BACKFILL STRUCTURE TYPE A	TON	124			124		248
502.0100	CONCRETE MASONRY BRIDGES	CY	8			11	260	279
502.3100	EXPANSION DEVICE B-26-11	LS						
502.3200	PROTECTIVE SURFACE TREATMENT	SY					840	840
502.3210	PIGMENTED SURFACE SEALER	SY	10			10	180	200
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH					8	8
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	52			42		94
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,340			1,710	71,270	74,320
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH				6		6
506.4000	STEEL DIAPHRAGMS B-26-11	EACH					15	15
506.7050.S	REMOVING BEARINGS, STRUCTURE B-26-11	EACH				6		6
511.1200	TEMPORARY SHORING B-26-11	SF	45			45		90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5			6		11
604.0600	SLOPE PAVING SELECT CRUSHED MATERIAL	SY	340			340		680
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100			100		200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2			2		4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	70			70		140
645.0130	GEOTEXTILE TYPE R	SY	340			340		680
	NON-BID ITEMS							
	FILLER	SIZE						1/2" & 3.

LIMITS OF PIGMENTED SURFACE SEALER LIMITS OF PROTECTIVE -SURFACE TREATMENT

SURFACE PROTECTION DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II OR III, OR M213,

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING SELECT CRUSHED MATERIAL AND GEOTEXTILE TYPE R WITHIN THE LIMITS SHOWN ON SHEETS 1 AND 19 OR AS DIRECTED BY THE

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

THE EXISTING STRUCTURE (B-26-11) IS A 3 SPAN DECK GIRDER BRIDGE, 168'LONG × 47.8' WIDE. THE DECK, PARAPETS AND UPPER PORTION OF THE WINGWALLS WILL BE REPLACED. THE EXISTING SUBSTRUCTURE UNITS AND PRESTRESSED GIRDERS WILL REMAIN IN PLACE.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH OF 23/4 INCHES, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

SUPERSTRUCTURE QUANTITIES INCLUDE CONCRETE AND REINFORCEMENT OF THE PARAPET ON THE DECK. THE CONCRETE AND REINFORCEMENT FOR THE PARAPETS ON THE WINGWALLS ARE INCLUDED IN THE ABUTMENT QUANTITIES.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE THE SUPERSTRUCTURE CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

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

EXCAVATION REQUIRED UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-26-11" IS NOT USED TO BALANCE THE EARTHWORK.

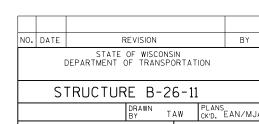
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO BOTH THE INSIDE FACE AND TOP OF PARAPETS ON THE DECK AND WING WALLS. SEE DETAIL ON THIS

ALL CONCRETE REMOVAL NOT COVERED WITH CONCRETE SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THE CONTRACTOR SHALL SUPPLY AND INSTALL A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS, NAME PLATE TO SHOW ORIGINAL CONSTRUCTION

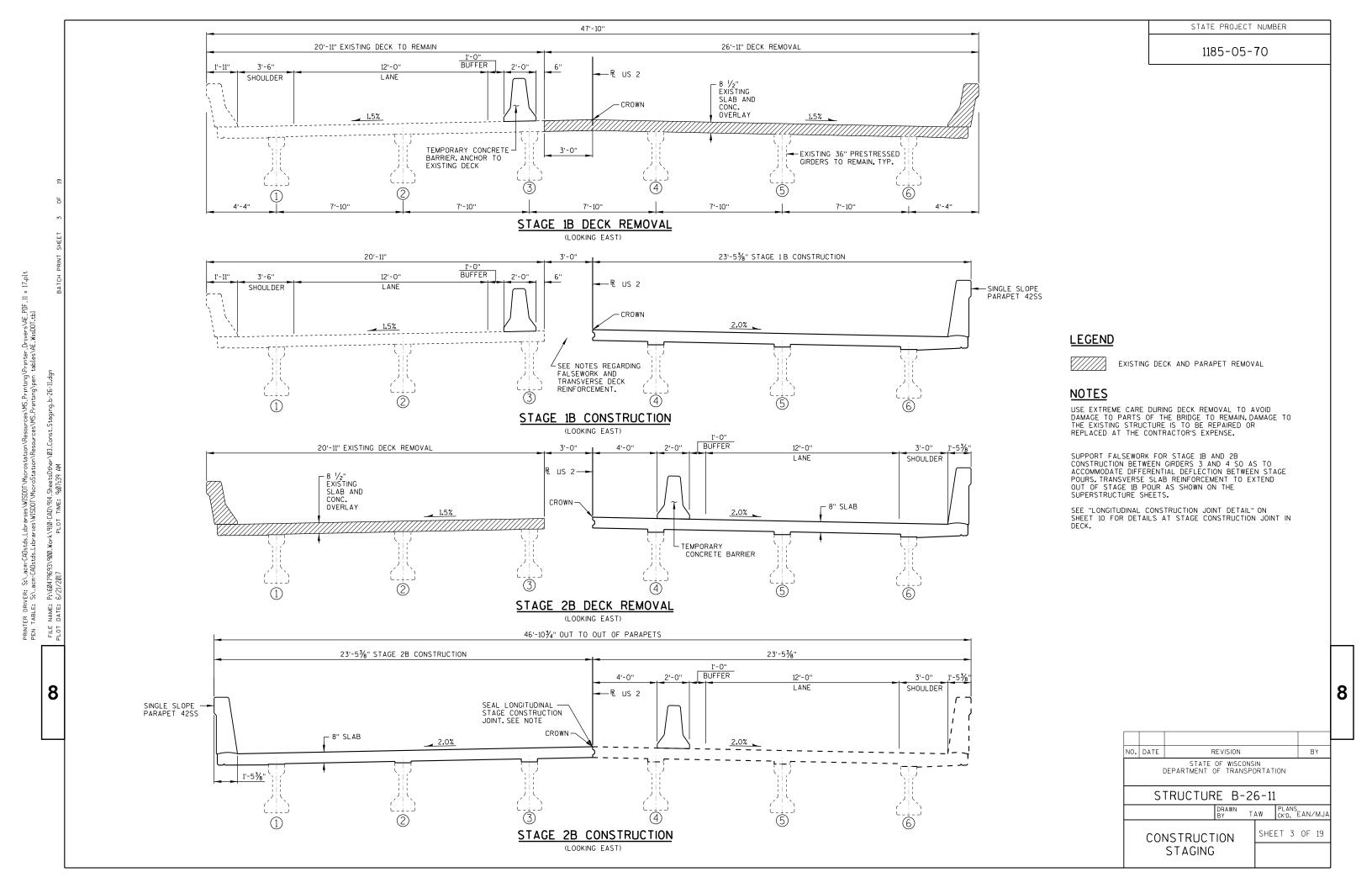
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

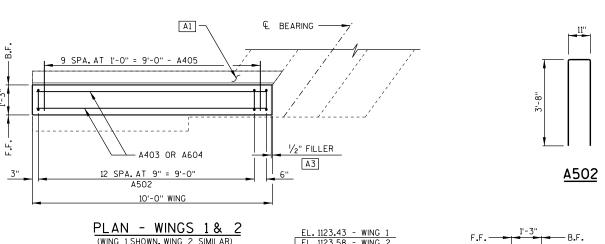
VARIATION TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

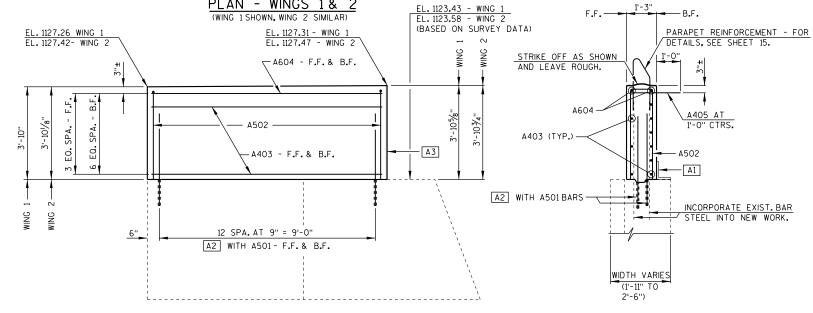


CROSS SECTION, GENERAL NOTES AND QUANTITIES

SHEET 2 OF 19







ELEVATION - WINGS 1 & 2 (WING 1 SHOWN, WING 2 SIMILAR)

TYPICAL SECTION THRU WING

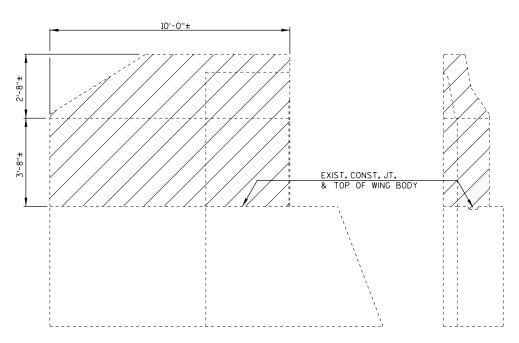
BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

	STAGE 1B	STAGE 2B			BAR		
MARK	NO. REQ'D	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION	
	COATED BAR	S				TOTAL	_WEIGHT = 640 LBS
A501	26	26	3-8			WINGS 1 & 2 - ADHESIVE ANCHORS	VERT.
A502	14	14	8-0	Х		WINGS 1 & 2	VERT.
A403	9	9	9-8			WINGS 1 & 2 - F.F. & B.F.	HORIZ.
A604	2	2	9-8			WINGS 1 & 2 - TOP - F.F. & B.F.	HORIZ.
A405	10	10	2 - 1			WINGS 1 & 2 - DOWELS	HORIZ.

ESTIMATED QUANTITIES

	CONCRETE MASONRY BRIDGES	BAR STEEL REINFORCEMENT
	(CY)	HS COATED STRUCTURES (LB)
STAGE 1B	4	320
STAGE 2B	4	320



WING ELEVATION

SECTION THRU WING

8

REMOVAL LIMITS DETAIL

(WING 1 SHOWN, WING 2 SIMILAR)

LEGEND

REMOVAL LIMITS (REMOVE EXIST, WING WALL TO THE TOP OF THE WING BODY, INCORPORATE EXIST, BAR STEEL INTO NEW WORK.)

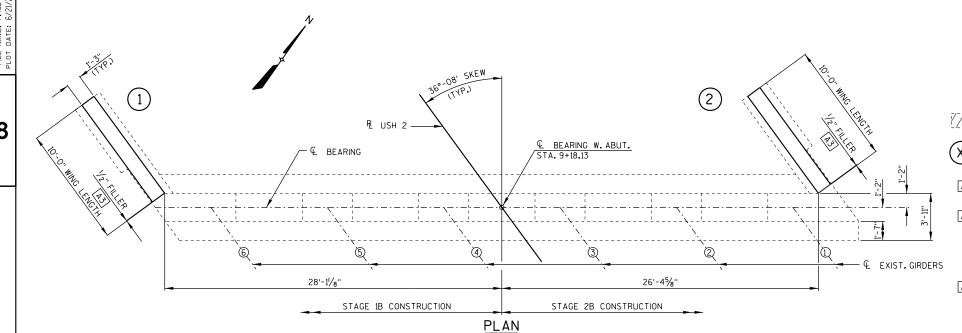
INDICATES WING NUMBER

[A1] 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

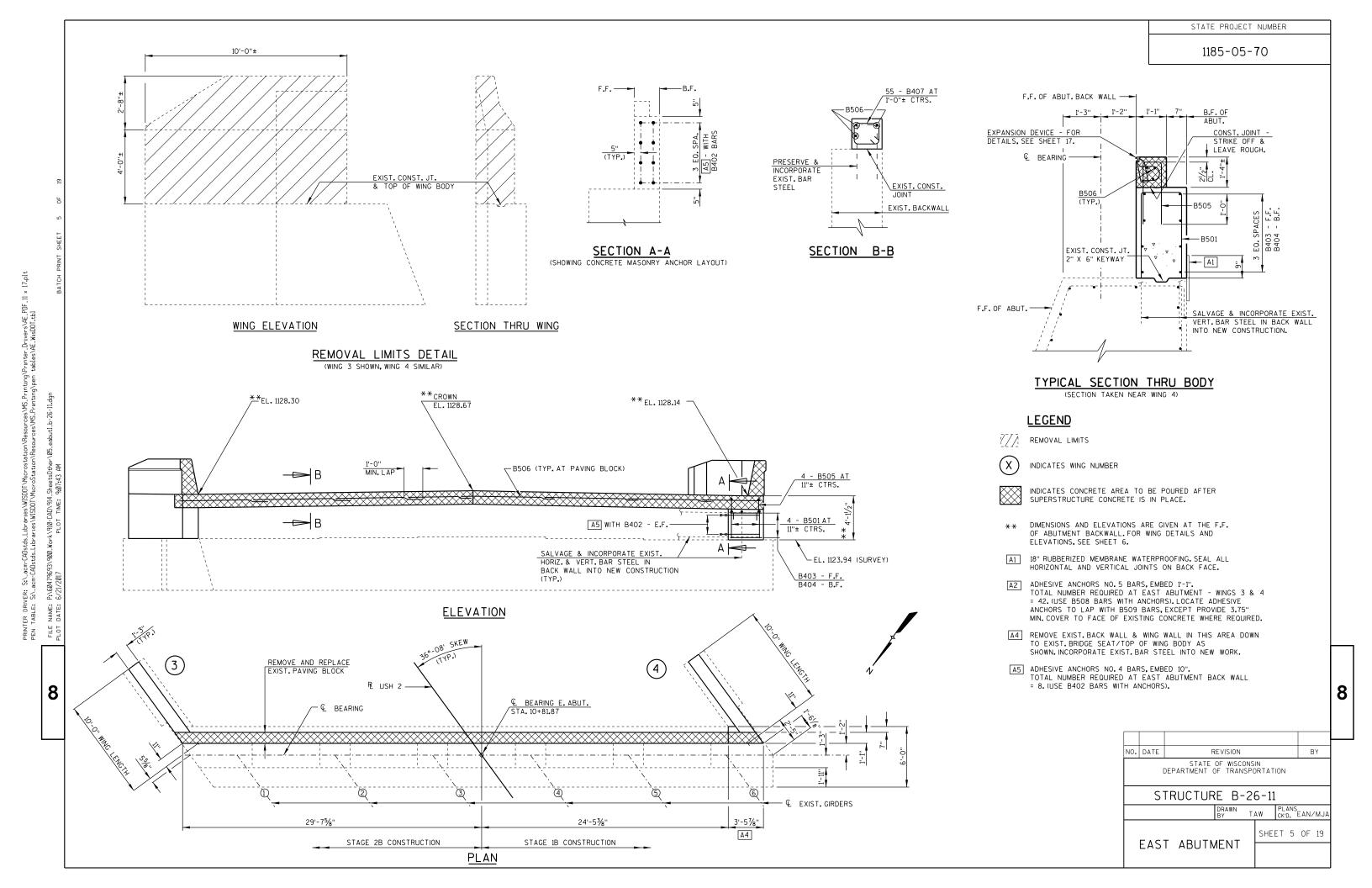
ADHESIVE ANCHORS NO. 5 BARS, EMBED 1'-1". Α2 TOTAL NUMBER REQUIRED AT WEST ABUTMENT - WINGS 1 & 2 = 52. (USE A501 BARS WITH ANCHORS). LOCATE ADHESIVE ANCHORS TO LAP WITH A502 BARS, EXCEPT PROVIDE 3.75" MIN. COVER TO FACE OF EXISTING CONCRETE WHERE REQUIRED.

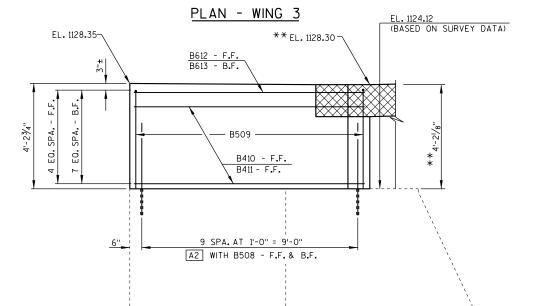
 ${
m 1/}_2$ " FILLER SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ${
m 1/}_2$ " FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE			F	REVISION				B	ΙΥ
	[DEPAI			OF WISC OF TRAN			ION		
	S	ΓRL	JCT	UF	RE B	-2	6-11			
					DRAWN BY	Τ.	ΔW	PLANS CK'D.	EAN/	′MJA
	WES	Τ ,	٩Bt	JTN	MENT		SHE	ET 4	OF	19



Printer_Orivers\AE_POF tables\AE_WisDOT.tbl ER DRWER: S:_acm-CAOstds_Libraries\WISOOT\Microstation\Resources\WS_Printing\ TABLE: S:_acm-CAOstds_Libraries\WISOOT\MicroStation\Resources\WS_Printing\pen abutl_b-26-11.dgn





10'-0" WING

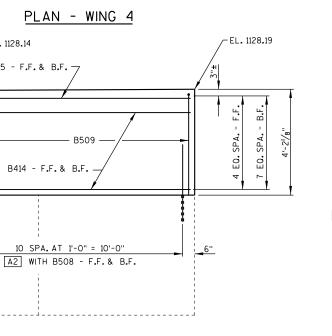
** __EL.1128.30 € BEARING — 8 SPA.AT 1'-0" = 8'-0" 10'-0" WING

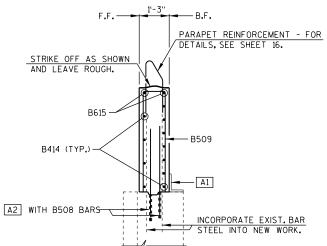
** EL. 1128.14

B615 - F.F. & B.F.

- B509

B414 - F.F. & B.F.





A1 A2 FOR SYMBOL DESCRIPTIONS, SEE SHEET 5.

TYPICAL SECTION THRU WING 4

WIDTH VARIES (1'-11" TO 2'-6")

B501 B407 <u>B505</u> B509

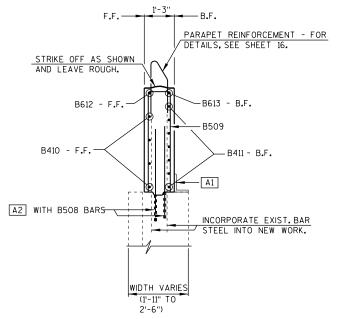
LEGEND

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-11 DRAWN TAW PLANS 8

SHEET 6 OF 19 EAST ABUTMENT DETAILS

ELEVATION - WING 3



TYPICAL SECTION THRU WING 3

BILL OF BARS

ELEVATION - WING 4

	STAGE 1B	STAGE 2B			BAR		
MARK	NO. REQ'D	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION	
	COATED BAR	S				TOTAL WEIGHT	= 980 LBS
B501	4		6-5	X		BACK WALL - NEAR WING 4	VER
B402	8		3-2			BACK WALL - ADHESIVE ANCHORS	HORI
B403	4		2 - 11			BACK WALL - NEAR WING 4	HORI
B404	4		2-0			BACK WALL - NEAR WING 4	HORI
B505	4		5-0	X		PAVING BLOCK - NEAR WING 4	VER
B506	12	12	8 - 1			PAVING BLOCK	HOR
B407	29	29	4 - 0	Х		PAVING BLOCK	VER
B508	22	20	3-8			WINGS 3 & 4 - ADHESIVE ANCHORS	VER
B509	10	10	8-6	Х		WINGS 3 & 4	VER
B410		4	8 - 10			WING 3 - F.F.	HORI
B411		7	9-5			WING 3 - B.F.	HORI
B612		1	8 - 10			WING 3 - TOP - F.F.	HORI
B613		1	9-5			WING 3 - TOP - B.F.	HORI
B414	11		9 - 10			WING 4 - F.F. & B.F.	HOR
B615	2		9 - 10			WING 4 - TOP - F.F. & B.F.	HOR

ESTIMATED QUANTITIES

	CONCRETE MASONRY BRIDGES	BAR STEEL REINFORCEMENT
	(CY)	HS COATED STRUCTURES (LB)
STAGE 1B	6	540
STAGE 2B	5	440

EL. 1124.01 (BASED ON SURVEY DATA)

ER DRWER: S:\.acm-CAOstds.Libraries\WISOOT\Microstation\Resources\WS_Printing\Printer_Drivers\AE_PDF_11 × 17-plt TABLE: S:\.acm-CAOstds.Libraries\WISOOT\MicroStation\Resources\WS_Printing\pen tables\AE_WisOOT.tbl

"GEOTEXTILE TYPE DF
SCHEDULE A"LIMITS.

(HATCHED AREA)

ABUTMENT WING

PIPE UNDERDRAIN WRAPPED 6-INCH.
SLOPE 0.5% TO SUITIABLE DRAINAGE.
ATTACH RODENT SHELD AT ENDS OF PIPE UNDERDRAIN, SEE DETAIL ON THIS SHEET.

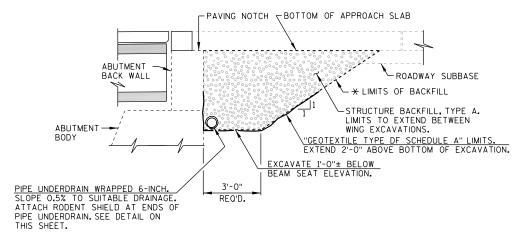
TOE OF EXCAVATION

FRONT FACE

PART ABUTMENT PLAN WITH WING

ABUTMENT FRONT FACE

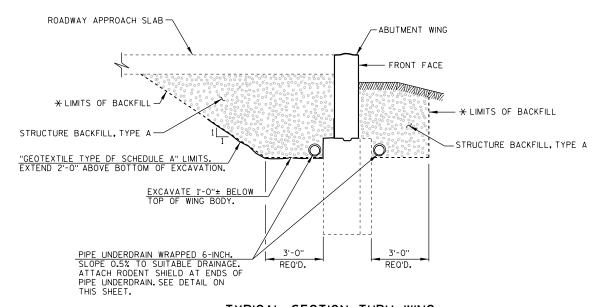
(WING 4 SHOWN, OTHER WINGS SIMILAR)



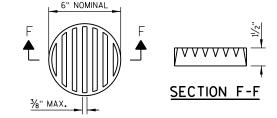
TYPICAL ABUTMENT BACKFILL (EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)

LEGEND

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



TYPICAL SECTION THRU WING (WING 4 SHOWN, OTHER WINGS SIMILAR)



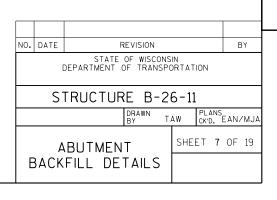
RODENT SHIELD DETAIL

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

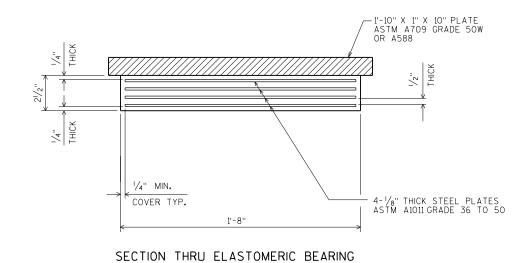
ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



—€ BEARING -EXISTING $\frac{5}{8}$ " ϕ x $6\frac{3}{8}$ " LONG STUDS -EXISTING PRESTRESSED GIRDER ELASTOMERIC EXISTING STAINLESS STEEL BEVELED ANCHOR PLATE CAST TO GIRDER. WIDTH IS BOTTOM FLANGE WIDTH MINUS $\frac{\pi}{4}$ ". BEARING END OF GIRDER USE E309 ELECTRODE -STEEL PLATE (ASTM A709 GRADE 50W OR A588) NO. 6 BLAST. VULCANIZE PLATE TO ELASTOMERIC PAD. -STEEL LAMINATED ELASTOMERIC BEARING (DUROMETER 60 \pm 5) 1'-8'' - 1" STEEL PLATE AND EXISTING STAINLESS STEEL BEVELED ANCHOR PLATE ELASTOMERIC END VIEW BEARING PLAN VIEW



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BEARING NOTES

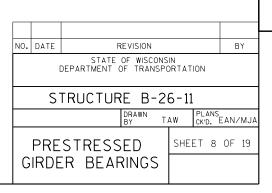
BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

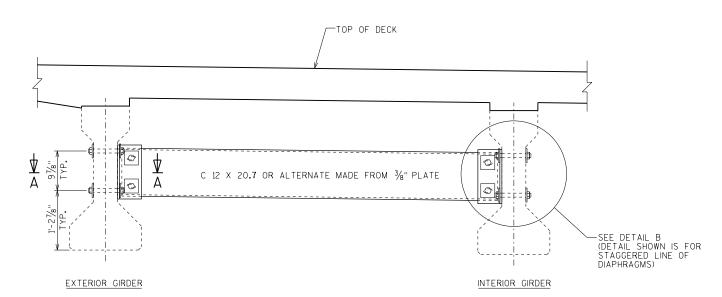
ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

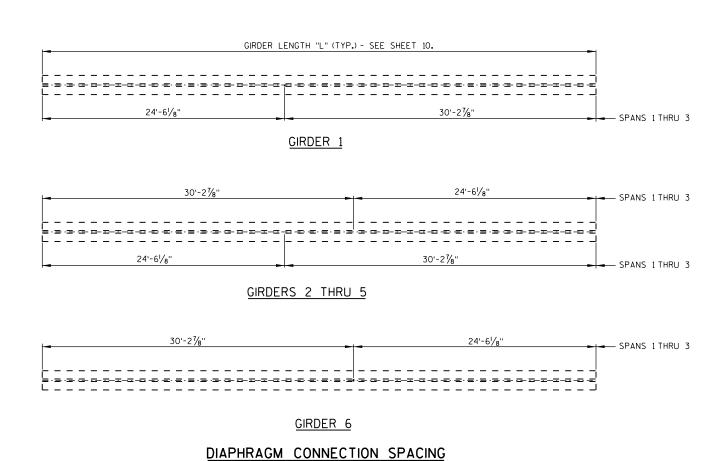
ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C).
TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.





PART TRANSVERSE SECTION AT DIAPHRAGM



NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-26-11", EACH.

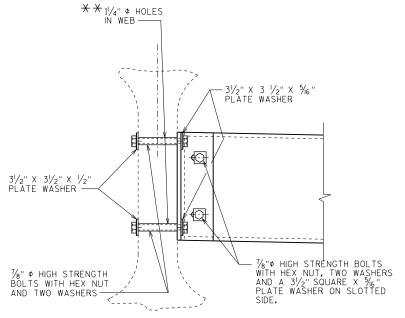
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A 709 GRADE 36.

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

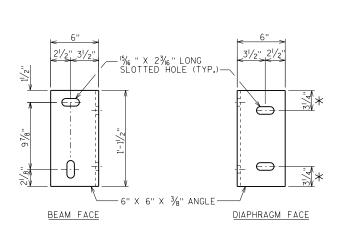
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE, HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

* FIELD CORE HOLES THRU WEB AT ALL EXISTING GIRDER LINES.



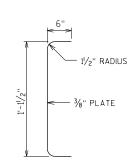
(FOR STAGGERED DIAPHRAGM)

DETAIL B

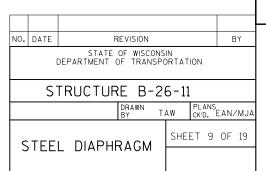


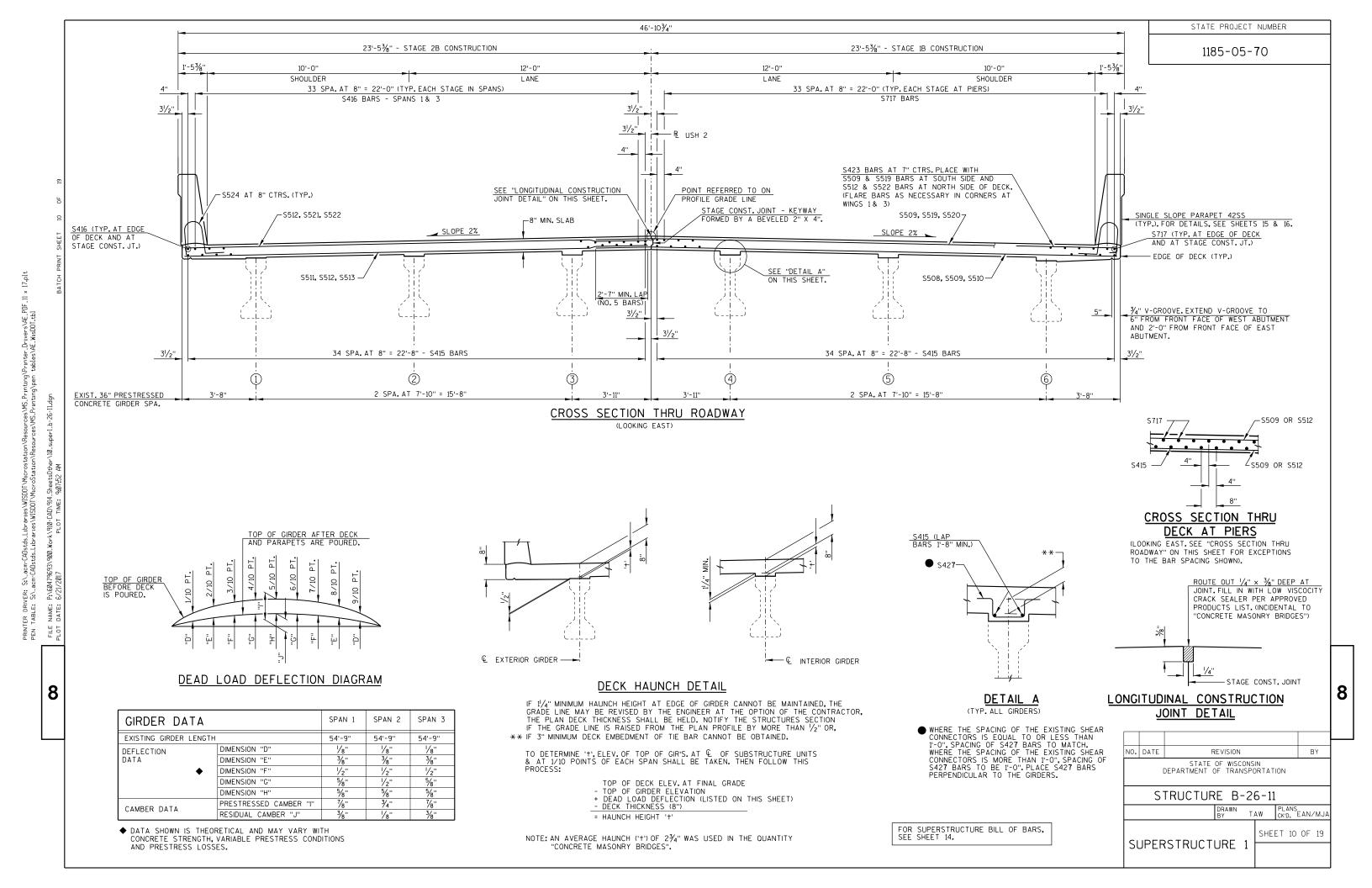
DIAPHRAGM SUPPORT

 $\frac{1}{2}$ 2 $\frac{1}{2}$ " FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU
ALTERNATE DIAPHRAGM





STATE PROJECT NUMBER 1185-05-70 168'-81/2" BACK TO BACK OF ABUTMENTS 1'-53/8'' 54'-41/2" 55'-0" 54'-41/2" 3'-6^l/₈" SPAN 1 SPAN 2 SPAN 3 36°-08" SKEW (TYP.) 2'-10³/₈" (TYP.) -S526 - PARAPET (TYP.) - S415 - BOTTOM (TYP.) € STEEL DIAPHRAGMS - EDGE OF SLAB € BRG. W. ABUT. PIER 2 — € BRG.E.ABUT. -B.F. OF ABUT. EXIST. DIAPHRAGM AT W. ABUT. TO REMAIN IN EXIST. DIAPHRAGM AT PIER TO REMAIN IN PLACE (TYP.) NEW STEEL DIAPHRAGM -END OF SLAB GIRDER (TYP. SEE NOTE 7 BELOW. ROADWAY PLACE (TYP.) PAVING NOTCH 5'-8¾" (TYP.) CLEAR END OF SLAB ∠R USH 2 LONGIT. STAGE CONST. JOINT PAVING NOTCH DIAPHRAGM AT S717 - TOP S717 - TOP ABUTMENT (TYP.) 23'-5¾" 1B CONST B.F. OF ABUT. -(5)-S416 - TOP (TYP. SPANS 1 & 3) ∠EDGE OF SLAB (TYP. SPANS 1 & 3) NOTE: FOR TRANSVERSE BAR STEEL REINFORCEMENT LAYOUT DETAILS, SEE SHEET 12. PLAN

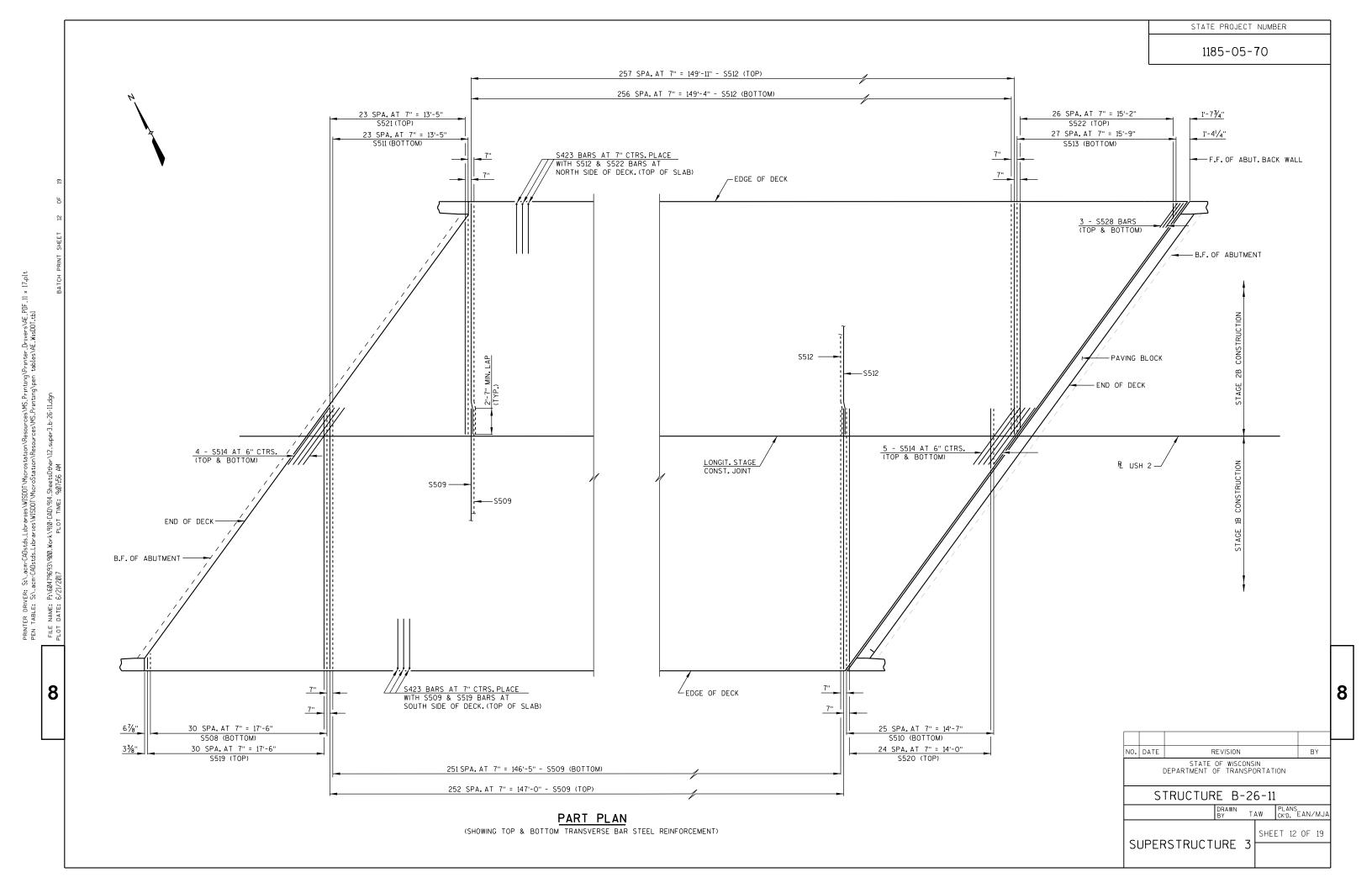
TOP OF DECK ELEVATIONS

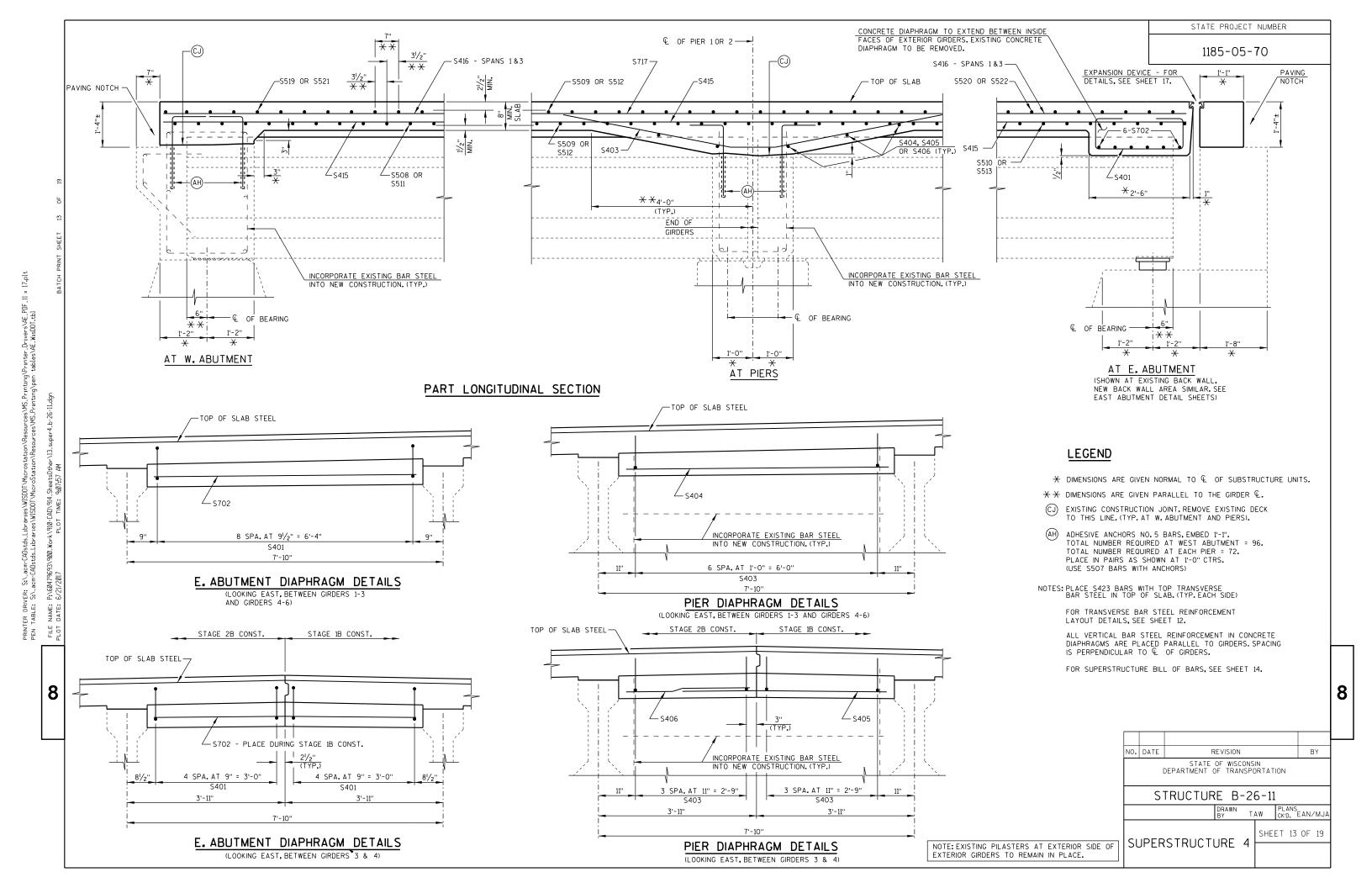
	LOCATION	C.L. BRG.	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	C.L.	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	C.L.	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	C.L. BRG.
	LUCATION	W. ABUT.	PT.	PIER 1	PT.	PIER 2	PT.	E. ABUT.																								
	W. EOD	1127.46	1127.49	1127.51	1127.54	1127.57	1127.59	1127.62	1127.65	1127.68	1127.70	1127.73	1127.76	1127.78	1127.81	1127.84	1127.87	1127.89	1127.92	1127.95		1128.00	1128.03	1128.06	1128.09	1128.11	1128.14	1128.17	1128.20	1128.22	1128.25	1128.28
	GIRDER 1	1127.52	1127.55	1127.57	1127.60	1127.63	1127.65	1127.68	1127.71	1127.74				1127.84	1127.87	1127.90			1127.98	1128.01		1128.06	1128.09	1128.12	1128.15	1128.17	1128.20	1128.23	1128.26	1128.28	1128.31	1128.34
	GIRDER 2	1127.65	1127.67	1127.70	1127.73	1127.75	1127.78	1127.81	1127.84	1127.86	1127.89	1127.92	1127.95	1127.97	1128.00	1128.03	1128.06	1128.08	1128.11	1128.14	1128.17	1128.19	1128.22	1128.25	1128.27	1128.30	1128.33	1128.36	1128.38	1128.41	1128.44	1128.46
	GIRDER 3	1127.77	1127.80	1127.83	1127.86	1127.88	1127.91	1127.94	1127.96	1127.99		1128.05		1128.10	1128.13	1128.16	1128.18	1128.21	1128.24	1128.27	1128.29	1128.32	1128.35	1128.38	1128.40	1128.43	1128.46	1128.48	1128.51	1128.54	1128.57	1128.59
5	TAGE CONST.JOI	NT 1127.84	1127.87	1127.89	1127.92	1127.95	1127.97	1128.00	1128.03	1128.06	1128.08	1128.11	1128.14	1128.17	1128.19	1128.22	1128.25	1128.28	1128.30	1128.33	1128.36	1128.39	1128.41	1128.44	1128.47	1128.49	1128.52	1128.55	1128.58	1128.60	1128.63	1128.66
	GIRDER 4	1127.75	1127.77	1127.80	1127.83	1127.85	1127.88	1127.91	1127.94	1127.96	1127.99	1128.02	1128.04	1128.07	1128.10	1128.13	1128.15	1128.18	1128.21	1128.24	1128.26	1128.29	1128.32	1128.35	1128.37	1128.40	1128.43	1128.46	1128.48	1128.51	1128.54	1128.56
	GIRDER 5	1127.56	1127.59	1127.61	1127.64	1127.67	1127.70	1127.72	1127.75	1127.78	1127.80	1127.83	1127.86	1127.89	1127.91	1127.94	1127.97	1128.00	1128.02	1128.05		1128.11	1128.13	1128.16	1128.19	1128.22	1128.24	1128.27	1128.30	1128.32	1128.35	1128.38
	GIRDER 6	1127.38	1127.40	1127.43	1127.46	1127.48	1127.51	1127.54	1127.57	1127.59		1127.65	1127.67	1127.70	1127.73	1127.76	1127.78	1127.81	1127.84	1127.87		1127.92	1127.95	1127.98	1128.00	1128.03	1128.06	1128.09	1128.11	1128.14	1128.17	1128.19
	E. EOD	1127.29	1127.32	1127.34	1127.37	1127.40	1127.42	1127.45	1127.48	1127.51	1127.53	1127.56	1127.59	1127.62	1127.64	1127.67	1127.70	1127.73	1127.75	1127.78	1127.81	1127.84	1127.86	1127.89	1127.92	1127.94	1127.97	1128.00	1128.03	1128.05	1128.08	1128.11

NOTES

- 1. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
- 2. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-O". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
- 3. ALL TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED PERPENDICULAR TO THE REFERENCE LINE.
- 4. LAP LONGITUDINAL NO. 5 BARS IN PARAPET 1'-9" MIN.
- 5. LAP NO. 4 BARS 1'-8" MIN. IN SLAB.
- 6. EDGE OF DECK (EOD) ELEVATIONS ARE CALCULATED ASSUMING CROSS SLOPE CONTINUES TO EDGE.
- 7. FOR LOCATIONS OF NEW DIAPHRAGM CONNECTION HOLES IN EXISTING GIRDERS, SEE SHEET 9.
- 8. BEND BOTTOM LEG OF S524 BAR IN PARAPET AS NECESSARY TO CLEAR END OF SLAB BY 2" MIN. AT WING CORNER 1.
- 9. LAP LONGITUDINAL NO. 7 BARS 3'-10" MIN.
- 10. FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 14.

DATE	F	REVISION				B'	Y
[ION		
S٦	TRUCTUF	RE B	-2	6-11			
		DRAWN BY	T	ΔW	PLANS CK'D.	EAN/	MJA
JPER	RSTRUCT	URE	2	SHEI	ET 11	OF	19
	S	STATE DEPARTMENT	STATE OF WISC DEPARTMENT OF TRAI STRUCTURE B DRAWN BY	STATE OF WISCONS DEPARTMENT OF TRANSPO	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTAT STRUCTURE B-26-11 DRAWN TAW BY SHEI	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-26-11 DRAWN TAW PLANS (CKD. SHEET 11	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-26-11 DRAWN BY TAW PLANS CKD. EAN/





BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

4 LENGTH SHOWN FOR BAR IS AN AVG. LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT

CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

CALCULATIO	NS. SEE BAR SERIE	S TABLE FOR ACTU	JAL LENGTHS	5.			
	STAGE 1B	STAGE 2B			BAR		
MARK	NO. REQ'D	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION	
	COATED BARS	S				TOTAL WEIGHT =	71 , 270 LBS
S401	23	23	5 - 2	X		EAST ABUTMENT DIAPHRAGM - BOTTOM	VERT.
S702	18	12	8 - 0			EAST ABUTMENT DIAPHRAGM - BOTTOM	HORIZ.
S403	36	36	9 - 10	Х		PIER DIAPHRAGM	LONGIT.
S404	24	24	8 - 0			PIER DIAPHRAGM	HORIZ.
S405	18	4	6 - 4			PIER DIAPHRAGM & EXP. DEVICE AT E. ABUT.	HORIZ.
S406	4	18	3 - 10			PIER DIAPHRAGM & EXP. DEVICE AT E. ABUT.	HORIZ.
S507	120	120	2-6	Х		WEST ABUTMENT & PIER DIAPH ADHESIVE ANCHORS	VERT.
S508	31		13 - 7		Δ	SLAB - BOTTOM	TRANS.
S509	505		25 - 10			SLAB - TOP & BOTTOM	TRANS.
S510	26		15 - 7		Δ	SLAB - BOTTOM	TRANS.
S511		24	12 - 3		Δ	SLAB - BOTTOM	TRANS.
S512		515	22 - 11			SLAB - TOP & BOTTOM	TRANS.
S513		28	11 - 11		Δ	SLAB - BOTTOM	TRANS.
S514	18		7-0			SLAB - TOP & BOTTOM - SYMM. ABOUT STAGE JOINT	TRANS.
S415	156	156	42 - 10			SLAB - BOTTOM & TOP OF GIRDERS	LONGIT.
S416	72	72	37 - 4			SLAB - TOP - SPANS 1 & 3	LONGIT.
S717	72	72	49 - 5			SLAB - TOP - AT PIERS	LONGIT.
						NOT USED	
S519	31		13 - 2		Δ	SLAB - TOP	TRANS.
S520	25		15 - 7		Δ	SLAB - TOP	TRANS.
S521		24	11 - 11		Δ	SLAB - TOP	TRANS.
S522		27	11 - 11		Δ	SLAB - TOP	TRANS.
S423	283	284	5-0	X		SLAB - TOP - AT EDGE OF SLAB	TRANS.
S524	251	251	4 - 5	X		PARAPET	VERT.
S525	251	251	6 - 8	Х		PARAPET	VERT.
S526	32	32	43 - 1			PARAPET	LONGIT.
S427	708	708	2 - 7	Х		SLAB - BOTTOM - HAT BARS AT GIRDERS	VERT.
S528		6	3 - 0			SLAB - TOP & BOTTOM - WING 3 CORNER	TRANS.

BAR SERIES

MARK	NO. REQ'D	LENGTH
S508	1 SET OF 31	1'-7" TO 25'-6"
S510	1 SET OF 26	5'-7" TO 25'-7"
S511	1 SET OF 24	3'-1" TO 21'-5"
S513	1 SET OF 28	1'-1" TO 22'-8'
S519	1 SET OF 31	1'-2" TO 25'-2"
S520	1 SET OF 25	5'-11" TO 25'-2"
S521	1 SET OF 24	2'-8' TO 21'-1"
S522	1 SET OF 27	1'-6" TO 22'-3"

ESTIMATED QUANTITIES

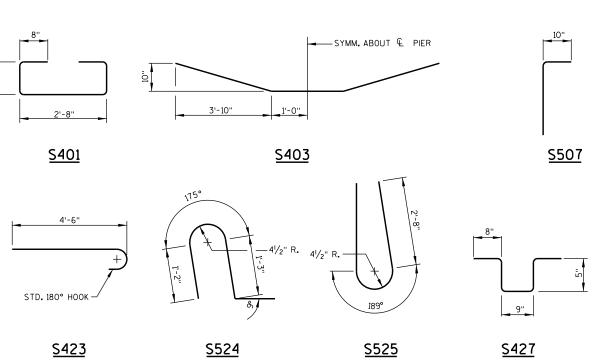
	HPC MASONRY SUPERSTRUCTURE (CY)	BAR STEEL REINFORCEMENT HS COATED STRUCTURES (LB)
STAGE 1B	0	36,610
STAGE 2B	0	34,660

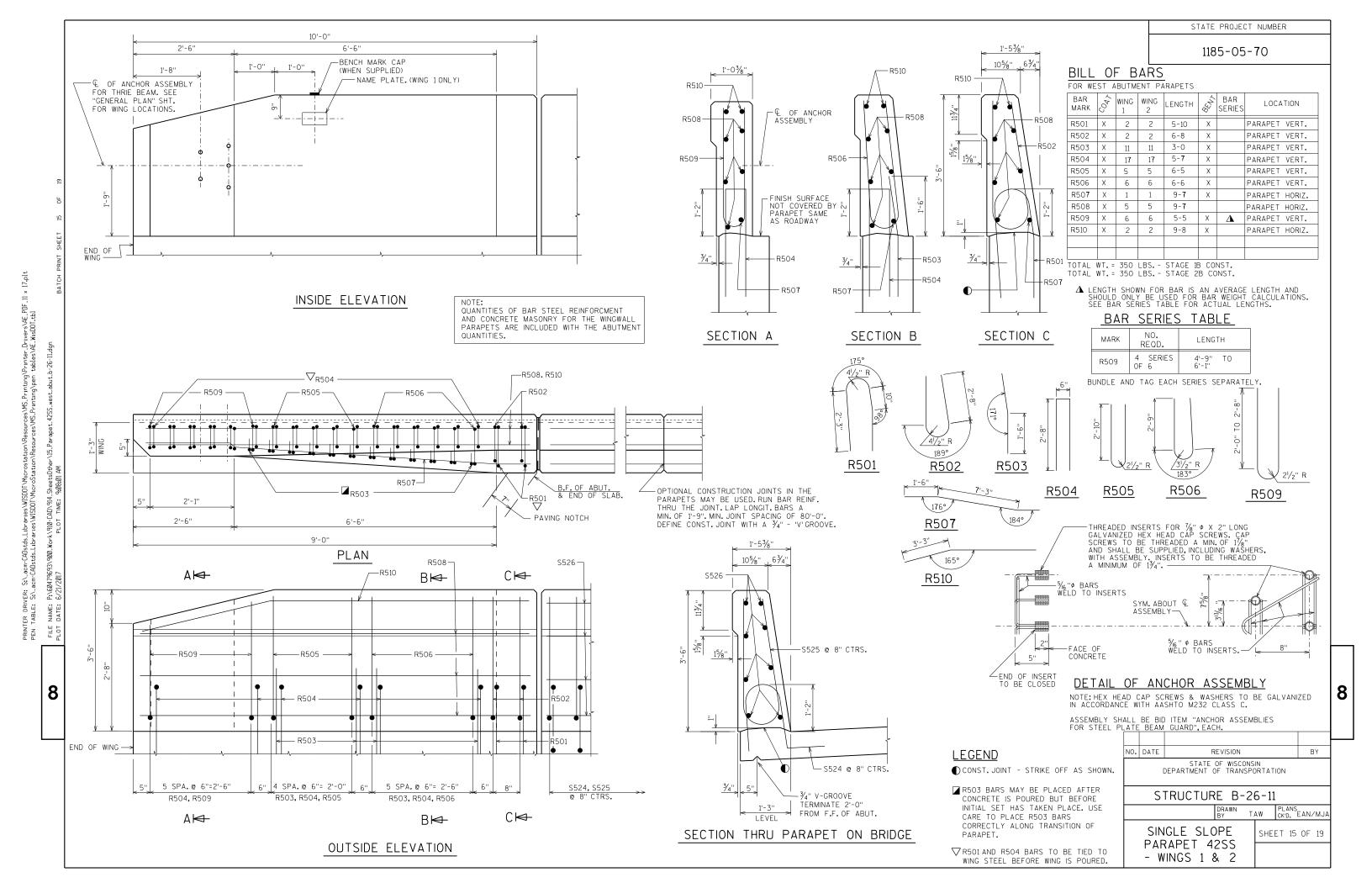
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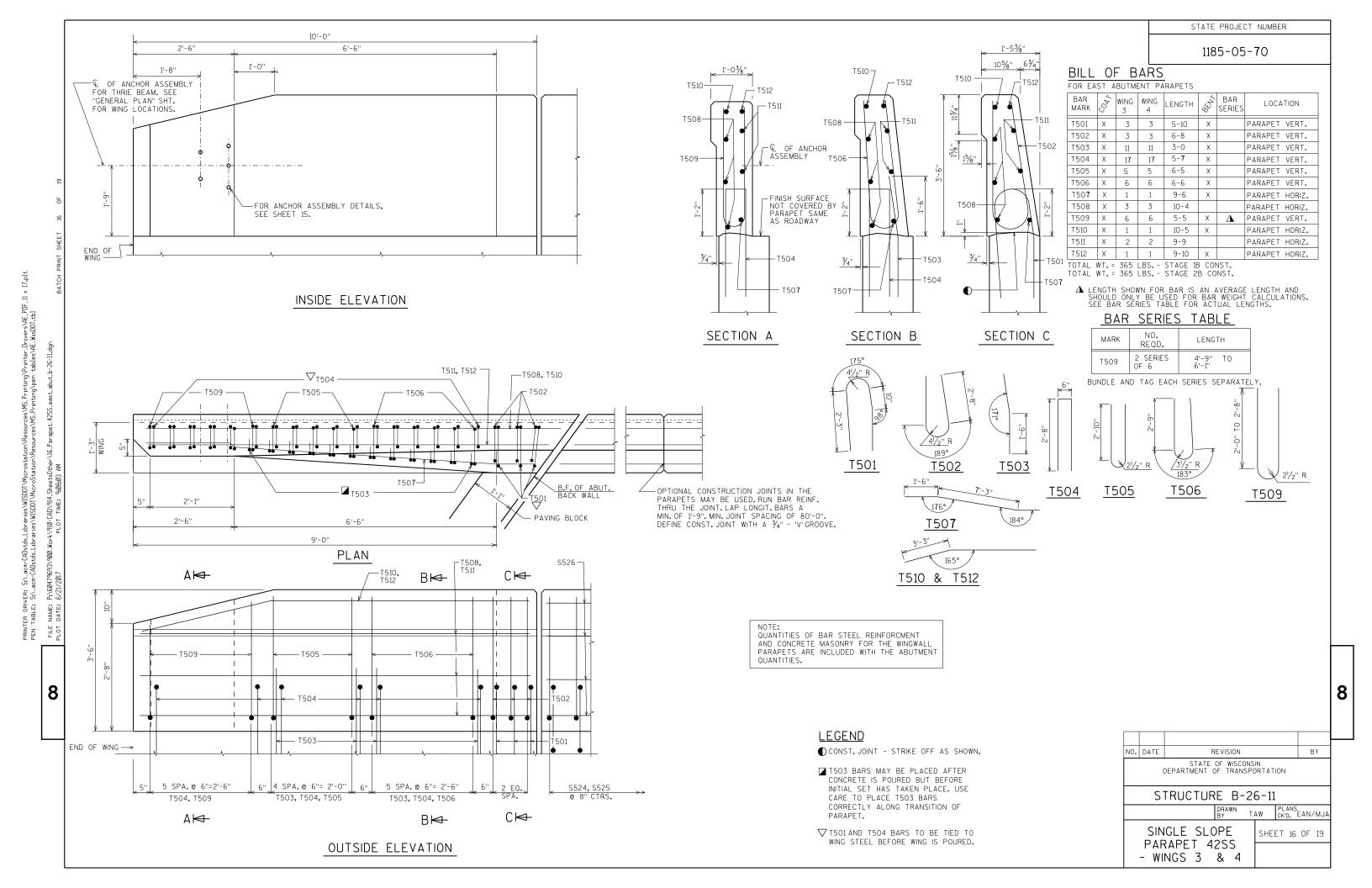
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BY STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-26-11 DRAWN BY TAW PLANS CK'D. EAN/MJA SHEET 14 OF 19 SUPERSTRUCTURE 5







-SET FLUSH WITH CONC. CONCRETE DIAPHRAGM TO EXTEND BETWEEN INSIDE (4) (5) FACES OF EXTERIOR GIRDERS PAVING NOTCH-CONST. JOINT FXISTING END OF GIRDER ABUTMENT REINFORCEMENT -MIN. FRONT FACE OF ABUT.BACKWALL * POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. SECTION THRU JOINT AT ABUTMENT

NORMAL TO & SUBSTRUCTURE

- NORMAL TO JOINT B506 - S405, S406 MIN. FACE OF $9\frac{1}{2}$ " MAX. CONC. OPENING AT PAVING BLOCK AT DECK

> SECTION THRU JOINT ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

LEGEND

- 1) NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.
- STUDS $\frac{5}{8}$ " ϕ X $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- $^{1}\!/_{2}"$ THICK ANCHOR PLATE WITH $^{5}\!/_{8}$ " ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO.1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- $^3\!4''$ ϕ threaded rod with 2 nuts and plate washers. Grout threaded rod into field drilled holes on $^{\mathbb Q}$ of girder. On abutment side grout threaded rod into field drilled holes in abutment backwall as shown.
- 4) $\frac{3}{4}$ " ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO.5.
- 5 FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO.1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1/2" \$\phi\$ HOLE FOR NO.3 AND 1" \$\phi\$ HOLE FOR NO. 4.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR

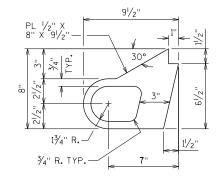
SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO.8 AND NO.9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

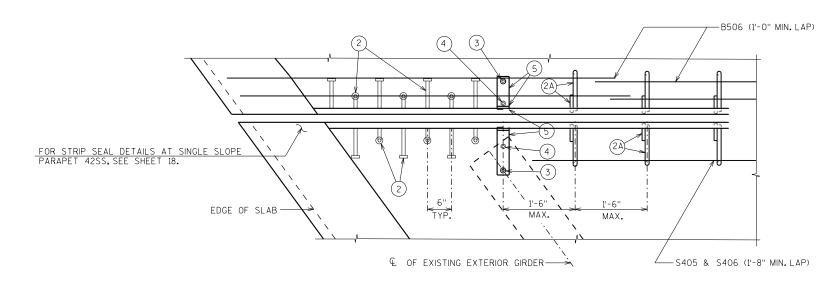
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-26-11".

13/4" NORMAL TO JOINT 21/2" MIN. BEND STUD TO CLEAR BOTTOM OF SLAB BY 1 1/2" ON OVERHANGS

SECTION THRU JOINT (EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS)



ALTERNATE STRIP SEAL ANCHOR

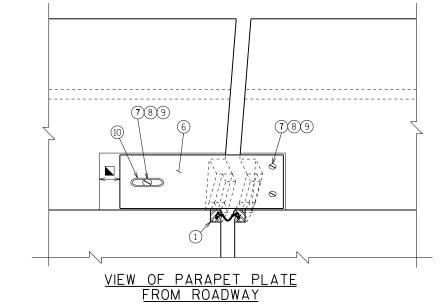


NO. DATE ΒY STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-26-11 TAW CK'D. EAN/MJA **EXPANSION** SHEET 17 OF 19 DEVICE

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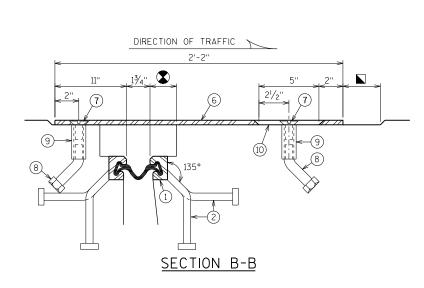
SECTION A-A

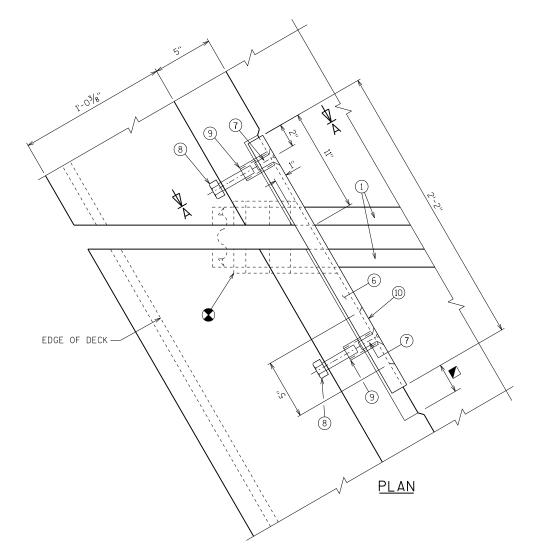


<u>LEGEND</u>

- 1 NEOPRENE STRIP SEAL (4 INCH) AND STEEL EXTRUSIONS.
- 6 GALVANIZED PLATE $\frac{3}{8}$ " X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.
- 7) $\frac{3}{4}$ "\$\phi\$ X 1\frac{1}{2}" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS \frac{1}{16}" BELOW PLATE SURFACE.
- (8) ¾4"¢ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- 9) 3/4" \$\phi X 2 1/4" GALVANIZED THREADED COUPLING.
- 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

■ JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

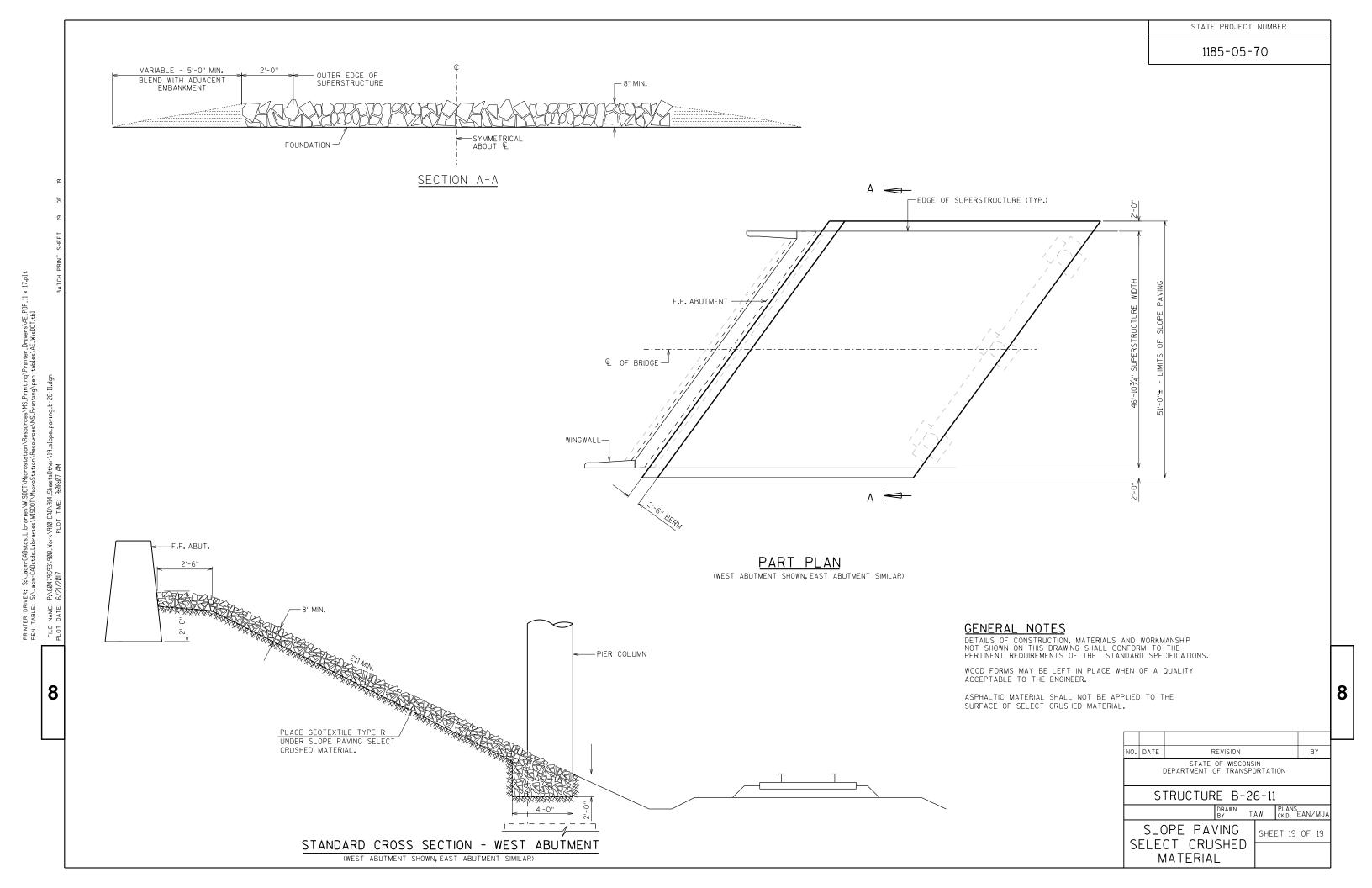




STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-26-11 DRAWN BY TAW PLANS CK'D. EAN/MJA EXPANSION SHEET 18 OF 19 DEVICE -

WINGS 3 & 4

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		AREA	(SF)	Incremental Vol (CY) (Unadjusted)	Cumula	tive Vol (CY)	
STAGE 1 STATION	Distance	Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
6+73		15.7	0	0	0	0	0	0
7+00	27	15.1	0	15	0	15	0	15
7+50	50	0	0	14	0	29	0	29
7+77	27	26.2	0	13	0	42	0	42
8+00	23	17.8	15.4	19	7	61	8	53
8+02	2	17.5	14.3	1	1	63	10	53
8+10	8	0	13.5	3	4	65	15	50
8+27	17	0	6.8	0	6	65	23	42
8+35	8	0	8.7	0	2	65	26	40
8+50	15	0	9.5	0	5	65	32	33
8+60	10	0	7.7	0	3	65	36	29
8+72	12	0	7.2	0	3	65	40	25
9+00	28	0	0	0	4	65	45	20
9+05	5	0	0	0	0	65	45	20
9+23	18	0	0	0	0	65	45	20
10+77	154	0	16	0	46	65	102	-37
11+00	23	0	0	0	7	65	110	-45
11+40	40	0	0	0	0	65	110	-45
11+50	10	0	0	0	0	65	110	-45
11+65	15	0	0	0	0	65	110	-45
11+73	8	0	0	0	0	65	110	-45
11+90	17	0	0	0	0	65	110	-45
11+98	8	0	0	0	0	65	110	-45
12+00	2	0	0	0	0	65	110	-45
12+23	23	0	0	0	0	65	110	-45
12+50	27	8.8	0	4	0	70	110	-41
13+00	50	17.9	0	25	0	94	110	-16
13+30	30	18.2	0	20	0	114	110	4
				114	88			

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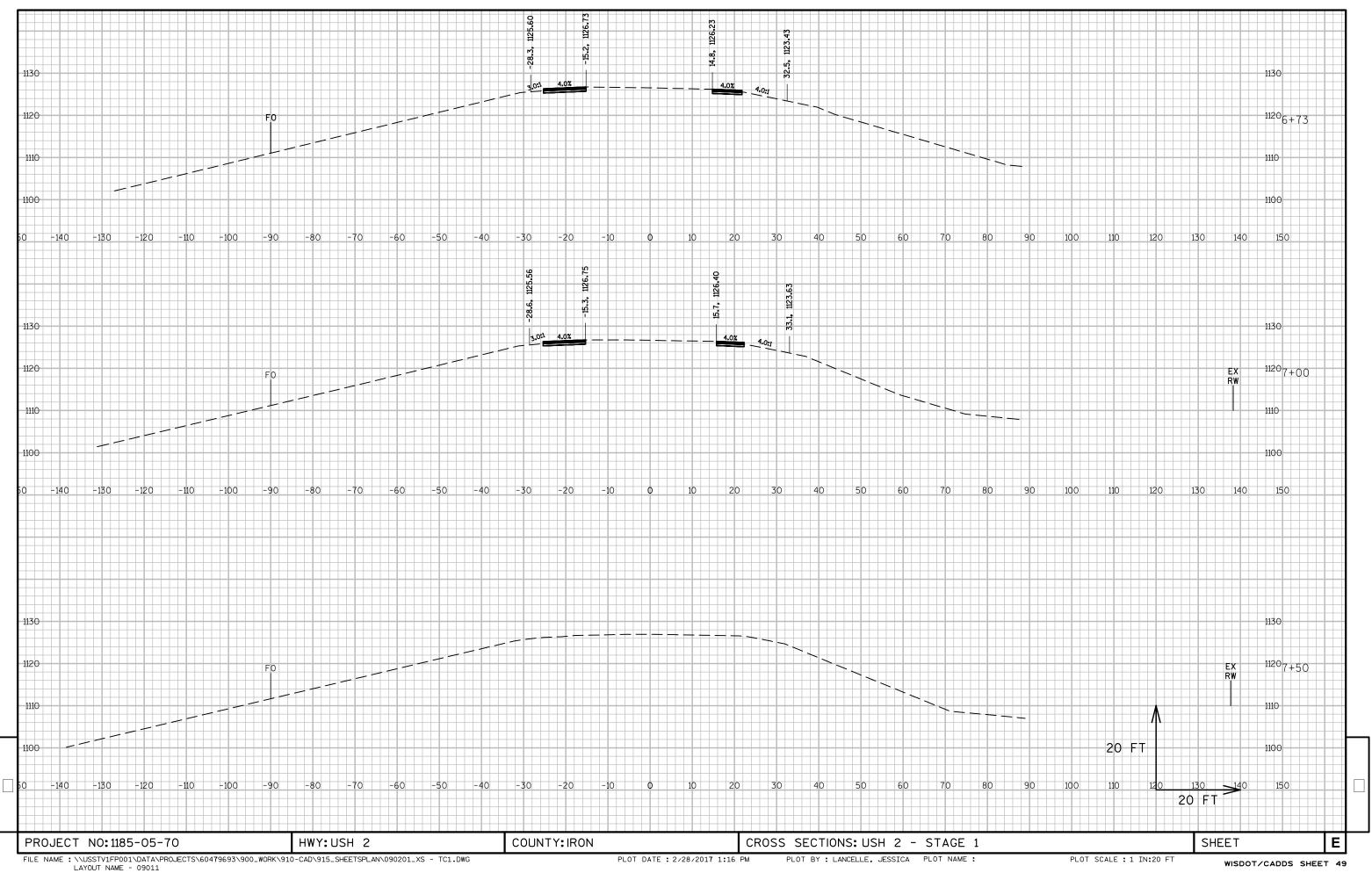
PROJECT NUMBER: 1185-05-70 HWY: USH 2 COUNTY: IRON EARTHWORK SHEET NO: E

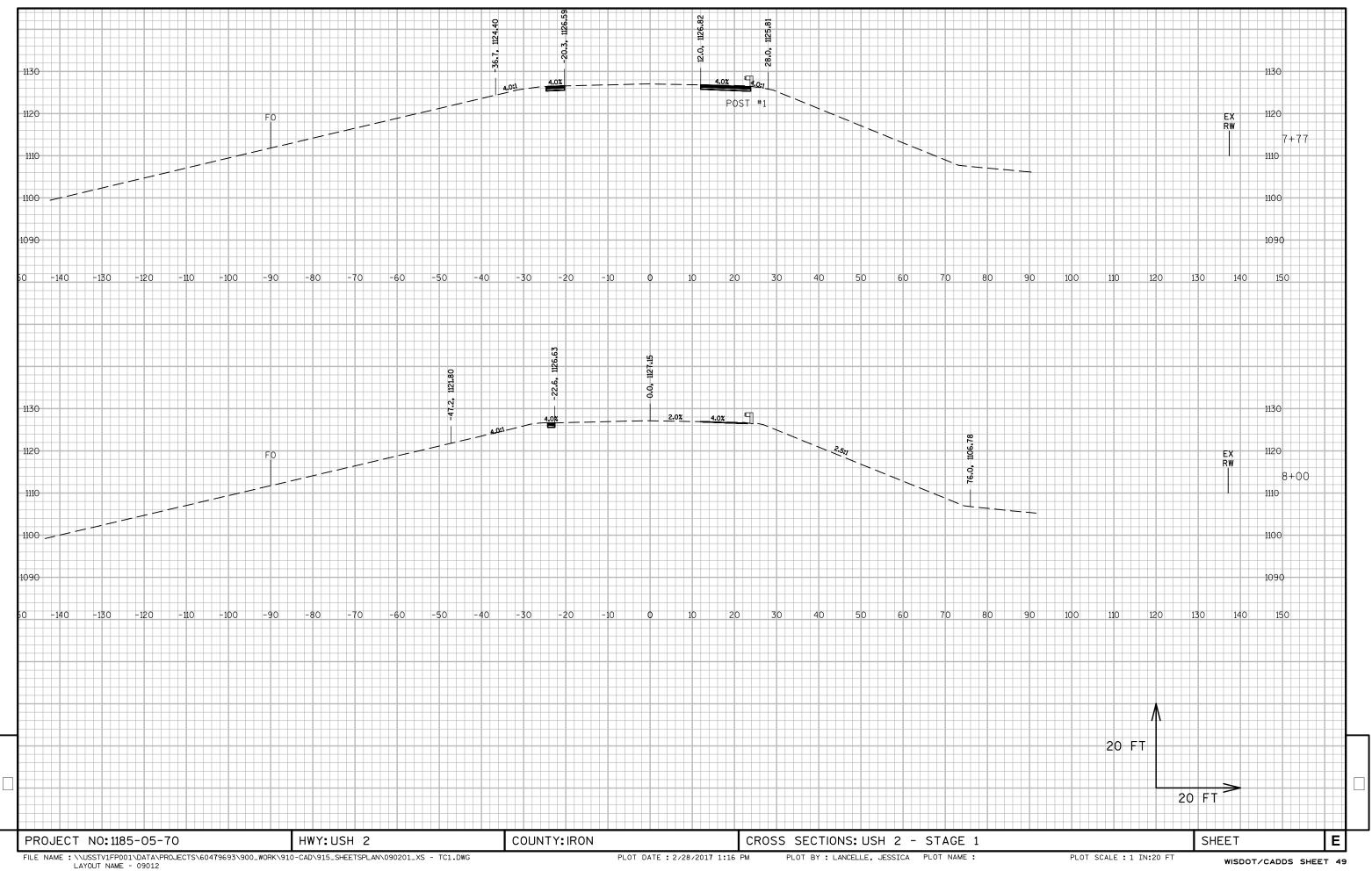
		AREA	(SF)	Incremental Vol (C	Y) (Unadjusted)	Cumula	tive Vol (CY)	
STAGE 2 STATION	Distance	Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinat
6+73		0.0	0.0	0	0	0	0	0
7+00	27	0.0	0.0	0	0	0	0	0
7+50	50	0.0	0.0	0	0	0	0	0
7+77	27	0.0	0.0	0	0	0	0	0
8+00	23	0.0	5.5	0	2	0	3	-3
8+02	2	1.0	4.5	0	0	0	3	-3
8+10	8	0.0	3.8	0	1	0	5	-5
8+27	17	0.0	0.0	0	1	0	6	-6
8+35	8	0.0	0.0	0	0	0	6	-6
8+50	15	0.0	0.0	0	0	0	6	-6
8+60	10	0.0	0.0	0	0	0	6	-6
8+72	12	0.0	0.0	0	0	0	6	-6
9+00	28	0.0	0.0	0	0	0	6	-6
9+05	5	0.0	0.0	0	0	0	6	-6
9+23	18	0.0	0.0	0	0	0	6	-6
10+77	154	0.0	0.0	0	0	0	6	-6
11+00	23	0.0	0.0	0	0	0	6	-6
11+40	40	0.0	0.0	0	0	0	6	-6
11+50	10	0.0	0.0	0	0	0	6	-6
11+65	15	0.0	0.0	0	0	0	6	-6
11+73	8	0.0	0.0	0	0	0	6	-6
11+90	17	0.0	0.0	0	0	0	6	-6
11+98	8	0.0	0.0	0	0	0	6	-6
12+00	2	0.0	0.0	0	0	0	6	-6
12+23	23	0.0	0.0	0	0	0	6	-6
12+50	27	0.0	0.0	0	0	0	6	-6
13+00	50	0.0	0.0	0	0	0	6	-6
13+30	30	0.0	0.0	0	0	0	6	-6
	L_			0	5			

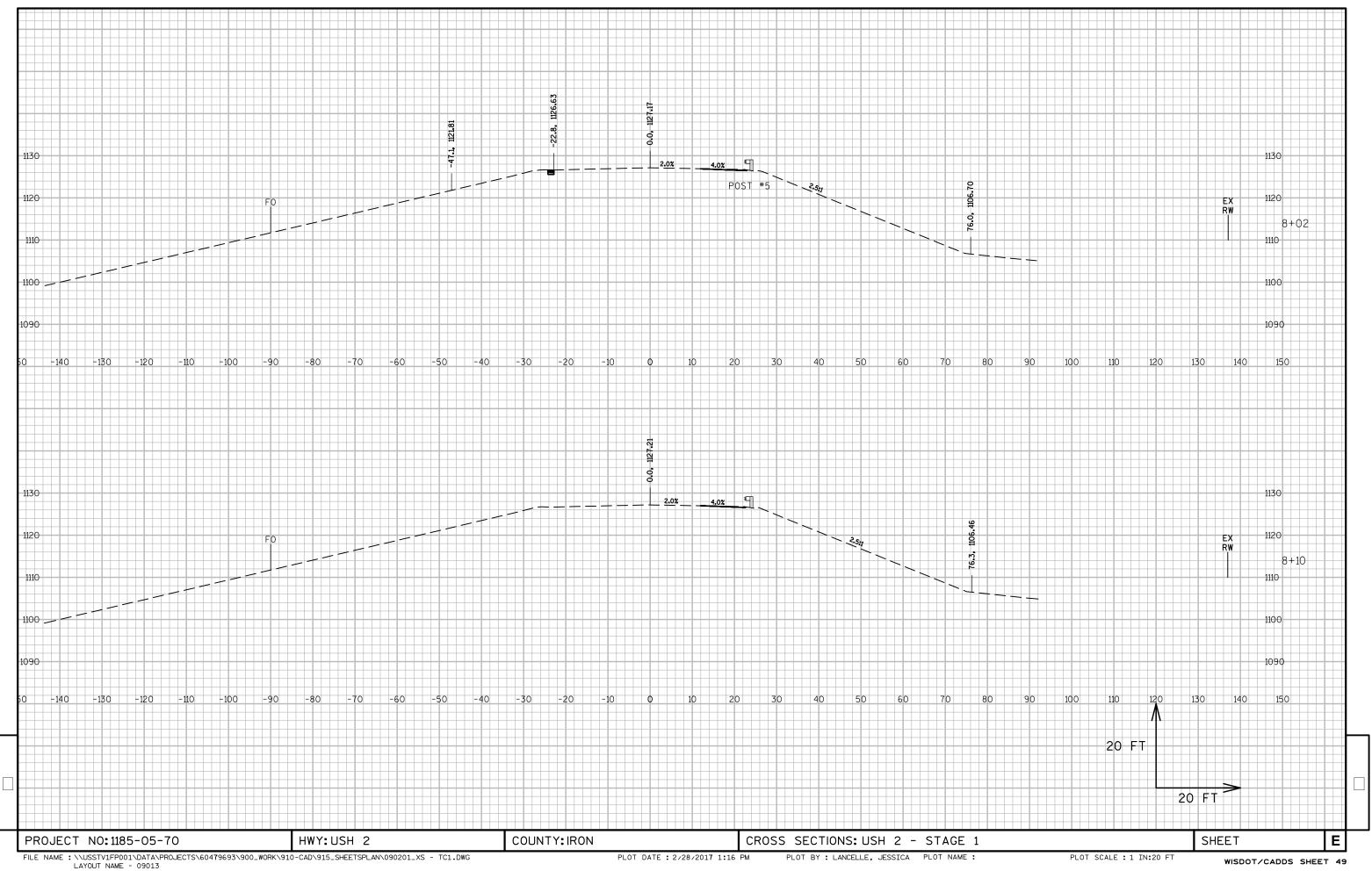
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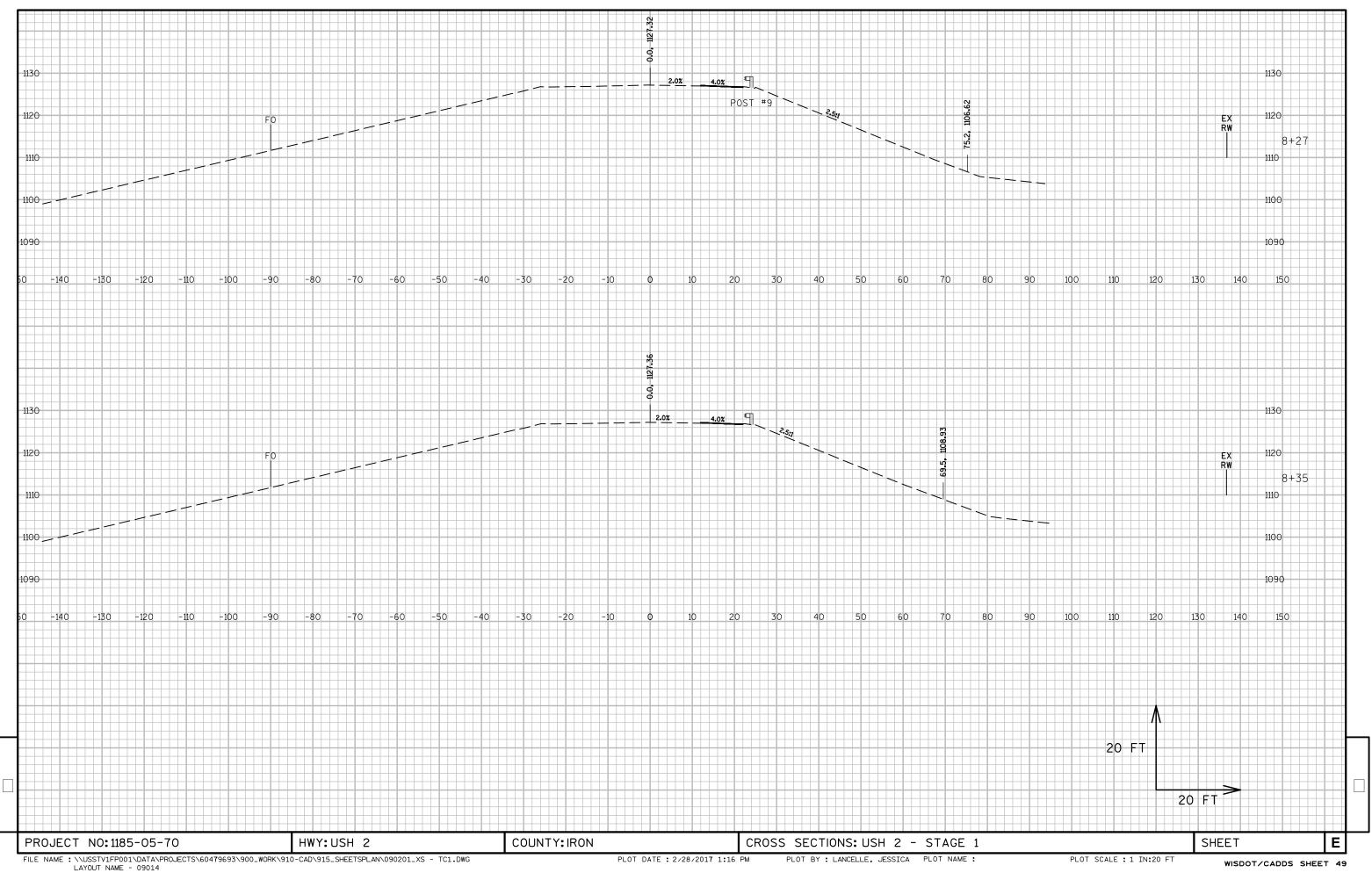
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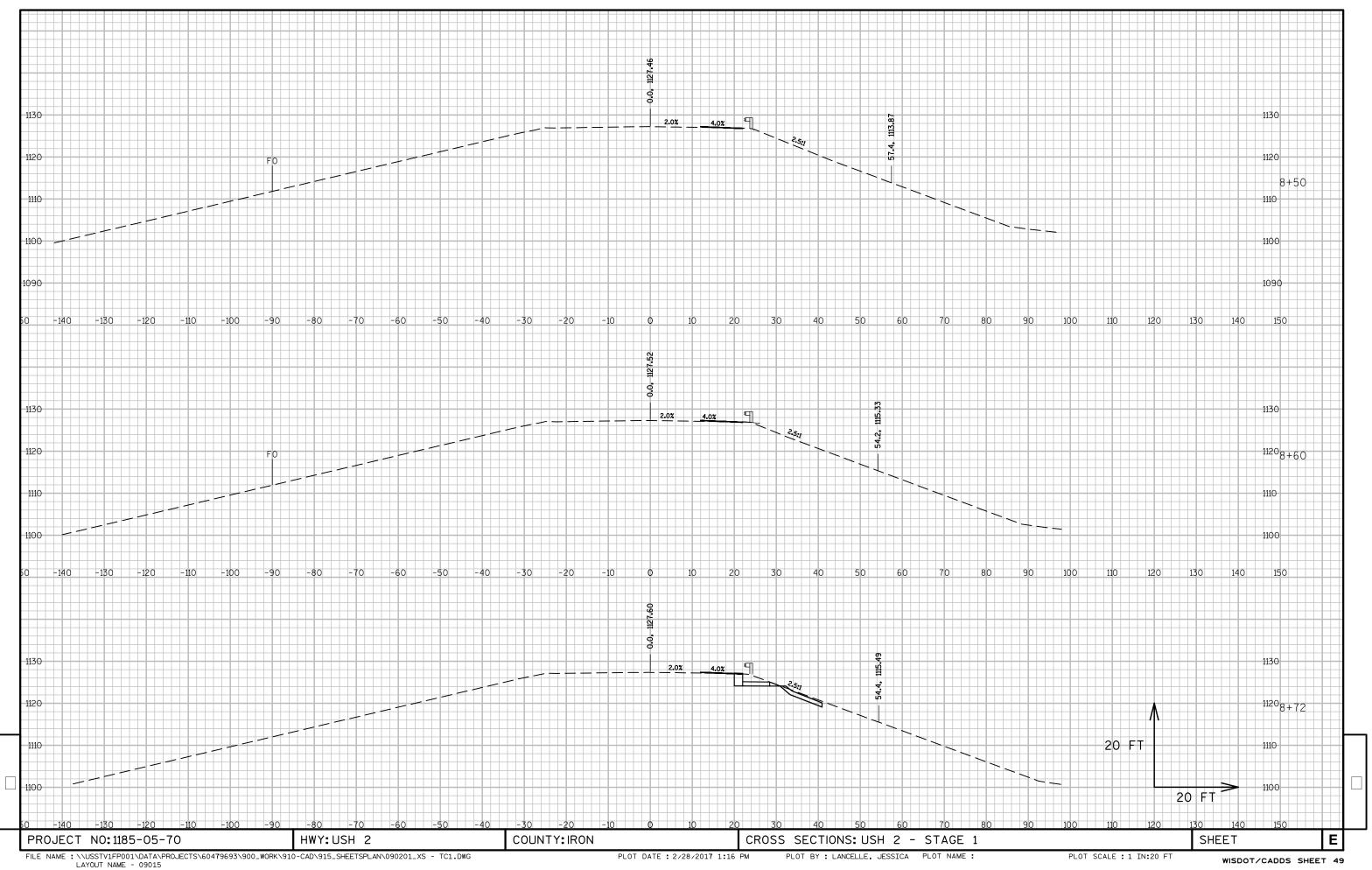
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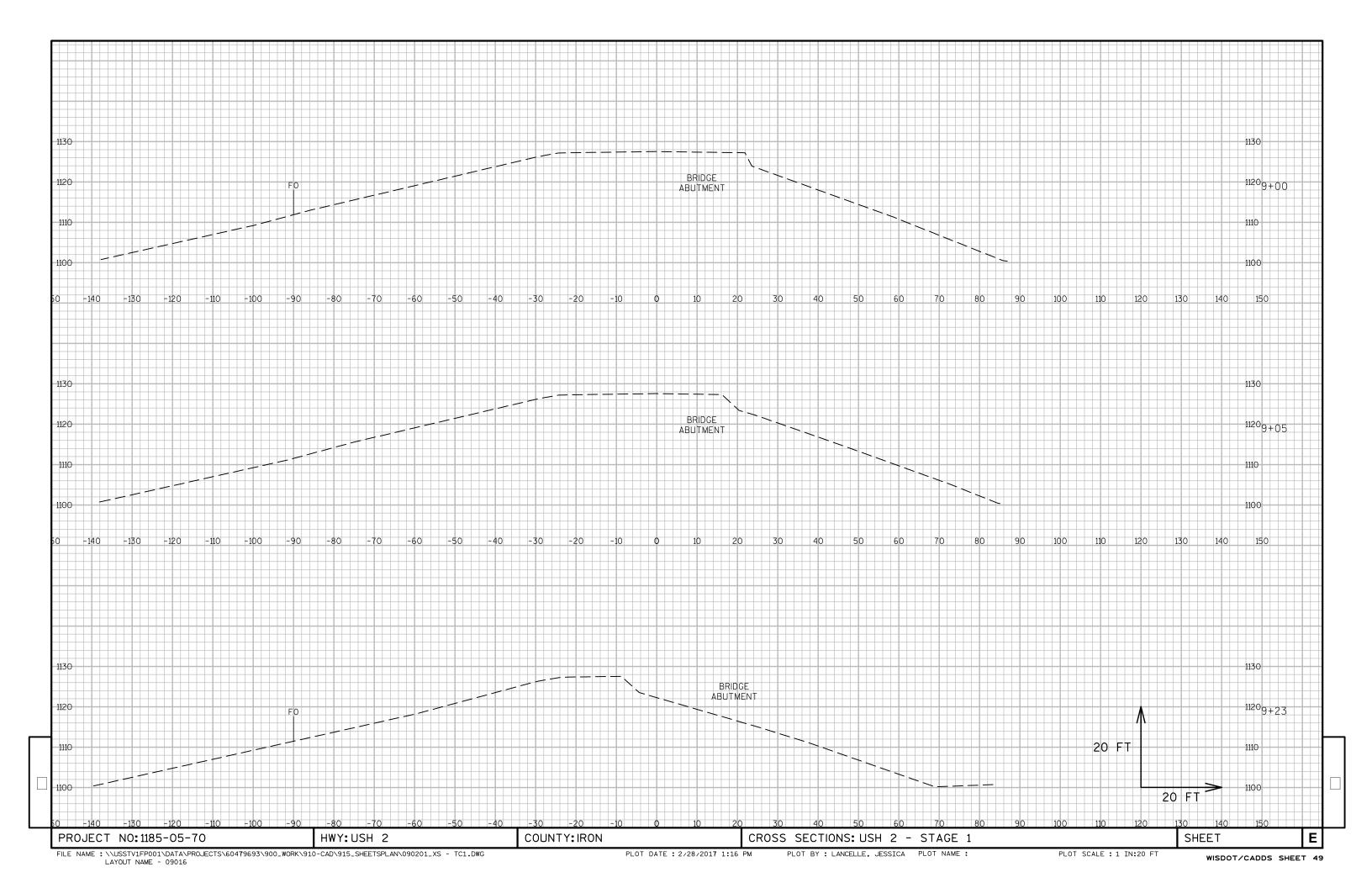


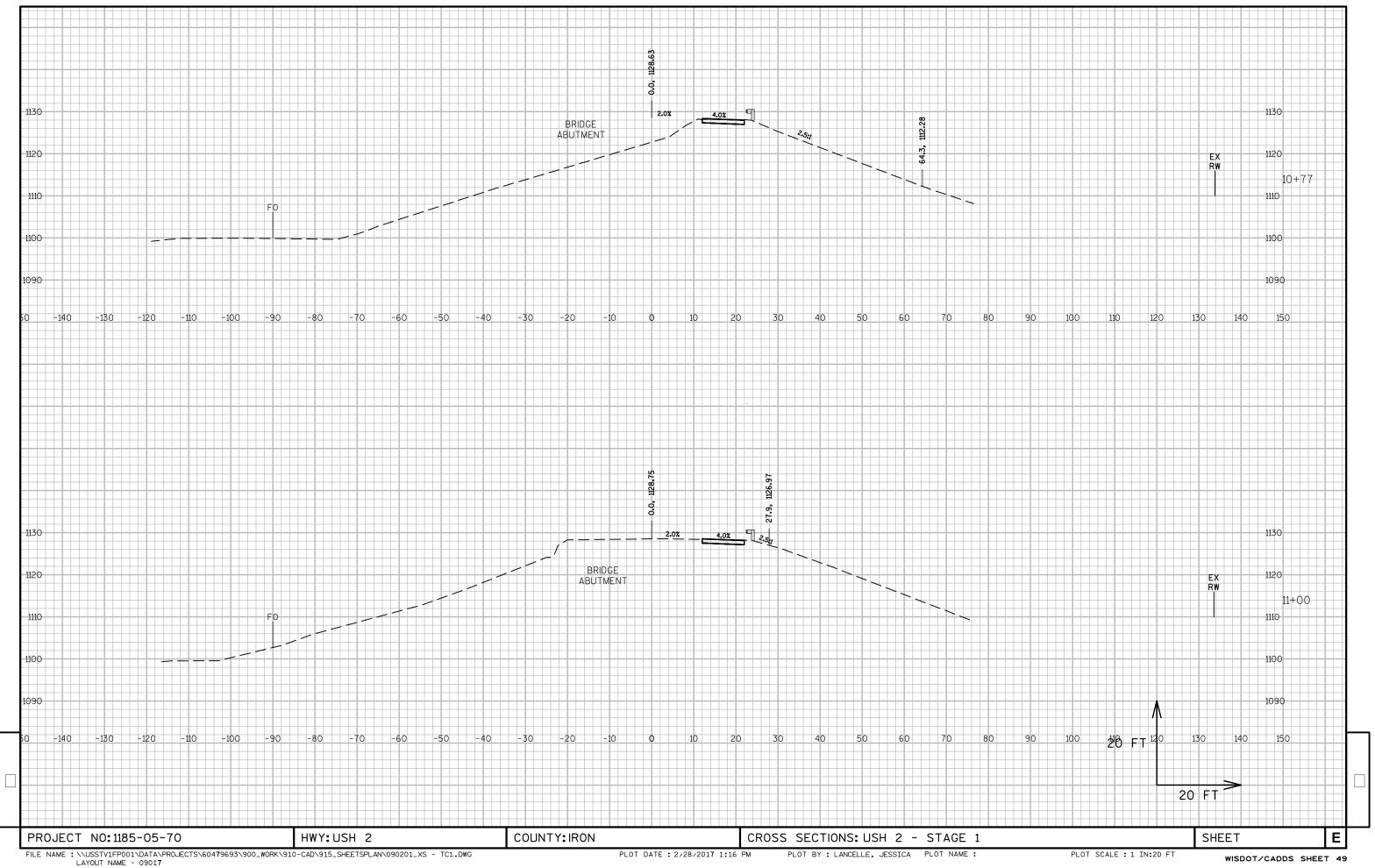


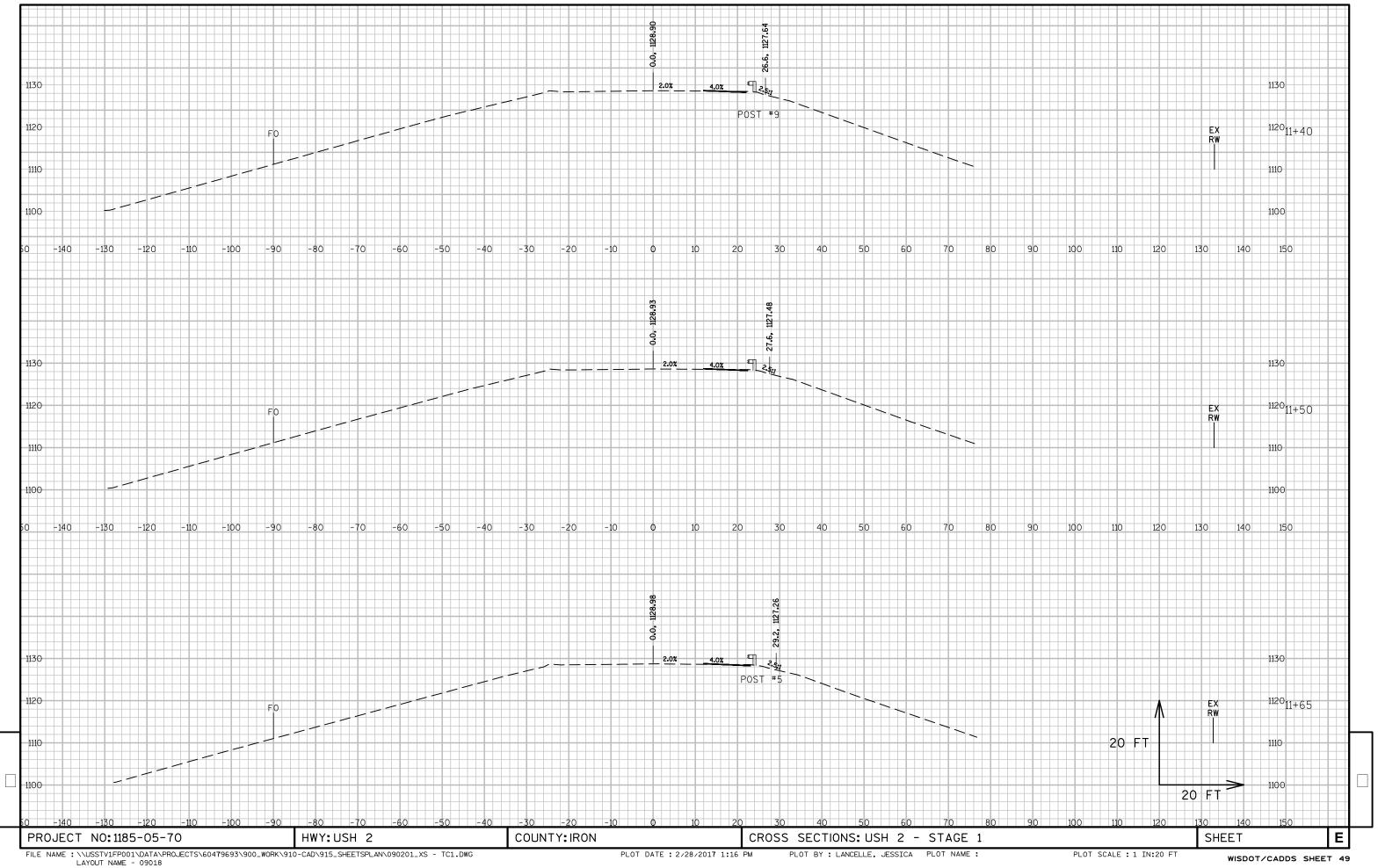


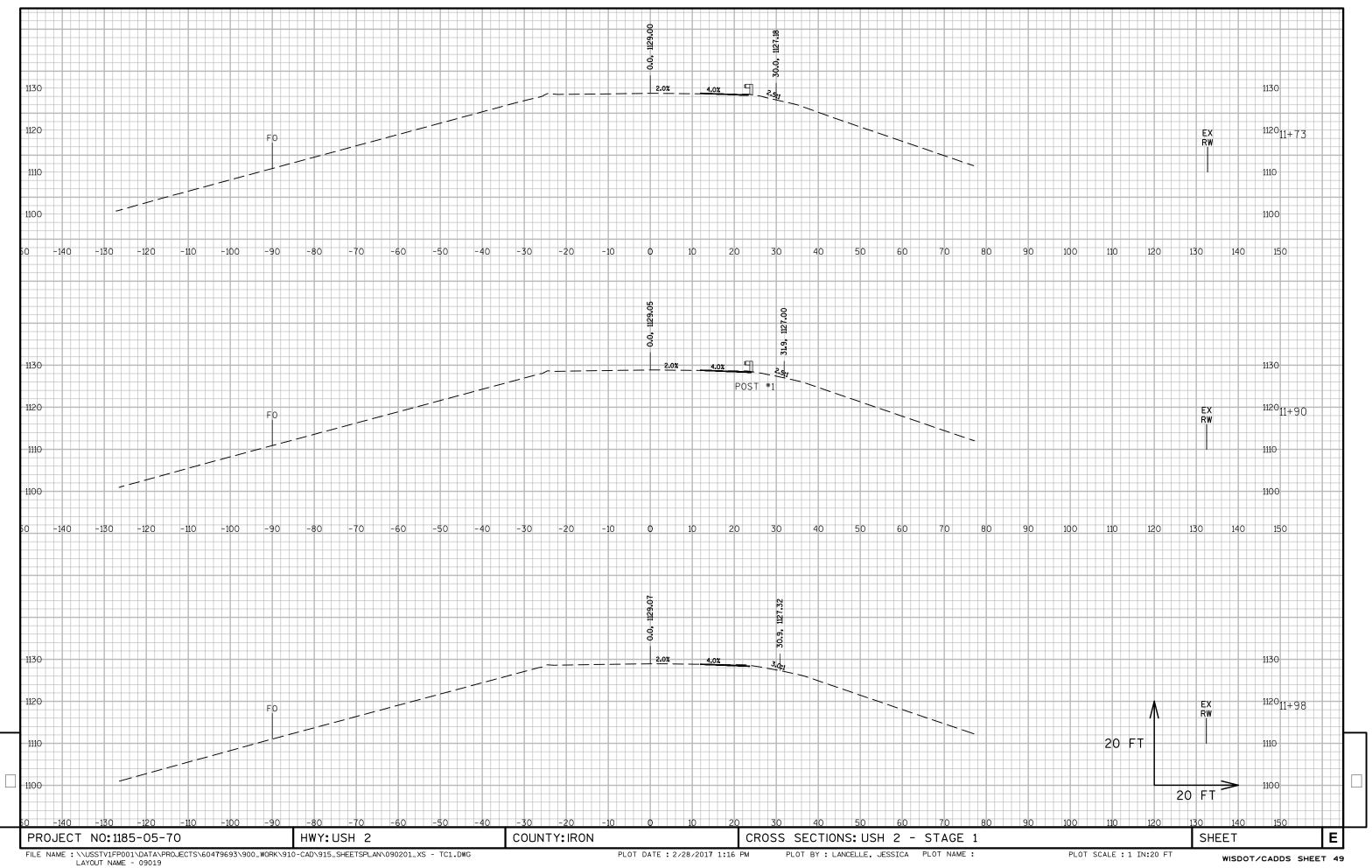


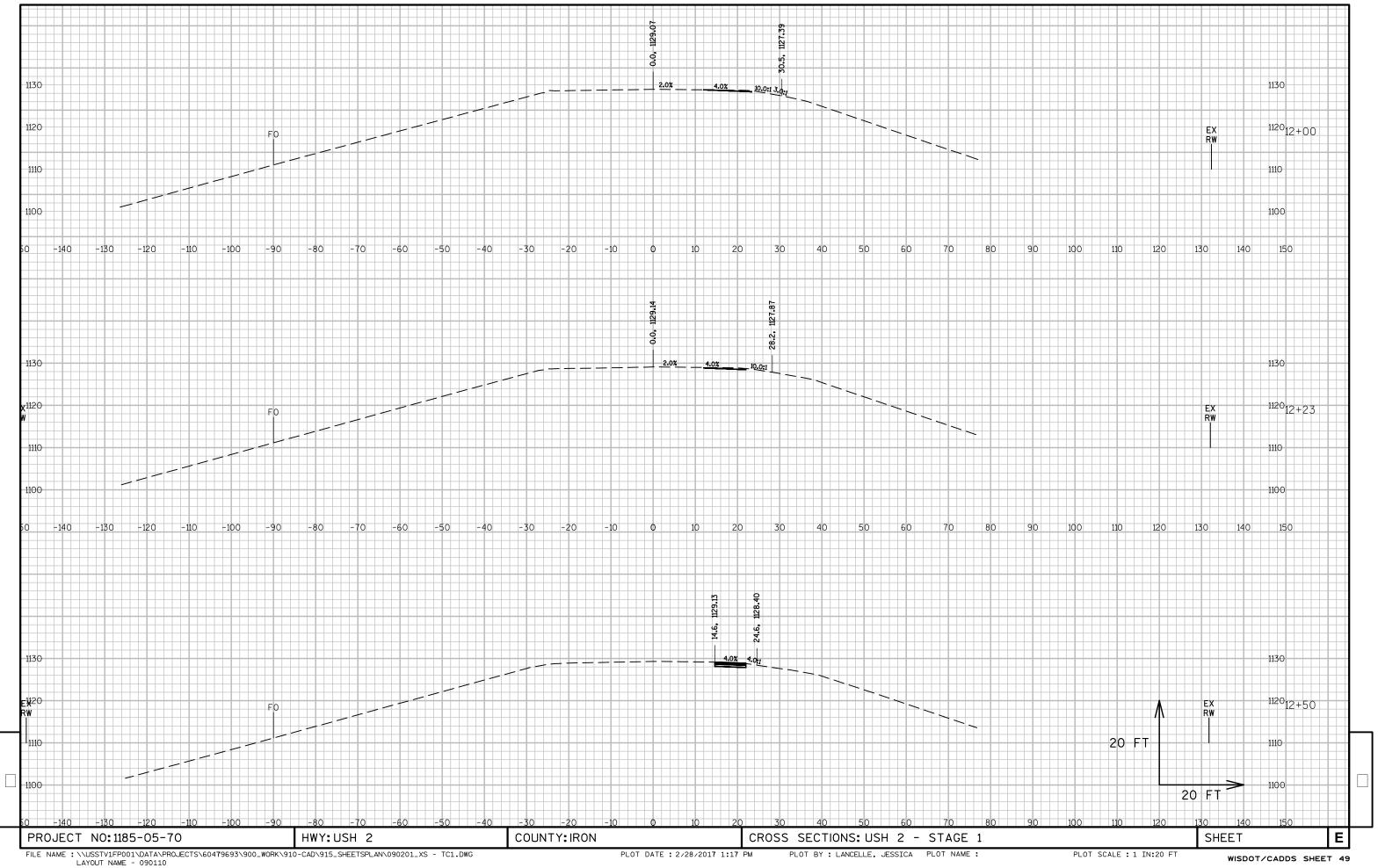


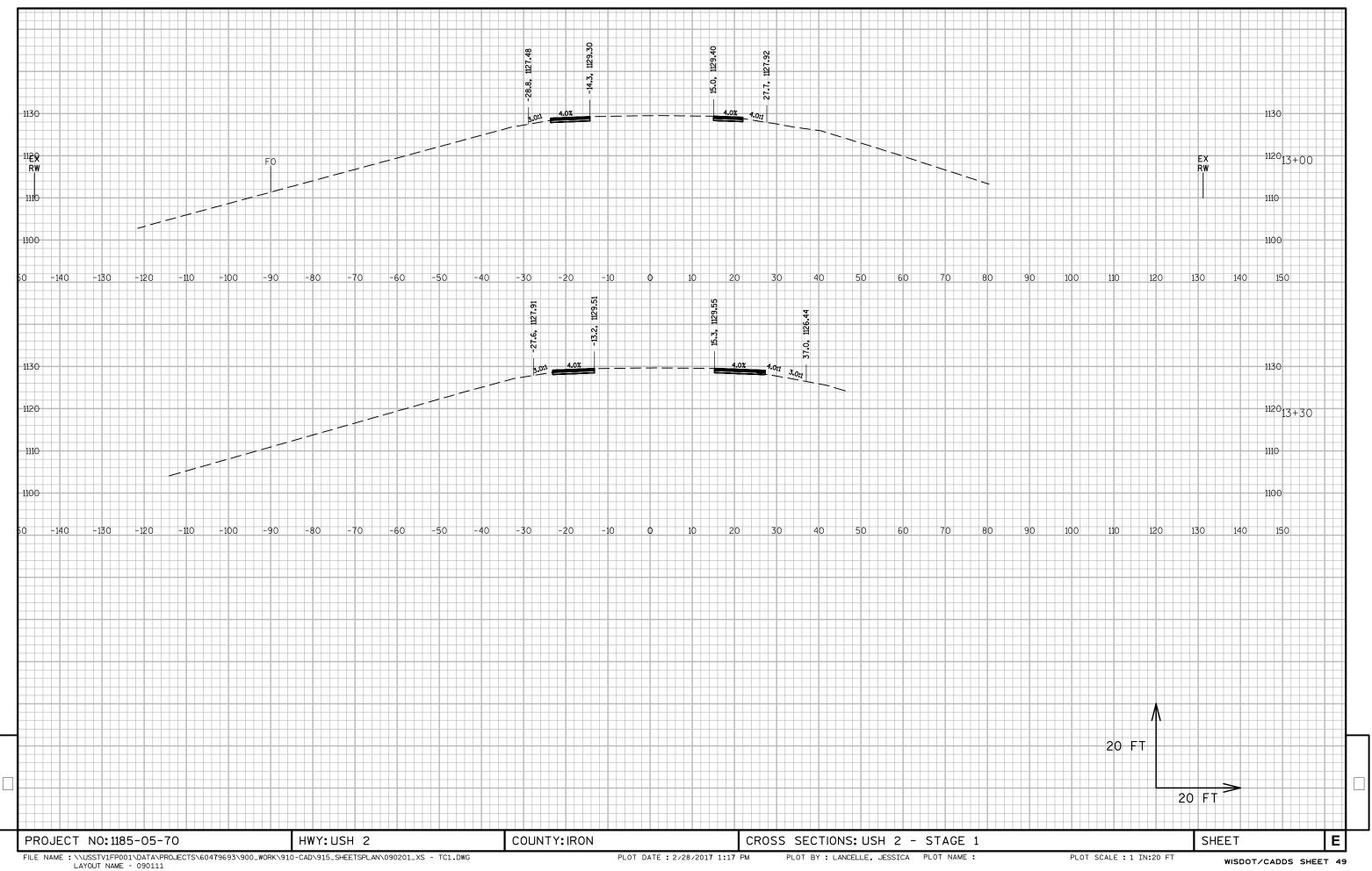


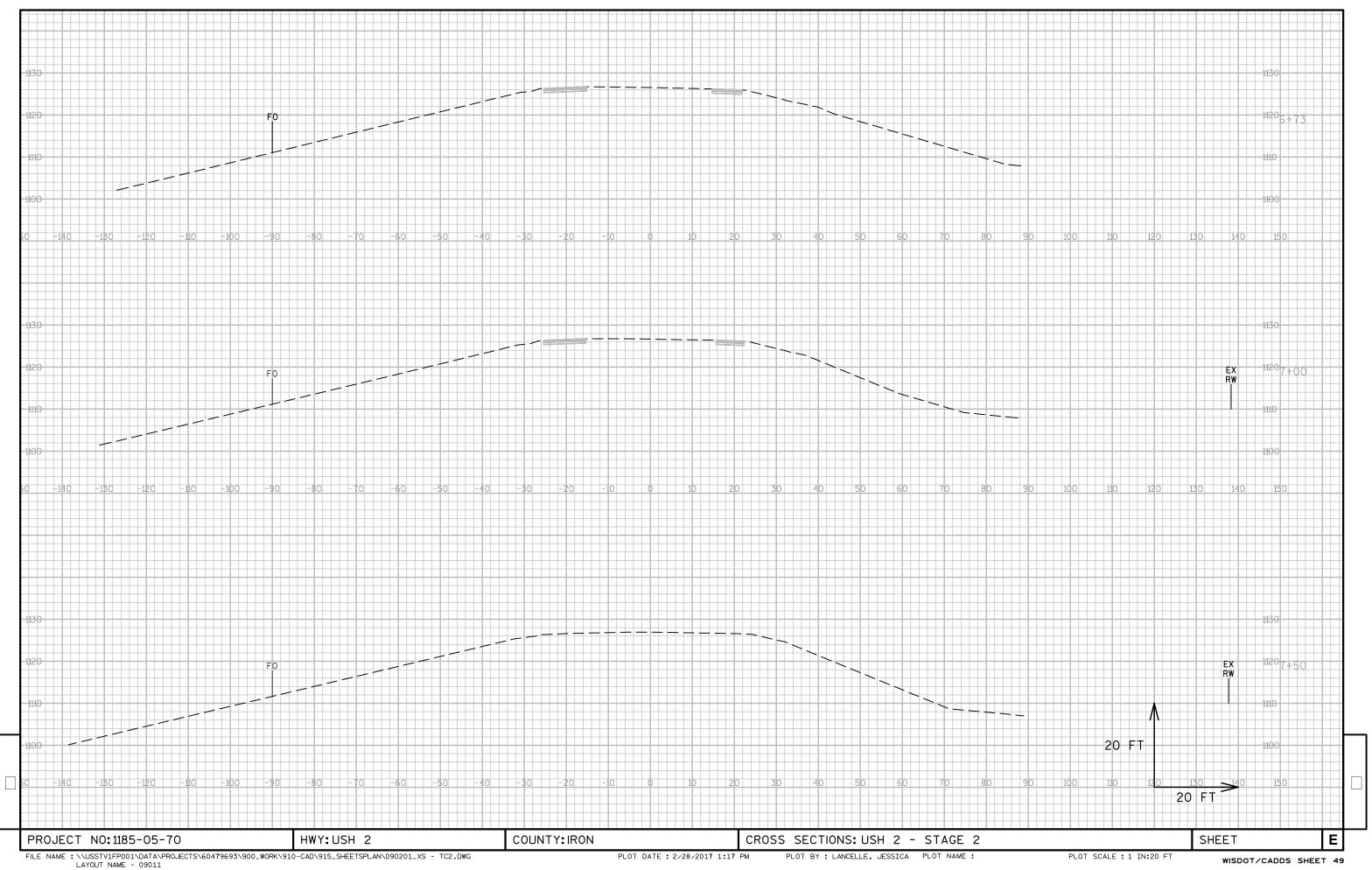


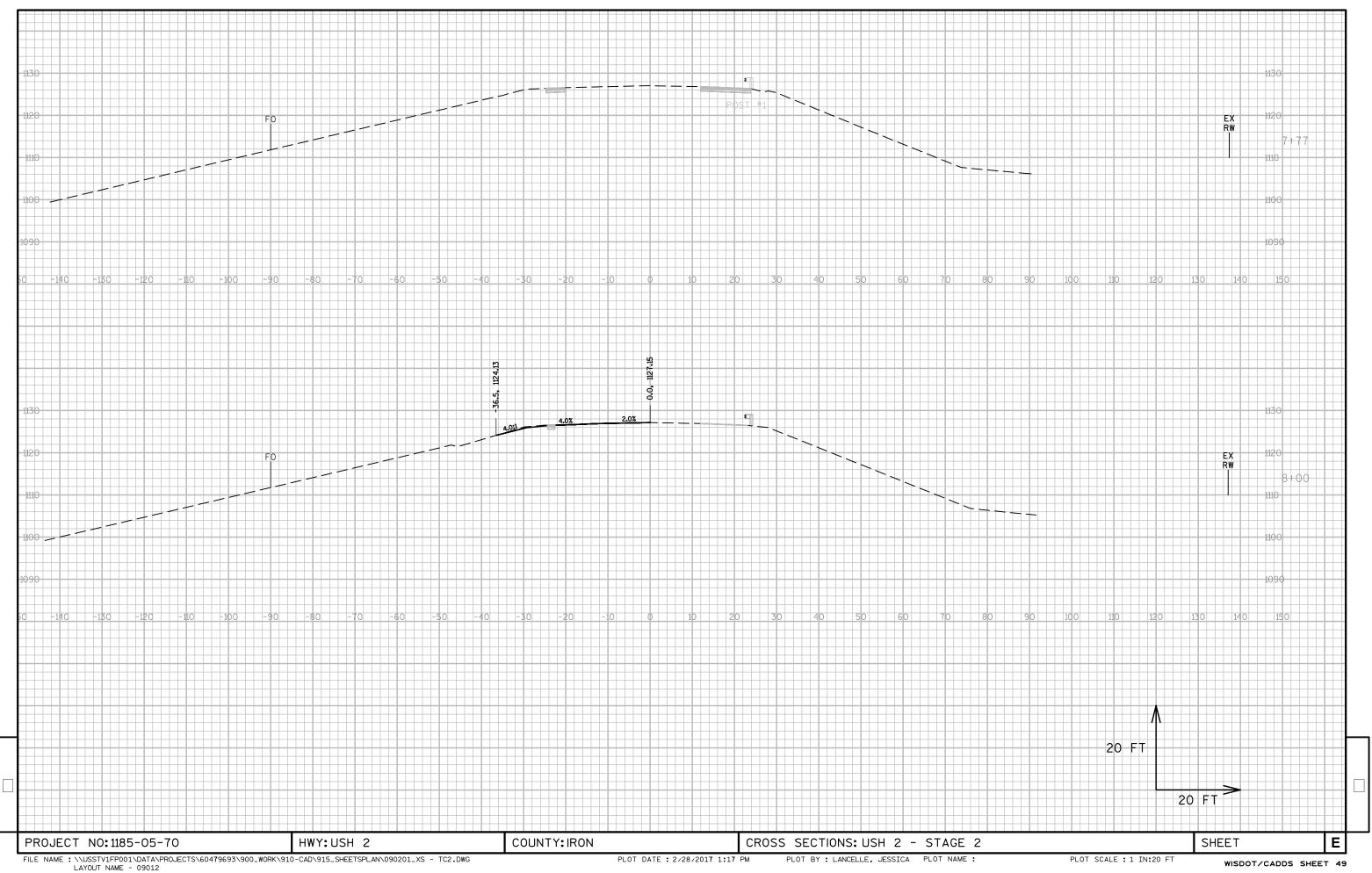


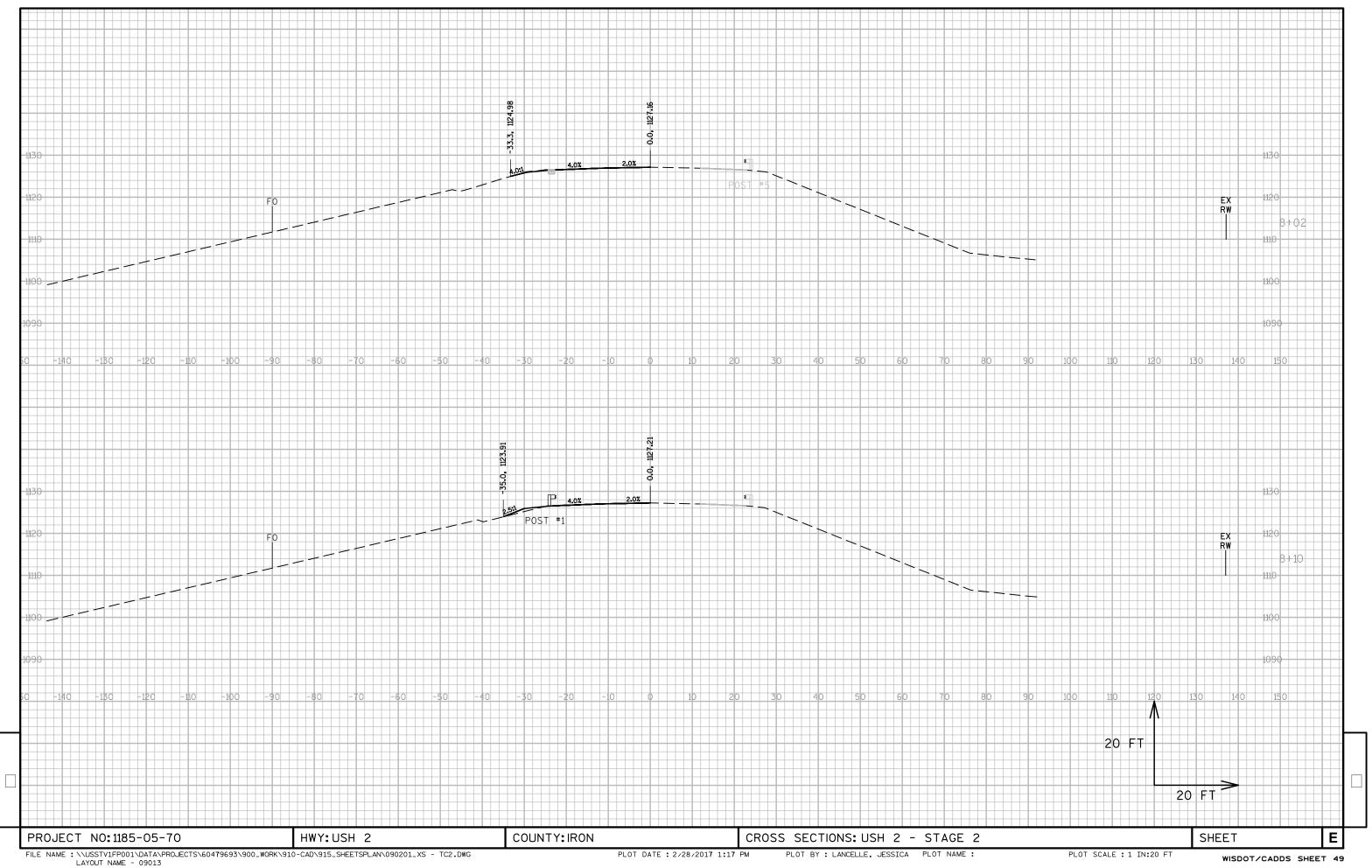


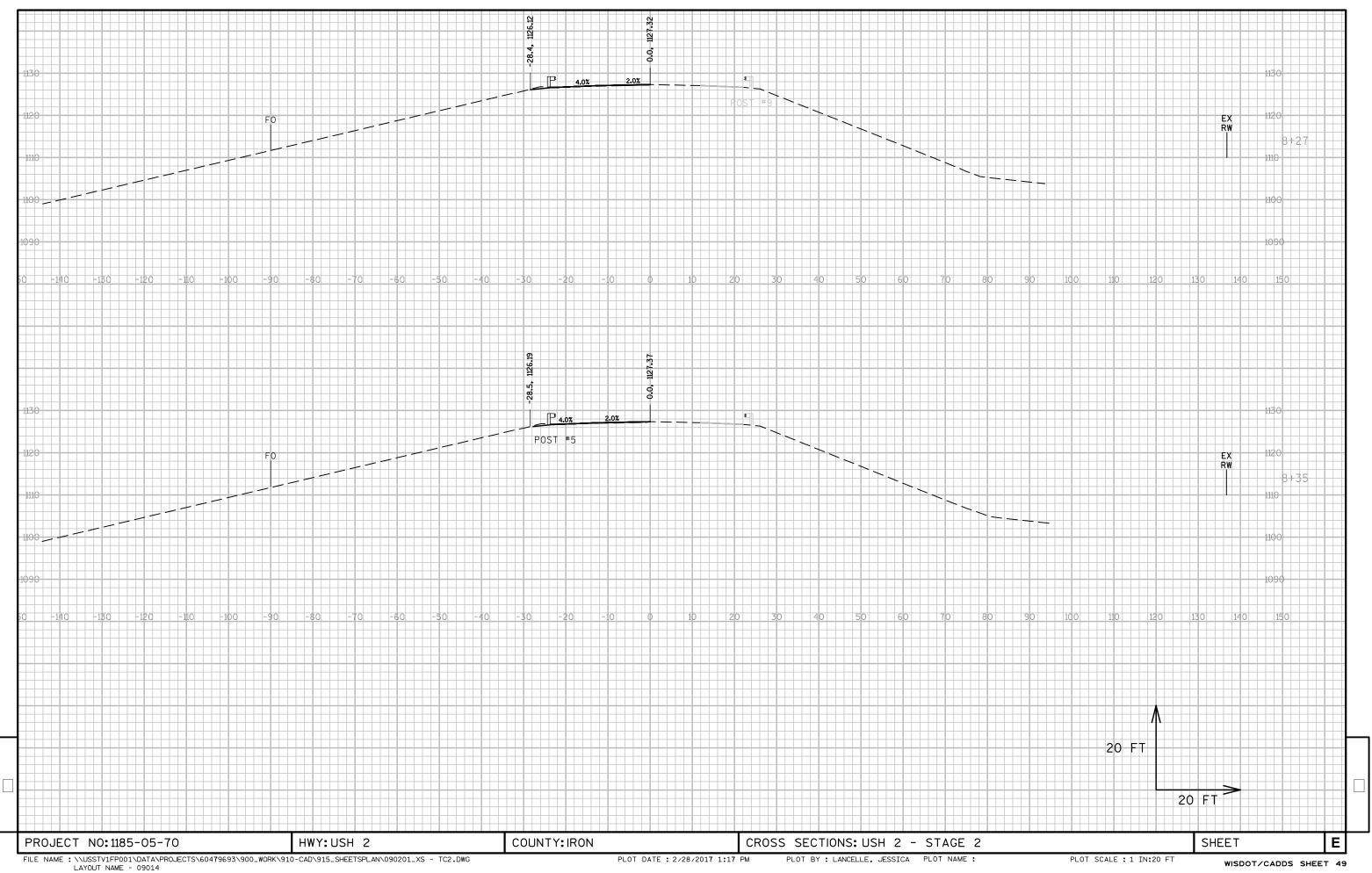


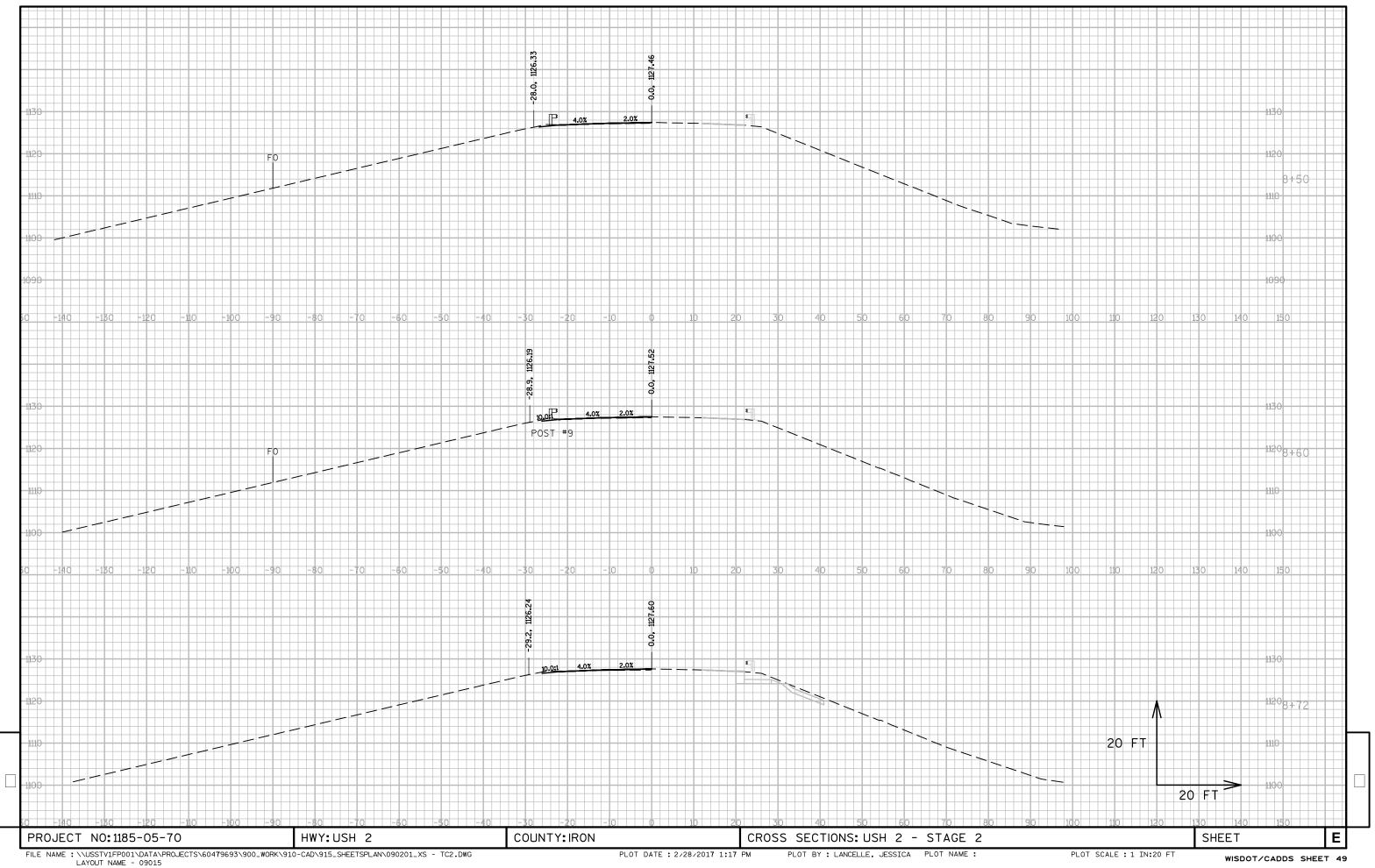


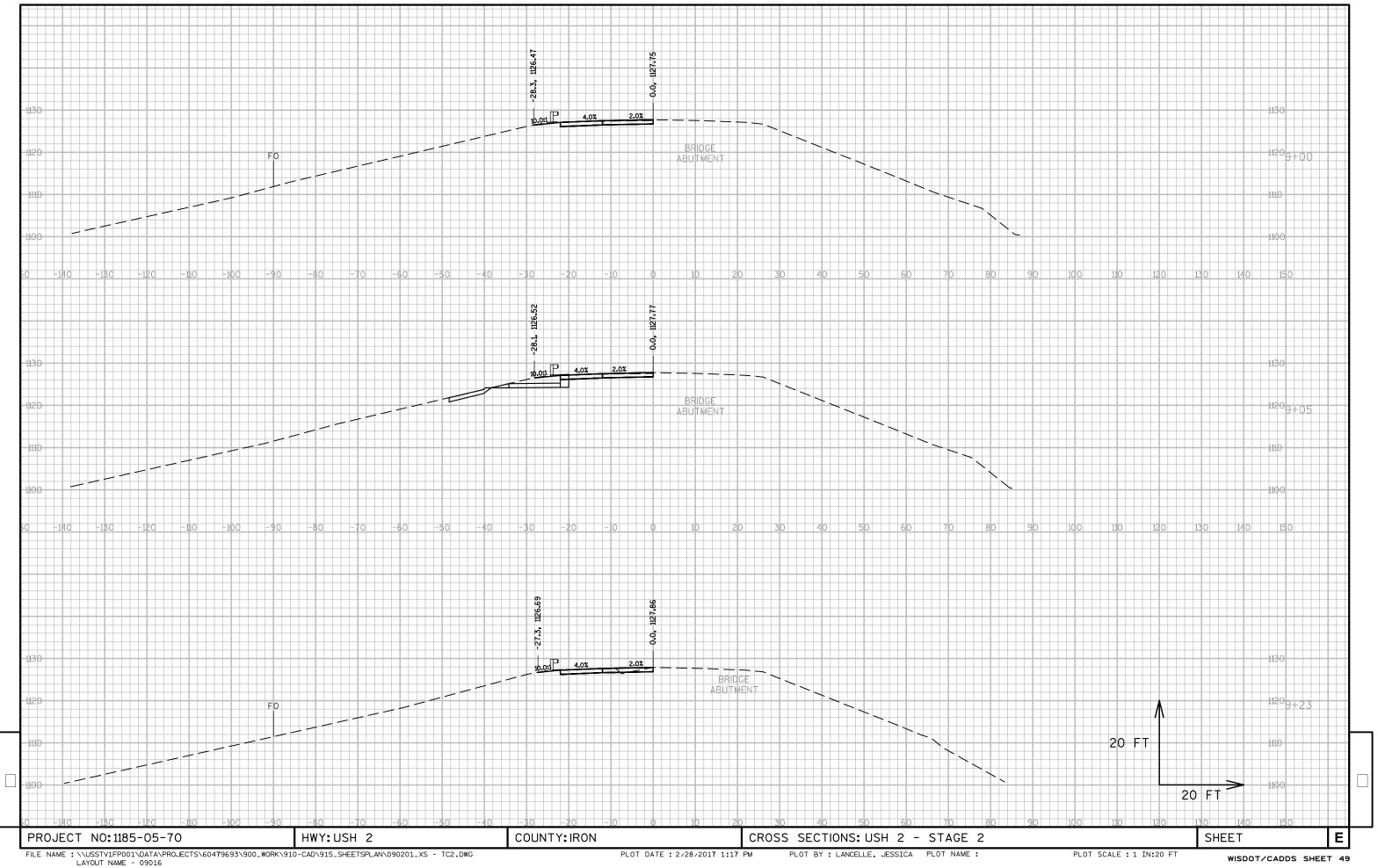


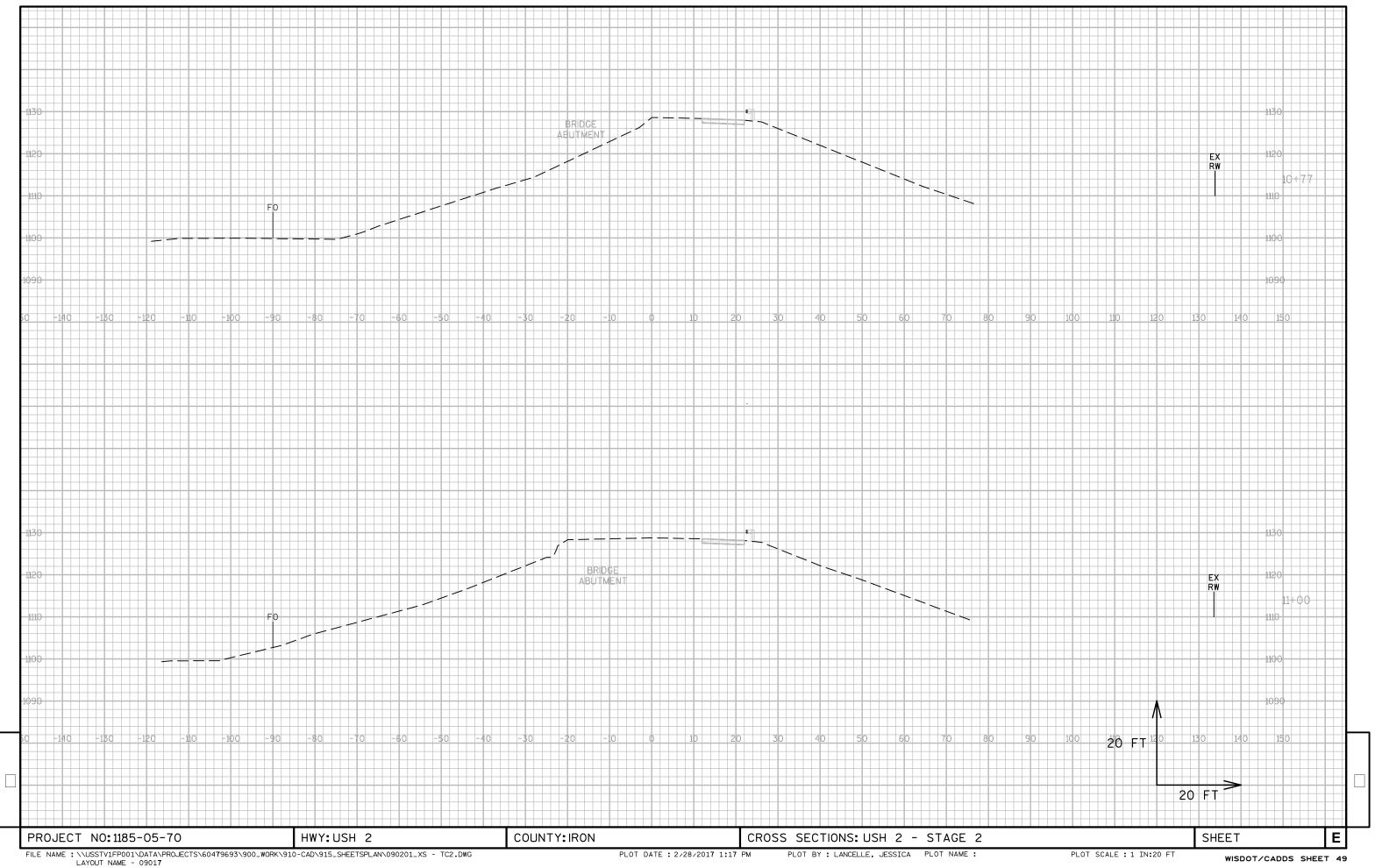


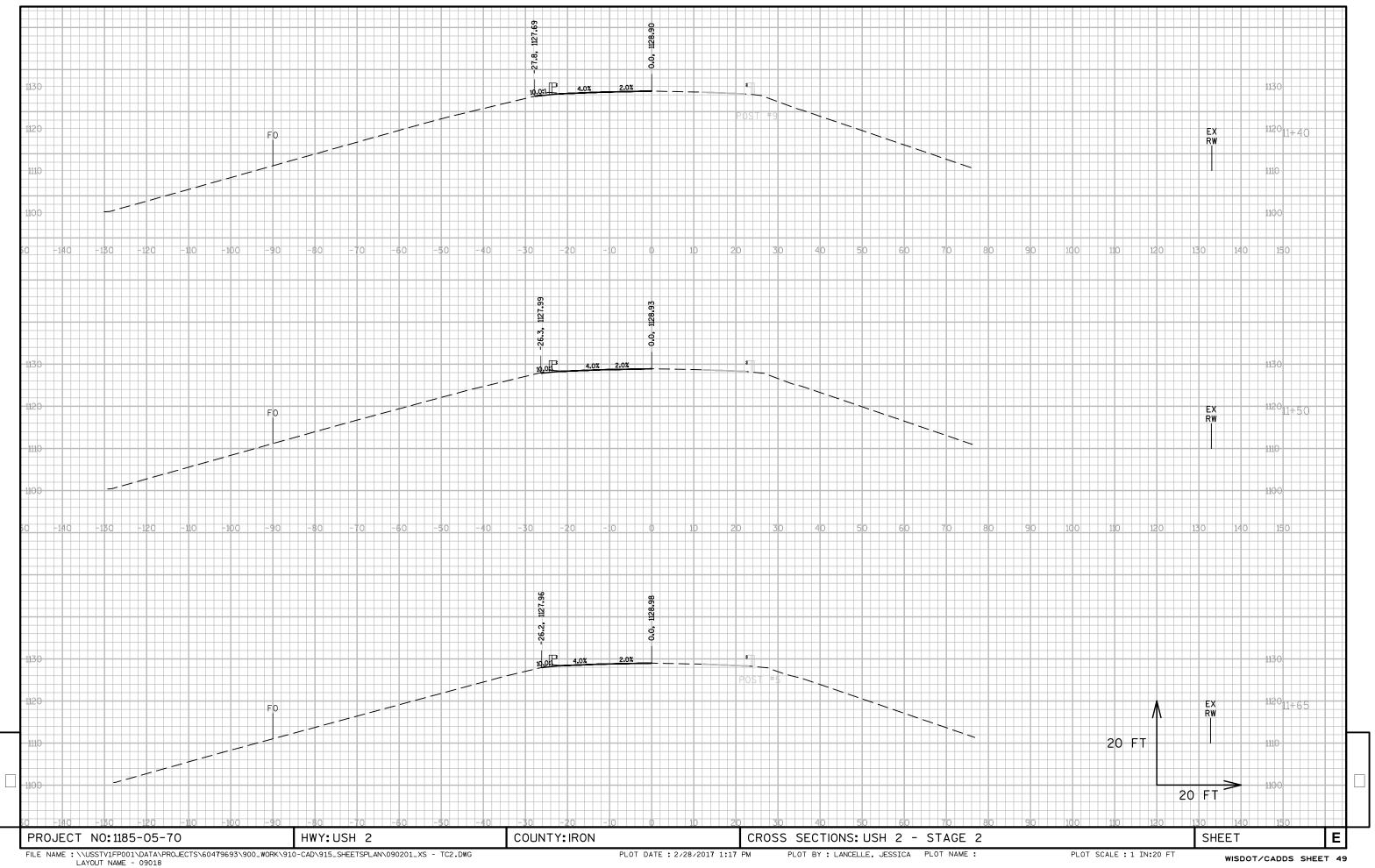


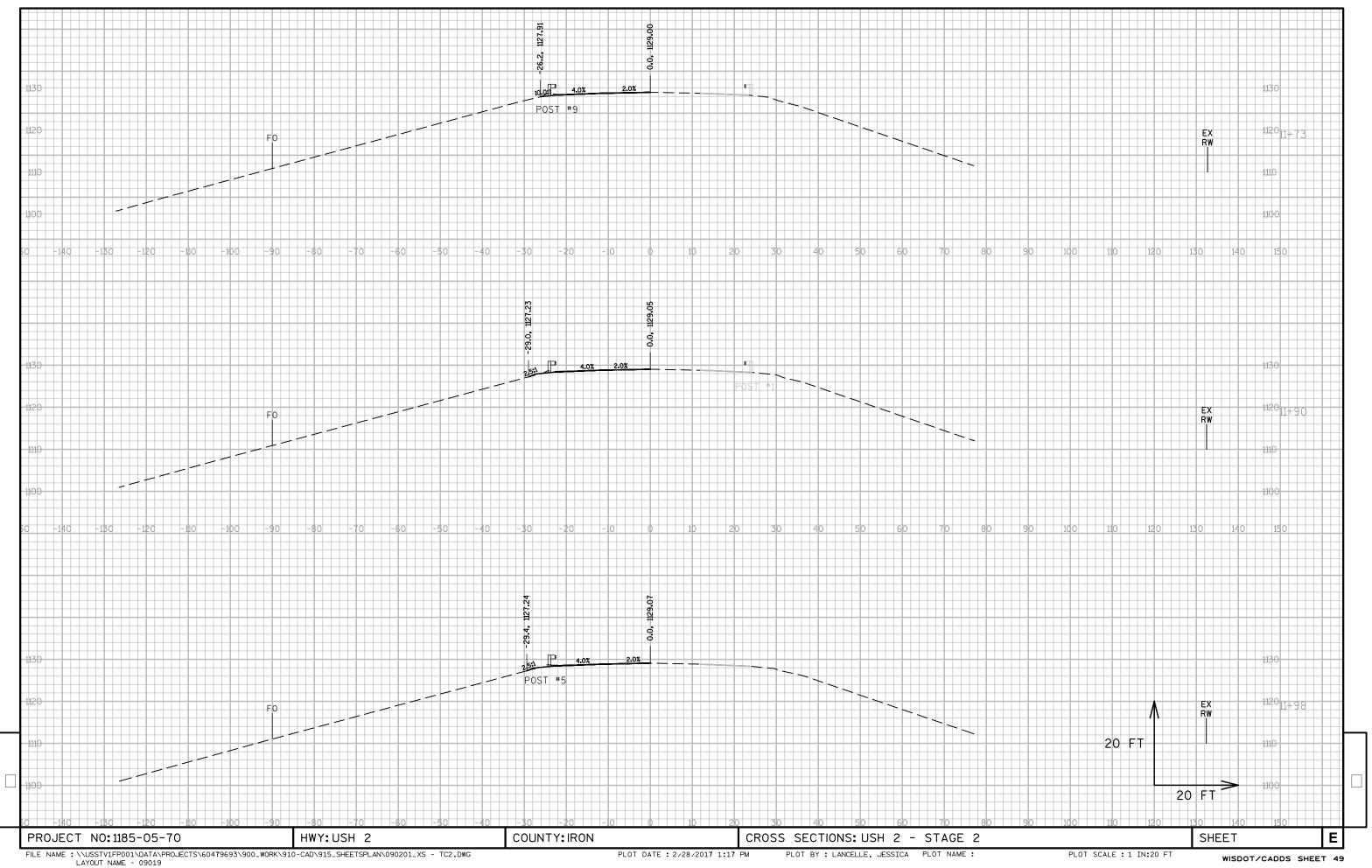


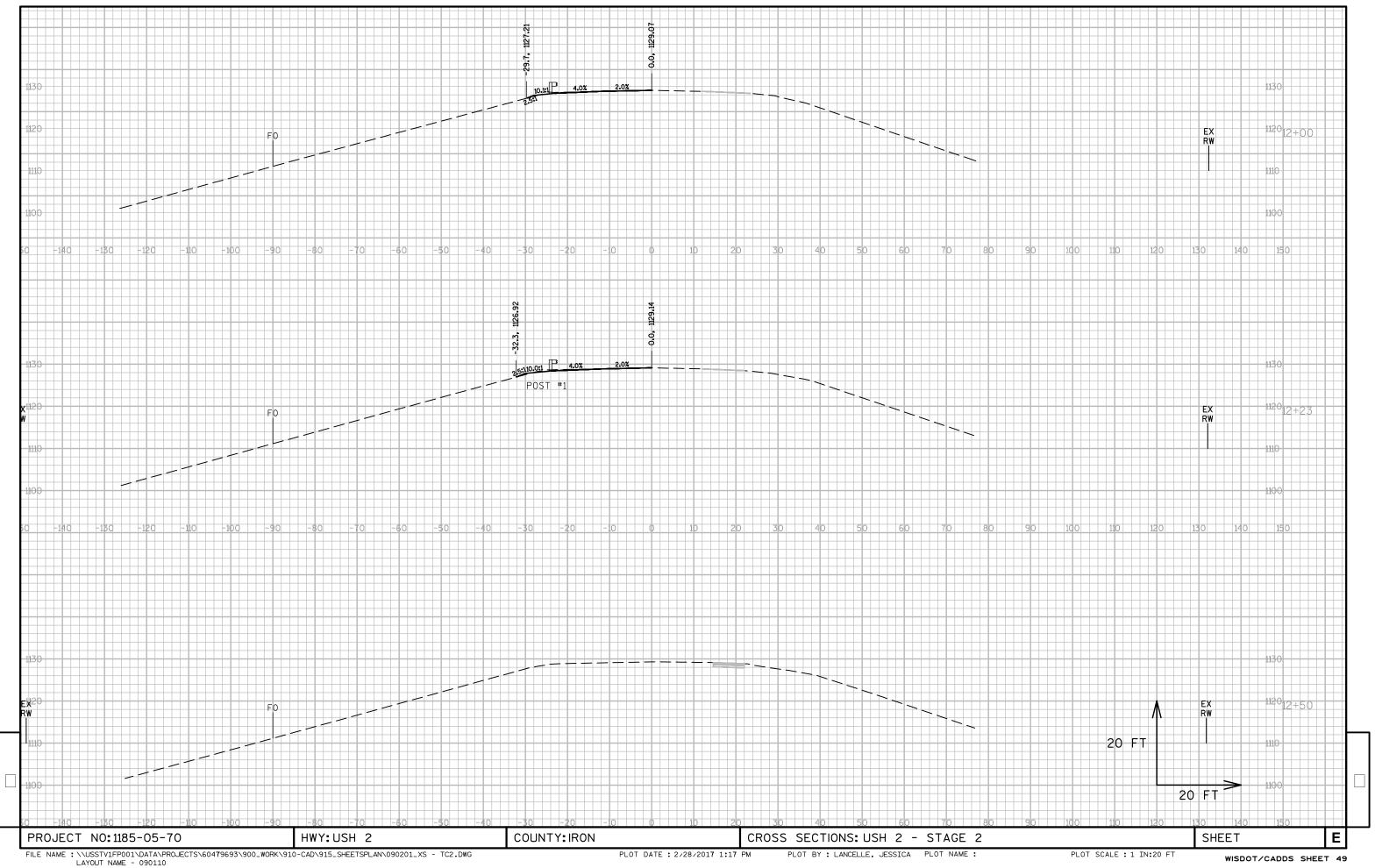


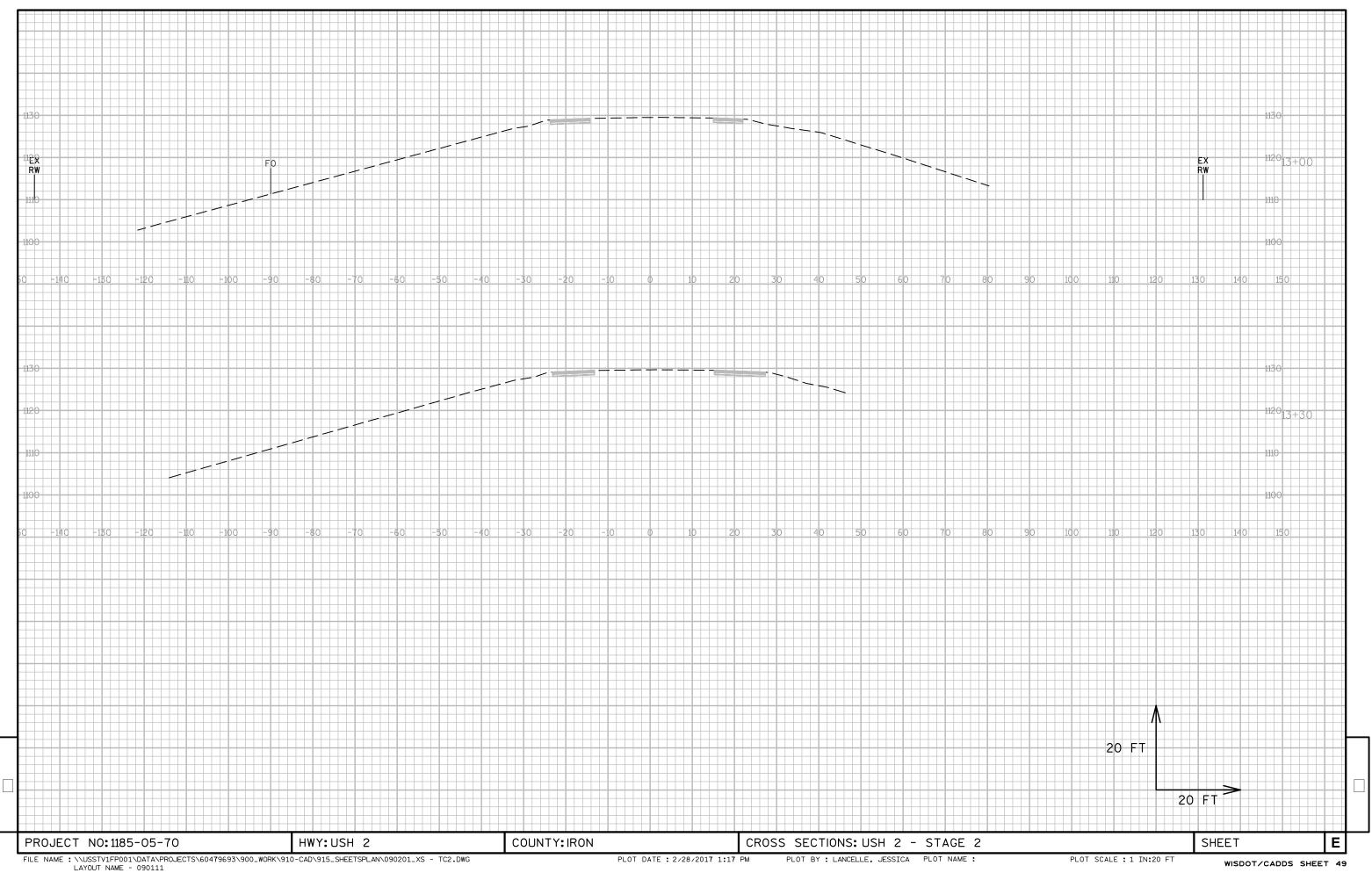


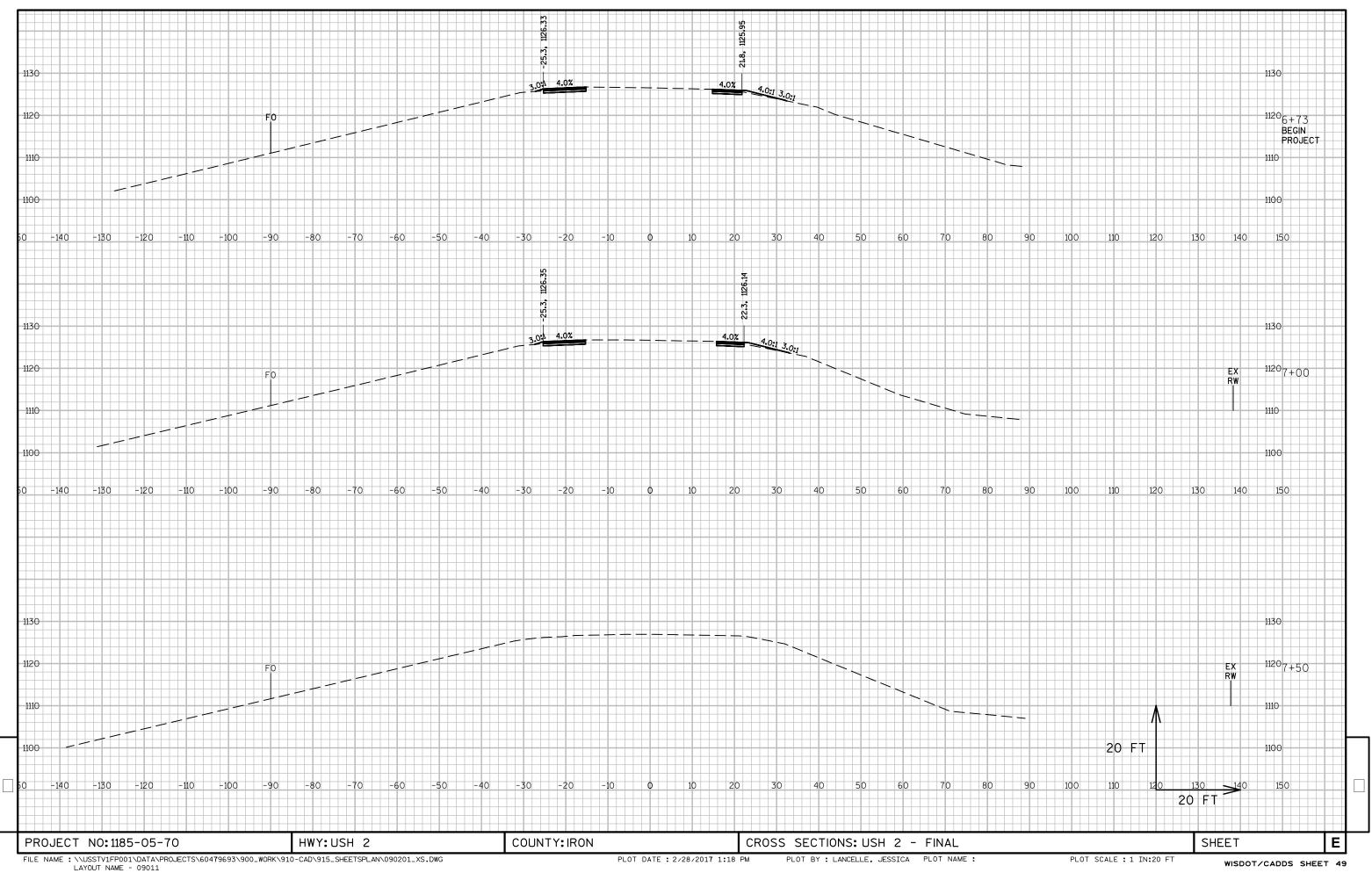


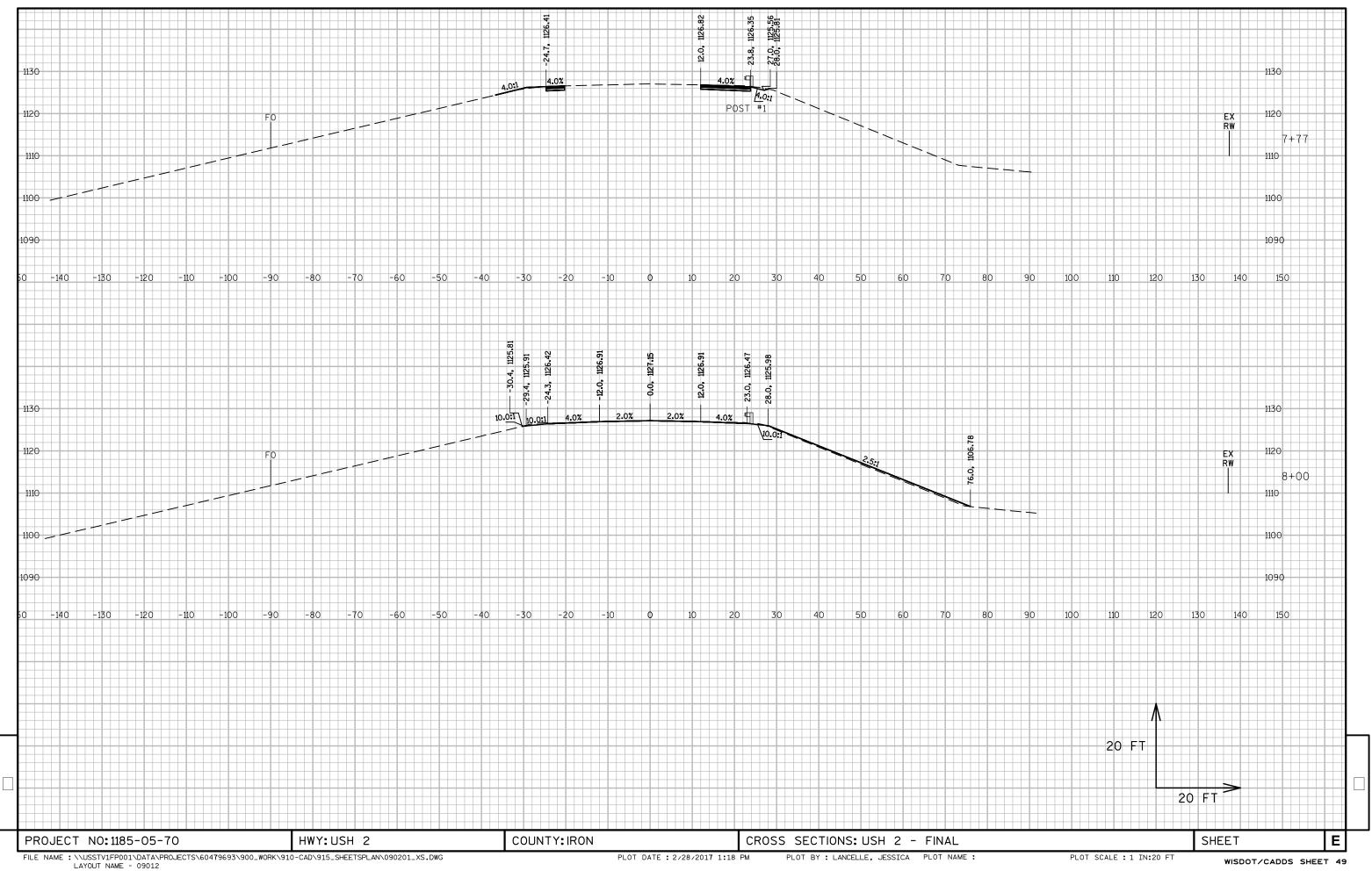


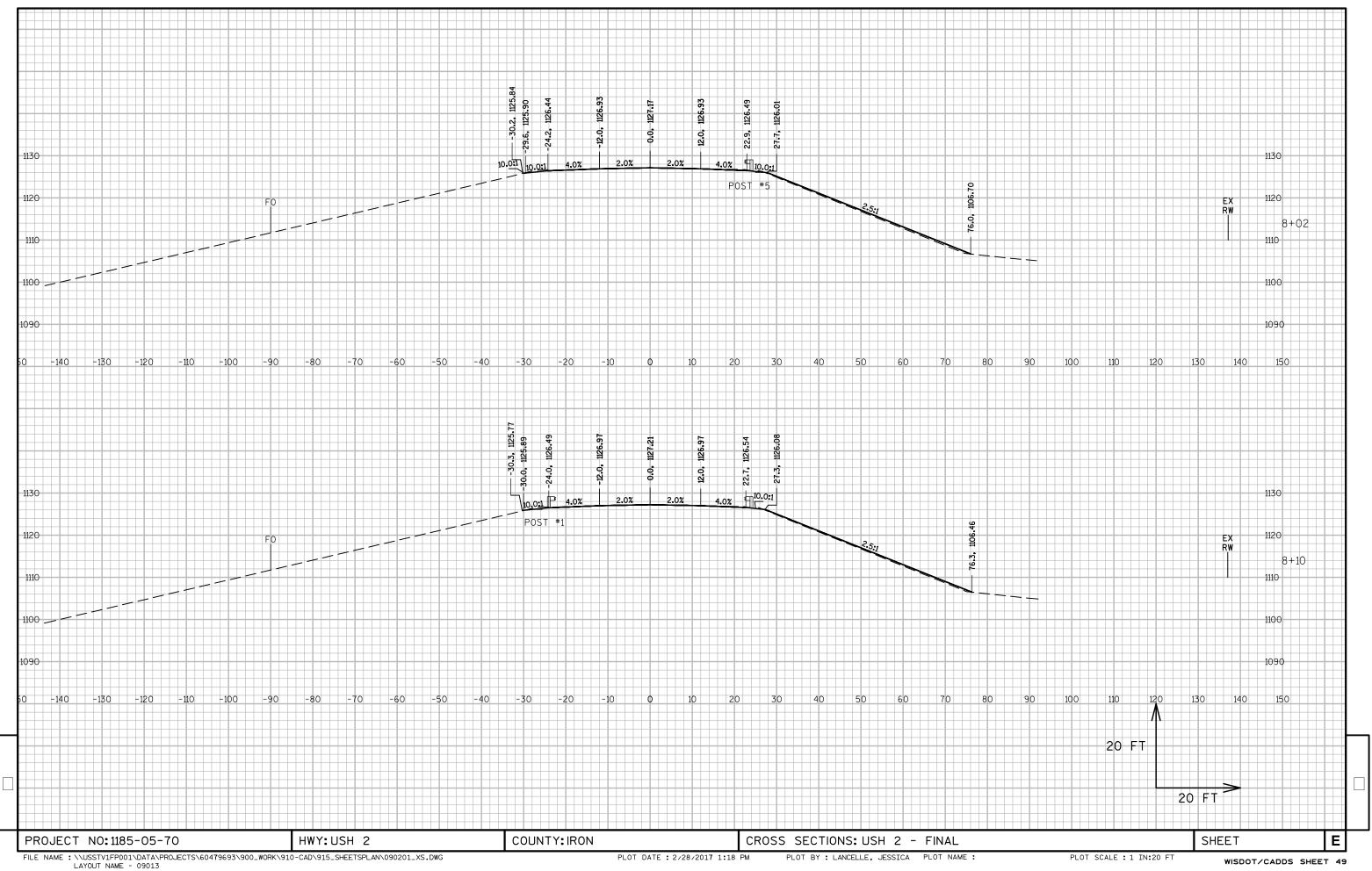


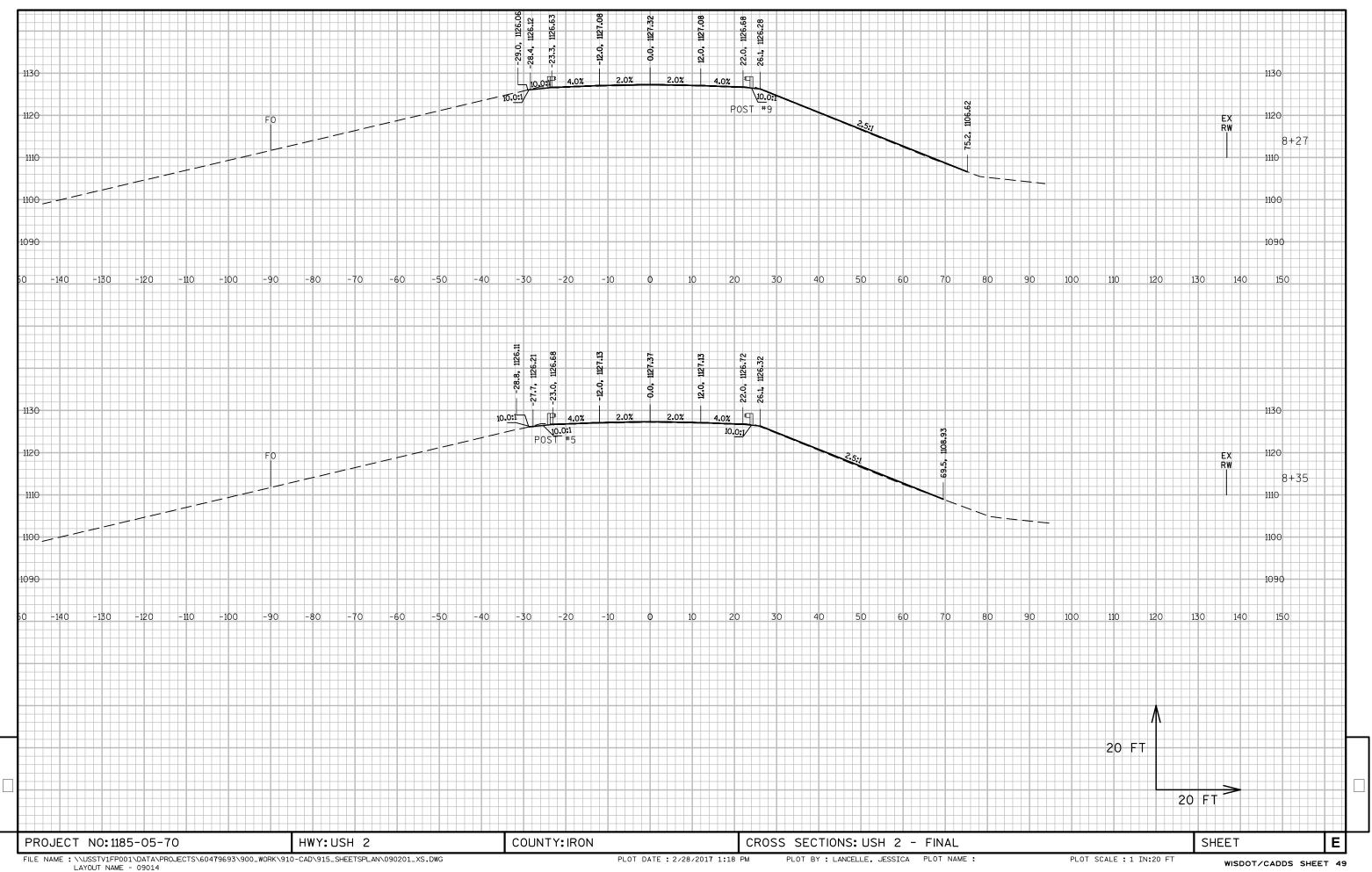


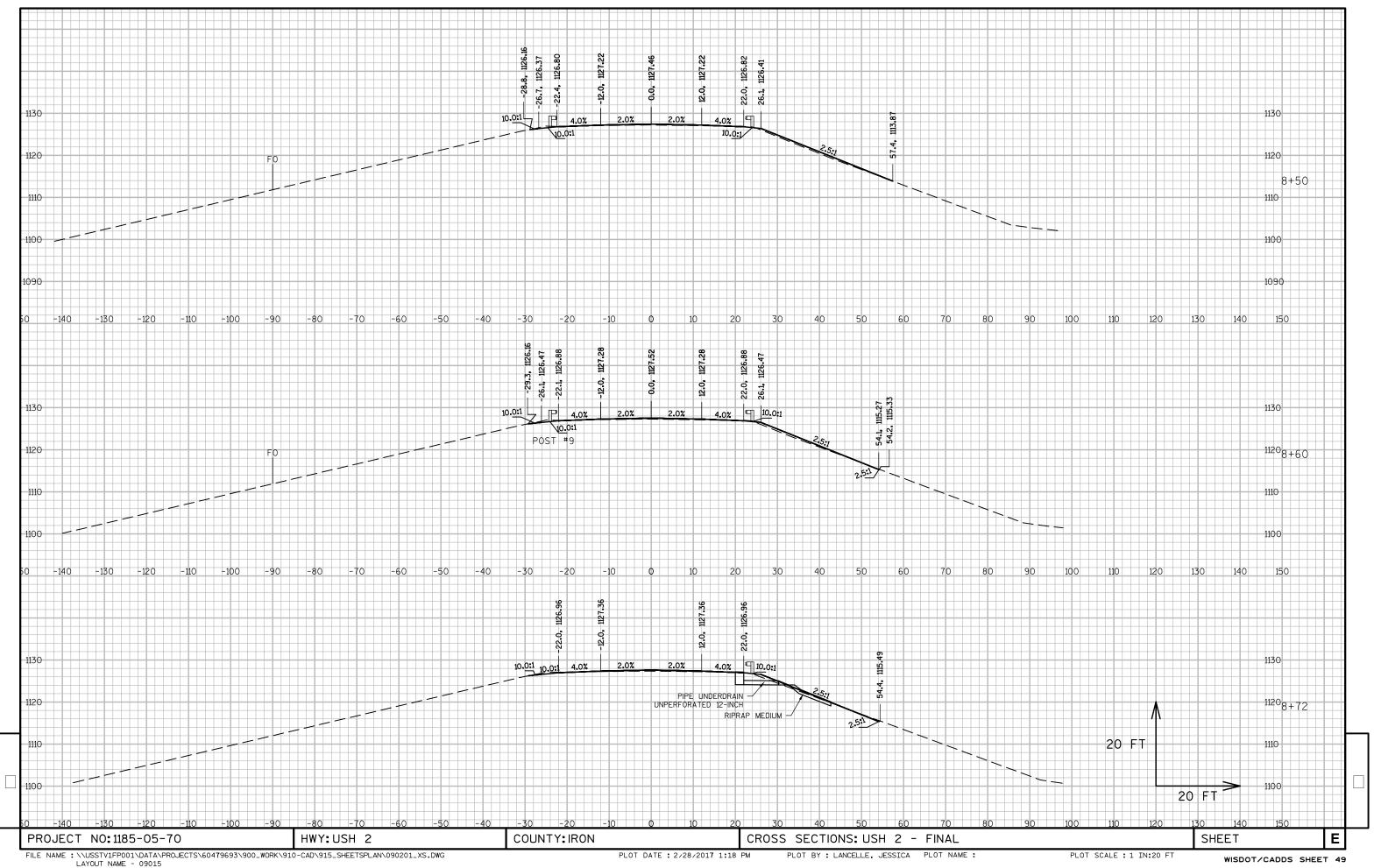


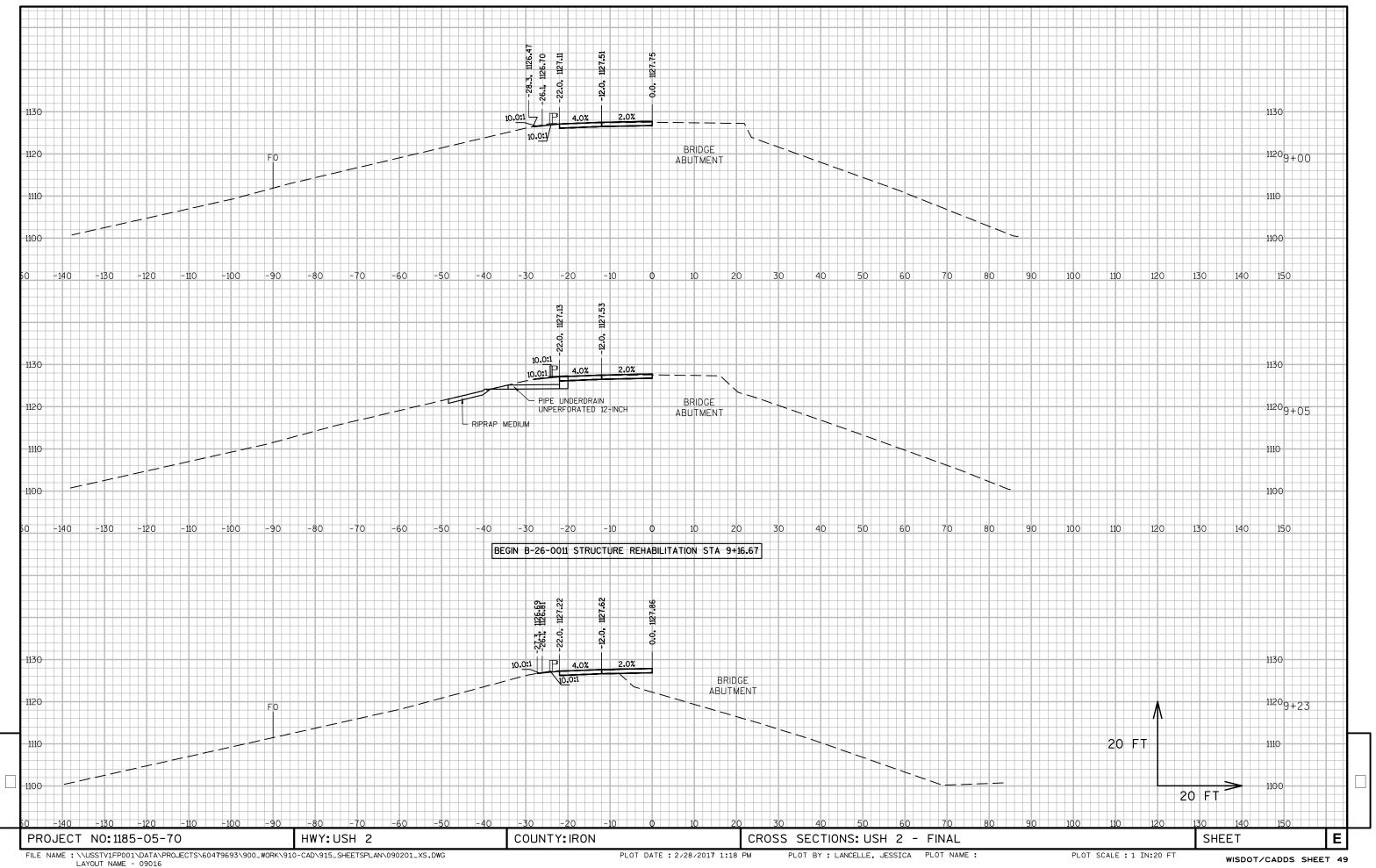


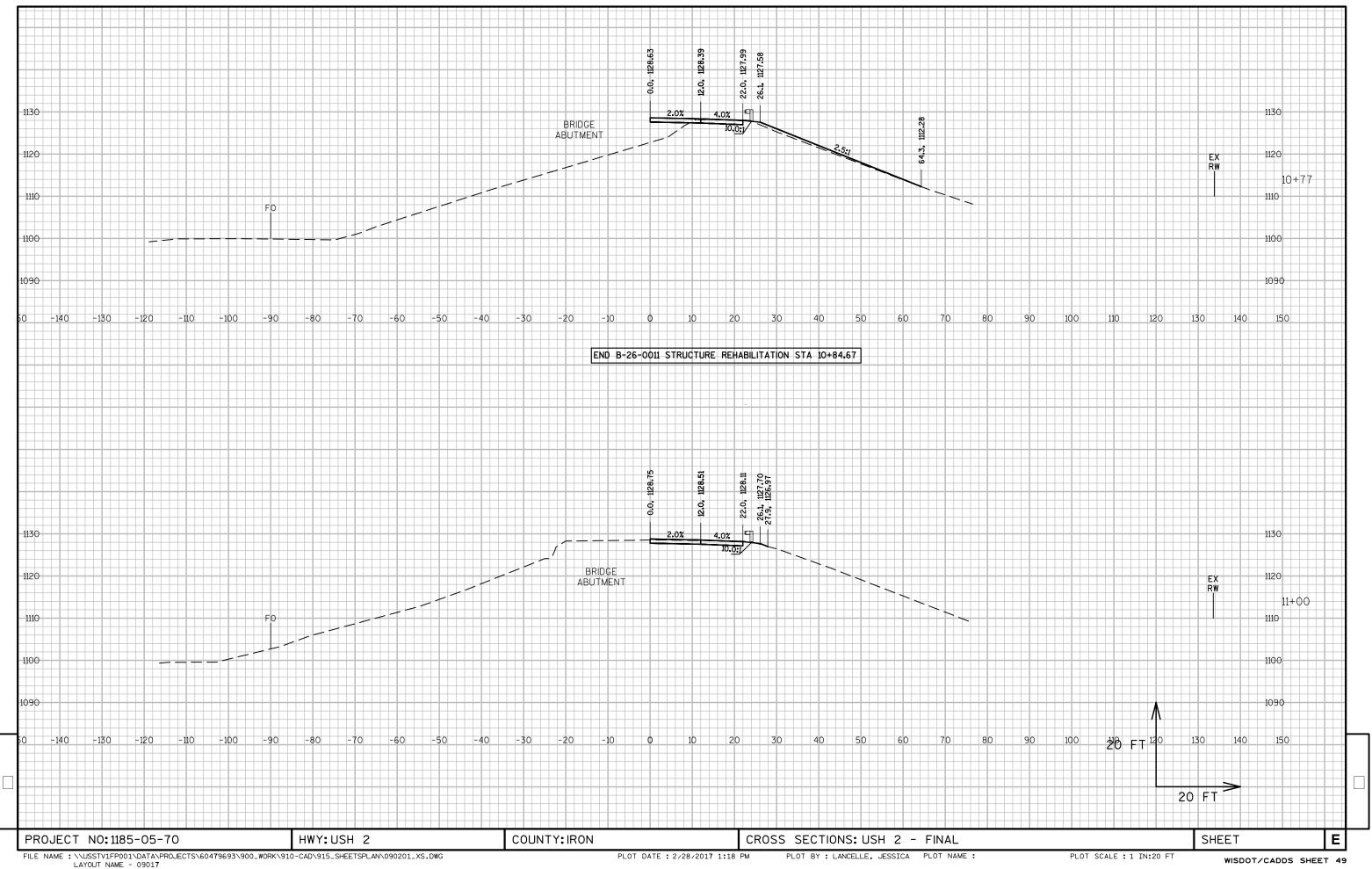


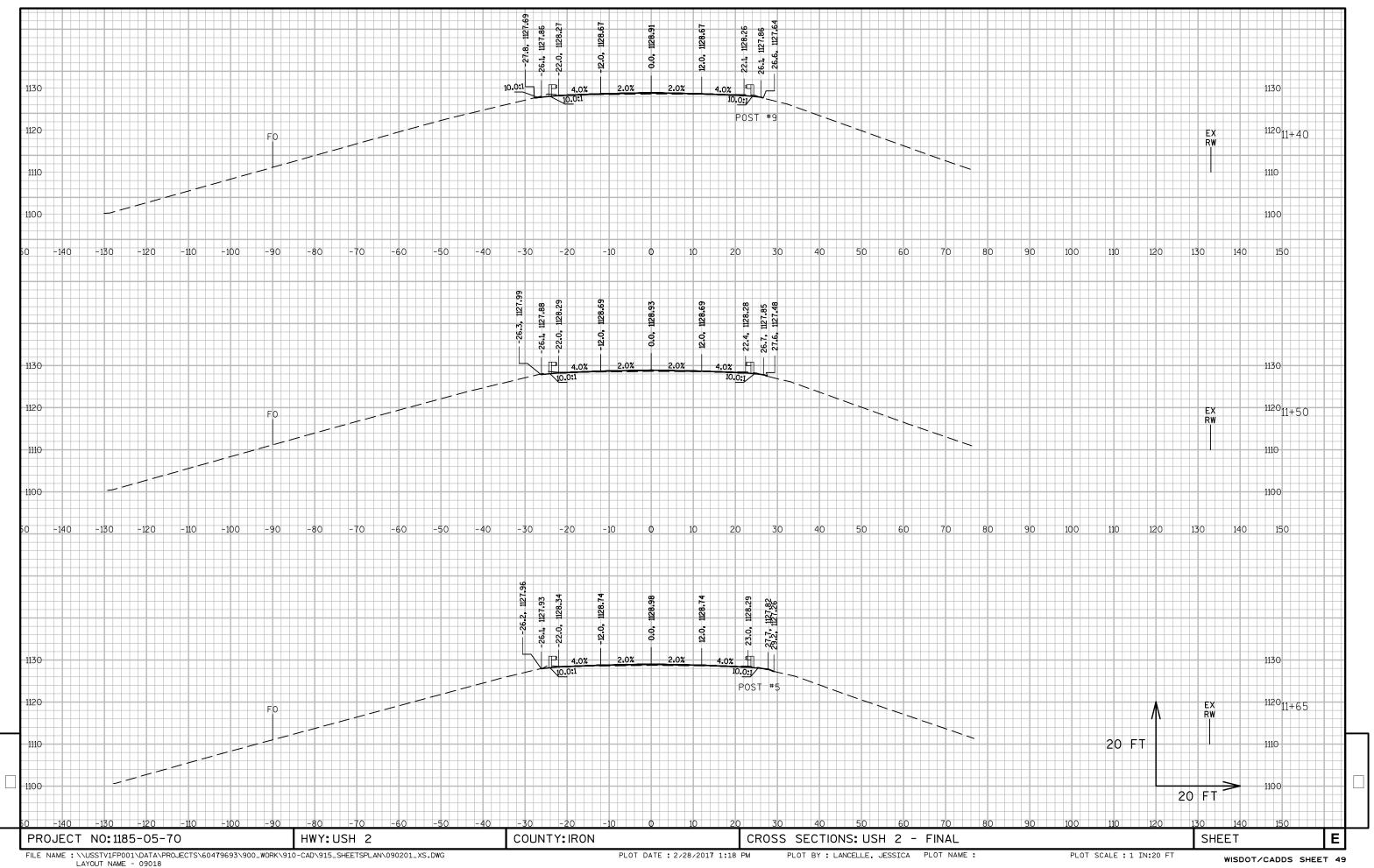


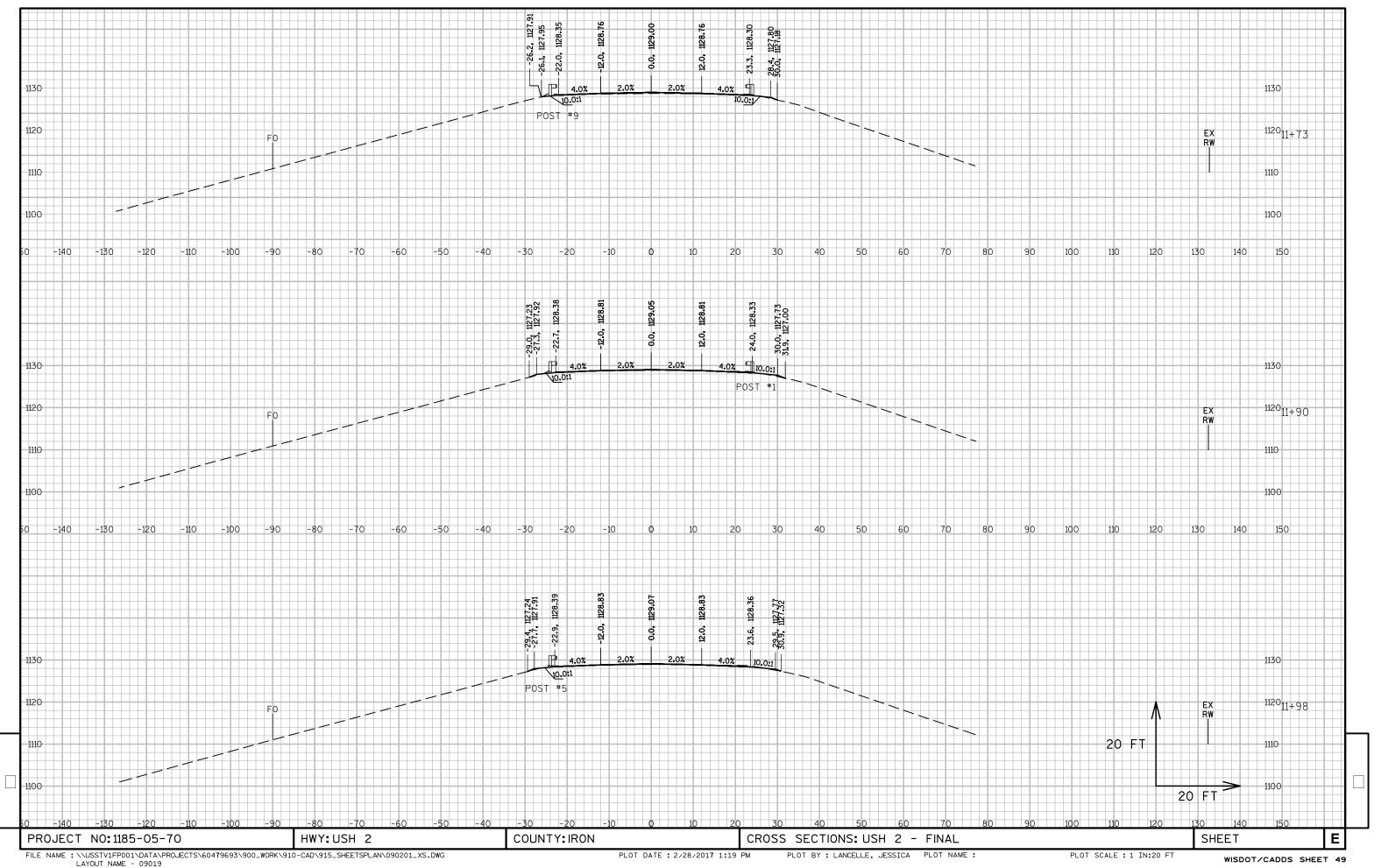


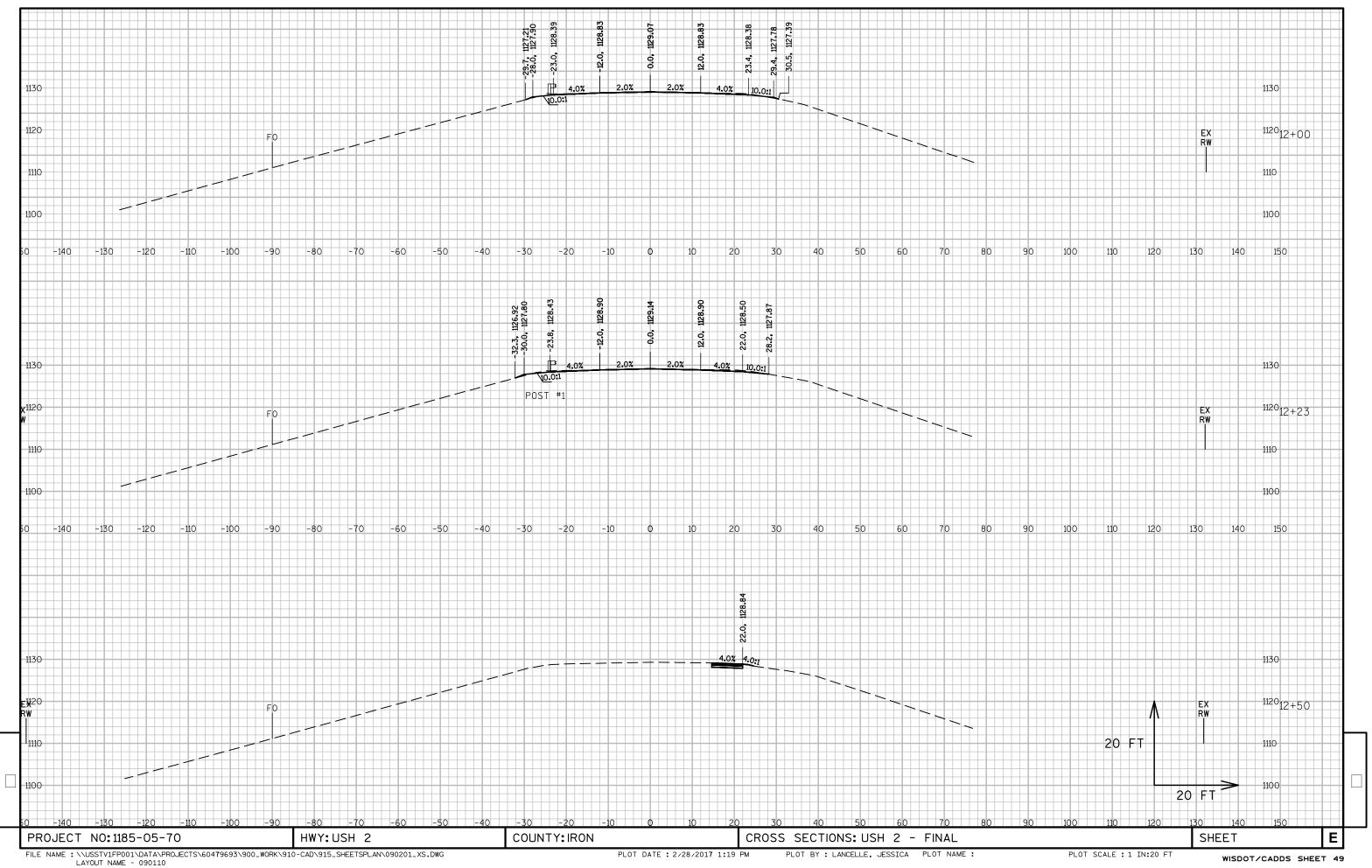


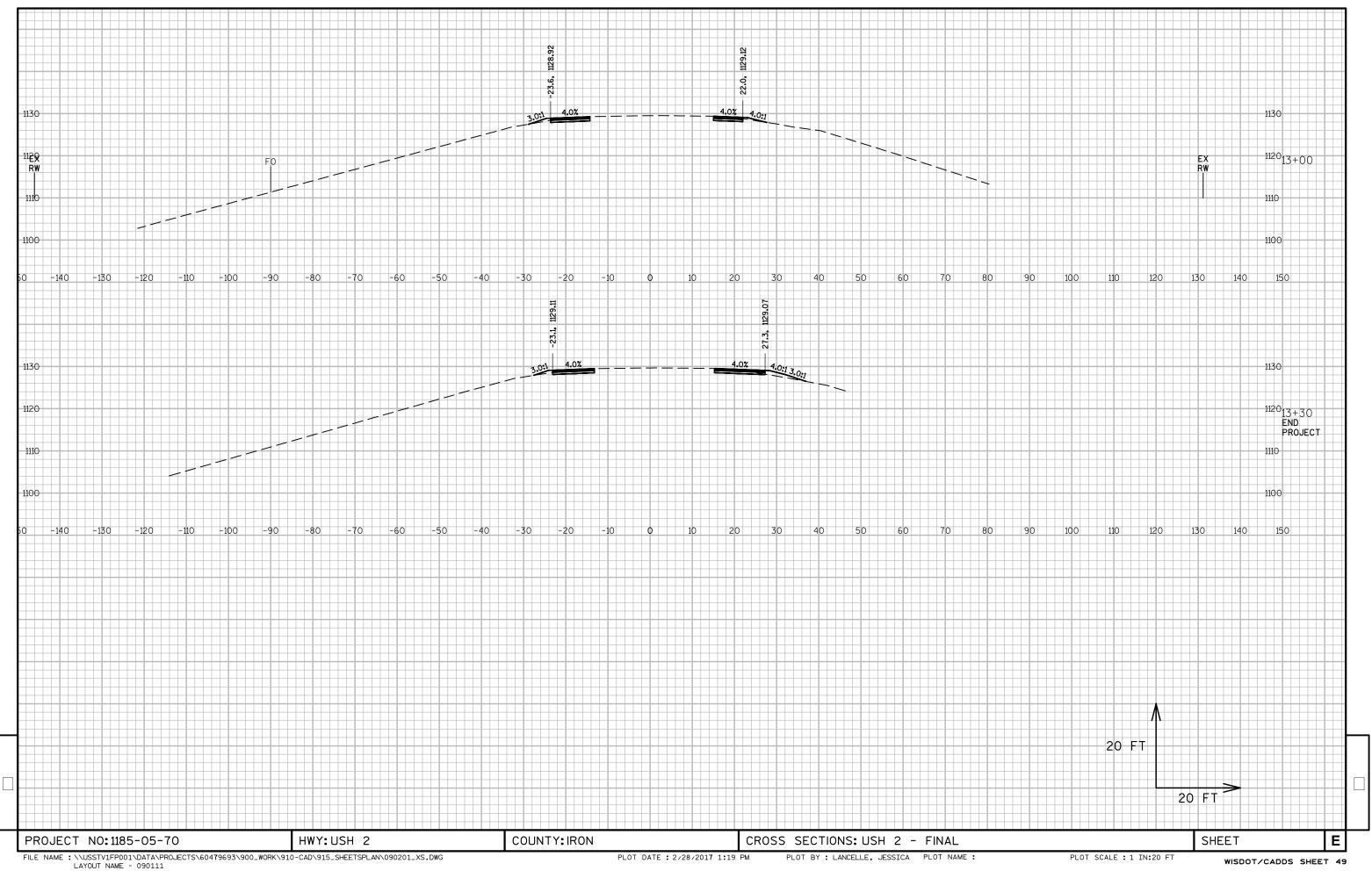












Notes



Wisconsin Department of Transportation

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