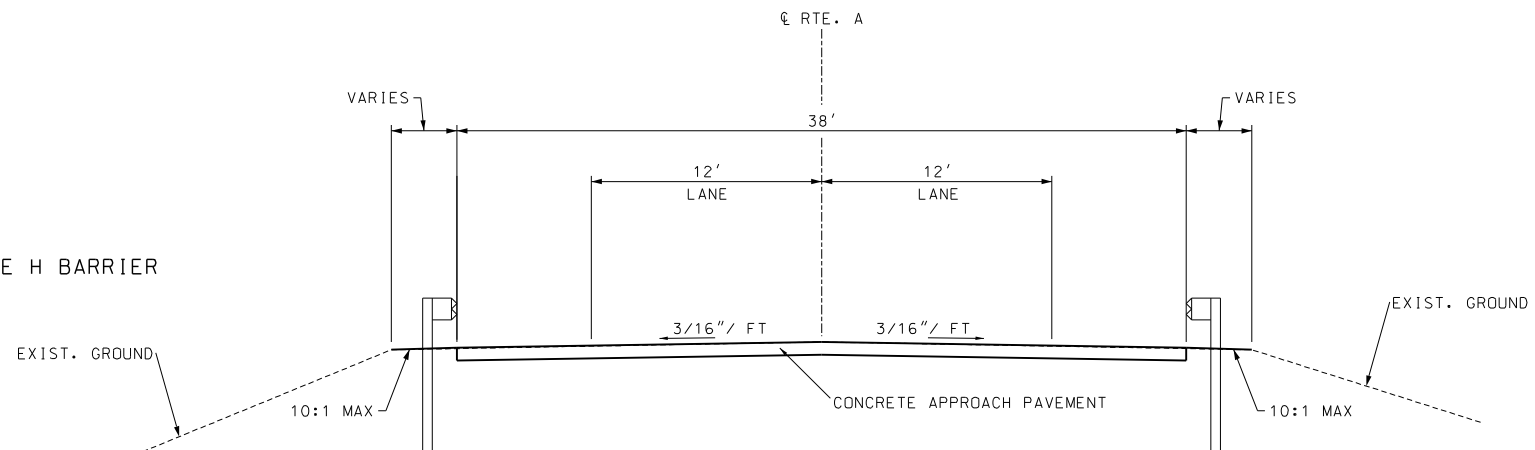
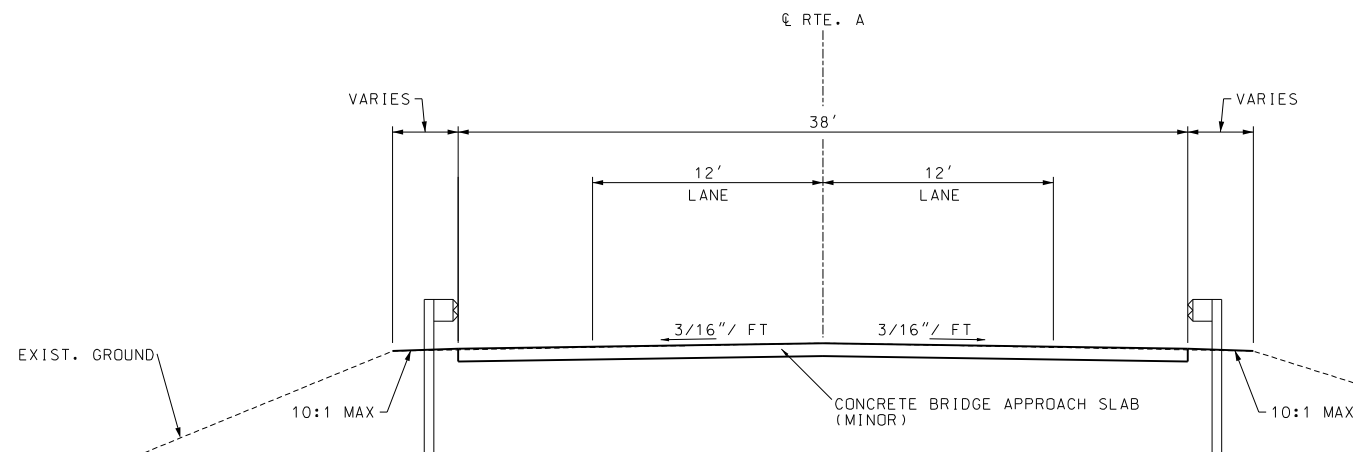


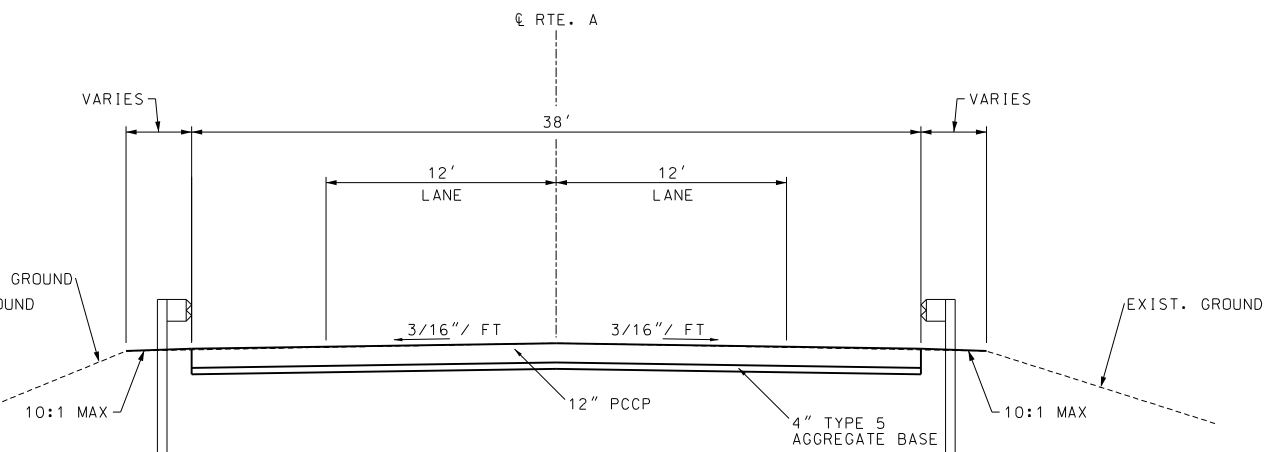
PROPOSED TYPICAL SECTION ON BRIDGE - RTE. A
STA. 19+26.56 TO STA. 21+74.77



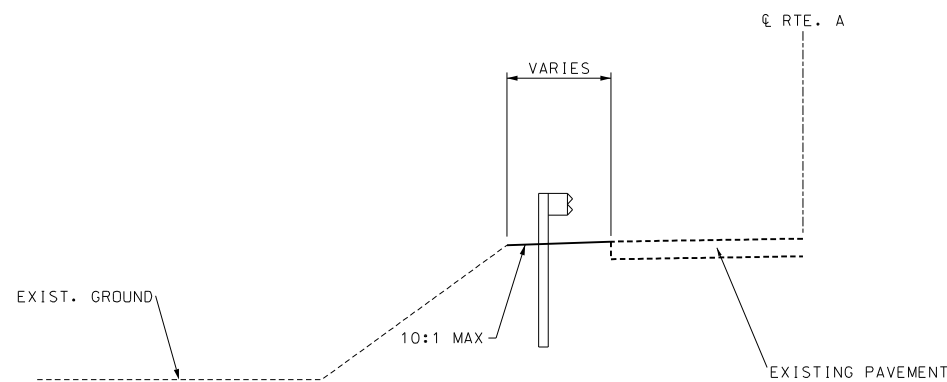
PROPOSED TYPICAL SECTION - RTE. A
STA. 18+83.16 TO STA. 19+01.56
STA. 21+99.77 TO STA. 22+18.17



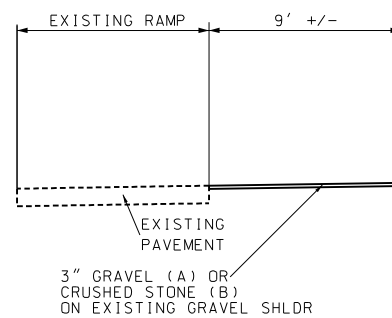
PROPOSED TYPICAL SECTION - RTE. A
STA. 19+01.56 TO STA. 19+26.56
STA. 21+74.77 TO STA. 21+99.77



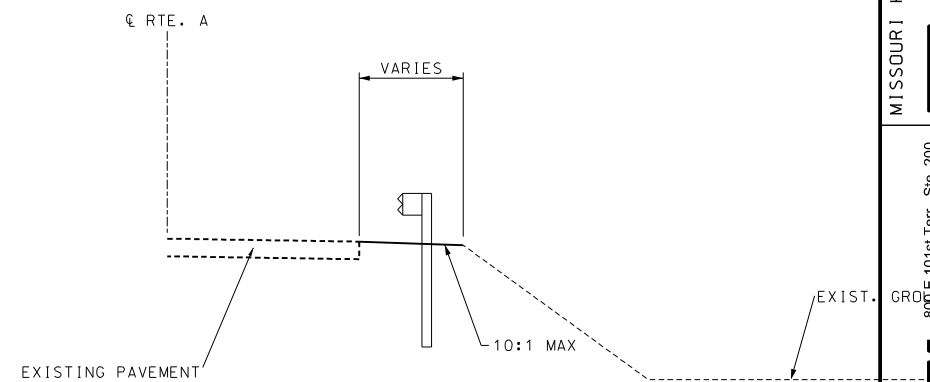
PROPOSED TYPICAL SECTION - RTE. A
STA. 18+66.56 TO STA. 18+83.16
STA. 22+18.17 TO STA. 22+34.77



PROPOSED TYPICAL SECTION RTE. A
STA. 18+26.35 TO STA. 19+01.53
STA. 22+34.77 TO STA. 23+01.22



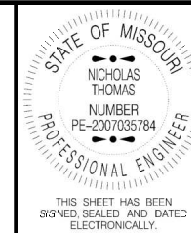
PROPOSED TYPICAL SECTION- I-35 RAMP
NB OFF RAMP- GORE TO TERMINAL (980')
NB ON RAMP- TERMINAL TO GORE (880')
SB OFF RAMP- GORE TO TERMINAL (960')
SB ON RAMP- TERMINAL TO GORE (860')



PROPOSED TYPICAL SECTION RTE. A
STA. 18+04.89 TO STA. 18+66.53
STA. 22+34.77 TO STA. 22+74.19

TYPICAL SECTIONS
SHEET 1 OF 1

NOT TO SCALE



DATE PREPARED
9/28/2021

ROUTE
A MO

DISTRICT
NW SHEET NO.
2

COUNTY
HARRISON

JOB NO.
J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

WILSON & COMPANY
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REMOVAL OF IMPROVEMENTS						
SHEET	STA.	STA.	LOCATION	ITEM	UNIT	QUANTITY
4	18+13.10	19+13.78	RTE. A	GUARDRAIL	LF	101
4	18+45.17	19+20.19	RTE. A	GUARDRAIL	LF	76
4	18+66.53	19+26.56	RTE. A	EXISTING PAVEMENT	SY	249
4	18+66.53		RTE. A	SAWCUT	LF	36
4	21+74.69	22+34.77	RTE. A	EXISTING PAVEMENT	SY	249
4	21+80.21	22+55.91	RTE. A	GUARDRAIL	LF	76
4	21+86.87	22+89.75	RTE. A	GUARDRAIL	LF	103
4	22+34.77		RTE. A	SAWCUT	LF	36
TOTAL = 1 LUMP SUM						

CONTRACTOR FURNISHED SURVEYING AND STAKING
TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

LINEAR GRADING, CLASS 2				
SHEET	STA.	STA.	LOCATION	QUANTITY (STA)
4	18+04.89	19+26.56	RTE. A, RT	1.22
4	18+26.35	19+26.56	RTE. A, LT	1.00
4	21+74.77	22+74.19	RTE. A, RT	0.99
4	21+74.77	23+01.22	RTE. A, LT	1.26
TOTAL				4.47
PAY TOTAL				4.50

DRAINAGE BASIN REPAIR			
SHEET	STA.	LOCATION	QUANTITY (EA)
13	18+95	RTE. A, RT	1
13	19+02	RTE. A, LT	1
13	22+00	RTE. A, RT	1
13	22+05	RTE. A, LT	1
TOTAL			4
PAY TOTAL			4

CONCRETE APPROACH PAVEMENT							
SHEET	STA.	STA.	LOCATION	LENGTH (L.F.)	WIDTH (L.F.)	CONCRETE APPROACH PAVEMENT (S.Y.)	REMARKS
4	18+83.16	19+01.56	RTE. A	18.4	38	78	
4	21+99.77	22+18.17	RTE. A	18.4	38	78	
TOTALS						156	
PAY TOTALS						156	

CONCRETE PAVEMENT								
SHEET	STA.	STA.	LOCATION	LENGTH (L.F.)	WIDTH (L.F.)	12" PCCP (S.Y.)	4" TYPE 5 AGG. BASE (S.Y.)	REMARKS
4	18+66.56	18+83.16	RTE. A	16.6	38	70	70	
4	22+18.17	22+34.77	RTE. A	16.6	38	70	70	
TOTALS						140	140	
PAY TOTALS						140	140	

PERMANENT EROSION CONTROL					
SHEET	STA.	STA.	LOCATION	TYPE 1 ROCK DITCH LINER (1' DEPTH)	
				FURNISHING (CY)	PLACING (CY)
13	19+08.24	19+55.49	RTE. A, RT	10	10
13	19+18.77	19+65.52	RTE. A, LT	10	10
13	21+36.46	21+82.50	RTE. A, RT	10	10
13	21+43.00	21+89.96	RTE. A, LT	9	9
TOTALS				39	39
PAY TOTALS				39	39

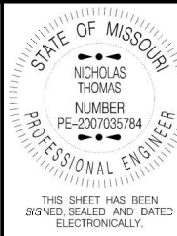
TEMPORARY EROSION CONTROL						
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE (LF)	SEDIMENT REMOVAL (CY)
12	19+09.2	19+54.6	RTE. A	RT	50	1
12	19+19.5	19+64.1	RTE. A	LT	50	1
12	21+36.8	21+81.9	RTE. A	LT	50	1
12	21+43.5	21+81.7	RTE. A	RT	50	1
TOTALS					200	4
PAY TOTALS					200	4

PAVEMENT MARKING						
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	4 IN. WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
14	18+65.00	22+35.00	RTE. A	93		INTERMITTENT YELLOW CENTERLINE
14	18+65.00	22+35.00	RTE. A		370	WHITE EDGE LINE
14	18+65.00	22+35.00	RTE. A		370	WHITE EDGE LINE
TOTALS				93	740	
PAY TOTALS				93	740	

GUARDRAIL								
SHEET	LOCATION	STATION	STATION	SIDE	MGS GUARDRAIL (LF)	TYPE A CRASHWORTHY END TERMINALS (MASH) (EA)	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) (EA)	BRIDGE ANCHOR SECTION (EA)
4	RTE. A	18+14.56	19+15.67	RT	12.5	1	1	
4	RTE. A	18+40.09	19+22.48	LT	12.5	1		1
4	RTE. A	21+78.88	22+61.26	RT	12.5	1	1	
4	RTE. A	21+86.94	22+86.83	LT	12.5	1		1
			TOTALS		50	4	2	2
			PAY TOTALS		50	4	2	2

SHOULDER AGGREGATE		
SHEET	LOCATION	GRAVEL (A) OR CRUSHED STONE (B) (TONS)
2	NB OFF RAMP OUTSIDE SHOULDER	160
2	NB ON RAMP OUTSIDE SHOULDER	144
2	SB OFF RAMP OUTSIDE SHOULDER	157
2	SB ON RAMP OUTSIDE SHOULDER	140
TOTALS		601
PAY TOTALS		601

SUMMARY OF QUANTITIES
SHEET 1 OF 2



DATE PREPARED
9/29/2021

ROUTE
A

STATE
MO

DISTRICT
NW

SHEET NO.
3

COUNTY
HARRISON

JOB NO.
J1S3215

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
.

DESCRIPTION	DATE
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
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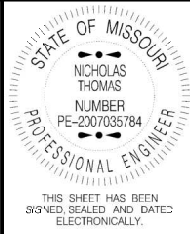
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

										EFFECTIVE: 04-01-2021															
SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.			SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.			ITEM NUMBER	TOTAL QTY	DESCRIPTION			
WARNING SIGNS								DESCRIPTION		GUIDE SIGNS								DESCRIPTION							
W01-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)		E05-1	36X48	12.00						GORE EXIT		6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)			
W01-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)		E05-2	48X36	12.00						EXIT OPEN		6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)			
W01-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)		E05-2a	48X36	12.00						EXIT CLOSED		6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)			
W01-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)		G020-1	60X24	10.00	4	40.00			1	ROAD WORK NEXT XX MILES		6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)			
W01-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)		G020-2	48X24	8.00	4	32.00			26	END ROAD WORK		6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)			
W01-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)		G020-4	36X18	4.50						PILOT CAR FOLLOW ME		6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)			
W01-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT ARROW)		G020-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW		6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)			
W01-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT ARROW)		G020-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW		6122020		REPLACEMENT SAND BARREL			
W01-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)		G020-5aP	36X24	6.00	16	96.00				WORK ZONE (PLAQUE)		6122030		IMPACT ATTENUATOR (RELOCATION)			
W01-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)		M04-8a	24X18	3.00	2	6.00			52	END DETOUR		6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)			
W01-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)		M04-9L	48X36	12.00						DETOUR (LEFT ARROW)		6161008	4	ADVANCED WARNING RAIL SYSTEM			
W01-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)		M04-9R	48X36	12.00						DETOUR (RIGHT ARROW)		6161012		BUOYS (BOATS KEEP OUT)			
W01-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)		M04-9P	48X12	4.00						STREET NAME (PLAQUE)		6161013		BUOYS (NO WAKE)			
W01-6a	72X36	18.00	6	108.00			16	HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)		M04-10L	48X18	6.00						DETOUR (ARROW LEFT)		6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)			
W01-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)		M04-10R	48X18	6.00						DETOUR (ARROW RIGHT)		6161020	40	CHANNELIZER (DRUM-LIKE)			
W01-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)		REGULATORY SIGNS										6161025	62	CHANNELIZER (TRIM LINE)			
W01-8	18X24	3.00						CHEVRON (SYMBOL)		R1-1	48X48	13.25	2	26.50			41	STOP		6161030	12	TYPE III MOVEABLE BARRICADE			
W01-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)		R1-2	48TRI	6.93						YIELD		6161033	60	DIRECTION INDICATOR BARRICADE			
W03-1	48X48	16.00	2	32.00			39	STOP AHEAD (SYMBOL)		R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)		6161040	4	FLASHING ARROW PANEL			
W03-2	48X48	16.00						YIELD AHEAD (SYMBOL)		R1-3P	30X12	2.50						ALL WAY (PLAQUE)		6161047		TYPE III OBJECT MARKER			
W03-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)		R2-1	36X48	12.00	14	168.00			4	SPEED LIMIT XX		6161051		WARNING LIGHT, TYPE A			
W03-4	48X48	16.00						BE PREPARED TO STOP		R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)		6161052	24	WARNING LIGHT, TYPE B			
W03-5	48X48	16.00	8	128.00			3	SPEED LIMIT AHEAD		R3-2	48X48	16.00	4	64.00			59	NO LEFT TURN (SYMBOL)		6161053		WARNING LIGHT, TYPE C			
W04-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)		R3-3	36X36	9.00						NO TURNS		6161055	60	SEQUENTIAL FLASHING WARNING LIGHT			
W04-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)		R3-4	48X48	16.00						NO U-TURN (SYMBOL)		6161070		TUBULAR MARKER			
W04-1aL	48X48	16.00						MERGE (ARROW SYMBOL)		R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT		6161095		RADAR SPEED ADVISORY SYSTEM			
W04-1aR	48X48	16.00	2	32.00			6A	MERGE (ARROW SYMBOL)		R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT				CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED			
W05-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS		R4-1	36X48	12.00						DO NOT PASS		6161096		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED			
W05-3	48X48	16.00						ONE LANE BRIDGE		R4-2	36X48	12.00	4	48.00			46A	PASS WITH CARE				CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED			
W05-5	48X48	16.00						NARROW LANES		R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)		6161098A	2				
W06-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)		R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)				CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED			
W06-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)		R5-1	30X30	6.25						DO NOT ENTER		6161099					
W06-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)		R5-1a	36X24	6.00						WRONG WAY		6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM			
W07-3a	30X24	5.00						NEXT XX MILES (PLAQUE)		R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)		6162002		TEMPORARY LONG-TERM RUMBLE STRIPS			
W08-1	48X48	16.00						BUMP		R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)		6162004	2	TEMPORARY SHORT-TERM RUMBLE STRIPS			
W08-2	48X48	16.00						DIP		R6-2L	24X30	5.00						ONE WAY (LEFT)				TEMPORARY TRAFFIC BARRIER			
W08-3	48X48	16.00						PAVEMENT ENDS		R6-2R	24X30	5.00						ONE WAY (RIGHT)		6173600D		CONTRACTOR FURNISHED/RETAINED			
W08-4	48X48	16.00						SOFT SHOULDER		R9-9	24X12	2.00						SIDEWALK CLOSED				TEMPORARY TRAFFIC BARRIER			
W08-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)		R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE		6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED			
W08-6	48X48	16.00						TRUCK CROSSING (WITH FLAGS)		R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE		6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION			
W08-6c	48X48	16.00						TRUCK ENTRANCE		R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)		6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER			
W08-7	36X36	9.00						LOOSE GRAVEL		R11-2	48X30	10.00	4	40.00			29	ROAD CLOSED		6176000B		COMMISSION FURNISHED/RETAINED			
W08-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL		R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD				TEMP. TRAFFIC BARRIER HEIGHT TRANSITION			
W08-9	48X48	16.00						LOW SHOULDER		R11-4	60X30	12.50						LOCAL TRAFFIC ONLY		6177000B		COMMISSION FURNISHED/RETAINED			
W08-11	48X48	16.00						UNEVEN LANES		R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC		6208064A		TEMPORARY RAISED PAVEMENT MARKER			
W08-12	48X48	16.00						NO CENTER LINE		CONST-3A	60X48	20.00						FINE SIGN		9029400		TEMPORARY TRAFFIC SIGNALS			
W08-15	48X48	16.00						GROOVED PAVEMENT		CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)		9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING			
W08-15P	30X24	5.00						MOTORCYCLE (PLAQUE)		MISCELLANEOUS SIGNS															
W08-17	48X48	16.00						SHOULDER DROP-OFF (SYMBOL)		CONST-5	48X36	12.00						POINT OF PRESENCE							
W08-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)		CONST-5	96X48	32.00						POINT OF PRESENCE							
W10-1	42RND.	9.62						RAILROAD CROSSING		CONST-7	48X24	8.00	4	32.00	</										

CONTROL POINTS - (NAVD88)

C.P. 1 - SET $\frac{5}{16}$ " BAR W/2" ALUM CAP STAMPED "CP 1"
STA. 14+78.49, 21.51' LT.
ELEV. 1052.85

C.P. 2 - SET $\frac{5}{16}$ " BAR W/2" ALUM CAP STAMPED "CP 2"
STA. 25+85.55, 22.42' LT.
ELEV. 1052.92



DATE PREPARED 9/28/2021	
ROUTE A	STATE MO
DISTRICT NW	SHEET NO. 4
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
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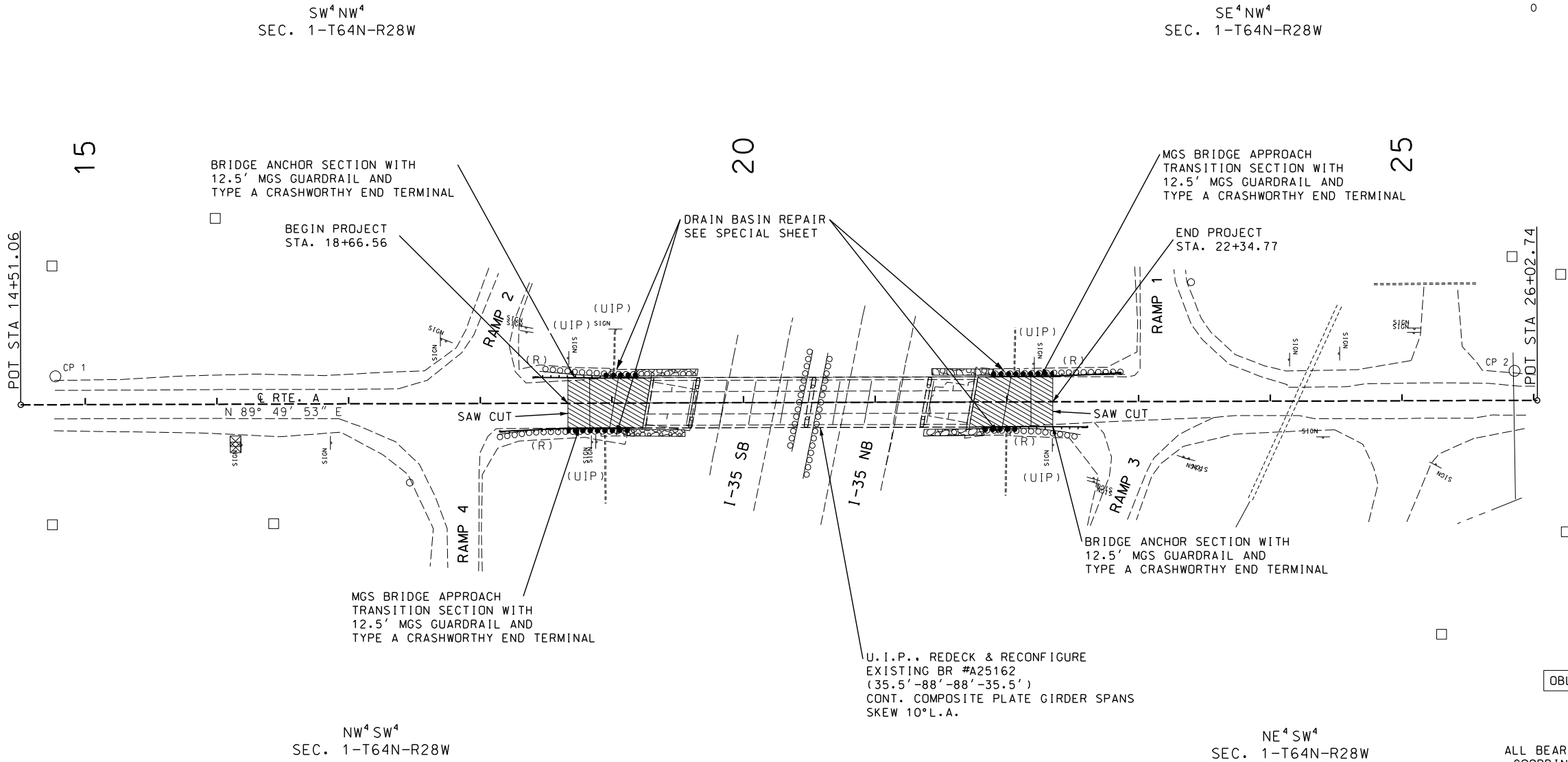
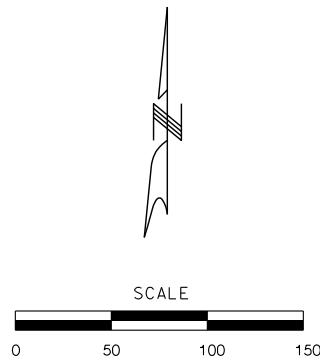
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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JEFFERSON CITY, MO 65102
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Kansas City, MO 64131
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Fax (816) 942-3013
Missouri Cert. of Authority #2003007599

WILSON & COMPANY
ENGINEERS & ARCHITECTS



ALL BEARINGS BASED ON STATE PLANE COORDINATES, MISSOURI WEST ZONE.

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

ACCESS IS ALLOWED UNDER THE BRIDGE

PLAN
SHEET 1 OF 1

UTILITIES

GRM Networks
1001 Kentucky Street
Princeton, MO 64673
(660) 425-2225

Harrison County PWSO #2
22209 East US Highway 136
Bethany, MO 64424
(660) 425-7414

ALL PROJECT COORDINATES ARE OF THE MISSOURI
STATE PLANE COORDINATE (SPC) SYSTEM OF 1983.

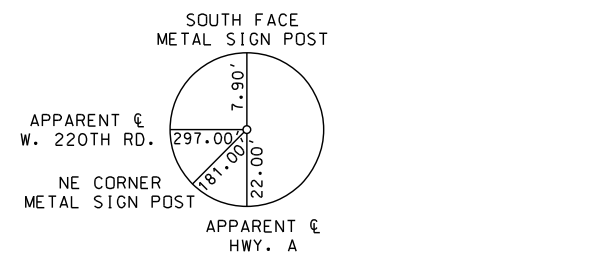
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COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD 83
VERTICAL DATUM	NAVD 88
GEOID MODEL	GEOID 12B (CONUS)
ELEVATIONS DETERMINED BY	STATIC GPS OBSERVATION MO VRS

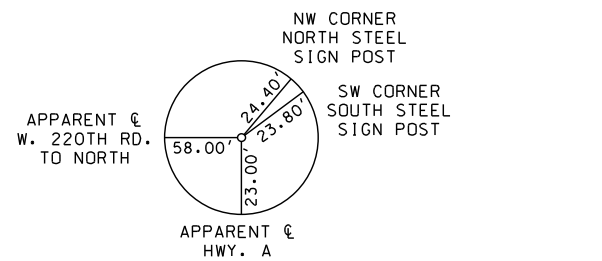
PROJECT PROJECTION FACTOR	1.0000000
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REFERENCE	CONTROL	INFORMATION
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COORDINATE SYSTEM	MISSOURI WEST ZONE 2403
CONTROL STATION	MOAL
DESIGNATION	MODOT ALBANY CORS ARP
CORS_ID	MOAL
PID	DM4112
LATITUDE	40°15'20.75416" (N)
LONGITUDE	94°17'58.90396" (W)
NORTHING (M)	453884.890
EASTING (M)	867039.786
ZONE	MO WEST



CONTROL POINT 1
5/8" IRON BAR
WEST OF BRIDGE
COORDINATES
NORTHING = 1,532,652.269
EASTING = 2,926,612.86
ELEVATION = 1052.85
(APPROXIMATE STATION 14+78.49
APPROXIMATE OFFSET 21.51' LEFT)

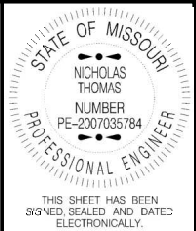


CONTROL POINT 2
5/8" IRON BAR
EAST OF BRIDGE
COORDINATES
NORTHING = 1,532,656.433
EASTING = 2,927,720.941
ELEVATION = 1052.93
(APPROXIMATE STATION 25+85.55
APPROXIMATE OFFSET 22.42' LEFT)

COORDINATE POINT LISTING

[illegible]

PROJECT CONTROL POINTS						
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[illegible][illegible][illegible]

DATE PREPARED
9/28/2021

ROUTE A	STATE MO
DISTRICT N.W	SHEET NO. 5

COUNTY
HARRISON

JOB NO.
J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
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[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

200 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

Missouri Cert. of
Authority #2003007599



WILSON
& COMPANY
ENGINEERS & ARCHITECTS

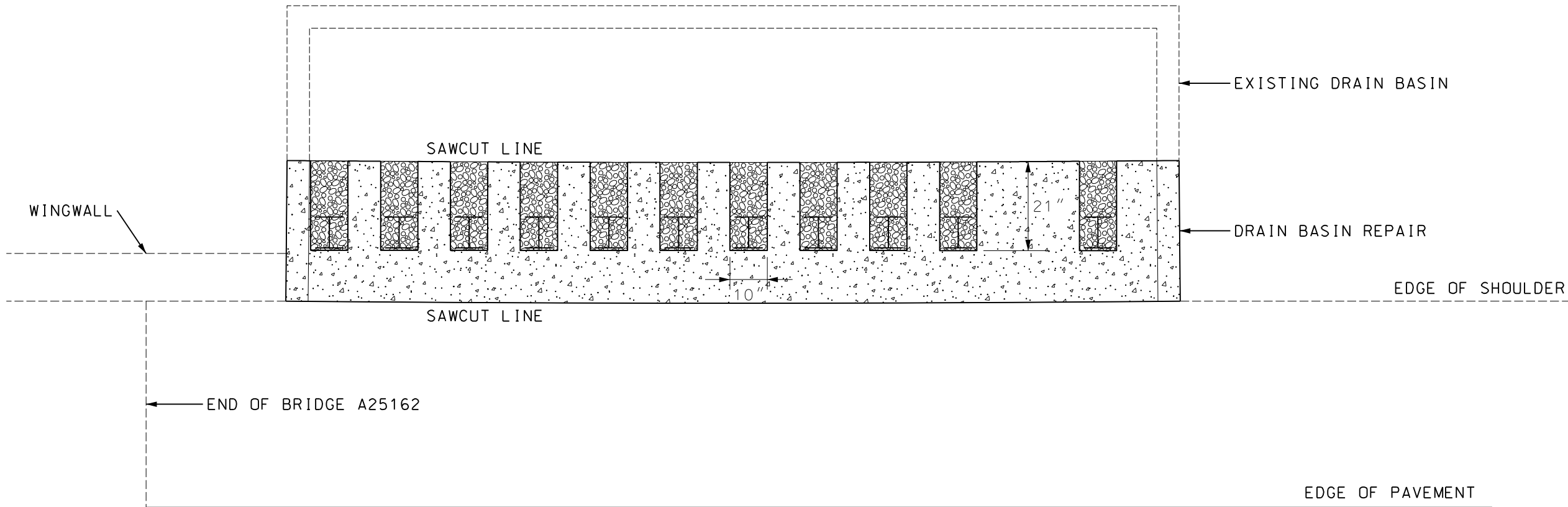
REFERENCE POINTS
AND
COORDINATE POINTS
SHEET 1 OF 1

NOTES: REFER TO STD. PLANS FOR
GUARDRAIL POST SPACING

REFER TO SPECIAL PROVISIONS FOR
ADDITIONAL CONSTRUCTION DETAILS.

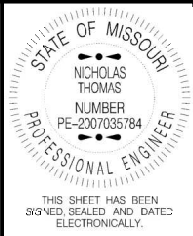
LEGEND

-  - CONCRETE
-  - TYPE 1 AGGREGATE



NOT TO SCALE


DRAIN BASIN REPAIR
SPECIAL SHEET 1 OF 1



DATE PREPARED 9/28/2021	
ROUTE A	STATE MO
DISTRICT NW	SHEET NO. 6
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



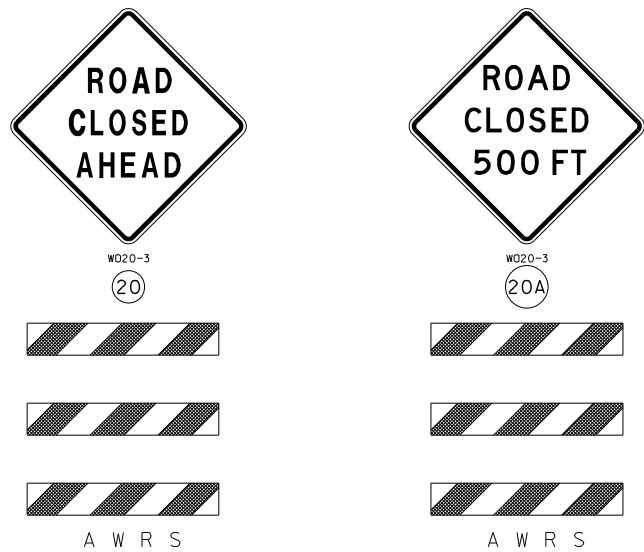
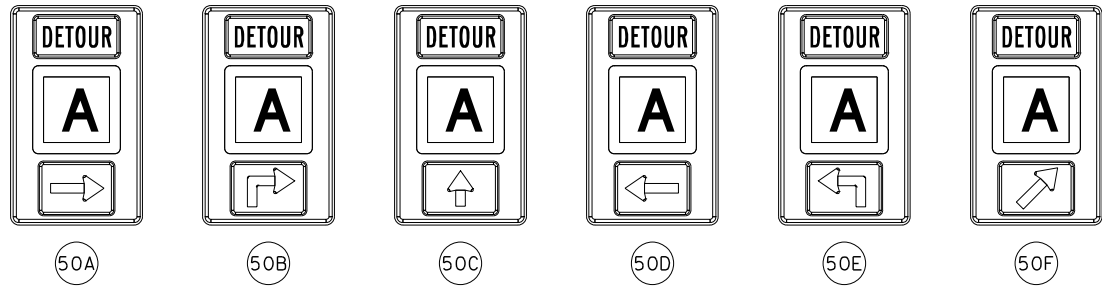
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



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Kansas City, MO 64131
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TYPE III MOVABLE BARRICADE
WITH TYPE B WARNING LIGHTS

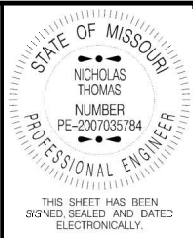
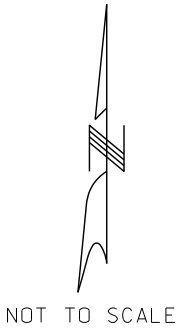
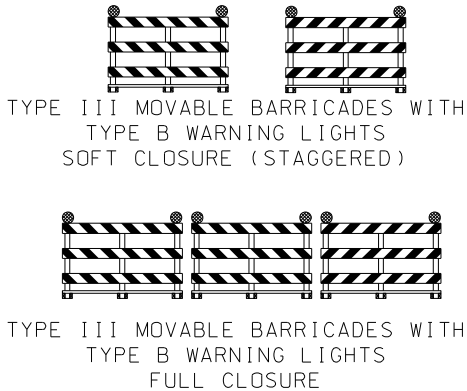
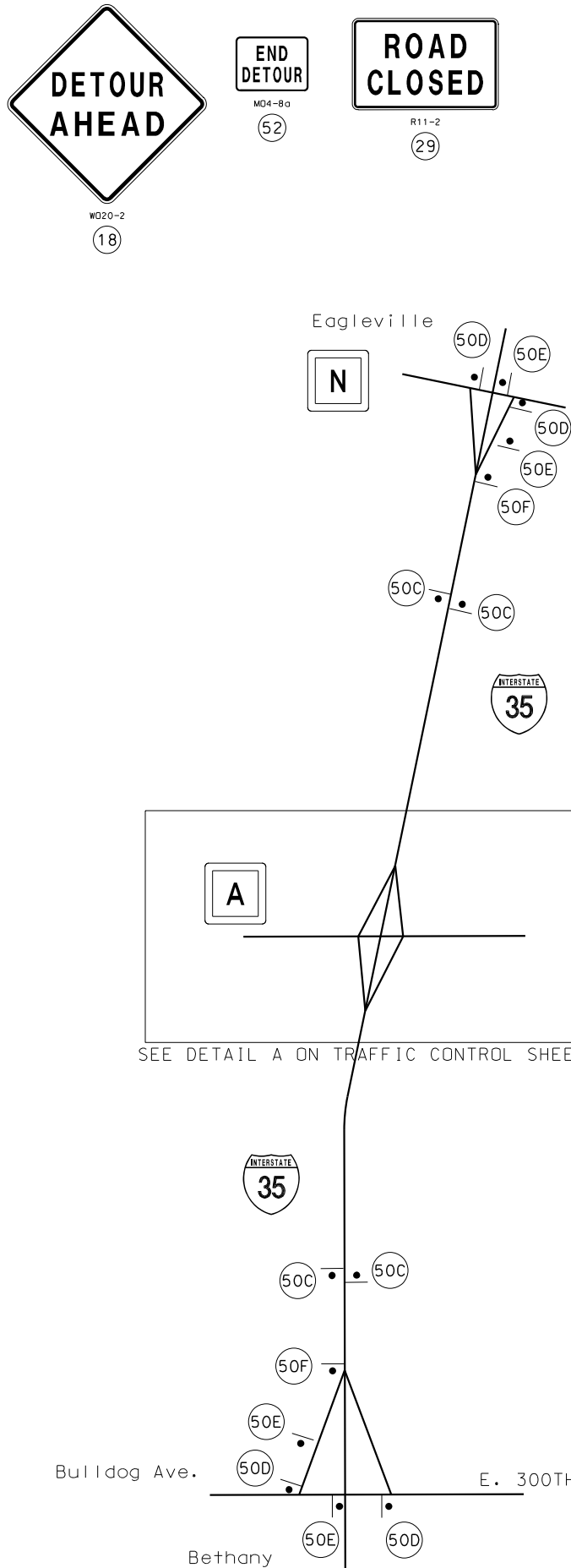
SIGN SPACING FOR ADVANCED SIGNS		
SPEED ¹ (MPH)	SIGN SPACING ² (S) (FT)	
	UNDIVIDED HIGHWAY	DIVIDED HIGHWAY
UP TO 35	200	200
40 TO 45	350	500
50 TO 55	500	1000
60 TO 70	1000	SA-1000
		SB-1500
		SC-2640

¹SPEED LIMIT IS BASED ON POSTED SPEED LIMIT.
²SIGN SPACING MAY BE ADJUSTED, NORMALLY BY INCREASING IT,
TO ACCOMMODATE FIELD CONDITIONS AND VISIBILITY.

* THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION
OR POINT OF RESTRICTION TO THE FIRST SIGN.

THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST
AND SECOND SIGNS.

LONGITUDINAL BUFFER SPACE	
SPEED ¹ (MPH)	BUFFER SPACE (FEET)
0-35	280
40-45	400
50-55	560
60-70	840



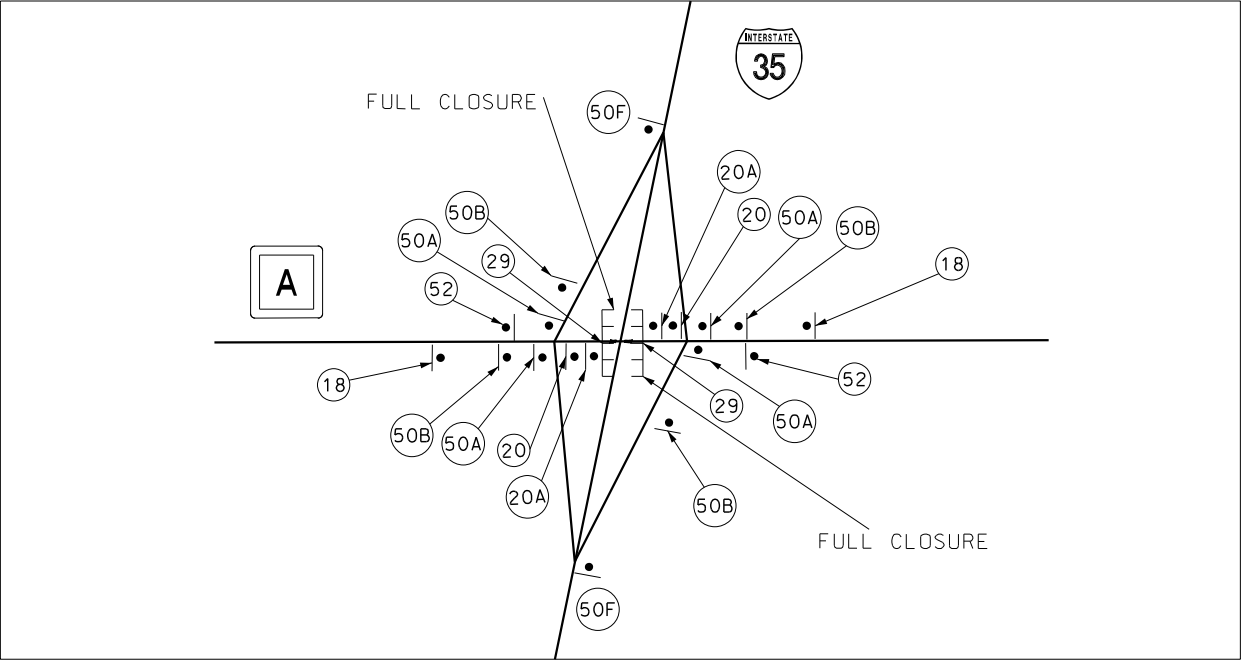
DATE PREPARED
9/28/2021
ROUTE
A
DISTRICT
NW
STATE
MO
SHEET NO.
7
COUNTY
HARRISON
JOB NO.
J1S3215
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

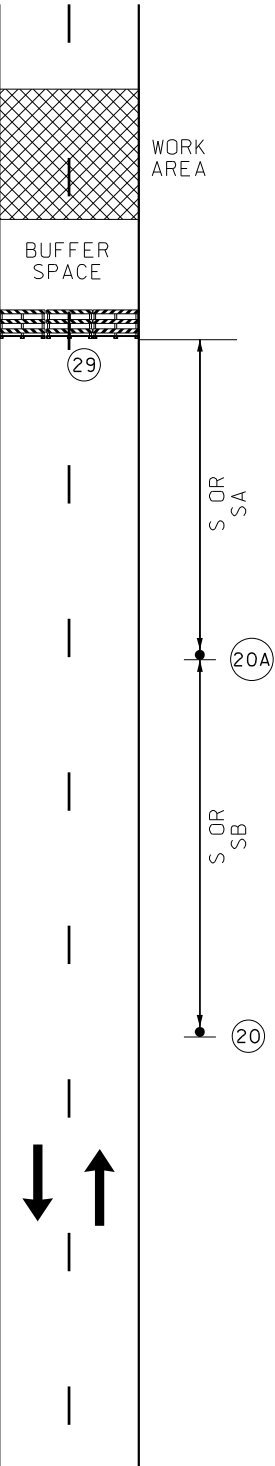
800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599
WILSON & COMPANY
ENGINEERS & ARCHITECTS

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DETAIL A

NOT TO SCALE



THRU ROAD CLOSURE

STATE OF MISSOURI

NICHOLAS THOMAS

NUMBER PE-2007035784

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

9/28/2021

ROUTE

A

STATE

MO

DISTRICT

NW

SHEET NO.

8

COUNTY

HARRISON

JOB NO.

J1S3215

CONTRACT ID.

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PROJECT NO.

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BRIDGE NO.

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DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

800 E 101st Terr., Ste. 200

Kansas City, MO 64131

Phone (816) 701-3100

Fax (816) 942-3013

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

WILSON & COMPANY

ENGINEERS & ARCHITECTS

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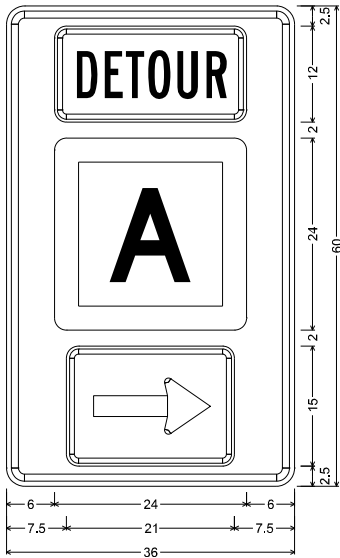
Kansas City, MO 64131

Phone (816) 701-3100

Fax (816) 942-3013

Missouri Cert. of Authority #2003007599

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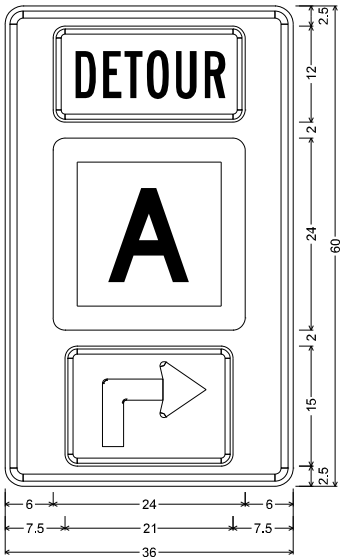


SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;

Table of letter and object lefts

6.000
6.000
7.500

SIGN NO.	50A
STATION	
ROADWAY	ROUTE A

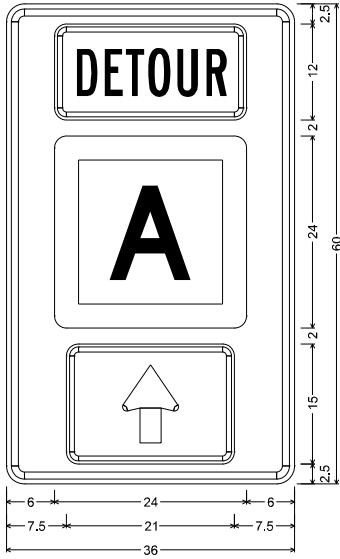


SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;

Table of letter and object lefts

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6.000
7.500

SIGN NO.	50B
STATION	
ROADWAY	ROUTE A

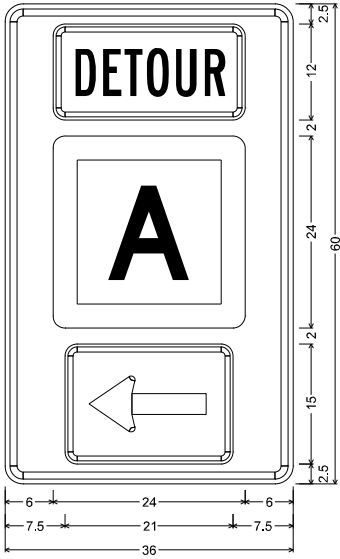


SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;

Table of letter and object lefts

6.000
6.000
7.500

SIGN NO.	50C
STATION	
ROADWAY	ROUTE A

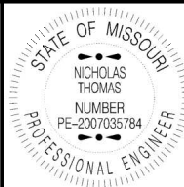


SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;

Table of letter and object lefts

6.000
6.000
7.500

SIGN NO.	50D
STATION	
ROADWAY	ROUTE A



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED 9/28/2021	
ROUTE A	STATE MO
DISTRICT NW	SHEET NO. 9
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DESCRIPTION	DATE
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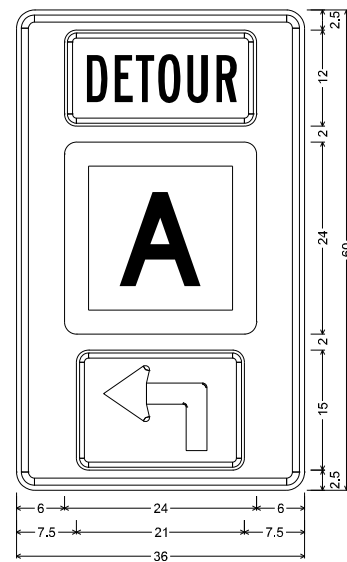
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

MoDOT

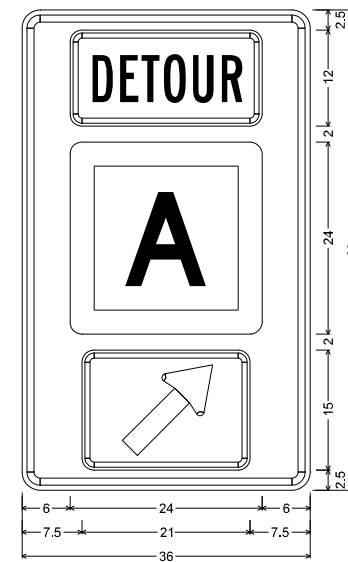
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
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Fax (816) 942-3013
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Authority #2003007599

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ENGINEERS & ARCHITECTS



SIGN NO.	50E
STATION	-
ROADWAY	ROUTE A

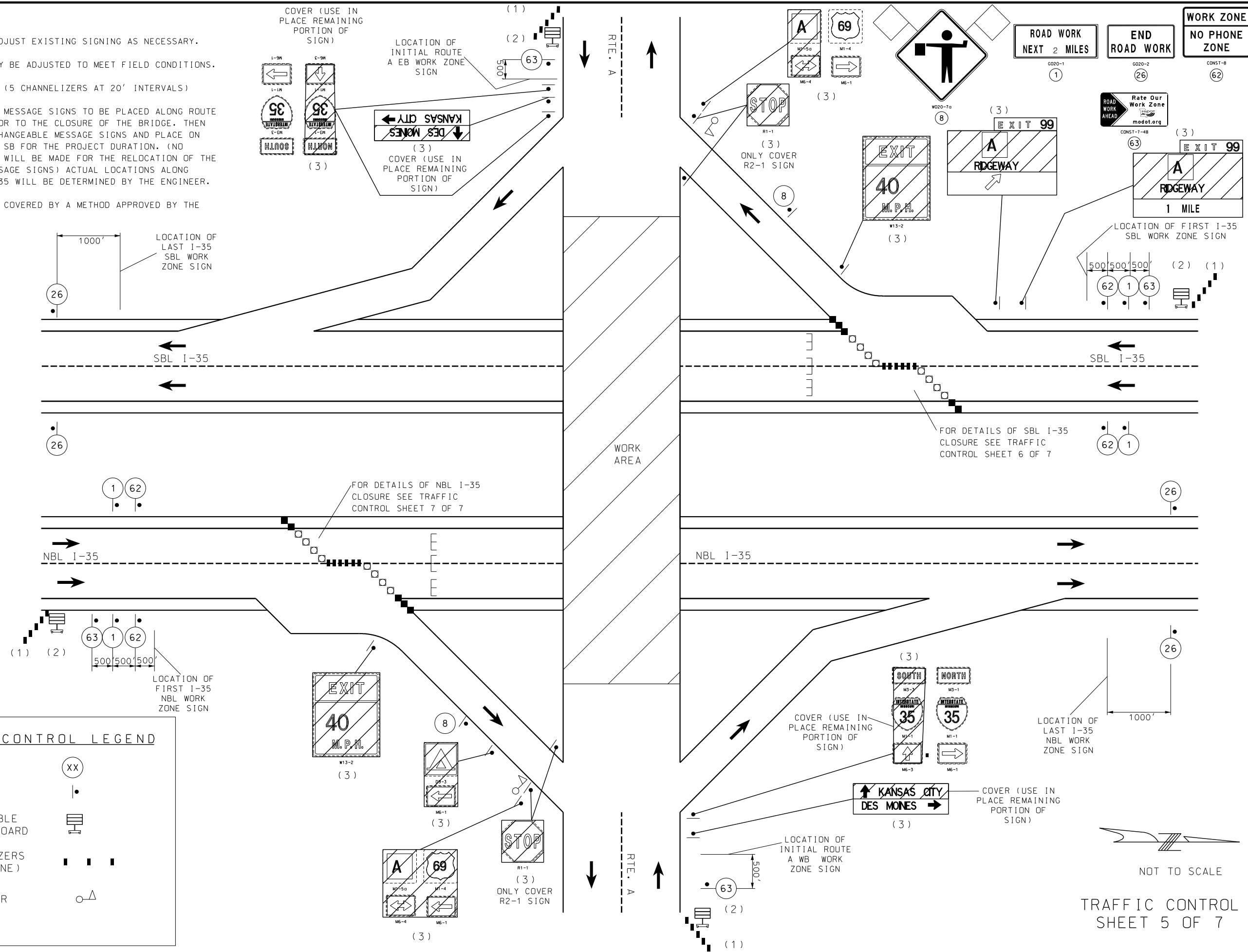


SIGN NO.	50F
STATION	.
ROADWAY	ROUTE A

TRAFFIC CONTROL
SHEET 4 OF 7

[illegible]

- NOTES:
- COVER AND ADJUST EXISTING SIGNING AS NECESSARY.
 - SPACINGS MAY BE ADJUSTED TO MEET FIELD CONDITIONS.
- (1) 100' TAPER (5 CHANNELIZERS AT 20' INTERVALS)
- (2) CHANGEABLE MESSAGE SIGNS TO BE PLACED ALONG ROUTE A ONE WEEK PRIOR TO THE CLOSURE OF THE BRIDGE. THEN MOVE THE TWO CHANGEABLE MESSAGE SIGNS AND PLACE ON I-35 NB & I-35 SB FOR THE PROJECT DURATION. (NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF THE CHANGEABLE MESSAGE SIGNS) ACTUAL LOCATIONS ALONG ROUTE A AND I-35 WILL BE DETERMINED BY THE ENGINEER.
- (3) SIGN TO BE COVERED BY A METHOD APPROVED BY THE ENGINEER.



TRAFFIC CONTROL LEGEND

- SIGN
- CHANGEABLE MESSAGE BOARD
- CHANNELIZERS (TRIM-LINE)
- FLAGGER

STATE OF MISSOURI
NICHOLAS THOMAS
NUMBER PE-2207035784
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
9/28/2021

ROUTE A
DISTRICT NW
COUNTY HARRISON
JOB NO. J1S3215
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

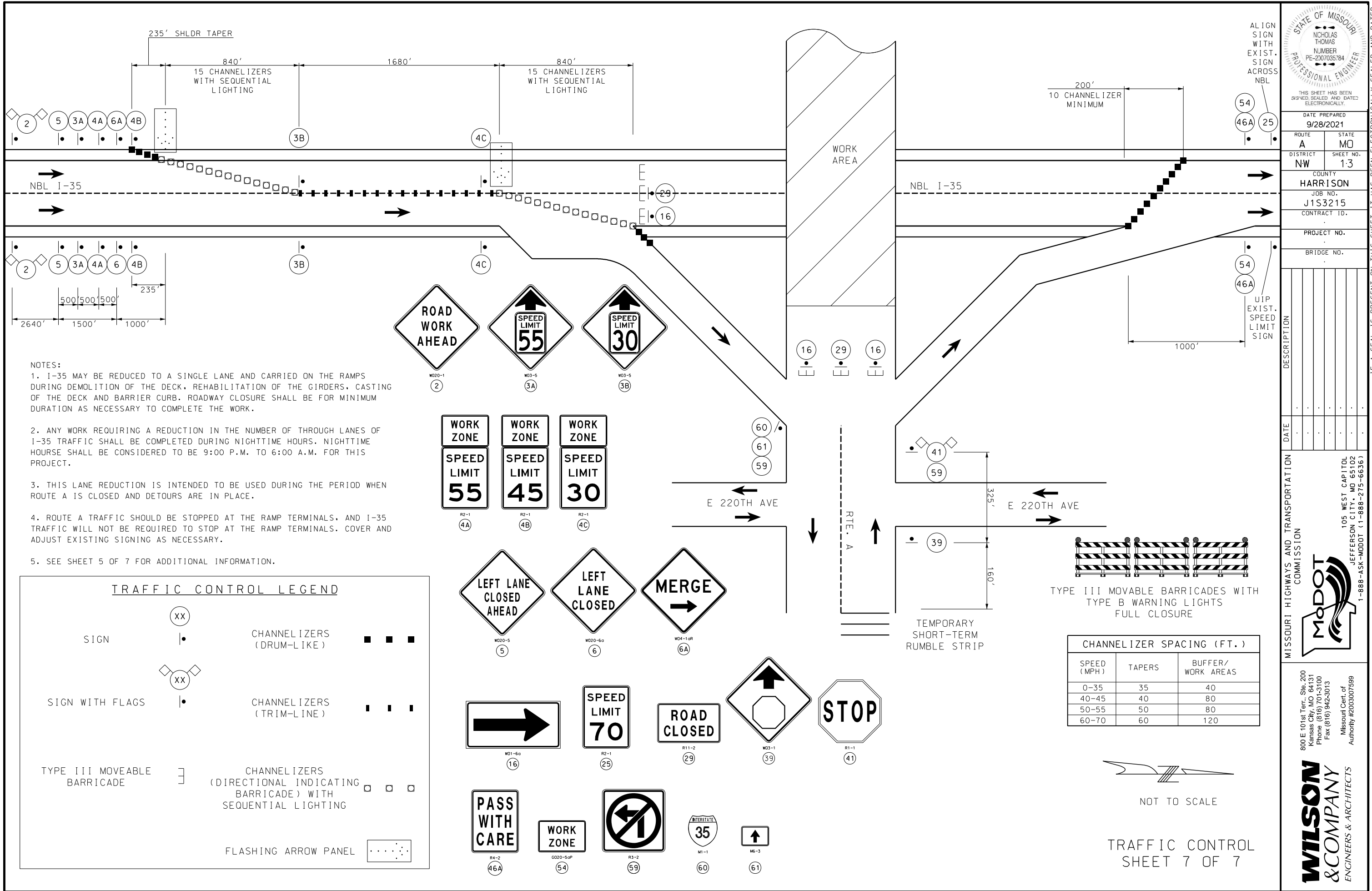
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
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WILSON & COMPANY
ENGINEERS & ARCHITECTS

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STATE OF MISSOURI

NICHOLAS THOMAS

NUMBER PE-2007035784

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2021

ROUTE A STATE MO

DISTRICT NW SHEET NO. 1-3

COUNTY HARRISON

JOB NO. J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200

Kansas City, MO 64131

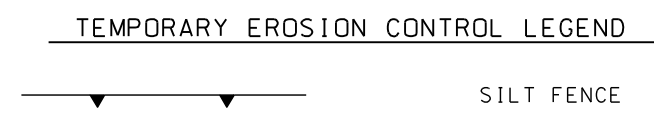
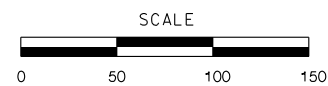
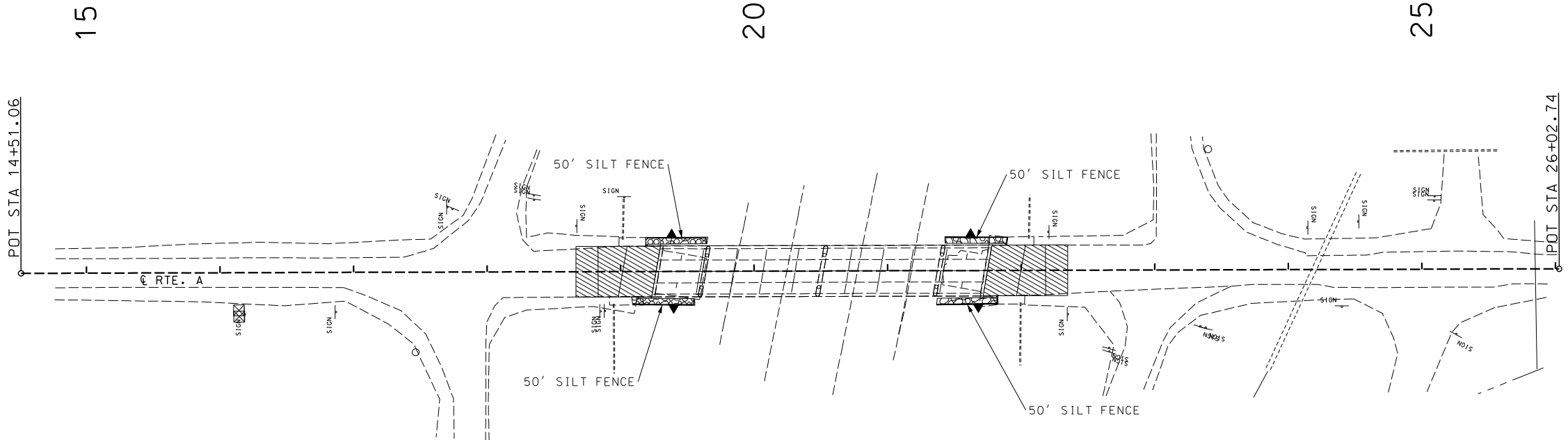
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Missouri Cert. of Authority #2003007599

WILSON & COMPANY

ENGINEERS & ARCHITECTS



TEMPORARY EROSION
CONTROL
SHEET 1 OF 1

STATE OF MISSOURI

NICHOLAS THOMAS

NUMBER

PE-2007035784

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED

9/28/2021

ROUTE

A

STATE

MO

DISTRICT

NW

SHEET NO.

14

COUNTY

HARRISON

JOB NO.


J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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Kansas City, MO 64131
Phone (816) 701-3100
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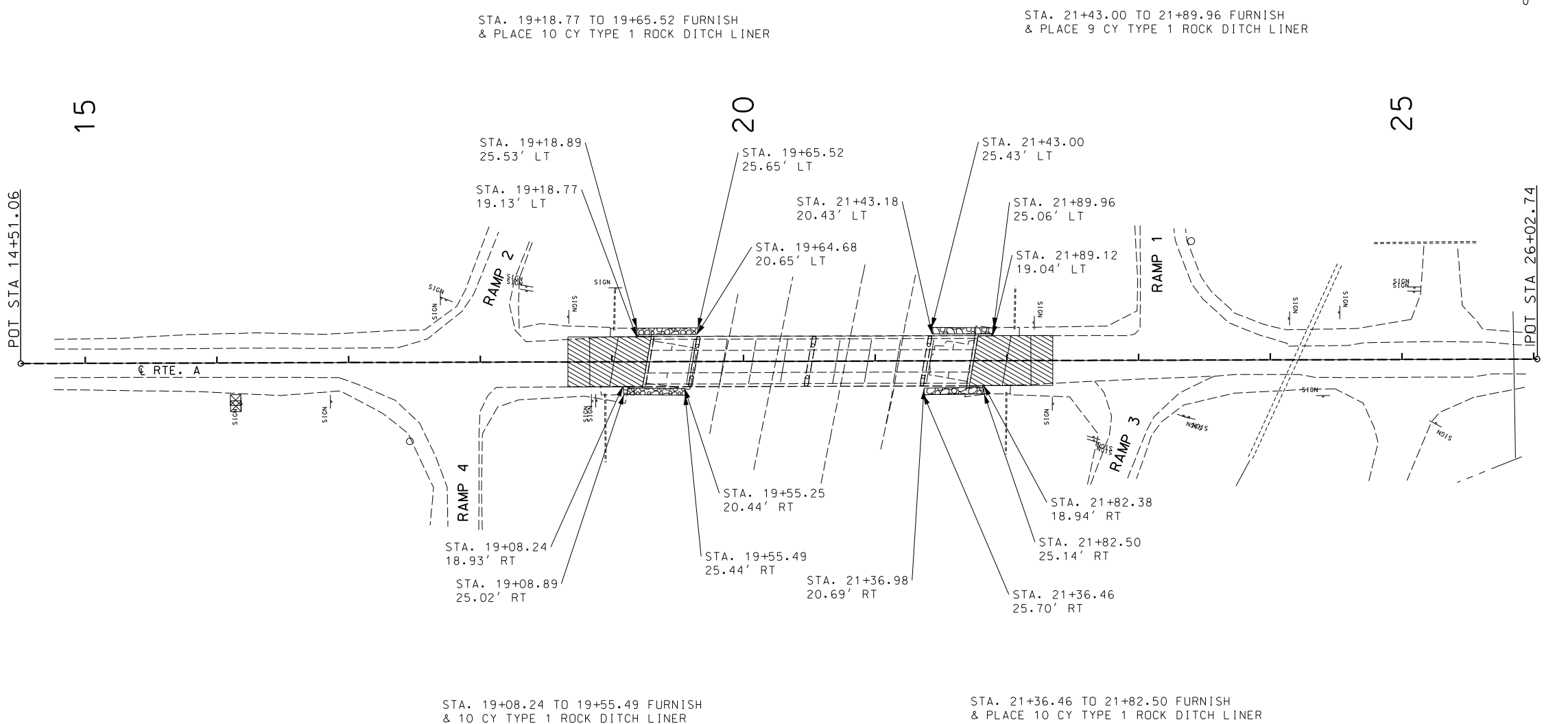
Missouri Cert. of
Authority #2003007599

**WILSON
& COMPANY**

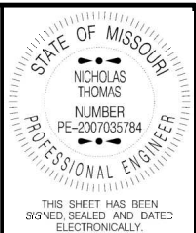
ENGINEERS & ARCHITECTS

DATE	DESCRIPTION
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PERMANENT EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED
9/28/2021

ROUTE A	STATE MO
DISTRICT NW	SHEET NO. 15
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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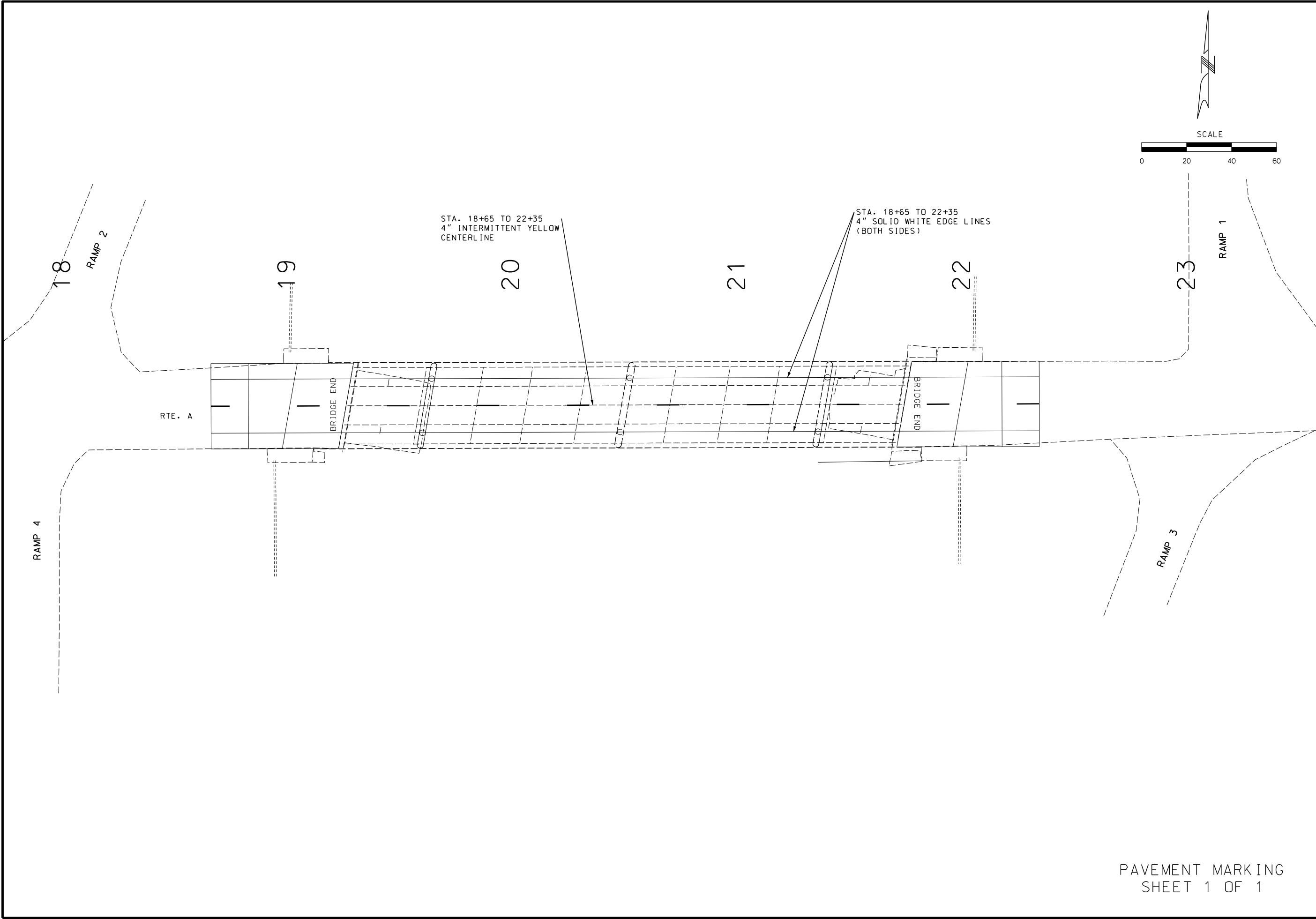
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

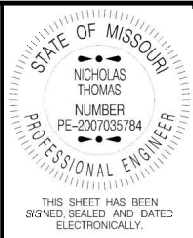
800 E 101st Terr., Ste. 200
Kansas City, MO 64131
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Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

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PAVEMENT MARKING
SHEET 1 OF 1



DATE PREPARED 9/28/2021	
ROUTE A	STATE MO
DISTRICT NW	SHEET NO. 16
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



800 E 101st Terr., Ste. 200
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SEC/SUR	1	TWP	64N	RGE	28W
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U. I. P., REDECK AND RECONFIGURE EXISTING SUPERSTRUCTURE TO (35.5'-88'-88'-35.5') CONTINUOUS COMPOSITE PLATE GIRDER SPANS (SKEW:10° L.A.)

Table Showing
S2 & S3 Bar Lengths

Int. Bent No. 2		Int. Bent No. 3		Int. Bent No. 4	
Span 1	Span 2	Span 2	Span 3	Span 3	Span 4
15' - 3"	19' - 3"	29' - 9"	29' - 9"	19' - 3	15' - 3"

Required Lap Length For Bar Splices **

Bar Size	Splice Length
4	2'-7"
5	3'-3"
6	3'-10"
7	4'-11"

** Unless otherwise shown.

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications
Seismic Performance Category A

Design Loading:

H20-44 (1969) (Existing)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Barrier)	$f'c = 4,000$ psi
Class B-2 Concrete (End Bents & Superstructure, except Barrier)	$f'c = 4,000$ psi
Reinforcing Steel (Grade 60)	$fy = 60,000$ psi
Structural Steel (ASTM 709 Grade 50)	$fy = 50,000$ psi

Fabricated Steel Connections:

Field connections shall be made with 3/4" diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16" diameter holes, except as noted.

Joint Filler:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Miscellaneous:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Roadway surfacing adjacent to bridge ends shall match new bridge slab surface. (Roadway item)

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

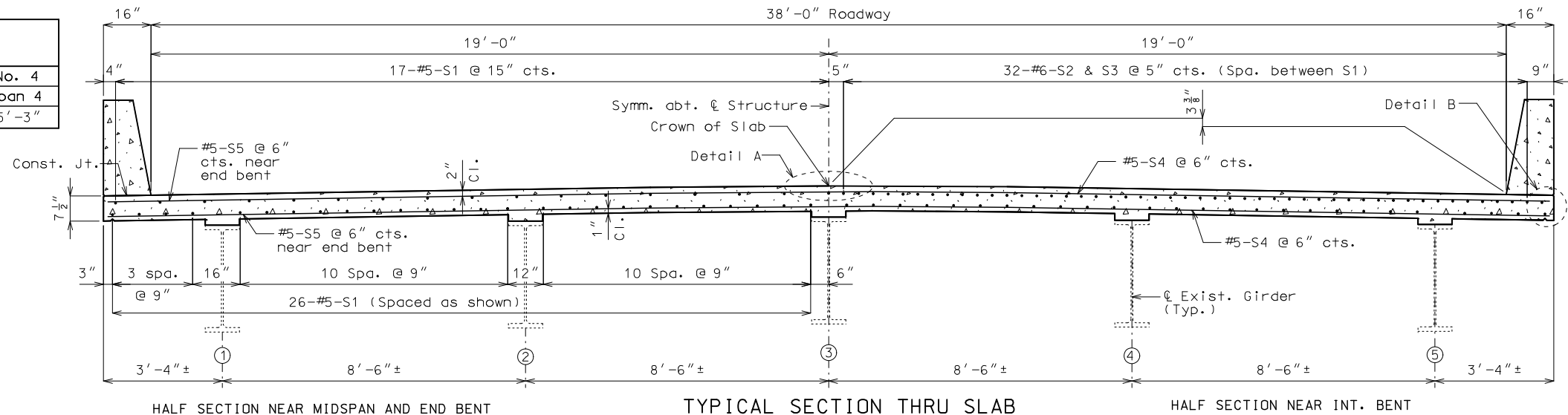
Contractor shall verify all dimensions in field before ordering new material.

The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Traffic Handling:

Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.

Vertical clearance for Interstate 35 traffic during construction shall be 15'-0" minimum over a 26 foot wide horizontal opening of the roadway in each direction.



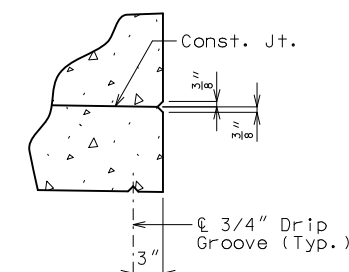
Estimated Quantities

Item		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	24
Removal of Existing Bridge Deck	sq. foot	10,203
Partial Removal of Substructure Concrete	lump sum	1
Removal of Existing Bearings	each	10
Bridge Approach Slab (Minor)	sq. yard	211
Slab on Steel	sq. yard	1127
* Type H Barrier	linear foot	545
Substructure Repair (Formed)	sq. foot	100
Fiber Reinforced Polymer Wrap	sq. foot	395
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Fabricated Structural Low Alloy Steel (Plate Girder) A709, Grade 50	pound	46,840
Shear Connectors	each	1440
Cleaning and Coating Existing Bearings	each	5
Slab Drain	each	12
Surface Preparation for Recoating Structural Steel	sq. foot	10,200
Field Application of Inorganic Zinc Primer	sq. foot	10,200
Intermediate Field Coat (System G)	sq. foot	13,100
Finish Field Coat (System G)	sq. foot	2800
* Reconfigure Existing Structural Steel	lump sum	1
Vertical Drain at End Bents	each	2
Laminated Neoprene Bearing Pad Assembly	each	10

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

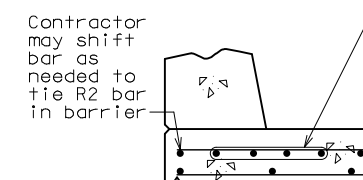
* Type H Barrier Curb Shall be cast-in-place option or slip-form option.

*** See Special Provisions



DETAIL B

Contractor may shift or swap
bars as needed to tie R3 bar
in barrier (4" min. bar spacing)



OPTIONAL SHIFTING
TOP BARS AT BARRIER

REPAIRS TO BRIDGE:
ROUTE A OVER INTERSTATE 35

ROUTE A FROM ROUTE 69 TO ROUTE T
ABOUT 0.4 MILE EAST OF ROUTE 69
BEGINNING STATION 19+25.34± (MATCH EXISTING)

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contracting shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

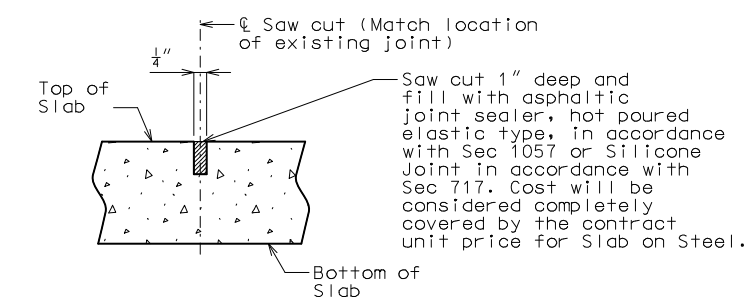
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Deflection and Haunching:

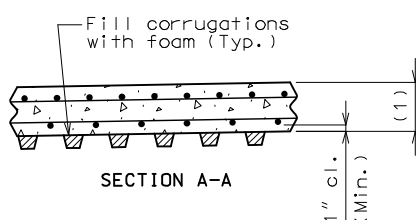
The contractor shall determine haunching based on field measurements and/or existing bridge plans.

In order to properly form the haunches for the new deck, the contractor shall shoot deck elevations along each girder line prior to deck removal followed by shooting elevations of tops of girders after deck removal and girder reconfiguration.

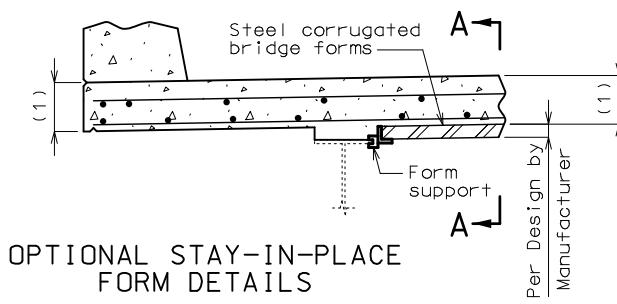
(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.



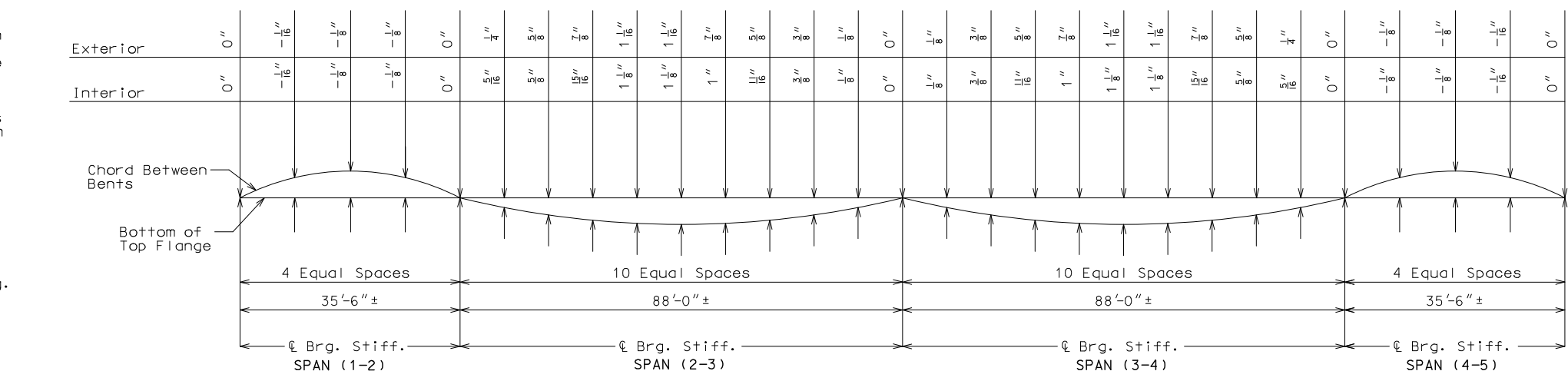
TYPICAL SECTION
THRU SAW CUT AT
INTERMEDIATE BENTS



SECTION A-A



OPTIONAL STAY-IN-PLACE FORM DETAILS

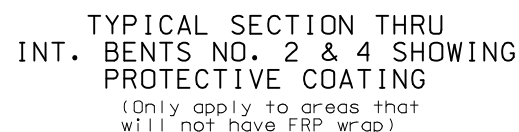


DEAD LOAD DEFLECTION

14.5% of dead load deflection is due to the weight of structural steel.

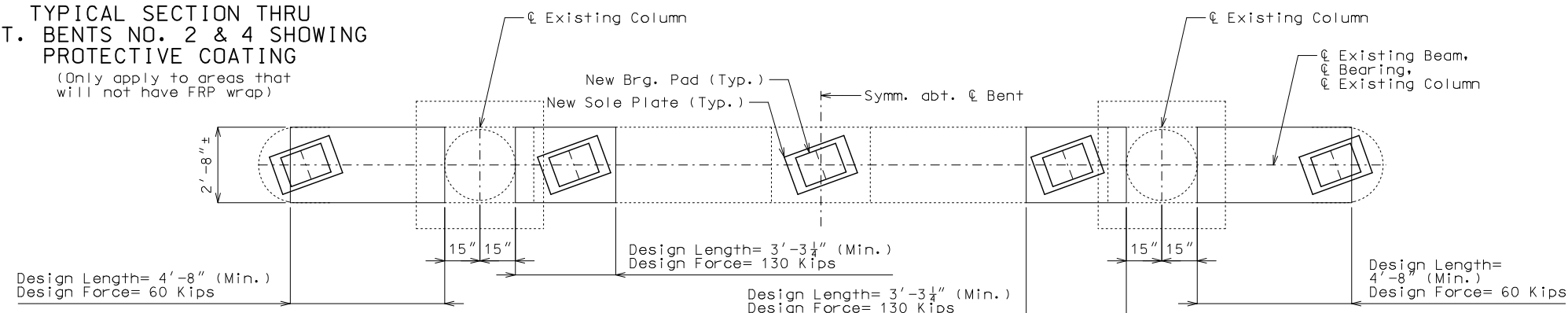
Dead load deflection includes weight of structural steel, concrete slab, and barrier.

Negative Values indicates upward deflection



TYPICAL SECTION THRU
INT. BENTS NO. 2 & 4 SHOWING
PROTECTIVE COATING

(Only apply to areas that
will not have FRP wrap)

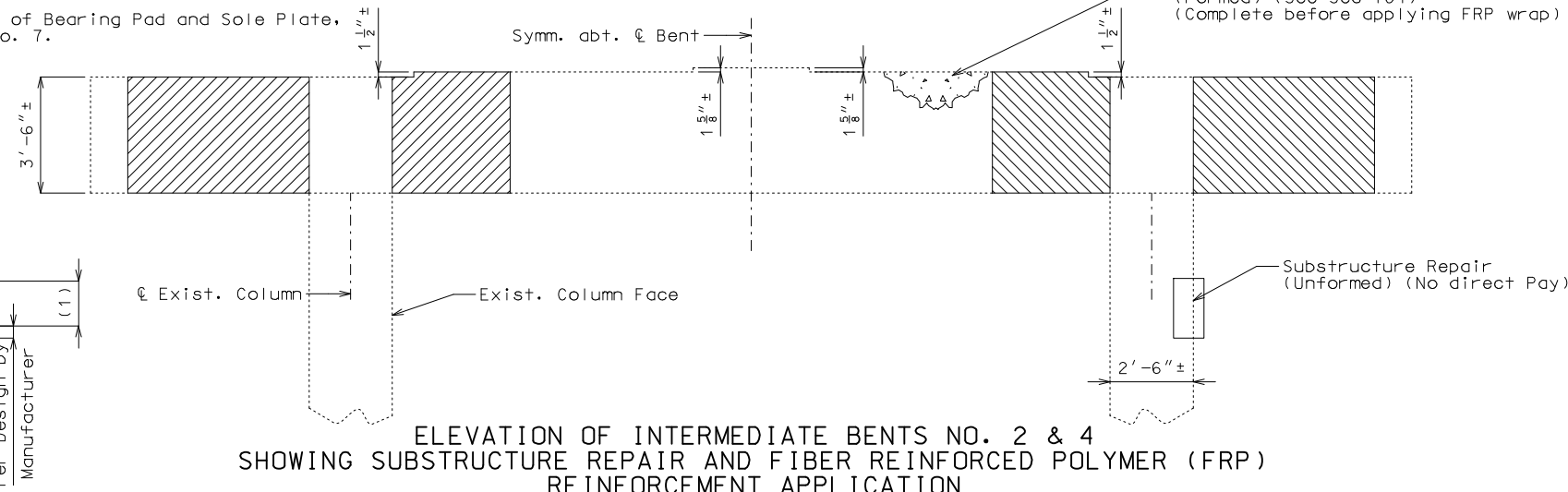


PLAN OF INTERMEDIATE BENTS NO. 2 & 4 SHOWING (FRP)
REINFORCEMENT APPLICATION

Note:

Design force is the factored shear force at any cross section in each design region that shall be resisted entirely by the FRP reinforcement. (See Special Provisions).

For Details of Bearing Pad and Sole Plate,
see Sheet No. 7.



ELEVATION OF INTERMEDIATE BENTS NO. 2 & 4
SHOWING SUBSTRUCTURE REPAIR AND FIBER REINFORCED POLYMER (FRP)
REINFORCEMENT APPLICATION

General Notes:

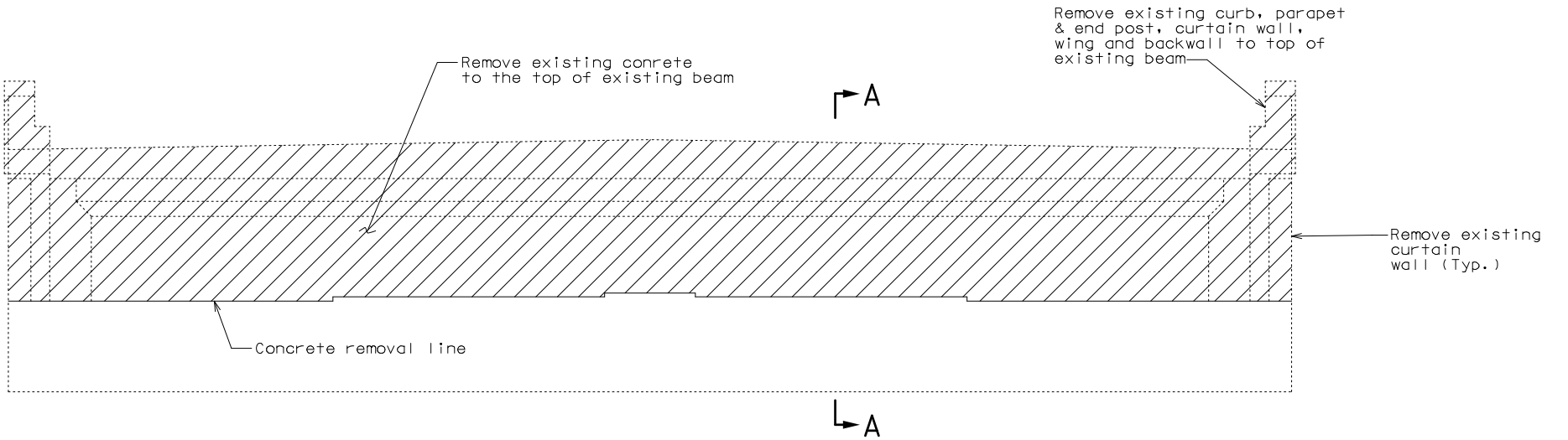
Structural Steel Protective Coating:
Protective Coating: System G in accordance with Sec 1081. All existing bearings at Bent No. 3 shall be recoated with System G.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Recoating of Structural Steel (System G, H or I). The cost of surface preparation will be considered completely covered by the contract unit price for Surface Preparation for Recoating Structural Steel.

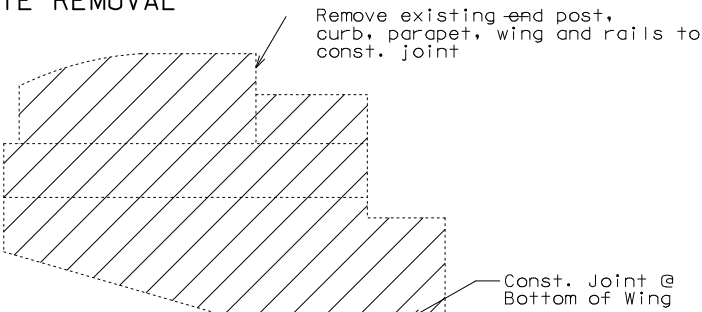
Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price for Field Application of Inorganic Zinc Primer. Tint of the prime coat for System G shall be similar to the color of the field coat to be used. The cost of the prime coat for new structural steel shall be considered completely covered by the unit price for Fabricated Structural Low Alloy Steel (Plate Girder) A709, Grade 50.

Field Coat: The color of the finish field coat shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract unit price for Intermediate Field Coat (System G). The cost of the finish field coat will be considered completely covered by the contract unit price for Finish Field Coat (System G).

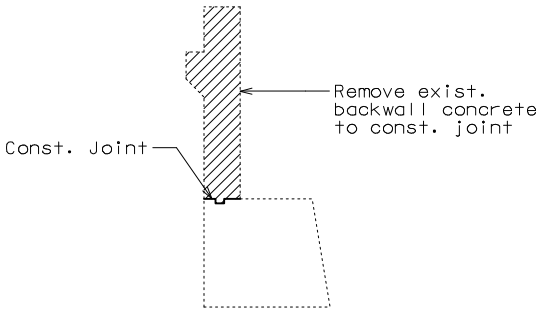
At the option of the contractor, the intermediate field coat and finish field coat may be applied in the shop. The contractor shall exercise extreme care during all phases of loading, hauling, handling, erection and pouring of the slab to minimize damage and shall be fully responsible for all repairs and cleaning of the coating systems as required by the engineer.



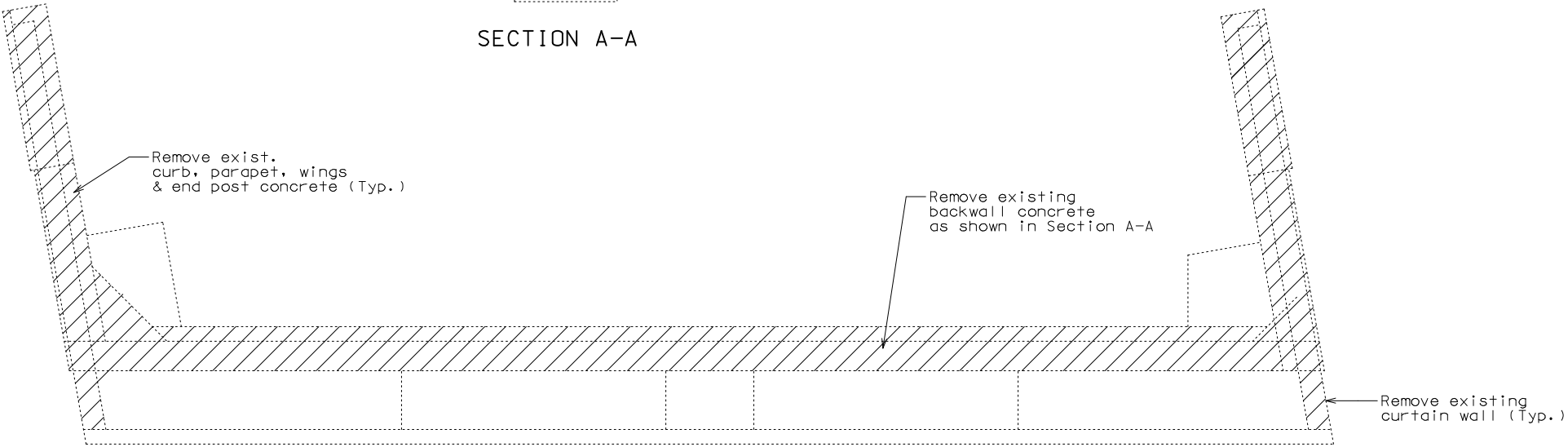
ELEVATION OF END BENT NO. 1 SHOWING CONCRETE REMOVAL



ELEVATION OF WING SHOWING CONCRETE REMOVAL LIMITS



SECTION A-A



PLAN OF END BENT NO. 1 SHOWING CONCRETE REMOVAL

End Bent No. 1 shown, End Bent No. 5 similar
Existing bearings and girders not shown for clarity.

Notes:

Existing vertical backwall and wingwall reinforcement shall be cleaned and reused.

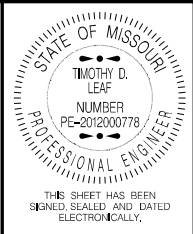
The cost of concrete removal will be considered completely covered by the contract price for Partial Removal of Substructure Concrete.

DETAILS OF CONCRETE REMOVAL

Detailed June 2021
Checked July 2021

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 15



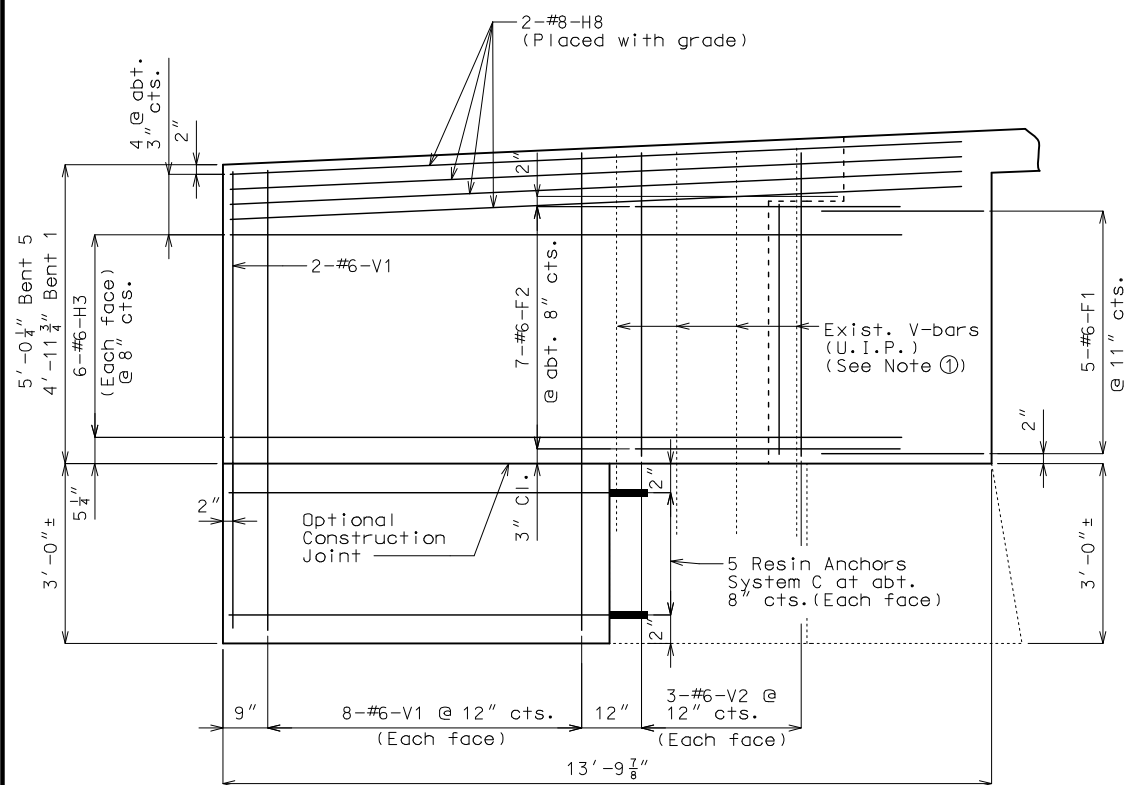
DATE PREPARED 8/10/2021	
ROUTE A	STATE MO
DISTRICT BR	SHEET NO. 3
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A25162	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

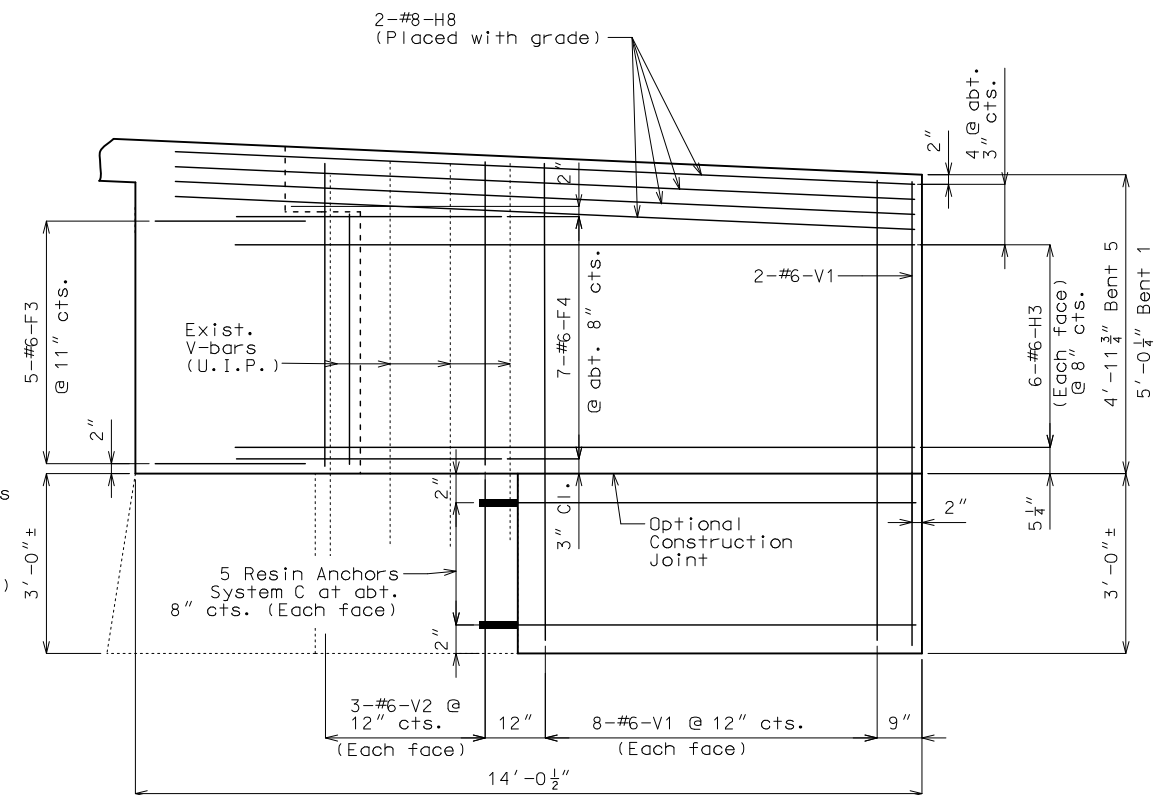
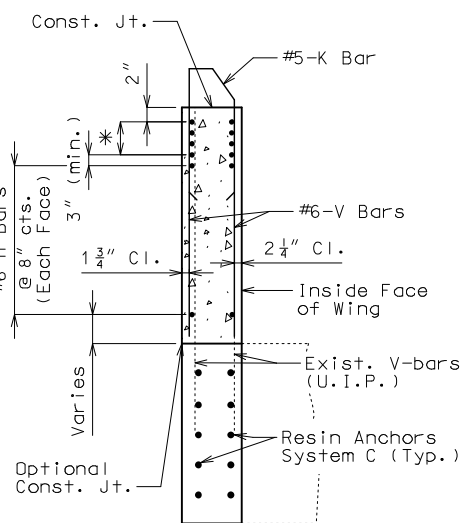
105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



Note ① :

Existing V-bars at the inside face shall be field bent so as to be encased in new wing concrete or shall be cut off 1" below top of bearing beam and the resulting hole back filled with an approved qualified special mortar in accordance with Sec 704.



ELEVATION D-D

Notes:

Work this sheet with Sheet No. 4.

For details and reinforcement of Type H Barrier, see Sheets No. 12 thru 14.

All concrete and reinforcement is included in the Table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

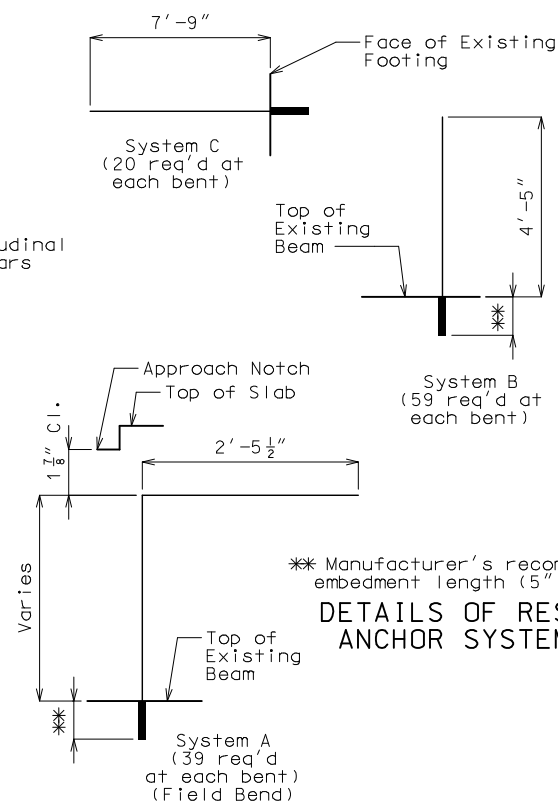
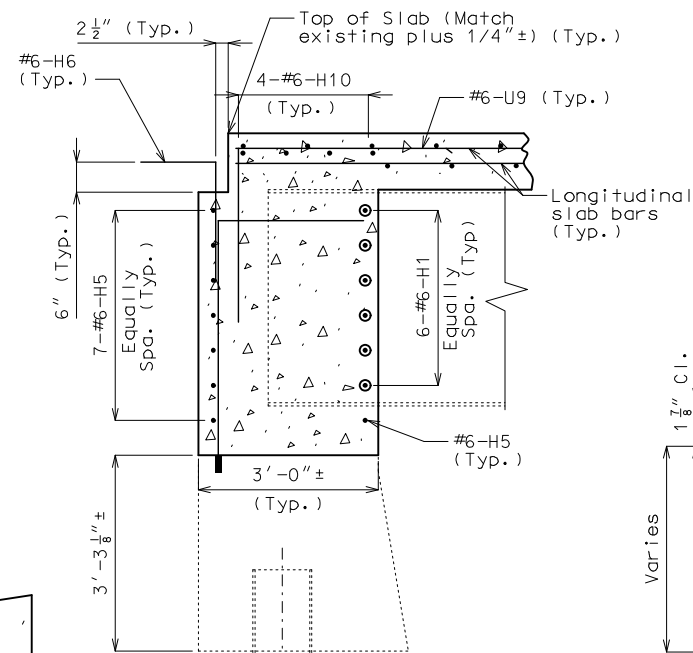
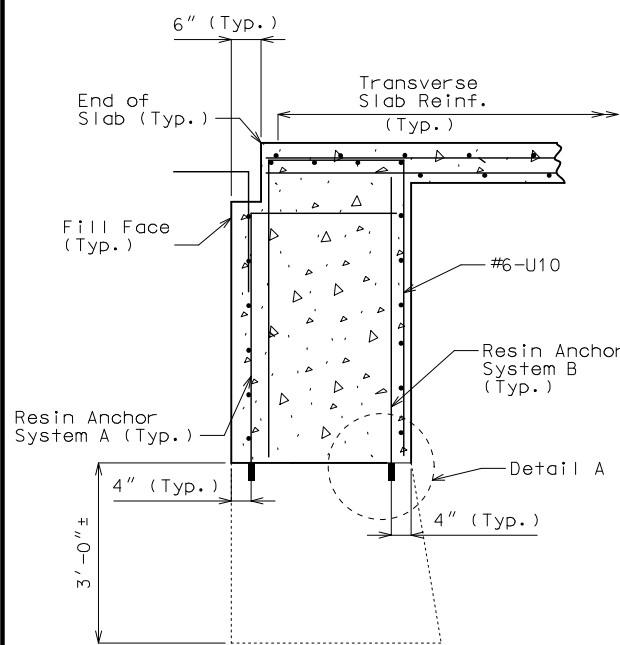
The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #6 Grade 60 reinforcing bar shall be substituted for the 3/4"Ø threaded rod.

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

The H1 bars are segmented for ease of placement through girder web holes. The total bar length for H1 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-10". Actual bar segment lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical bar splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length will be determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and installing the bar splices will be considered completely covered by the contract unit price for Slab on Steel. No adjustment of the quantity of reinforcing steel will be allowed for the use of mechanical bar splices.

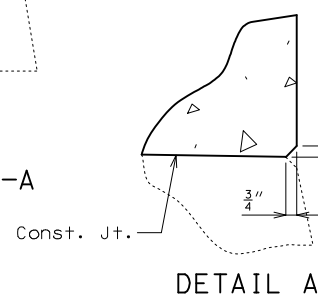
Cost of field drilling holes in existing plate girder webs will be considered completely covered by the contract unit price for Slab on Steel.

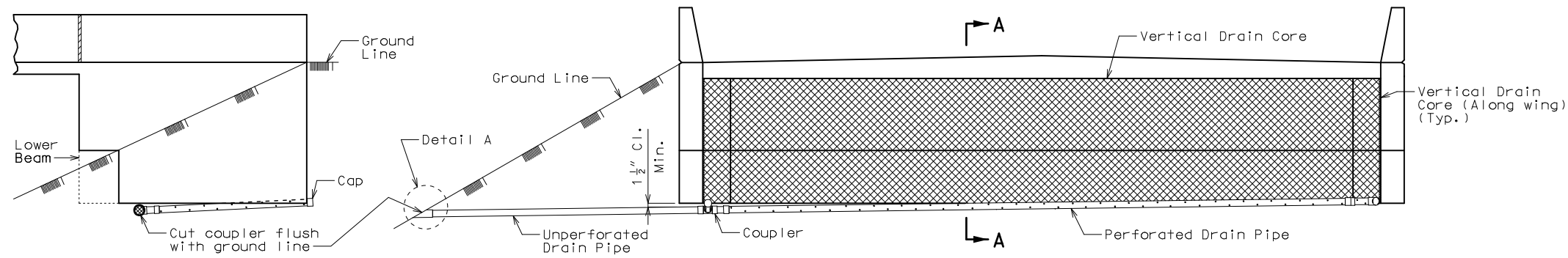


DETAILS OF END BENTS NO. 1 & 5

(End Bent No. 1 shown, End Bent No. 5 similar)

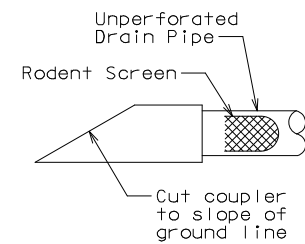
(Existing piles not shown for clarity.)



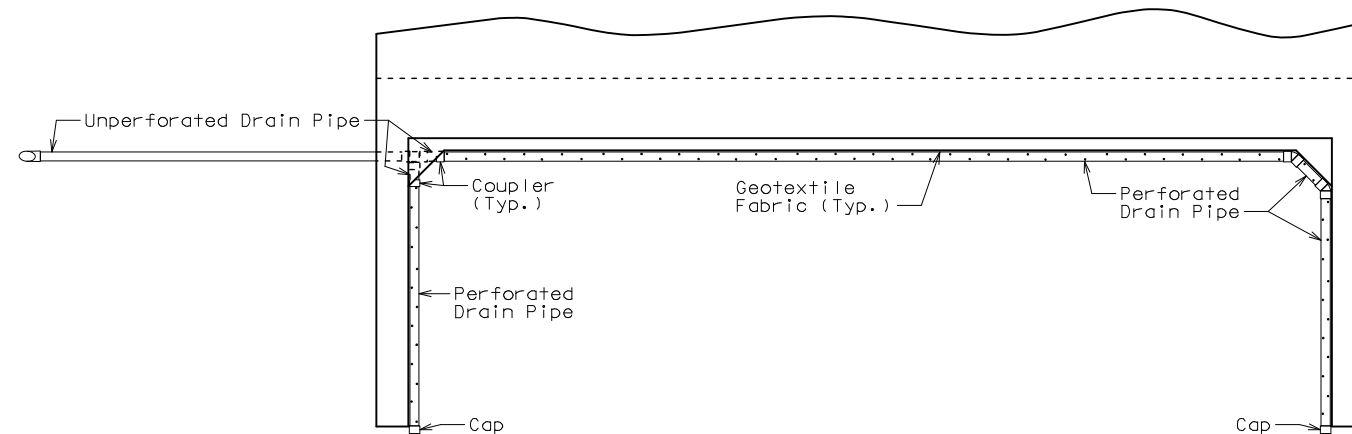


ELEVATION OF WING

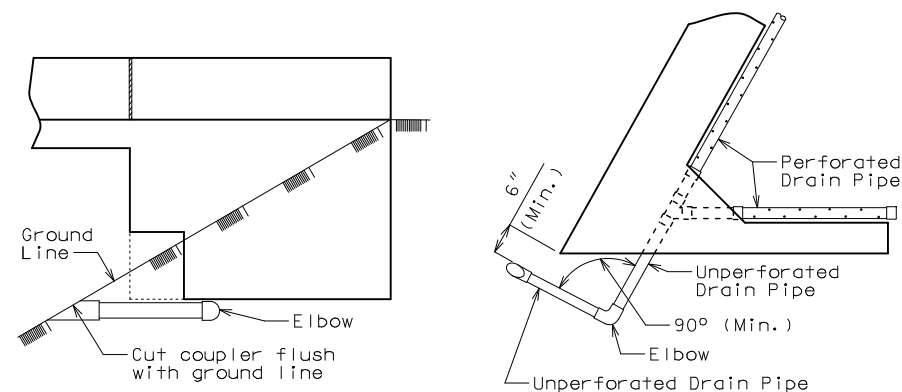
(Optional Const. Jt. not shown, for clarity)



DETAIL A



PLAN OF END BENT

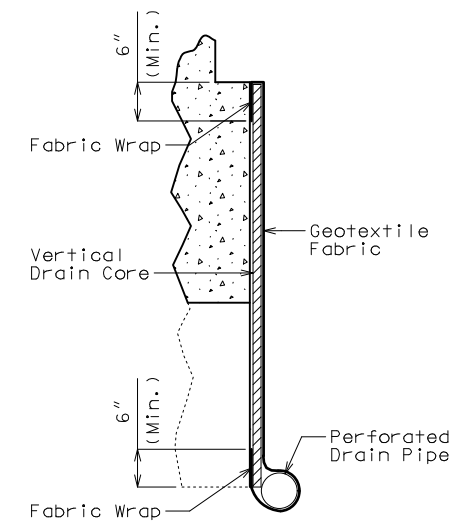


ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)



PART SECTION A-A

(Section thru wing similar)

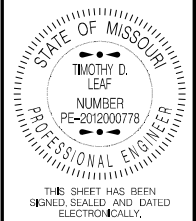
General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

DATE PREPARED
2-10-1994

8/10/2021	
ROUTE	STATE

ROUTE	STATE
A	MO

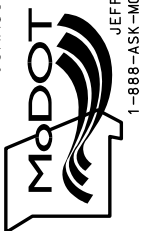
DISTRICT	SHEET NO.
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BR	6
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COUNTY
HARRISON

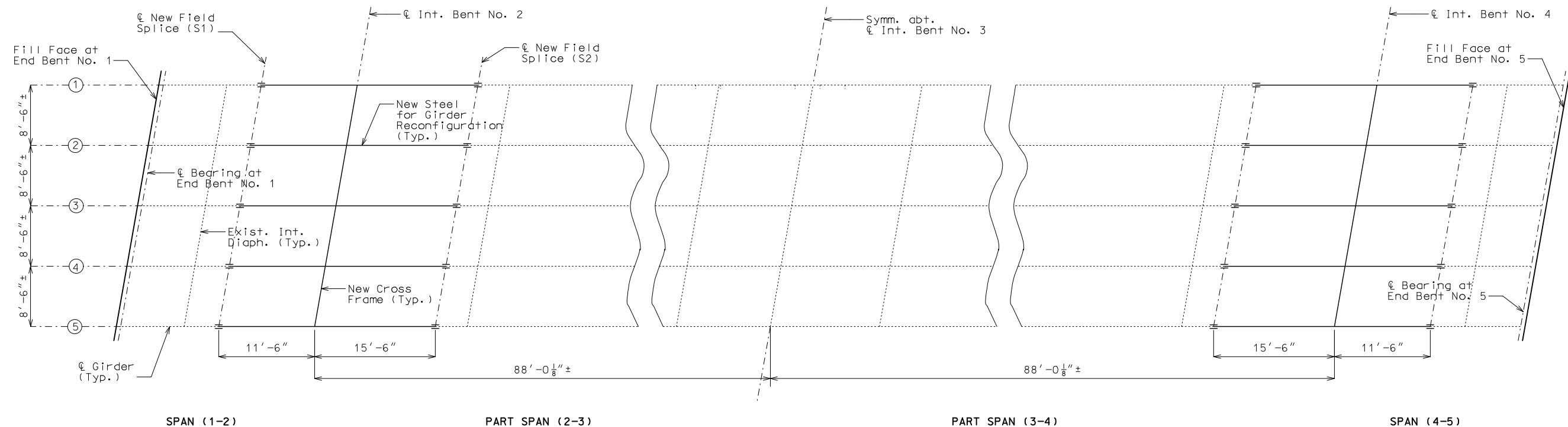
HARRISON
JOB NO.

J1S3215

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

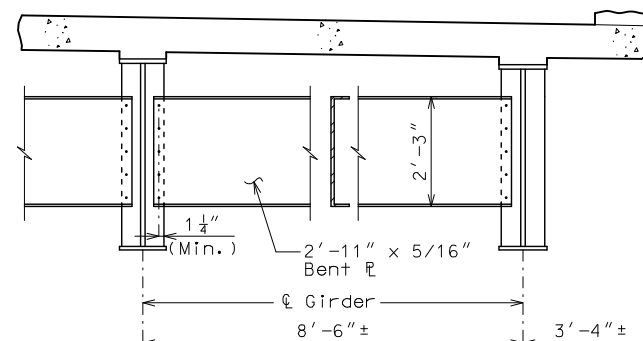
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PART PLAN OF STRUCTURAL STEEL

Note:

At the contractor's option, holes in the diaphragm plate of non slab bearing diaphragms may be made 3/16" larger than the nominal diameter of the bolt. A hardened washer shall be used under the bolt head and nut when this option is used. Holes in the girder diaphragm connection plate or transverse web stiffener shall be standard size.



TYPICAL PART SECTION SHOWING CROSS FRAMES

Notes:

Longitudinal dimensions are taken parallel to grade.

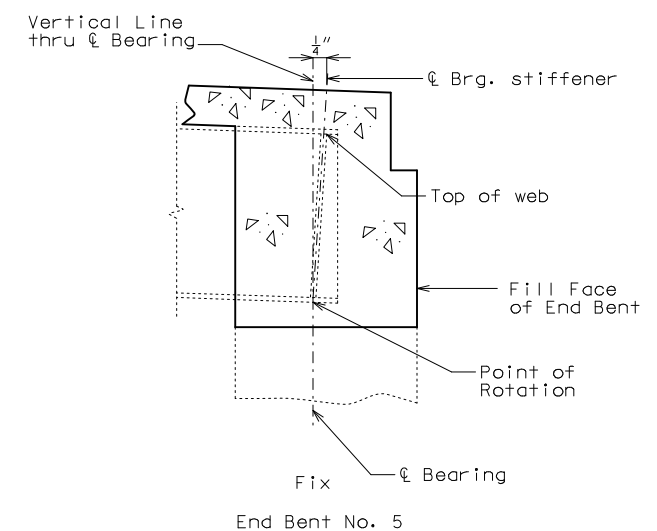
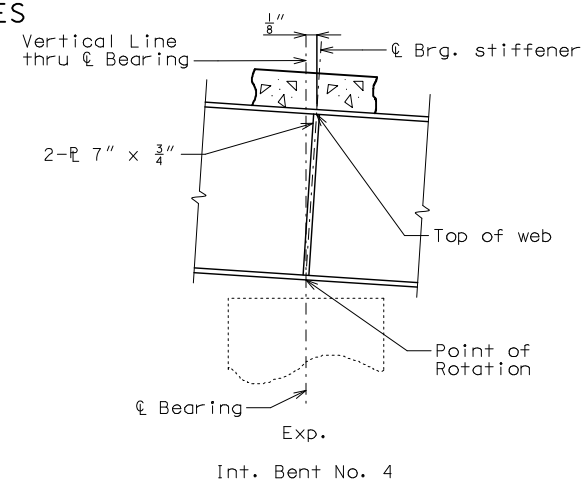
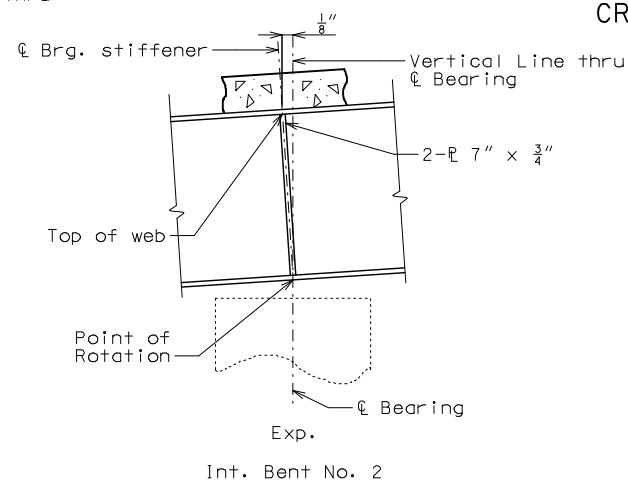
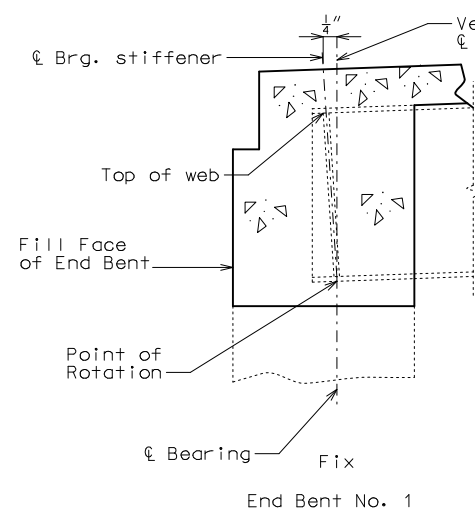
Fabricated structural steel shall be ASTM A709, Grade 50.

For details of reconfiguration to existing girders, see Sheet No. 9.

For details and spacing of shear connectors, see Sheet No. 9.

For details of bolted field splices, see Sheet No. 10.

For location of slab drain attachment holes, see Sheet No. 11.

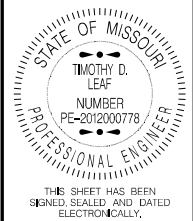


PART LONGITUDINAL SECTIONS
RECONFIGURATION OF EXISTING GIRDERS

Detailed June 2021
Checked July 2021

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 15

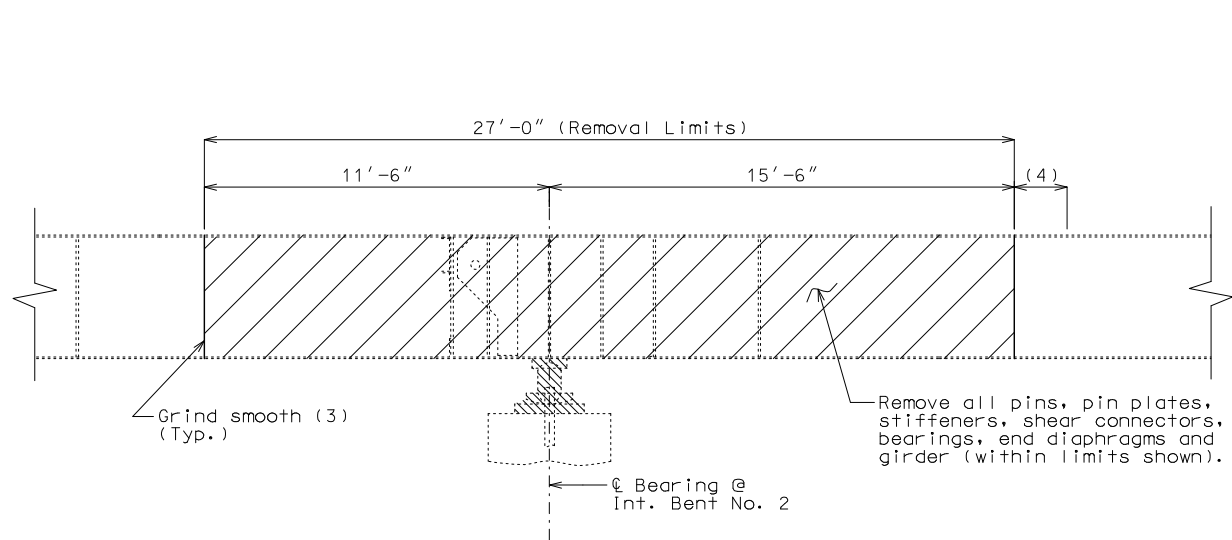


DATE PREPARED	8/10/2021
ROUTE	A
STATE	MO
DISTRICT	BR
SHEET NO.	8
COUNTY	HARRISON
JOB NO.	J1S3215
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A25162

DESCRIPTION	DATE



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PART ELEVATION OF EXISTING GIRDER NEAR INT. BENT NO. 2 SHOWING STRUCTURAL STEEL REMOVAL

Notes:

Payment for removal of pins, pin plates, end diaphragms, bearings and any other incidental material included in the girder region being removed, and any coating repair will be considered completely covered by the contract lump sum price for Reconfigure Existing Structural Steel.

Any weld material remaining after removal shall be ground flush.

The cost of supplying and installing shear connectors will be considered completely covered by the contract unit price for Shear Connectors.

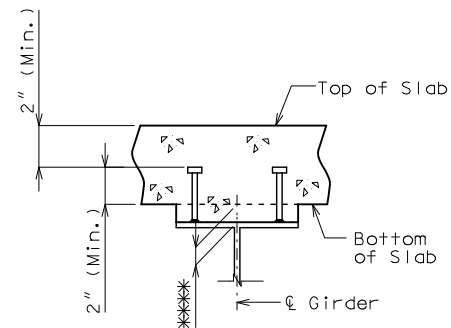
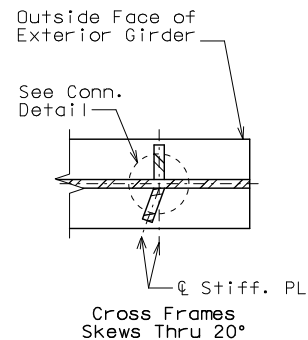
Shear connectors shall be in accordance with Sec 712, 1037 & 1080.

Required temporary support load of 22 kips per girder left of Int. Bent No. 2 (Span 1-2) and right of Int. Bent No. 4 (Span 4-5) and 31 kips per girder right of Int. Bent No. 2 (Span 2-3) and left of Int. Bent No. 4 (Span 3-4) is a service dead load without a factor of safety. It includes existing girder weight (existing or new deck weight not included) and a construction load of 50 psf. See Special Provisions.

Girder reconfiguration work shall be completed at one bent before starting removals at the other bent for each girder line.

(3) The cut end of existing girders and any damaged areas of existing paint shall be coated with Gray Epoxy-Mastic Primer.

(4) Any shear connectors interfering with splice plate installation shall be removed.

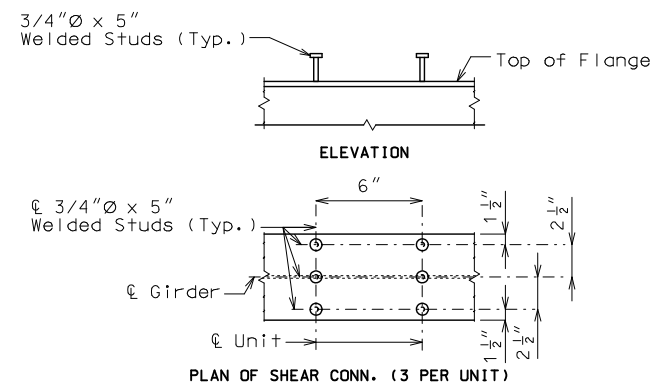


SECTION THRU NEW GIRDER SHOWING SHEAR CONNECTORS

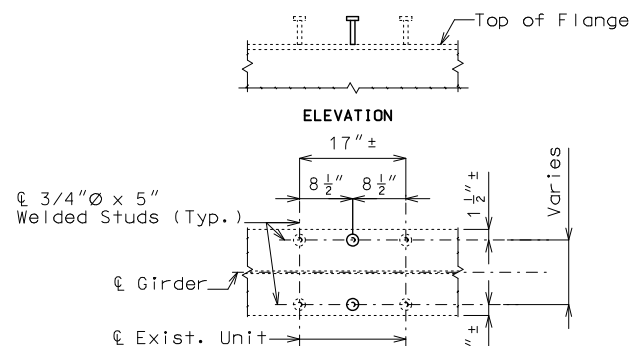
(New girder shown, existing girder similar)

*** Min. Haunch = 1/2"

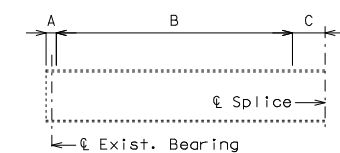
Max. Haunch = 2"



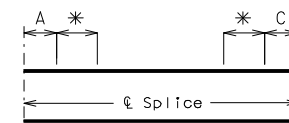
DETAILS OF ANCHORAGE SHEAR CONNECTORS



DETAILS OF SHEAR CONNECTORS



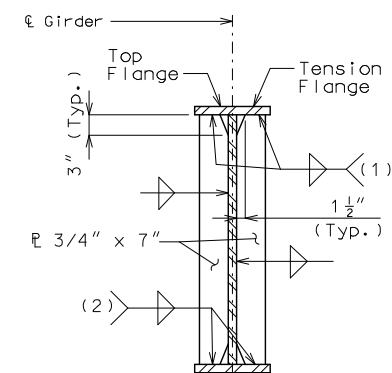
ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR END BEAMS & MAIN BEAMS



ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR BEARING BEAMS

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING				
Beam	S.C. per unit	A	B	C
End Beam (Spans 1-2 & 4-5)	2	20 1/4" ±	26 Units @ 10" cts.	21 3/8" ±
Brg. Beam (Bents 2 & 4)	3	21 3/8" ±	*	21 3/8" ±
Main Beam (Spans 2-3 & 3-4)	2	21 3/8" ±	31 Units @ 17" cts.	21 3/8" ±
Total shear connectors required				1440

* Anchorage Shear Connectors: 5 Units @ 6" cts.



INTERMEDIATE BEARING STIFFENER

WELDING DETAILS

- (1) Tight fit
- (2) Grind or mill to bear.

PART ELEVATION OF PROPOSED GIRDER NEAR INT. BENT NO. 2 SHOWING RECONFIGURATION

Notes:

Longitudinal dimensions are taken parallel to grade.

All web plates shall be subject to notch toughness requirements.

All fabricated structural steel shall be ASTM A709, Grade 50.

For Details of Laminated Neoprene Bearing Pad Assembly, see Sheet No. 7.

For details of cross frames, see Sheet No. 8.

For Part Plan of Structural Steel, see Sheet No. 8.

For Part Longitudinal Section at Bents No. 2 & 4, see Sheet No. 8.

For details of bolted field splices, see Sheet No. 10.

For location for slab drain attachment holes, see Sheet No. 11.

** Indicates all flange plates subject to notch toughness requirements.

*** Add one new unit of shear connectors between existing units on each girder in Spans 2 and 3.

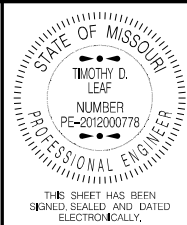
DETAILS OF RECONFIGURATION OF EXISTING GIRDERS

(Near Intermediate Bent No. 2 shown, near Intermediate Bent No. 4 similar by 180° rotation)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 15

Detailed June 2021
Checked July 2021



DATE PREPARED 8/10/2021	
ROUTE A	STATE MO
DISTRICT BR	SHEET NO. 9
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A25162	

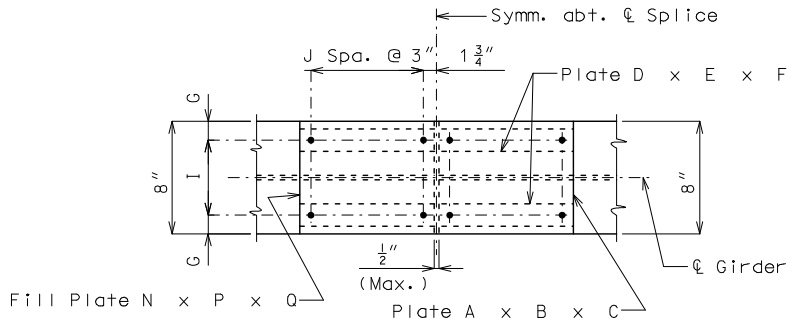
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

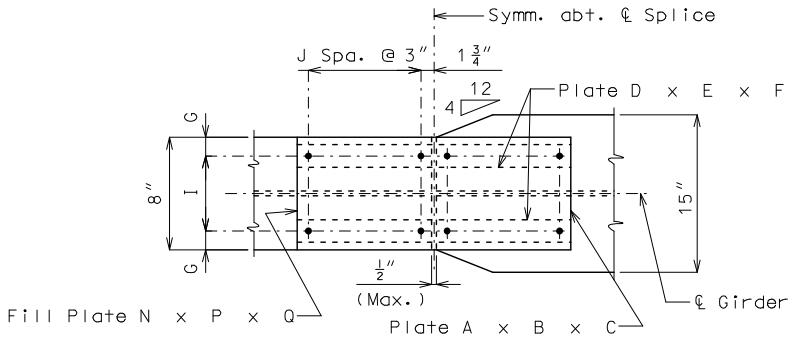
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MoDOT

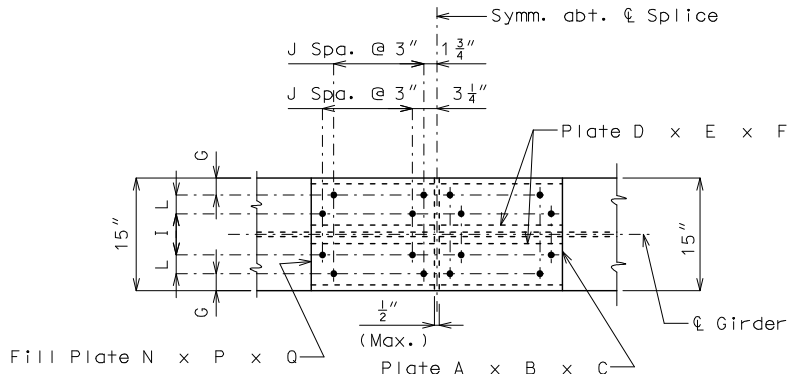
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



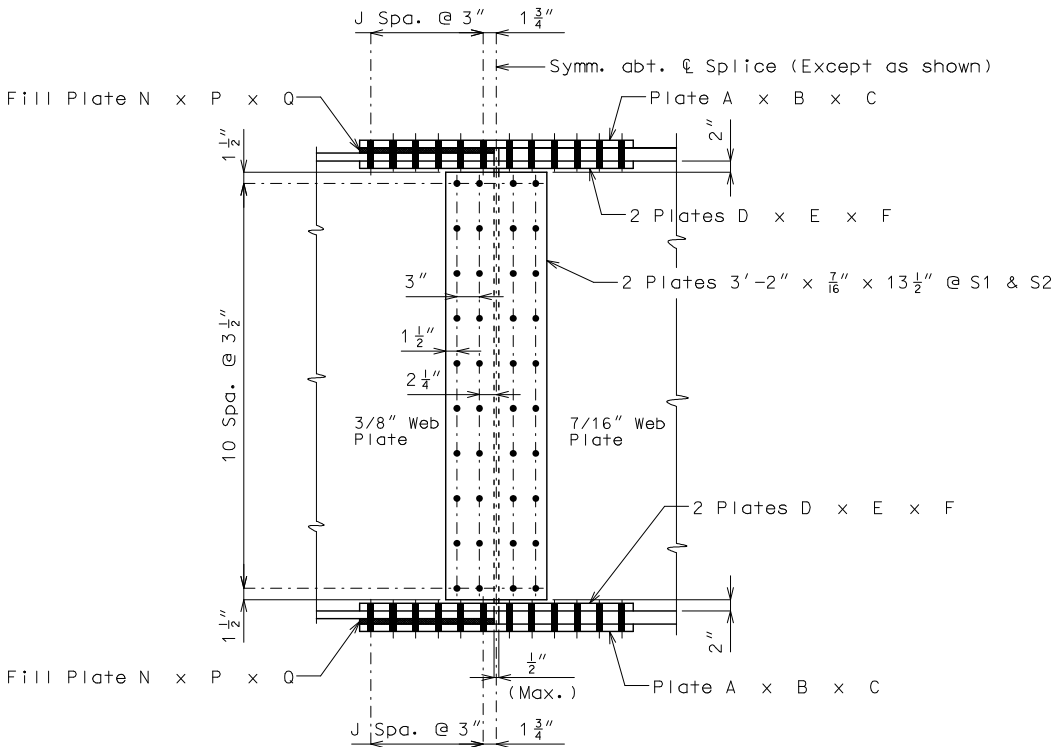
PLAN OF FLANGE
S1 & S2 (TOP)



PLAN OF FLANGE
S1 (BOTTOM)



PLAN OF FLANGE
S2 (BOTTOM)



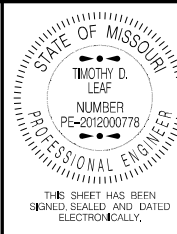
DETAIL OF BOLTED FIELD SPLICE

Bolts shall be 7/8"Ø ASTM F3125 Grade A325 Type 1 in 15/16"Ø holes.

Contact surfaces shall be in accordance with Sec 1081 for surface preparation.

The flange and splice plates shall be subject to notch toughness requirements.

TABLE OF DIMENSIONS – FIELD SPLICE													
LOCATION	A	B	C	D	E	F	G	I	J	L	N	P	Q
S1 & S2 Top	8"	3/8"	2'-0 1/2"	3"	3/8"	2'-0 1/2"	1 1/2"	5"	3	0"	8"	1/4"	12"
S1 Bottom	8"	3/8"	2'-0 1/2"	3"	1/2"	2'-0 1/2"	1 1/2"	5"	3	0"	8"	3/8"	12"
S2 Bottom	15"	1/2"	4'-3 1/2"	6 1/2"	5/8"	4'-3 1/2"	1 1/2"	7"	7	2 1/2"	0"	0"	0"



DATE PREPARED 8/10/2021	
ROUTE A	STATE MO
DISTRICT BR	SHEET NO. 10
COUNTY HARRISON	
JOB NO. J1S3215	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A25162	

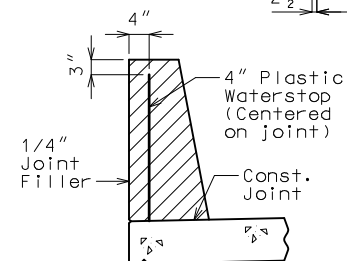
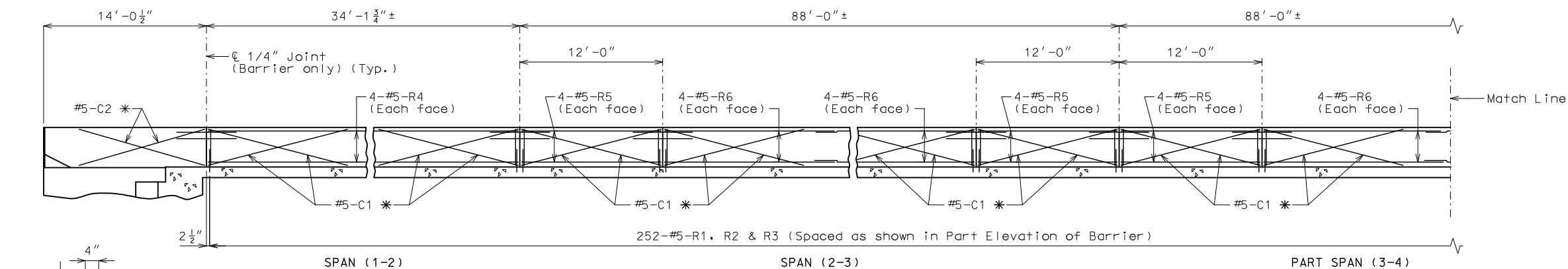
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

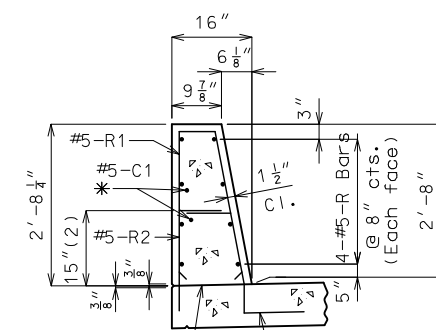
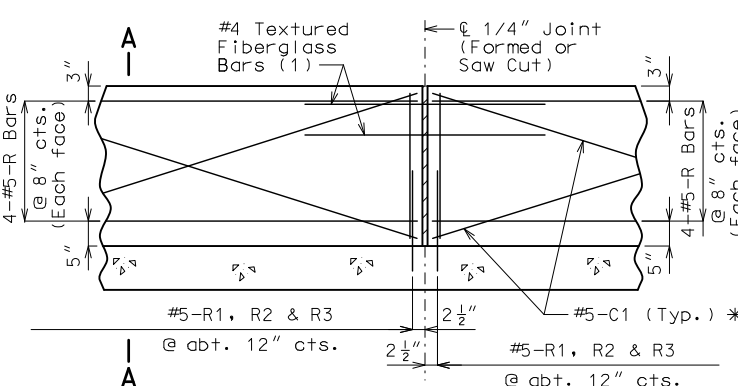
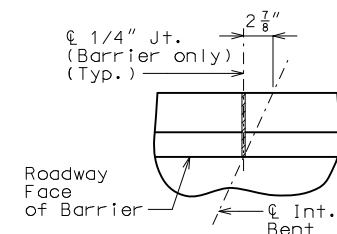
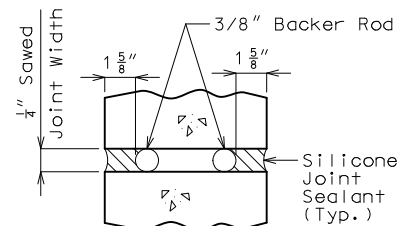
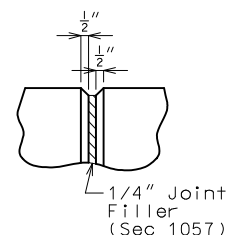
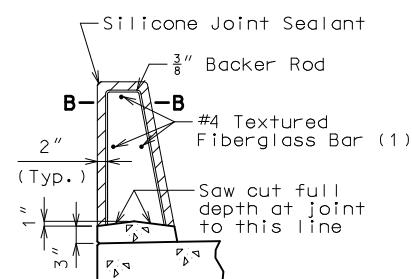
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

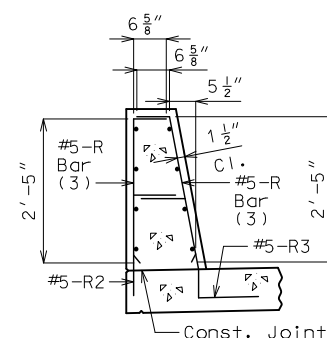
Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type H Barrier.



Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar



General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type H Barrier per linear foot.

Concrete in barrier shall be Class B-1.

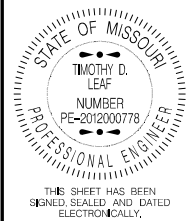
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

Concrete traffic barrier delineators shall be placed on top of the barrier, as shown on Standard Plan 617-10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

Plastic waterstop shall not be used with saw cut joints.



DATE PREPARED
8/10/2021

ROUTE	STATE
A	MO

DISTRICT	SHEET NO.
BR	12

COUNTY
HARRISON

JOB NO.
J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.	A25162
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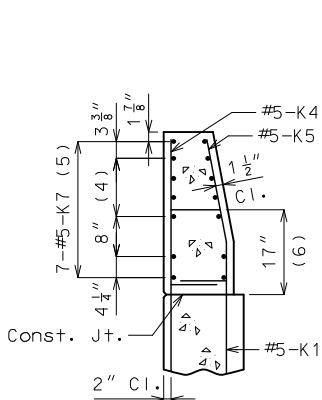
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

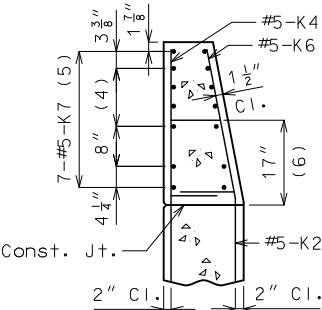


105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

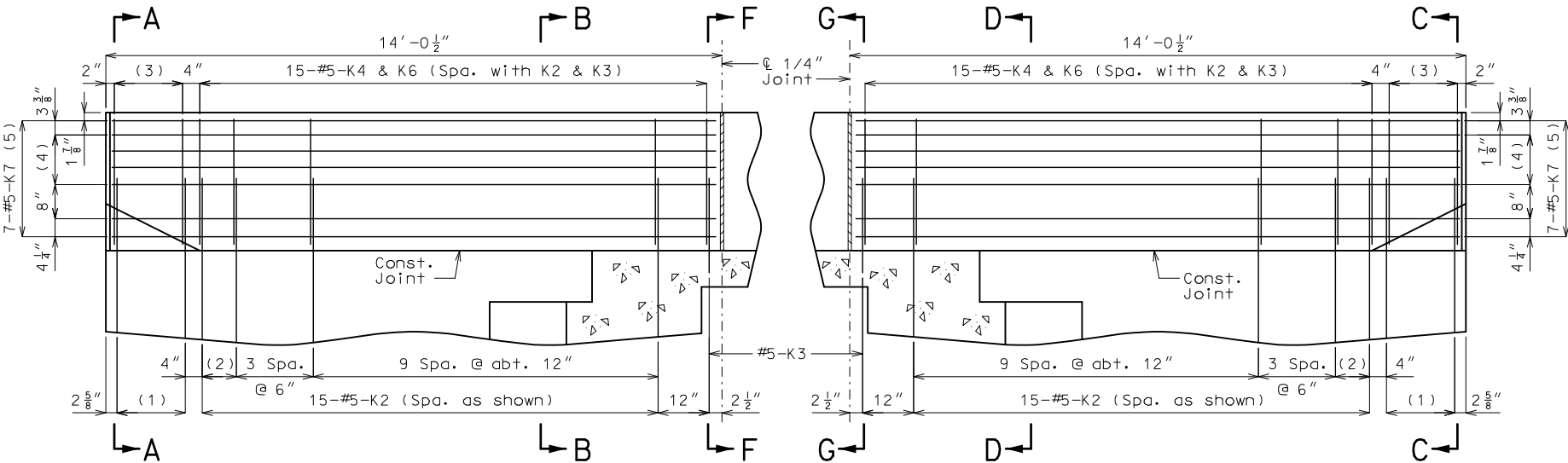
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SECTION A-A

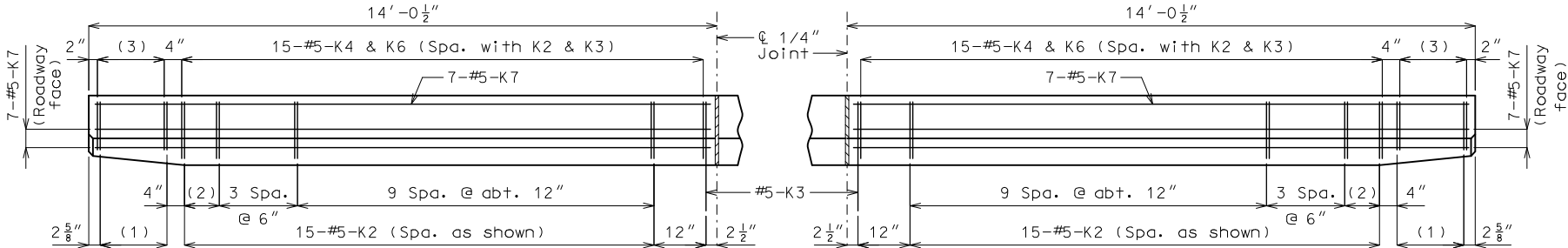


SECTION B-B

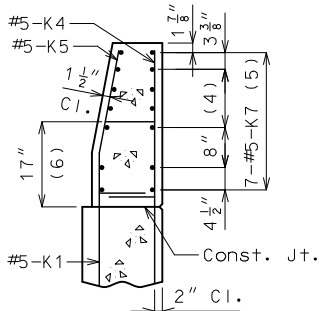


PART ELEVATION

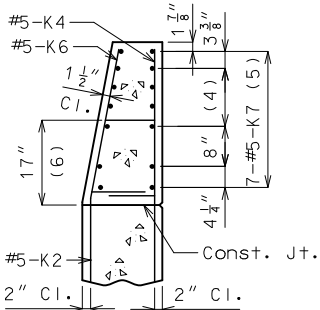
- (1) 5-#5-K1 @ 4" cts. (3) 5-#5-K4 and 5-#5-K5, spaced with K1 (5) Spaced as shown, each face
(2) 2 Spaces @ 4" (4) 3 Spaces @ 3 13/16" (6) To top of bar



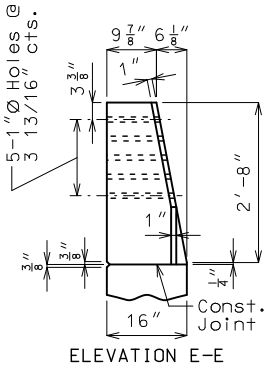
PART PLAN



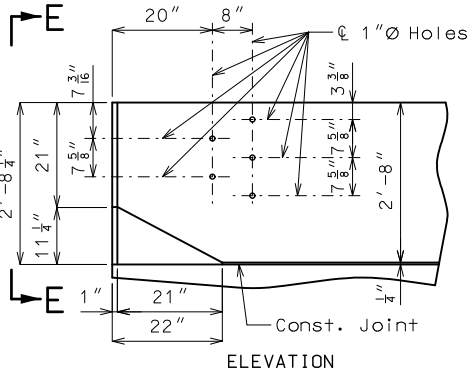
SECTION C-C



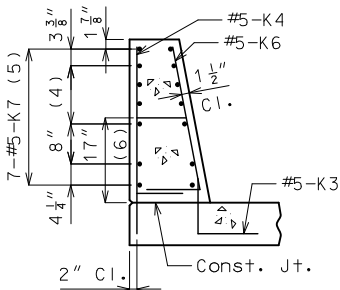
SECTION D-D



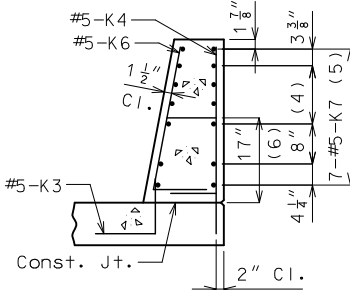
ELEVATION E-E



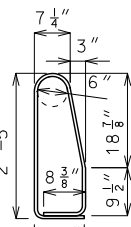
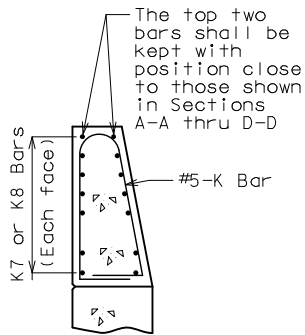
ELEVATION



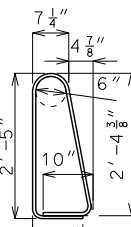
SECTION F-F



SECTION G-G



K4-K5



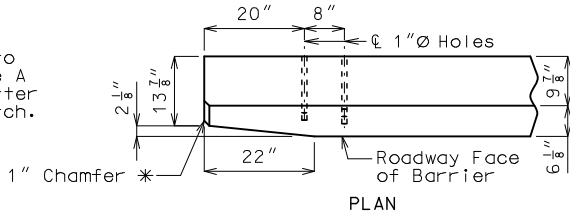
K4-K6

PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

* Transition to zero at Type A curb for gutter lines to match.



PLAN

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

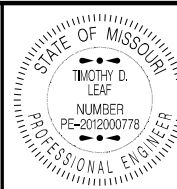
TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 15

Detailed June 2021
Checked July 2021



DATE PREPARED
8/10/2021

ROUTE
A

STATE
MO

DISTRICT
BR

SHEET NO.
13

COUNTY
HARRISON

JOB NO.
J1S3215

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A25162

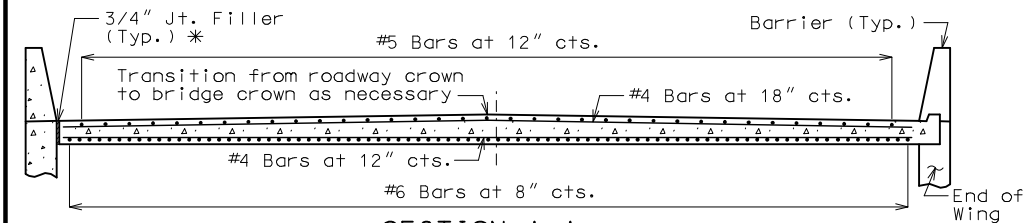
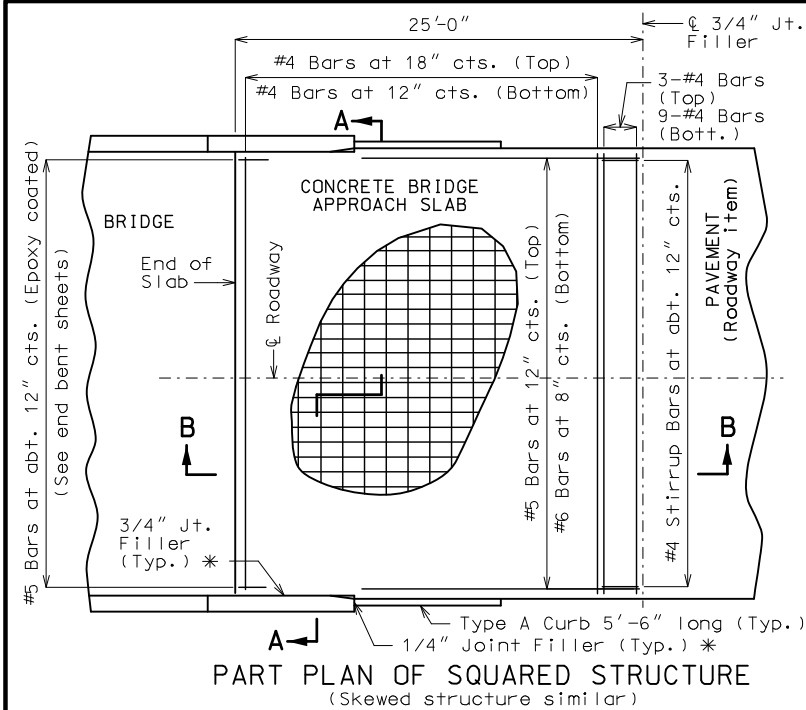
DESCRIPTION

DATE

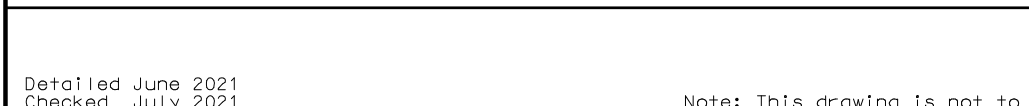
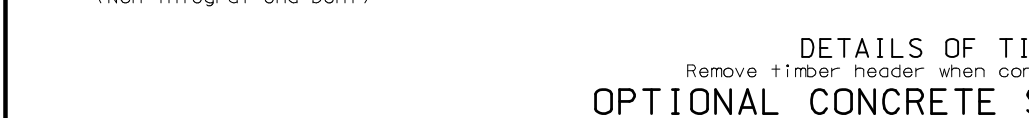
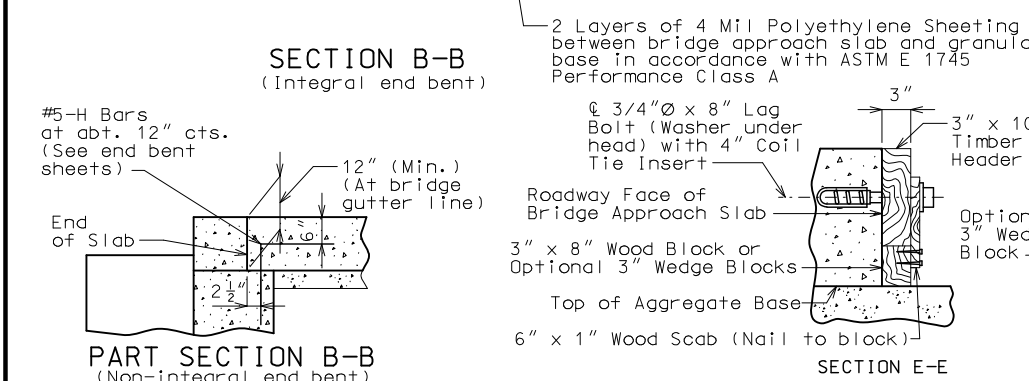
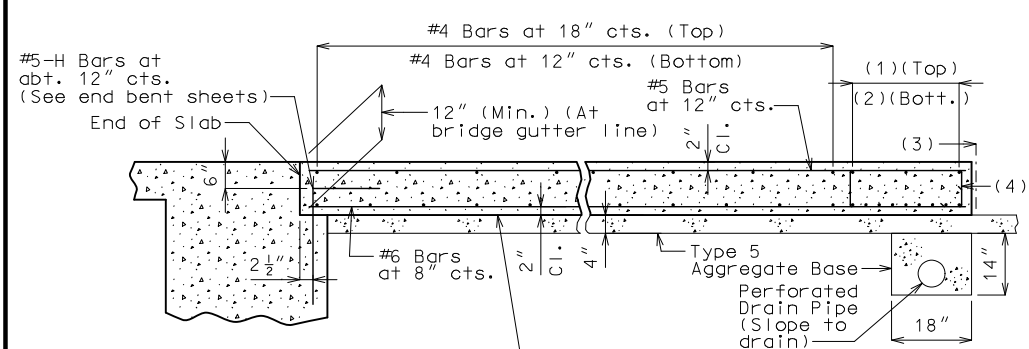
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

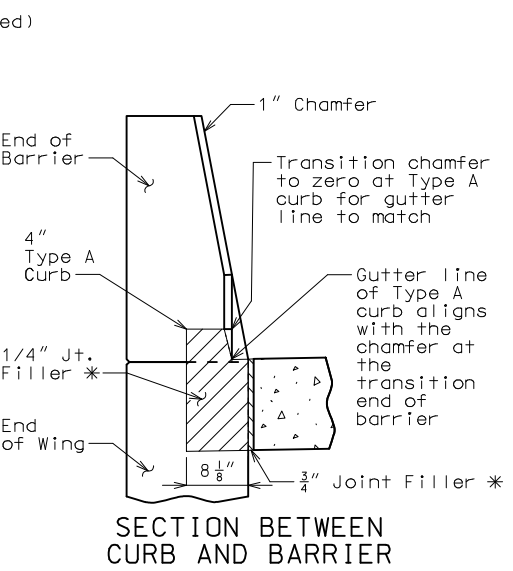
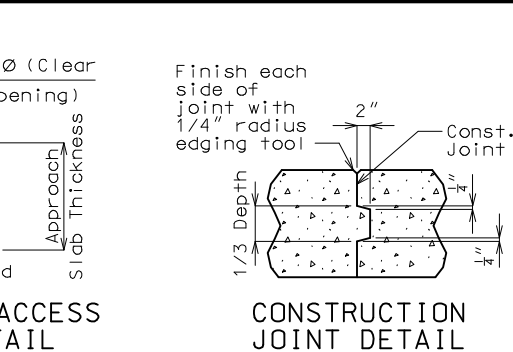
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

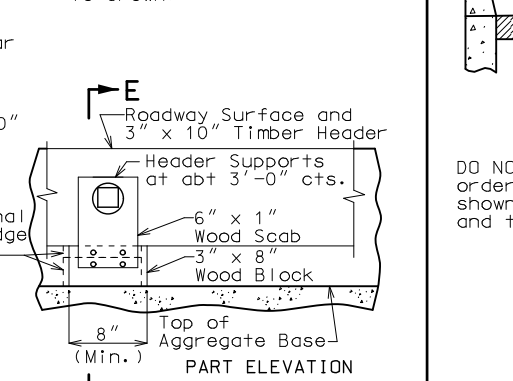


Remove timber header when concrete pavement is placed.



SECTION BETWEEN CURB AND BARRIER

- (1) 3-#4 Bars
- (2) 9-#4 Bars
- (3) 3/4" Jt. Filler
- (4) #4 Stirrup Bars at abt. 12" cts.; 2'-0" x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.



Remove timber header when concrete pavement is placed.

OPTIONAL CONCRETE SLAB

Notes For Concrete Slab Only:

All concrete for the bridge approach slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by lap splicing the #4 bars 29" or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

See Missouri Standard Plan 609.00 for details of Type A curb.

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

General Notes:

Contractor shall have the option to construct either slab except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

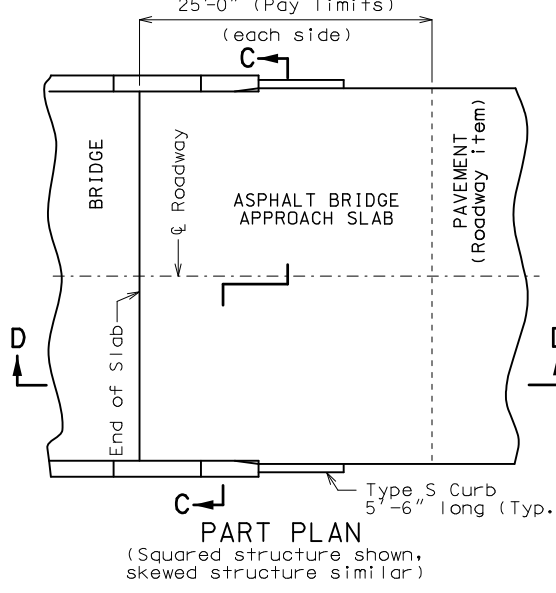
MoDOT Construction personnel will indicate the bridge approach slab used for this structure:

- ☐ Concrete Bridge Approach Slab
- ☐ Asphalt Bridge Approach Slab

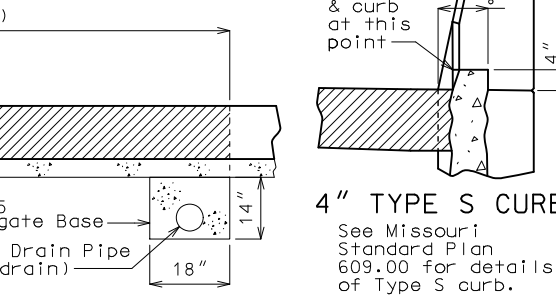
Notes For Asphalt Slab Only:

Payment for furnishing all materials, labor and excavation necessary to construct the asphalt bridge approach slab, including tack, curb, underdrain and Type 5 aggregate base within the pay limits shown, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

Application of tack is required between lifts per Sec 403.



With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



OPTIONAL ASPHALT SLAB

STATE OF MISSOURI
TIMOTHY D. LEAF
NUMBER
PE-2012000778
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
8/10/2021
ROUTE
A
DISTRICT
BR
COUNTY
HARRISON
JOB NO.
J1S3215
CONTRACT ID.
PROJECT NO.
BRIDGE NO.
A25162

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DESIGN DESIGNATION

A.A.D.T. - 2022 = 564
A.A.D.T. - 2042 = 784
D.H.V. = 9%
T = 20%
V = 55 M.P.H.
D = 51%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

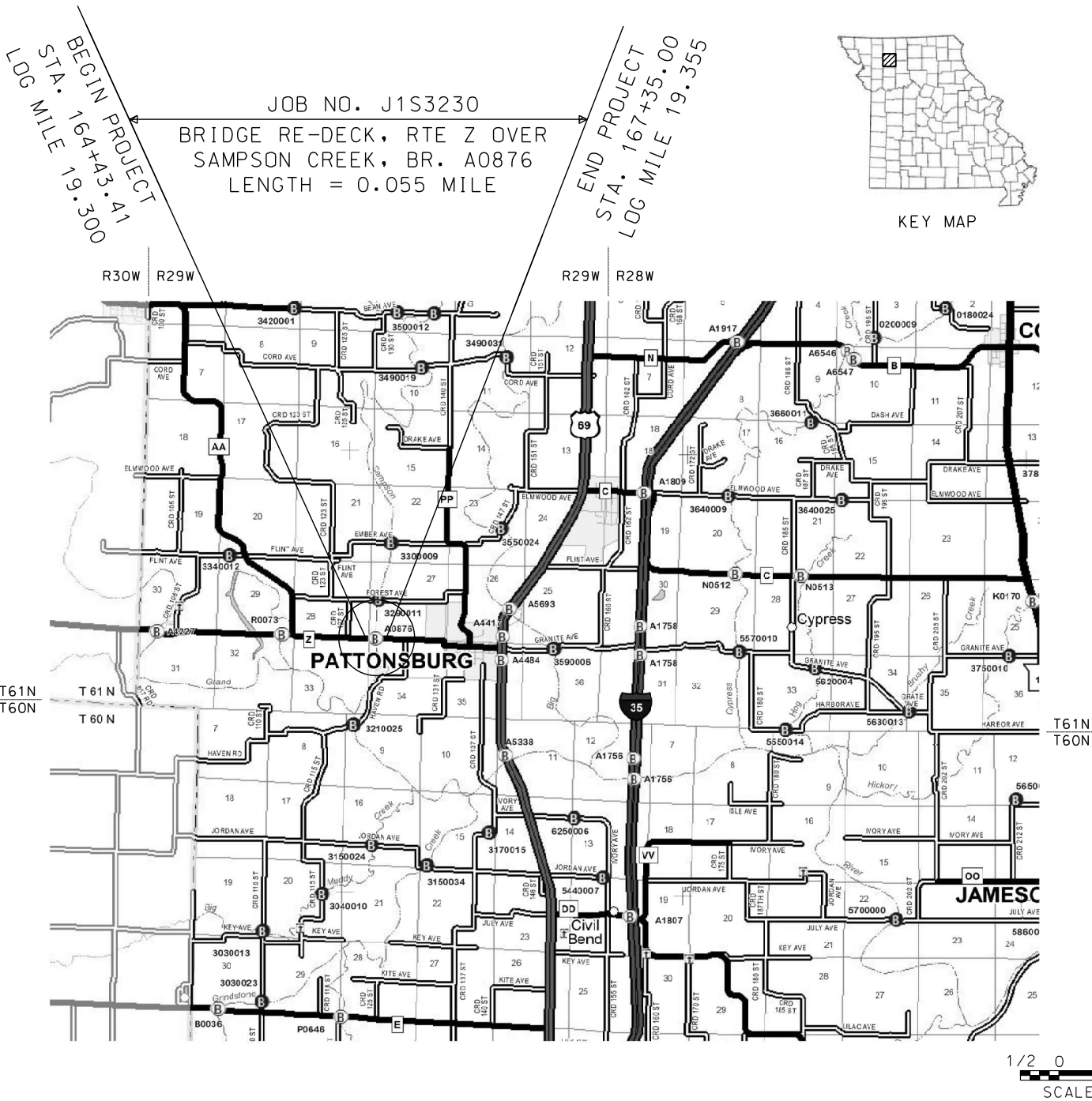
NORMAL RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
DAVIESS COUNTY



THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (1 SHEET)----	2
QUANTITIES(QU) (2 SHEETS)-----	3
PLAN-PROFILE (PP)-----	4
COORDINATE POINTS (CP)-----	5
TRAFFIC CONTROL (TC)-----	6-9
EROSION CONTROL (EC)-----	10-11
PAVEMENT MARKING (PM)-----	12
CULVERT SECTION (CS)-----	13-14
BRIDGE DRAWINGS (B)	
A0876-----	1-7
CROSS-SECTIONS (XS)-----	1-5

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 164+43.41
END OF PROJECT	STA. 167+35.00
APPARENT LENGTH	291.59 FEET
EQUATIONS AND EXCEPTIONS:	

TOTAL CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	291.59 FEET
STATE LENGTH	0.055 MILE
FOR INFORMATION ONLY	
ESTIMATED DISTURBED ACRES	0.48 ACRES



DATE PREPARED
8/4/2021

ROUTE	STATE
Z	MO
DISTRICT	SHEET NO.
NW	1

COUNTY
DAVIESS

JOB NO.
J1S3230

CONTRACT ID.

PROJECT NO.
.

BRIDGE NO.
.

DESCRIPTION	DATE
.	.
.	.
.	.
.	.
.	.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

WILSON & COMPANY
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REMOVAL OF IMPROVEMENTS							
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS
4	158+84.83	159+14.98	RTE. Z, RT	18" CMP	LF	30	
4	164+43.41	164+63.41	RTE. Z	PAVEMENT	SY	48	
4	164+43.41		RTE. Z	SAW CUT	LF	22	
4		VARIES	RTE. Z	SIGNS	EA	4	OBJECT MARKERS ON BOTH APPROACHES
4	166+00.00	166+66.00	RTE. Z, RT	18" CMP	LF	66	
4	166+36.28	167+35.00	RTE. Z	PAVEMENT	SY	234	
4	167+00.00		RTE. Z	18" CMP	LF	64	
4	167+04.00	167+45.55	RTE. Z	24" PVC	LF	78	
4	167+35.00		RTE. Z	SAW CUT	LF	21	
TOTAL = 1 LUMP SUM							

CONTRACTOR FURNISHED SURVEYING AND STAKING
TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

PAVEMENT SUMMARY										
SHEET	STA.	STA.	WIDTH(FT)	LOCATION	1.75" BP-1 (PG 64-22) (TONS)	8.25" BASE (PG 64-22) (TONS)	10.25" BASE (PG 64-22) (TONS)	4" TYPE 5 AGGR. BASE (SY)	6" TYPE 1 AGGR. BASE (SY)	TACK COAT (GAL)
4	164+43.4	164+63.4	VARIES	RTE. Z	5		28	54		13.5
4	166+36.3	166+56.3	24	RTE. Z	5		28	54		13.5
4	166+56.3	167+35.0	VARIES	RTE. Z	20	97			225	56.5
				TOTALS	30	97	56	108	225	83.5
				PAY TOTALS	30	97	56	108	225	84.0

EARTHWORK					
SHEET	STA.	STA.	LOCATION	COMPACTING EMB (CY)	EMB IN PLACE (CY)
4	158+82.06	159+38.53	RTE. Z	13	88
4	163+00.00	164+63.41	RTE. Z		288
4	166+36.28	168+00.00	RTE. Z	158	351
			TOTALS	171	727
			PAY TOTALS	171	727

GRAVEL (A) OR CRUSHED STONE (B)					
SHEET	STA.	LOCATION	AREA (SF)	6 INCH THICK (TONS)	REMARKS
4	159+12.50	RTE. Z	701	26	ENTRANCE LT
4	159+10.00	RTE. Z	1571	58	ENTRANCE RT
			TOTAL	84	
			PAY TOTAL	84	

GROUP 'C' PIPE							
SHEET	STA.	STA.	LOCATION	24 INCH PIPE GROUP C (LF)	30 INCH PIPE GROUP C (LF)	CLASS 3 EXCAVATION (CY)	REMARKS
14	158+83.2	159+36.1	RTE. Z	52		12	ENTRANCE PIPE
14	159+09.5	159+35.5	RTE. Z		26	2	ENTRANCE PIPE
			TOTALS	52	26	14	
			PAY TOTALS	52	26	14	

GROUP 'B' PIPE								
SHEET	STA.	STA.	LOCATION	42 INCH PIPE GROUP B (LF)	42 INCH F.E.S. GROUP B (EA)	AUTO FLOODGATE (TYPE 2) (EA)	CLASS 3 EXCAVATION (CY)	REMARKS
14	166+96.40	167+46.90	RTE. Z	72	2		175	CROSS ROAD PIPE
14	166+03.20	166+65.94	RTE. Z	63	1	1	130	BERM PIPE
			TOTALS	135	3	1	305	
			PAY TOTALS	135	3	1	305	

PERMANENT EROSION CONTROL								
SHEET	STA.	STA.	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CY)	PLACING TYPE 2 ROCK BLANKET (CY)	PERMANENT EROSION CONTROL GEOTEXTILE (SY)	ROCK LINING FOR CULVERT OUTLET (CY)	REMARKS
12	159+35.38		RTE. Z	16	16			BOTH LT & RT
12	164+64.38	165+26.10	RTE. Z	79	79	108		
12	165+73.60	166+35.27	RTE. Z	117	117	165		
12	165+83.20	166+03.20	RTE. Z				15	
12	167+00.00		RTE. Z				15	
			TOTALS	212	212	273	30	
			PAY TOTALS	212	212	273	30	

SEEDING - COOL SEASON MIXTURE				
SHEET	STA.	STA.	LOCATION	SEEDING (AC)
12	158+78.12	158+42.11	RTE. Z	0.01
12	163+00.00	164+63.41	RTE. Z	0.13
12	166+36.28	168+00.00	RTE. Z	0.15
			TOTAL	0.29
			PAY TOTAL	1.00

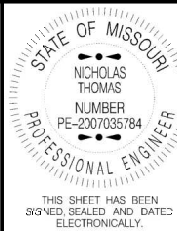
PAVEMENT MARKING					
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
13	164+40	167+40	RTE. Z	300	WB SOLID YELLOW
13	164+40	167+40	RTE. Z	75	EB INTERMITTENT YELLOW
			TOTAL	375	
			PAY TOTAL	375	

TEMPORARY EROSION CONTROL								
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE (LF)	TYPE C BERM (LF)	ROCK DITCH CHECK (LF)	SEDIMENT REMOVAL (CY)
11	158+76.4		RTE. Z	RT	35			1
11	159+24.8		RTE. Z	LT	40			1
11	159+33.5		RTE. Z	RT	40		10	1
11	162+98.0	165+26.0	RTE. Z	RT	230			3
11	163+34.4	164+26.0	RTE. Z	LT	215			3
11	165+26.6		RTE. Z			65		
11	165+73.1		RTE. Z			65		
11	165+75.0	167+66.5	RTE. Z	RT	275			3
11	165+75.0	168+01.8	RTE. Z	LT	250			3
11	165+97.3		RTE. Z	RT			10	1
11	167+00.0		RTE. Z	RT			10	1
			TOTALS		1085	130	30	17
			PAY TOTALS		1085	130	30	17

GUARDRAIL							
SHEET	LOCATION	STATION	STATION	SIDE	MGS GUARDRAIL (LF)	TYPE A CRASHWORTHY END TERMINALS (MASH) (EA)	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) (EA)
4	RTE. Z	163+15.00	164+66.08	RT	50.0	1	1
4	RTE. Z	163+64.96	164+66.08	LT	12.5	1	1
4	RTE. Z	166+33.61	167+34.72	RT	12.5	1	1
4	RTE. Z	166+33.61	167+84.68	LT	50.0	1	1
			TOTALS		125	4	4
			PAY TOTALS		125	4	4

CLEARING AND GRUBBING				
SHEET	STATION	STATION	LOCATION	QUANTITY (AC)
4	158+78.12	159+42.11	RTE. Z	0.07
4	163+00.00	165+26.10	RTE. Z	0.20
4	165+73.60	168+00.00	RTE. Z	0.21
			TOTAL	0.48
			PAY TOTAL	0.50

SUMMARY OF QUANTITIES
SHEET 1 OF 2



DATE PREPARED
8/4/2021
ROUTE Z STATE MO
DISTRICT NW SHEET NO. 3
COUNTY DAVIESS
JOB NO. J1S3230
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599
WILSON & COMPANY
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/4/2021	
ROUTE	STATE
Z	MO
DISTRICT	SHEET NO.
NJW	3

JOB NO.
J1S3230

PROJECT NO.
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OPTION

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ATION
CAPITOL
65102
6636RANSI
105 WE
N CITY
(1-881

Logo of the American Society of Professional Estimators (ASPE). The logo features a stylized 'A' and 'S' intertwined, with the letters 'PE' below them. The text 'AMERICAN SOCIETY OF PROFESSIONAL ESTIMATORS' is written in a circular path around the central emblem.

MI	
D	

st Terr.,
City, MO
(816) 70
(16) 942-

808

SC
PA
ARCHI



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

CONTROL POINTS - (NAVD88)

C.P. 1 - SET BAR WITH WCI ALUM CAP
STA. 145+95.00, 26.78' RT.
ELEV. 779.86

C.P. 2 - SET BAR WITH WCI ALUM CAP
STA. 164+58.61, 36.01' RT.
ELEV. 785.97

C.P. 3 - SET BAR WITH WCI ALUM CAP
STA. 166+43.16, 30.58' LT.
ELEV. 786.05

C.P. 4 - SET BAR WITH WCI ALUM CAP
STA. 175+06.35, 16.78' LT.
ELEV. 777.47

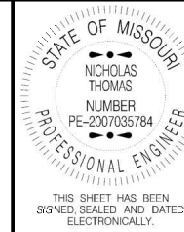
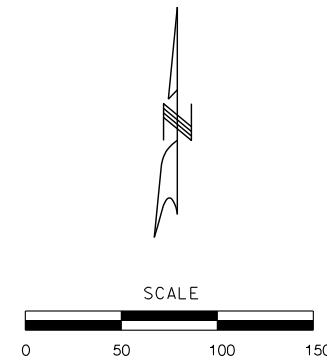
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M.F. & C., INC.

0.031 AC. NEW PERM. ESM'T (DRAINAGE) LT.
0.003 AC. TEMP. ESM'T (DRWY.) LT.
0.013 AC. TEMP. ESM'T (DRWY.) RT.
0.076 AC. TEMP. ESM'T (PIPE) RT.
76.4 AC. REMAINING

PERM. ESM'T (DRAINAGE) TRACT 1		
SEGMENT ID	LENGTH (FT.)	BEARING OR BACK TANGENT
(A)	10.00	N00°37'16"E
(B)	134.02	S89°22'44"E
(C)	10.00	S00°37'16"W
(D)	134.02	N89°22'44"W

TEMPORARY EASEMENTS TRACT 1		
SEGMENT ID	LENGTH (FT.)	BEARING OR BACK TANGENT
(E)	6.00	N00°37'16"E
(F)	25.00	S89°22'44"E
(G)	6.00	S00°37'16"W
(H)	25.00	N89°22'44"W
(I)	58.70	S89°22'44"E
(J)	10.00	S00°37'16"W
(K)	58.70	N89°22'44"W
(L)	10.00	N00°37'16"E
(M)	29.94	S00°36'29"W
(N)	95.00	S89°23'31"E
(O)	44.68	N64°08'36"E



DATE PREPARED
8/4/2021

ROUTE Z STATE MO
DISTRICT NW SHEET NO. 4

COUNTY
DAVIESS

JOB NO.
J1S3230

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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Kansas City, MO 64131
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Authority #2003007599

**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

Land Survey Monument
Southwest Corner
Sec. 27-T61N-R29W
Found Railroad Spike
in Asphalt
BL STA. 158+74.50=
CL STA. 158+74.50 Route Z
PLANS S-31(7)
DNR # 600-XXXX

159+12.50 WIDEN F.E. LT.
W = 20' (44' TOTAL),
BLD. TYPE 1 DRWY., GRADE = 10.00%
EXTEND EXIST 30" C.M.P.
W/ 30" GROUP C PIPE
AGGR. SURFACE

BEGIN PROJECT STA. 164+43.41
IMPROVEMENT BEGINS AT A POINT
568.91' S89°22'46"E
OF THE SW $\frac{1}{4}$ COR. SEC.
27-T61N-R29W

MGS BRIDGE APPROACH
TRANSITION SECTION WITH
12.5' MGS GUARDRAIL AND
CRASHWORTHY END TERMINAL

MGS BRIDGE APPROACH
TRANSITION SECTION WITH
50.0' MGS GUARDRAIL AND
CRASHWORTHY END TERMINAL

U.I.P. AND REDECK
EXISTING BR #A0876
(50'-70'-50')
CONT. COMPOSITE WIDE
FLANGE BEAM SPANS

END PROJECT STA. 167+35.00
IMPROVEMENT ENDS AT A POINT
861.38' S89°22'46"E OF THE
SW $\frac{1}{4}$ COR. SEC. 27-T61N-R29W

KEY TO SYMBOLS
OBLITERATION

ALL BEARINGS BASED ON STATE PLANE
COORDINATES, MISSOURI WEST ZONE.

ANY WORK INDICATED ON THE PLANS THAT
EXTENDS BEYOND THE PROJECT LIMITS IS
CONSIDERED INCIDENTAL TO AND A PART OF
THE CONSTRUCTION OF THIS PROJECT.

ACCESS IS ALLOWED UNDER THE BRIDGE

STA. 166+03.20 TO STA. 166+65.94
BLD 42" X 63.0' GROUP B PIPE
W/ 1 - GROUP B F.E.S.
W/ 1 - AUTO FLOODGATE (TYPE 2)
ROCK LINING 2' X 10' X 20'

LAND SURVEY MONUMENT
SW $\frac{1}{4}$ CORNER
SECTION 27, T61N R29W 1S
AT E ROUTE Z STA. 158+74.50
FOUND RAILROAD SPIKE IN ASPHALT
DNR # 600-XXXX

PLAN
SHEET 1 OF 1

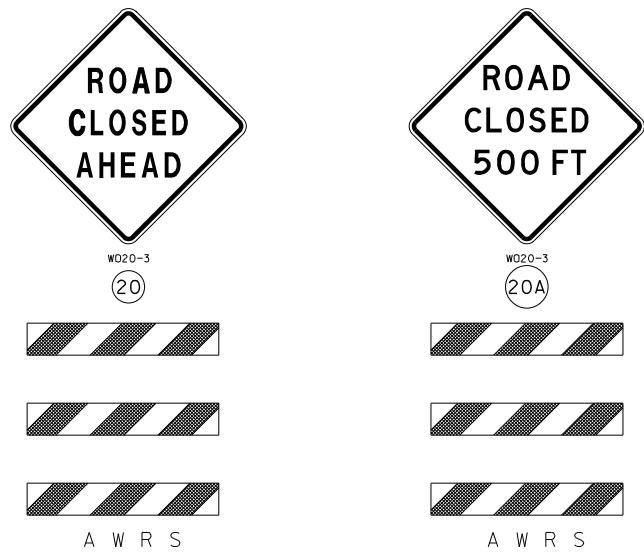
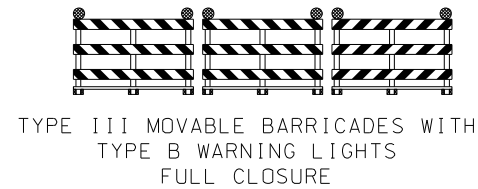
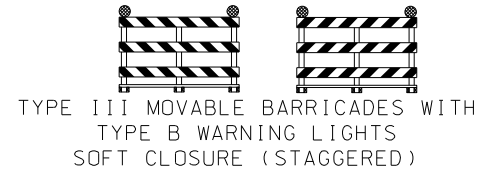
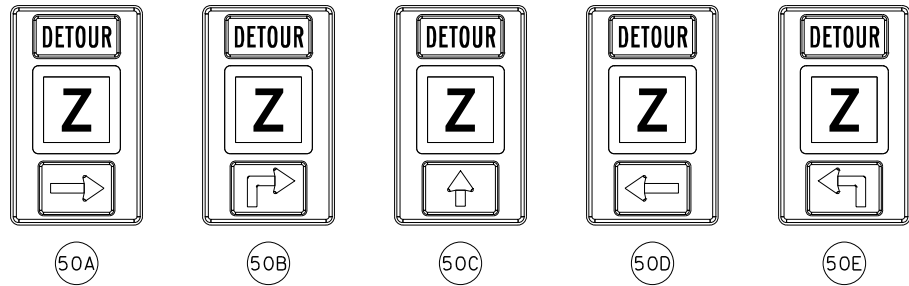
UTILITIES

WINDSTREAM COMMUNICATIONS
305 EAST SECOND STREET
MILAN, MO 63556
(800) 289-1901

NW $\frac{1}{4}$ NW $\frac{1}{4}$
SEC. 34-T61N-R29W

M.F. & C., INC.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



TYPE III MOVABLE BARRICADE WITH TYPE B WARNING LIGHTS

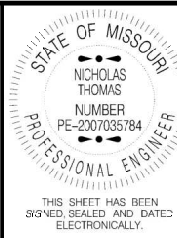
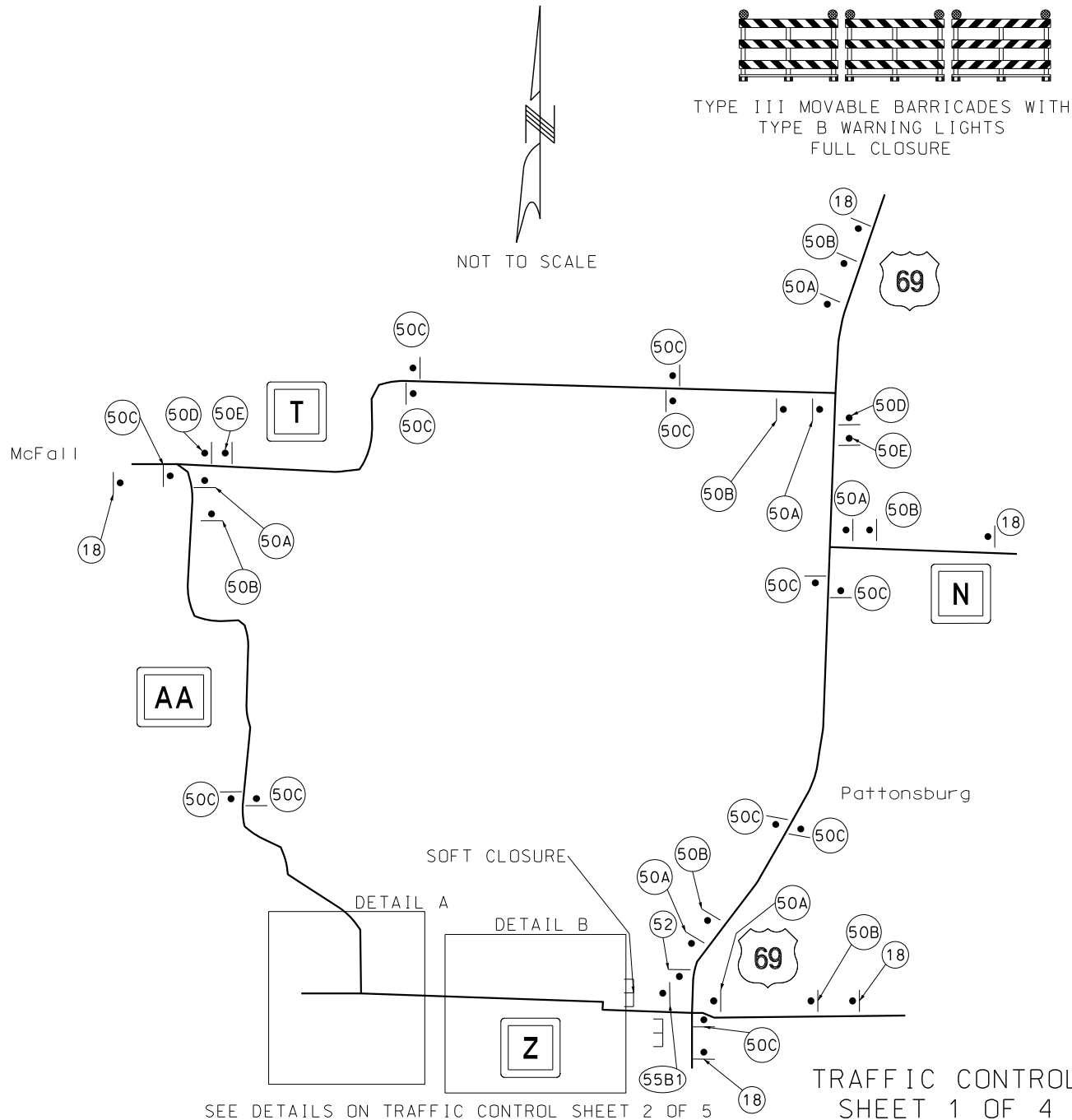
SIGN SPACING FOR ADVANCED SIGNS		
SPEED ¹ (MPH)	SIGN SPACING ² (S) (FT)	
	UNDIVIDED HIGHWAY	DIVIDED HIGHWAY
UP TO 35	200	200
40 TO 45	350	500
50 TO 55	500	1000
60 TO 70	1000	SA-1000 SB-1500 SC-2640

¹SPEED LIMIT IS BASED ON POSTED SPEED LIMIT.
²SIGN SPACING MAY BE ADJUSTED, NORMALLY BY INCREASING IT, TO ACCOMMODATE FIELD CONDITIONS AND VISIBILITY.

* THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN.

THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS.

LONGITUDINAL BUFFER SPACE	
SPEED ¹ (MPH)	BUFFER SPACE (FEET)
0-35	280
40-45	400
50-55	560
60-70	840



DATE PREPARED
8/4/2021

ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 6

COUNTY
DAVIESS

JOB NO.
J1S3230

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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DESCRIPTION	DATE
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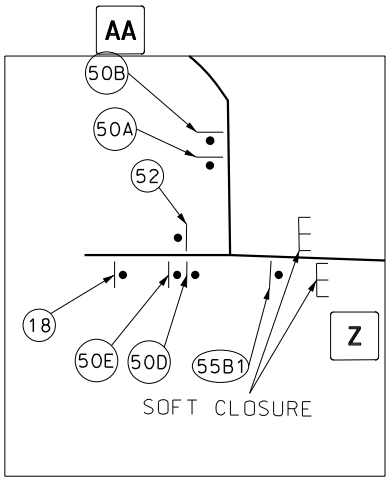
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

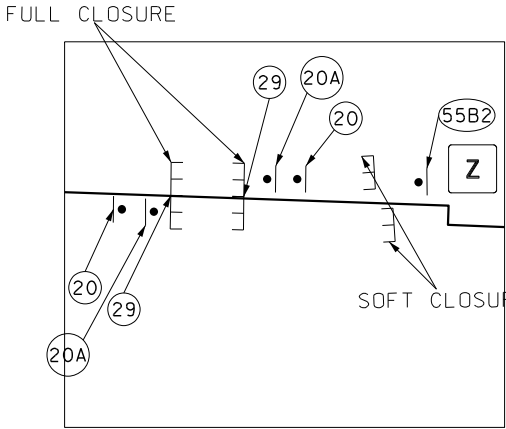
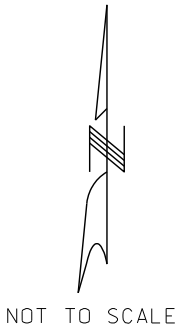
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
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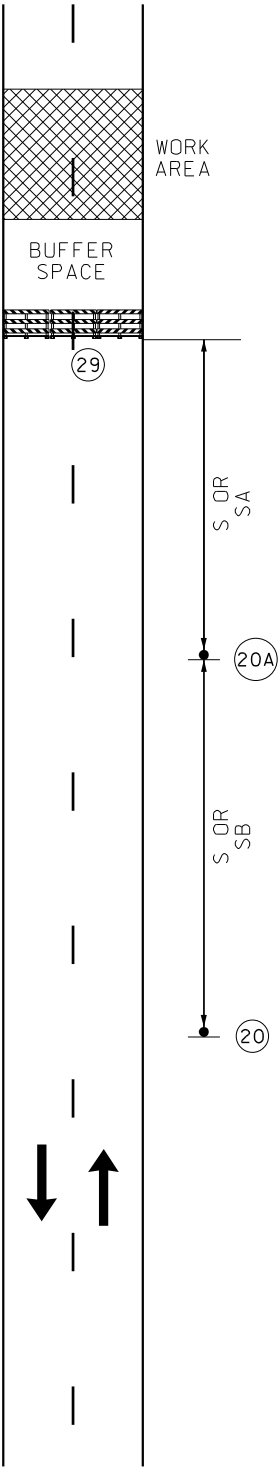
WILSON & COMPANY
ENGINEERS & ARCHITECTS



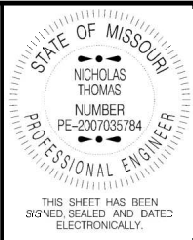
DETAIL A



DETAIL B



THRU ROAD CLOSURE



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 7
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

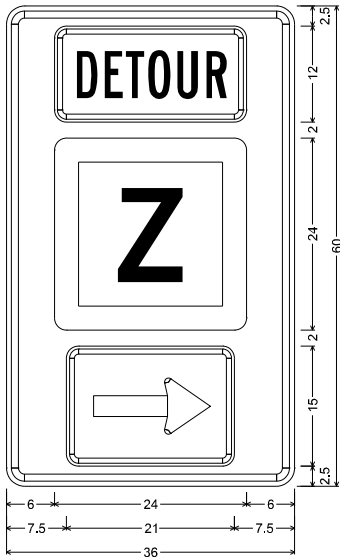
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ENGINEERS & ARCHITECTS

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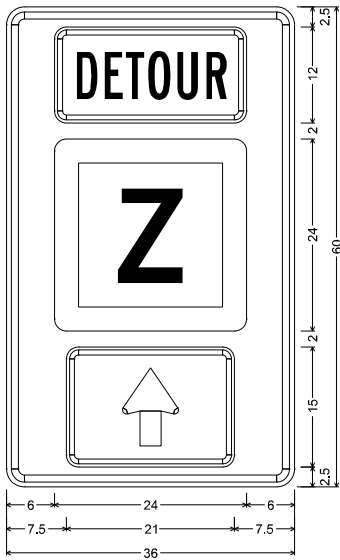


SIGN NO.	50A
STATION	
ROADWAY	ROUTE Z

SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a:

Table of letter and object lefts

6.000
6.000
7.500

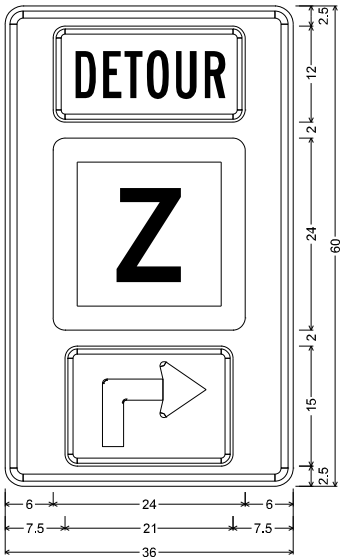


SIGN NO.	50C
STATION	
ROADWAY	ROUTE Z

SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a:

Table of letter and object lefts

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6.000
7.500

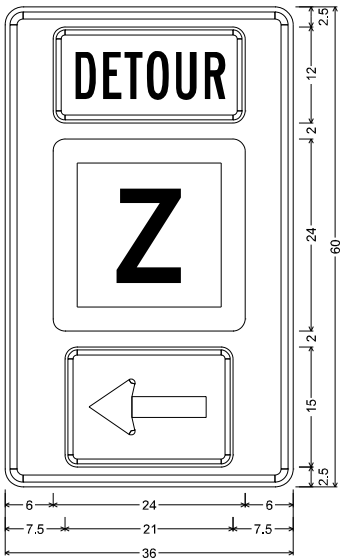


SIGN NO.	50B
STATION	
ROADWAY	ROUTE Z

SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a:

Table of letter and object lefts

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6.000
7.500

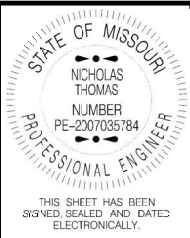


SIGN NO.	50D
STATION	
ROADWAY	ROUTE Z

SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a:

Table of letter and object lefts

6.000
6.000
7.500



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 8
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

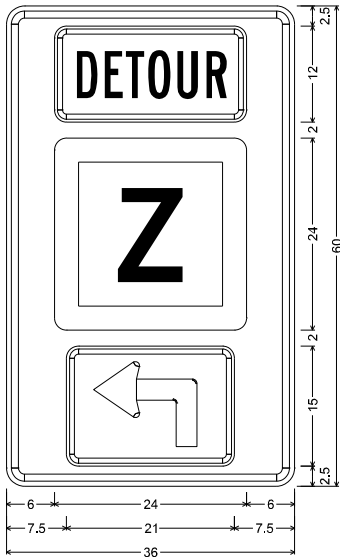
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
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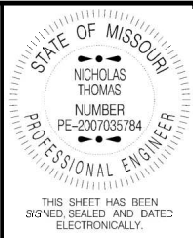
WILSON & COMPANY
ENGINEERS & ARCHITECTS



SIGN NO.	50E
STATION	
ROADWAY	ROUTE Z

SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a:
Table of letter and object lefts


6.000
6.000
7.500



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 9
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DESCRIPTION	DATE
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

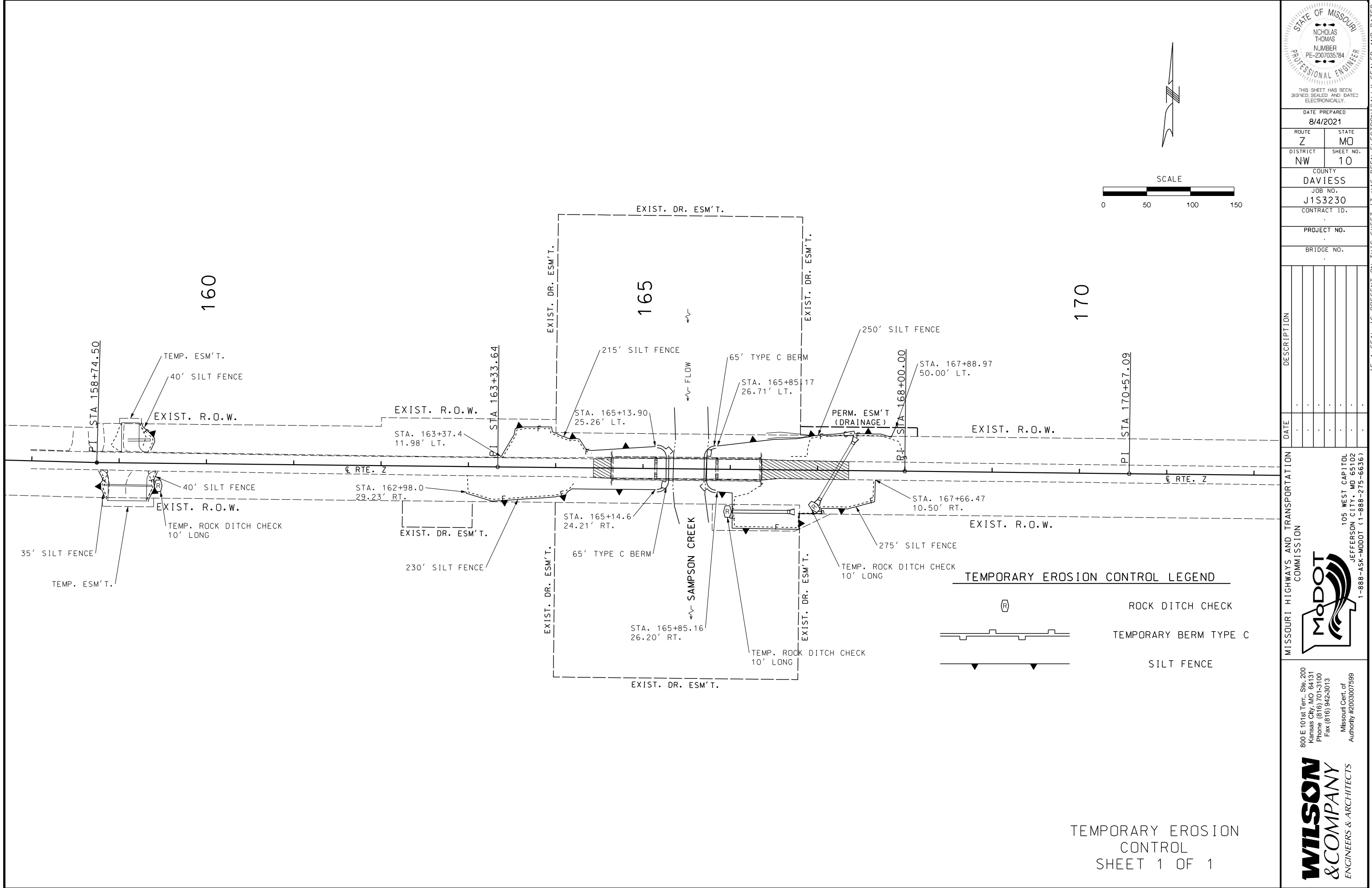


105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



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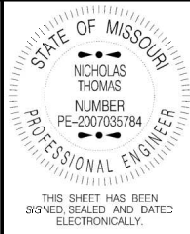
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



TEMPORARY EROSION CONTROL LEGEND

	ROCK DITCH CHECK
	TEMPORARY BERM TYPE C
	SILT FENCE

TEMPORARY EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 10
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

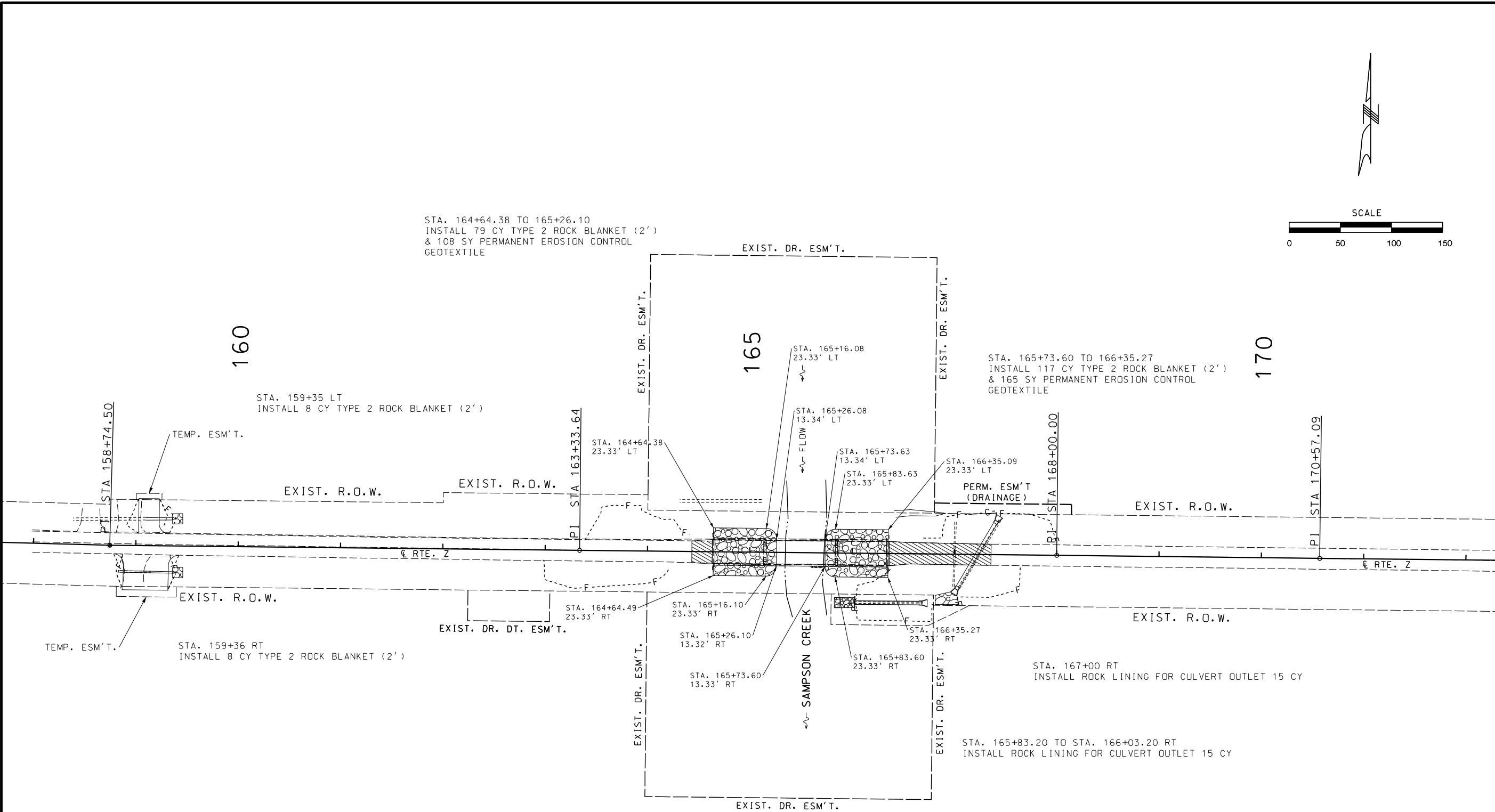
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

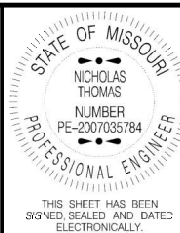
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PERMANENT EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 1-1
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

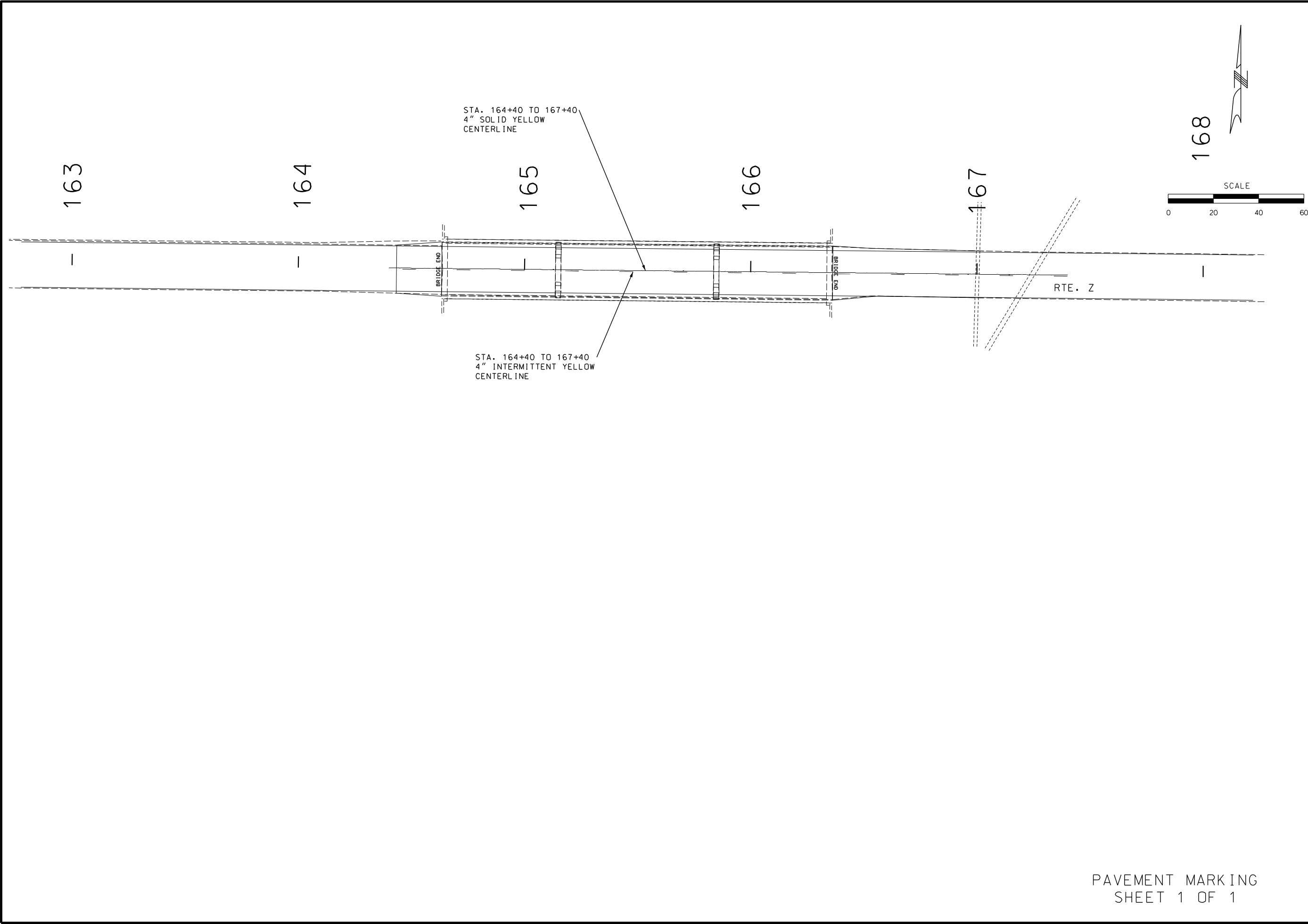
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

WILSON & COMPANY
ENGINEERS & ARCHITECTS

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599



800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

DATE	DESCRIPTION
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.	.

STATE OF MISSOURI
NICHOLAS THOMAS
NUMBER
PE-2007035784
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
8/4/2021

ROUTE
Z

DISTRICT
NW

STATE
MO

SHEET NO.
12

COUNTY
DAVIESS

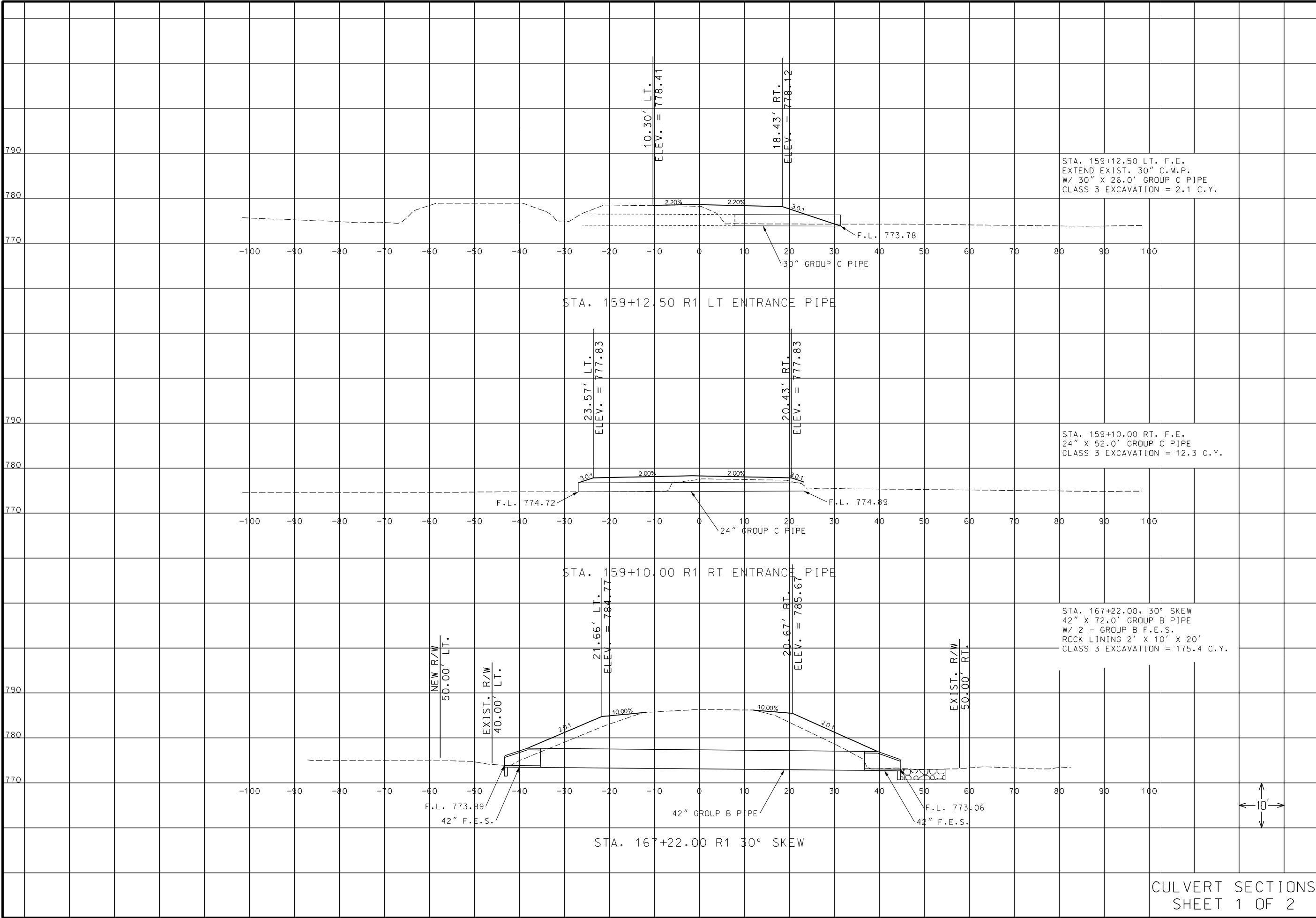
JOB NO.
J1S3230

CONTRACT ID.
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PROJECT NO.
.

BRIDGE NO.
.

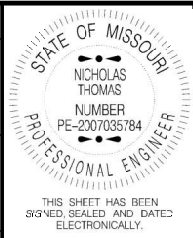
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



STA. 159+12.50 LT. F.E.
EXTEND EXIST. 30" C.M.P.
W/ 30" X 26.0' GROUP C PIPE
CLASS 3 EXCAVATION = 2.1 C.Y.

STA. 159+10.00 RT. F.E.
24" X 52.0' GROUP C PIPE
CLASS 3 EXCAVATION = 12.3 C.Y.

STA. 167+22.00, 30° SKEW
42" X 72.0' GROUP B PIPE
W/ 2 - GROUP B F.E.S.
ROCK LINING 2' X 10' X 20'
CLASS 3 EXCAVATION = 175.4 C.Y.



DATE PREPARED 8/4/2021	
ROUTE Z	STATE MO
DISTRICT NW	SHEET NO. 13
COUNTY DAVIESS	
JOB NO. J1S3230	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

WILSON & COMPANY
ENGINEERS & ARCHITECTS

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General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

Pouring and Finishing Slab:

The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured from end to end at a minimum rate of 25 cubic yards per hour.

Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.

Structural Steel Protective Coating
(All existing bearings at Int. Bents No. 2 & 3):

Protective Coating: Calcium Sulfonate System in accordance with Sec 1081. All existing bearings shall be overcoated with Calcium Sulfonate System.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Overcoating of Structural Steel (Calcium Sulfonate System). The cost of surface preparation will be considered completely covered by the contract unit price for Cleaning and Coating Existing Bearings.

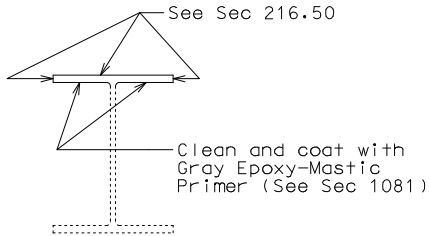
Rust Penetrating Sealer: The rust penetrating sealer shall be applied to the surfaces of all bearings and other locations where rust bleeding, pack rust and layered rust is occurring. The cost of the rust penetrating sealer will be considered completely covered by the contract unit price for Cleaning and Coating Existing Bearings.

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per each for Cleaning and Coating Existing Bearings.

Topcoat: The color of the topcoat shall be Gray (Federal Standard #26373). The cost of the topcoat will be considered completely covered by the contract unit price per each for Cleaning and Coating Existing Bearings.

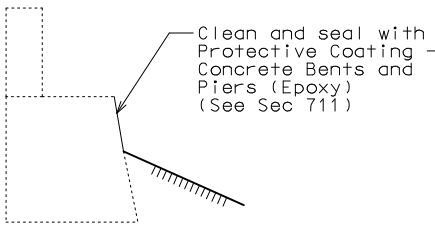
Structural Steel Protective Coating:

Top, sides and bottom of the top flanges of all existing WF beams shall be coated with one 6-mil thickness of gray epoxy-mastic primer (non-aluminum) applied over an SSPC-SP3 surface preparation in accordance with Sec 216 & 1081. The cost of surface preparation and gray epoxy-mastic primer will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

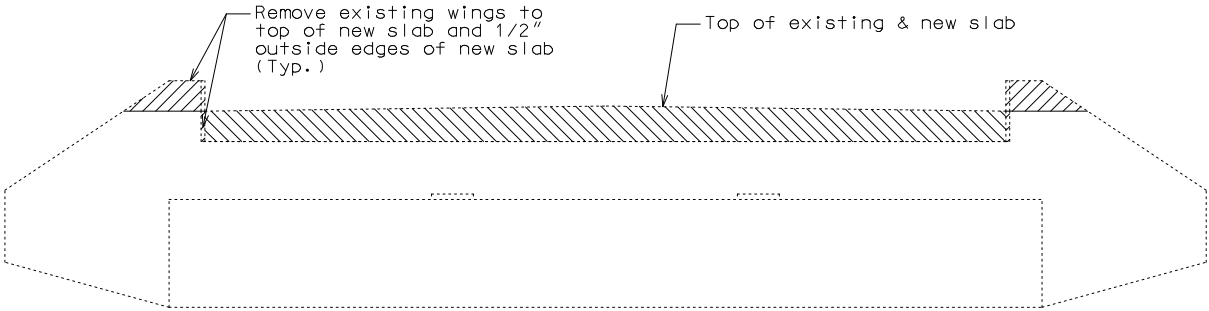


TYPICAL SECTION THRU EXISTING BEAMS SHOWING PROTECTIVE COATING

(All Beams, Full Length)



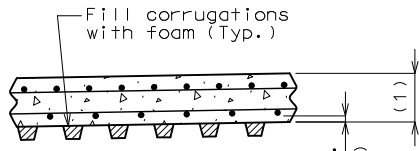
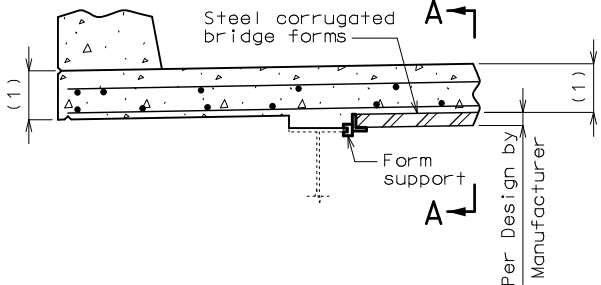
TYPICAL SECTION THRU END BENTS 1 & 4 SHOWING PROTECTIVE COATING



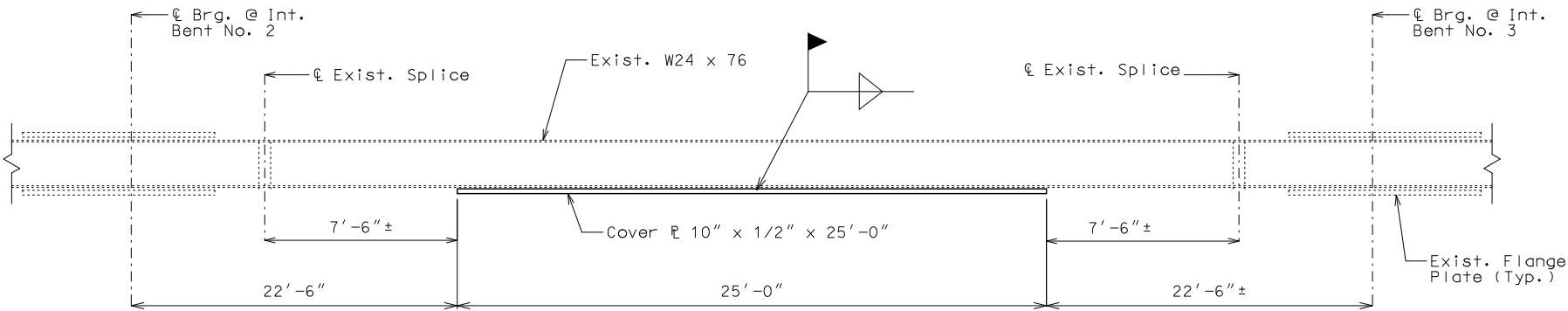
DETAILS OF CONCRETE REMOVAL AT END BENTS NO. 1 & 4

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall and wingwall reinforcement shall be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

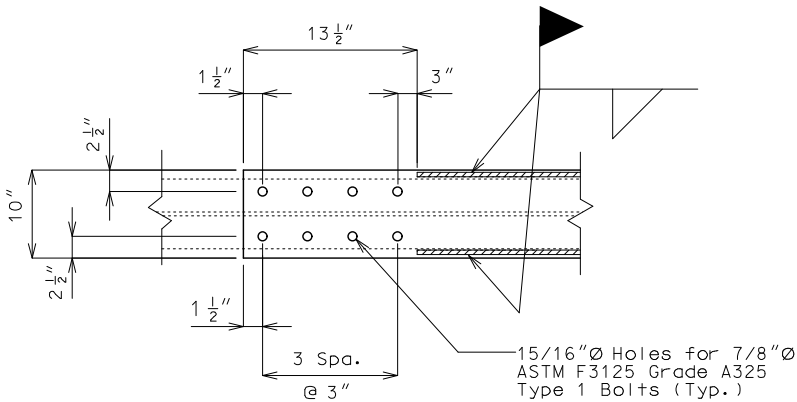
A smooth, level surface shall be provided at removal lines.



SECTION A-A
OPTIONAL STAY-IN-PLACE FORM DETAILS



PART ELEVATION OF EXTERIOR BEAM SHOWING COVER PLATE INSTALLATION ON SPAN (2-3)



TYPICAL DETAIL OF THE ENDS OF COVER PLATES (BOTTOM VIEW)

Notes:

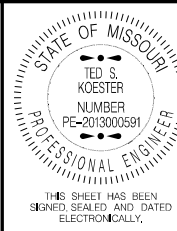
Beam with end-bolted cover plates shall be installed in the following sequence after existing bridge deck is removed:

1. Drill holes in cover plate and flange.
2. Clean faying surfaces. (See Special Provisions)
3. Install and tighten bolts.
4. Weld cover plate to flange.

Fabricated Structural Steel shall be ASTM A709 Grade 50, except as noted.

Payment for 881 pounds of new cover plates, complete in place, will be considered completely covered by the contract lump sum price for Strengthening Existing Beams.

Notch toughness is required for all cover plates.



DATE PREPARED
7/22/2021

ROUTE Z STATE MO

DISTRICT BR SHEET NO. 2

COUNTY DAVIESS

JOB NO. J1S3230

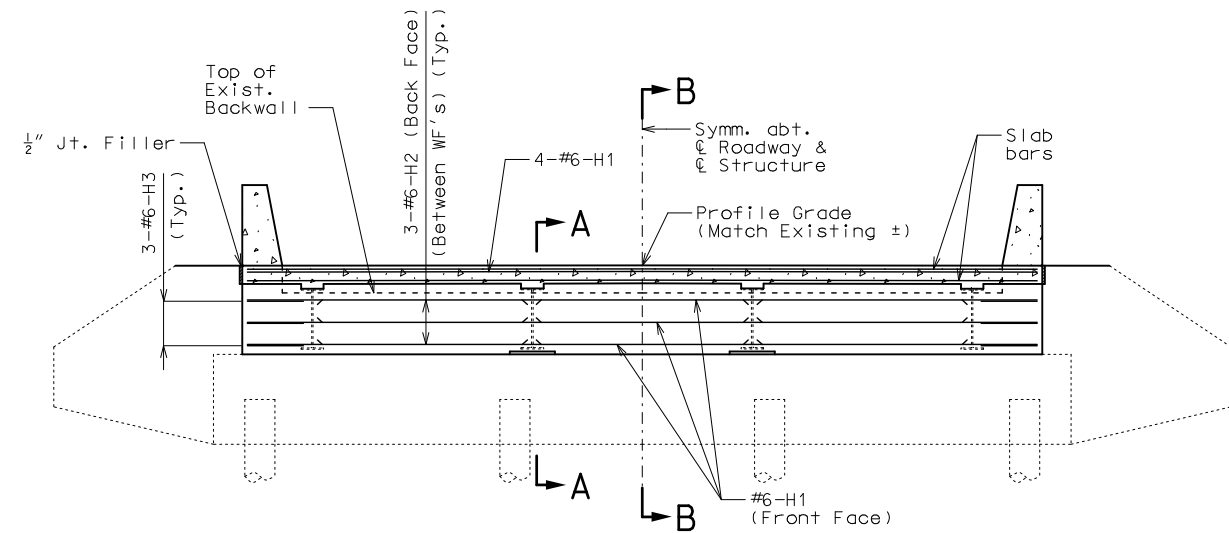
CONTRACT ID.

PROJECT NO.

BRIDGE NO. A08761

DATE	DESCRIPTION



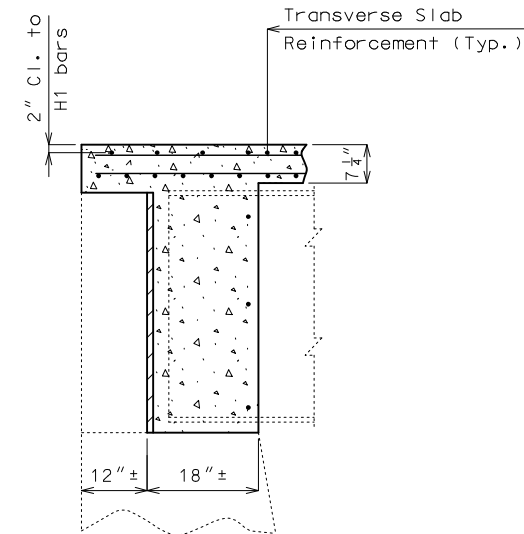


SECTION NEAR END BENTS

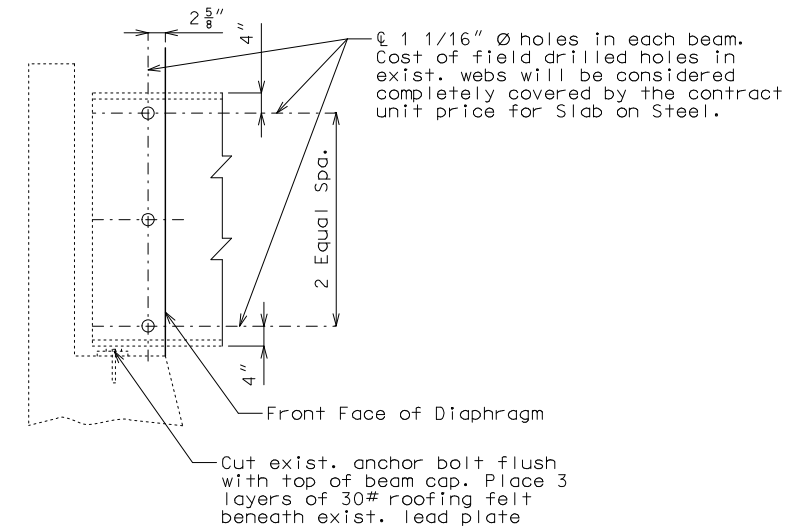
(End Bent No. 1 shown, End Bent No. 4 similar)

Notes: Existing steel end diaphragms not shown for clarity (Leave in place).

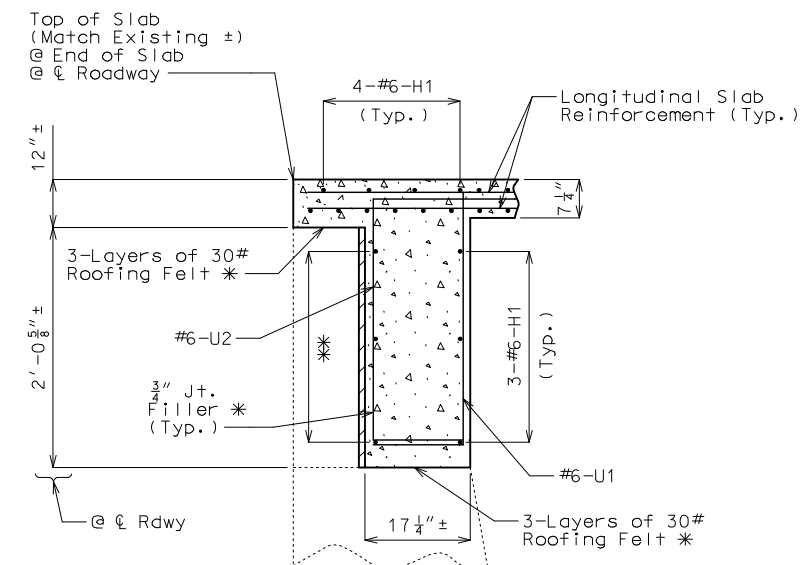
U bars not shown for clarity.



SECTION A-A



DETAIL OF WEB HOLES AT END BENT



SECTION B-B

* Entire length of diaphragm (Typ.)

* 3-#6-H2 (Between WF Beams) (Typ.)

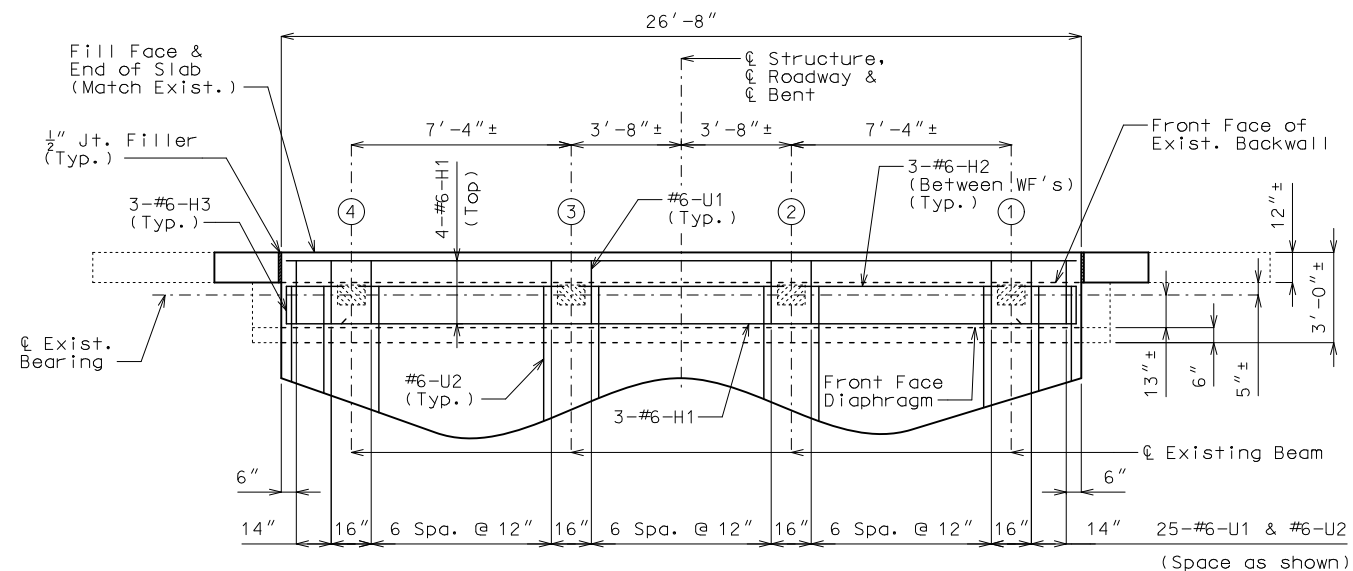
Notes:

Required temporary support load of 10 kips at each bearing is a service load without a factor of safety. It includes the dead load (without the slab) and a construction load of 50 psf applied to the deck area. Live load is not included in the support load (See Special Provisions).

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

All concrete and reinforcement is included in the table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

Cost of temporary supports, cutting anchor bolts, and placing roofing felt and joint filler will be considered completely covered by the contract unit price for Slab on Steel.



PART PLAN

(End Bent No. 1 shown, End Bent No. 4 similar)

Notes: Slab reinforcing steel not shown for clarity.

DETAILS OF END BENTS NO. 1 & 4

Detailed July 2021
Checked July 2021

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 7



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
7/22/2021

ROUTE Z STATE MO

DISTRICT BR SHEET NO. 3

COUNTY DAVIESS

JOB NO. J1S3230

CONTRACT ID.

PROJECT NO.

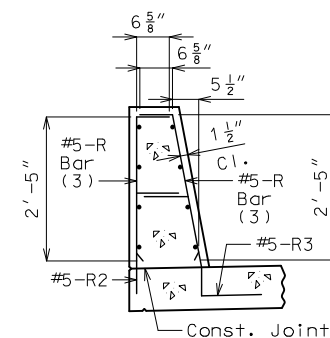
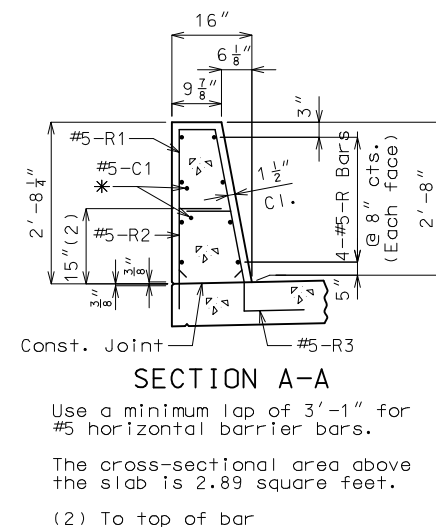
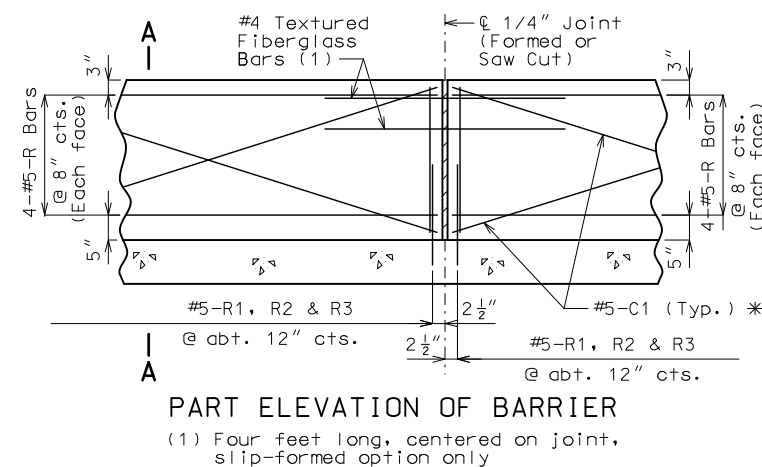
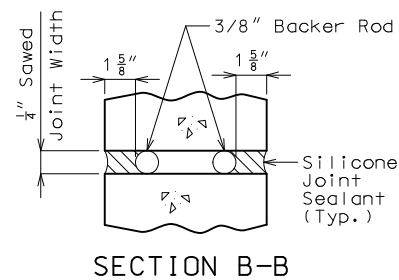
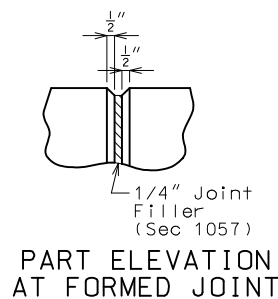
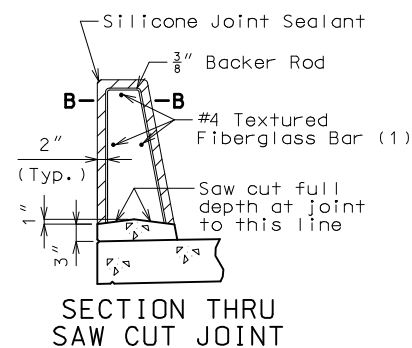
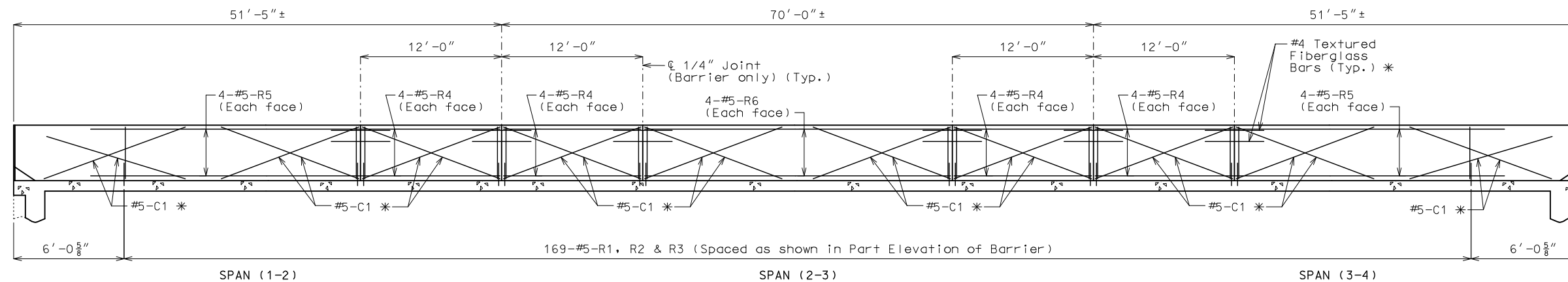
BRIDGE NO. A08761

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type H Barrier per linear foot.

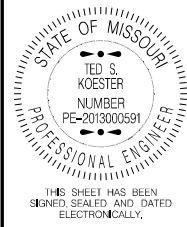
Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown in Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



DATE PREPARED
7/22/2021

ROUTE	STATE
Z	MO

DISTRICT BR	SHEET NO. 5
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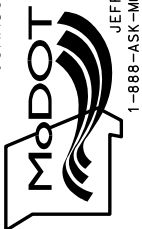
COUNTY
DAVIESS

JOB NO.
J1S3230

CONTRACT ID.

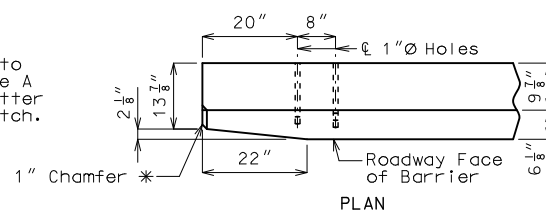
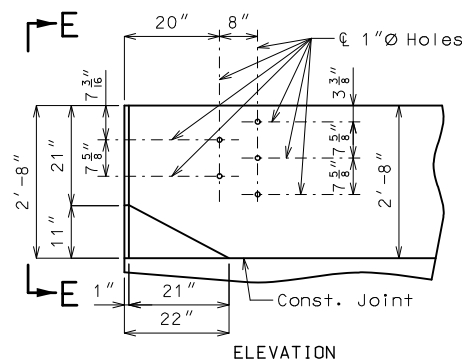
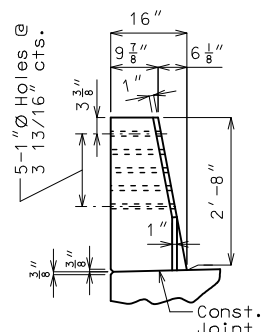
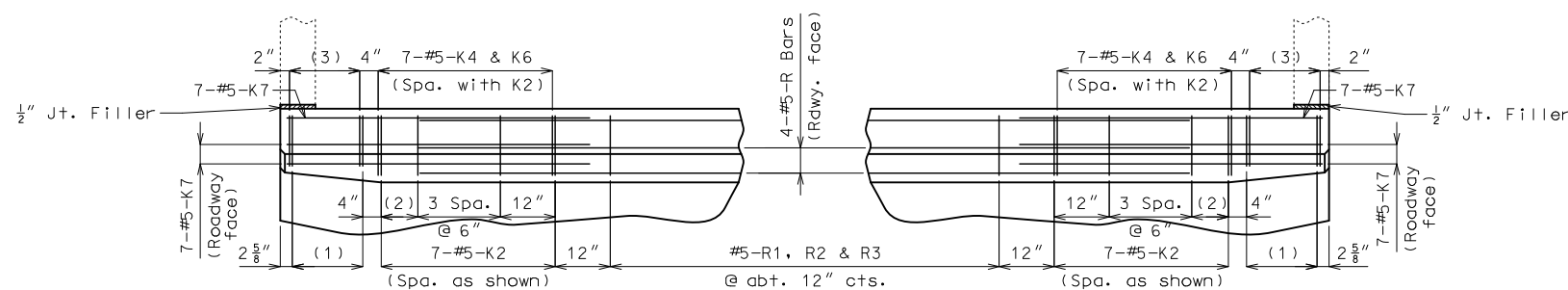
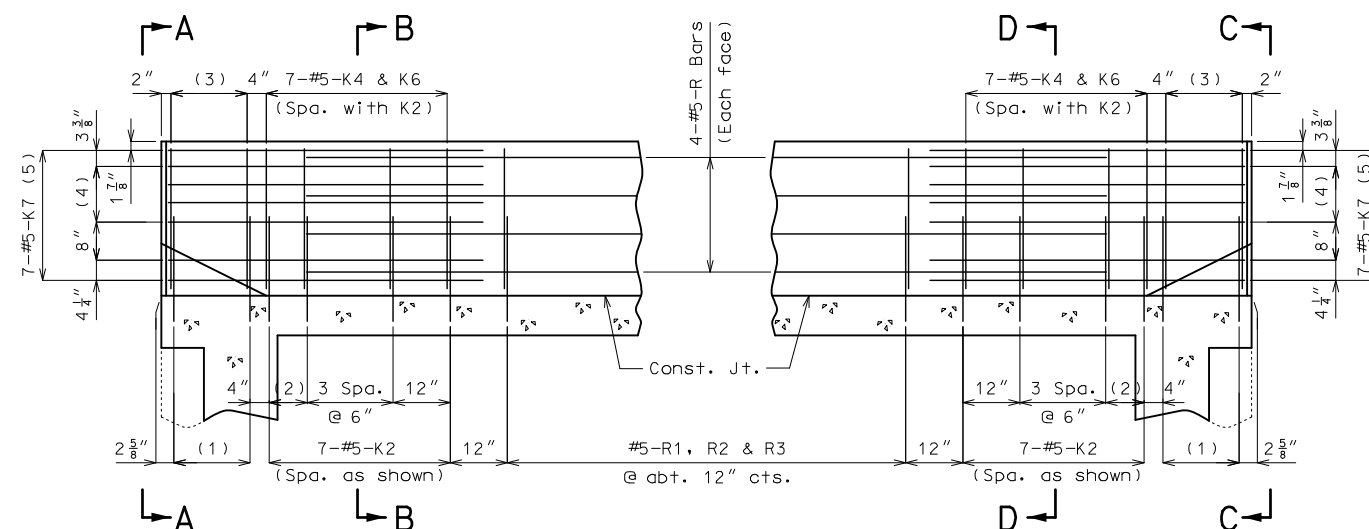
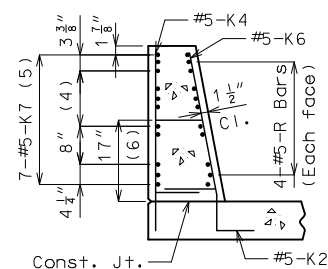
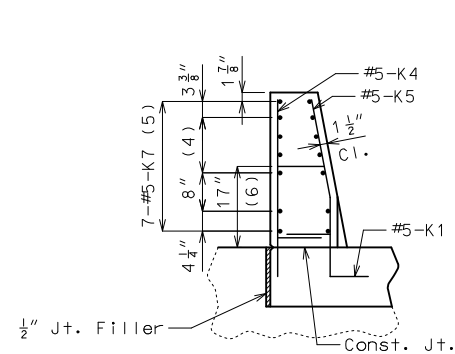
PROJECT NO.

BRIDGE NO.	A08761
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[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MD 65102
1-888-ASK-MDOT (1-888-275-6636)

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- * Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

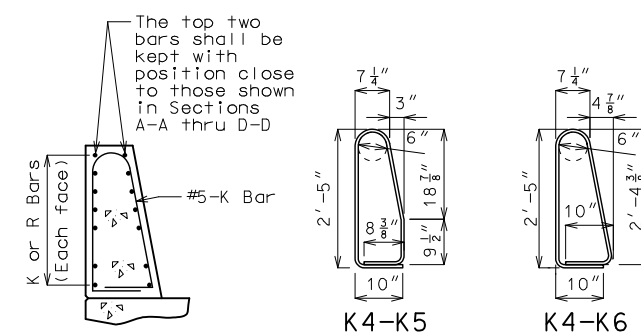
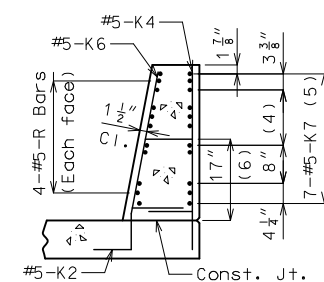
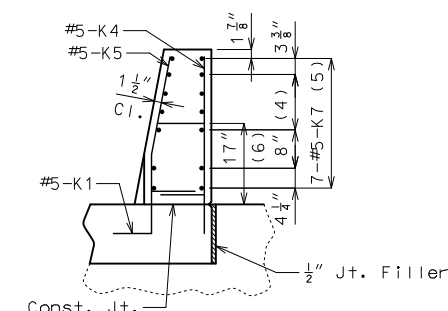
Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2".

Use a minimum lap of 3'-1" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

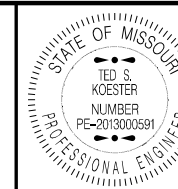
(Left barrier shown, right barrier similar)



PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY,

DATE PREPARED _____

ROUTE	STATE
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DISTRICT	SHEET NO.
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COUNTY

DAVLESS
JOB NO.

0135250
CONTRACT ID

PROJECT NO.

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

[illegible]

A.A.D.T. - 2022 = 112
A.A.D.T. - 2042 = 123
D.H.V. = 22%
T = 10%
V = 55 M.P.H.
D = 53%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO RIGHT OF WAY
ACQUISITION

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	- FO -	- FO -
OVERHEAD CABLE TV	- OTV -	- OTV -
UNDERGROUND CABLE TV	- UTV -	- UTV -
OVERHEAD TELEPHONE	- OT -	- OT -
UNDERGROUND TELEPHONE	- UT -	- UT -
OVERHEAD POWER	- OE -	- OE -
UNDERGROUND POWER	- UE -	- UE -
SANITARY SEWER	- S -	- S -
STORM SEWER	- SS -	- SS -
GAS	- G -	- G -
WATER	- W -	- W -
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

JOB NO. J1S3278

BRIDGE REDECK, RTE. YY OVER
SANDY CREEK, BR. NO1331
LENGTH = 0.028 MILE

BEGIN PROJECT
STA. 124+36.66
LOG MILE 5.695

END PROJECT
STA. 125+84.11
LOG MILE 5.723

KEY MAP
SHOWING LOCATION OF
PUTNAM COUNTY

SCALE IN MILES

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

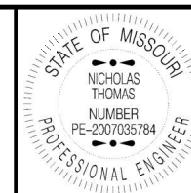
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TYPICAL SECTIONS (TS) (1 SHEET)----	2
QUANTITY SHEETS (QU)(2 SHEETS)-----	3
PLAN-PROFILE (PP)-----	4
REFERENCE AND CONTROL POINTS (RP)---	5
TRAFFIC CONTROL (TC)-----	6
EROSION CONTROL (EC)-----	7-8
SIGNING & PAVEMENT MARKING (SN)----	9
BRIDGE DRAWINGS (B)-----	
NO1331-----	1-8

BEGINNING OF PROJECT	STA. 124+36.66
END OF PROJECT	STA. 125+84.11
APPARENT LENGTH	147.45 FEET
EQUATIONS AND EXCEPTIONS:	

BEGINNING OF PROJECT	STA. 124+36.66
END OF PROJECT	STA. 125+84.11
APPARENT LENGTH	147.45 FEET
EQUATIONS AND EXCEPTIONS:	

EQUATIONS AND EXCEPTIONS:

TOTAL CORRECTIONS	0.00	FEET
NET LENGTH OF PROJECT	147.45	FEET
STATE LENGTH	0.028	MILE
FOR INFORMATION ONLY		
ESTIMATED DISTURBED ACRES	0.05	ACRE



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
8/4/2021

ROUTE Y·Y	STATE M·O
--------------	--------------

DISTRICT	SHEET NO.
N.W	1

COUNTY
PUTNAM

JOB NO.
J1S3278

CONTRACT ID.

PROJECT NO.

BRIDGE NO.							

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

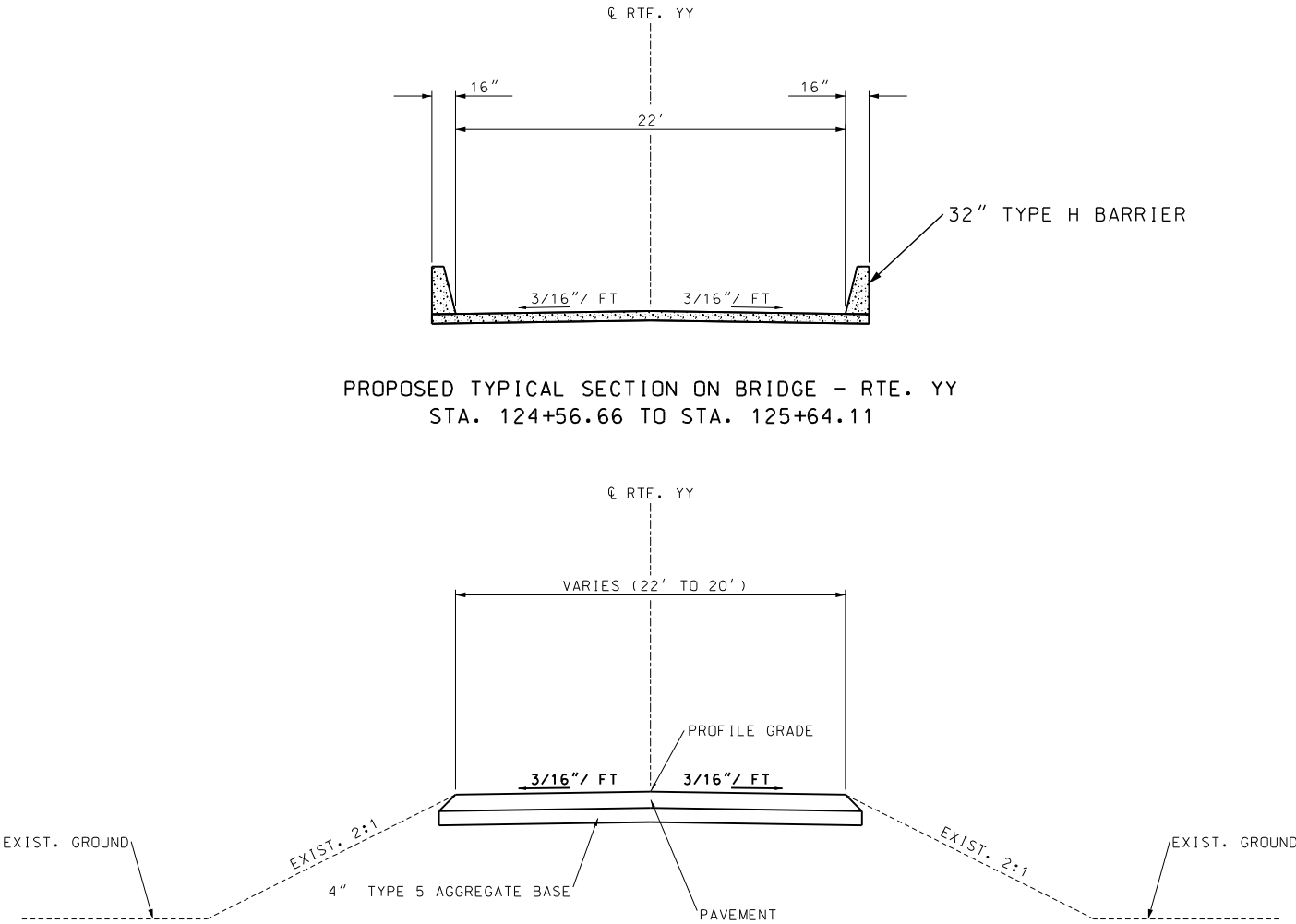
100 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

Missouri Cert. of
Authority #2003007599

WILSON
& COMPANY
ENGINEERS & ARCHITECTS

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NOT TO SCALE



PROPOSED TYPICAL SECTION ON BRIDGE - RTE. YY
STA. 124+56.66 TO STA. 125+64.11

PROPOSED TYPICAL SECTION RTE. YY
STA. 124+36.66 TO STA. 124+56.66
STA. 125+64.11 TO STA. 125+84.11

PAVEMENT - HMA DESIGN

12" BITUMINOUS PAVEMENT

1.75" BP-1 W/PG 64-22

10.25" BITUMINOUS BASE W/PG 64-22

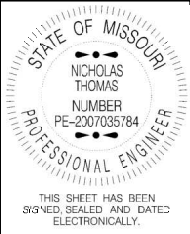
ESTIMATE FACTORS:
FOR INFORMATION PURPOSES ONLY

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BP-1) - 1.98 TONS/CUYD

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) - 1.98 TONS/CUYD

TACK COAT - 0.05 GAL/SQYD

4" TYPE 5 AGGREGATE - 0.22 TONS/SQYD COMPACTED



DATE PREPARED
8/4/2021

ROUTE YY	STATE MO
DISTRICT NW	SHEET NO. 2

COUNTY
PUTNAM

JOB NO.
J1S3278

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

WILSON & COMPANY
ENGINEERS & ARCHITECTS

Missouri Cert. of
Authority #2003007599

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REMOVAL OF IMPROVEMENTS							
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS
4	VARIES		RTE. YY	SIGNS	EA	12	EXISTING OBJECT MARKERS
4	124+36.66		RTE. YY	SAW CUT	FT	24	
4	124+36.66	124+56.66	RTE. YY	PAVEMENT	SY	46	REMOVAL OF EXISTING PAVEMENT
4	125+64.11	125+84.11	RTE. YY	PAVEMENT	SY	44	REMOVAL OF EXISTING PAVEMENT
4	125+84.11		RTE. YY	SAW CUT	FT	22	
TOTAL = 1 LUMP SUM							

CONTRACTOR FURNISHED SURVEYING AND STAKING
TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

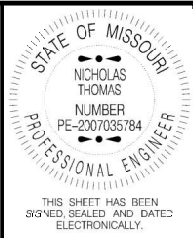
BITUMINOUS PAVEMENT								
SHEET	STA.	STA.	WIDTH(FT)	LOCATION	1.75" BP-1 (PG 64-22) (TONS)	10.25" BASE (PG 64-22) (TONS)	4" TYPE 5 AGGR. BASE (SY)	TACK COAT (GAL)
4	124+36.7	124+56.7	VARIES	RTE. YY	4.7	27.3	53.0	13.3
4	125+64.1	125+84.1	VARIES	RTE. YY	4.5	26.6	51.5	12.9
				TOTALS	9.2	53.9	104.5	26.2
				PAY TOTALS	9.2	53.9	104.5	27

LINEAR GRADING, CLASS 2				
SHEET	STA.	STA.	LOCATION	QUANTITY (STA)
4	124+32.3	124+56.6	RTE. YY, RT	0.2
4	124+41.1	124+61.1	RTE. YY, LT	0.2
4	125+59.6	125+79.7	RTE. YY, RT	0.2
4	125+68.6	125+88.0	RTE. YY, LT	0.2
			TOTAL	0.8
			PAY TOTAL	0.8

PERMANENT EROSION CONTROL							
SHEET	STA.	STA.	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CY)	PLACING TYPE 2 ROCK BLANKET (CY)	PERMANENT EROSION CONTROL GEOTEXTILE (SY)	GABIONS (CY)
9	124+51.01	125+00.08	RTE. YY	32	32	63	22
9	125+22.37	125+69.35	RTE. YY	21	21	44	22
				TOTALS	53	107	44
				PAY TOTALS	53	107	44

TEMPORARY EROSION CONTROL						
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE (LF)	SEDIMENT REMOVAL (CY)
8	124+32.3	124+56.6	RTE. YY	RT	20	1
8	124+41.1	124+61.1	RTE. YY	LT	20	1
8	125+59.6	125+79.7	RTE. YY	RT	20	1
8	125+68.6	125+88.0	RTE. YY	LT	20	1
					TOTALS	4
					PAY TOTALS	4

PAVEMENT MARKING					
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
10	124+35.00	125+90.00	RTE. YY	310.0	DOUBLE YELLOW CENTERLINE
			TOTALS	310.0	
			PAY TOTALS	310	



DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT NW	SHEET NO. 3
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DESCRIPTION	DATE								
.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ENGINEERS & ARCHITECTS

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

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DATE PREPARED	
8/4/2021	
ROUTE	STATE
Y-Y	MO
DISTRICT	SHEET NO.
NJW	3

JOB NO.
J1S3278

PROJECT NO.
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ATION
CAPITOL
65102
6636RANSI
105 WE
N CITY
(1-881

Logo of the American Society of Professional Estimators (ASPE). The logo features a stylized 'A' and 'S' intertwined, with the letters 'PE' below them. The text 'AMERICAN SOCIETY OF PROFESSIONAL ESTIMATORS' is written in a circular path around the central emblem.

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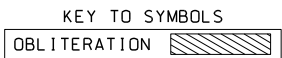
st Terr.,
City, MO
(816) 70
(16) 942-

808

SC
PA
ARCHI



SUMMARY OF QUANTITIES
SHEET 2 OF 2



PLAN
SHEET 1 OF 1

STATE OF MISSOURI
NICHOLAS
THOMAS
NUMBER
PE-2307035784
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT N-W	SHEET NO. 4
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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1-888-ASK-MODOT (1-888-275-6636)

000 E 101st Terr., Ste. 200
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& COMPANY
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TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- E TYPE III MOVABLE BARRICADE WITH LIGHT



W020-3A WITH AWRS

W020-3 WITH AWRS

(20)

(20A)



R11-3a

(55A)

R11-2

(29)

NOTES:

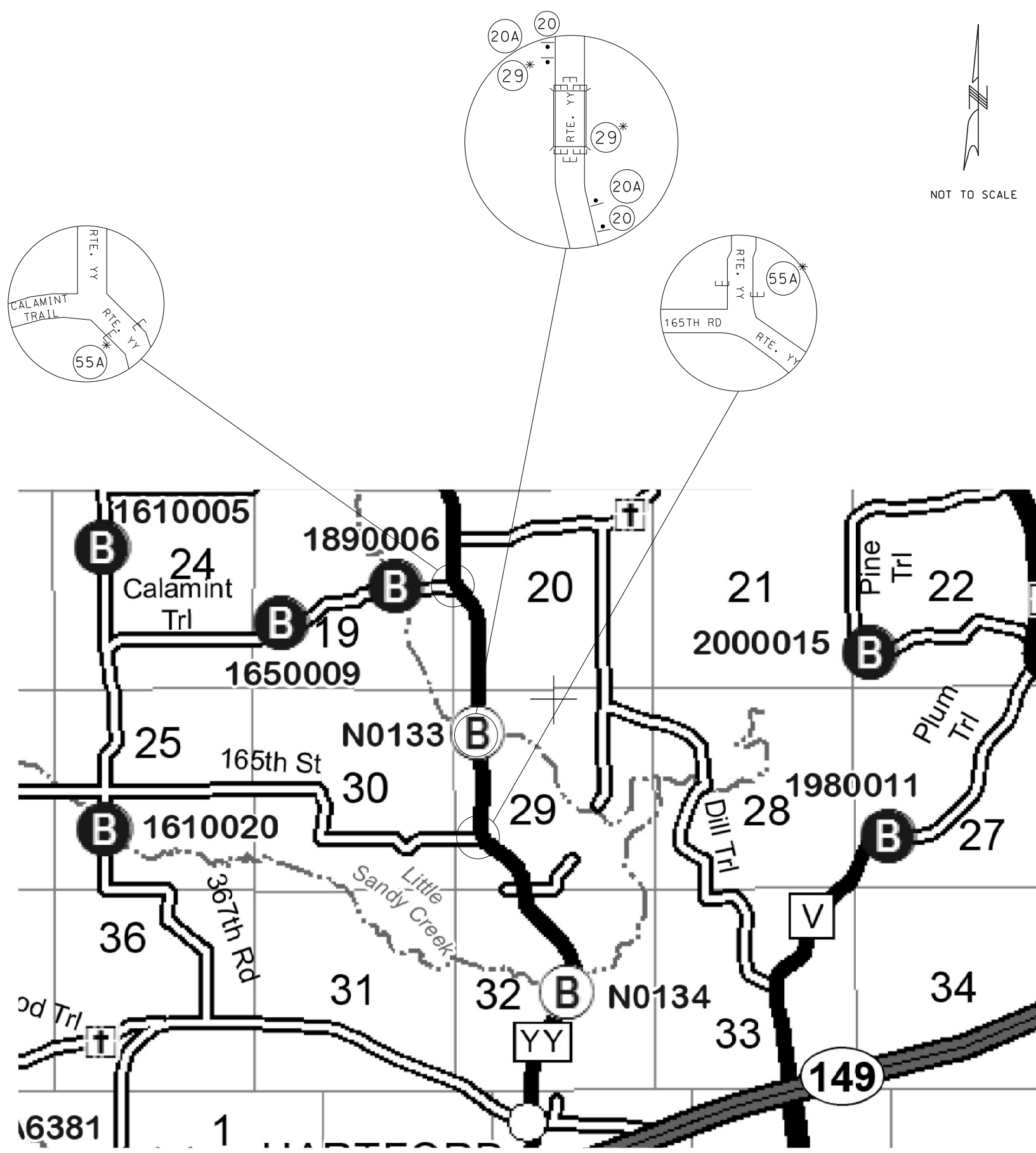
TYPE III MOVABLE BARRICADES FOR BRIDGE CLOSURE WORKZONE SHALL BE WITH LIGHTS. SEE STD 616.10 FOR PLACEMENT OF LIGHTS AND SIGNS ON BARRICADES.

ALL SIGNS SHOULD BE PLACED APPROXIMATELY 500' APART UNLESS OTHERWISE SHOWN.

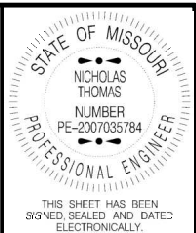
ALL STATIONS, SPACING, AND DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

ANY EXISTING SIGNS THAT CONFLICT WITH THIS TRAFFIC CONTROL PLAN SHALL BE COVERED.

* SIGN MOUNTED TO BARRICADE



NOT TO SCALE



DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT NW	SHEET NO. 6
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

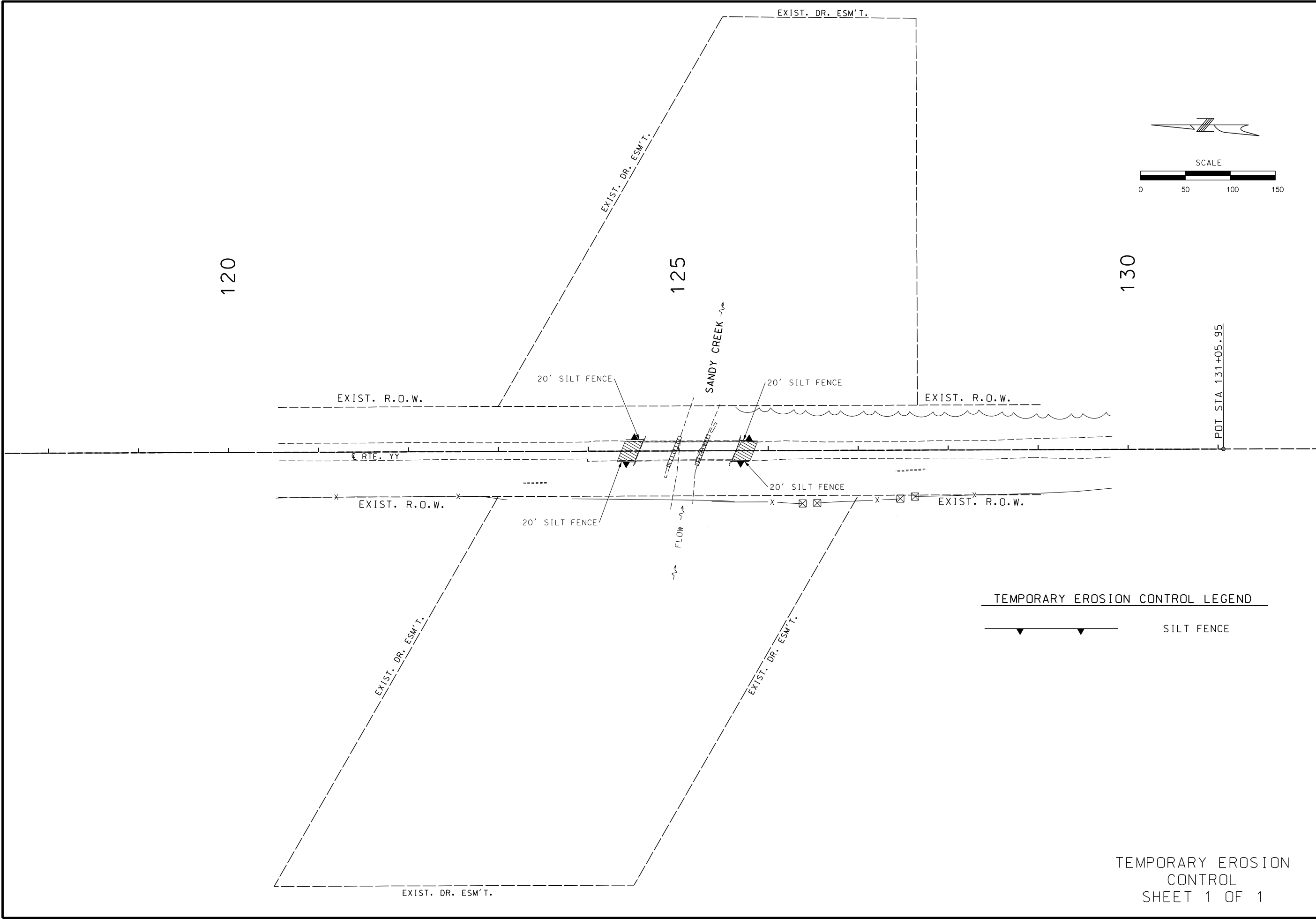
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1-888-ASK-MODOT (1-888-275-6636)

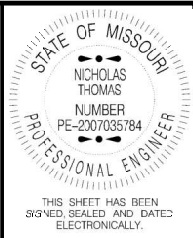
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Kansas City, MO 64131
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Fax (816) 942-3013
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TEMPORARY EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT NW	SHEET NO. 7
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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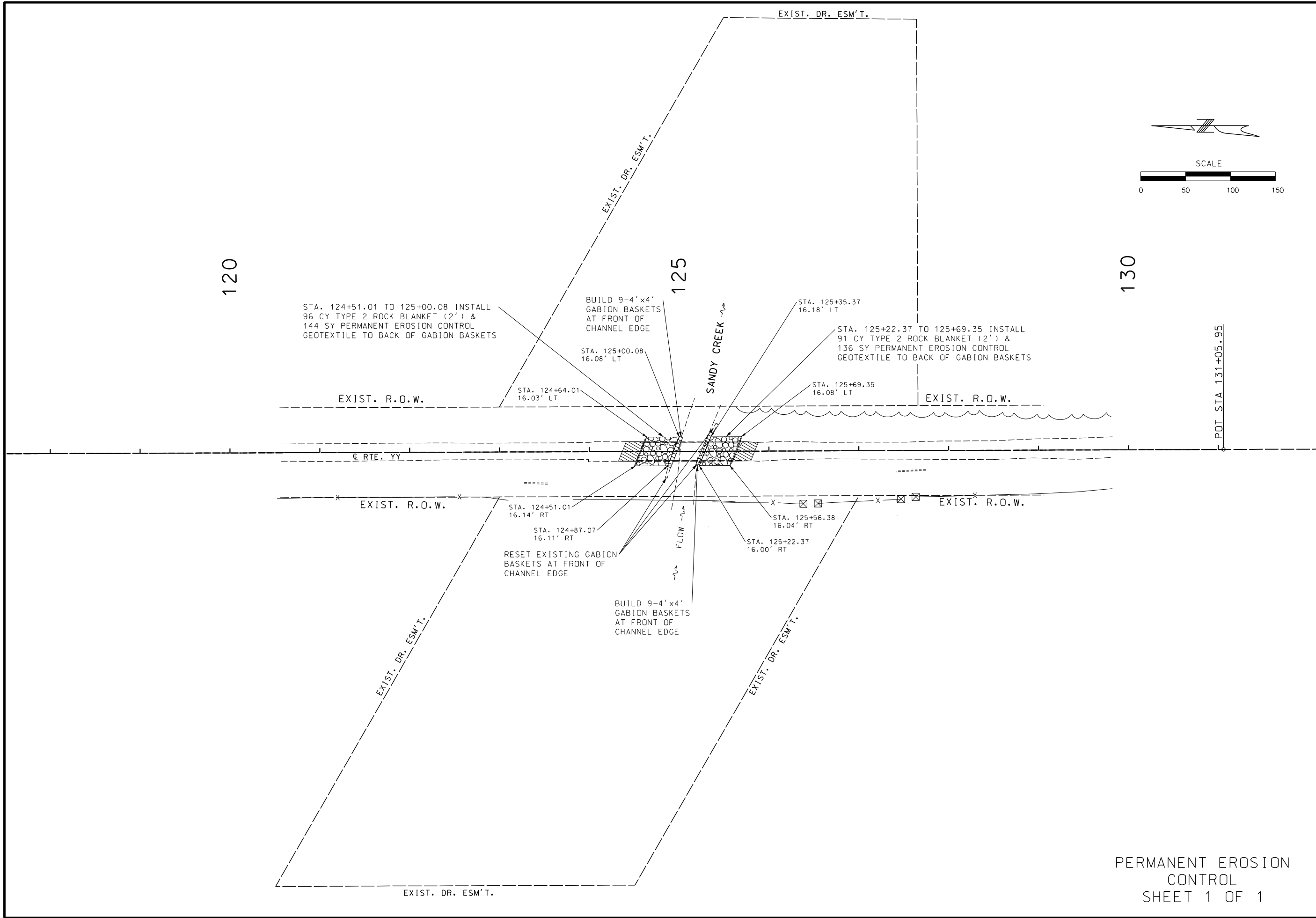
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JEFFERSON CITY, MO 65102
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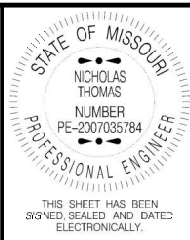
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Missouri Cert. of
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PERMANENT EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT NW	SHEET NO. 8
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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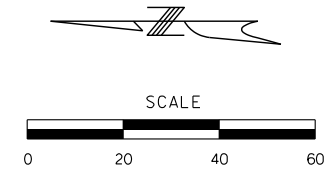
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

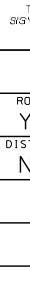
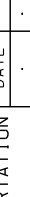



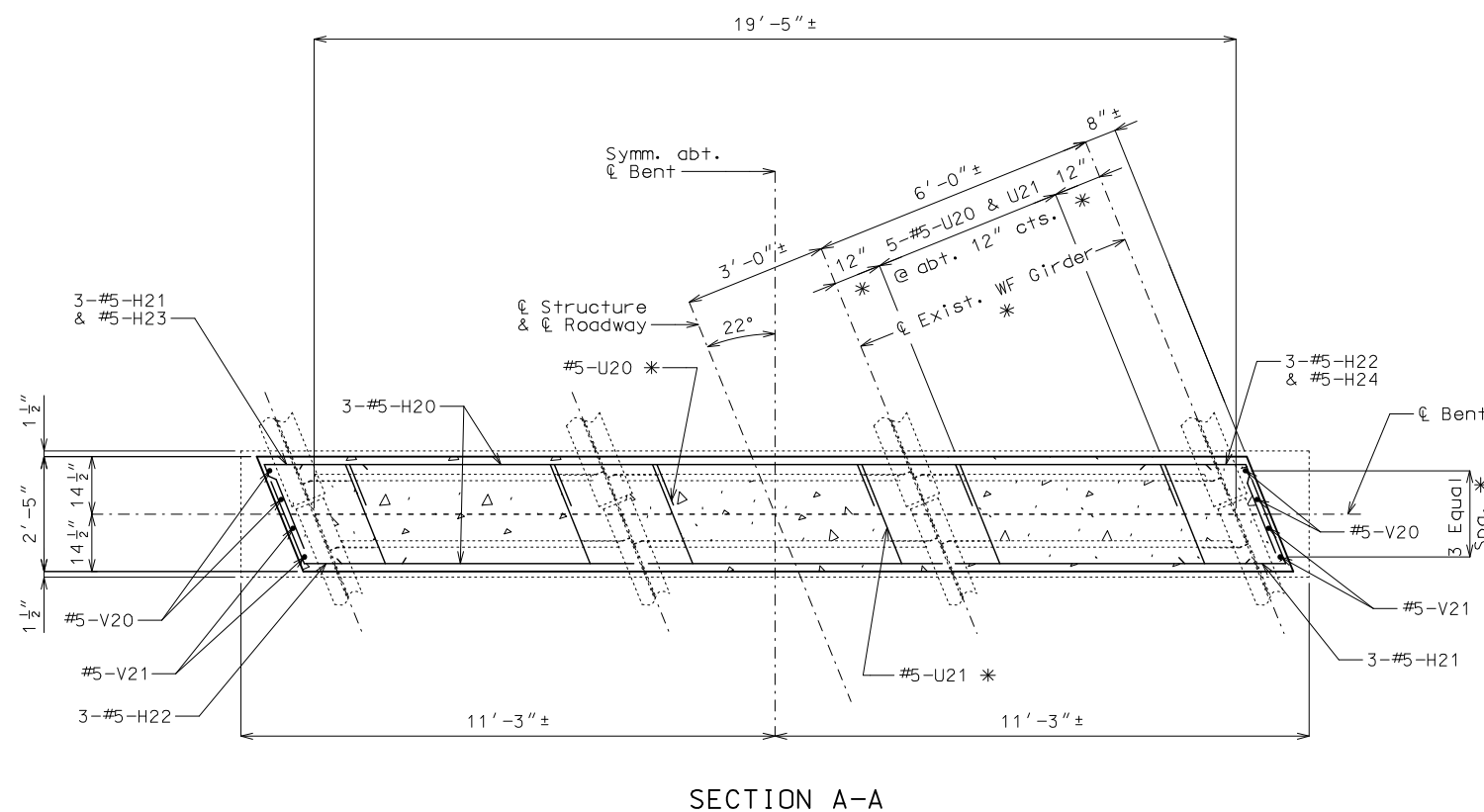
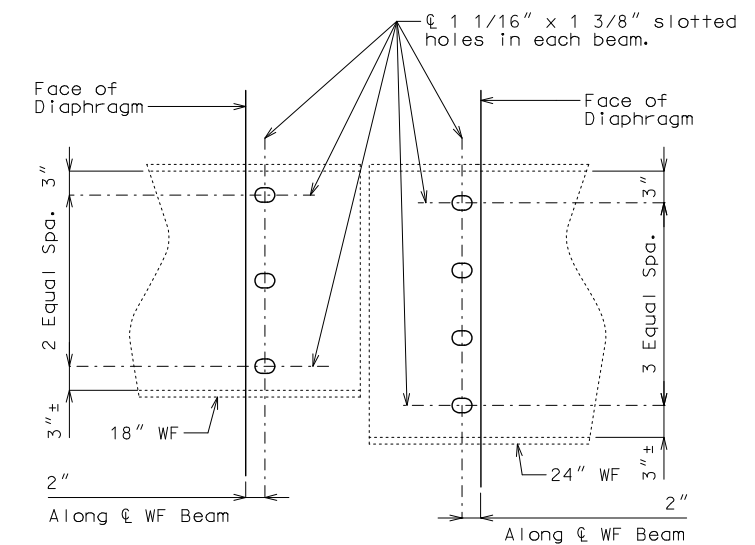
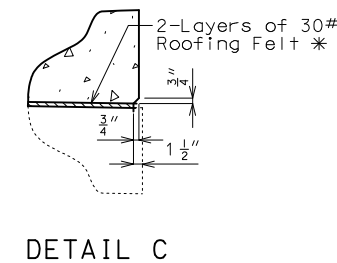
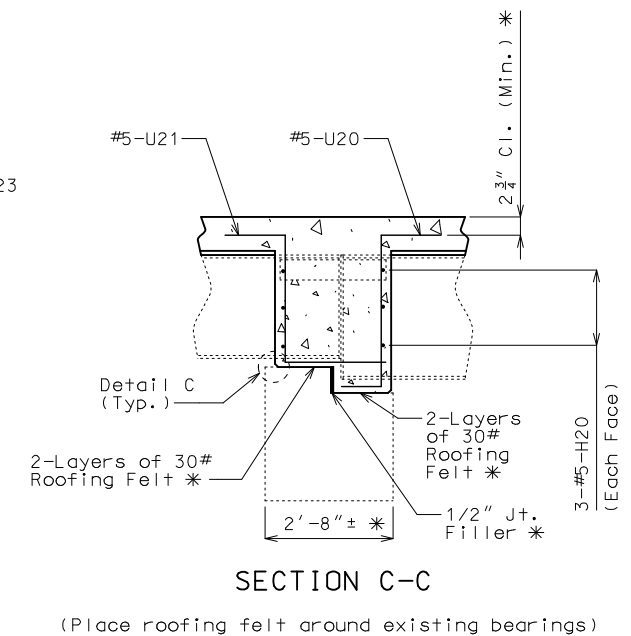
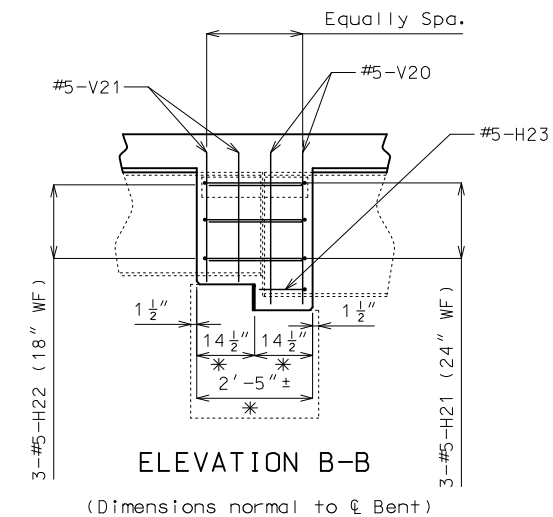
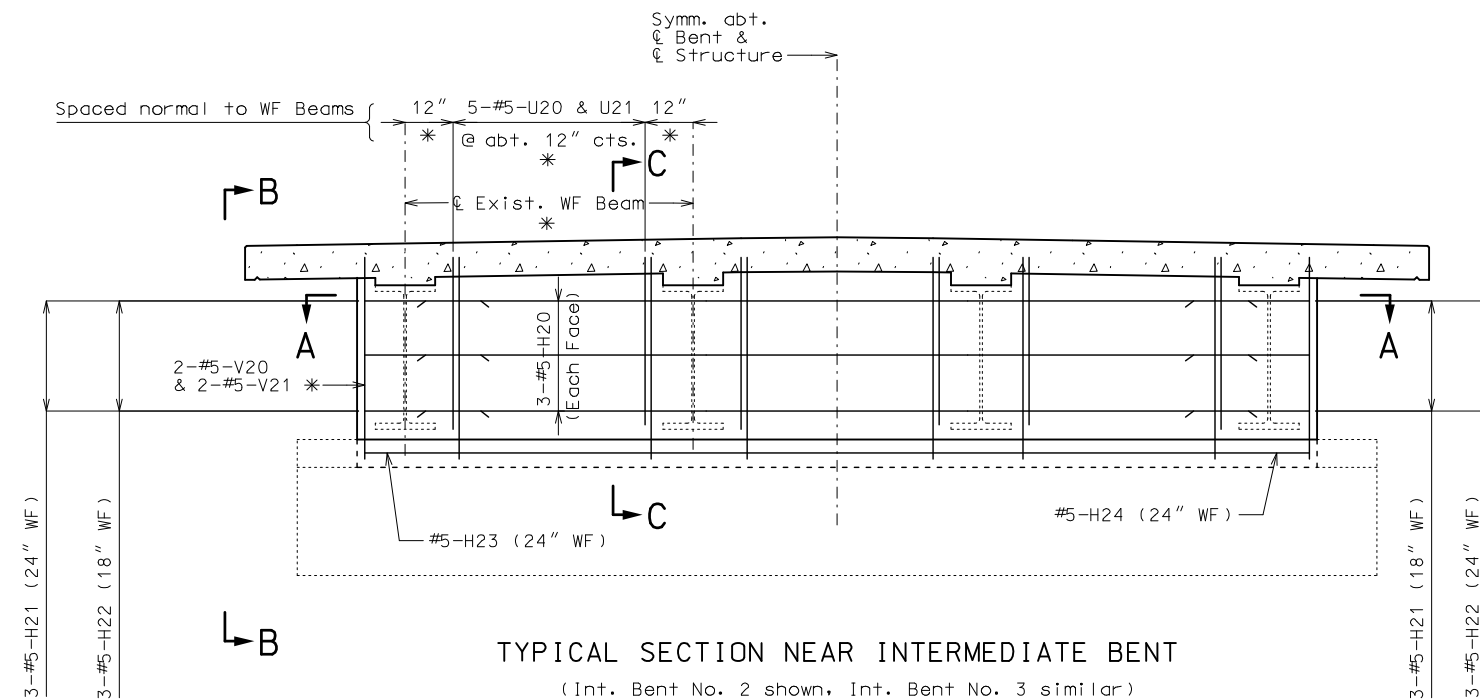
STANDARD SIGN ASSEMBLIES				
SIGN NUMBER	SIGN SIZE	STATION	FLAT SHEET FLUORESCENT	
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH	
			 OM3-L 12" X 36"	 OM3-R 12" X 36"
1	12" X 36"	124+20	1	
2	12" X 36"	124+40	1	
3	12" X 36"	124+60	1	
4	12" X 36"	124+10		1
5	12" X 36"	124+30		1
6	12" X 36"	124+50		1
7	12" X 36"	125+70		1
8	12" X 36"	125+90		1
9	12" X 36"	126+10		1
10	12" X 36"	125+60	1	
11	12" X 36"	125+80	1	
12	12" X 36"	126+00	1	
		TOTALS	6	6

SIGN SUMMARY				
STANDARD SIGN	SIGN DETAIL SHEET NO	NO EACH	SIZE, TYPE & SQ FT	
			SIZE	FLAT SHEET* FLUORESCENT ITEM NO 9035069A
QM3-L	STD	6	12"x36"	18
QM3-R	STD	6	12"x36"	18
			TOTAL	36

*YELLOW

SIGNING AND PAVEMENT MARKING
SHEET 1 OF 1

	
DATE PREPARED 8/4/2021	
ROUTE Y-Y	STATE MO
DISTRICT NW	SHEET NO. 9
COUNTY PUTNAM	
JOB NO. J1S3278	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
	
800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013	
Missouri Cert. of Authority #2003007599	
105 WEST CAPITAL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	



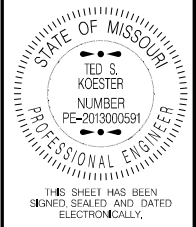
Notes:

* (Typ.)

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

Cost of field drilled holes in existing webs, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

All concrete and reinforcement in intermediate bent diaphragms, complete in place, will be considered completely covered by the contract unit price for Slab on Steel and is included in the table of Estimated Quantities for Slab on Steel.



DATE PREPARED
7/22/2021

ROUTE YY	STATE MO
-------------	-------------

DISTRICT	SHEET NO.
BR	4


COUNTY
PUTNAM

JOB NO.
J1S3278

CONTRACT ID.	
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PROJECT NO.

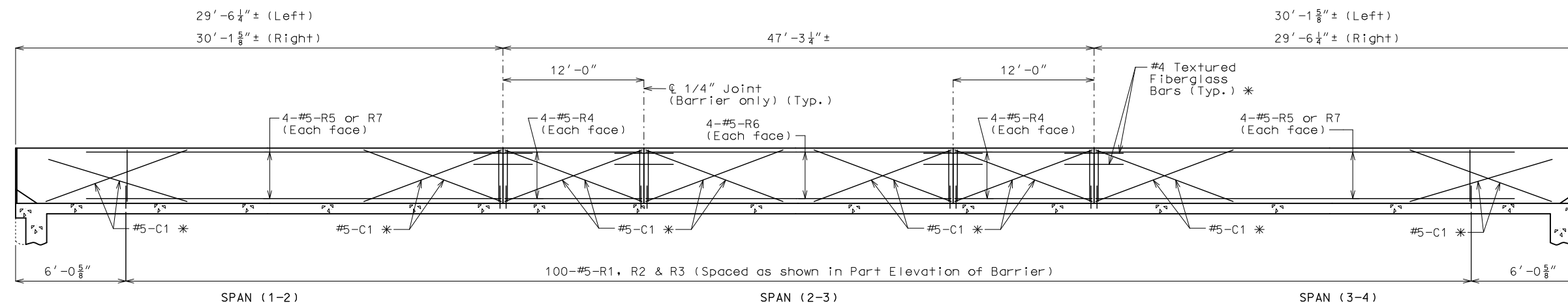
BRIDGE NO.	N01332
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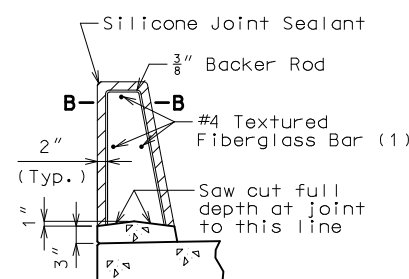
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COMMISSION

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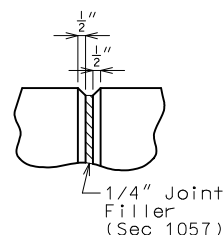
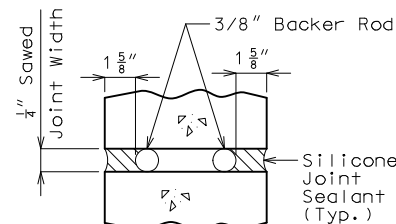
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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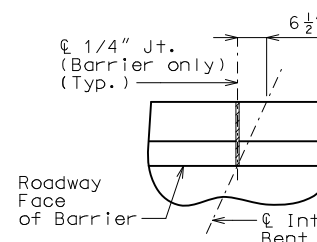
ELEVATION OF BARRIER
(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.



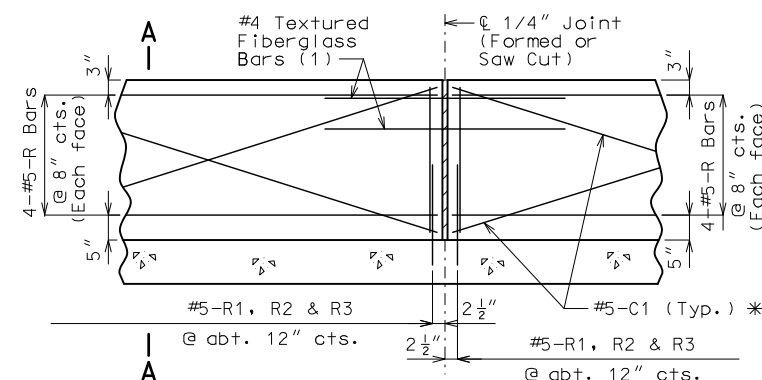
SECTION THRU
SAW CUT JOINT

PART ELEVATION
AT FORMED JOINT

SECTION B-B

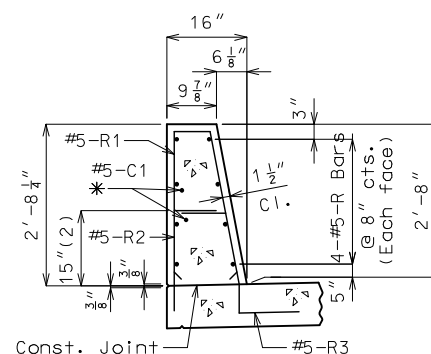


PART PLAN SHOWING
JOINT LOCATION



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint,
slip-formed option only

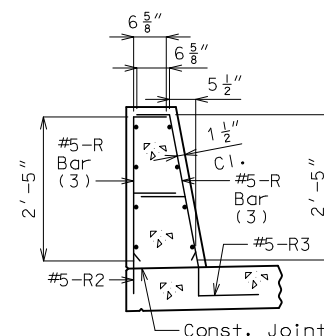


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type H Barrier per linear foot.

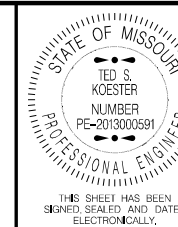
Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Standard Plan 17.10 and in accordance with Section 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



DATE PREPARED
7/22/202

ROUTE	ST
YY	M

DISTRICT	SHEET
BR	9

COUNTY
PUTNAM

JOB NO.
J1S3278

CONTRACT ID

PROJECT NO.

BRIDGE NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

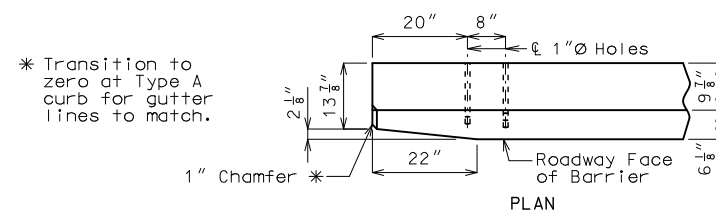
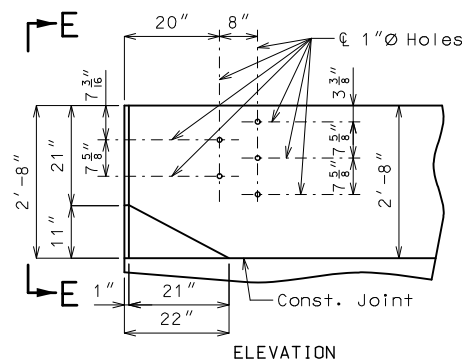
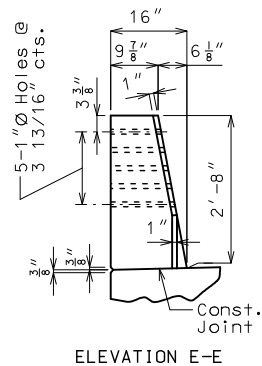
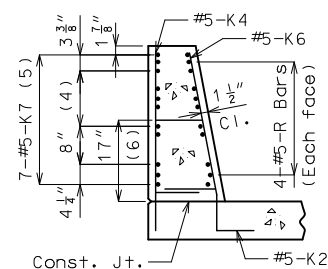
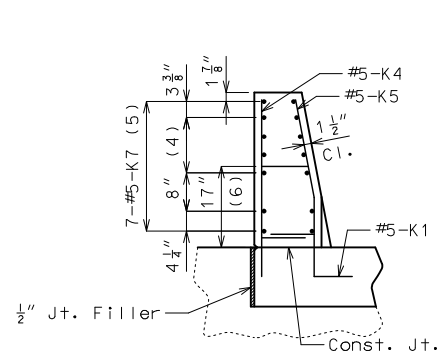
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JEFFERSON CITY, MO 65102

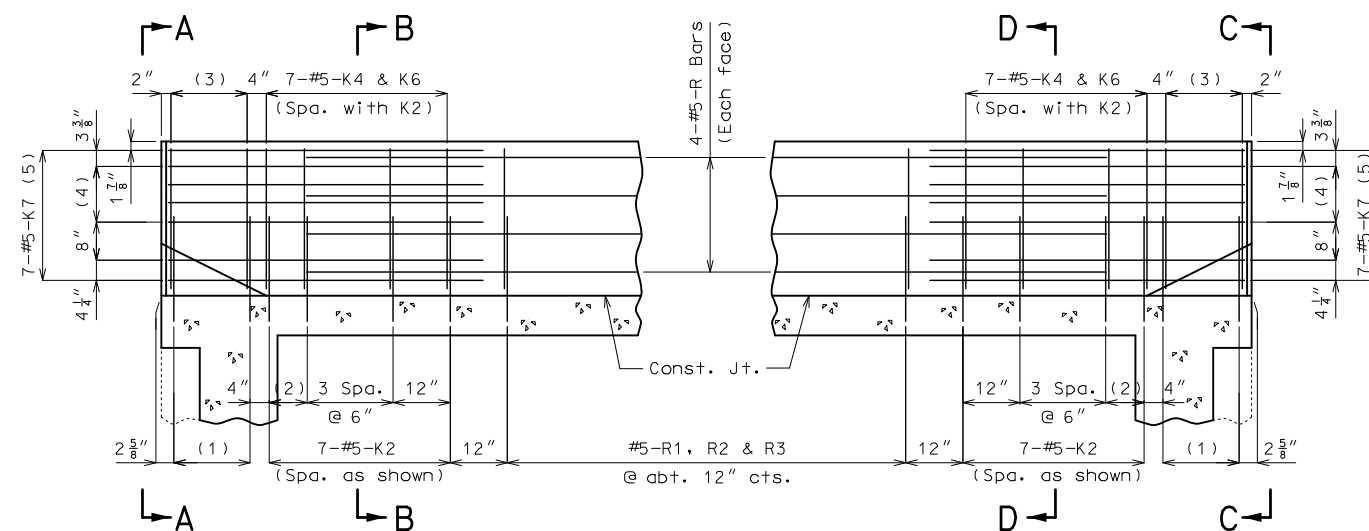
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- * Transition to zero at Type A curb for gutter lines to match.

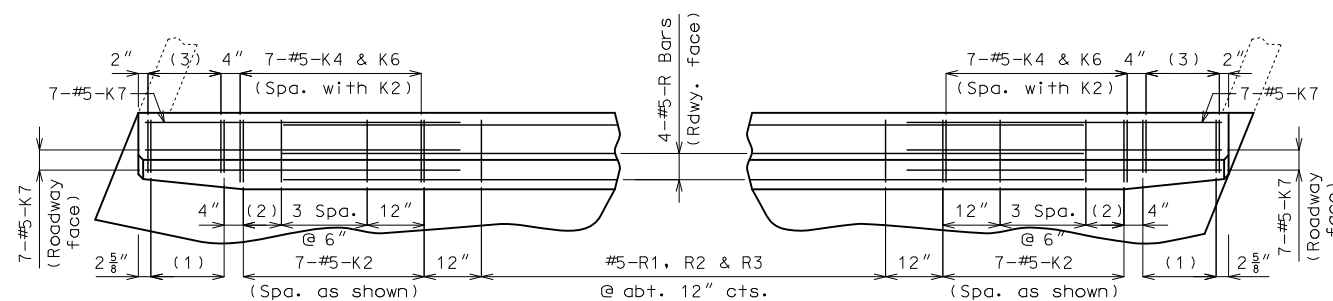


(1) 5-#5-K1 @ 4" cts.
(2) 2 Spaces @ 4"

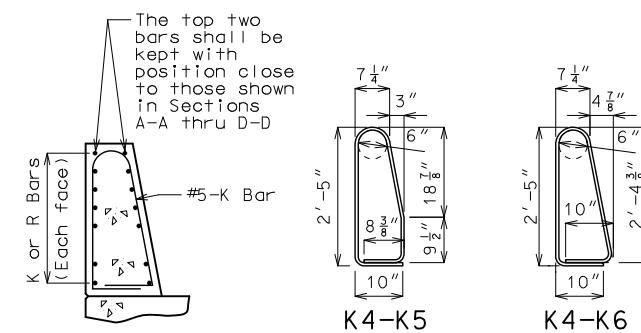
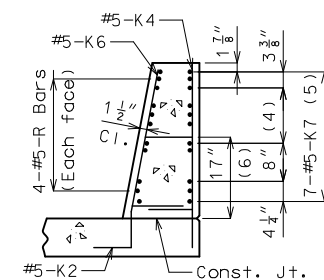
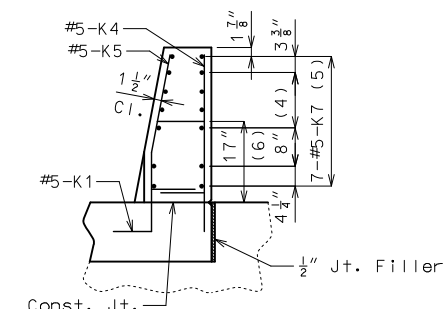
(3) 5-#5-K4 and 5-#5-K5,
spaced with K1

(4) 3 Spaces @ $3\frac{13}{16}$ "

(5) Spaced as shown, each face
(6) To top of bar



PART PLAN



PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2".

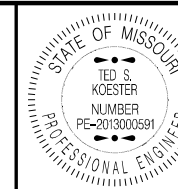
Use a minimum lap of 3'-1" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 8



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY,

DATE PREPARED _____

ROUTE	ST
-------	----

DISTRICT	SHEET
----------	-------

COUNTY

JOB NO.

CONTRACT ID

PROJECT NO.

BRIDGE NO.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED:

A.A.D.T. - 2022 = 113
A.A.D.T. - 2042 = 124
D.H.V. = 7%
T = 13%
V = 55 M.P.H.
D = 53%

NO RIGHT OF WAY
ACQUISITION

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	- FO -	- FO -
OVERHEAD CABLE TV	- OTV -	- OTV -
UNDERGROUND CABLE TV	- UTV -	- UTV -
OVERHEAD TELEPHONE	- OT -	- OT -
UNDERGROUND TELEPHONE	- UT -	- UT -
OVERHEAD POWER	- OE -	- OE -
UNDERGROUND POWER	- UE -	- UE -
SANITARY SEWER	- S -	- S -
STORM SEWER	- SS -	- SS -
GAS	- G -	- G -
WATER	- W -	- W -
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
MERCER COUNTY



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (1 SHEET)-----	2
QUANTITY SHEETS (QU)(2 SHEETS)-----	3
PLAN-PROFILE (PP)-----	4
REFERENCE AND CONTROL POINTS (CP)---	5
TRAFFIC CONTROL (TC)-----	6
EROSION CONTROL (EC)-----	7-8
SIGNING & PAVEMENT MARKING (SN)-----	9
BRIDGE DRAWINGS (B)-----	
N05611-----	1-8

STATE OF MISSOURI
NICHOLAS
THOMAS
NUMBER
PE-2207035784
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.


DATE PREPARED 8/4/2021	
ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 1
COUNTY MERCEUR	
JOB NO. J1S3279	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

[illegible]

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

BEGINNING OF PROJECT	STA. 77+44.98
END OF PROJECT	STA. 79+09.97
APPARENT LENGTH	164.99 FEET
EQUATIONS AND EXCEPTIONS:	

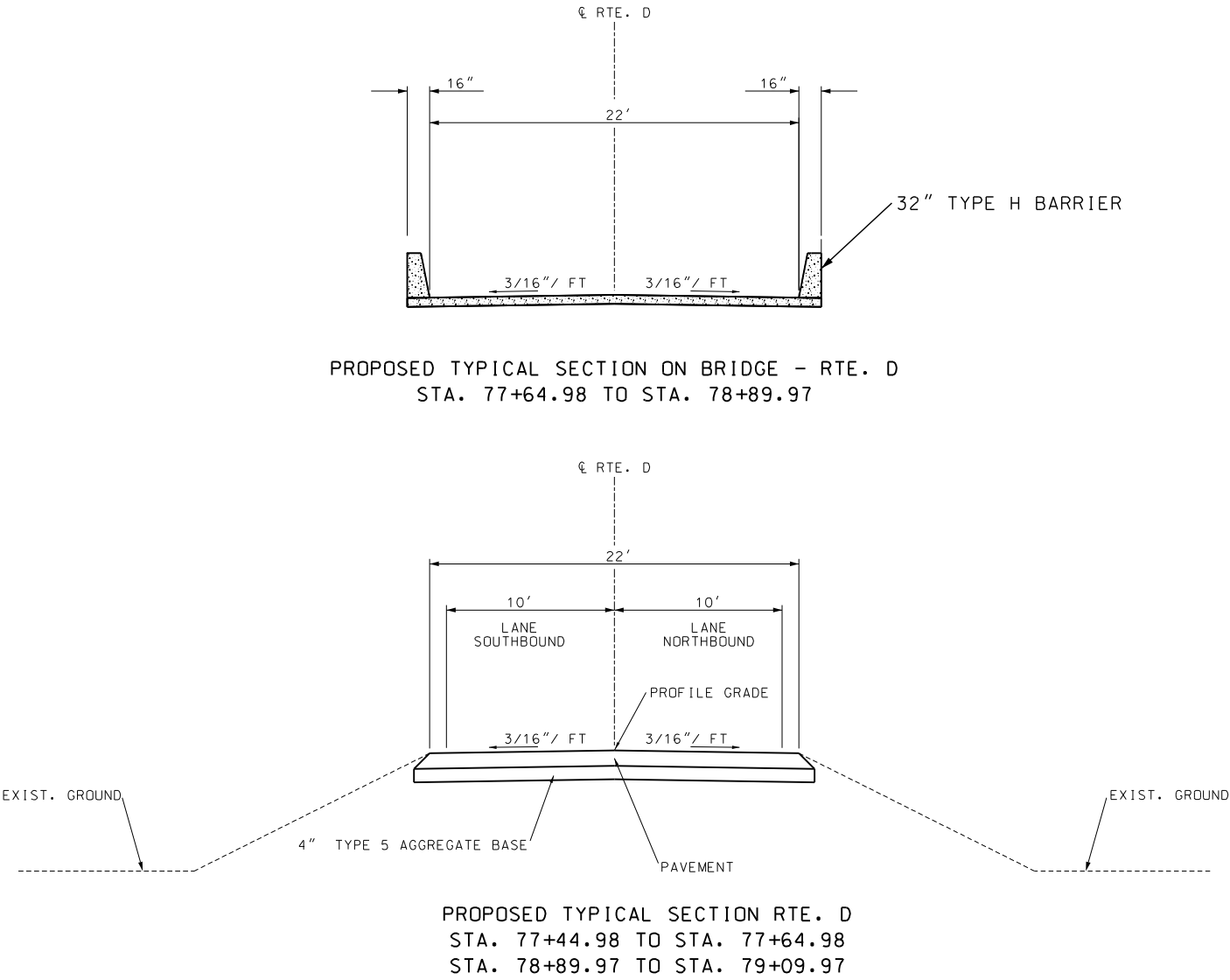
TOTAL CORRECTIONS	0.00	FEET
NET LENGTH OF PROJECT	164.99	FEET
STATE LENGTH	0.031	MILE
FOR INFORMATION ONLY		
ESTIMATED DISTURBED ACRES	0.30	ACRES


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102

200 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

NOT TO SCALE



PAVEMENT - HMA DESIGN

12" BITUMINOUS PAVEMENT

1.75" BP-1 W/PG 64-22

10.25" BITUMINOUS BASE W/PG 64-22

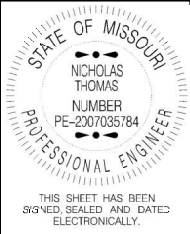
ESTIMATE FACTORS:
FOR INFORMATION PURPOSES ONLY

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BP-1) - 1.98 TONS/CUYD

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) - 1.98 TONS/CUYD

TACK COAT - 0.05 GAL/SQYD

4" TYPE 5 AGGREGATE - 0.22 TONS/SQYD COMPACTED



DATE PREPARED 8/4/2021	
ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 2
COUNTY MERCER	
JOB NO. J1S3279	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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Kansas City, MO 64131
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Fax (816) 942-3013

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ENGINEERS & ARCHITECTS

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Authority #2003007599

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REMOVAL OF IMPROVEMENTS							
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS
4	VARIES		RTE. D	SIGN	EA	12	EXISTING OBJECT MARKERS
4	77+44.98		RTE. D	SAW CUT	FT	18	
4	77+44.98	77+64.98	RTE. D	PAVEMENT	SY	39.5	REMOVAL OF EXISTING PAVEMENT
4	78+89.97	79+09.97	RTE. D	PAVEMENT	SY	40.0	REMOVAL OF EXISTING PAVEMENT
4	79+09.97		RTE. D	SAW CUT	FT	18	
					TOTAL	1 LUMP SUM	

CONTRACTOR FURNISHED SURVEYING AND STAKING
TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

BITUMINOUS PAVEMENT								
SHEET	STA.	STA.	LOCATION	WIDTH(FT)	1.75" BP-1 (PG 64-22) (TONS)	10.25" BASE (PG 64-22) (TONS)	4" TYPE 5 AGGR. BASE (SY)	TACK COAT (GAL)
4	77+45.0	77+65.0	RTE. D	VARIES	4.3	25.0	49.0	13.0
4	78+90.2	79+10.0	RTE. D	VARIES	4.3	25.2	49.0	13.0
				TOTALS	8.6	50.2	98.0	26.0
				PAY TOTALS	8.6	50.2	98.0	26

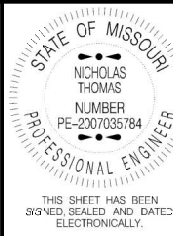
LINEAR GRADING, CLASS 2				
SHEET	STA.	STA.	LOCATION	QUANTITY (STA)
4	77+45.0	77+65.0	RTE. D, LT	0.2
4	77+45.0	77+65.0	RTE. D, RT	0.2
4	78+90.2	79+10.0	RTE. D, LT	0.2
4	78+90.2	79+10.0	RTE. D, RT	0.2
			TOTAL	0.8
			PAY TOTAL	0.8

CLEARING AND GRUBBING				
SHEET	STA.	STA.	LOCATION	AREA (AC)
4	77+35	78+28	RTE. D	0.17
4	78+47	79+19	RTE. D	0.13
			TOTAL	0.30
			PAY TOTAL	1.0

PERMANENT EROSION CONTROL						
SHEET	STA.	STA.	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CY)	PLACING TYPE 2 ROCK BLANKET (CY)	PERMANENT EROSION CONTROL GEOTEXTILE (SY)
9	77+35.06	78+28.33	RTE. D	613	613	875
9	78+47.22	79+19.78	RTE. D	476	476	654
			TOTALS	1089	1089	1529
			PAY TOTALS	1089	1089	1529

TEMPORARY EROSION CONTROL							
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE (LF)	TYPE C BERM (LF)	SEDIMENT REMOVAL (CY)
8	77+44.3	77+64.2	RTE. D	LT	20		1
8	77+44.3	77+64.2	RTE. D	RT	20		1
8	77+10.0	77+10.0	RTE. D			100	
8	78+43.4	78+43.4	RTE. D			140	
8	78+91.4	79+08.5	RTE. D	LT	20		1
8	78+91.3	79+10.2	RTE. D	RT	20		1
				TOTALS	80	240	4
				PAY TOTALS	80	240	4

PAVEMENT MARKING					
SHEET	STA.	STA.	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
10	77+40	79+10	RTE. D	42.5	INTERMITTENT YELLOW CENTERLINE
			TOTAL	42.5	
			PAY TOTAL	43	



DATE PREPARED
8/4/2021

ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 3

COUNTY
MERCER

JOB NO.
J1S3279

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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DESCRIPTION	DATE
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 10th Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

WILSON & COMPANY
ENGINEERS & ARCHITECTS

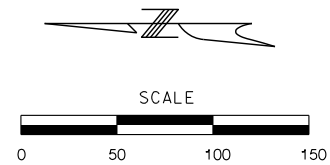
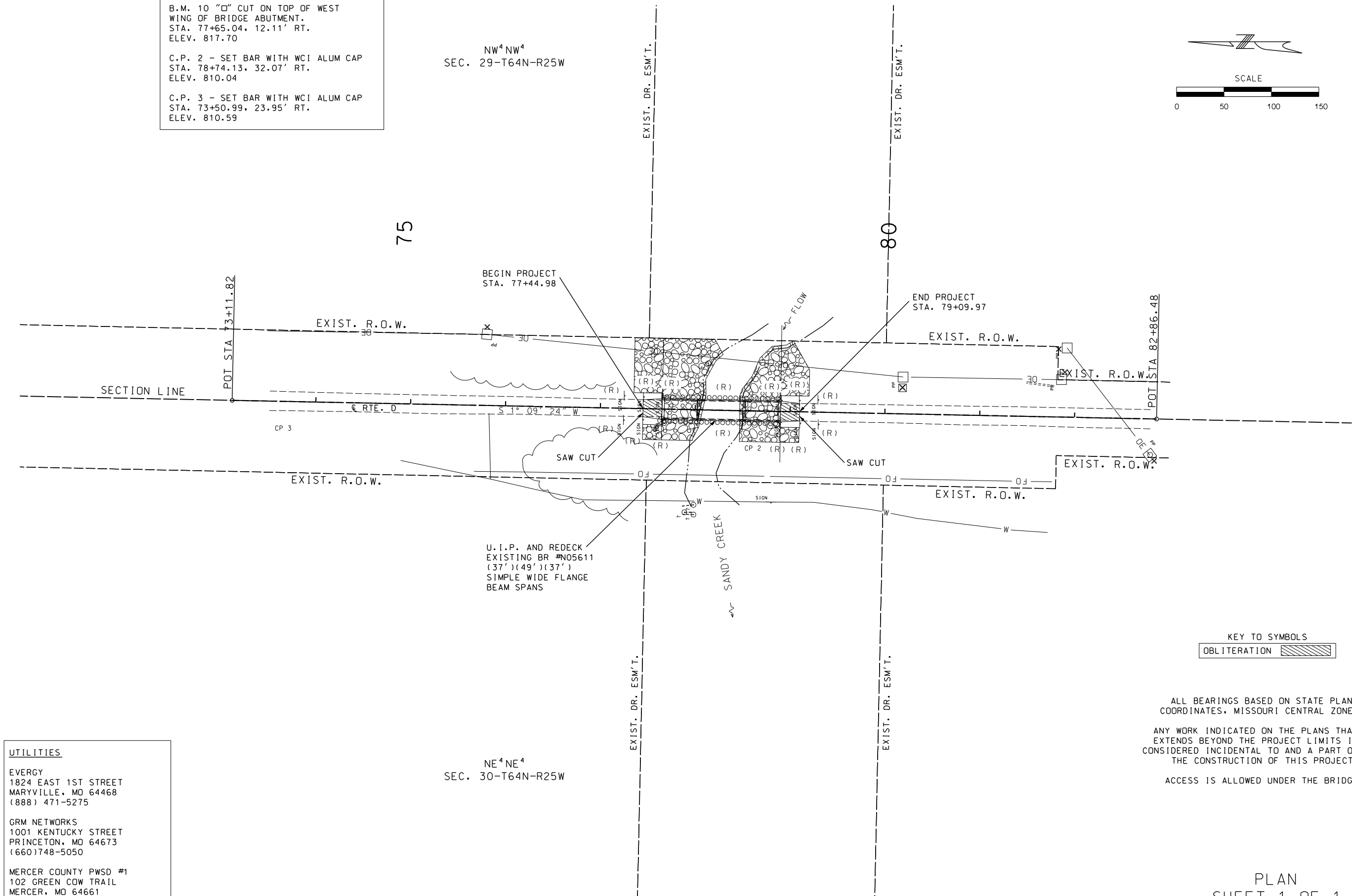
Missouri Cert. of
Authority #2003007599

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

CONTROL POINTS - (NAVD88)
B.M. 10 "O" CUT ON TOP OF WEST
WING OF BRIDGE ABUTMENT.
STA. 77+65.04, 12.11' RT.
ELEV. 817.70
C.P. 2 - SET BAR WITH WCI ALUM CAP
STA. 78+74.13, 32.07' RT.
ELEV. 810.04
C.P. 3 - SET BAR WITH WCI ALUM CAP
STA. 73+50.99, 23.95' RT.
ELEV. 810.59

NW⁴NW⁴
SEC. 29-T64N-R25W

NE⁴NE⁴
SEC. 30-T64N-R25W

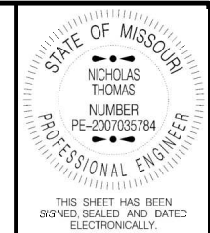


UTILITIES
EVERGY
1824 EAST 1ST STREET
MARYVILLE, MO 64468
(888) 471-5275
GRM NETWORKS
1001 KENTUCKY STREET
PRINCETON, MO 64673
(660)748-5050
MERCER COUNTY PSD #1
102 GREEN COW TRAIL
MERCER, MO 64661
(660) 953-0654

KEY TO SYMBOLS
OBLITERATION

ALL BEARINGS BASED ON STATE PLANE
COORDINATES, MISSOURI CENTRAL ZONE.
ANY WORK INDICATED ON THE PLANS THAT
EXTENDS BEYOND THE PROJECT LIMITS IS
CONSIDERED INCIDENTAL TO AND A PART OF
THE CONSTRUCTION OF THIS PROJECT.
ACCESS IS ALLOWED UNDER THE BRIDGE

PLAN
SHEET 1 OF 1



DATE PREPARED
8/4/2021
ROUTE
D
STATE
MO
DISTRICT
NW
SHEET NO.
4
COUNTY
MERCER
JOB NO.
J1S3279
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599
WILSON & COMPANY
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ALL PROJECT COORDINATES ARE OF THE MISSOURI
STATE PLANE COORDINATE (SPC) SYSTEM OF 1983.

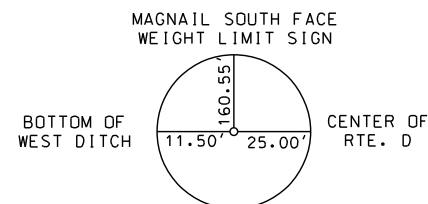
[illegible]

COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD 83
VERTICAL DATUM	NAVD 88
GEOID MODEL	GEOID 12B (CONUS)
ELEVATIONS DETERMINED BY	STATIC GPS OBSERVATION MO VRS

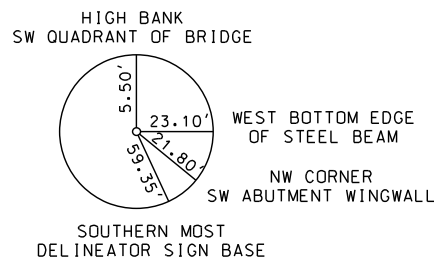
PROJECT PROJECTION FACTOR	1.0000000
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REFERENCE	CONTROL	INFORMATION
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COORDINATE SYSTEM	MISSOURI CENTRAL ZONE 2402
CONTROL STATION	MOPN
DESIGNATION	MODOT PRINCETON CORS ARP
CORS_ID	MOPN
PID	DM2692
LATITUDE	40°25'02.46875" (N)
LONGITUDE	93°34'39.03753" (W)
NORTHING (M)	509345.124
EASTING (M)	408555.082
ZONE	MO CENTRAL

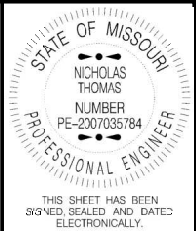


CONTROL POINT 3
5/8" IRON BAR
NORTH OF BRIDGE
COORDINATES
NORTHING = 1,636,375.376
EASTING = 1,292,833.560
ELEVATION = 810.59
(APPROXIMATE STATION 73+50.99
APPROXIMATE OFFSET 23.95' RIGHT)



CONTROL POINT 2
5/8" IRON BAR
SOUTH OF BRIDGE
COORDINATES
NORTHING = 1,635,852.504
EASTING = 1,292,814.887
ELEVATION = 810.04
(APPROXIMATE STATION 78+74.13
APPROXIMATE OFFSET 32.07' RIGHT)

COORDINATE POINT LISTING

[illegible]

DATE PREPARED
8/4/2021

ROUTE	STATE
D	MO

DISTRICT N.W	SHEET NO. 5
-----------------	----------------


COUNTY
MERCER

JOB NO.
J1S3279

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

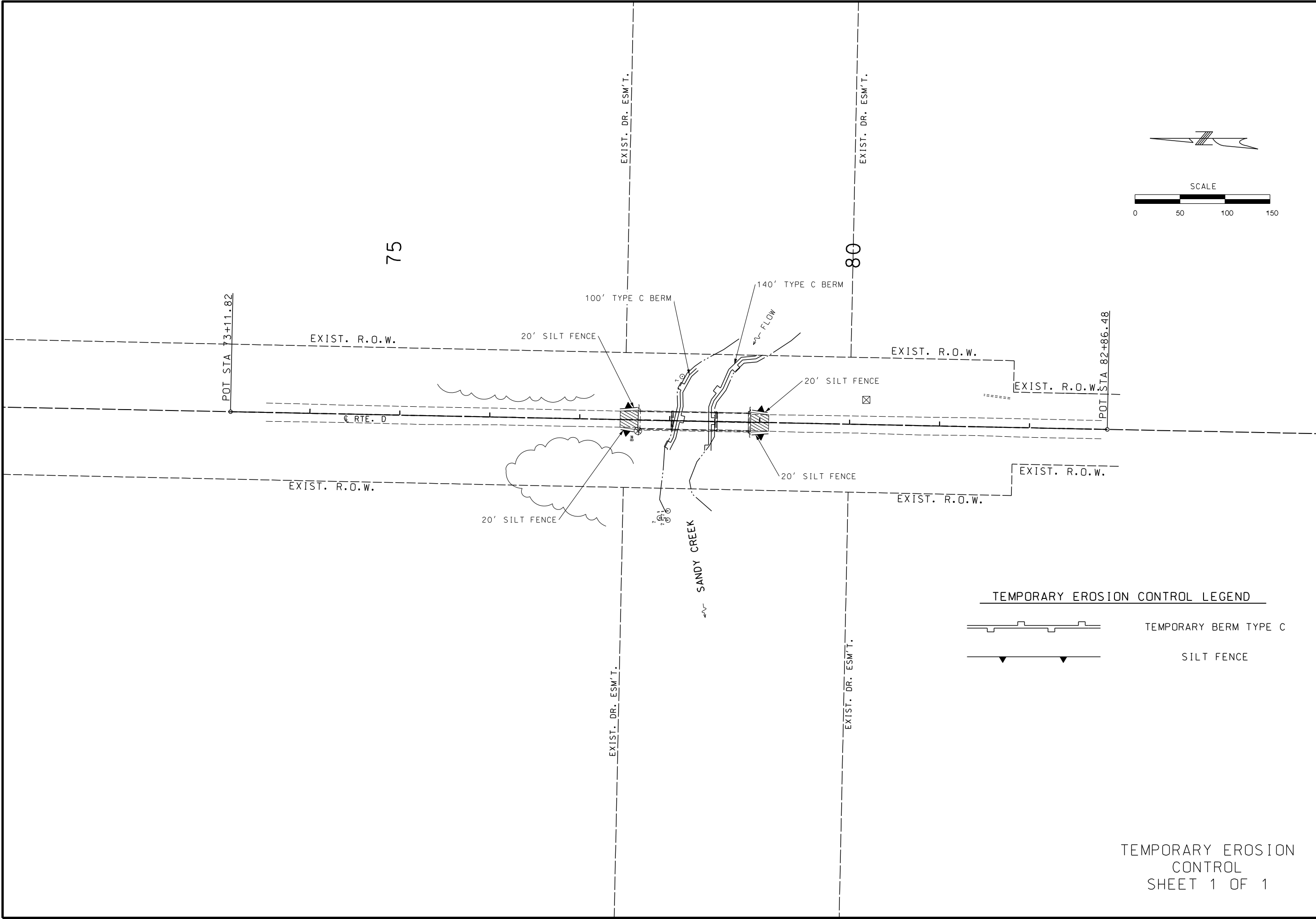
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

WILSON
& COMPANY
ENGINEERS & ARCHITECTS

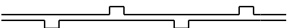
800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013

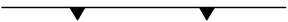
Missouri Cent. of
Authority #2003007599

REFERENCE POINTS
AND
COORDINATE POINTS
SHEET 1 OF 1



TEMPORARY EROSION CONTROL LEGEND

 TEMPORARY BERM TYPE C

 SILT FENCE

TEMPORARY EROSION
CONTROL
SHEET 1 OF 1


STATE OF MISSOURI
NICHOLAS THOMAS
NUMBER
PE-2007035784
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED 8/4/2021	
ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 7
COUNTY MERCER	
JOB NO. J1S3279	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
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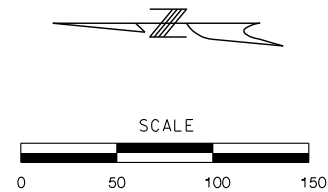
**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STA. 77+35.06 TO 78+28.33 INSTALL
613 CY TYPE 2 ROCK BLANKET (2') &
875 SY WITH PERMANENT EROSION CONTROL
GEOTEXTILE

STA. 79+02.17
74.54' LT

STA. 78+47.22 TO 79+19.78 INSTALL
476 CY TYPE 2 ROCK BLANKET (2') &
654 SY WITH PERMANENT EROSION CONTROL
GEOTEXTILE



EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

SANDY CREEK

STA. 78+19.41
74.61' LT

STA. 78+28.33
58.90' LT

STA. 79+19.78
44.49' LT

STA. 79+19.78
16.71' LT

STA. 77+35.06
74.68' LT

STA. 77+35.06
16.73' LT

STA. 77+45.01
16.71' RT

STA. 77+45.01
32.50' RT

STA. 78+47.22
32.50' RT

STA. 77+97.59
32.50' RT

STA. 79+09.87
16.75' RT

STA. 79+09.87
32.50' RT

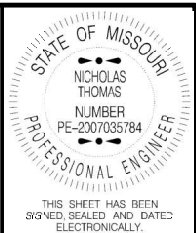
EXIST. DR. ESM'T.

EXIST. DR. ESM'T.

EXIST. DR. ESM'T.

EXIST. DR. ESM'T.

PERMANENT EROSION
CONTROL
SHEET 1 OF 1



DATE PREPARED 8/4/2021	
ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 8
COUNTY MERCER	
JOB NO. J1S3279	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

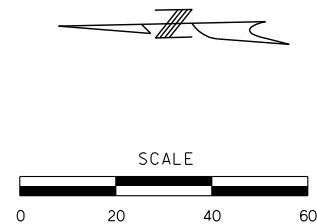
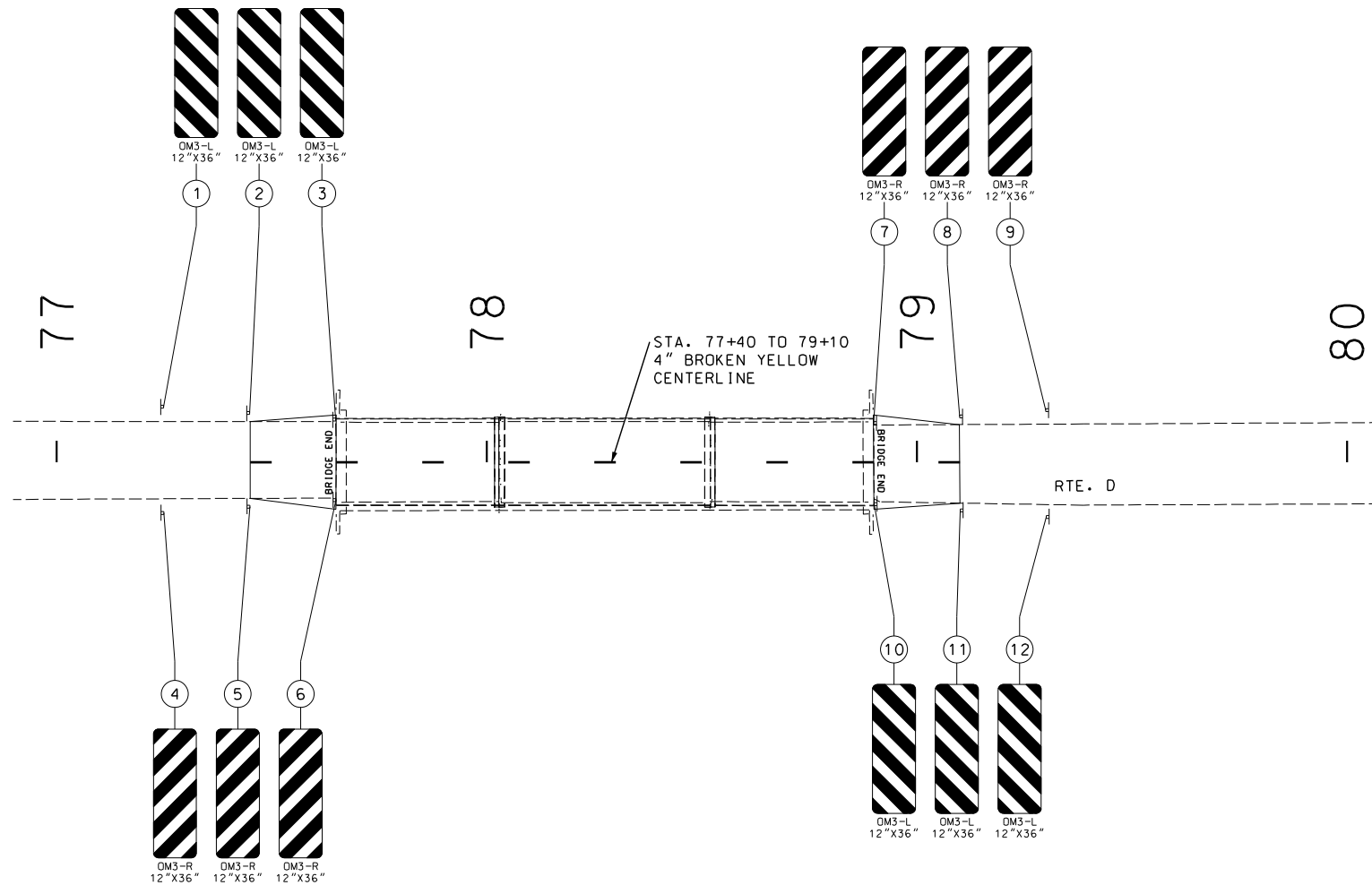
MISSOURI HIGHWAYS AND TRANSPORTATION
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**WILSON
& COMPANY**
ENGINEERS & ARCHITECTS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



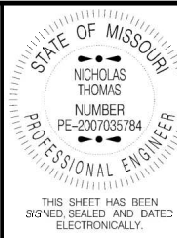
SIGNS					PERFORATED SQUARE STEEL TUBE POST		
SIGN NO	SIGN SIZE	STATION	LOCATION	SIGN DETAIL SHEET NO	2 IN		
					POST NO 1	TOTAL	ANCHOR 12 GA
					LF	LF	LF
1	12"x36"	77+25	14.0' L	STD	11.0	11.0	3.0
2	12"x36"	77+45	12.5' L	STD	8.5	8.5	3.0
3	12"x36"	77+65	11.5' L	STD	6.0	6.0	3.0
4	12"x36"	77+25	14.0' R	STD	11.0	11.0	3.0
5	12"x36"	77+45	12.5' R	STD	8.5	8.5	3.0
6	12"x36"	77+65	11.5' R	STD	6.0	6.0	3.0
7	12"x36"	78+90	11.5' L	STD	6.0	6.0	3.0
8	12"x36"	79+10	12.5' L	STD	8.5	8.5	3.0
9	12"x36"	79+30	14.0' L	STD	11.0	11.0	3.0
10	12"x36"	78+90	11.5' R	STD	6.0	6.0	3.0
11	12"x36"	79+10	12.5' R	STD	8.5	8.5	3.0
12	12"x36"	79+30	14.0' R	STD	11.0	11.0	3.0
TOTALS						102.0	36.0

STANDARD SIGN ASSEMBLIES				
SIGN NUMBER	SIGN SIZE	STATION	FLAT SHEET FLUORESCENT	
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH	
1	12"x36"	77+25	1	
2	12"x36"	77+45	1	
3	12"x36"	77+65	1	
4	12"x36"	77+25		1
5	12"x36"	77+45		1
6	12"x36"	77+65		1
7	12"x36"	78+90		1
8	12"x36"	79+10		1
9	12"x36"	79+30		1
10	12"x36"	78+90	1	
11	12"x36"	79+10	1	
12	12"x36"	79+30	1	
TOTALS			6	6

SIGN SUMMARY				
STANDARD SIGN	SIGN DETAIL SHEET NO	NO EACH	SIZE, TYPE & SQ FT	
			SIZE	FLAT SHEET* FLUORESCENT ITEM NO 9035069A
OM3-L	STD	6	12"x36"	18
OM3-R	STD	6	12"x36"	18
			TOTAL	36

*YELLOW

SIGNING AND PAVEMENT MARKING
SHEET 1 OF 1



DATE PREPARED
8/4/2021

ROUTE D	STATE MO
DISTRICT NW	SHEET NO. 9

COUNTY
MERCER

JOB NO.
J1S3279

CONTRACT ID.
.

PROJECT NO.
.

BRIDGE NO.
.

DATE	DESCRIPTION
.	.
.	.
.	.
.	.
.	.
.	.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

800 E 101st Terr., Ste. 200
Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of
Authority #2003007599

WILSON & COMPANY
ENGINEERS & ARCHITECTS

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Table Showing
S2 Bar Lengths

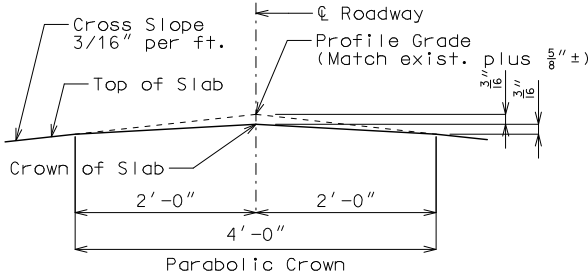
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
5'-0"	5'-0"	5'-0"	5'-0"

Required Lap Length
For Bar Splices **

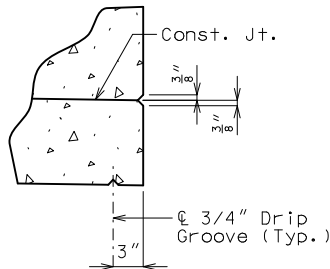
Bar Size	Splice Length
4	2'-7"
5	3'-3"
6	3'-10"
7	4'-11"

** Unless otherwise shown.

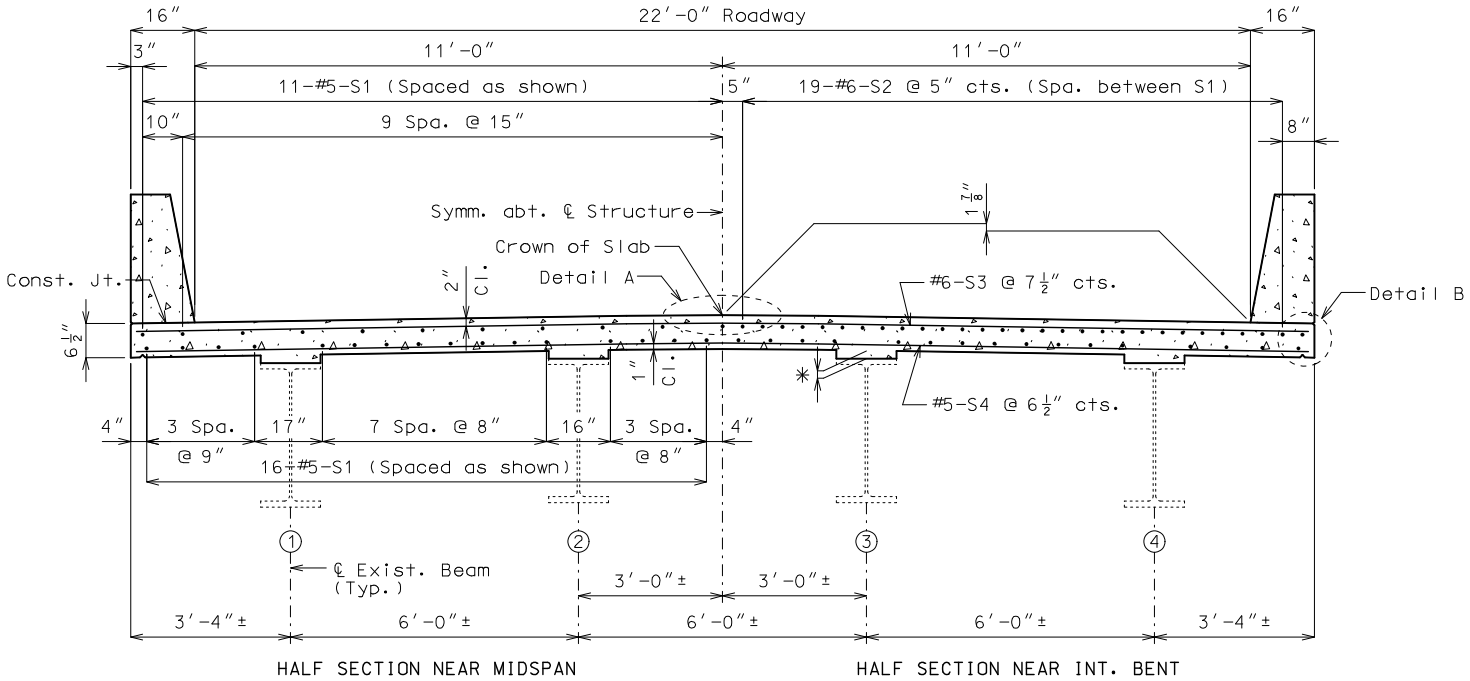
U.I.P., REDECK AND MAKE COMPOSITE EXISTING (37', 49', 37') SIMPLE WIDE FLANGE BEAM SPANS



DETAIL A



DETAIL B



TYPICAL SECTION THRU SLAB

* Increase exist. haunch 3/8" ± at interior beams to match grade shown in Detail A

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Seismic Performance Category A

Design Loading:

H10-44 (1953) (Existing)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Barrier) $f'_c = 4,000$
Class B-2 Concrete (Bents & Superstructure, except Barrier) $f'_c = 4,000$
Reinforcing Steel (Grade 60) $f_y = 60,000$

Joint Filler:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Miscellaneous:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Roadway surfacing adjacent to bridge ends shall match new bridge slab surface. (Roadway item)

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

Traffic Handling:

Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.

Estimated Quantities		
Item		Total
Removal of Existing Bridge Deck	sq. foot	2796
Slab on Steel	sq. yard	343
Type H Barrier	linear foot	251
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Shear Connectors	each	888
Slab Drain	each	20

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

Estimated Quantities for Slab on Steel		
Item		Total
Class B-2 Concrete	cu. yard	77.0
Reinforcing Steel (Epoxy Coated)	pound	23,730

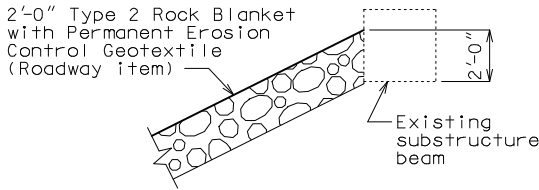
The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for stay-in-place corrugated steel forms, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness Class SC 4 and a finish Type I, II or III.

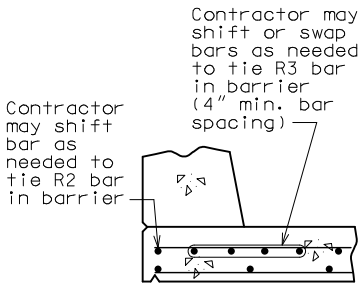
Slab shall be cast-in-place with conventional forming or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

Bridge deck surface may be finished with a vibratory screed.

For Optional Stay-In-Place Form Details, see Sheet No. 2.



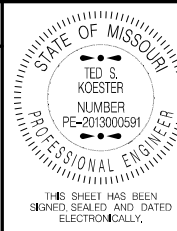
ROCK BLANKET ON SPILL SLOPES



OPTIONAL SHIFTING
TOP BARS AT BARRIER

REPAIRS TO BRIDGE:
ROUTE D OVER SANDY CREEK

ROUTE D FROM ROUTE 136 TO ROUTE A
ABOUT 1.5 MILES SOUTH OF ROUTE 136
BEGINNING STATION 77+65.00 ± (MATCH EXISTING)



DATE PREPARED
7/22/2021

ROUTE D STATE MO

DISTRICT BR SHEET NO. 1

COUNTY MERCER

JOB NO. J1S3279

CONTRACT ID.

PROJECT NO.

BRIDGE NO. N05612

DESCRIPTION

DATE

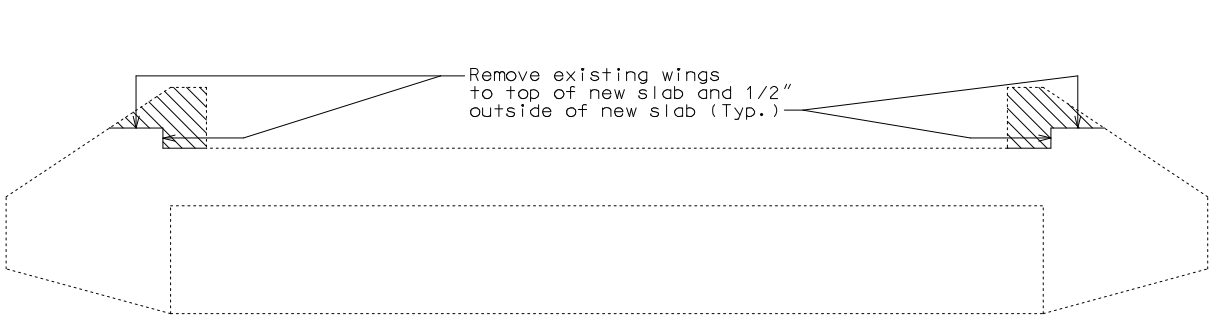
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JEFFERSON CITY, MO 65102

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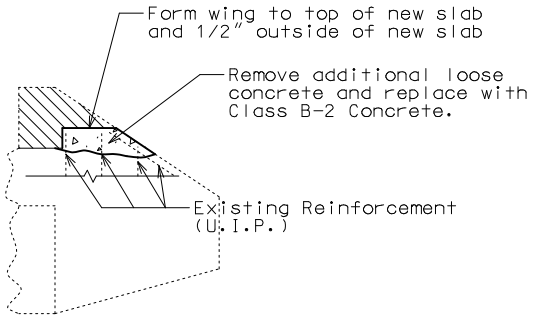
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DETAILS OF CONCRETE REMOVAL AT END BENTS

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall and wingwall reinforcement shall be cut off one inch below concrete removal surface, except at wing repair, and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at removal lines except at wing repair.



DETAIL OF WING REPAIR AT END BENT NO. 1

Wing Repair shall be completed before adjacent slab concrete is poured.

Cost of wing repair will be considered completely covered by the contract unit price for Slab on Steel.

General Notes:

Structural Steel Protective Coating:

Sides and bottom of the top flanges of exterior beams shall be coated with one 6-mil thickness coat of gray epoxy-mastic primer (non-aluminum) applied over an SSPC-SP-3 surface preparation in accordance with Sec 1081. The cost of surface preparation and gray epoxy-mastic primer (non-aluminum) will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

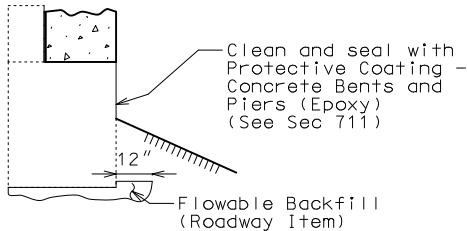
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured from end to end at a minimum rate of 25 cubic yards per hour.

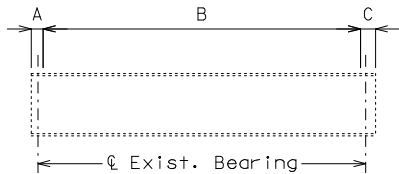
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.

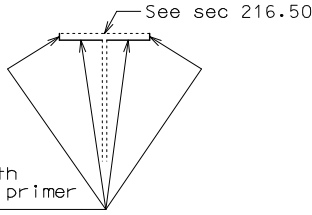


TYPICAL SECTION THRU
END BENTS 1 & 4 SHOWING
PROTECTIVE COATING
AND FLOWABLE BACKFILL

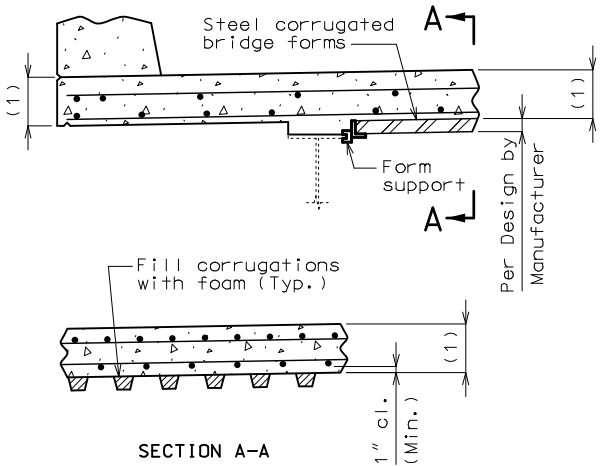


ELEVATION SHOWING SHEAR
CONNECTOR SPACING

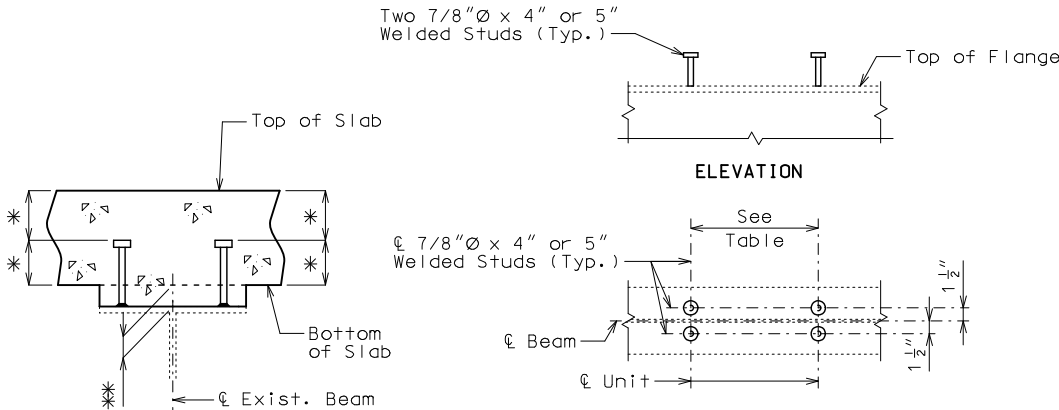
TABLE SHOWING SHEAR CONNECTOR UNIT SPACING				
Span	S.C. per unit	A	B	C
1	2	11"±	36 Units @ 12" cts.	11"±
2	2	8"±	39 Units @ 15" cts.	8"±
3	2	11"±	36 Units @ 12" cts.	11"±
Total shear connectors required				888



TYPICAL SECTION THRU
EXTERIOR BEAM SHOWING
PROTECTIVE COATING



SECTION A-A
OPTIONAL STAY-IN-PLACE
FORM DETAILS



HALF SECTION
THRU BEAM HALF SECTION
THRU COVER &

SECTION THRU EXIST.
BEAM SHOWING
SHEAR CONNECTORS

* 2" Minimum

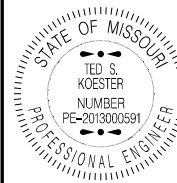
** Min. Haunch = 0"
Max. Haunch = 3"

PLAN OF SHEAR CONN. (2 PER UNIT)

DETAILS OF SHEAR CONNECTORS

The cost of supplying and installing shear connectors will be considered completely covered by the contract unit price for Shear Connectors.

Shear connectors shall be in accordance with Sec 712, 1037 & 1080.



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ELECTRONICALLY.

DATE PREPARED
7/22/2021

ROUTE D STATE MO

DISTRICT BR SHEET NO. 2

COUNTY
MERCER

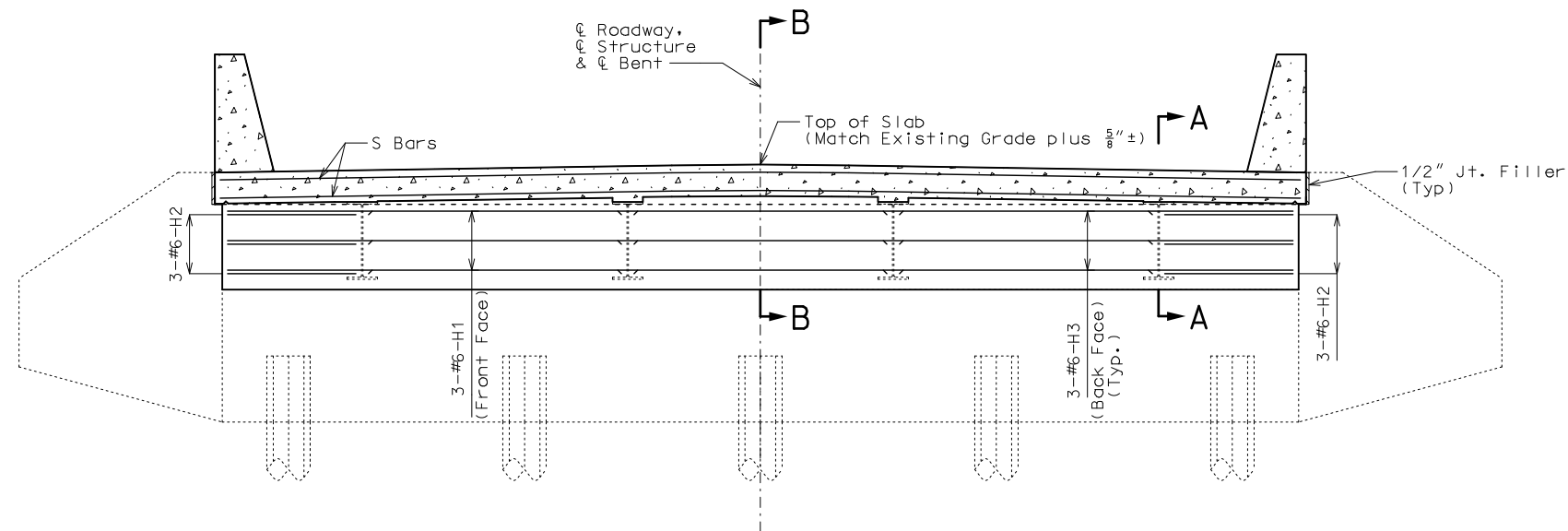
JOB NO.
J1S3279

CONTRACT ID.

PROJECT NO.

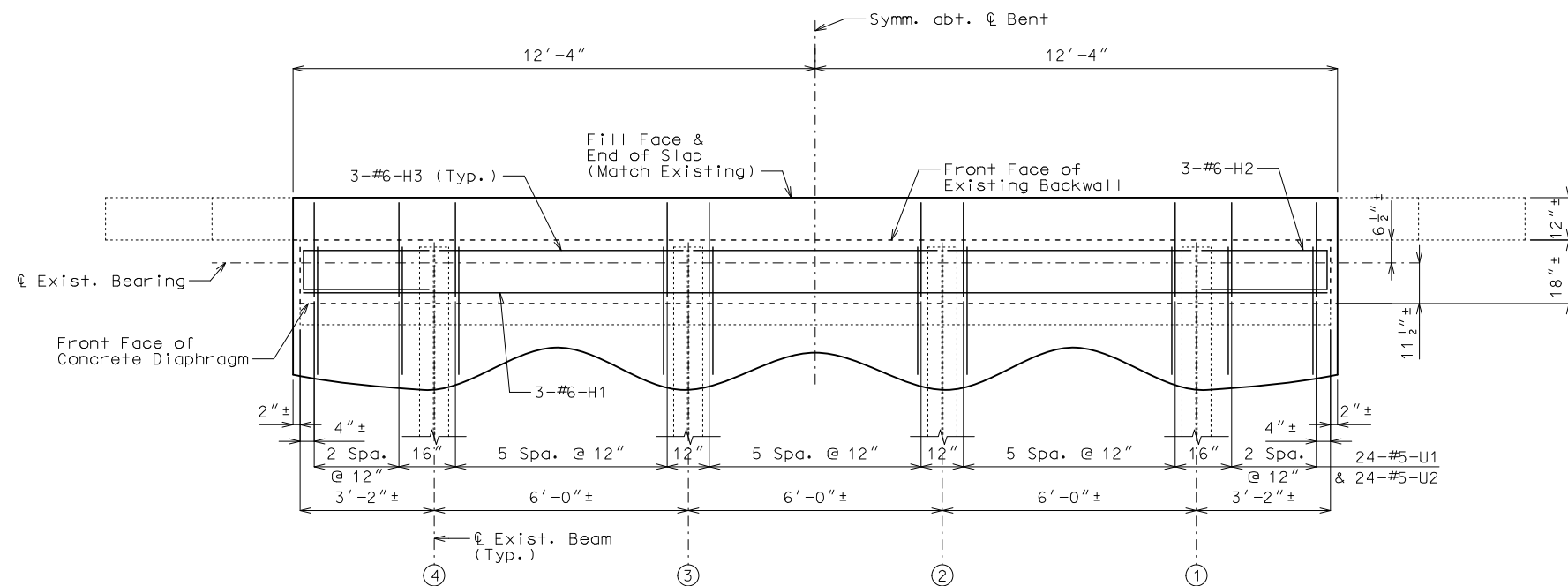
BRIDGE NO.
N05612

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SECTION NEAR END BENT

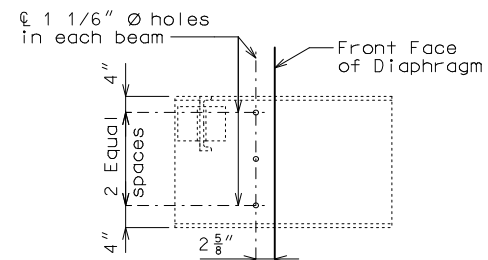
Existing end diaphragms and new U Bars not shown for clarity.



PLAN

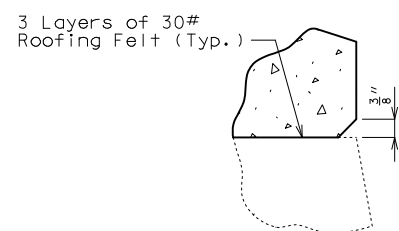
(End Bent No. 1 shown, End Bent No. 4 Similar)

Note: S bars not shown for clarity.

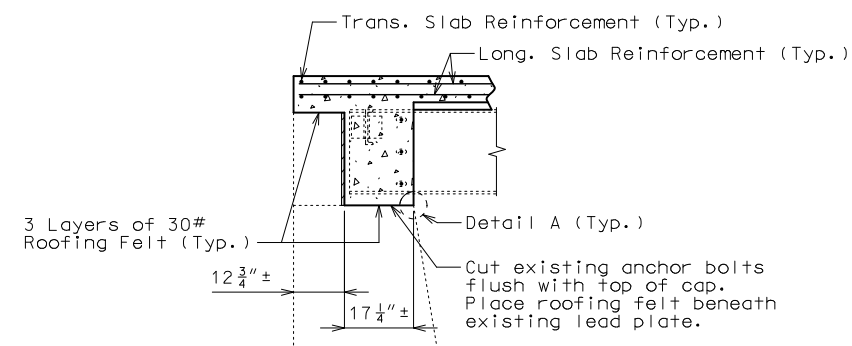


DETAIL OF WEB HOLES
AT END BENTS NO. 1 & 4

Cost of field drilling holes in existing webs will be considered completely covered by the contract unit price for Slab on Steel.

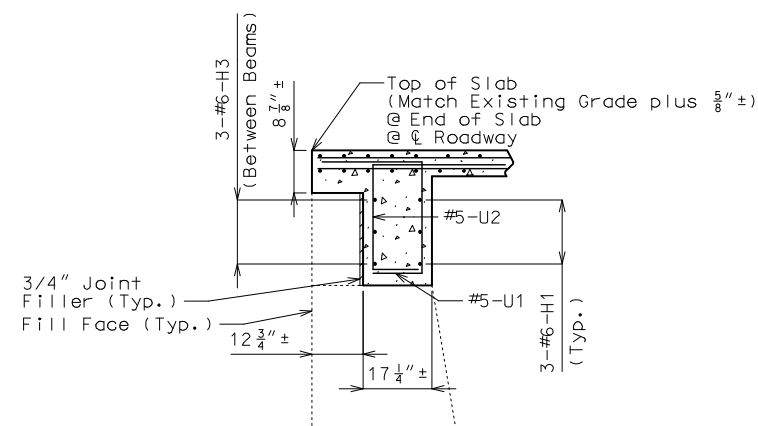


DETAIL A



SECTION A-A

(Normal to Roadway)



SECTION B-B

(Normal to Roadway)

Notes:

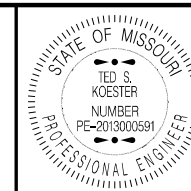
Cost of cutting anchor bolts and placing roofing felt will be considered completely covered by the contract unit price for Slab on Steel.

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

All concrete and reinforcement shown here is included in the Table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

Required temporary support load of 10 kips at each bearing is a service load without a factor of safety. It includes the dead load (without the slab) and a construction load of 50 psf applied to the deck area. Truck traffic is not included in the support load (See Special Provisions).

For details and reinforcement of Barrier not shown, see Sheets No. 6 & 7.



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ELECTRONICALLY.

DATE PREPARED
7/22/2021

ROUTE D STATE MO

DISTRICT BR SHEET NO. 3

COUNTY MERCER

JOB NO. J1S3279

CONTRACT ID.

PROJECT NO.

BRIDGE NO. N05612

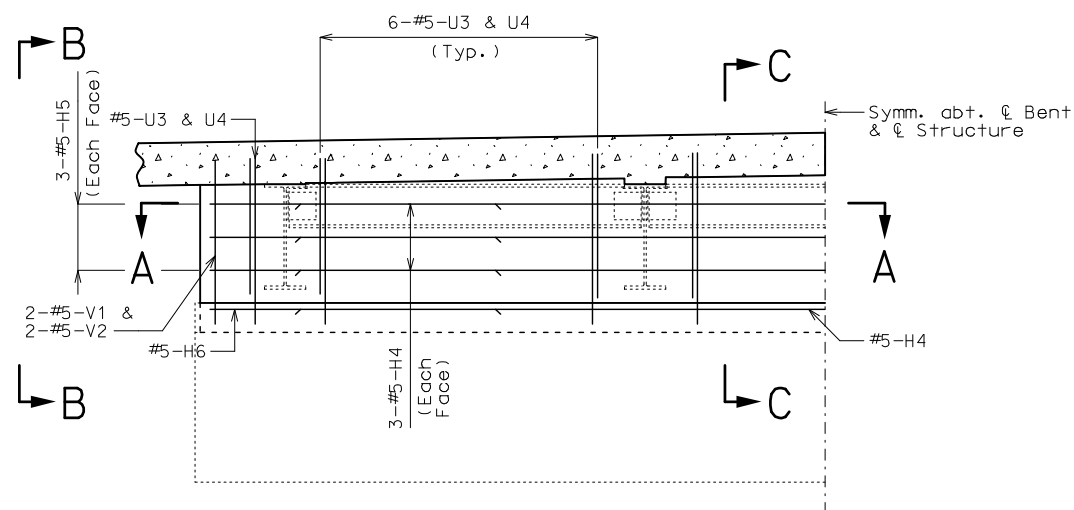
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

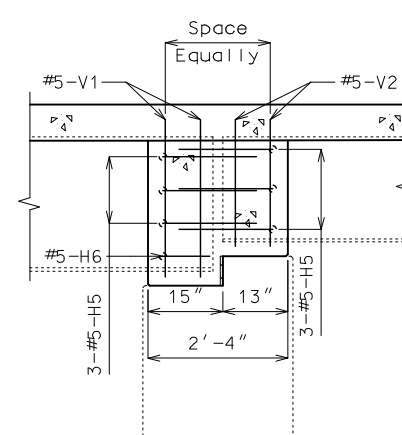
105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

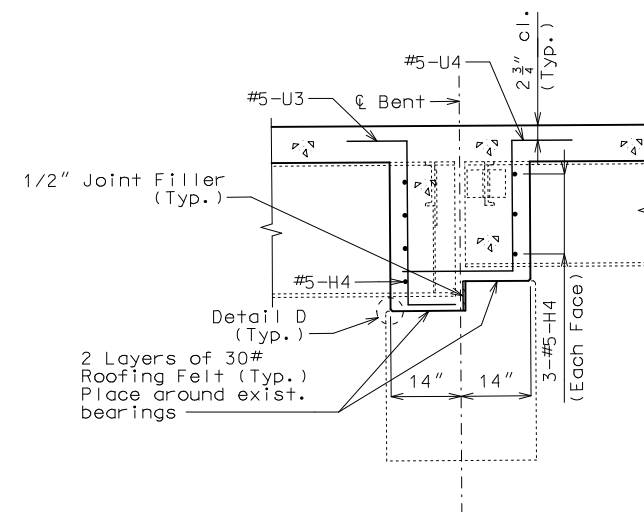
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



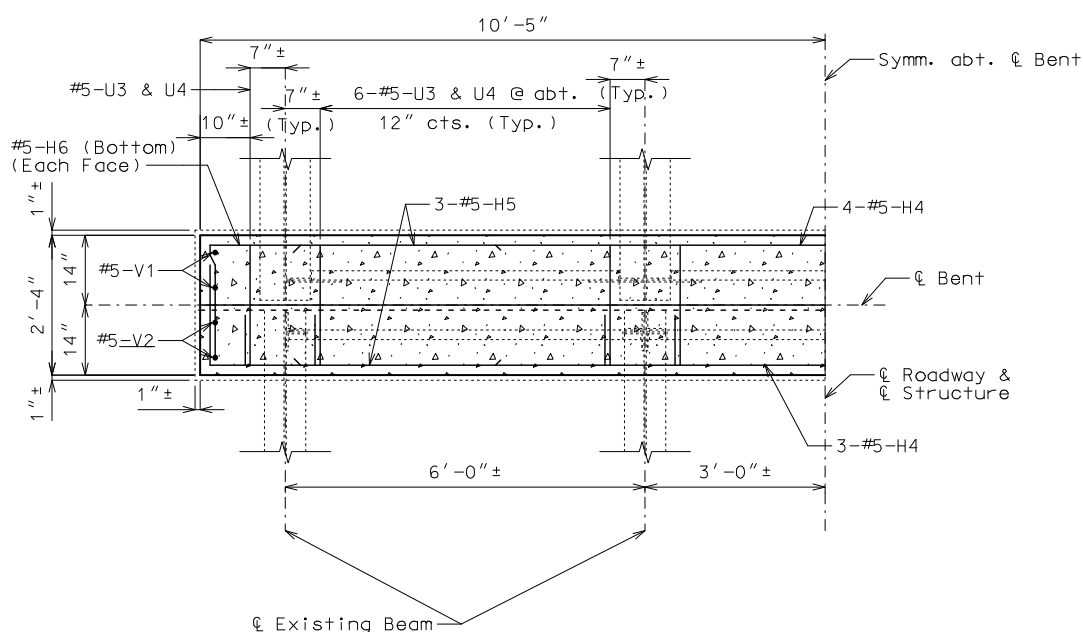
PART SECTION NEAR INTERMEDIATE BENT
(Int. Bent No. 2 shown, Int. Bent No. 3 similar)



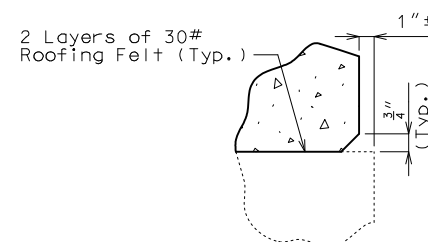
ELEVATION B-B



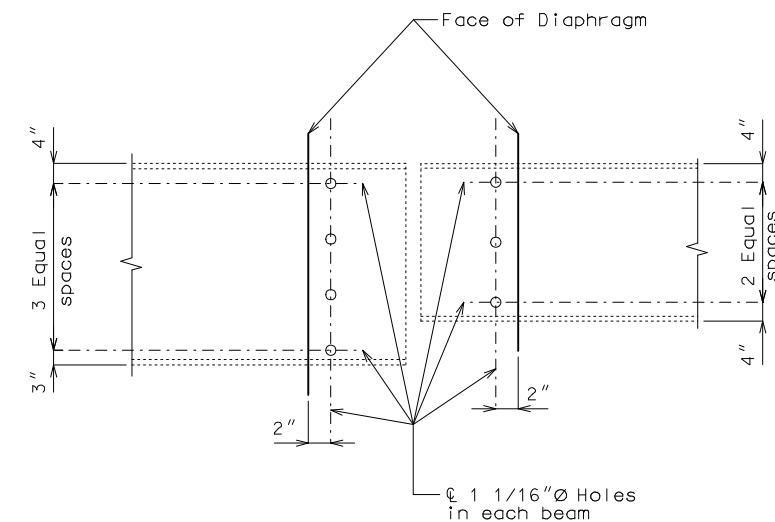
SECTION C-C



SECTION A-A



DETAIL D



DETAILS OF WEB HOLES
AT INTERMEDIATE BENTS

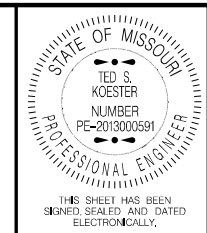
Notes:

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

Cost of field drilling holes in existing webs will be considered completely covered by the contract unit price for Slab on Steel.

All concrete and reinforcement in the intermediate bent diaphragms, complete in place, will be considered completely covered by the contract unit price for Slab on Steel and is included in the table of Estimated Quantities for Slab on Steel.

DETAILS OF CONCRETE DIAPHRAGMS AT INTERMEDIATE BENTS NO. 2 & 3



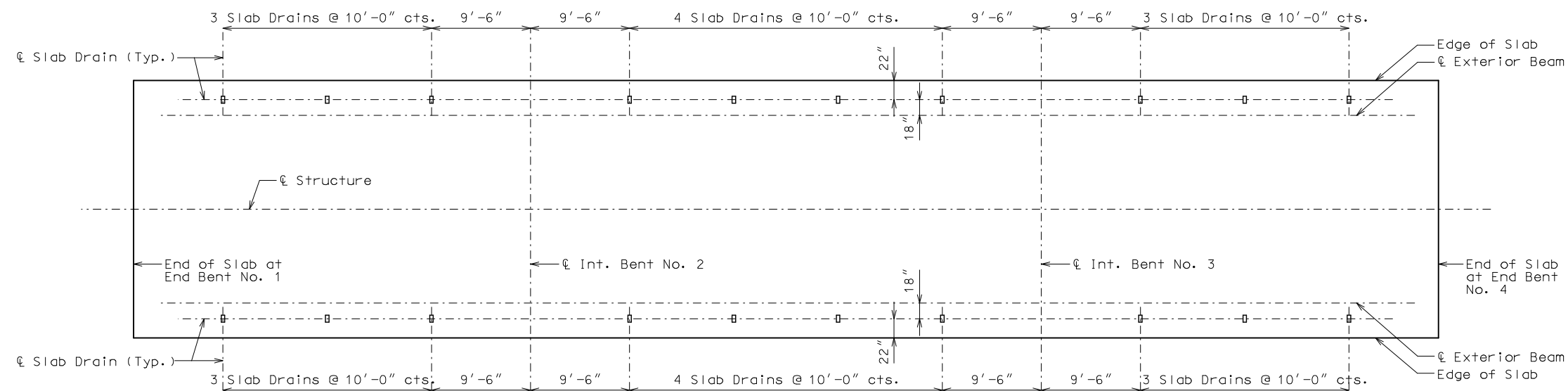
DATE PREPARED 7/22/2021	
ROUTE D	STATE MO
DISTRICT BR	SHEET NO. 4
COUNTY MERCER	
JOB NO. J1S3279	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N05612	

DATE	DESCRIPTION

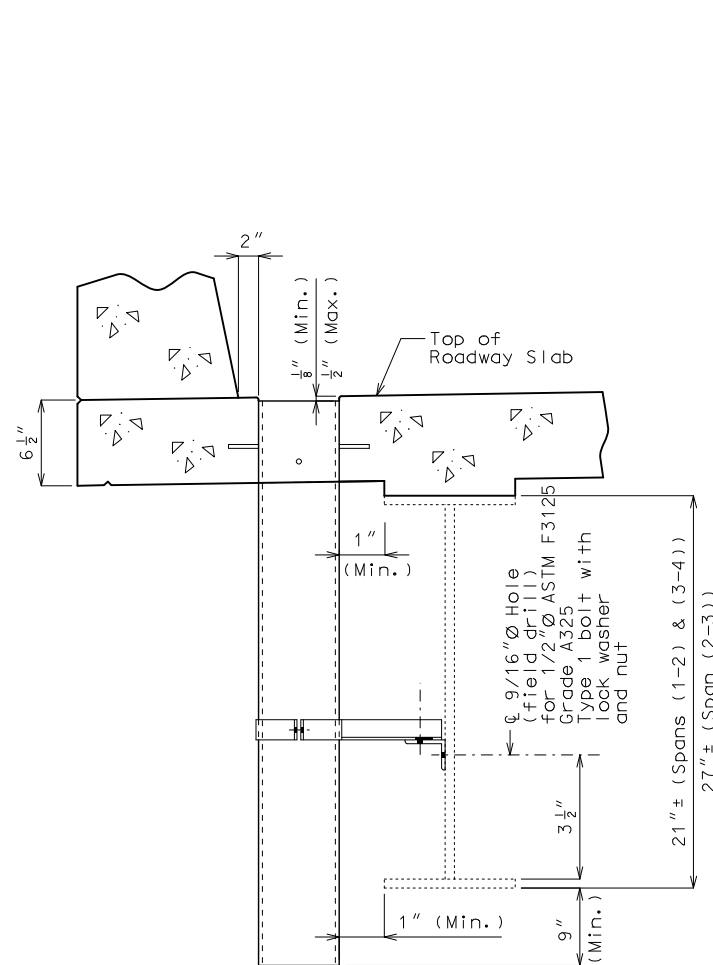
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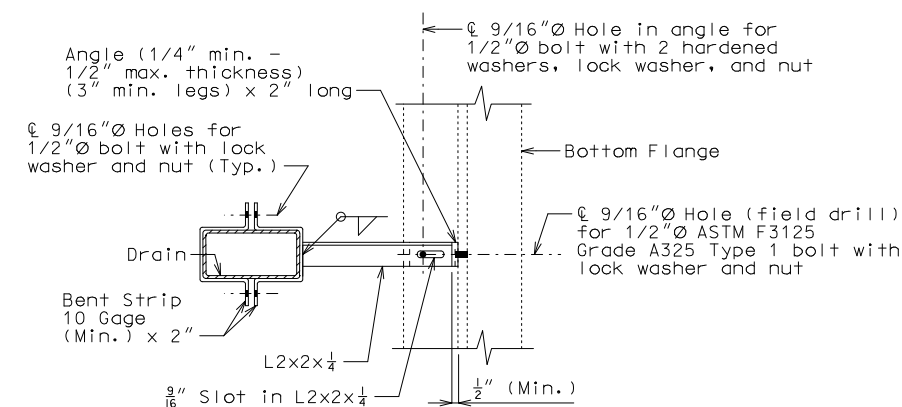
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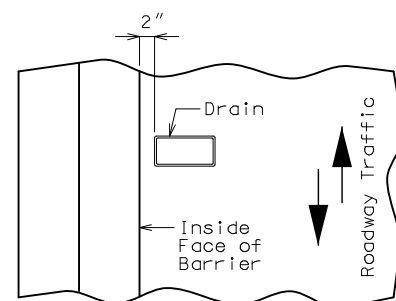
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

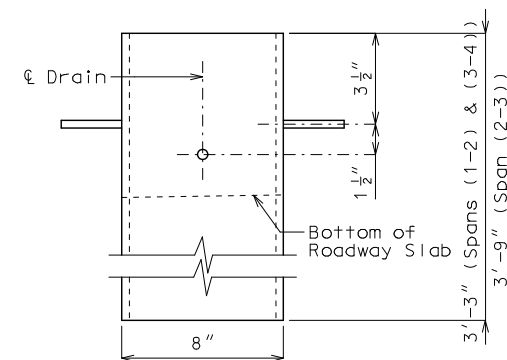


PART SECTION SHOWING BRACKET ASSEMBLY

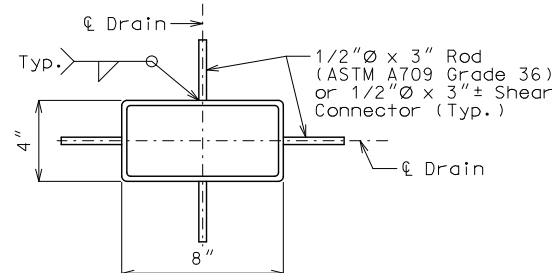


PART PLAN OF SLAB AT DRAIN

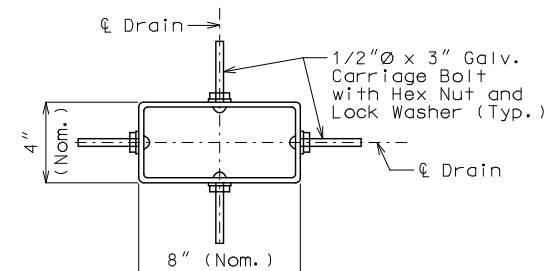
SLAB DRAINS



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

General Notes:

Contractor shall have the option to construct either steel or FRP slab drains. All drains shall be of same type.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

Locate drains in slab by dimensions shown
in Part Section Near Drain.

Reinforcing steel shall be shifted to clear drains.

The bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

All 1/2"Ø bolts shall be ASTM A307, except as shown.

Shop drawings will not be required for the slab drains and the bracket assembly.

The bolt hole for the bracket assembly attachment should be shifted to the minimum extent necessary to field drill in the existing web.

Notes for Steel Drain:

Slab drains may be fabricated of either 1/4" welded sheets of ASTM A709 Grade 36 steel or from 1/4" structural steel tubing ASTM A500 or A501.

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

Drains shall be machine filament-wound thermosetting resin tubing meeting the requirements of ASTM D2996 with the following exceptions:

Shape of drains shall be rectangular with outside nominal dimensions of 8" x 4".

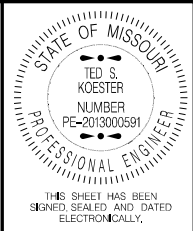
Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance.

The color of the slab drain shall be gray (Federal Standard 26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

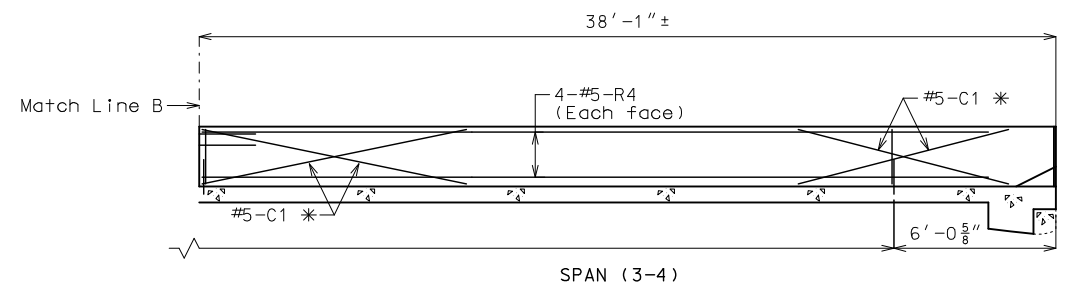
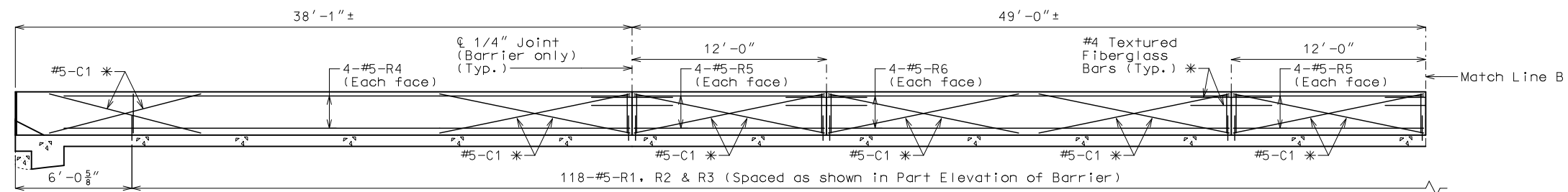
At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.



DATE PREPARED	
7/22/2021	
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JOB NO.	
J1S3279	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. N05612

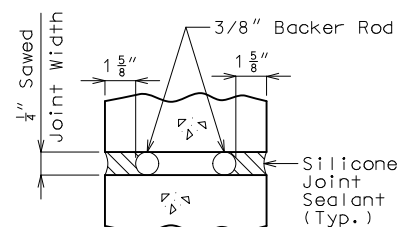
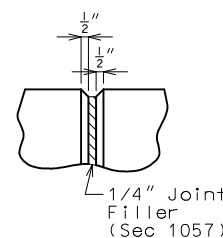
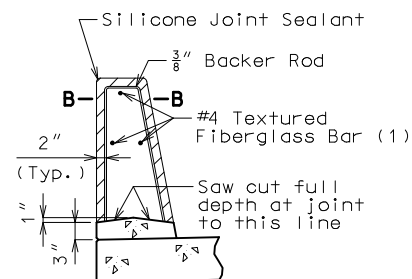
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ELEVATION OF BARRIER

(Left barrier shown, right barrier similar)

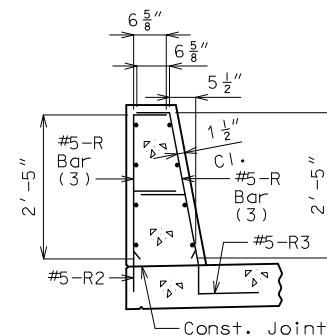
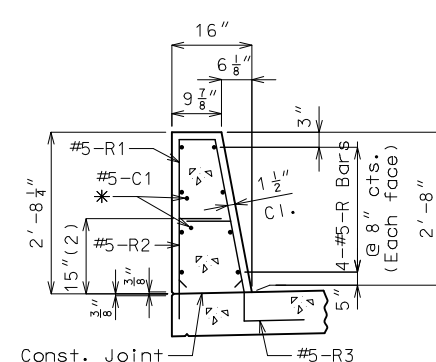
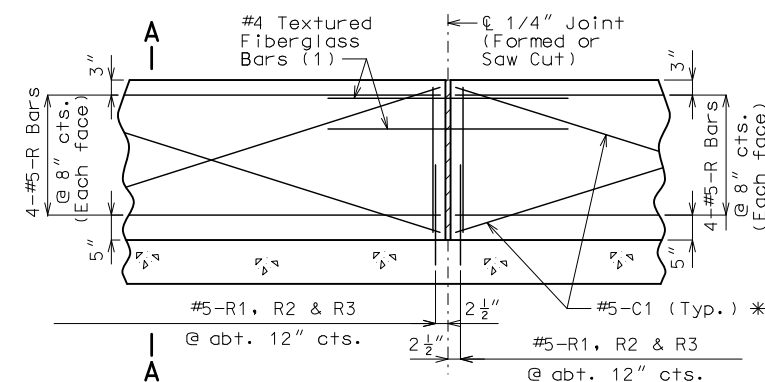
Longitudinal dimensions are horizontal.



SECTION THRU
SAW CUT JOINT

PART ELEVATION
AT FORMED JOINT

SECTION B-B



R-BAR PERMISSIBLE ALTERNATE SHAPE

- (3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar

General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type H Barrier per linear foot.

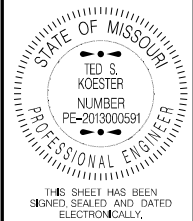
Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617-10 and in accordance with Sec 617. Delineator on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



DATE PREPARED
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JOB NO.

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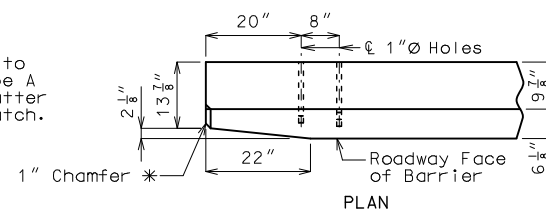
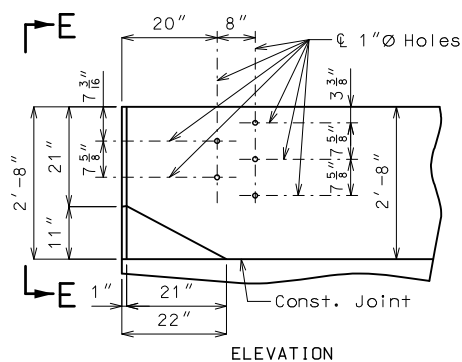
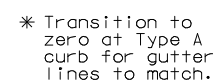
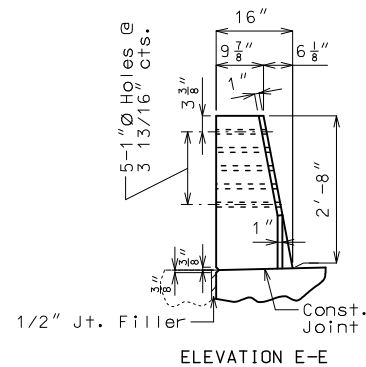
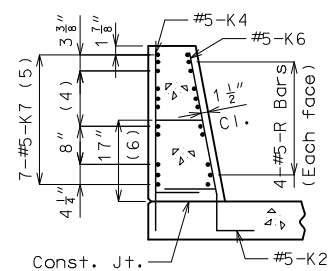
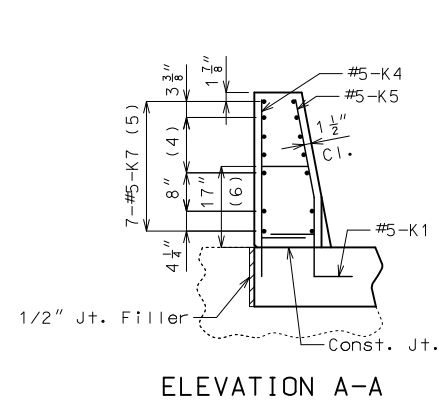
CONTRACT ID.

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		BRIDGE NO.	
		N05612	
DATE			
DESCRIPTION			

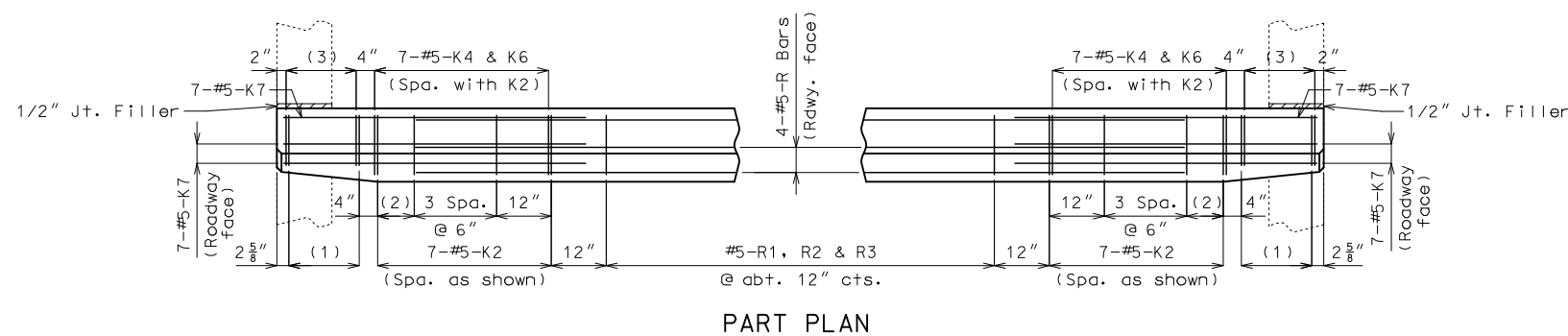
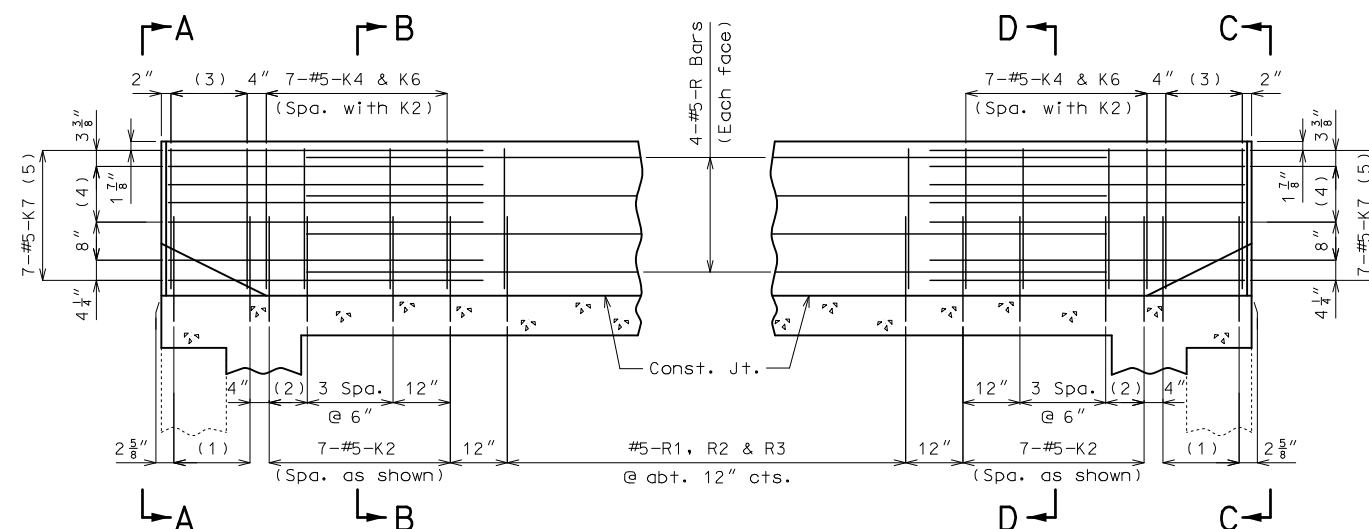
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



DETAILS OF GUARD RAIL ATTACHMENT



General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

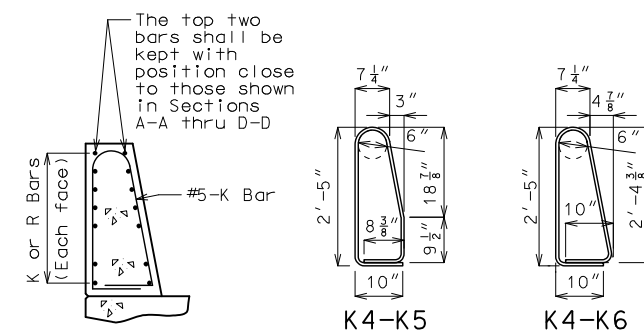
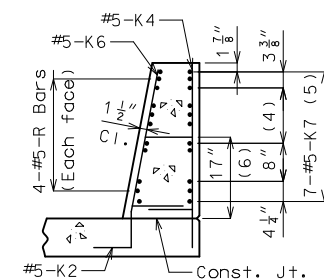
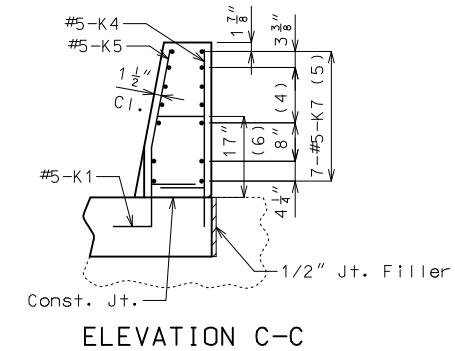
Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2".

Use a minimum lap of 3'-1" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

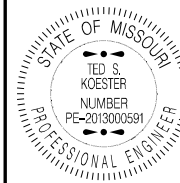
(Left barrier shown, right barrier similar)



PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY,

DATE PREPARED

ROUTE	STATE
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DISTRICT	SHEET NO.
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COUNTY

JOB NO.

0135213
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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105 WEST CAPITOL
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