

DATE PREPARED 4/23/2025	
ROUTE VAR.	STATE MO
DISTRICT NW	SHEET NO. 2
COUNTY VARIOUS	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



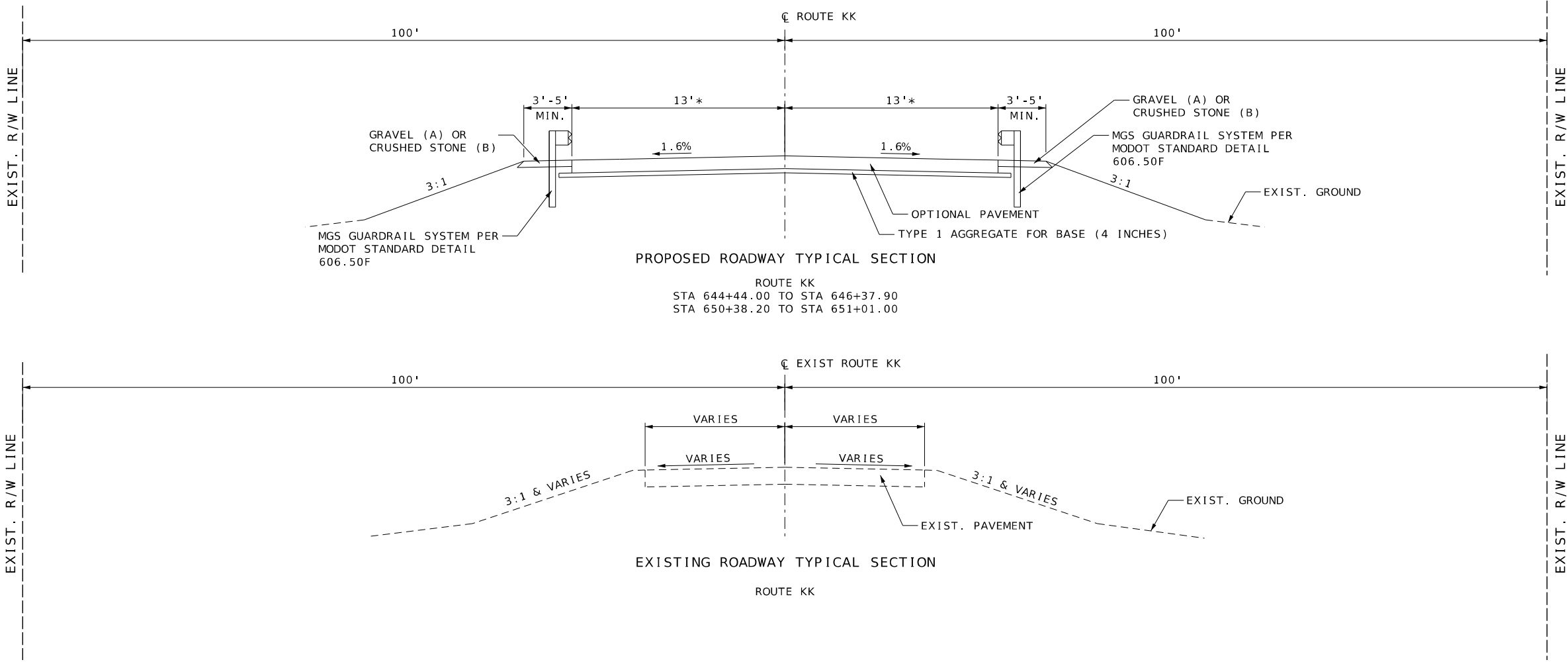
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-273-6636)



ENGINEERS & ARCHITECTS

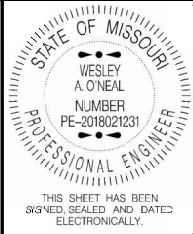
800 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
Fax (816) 942-3013  
Missouri Cert. of  
Authority #2003007599

NOTES:  
\* TRANSITION FROM MATCH EXISTING TO 13' WIDE  
STA. 644+44.00 TO STA. 645+11.00  
TRANSITION FROM 13' WIDE TO MATCH EXISTING  
STA. 650+38.20 TO STA 651+01.00



OPTIONAL PAVEMENT		
LOCATION	HMA DESIGN	PCCP DESIGN
MO ROUTE KK	10.0" HMA 2" BITUMINOUS PAVEMENT MIXTURE PG58-28H (BP-1) OVER 8" BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	8.5" PCCP 15 FT. JOINT SPACING, 1¼" DOWELS, EXTENDED SLAB

TYPICAL SECTIONS  
CHARITON - ROUTE KK  
SHEET 1 OF 4



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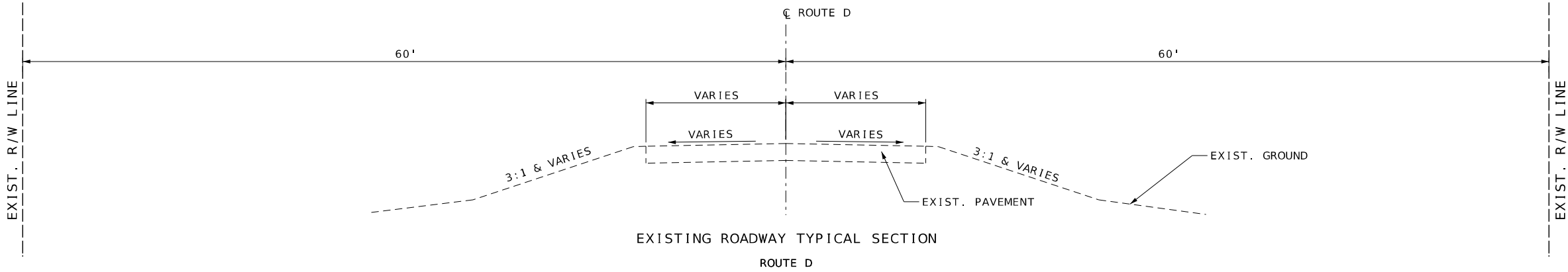
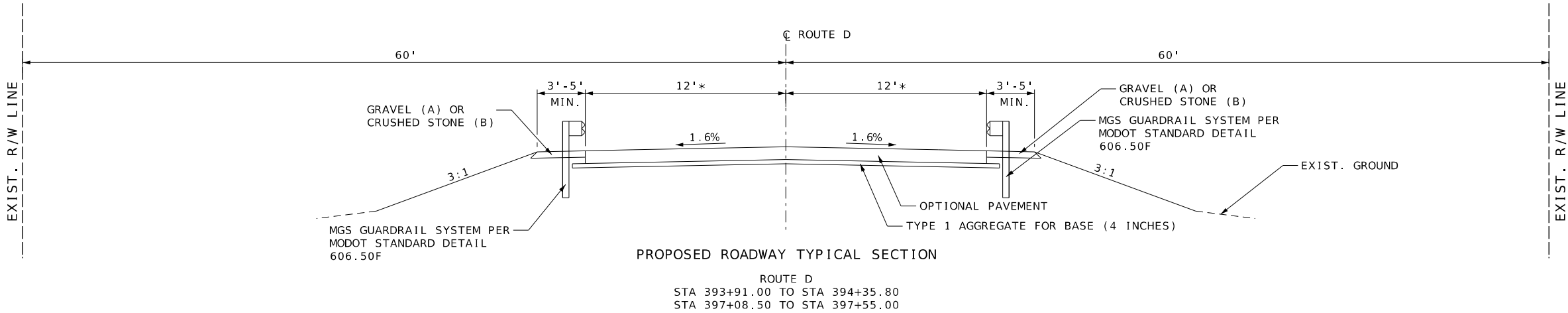
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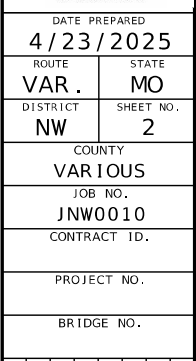
ENGINEERS & ARCHITECTS

NOTES:  
\* TRANSITION FROM MATCH EXISTING TO 12' WIDE  
STA. 393+91.00 TO STA. 394+35.80  
TRANSITION FROM 12' WIDE TO MATCH EXISTING  
STA. 397+08.50 TO STA 397+55.00



OPTIONAL PAVEMENT		
LOCATION	HMA DESIGN	PCCP DESIGN
MO ROUTE D	10.0" HMA 2" BITUMINOUS PAVEMENT MIXTURE PG58-28H (BP-1) OVER 8" BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	8.5" PCCP 15 FT. JOINT SPACING, 1 1/4" DOWELS, EXTENDED SLAB

TYPICAL SECTIONS  
LIVINGSTON - ROUTE D  
SHEET 2 OF 4

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MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

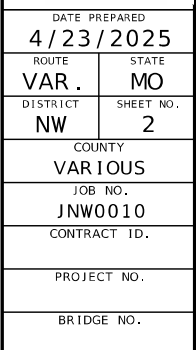
**MoDOT**

105 WEST CAPITOL  
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**WILSON**  
**& COMPANY**  
ENGINEERS & ARCHITECTS

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COMMISSION

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EXIST. R/W LINE

45'

ROUTE JJ

11'\*

1.6%

3:1

OPTIONAL PAVEMENT

TYPE 1 AGGREGATE FOR BASE (4 INCHES)

PROPOSED ROADWAY TYPICAL SECTION

ROUTE JJ

STA 123+65.00 TO STA 124+22.20

STA 125+92.90 TO STA 126+42.00

EXIST. R/W LINE

45'

ROUTE JJ

VARIES

VARIES

3:1 & VARIES

EXIST. PAVEMENT

EXISTING ROADWAY TYPICAL SECTION

ROUTE JJ

OPTIONAL PAVEMENT		
LOCATION	HMA DESIGN	PCCP DESIGN
MO ROUTE JJ	<p>10.0" HMA</p> <p>2" BITUMINOUS PAVEMENT MIXTURE PG58-28H (BP-1)</p> <p>OVER 8" BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)</p>	<p>8.5" PCCP</p> <p>15 FT. JOINT SPACING, 1¼" DOWELS, EXTENDED SLAB</p>

TYPICAL SECTIONS  
CARROLL - ROUTE JJ  
SHEET 4 OF 4



TEMPORARY EROSION CONTROL							
BEGIN STATION	END STATION	SIDE	SILT FENCE (LF)	ROCK DITCH CHECK (LF)	TYPE 2C EROSION CONTROL BLANKET (SY)	TYPE C BERM (LF)	SEDIMENT REMOVAL (CY)
A1889 - ROUTE KK							
644+40	646+67	RT	267				2.7
644+41	646+52	LT	214				2.1
650+13	652+03	RT	213				2.1
650+13	652+04	LT	200				2.0
646+07	646+41	RT			38		
645+56	646+45	LT			98		
651+13	652+00	RT			92		
651+64	652+04	LT			36		
TOTAL			894		264		9
L0548 - ROUTE D							
392+62	394+54	RT	197				2.0
392+59	393+15	LT	56				0.6
397+00	398+92	RT	199				2.0
394+22		LT		113			1.0
397+47		LT		113			1.0
392+62	394+36	RT			197		
393+19	394+36	LT			458		
397+08	398+26	RT			229		
397+08	398+87	LT			581		
394+31	394+83	RT/LT				159	10.0
396+62	397+31	RT/LT				182	10.0
TOTAL			452	226	1465	341	27
N0727 - ROUTE B							
422+22	423+17	RT	98				1.0
422+20	423+14	LT	102				1.0
424+34	424+98	RT	71				0.7
424+35	424+98	LT	75				0.8
422+22	423+13	RT			58		
422+22	423+13	LT			43		
424+36	424+96	RT			22		
424+36	424+96	LT			30		
TOTAL			346		153		4
N0826 - ROUTE JJ							
123+65	124+51	RT	102				1.0
123+65	124+46	LT	91				0.9
125+68	125+68	RT	98				1.0
125+64	125+64	LT	104				1.0
123+65	124+42	RT			38		
123+64	124+42	LT			45		
125+73	126+42	RT			35		
125+73	126+43	LT			46		
TOTAL			395		164		4
PAY TOTAL			2087	226	2046	341	44

SEEDING AND MULCHING			
BEGIN STATION	END STATION	COOL SEASON MIXTURES (AC)	MULCHING (AC)
A1889 - ROUTE KK			
644+44	651+01	0.1	0.1
TOTAL		0.1	0.1
L0548 - ROUTE D			
393+91	397+55	0.3	0.3
TOTAL		0.3	0.3
N0727 - ROUTE B			
422+22	424+96	0.1	0.1
TOTAL		0.1	0.1
N0826 - ROUTE JJ			
123+65	126+42	0.1	0.1
TOTAL		0.1	0.1
PAY TOTAL		0.6	0.6

PAVEMENT MARKING					
BEGIN STATION	END STATION	SIDE	PERM. 4" YELLOW CLASS 1 PAVEMENT MARKING PAINT TYPE P BEADS (LF)	REMOVAL PERM. 4" PAINT (LF)	
A1889 - ROUTE KK					
643+94	651+51	CL	1514		
TOTAL			1514		
L0548 - ROUTE D					
393+41	398+05	CL	928		
TOTAL			928		
N0727 - ROUTE B					
419+67	426+87	CL	1440		
419+67	426+87	RT		255	
419+67	426+87	LT		255	
TOTAL			1440	510	
N0826 - ROUTE JJ					
122+36	127+57	CL	1042		
122+36	127+57	RT		80	
122+36	127+57	LT		80	
TOTAL			1042	160	
PAY TOTAL			4924	670	

PAVEMENT						
BEGIN STATION	END STATION	SIDE	TYPE 1 AGGREGATE BASE (4") (SY)	OPTIONAL PAVEMENT (SY)	GRAVEL (A) OR CRUSHED STONE (B) (SY)	REMARKS
A1889 - ROUTE KK						
644+44	646+38	CL	541	541		
650+38	651+01	CL	176	162		
645+12	645+94	LT			141	SALEM AVE.
645+67	646+21	RT			68	PRIVATE DR.
646+06	646+62	RT			81	GUARDRAIL
645+69	646+55	LT			94	GUARDRAIL
650+23	651+12	RT			90	GUARDRAIL
650+16	651+66	LT			108	GUARDRAIL
TOTAL			717	703	582	
L0548 - ROUTE D						
393+91	394+36	CL	119	109		
396+89	397+55	CL	124	113		
392+92	394+56	RT			111	GUARDRAIL
393+55	394+56	LT			64	GUARDRAIL
396+89	397+90	RT			74	GUARDRAIL
396+89	398+53	LT			97	GUARDRAIL
TOTAL			243	222	346	
N0727 - ROUTE B						
422+22	422+93	CL	166	166		
424+56	424+96	CL	101	92		
TOTAL			267	258		
N0826 - ROUTE JJ						
123+65	124+22	CL	145	132		
125+93	126+42	CL	121	110		
TOTAL			266	242		
PAY TOTAL			1493	1425	928	

MOBILIZATION	
1	LUMP SUM
CONTRACTOR FURNISHED SURVEYING & STAKING	
1	LUMP SUM

FLOWABLE BACKFILL			
BEGIN STATION	END STATION	QTY (CY)	REMARKS
L0548 - ROUTE D			
396+85	396+89	2	END BENT 4
TOTAL		2	
PAY TOTAL		2	

EARTHWORK			
BEGIN STATION	END STATION	SIDE	LINEAR GRADING CLASS 2 (STA)
A1889 - ROUTE KK			
644+44	646+61	LT/RT	4.3
650+16	651+01	LT/RT	1.7
TOTAL			6
L0548 - ROUTE D			
393+91	394+56	LT/RT	1.3
396+89	397+55	LT/RT	1.3
TOTAL			2.6
N0727 - ROUTE B			
422+22	423+13	LT/RT	1.8
424+36	424+96	LT/RT	1.2
TOTAL			3
N0826 - ROUTE JJ			
123+65	124+42	LT/RT	1.5
125+73	126+42	LT/RT	1.4
TOTAL			2.9
PAY TOTAL			14.5

SUMMARY OF QUANTITIES  
SHEET 2 OF 5



DATE PREPARED  
**4/23/2025**  
ROUTE  
**VAR.**  
DISTRICT  
**NW**  
STATE  
**MO**  
SHEET NO.  
**3**  
COUNTY  
**VARIOUS**  
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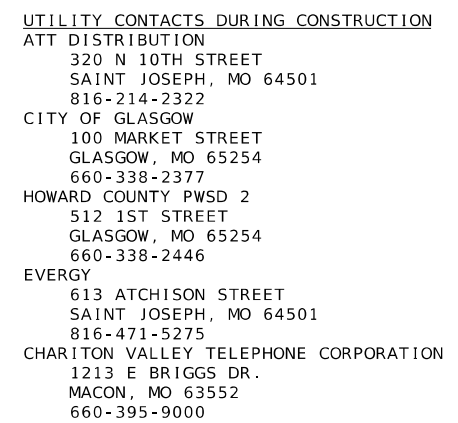
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[illegible]



WARNING SIGNS									GUIDE SIGNS									ITEM NUMBER		TOTAL QTY		EFFECTIVE: 07-01-2025
SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION	SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION	ITEM NUMBER	TOTAL QTY	DESCRIPTION		
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)	E05-1	36X48	12.00						GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)		
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)	E05-2	48X36	12.00						EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)		
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)	E05-2a	48X36	12.00						EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)		
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)	GO20-1	18X24	10.00						ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)		
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)	GO20-2	48X24	8.00						END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)		
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)	GO20-4	36X18	4.50						PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)		
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)	GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)		
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)	GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL		
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)		
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00						END DETOUR	6123001		TRUCK MOUNTED ATTENUATOR (TMA)		
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.00						DETOUR (LEFT)	6161008		ADVANCED WARNING RAIL SYSTEM		
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-9R	48X36	12.00						DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)		
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00						STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)		
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)		
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)	6161025		CHANNELIZER (TRIM LINE)		
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	REGULATORY SIGNS									6161030	32	TYPE III MOVEABLE BARRICADE		
WO1-8	18X24	3.00						CHEVRON (SYMBOL)	R1-1	48X48	13.25						STOP	6161033		DIRECTION INDICATOR BARRICADE		
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.	6.93						YIELD	6161040		FLASHING ARROW PANEL		
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER		
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161055		SEQUENTIAL FLASHING WARNING LIGHT		
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00						SPEED LIMIT XX	6161070		TUBULAR MARKER		
WO3-4	48X48	16.00						BE PREPARED TO STOP	R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM		
WO3-5	48X48	16.00						SPEED LIMIT AHEAD	R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)	6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED		
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00						NO TURNS			CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED		
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00						NO U-TURN (SYMBOL)	6161098A		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED		
WO4-1aL	48X48	16.00						MERGE (LEFT)	R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT	6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED		
WO4-1aR	48X48	16.00						MERGE (RIGHT)	R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM		
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00						DO NOT PASS	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS		
WO5-3	48X48	16.00						ONE LANE BRIDGE	R4-2	36X48	12.00						PASS WITH CARE	6173600D		TEMPORARY TRAFFIC BARRIER		
WO5-5	48X48	16.00						NARROW LANES	R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)			TEMPORARY TRAFFIC BARRIER		
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)	6173602B		CONTRACTOR FURNISHED/RETAINED		
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25						DO NOT ENTER			TEMPORARY TRAFFIC BARRIER		
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00						WRONG WAY	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED		
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION		
WO8-1	48X48	16.00						BUMP	R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER		
WO8-2	48X48	16.00						DIP	R6-2L	24X30	5.00						ONE WAY (LEFT)	6176000B		TEMPORARY TRAFFIC BARRIER		
WO8-3	48X48	16.00						PAVEMENT ENDS	R6-2R	24X30	5.00						ONE WAY (RIGHT)			COMMISSION FURNISHED/RETAINED		
WO8-4	48X48	16.00						SOFT SHOULDER	R9-9	24X12	2.00						SIDEWALK CLOSED	6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION		
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)	R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE			COMMISSION FURNISHED/RETAINED		
WO8-6	48X48	16.00						TRUCK CROSSING											SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE	6208064A		TEMPORARY RAISED PAVEMENT MARKER
WO8-6c	48X48	16.00						TRUCK ENTRANCE	R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE	9029400		TEMPORARY TRAFFIC SIGNALS		
WO8-7	36X36	9.00						LOOSE GRAVEL												9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL	R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)					
WO8-9	48X48	16.00						LOW SHOULDER	R11-2	48X30	10.00	9	90.00			63	ROAD CLOSED					
WO8-11	48X48	16.00						UNEVEN LANES	R11-3a	60X30	12.50	6	75.00			61	ROAD CLOSED XX MILES AHEAD					
WO8-12	48X48	16.00						NO CENTER LINE												61a	LOCAL TRAFFIC ONLY	
WO8-15	48X48	16.00						GROOVED PAVEMENT	R11-4	60X30	12.50	6	75.00			62	ROAD CLOSED TO THRU TRAFFIC					
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)	CONST-3A	60X48	20.00						FINE SIGN					
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)	CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)					
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)	MISCELLANEOUS SIGNS													
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)	CONST-5	48X36	12.00						POINT OF PRESENCE					
W10-1	42RND.	9.62						RAILROAD CROSSING	CONST-5	96X48	32.00						POINT OF PRESENCE					
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)	CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE					
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)														
WO12-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)														
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)														
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD														
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD														
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)														
WO16-2	30X24	5.00						XXX FEET (PLAQUE)														



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
4/23/2025

ROUTE	STATE
VAR.	MO

VAR.	MO
DISTRICT	SHEET NO.
NW	4

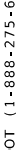
NW	4
COUNTY	
VARIOUS	

VARIOUS
JOB NO.
JNW0010

JNW0010
CONTRACT ID.

PROJECT NO.
-------------

BRIDGE NO.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

**MoDOT**

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

300 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

ALL BEARINGS BASED ON LDP MO LINNEUS-  
2023 FT COORDINATE SYSTEM

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

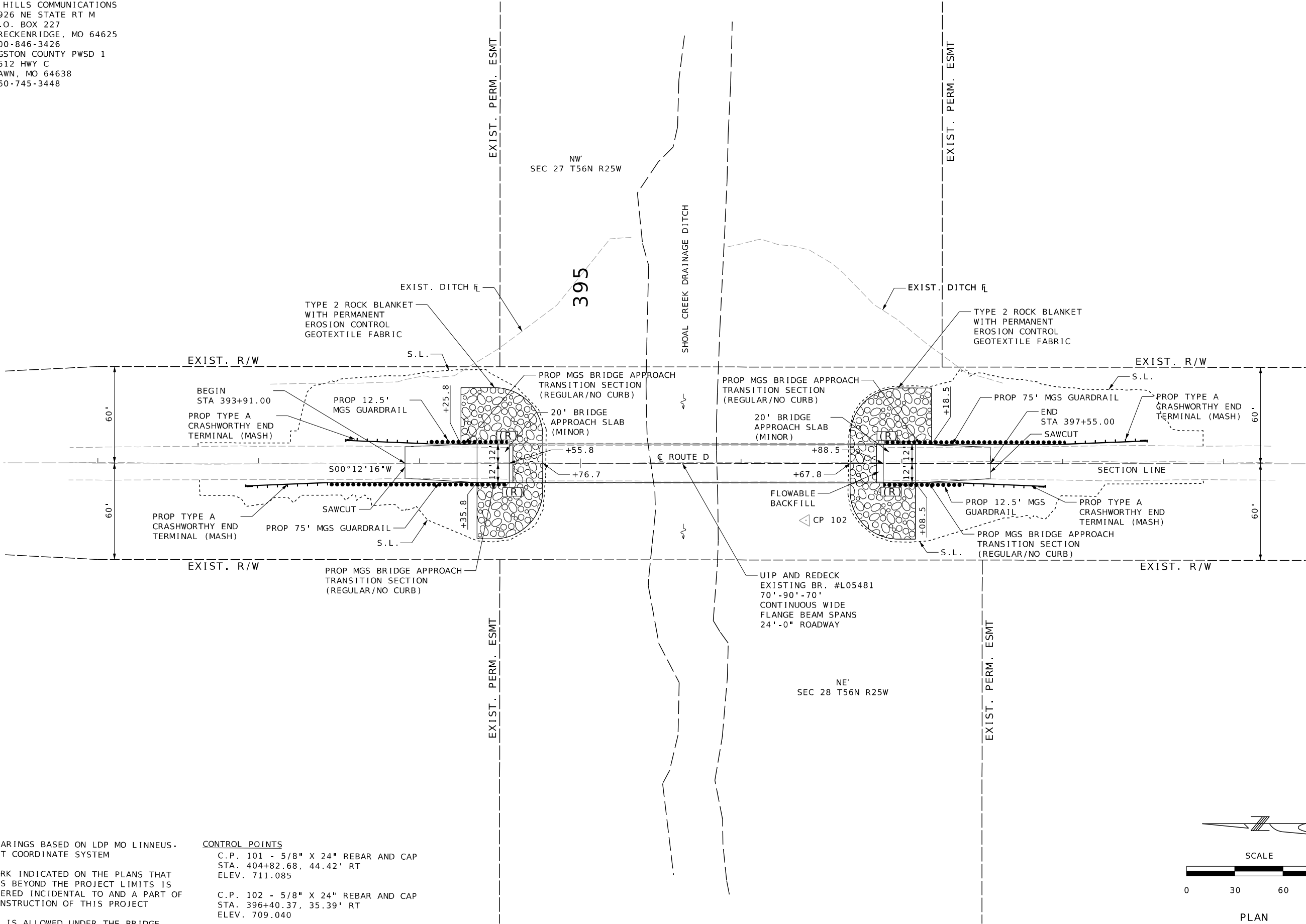
CONTROL POINTS

C. P. 101 - 5/8" X 24" REBAR AND CAP  
STA. 649+60.76, 93.61' LT  
ELEV. 613.053

C. P. 102 - 5/8" X 24" REBAR AND CAP  
STA. 647+42.48, 79.97' RT  
ELEV. 615.427

PLAN  
CHARITON - ROUTE KK  
SHEET 1 OF 4

UTILITY CONTACTS DURING CONSTRUCTION  
GREEN HILLS COMMUNICATIONS  
7926 NE STATE RT M  
P.O. BOX 227  
BRECKENRIDGE, MO 64625  
800-846-3426  
LIVINGSTON COUNTY PWSO 1  
7512 HWY C  
DAWN, MO 64638  
660-745-3448



ALL BEARINGS BASED ON LDP MO LINNEUS-  
2023 FT COORDINATE SYSTEM

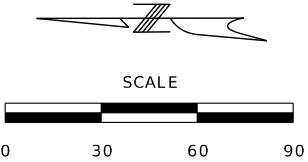
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THE CONSTRUCTION OF THIS PROJECT

ACCESS IS ALLOWED UNDER THE BRIDGE

CONTROL POINTS

C.P. 101 - 5/8" X 24" REBAR AND CAP  
STA. 404+82.68, 44.42' RT  
ELEV. 711.085

C.P. 102 - 5/8" X 24" REBAR AND CAP  
STA. 396+40.37, 35.39' RT  
ELEV. 709.040



PLAN  
LIVINGSTON - ROUTE D  
SHEET 2 OF 4



THIS SHEET HAS BEEN  
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DATE PREPARED  
4/23/2025

ROUTE STATE  
VAR. MO  
DISTRICT SHEET NO.  
NW 5

COUNTY  
VARIOUS  
JOB NO.  
JNW0010  
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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  
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Authority #2003007599

**WILSON  
& COMPANY**  
ENGINEERS & ARCHITECTS

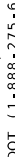
ALL BEARINGS BASED ON LDP MO LINNEUS-  
2023 FT COORDINATE SYSTEM

ANY WORK INDICATED ON THE PLANS THAT  
EXTENDS BEYOND THE PROJECT LIMITS IS  
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THE CONSTRUCTION OF THIS PROJECT

ACCESS IS ALLOWED UNDER THE BRIDGE

C.P. 101 - 5/8" X 24" REBAR WITH CAP  
STA. 424+27.52, 31.46' RT  
ELEV. 651.207

C.P. 102 - 5/8" X 24" REBAR WITH CAP  
STA. 422+09.75, 37.07' LT  
ELEV. 649.040

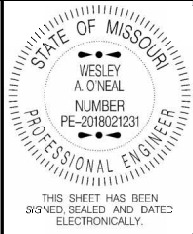


MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

**WILSON**  
**& COMPANY**  
ENGINEERS & ARCHITECTS

UTILITY CONTACTS DURING CONSTRUCTION  
GREEN HILLS COMMUNICATIONS  
7926 NE STATE RT M  
P.O. BOX 227  
BRECKENRIDGE, MO 64625  
800-846-3426  
FARMERS ELECTRIC COOP  
201 US-36 BUS,  
CHILLICOTHE, MO 64601  
800-927-5334



DATE PREPARED 4/23/2025	
ROUTE VAR.	STATE MO
DISTRICT NW	SHEET NO. 7
COUNTY VARIOUS	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-273-6636)

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ALL BEARINGS BASED ON LDP MO LINNEUS-  
2023 FT COORDINATE SYSTEM

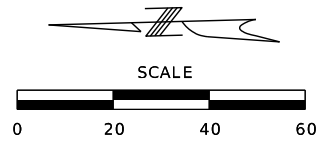
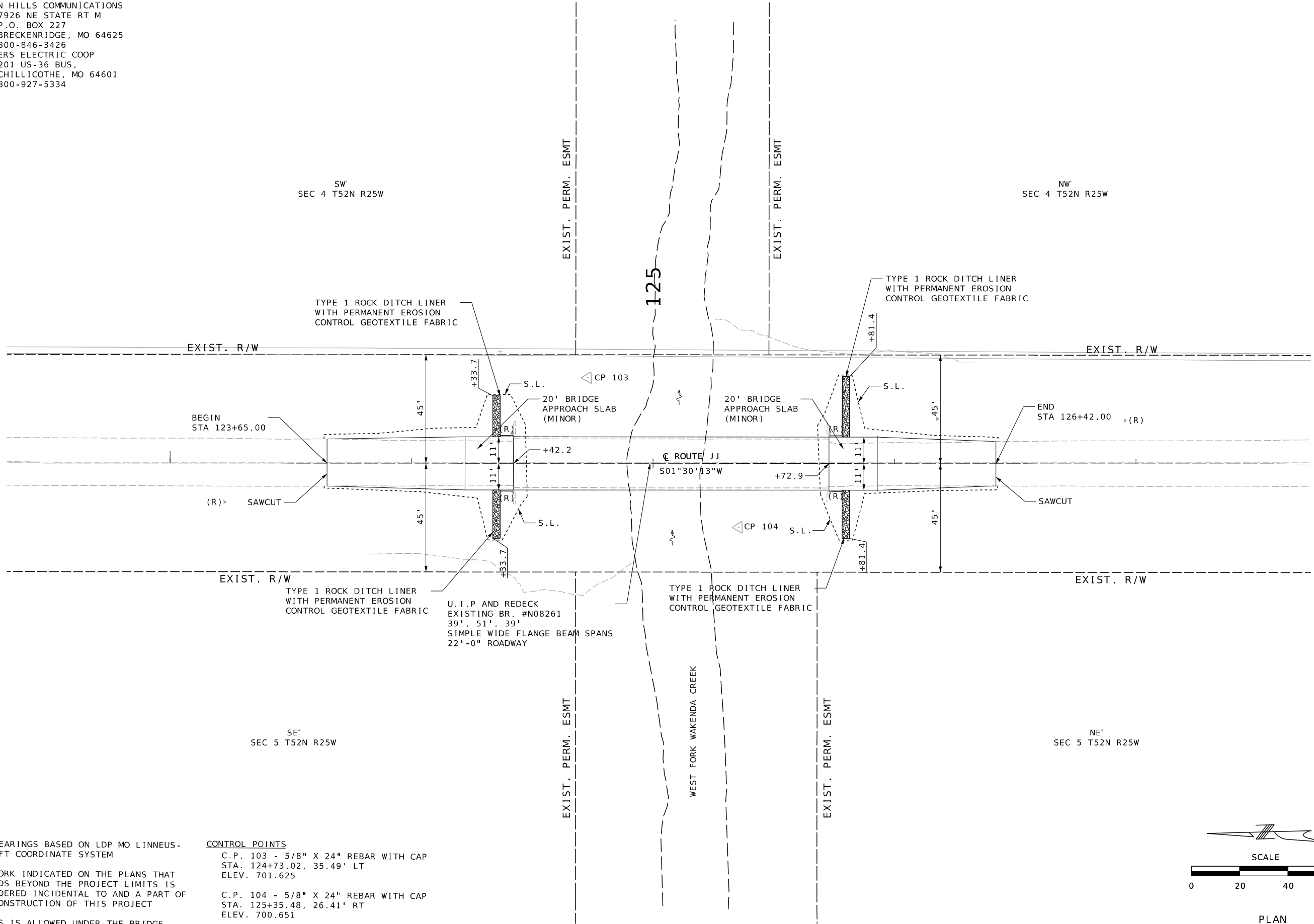
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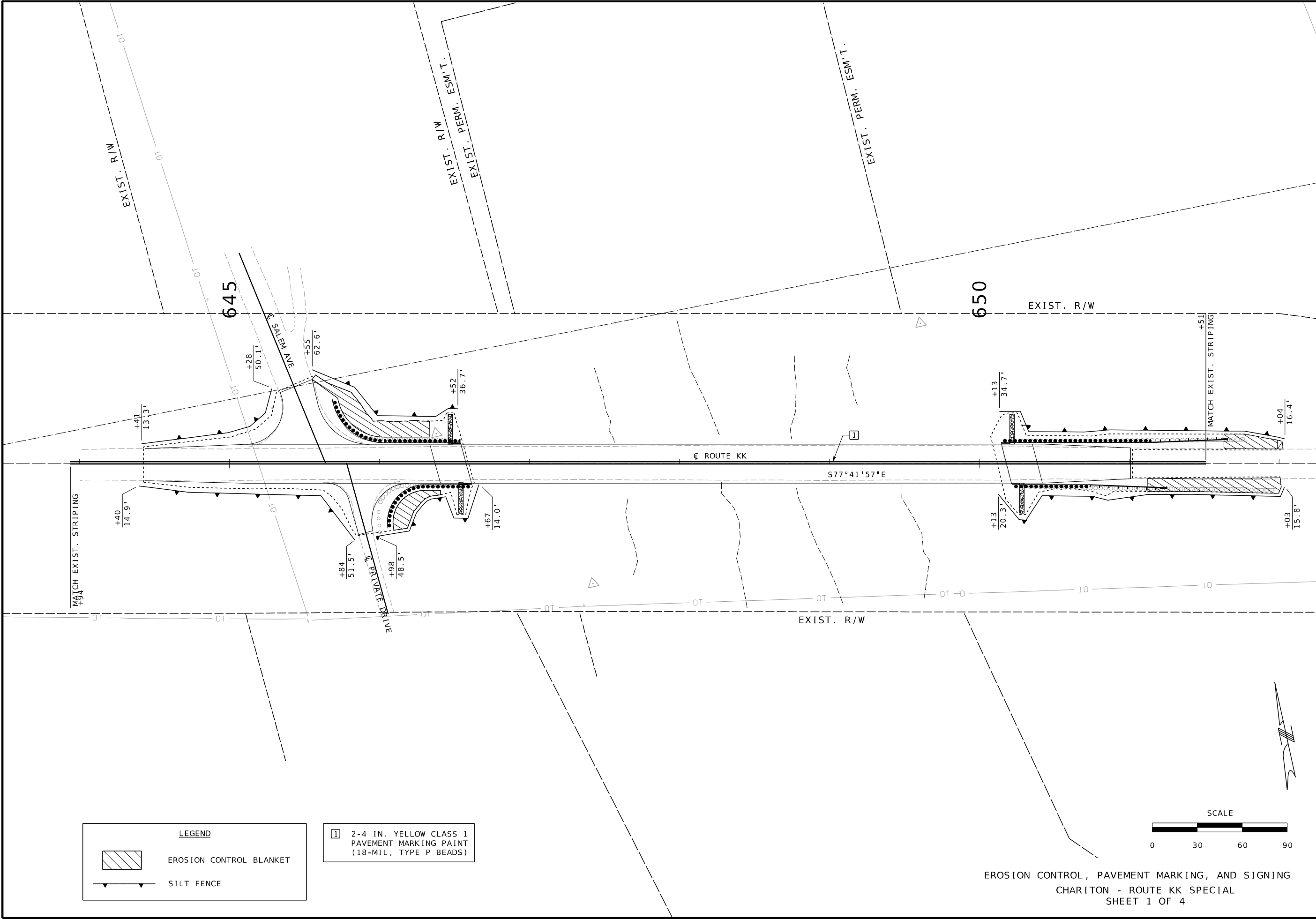
CONTROL POINTS

C.P. 103 - 5/8" X 24" REBAR WITH CAP  
STA. 124+73.02, 35.49' LT  
ELEV. 701.625

C.P. 104 - 5/8" X 24" REBAR WITH CAP  
STA. 125+35.48, 26.41' RT  
ELEV. 700.651



PLAN  
CARROLL - ROUTE JJ  
SHEET 4 OF 4



STATE OF MISSOURI

WESLEY A. O'NEAL

NUMBER

PE-2018021231

PROFESSIONAL ENGINEER

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4/23/2025

ROUTE

VAR.

STATE

MO

DISTRICT

NW

SHEET NO.

8

COUNTY

VARIOUS

JOB NO.

JNW0010

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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Kansas City, MO 64131  
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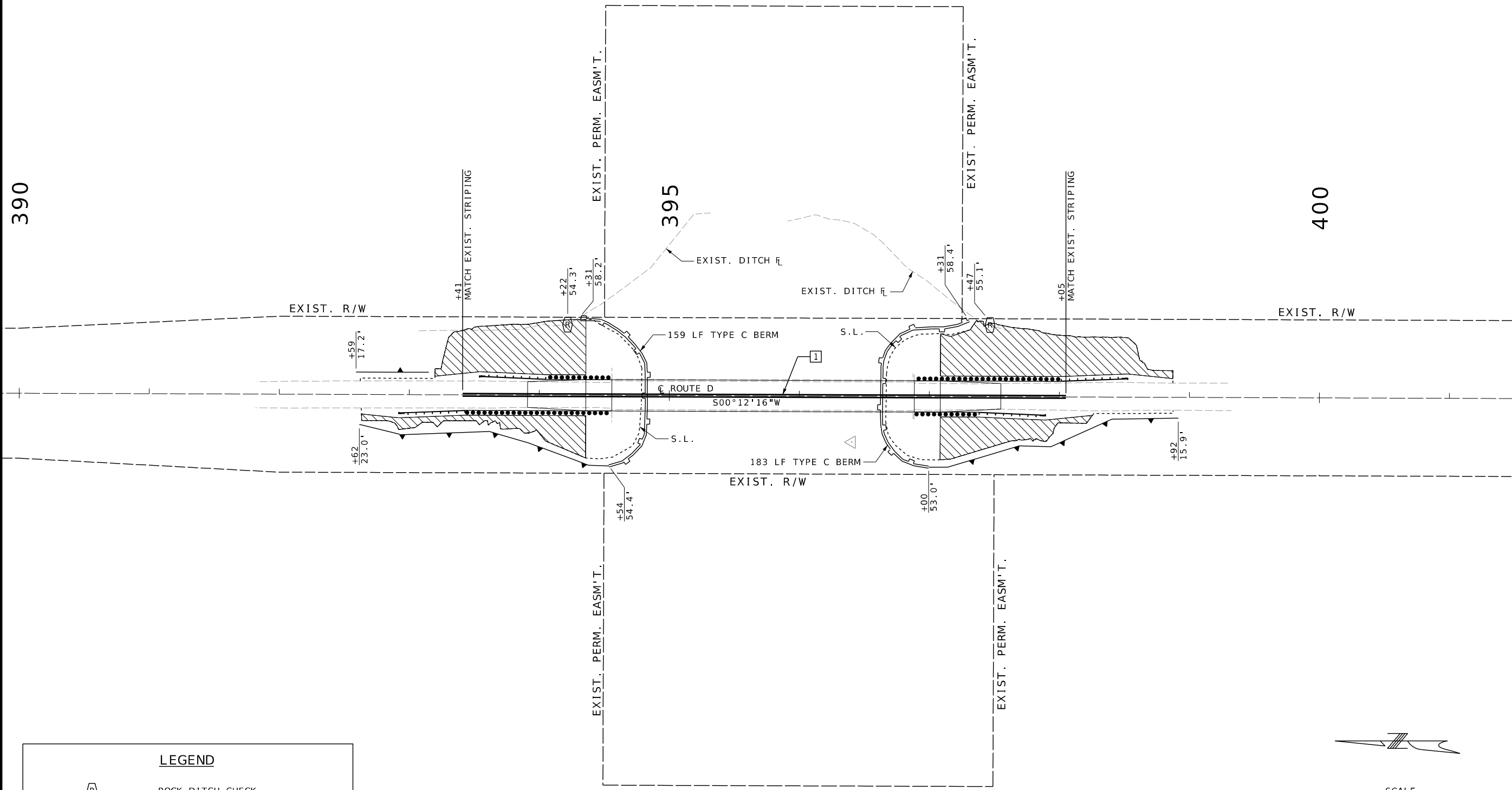
**WILSON & COMPANY**  
ENGINEERS & ARCHITECTS

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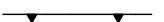

390

395

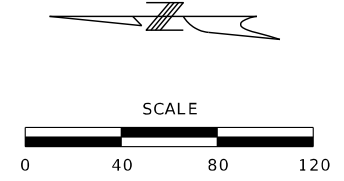
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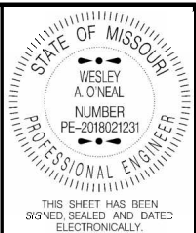
LEGEND

-  ROCK DITCH CHECK
-  EROSION CONTROL BLANKET
-  SILT FENCE
-  SILT FENCE

1 2-4 IN. YELLOW CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS)




EROSION CONTROL, PAVEMENT MARKING, AND SIGNING  
LIVINGSTON - ROUTE D SPECIAL  
SHEET 2 OF 4



DATE PREPARED 4/23/2025	
ROUTE VAR.	STATE MO
DISTRICT NW	SHEET NO. 9
COUNTY VARIOUS	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

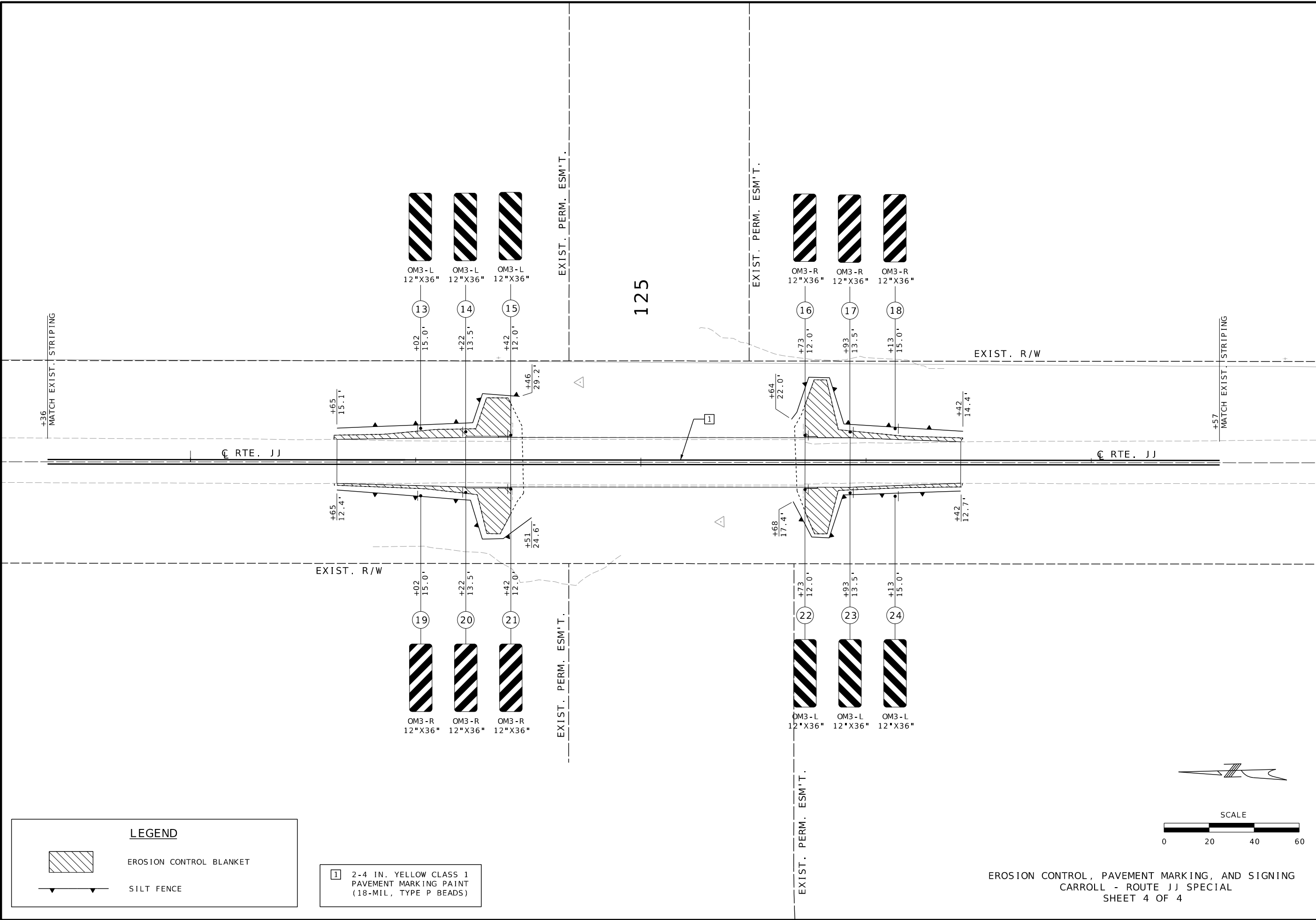


105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

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Kansas City, MO 64131  
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**WILSON & COMPANY**  
ENGINEERS & ARCHITECTS





STATE OF MISSOURI

WESLEY A. O'NEAL

NUMBER  
PE-2018021231

PROFESSIONAL ENGINEER

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4/23/2025

ROUTE  
VAR.

DISTRICT  
NW

STATE  
MO

SHEET NO.  
11

COUNTY  
VARIOUS

JOB NO.  
JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

MoDOT

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**WILSON & COMPANY**

ENGINEERS & ARCHITECTS

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6/18/2025

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- BARRICADE
- WORK AREA



WO20-3  
20



WO20-3  
20a



R11-3a  
61



R11-3a  
61a



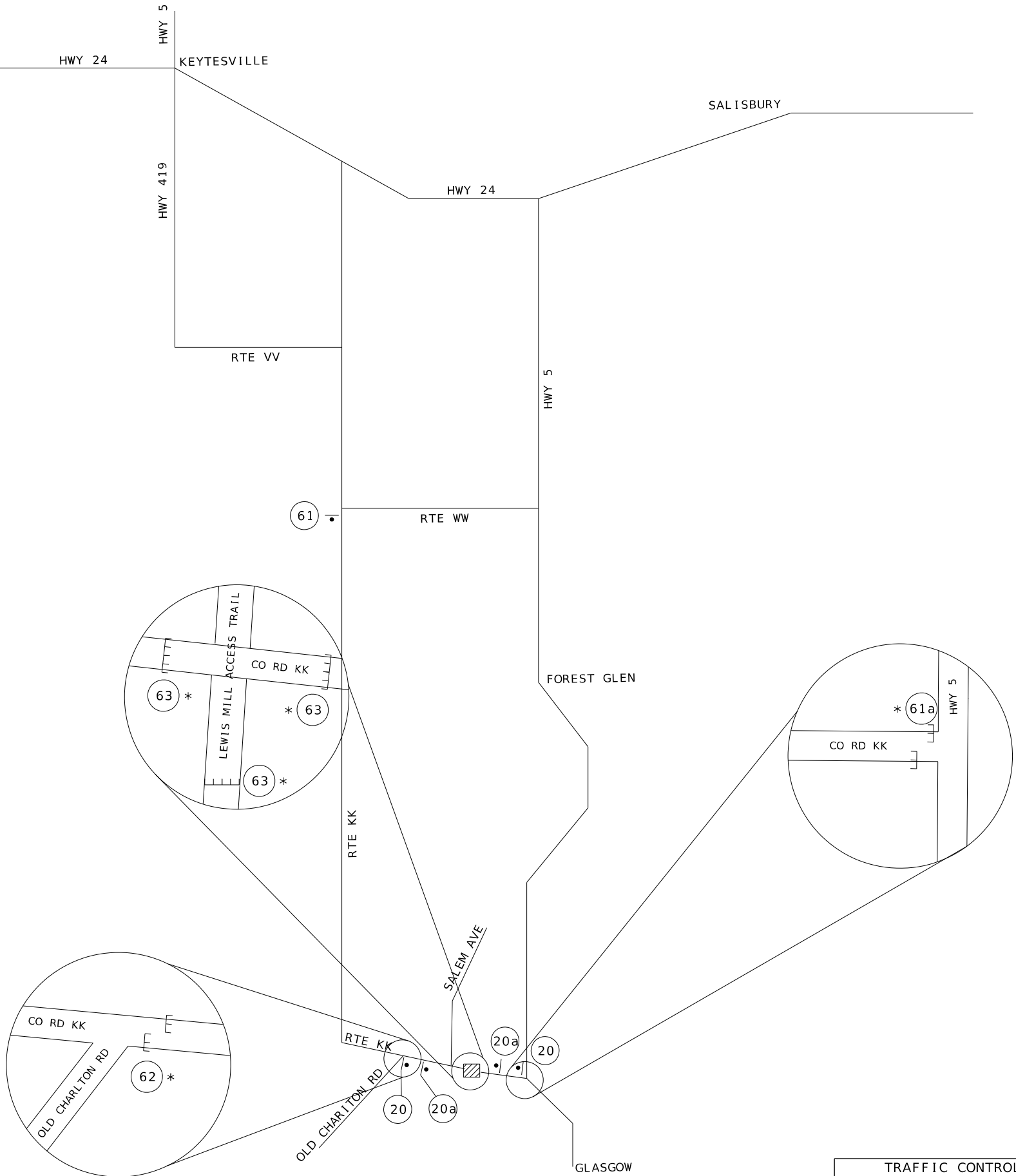
R11-4  
62



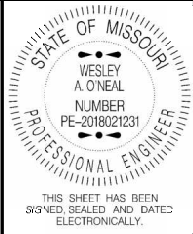
R11-2  
63

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

\* SIGN MOUNTED TO BARRICADE



TRAFFIC CONTROL  
CHARITON - ROUTE KK  
SHEET 1 OF 4



DATE PREPARED 4/23/2025	
ROUTE VAR.	STATE MO
DISTRICT NW	SHEET NO. 12
COUNTY VARIOUS	
JOB NO. JNW0010	
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

**WILSON & COMPANY**  
ENGINEERS & ARCHITECTS

Missouri Cert. of  
Authority #2003007599

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- E BARRICADE
- ▨ WORK AREA



WO20-3  
(20)



WO20-3  
(20a)

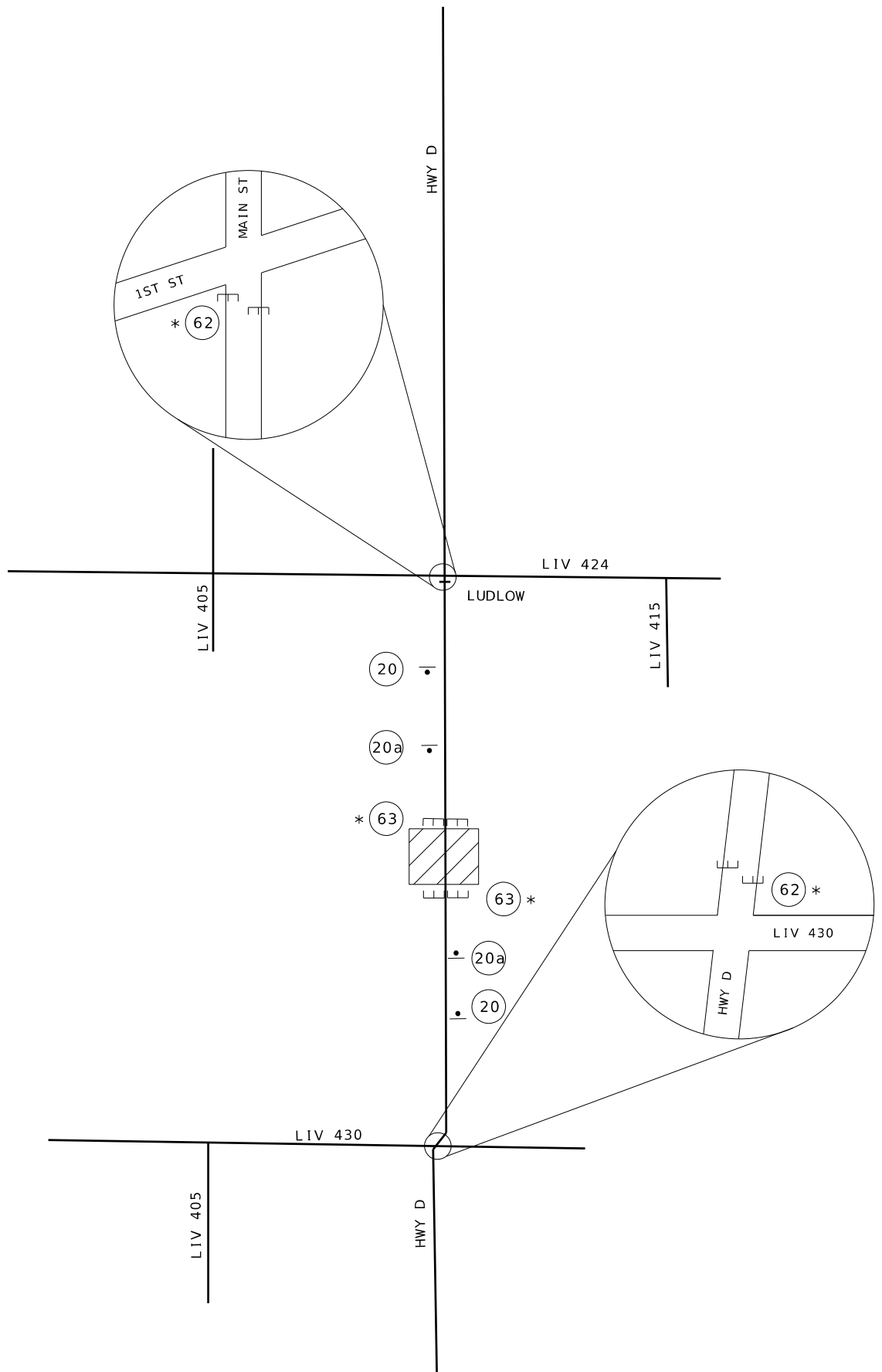


R11-4  
(62)



R11-2  
(63)

NOTES:  
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\* SIGN MOUNTED TO BARRICADE



TRAFFIC CONTROL  
LIVINGSTON - ROUTE D  
SHEET 2 OF 4

STATE OF MISSOURI

WESLEY A. O'NEAL

NUMBER PE-2018021231

PROFESSIONAL ENGINEER

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DATE PREPARED

4/23/2025

ROUTE

VAR.

DISTRICT

NW

STATE

MO

SHEET NO.

13

COUNTY

VARIOUS

JOB NO.

JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-273-6636)

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

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- E BARRICADE
- ▨ WORK AREA



WO20-3  
20



WO20-3  
20a



R11-3a  
61



R11-3a  
61a

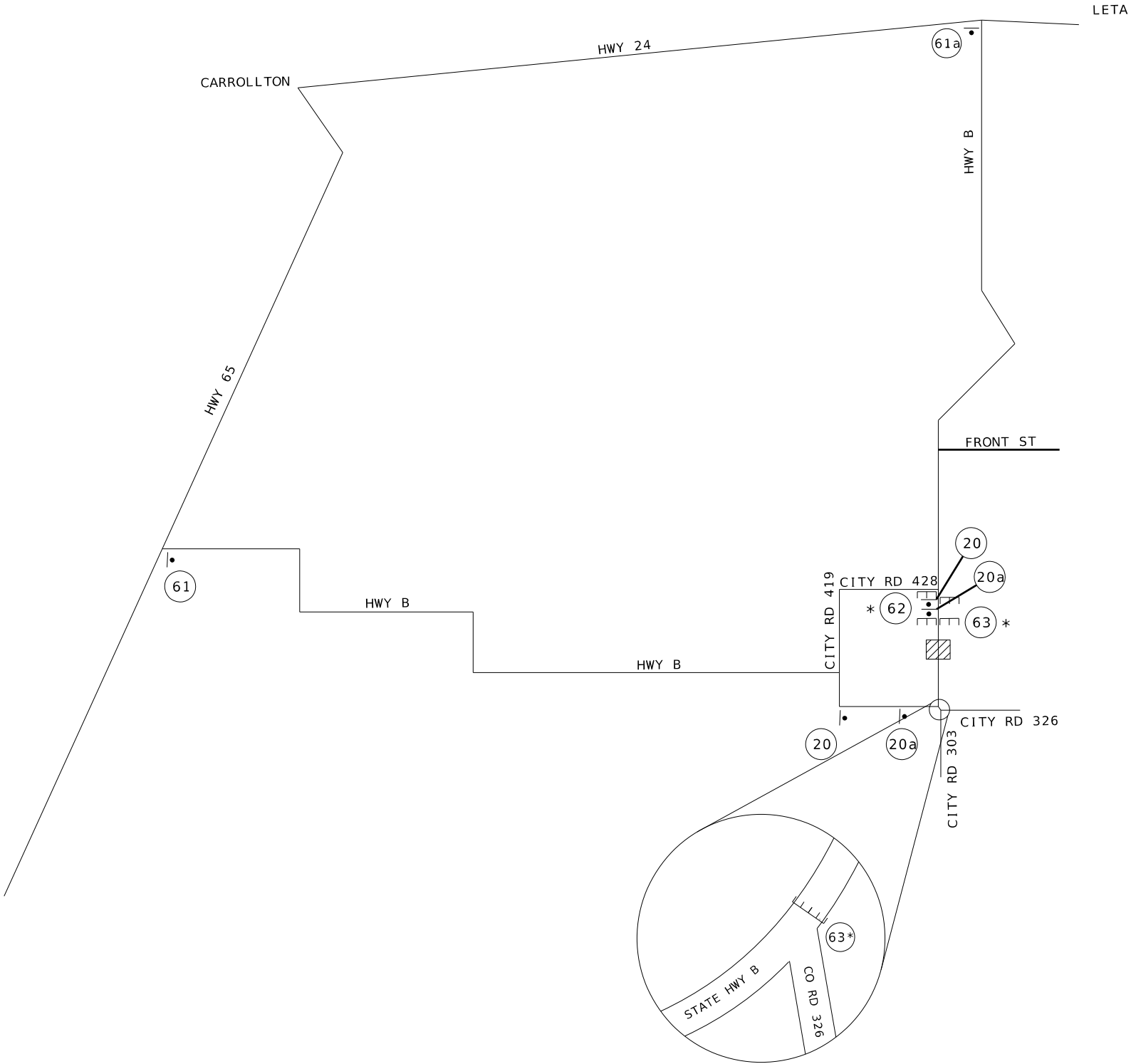


R11-4  
62



R11-2  
63

NOTES:  
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\* SIGN MOUNTED TO BARRICADE



TRAFFIC CONTROL  
CARROLL - ROUTE B  
SHEET 3 OF 4



DATE PREPARED 4/23/2025	
ROUTE VAR.	STATE MO
DISTRICT NW	SHEET NO. 14
COUNTY VARIOUS	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
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Fax (816) 942-3013  
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Authority #2003007599

**WILSON & COMPANY**  
ENGINEERS & ARCHITECTS

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- E BARRICADE
- ▨ WORK AREA



WO20-3  
20



WO20-3  
20a



R11-3a  
61



R11-3a  
61a

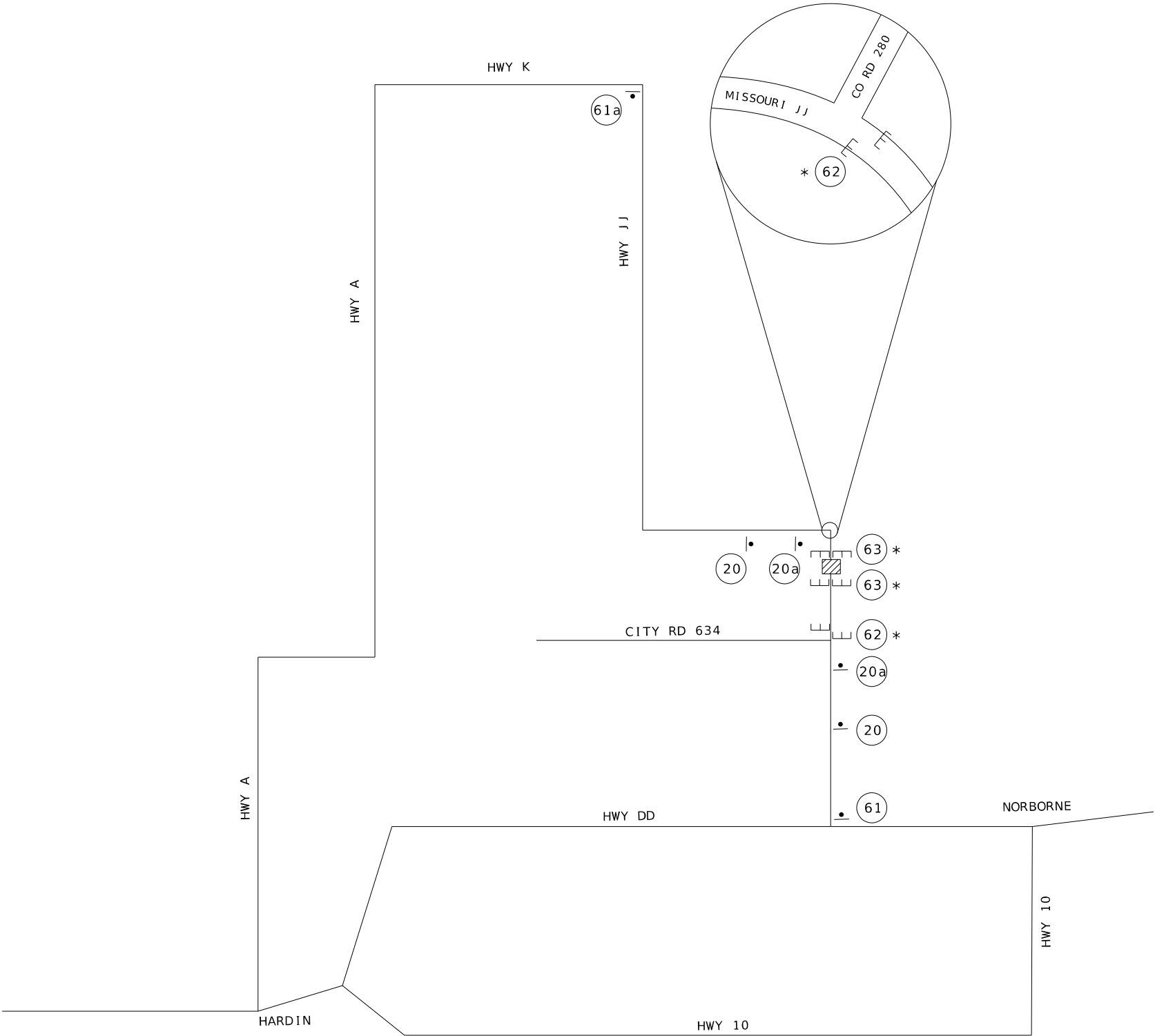


R11-4  
62



R11-2  
63

NOTES:  
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\* SIGN MOUNTED TO BARRICADE



STATE OF MISSOURI

WESLEY A. O'NEAL

NUMBER

PE-2018021231

PROFESSIONAL ENGINEER

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DATE PREPARED

4/23/2025

ROUTE

VAR.

DISTRICT

NW

STATE

MO

SHEET NO.

15

COUNTY

VARIOUS

JOB NO.

JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-273-6636)

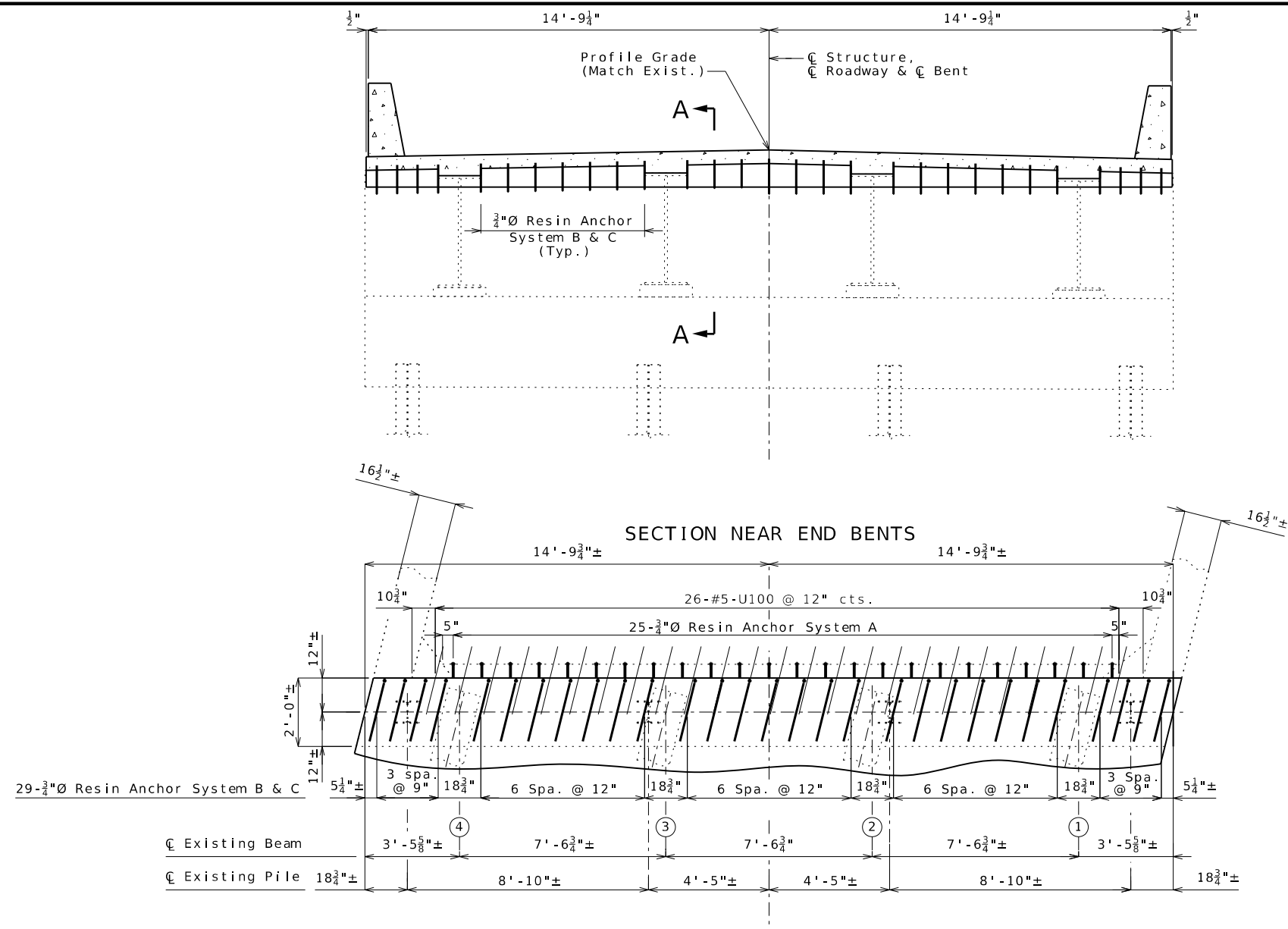
800 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
Fax (816) 942-3013  
Missouri Cert. of  
Authority #2003007599

ENGINEERS & ARCHITECTS

TRAFFIC CONTROL  
CARROLL - ROUTE JJ  
SHEET 4 OF 4







Notes:

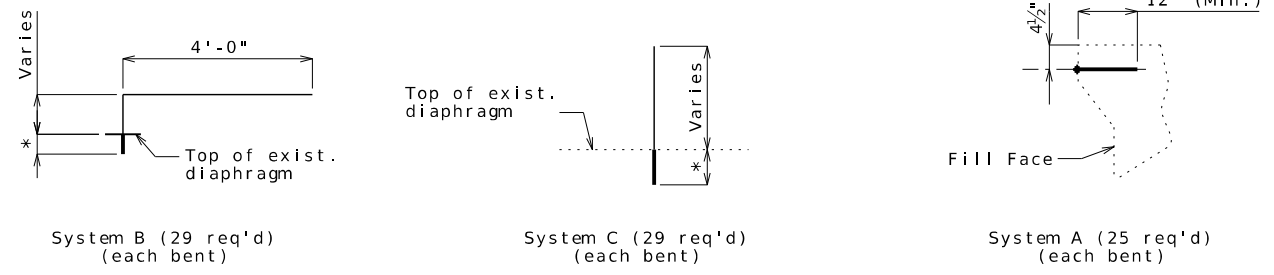
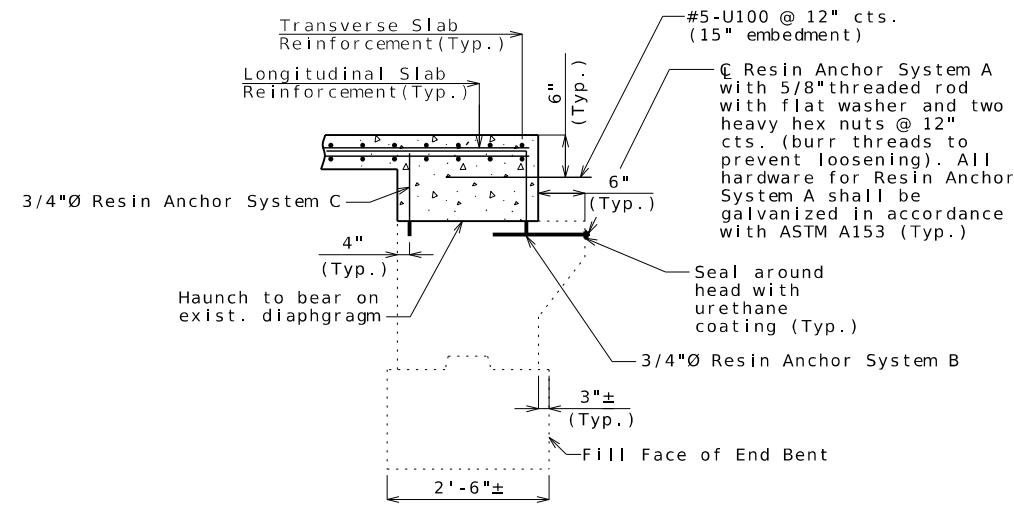
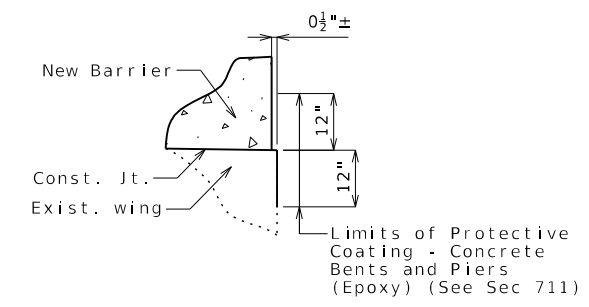
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor system, 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 system 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.

All concrete in the concrete diaphragm at the end bents is included in the Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.



DETAILS OF RESIN ANCHOR SYSTEMS  
\* Manufacturer's recommended embedment length (5" min.)

DETAILS OF END BENTS NO. 1A & 4A

STATE OF MISSOURI  
JASON M. KEMNITZ  
NUMBER PE-2011005051  
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED <b>6/26/2025</b>	
ROUTE <b>KK</b>	STATE <b>MO</b>
DISTRICT <b>BR</b>	SHEET NO. <b>3</b>
COUNTY <b>CHARITON</b>	
JOB NO. <b>JNW0010</b>	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. <b>A18892</b>	

DESCRIPTION	DATE

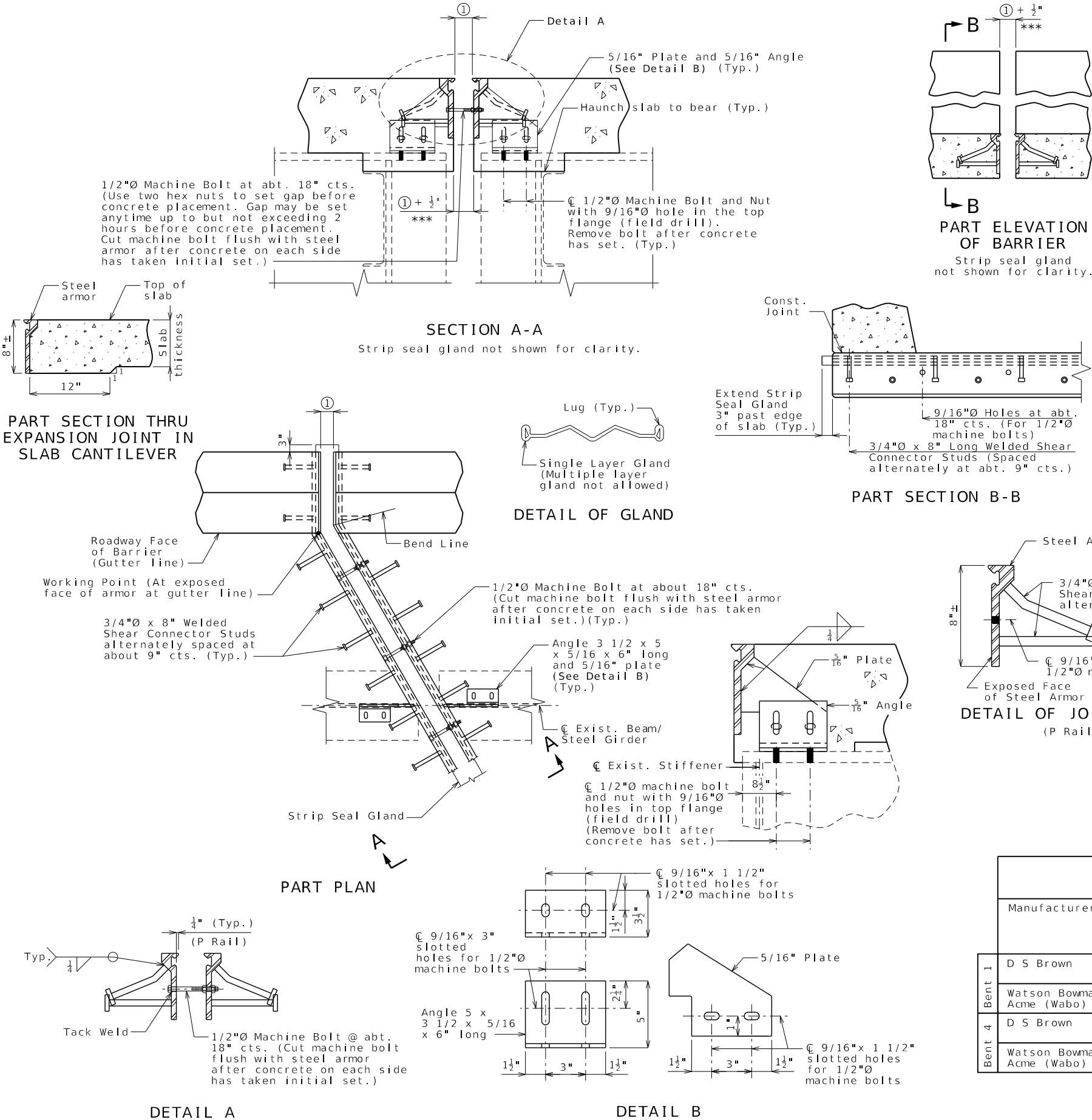
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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  
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Authority #2003007599

**WILSON & COMPANY**  
ENGINEERS & ARCHITECTS





GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum, or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

The terms P and R rail are used for identification only, and are not endorsements for any particular manufacturer.

\*\*\* Because of variation in armor dimensions, the concrete opening will vary if the optional R rail is used. Dimensions shown are based on the P rail option.

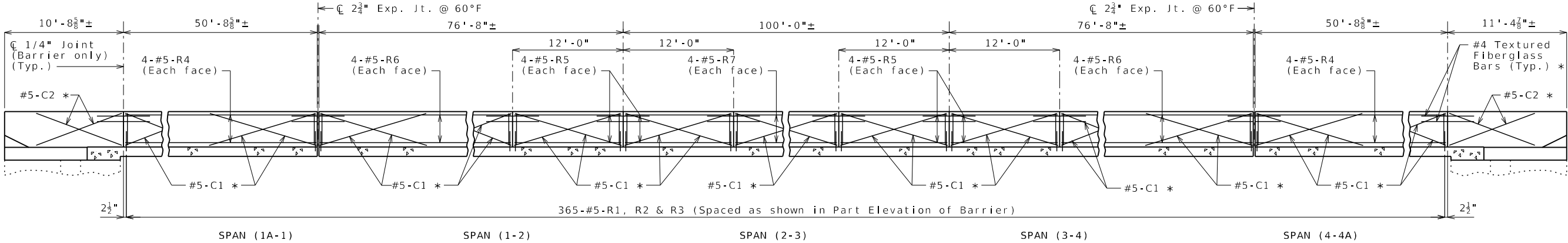
Table of Allowed Transverse Strip Seal Expansion Joint System									
	Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temperature					
				② @ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F
③									
Bent 1	D S Brown	Strip seal L2-500	3 1/4"	3 3/8"	3"	2 3/4"	2 1/2"	2 3/8"	2 1/8"
	Watson Bowman Acme (Wabo)	Strip seal SE-500	3 1/4"	3 3/8"	3"	2 3/4"	2 1/2"	2 3/8"	2 1/8"
Bent 4	D S Brown	Strip seal L2-500	1 3/4"	2 3/4"	2 5/8"	2 1/2"	2 3/8"	2 1/4"	2 1/8"
	Watson Bowman Acme (Wabo)	Strip seal SE-500	1 3/4"	2 3/4"	2 5/8"	2 1/2"	2 3/8"	2 1/4"	2 1/8"

STATE OF MISSOURI  
JASON M. KEMNITZ  
NUMBER  
PE-2011005051  
PROFESSIONAL ENGINEER  
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DATE PREPARED  
6/26/2025  
ROUTE  
KK  
DISTRICT  
BR  
STATE  
MO  
SHEET NO.  
5  
COUNTY  
CHARITON  
JOB NO.  
JNW0010  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO.  
A18892

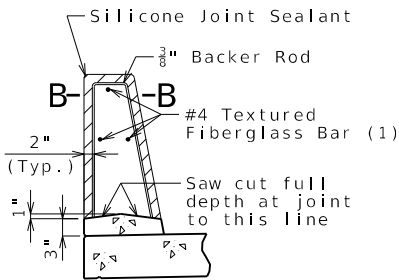
DESCRIPTION  
DATE

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

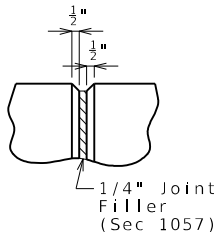
800 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
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Authority #2003007599  
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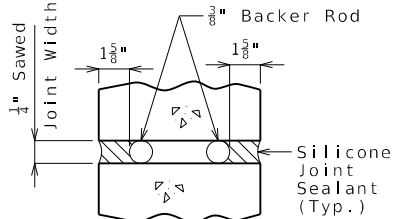
ELEVATION OF BARRIER  
(Left barrier shown, right barrier similar)  
Longitudinal dimensions are horizontal.



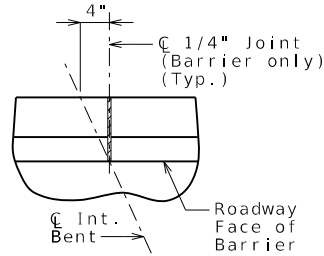
SECTION THRU SAW CUT JOINT



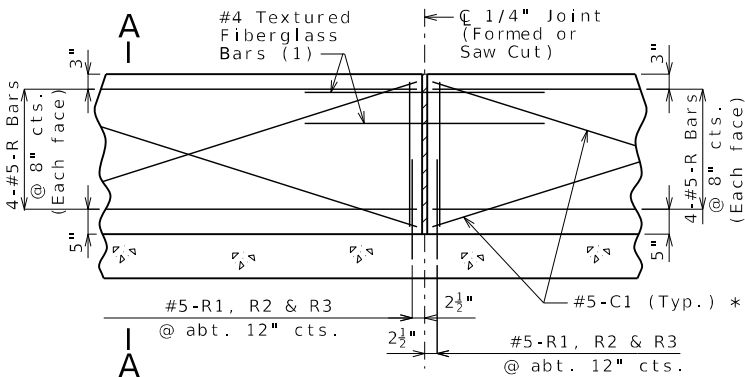
PART ELEVATION AT FORMED JOINT



SECTION B-B

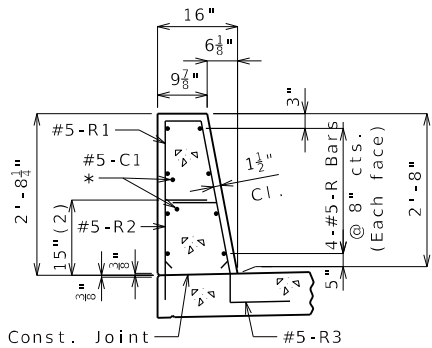


PART PLAN SHOWING JOINT LOCATION



PART ELEVATION OF BARRIER

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

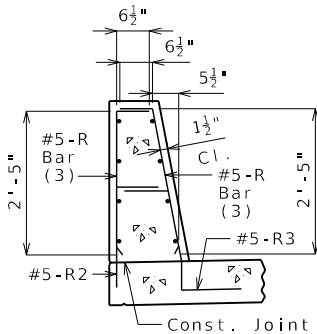


SECTION A-A

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 (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 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.



THIS SHEET HAS BEEN  
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ELECTRONICALLY.

DATE PREPARED

6/26/2025

ROUTE STATE

KK MO

DISTRICT SHEET NO.

BR 6

COUNTY

CHARITON

JOB NO.

JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A18892

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

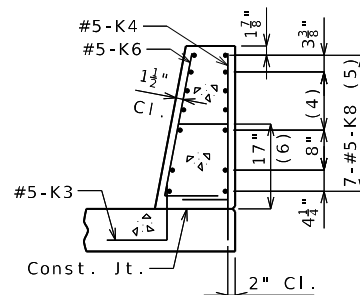
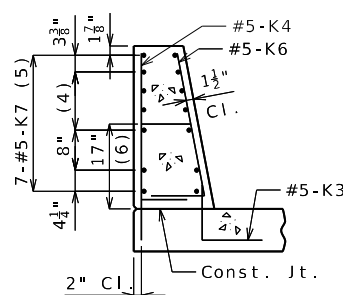
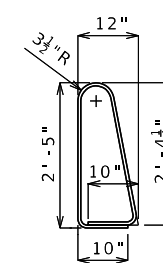
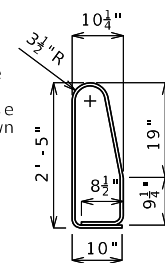
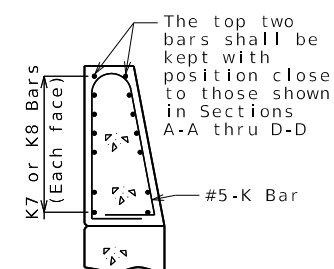
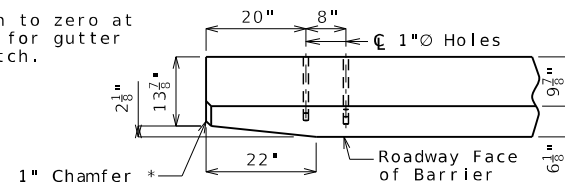
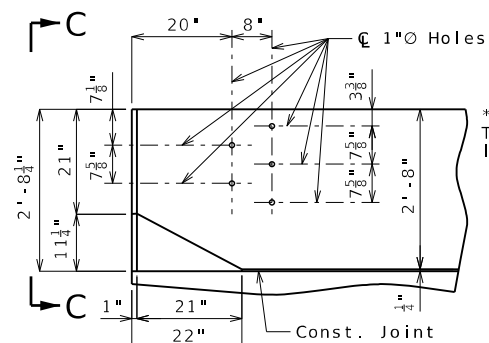
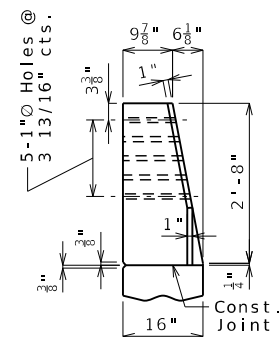
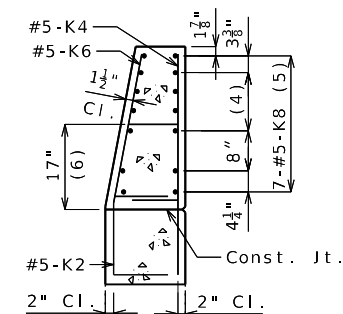
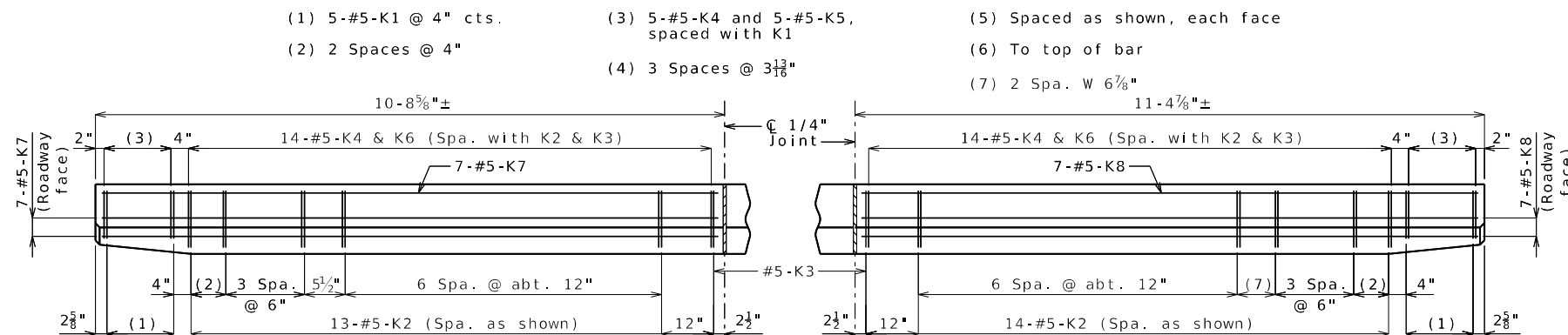
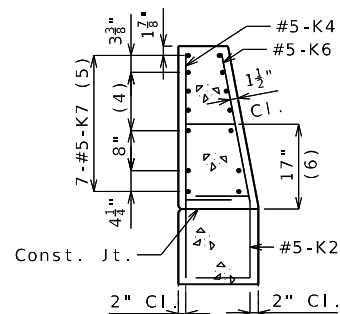
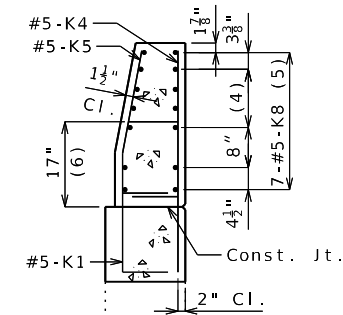
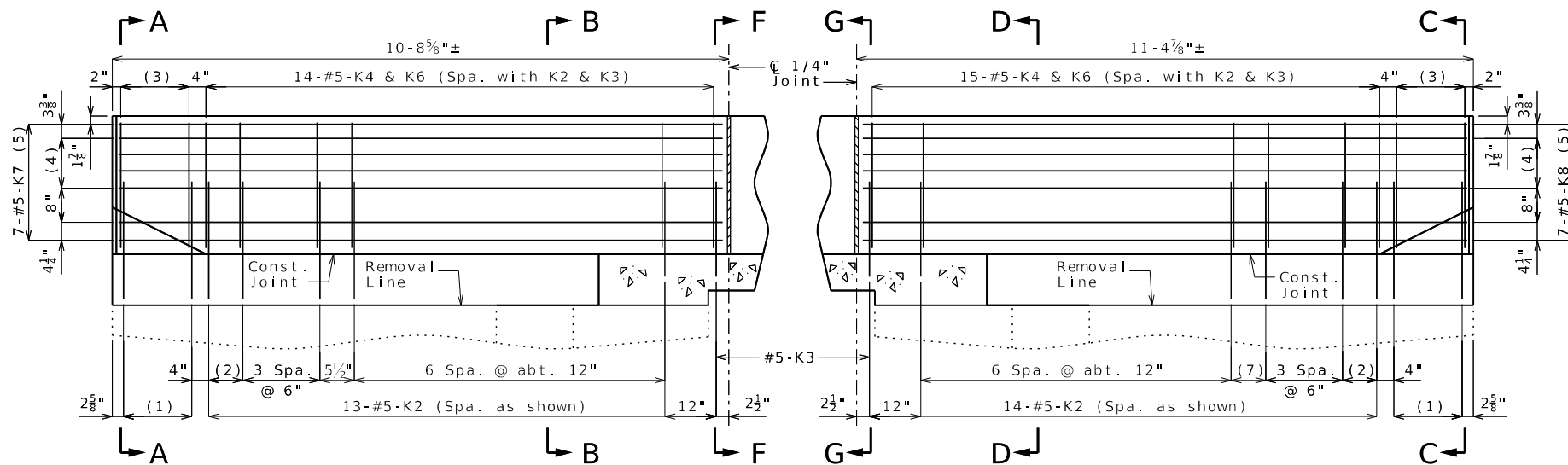
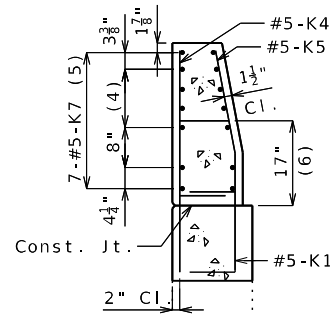
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### DETAILS OF GUARD RAIL ATTACHMENT

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" except as shown for bars embedded into end bent.

### 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.

All dimensions are out to out.



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6 / 26 / 202

ROUTE	ST
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KK	M
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DISTRICT	SHEET
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BR

COUNTY

CHARITON

JOB NO.

JNW0010

CONTRACT ID

PROJECT NO. \_\_\_\_\_

BRIDGE NO.

A18892

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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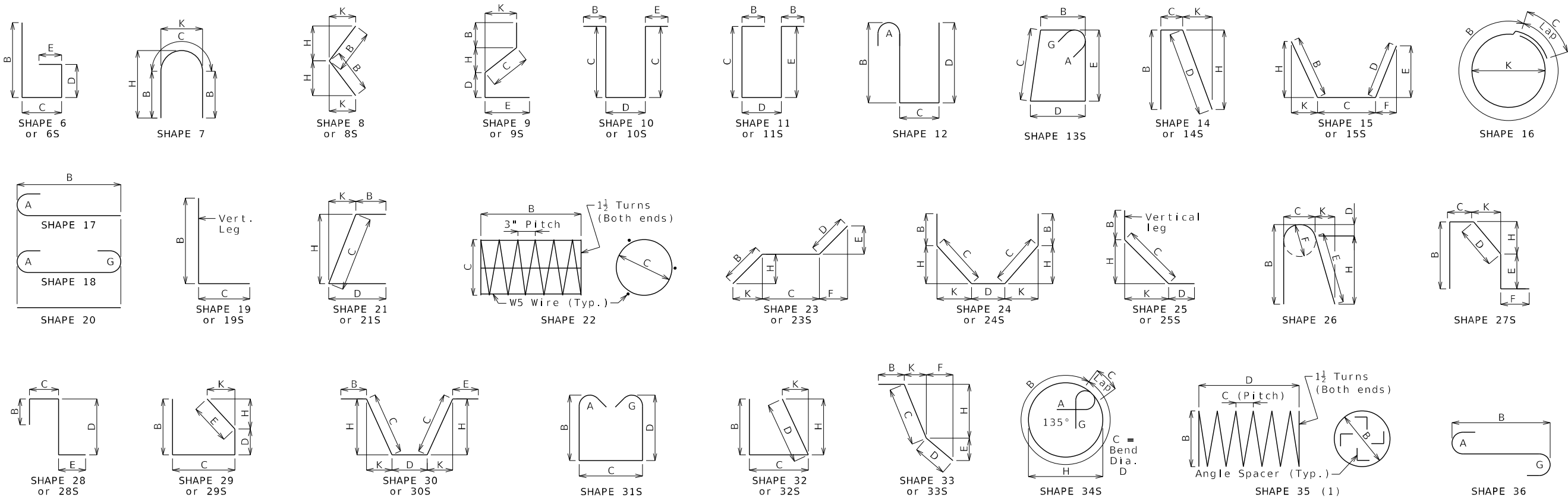
105 WEST CAPITAL  
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00 E 101st Terr., Ste. 200  
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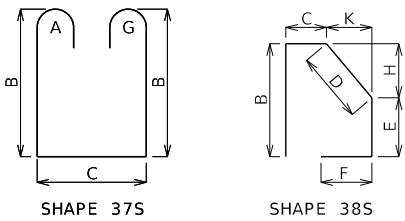
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Finished Bend Dimensions D and Hook Dimensions						
Standard Pin Bend Shapes						
Size	Case	D	A or G		J	
			90°	180°	180°	
#4	1	3"	8"	6"	4"	
#5	1	3 <sup>3</sup> / <sub>4</sub> "	10"	7"	5"	
#6	1	4 <sup>1</sup> / <sub>2</sub> "	12"	8 <sup>1</sup> / <sub>4</sub> "	6"	
#7	2	5 <sup>1</sup> / <sub>4</sub> "	14"	9 <sup>3</sup> / <sub>4</sub> "	7"	
	3	7"	15"	11 <sup>1</sup> / <sub>2</sub> "	8 <sup>3</sup> / <sub>4</sub> "	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 <sup>1</sup> / <sub>4</sub> "	10"	
#9	1	9 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>2</sub> "	15 <sup>1</sup> / <sub>2</sub> "	11 <sup>3</sup> / <sub>4</sub> "	
#10	1	10 <sup>3</sup> / <sub>4</sub> "	22"	17 <sup>1</sup> / <sub>2</sub> "	13 <sup>1</sup> / <sub>4</sub> "	
#11	1	12"	24 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>2</sub> "	14 <sup>7</sup> / <sub>8</sub> "	
#14	1	18 <sup>1</sup> / <sub>4</sub> "	31 <sup>1</sup> / <sub>4</sub> "	27 <sup>1</sup> / <sub>2</sub> "	21 <sup>5</sup> / <sub>8</sub> "	
#18	1	24"	41 <sup>1</sup> / <sub>2</sub> "	36 <sup>1</sup> / <sub>4</sub> "	28 <sup>1</sup> / <sub>2</sub> "	
Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G		H	J
			90°	135°	180°	135°
#4	2	2"	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	5"	2 <sup>7</sup> / <sub>8</sub> "
	3	3"	5"	5 <sup>1</sup> / <sub>4</sub> "	6"	3"
#5	2	2 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>4</sub> "
	3	3 <sup>3</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>4</sub> "	7"	3 <sup>3</sup> / <sub>4</sub> "
#6	1	4 <sup>1</sup> / <sub>2</sub> "	12"	7 <sup>3</sup> / <sub>4</sub> "	8 <sup>1</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>8</sub> "
Applicable for all grades of steel.						
Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.						



BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)							
By Size	Size	Substructure		Superstructure		Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	
	W5	0	0	0	0	0	0
	4	0	0	16,391	0	0	16,391
	5	0	136	45,251	14,563	801	60,751
	6	0	119	28,129	0	0	28,248
	7	0	0	0	0	0	0
By Type		0	255	89,771	14,563	0	105,390

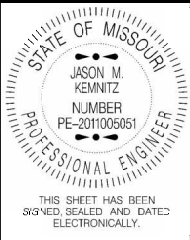
All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed March 2025  
Checked April 2025

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

Sheet No. 9 of 10



DATE PREPARED		6/26/2025
ROUTE	STATE	KK MO
DISTRICT	SHEET NO.	BR 9
COUNTY		CHARITON
JOB NO.		JNW0010
CONTRACT ID.		
PROJECT NO.		
BRIDGE NO.		A18892

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

800 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
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Bill of Reinforcing Steel																	
No. Req.	Size/ Mark	Location	Codes				Dimensions							Nom. Length	Actual Length	Weight lb	
							B	C	D	E	F	H	K				
			E	SH	S	X	V	ft	in.	ft	in.	ft	in.	ft	in.	ft	in.
		END BENT NO. 1A & 4A															
52	5	U100	SLAB REST	20	S			2	6.000							2	6
		INT. BENT NO. 4															
3	6	H400	BEAM	20				26	6.000							26	6
		SLAB															
124	5	S1	SLAB	E	20			52	4.000							52	4
88	6	S2	SLAB	E	20			39	0.000							39	0
508	6	S3	SLAB	E	20			28	5.000							28	5
60	6	S4	SLAB	E	20		V	6	26	4.000						26	4
		INCREMENT = 32 INCH						2	4.000							2	4
677	5	S5	SLAB	E	20			28	5.000							28	5
78	5	S6	SLAB	E	20		V	6	26	8.000						26	8
		INCREMENT = 24 INCH						2	10.000							2	10
310	5	S7	SLAB	E	20			53	3.000							53	3
16	4	S8	SLAB	E	20			50	6.000							50	6
408	4	S9	SLAB	E	20			52	4.000							52	4
1008	4	S10	SLAB	E	10	S		0	6.000	0	4.000	0	9.000			1	11
		TYPE H BARRIER															
20	5	K1	BARRIER	E	38	S		2	3.500	0	9.250	0	5.375	0	22.250	0	9.500
54	5	K2	BARRIER	E	38	S		2	3.500	0	9.250	0	14.500	0	13.250	0	10.000
4	5	K3	BARRIER	E	27	S		0	20.750	0	9.250	0	14.500	0	6.000	0	12.000
58	5	K4	BARRIER	E	19	S		2	5.000	0	10.000						
20	5	K5	BARRIER	E	38	S						0	19.250	0	9.500	0	8.250
58	5	K6	BARRIER	E	21	S				2	4.875	0	10.000			2	4.250
28	5	K7	BARRIER	E	20			10	5.000							10	5
28	5	K8	BARRIER	E	20			11	1.000							11	1
730	5	R1	BARRIER	E	14	S		2	5.000	0	6.500	2	5.500			2	5.000
730	5	R2	BARRIER	E	19	S		0	18.750	0	9.500					2	4
730	5	R3	BARRIER	E	27	S				0	9.500	0	15.250	0	3.250	0	12.000
32	5	R4	BARRIER	E	20			50	3.000							50	3
64	5	R5	BARRIER	E	20			11	8.000							11	8
64	5	R6	BARRIER	E	20			33	9.000							52	6
32	5	R7	BARRIER	E	20			39	5.000							39	5
		SLIP FORM BARRIER															
64	5	C1	SLIP FORM	E	20			12	0.000							12	0

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 9.

Detailed March 2025  
Checked April 2025

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

# BILL OF REINFORCING STEEL

Sheet No. 10 of 10

[illegible]

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.



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ROUTE	STATE
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KK	MO
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DISTRICT	SHEET NO.
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BR	10
----	----

COUNTY
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CHARITON

JOB NO.
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JNW0010

CONTRACT ID.
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\_\_\_\_\_

PROJECT NO.
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\_\_\_\_\_

BRIDGE NO.

A18892

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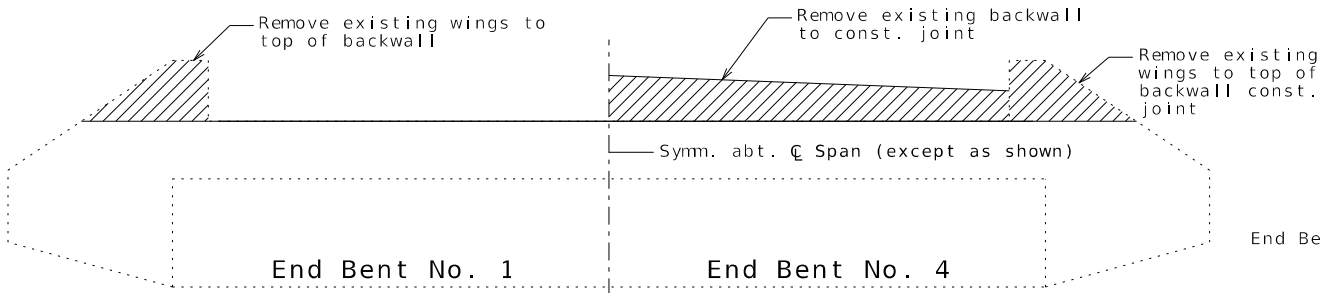
MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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000 E 101st Terr., Ste. 200  
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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 to 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 Bents No. 1 & 4 removal lines.

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.

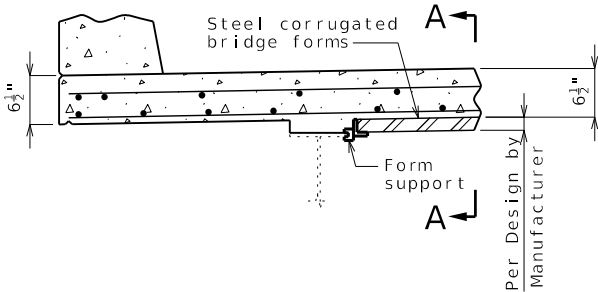
Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

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

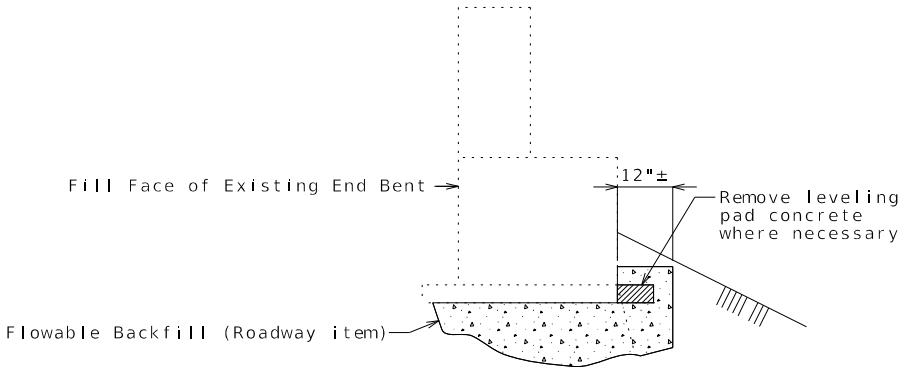
Bridge deck surface may be finished with a vibratory screed.

Haunching:

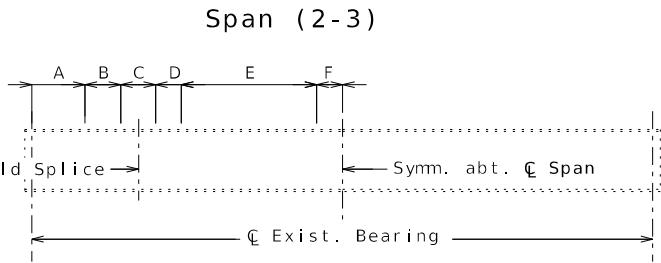
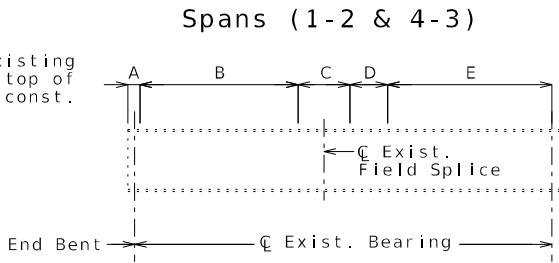
Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. Haunches will be increased approximately 3/4" when comparing with original plan dimensions to match existing grade on Rte.D.



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



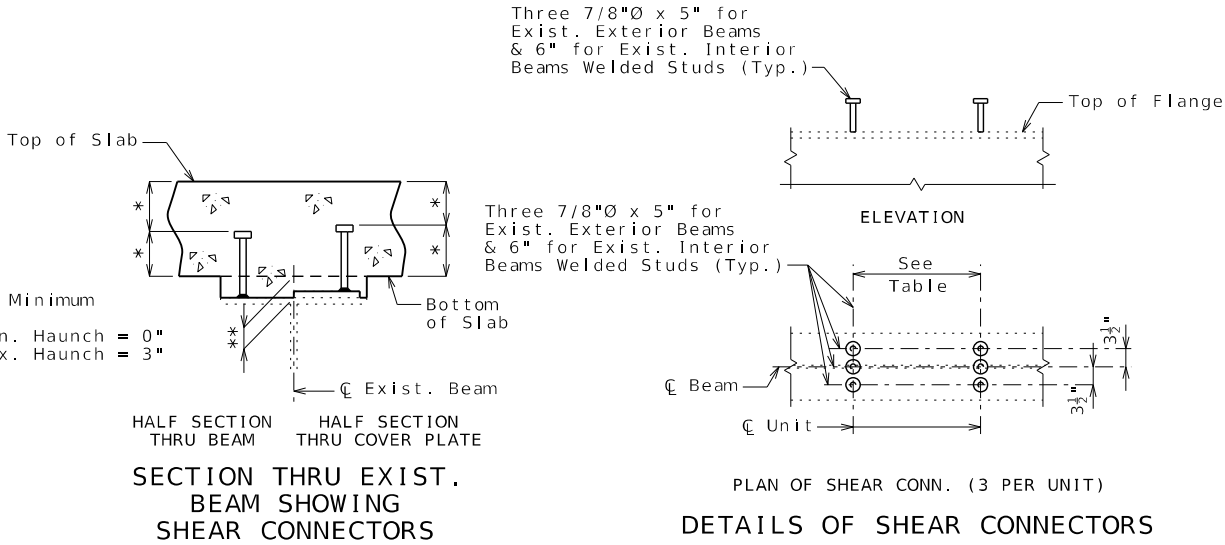
PART SECTION SHOWING FLOWABLE  
BACKFILL AT EXPOSED PILES AT  
END BENT NO. 4



ELEVATION SHOWING SHEAR  
CONNECTOR SPACING

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING						
Span	S.C. per unit	A	B	C	D	E
(1-2)	3	6 1/4" ±	51 Units @ 12" cts.	4' - 0 1/2" ±	7 Units @ 6" cts.	12' - 11 3/4" ±
(4-3)	3	6 1/4" ±	51 Units @ 12" cts.	4' - 0 1/2" ±	7 Units @ 6" cts.	12' - 11 3/4" ±
Total shear connectors required						1,392

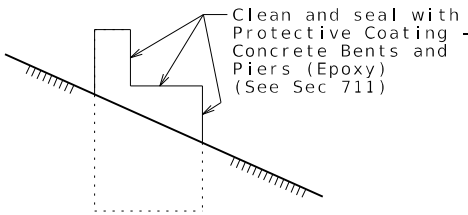
TABLE SHOWING SHEAR CONNECTOR UNIT SPACING						
Span	S.C. per unit	A	B	C	D	E
(2-3)	3	17' - 11 3/4"	7 Units @ 6" cts.	4' - 0 1/2" ±	5 3/4" ±	20 Units @ 12" cts.
Total shear connectors required						648



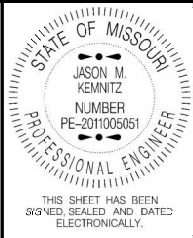
PLAN OF SHEAR CONN. (3 PER UNIT)  
DETAILS OF SHEAR CONNECTORS

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.



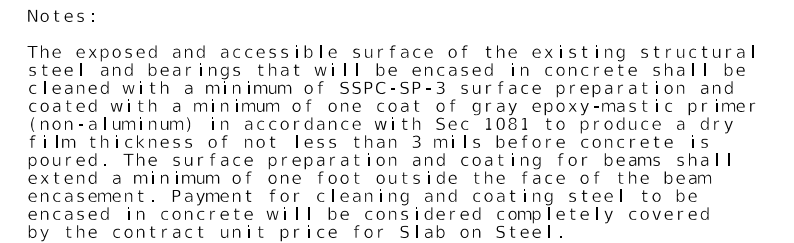
TYPICAL SECTION THRU  
END BENTS NO. 1 & 4 SHOWING  
PROTECTIVE COATING



DATE PREPARED 6/26/2025	
ROUTE D	STATE MO
DISTRICT BR	SHEET NO. 2
COUNTY LIVINGSTON	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. L05481	

DESCRIPTION	DATE

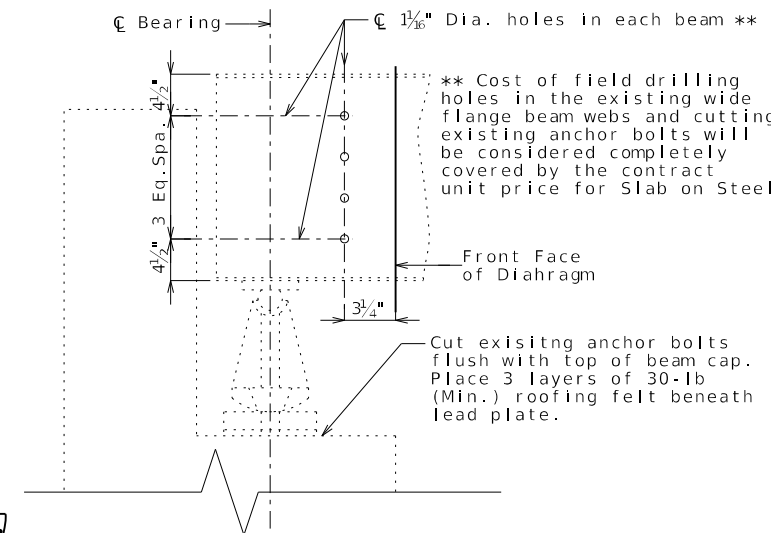




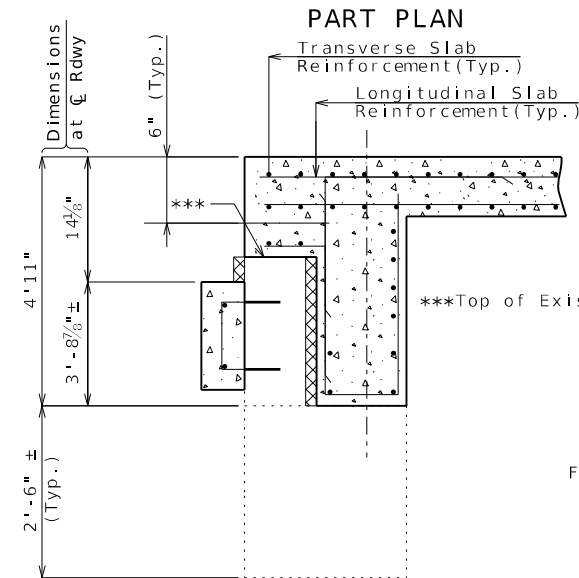
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039. The cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) for concrete option only. The minimum embedment depth in concrete with  $f'c = 4000$  psi for the resin anchor system shall be that required to meet the minimum pullout strength in accordance with Sec 1039 but shall not be no less than 5".

All reinforcement and concrete in the concrete diaphragm at the end bents is included in the Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel. All reinforcement and concrete in the approach slab rest will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) for concrete option only.

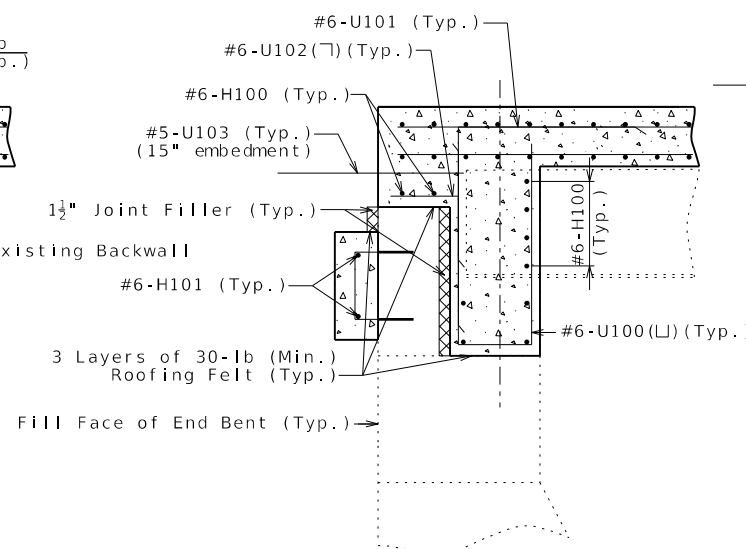
Cost of cutting anchor bolts, temporary supports, and placing roofing felt and joint filler will be considered completely covered by the contract unit price for Slab on Steel.



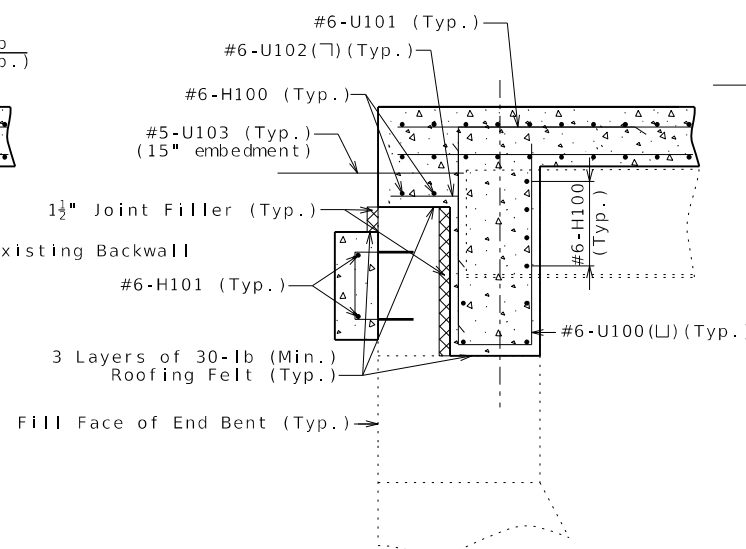
### DETAIL OF WEB HOLES AT END BENT



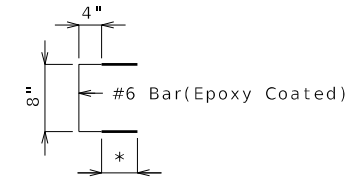
SECTION A-A



SECTION B-B



SECTION C-C

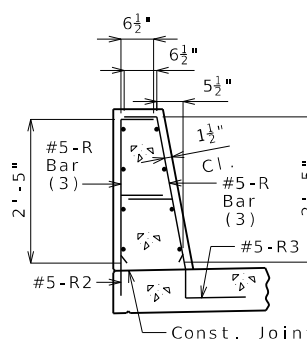
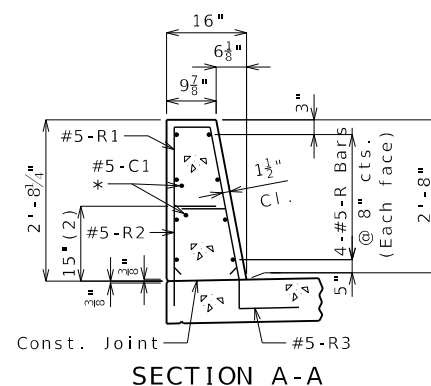
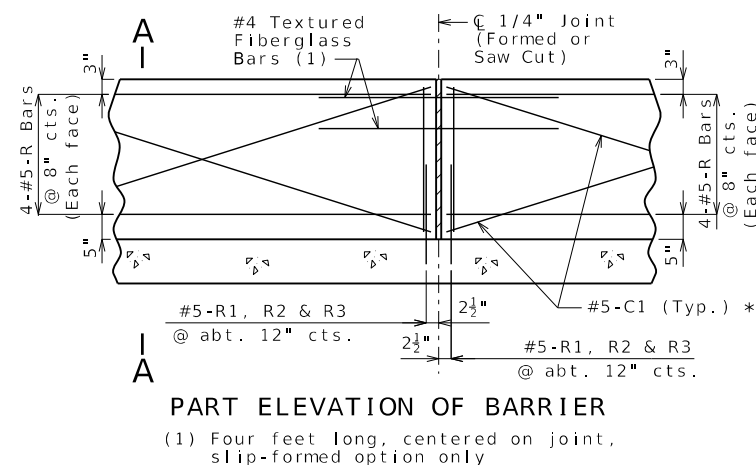
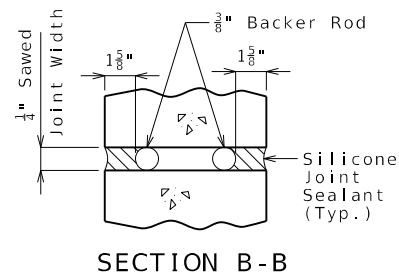
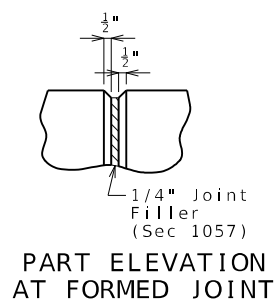
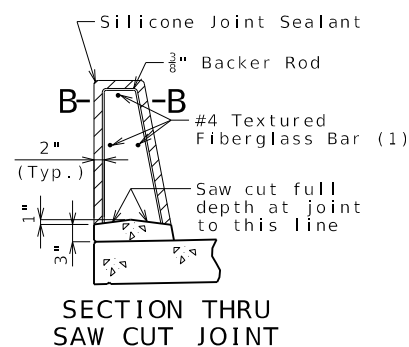
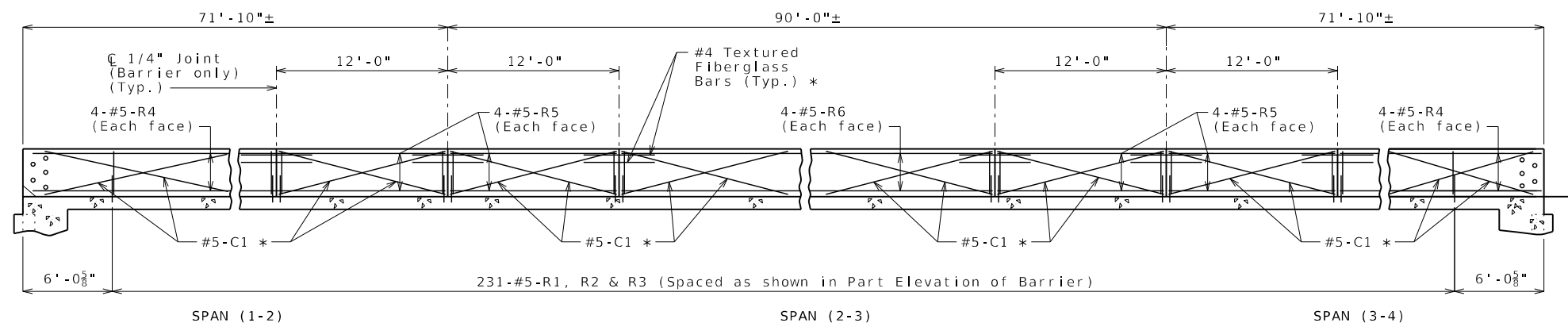


\* Manufacturer's recommended  
embedment length (5" min.)

System A  
(24 req'd. each bent)

DETAIL OF RESIN ANCHOR SYSTEM





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.

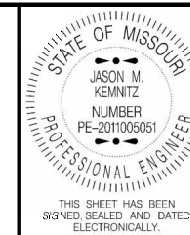
Concrete in barrier shall be Class B-1.

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. 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.



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
6/26/2025

ROUTE	STATE
D	MO

DISTRICT	SHEET NO.
BR	5

COUNTY  
LIVINGSTON

JOB NO.  
JNW0010

CONTRACT ID.
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PROJECT NO.
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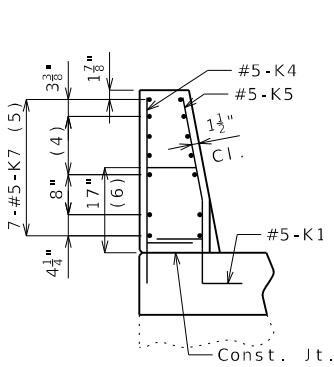
BRIDGE NO.  
L05481[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

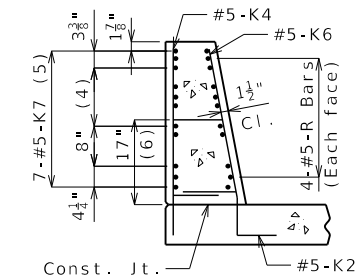
300 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
Fax (816) 942-3013

Missouri Cert. of  
Authority #2003007599

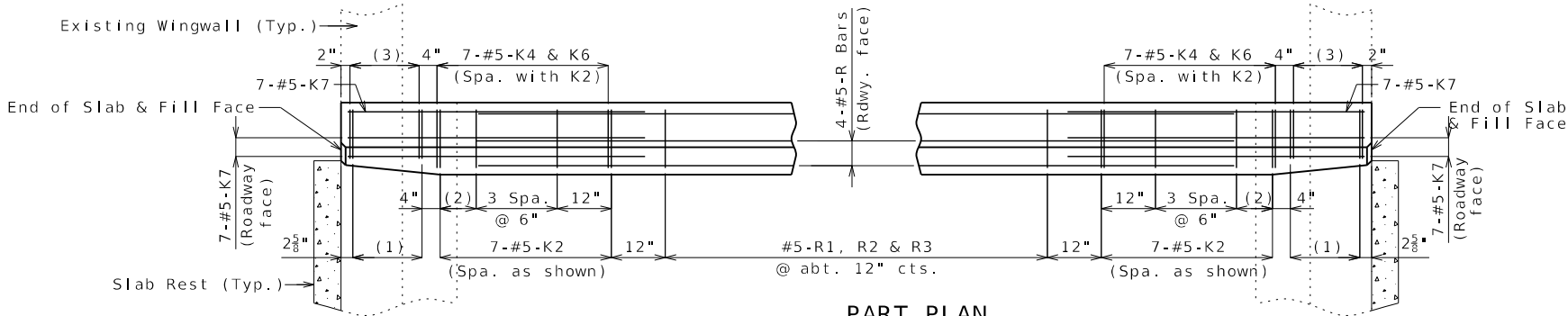
**WILSON**  
**& COMPANY**  
ENGINEERS & ARCHITECTS



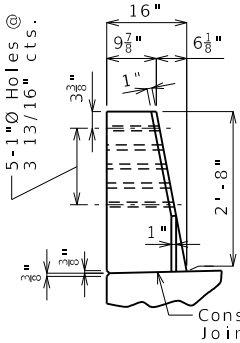
ELEVATION A-A



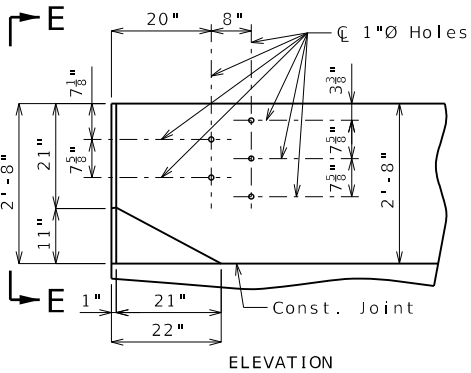
SECTION B-B



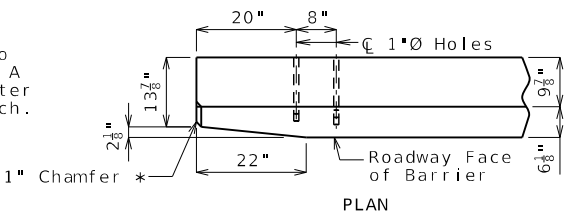
PART PLAN



ELEVATION E-E



ELEVATION

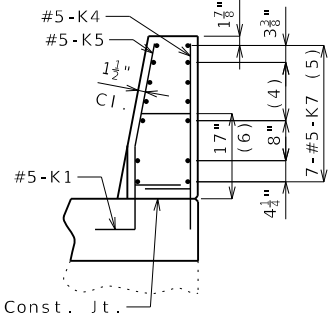


PLAN

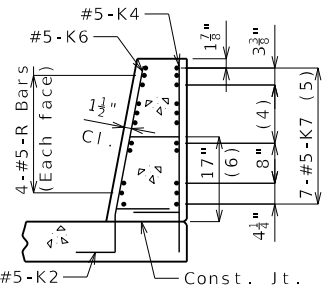
DETAILS OF GUARD RAIL ATTACHMENT

PART ELEVATION

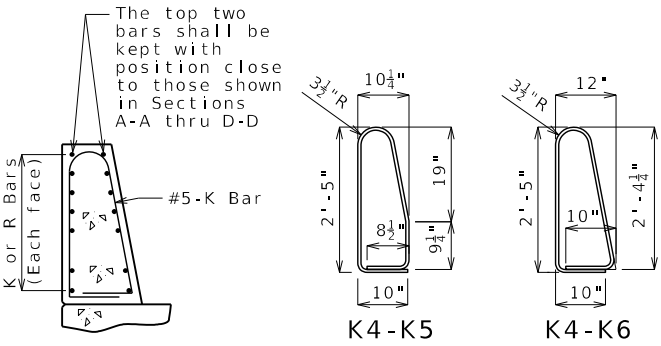
- (1) 5-#5-K1 @ 4" cts.  
(2) 2 Spaces @ 4"  
(3) 5-#5-K4 and 5-#5-K5, spaced with K1  
(4) 3 Spaces @ 3 1/8"  
(5) Spaced as shown, each face  
(6) To top of bar



ELEVATION C-C



SECTION D-D



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.

All dimensions are out to out.

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.

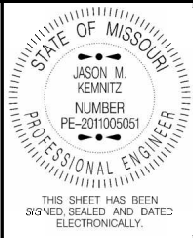
Reinforcing Steel:

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)



DATE PREPARED 6/26/2025	
ROUTE D	STATE MO
DISTRICT BR	SHEET NO. 6
COUNTY LIVINGSTON	
JOB NO. JNW0010	
CONTRACT ID.	

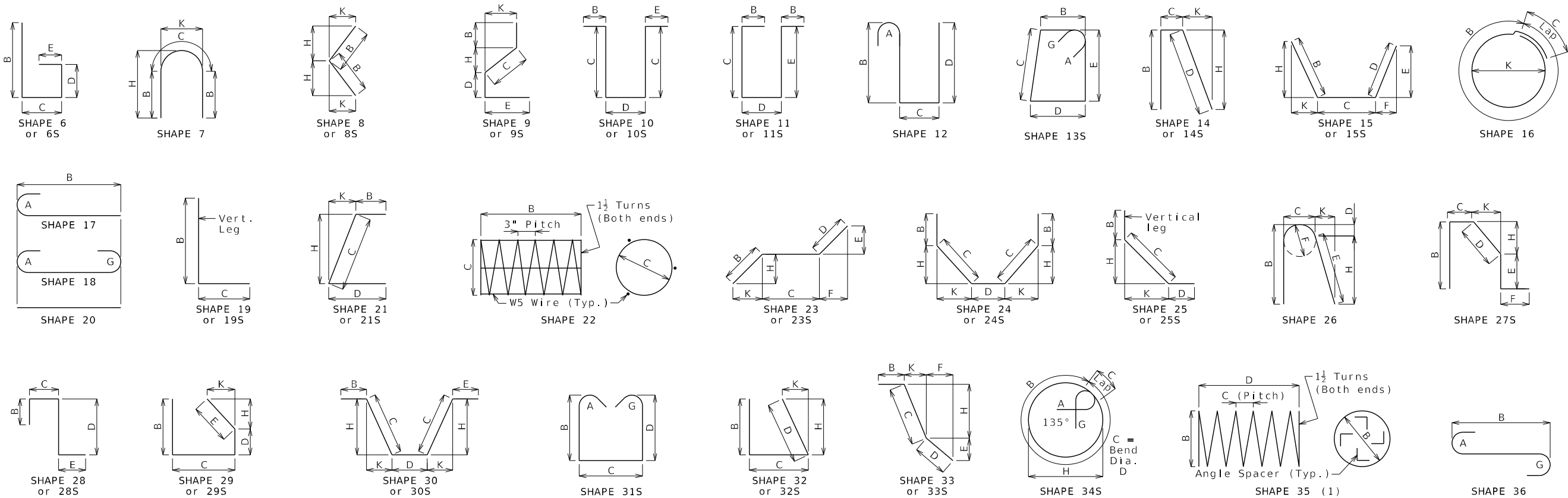
PROJECT NO.
BRIDGE NO. L05481

DESCRIPTION	DATE

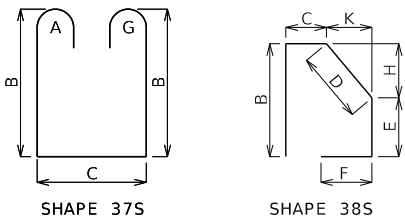
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)
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800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of Authority #2003007599	<b>WILSON &amp; COMPANY</b> ENGINEERS & ARCHITECTS
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Finished Bend Dimensions D and Hook Dimensions						
Standard Pin Bend Shapes						
Size	Case	D	A or G		J	
			90°	180°	180°	
#4	1	3"	8"	6"	4"	
#5	1	3 <sup>3</sup> / <sub>4</sub> "	10"	7"	5"	
#6	1	4 <sup>1</sup> / <sub>2</sub> "	12"	8 <sup>1</sup> / <sub>4</sub> "	6"	
#7	2	5 <sup>1</sup> / <sub>4</sub> "	14"	9 <sup>3</sup> / <sub>4</sub> "	7"	
	3	7"	15"	11 <sup>1</sup> / <sub>2</sub> "	8 <sup>3</sup> / <sub>4</sub> "	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 <sup>1</sup> / <sub>4</sub> "	10"	
#9	1	9 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>2</sub> "	15 <sup>1</sup> / <sub>2</sub> "	11 <sup>3</sup> / <sub>4</sub> "	
#10	1	10 <sup>3</sup> / <sub>4</sub> "	22"	17 <sup>1</sup> / <sub>2</sub> "	13 <sup>1</sup> / <sub>4</sub> "	
#11	1	12"	24 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>2</sub> "	14 <sup>7</sup> / <sub>8</sub> "	
#14	1	18 <sup>1</sup> / <sub>4</sub> "	31 <sup>1</sup> / <sub>4</sub> "	27 <sup>1</sup> / <sub>2</sub> "	21 <sup>5</sup> / <sub>8</sub> "	
#18	1	24"	41 <sup>1</sup> / <sub>2</sub> "	36 <sup>1</sup> / <sub>4</sub> "	28 <sup>1</sup> / <sub>2</sub> "	
Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G		H	J
			90°	135°	180°	135°
#4	2	2"	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	5"	2 <sup>7</sup> / <sub>8</sub> "
	3	3"	5"	5 <sup>1</sup> / <sub>4</sub> "	6"	3"
#5	2	2 <sup>1</sup> / <sub>2</sub> "	5 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>4</sub> "
	3	3 <sup>3</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>4</sub> "	7"	3 <sup>3</sup> / <sub>4</sub> "
#6	1	4 <sup>1</sup> / <sub>2</sub> "	12"	7 <sup>3</sup> / <sub>4</sub> "	8 <sup>1</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>8</sub> "
Applicable for all grades of steel.						
Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.						



BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)							
By Size	Size	Substructure		Superstructure		Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	
		Plain	Epoxy	Plain	Epoxy	Plain	Epoxy
By Type	W5	0	0	0	0	0	0
	4	0	0	416	0	0	416
	5	0	142	15,851	9,504	0	26,098
	6	0	3,153	20,127	0	0	23,370
	7	0	0	0	0	0	0
By Type		0	3,295	36,394	9,504	401	49,884

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed March 2025  
Checked April 2025

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

Sheet No. 8 of 9

STATE OF MISSOURI

JASON M. KEMNITZ

NUMBER PE-2011005051

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED \$DATES

ROUTE D STATE MO

DISTRICT BR SHEET NO. 8

COUNTY LIVINGSTON

JOB NO. JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L05481

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

\$FILE\$ \$TIME\$ \$DATES\$

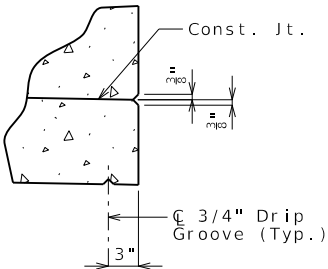
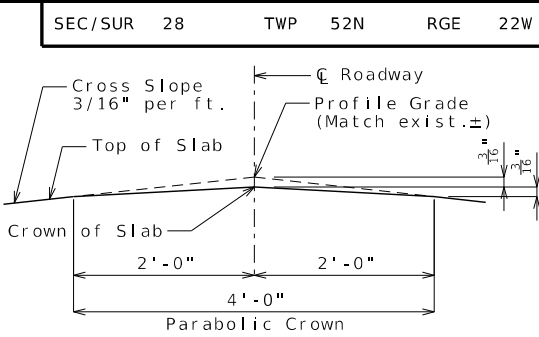
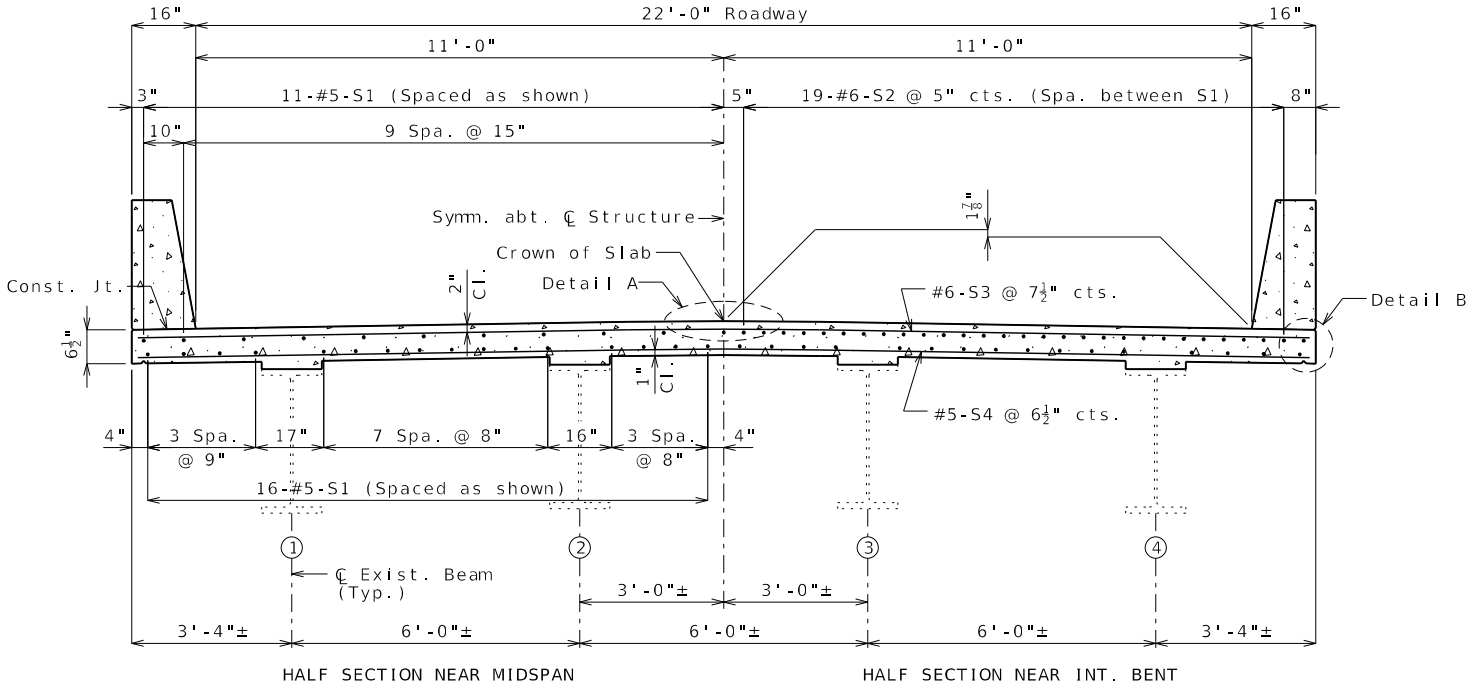


Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span (1-2)	Span (2-3)	Span (2-3)	Span (3-4)
5'-0"	5'-0"	5'-0"	5'-0"

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', 47', 37') SIMPLE WIDE FLANGE BEAM SPANS



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)  
No 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 (ASTM A615 Grade 60) fy = 60,000 psi

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 plain 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 field before finalizing the shop drawings.

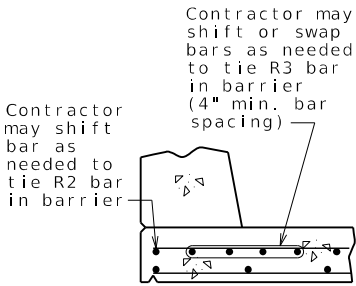
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

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).

For adjusted girder deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

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

TYPICAL SECTION THRU SLAB



OPTIONAL SHIFTING  
TOP BARS AT BARRIER

Estimated Quantities

Item		Total
Removal of Existing Bridge Deck	sq. foot	2751
Bridge Approach Slab (Minor)	sq. yard	100
Slab on Steel	sq. yard	338
Type H Barrier	linear foot	246
Substructure Repair (Formed)	sq. foot	90
Fiber Reinforced Polymer Wrap	sq. foot	11
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Shear Connectors	each	1,896
Strengthening Existing Beams	lump sum	1
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	78
Reinforcing Steel (Epoxy Coated)	pound	29,005

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 1, 11 or 111.

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

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

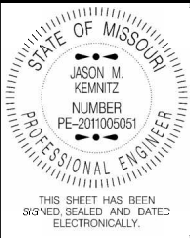
REPAIRS TO BRIDGE:  
ROUTE B OVER SAMBO CREEK

ROUTE B FROM ROUTE 65 TO ROUTE 24  
ABOUT 7.9 MILES EAST OF ROUTE 65  
BEGINNING STATION 423+13.5 ± (MATCH EXISTING)

Detailed March 2025  
Checked April 2025

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

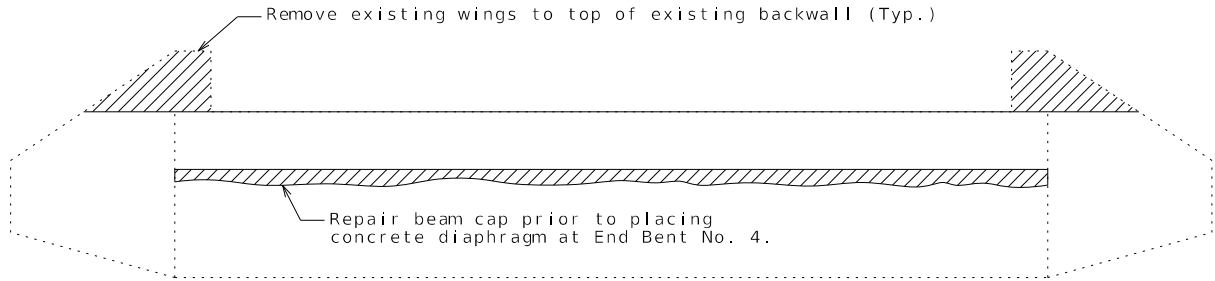
Sheet No. 1 of 11



DATE PREPARED 6/26/2025	
ROUTE B	STATE MO
DISTRICT BR	SHEET NO. 1
COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N07271	

DESCRIPTION	DATE





### 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 to 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 Bents No. 1 & 4 removal lines.

### 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.

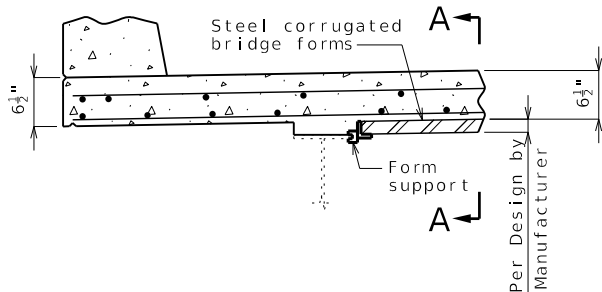
Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

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

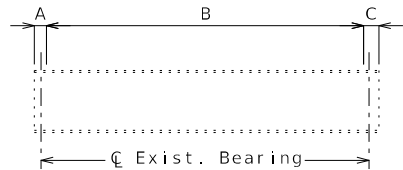
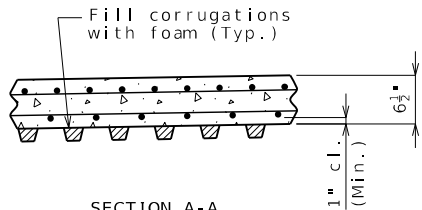
Bridge deck surface may be finished with a vibratory screed.

#### Haunching:

Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. Haunches will be increased approximately 1/2" when comparing with original plan dimensions to match existing grade on Rte.B.

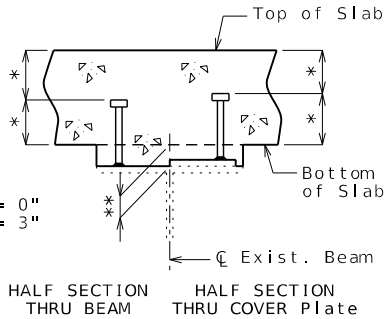


OPTIONAL STAY-IN-PLACE FORM DETAILS

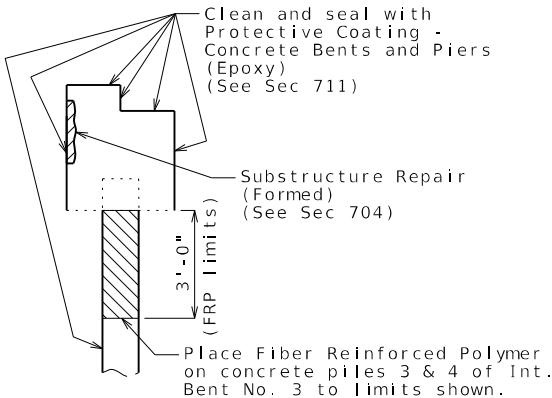


ELEVATION SHOWING SHEAR CONNECTOR SPACING

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING				
Span	S.C. per unit	A	B	C
(1-2)	2	8"±	72 Units @ 6" cts.	8"±
(2-3)	2	5"±	93 Units @ 6" cts.	5"±
(3-4)	2	8"±	72 Units @ 6" cts.	8"±
Total shear connectors required				1,896

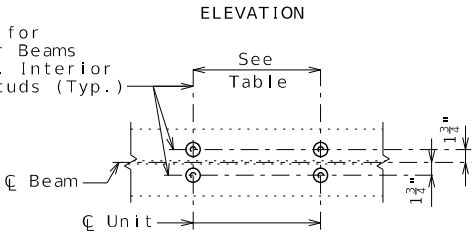
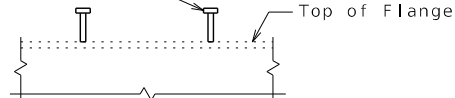


SECTION THRU EXIST. BEAM SHOWING SHEAR CONNECTORS



TYPICAL SECTION THRU INT. BENTS NO. 2 & 3 SHOWING PROTECTIVE COATING, SUBSTRUCTURE REPAIR AND FIBER WRAPPING OF PILES

Two 7/8"Ø x 4" for Exist. Exterior Beams & 5" for Exist. Interior Beams Welded Studs (Typ.)

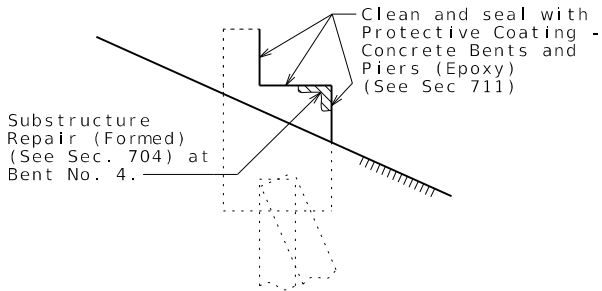


PLAN OF SHEAR CONN. (2 PER UNIT)

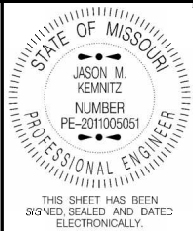
### DETAILS OF SHEAR CONNECTORS

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.



TYPICAL SECTION THRU END BENTS NO. 1 & 4 SHOWING PROTECTIVE COATING AND SUBSTRUCTURE REPAIR



DATE PREPARED 6/26/2025	
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JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N07271	

DESCRIPTION	DATE

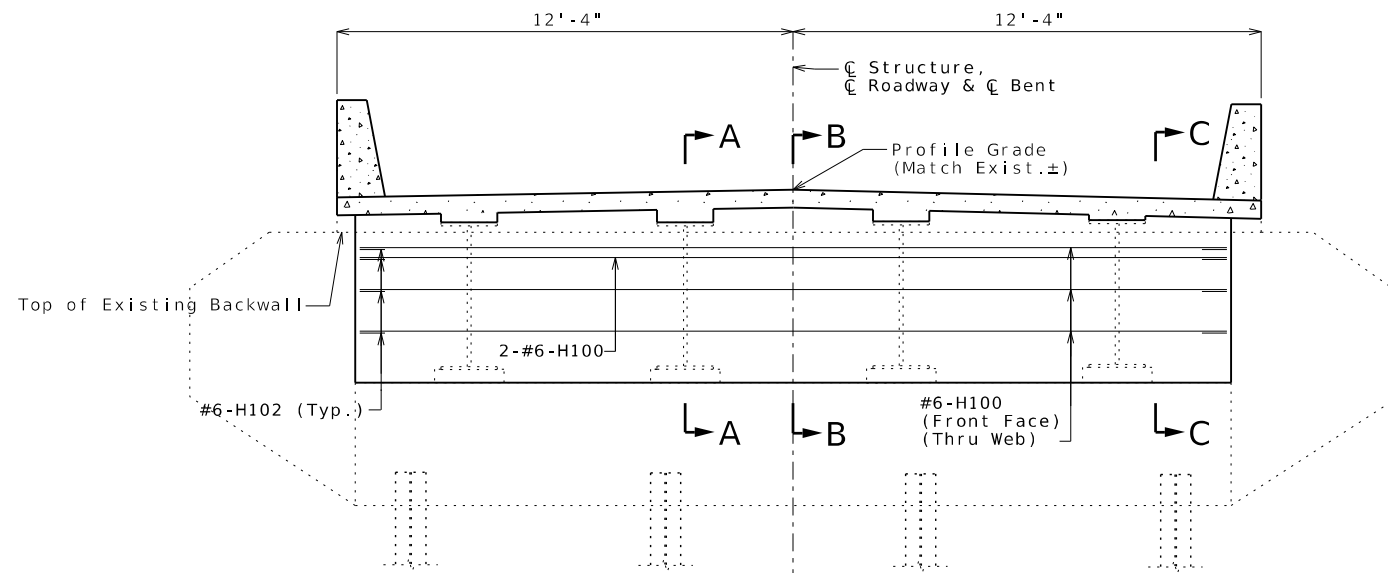
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MoDOT

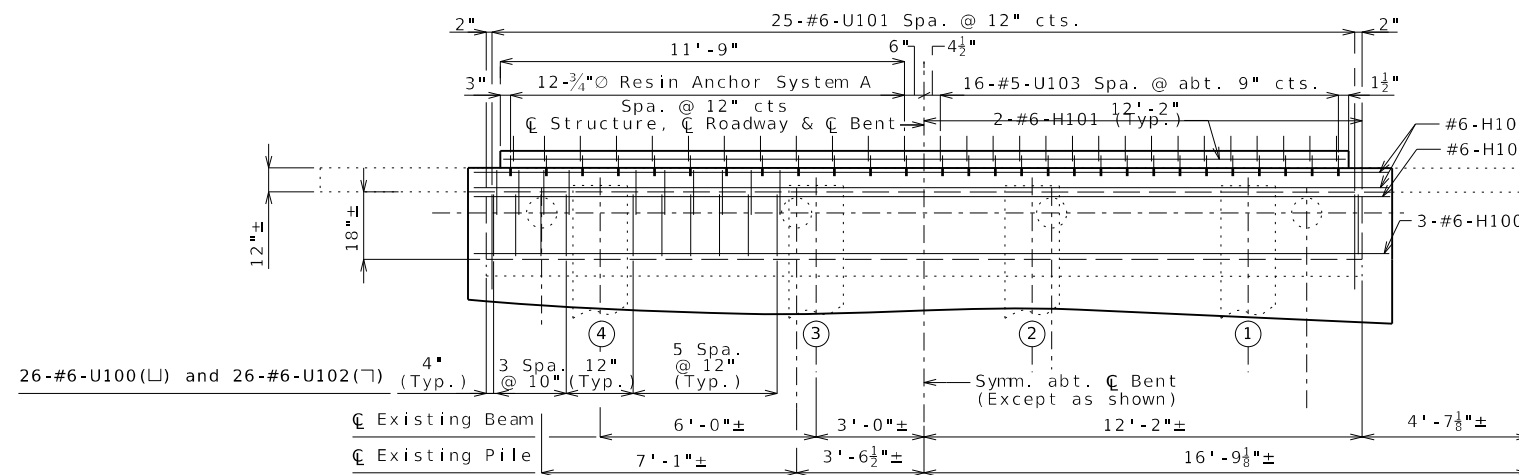
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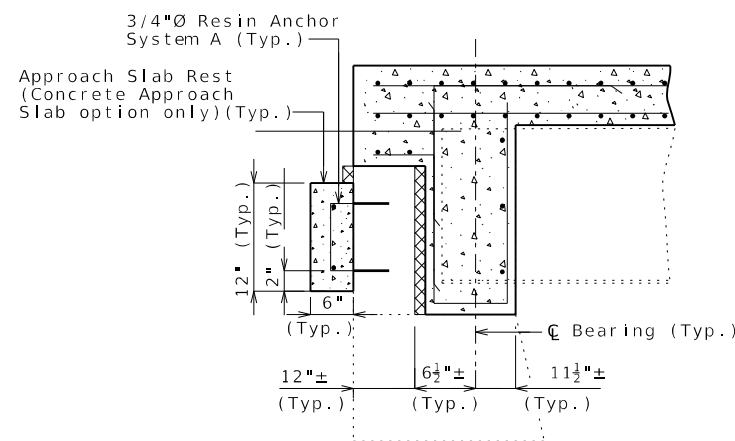


SECTION NEAR END BENT

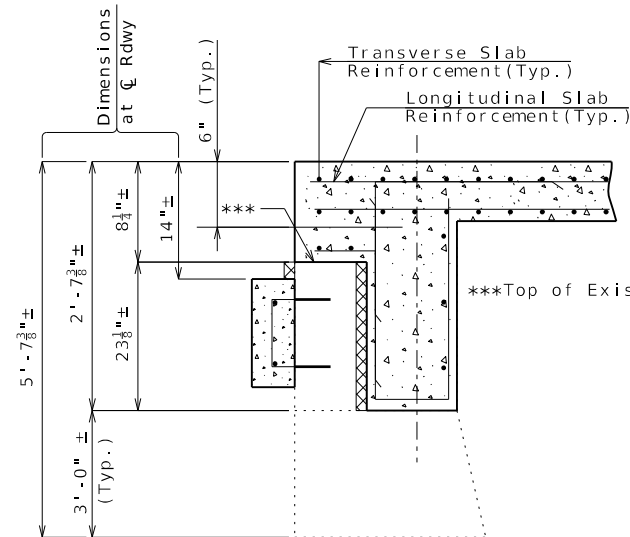
Note: Existing steel end diaphragms not shown for clarity (leave-in-place).



PART PLAN



SECTION A-A



SECTION B-B

DETAIL OF END BENTS NO. 1 & 4

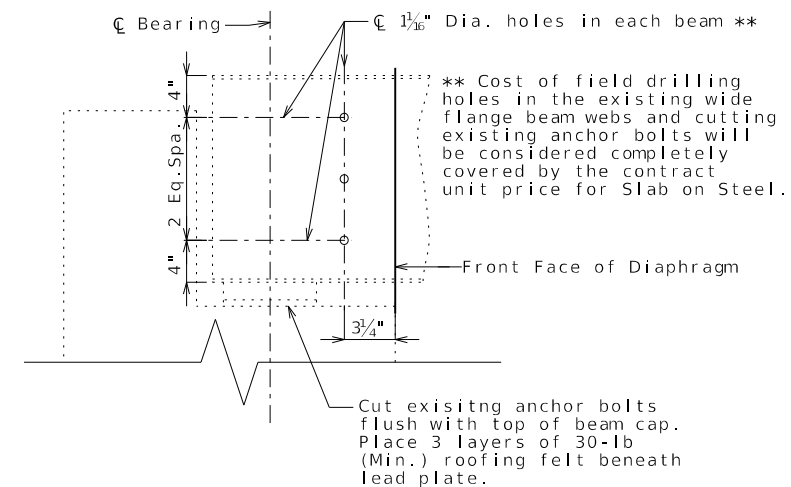
Notes:

The exposed and accessible surface 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.

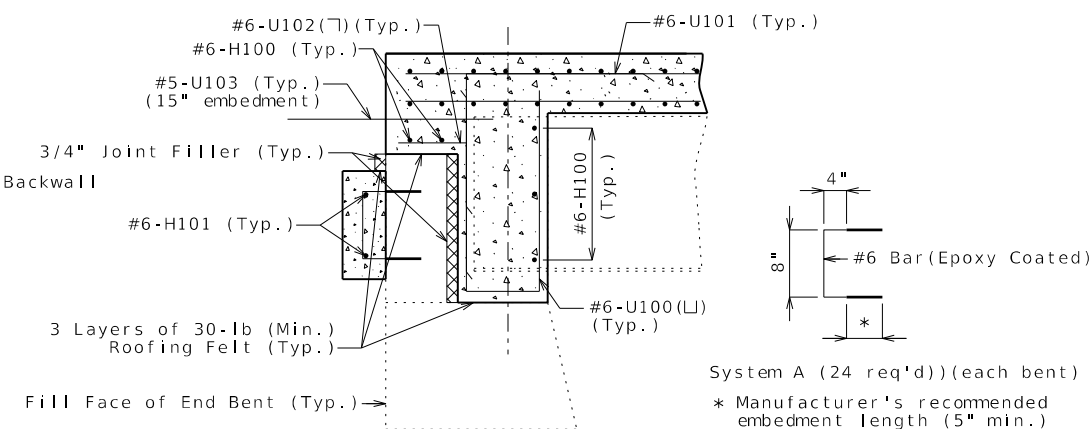
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039. The cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) for concrete option only. The minimum embedment depth in concrete with  $f'c = 4000$  psi for the resin anchor system shall be that required to meet the minimum pullout strength in accordance with Sec 1039 but shall not be no less than 5".

All reinforcement and concrete in the concrete diaphragm at the end bents is included in the Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel. All reinforcement and concrete in the approach slab rest will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) for concrete option only.

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



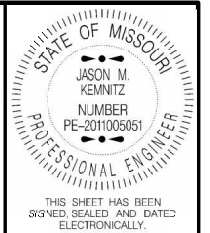
DETAIL OF WEB HOLES AT END BENT



SECTION C-C

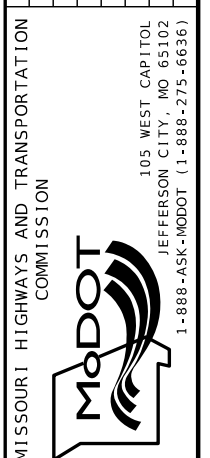
DETAIL OF RESIN ANCHOR SYSTEM

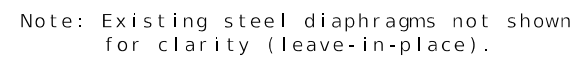
System A (24 req'd))(each bent)  
\* Manufacturer's recommended embedment length (5" min.)



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COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N07271	

DESCRIPTION	DATE





ELEVATION B-B

Bend or cut bottom leg of U bars  
in field where necessary to miss  
existing steel diaphragm bent plate

SECTION A-A

DETAIL D

### DETAILS OF WEB HOLES IN EXTERIOR BEAMS AT INTERMEDIATE BENTS

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 mills before concrete is poured. The surface preparation and coating for girders shall extend a minimum of one foot outside the face of the girder 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.

Cost of field drilling holes in existing exterior wide flange beam webs and placing roofing felt and joint filler will be considered completely covered by the contract unit price for Slab on steel.

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



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DATE PREPARED  
6/26/2025

ROUTE B	STATE MO
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DISTRICT BR	SHEET NO. 4
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COUNTY  
CARROLL

JOB NO.  
JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.	
N07271	

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
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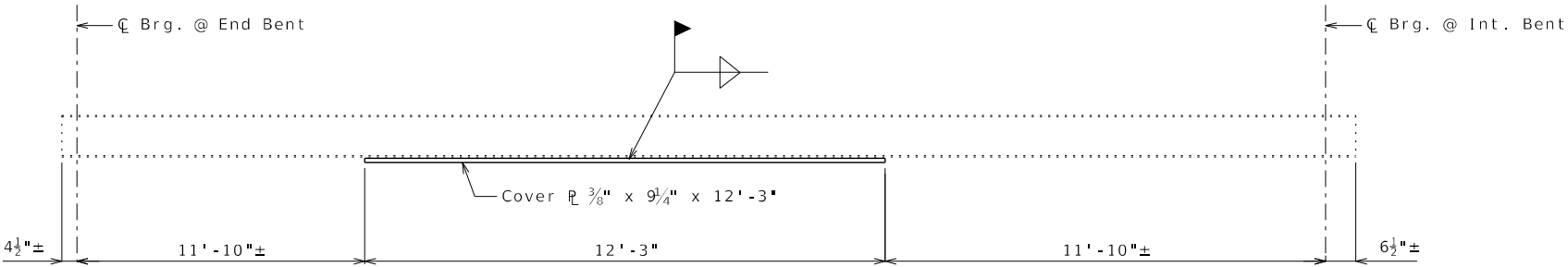
105 WEST CAPITOL  
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000 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
Fax (816) 942-3013

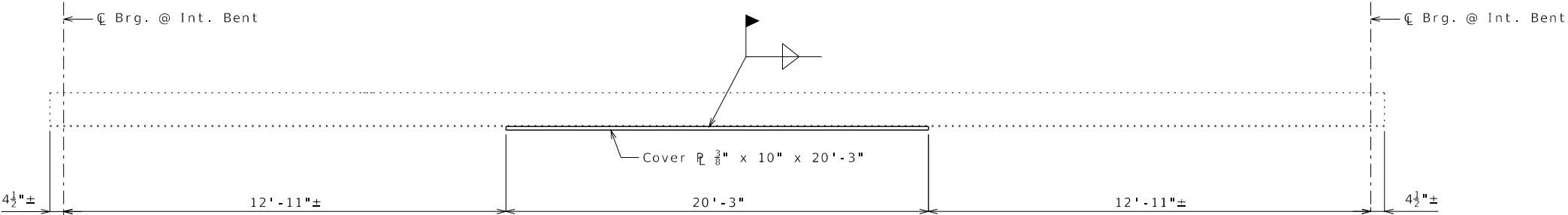
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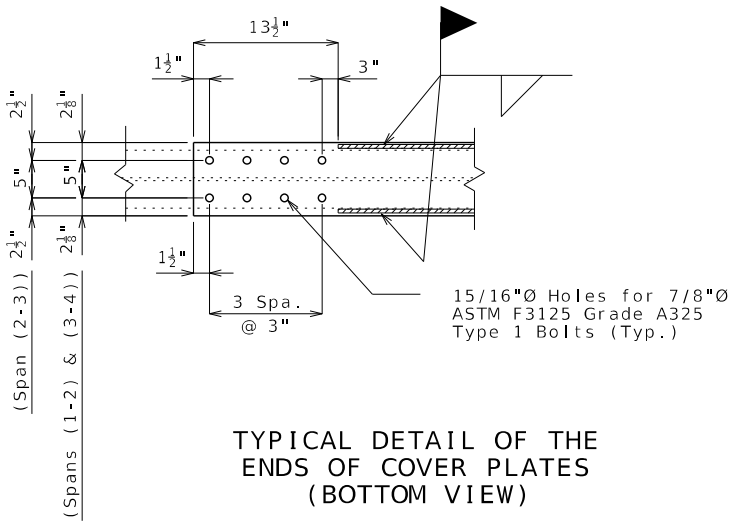




PART ELEVATION OF EXTERIOR BEAMS NO. 1 & 4 SHOWING COVER PLATE INSTALLATION  
SPAN (1-2) AND SPAN (3-4)



PART ELEVATION OF EXTERIOR BEAMS NO. 1 & 4 SHOWING COVER PLATE INSTALLATION  
SPAN (2-3)



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

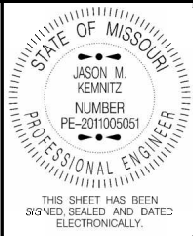
- Notes:
- Beam with end-bolted cover plates shall be installed in the following sequence after existing bridge deck is removed:
1. Drill holes in cover plate and flange.
  2. Clean faying surfaces. (See Special Provisions)
  3. Install and tighten bolts.
  4. Weld cover plate to flange.

Fabricated Structural Steel shall be ASTM A709 Grade 36, except as noted.

Payment for 1,190 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.

Contractor shall verify all dimensions in field before finalizing the shop drawings.



DATE PREPARED 6/26/2025	
ROUTE B	STATE MO
DISTRICT BR	SHEET NO. 6
COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N07271	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
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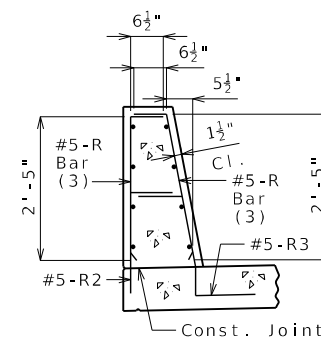
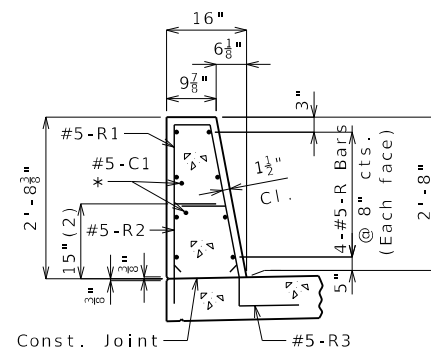
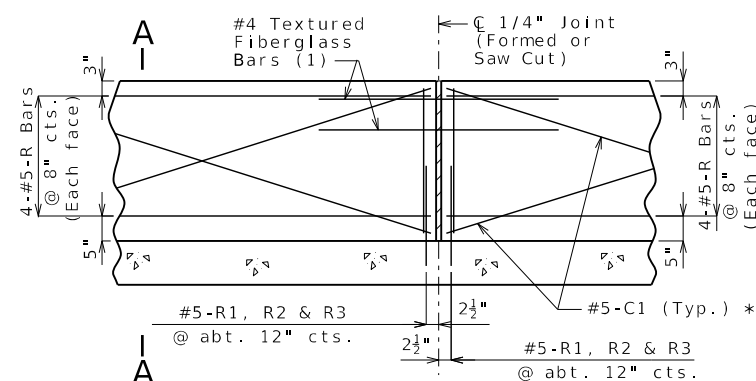
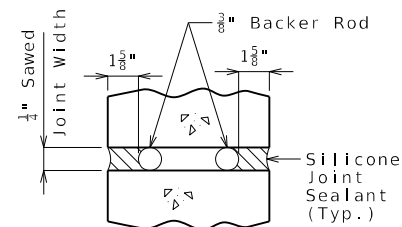
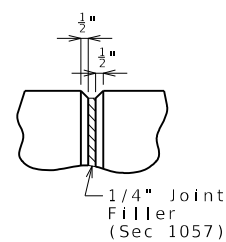
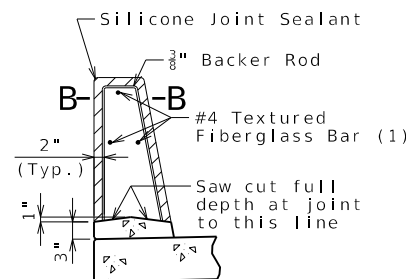
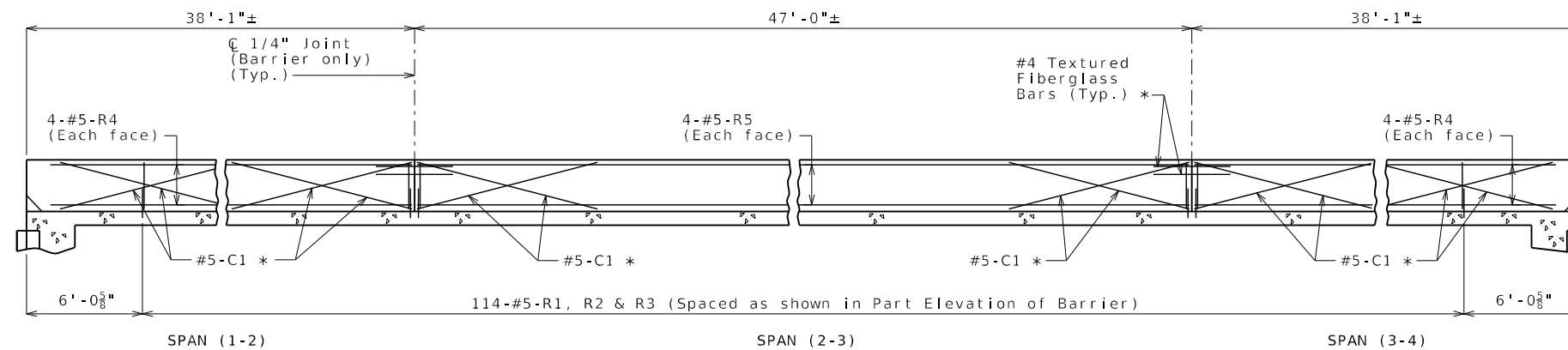
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General Notes:

\* 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.

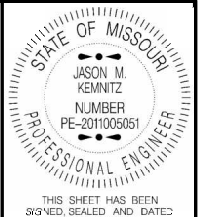
Concrete in barrier shall be Class B-1.

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. 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.



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ROUTE	STATE
B	MO

DISTRICT BR	SHEET NO. 7
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COUNTY  
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JOB NO.  
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CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.	N07271
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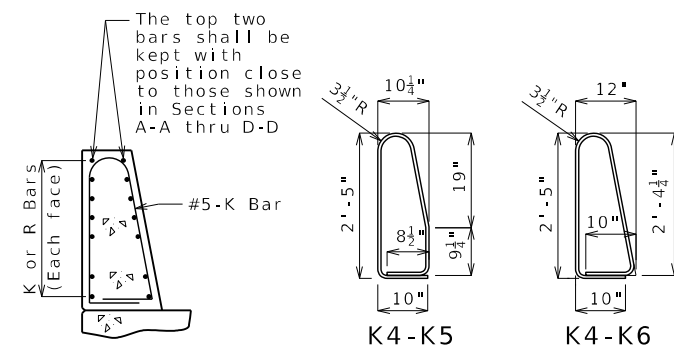
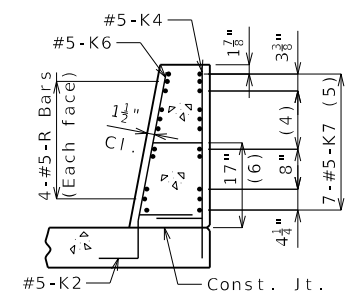
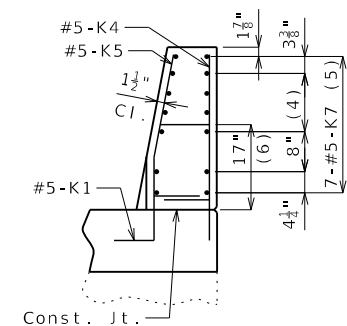
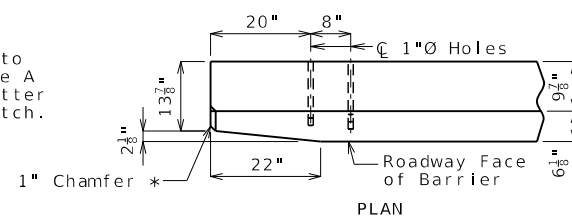
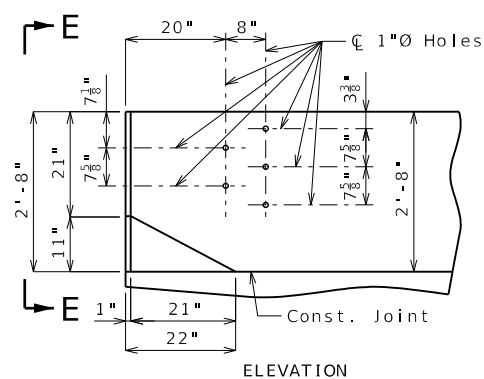
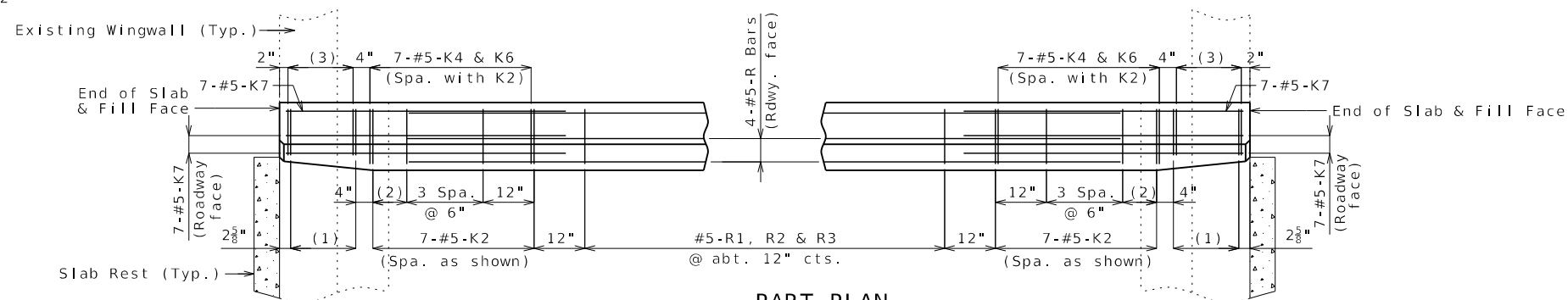
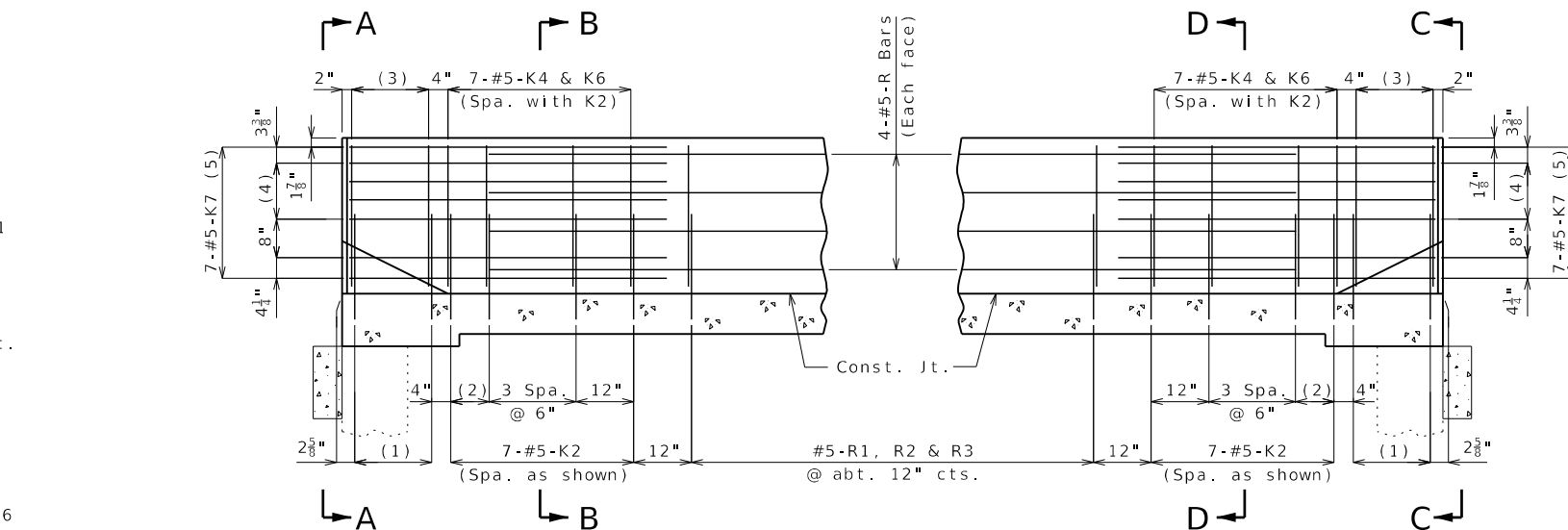
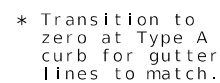
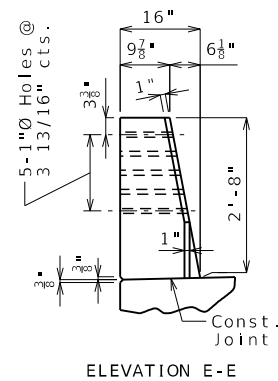
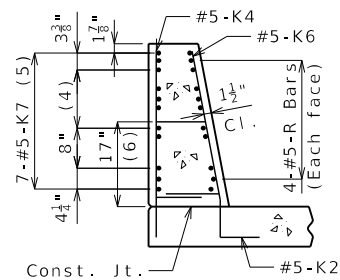
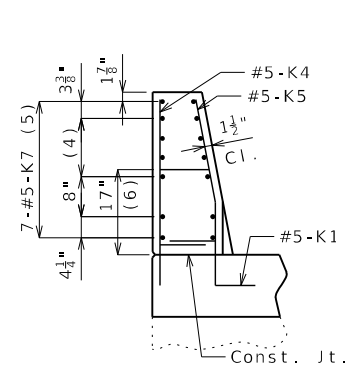
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
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PERMISSIBLE ALTERNATE SHAPES  
(Other K bars not shown for clarity)

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

All dimensions are out to out.

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 2'-6" between K7 bars and R bars.

## TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)



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ROUTE	STATE
B	MO

B	MO
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COUNTY

CARROLL L

JOB NO.

JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

N07271

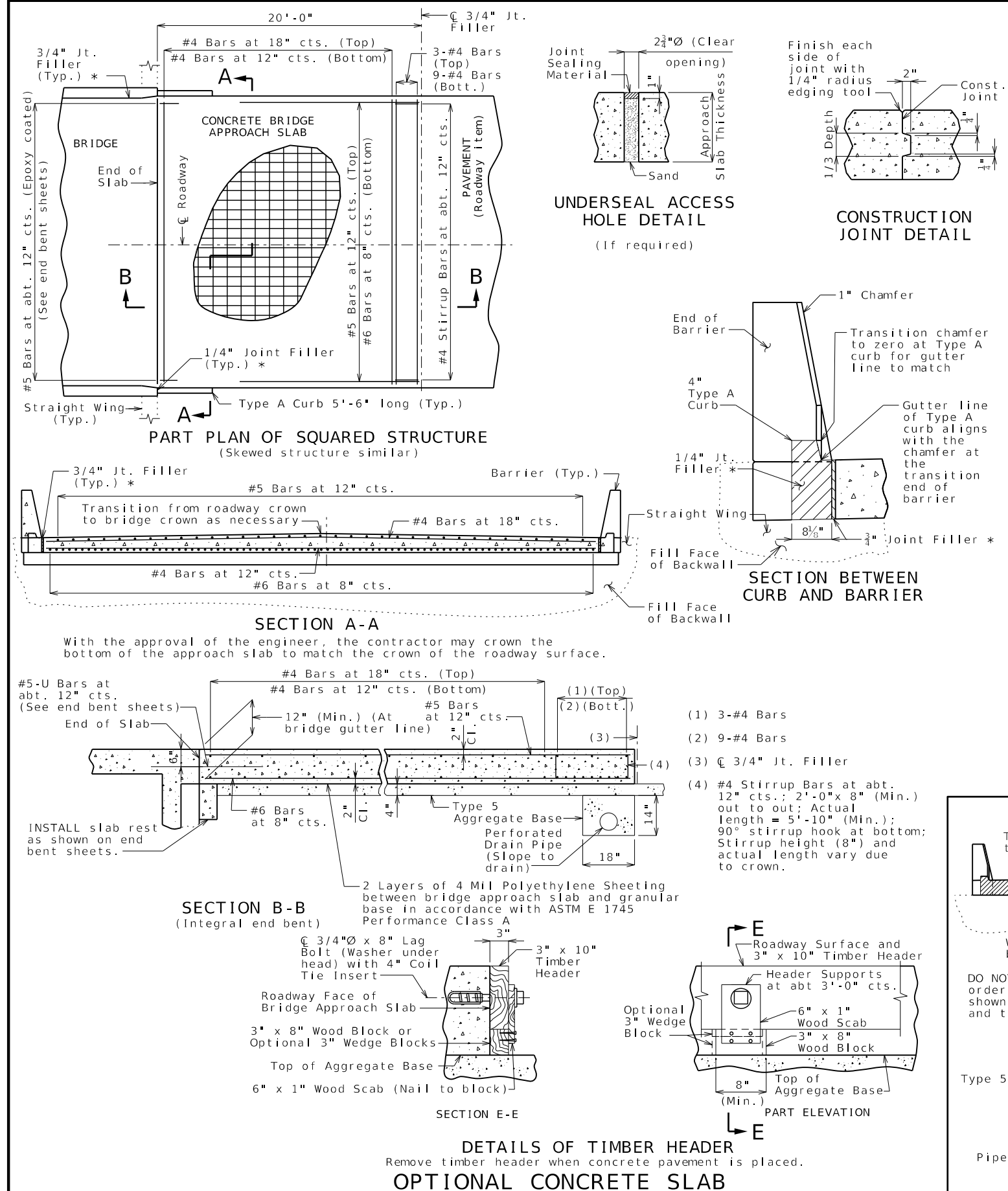
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## Notes For Concrete Slab Only:

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  $f_y = 60,000$  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  $1\frac{1}{2}"$ , unless otherwise shown.

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

**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:

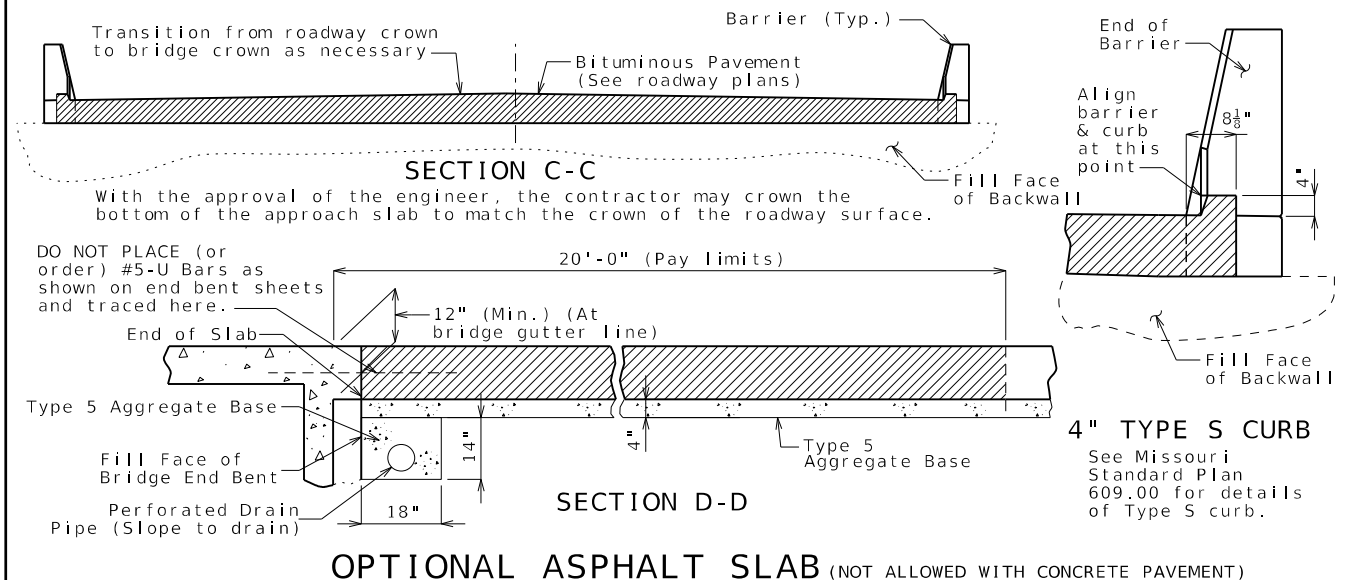
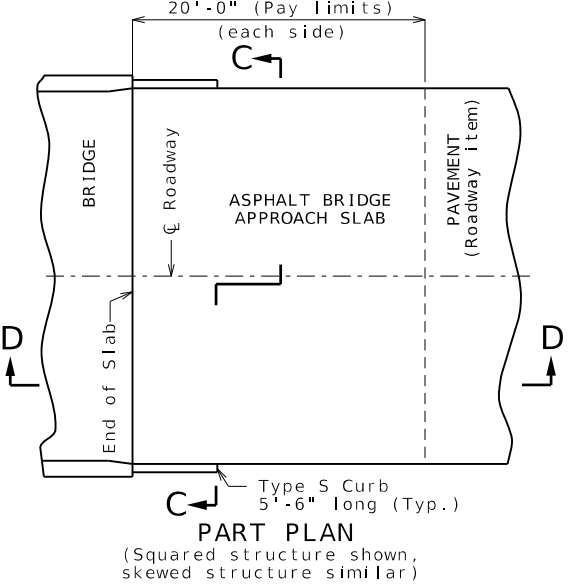
☐ Concrete Bridge Approach Slab

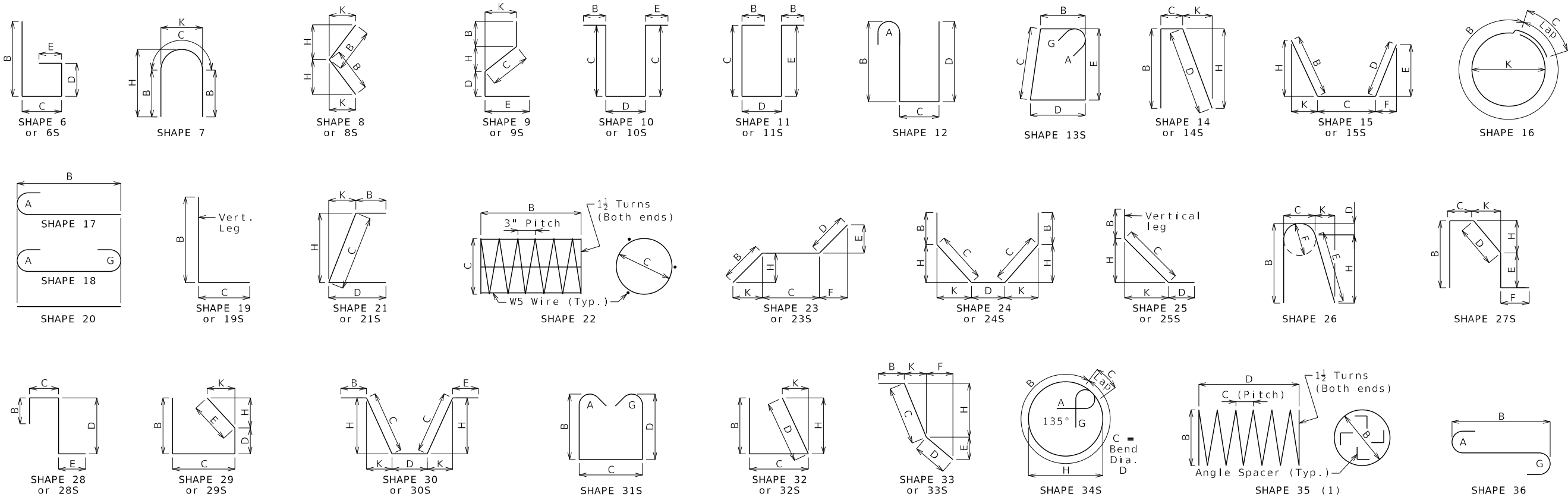
☐ Asphalt Bridge Approach Slab

## Notes For Asphalt Slab Only:

Payment for furnishing all materials, labor and excavation necessary to construct the asphalt bridge approach slab, including tack, curb, 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.



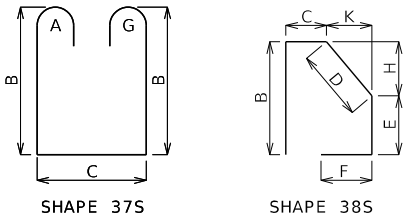


Finished Bend Dimensions D and Hook Dimensions						
Standard Pin Bend Shapes						
Size	Case	D	A or G		J	
			90°	180°	180°	
#4	1	3"	8"	6"	4"	
#5	1	3 3/4"	10"	7"	5"	
#6	1	4 1/2"	12"	8 1/4"	6"	
#7	2	5 1/4"	14"	9 3/4"	7"	
	3	7"	15"	11 1/2"	8 3/4"	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 1/4"	10"	
#9	1	9 1/2"	19 1/2"	15 1/2"	11 3/4"	
#10	1	10 3/4"	22"	17 1/2"	13 1/4"	
#11	1	12"	24 1/2"	19 1/2"	14 7/8"	
#14	1	18 1/4"	31 1/4"	27 1/2"	21 5/8"	
#18	1	24"	41 1/2"	36 1/4"	28 1/2"	
Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G		H	J
			90°	135°	180°	135°
#4	2	2"	4 1/2"	4 1/2"	5"	2 7/8"
	3	3"	5"	5 1/4"	6"	3"
#5	2	2 1/2"	5 3/4"	5 3/4"	5 3/4"	3 3/4"
	3	3 3/4"	6 1/4"	6 1/4"	7"	3 3/8"
#6	1	4 1/2"	12"	7 3/4"	8 1/4"	4 3/8"

Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.

6d for #4 & #5, 12d for #6



BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)							
By Size	Size	Substructure		Superstructure		Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	
	W5	0	0	0	0	0	0
	4	0	246	0	0	0	246
	5	0	487	12,940	5,177	300	18,454
	6	0	1,488	8,366	0	0	9,854
	7	0	0	0	0	0	0
By Type		0	2,221	21,306	5,177	300	28,554

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed March 2025  
Checked April 2025

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

Sheet No. 10 of 11

STATE OF MISSOURI

JASON M. KEMNITZ

NUMBER PE-2011005051

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 6/26/2025

ROUTE B

DISTRICT BR

COUNTY CARROLL

JOB NO. JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO. N07271

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



Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span (1-2)	Span (2-3)	Span (2-3)	Span (3-4)
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.

General Notes:

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

Design Loading:  
H15-44 (1-Lane) (1957) (Existing)  
HS20-44 (New Construction)  
No 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 (ASTM A615 Grade 60)      fy = 60,000 psi

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 plain 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 the field before finalizing the shop drawings.

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.

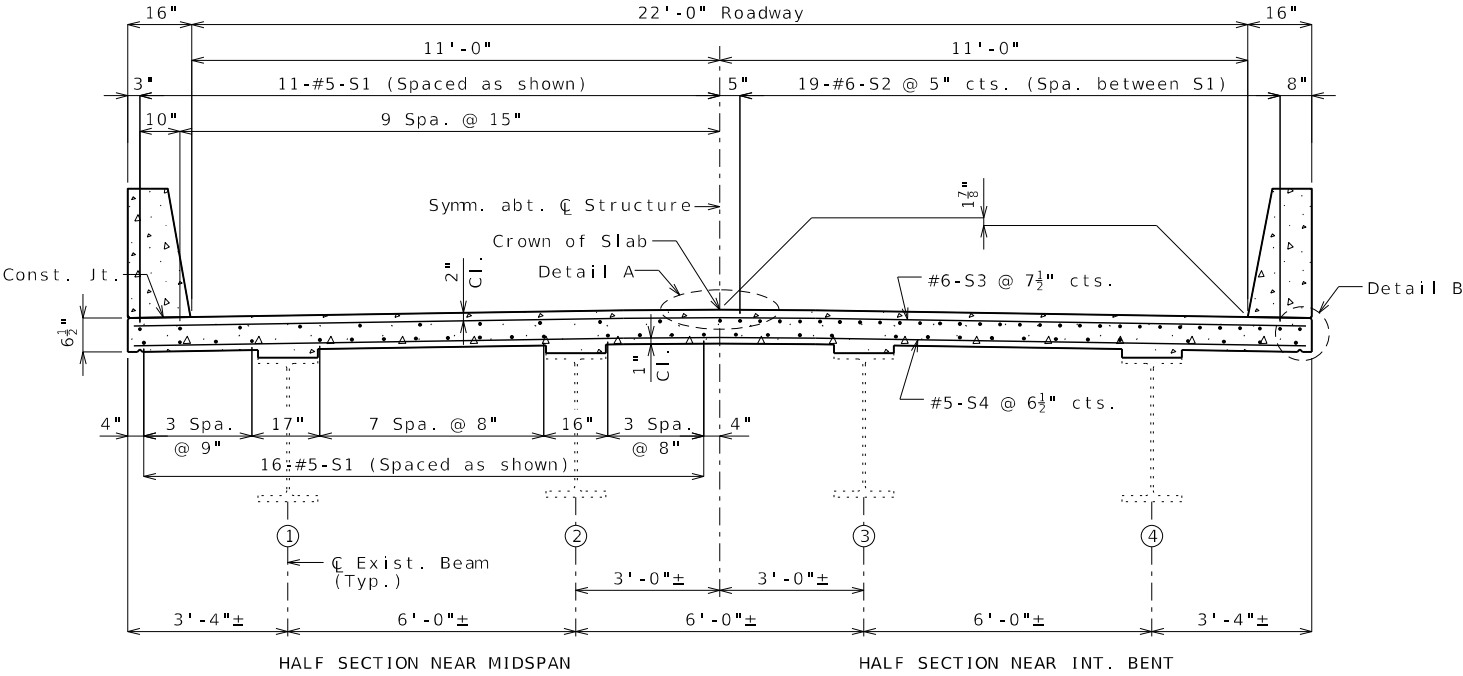
Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

For adjusted girder deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

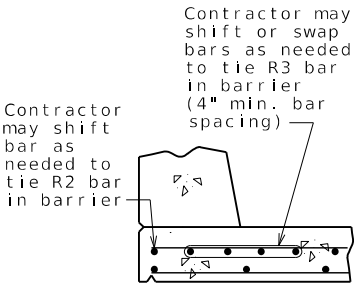
Traffic Handling:

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

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (39',51',39') SIMPLE WIDE FLANGE BEAM SPANS

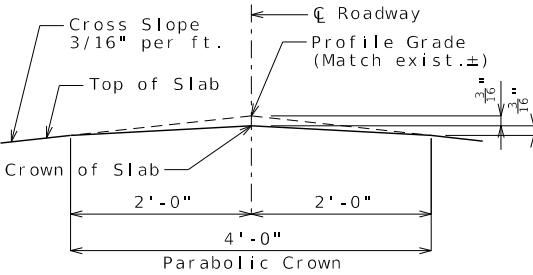


TYPICAL SECTION THRU SLAB

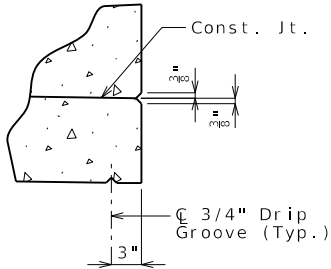


OPTIONAL SHIFTING TOP BARS AT BARRIER

SEC/SUR 4/5      TWP 52N      RGE 25W



DETAIL A



DETAIL B

Estimated Quantities		
Item		Total
Removal of Existing Bridge Deck	sq. foot	3,137
Bridge Approach Slab (Minor)	sq. yard	100
Slab on Steel	sq. yard	360
Type H Barrier	linear foot	262
Substructure Repair (Formed)	sq. foot	75
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Shear Connectors	each	3,060
Strengthening Existing Beams	lump sum	1
Slab Drain	each	22
Surface Preparation for Applying Epoxy-Mastic Primer	lump sum	1
Aluminum Epoxy-Mastic Primer	lump sum	1

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	92
Reinforcing Steel (Epoxy Coated)	pound	30,403

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.

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

REPAIRS TO BRIDGE:  
ROUTE JJ OVER WEST FORK WAKENDA CREEK

ROUTE JJ FROM ROUTE AA TO ROUTE DD  
ABOUT 2.5 MILES EAST OF ROUTE AA  
BEGINNING STATION 124+42.0 ± (MATCH EXISTING)

STATE OF MISSOURI

JASON M. KEMNITZ

NUMBER PE-2011005051

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 6/26/2025

ROUTE JJ STATE MO

DISTRICT BR SHEET NO. 1

COUNTY CARROLL

JOB NO. JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO. N08261

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

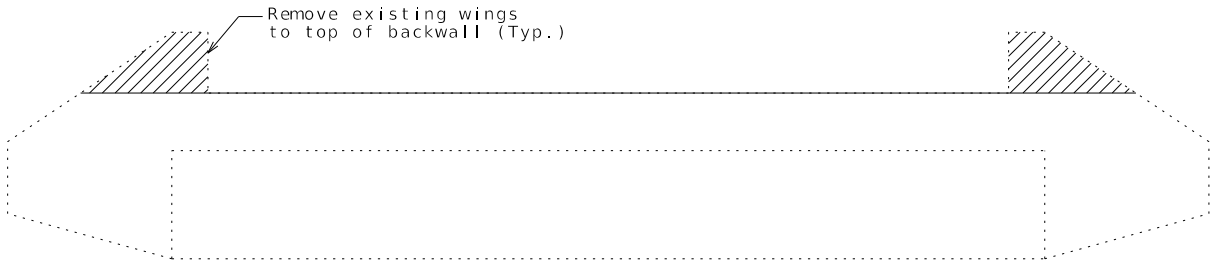
Phone (816) 701-3100

Fax (816) 942-3013

Missouri Cert. of Authority #2003007599

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ENGINEERS & ARCHITECTS



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 to 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 Bents No. 1 & 4 removal lines.

General Notes:

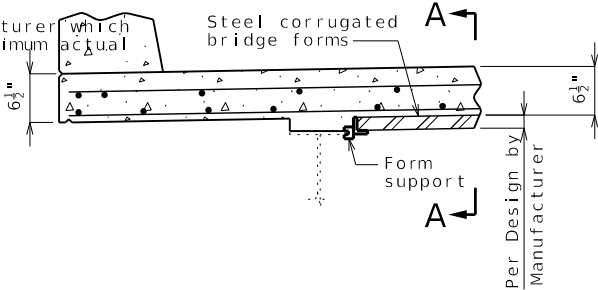
Stay-In-Place Forms:

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.

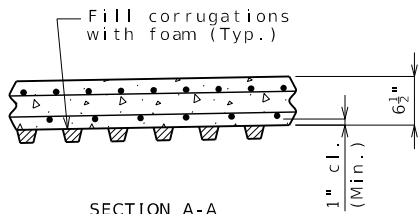
Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

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

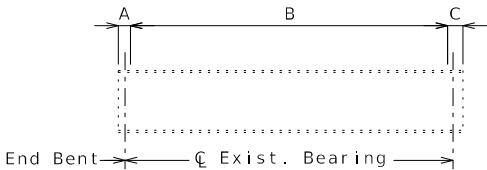
Bridge deck surface may be finished with a vibratory screed.

Haunching:

Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. Adjust haunches as needed to match existing grade on Rte. JJ.

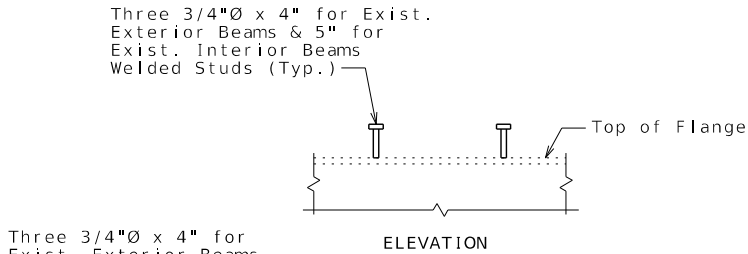


OPTIONAL STAY-IN-PLACE FORM DETAILS

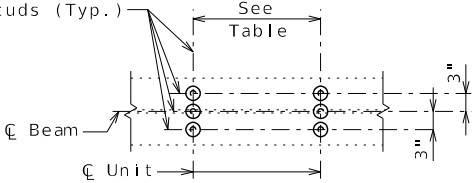


ELEVATION SHOWING SHEAR CONNECTOR SPACING

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING				
Span	S.C. per unit	A	B	C
(1-2)	3	5"±	77 Units @ 6" cts.	5"±
(2-3)	3	5"±	101 Units @ 6" cts.	5"±
(3-4)	3	5"±	77 Units @ 6" cts.	5"±
Total shear connectors required				3,060



ELEVATION

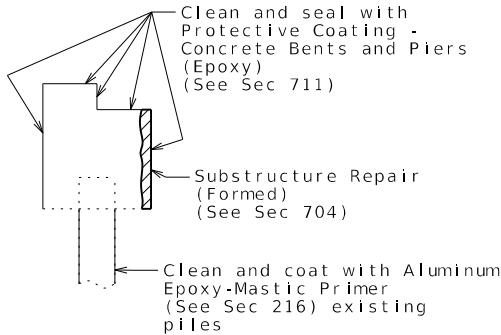


PLAN OF SHEAR CONN. (3 PER UNIT)

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.

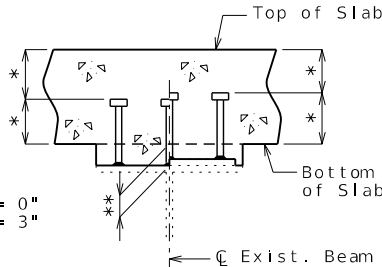
Shear connectors shall be in accordance with Sec 712, 1037 & 1080.



TYPICAL SECTION THRU INT. BENTS NO. 2 & 3 SHOWING PROTECTIVE COATING

Structural Steel Protective Coating:

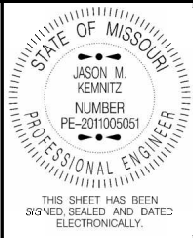
All exposed surfaces of the existing structural steel piles and sway bracing shall be recoated with one 6-mil thickness of aluminum epoxy-mastic primer applied over an SSPC-SP3 surface preparation in accordance with Sec 1081. The bituminous coating shall be applied one foot above and below the existing ground line and in accordance with Sec 702. These protective coatings will not be required below the normal low water line. The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the aluminum epoxy-mastic primer and bituminous coating will be considered completely covered by the contract lump sum price for Aluminum Epoxy-Mastic Primer.



\* 2" Minimum  
\*\* Min. Haunch = 0"  
Max. Haunch = 3"

HALF SECTION THRU BEAM  
HALF SECTION THRU COVER PLATE

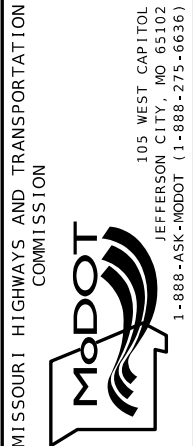
SECTION THRU EXIST. BEAM SHOWING SHEAR CONNECTORS

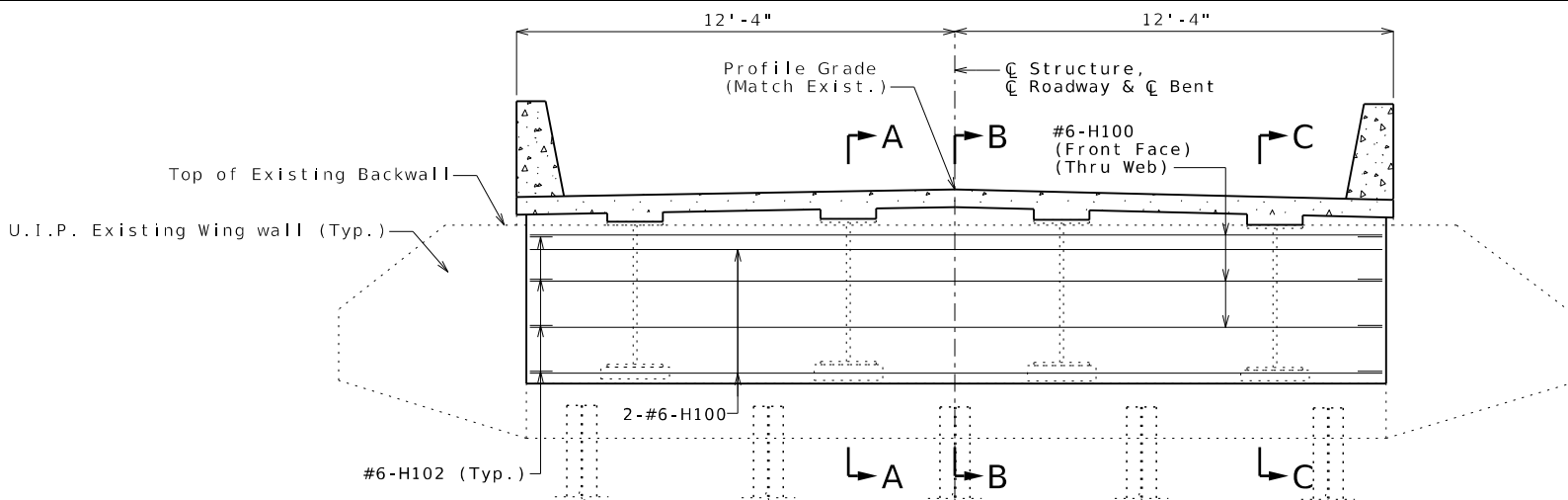


DATE PREPARED 6/26/2025	
ROUTE JJ	STATE MO
DISTRICT BR	SHEET NO. 2
COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. N08261

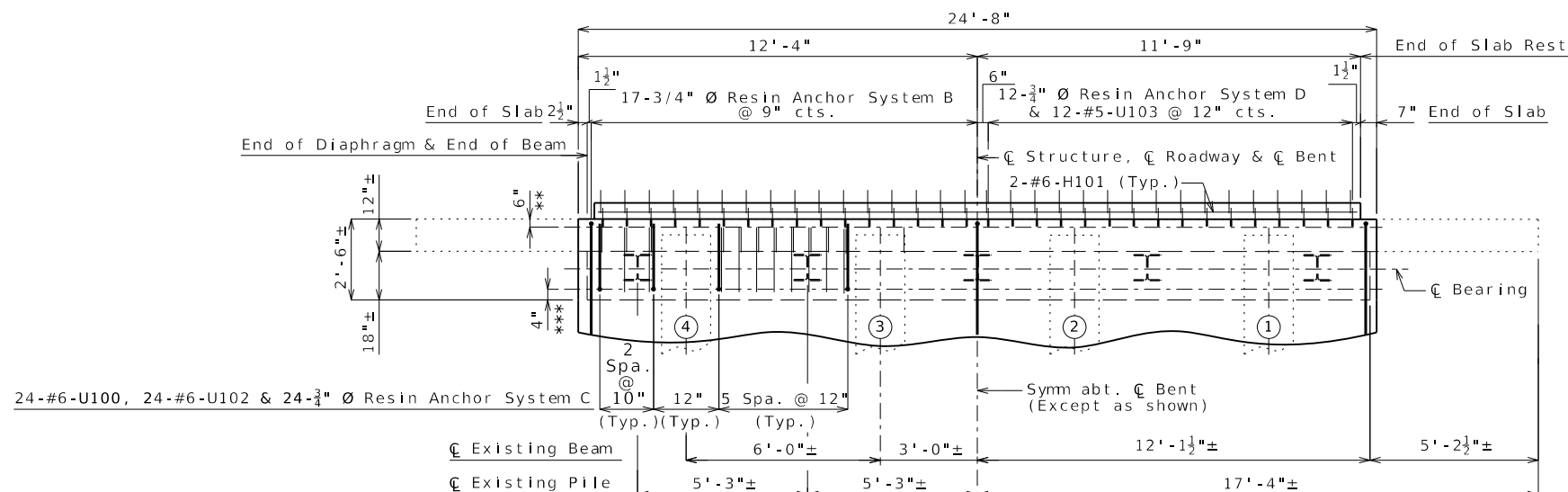
DESCRIPTION	DATE



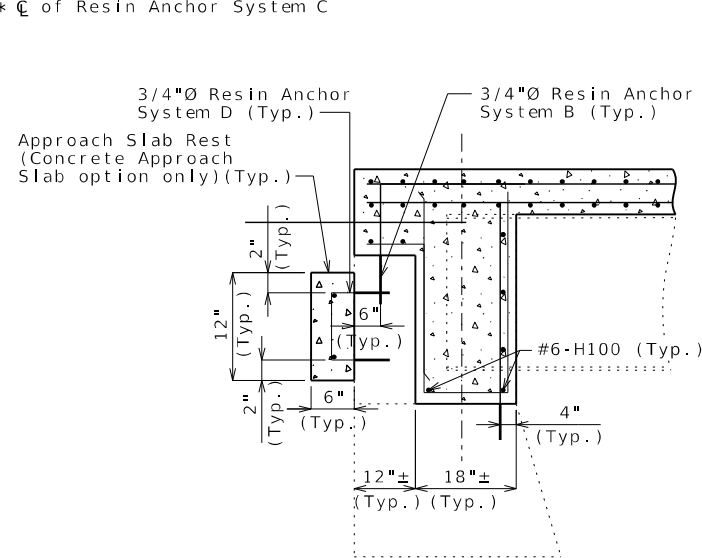


SECTION NEAR END BENT

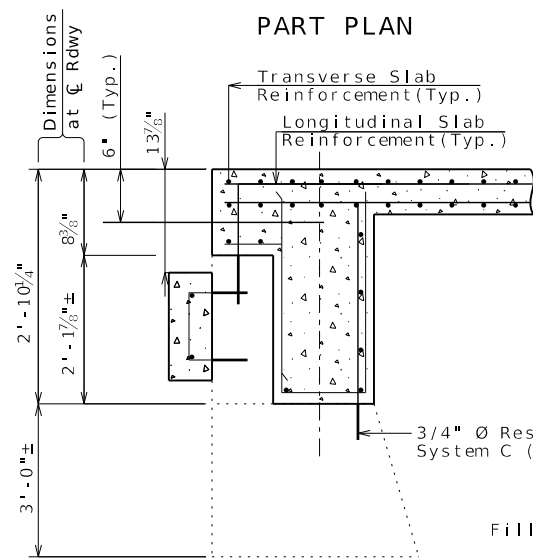
Note: Existing steel end diaphragms not shown for clarity (leave-in-place).



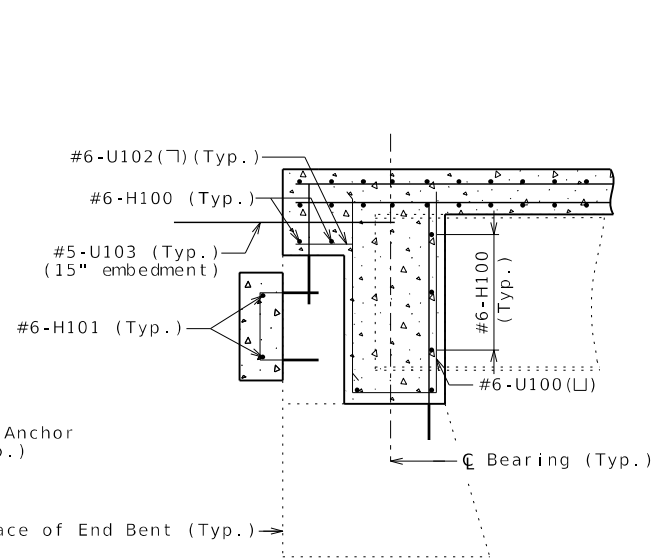
\*\*  $\text{CL}$  of Resin Anchor System B  
\*\*\*  $\text{CL}$  of Resin Anchor System C



SECTION A-A



SECTION B-B



SECTION C-C

## DETAIL OF END BENTS NO. 1 & 4

### Notes:

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

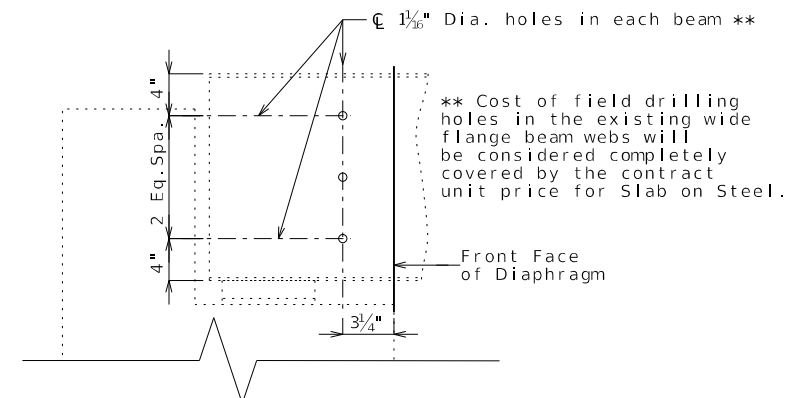
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Slab on Steel (System B & C) or Bridge Approach Slab (Minor) (System D) for concrete option only.

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

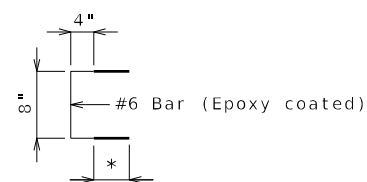
An epoxy coated #6 Grade 60 reinforcing bar shall be substituted for the 3/4" Ø threaded rod.

All reinforcement and concrete in the concrete diaphragm at the end bents is included in the Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel. All reinforcement and concrete in the approach slab rest will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) for concrete option only.

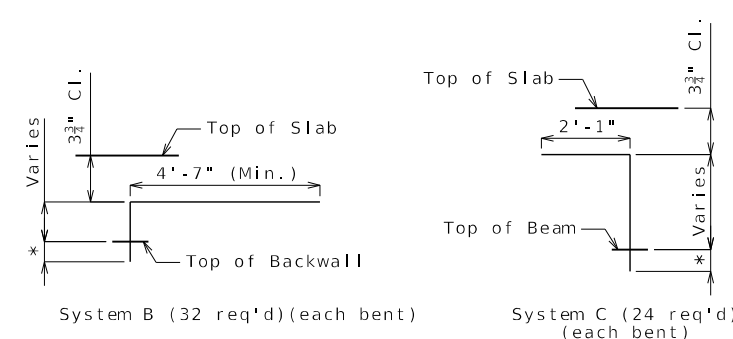
The exposed and accessible surface of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSP-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry 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.



DETAIL OF WEB HOLES AT END BENT



System D (23 req'd)(each bent)

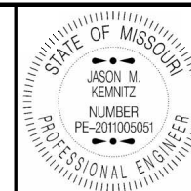


System B (32 req'd)(each bent)

System C (24 req'd)(each bent)

\* Manufacturer's recommended embedment length (5" min.)

## DETAILS OF RESIN ANCHOR SYSTEMS



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
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DATE PREPARED  
6/26/2025

ROUTE  
J J

STATE  
MO

DISTRICT  
BR

SHEET NO.  
3

COUNTY  
CARROLL

JOB NO.  
JNW0010

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
N08261

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102

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

ModOT

800 E 101st Terr., Ste. 200  
Kansas City, MO 64131

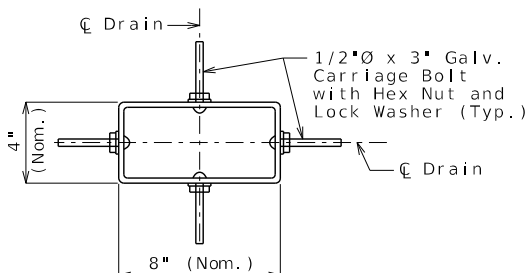
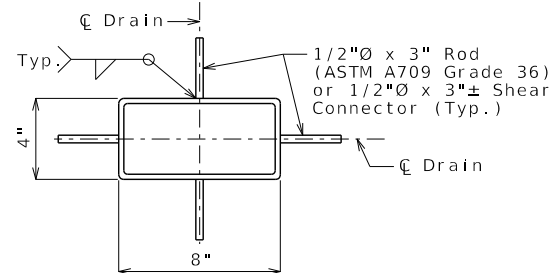
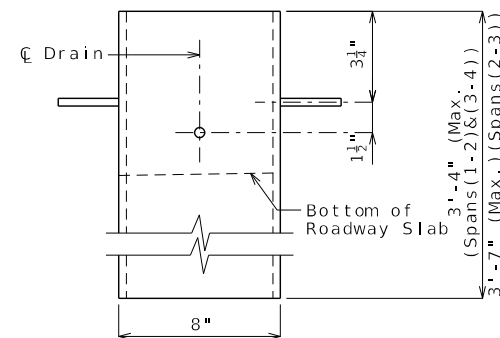
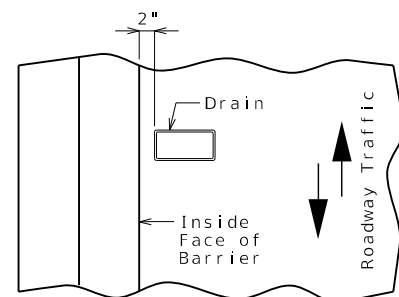
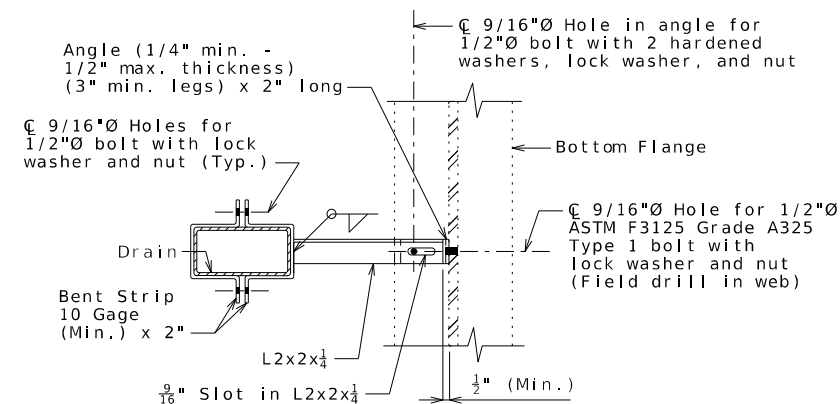
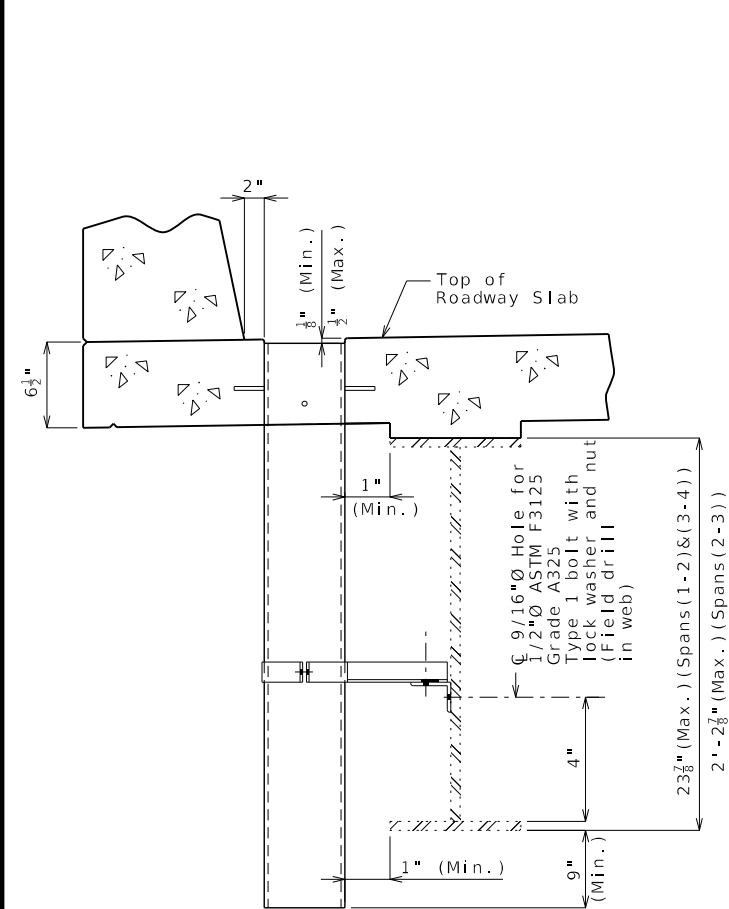
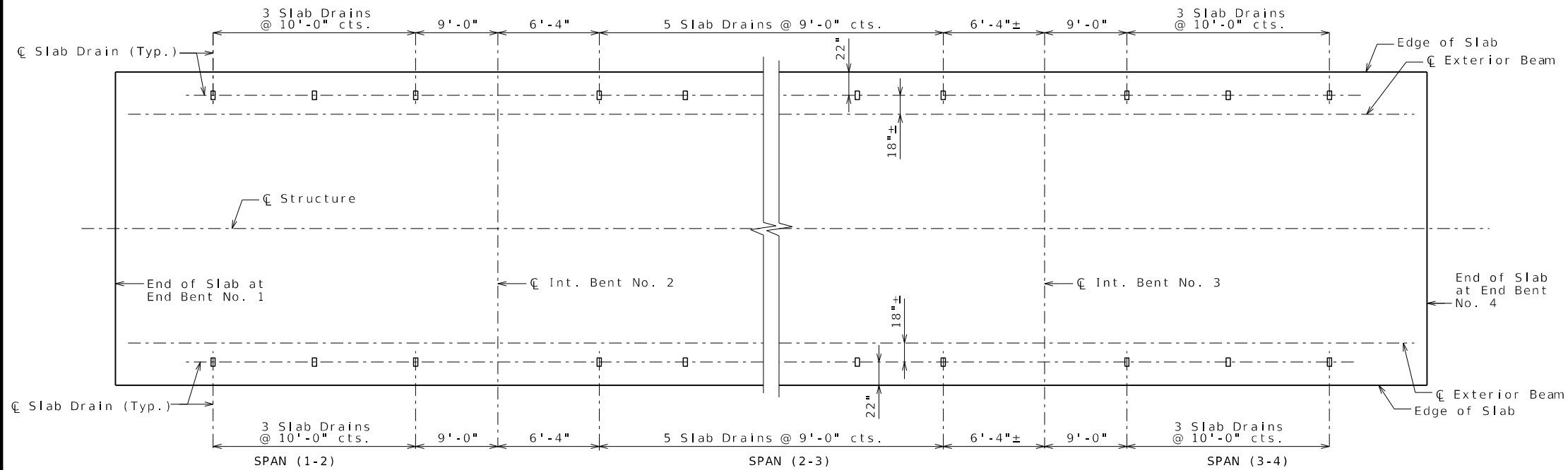
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Fax (816) 942-3013

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Authority #2003007599

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& COMPANY

ENGINEERS & ARCHITECTS





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-inch diameter 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 shall 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-inch welded sheets of ASTM A709 Grade 36 steel or from 1/4-inch 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".

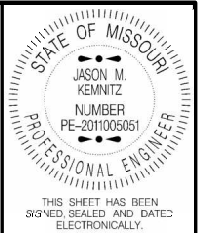
Minimum reinforced wall thickness shall be 1/4 inch.

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

6/26/2025	
ROUTE J J	STATE MO
DISTRICT BR	SHEET NO. 5

COUNTY

CARROLL

JOB NO.  
LNW0010

CONTRACT ID.

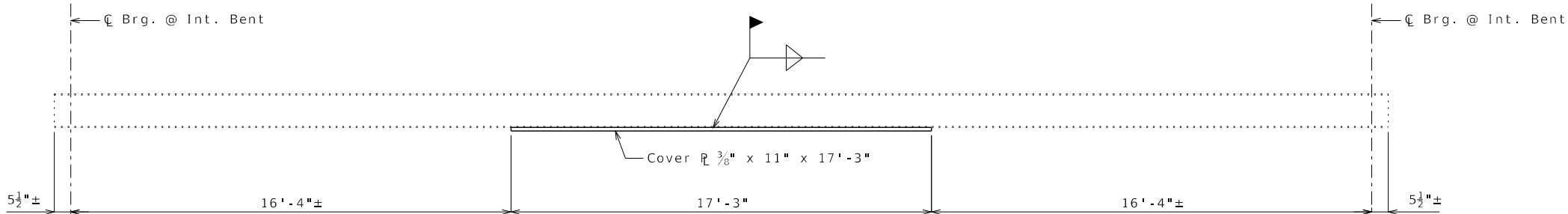
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

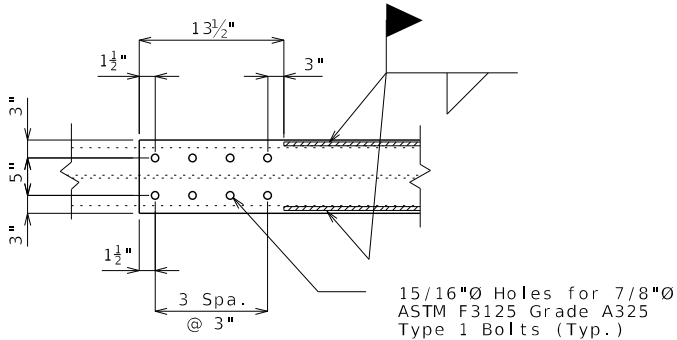
200 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
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Fax (816) 942-3013

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**WILSON**  
**& COMPANY**  
ENGINEERS & ARCHITECTS



PART ELEVATION OF EXTERIOR BEAMS NO. 1 & 4 SHOWING COVER PLATE INSTALLATION  
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 36, except as noted.

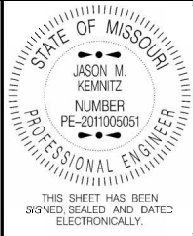
Payment for 514 pounds of new cover plates, complete in place, will be considered completely covered by the contract lump sum price for Strengthening Existing Beams.

Notch toughness is required for all cover plates.

Contractor shall verify all dimensions in field before finalizing the shop drawings.

STRENGTHENING EXISTING BEAMS

Detailed March 2025  
Checked April 2025



DATE PREPARED 6/26/2025	
ROUTE J J	STATE MO
DISTRICT BR	SHEET NO. 6
COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. N08261	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

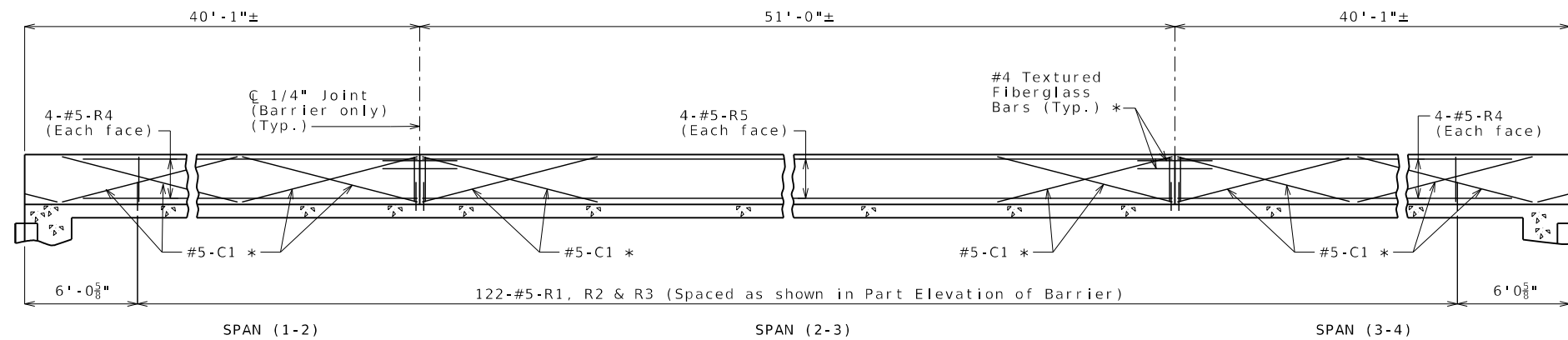
**MoDOT**

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

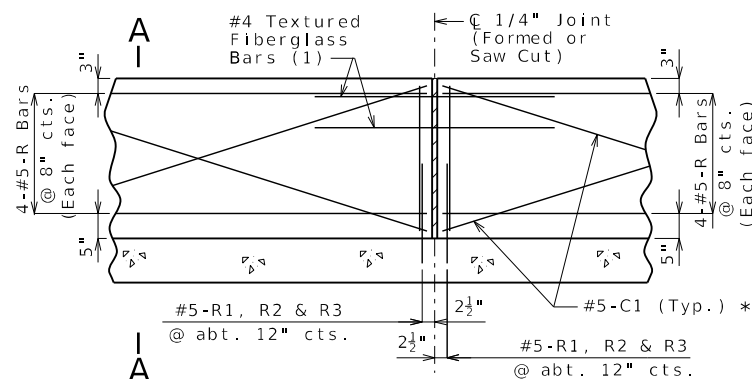
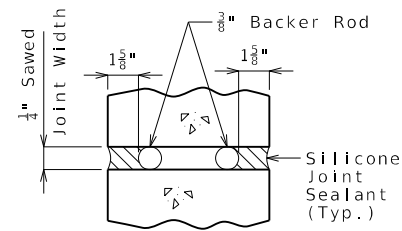
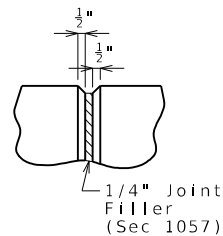
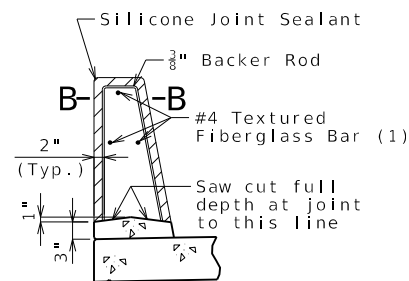
800 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
Fax (816) 942-3013

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ENGINEERS & ARCHITECTS

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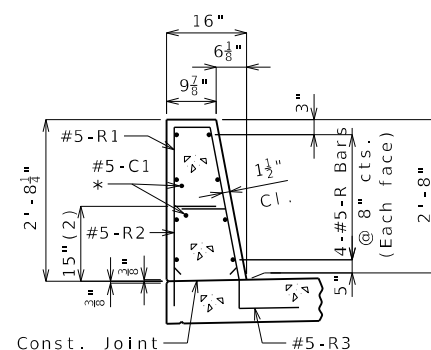


ELEVATION OF BARRIER  
(Left barrier shown, right barrier similar)  
Longitudinal dimensions are horizontal.



PART ELEVATION OF BARRIER

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



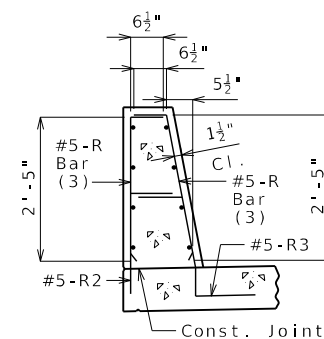
Const. Joint  #5-R3

**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.

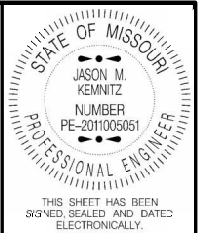
Concrete in barrier shall be Class B-1.

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 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  
6/26/2025

ROUTE	STATE
LI	MO

DD	MO
DISTRICT	SHEET NO

BR 7

COUNTY
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CARROLL

JOB NO.  
INW0010

CONTRACT ID.
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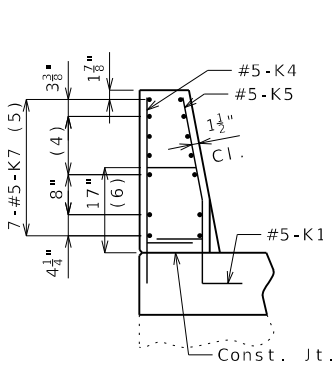
MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
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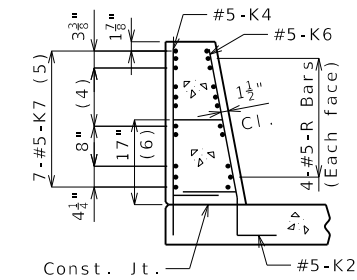
200 E 101st Terr., Ste. 200  
Kansas City, MO 64131  
Phone (816) 701-3100  
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Authority #2003007599

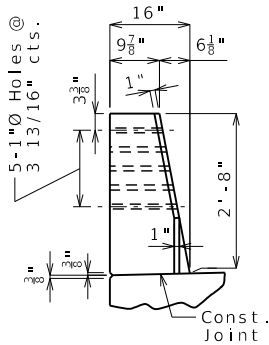
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ELEVATION A-A

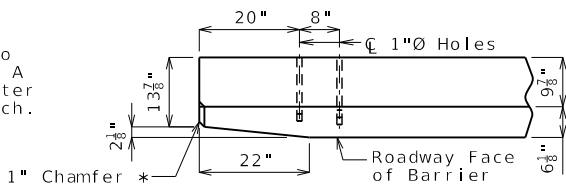


SECTION B-B

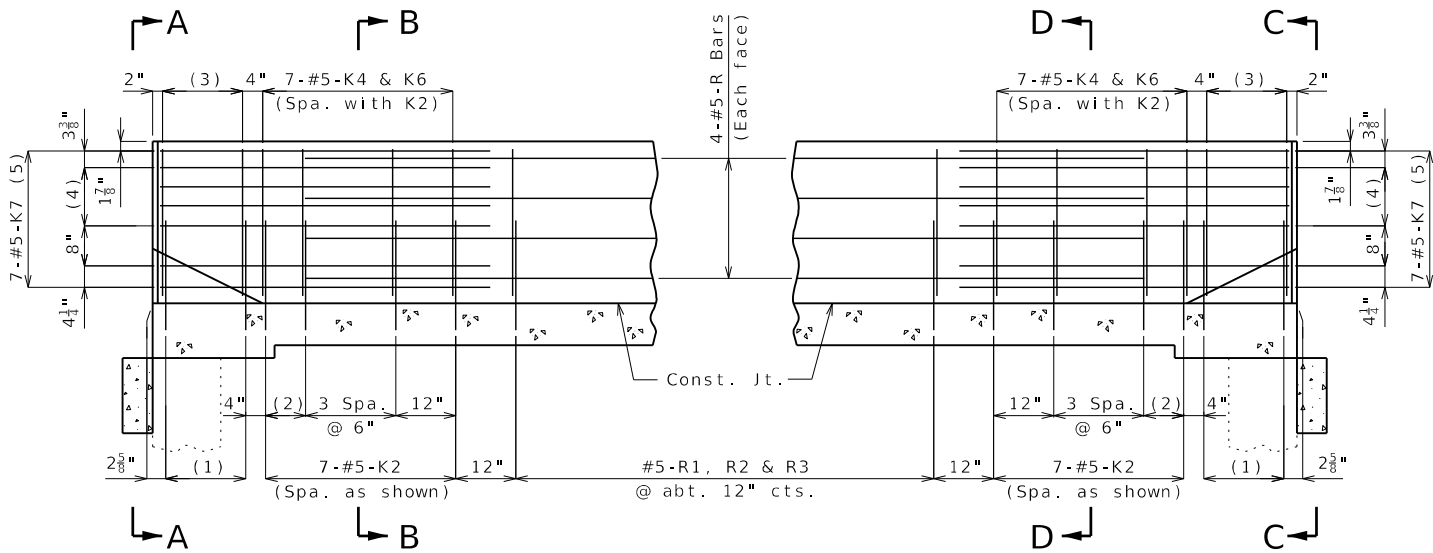


ELEVATION E-E

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

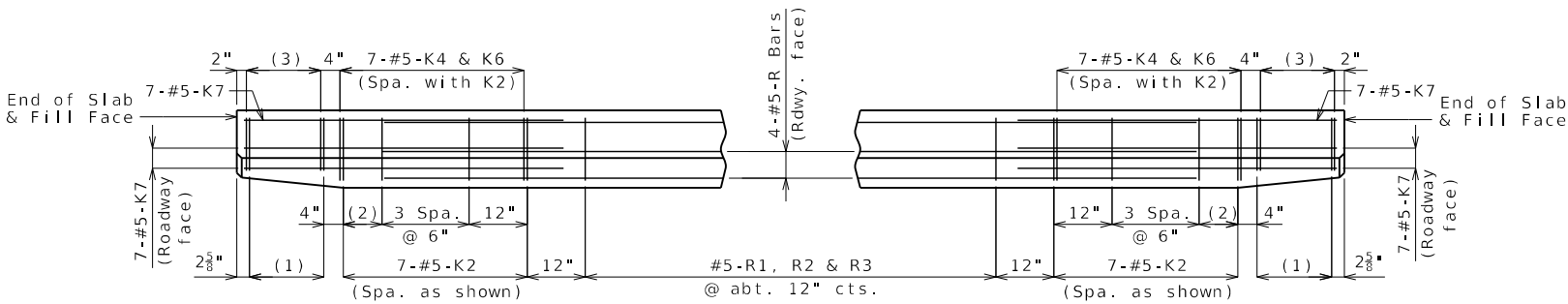


DETAILS OF GUARD RAIL ATTACHMENT



PART ELEVATION

- (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 13/16"  
(5) Spaced as shown, each face  
(6) To top of bar



PART 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.

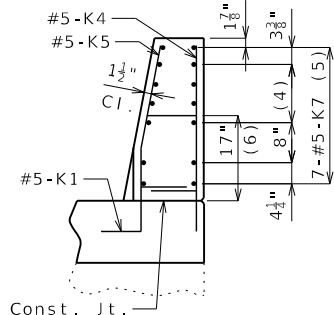
Reinforcing Steel:

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

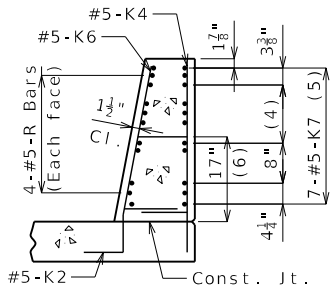
Use a minimum lap of 2'-6" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

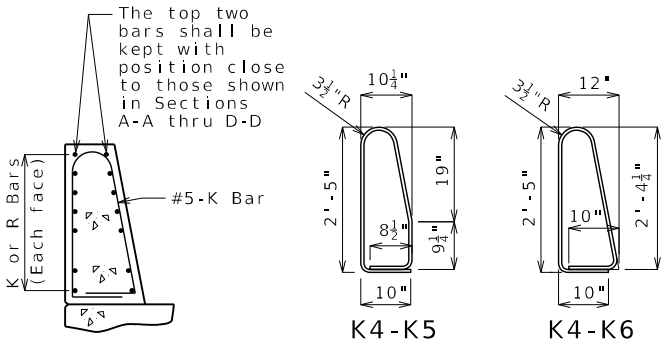
(Left barrier shown, right barrier similar)



ELEVATION C-C



SECTION D-D



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.

All dimensions are out to out.



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED 6/26/2025	
ROUTE J J	STATE MO
DISTRICT BR	SHEET NO. 8
COUNTY CARROLL	
JOB NO. JNW0010	
CONTRACT ID.	

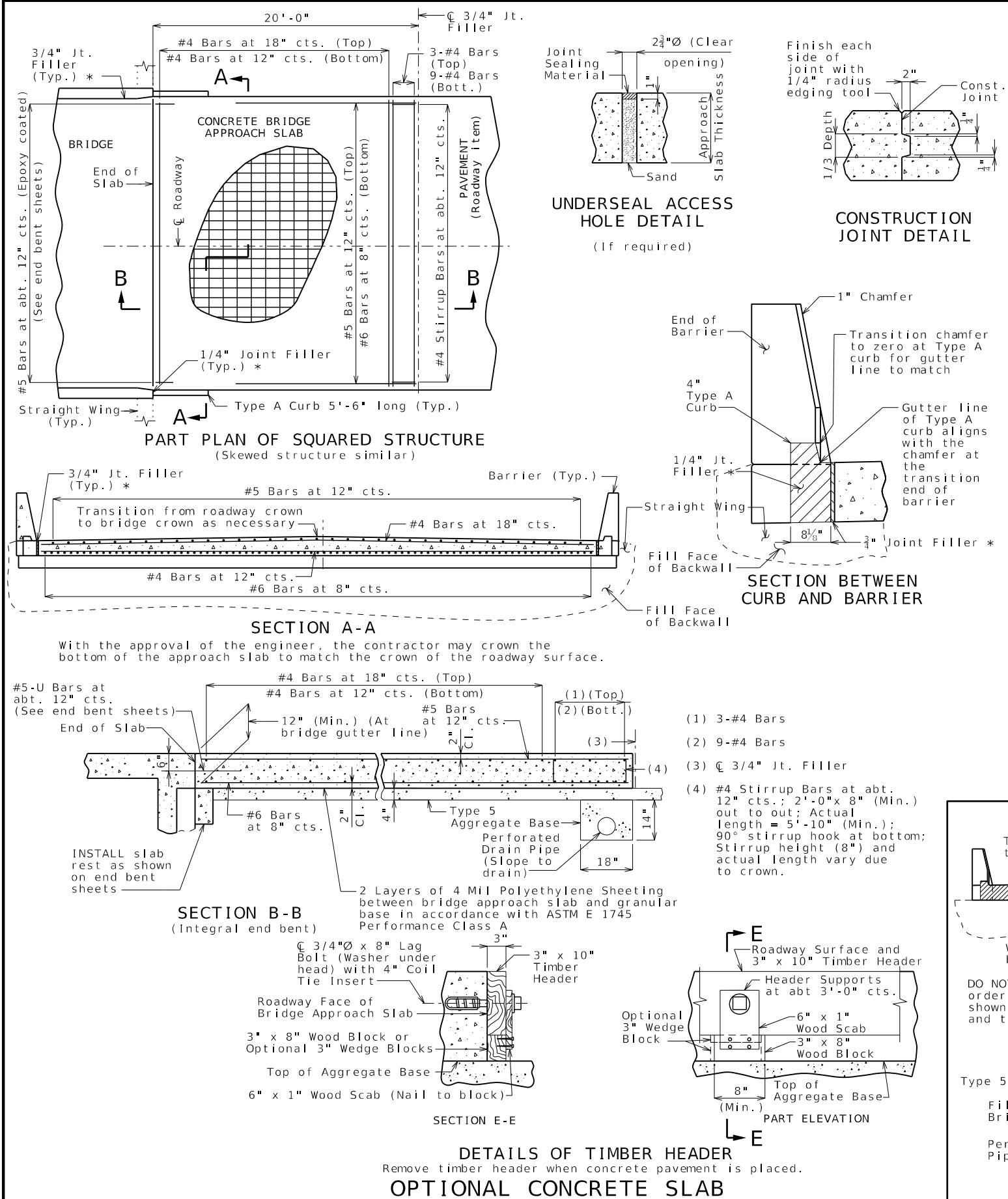
PROJECT NO.
BRIDGE NO. N08261

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  
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Authority #2003007599

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**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  $f_y = 60,000$  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 providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

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:

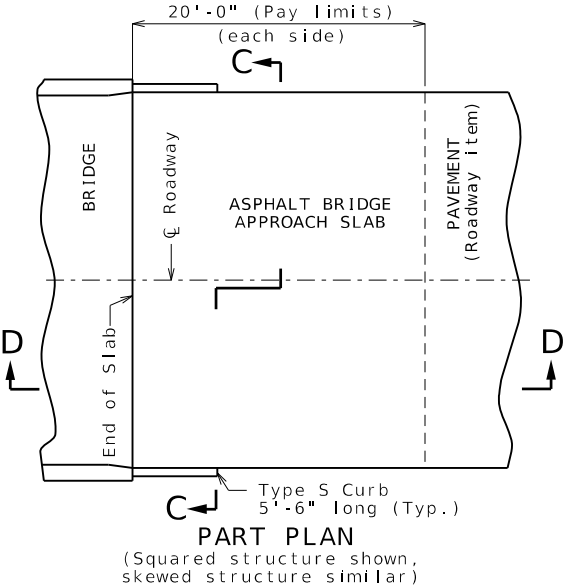
☐ Concrete Bridge Approach Slab

☐ 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, 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.



STATE OF MISSOURI  
JASON M. KEMNITZ  
NUMBER  
PE-2011005051  
PROFESSIONAL ENGINEER  
THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
6/26/2025  
ROUTE  
JJ  
DISTRICT  
BR  
COUNTY  
CARROLL  
JOB NO.  
JNW0010  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO.  
N08261

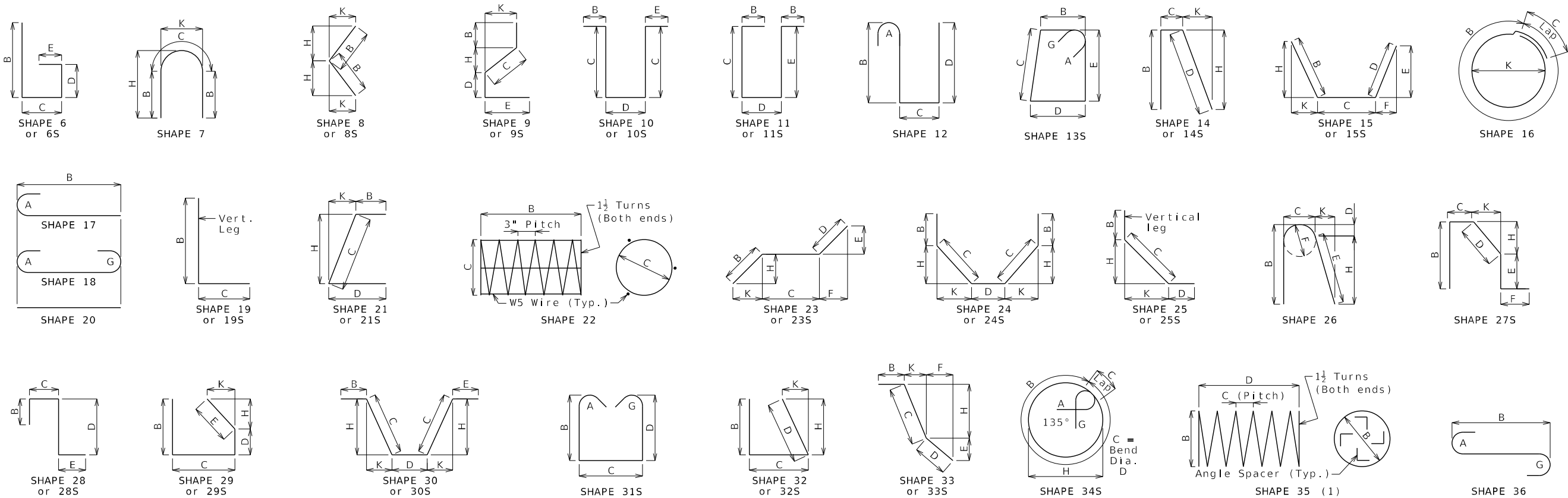
MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION  
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**BRIDGE APPROACH SLAB (MINOR)**

Integral end bents shown, non-integral end bent similar.

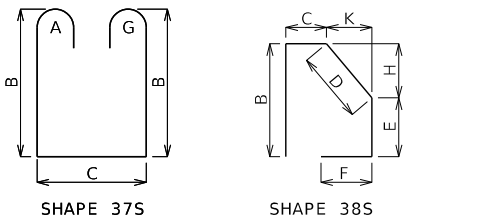


Finished Bend Dimensions D and Hook Dimensions						
Standard Pin Bend Shapes						
Size	Case	D	A or G		J	
			90°	180°	180°	
#4	1	3"	8"	6"	4"	
#5	1	3 3/4"	10"	7"	5"	
#6	1	4 1/2"	12"	8 1/4"	6"	
#7	2	5 1/4"	14"	9 3/4"	7"	
	3	7"	15"	11 1/2"	8 3/4"	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 1/4"	10"	
#9	1	9 1/2"	19 1/2"	15 1/2"	11 3/4"	
#10	1	10 3/4"	22"	17 1/2"	13 1/4"	
#11	1	12"	24 1/2"	19 1/2"	14 7/8"	
#14	1	18 1/4"	31 1/4"	27 1/2"	21 5/8"	
#18	1	24"	41 1/2"	36 1/4"	28 1/2"	
Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G		H	J
			90°	135°	180°	135°
#4	2	2"	4 1/2"	4 1/2"	5"	2 7/8"
	3	3"	5"	5 1/4"	6"	3"
#5	2	2 1/2"	5 3/4"	5 3/4"	5 3/4"	3 3/4"
	3	3 3/4"	6 1/4"	6 1/4"	7"	3 3/8"
#6	1	4 1/2"	12"	7 3/4"	8 1/4"	4 3/8"

Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.

6d for #4 & #5, 12d for #6



BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)							
By Size	Size	Substructure		Superstructure		Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	
		Plain	Epoxy	Plain	Epoxy	Plain	Epoxy
	W5	0	0	0	0	0	0
	4	0	313	0	0	0	313
	5	0	440	13,764	5,474	0	19,978
	6	0	1,269	8,843	0	0	10,112
	7	0	0	0	0	0	0
By Type		0	2,022	22,607	5,474	300	30,403

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed March 2025  
Checked April 2025

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

Sheet No. 10 of 11

STATE OF MISSOURI  
JASON M. KEMNITZ  
NUMBER PE-2011005051  
PROFESSIONAL ENGINEER  
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 6/26/2025  
ROUTE J J STATE MO  
DISTRICT BR SHEET NO. 10  
COUNTY CARROLL  
JOB NO. JNW0010  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO. N08261

DESCRIPTION  
DATE

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

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