



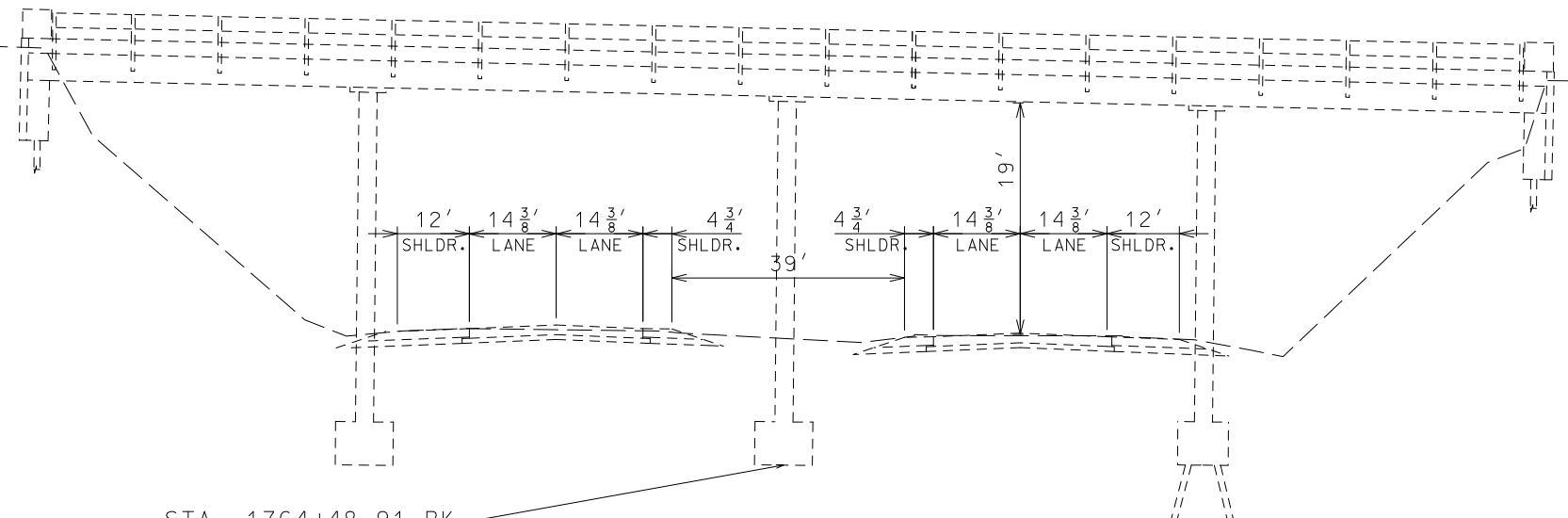








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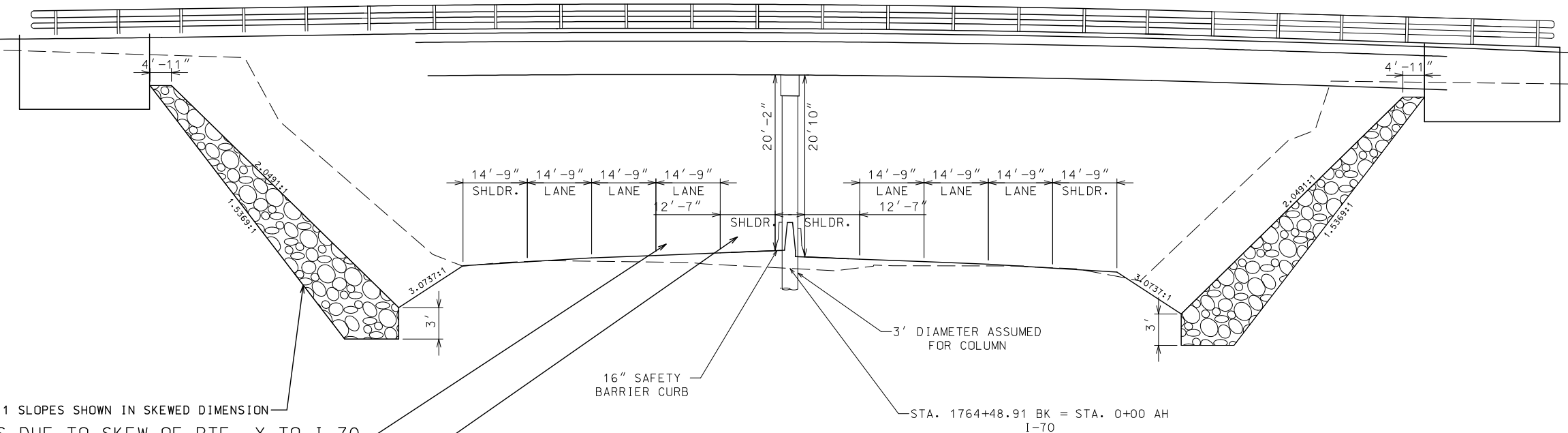
STA. 1764+48.91 BK = STA. 0+00 AH I-70

### EXISTING TYPICAL SECTION ROUTE I-70

VPI STA. 13+07.31 (RTE. Y)  
EL 724.24  
-1.11% o +0.73%  
145.20' V.C.

VPI STA 14+65.13 (RTE. Y)  
EL 725.39  
+0.73% o -0.50%  
97.17' V.C.

VPI STA. 16+26.50 (RTE. Y)  
EL 724.59  
-0.50% o -3.36%  
225.57' V.C.

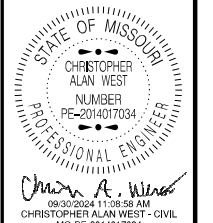


2:1, 3:1 AND 1.5:1 SLOPES SHOWN IN SKEWED DIMENSION  
12'-4" LANES DUE TO SKEW OF RTE. Y TO I-70  
10'-6" INSIDE SHOULDERS AT BRIDGE PIER  
DUE TO SKEW OF RTE. Y TO I-70  
AS WELL AS COLUMN AND SAFETY BARRIER WIDTH

### PROPOSED TYPICAL SECTION USING A FUTURE SIX LANE TEMPLATE ROUTE I-70

NOT TO SCALE

TYPICAL SECTIONS  
SHEET 4 OF 4



DATE PREPARED 9/30/2024	
ROUTE Y	STATE MO
DISTRICT KC	SHEET NO. 2
COUNTY LAFAYETTE/SALINE	
JOB NO. J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9319	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

REV.

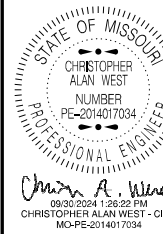




SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN	DESCRIPTION
IN.	SQ. FT.	EACH	SQ. FT.	EACH	SQ. FT.	NUM.		
<b>WARNING SIGNS</b>								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT ARROW)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT ARROW)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00	2	36.00			16	HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00	6	96.00			VAR.	SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00	2	32.00			6B	MERGE (ARROW SYMBOL)
WO4-1aR	48X48	16.00	2	32.00			6A	MERGE (ARROW SYMBOL)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING (WITH FLAGS)
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17	48X48	16.00						SHOULDER DROP-OFF (SYMBOL)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
WO10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
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)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	18	288.00			2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00	6	96.00			18	DETOUR AHEAD
WO20-3	48X48	16.00	14	224.00			20	ROAD CLOSED AHEAD
WO20-4	48X48	16.00	4	64.00			12	ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	8	124.00			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	4	64.00			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	4	64.00			8	FLAGGER (SYMBOL, WITH FLAGS)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	7	112.00			21	SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19						WET PAINT (ARROW PIVOTS)

SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN	DESCRIPTION
IN.	SQ. FT.	EACH	SQ. FT.	EACH	SQ. FT.	NUM.		
<b>GUIDE SIGNS</b>								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00	4	48.00			29A	EXIT CLOSED
GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	8	64.00			26	END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	16	96.00			54	WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT ARROW)
MO4-9R	48X36	12.00						DETOUR (RIGHT ARROW)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR (ARROW LEFT)
MO4-10R	48X18	6.00						DETOUR (ARROW RIGHT)
<b>REGULATORY SIGNS</b>								
R1-1	48X48	13.25						STOP
R1-2	48TR	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00	17	204.00			VAR.	SPEED LIMIT XX
R3-1	48X48	16.00	4	64.00			56	NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00	6	96.00			55	NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	14	140.00			29	ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD
R11-4	60X30	12.50						LOCAL TRAFFIC ONLY
CONST-3A	60X48	20.00						ROAD CLOSED TO THRU TRAFFIC
CONST-3X	56X12	4.67						FINE SIGN
<b>MISCELLANEOUS SIGNS</b>								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00	2	64.00			60	POINT OF PRESENCE
CONST-7	48X24	8.00						RATE OUR WORK ZONE
CONST-7	72X36	18.00						RATE OUR WORK ZONE
CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE
MO4-12	36X60	36X60	37	555			VAR	DETOUR - LETTERED ROUTES
MO4-11-36	36X78	36X60	22	429			VAR	DETOUR - NUMBERED ROUTES
				<b>TOTAL</b>				
				2992				
				<b>TOTAL</b>				
				0				

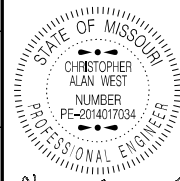
ITEM	TOTAL	DESCRIPTION
NUMBER	QTY	
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019	4	IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	8	REPLACEMENT SAND BARREL
6122030	2	IMPACT ATTENUATOR (RELOCATION)
6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161008	10	ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	100	CHANNELIZER (TRIM LINE)
6161030	40	TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040	3	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099	4	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	4	TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D	1310	TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A	1310	RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING











Christopher Alan West  
09/30/2024 11:36:24 AM  
CHRISTOPHER ALAN WEST - CIVIL  
MO-PE-2014017034

DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 7

COUNTY  
LAFAYETTE / SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DESCRIPTION

DATE	DESCRIPTION

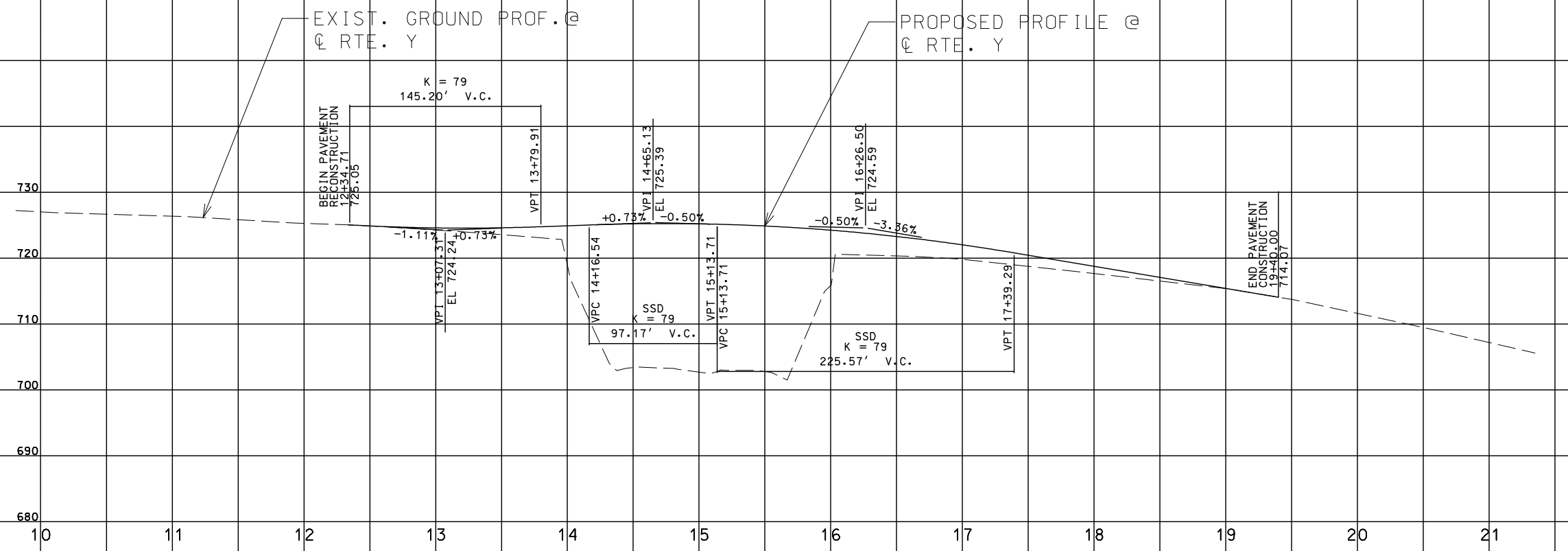
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-273-6636)

ROUTE Y  
PROFILE SHEET  
SHEET 4 OF 8

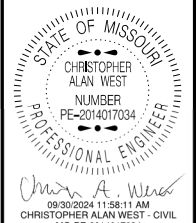
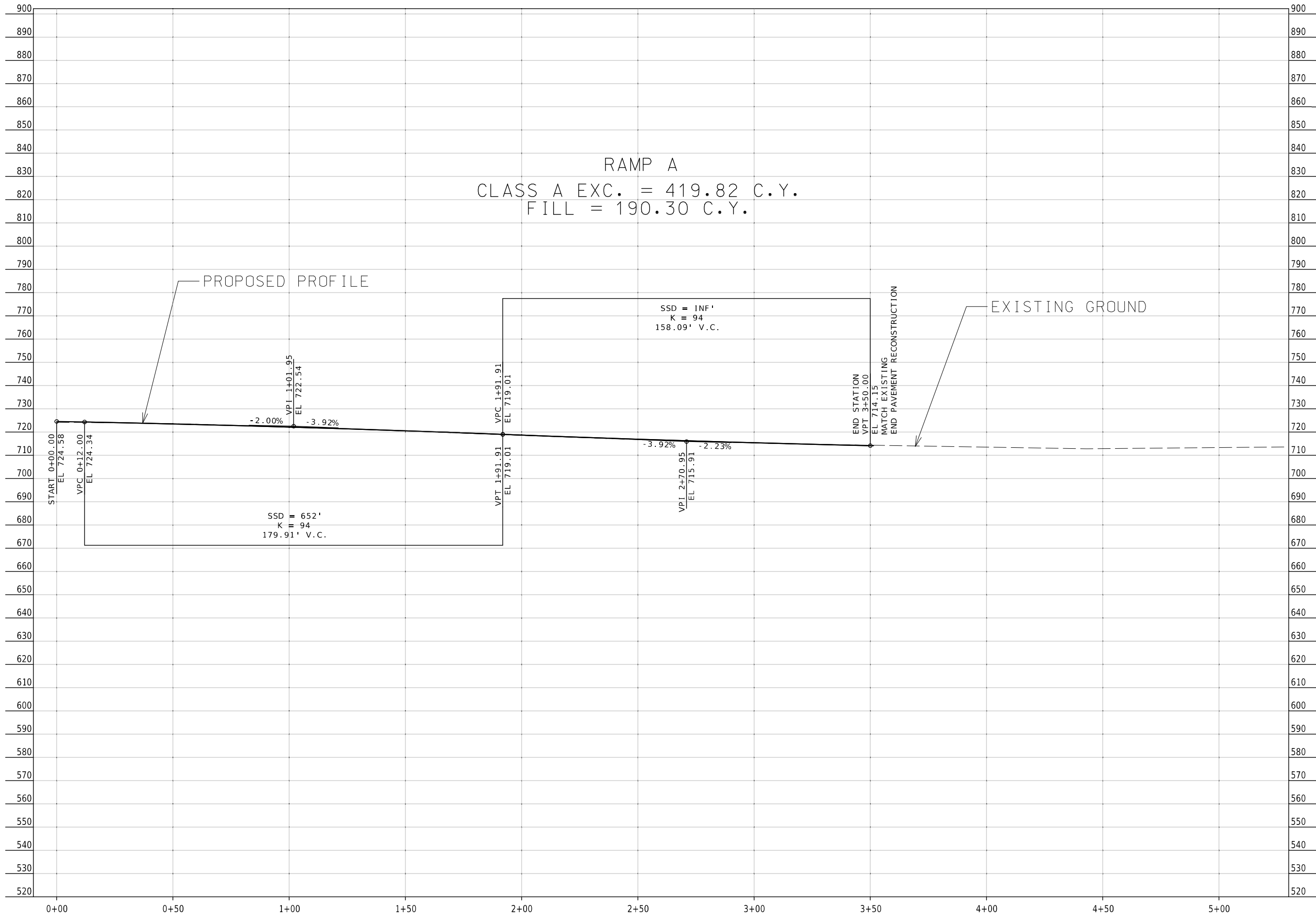
PROPOSED PROFILE ROUTE Y  
SCALE: 1" = 50' HORIZ. 1" = 10' VERT.

CLASS A EXC. = 551.2 C.Y.  
FILL = 2608.94 C.Y.



PROFILE KEY  
 --- EXISTING GROUND RTE. Y  
 ——— PROPOSED GROUND RTE. Y





DATE PREPARED  
9/30/2024

ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	8

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

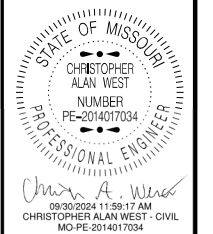
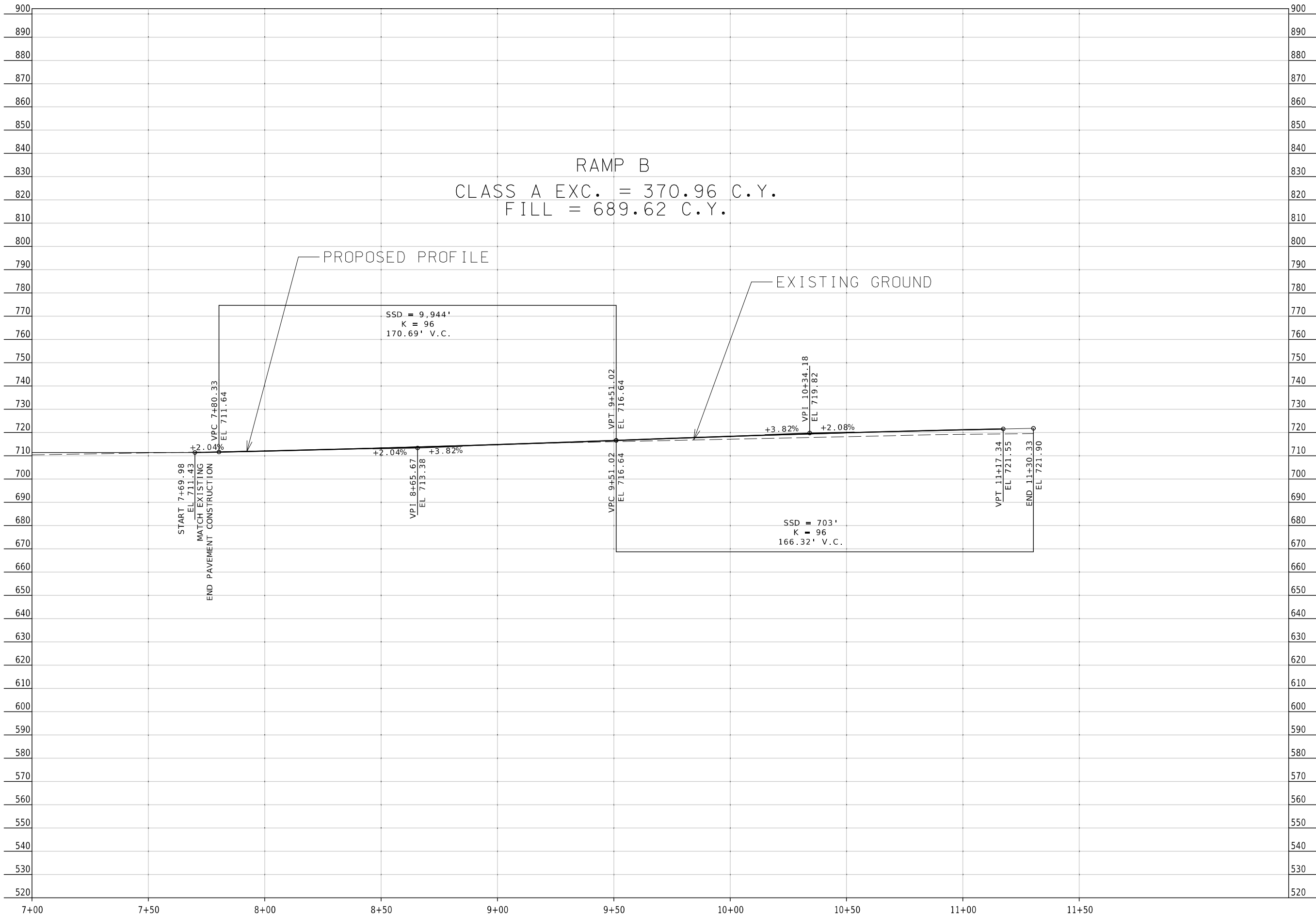
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

RAMP A  
PROFILE SHEET  
SHEET 5 OF 8

REV.



DATE PREPARED  
**9/30/2024**

ROUTE STATE  
**Y MO**

DISTRICT SHEET NO.  
**KC 9**

COUNTY  
**LAFAYETTE/SALINE**

JOB NO.  
**J3S3162**

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
**A9319**

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION  
 COMMISSION

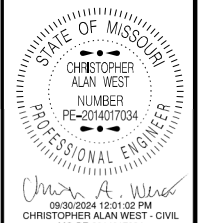
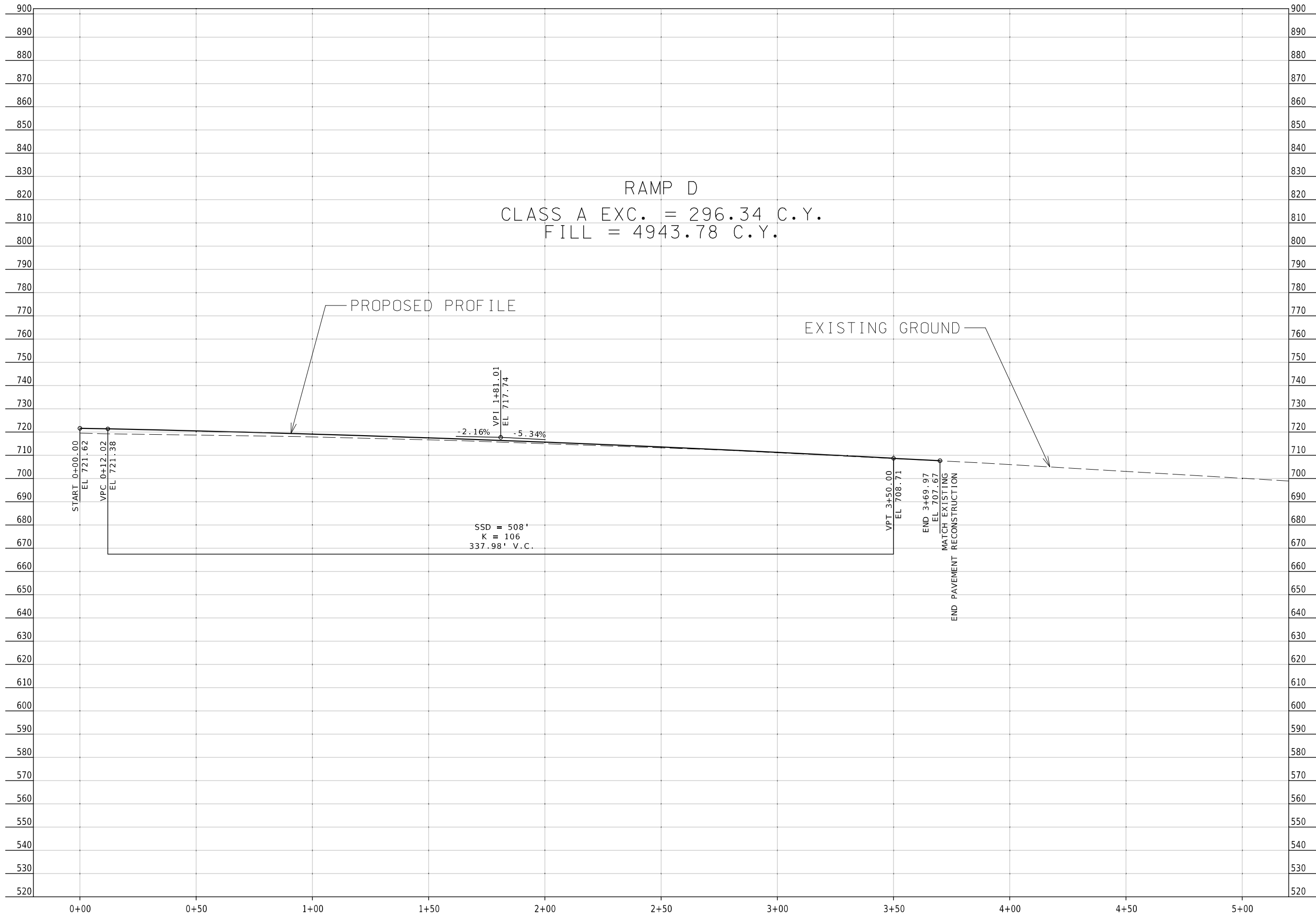
**MoDOT**

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

**RAMP B  
 PROFILE SHEET  
 SHEET 6 OF 8**

REV.





DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 11

COUNTY  
LAFAYETTE / SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

RAMP D  
PROFILE SHEET  
SHEET 8 OF 8

REV.











# Sign Spacing, Device Spacing and Channelizing Taper Lengths

SIGN SPACING (S) FOR ADVANCE SIGN SERIES (1) (2)		
SPEED MPH	UNDIVIDED HIGHWAYS	DIVIDED HIGHWAYS
0-35	200	200
40-45	350	500
50-55	500	1000
60-70	1000	SA-1000 SB-1500 SC-2640

LONGITUDINAL BUFFER SPACE (B)	
SPEED MPH	BUFFER SPACE
0-35	250
40-45	360
50-55	495
60-70	730

TAPER LENGTHS AND SPACING OF CHANNELIZING DEVICES					
SPEED MPH	MINIMUM TAPER LENGTHS (L) FOR LANE WIDTHS (W)			MAXIMUM CHANNELIZER SPACING	
	10 FT	11 FT	12 FT	THROUGH TAPER	THROUGH WORK AREA
0-35	205	225	245	35	40
40-45	450	495	540	40	80
50-55	550	605	660	50	80
60-70	700	770	840	60	120

TAPER LENGTH (L):  
 $L = WS$  FOR 40 MPH OR MORE  
 $L = \frac{WS^2}{60}$  FOR 35 MPH OR LESS  
 FOR SHOULDER TAPER USE L/3

WHERE:  
 L = TAPER LENGTH IN FEET  
 W = LATERAL SHIFT IN FEET  
 S = POSTED SPEED IN MPH

**NOTES:**

DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.









- (1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OR SIGNED CONDITION
- (2) SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS

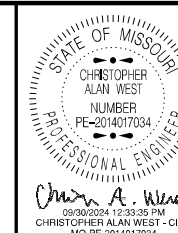
## TRAFFIC CONTROL DEVICES

GENERAL NOTES:

1. SEE STANDARD PLAN 616.10 FOR DETAILS AND ITEMS NOT SHOWN
2. EXISTING SIGNS SHALL BE COVERED DURING WORKING HOURS ONLY IF IN CONFLICT WITH TRAFFIC CONTROL PLANS.
3. NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING OR REMOVING SIGNS.
4. CONES ALLOWABLE FOR DAYTIME OPERATIONS ONLY.
6. LOCATE FLASHING ARROW PANEL AT BEGINNING OF TAPER WHEN FEASIBLE, ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS OR CONES.

TRAFFIC CONTROL LEGEND

-  SIGN (SINGLE SIDED)
-  SIGN (DOUBLE SIDED)
-  FLAGGER
-  DIRECTIONAL INDICATOR BARRICADE
-  CHANNELIZER
-  BARRICADE
-  CHANGEABLE MESSAGE BOARD
-  TRUCK MOUNTED ATTENUATOR W/ FLASHING ARROW



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 16

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

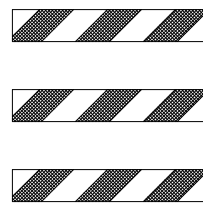
MoDOT

TRAFFIC CONTROL SHEET 1 OF 17

# SIGNS LEGEND



BRIDGE  
OR  
RAMP



WO20-1  
2



BRIDGE  
OR  
RAMP

WO20-1  
2A



R2-1  
3



R2-1  
4



R2-1  
4A



CENTER LANE  
OR  
LEFT LANE

WO20-5  
5



CENTER  
OR  
LEFT

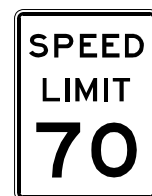
WO20-6a  
6



WO4-1aR  
6A



WO4-1aL  
6B



R2-1  
7



WO20-7a  
8



R2-1  
8A



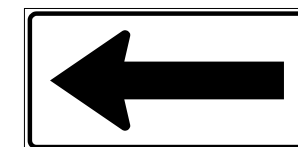
WO3-5  
9



WO3-5  
9B



WO20-4  
12



WO1-6a  
16



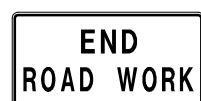
WO20-2  
18



WO20-3  
20



WO21-5  
21



GO20-2  
26



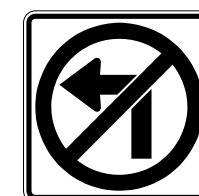
R11-2  
29



E05-2a  
29A



GO20-5aP  
54



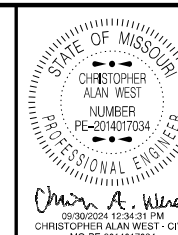
R3-2  
55



R3-1  
56



CONST-5  
60



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 17

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DESCRIPTION

DATE

DATE

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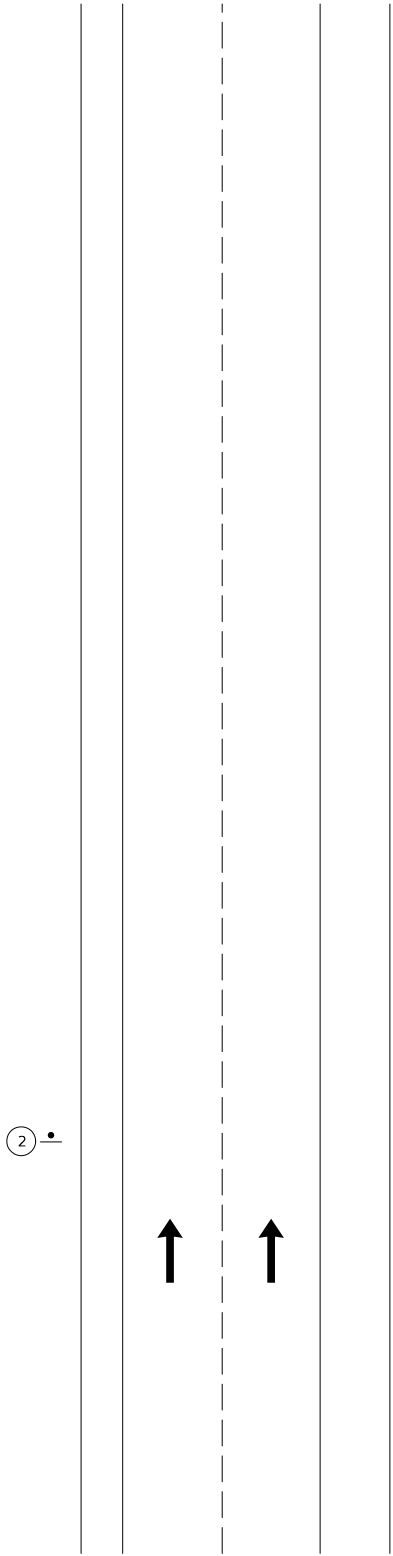
DATE

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



TRAFFIC CONTROL  
SHEET 2 OF 17





I-70 BEGIN & END OF PROJECT SIGNING










END OF PROJECT LIMITS;  
END OF WORK ZONE TERMINATION  
AREA, IF LOCATED BEYOND END  
OF PROJECT; OR LAST WORK  
ZONE SIGN, IF LOCATED OUTSIDE  
PROJECT LIMITS

BEGINNING OF PROJECT LIMITS;  
INITIAL WORK ZONE SIGN, IF LOCATED  
OUTSIDE PROJECT LIMITS.

NOT TO SCALE

MULTI-LANE  
DIVIDED

**TRAFFIC CONTROL LEGEND**

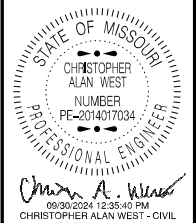
-  SIGN (SINGLE SIDED)
-  SIGN (DOUBLE SIDED)
-  FLAGGER
-  CONE
-  CHANNELIZER
-  BARRICADE
-  CHANGEABLE MESSAGE BOARD

NOTES:  
NO DIRECT PAY WILL BE MADE FOR RELOCATING,  
COVERING, UNCOVERING OR REMOVING SIGNS.

ANY EXISTING SIGNING THAT CONFLICTS WITH  
THE TRAFFIC CONTROL SIGNING SHALL BE  
COMPLETELY COVERED OR REMOVED.

(1) DISTANCE MAY BE ADJUSTED TO FIELD  
CONDITIONS. WHERE TRAFFIC BACKUPS  
ARE EXPECTED BEYOND THE ADVANCE  
WARNING AREA, ADDITIONAL SIGNING  
MAY BE NEEDED.


(2) SIGN CONST-5-96 IS PLACED 500 FEET  
BEFORE THE BEGINNING OF PROJECT  
LIMITS OR THE ROAD WORK AHEAD SIGN  
OR ROAD WORK NEXT XX MILES SIGN, IF  
USED, WHEN THESE SIGNS ARE LOCATED  
OUTSIDE THE PROJECT LIMITS.



DATE PREPARED	
9/30/2024	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	19
COUNTY	
LAFAYETTE / SALINE	
JOB NO.	
J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9319	

DESCRIPTION	DATE

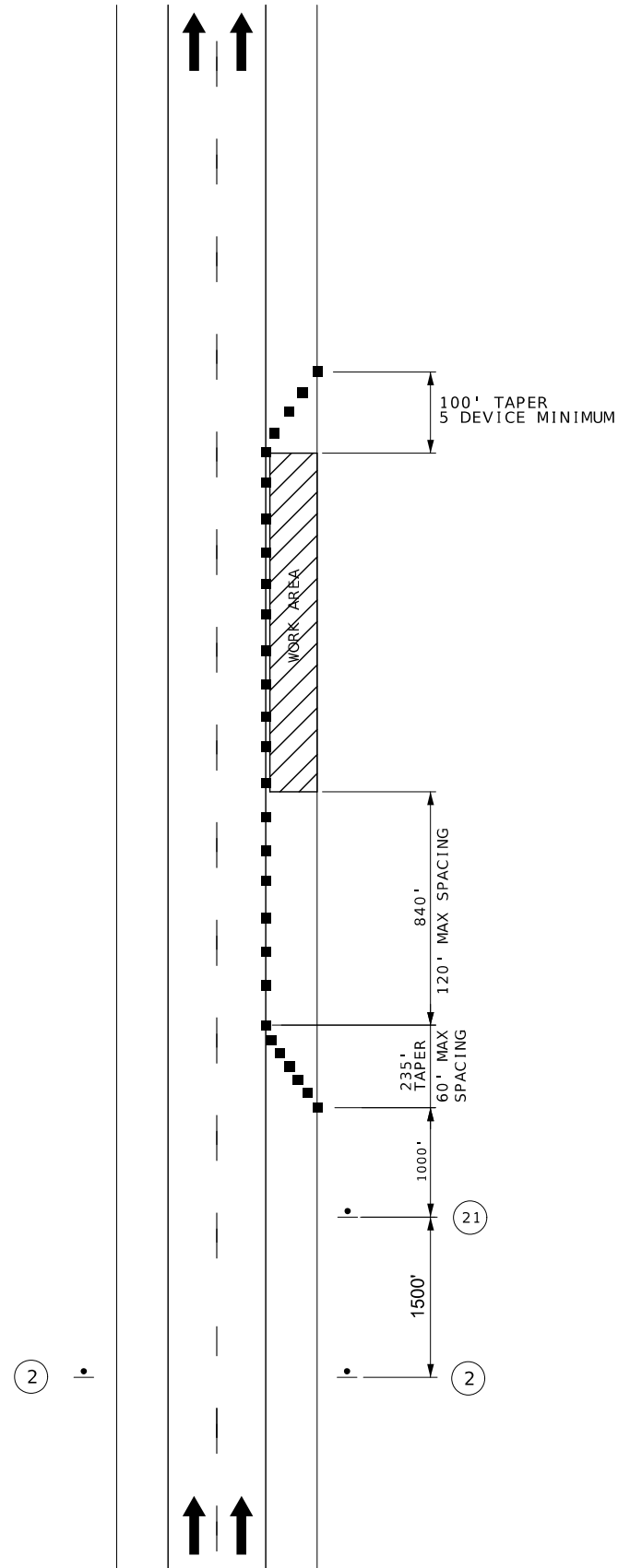
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

TRAFFIC CONTROL  
SHEET 4 OF 17

REV.



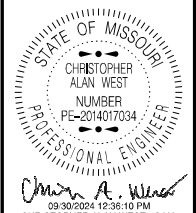
SHOULDER WORK  
(DIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◡ SIGN (DOUBLE SIDED)
- ◡ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ◻ CHANGEABLE MESSAGE BOARD

NOTES:  
NO DIRECT PAY WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING SIGNS.  
  
ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.  
  
SPACING OF SIGNS SHOWN ON THE PLANS ARE MINIMUM AND MAY BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS.



DATE PREPARED 9/30/2024	
ROUTE Y	STATE MO
DISTRICT KC	SHEET NO. 20
COUNTY LAFAYETTE/SALINE	
JOB NO. J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9319	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

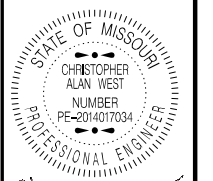
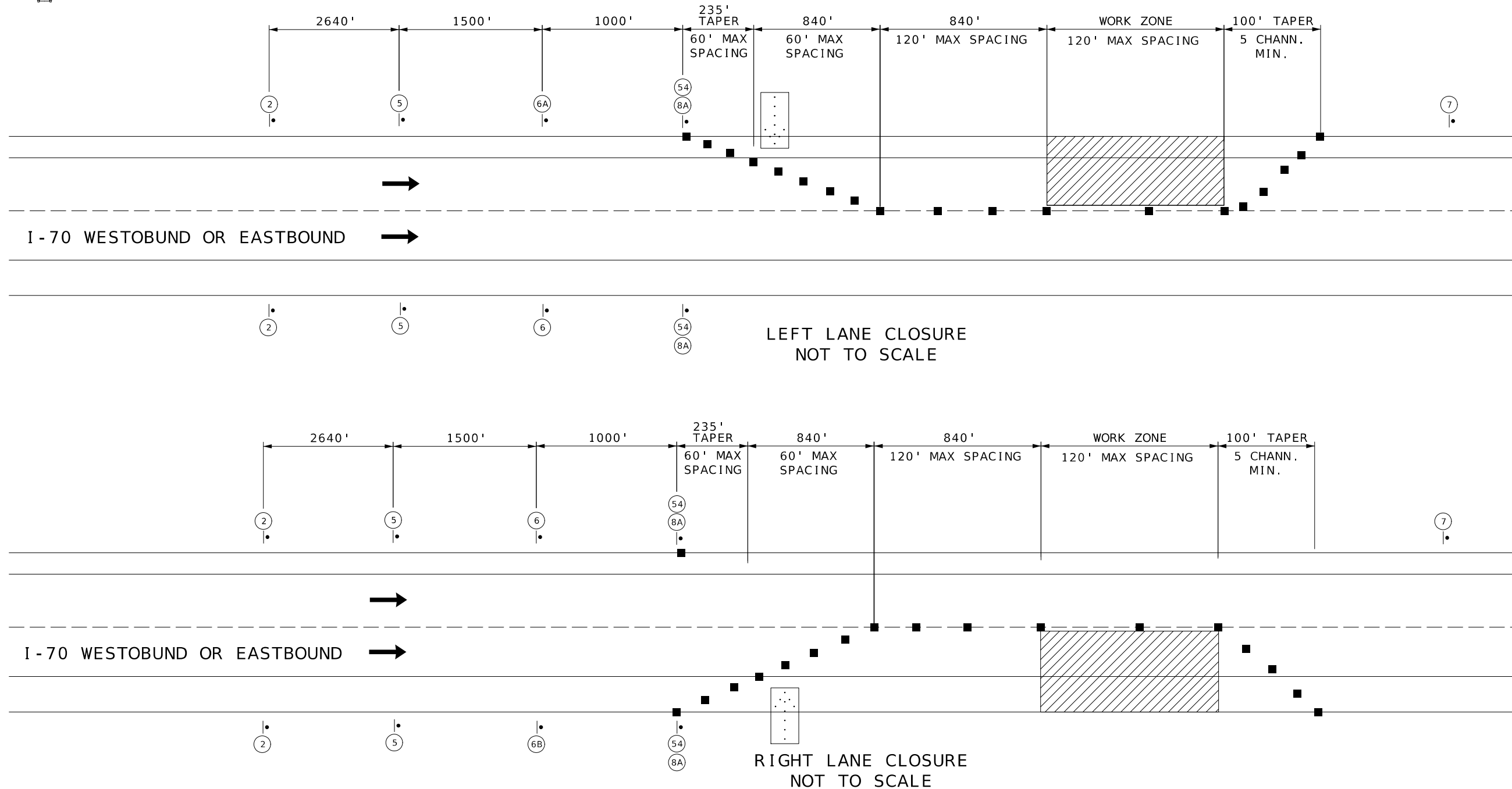
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-273-6636)

**TRAFFIC CONTROL LEGEND**

- SIGN (SINGLE SIDED)
- ◻ SIGN (DOUBLE SIDED)
- ◁ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▩ CHANGEABLE MESSAGE BOARD

**NOTES:**  
 NO DIRECT PAY WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING SIGNS.  
 ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.  
 LOCATE FLASHING ARROW PANEL AT BEGINNING OF TAPER WHEN FEASIBLE. ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS.  
 SPACING OF SIGNS SHOWN ON THE PLANS ARE MINIMUM AND MAY BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS.

**I-70 LANE CLOSURE**



DATE PREPARED  
 9/30/2024

ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	21

COUNTY  
 LAFAYETTE / SALINE

JOB NO.  
 J3S3162

BRIDGE NO.  
 A9319

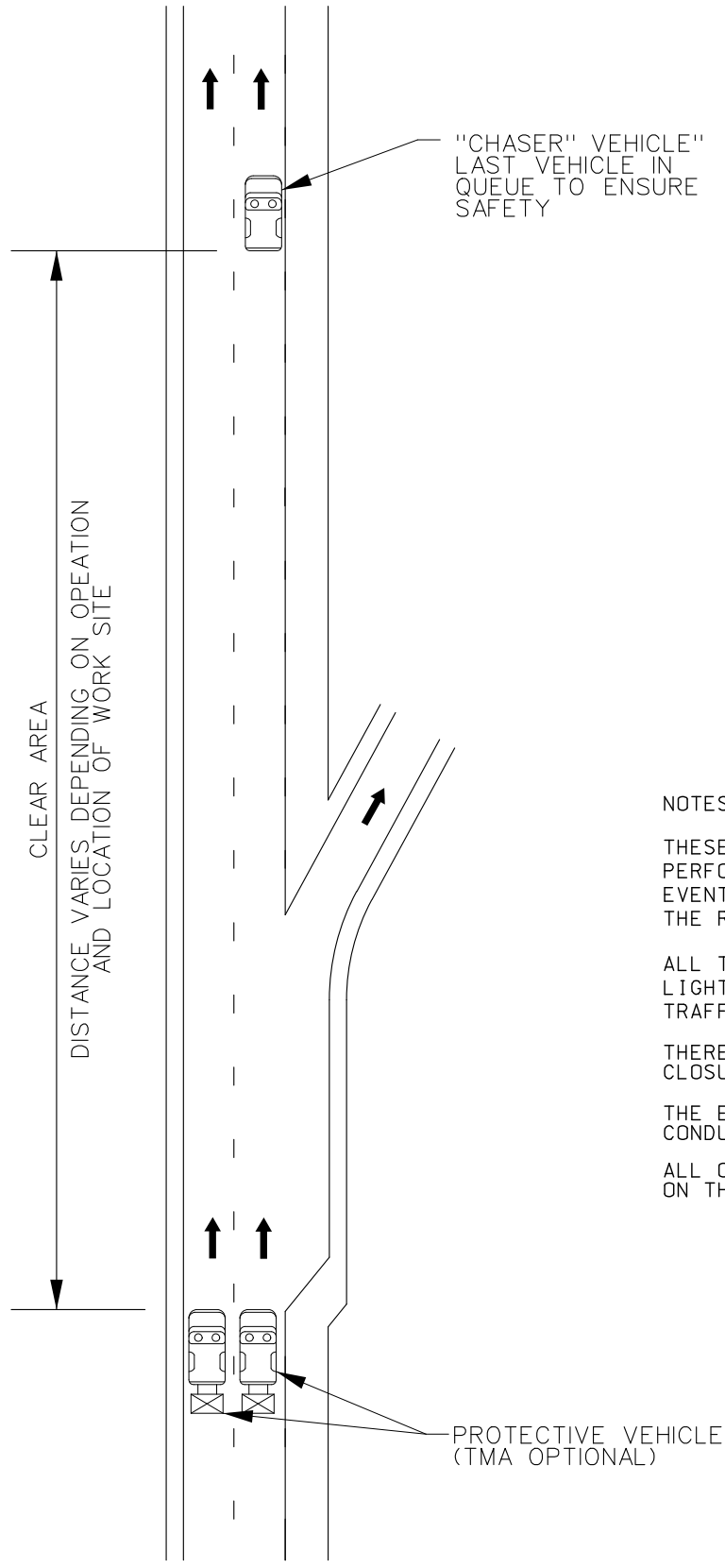
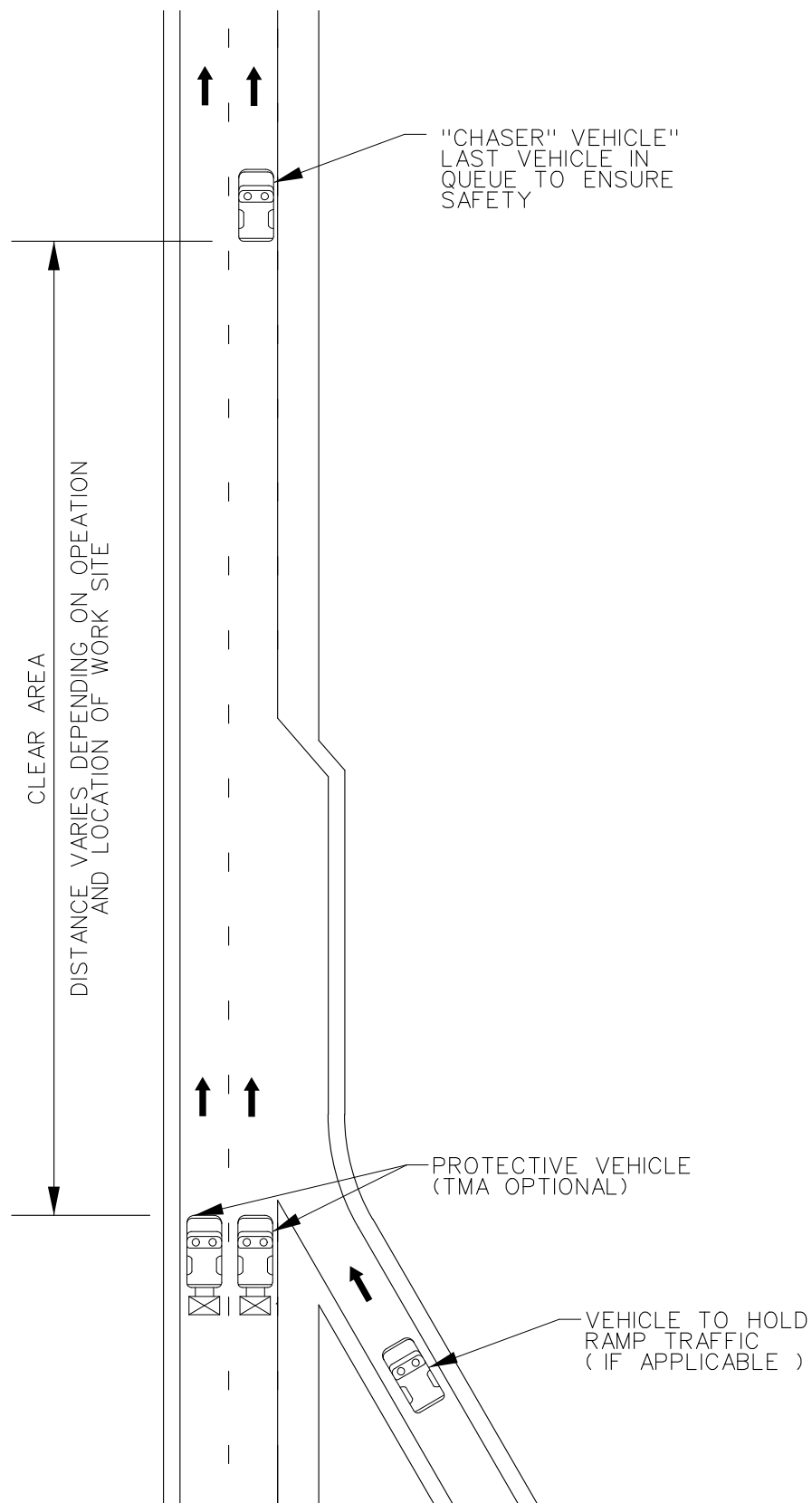
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL  
 SHEET 6 OF 17

ROLLING STOP



NOTES:

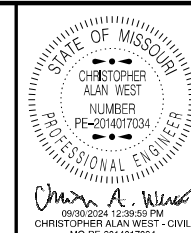
THESE TRAFFIC CONTROL FIGURES DEPICTS THE MINIMUM REQUIREMENTS TO PERFORM A ROLLING STOP. IF THE ROLLING STOP IS OR CAN BE A PLANNED EVENT, THEN A SITE SPECIFIC TRAFFIC CONTROL PLAN SHOULD BE DEVELOPED. THE ROLLING STOP PLAN SHOULD BE APPROVED BY THE ENGINEER.

ALL TRAFFIC CONTROL VEHICLES SHALL BE EQUIPED WITH FLASHING WARNING LIGHTS. TRAFFIC CONTROL VEHICLES USED TO STOP OR SLOW DOWN MAINLINE TRAFFIC SHALL ALSO BE CONSIDERED PROTECTIVE VEHICLES (TMA OPTIONAL).

THERE SHOULD BE A MINIMUM OF ONE VEHICLE PER LANE DURING THE ROAD CLOSURE.

THE ENGINEER SHALL BE NOTIFIED AND ON SITE WHEN A ROLLING STOP IS CONDUCTED.

ALL ON RAMP TRAFFIC IN THE VICINITY OF THE WORK SITE SHALL BE STOPPED ON THE RAMP BY A TRAFFIC CONTROL VEHICLE EQUIPPED WITH FLASHING LIGHTS



DATE PREPARED

9/30/2024

ROUTE STATE

Y MO

DISTRICT SHEET NO.

KC 22

COUNTY

LAFAYETTE / SALINE

JOB NO.

J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9319

DESCRIPTION

DATE

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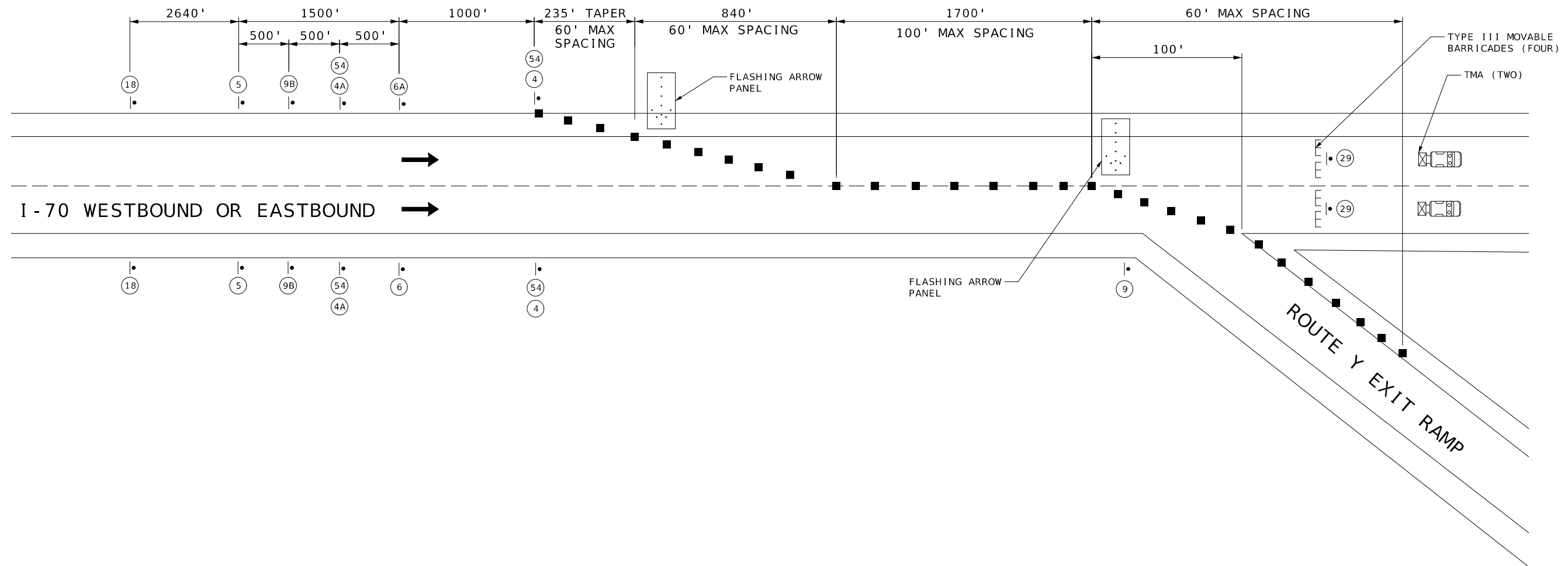
DATE

DATE



TRAFFIC CONTROL  
SHEET 7 OF 17

# STAGE 1 ROUTE Y LANE CLOSURE BRIDGE DEMO



NOTES:  
 NO DIRECT PAY WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING SIGNS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

LOCATE FLASHING ARROW PANEL AT BEGINNING OF TAPER WHEN FEASIBLE. ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS.

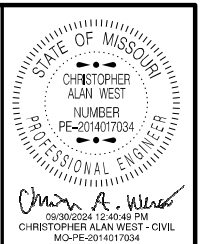
SPACING OF SIGNS SHOWN ON THE PLANS ARE MINIMUM AND MAY BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS.

SEE SPECIAL PROVISIONS FOR I-70 CLOSURE RESTRICTIONS.

WEST I-70 DETOUR  
 EAST I-70 DETOUR  
 NOT TO SCALE

### TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◫ SIGN (DOUBLE SIDED)
- ◁ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▩ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
 9/30/2024

ROUTE Y STATE MO  
 DISTRICT KC SHEET NO. 23

COUNTY  
 LAFAYETTE / SALINE

JOB NO.  
 J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
 A9319

DATE	DESCRIPTION

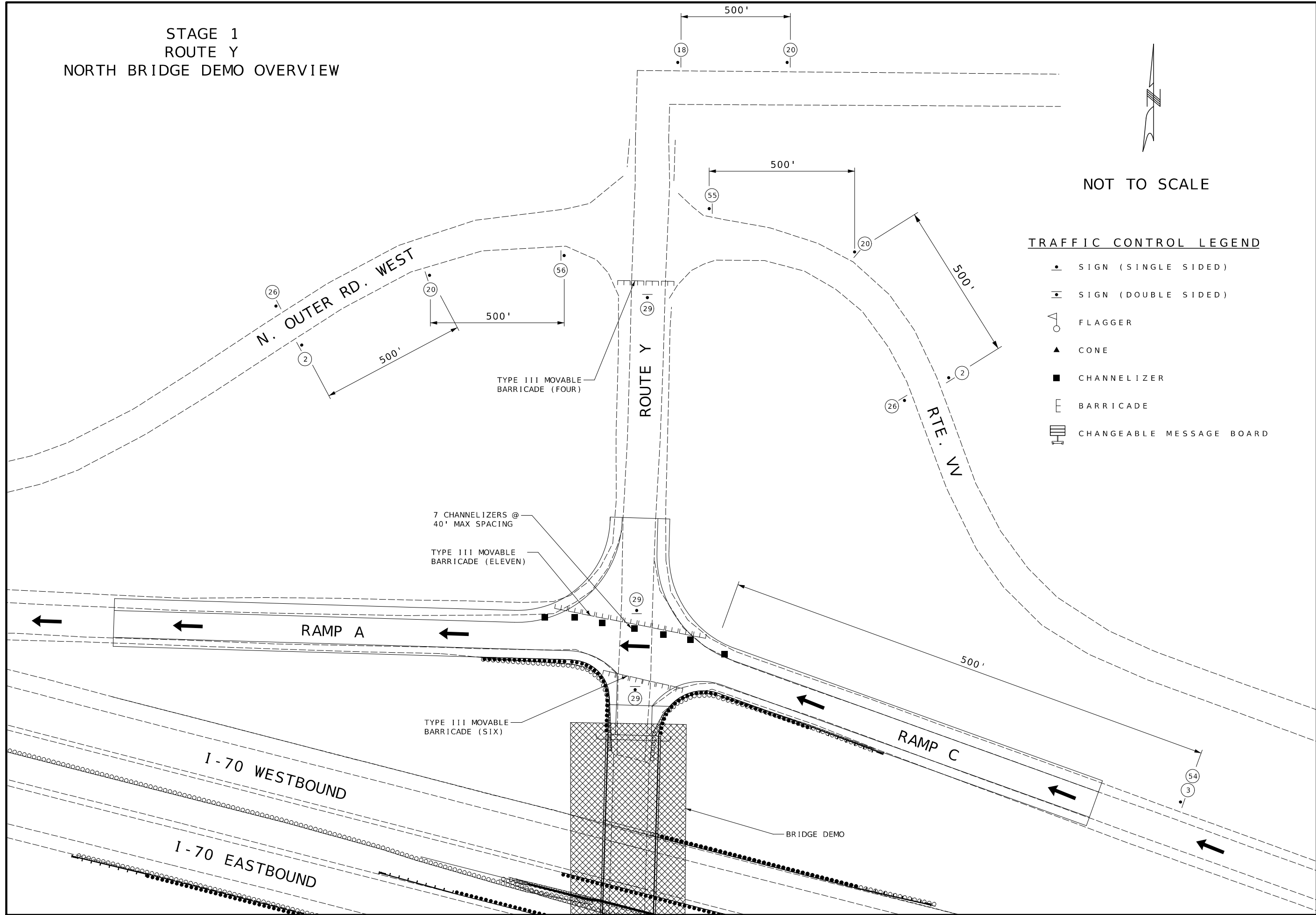
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL  
 SHEET 8 OF 17



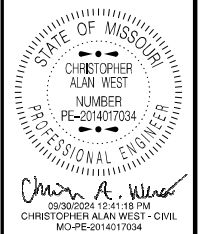
STAGE 1  
ROUTE Y  
NORTH BRIDGE DEMO OVERVIEW



NOT TO SCALE

TRAFFIC CONTROL LEGEND


- SIGN (SINGLE SIDED)
- ▬ SIGN (DOUBLE SIDED)
- ◁ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▨ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
9/30/2024  
ROUTE Y STATE MO  
DISTRICT KC SHEET NO. 24  
COUNTY LAFAYETTE/SALINE  
JOB NO. J3S3162  
CONTRACT ID.

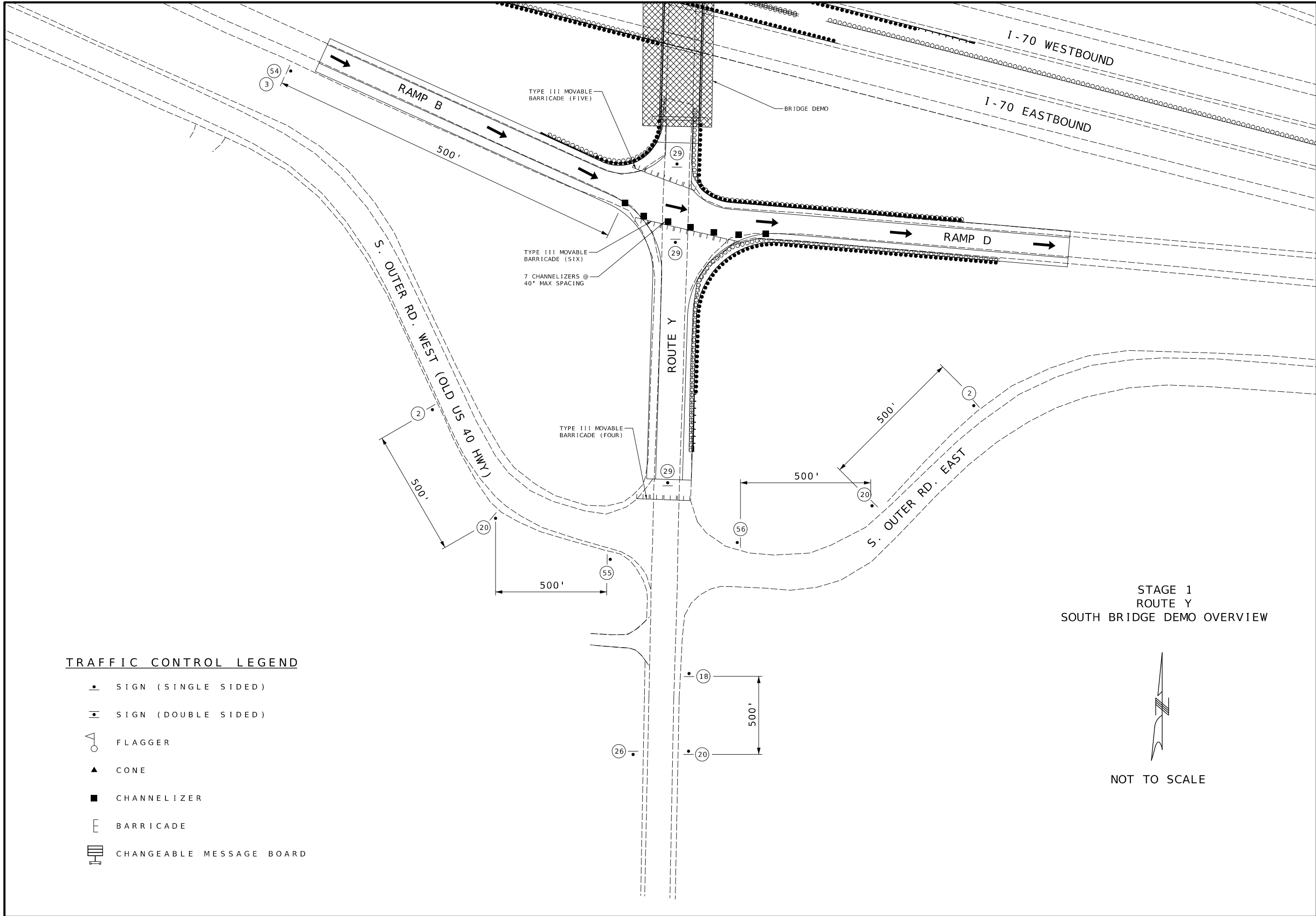
PROJECT NO.  
BRIDGE NO. A9319

DATE	DESCRIPTION

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

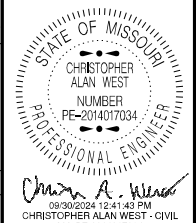
TRAFFIC SHEET  
SHEET 9 OF 17

REV.



**TRAFFIC CONTROL LEGEND**

- SIGN (SINGLE SIDED)
- ◻ SIGN (DOUBLE SIDED)
- △ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▩ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
9/30/2024

ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	25

COUNTY  
LAFAYETTE / SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

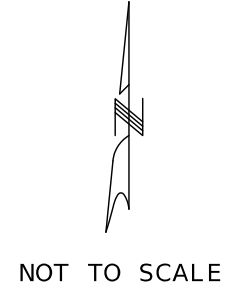
BRIDGE NO.  
A9319

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

STAGE 1  
ROUTE Y  
SOUTH BRIDGE DEMO OVERVIEW



TRAFFIC CONTROL  
SHEET 10 OF 17

REV.





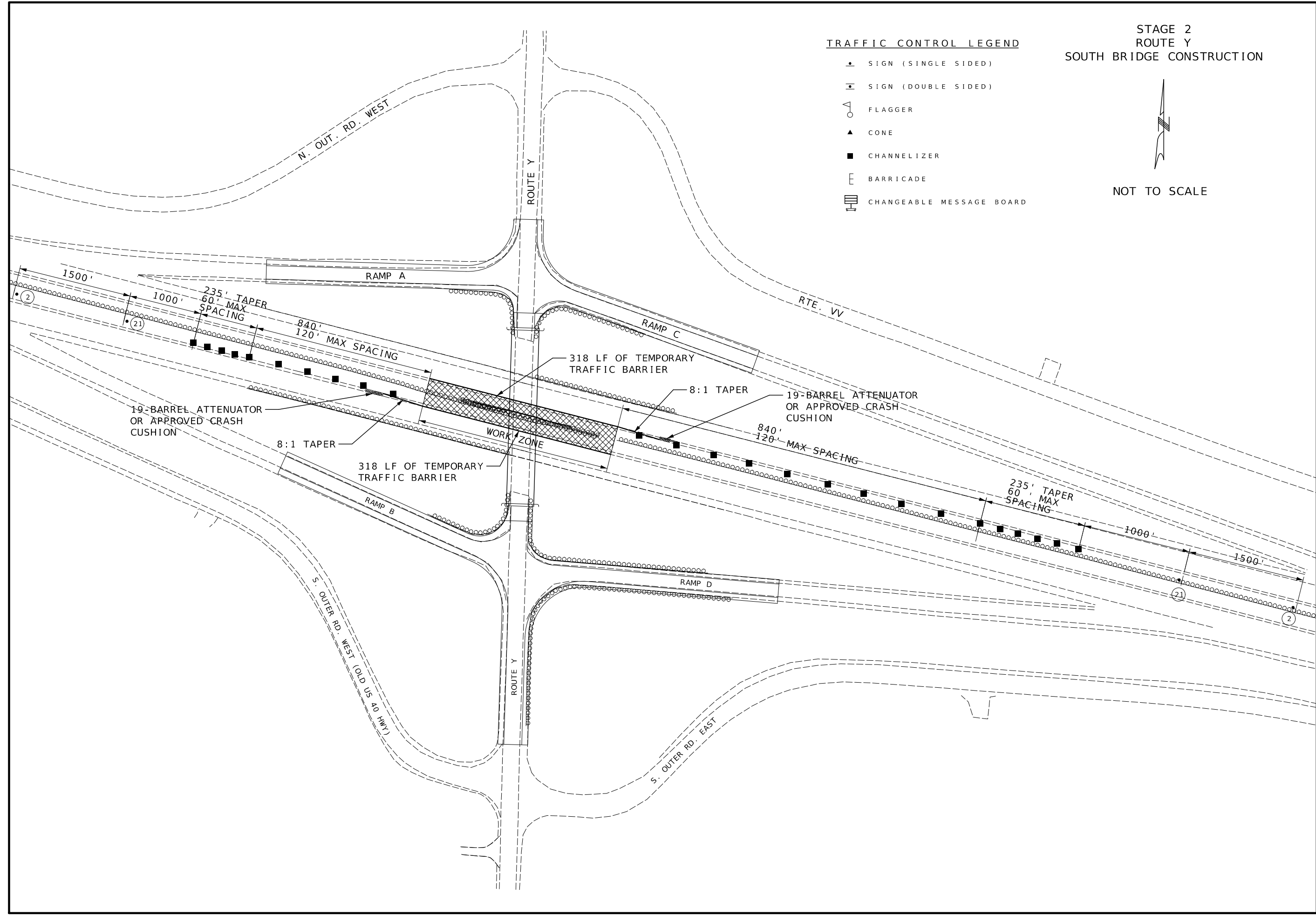
STAGE 2  
ROUTE Y  
SOUTH BRIDGE CONSTRUCTION

TRAFFIC CONTROL LEGEND

- ▲ SIGN (SINGLE SIDED)
- ▬ SIGN (DOUBLE SIDED)
- ◻ FLAGGER
- ▲ CONE
- CHANNELIZER
- ⌌ BARRICADE
- Ⓜ CHANGEABLE MESSAGE BOARD



NOT TO SCALE



CHRISTOPHER ALAN WEST  
PROFESSIONAL ENGINEER  
MO-PE-2014017034

DATE PREPARED	
9/30/2024	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	28
COUNTY	
LAFAYETTE/SALINE	
JOB NO.	
J3S3162	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.
A9319

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

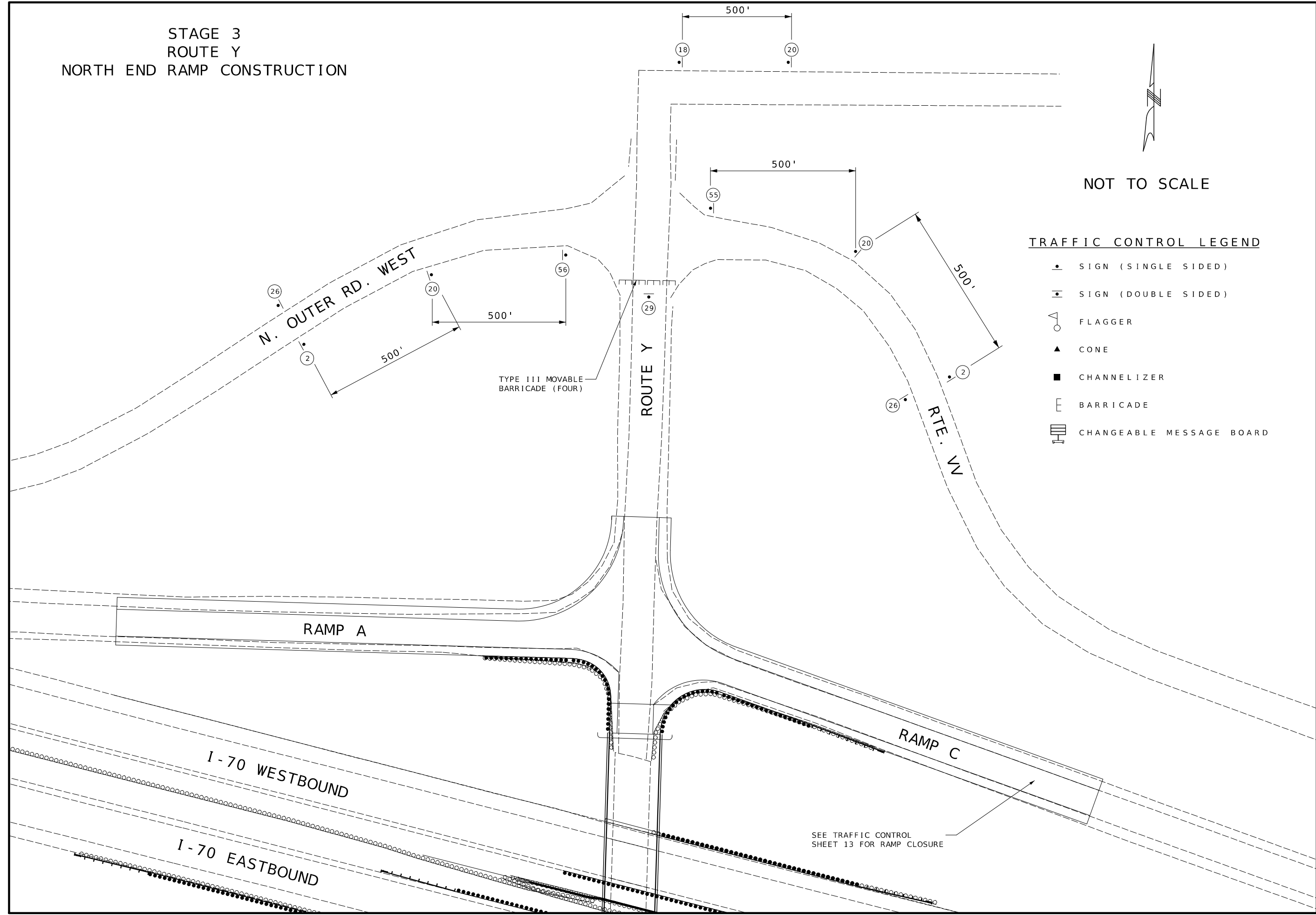
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-273-6636)

TRAFFIC CONTROL  
SHEET 13 OF 17

REV.



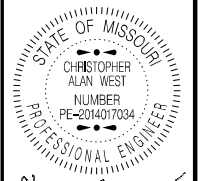
STAGE 3  
ROUTE Y  
NORTH END RAMP CONSTRUCTION



NOT TO SCALE

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ▬ SIGN (DOUBLE SIDED)
- △ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▨ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
9/30/2024

ROUTE Y STATE MO

DISTRICT KC SHEET NO. 30

COUNTY LAFAYETTE/SALINE

JOB NO. J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9319

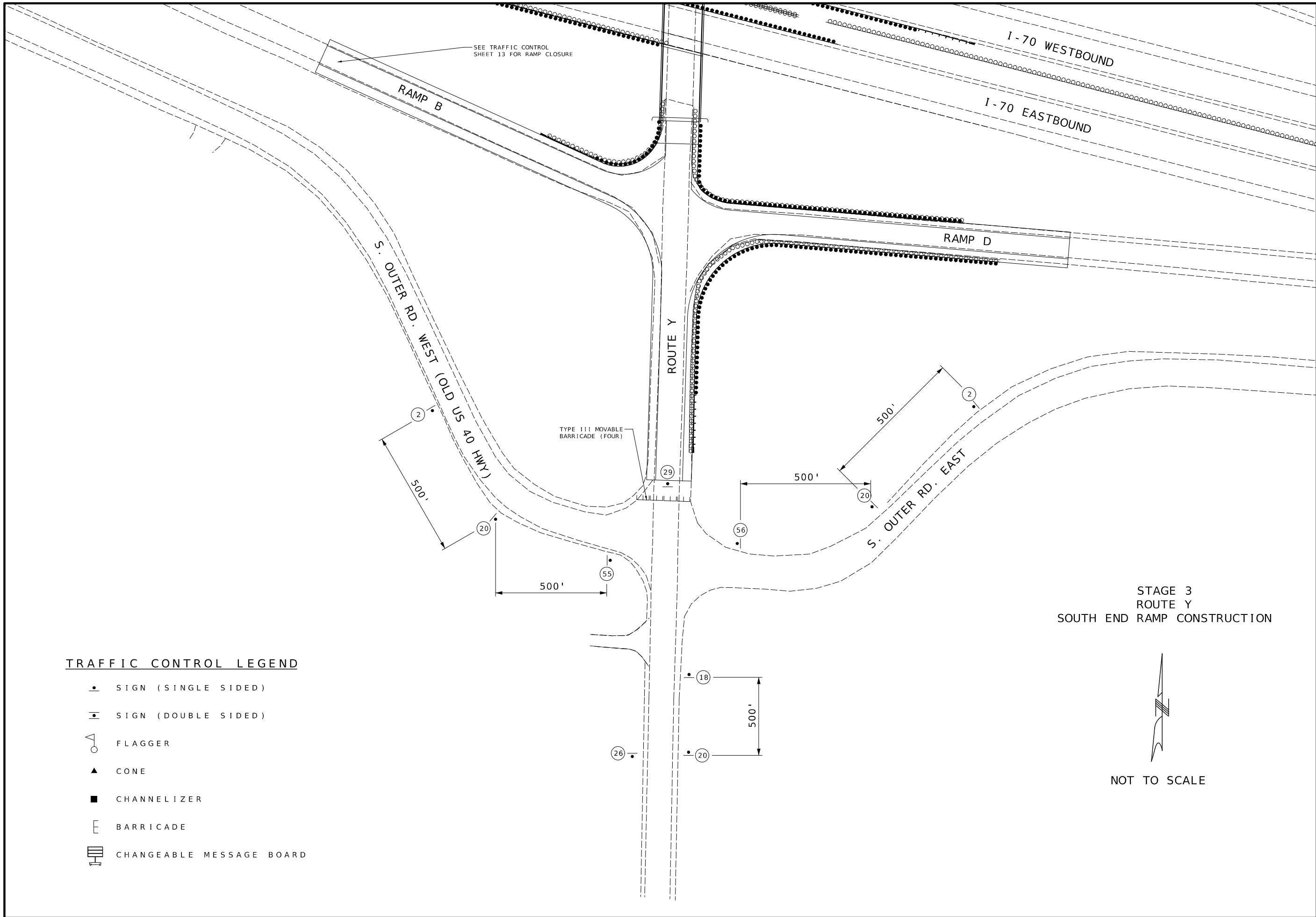
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC SHEET  
SHEET 15 OF 17

REV.



SEE TRAFFIC CONTROL SHEET 13 FOR RAMP CLOSURE

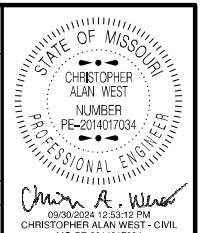
TYPE III MOVABLE BARRICADE (FOUR)

STAGE 3  
ROUTE Y  
SOUTH END RAMP CONSTRUCTION

NOT TO SCALE

**TRAFFIC CONTROL LEGEND**

- SIGN (SINGLE SIDED)
- ◻ SIGN (DOUBLE SIDED)
- △ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▩ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
9/30/2024

ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	31

COUNTY  
LAFAYETTE / SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET 16 OF 17



# DETOUR LAYOUT



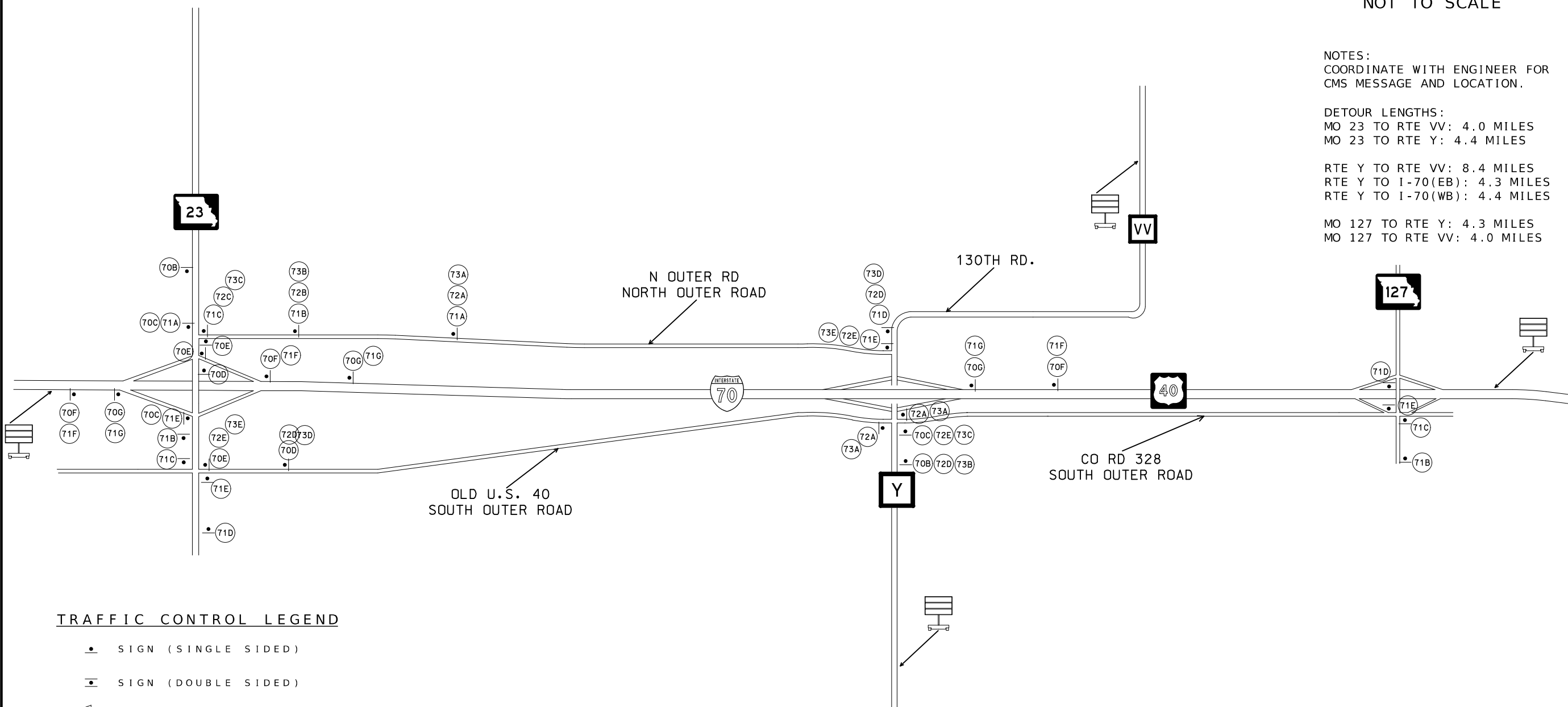
NOT TO SCALE

NOTES:  
COORDINATE WITH ENGINEER FOR  
CMS MESSAGE AND LOCATION.

DETOUR LENGTHS:  
MO 23 TO RTE VV: 4.0 MILES  
MO 23 TO RTE Y: 4.4 MILES

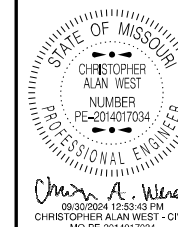
RTE Y TO RTE VV: 8.4 MILES  
RTE Y TO I-70(EB): 4.3 MILES  
RTE Y TO I-70(WB): 4.4 MILES

MO 127 TO RTE Y: 4.3 MILES  
MO 127 TO RTE VV: 4.0 MILES



## TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ▬ SIGN (DOUBLE SIDED)
- ◁ FLAGGER
- ▲ CONE
- CHANNELIZER
- E BARRICADE
- ▭ CHANGEABLE MESSAGE BOARD



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 32

COUNTY  
LAFAYETTE / SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DESCRIPTION







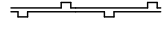
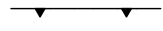


DATE

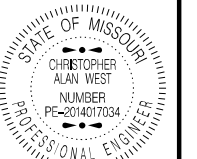
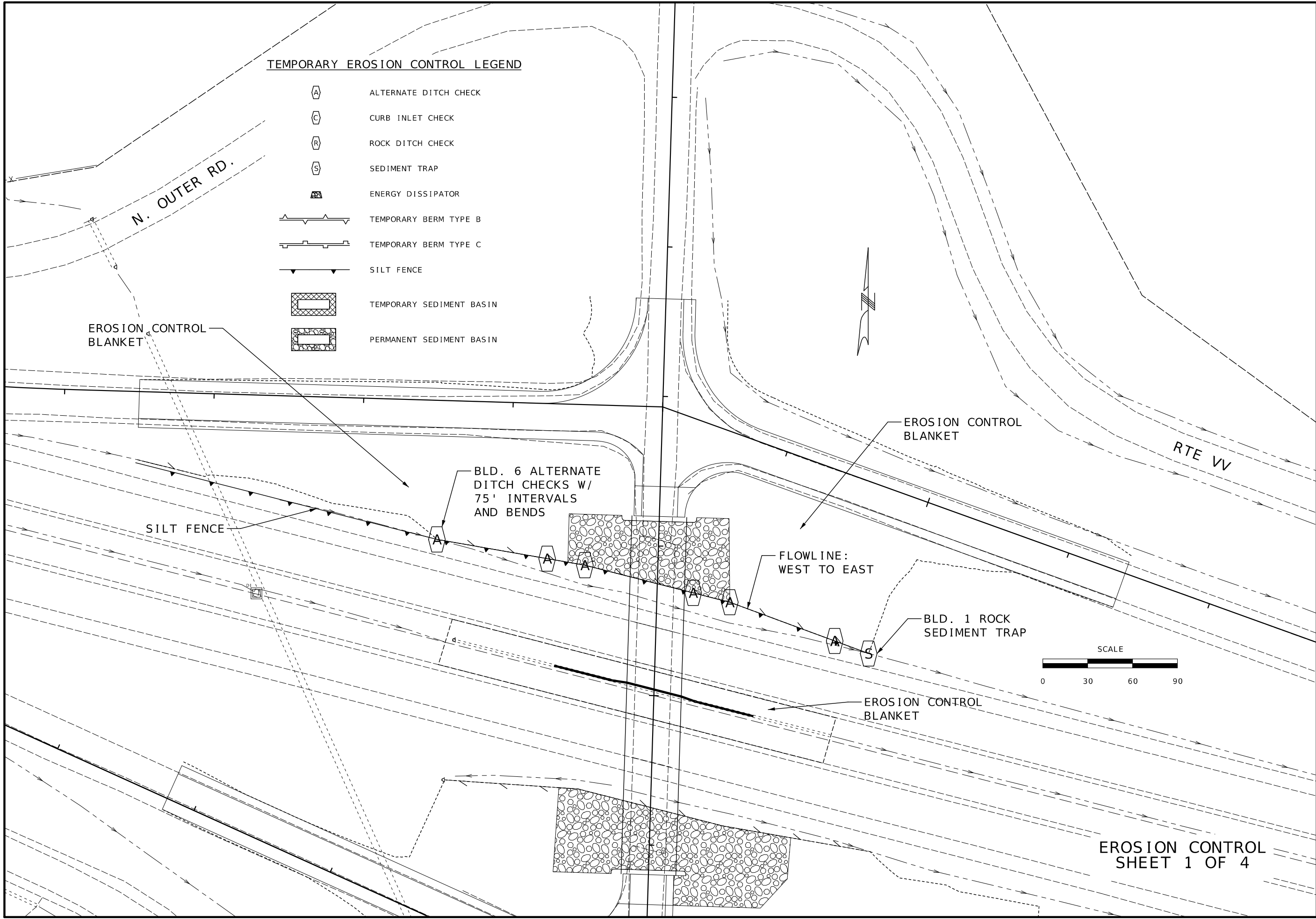
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET 17 OF 17

**TEMPORARY EROSION CONTROL LEGEND**

-  ALTERNATE DITCH CHECK
-  CURB INLET CHECK
-  ROCK DITCH CHECK
-  SEDIMENT TRAP
-  ENERGY DISSIPATOR
-  TEMPORARY BERM TYPE B
-  TEMPORARY BERM TYPE C
-  SILT FENCE
-  TEMPORARY SEDIMENT BASIN
-  PERMANENT SEDIMENT BASIN



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 33

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DESCRIPTION	DATE

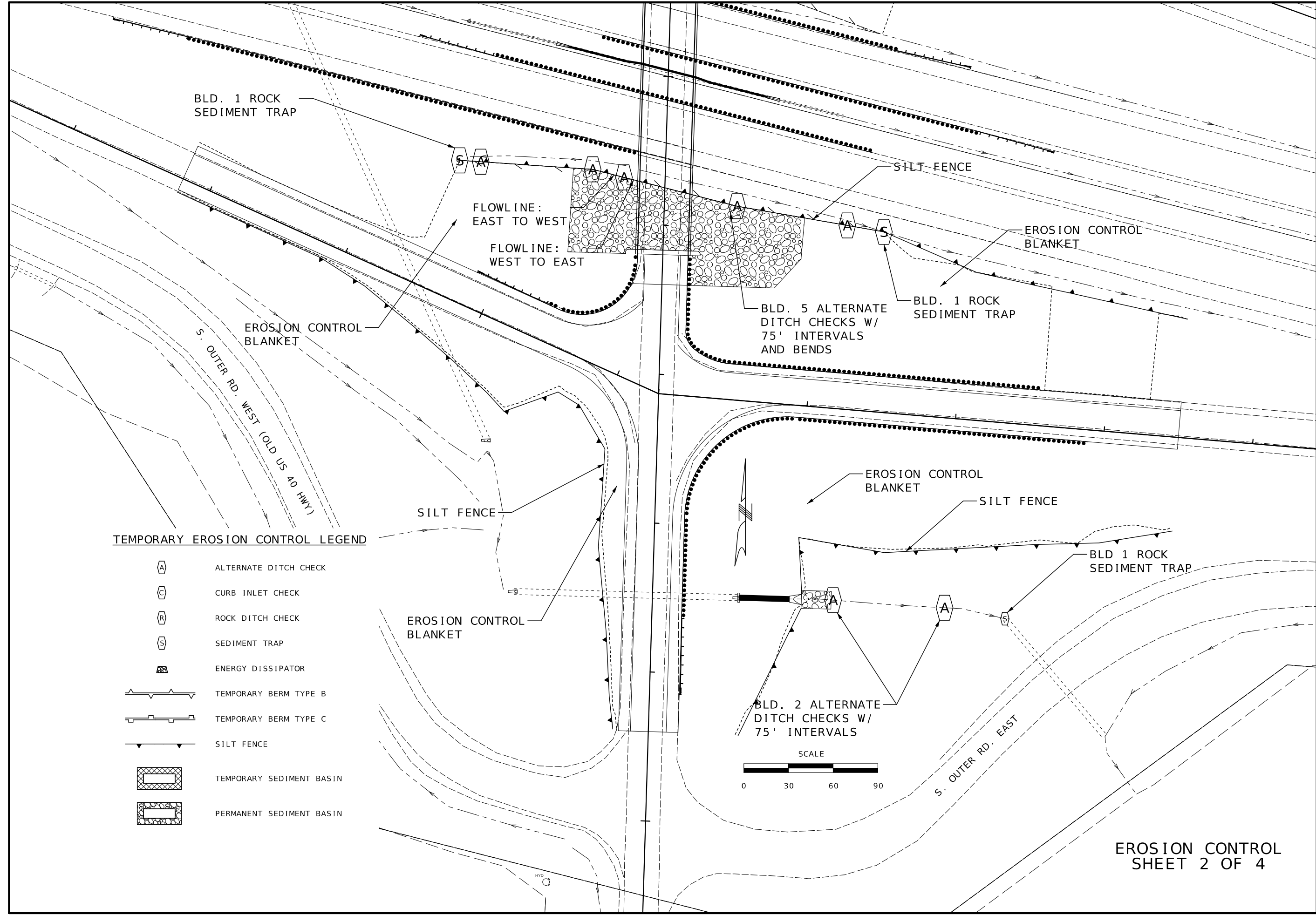
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION








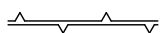
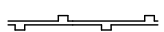
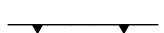


105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

PHASE 1 - BRIDGE REMOVAL AND CONSTRUCTION (NORTH INTERSECTION)

EROSION CONTROL SHEET 1 OF 4



TEMPORARY EROSION CONTROL LEGEND

-  ALTERNATE DITCH CHECK
-  CURB INLET CHECK
-  ROCK DITCH CHECK
-  SEDIMENT TRAP
-  ENERGY DISSIPATOR
-  TEMPORARY BERM TYPE B
-  TEMPORARY BERM TYPE C
-  SILT FENCE
-  TEMPORARY SEDIMENT BASIN
-  PERMANENT SEDIMENT BASIN

STATE OF MISSOURI  
 CHRISTOPHER ALAN WEST  
 NUMBER  
 PE-2014017034  
 PROFESSIONAL ENGINEER  
 Christopher A. West  
 09/30/2024 12:12:18 PM  
 CHRISTOPHER ALAN WEST - CIVIL  
 MO-PE-2014017034

DATE PREPARED  
 9/30/2024  
 ROUTE STATE  
 Y MO  
 DISTRICT SHEET NO.  
 KC 34  
 COUNTY  
 LAFAYETTE/SALINE  
 JOB NO.  
 J3S3162  
 CONTRACT ID.

PROJECT NO.  
 BRIDGE NO.  
 A9319






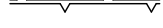




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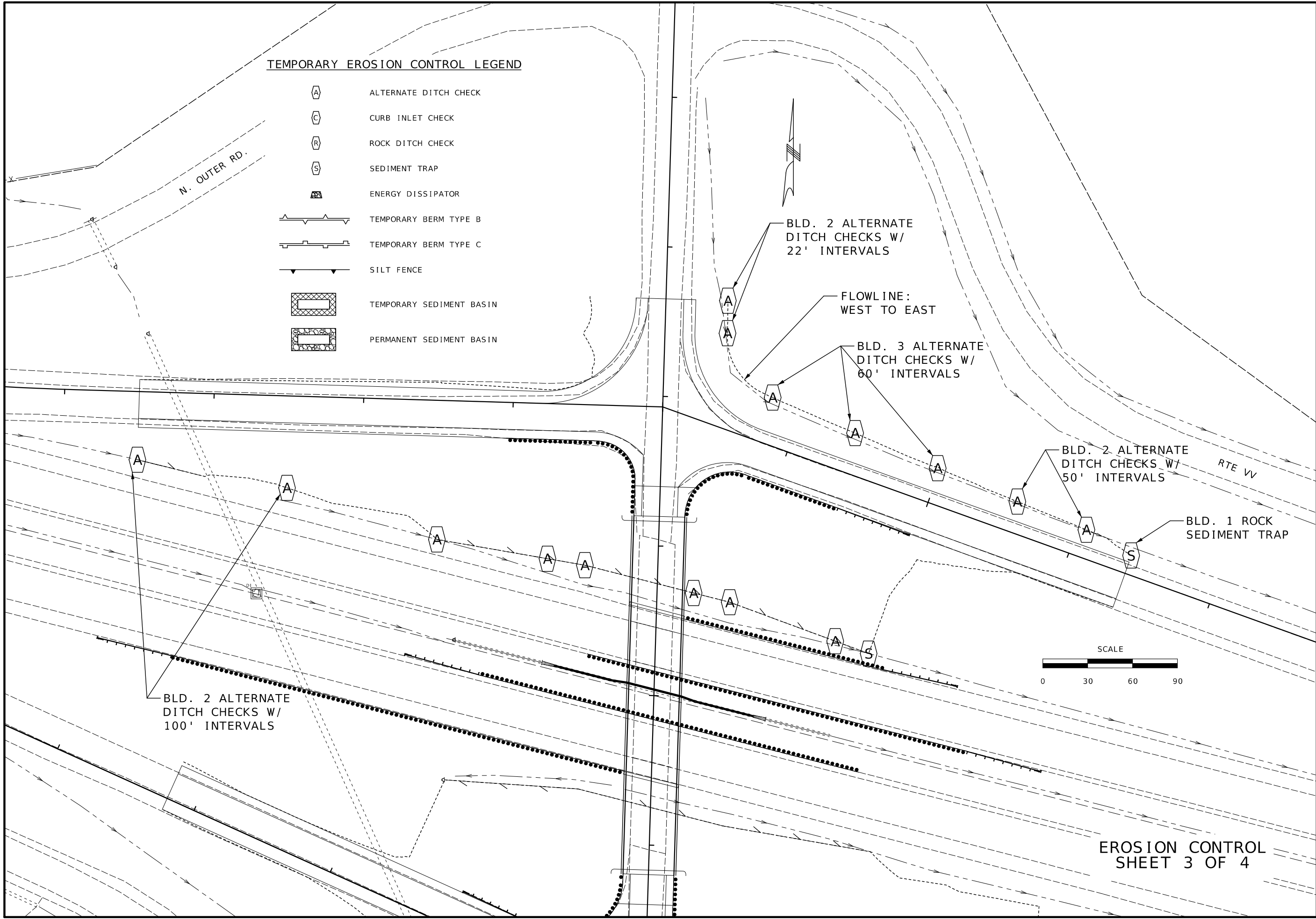
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

PHASE 1 - BRIDGE REMOVAL AND CONSTRUCTION (SOUTH INTERSECTION)

EROSION CONTROL SHEET 2 OF 4

**TEMPORARY EROSION CONTROL LEGEND**

-  ALTERNATE DITCH CHECK
-  CURB INLET CHECK
-  ROCK DITCH CHECK
-  SEDIMENT TRAP
-  ENERGY DISSIPATOR
-  TEMPORARY BERM TYPE B
-  TEMPORARY BERM TYPE C
-  SILT FENCE
-  TEMPORARY SEDIMENT BASIN
-  PERMANENT SEDIMENT BASIN



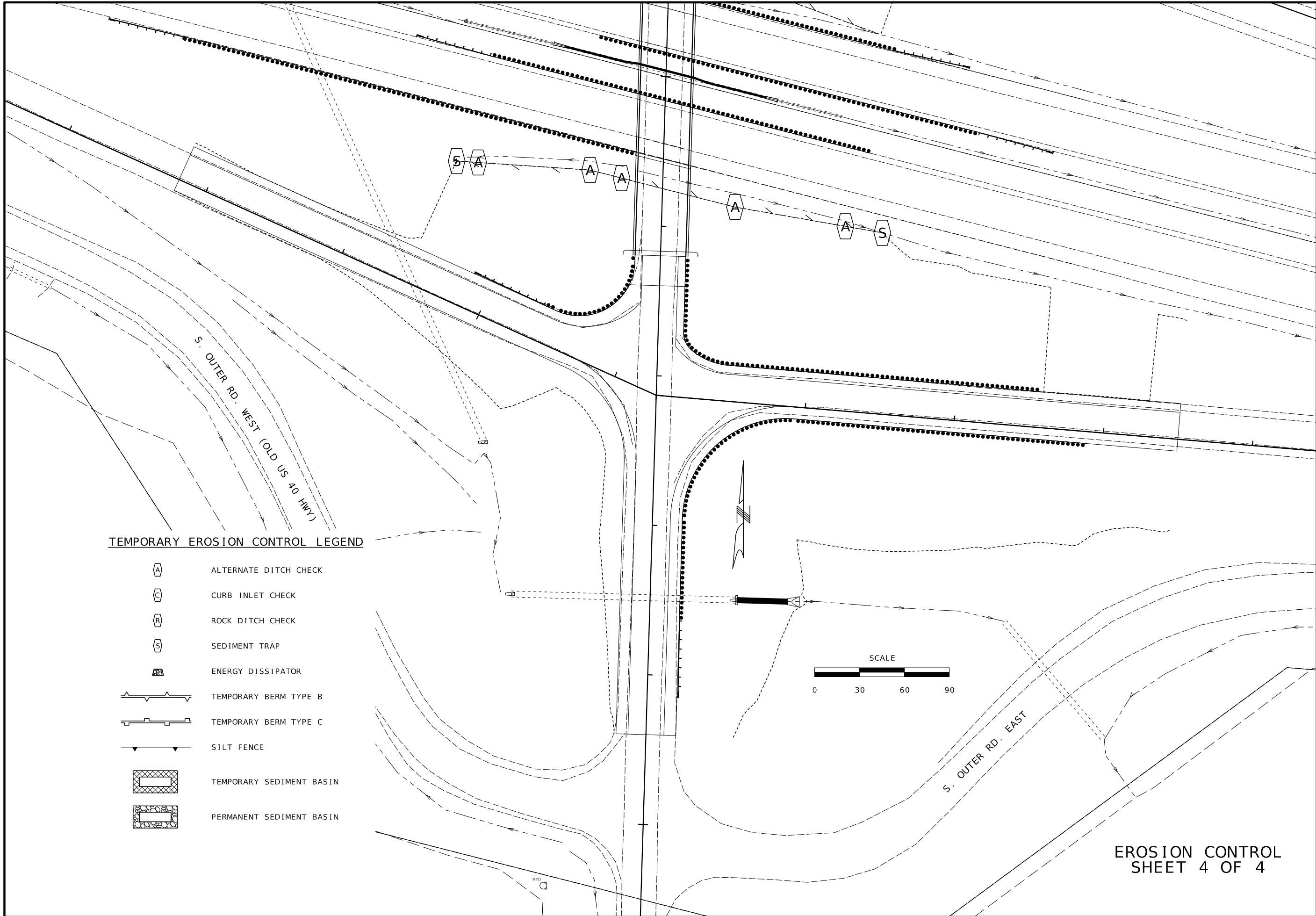
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 CHRISTOPHER ALAN WEST  
 NUMBER PE-2014017034  
 PROFESSIONAL ENGINEER  
 Christopher Alan West  
 09/30/2024 12:18:03 PM  
 CHRISTOPHER ALAN WEST - CIVIL  
 MO-PE-2014017034

DATE PREPARED  
 9/30/2024  
 ROUTE STATE  
 Y MO  
 DISTRICT SHEET NO.  
 KC 35  
 COUNTY  
 LAFAYETTE/SALINE  
 JOB NO.  
 J3S3162  
 CONTRACT ID.  
 PROJECT NO.  
 BRIDGE NO.  
 A9319







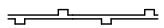
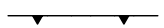


DESCRIPTION	DATE

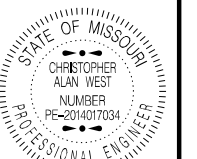
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 MoDOT  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

PHASE 2 - RAMP  
 RECONSTRUCTION  
 (NORTH INTERSECTION)  
 REV.



**TEMPORARY EROSION CONTROL LEGEND**

-  ALTERNATE DITCH CHECK
-  CURB INLET CHECK
-  ROCK DITCH CHECK
-  SEDIMENT TRAP
-  ENERGY DISSIPATOR
-  TEMPORARY BERM TYPE B
-  TEMPORARY BERM TYPE C
-  SILT FENCE
-  TEMPORARY SEDIMENT BASIN
-  PERMANENT SEDIMENT BASIN



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 36

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.  
BRIDGE NO.  
A9319

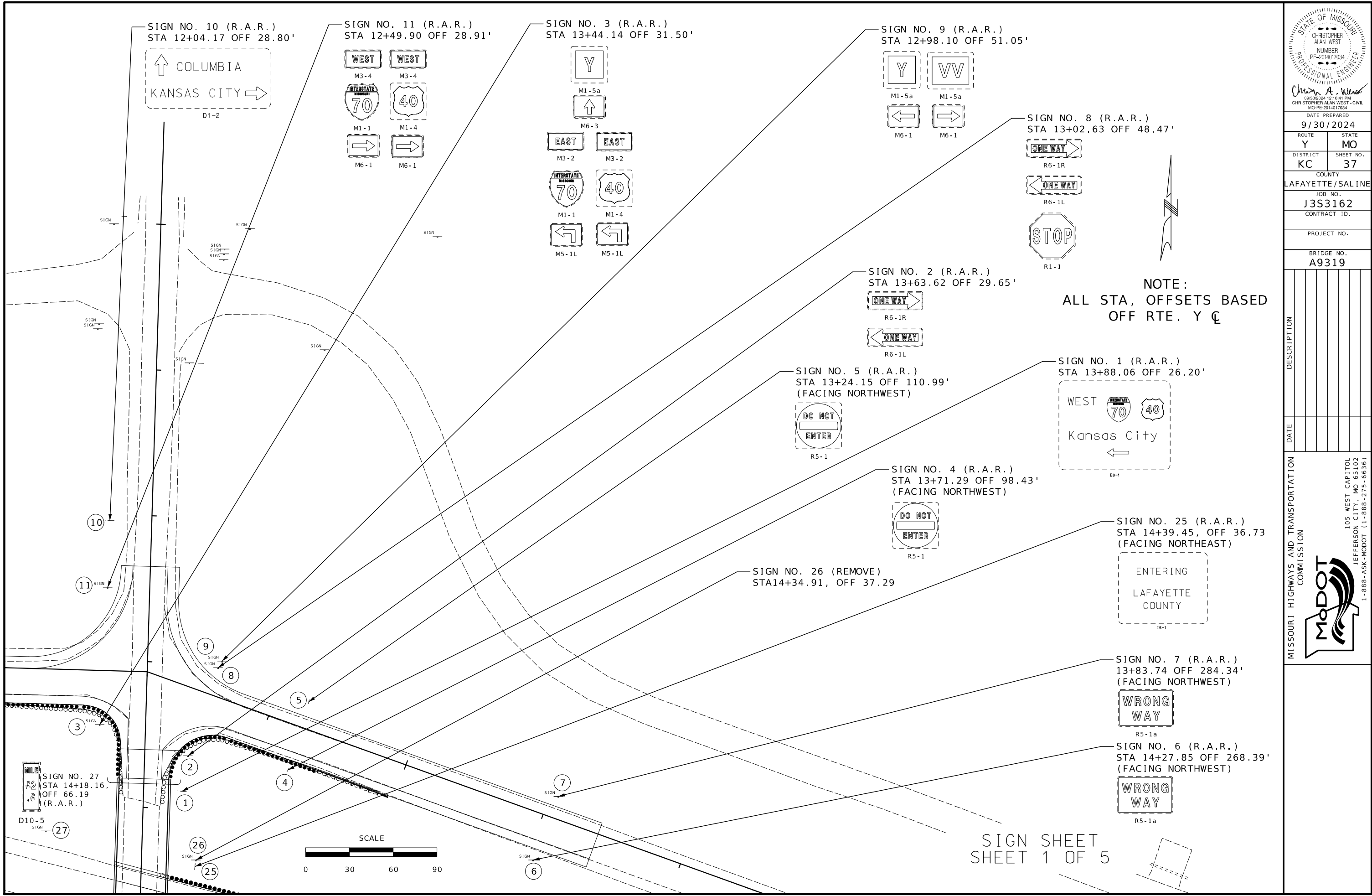
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-273-6636)

PHASE 2 - RAMP  
 RECONSTRUCTION  
 (SOUTH INTERSECTION)

EROSION CONTROL  
 SHEET 4 OF 4

REV.



SIGN NO. 10 (R.A.R.)  
STA 12+04.17 OFF 28.80'  
↑ COLUMBIA  
KANSAS CITY →  
D1-2

SIGN NO. 11 (R.A.R.)  
STA 12+49.90 OFF 28.91'  
WEST WEST  
M3-4 M3-4  
70 40  
M1-1 M1-4  
→ →  
M6-1 M6-1

SIGN NO. 3 (R.A.R.)  
STA 13+44.14 OFF 31.50'  
Y  
M1-5a  
↑  
M6-3  
EAST EAST  
M3-2 M3-2  
70 40  
M1-1 M1-4  
↙ ↙  
M5-1L M5-1L

SIGN NO. 9 (R.A.R.)  
STA 12+98.10 OFF 51.05'  
Y VV  
M1-5a M1-5a  
← →  
M6-1 M6-1

SIGN NO. 8 (R.A.R.)  
STA 13+02.63 OFF 48.47'  
ONE WAY →  
R6-1R  
ONE WAY ←  
R6-1L  
STOP  
R1-1

NOTE:  
ALL STA, OFFSETS BASED  
OFF RTE. Y ☐

SIGN NO. 2 (R.A.R.)  
STA 13+63.62 OFF 29.65'  
ONE WAY →  
R6-1R  
ONE WAY ←  
R6-1L

SIGN NO. 5 (R.A.R.)  
STA 13+24.15 OFF 110.99'  
(FACING NORTHWEST)  
DO NOT ENTER  
R5-1

SIGN NO. 1 (R.A.R.)  
STA 13+88.06 OFF 26.20'  
WEST 70 40  
Kansas City ←  
EB-1

SIGN NO. 4 (R.A.R.)  
STA 13+71.29 OFF 98.43'  
(FACING NORTHWEST)  
DO NOT ENTER  
R5-1

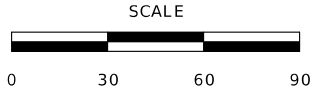
SIGN NO. 26 (REMOVE)  
STA 14+34.91, OFF 37.29

SIGN NO. 25 (R.A.R.)  
STA 14+39.45, OFF 36.73  
(FACING NORTHEAST)  
ENTERING LAFAYETTE COUNTY  
16-1

SIGN NO. 7 (R.A.R.)  
13+83.74 OFF 284.34'  
(FACING NORTHWEST)  
WRONG WAY  
R5-1a

SIGN NO. 6 (R.A.R.)  
STA 14+27.85 OFF 268.39'  
(FACING NORTHWEST)  
WRONG WAY  
R5-1a

SIGN NO. 27  
STA 14+18.16,  
OFF 66.19  
(R.A.R.)  
D10-5  
SIGN  
27



SIGN SHEET  
SHEET 1 OF 5



DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO  
DISTRICT SHEET NO.  
KC 37

COUNTY  
LAFAYETTE/SALINE  
JOB NO.  
J3S3162  
CONTRACT ID.

PROJECT NO.  
BRIDGE NO.  
A9319

DESCRIPTION	DATE

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

REV.

SIGN NO. 16 (R.A.R.)  
STA 15+73.04 OFF 263.13'  
(FACING SOUTHEAST)



R5-1a

SIGN NO. 28 (R.A.R.)  
STA 15+58.86 OFF 19.19'  
(FACING WEST)



16-1

SIGN NO. 29 (REMOVE)  
STA 15+62.98, OFF 23.87'

SIGN NO. 17 (R.A.R.)  
STA 16+13.35 OFF 279.00'  
(FACING SOUTHEAST)



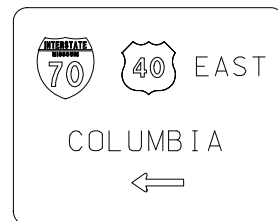
R5-1a

SIGN NO. 18 (R.A.R.)  
16+43.36 OFF 208.04'



D1-2

SIGN NO. 12 (R.A.R.)  
STA 16+19.06 OFF 27.45'



EB-1

SIGN NO. 14 (R.A.R.)  
STA 16+39.20 OFF 94.12'  
(FACING SOUTHEAST)



R5-1

SIGN NO. 15 (R.A.R.)  
STA 16+83.10 OFF 110.78'  
(FACING SOUTHEAST)



R5-1

SIGN NO. 13 (R.A.R.)  
STA 16+46.92 OFF 33.33'

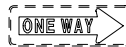


R6-1R

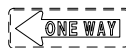


R6-1L

SIGN NO. 19 (R.A.R.)  
STA 17+00.19 OFF 61.37'



R6-1R

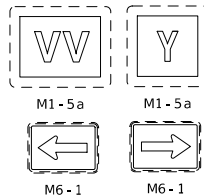


R6-1L



R1-1

SIGN NO. 20 (R.A.R.)  
STA 17+06.46 OFF 59.77'



M1-5a

M1-5a

M6-1

M6-1

SIGN NO. 22 (R.A.R.)  
STA 16+75.20 OFF 25.06'



M1-5a



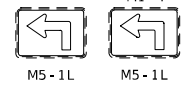
M6-3



M3-4 M3-4



M1-1 M1-4



M5-1L M5-1L

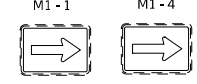
SIGN NO. 21 (R.A.R.)  
STA 17+84.23 OFF 24.81'



M3-2 M3-2

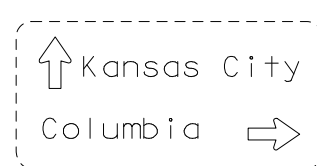


M1-1 M1-4



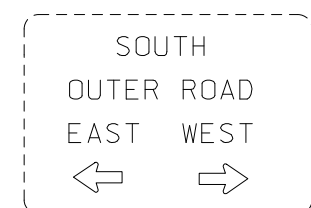
M6-1 M6-1

SIGN NO. 23 (R.A.R.)  
STA 18+54.64 OFF 29.09'



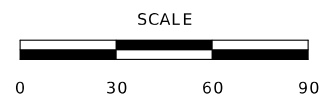
D1-2

SIGN NO. 24 (R.A.R.)  
STA 19+35.60 OFF 29.37'

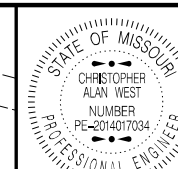


E9-1

SIGNS NOT PRESENT  
NOR APPLICABLE



NOTE:  
ALL STA, OFFSETS BASED  
OFF RTE. Y & C



CHRISTOPHER ALAN WEST  
NUMBER PE-2014017034  
PROFESSIONAL ENGINEER

DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 38

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

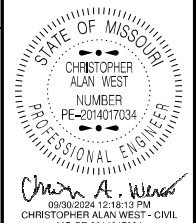
JEFFERSON CITY, MO 65102

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



SIGN SHEET  
SHEET 2 OF 5

REV.



DATE PREPARED  
9/30/2024  
ROUTE Y STATE MO  
DISTRICT KC SHEET NO. 39  
COUNTY LAFAYETTE / SALINE  
JOB NO. J3S3162  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO. A9319

Main data table with columns for SIGN NO., SIGN SIZE, STATION, LOCATION, CONCRETE FOOTINGS EMBEDDED, STRUCTURAL STEEL POSTS, PIPE POSTS, BACKING BARS, U-CHANNEL POST, and PERFORATED SQUARE STEEL TUBE. Includes subtotals and totals for various materials and components.

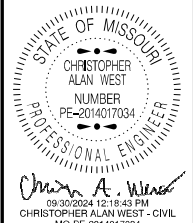
\* BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.  
\*\* BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

ROUND PIPE POST AND FOOTING DATA TABLE

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

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





09/30/2024 12:18:43 PM  
CHRISTOPHER ALAN WEST - CIVIL  
MO-PE-2014017034

DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 40

COUNTY

LAFAYETTE / SALINE

JOB NO.

J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9319

SIGN NUMBER	STATION	LOCATION	STANDARD SIGN ASSEMBLIES														SIGN SUMMARY								
			TYPE														STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET					
			SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH				SIZE	FLAT SHEET SH	FLAT SHEET FLUORESCENT SHF *	STRUCTURAL ST	STRUCTURAL FLUORESCENT STF *	
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH																	ITEM NO. 9035004A	ITEM NO. 9035069A	ITEM NO. 9035011A	ITEM NO. 9035071A		
12		SOUTH INT.															1	R6-1L	1	54"X18"	6.75				
13		SOUTH INT.	1	1													1	R6-1R	1	54"X18"	6.75				
22		SOUTH INT.			1	1	1	1									1	M1-1	1	24"X24"	4				
																	1	M6-3	1	21"X15"	2.1875				
																	1	M1-5a	1	30"X24"	5				
																	1	M3-4	1	24"X12"	2				
																	1	E8-1	1	120"X84"	70				
											TOTAL		97												

\* ORANGE, YELLOW & YELLOW/GREEN

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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



*Christopher A. West*  
CHRISTOPHER ALAN WEST - CIVIL  
MO-PE-2014017034

DATE PREPARED  
9/30/2024

ROUTE STATE  
Y MO

DISTRICT SHEET NO.  
KC 41

COUNTY  
LAFAYETTE/SALINE

JOB NO.  
J3S3162

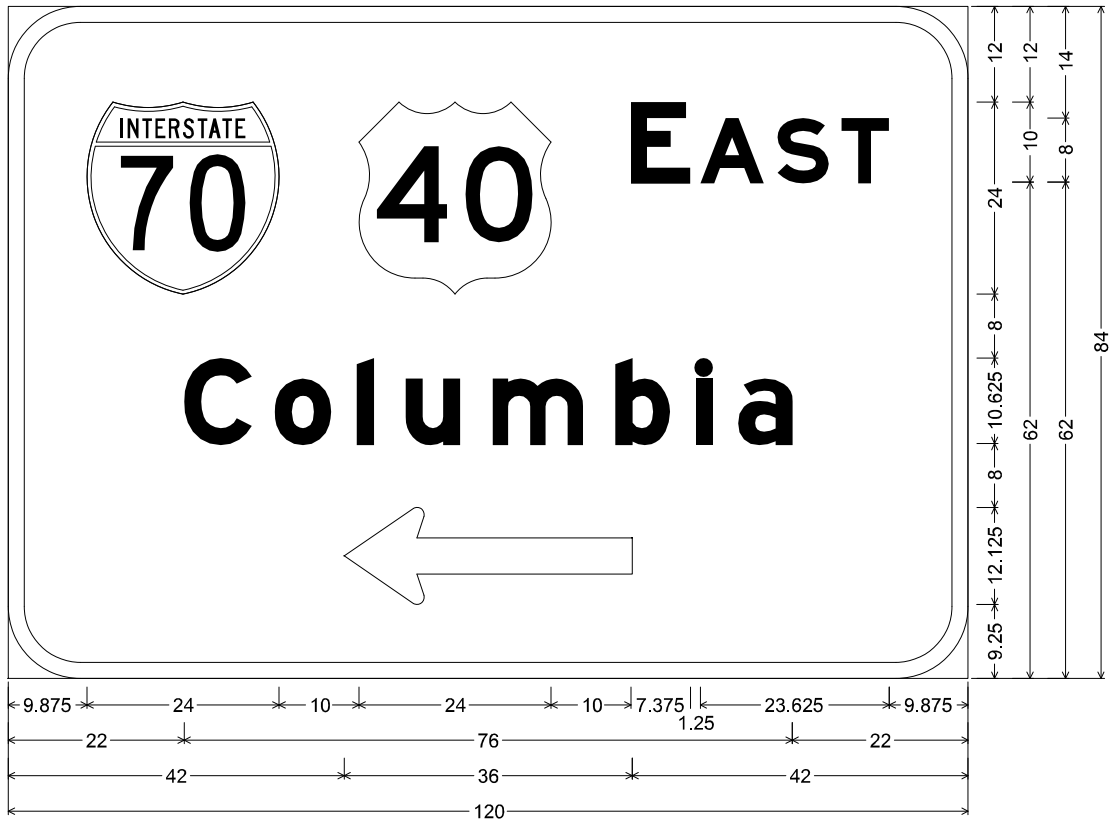
CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9319

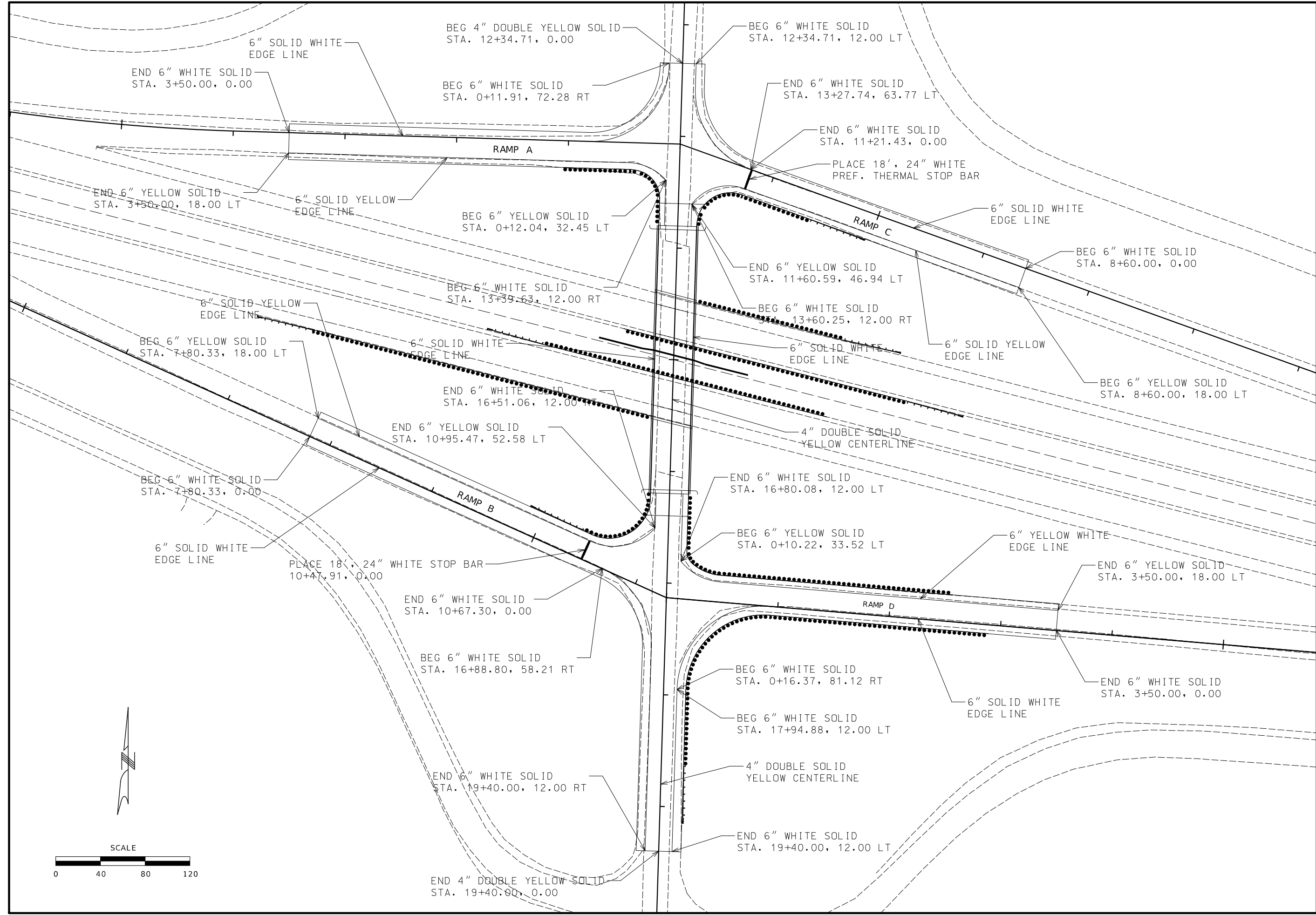
DATE	DESCRIPTION

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



E8-1 ST-STRUCTURAL;  
9.000" Radius, 2.000" Border, White on, Green;  
Interstate 70 12.000" C; "EAST", E Mod; "Columbia", E Mod;  
Standard Arrow Custom 36.000" X 12.125" 180';  
Table of letter and object lefts

70	40	E	A	S	T		
9.875	43.875	77.875	86.500	96.125	104.250		
C	o	l	u	m	b	i	a
22.000	33.375	43.625	49.625	60.625	75.875	86.000	91.250
←							
42.000							



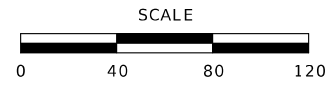
STATE OF MISSOURI  
 CHRISTOPHER ALAN WEST  
 NUMBER  
 PE-2014017034  
 PROFESSIONAL ENGINEER  
 Christopher A. West  
 09/30/2024 12:20:40 PM  
 CHRISTOPHER ALAN WEST - CIVIL  
 MO-PE-2014017034

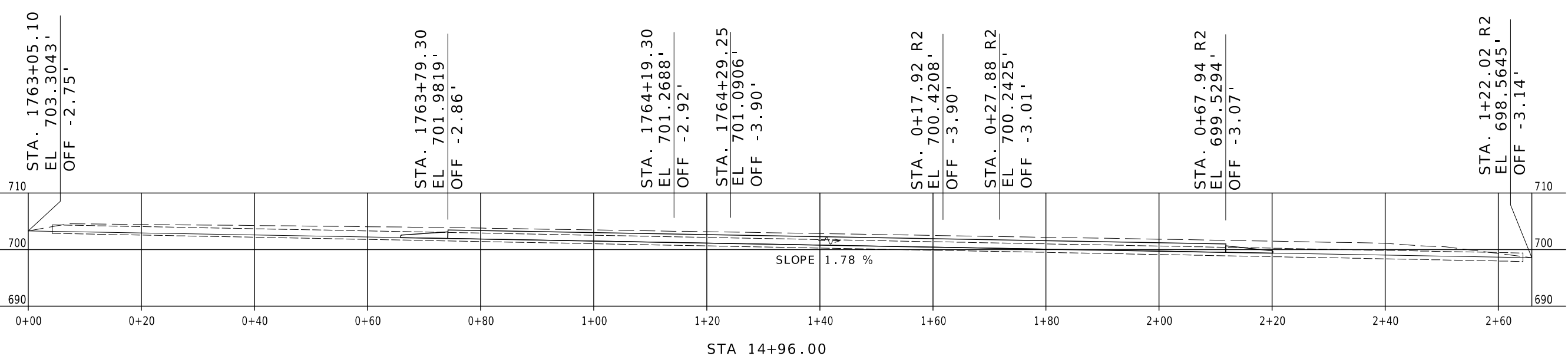
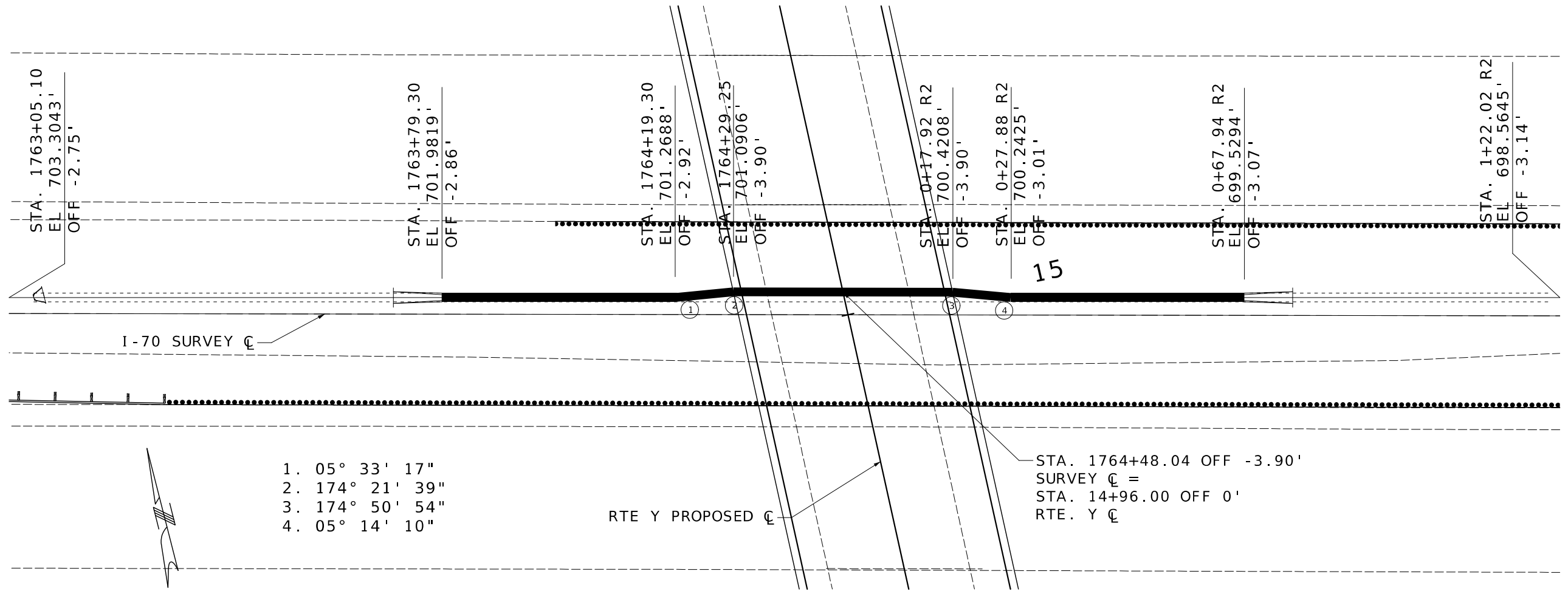
DATE PREPARED  
 9/30/2024  
 ROUTE STATE  
 Y MO  
 DISTRICT SHEET NO.  
 KC 42  
 COUNTY  
 LAFAYETTE / SALINE  
 JOB NO.  
 J3S3162  
 CONTRACT ID.  
 PROJECT NO.  
 BRIDGE NO.  
 A9319

DESCRIPTION	DATE

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

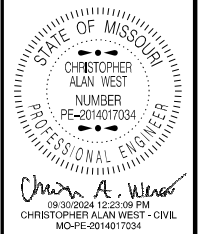
PAVEMENT MARKING SHEET  
 REV.





BLD 18" X 138' GROUP B PIPE  
 BLD 2-18" SES 10:1  
 CLASS 3 EXC. 80.44 CY  
 REMOVE EXISTING PIPE: 261 LF

ROUTE Y  
 CULVERT SECTION  
 SHEET 1 OF 2



DATE PREPARED  
 9/30/2024  
 ROUTE Y STATE MO  
 DISTRICT KC SHEET NO. 43  
 COUNTY LAFAYETTE/SALINE  
 JOB NO. J3S3162  
 CONTRACT ID.

PROJECT NO.  
 BRIDGE NO. A9319

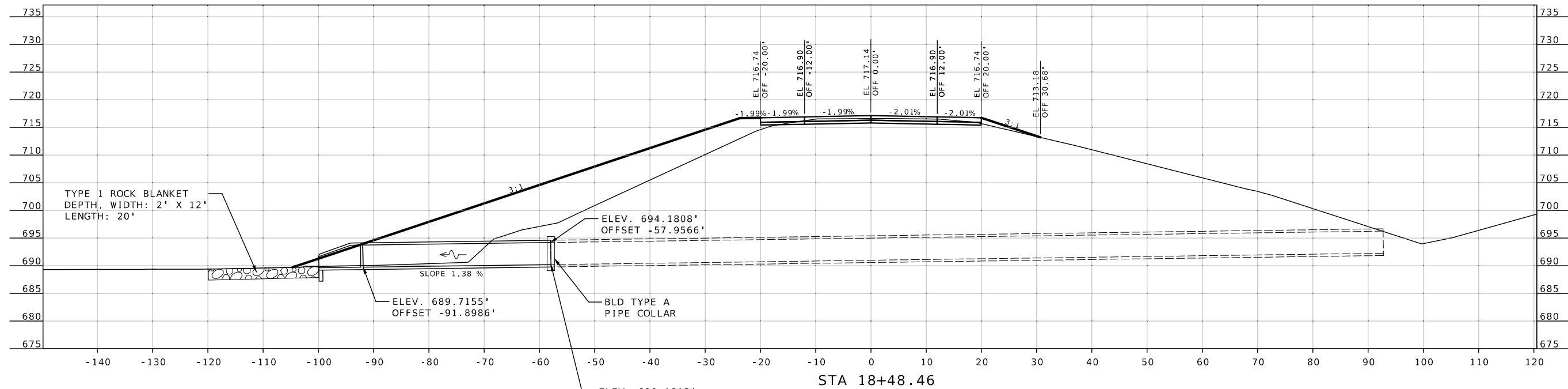
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-273-6636)

170 MEDIAN CULVERT CROSS SECTION

REV.

DATE PREPARED	
9/30/2024	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
KC	44
COUNTY	
LAFAYETTE/SALINE	
JOB NO.	
J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9319	



BLD 48" X 34' GROUP A PIPE  
BLD 1-48" FES  
BLD TYPE A PIPE COLLAR  
CLASS 3 EXCAV. 23.52 CY  
REMOVE EXISTING FES

ROUTE Y  
CULVERT SECTION  
SHEET 2 OF 2

DATE	DESCRIPTION

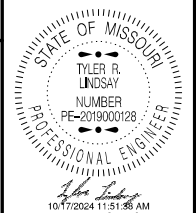
MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

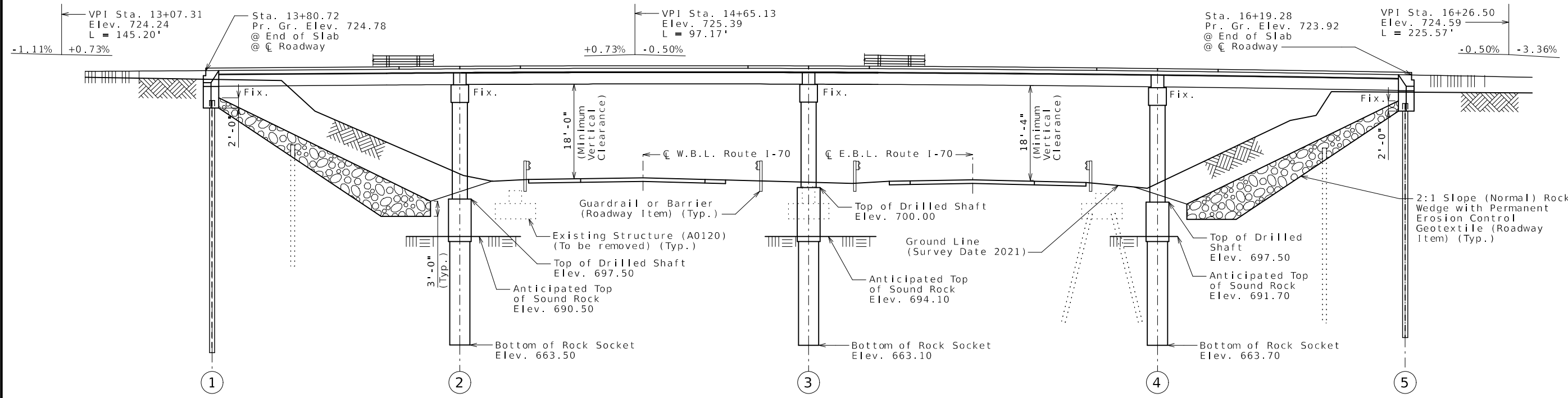
RTE Y CULVERT  
CROSS SECTION

(49'-69'-69'-49') PRESTRESSED CONCRETE SPREAD BOX BEAM SPANS (SKEW: 12°34'30" L.A.)

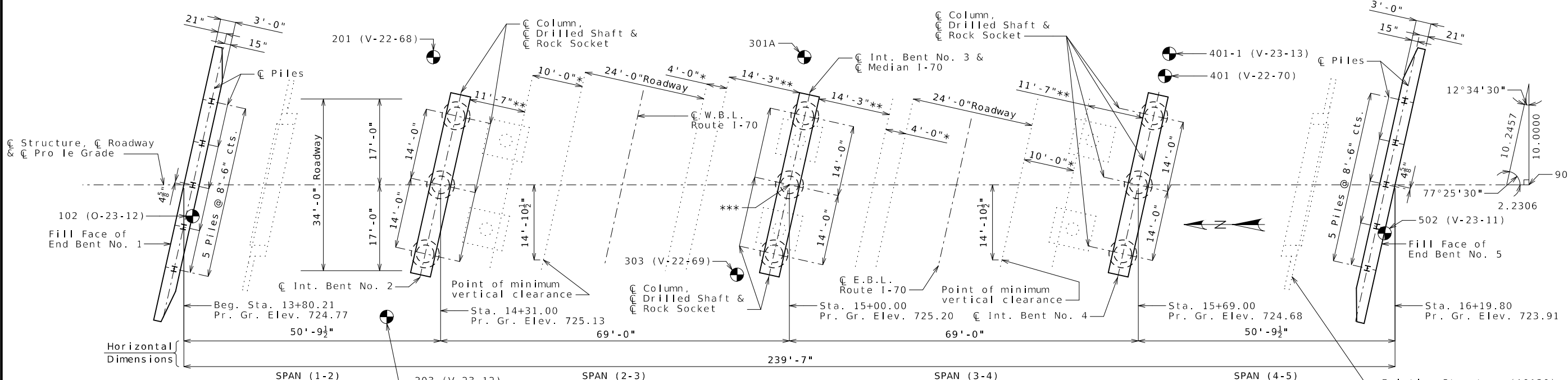
SEC/SUR 6 TWP 48N RGE 24W



DATE PREPARED 10/17/2024  
ROUTE Y STATE MO  
DISTRICT BR SHEET NO. 1  
COUNTY LAFAYETTE  
JOB NO. J3S3162  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO. A9319



GENERAL ELEVATION



PLAN

● Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 27 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

\* Shoulder  
\*\* Horizontal Clearance to Column Face  
\*\*\* Sta. 15+00.00 @ Route Y = Sta. 1764+48.91 BK / Sta. 0+00.00 AH @ Median I-70

Note:  
Roadway II shall be completed to the normal roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the embankment section.

B.M. #1 - 5/8" IRON BAR @ SW CORNER OF ROUTE Y & I-70 EB OFF-RAMP INTERSECTION, EL. 717.55, NORTHING 1025199.03, EASTING 3067927.47  
B.M. #2 - 5/8" IRON BAR @ NE CORNER OF ROUTE Y & I-70 WB OFF-RAMP INTERSECTION, EL. 723.48, NORTHING 1025667.69, EASTING 3067987.55

BRIDGE: ROUTE Y OVER ROUTE I-70  
ROUTE Y FROM ROUTE VV TO COUNTY ROAD 308  
ABOUT 0.1 MILE SOUTH OF ROUTE VV  
TIE STATION 15+00.00

Designed Aug. 2024  
Detailed Aug. 2024  
Checked Sep. 2024

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

DESCRIPTION  
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



**Estimated Quantities for Slab on Concrete Beam**

Item	Unit	Total
Class B-2 Concrete	cu. yard	251
Reinforcing Steel (Epoxy Coated)	pound	67,060

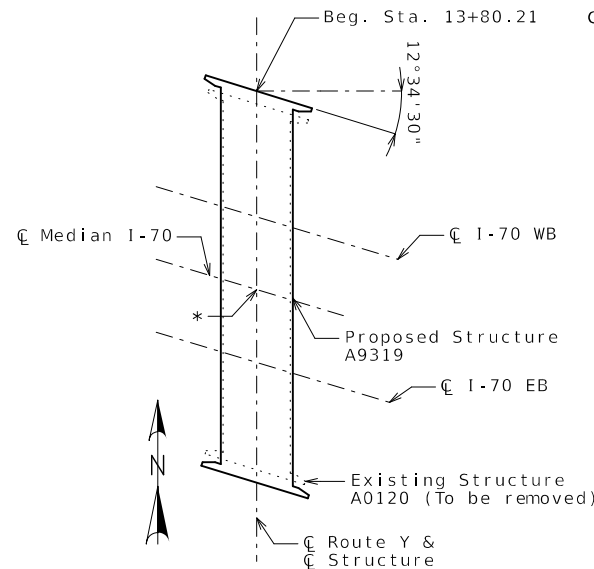
The table of Estimated Quantities for Slab on Concrete Beam represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms and 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 as shown on the plans and 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.

The Estimated Quantities for Slab on Concrete Beam are based on skewed precast prestressed end panels.

Class B-2 Concrete quantity is based on minimum top angle thickness and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete Beam.



**LOCATION SKETCH**

\* Sta. 15+00.00 C Route Y =  
Sta. 1764+48.91 BK / 0+00.00 AH C Median I-70

**General Notes:**

Design Specifications:  
2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)  
Seismic Design Category = A

**Design Loading:**

Vehicular = HL-93  
Future Wearing Surface = 35 lb/sf  
Earth = 120 lb/cf  
Equivalent Fluid Pressure = 45 lb/cf (Min.)  
Superstructure: Simply-Supported, Non-Composite for dead load.  
Continuous Composite for live load.

**Design Unit Stresses:**

Class B Concrete (Substructure, except Drilled Shafts and Rock Sockets) f'c = 3,000 psi  
Class B-2 Concrete (Drilled Shafts & Rock Sockets) f'c = 4,000 psi  
Class B-2 Concrete (Superstructure, except Prestressed Beams) f'c = 4,000 psi  
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi  
Structural Steel HP Pile (ASTM A709 Grade 50) fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 16.

For prestressed box beam stresses, see Sheets No. 13 & 14.

**Neoprene Pads:**

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

**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.

**Traffic Handling:**

Vertical clearance for Route I-70 traffic during construction shall be 15'-6" minimum over a 24'-0" wide horizontal opening of the roadway in each direction.

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

**Miscellaneous:**

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

- Constant Joint Filler
- Variable Joint Filler

Foundation Data						
Type	Design Data	Bent Number				
		1	2	3	4	5
Load Bearing Pile	Pile Type and Size	HP 12x53	--	--	--	HP 12x53
	Number	ea	5	--	--	5
	Approximate Length Per Each	ft	54	--	--	53
	Pile Point Reinforcement	ea	All	--	--	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	--	--	Full Length
	Pile Driving Verification Method		DT	--	--	DT
	Resistance Factor		0.65	--	--	0.65
Rock Socket	Minimum Nominal Axial Compressive Resistance	kip	250	--	--	245
	Number	ea	--	3	3	--
	Foundation Material		--	Weak Rock	Weak Rock	Weak Rock
	Elevation Range	ft	--	685.5-665	689-665	686-665
	Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	--	3.4	3.4	3.4
	Foundation Material		--	Strong Rock	Strong Rock	Strong Rock
	Elevation Range	ft	--	665-650	665-650	665-650
	Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	--	11.0	11.0	11.0
	Minimum Nominal Axial Compressive Resistance (Tip Resistance)	ksf	--	32.1	31.0	32.6

DT = Dynamic Testing

**Load Bearing Pile:**

Minimum Nominal Axial Compressive Resistance =  $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

**Rock Socket (Drilled Shafts):**

Minimum Nominal Axial Compressive Resistance =  $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factors}}$   
(Side Resistance + Tip Resistance)

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviation in penetration less than 5 feet of the minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.

Estimated Quantities			
Item	Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	70	70
Removal of Bridges (A0120)	lump sum		1
Bridge Approach Slab (Minor)	sq. yard		155
Drilled Shafts (5 ft. 6 in. Dia.)	linear foot	56.1	56.1
Rock Sockets (5 ft. 0 in. Dia.)	linear foot	258.0	258.0
Video Camera Inspection	each	9	9
Foundation Inspection Holes	linear foot	348.0	348.0
Sonic Logging Testing	each	9	9
** Galvanized Structural Steel Piles (12 in.)	linear foot	535	535
Dynamic Pile Testing	each	2	2
Pile Point Reinforcement	each	10	10
Class B Concrete (Substructure)	cu. yard	178.8	178.8
Slab on Concrete Beam	sq. yard		972
Concrete Curb (Bridge Rail)	linear foot		479
27 in., Prestressed Concrete Spread Box Beam	linear foot		940
Reinforcing Steel (Bridges)	pound	69,660	69,660
Bridge Rail (Two Tube Structural Steel)	linear foot		481
Vertical Drain at End Bents	each		2
Plain Neoprene Bearing Pad	each		8
Laminated Neoprene Bearing Pad	each		24

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete Beam.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete Beam.

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete Beam.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete Beam.

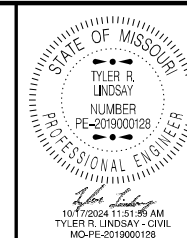
\*\* See Special Provisions

**GENERAL NOTES AND QUANTITIES**

Detailed Aug. 2024  
Checked Sep. 2024

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

Sheet No. 2 of 27



DATE PREPARED  
10/17/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 2

COUNTY LAFAYETTE

JOB NO. J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9319

DESCRIPTION

DATE

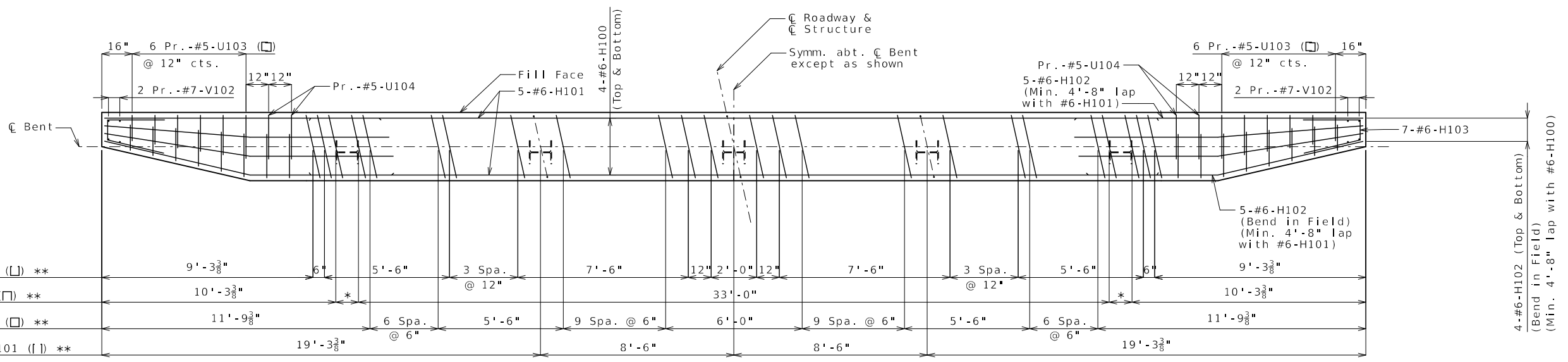
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

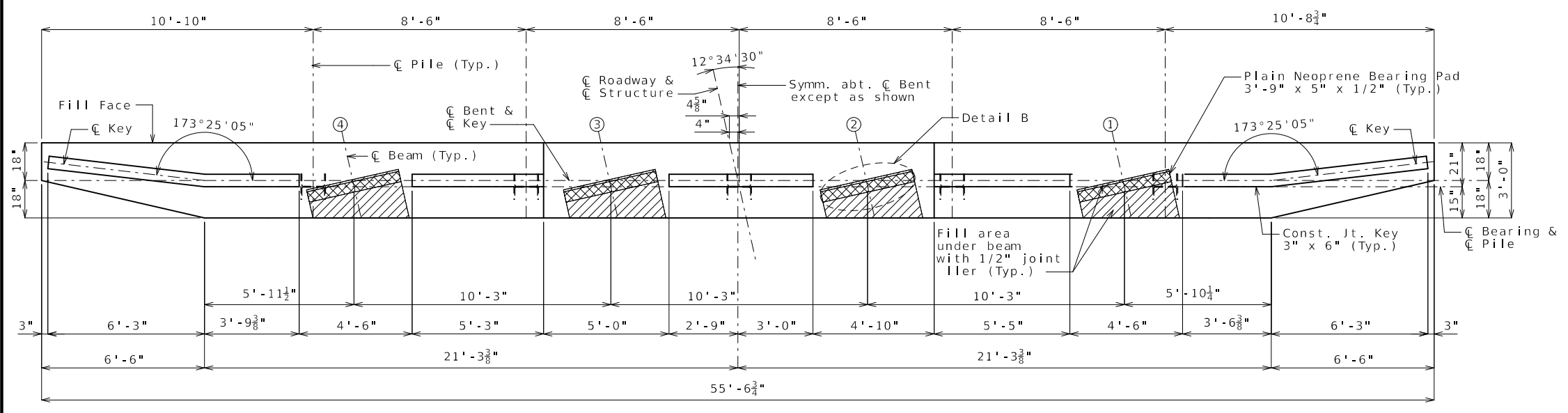
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MoDOT

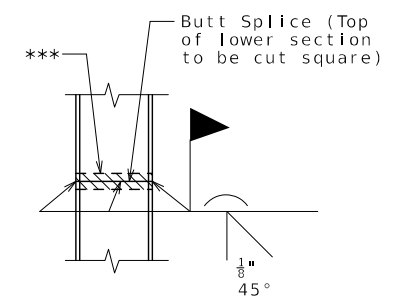
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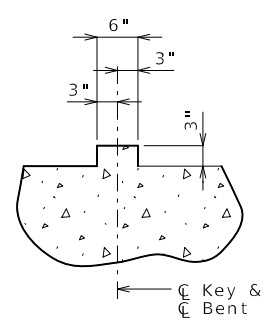
**PLAN OF BEAM SHOWING REINFORCEMENT**  
Note: Keys and steps not shown for clarity.  
\* 2 spa. @ 6"  
\*\* Placed parallel to centerline of roadway.



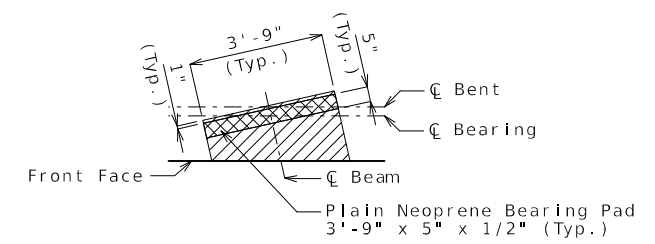
**PLAN OF BEAM**  
(End Bent No. 1 shown, End Bent No. 5 similar)



**STEEL PILE SPLICE**  
(If required)  
\*\*\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



**SECTION THRU KEY**



**DETAIL B**

**Substructure Quantity Table for Bent No. 1**

Item	Quantity
Class 1 Excavation	cu. yard 35
Galvanized Structural Steel Piles (12 in.)	linear foot 270
Dynamic Pile Testing	each 1
Pile Point Reinforcement	each 5
Class B Concrete (Substructure)	cu. yard 25.3

**Substructure Quantity Table for Bent No. 5**

Item	Quantity
Class 1 Excavation	cu. yard 35
Galvanized Structural Steel Piles (12 in.)	linear foot 265
Dynamic Pile Testing	each 1
Pile Point Reinforcement	each 5
Class B Concrete (Substructure)	cu. yard 25.3

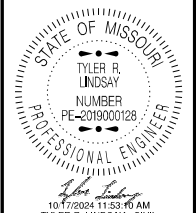
These quantities are included in the Estimated Quantities table on Sheet No. 2.

Notes:  
Work this sheet with Sheets No. 4 & 5.  
Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

**DETAILS OF END BENTS NO. 1 & 5**





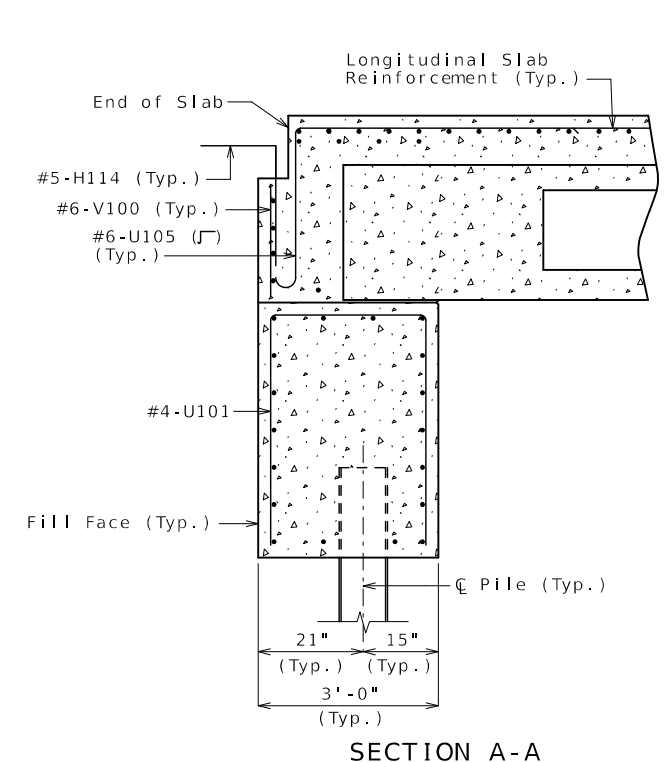


DATE PREPARED  
 10/17/2024  
 ROUTE Y STATE MO  
 DISTRICT BR SHEET NO. 5  
 COUNTY LAFAYETTE  
 JOB NO. J3S3162  
 CONTRACT ID.

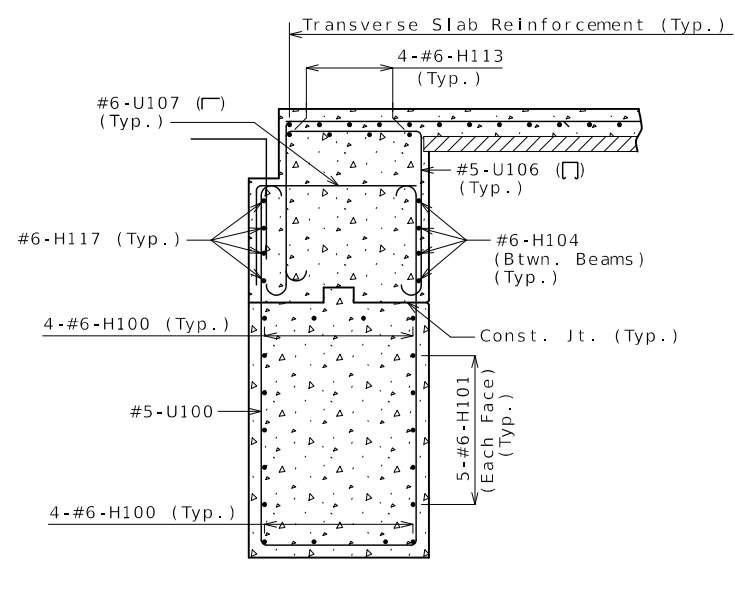
PROJECT NO.  
 BRIDGE NO. A9319

DATE	DESCRIPTION

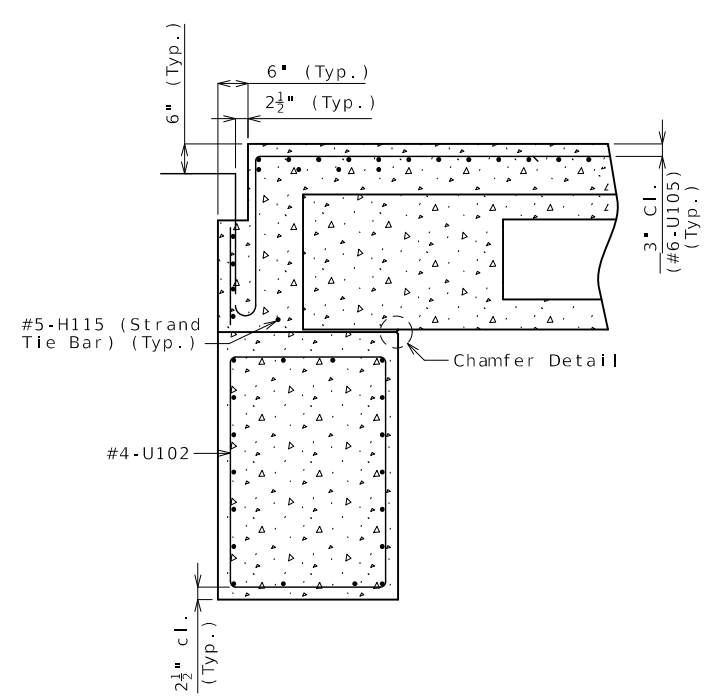
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-273-6636)



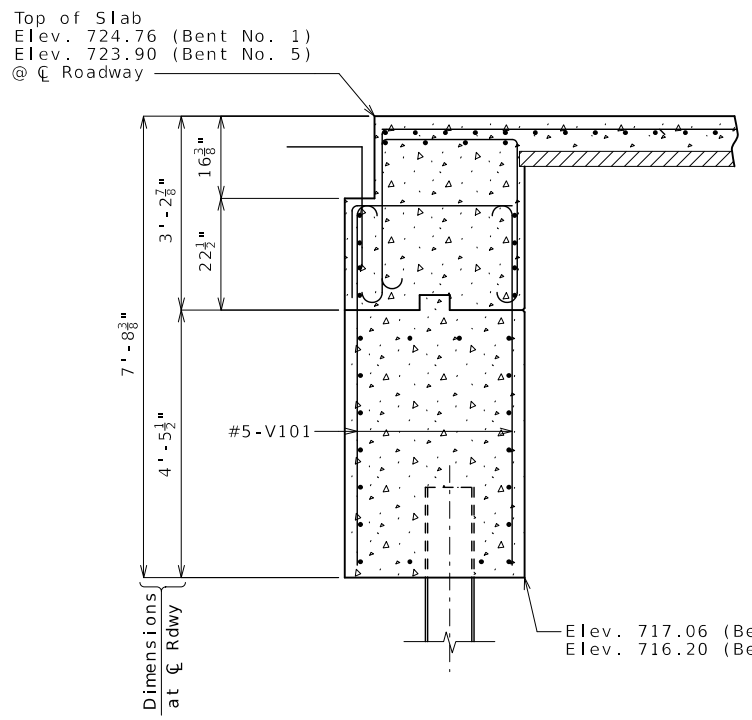
SECTION A-A



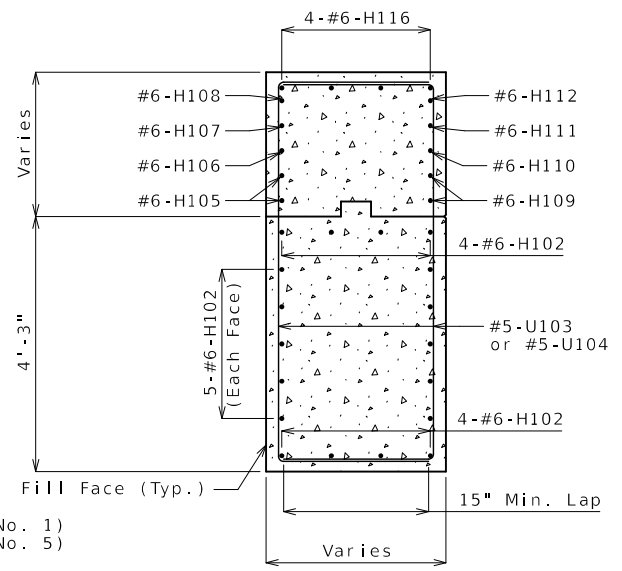
SECTION B-B



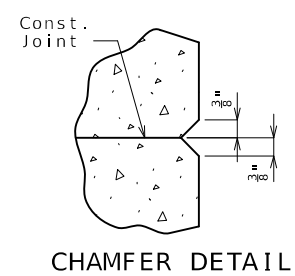
SECTION C-C



SECTION D-D



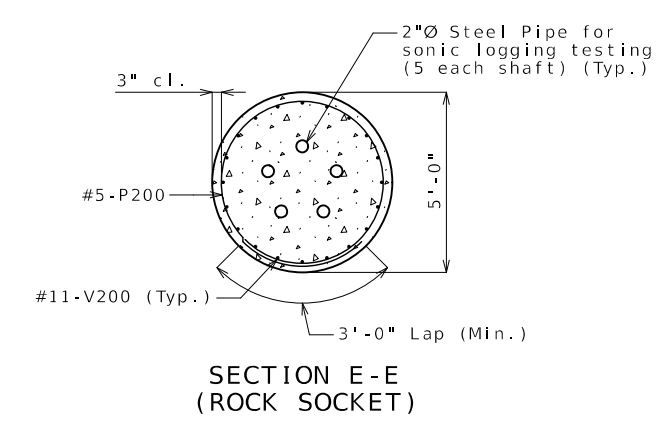
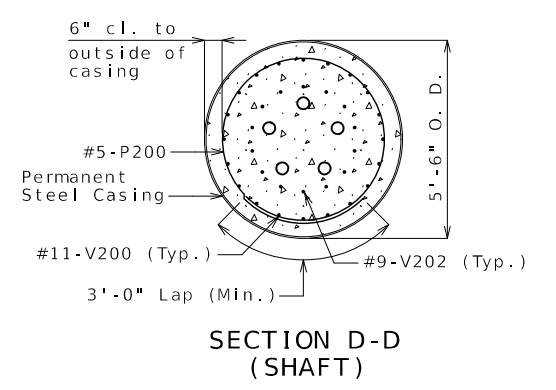
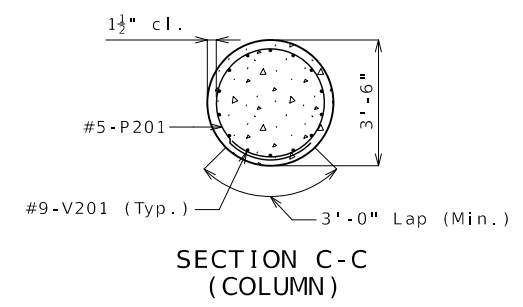
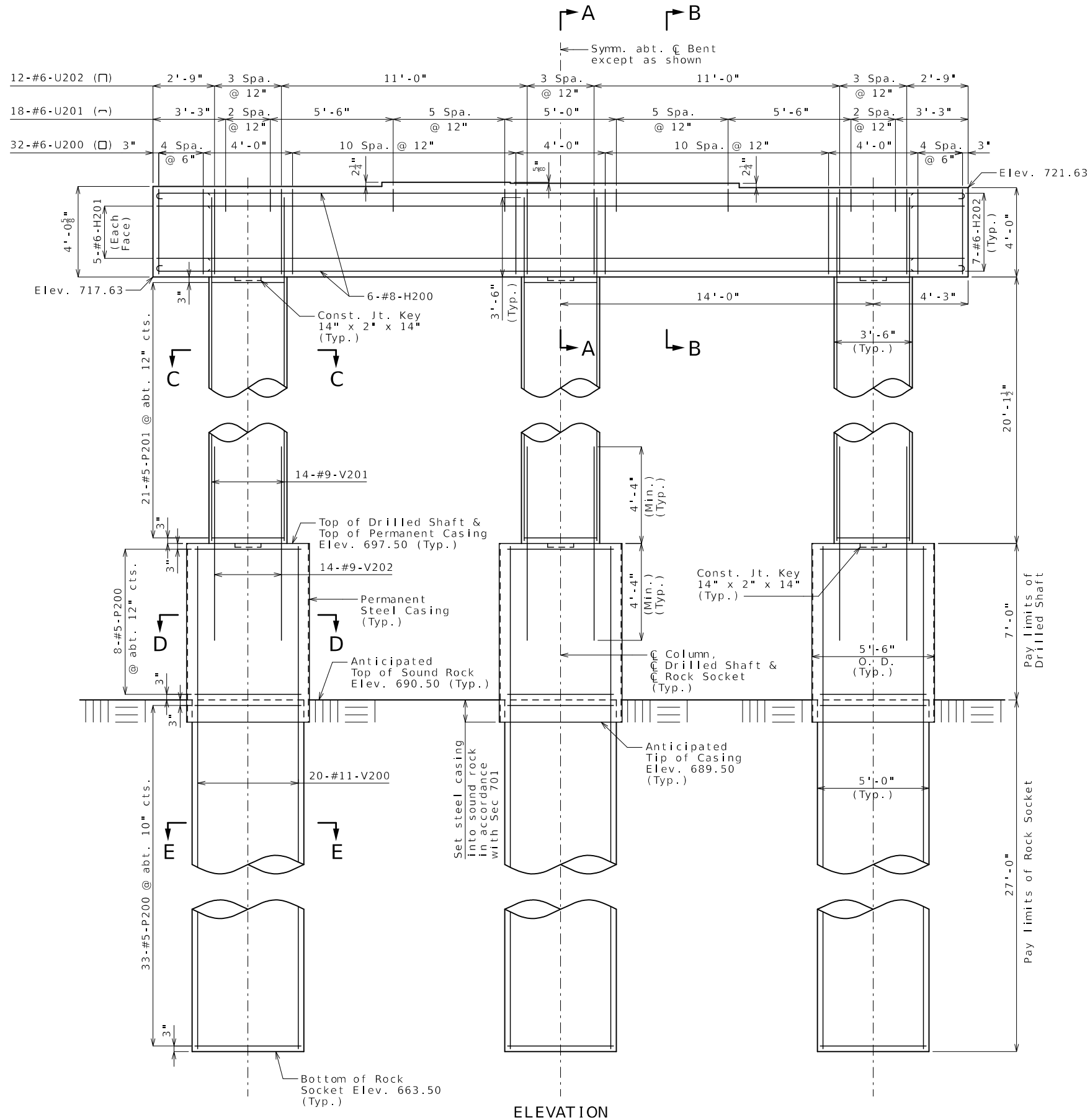
SECTION E-E



CHAMFER DETAIL

Notes:  
 Work this sheet with Sheets No. 3 & 4.





Notes:

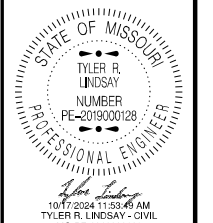
An additional 4 feet has been added to the #11-V200 lengths and an additional 15-#5-P200 bars have been added in the quantities, if required, for possible change in drilled shaft or rock socket length. The additional V-bar length shall be cut off if not required. The additional P-bars shall be spaced similarly to that shown in elevation, if required, or to a lesser spacing if not required, but not less than 6-inch centers.

Location of lap splices in P-bars shall be alternately staggered at least 2'-0".

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

Thickness of permanent steel casing shall be in accordance with Sec 701.

Work this sheet with Sheet No. 8.



DATE PREPARED  
10/17/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 7

COUNTY LAFAYETTE

JOB NO. J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9319

DESCRIPTION	DATE

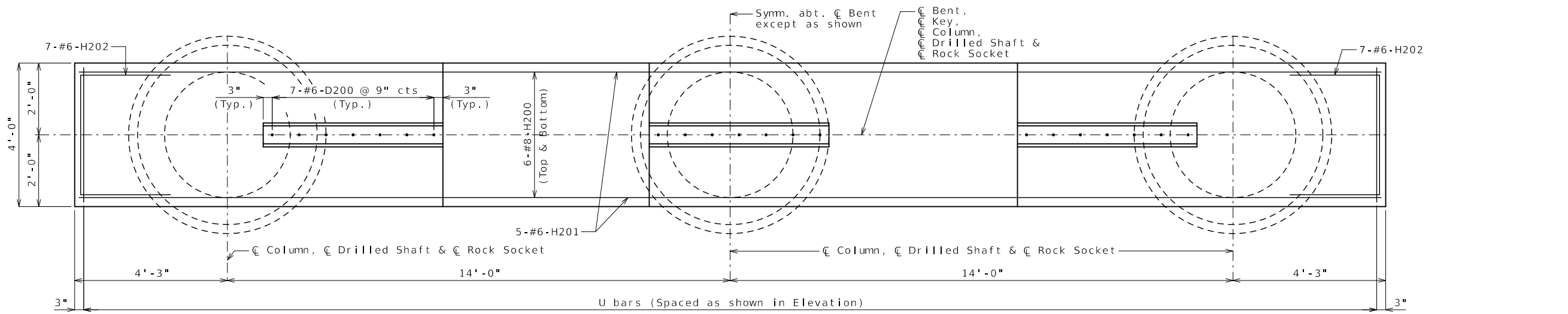
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

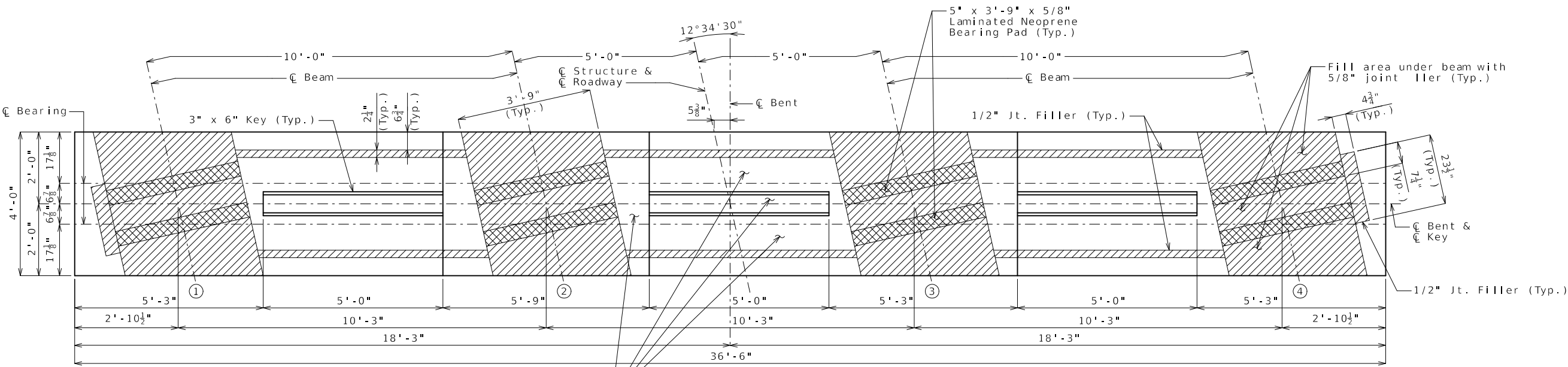
105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

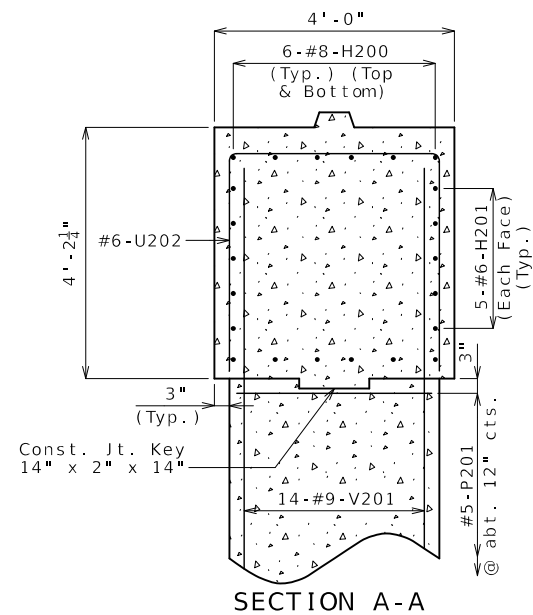
DETAILS OF INTERMEDIATE BENT NO. 2



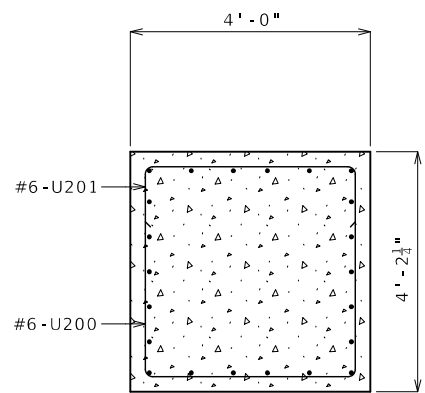
PLAN OF BEAM SHOWING REINFORCEMENT



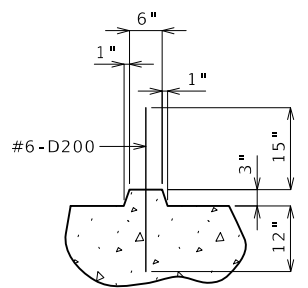
PLAN OF BEAM



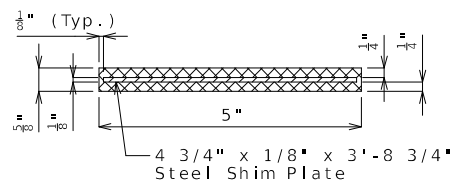
SECTION A-A



SECTION B-B



SECTION THRU KEY



TYPICAL SECTION THRU 5" X 5/8" X 3'-9" LAMINATED NEOPRENE BEARING PAD

Item	Quantity
Drilled Shafts (5 ft. 6 in. Dia.)	linear foot 21.0
Rock Sockets (5 ft. 0 in. Dia.)	linear foot 81.0
Video Camera Inspection	each 3
Foundation Inspection Holes	linear foot 111.0
Sonic Logging Testing	each 3
Class B Concrete (Substructure)	cu. yard 43.8
Reinforcing Steel (Bridges)	pound 22,970

These quantities are included in the Estimated Quantities table on Sheet No. 2.

All reinforcement in drilled shafts and rock sockets is included in the Substructure Quantities.

Notes:

Work this sheet with Sheet No. 7.

For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.



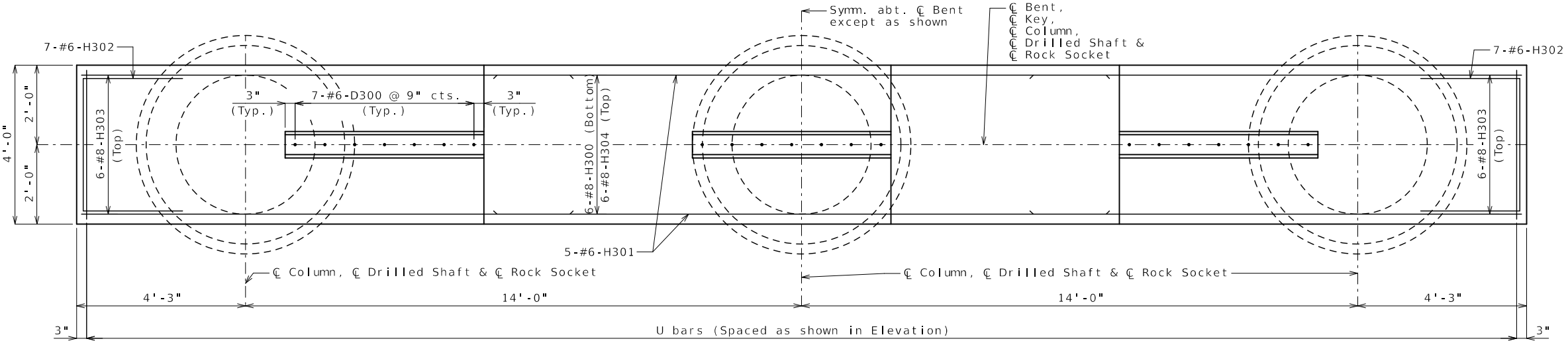
DATE PREPARED  
10/17/2024  
ROUTE Y STATE MO  
DISTRICT BR SHEET NO. 8  
COUNTY LAFAYETTE  
JOB NO. J3S3162  
CONTRACT ID.

PROJECT NO.  
BRIDGE NO. A9319

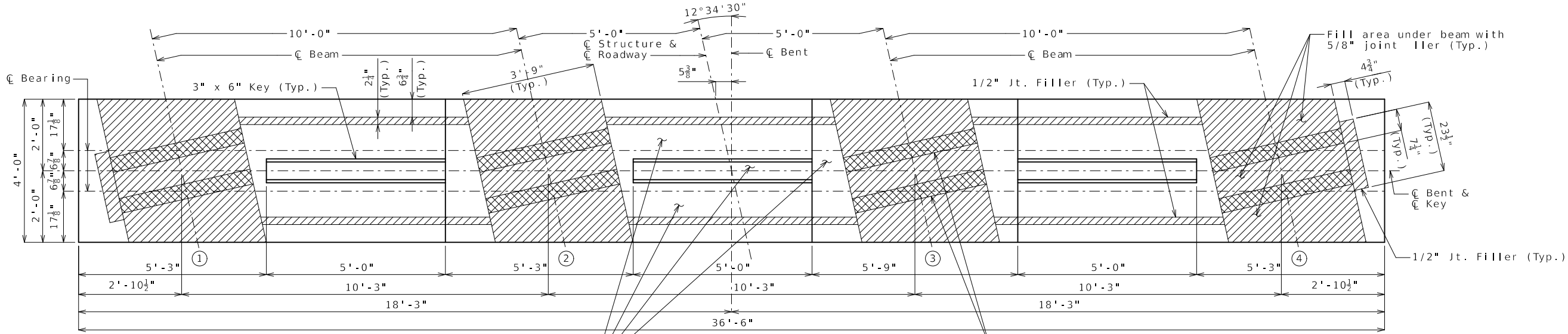
DESCRIPTION	DATE

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

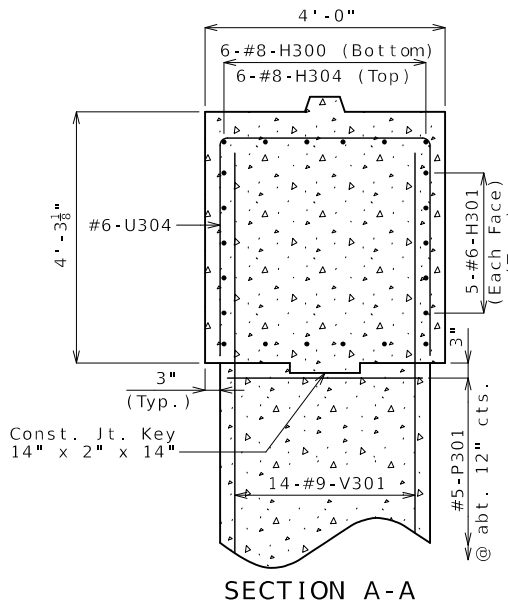




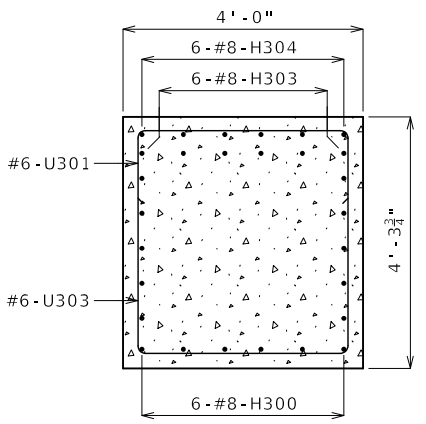
PLAN OF BEAM SHOWING REINFORCEMENT



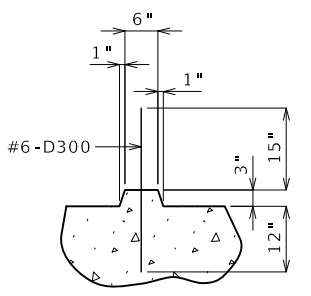
PLAN OF BEAM



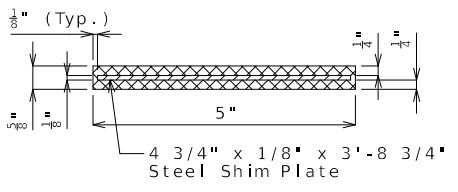
SECTION A-A



SECTION B-B



SECTION THRU KEY



TYPICAL SECTION THRU 5" X 5/8" X 3'-9" LAMINATED NEOPRENE BEARING PAD

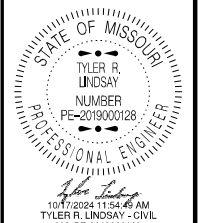
DETAILS OF INTERMEDIATE BENT NO. 3

Item	Quantity
Drilled Shafts (5 ft. 6 in. Dia.)	linear foot 17.7
Rock Sockets (5 ft. 0 in. Dia.)	linear foot 93.0
Video Camera Inspection	each 3
Foundation Inspection Holes	linear foot 123.0
Sonic Logging Testing	each 3
Class B Concrete (Substructure)	cu. yard 41.3
Reinforcing Steel (Bridges)	pound 23,840

These quantities are included in the Estimated Quantities table on Sheet No. 2.

All reinforcement in drilled shafts and rock sockets is included in the Substructure Quantities.

Notes:  
Work this sheet with Sheet No. 9.  
For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.

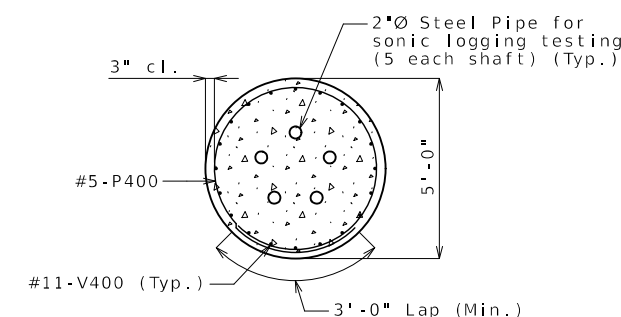
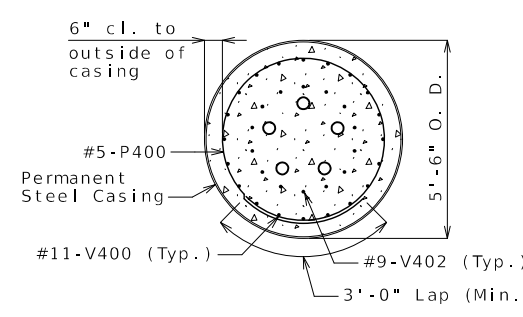
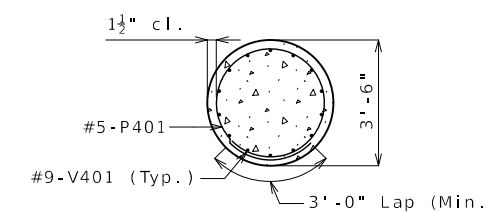
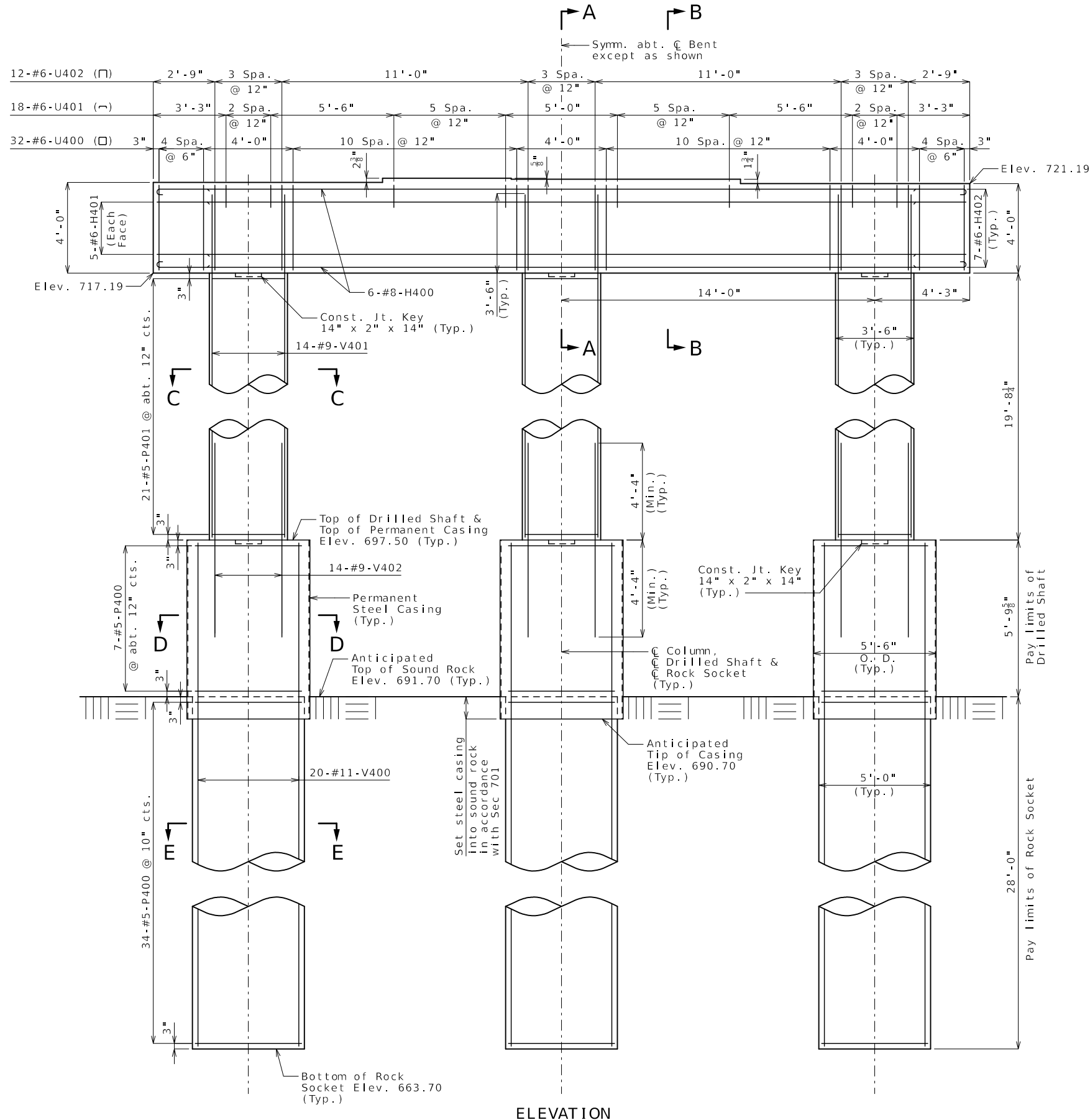


DATE PREPARED 10/17/2024	
ROUTE Y	STATE MO
DISTRICT BR	SHEET NO. 10
COUNTY LAFAYETTE	
JOB NO. J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9319	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
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Notes:

An additional 4 feet has been added to the #11-V400 lengths and an additional 15-#5-P400 bars have been added in the quantities, if required, for possible change in drilled shaft or rock socket length. The additional V-bar length shall be cut off if not required. The additional P-bars shall be spaced similarly to that shown in elevation, if required, or to a lesser spacing if not required, but not less than 6-inch centers.

Location of lap splices in P-bars shall be alternately staggered at least 2'-0".

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

Thickness of permanent steel casing shall be in accordance with Sec 701.

Work this sheet with Sheet No. 12.

DETAILS OF INTERMEDIATE BENT NO. 4

Detailed Aug. 2024  
Checked Sep. 2024

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

Sheet No. 11 of 27

TYLER R. LINDSAY  
NUMBER PE-2019000128  
PROFESSIONAL ENGINEER

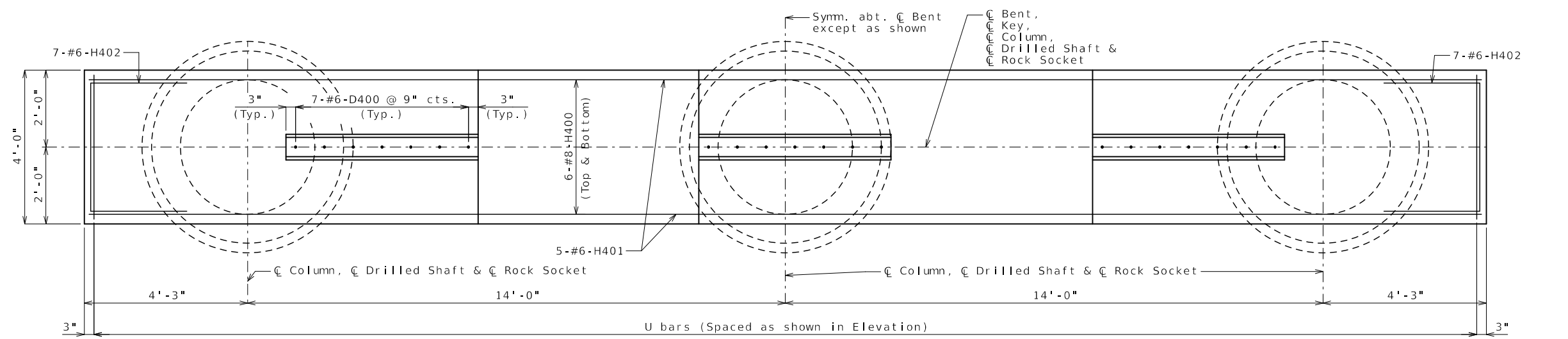
10/17/2024 11:55:41 AM  
TYLER R. LINDSAY - CIVIL  
MO-PE-2019000128

DATE PREPARED <b>10/17/2024</b>	
ROUTE <b>Y</b>	STATE <b>MO</b>
DISTRICT <b>BR</b>	SHEET NO. <b>11</b>
COUNTY <b>LAFAYETTE</b>	
JOB NO. <b>J3S3162</b>	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. <b>A9319</b>	
DESCRIPTION	DATE

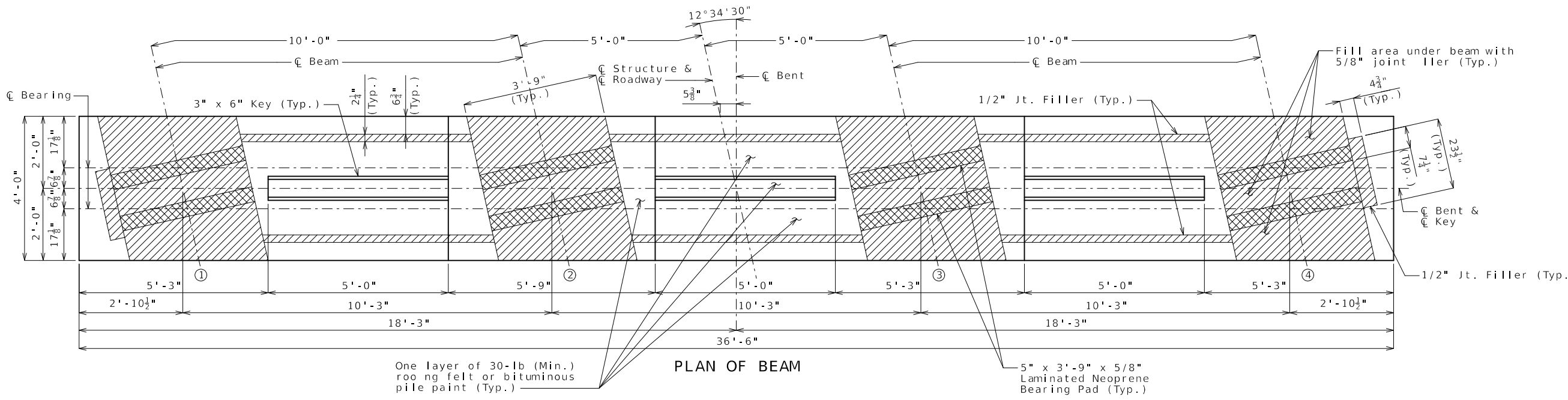
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

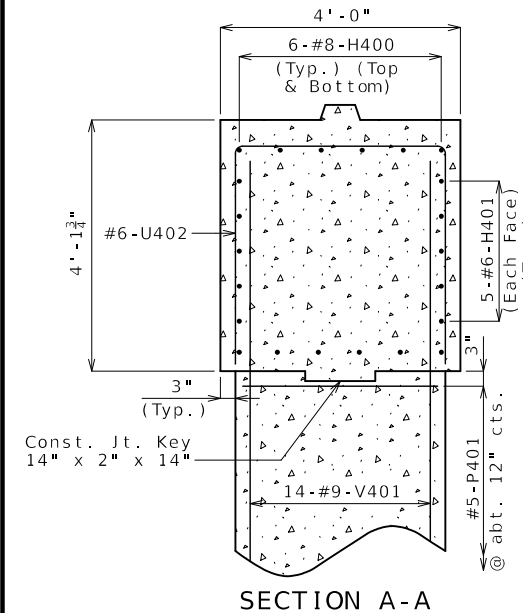




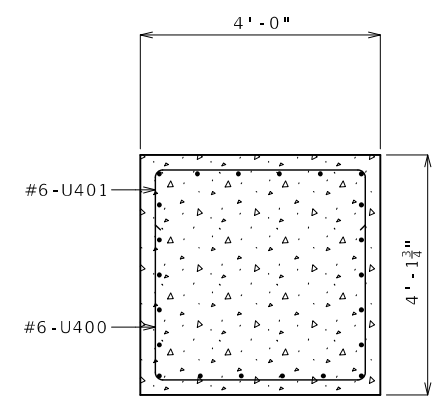
PLAN OF BEAM SHOWING REINFORCEMENT



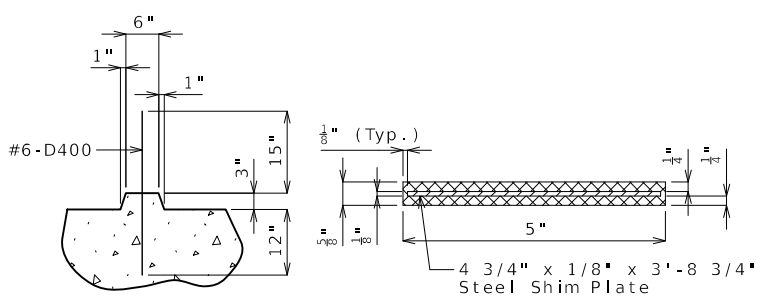
PLAN OF BEAM



SECTION A-A



SECTION B-B



SECTION THRU KEY

TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD

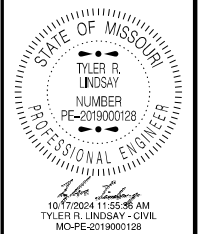
DETAILS OF INTERMEDIATE BENT NO. 4

Item	Quantity
Drilled Shafts (5 ft. 6 in. Dia.)	linear foot 17.4
Rock Sockets (5 ft. 0 in. Dia.)	linear foot 84.0
Video Camera Inspection	each 3
Foundation Inspection Holes	linear foot 114.0
Sonic Logging Testing	each 3
Class B Concrete (Substructure)	cu. yard 43.1
Reinforcing Steel (Bridges)	pound 22,850

These quantities are included in the Estimated Quantities table on Sheet No. 2.

All reinforcement in drilled shafts and rock sockets is included in the Substructure Quantities.

Notes:  
Work this sheet with Sheet No. 11.  
For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.

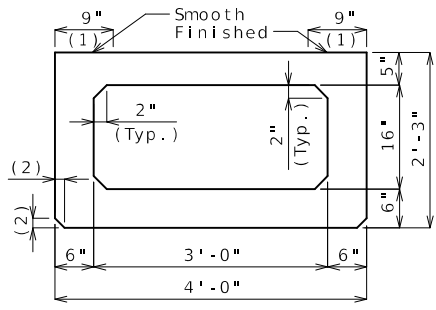


DATE PREPARED	10/17/2024
ROUTE	Y
STATE	MO
DISTRICT	BR
SHEET NO.	12
COUNTY	LAFAYETTE
JOB NO.	J3S3162
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A9319

DESCRIPTION	DATE

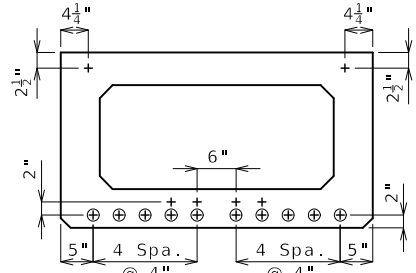
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



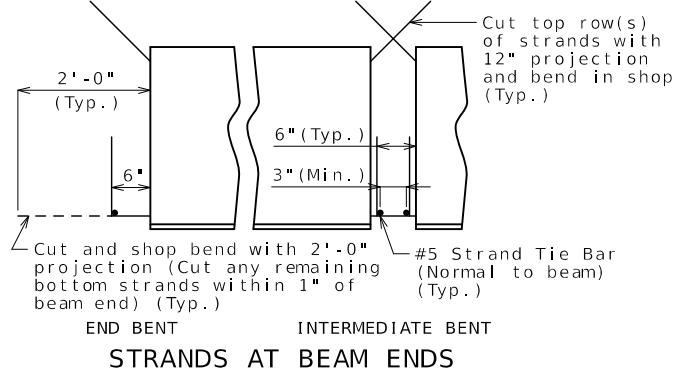
DIMENSIONS

- (1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.
(2) 1 1/2 inch (Typ.) (3/4 inch Optional)



STRAND ARRANGEMENT

All strands are fully bonded unless otherwise noted.
+ Indicates prestressing strand.
O Indicates cut and shop bend with 2'-0 inch projection.

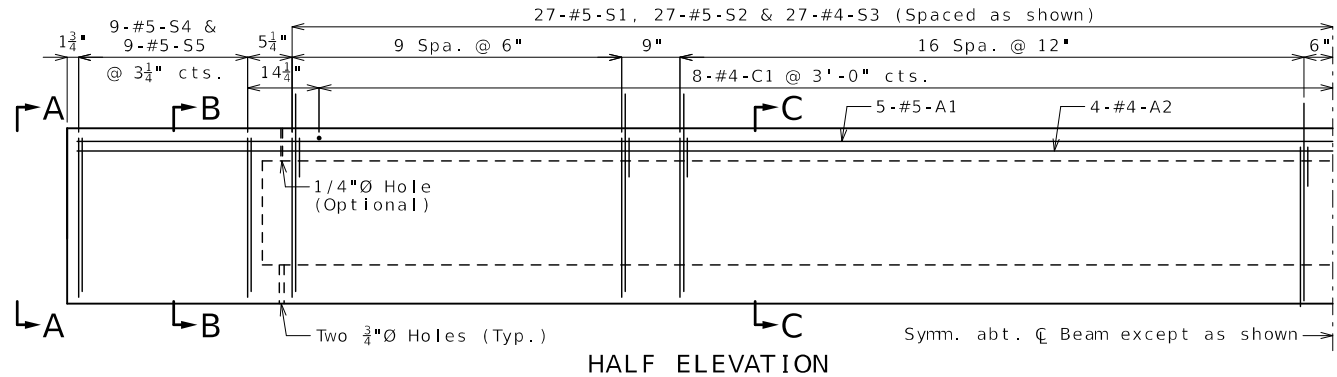


STRANDS AT BEAM ENDS

Table with columns: NO., SIZE & MARK, ACTUAL LENGTH, SHAPE, and BENDING DIAGRAM. Lists various steel shapes and their dimensions.

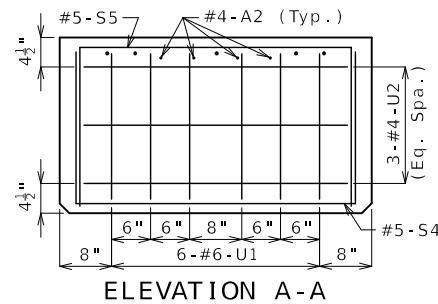


Project information block including Date Prepared (10/17/2024), Route (Y), State (MO), District (BR), Sheet No. (13), County (Lafayette), Job No. (J3S3162), and Contract ID.



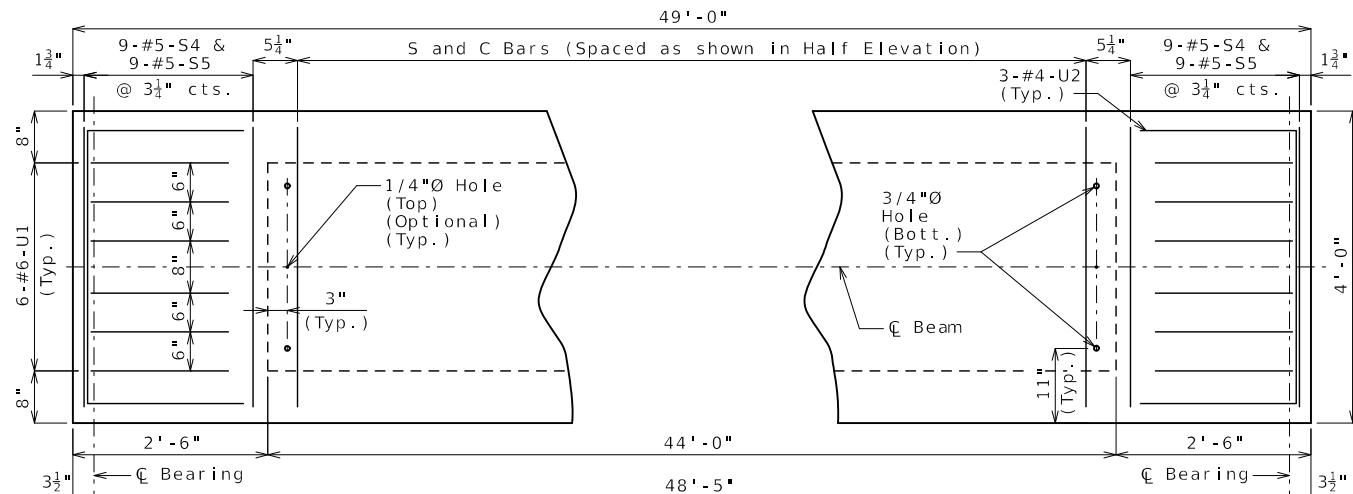
HALF ELEVATION

Strands not shown for clarity.

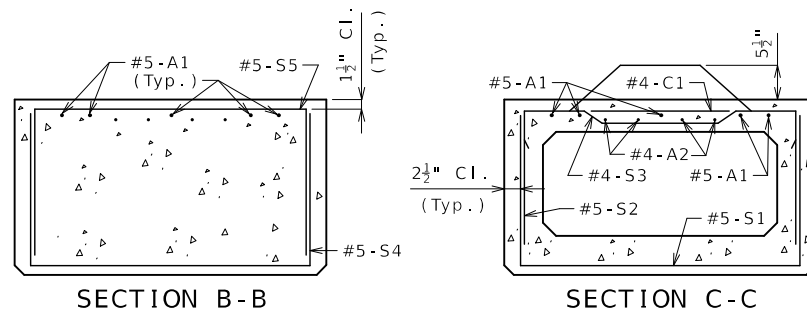


ELEVATION A-A

All dimensions are out to out. Use symmetry for dimensions not shown.
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.
Actual lengths are measured along centerline of bar to the nearest inch.



PART PLAN



SECTION B-B

SECTION C-C

Minimum clearance to reinforcing shall be one inch, unless otherwise shown.
All reinforcement shall be Grade 60.
All S2 bars shall be epoxy coated.

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.
Use 16 strands, 0.6 inch diameter Grade 270, with an initial prestress force of 704 kips.

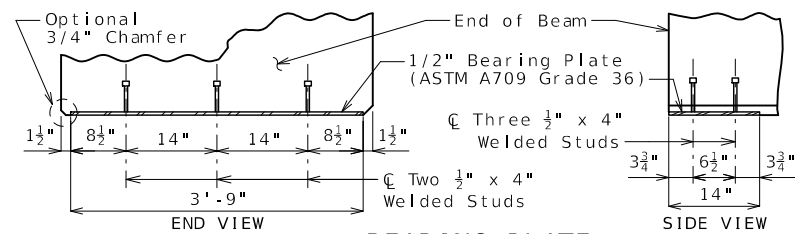
Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

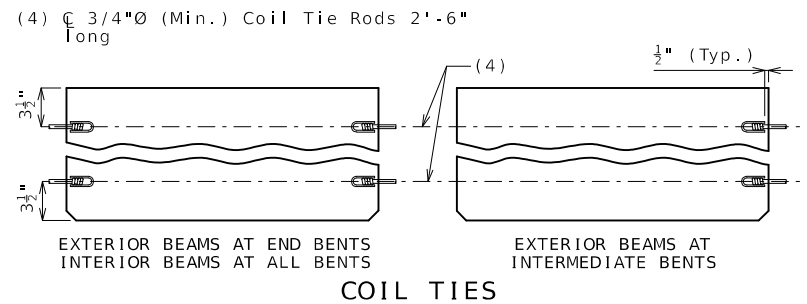
Exterior and interior beams are the same except: coil ties, application of bond breaker.

For Beam Camber Diagram, see Sheet No. 17.

For location of coil ties at concrete bent diaphragms, see Sheets No. 4 and 15.



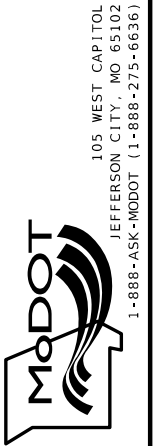
BEARING PLATE

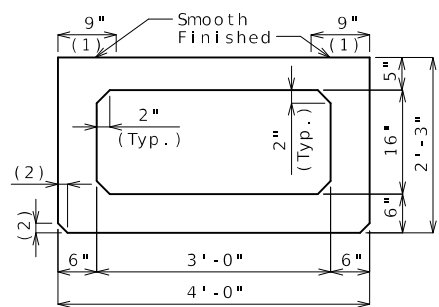


COIL TIES

SPREAD BOX BEAMS - SPANS (1-2) AND (4-5)

DESCRIPTION, DATE, MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

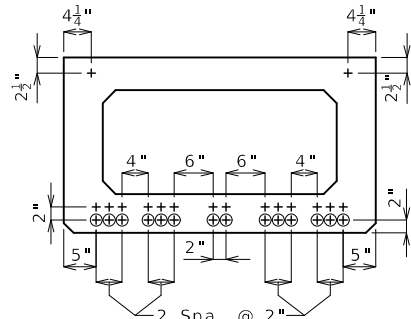




**DIMENSIONS**

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.

(2) 1 1/2" (Typ.) (3/4" Optional)

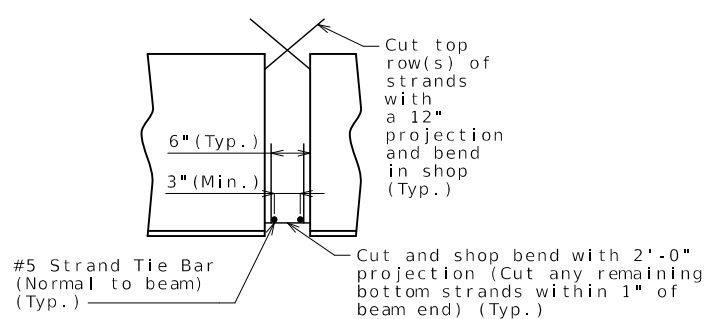


**STRAND ARRANGEMENT**

All strands are fully bonded unless otherwise noted.

+ Indicates prestressing strand.

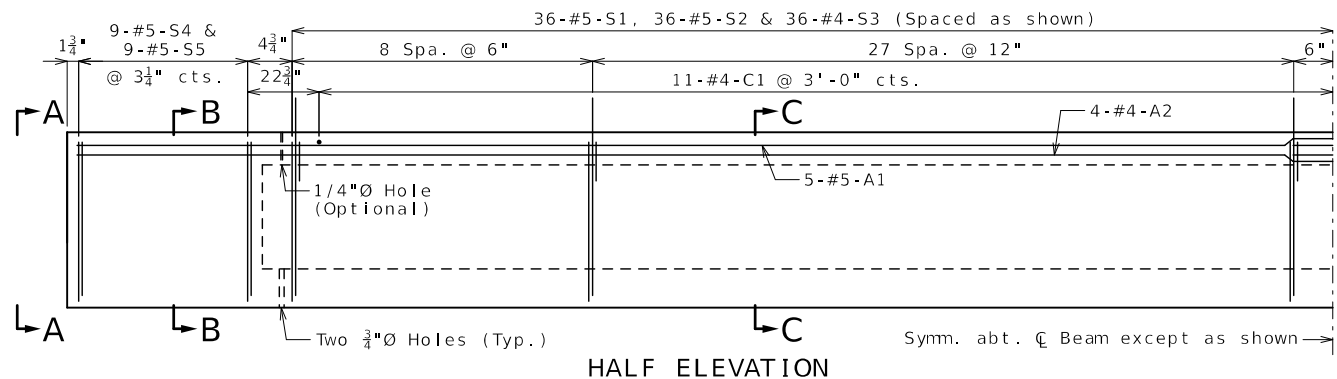
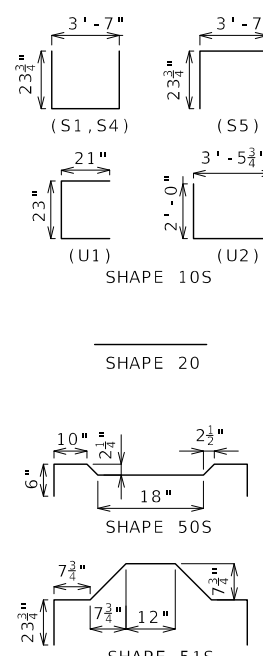
○ Indicates cut and shop bend with 2'-0" projection.



**STRANDS AT BEAM ENDS**

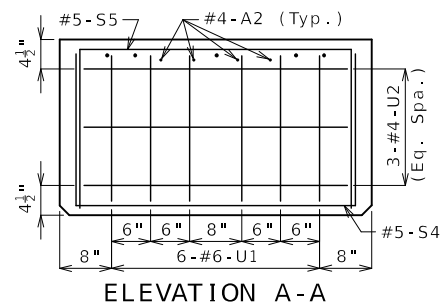
#5 Strand Tie Bar (Normal to beam) (Typ.)  
Cut and shop bend with 2'-0" projection (Cut any remaining bottom strands within 1" of beam end) (Typ.)

BILL OF REINFORCING STEEL - EACH BEAM				BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE		
10	5 A1	35'-5"	20		
8	4 A2	35'-5"	20		
21	4 C1	3'-7"	20		
72	5 S1	7'-4"	10S		
72	5 S2	7'-9"	51S		
72	4 S3	4'-6"	50S		
18	5 S4	7'-4"	10S		
18	5 S5	7'-4"	10S		
12	6 U1	5'-1"	10S		
6	4 U2	7'-4"	10S		

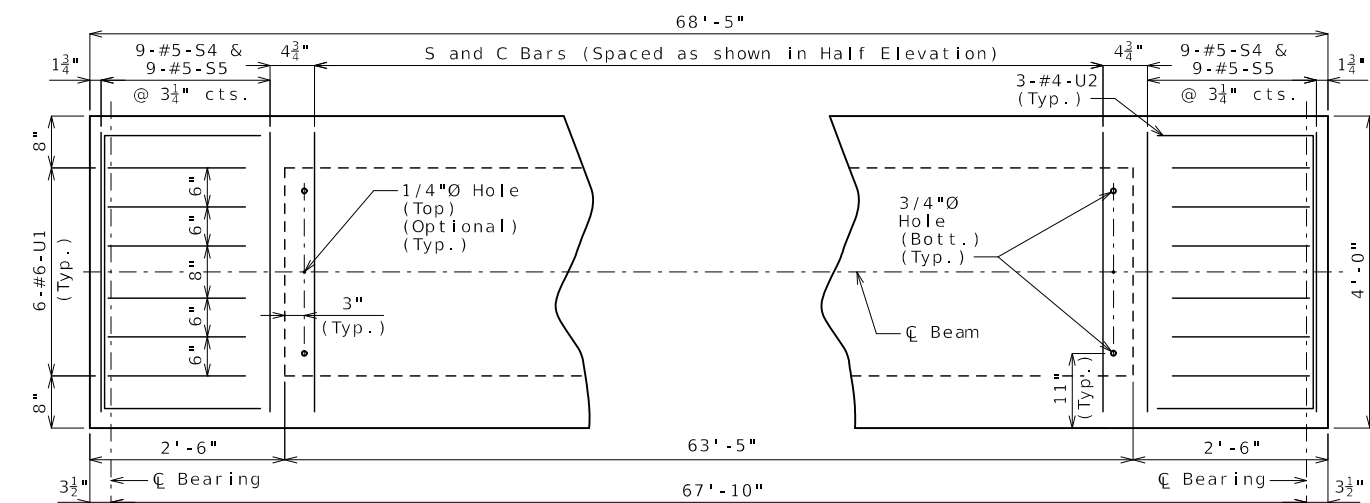


**HALF ELEVATION**

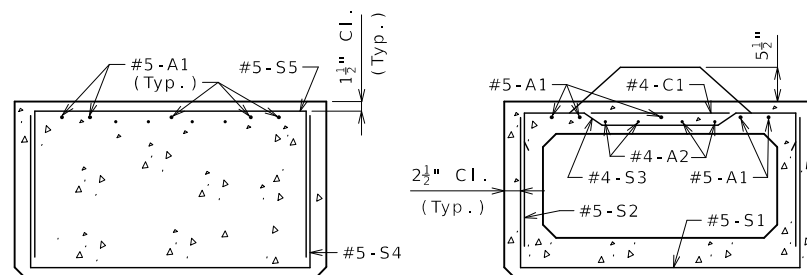
Strands not shown for clarity.



**ELEVATION A-A**



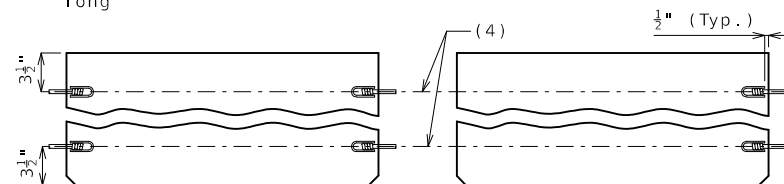
**PART PLAN**



**SECTION B-B**

**SECTION C-C**

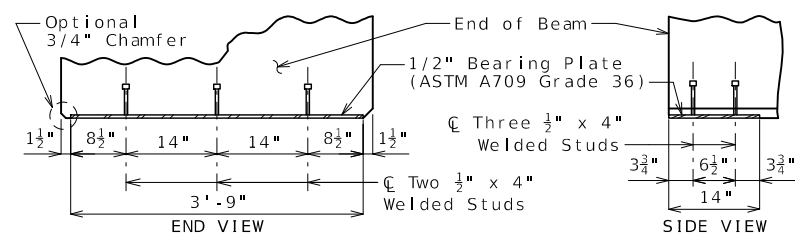
(4) 3/4" (Min.) Coil Tie Rods 2'-6" Long



**INTERIOR BEAMS AT INTERMEDIATE BENTS**

**EXTERIOR BEAMS AT INTERMEDIATE BENTS**

**COIL TIES**



**BEARING PLATE**

**SPREAD BOX BEAMS - SPANS (2-3) AND (3-4)**

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

Sheet No. 14 of 27

All dimensions are out to out. Use symmetry for dimensions not shown.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch, unless otherwise shown.

All reinforcement shall be Grade 60. All S2 bars shall be epoxy coated.

**General Notes:**

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 30 strands, 0.6"Ø Grade 270, with an initial prestress force of 1319 kips.

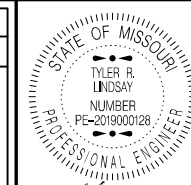
Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior beams are the same except: coil ties, application of bond breaker.

For Beam Camber Diagram, see Sheet No. 17.

For location of coil ties at concrete bent diaphragms, see Sheet No. 15.



DATE PREPARED  
10/17/2024 11:56:15 AM  
TYLER R. LINDSAY - CIVIL  
MO-PE-2019000128

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 14

COUNTY LAFAYETTE

JOB NO. J3S3162

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9319

DESCRIPTION

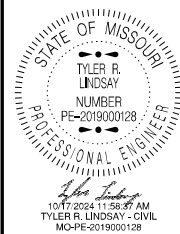
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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



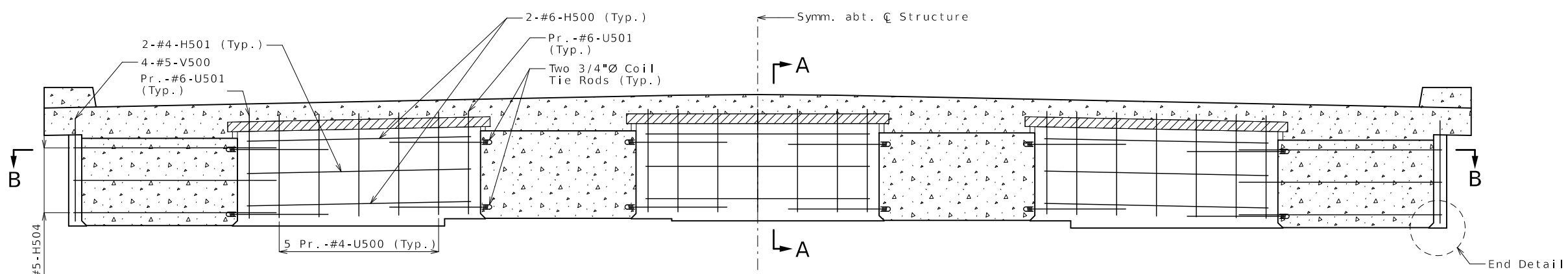


DATE PREPARED  
10/17/2024  
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DISTRICT BR SHEET NO. 15  
COUNTY LAFAYETTE  
JOB NO. J3S3162  
CONTRACT ID.

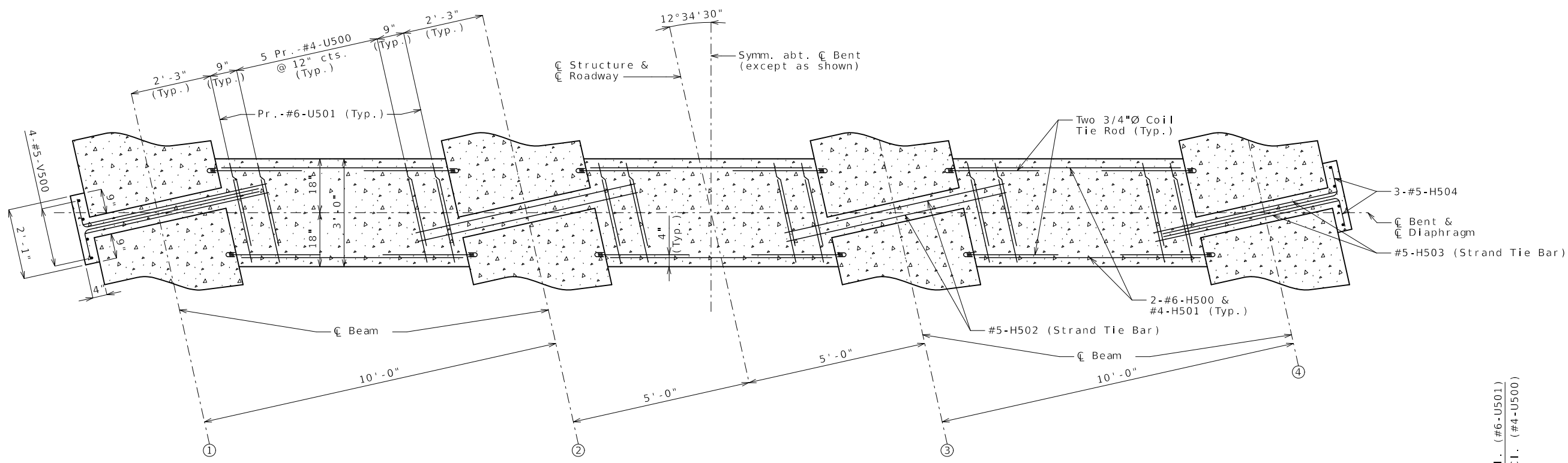
PROJECT NO.  
BRIDGE NO. A9319

DESCRIPTION	DATE

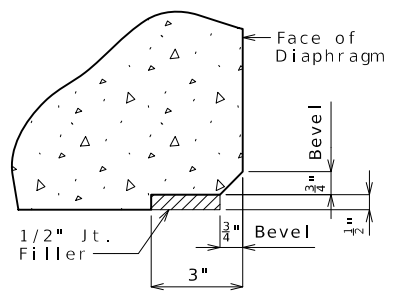
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)



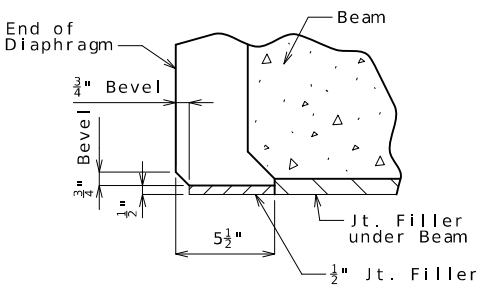
SECTION NEAR INTERMEDIATE BENT  
(Normal to C Structure)



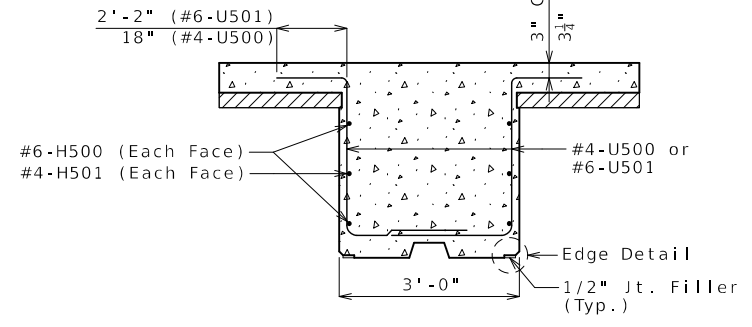
SECTION B-B



EDGE DETAIL



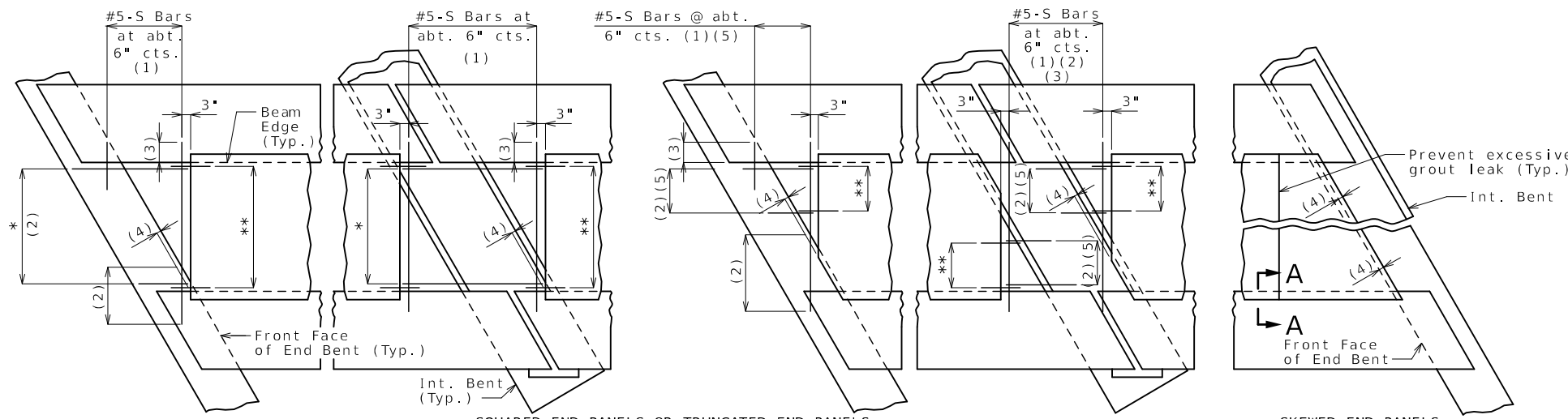
END DETAIL



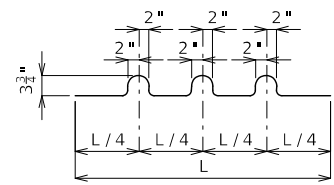
SECTION A-A

Notes:  
 Diaphragms at intermediate bents shall be built vertical.  
 For location of Strand Tie Bars and Coil Tie Rods, see Sheets No. 13 & 14.  
 All U bars in diaphragm shall be placed parallel to C Roadway.

CONCRETE DIAPHRAGMS AT INTERMEDIATE BENTS NO. 2, 3 & 4

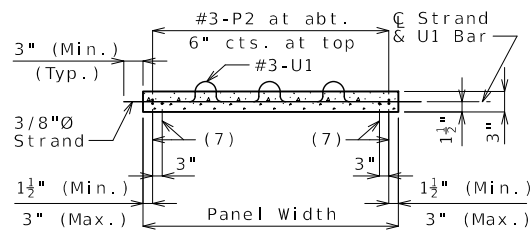


PLAN SHOWING PANEL PLACEMENT  
 \* #5-S Bars at abt. 9" cts. (1)  
 \*\* #3-P1 at 12" cts. (End panels only)

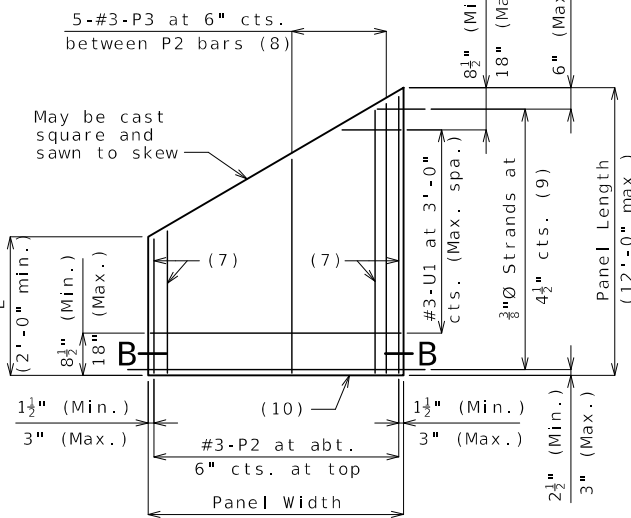


BENDING DIAGRAM FOR U1 BAR

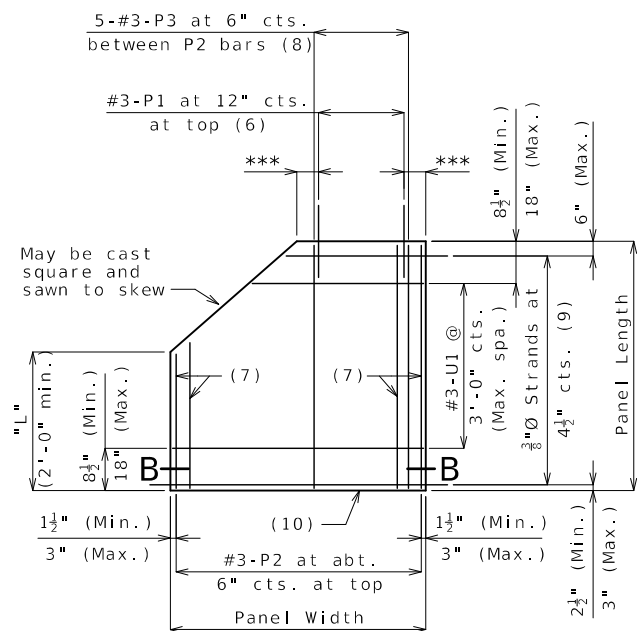
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



SECTION B-B

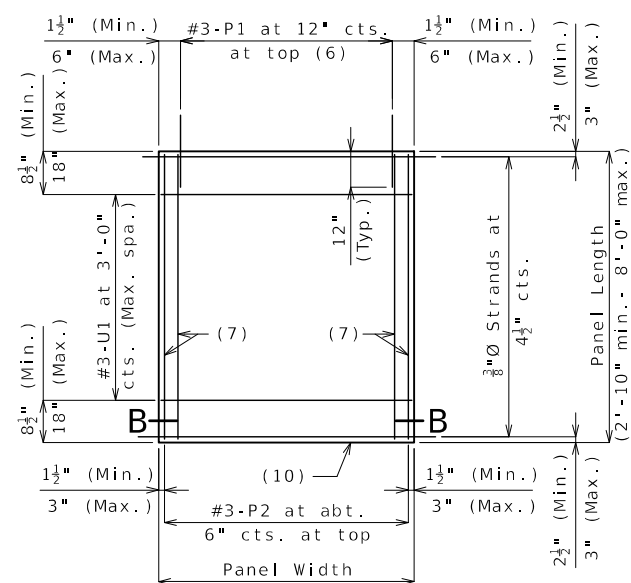


PLAN OF OPTIONAL SKEWED END PANEL

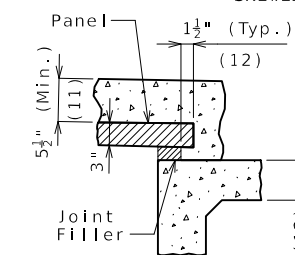


PLAN OF OPTIONAL TRUNCATED END PANEL

\*\*\* 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL



SECTION A-A  
 Reference Notes:

- Plan of Panel Placement:**  
 (1) S-bars shown as bottom steel in slab between panels and used with squared and truncated end panels only.  
 (2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.  
 (3) Extend S-bars 9 inches beyond edge of beam (Typ.).  
 (4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.  
 (5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.  
**Plans of Panels:**  
 (6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

- (7) #3-P2 bars near edge of panel at bottom (under strands).  
 (8) Use #3-P3 bars if panel is skewed 45° or greater.  
 (9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.  
 (10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

- Section A-A:**  
 (11) Slab thickness over prestressed panels varies due to beam camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.  
 (12) Contractor shall ensure proper consolidation under and between panels.  
 (13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the beam top angle thickness. Dimensions shall be shown on the shop drawings.

PRESTRESSED PANELS

General Notes:

Prestressed Panels:  
 Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored nish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

**Reinforcing Steel:**  
 All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:  
 #3-P2 bars at 16 inches.  
 WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

**Joint Filler:**  
 Joint filler shall be preformed ber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

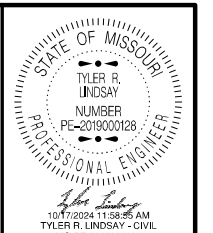
Use Slab Haunching Diagram on Sheet No. 17 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the beam to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed ber expansion joint material shall be used under any one edge of any panel except at locations where top angle thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of angle.

Joint filler shall be glued to the beam. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.



DATE PREPARED 10/17/2024	
ROUTE Y	STATE MO
DISTRICT BR	SHEET NO. 16
COUNTY LAFAYETTE	
JOB NO. J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9319	

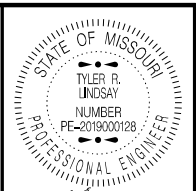
DESCRIPTION	DATE

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105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
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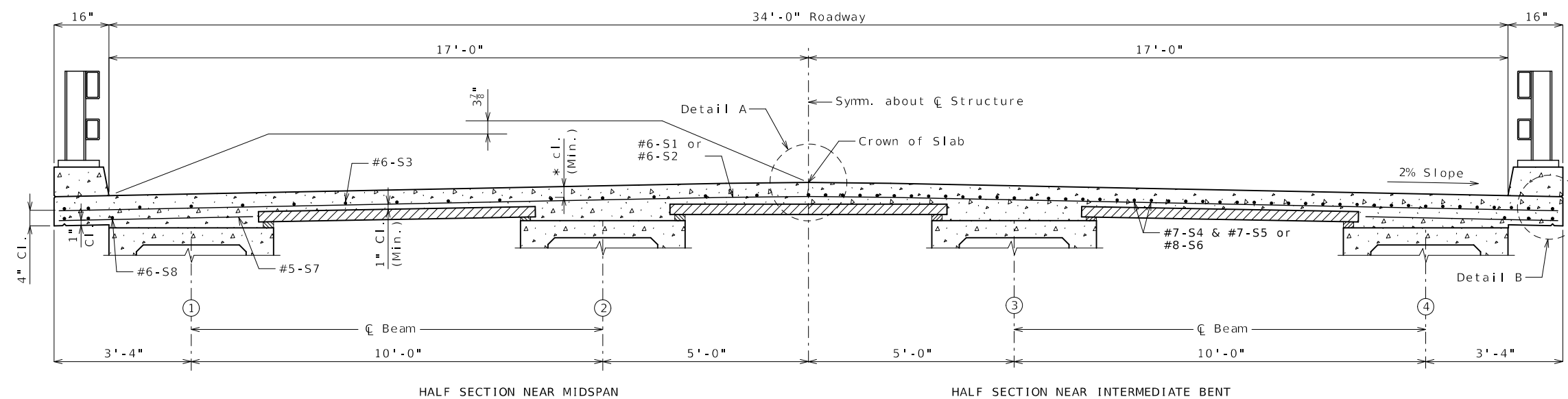


DATE PREPARED  
10/17/2024

ROUTE Y STATE MO  
DISTRICT BR SHEET NO. 19

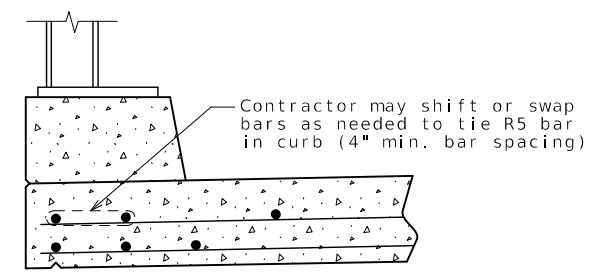
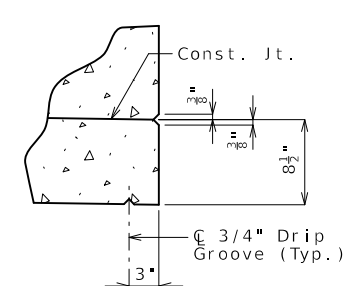
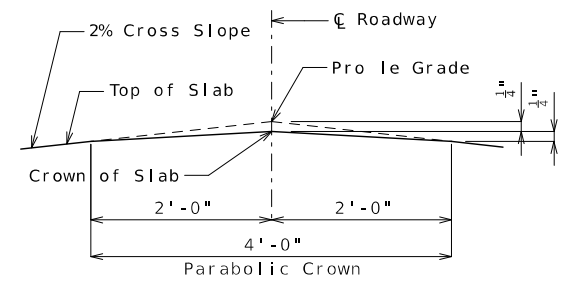
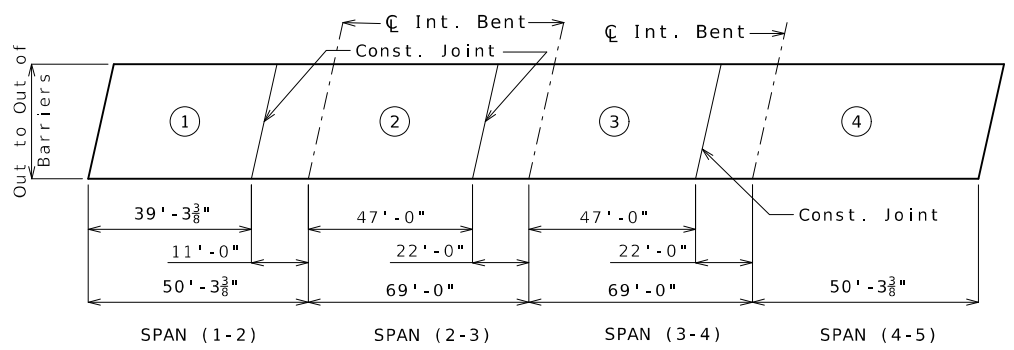
COUNTY LAFAYETTE  
JOB NO. J3S3162  
CONTRACT ID.

PROJECT NO.  
BRIDGE NO. A9319



SECTION THRU SLAB

- \* 3" (#6)
- 2 7/8" (#7)
- 2 3/4" (#8)



OPTIONAL SHIFTING TOP BARS AT CURB

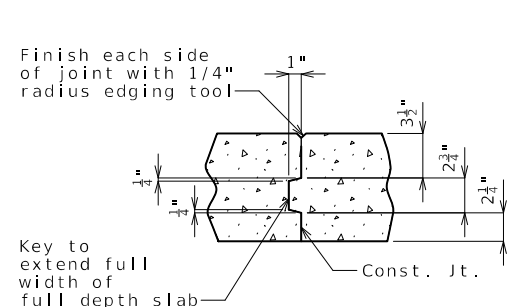
	Sequence of Pours				Min. Rate of Pour Cu. Yds./Hr.
	Direction				
Basic Sequence	1 End to 2	2 1 to 3	3 2 to 4	4 3 to End	25
Alternate pours to the basic sequence are subject to the approval of the engineer in accordance with Sec 703.					
Alternate A Pours	1 + 2 End to 3	3 2 to 4	4 3 to End		25
Alternate B Pours	1 + 2 End to 3		3 + 4 2 to End		25
Alternate C Pours	1 + 2 + 3 + 4 End to End				25

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.  
The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

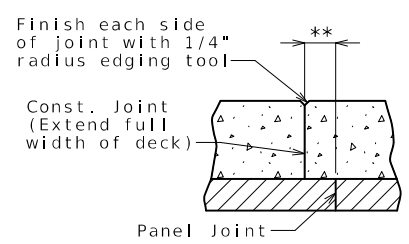
SLAB POURING SEQUENCE

DETAIL A

DETAIL B



FULL DEPTH SLAB



SLAB ON PANELS

SLAB CONSTRUCTION JOINT

Notes:

- For details of precast prestressed panels, see Sheet No. 16.
- For reinforcement of curb not shown, see Sheet No. 20.
- For Theoretical Bottom of Slab Elevations, Beam Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 17.
- For Plans of Slab Showing Reinforcement, see Sheet No. 18.

SLAB DETAILS

Detailed Aug. 2024  
Checked Sep. 2024

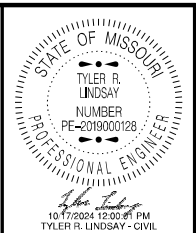
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 19 of 27

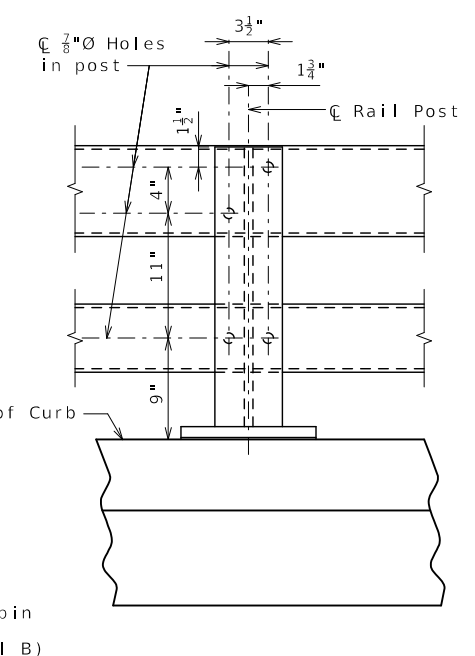
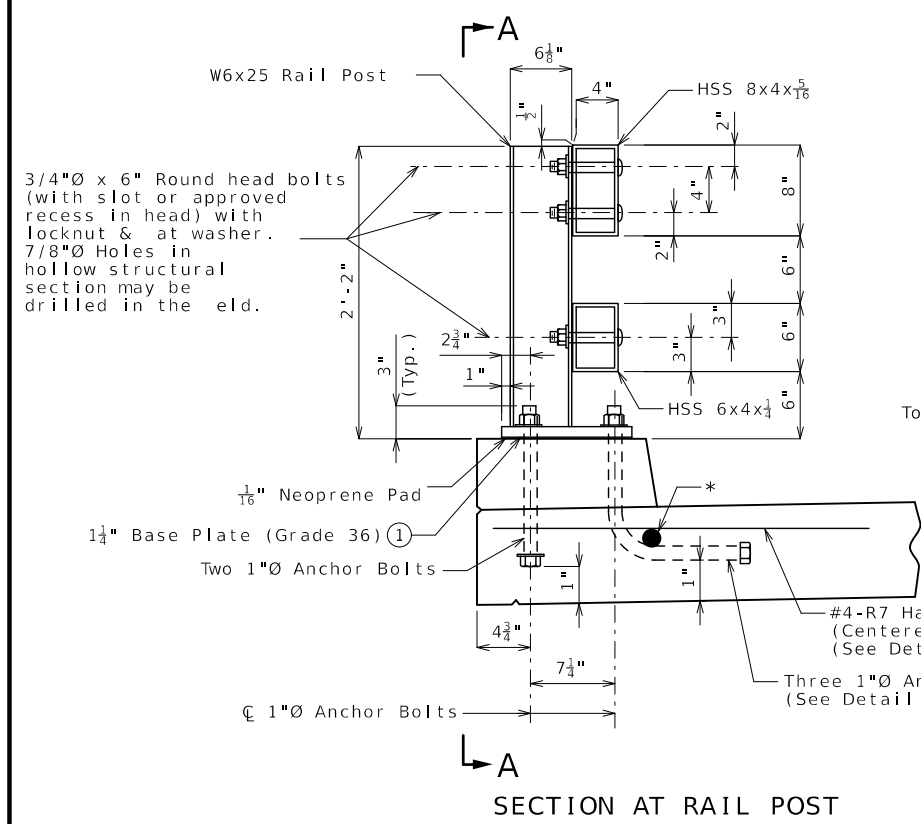
DATE	DESCRIPTION



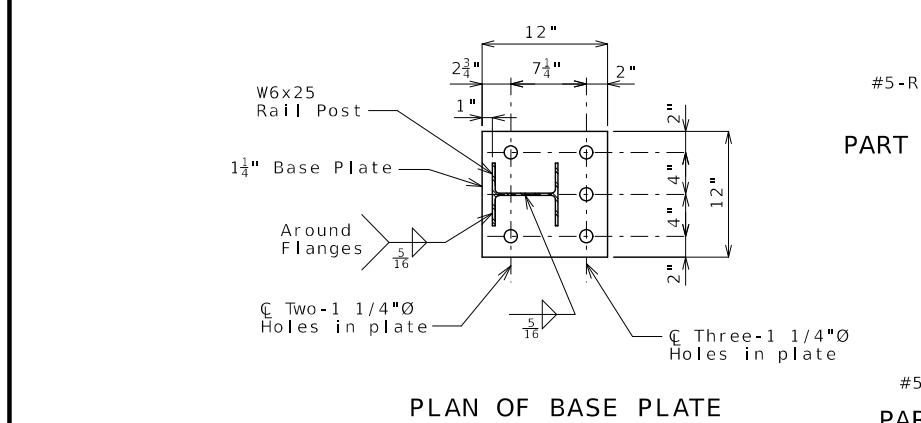




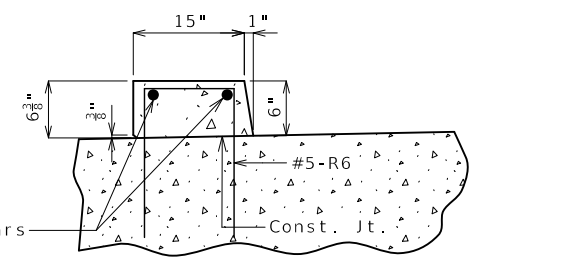
DATE PREPARED	
10/17/2024	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
BR	20
COUNTY	
LAFAYETTE	
JOB NO.	
J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9319	



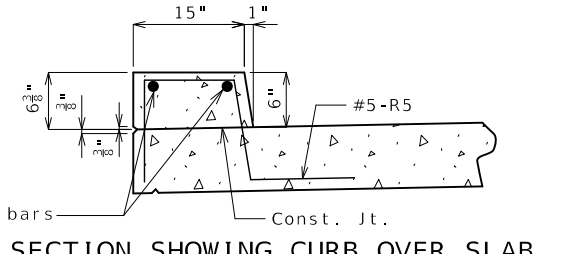
PART ELEVATION A-A



PLAN OF BASE PLATE



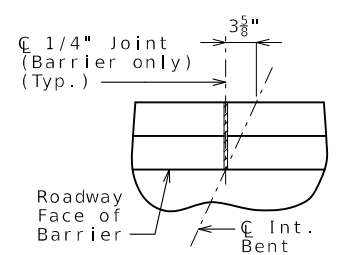
PART SECTION SHOWING CURB OVER END BENT



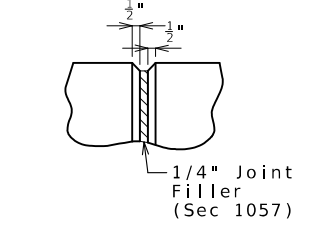
PART SECTION SHOWING CURB OVER SLAB

\* Tack weld same size bar (2'-8" long and centered) as slab longitudinal reinf. Optional to wrap bolt under slab long. reinf. provided that 1" clearance is maintained to bottom of slab.

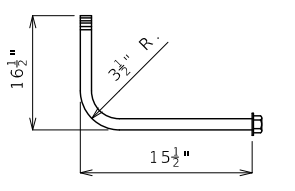
① Bevel bottom of post (slope 2% or slab cross slope).



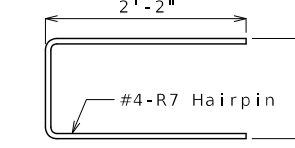
PART PLAN SHOWING JOINT LOCATION



PART ELEVATION AT FORMED JOINT



DETAIL A



DETAIL B

Bridge Rail Notes:

Rail posts shall be set perpendicular to roadway prole grade, vertically in cross section and aligned in accordance with Sec 713 except that the rail posts shall be aligned by the use of shims such that the post deviates not more than 1/2 inch from true horizontal alignment after nal adjustment. The shims shall be 3" x 1 3/4" and placed between the post and the rail. The thickness of the shims shall be determined by the contractor and verified by the engineer before ordering material for this work.

Rail posts shall be seated on elastomeric pads having the same dimensions as the base plate and 1/16" thickness. Pads may be any elastomeric material, plain or beaded, having a hardness (Durometer) of 50 or greater, and certified by the manufacturer. Additional pads or half pads may be used for shimming for alignment. Post heights shown will increase by the thickness of the pad.

HSS = Hollow Structural Section

Dimensions of bridge rails are measured horizontally.

Bridge Rails will be measured to the nearest linear foot for each structure, measured along inside face of curb from II face to II face.

Payment for furnishing all materials and labor necessary to install Bridge Rail, complete in place, will be considered completely covered by the contract unit price for Bridge Rail (Two Tube Structural Steel) per linear foot.

Guardrail delineators shall be attached to the top of the guardrail post using galvanized anchorage as shown on Missouri Standard Plan 606.00 and in accordance with Sec 606. Delineators on bridges with two-lane, two-way tra c shall have retro reflective sheeting on both sides. Guardrail delineators will be considered completely covered by the contract unit price for Bridge Rail (Two Tube Structural Steel).

Curb Notes:

Top of curb shall be built parallel to grade.

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

Use a minimum lap of 2'-11" for horizontal #5-R bars.

The cross-sectional area of curb above the slab = 0.66 sq. ft.

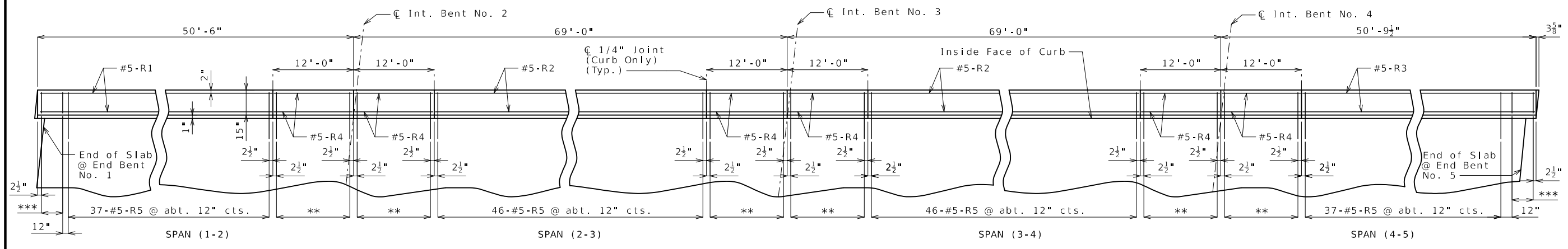
Concrete in the curb shall be Class B-2.

The curb shall be cured by application of Type 1-D Liquid Membrane-Forming Curing Compound in accordance with Sec 1055 and sealed in accordance with Sec 703. The contractor shall remove all curing compound in accordance with the manufacturer's recommendations before the concrete sealer is applied.

Measurement of the curb is to the nearest linear foot for each structure, measured along the outside top of slab from II face to II face.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Concrete Curb (Bridge Rail) per linear foot.

Note: Work this sheet with Sheets No. 21 & 22.



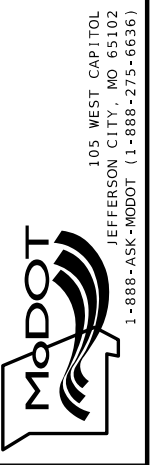
PLAN OF LEFT CURB SHOWING REINFORCEMENT

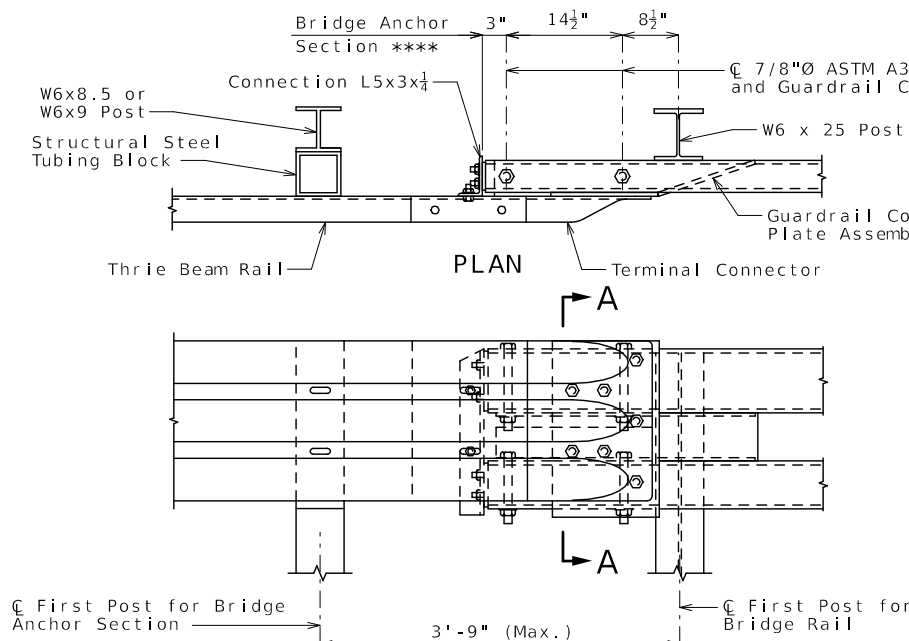
(Left curb shown. Right curb similar.)

Note: Longitudinal dimensions are horizontal along outside face of curb.

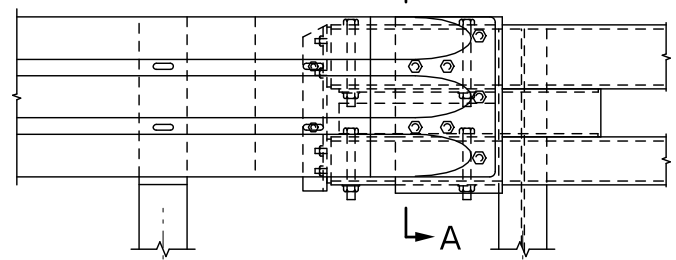
\*\* 13-#5-R5 @ abt. 12" cts.  
\*\*\* 3-#5-R6 @ 12" cts.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



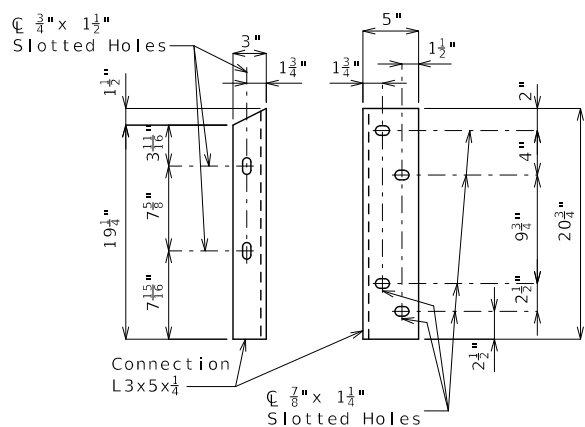


PLAN



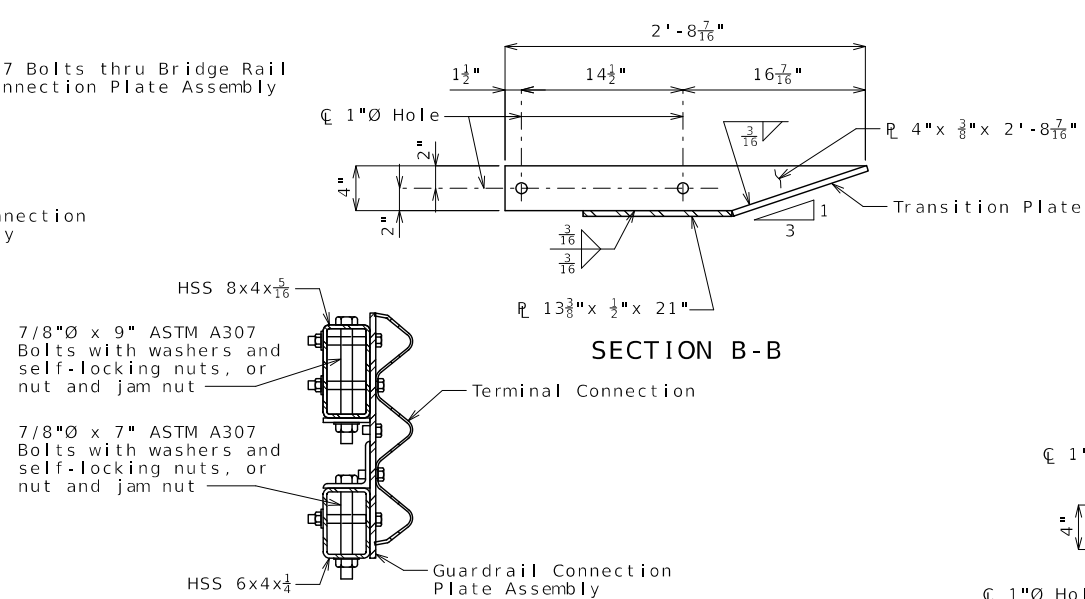
DETAIL A

(Part elevation of bridge anchor section)



CONNECTION ANGLE DETAILS

Install angles to rail caps using 5/8"Ø washers and self-locking nuts, or nuts and jam nuts.



SECTION B-B

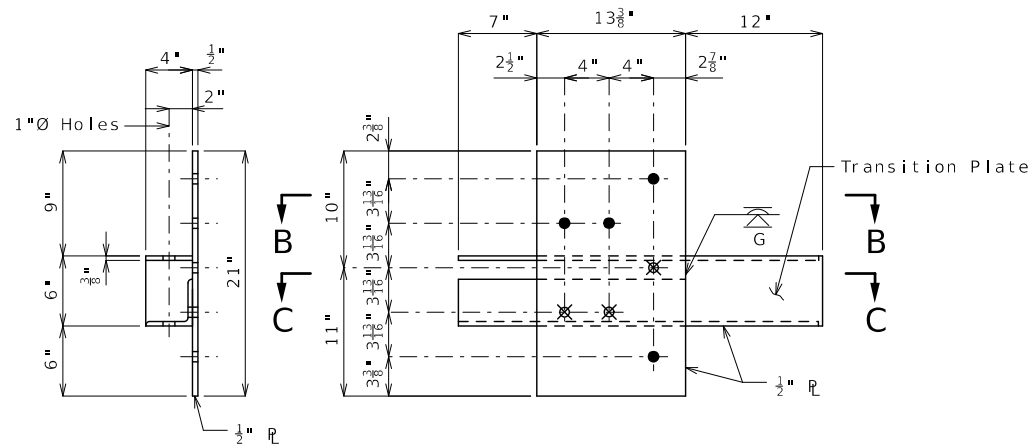
7/8"Ø x 9" ASTM A307 Bolts with washers and self-locking nuts, or nut and jam nut

7/8"Ø x 7" ASTM A307 Bolts with washers and self-locking nuts, or nut and jam nut

HSS 8x4x3/16

HSS 6x4x1/4

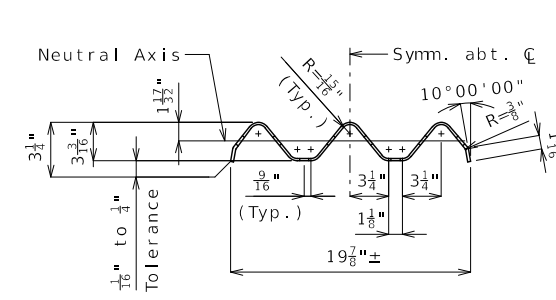
SECTION A-A



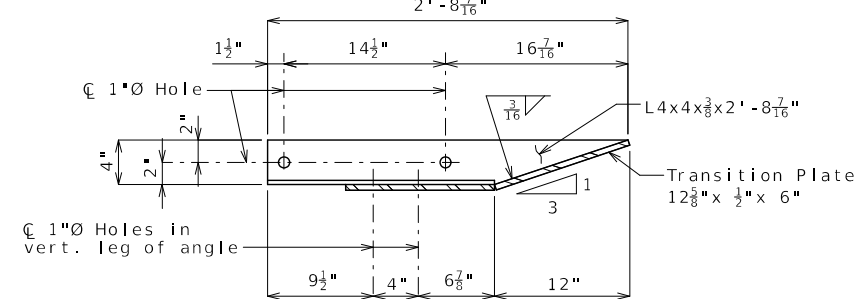
GUARDRAIL CONNECTION PLATE ASSEMBLY DETAILS

- ⊗ Drill and tap 3 holes for 7/8"Ø ASTM F3125 Grade A325 Type 1 bolts.
- Four 1"Ø Holes for 7/8"Ø ASTM F3125 Grade A325 Type 1 bolts and nuts

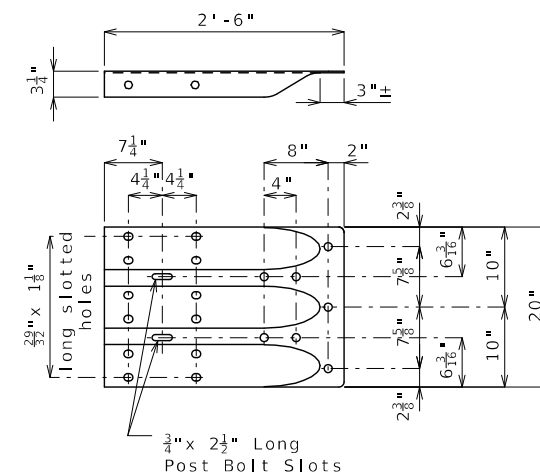
42 Rail Posts (Spaced as Shown)



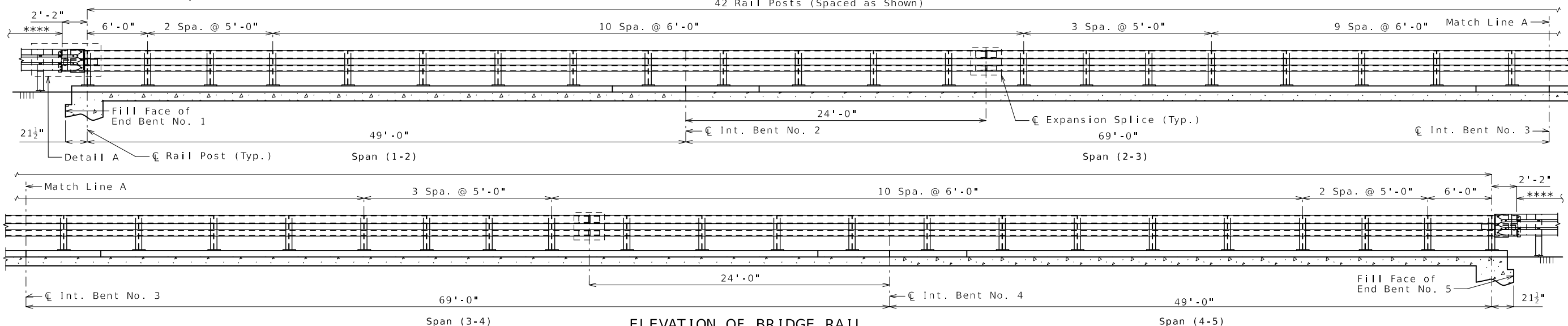
SECTION THRU THRIE BEAM RAIL



SECTION C-C



TERMINAL CONNECTOR



ELEVATION OF BRIDGE RAIL

(Left bridge rail shown, right bridge rail similar)  
Longitudinal dimensions are horizontal.

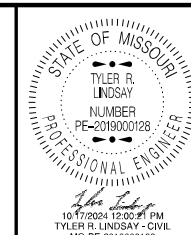
Note: Work this sheet with Sheets No. 20 & 22.

\*\*\*\* Bridge anchor section shall be in accordance with Missouri Standard Plan 606.22 except bearing plate and connector plate will not be required.

Detailed Aug. 2024  
Checked Sep. 2024

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

Sheet No. 21 of 27



DATE PREPARED  
10/17/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 21

COUNTY LAFAYETTE

JOB NO. J3S3162

CONTRACT ID.

PROJECT NO.

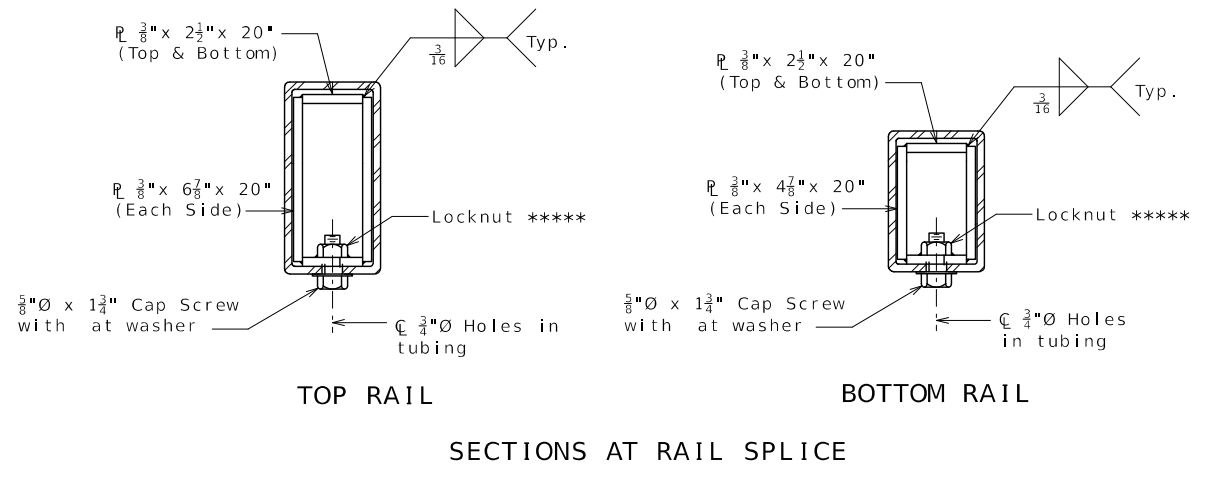
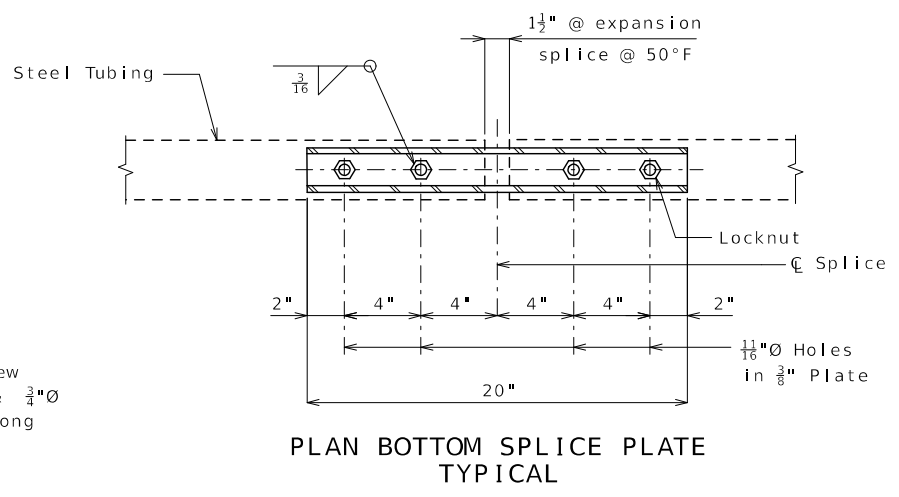
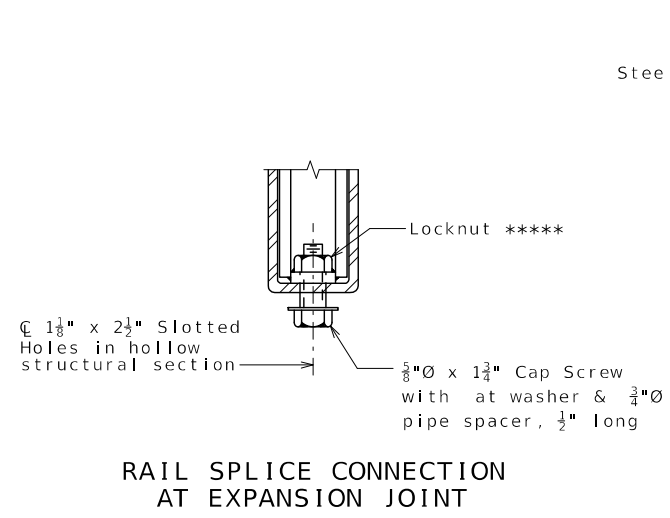
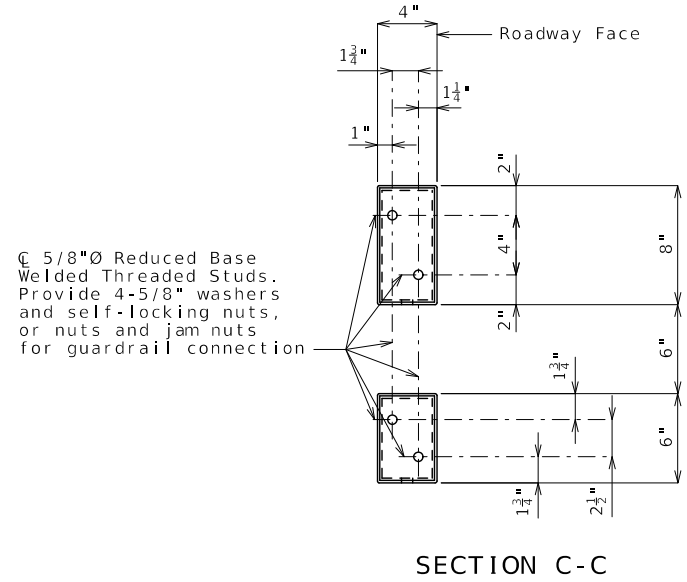
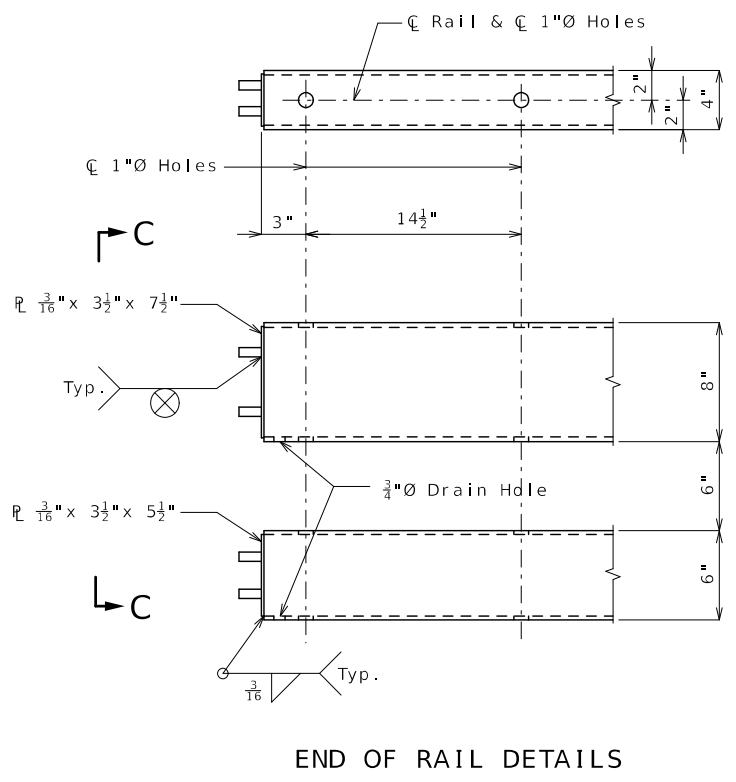
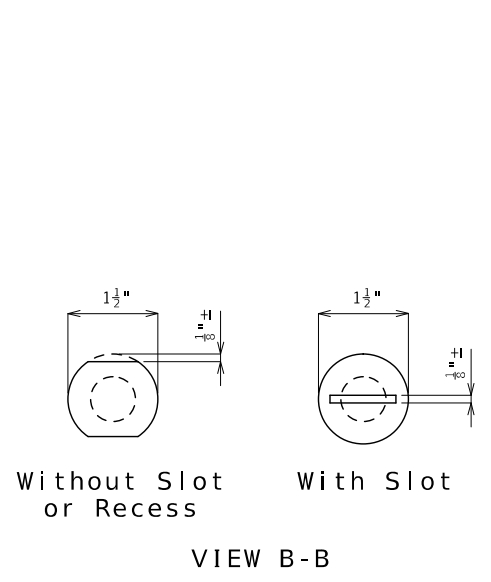
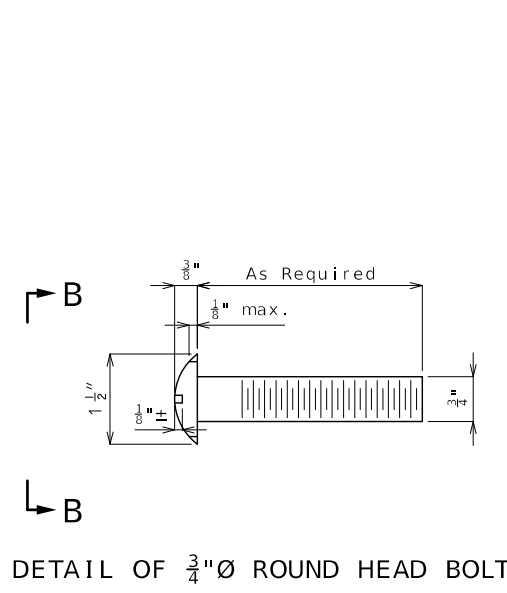
BRIDGE NO. A9319

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION





Notes:

Fabrication of structural steel shall be in accordance with Sec 712 and 1080.

Hollow structural sections shall be in accordance with ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F, see Sec 1080 for reporting.

All other steel shapes and plates shall be in accordance with AASHTO M 270 Grade 36 except posts shall be in accordance with AASHTO M 270, Grade 50.

All anchor bolts shall be ASTM F1554 Grade 36 with ASTM A563 Grade A hex nuts and ASTM F436 hardened washers.

Bolts, cap screws, and nuts shall be in accordance with ASTM designation A307 except for high strength bolts, nuts and washers noted which shall be in accordance with AASHTO M 164.

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

All posts, railing, rail splices, and angles shall be galvanized after shop fabrication in accordance with AASHTO M 111 and ASTM A385. Galvanized rail shall not be painted.

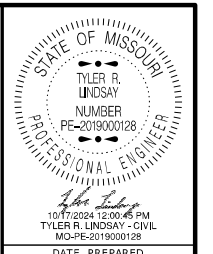
Railing shall be in accordance with Sec 713, except as noted.

All eld drilled holes shall be coated with an approved zinc rich paint before erection.

HSS = Hollow Structural Section

Work this sheet with Sheets No. 20 & 21.

\*\*\*\*\* Tack weld nut to plate.

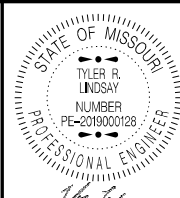


DATE PREPARED 10/17/2024	
ROUTE Y	STATE MO
DISTRICT BR	SHEET NO. 22
COUNTY LAFAYETTE	
JOB NO. J3S3162	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9319	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



DATE PREPARED  
**10/17/2024**

ROUTE STATE  
**Y MO**

DISTRICT SHEET NO.  
**BR 23**

COUNTY  
**LAFAYETTE**

JOB NO.  
**J3S3162**

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
**A9319**

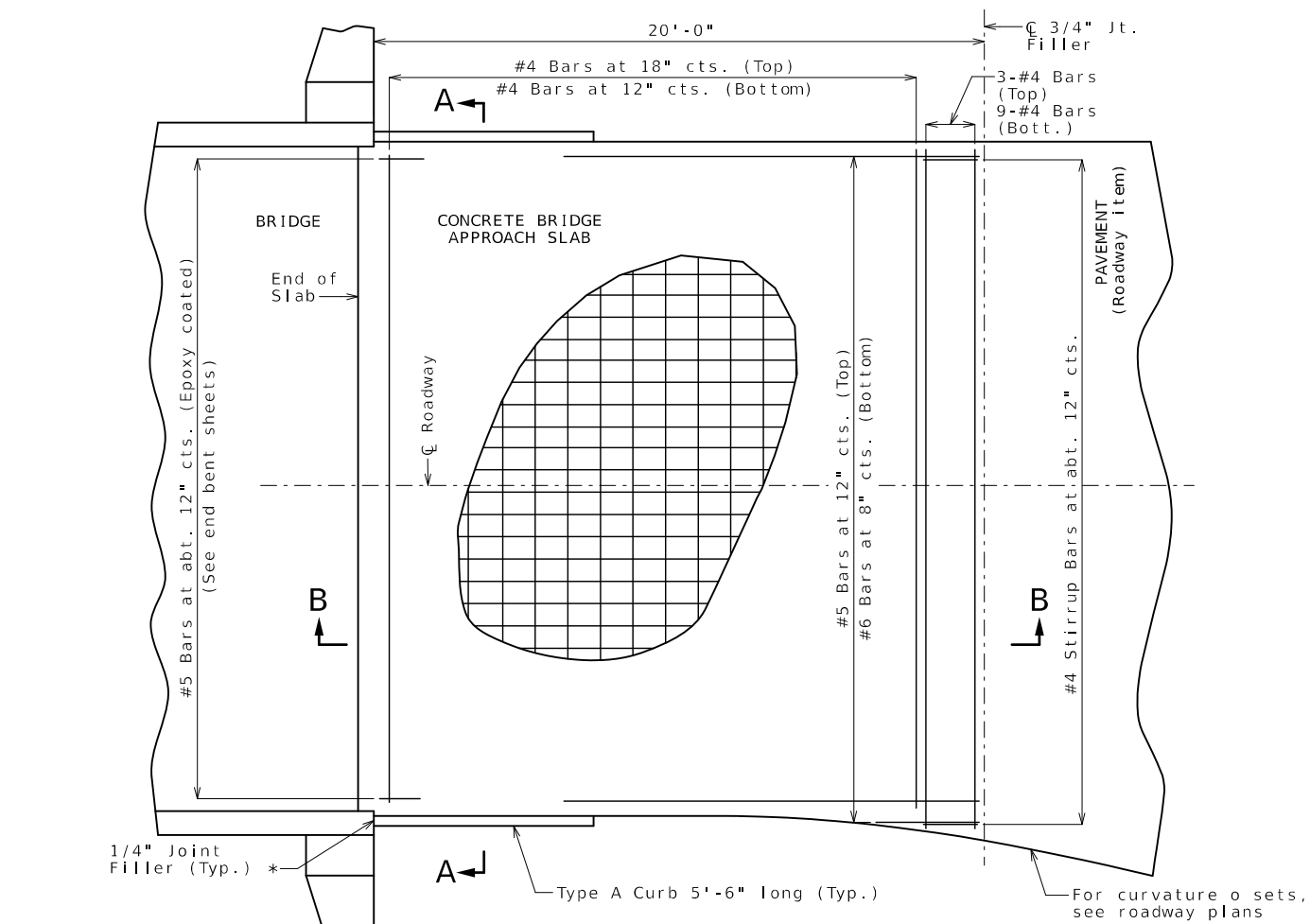
DESCRIPTION

DATE

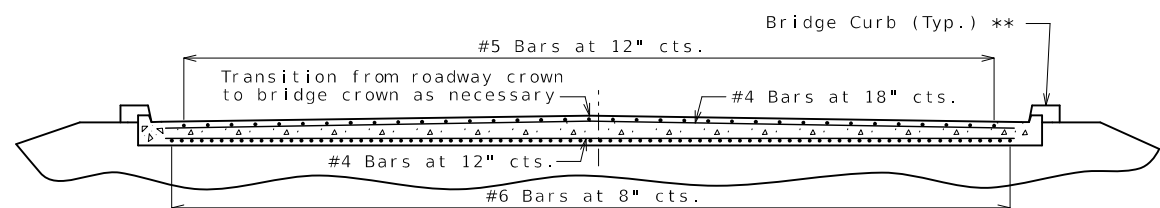
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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



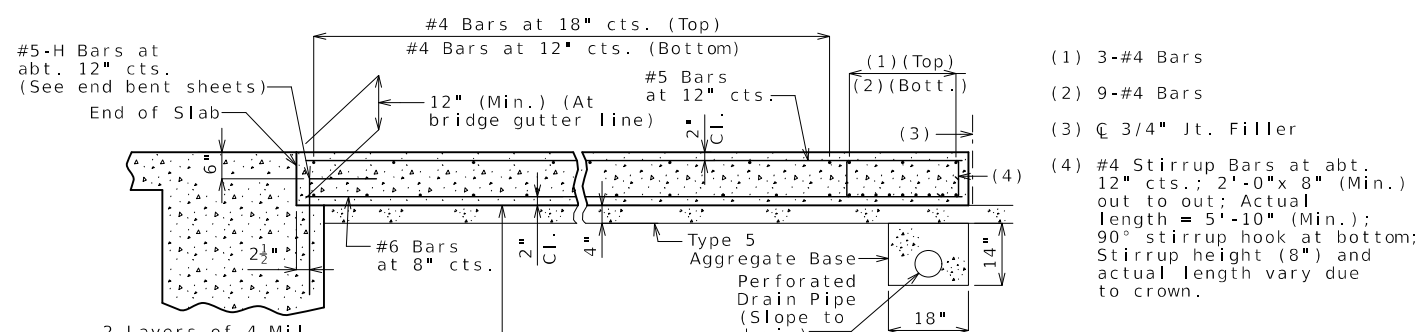
**PART PLAN OF SQUARED STRUCTURE**  
(Skewed structure similar)



**SECTION A-A**

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

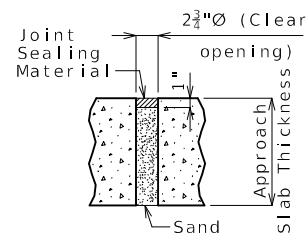
\*\* Two Tube Rail not shown for clarity.



**SECTION B-B**

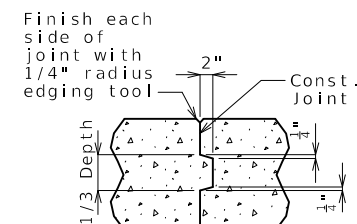
2 Layers of 4 Mil Polyethylene Sheeting between bridge approach slab and granular base in accordance with ASTM E 1745 Performance Class A

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

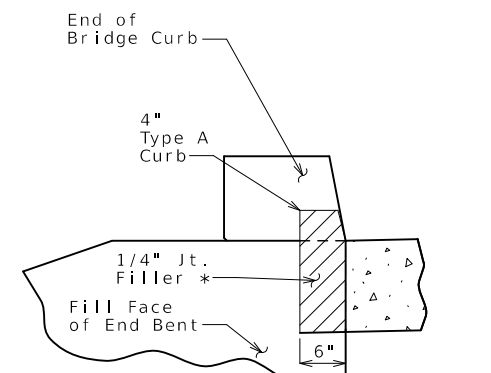


**UNDERSEAL ACCESS HOLE DETAIL**

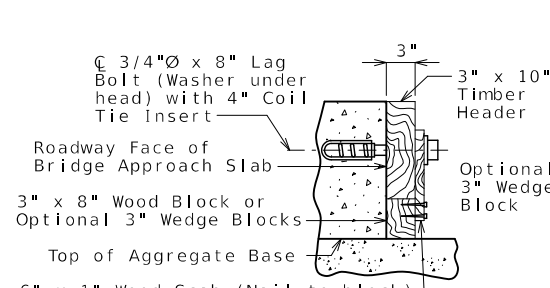
(If required)



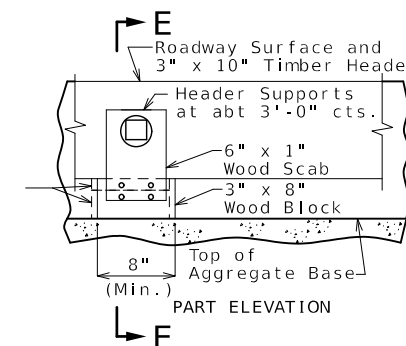
**CONSTRUCTION JOINT DETAIL**



**SECTION BETWEEN TYPE A CURB AND BRIDGE CURB**



**SECTION E-E**

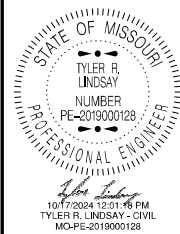


**PART ELEVATION**

**DETAILS OF TIMBER HEADER**

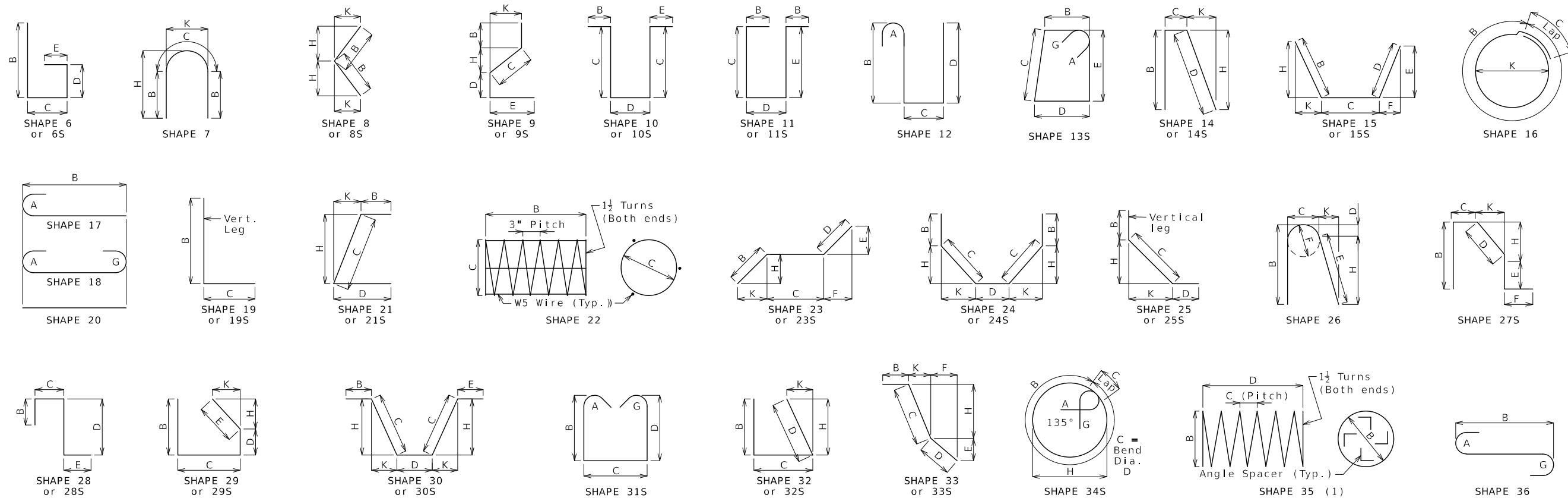
Remove timber header when concrete pavement is placed.

**BRIDGE APPROACH SLAB (MINOR)**



DATE PREPARED  
10/17/2024

ROUTE Y STATE MO  
DISTRICT BR SHEET NO. 24  
COUNTY LAFAYETTE  
JOB NO. J3S3162  
CONTRACT ID.  
PROJECT NO.  
BRIDGE NO. A9319



**Finished Bend Diameters D and Hook Dimensions**

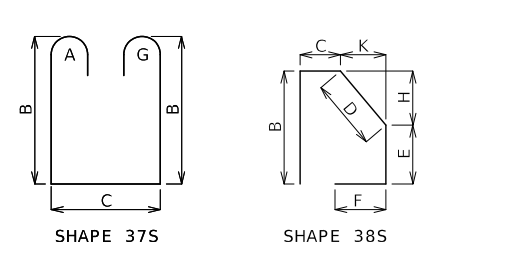
Standard Pin Bend Shapes					
Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3 3/4"	10"	7"	5"
#6	1	4 1/2"	12"	8 1/2"	6"
#7	2	5 1/4"	14"	9 3/4"	7"
	3	7"	15"	11 1/2"	8 3/4"
#8	2	6"	16"	11"	8"
	3	8"	17"	13 3/4"	10"
#9	1	9 1/2"	19 1/2"	15 1/2"	11 3/4"
#10	1	10 3/4"	22"	17 1/2"	13 1/4"
#11	1	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°	180°
#4	2	2"	4 1/2"	4 1/2"	5"	2 7/8"	3"
	3	3"	5"	5 1/4"	6"	3"	4"
#5	2	2 1/2"	5 3/4"	5 3/4"	5 3/4"	3 3/4"	3 3/4"
	3	3 3/4"	6 1/4"	6 1/4"	7"	3 3/8"	5"
#6	1	4 1/2"	12"	7 3/4"	8 1/4"	4 3/8"	6"

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

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.

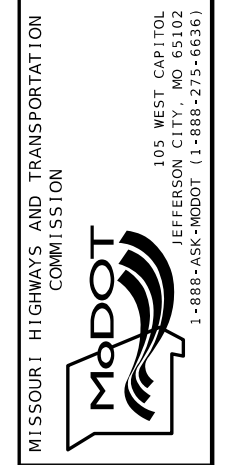
Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)							
Size	Substructure		Superstructure			Entire Bridge	
	Plain	Epoxy	Slab	Barrier	Slip Form	Plain	Epoxy
	W5	0	0	0	0	0	0
4	0	0	1,192	0	0	0	1,192
5	10,052	0	4,672	3,390	0	10,052	8,062
6	5,448	0	47,810	0	0	5,448	47,810
7	0	0	7,548	0	0	0	7,548
8	3,812	0	5,831	0	0	3,812	5,831
9	13,365	0	0	0	0	13,365	0
10	0	0	0	0	0	0	0
11	36,979	0	0	0	0	36,979	0
14	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
By Type	69,656	0	67,053	3,390	0	69,656	70,443

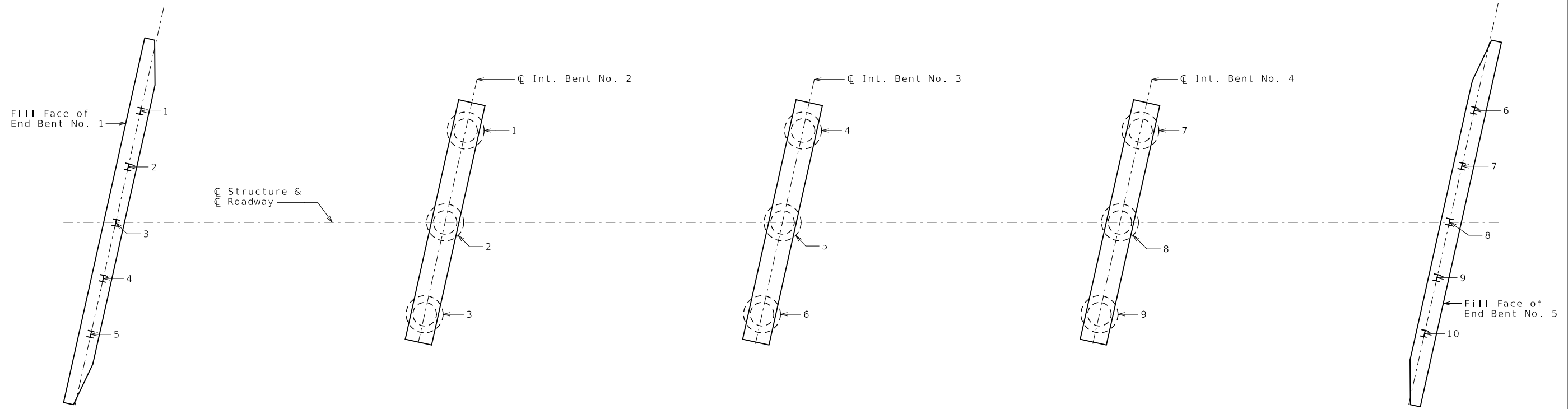
All superstructure reinforcing steel shall be epoxy coated unless otherwise speci ed.

### BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

DESCRIPTION	DATE







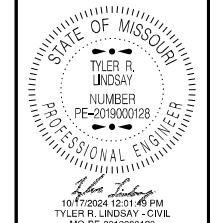
PART PLAN SHOWING PILE & DRILLED SHAFT NUMBERING FOR RECORDING AS-BUILT PILE DATA & AS-BUILT DRILLED SHAFT DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 1
1			
2			
3			
4			
5			
			End Bent No. 5
6			
7			
8			
9			
10			

Note:  
 Indicate in remarks column:  
 A. Pile type and grade  
 B. Batter  
 C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

As-Built Drilled Shaft Data				
Shaft No.	Top of Sound Rock (Elev.)	Tip of Casing (Elev.)	Bottom of Rock Socket (Elev.)	Remarks
				Int. Bent No. 2
1				
2				
3				
4				Int. Bent No. 3
5				
6				
				Int. Bent No. 4
7				
8				
9				



DATE PREPARED  
 10/17/2024  
 ROUTE Y STATE MO  
 DISTRICT BR SHEET NO. 26  
 COUNTY LAFAYETTE  
 JOB NO. J3S3162  
 CONTRACT ID.  
 PROJECT NO.  
 BRIDGE NO. A9319

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-273-6636)

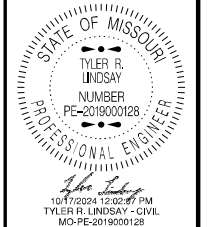
AS-BUILT PILE & DRILLED SHAFT DATA



### SUBSURFACE DIAGRAM

PROJECT NAME Bridge Replacement  
 PROJECT LOCATION Over I-70  
 CLIENT \_\_\_\_\_  
 PROJECT NUMBER J3S3162

Asphalt	Concrete	USCS Clayey Gravel
USCS Low Plasticity Clay	USCS High Plasticity Clay	Shale
Sandstone	Coal	USCS Poorly-graded Gravel
USCS Low Plasticity Gravelly Clay		



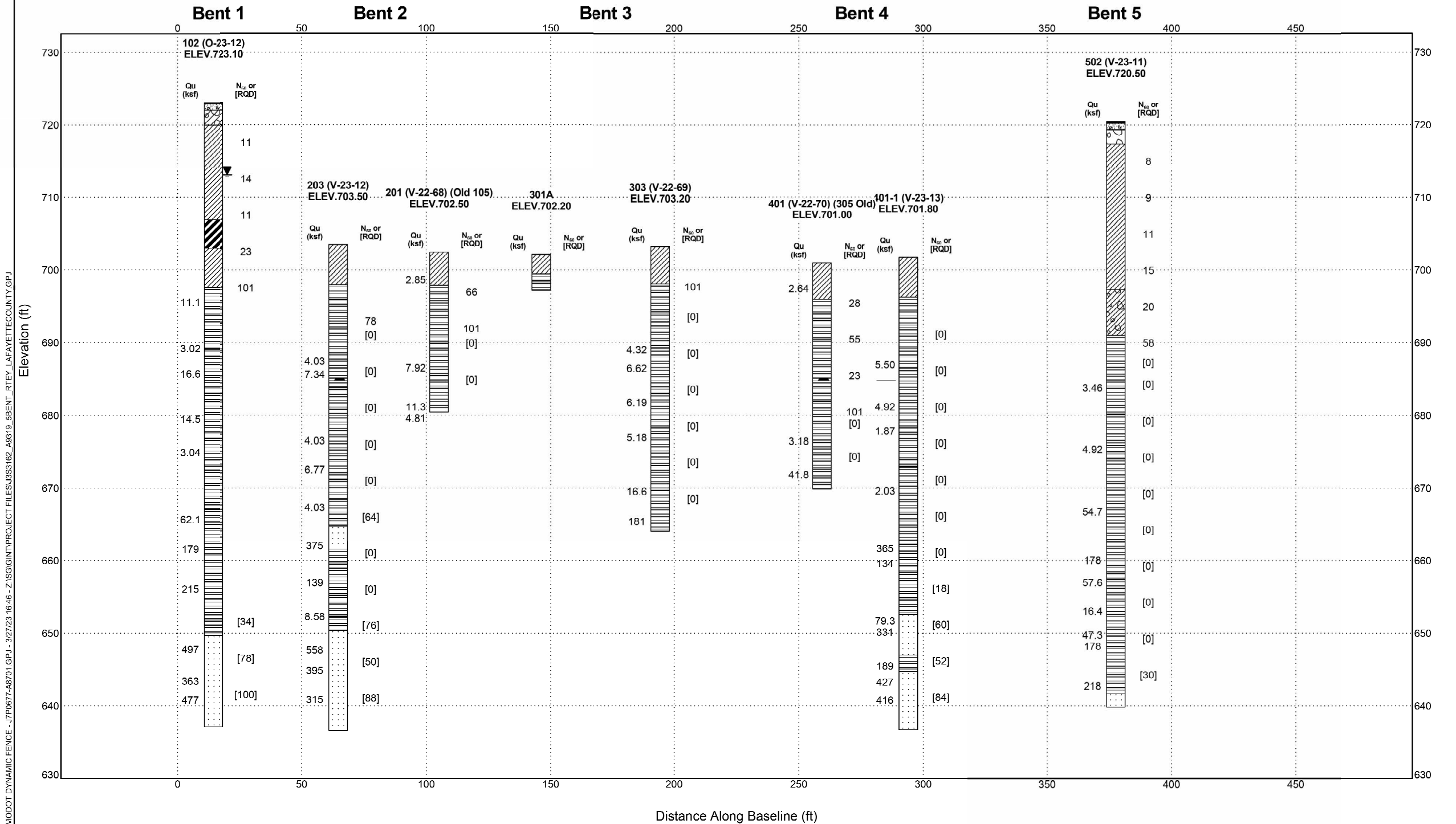
DATE PREPARED  
 10/17/2024  
 ROUTE Y STATE MO  
 DISTRICT BR SHEET NO. 27  
 COUNTY LAFAYETTE

JOB NO.  
 J3S3162  
 CONTRACT ID.

BRIDGE NO.	DESCRIPTION
A9319	

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



MODOT DYNAMIC FENCE - JTP0677-AB701.GPJ - 3/27/23 16:46 - Z:\SG\GINT\PROJECT FILES\J3S3162\_A8319\_5BENT\_1 RTEY\_LAFAYETTECOUNTY.GPJ

### BORING DATA

Note: For locations of borings, see Sheet No. 1.