

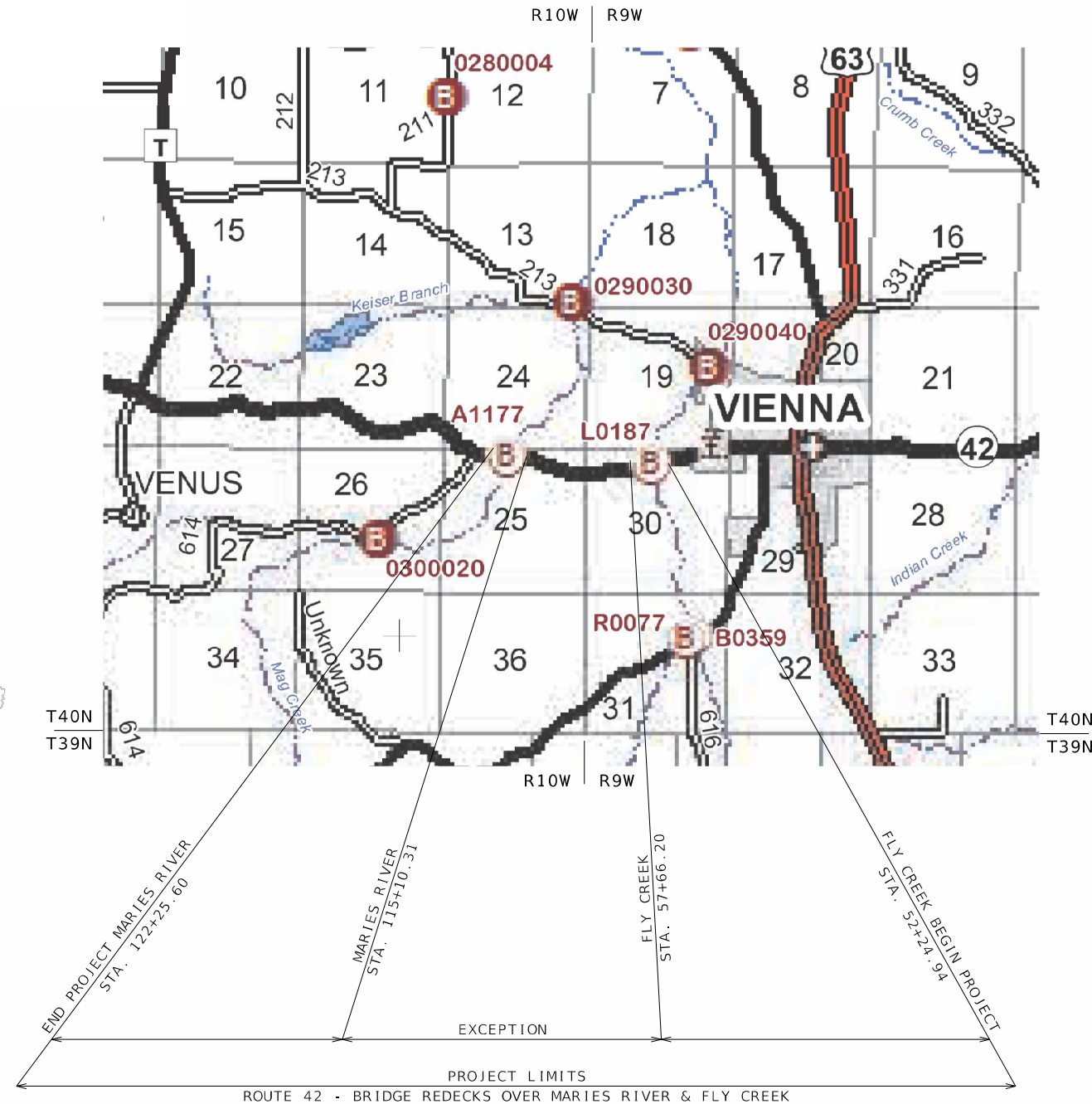
A.A.D.T. - 2022 = 867
A.A.D.T. - 2042 = 1257
T = 5%
V = 55 M.P.H.

NO NEW RIGHT-OF-WAY

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

TOWNSHIP 40 NORTH, RANGE 9 & 10 WEST, SECTIONS 25 & 30

KEY MAP



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

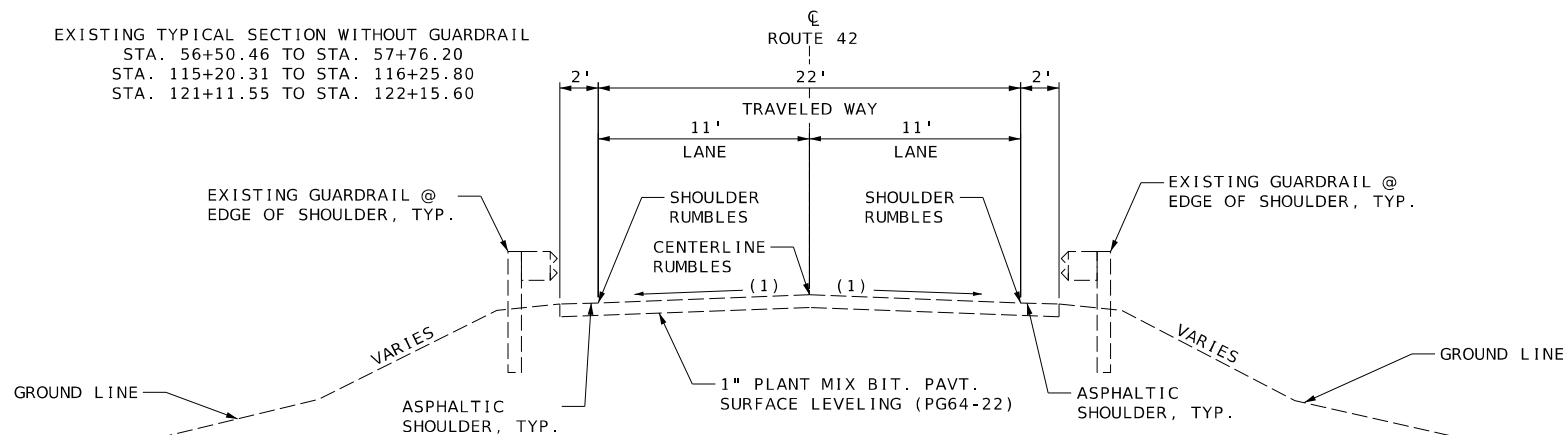
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (1 SHEET)----	2
QUANTITIES (QU) (2 SHEETS)-----	3
PLAN-PROFILE (PP)-----	4-5
EROSION CONTROL SHEETS (EC)-----	6-7
TRAFFIC CONTROL SHEETS (TC)-----	8-12
PAVEMENT MARKING & SIGNING (PM)----	13-14
BRIDGE DRAWINGS (B)	
A11772-----	1-11
L01872-----	1-9

DATE PREPARED	
1/13/2025	
ROUTE	STATE
42	MO
DISTRICT	SHEET NO.
CD	1
COUNTY	
MARIES	
JOB NO.	
J5P3565	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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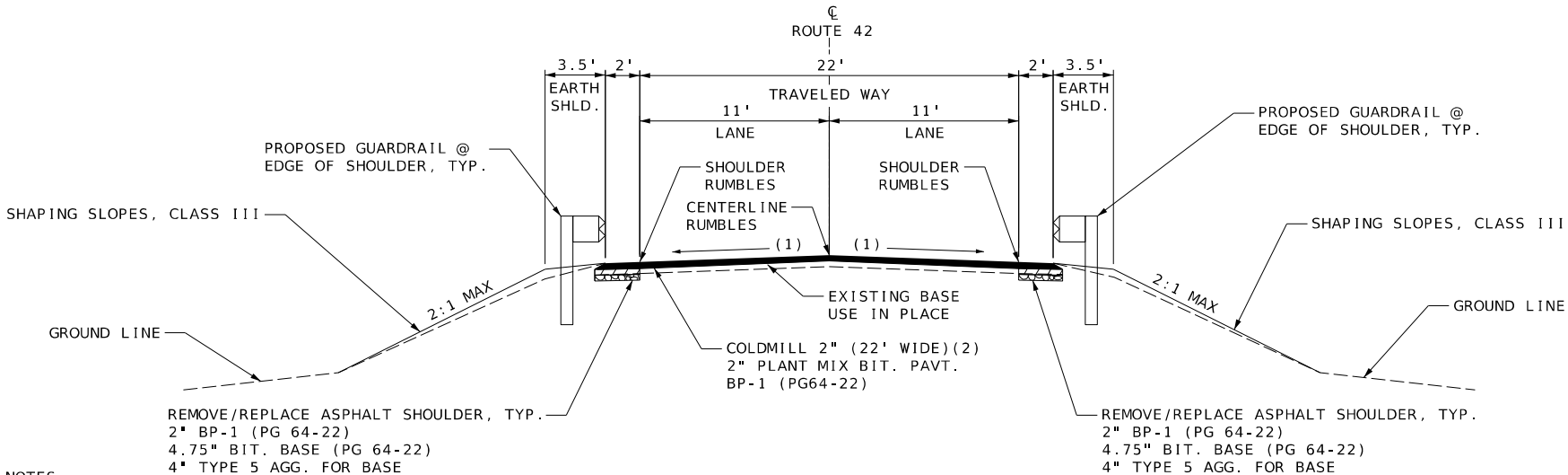
Kimley»Horn
805 PENNSYLVANIA AVE SUITE 150
KANSAS CITY, MO 64105
PHONE 816-652-0350
CERTIFICATE OF AUTHORITY NO. 001512-ENGINEERING
WWW.KIMLEY-HORN.COM

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



EXISTING GUARDRAIL SECTION ON TANGENT
TYPICAL SECTION ROUTE 42
STA. 52+34.94 TO 57+56.20 (EXCLUDING BRIDGE)
STA. 115+20.31 TO 122+15.60 (EXCLUDING BRIDGE)

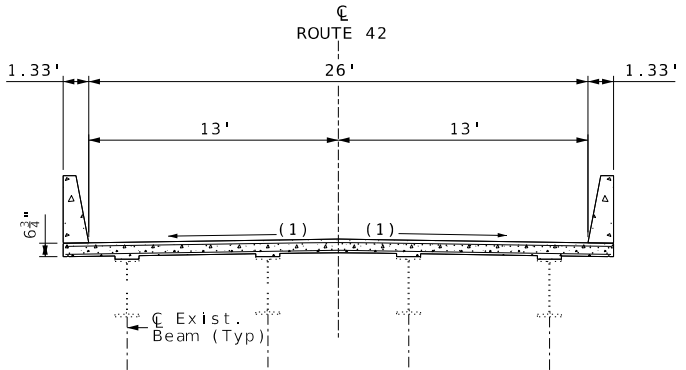
(1) EXISTING SLOPE (2% ASSUMED)



PROPOSED GUARDRAIL SECTION ON TANGENT
TYPICAL SECTION ROUTE 42
STA. 52+49.94 TO 57+41.20 (EXCLUDING BRIDGE)
STA. 115+35.31 TO 122+00.60 (EXCLUDING BRIDGE)

(1) MATCH EXISTING SLOPE
(2) COLDMILL/NEW PAVEMENT STATIONING
STA. 53+29.56 TO 55+72.98 (EXCLUDING BRIDGE)
STA. 116+99.11 TO STA. 120+36.83 (EXCLUDING BRIDGE)

NOTES:
SHAPING SLOPES, CLASS III SHALL
BE COMPLETED AS NEEDED
SEE STANDARD PLANS 401.00 SHEET
3 OF 3 FOR SAFETY EDGE DETAILS



PROPOSED BRIDGE SECTION ON TANGENT
TYPICAL SECTION ROUTE 42
STA. 53+77.82 TO STA. 55+25.28
STA. 117+51.23 TO STA. 119+84.67

(1) MATCH EXISTING SLOPE

ESTIMATE FACTORS:
BITUMINOUS PAVEMENT MIXTURE PG 64-22 (BP-1) = 1.948 TON/CY
BITUMINOUS BASE MIXTURE FOR PG 64-22 (BASE) = 1.943 TON/CY
TACK COAT = 0.08 GAL/SY
LOCATION OF CENTERLINE RUMBLES:
PAVEMENT MARKING SHALL BE BASED ON
THE DISTANCE WHICH CREATES TWO LANES
OF THE SAME WIDTH, NOT TO BE LESS
THAN 11'. CONTRACTOR SHALL NOT
CONSTRUCT LANES BASED ON FINISHED
CROWN LOCATION.

NOT TO SCALE
TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI

LORA ELLEN DIALLO

NUMBER

PE-2023011048

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/13/2025

ROUTE
42

STATE
MO

DISTRICT
CD

SHEET NO.
2

COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

Kimley

Horn

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

K:\KNC_TPTO\268242001 - MODOT Maries Redecks\CAD\A11772\Road\MoDOT_A11772_Typical_Sections.dgn 8:29:06 AM 1/13/2025

REMOVAL OF IMPROVEMENTS				
BRIDGE NO.	STATION	STATION	QUANTITY	REMARKS
A11772	115+35.31	117+49.11	129 SY	FULL DEPTH SHOULDER REMOVAL RIGHT
A11772	115+39.89	117+53.17	140 SY	FULL DEPTH SHOULDER REMOVAL LEFT
A11772	119+82.37	121+96.01	117 SY	FULL DEPTH SHOULDER REMOVAL RIGHT
A11772	119+86.82	122+00.60	104 SY	FULL DEPTH SHOULDER REMOVAL LEFT
L01872	52+49.94	53+79.56	10 SY	FULL DEPTH SHOULDER REMOVAL RIGHT
L01872	52+53.98	53+79.56	15 SY	FULL DEPTH SHOULDER REMOVAL LEFT
L01872	55+22.98	57+41.20	24 SY	FULL DEPTH SHOULDER REMOVAL RIGHT
L01872	55+22.98	57+41.20	27 SY	FULL DEPTH SHOULDER REMOVAL LEFT
A11772	116+25.79	121+11.55	497 LF	EXISTING GUARDRAIL - ROUTE 42
L01872	52+52.05	56+49.89	494 LF	EXISTING GUARDRAIL - ROUTE 42
A11772	111+03.00	120+30.00	5 EA	EXISTING SIGNS - ROUTE 42
L01872	53+39.00	55+70.00	4 EA	EXISTING SIGNS - ROUTE 42
			TOTAL	1.0 LUMP SUM

RUMBLE STRIPS					
BRIDGE NO.	STATION	STATION	LOC.	BITUMINOUS CENTERLINE RUMBLE STRIP (STATION (100FT))	BITUMINOUS SHOULDER RUMBLE STRIP (STATION (100FT))
A11772	115+35.31	117+49.11	RIGHT		2.14
A11772	115+39.89	117+53.17	LEFT		2.13
A11772	116+99.11	117+51.23	CENTER	0.53	
A11772	119+82.37	121+96.01	RIGHT		2.14
A11772	119+84.69	120+36.83	CENTER	0.52	
A11772	119+86.82	122+00.60	LEFT		2.14
L01872	52+49.94	53+79.56	RIGHT		1.30
L01872	52+53.98	53+79.56	LEFT		1.26
L01872	53+29.56	53+77.82	CENTER	0.50	
L01872	55+22.98	57+41.20	RIGHT		2.18
L01872	55+22.98	57+41.20	LEFT		2.18
L01872	55+25.28	55+72.98	CENTER	0.50	
			TOTAL	2.05	15.47
			USE	2.1	15.5

PAVEMENT											
BRIDGE NO.	STATION	STATION	TYPE	LOC.	LENGTH (FT)	WIDTH (FT)	2" BP-1 (TONS)	4.75" BIT. BASE (TONS)	4" TYPE 5 AGG. BASE (SY)	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS) (SY)	TACK COAT (GAL)
A11772	115+35.31	117+49.11	SHOULDER	RIGHT	214	2	5.1	12.2	47.6	0.0	4.8
A11772	115+39.89	117+53.17	SHOULDER	LEFT	213	2	5.1	12.1	47.3	0.0	4.7
A11772	116+99.11	117+51.23	M&F	-	52	22	13.8	0.0	0.0	127.4	12.7
A11772	119+82.37	121+96.01	SHOULDER	RIGHT	214	2	5.1	12.2	47.6	0.0	4.8
A11772	119+84.67	120+36.83	M&F	-	52	22	13.8	0.0	0.0	127.5	12.8
A11772	119+86.82	122+00.60	SHOULDER	LEFT	214	2	5.1	12.2	47.6	0.0	4.8
L01872	52+49.94	53+79.56	SHOULDER	RIGHT	130	2	3.1	7.4	28.9	0.0	2.9
L01872	52+53.98	53+79.56	SHOULDER	LEFT	126	2	3.0	7.2	28.0	0.0	2.8
L01872	53+29.56	53+77.82	M&F	-	48	22	12.7	0.0	0.0	118.0	11.8
L01872	55+22.98	57+41.20	SHOULDER	RIGHT	218	2	5.2	12.4	48.4	0.0	4.8
L01872	55+22.98	57+41.20	SHOULDER	LEFT	218	2	5.2	12.4	48.4	0.0	4.8
L01872	55+25.28	55+72.98	M&F	-	48	22.0	12.6	0.0	0.0	116.6	11.7
						TOTAL	89.8	88.1	343.8	489.5	83.4
						USE	90	88	344	490	83

GUARDRAIL						
BRIDGE NO.	STATION	STATION	LOC.	MGS GUARDRAIL (LF)	MGS BRIDGE APPROACH TRANSITION SECTION (EA)	MGS TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)
A11772	115+86.44	117+11.44	RIGHT	125.0	1	1
A11772	115+91.03	117+16.03	LEFT	125.0	1	1
A11772	120+19.88	121+44.88	RIGHT	125.0	1	1
A11772	120+24.46	121+49.46	LEFT	125.0	1	1
L01872	53+01.07	53+38.57	RIGHT	37.5	1	1
L01872	53+05.11	53+42.61	LEFT	37.5	1	1
L01872	55+60.48	56+85.48	RIGHT	125.0	1	1
L01872	55+65.07	56+90.07	LEFT	125.0	1	1
			TOTAL	825.0	8.0	8.0
			USE	825	8	8

PAVEMENT MARKING						
BRIDGE NO.	STATION	STATION	LOC.	STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS		REMARKS
				4 INCH YELLOW (LF)	4 INCH WHITE (LF)	
A11772	115+35.31	121+96.01	RIGHT		661	SOLID WHITE EDGE LINE
A11772	115+39.89	122+00.60	LEFT		661	SOLID WHITE EDGE LINE
A11772	116+99.11	120+36.83	CENTER	85		INTERMITTENT YELLOW CENTER LINE
L01872	52+49.94	57+41.20	RIGHT		491	SOLID WHITE EDGE LINE
L01872	52+53.98	57+41.20	LEFT		487	SOLID WHITE EDGE LINE
L01872	53+29.56	55+72.98	CENTER	61		INTERMITTENT YELLOW CENTER LINE
			TOTAL	146.0	2300.0	
			USE	146	2300	

EARTHWORK				
BRIDGE NO.	STATION	STATION	LOC.	SHAPING SLOPES CLASS III (100 FT)
A11772	115+10.31	117+49.11	RIGHT	2.4
A11772	115+14.89	117+53.53	LEFT	2.4
A11772	119+82.73	122+21.01	RIGHT	2.4
A11772	119+86.83	122+25.51	LEFT	2.4
L01872	52+24.94	53+74.97	RIGHT	1.5
L01872	52+28.98	53+79.56	LEFT	1.5
L01872	55+22.98	57+66.20	RIGHT	2.4
L01872	55+27.57	57+66.20	LEFT	2.4
			TOTAL	17.4
			USE	18.0

EROSION CONTROL					
BRIDGE NO.	STATION	STATION	LOC.	SILT FENCE (LF)	SEDIMENT REMOVAL (CY)
A11772	115+10.31	117+49.11	RIGHT	240	2.4
A11772	115+14.89	117+53.53	LEFT	240	2.4
A11772	119+82.73	122+21.01	RIGHT	240	2.4
A11772	119+86.83	122+25.51	LEFT	240	2.4
L01872	52+24.94	53+74.97	RIGHT	150	1.5
L01872	52+28.98	53+79.56	LEFT	150	1.5
L01872	55+22.98	57+66.20	RIGHT	240	2.4
L01872	55+27.57	57+66.20	LEFT	240	2.4
			TOTAL	1740	17.4
			USE	1740	18

MULCHING (AC.)	
TOTAL	1.0

SEEDING - COOL SEASON GRASSES (AC.)	
TOTAL	1.0

MOBILIZATION
TOTAL = 1.0 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING	
TOTAL = 1.0 LUMP SUM	

SUMMARY OF QUANTITIES
SHEET 1 OF 2



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY

DATE PREPARED

1 / 13 / 2025

ROUTE 42	STATE MO
DISTRICT CD	SHEET NO. 3

COUNTY

MAR I ES

JOB NO.

J5P3565

CONTRACT ID

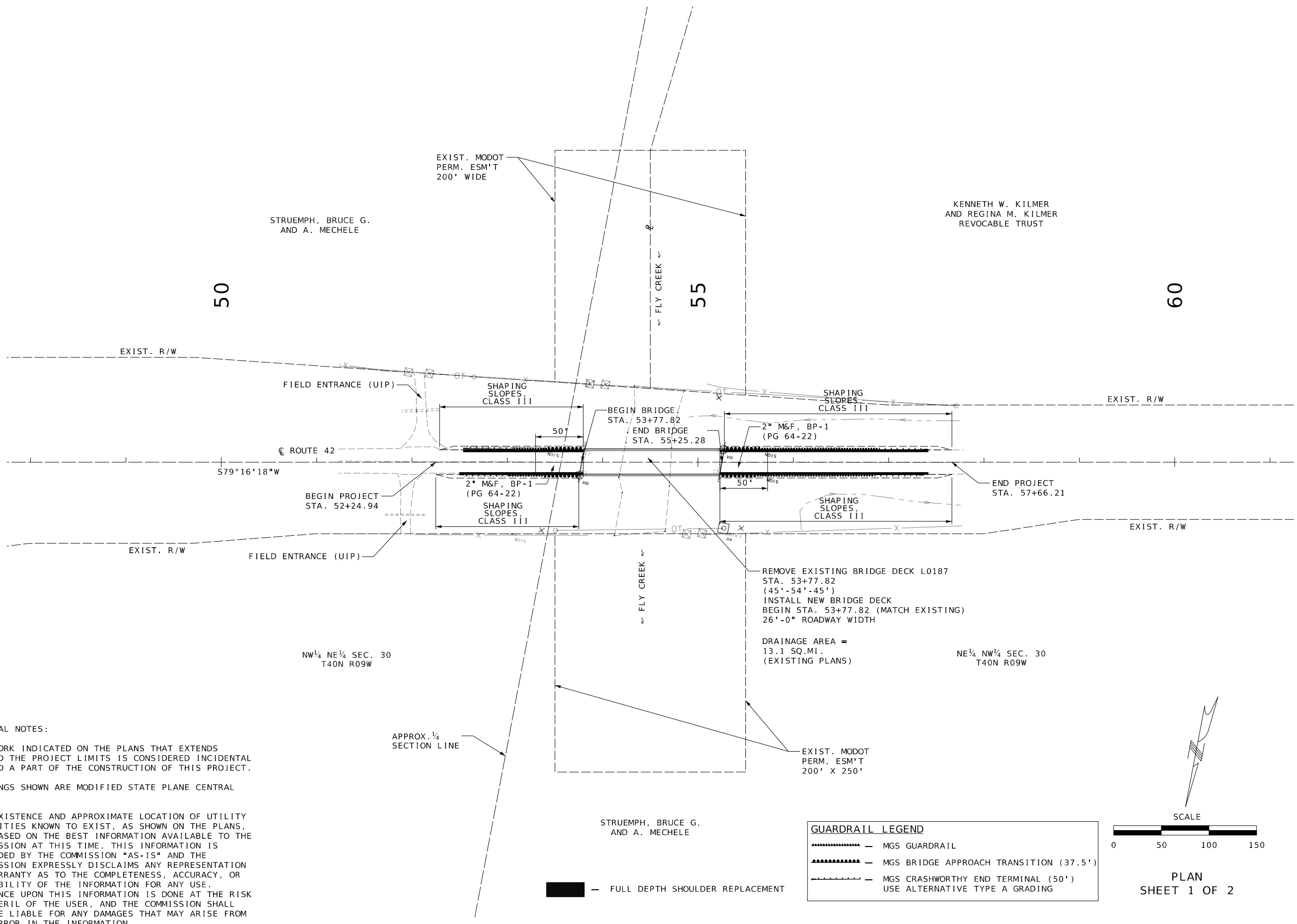
PROJECT NO. _____

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

Kimley»Horn

SIGN	SIZE IN.	AREA SQ. FT.	QTY EACH	TOTAL AREA SQ. FT.	QTY RELOC EACH	TOTAL RELOC SQ. FT.	SIGN NUM.	DESCRIPTION	SIGN	SIZE IN.	AREA SQ. FT.	QTY EACH	TOTAL SQ. FT.	QTY RELOC EACH	TOTAL RELOC SQ. FT.	SIGN NUM.	DESCRIPTION	ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2024
WARNING SIGNS									GUIDE SIGNS											DESCRIPTION
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)	E05-1	36X48	12.00						GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)	E05-2	48X36	12.00						EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)	E05-2a	48X36	12.00						EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)	GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)	GO20-2	48X24	8.00						END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)	GO20-4	36X18	4.50						PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)	GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)	GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00	2	6.00			52	END DETOUR	6161008	2	TRUCK MOUNTED ATTENUATOR (TMA)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.00						DETOUR (LEFT)	6161008		ADVANCED WARNING RAIL SYSTEM
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-9R	48X36	12.00						DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00						STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00	1	6.00			67B	DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00	1	6.00			67A	DETOUR ARROW (RIGHT)	6161025		CHANNELIZER (TRIM LINE)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	REGULATORY SIGNS									6161030	14	TYPE III MOVEABLE BARRICADE
WO1-8	18X24	3.00						CHEVRON (SYMBOL)	R1-1	48X48	13.25						STOP	6161033		DIRECTION INDICATOR BARRICADE
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.	6.93						YIELD	6161040		FLASHING ARROW PANEL
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161055		SEQUENTIAL FLASHING WARNING LIGHT
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00						SPEED LIMIT XX	6161070		TUBULAR MARKER
WO3-4	48X48	16.00						BE PREPARED TO STOP	R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM
WO3-5	48X48	16.00						SPEED LIMIT AHEAD	R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)	6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00						NO TURNS	6161098A	5**	CHANGEABLE MESSAGE SIGN WITHOUT COMM.
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00						NO U-TURN (SYMBOL)			INTERFACE- CONTRACTOR FURNISHED/RETAINED
WO4-1aL	48X48	16.00						MERGE (LEFT)	R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT	6161099		CHANGEABLE MESSAGE SIGN WITH COMM.
WO4-1aR	48X48	16.00						MERGE (RIGHT)	R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT			INTERFACE- CONTRACTOR FURNISHED/RETAINED
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00						DO NOT PASS	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
WO5-3	48X48	16.00						ONE LANE BRIDGE	R4-2	36X48	12.00						PASS WITH CARE	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
WO5-5	48X48	16.00						NARROW LANES	R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)	6173600D		TEMPORARY TRAFFIC BARRIER
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)			CONTRACTOR FURNISHED/RETAINED
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25						DO NOT ENTER	6173602B		TEMPORARY TRAFFIC BARRIER
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00						WRONG WAY			CONTRACTOR FURNISHED/COMMISSION RETAINED
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
WO8-1	48X48	16.00						BUMP	R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
WO8-2	48X48	16.00						DIP	R6-2L	24X30	5.00						ONE WAY (LEFT)	6176000B		TEMPORARY TRAFFIC BARRIER
WO8-3	48X48	16.00						PAVEMENT ENDS	R6-2R	24X30	5.00						ONE WAY (RIGHT)			COMMISSION FURNISHED/RETAINED
WO8-4	48X48	16.00						SOFT SHOULDER	R9-9	24X12	2.00						SIDEWALK CLOSED	6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)	R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE			COMMISSION FURNISHED/RETAINED
WO8-6	48X48	16.00						TRUCK CROSSING											SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE	6208064A
WO8-6c	48X48	16.00						TRUCK ENTRANCE	R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)	9029400		TEMPORARY TRAFFIC SIGNALS
WO8-7	36X36	9.00						LOOSE GRAVEL	R11-2	48X30	10.00	2	20.00	2	20.00	29	ROAD CLOSED	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL	R11-3a	60X30	12.50	1	12.50			66A	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY			
WO8-9	48X48	16.00						LOW SHOULDER	R11-4	60X30	12.50	3	37.50			31	ROAD CLOSED TO THRU TRAFFIC			
WO8-11	48X48	16.00						UNEVEN LANES	CONST-3A	60X48	20.00						FINE SIGN			
WO8-12	48X48	16.00						NO CENTER LINE	CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)			
WO8-15	48X48	16.00						GROOVED PAVEMENT	MISCELLANEOUS SIGNS											
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)	CONST-5	48X36	12.00						POINT OF PRESENCE			
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)	CONST-5	96X48	32.00						POINT OF PRESENCE			
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)	CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE			
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)	SPECIAL	36X78	19.50	3	58.50			60A	DETOUR ASSEMBLY EAST/LEFT			
W10-1	42RND.	9.62						RAILROAD CROSSING	SPECIAL	36X78	19.50	2	39.00			60B	DETOUR ASSEMBLY EAST RIGHT			
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)	SPECIAL	36X78	19.50	6	117.00			60C	DETOUR ASSEMBLY EAST/STRAIGHT			
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)	SPECIAL	36X78	19.50	2	39.00			60D	DETOUR ASSEMBLY EAST/ADV. LEFT			
WO12-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)	SPECIAL	36X78	19.50	1	19.50			60E	DETOUR ASSEMBLY EAST/ADV. RIGHT			
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)	SPECIAL	36X78	19.50	1	19.50			63A	DETOUR ASSEMBLY WEST/LEFT	</		



GENERAL NOTES:

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

BEARINGS SHOWN ARE MODIFIED STATE PLANE CENTRAL ZONE.

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION.

STRUEMPH, BRUCE G.
AND A. MECHELE

—

FULL DEPTH SHOULDER REPLACEMENT

GUARDRAIL LEGEND

.....

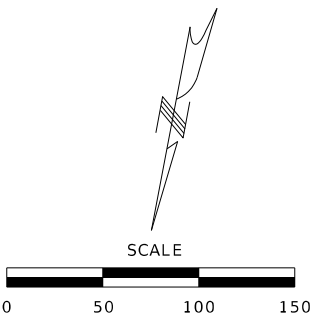
— MGS GUARDRAIL

.....

— MGS BRIDGE APPROACH TRANSITION (37.5')

.....

— MGS CRASHWORTHY END TERMINAL (50')
USE ALTERNATIVE TYPE A GRADING



PLAN
SHEET 1 OF 2

STATE OF MISSOURI

LORA ELLEN DIALLO

NUMBER

PE-2023011048

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED

1/13/2025

ROUTE

42

DISTRICT

CD

STATE

MO

SHEET NO.

4

COUNTY

MARIES

JOB NO.

J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

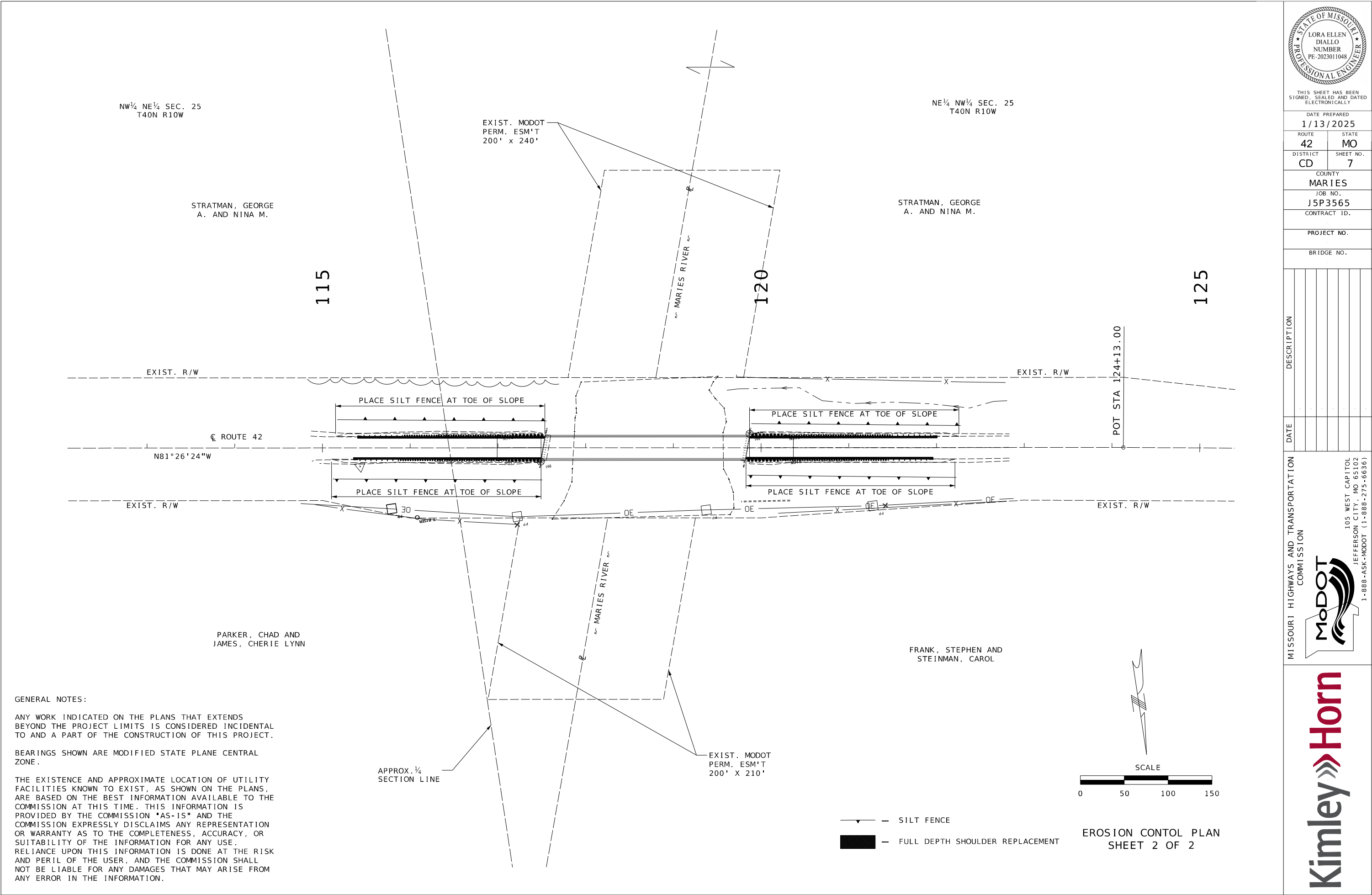
105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

Kimley»Horn

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DATE PREPARED
1/13/2025

ROUTE 42	STATE MO
DISTRICT CD	SHEET NO. 7

COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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Kimley»Horn



WO20 -

(24)

MO4-8:

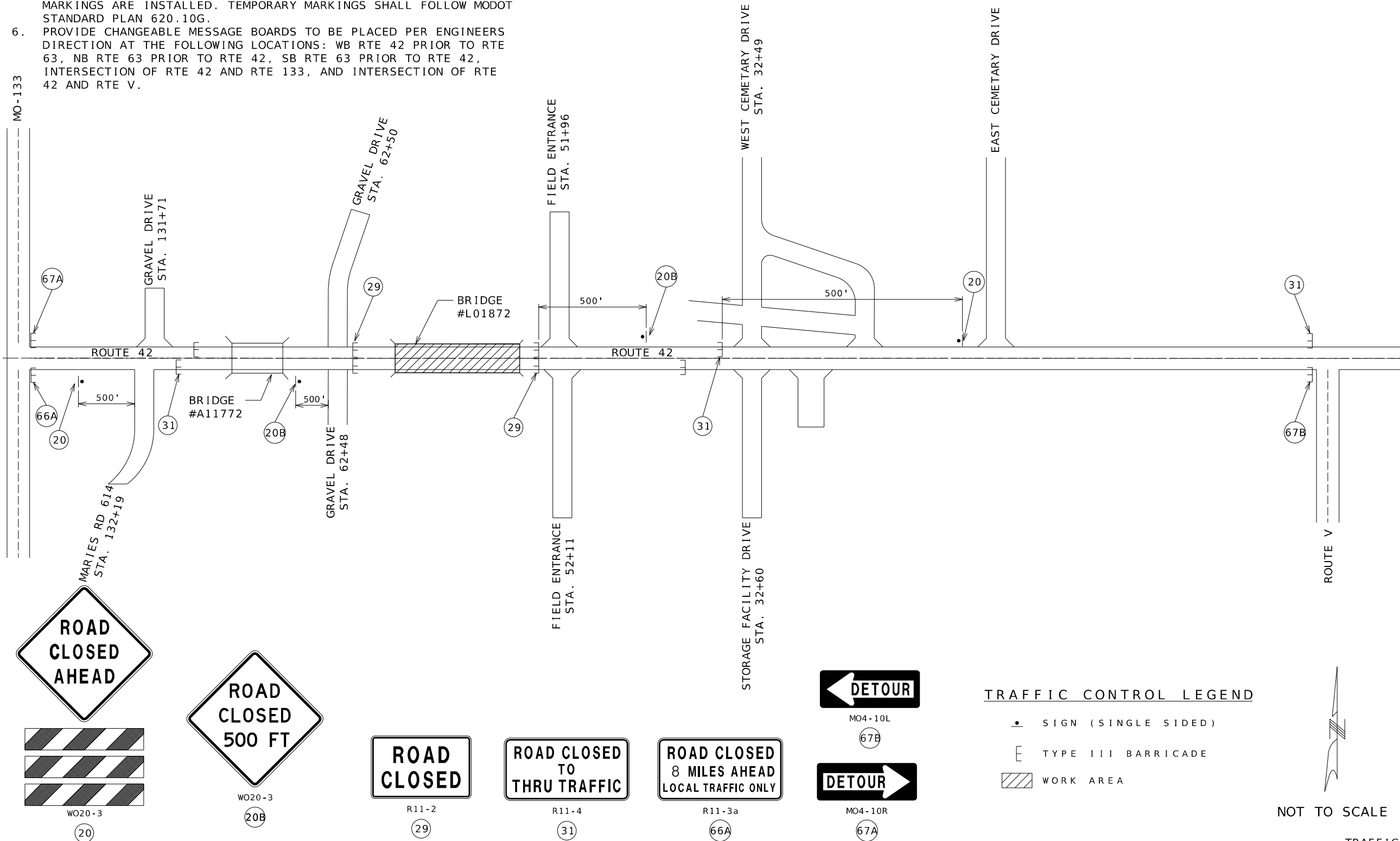
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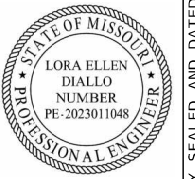
GENERAL NOTES:

1. PLACEMENT OF TRAFFIC CONTROL SIGNS IS APPROXIMATE AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER
2. SIGN SPACING TO BE 500' OR AS DIRECTED BY THE ENGINEER
3. ANY EXISTING SIGN THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED. NO DIRECT PAY.
4. ALL SIGNS SHOWN ON THIS SHEET ARE NON-PORTABLE AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
5. INSTALL TEMPORARY MARKINGS ON NEW PAVEMENT UNTIL PERMANENT MARKINGS ARE INSTALLED. TEMPORARY MARKINGS SHALL FOLLOW MODOT STANDARD PLAN 620.10G.
6. PROVIDE CHANGEABLE MESSAGE BOARDS TO BE PLACED PER ENGINEERS DIRECTION AT THE FOLLOWING LOCATIONS: WB RTE 42 PRIOR TO RTE 63, NB RTE 63 PRIOR TO RTE 42, SB RTE 63 PRIOR TO RTE 42, INTERSECTION OF RTE 42 AND RTE 133, AND INTERSECTION OF RTE 42 AND RTE V.



NOT TO SCALE

TRAFFIC CONTROL
SHEET 2 OF 5



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DATE PREPARED

1 / 13 / 2025

ROUTE	STATE
12	MO

#2	MO
DISTRICT	SHEET NO.

CD	9
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COUNTY

MARIES

JOB NO.
158256

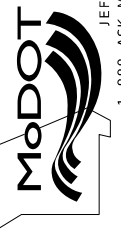
JSP 3565

CONTRACT ID

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

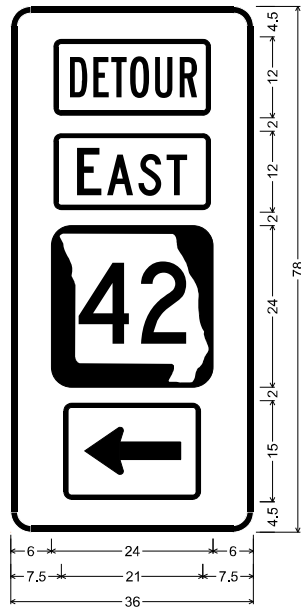
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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



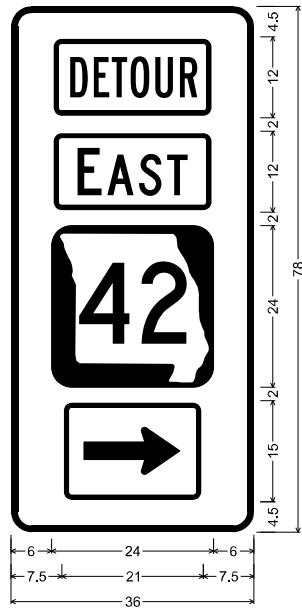
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REV.



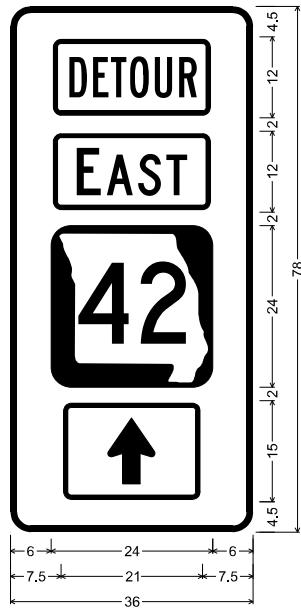
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60A



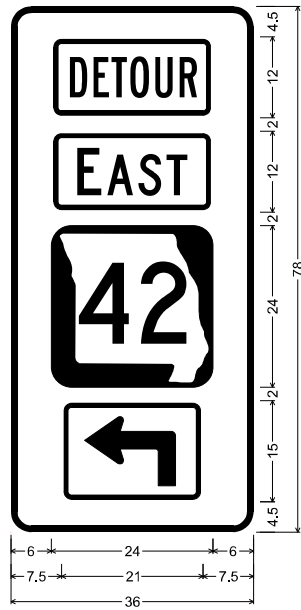
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60B



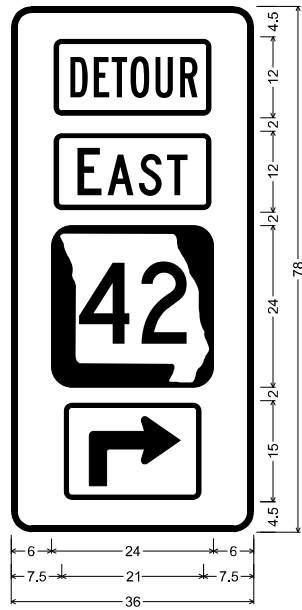
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60C



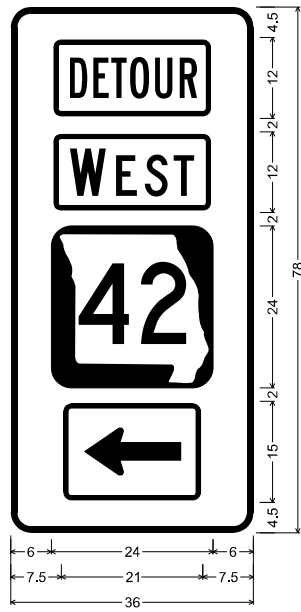
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60D



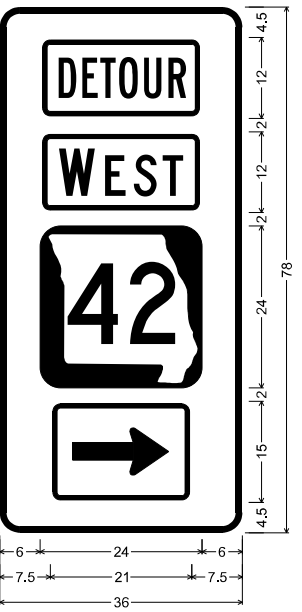
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60E



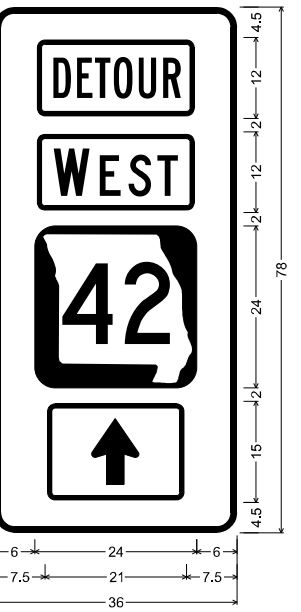
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63A



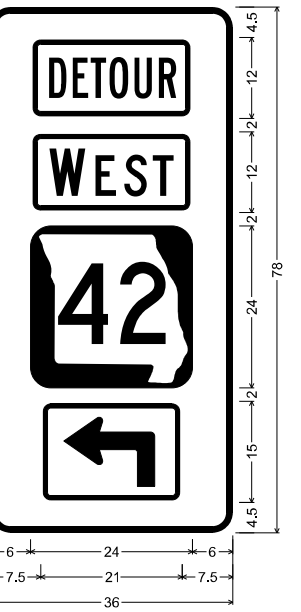
3.0" Radius, 1.0" Border, Black on Orange;

63B



3.0" Radius, 1.0" Border, Black on Orange;

63C



3.0" Radius, 1.0" Border, Black on Orange;

63D



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1/13/2025

ROUTE STATE

42 MO

DISTRICT SHEET NO.

CD 11

COUNTY

MARIES

JOB NO.

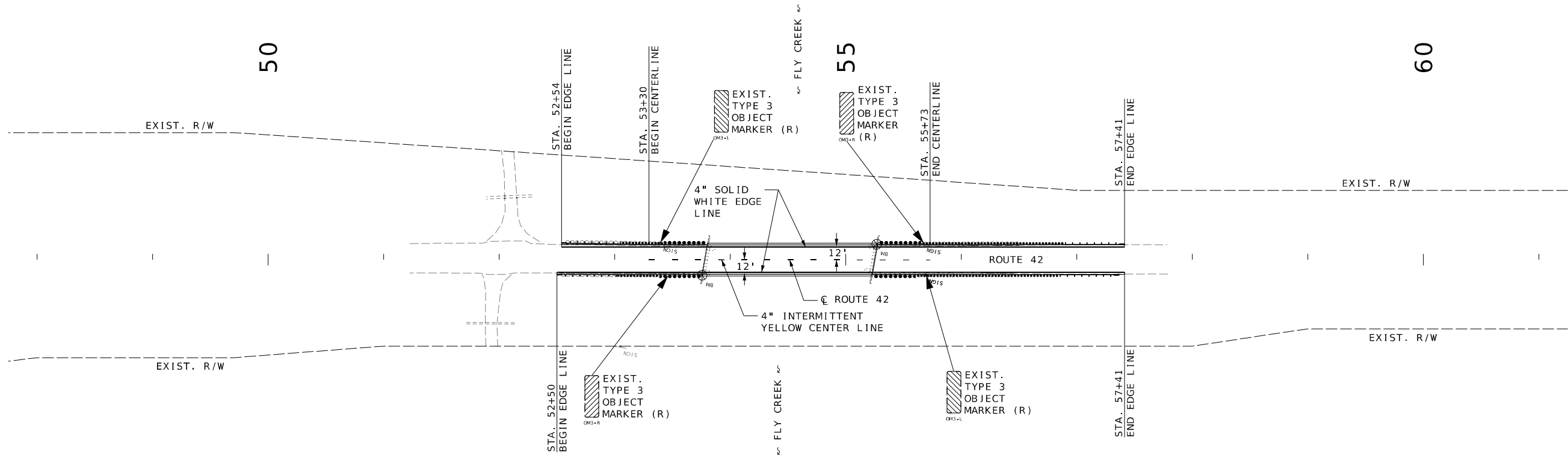
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CONTRACT ID.

PROJECT NO.

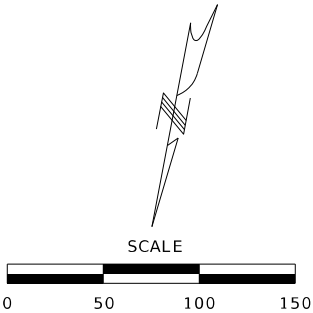
BRIDGE NO.

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BRIDGE #L01872

(R) - REMOVE



PAVEMENT MARKING & SIGNING
SHEET 1 OF 2



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1/13/2025

ROUTE	STATE
42	MO
DISTRICT	SHEET NO.
CD	13

COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

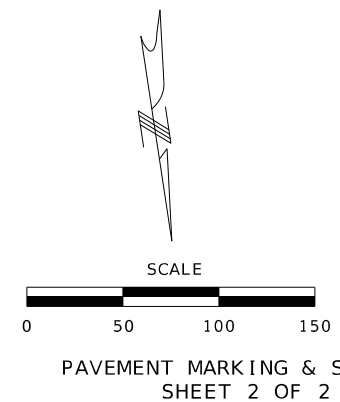
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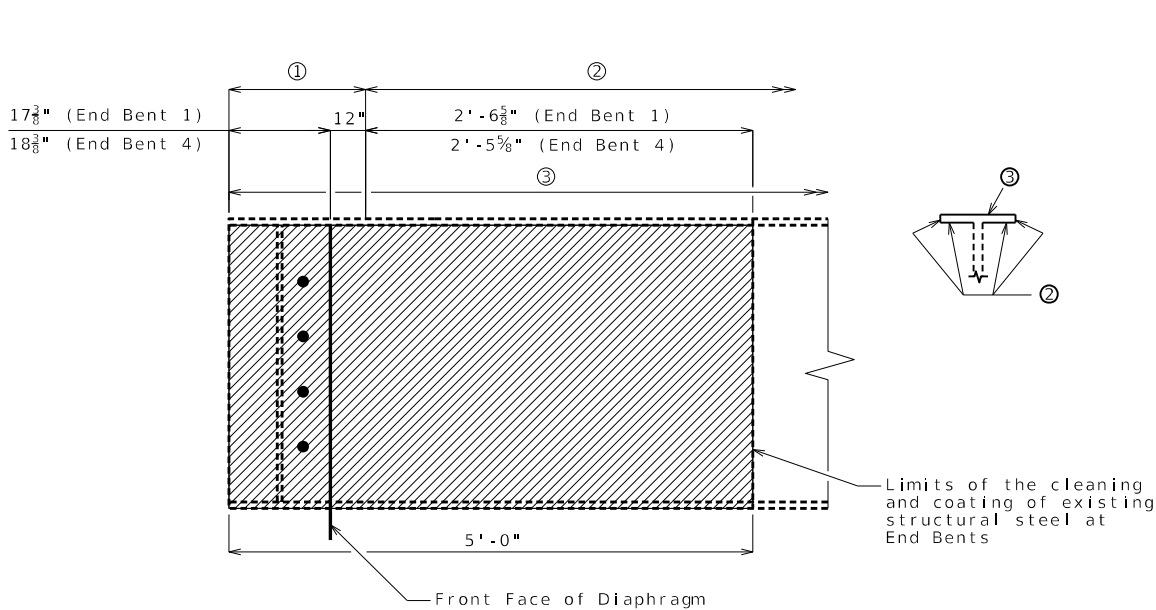
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

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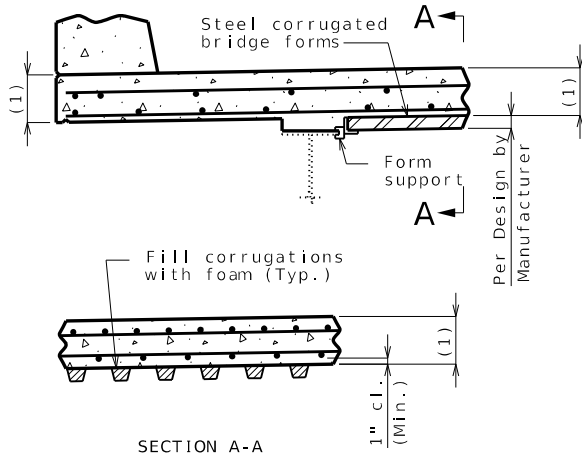
DETAILS OF CLEANING AND COATING

(End Bents No. 1 & 4)(Shear Connectors not shown)

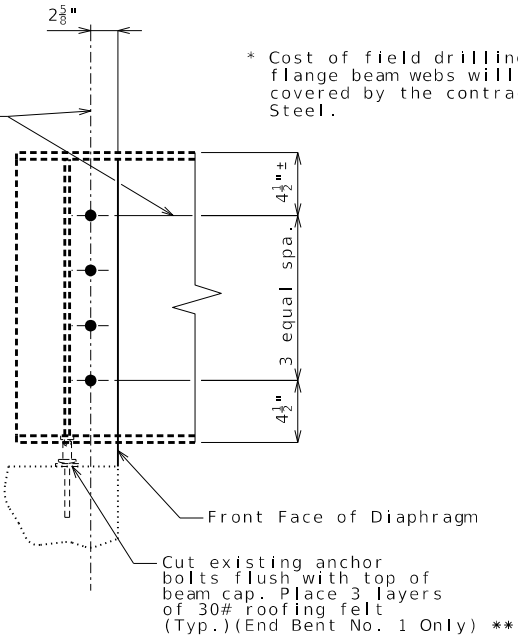
Structural Steel Protective Coating:

The exposed and accessible surfaces of the existing structural steel and bearings, within the limits shown above and denoted in Sec. 216.50.2.2, shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of no less than 6 mils before concrete is poured. The surface preparation and coating shall extend a minimum of 5 feet from the end of the beam for all structural steel and bearing. Structural steel includes beams, end diaphragms, bearing stiffeners, and all plates, channels and connections and components thereof. Beam top flange cleaning and coating, as denoted in Sec 216.50.2.2, shall extend the entire length of all beams from End Bent No. 1 to End Bent No. 4.

- ① Within the limits shown, surface preparation and gray epoxy-mastic primer will be considered completely covered by the contract unit price for Slab on Steel, except as included in ③ (top flange).
- ② Within the limits shown, surface preparation and gray epoxy-mastic primer will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer and Gray Epoxy-Mastic Primer, except as included in ③ (top flange).
- ③ Within the limits shown, top flange surface preparation and gray epoxy-mastic primer, as defined in Sec. 216.50.2.2, will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.



OPTIONAL STAY-IN-PLACE FORM DETAILS



DETAILS OF WEB HOLES AND BEARING MODIFICATIONS

General Notes:

Stay-In-Place Forms:

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

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

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

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

Pouring and Finishing Slab:

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

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

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

Bridge deck surface may be finished with vibratory screed.

Haunching:

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



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1/6/2025

ROUTE
42

STATE
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DISTRICT
BR

SHEET NO.
2

COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11772

DESCRIPTION

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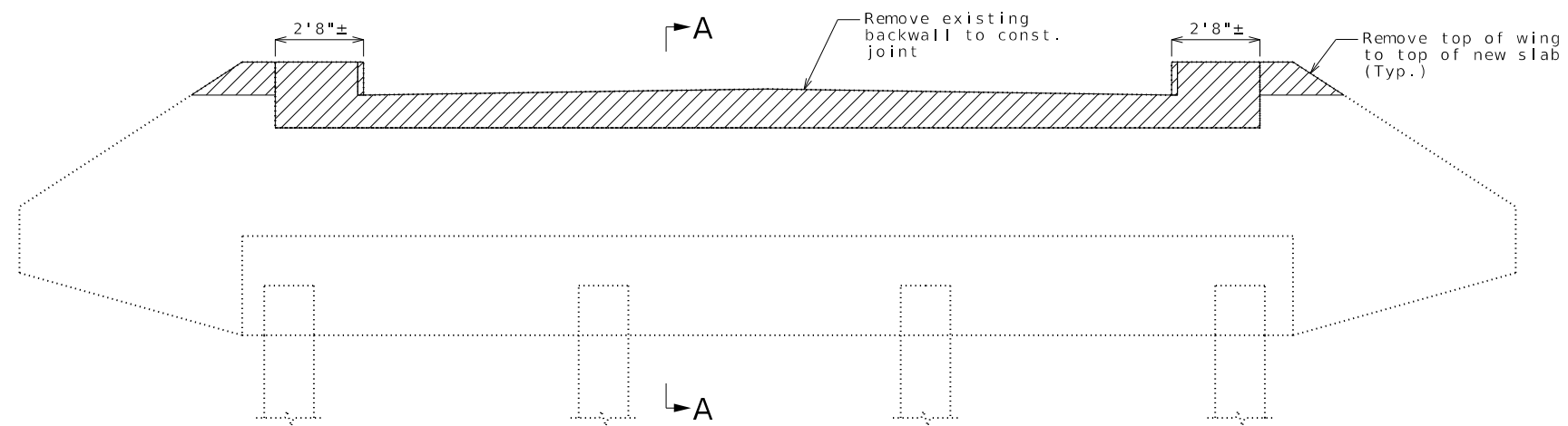
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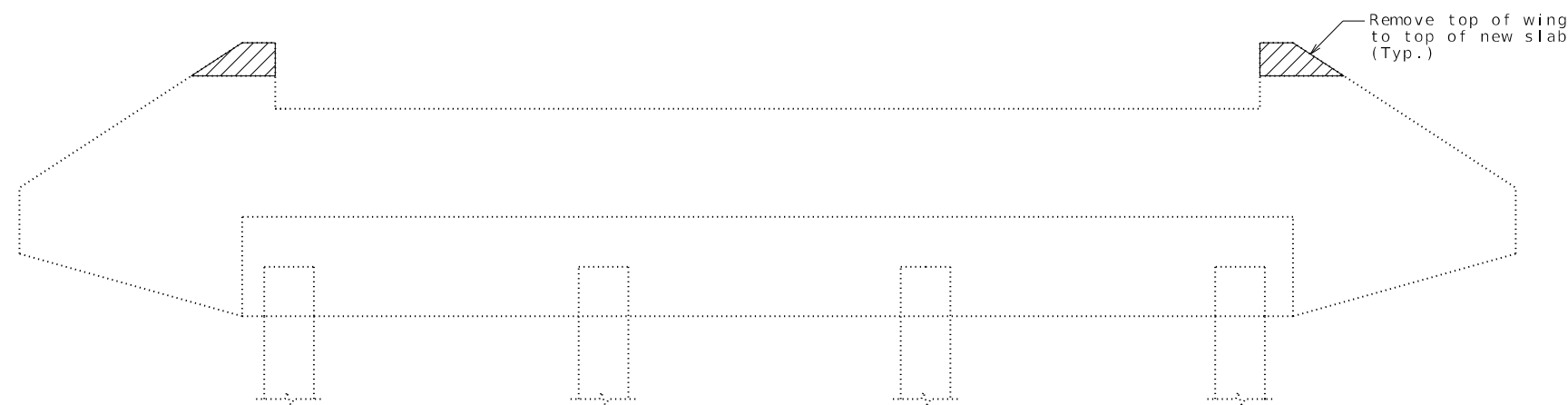
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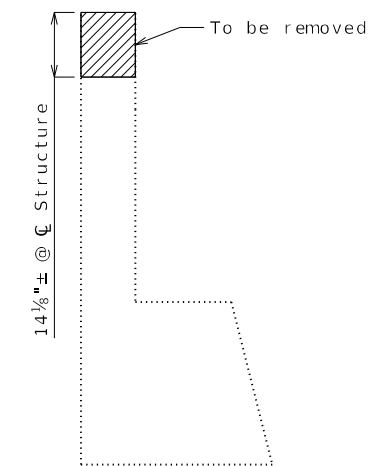
DETAILS OF CONCRETE REMOVAL AT END BENT NO. 1



DETAILS OF CONCRETE REMOVAL AT END BENT NO. 4

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

A smooth, level surface shall be provided at Bent No. 1.



SECTION A-A



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ROUTE	STATE
42	MO


DISTRICT BR	SHEET NO. 3
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COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11772[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
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1-888-ASK-MODOT (1-888-275-6636)

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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JEFFERSON CITY, MO 65102
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Kimley»»Horn

805 Pennsylvania Ave Suite 150
Kansas City, MO 64105
1-816-652-0350

Detailed Jul. 2024
Checked Nov. 2024

Checked Nov. 2024

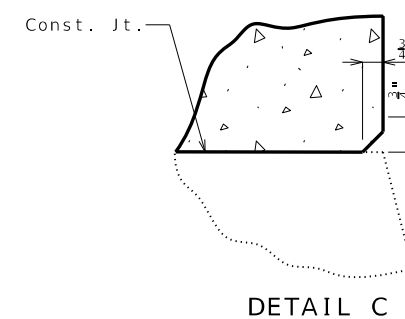
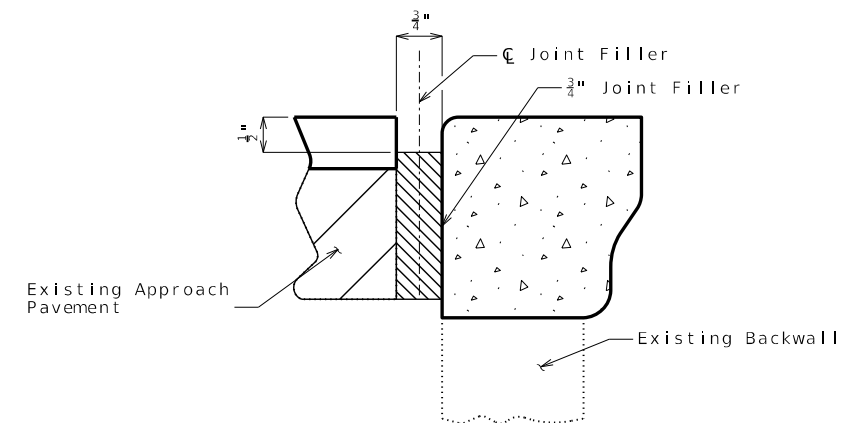
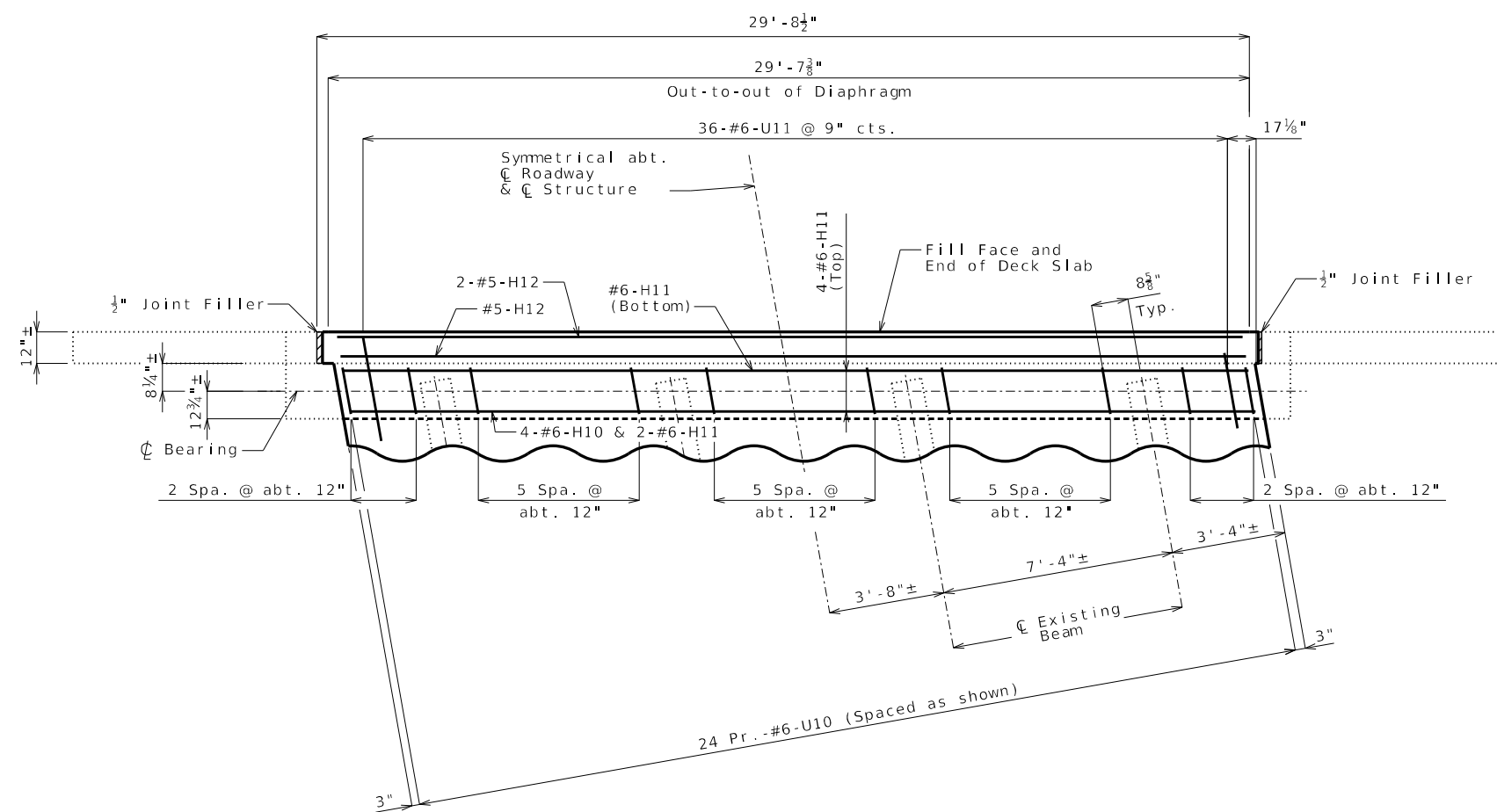
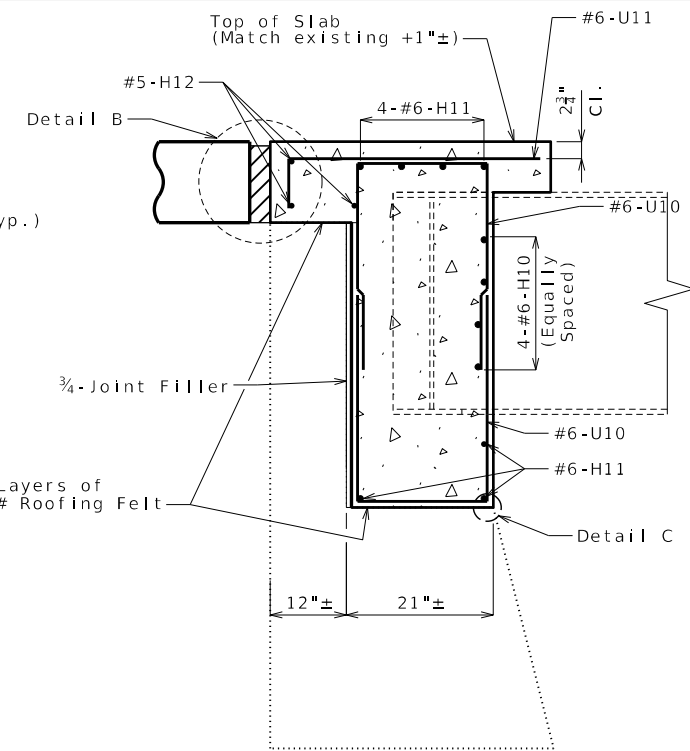
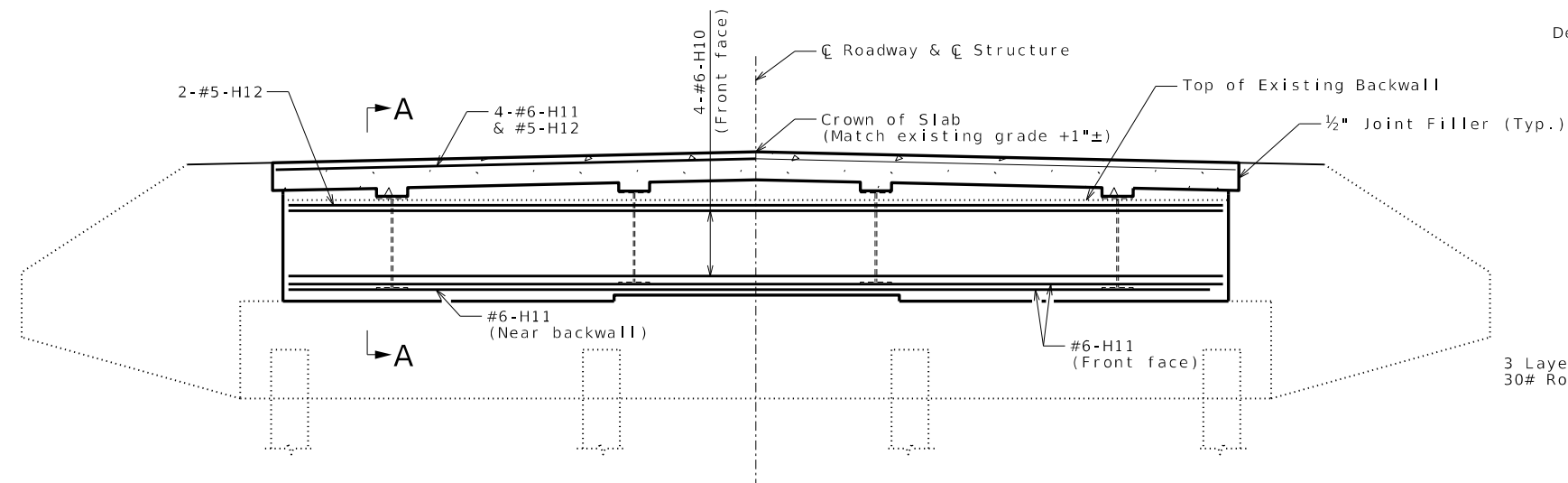
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 11

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REV. 11-10-1990



Notes:

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

Joint filler and anything incidental to its installation will be considered completely covered by the contract unit price for Slab on Steel.



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1/6/2025

ROUTE	STATE
42	MO

DISTRICT BR	SHEET NO. 4
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COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11772

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

Kimley»Horn

805 Pennsylvania Ave Suite 150
Kansas City, MO 64105
1-816-652-0350

Detailed Jul. 2024
Checked Nov. 2024

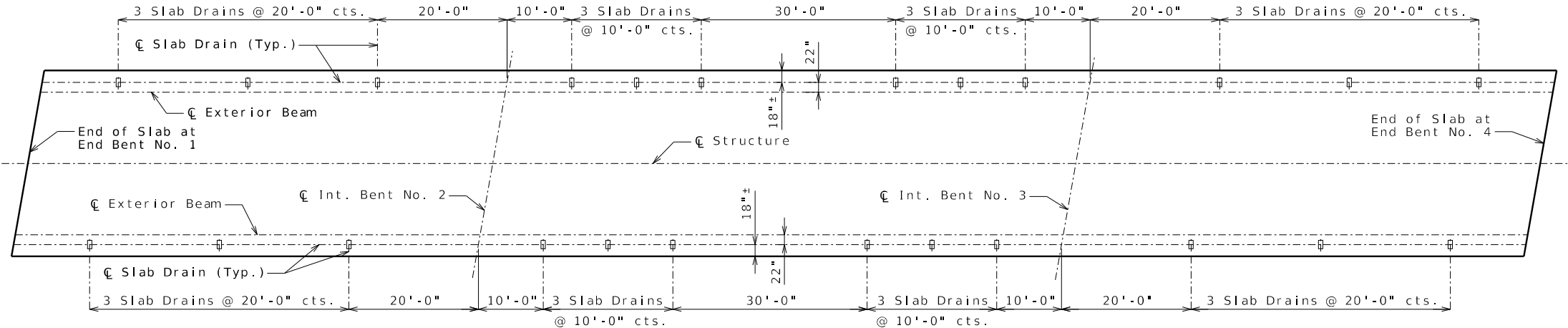
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Sheet No. 4 of 11

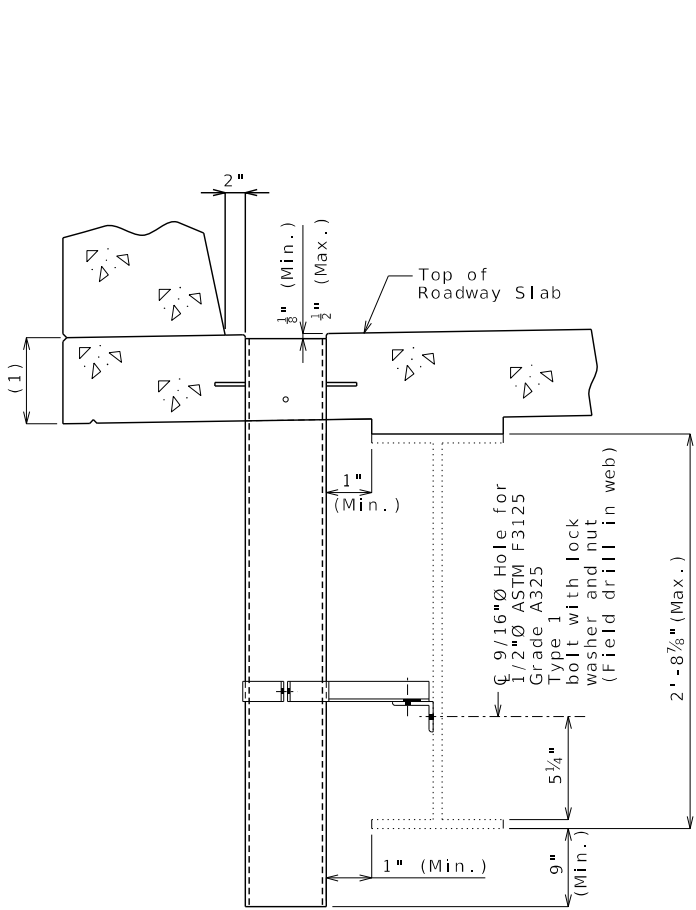
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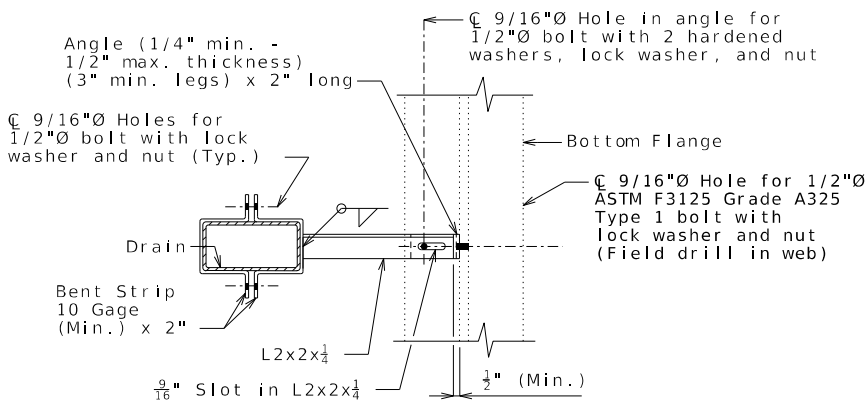
REV.



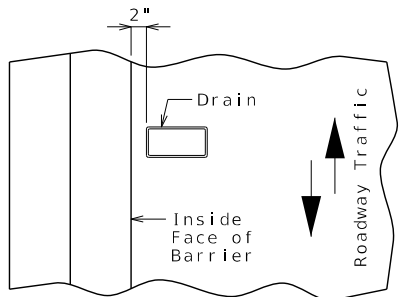
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

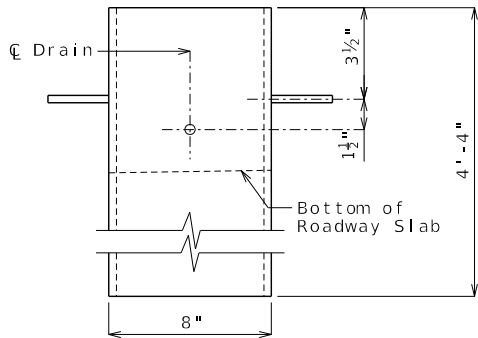


PART SECTION SHOWING BRACKET ASSEMBLY

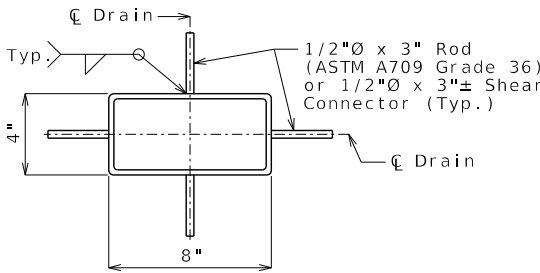


PART PLAN OF SLAB AT DRAIN

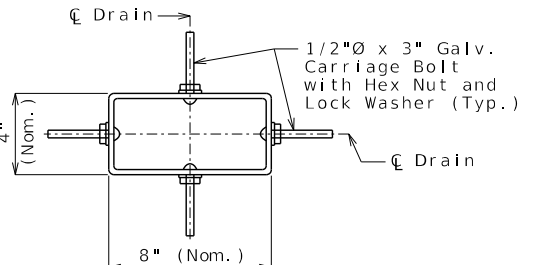
SLAB DRAINS



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

General Notes:

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

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

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

Reinforcing steel shall be shifted to clear drains.

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

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

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

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

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

(1) See front sheet for slab thickness.

Notes for Steel Drain:

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

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

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

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

Minimum reinforced wall thickness shall be 1/4 inch.

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

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

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

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



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DATE PREPARED
1/6/2025

ROUTE 42 STATE MO

DISTRICT BR SHEET NO. 6

COUNTY
MARIES

JOB NO.
JSP3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11772

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

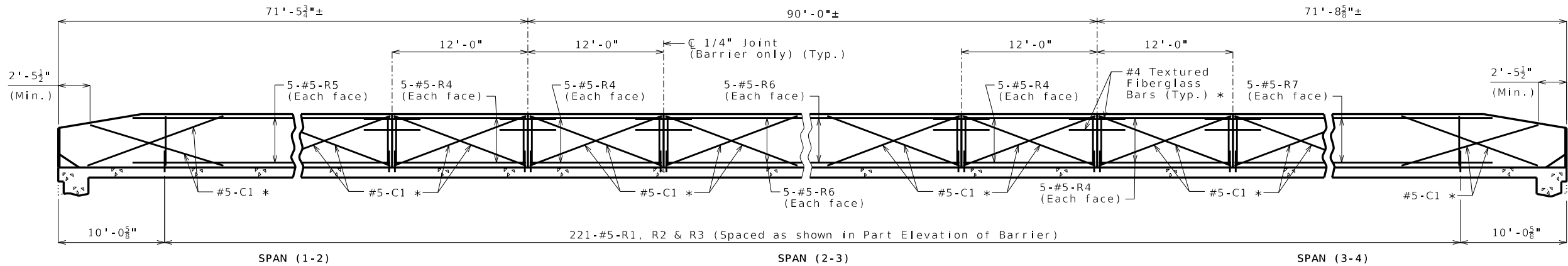
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Kimley»Horn

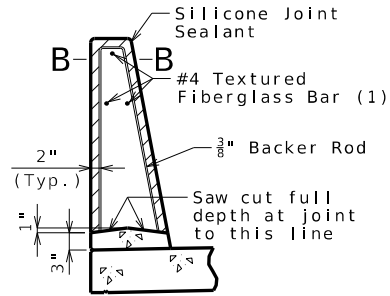
805 Pennsylvania Ave Suite 150
Kansas City, MO 64105
1-816-652-0350

REV.

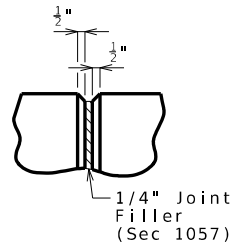
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



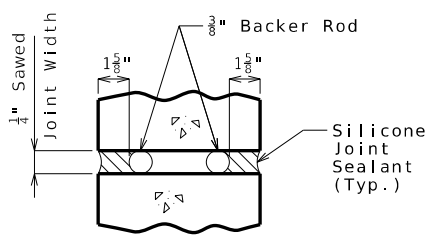
ELEVATION OF BARRIER
(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.



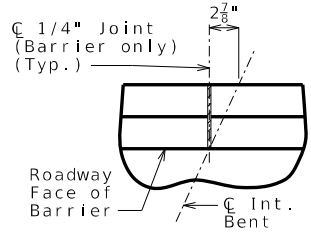
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT



SECTION B-B



PART PLAN SHOWING JOINT LOCATION

General Notes:

* Slip-formed option only.

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

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

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

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

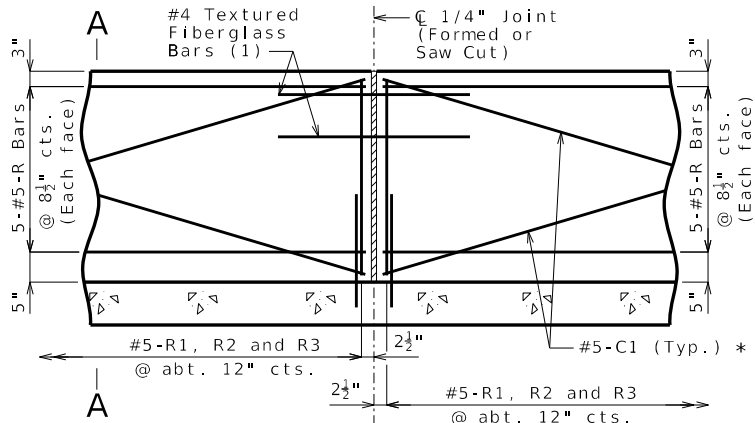
Concrete in barrier shall be Class B-1.

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

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

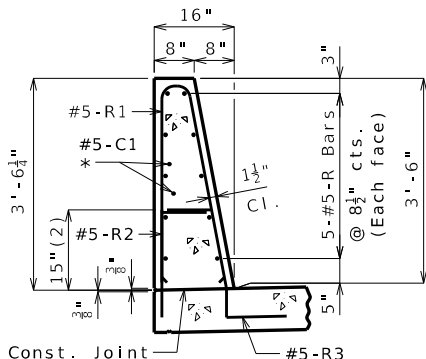
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

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



PART ELEVATION OF BARRIER

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

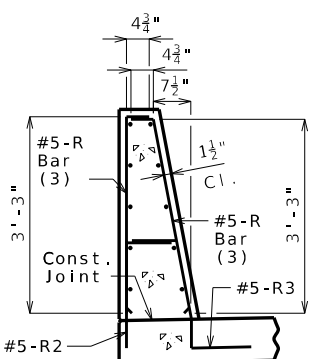


SECTION A-A

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

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

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

TYPE D BARRIER

Sheet No. 8 of 11

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

Detailed Jul. 2024
Checked Nov. 2024



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY

DATE PREPARED
1/6/2025

ROUTE
42

STATE
MO

DISTRICT
BR

SHEET NO.
8

COUNTY
MARIES

JOB NO.
JSP3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11772

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

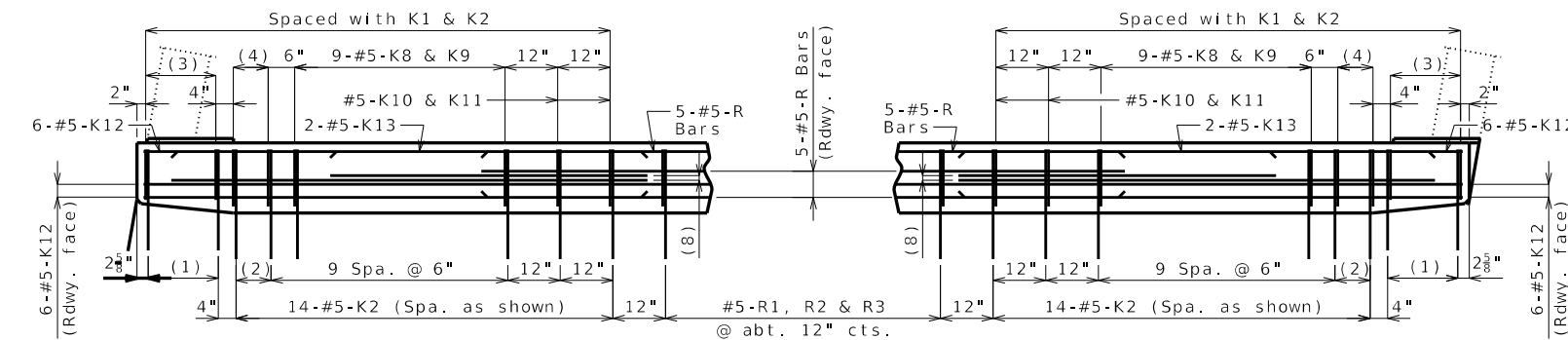
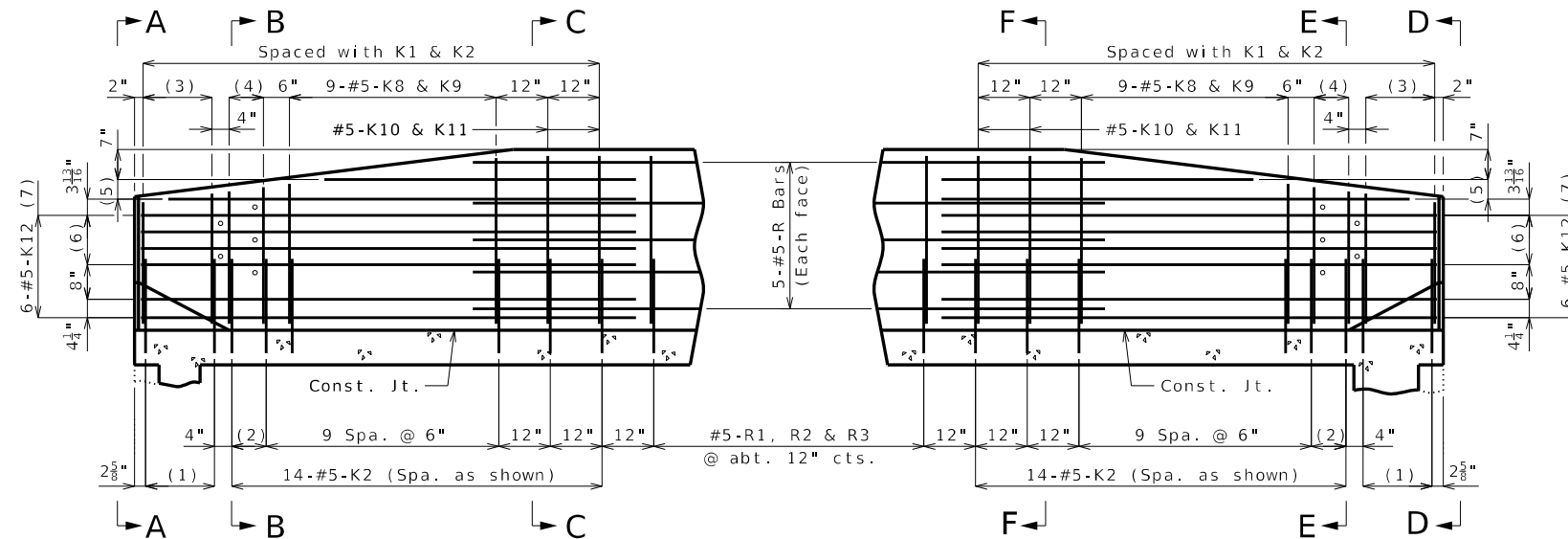
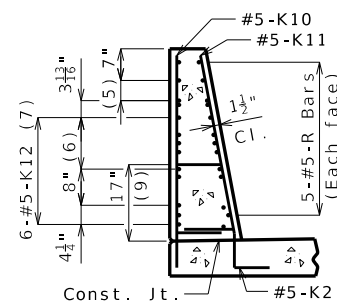
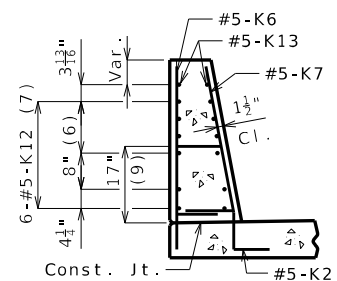
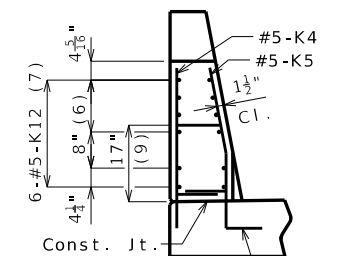
MODOT

Kimley

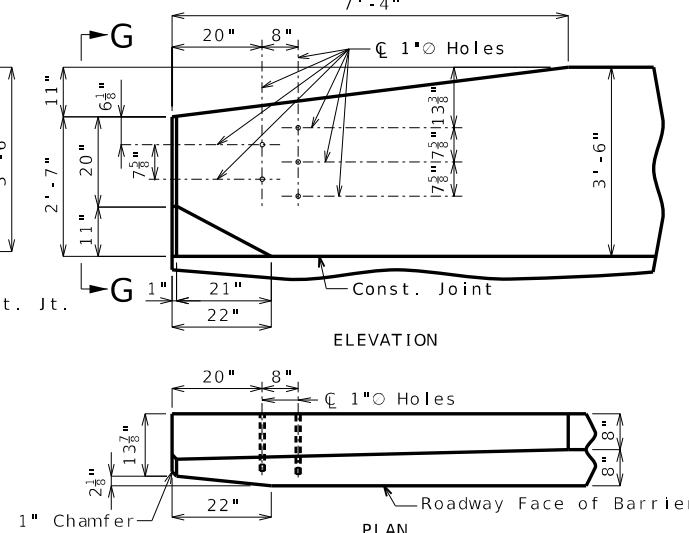
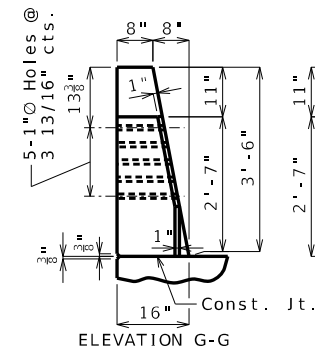
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REV.



(Top of barrier not shown for clarity.)



- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 2-#5-K13 @ $4\frac{1}{2}$ " cts., each face
- (6) 3 spaces @ $3\frac{13}{16}$ "
- (7) Spaced as shown, each face
- (8) 2-#5-K13 (Roadway face)
- (9) To top of bar

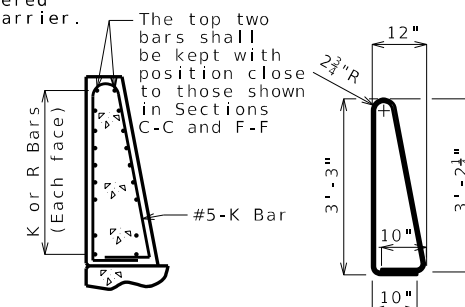
General Notes:

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

Reinforcing Steel:

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

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



K10-K11 BAR PERMISSIBLE
ALTERNATE SHAPE

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.



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ELECTRONICALLY

DATE PREPARED
1/6/2025

ROUTE 42	STATE MO
DISTRICT BR	SHEET NO. 9

COUNTY

MARIES

JOB NO.
152256

J5P3565

CONTRACT ID.

PROJECT NO. _____

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

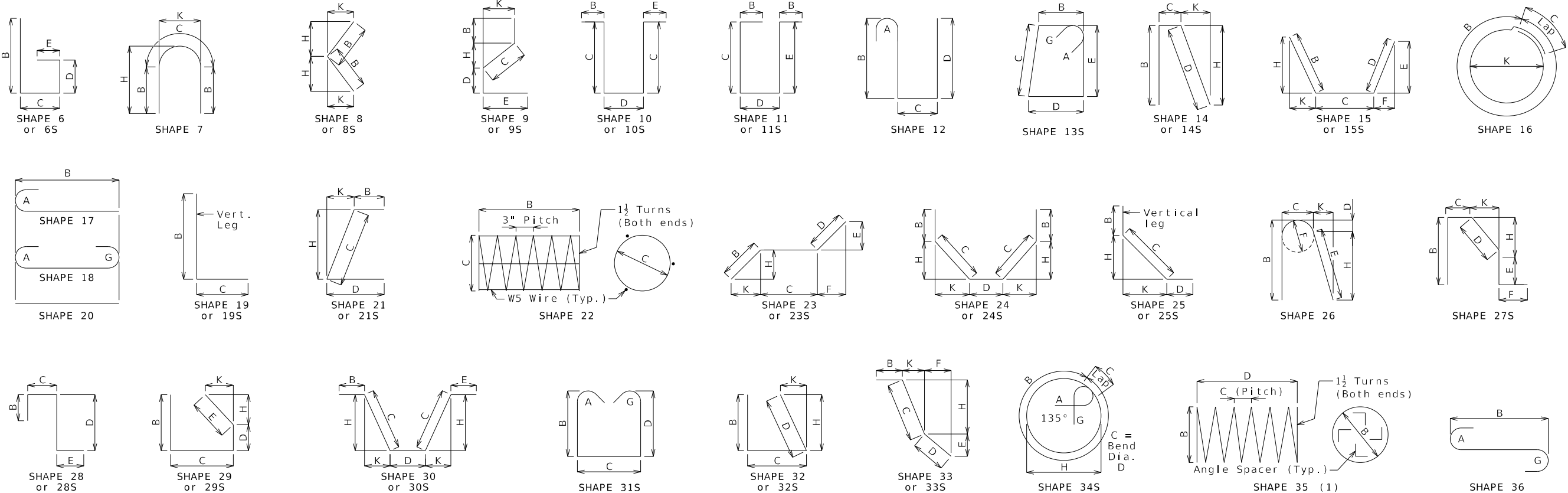
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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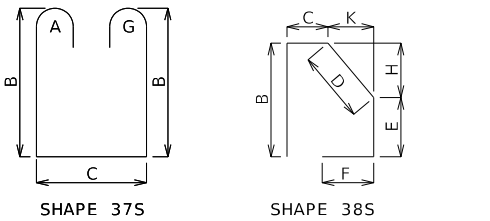
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REV.



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 1/4"	10"	
#9	1	9 1/2"	19 1/2"	15 1/2"	11 1/2"	
#10	1	10 3/4"	22"	17 1/2"	13 1/2"	
#11	1	12"	24 1/2"	19 1/2"	14 3/8"	
#14	1	18 1/4"	31 1/4"	27 1/2"	21 3/8"	
#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	4 1/2"	4 1/2"	4 1/2"	5"	2 3/8" 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 3/8" 3 3/4"
	3	3 3/4"	6 1/4"	6 1/2"	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.

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

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

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

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



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DATE PREPARED

1/6/2025

ROUTE

42

STATE

MO

DISTRICT

BR

SHEET NO.

10

COUNTY

MARIES

JOB NO.

J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A11772

DESCRIPTION

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Table Showing
S2 Bar Lengths

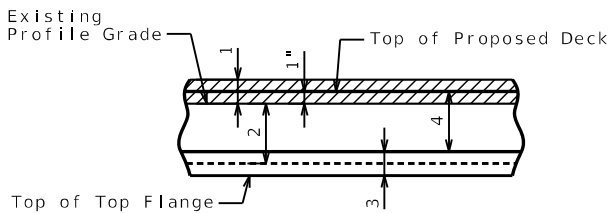
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
15'-4"	16'-6"	16'-6"	15'-4"

Required Lap Length
For Bar Splices **

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

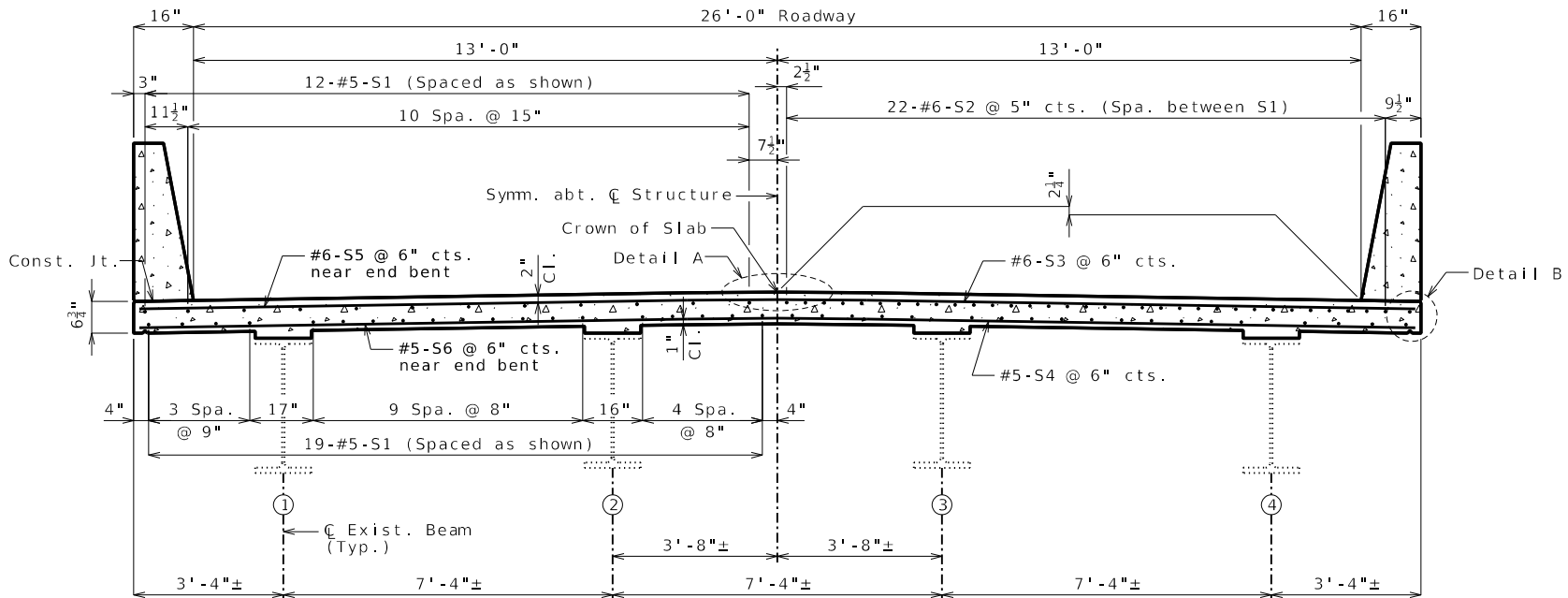
** Unless otherwise shown.

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (45'- 54'- 45') CONTINUOUS NON-COMPOSITE WIDE FLANGE BEAM SPANS (SKEW 10° LA)



- 1) Existing wearing surface (2'±)
- 2) Original concrete deck (6 3/4'±)
- 3) Proposed haunch (By Contractor)
- 4) Proposed Deck Slab (6 3/4')

PROFILE GRADE DETAIL



HALF SECTION NEAR MIDSPAN AND END BENT

HALF SECTION NEAR INT. BENT

TYPICAL SECTION THRU SLAB

Estimated Quantities

Item	Total
Dewatering	1
Removal of Existing Bridge Deck	3,920
Class B-1 Concrete (Substructure)	27.6
Slab on Steel	470
Type D Barrier	295
Reinforcing Steel (Bridges)	2,250
Shear Connectors	2,192
Slab Drain	26
Surface Preparation for Applying Epoxy Mastic Primer	1
Gray Epoxy Mastic Primer	1
Non-Destructive Testing	19

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

Estimated Quantities for Slab on Steel

Item	Total
Class B-2 Concrete	104
Reinforcing Steel (Epoxy Coated)	37,930

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

Method of forming the slab shall be in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness Class SC 4 and a finish Type 1, II or III.

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

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

REPAIRS TO BRIDGE:
ROUTE 42 OVER OVER FLY CREEK

ROUTE 42 FROM ROUTE 63 TO ROUTE T
ABOUT 1.0 MILES W OF ROUTE 63
BEGINNING STATION 53+78.0± (MATCH EXISTING)

General Notes:

Design Specifications:

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

Design Loading:

HS15-44 (1957) (Existing)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Substructure & Barrier) f'c = 4,000 psi
Class B-2 Concrete (End Bents & Superstructure, except Barrier) f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi

Joint Filler:

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

Reinforcing Steel:

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

Traffic Handling:

Structure to be closed during construction. See roadway plans for traffic control.

Miscellaneous:

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

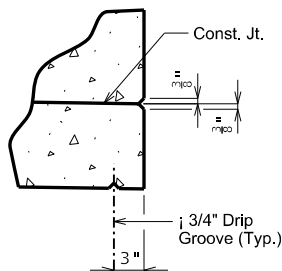
Roadway surfacing adjacent to bridge ends shall match new bridge slab surface (Roadway item).

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

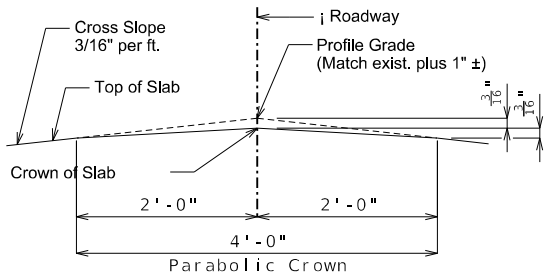
Contractor shall verify all dimensions in field before ordering new material.

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

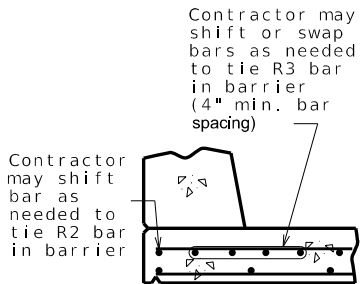
For adjusted beam deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.



DETAIL B



DETAIL A



OPTIONAL SHIFTING
TOP BARS AT BARRIER



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DATE PREPARED
1/6/2025

ROUTE 42 STATE MO

DISTRICT BR SHEET NO. 1

COUNTY
MARIES

JOB NO.
J5P3565

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L01872

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

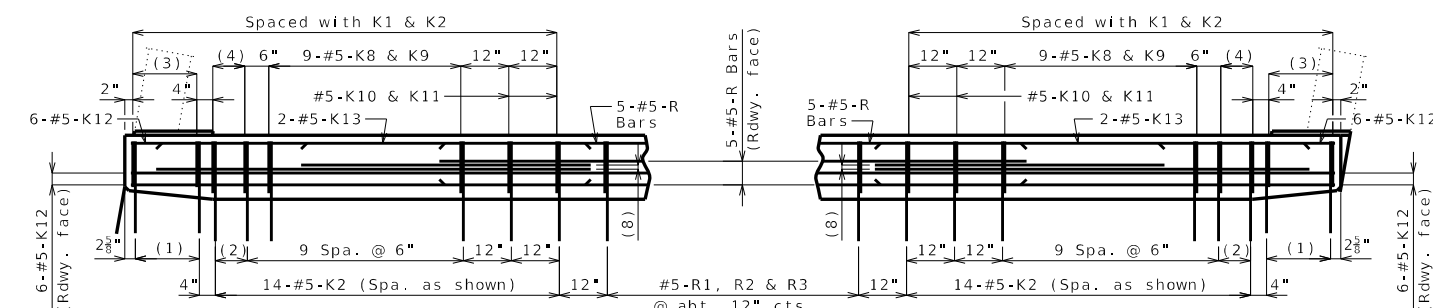
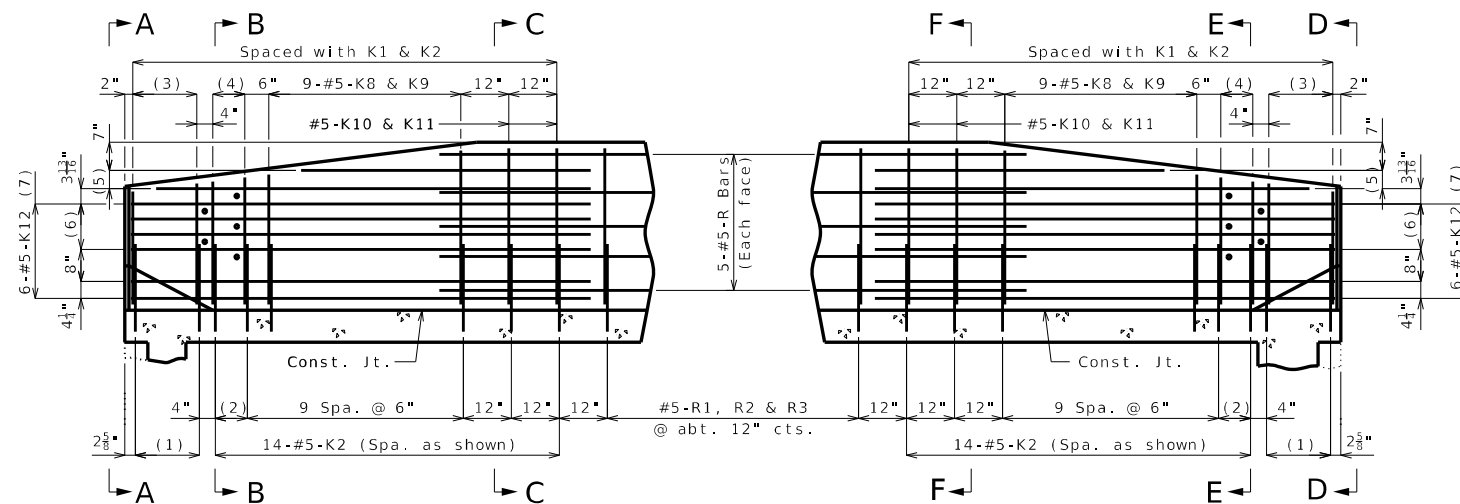
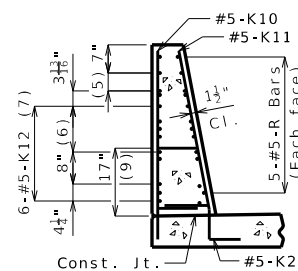
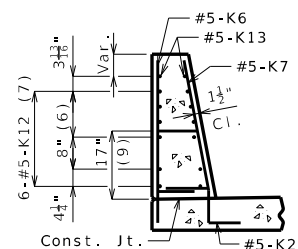
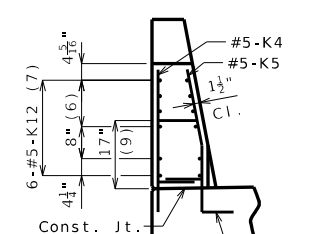
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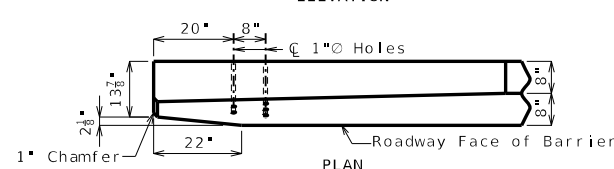
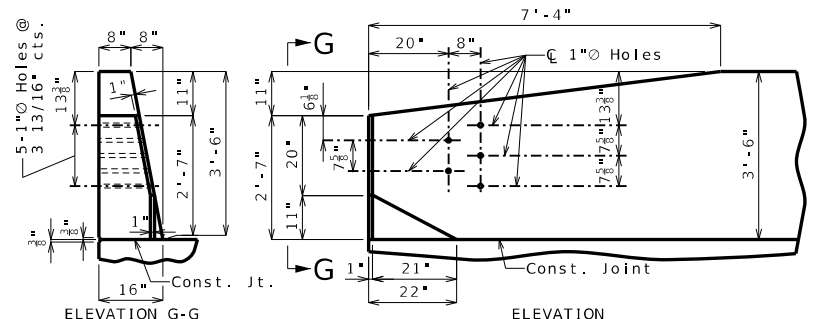
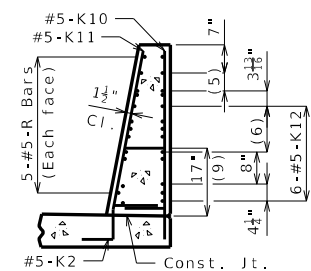
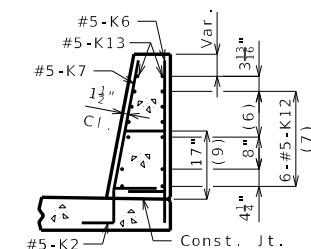
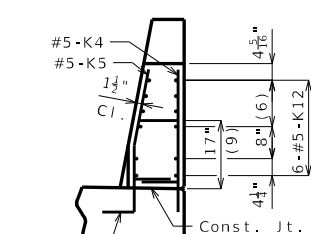


Joint filler and anything incidental to its installation will be considered completely covered by the contract unit price for Slab on Steel.





PART PLAN
(Top of barrier not shown for clarity.)



DETAILS OF GUARD RAIL ATTACHMENT

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 2-#5-K13 @ $4\frac{1}{2}$ " cts., each face
- (6) 3 spaces @ $3\frac{13}{16}$ "
- (7) Spaced as shown, each face
- (8) 2-#5-K13 (Roadway face)
- (9) To top of bar

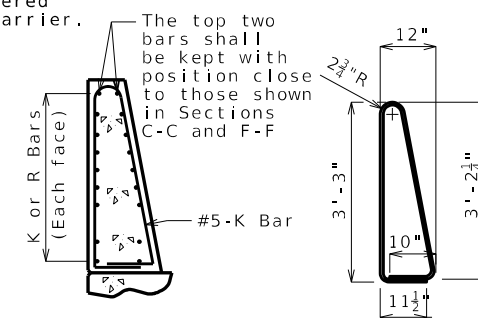
General Notes:

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

Reinforcing Steel :

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

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



K10-K11 BAR PERMISSIBLE
ALTERNATE SHAPE

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar)



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DATE PREPARED

ROUTE	STA
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42	MM
DISTRICT	SHEET

DR	7
COUNTY	

JOB NO.

CONTRACT ID.

PROJECT NO. _____

BRIDGE NO. _____

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

Kimley»Horn

A.A.D.T. - 2024 = 360
A.A.D.T. - 2044 = 504
V = 55 M.P.H.

FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

KEY MAP
LOCATION OF MARIES COUNTY

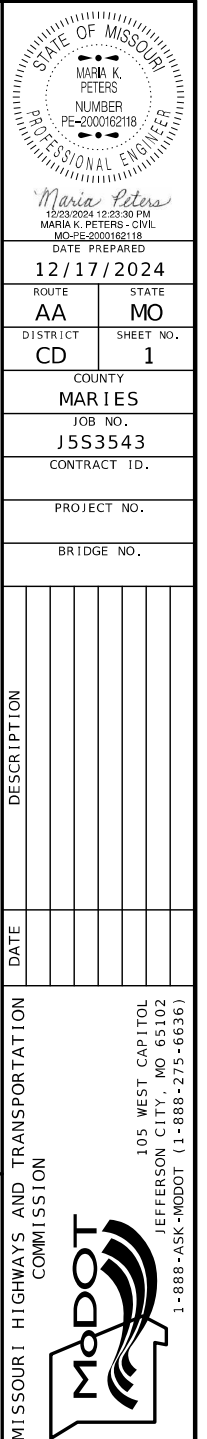
NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

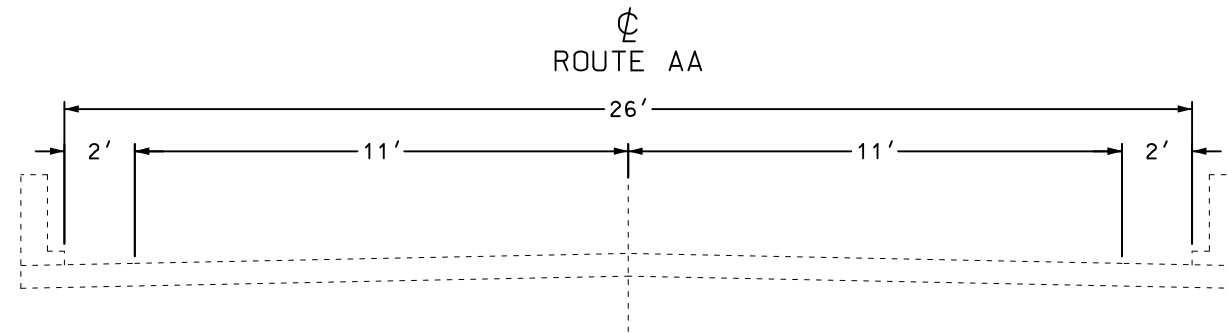
The map illustrates the Maries River area, showing the Southwestern Railway and the towns of Koeltztown, Argyle, and Freeburg. The Osage County Line and Maries County Line are also indicated. Key features include:

- Southwestern Railway:** A line running from the top left towards the bottom right, with a section labeled "SOUTHWESTERN RAILWAY" in the center.
- Towns:** Koeltztown (top left), Argyle (center left), and Freeburg (center right).
- County Lines:** Osage County Line (dashed line) and Maries County Line (solid line).
- Rivers:** Little Maries River and Maries River.
- Bridge A1857:** Located near Argyle, with a redeck of 0.061 miles.
- Bridge A1858:** Located near Freeburg, with a redeck of 0.070 miles.
- Mile Markers:** BEGIN LM 1.880, END LM 1.941, and BEGIN LM 2.017.
- Other Labels:** AA, T, P, and 63 (road markers).

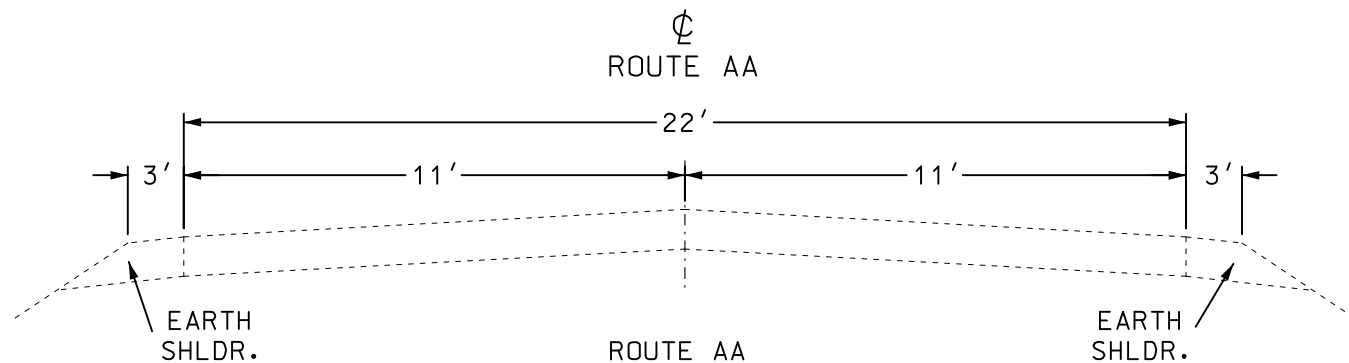
THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY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

TOTAL CORRECTIONS	0.000	FEET
NET LENGTH OF PROJECT	691.68	FEET
STATE LENGTH	0.131	MILES
FOR INFORMATION ONLY		
ESTIMATED DISTURBED ACRES	0.2	ACRES

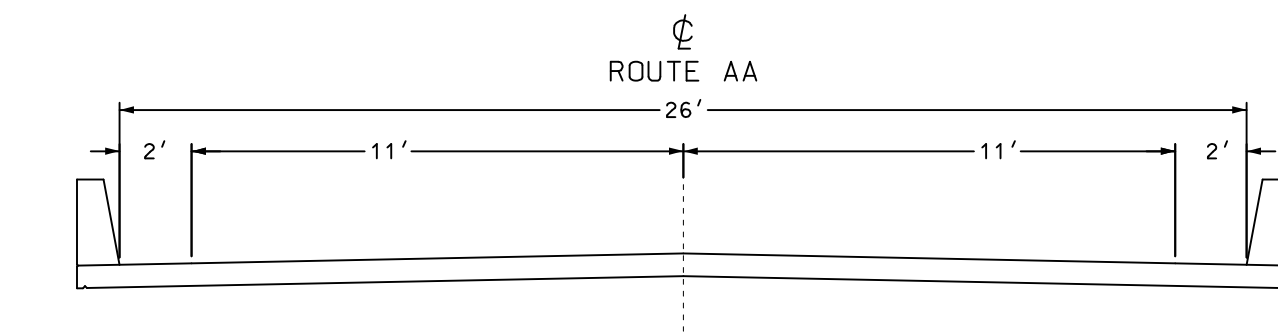




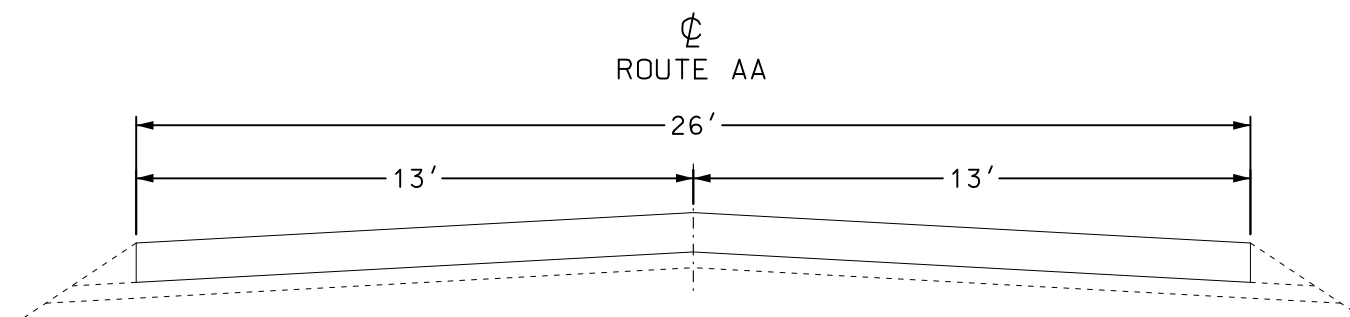
ROUTE AA
EXIST. TYPICAL SECTIONS ON TANGENT
LM 1.893 TO LM 1.927 (BRIDGE A1857)
LM 2.030 TO LM 2.074 (BRIDGE A1858)



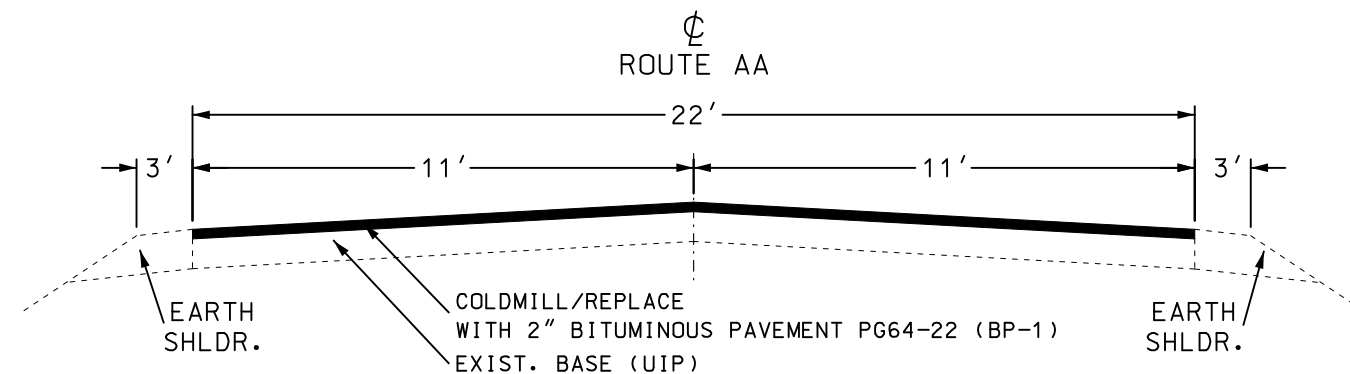
ROUTE AA
EXIST. TYPICAL SECTIONS ON TANGENT
(EXIST. ROADWAY AT BRIDGE)
LM 1.880 TO LM 1.893 (BRIDGE A1857)
LM 1.927 TO LM 1.941 (BRIDGE A1857)
LM 2.017 TO LM 2.030 (BRIDGE A1858)
LM 2.074 TO LM 2.087 (BRIDGE A1858)



ROUTE AA
PROPOSED TYPICAL SECTIONS ON TANGENT
LM 1.893 TO LM 1.927 (BRIDGE A18571)
LM 2.030 TO LM 2.074 (BRIDGE A18581)



ROUTE AA
PROPOSED TYPICAL SECTIONS ON TANGENT
(BRIDGE APPROACH SLAB)
LM 1.889 TO LM 1.893 (BRIDGE A18571)
LM 1.927 TO LM 1.931 (BRIDGE A18571)
LM 2.026 TO LM 2.030 (BRIDGE A18581)
LM 2.074 TO LM 2.078 (BRIDGE A18581)



ROUTE AA
PROPOSED TYPICAL SECTIONS ON TANGENT
(ROADWAY AT BRIDGE APPROACH SLAB)
LM 1.880 TO LM 1.889 (BRIDGE A18571)
LM 1.931 TO LM 1.941 (BRIDGE A18571)
LM 2.017 TO LM 2.026 (BRIDGE A18581)
LM 2.078 TO LM 2.087 (BRIDGE A18581)

ESTIMATE FACTORS	
BITUMINOUS PAVEMENT PG64-22 (BP-1)	1.948 TONS/YD ³
TACK COAT (COLDMILLING)	0.10 GAL/YD ²

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI

MARIA K. PETERS

NUMBER

PE-2000162118

PROFESSIONAL ENGINEER

DATE PREPARED

12/20/2024

ROUTE

AA

STATE

MO

DISTRICT

CD

SHEET NO.

2

COUNTY

MARIES

JOB NO.

J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

MODOT

ASPHALT (PLANT MIX BITUMINOUS PAVEMENT PG64-22)								
LOG MILE	LOG MILE	LOCATION	LENGTH LF	WIDTH FT	AREA SY	ASPHALT (1.948 TON / CY) TON	TACK GAL	REMARKS
1.880	1.889	RTE. AA	50	22	122.2	13.22	12.2	NORTH / BRIDGE A18571
1.931	1.941	RTE. AA	50	22	122.2	13.22	12.2	SOUTH / BRIDGE A18571
2.017	2.026	RTE. AA	50	22	122.2	13.22	12.2	NORTH / BRIDGE A18581
2.078	2.087	RTE. AA	50	22	122.2	13.22	12.2	SOUTH / BRIDGE A18581
					SUB-TOTAL	52.88	48.8	
					USE	53	49	

REMOVAL OF IMPROVEMENTS					
LOG MILE	LOG MILE	LOCATION	ITEM	QUANTITY	REMARKS
1.892		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18571 / NORTH / RT
1.894		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18571 / NORTH / LT
1.922		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18571 / SOUTH / RT
1.924		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18571 / SOUTH / LT
1.889		RTE. AA	SAW CUT	26 FT	BRIDGE A18571
	1.931	RTE. AA	SAW CUT	26 FT	BRIDGE A18571
1.889	1.893	RTE. AA	PAVEMENT REMOVAL	57.7 SY	BRIDGE A18571 APPROACH SLAB (NORTH)
1.927	1.931	RTE. AA	PAVEMENT REMOVAL	57.7 SY	BRIDGE A18571 APPROACH SLAB (SOUTH)
2.029		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18581 / NORTH / LT
2.031		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18581 / NORTH / RT
2.073		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18581 / SOUTH / LT
2.075		RTE. AA	OBJECT MARKER & POST	1 EA	BRIDGE A18581 / SOUTH / RT
2.026		RTE. AA	SAW CUT	26 FT	BRIDGE A18581
	2.078	RTE. AA	SAW CUT	26 FT	BRIDGE A18581
2.026	2.030	RTE. AA	PAVEMENT REMOVAL	57.7 SY	BRIDGE A18581 APPROACH SLAB (NORTH)
2.074	2.078	RTE. AA	PAVEMENT REMOVAL	57.7 SY	BRIDGE A18581 APPROACH SLAB (SOUTH)
			USE	1 LUMP SUM	

TEMPORARY EROSION CONTROL						
LOG MILE	LOG MILE	LOCATION	SILT FENCE LF	SEDIMENT REMOVAL CY	TYPE C BERM LF	REMARKS
		RTE. AA / LT	100.00	1		BRIDGE A18571 / NORTH
		RTE. AA / RT	85.00	1		BRIDGE A18571 / NORTH
UNDER BRIDGE		RTE. AA / RT			155.00	BRIDGE A18571 / NORTH
		RTE. AA / LT	85.00	1		BRIDGE A18571 / SOUTH
		RTE. AA / RT	95.00	2		BRIDGE A18571 / SOUTH
UNDER BRIDGE		RTE. AA / RT			155.00	BRIDGE A18571 / SOUTH
		RTE. AA / LT	85.00	1		BRIDGE A18581 / NORTH
		RTE. AA / RT	65.00	1		BRIDGE A18581 / NORTH
UNDER BRIDGE		RTE. AA / RT			155.00	BRIDGE A18581 / NORTH
		RTE. AA / LT	100.00	2		BRIDGE A18581 / SOUTH
		RTE. AA / RT	85.00	1		BRIDGE A18581 / SOUTH
UNDER BRIDGE		RTE. AA / RT			155.00	BRIDGE A18581 / SOUTH
		TOTAL	700.0	10.0	620.0	
		USE	700	10	620	

SEEDING AND MULCH					
LOG MILE	LOG MILE	LOCATION	SEEDING COOL SEASON GRASSES (AC)	MULCHING (AC)	REMARKS
1.889	1.893	ROUTE AA / LT	0.02	0.02	BRIDGE A18571 / NORTH END
1.889	1.893	ROUTE AA / RT	0.02	0.02	BRIDGE A18571 / NORTH END
1.927	1.931	ROUTE AA / LT	0.02	0.02	BRIDGE A18571 / SOUTH END
1.927	1.931	ROUTE AA / RT	0.02	0.02	BRIDGE A18571 / SOUTH END
2.026	2.030	ROUTE AA / LT	0.02	0.02	BRIDGE A18581 / NORTH END
2.026	2.030	ROUTE AA / RT	0.02	0.02	BRIDGE A18581 / NORTH END
2.074	2.078	ROUTE AA / LT	0.02	0.02	BRIDGE A18581 / SOUTH END
2.074	2.078	ROUTE AA / RT	0.02	0.02	BRIDGE A18581 / SOUTH END
		TOTAL	0.16	0.16	
		USE	1.0	1.0	

PAVEMENT MARKING						
WATERBORNE PAVEMENT MARKING – TYPE P BEADS						
LOG MILE	LOG MILE	LOCATION	LENGTH FT	4" INTER. YELLOW LF	4" SOLID WHITE LF	REMARKS
1.880	1.941	ROUTE AA	322.08	80.5	644.2	BRIDGE A1857
1.941	2.017	ROUTE AA	401.28	100.3	802.6	BETWEEN THE BRIDGES
2.017	2.087	ROUTE AA	369.60	92.4	739.2	BRIDGE A1858
			TOTAL	273.2	2186.0	
			USE	273	2186	

NOTE: ALL PAVEMENT MARKINGS TO MATCH EXISTING. LOCATE BEFORE MILLING OR RESURFACING.

TYPE 2 ROCK BLANKET					
SHEET NO.	LOCATION	FURNISHING ROCK BLANKET (CY)	PLACING ROCK BLANKET (CY)	GEOTEXTILE (SY)	REMARKS
5	ROUTE AA	97.9	97.9	199.0	BRIDGE A18571 / NORTH END
5	ROUTE AA	98.0	98.0	199.0	BRIDGE A18571 / SOUTH END
5	ROUTE AA	110.4	110.4	216.0	BRIDGE A18581 / NORTH END
5	ROUTE AA	98.4	98.4	199.0	BRIDGE A18581 / SOUTH END
	TOTAL	404.7	404.7	813.0	
	USE	405	405	813	

COLDMILLING (3" OR LESS)						
LOG MILE	LOG MILE	LOCATION	LENGTH LF	WIDTH FT	AREA SY	REMARKS
1.880	1.889	RTE. AA	50	22	122.2	NORTH / BRIDGE A18571
1.931	1.941	RTE. AA	50	22	122.2	SOUTH / BRIDGE A18571
2.017	2.026	RTE. AA	50	22	122.2	NORTH / BRIDGE A18581
2.078	2.087	RTE. AA	50	22	122.2	SOUTH / BRIDGE A18581
				SUB-TOTAL	488.8	
				USE	489	

CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM

MOBILIZATION
1 LUMP SUM

SUMMARY OF QUANTITIES
SHEET 1 OF 2



DATE PREPARED
1/15/2025

ROUTE AA	STATE MO
DISTRICT CD	SHEET NO. 3

COUNTY
MARIES

JOB NO.
J553543

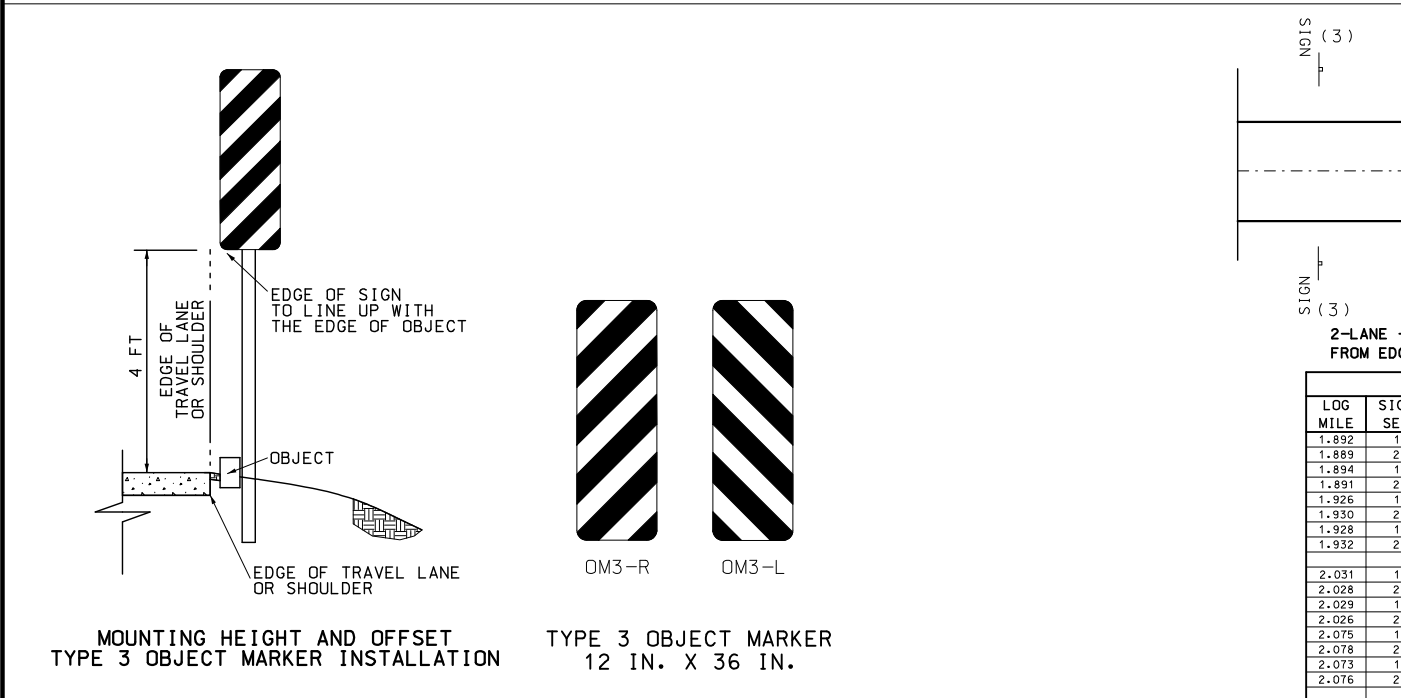
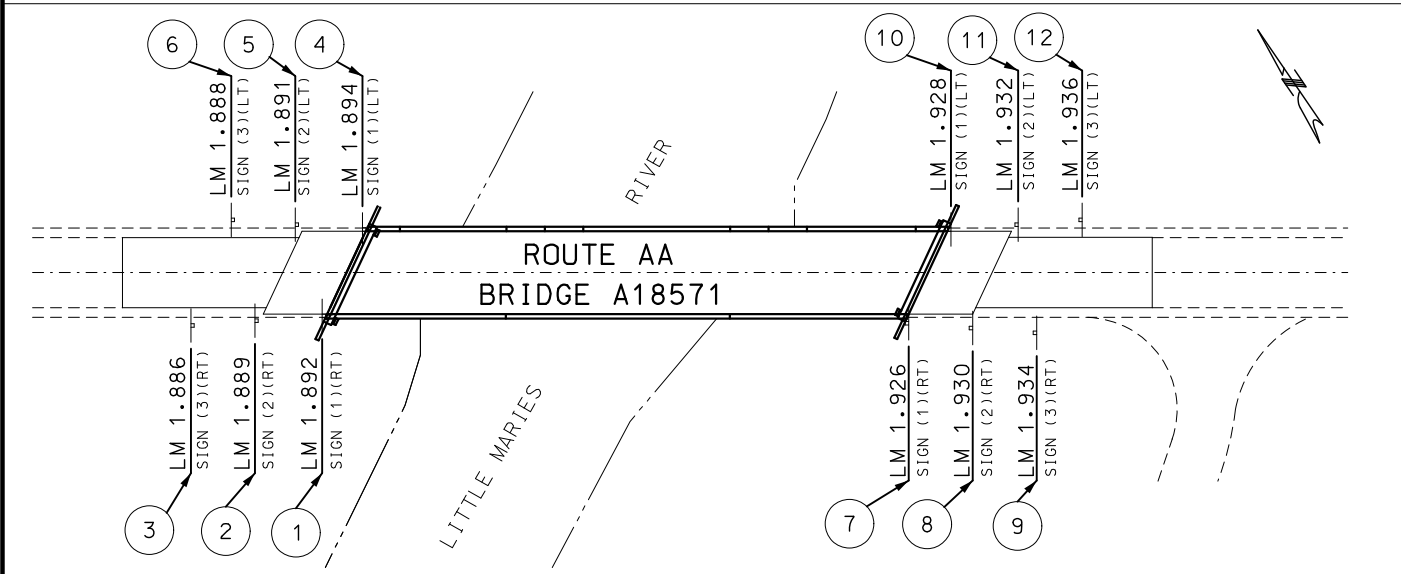
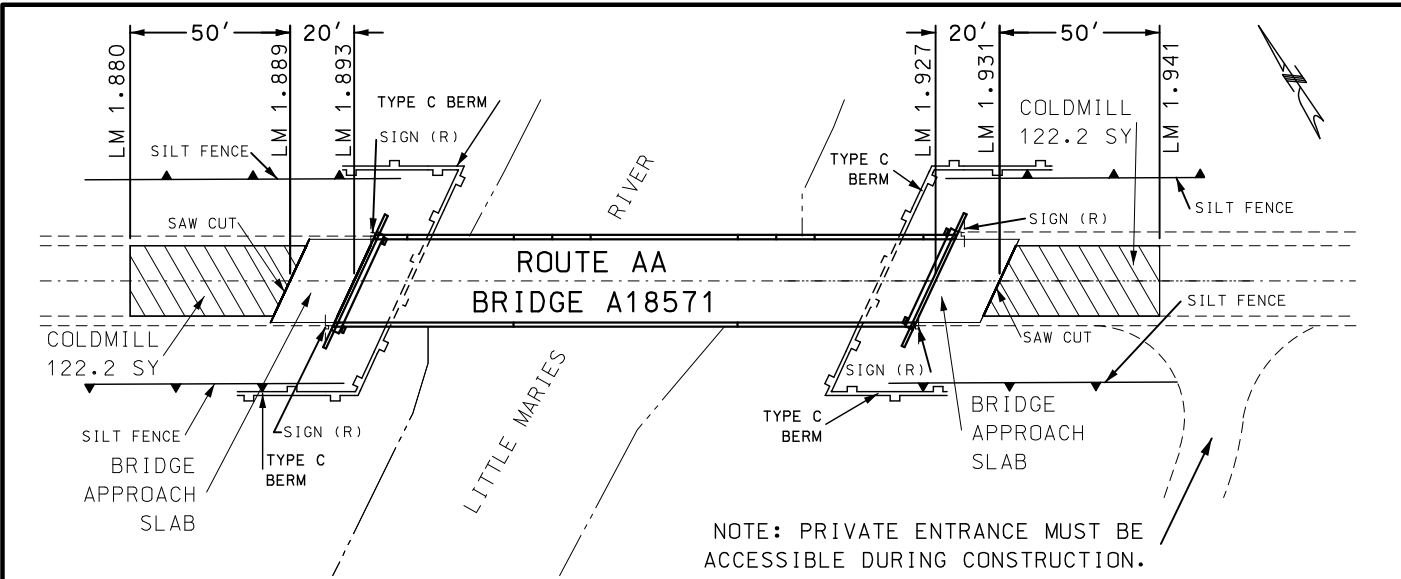
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PROJECT NO.

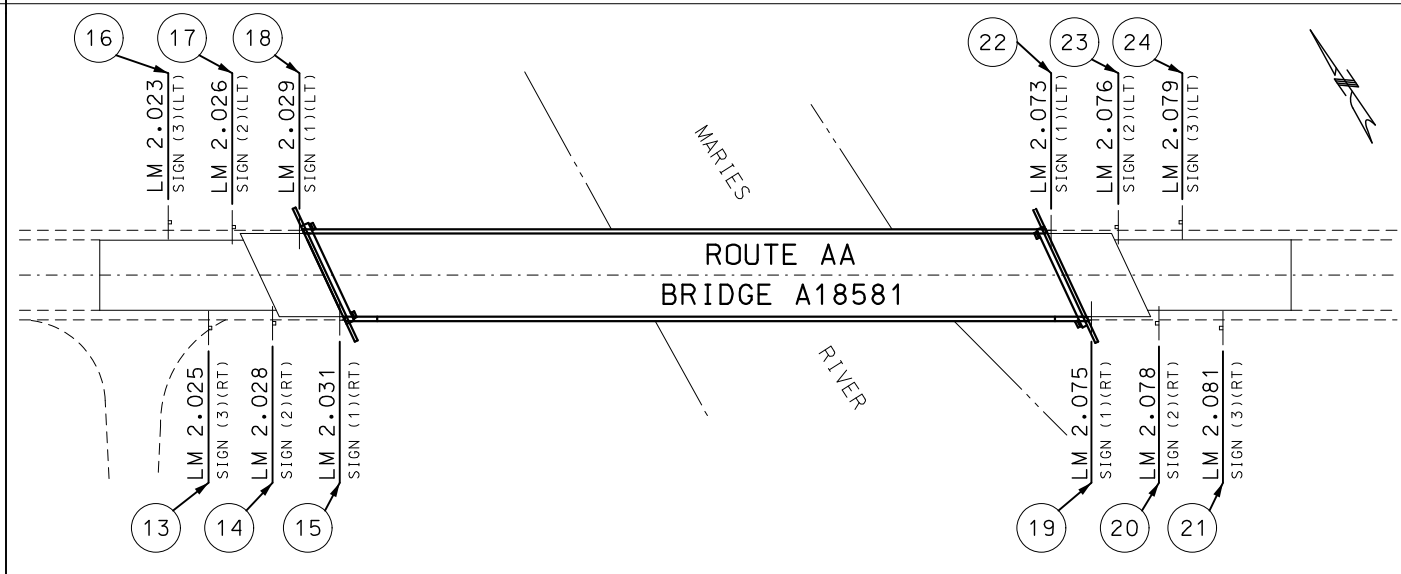
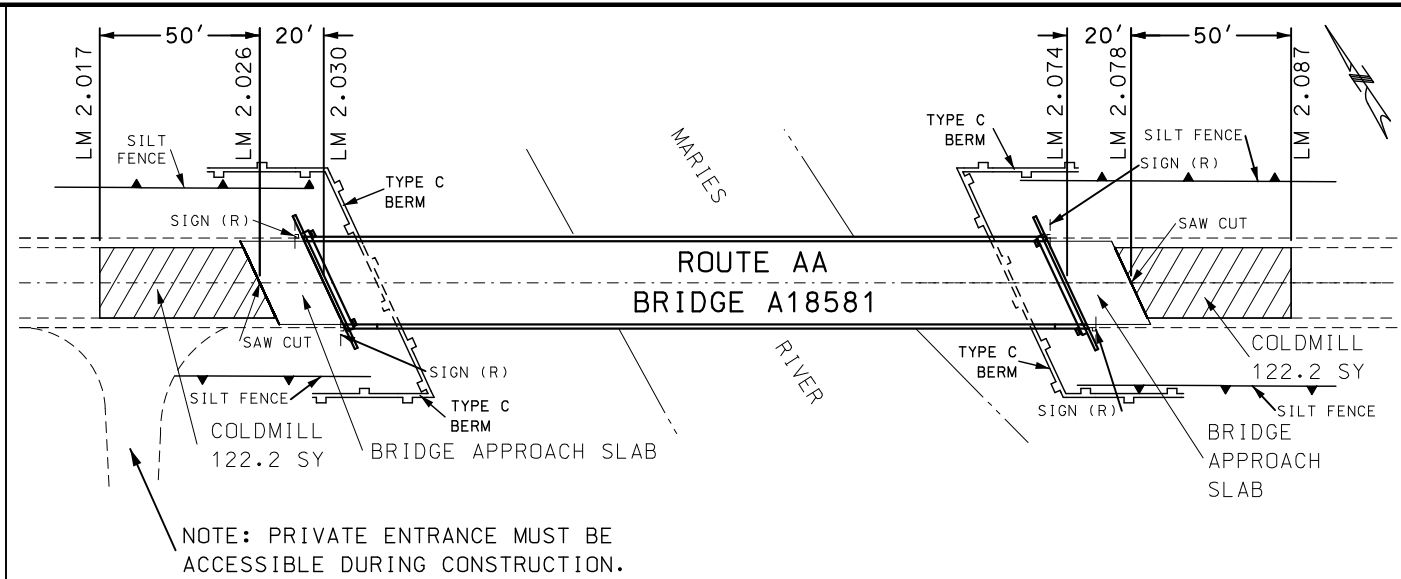
BRIDGE NO.

DESCRIPTION	DATE					





(1) PLACED AS NEAR THE OBSTRUCTION AS POSSIBLE AND SET TO LINE UP WITH INSIDE EDGE OF OBSTRUCTION.
(2) PLACED 1.5 FEET OFF THE EDGE OF PAVEMENT AND 20 FEET FROM THE END OF THE OBSTRUCTION.
(3) PLACED 3.0 FEET OFF THE EDGE OF PAVEMENT AND 40 FEET FROM THE END OF THE OBSTRUCTION.



OBJECT MARKERS				
LOG MILE	SIGN SET	LOCATION	BRIDGE	REMARKS
1.892	1	RTE. AA / RT	A18571	NORTH OF BRIDGE
1.889	2	RTE. AA / RT	A18571	NORTH OF BRIDGE
1.894	1	RTE. AA / LT	A18571	NORTH OF BRIDGE
1.891	2	RTE. AA / LT	A18571	NORTH OF BRIDGE
1.926	1	RTE. AA / RT	A18571	SOUTH OF BRIDGE
1.930	2	RTE. AA / RT	A18571	SOUTH OF BRIDGE
1.928	1	RTE. AA / LT	A18571	SOUTH OF BRIDGE
1.932	2	RTE. AA / LT	A18571	SOUTH OF BRIDGE
2.031	1	RTE. AA / RT	A18581	NORTH OF BRIDGE
2.028	2	RTE. AA / RT	A18581	NORTH OF BRIDGE
2.023	1	RTE. AA / LT	A18581	NORTH OF BRIDGE
2.026	2	RTE. AA / LT	A18581	NORTH OF BRIDGE
2.075	1	RTE. AA / RT	A18581	SOUTH OF BRIDGE
2.078	2	RTE. AA / RT	A18581	SOUTH OF BRIDGE
2.073	1	RTE. AA / LT	A18581	SOUTH OF BRIDGE
2.076	2	RTE. AA / LT	A18581	SOUTH OF BRIDGE

NOT TO SCALE

STATE OF MISSOURI
MARIA K. PETERS
NUMBER
PE-2000162118
PROFESSIONAL ENGINEER

DATE PREPARED
12/20/2024

ROUTE
AA

DISTRICT
CD

COUNTY
MARIES

JOB NO.
J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

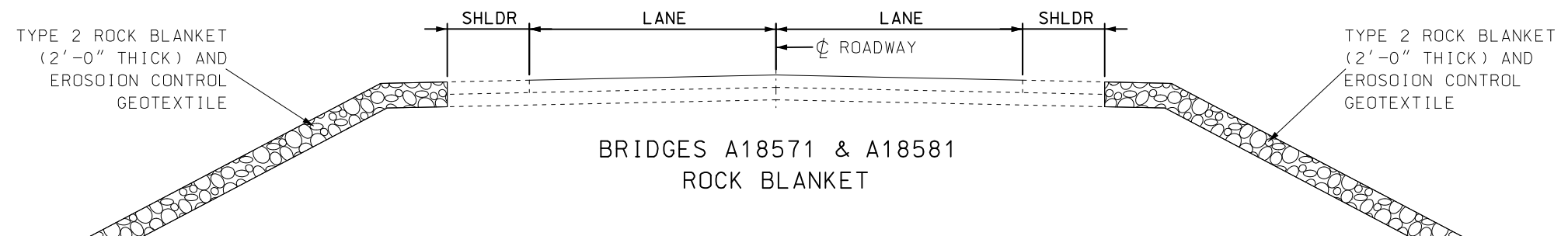
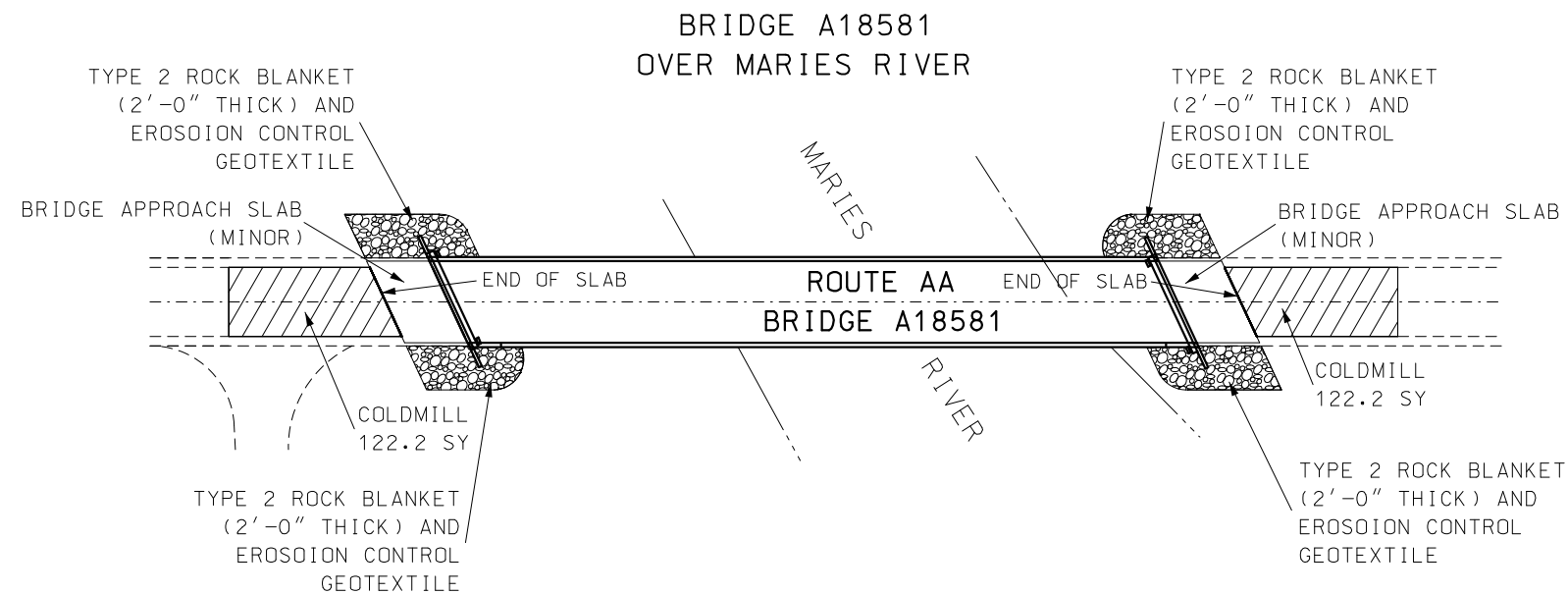
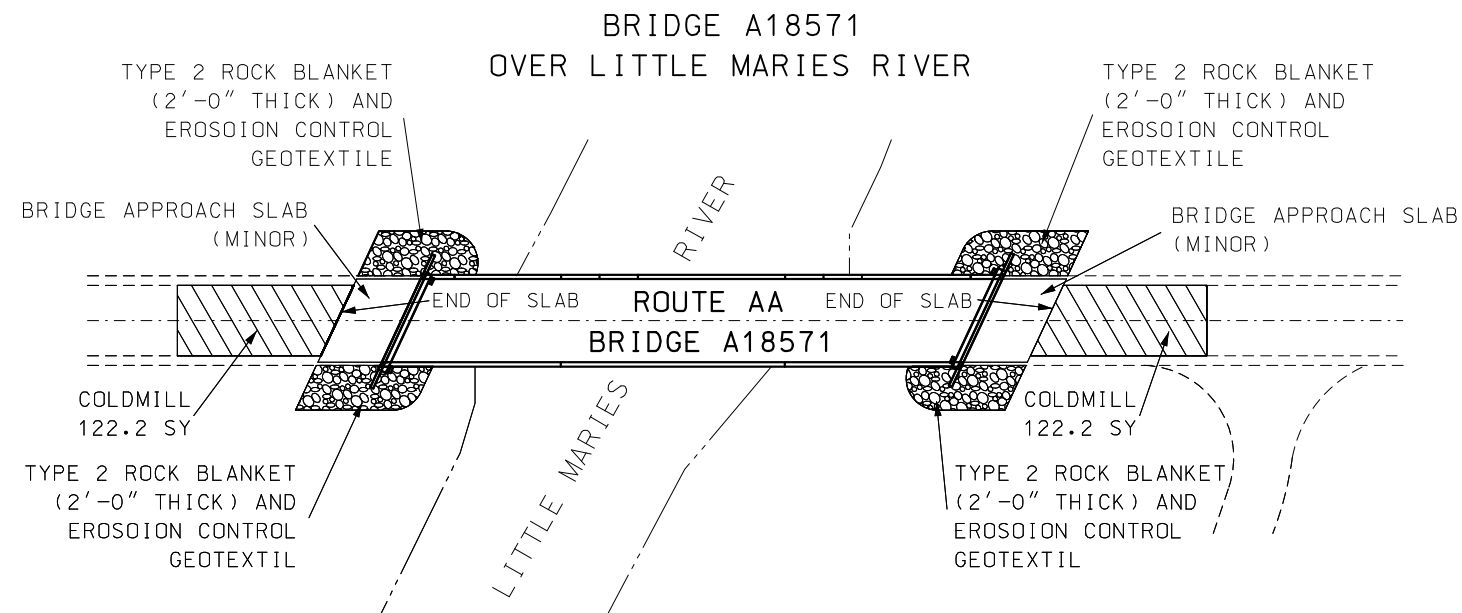
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

SPECIAL SHEET
SHEET 1 OF 2



BRIDGE A18571
REMOVE EXIST. BRIDGE DECK
(45'-70'-45')
INSTALL NEW BRIDGE DECK
WIDTH 26'-0" PLUS 16"
TYPE D BARRIERS EACH SIDE

BRIDGE A18581
REMOVE EXIST. BRIDGE DECK
(70'-90'-70')
INSTALL NEW BRIDGE DECK
WIDTH 26'-0" PLUS 16"
TYPE D BARRIERS EACH SIDE.
INCLUDES FOOTING COLLARS
AROUND FOOTINGS AT BENT 2
(WEST INTERMEDIATE BENT).

NOTES:
RUBBERIZED CONCRETE FROM THE EXIST. BRIDGE DECK
THAT QUALIFIES AS CLEAN FILL MAY BE PLACED ON
SPILL SLOPES AT END BENTS ABOVE ORDINARY HIGH
WATER LINE. NO DIRECT PAY.

REMOVE EXISTING OBJECT MARKERS (R).

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

GENERAL NOTE:
FOR DETAILS OF BRIDGE APPROACH SLAB (MINOR ROAD)
SEE BRIDGE PLANS.

CASE	FILL SLOPE PROTECTION
1	ROCK BLANKET FILL SLOPE

NOT TO SCALE

SPECIAL SHEET
SHEET 2 OF 2



Maria Peters
12/23/2024 12:24:38 PM
MARIA K. PETERS - CIVIL
MO-PE-2000162118

DATE PREPARED
12/17/2024

ROUTE	STATE
AA	MO

DISTRICT	SHEET NO.
CD	5

COUNTY
MAR IES

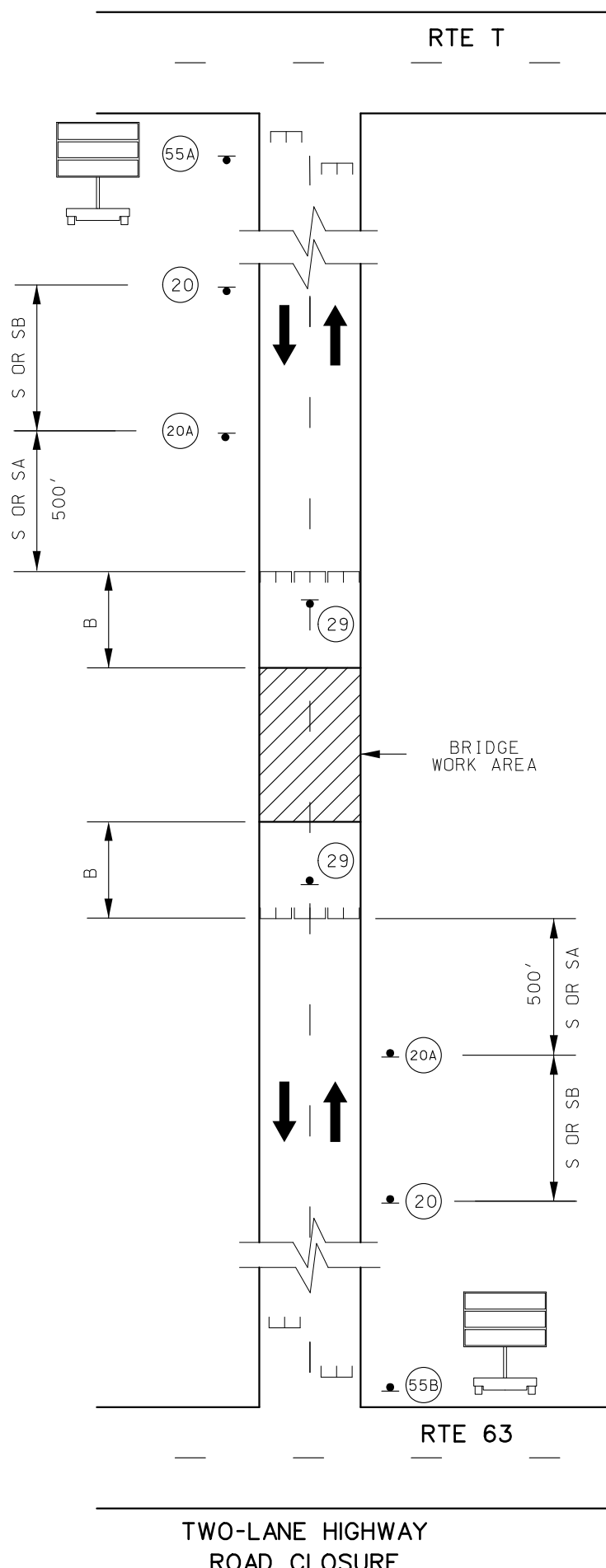
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1553543

1555543
CONTRACT ID.

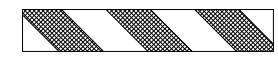
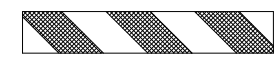
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COMMISSION

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



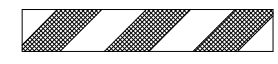
W020-3
(20)



AWRS



W020-3
(20A)



AWRS



R11-3a
(55A)



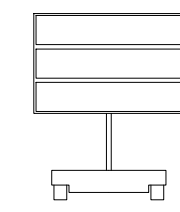
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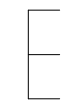
R11-2
(29)

SPEED NORMAL POSTED (mph)	SIGN SPACING (ft.)		CHANNELIZER SPACING (ft.)		TAPER LENGTH		BUFFER LENGTH (ft.) (B)
	UNDIVIDED (S)	DIVIDED (S)	THROUGH TAPERS	BUFFER/ WORK AREA	SHOULDER (T1)	LANE (T2)	
≤ 35	200	200	-	-	-	-	250
40-45	350	500	-	-	-	-	360
50-55	500	1000	-	-	-	-	495
60-70	1000	SA - 1000 SB - 1500 SC - 2640	-	-	-	-	730

1. Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.



- CHANGEABLE MESSAGE SIGN



- TYPE III MOVEABLE BARRICADE



- SIGN

GENERAL NOTES:

ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.

TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICE LOCATIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY RELOCATION OF SIGNS OR DEVICES FOR TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL, NO DIRECT PAY.

CONTRACTOR SHALL MAINTAIN ACCESS TO ENTRANCES AT ALL TIMES. CONTRACTOR SHALL COORDINATE ACCESS TO FIELD ENTRANCES WITH PROPERTY OWNERS.

NOTES:

ALL TRAFFIC CONTROL SIGNS SHOWN ON THIS SHEET ARE CONSIDERED PERMANENT FOR THE DURATION OF THIS PROJECT.

ONE BARRICADE SHALL BE REQUIRED TO COMPLETELY CLOSE EACH 8 FEET OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

ROAD CLOSED SIGN MAY BE PLACED 7-10 FEET BEHIND THE BARRICADES AND AT A SIGN HEIGHT APPROPRIATE TO THE TYPE OF ROADWAY.

THE ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY OR ROAD CLOSED TO THRU TRAFFIC SIGN SHOULD BE LOCATED AT THE FIRST STATE ROUTE OR, AT THE DISCRETION OF THE ENGINEER, AT ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE. ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR WORK VEHICLES, LOCAL TRAFFIC, ETC. NO DIRECT PAY.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 1 OF 4

STATE OF MISSOURI

MARIA K. PETERS

NUMBER
PE-2000162118

PROFESSIONAL ENGINEER

Maria K. Peters

12/23/2024 12:50:02 PM

MARIA K. PETERS - CIVIL

MO-PE-2000162118

DATE PREPARED
12/17/2024

ROUTE
AA

DISTRICT
CD

STATE
MO

SHEET NO.
6

COUNTY
MARIES

JOB NO.
J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

DETOUR

M04-8

AA

M1-5a

↑

M6-3

50A

DETOUR

M04-8

AA

M1-5a

↗

M5-1R

50B

DETOUR

M04-8

AA

M1-5a

→

M6-1

50C

DETOUR

M04-8

AA

M1-5a

↖

M5-1L

50D

DETOUR

M04-8

AA

M1-5a

←

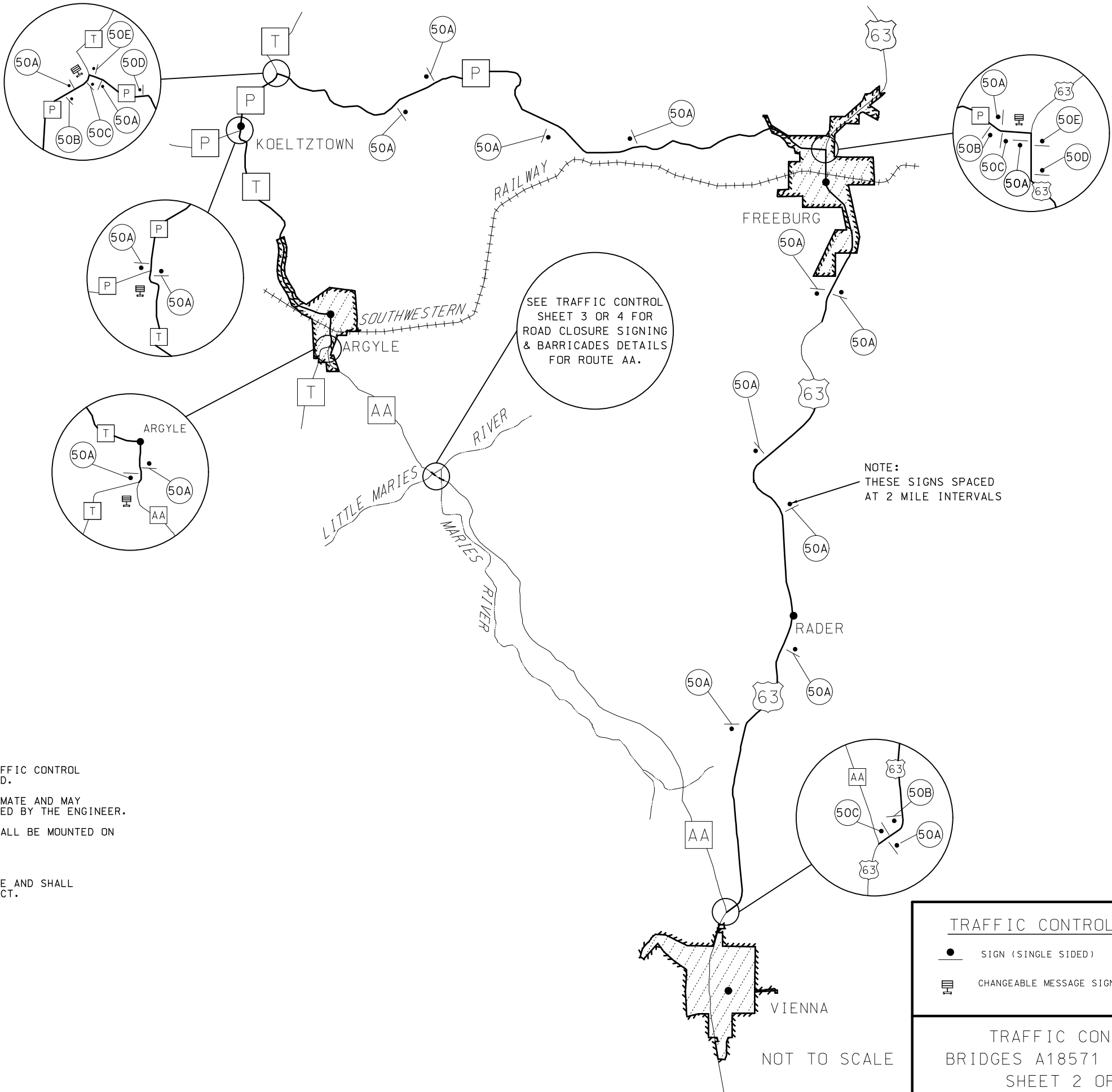
M6-1

50E

DETOUR 28 MILES

GENERAL NOTES:

- ANY EXISTING SIGN THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
- PLACEMENT OF TRAFFIC CONTROL SIGNS IS APPROXIMATE AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- R11-2 ASSOCIATED WITH TYPE III BARRICADES SHALL BE MOUNTED ON POST 7-10 FT. BEHIND BARRICADE.
- CMS MESSAGES AS APPROVED BY ENGINEER.
- ALL SIGNS SHOWN ON THIS SHEET ARE NON-PORTABLE AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
- SEE SHEET 1 OF 4 FOR SIGN SPACING.



TRAFFIC CONTROL LEGEND

●

SIGN (SINGLE SIDED)

Ⓜ

CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL
BRIDGES A18571 & A18581
SHEET 2 OF 4

STATE OF MISSOURI

MARIA K. PETERS

NUMBER

PE-2000162118

PROFESSIONAL ENGINEER

Maria Peters

12/23/2024 12:50:40 PM

MARIA K. PETERS - CIVIL

MO-PE-2000162118

DATE PREPARED

12/17/2024

ROUTE

AA

STATE

MO

DISTRICT

CD

SHEET NO.

7

COUNTY

MARIES

JOB NO.

J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

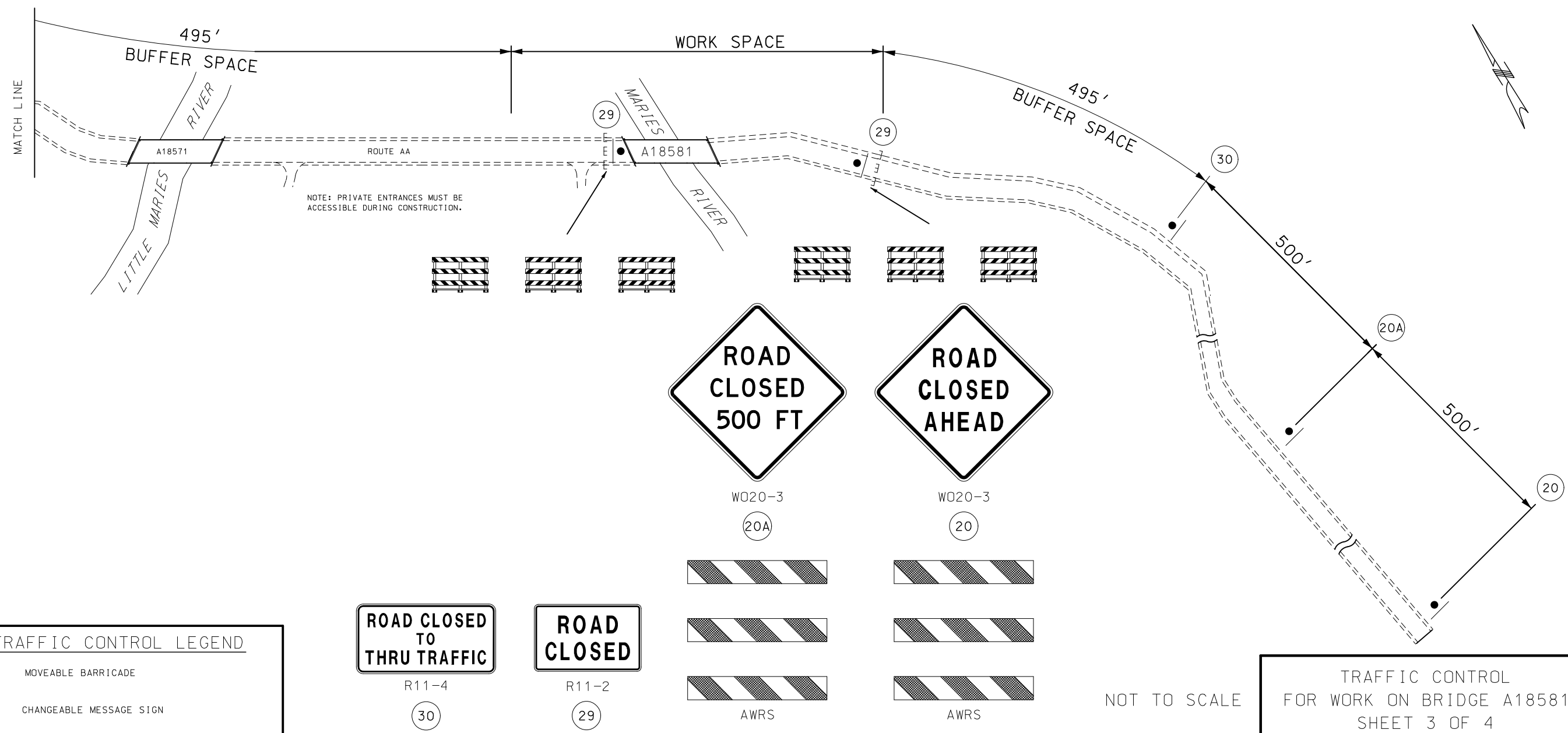
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

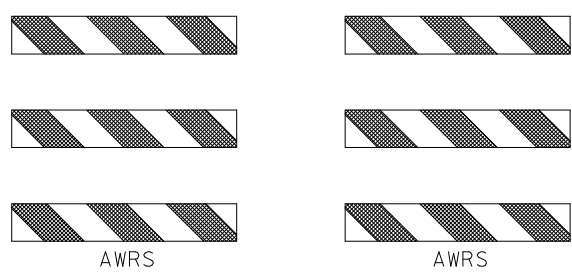
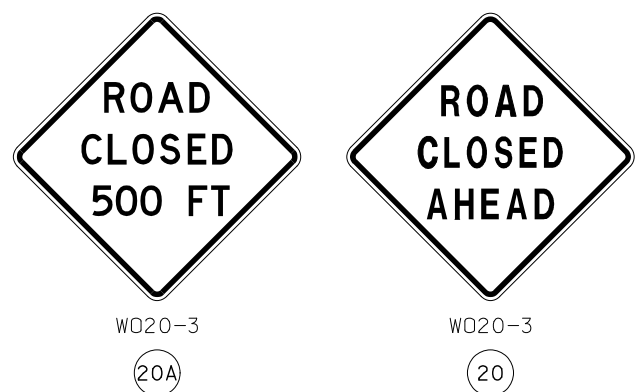
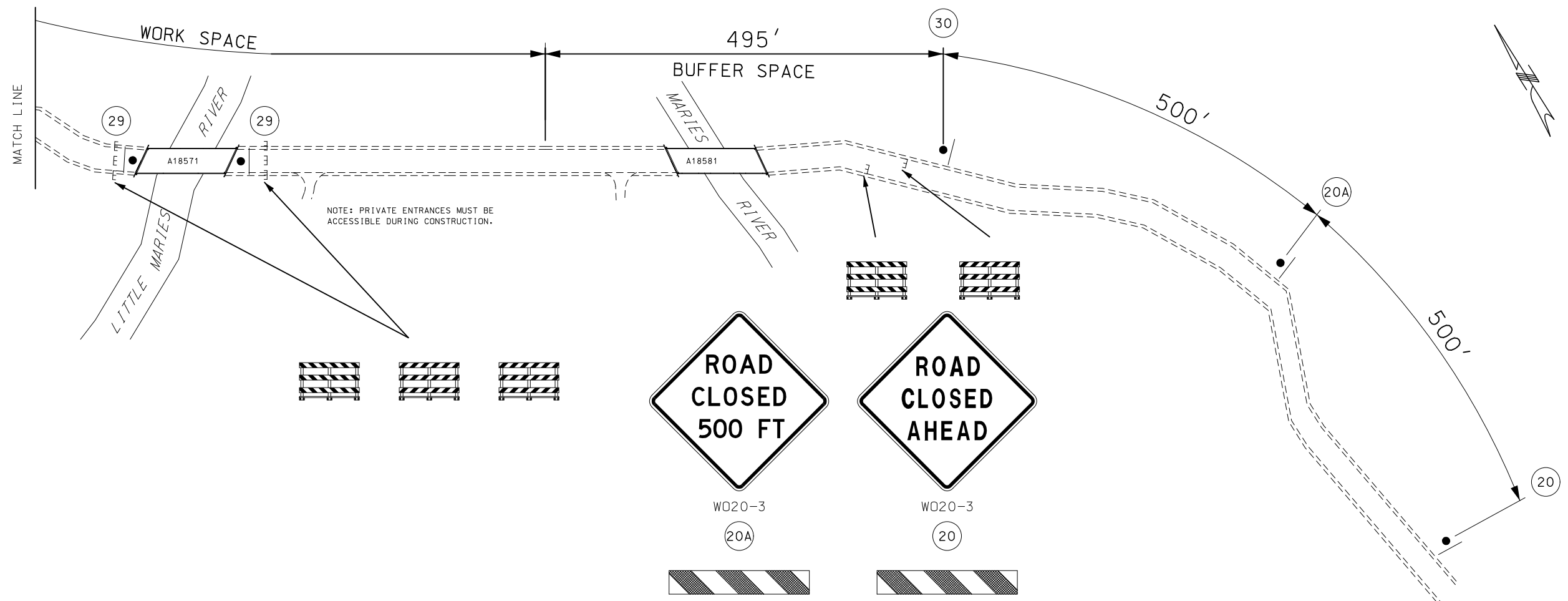
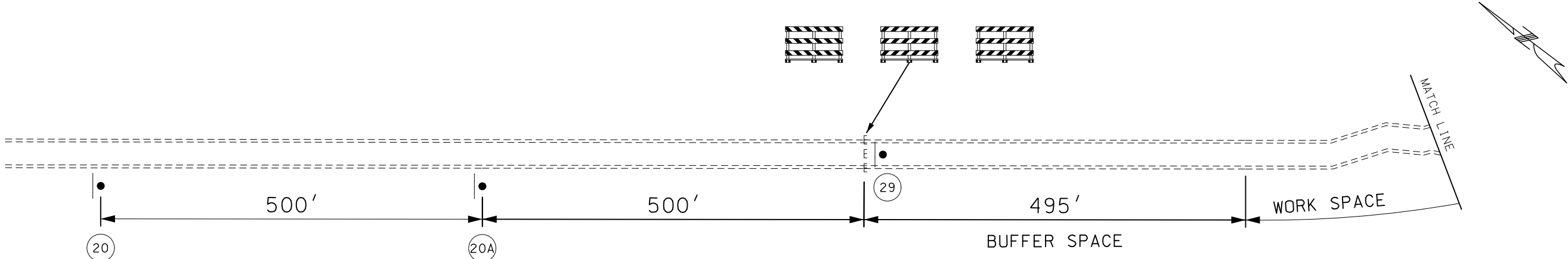
105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

MODOT





TRAFFIC CONTROL LEGEND

- MOVEABLE BARRICADE
- CHANGEABLE MESSAGE SIGN

NOT TO SCALE

TRAFFIC CONTROL
FOR WORK ON BRIDGE A18571
SHEET 4 OF 4

STATE OF MISSOURI

MARIA K. PETERS

NUMBER
PE-2000162118

PROFESSIONAL ENGINEER

Maria Peters

12/23/2024 12:52:22 PM

MARIA K. PETERS - CIVIL

MO-PE-2000162118

DATE PREPARED

12/17/2024

ROUTE

AA

STATE

MO

DISTRICT

CD

SHEET NO.

9

COUNTY

MARIES

JOB NO.

J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

General Notes:

Design Specifications:

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

Design Loading:

H15-44 (1961) (Existing)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Barrier) f'c = 4,000 psi
Class B-2 Concrete (End Bents & Superstructure, except Barrier) f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi

Joint Filler:

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

Reinforcing Steel:

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

Miscellaneous:

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

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

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

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

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

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

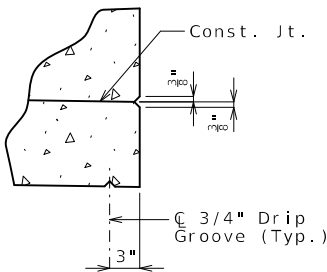
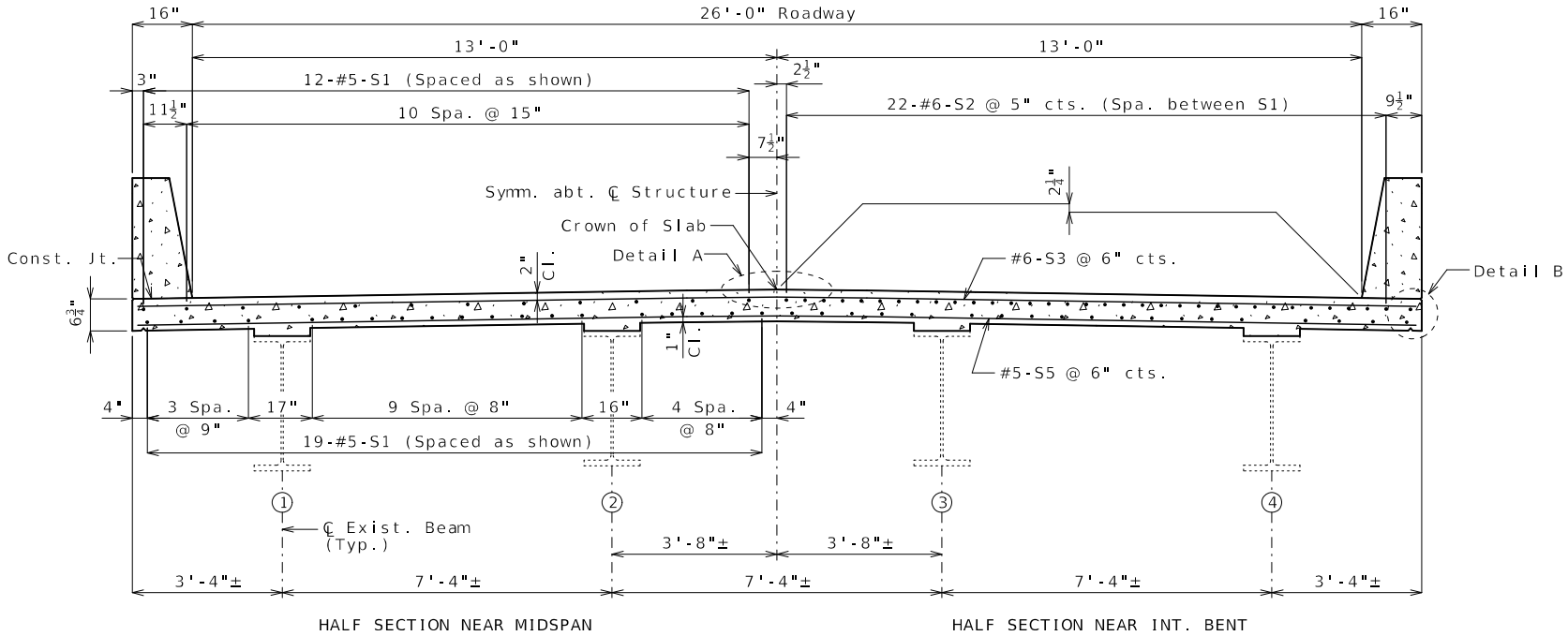
Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

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

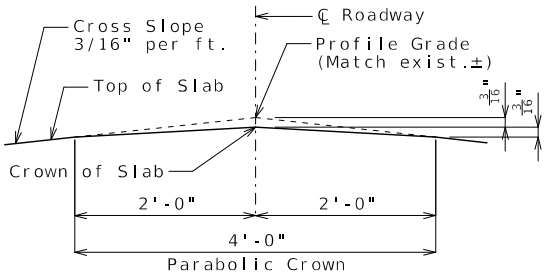
Traffic Handling:

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

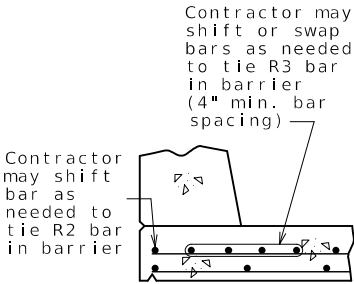
U.I.P., REDECK AND MAKE COMPOSITE EXISTING (54'-70'-54') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 25°00'00" L.A.)



DETAIL B



DETAIL A



OPTIONAL SHIFTING TOP BARS AT BARRIER

Estimated Quantities		
Item		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	16
Removal of Existing Bridge Deck	sq. foot	5226
Bridge Approach Slab (Minor)	sq. yard	118
Slab on Steel	sq. yard	579
Type D Barrier	linear foot	363
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Slab Drain	each	32
Surface Preparation for Applying Epoxy-Mastic Primer	lump sum	1
Gray Epoxy-Mastic Primer	lump sum	1
Non-Destructive Testing	linear foot	50

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

Required Lap Length For Bar Splices **	
Bar Size	Splice Length
4	2'-7"
5	3'-3"
6	3'-10"
7	4'-11"

** Unless otherwise shown.

Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
20'-0"	20'-6"	20'-6"	20'-0"

Estimated Quantities for Slab on Steel		
Item		Total
Class B-2 Concrete	cu. yard	124
Reinforcing Steel (Epoxy Coated)	pound	47,160

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

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

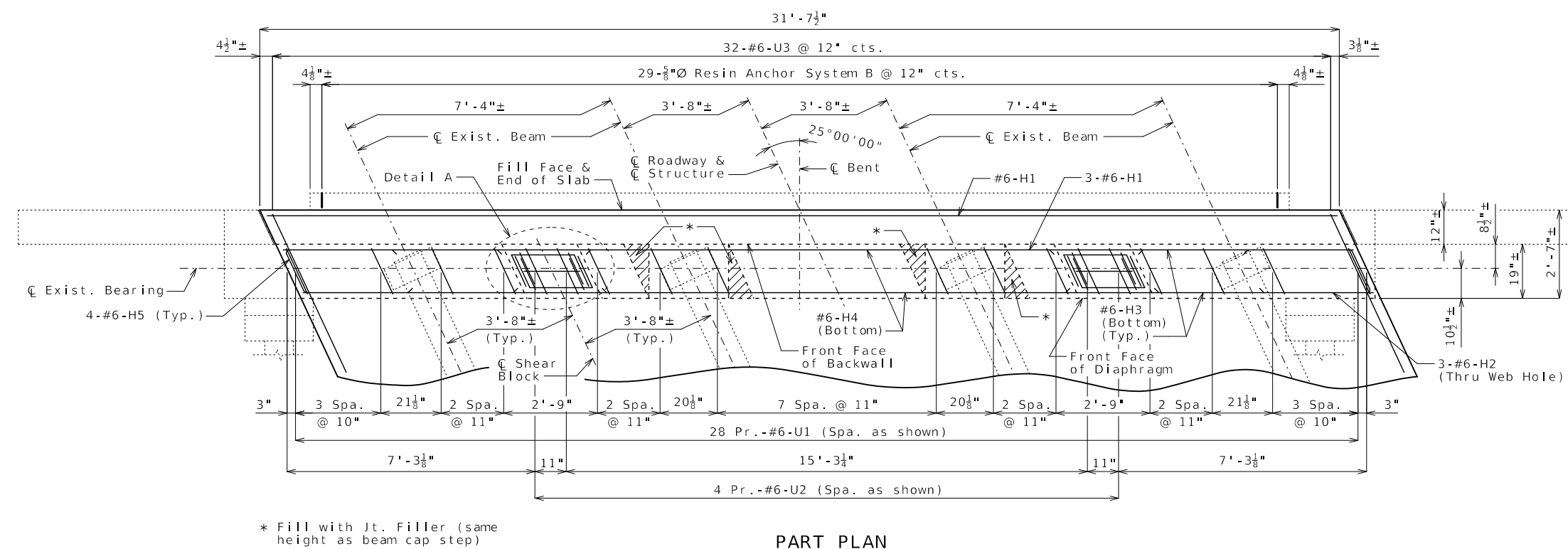
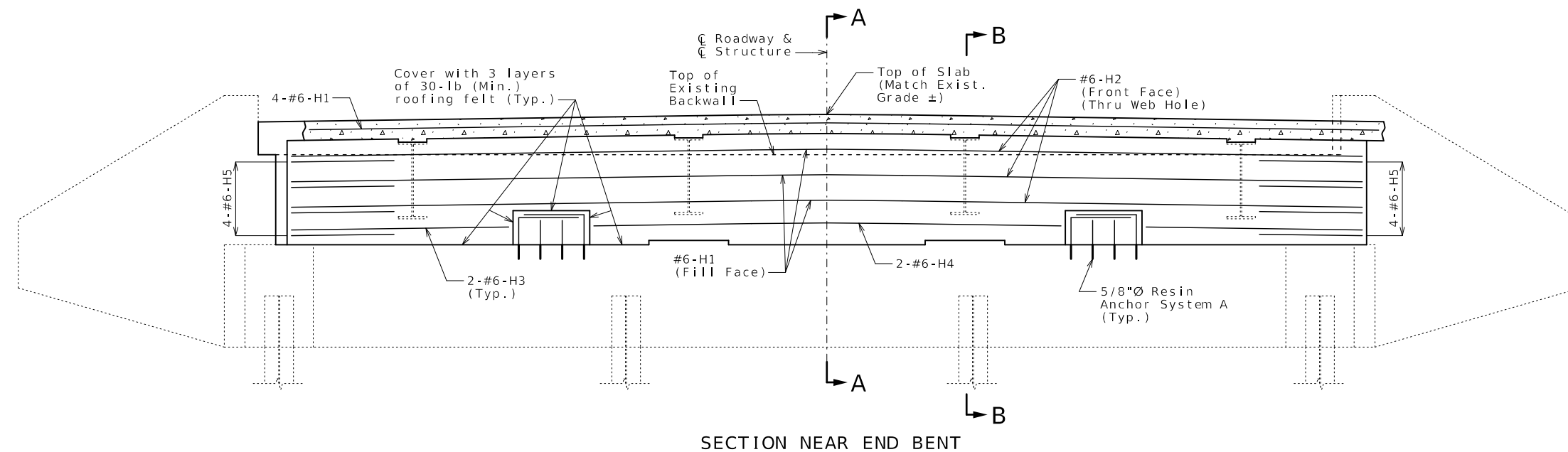
Slab shall be cast-in-place with conventional forming or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

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

Bridge deck surface may be finished with a vibratory screed.

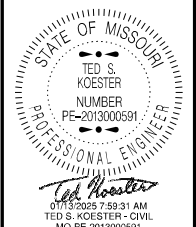
REPAIRS TO BRIDGE:
ROUTE AA OVER LITTLE MARIES RIVER

ROUTE AA FROM ROUTE T TO ROUTE 63
ABOUT 1.9 MILES SOUTH OF ROUTE T
BEGINNING STATION 100+84.50± (MATCH EXISTING)




DETAILS OF END BENTS NO. 1 & 4

Note: Work this sheet with Sheet No. 4.

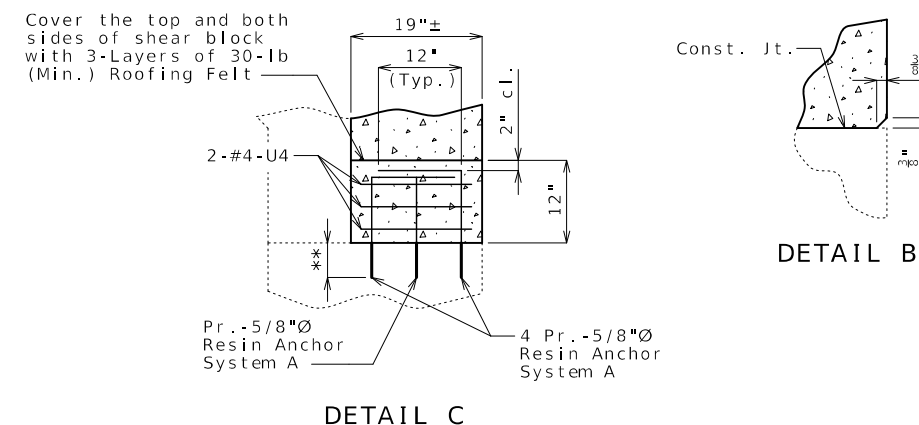
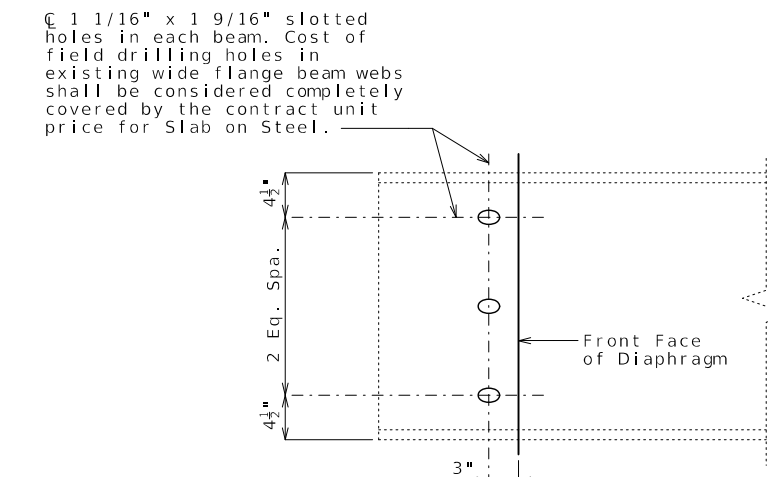
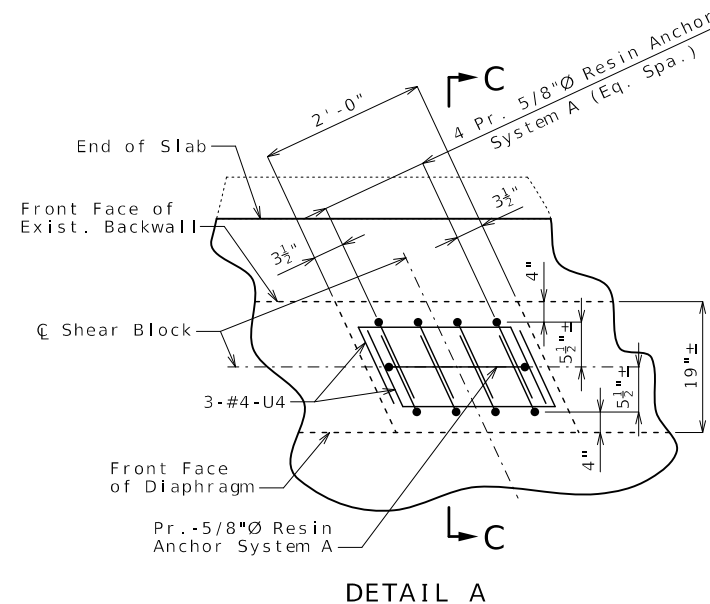
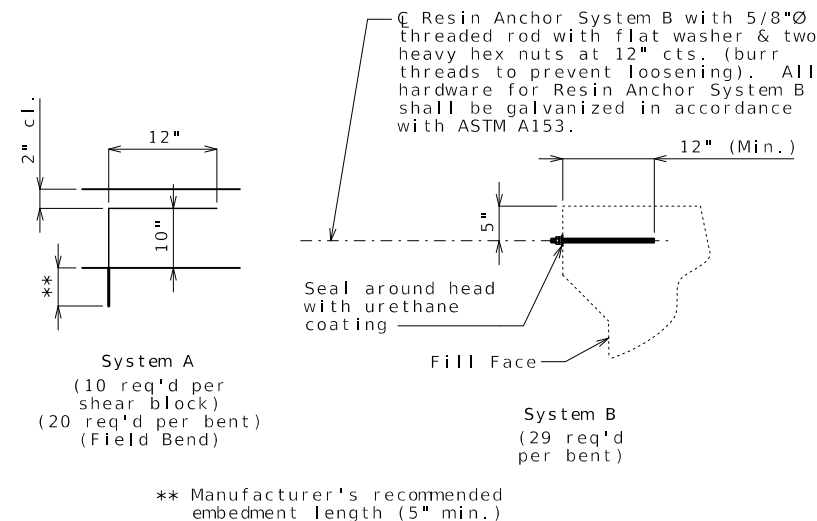
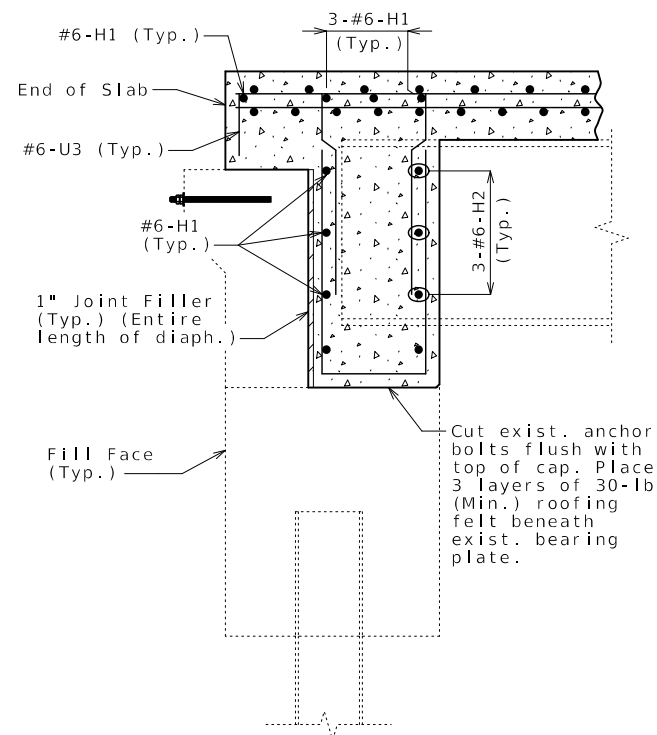
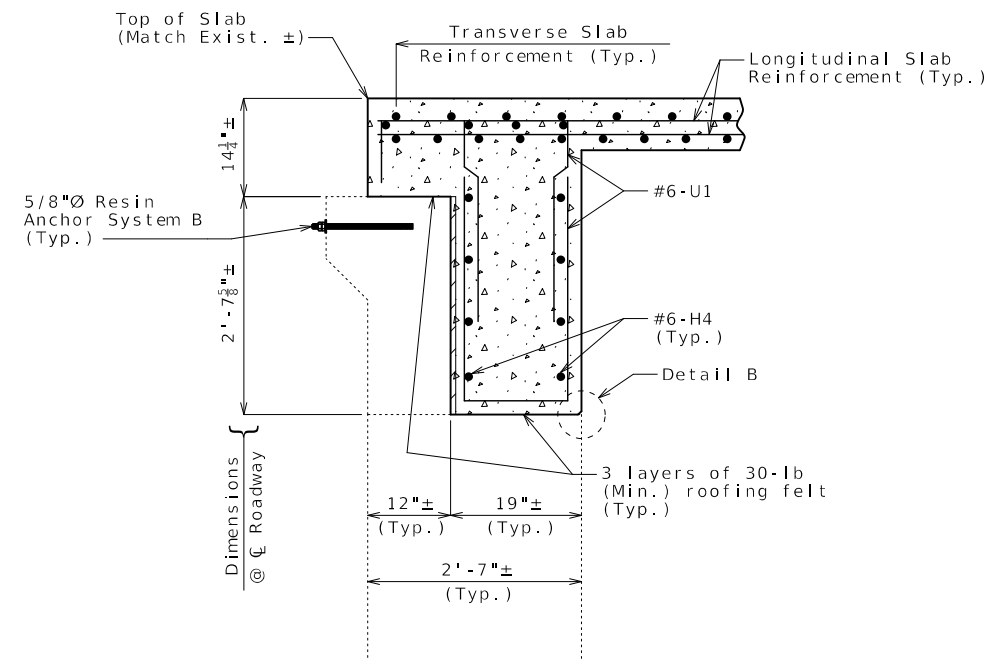


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DATE PREPARED	
1/13/2025	
ROUTE	STATE
AA	MO
DISTRICT	SHEET NO.
BR	3
COUNTY	
MARIES	
JOB NO.	
J553543	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A18571	

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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



Notes:

Work this sheet with Sheet No. 3.

The U-bars shall be placed parallel to C of Roadway.

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

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

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

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

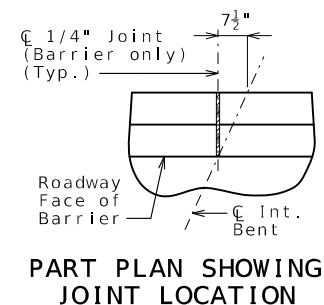
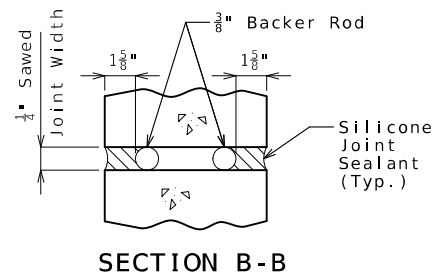
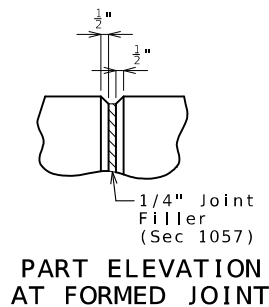
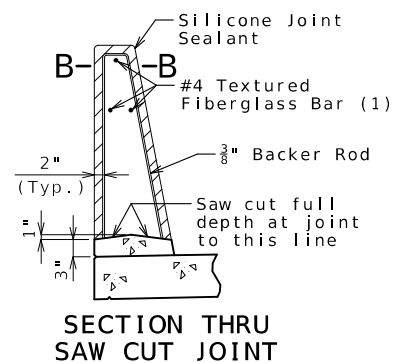
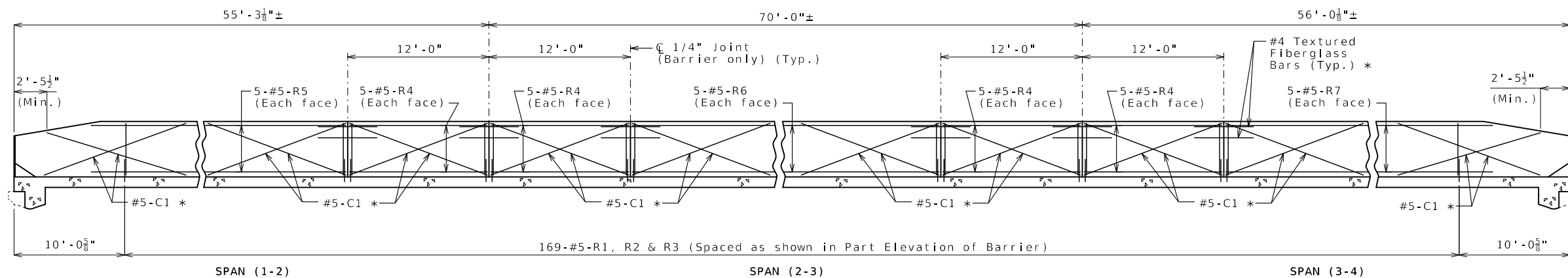
Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

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

An epoxy coated #5 Grade 60 reinforcing bar as shown shall be substituted for the 5/8"Ø threaded rod.

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

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General Notes:

* Slip-formed option only.

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

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

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

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

Concrete in barrier shall be Class B-1.

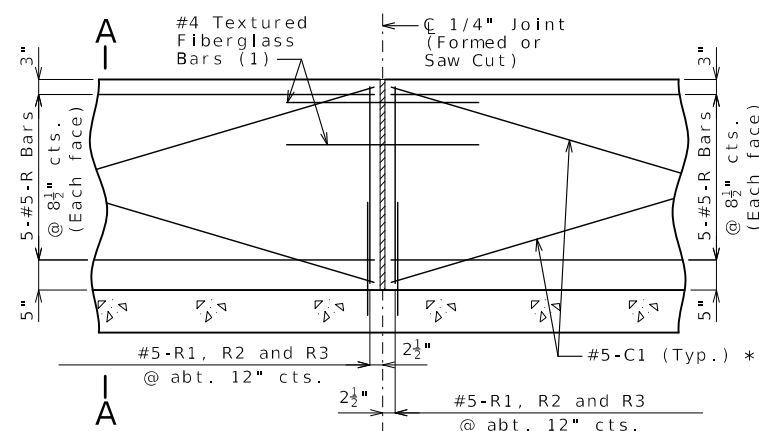
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

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

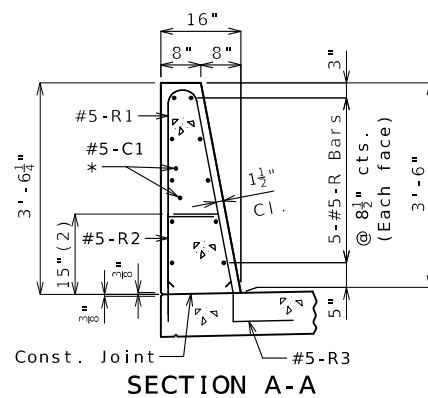
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

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

Plastic waterstop shall not be used with saw cut joints.



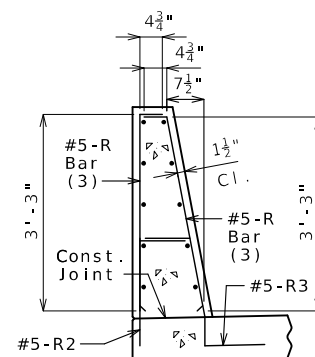
(1) Four feet long, centered on joint,
slip-formed option only



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

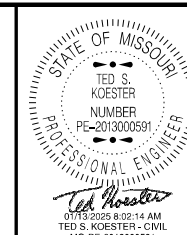
The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



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

TYPE D BARRIER



DATE PREPARED

1 / 13 / 202

ROUTE	ST
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AA	M
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DISTRICT	SHEET
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COUNTY _____
INDEXED _____

MARIES

JOB NO.
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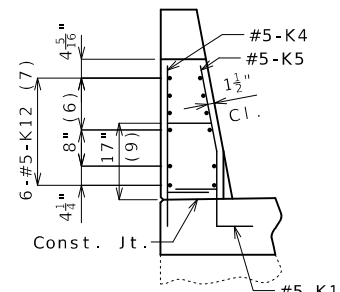
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



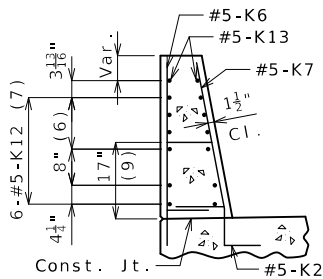
105 WEST CAPITOL
JEFFERSON CITY, MO 65102

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COMMISSION

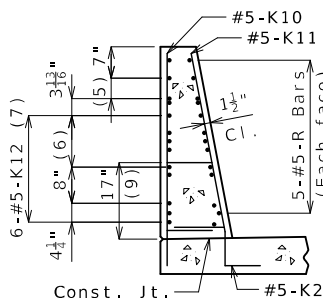
105 WEST CAPITOL
JEFFERSON CITY, MO 65102



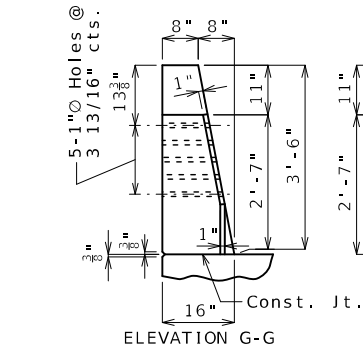
ELEVATION A-A



SECTION B-B

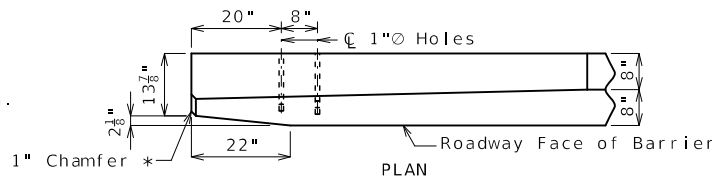


SECTION C-C

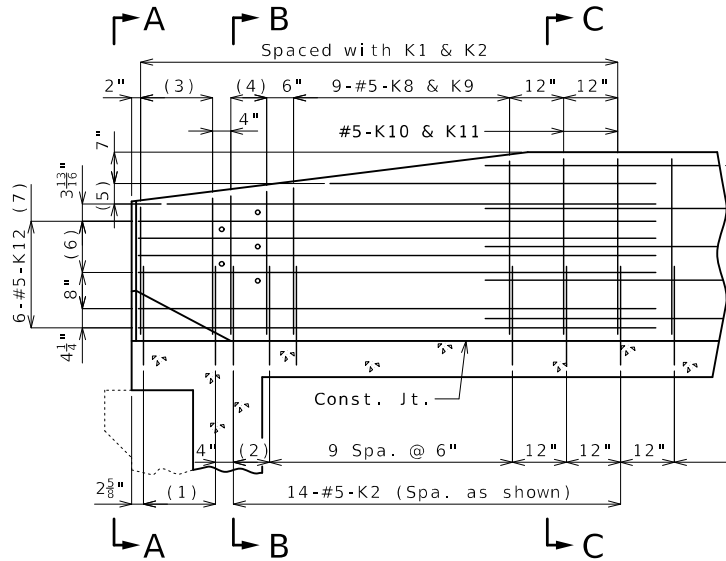


ELEVATION G-G

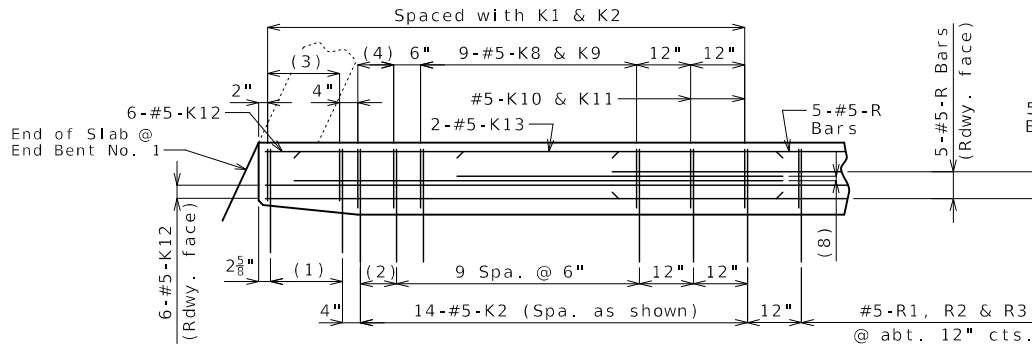
* Transition to zero at Type A curb for gutter lines to match.



DETAILS OF GUARD RAIL ATTACHMENT

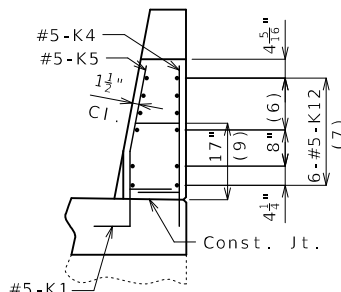
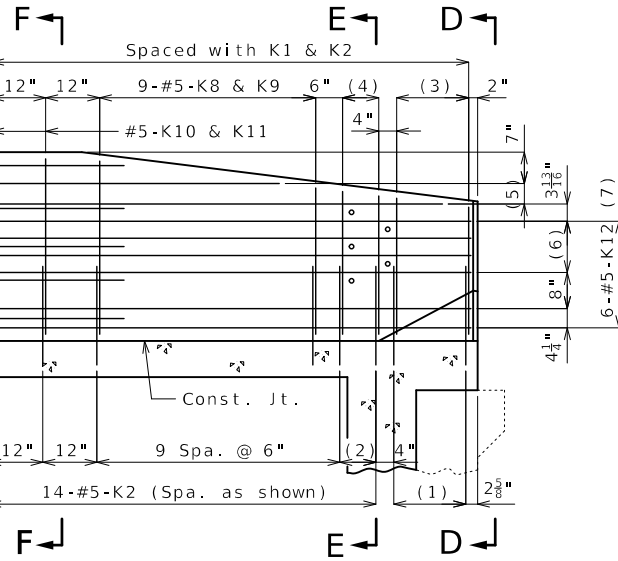


PART ELEVATION

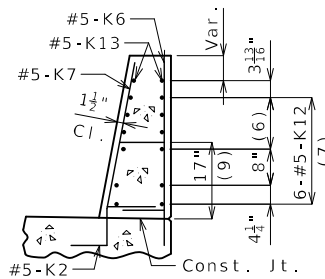


PART PLAN

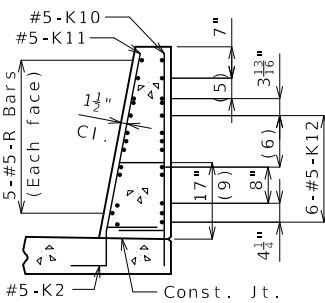
(Top of barrier not shown for clarity.)



ELEVATION D-D



SECTION E-E



SECTION F-F

General Notes:

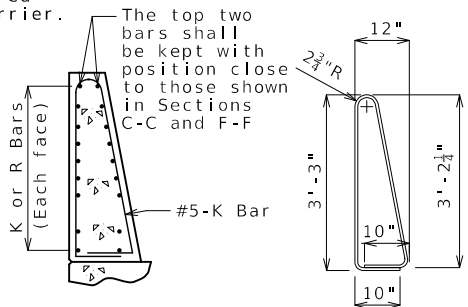
Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered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

Reinforcing Steel:

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

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

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 2-#5-K13 @ 4 1/2" cts., each face
- (6) 3 spaces @ 3 13/16"
- (7) Spaced as shown, each face
- (8) 2-#5-K13 (Roadway face)
- (9) To top of bar



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

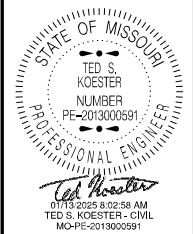
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar)



DATE PREPARED

1/13/2025

ROUTE AA STATE MO

DISTRICT BR SHEET NO. 7

COUNTY

MARIES

JOB NO.

J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A18571

DESCRIPTION

DATE

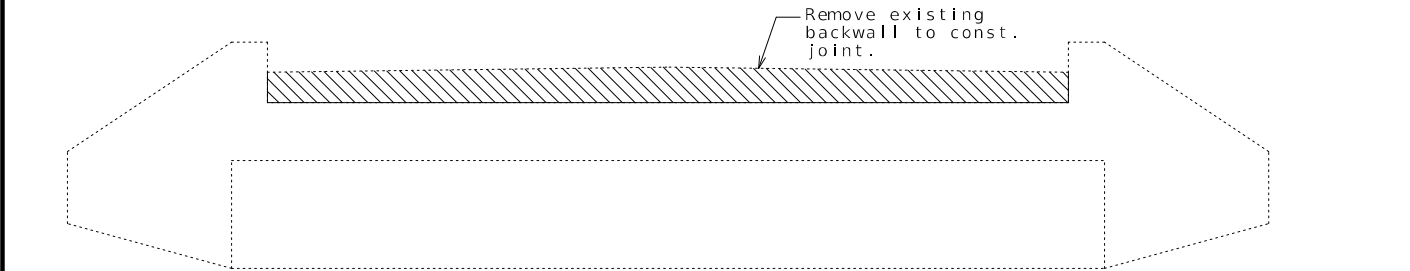
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

MODOT



DETAILS OF CONCRETE REMOVAL AT END BENTS

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

A smooth, level surface shall be provided at Bent No. 1 removal lines.

General Notes:

Stay-In-Place Forms:

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

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

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

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

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

Pouring and Finishing Slab:

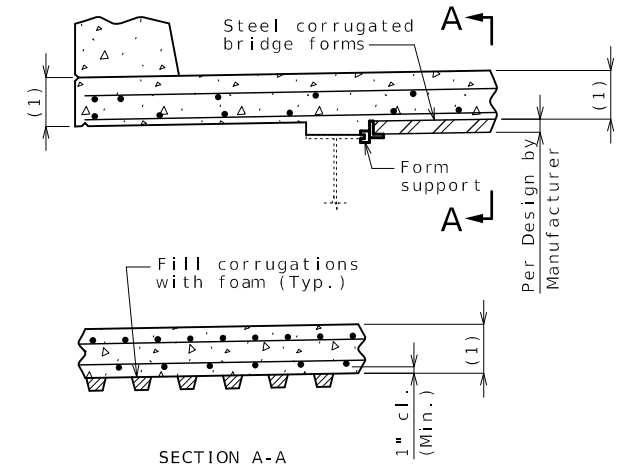
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing,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

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

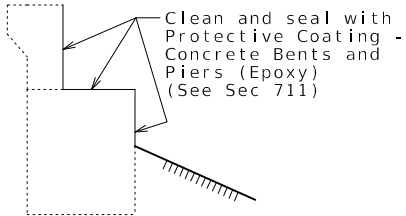
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

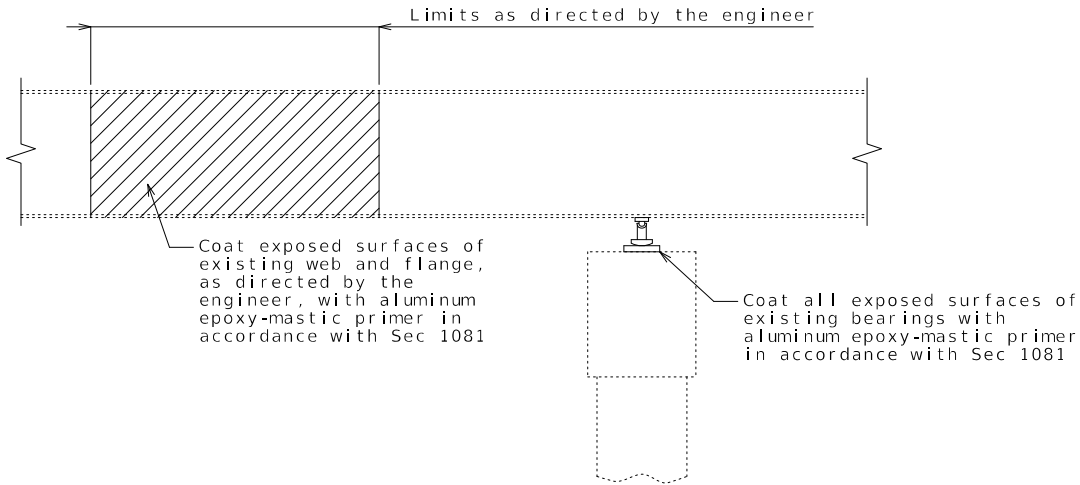
(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.



OPTIONAL STAY-IN-PLACE FORM DETAILS

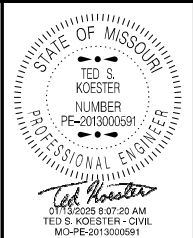


TYPICAL SECTION THRU END BENTS NO. 1 & 4 SHOWING PROTECTIVE COATING



PART ELEVATION OF INT. BENTS NO. 2 & 3 SHOWING RECOATING OF STRUCTURAL STEEL

Exposed surfaces of the existing structural steel, as directed by the engineer, and all intermediate bent bearings shall be recoated with one 6-mil thickness of gray epoxy-mastic primer applied over an SSPC-SP3 surface preparation in accordance with Sec 1081. The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the gray epoxy-mastic primer and bituminous coating will be considered completely covered by the contract lump sum price for Gray Epoxy-Mastic Primer.



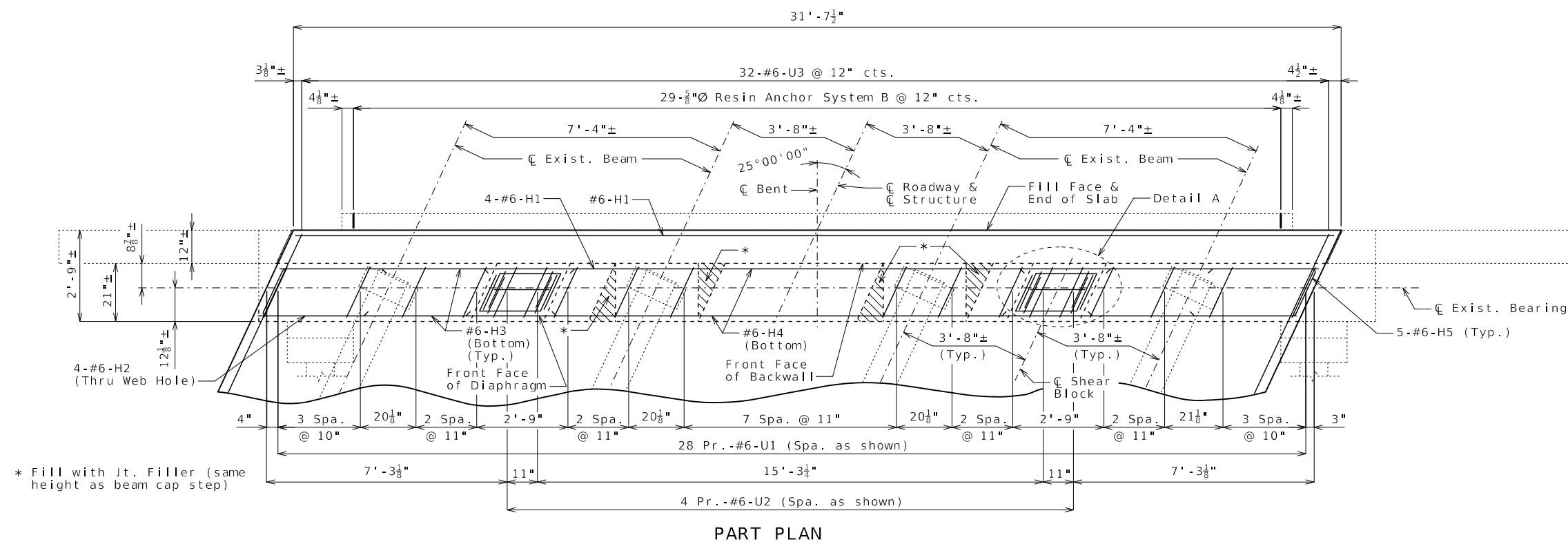
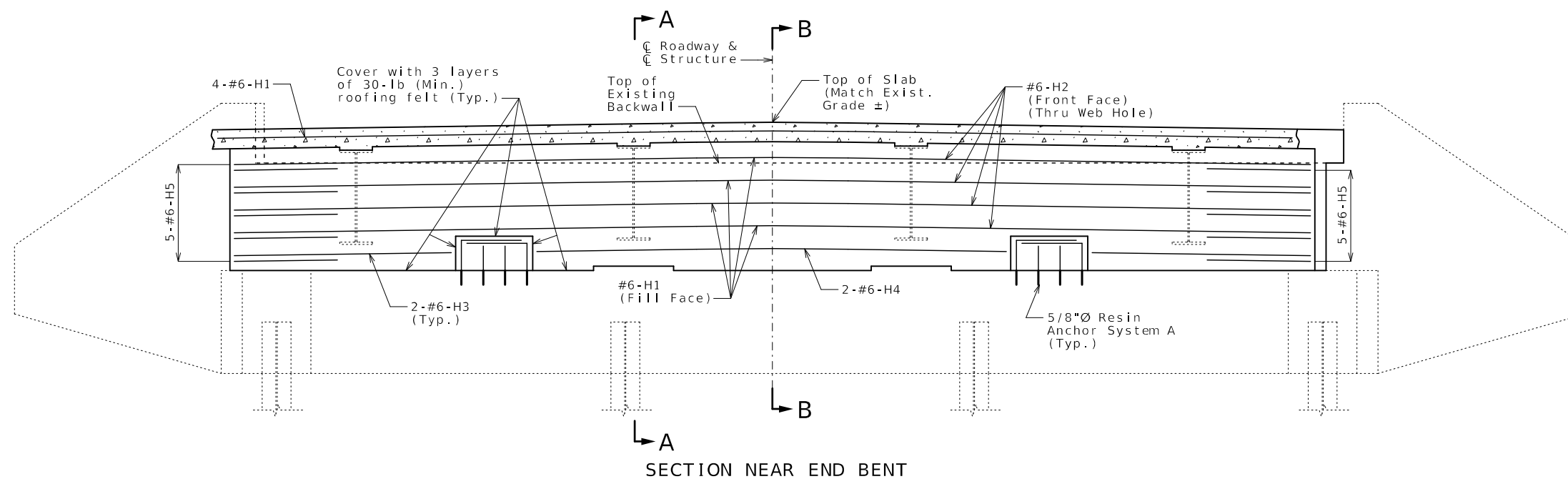
DATE PREPARED 1/13/2025	
ROUTE AA	STATE MO
DISTRICT BR	SHEET NO. 2
COUNTY MARIES	
JOB NO. J553543	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. A18581

DESCRIPTION	DATE

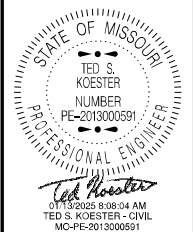
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



DETAILS OF END BENTS NO. 1 & 4

Note: Work this sheet with Sheet No. 4.



DATE PREPARED

ROUTE AA	STATE MO
DISTRICT BR	SHEET NO. 3

COUNTY
MARIES

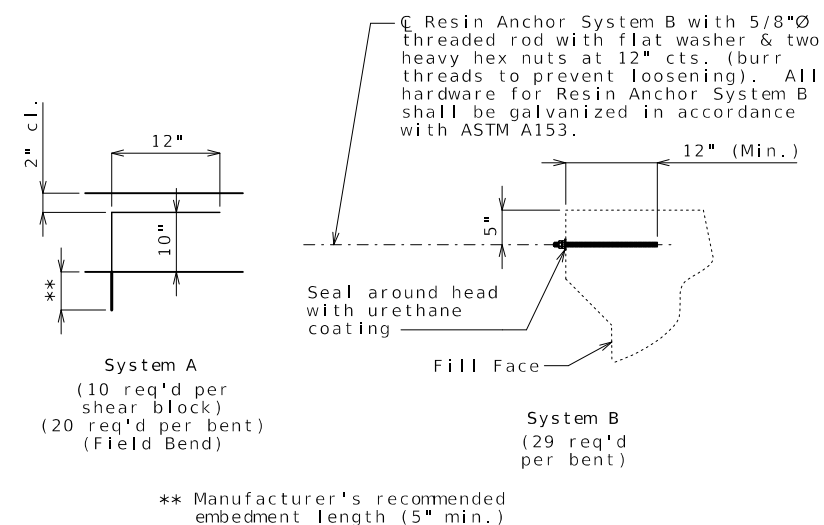
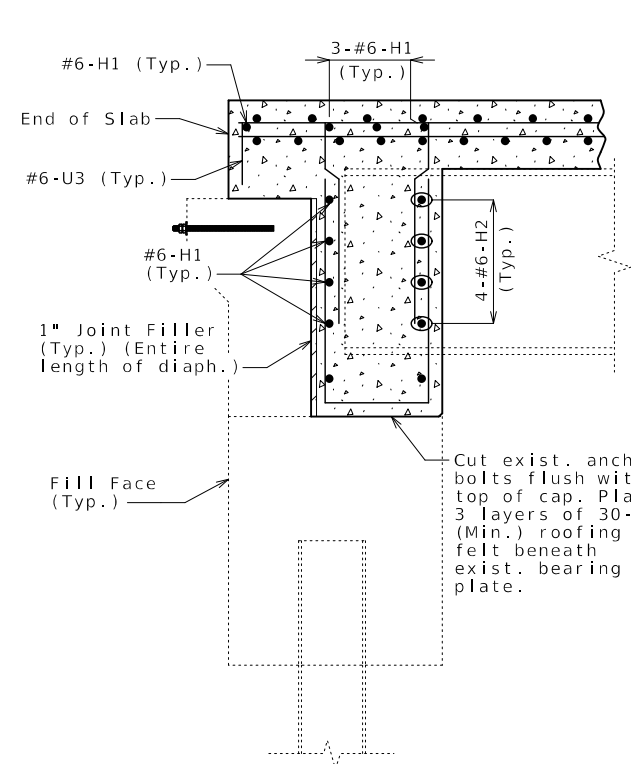
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CONTRACT ID.

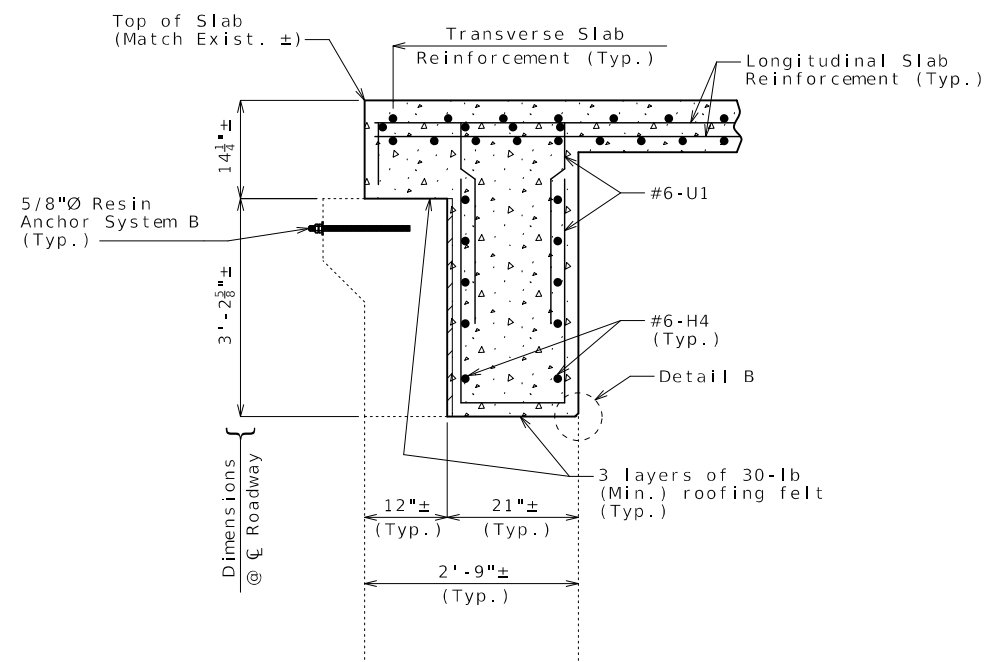
PROJECT NO.

BRIDGE NO.
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COMMISSION

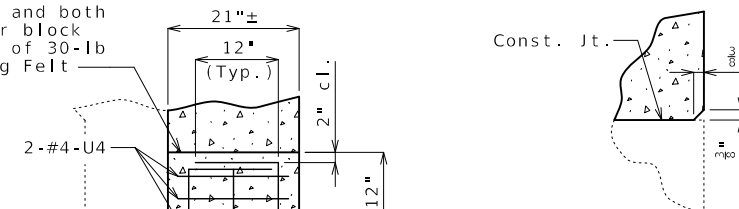
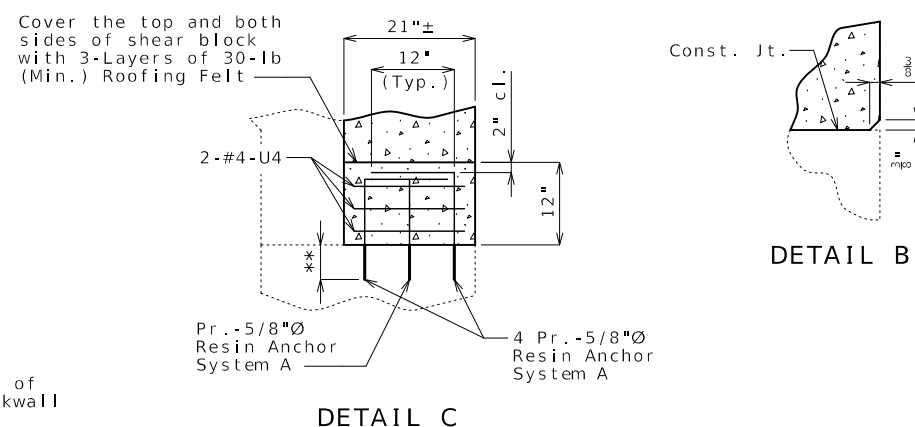
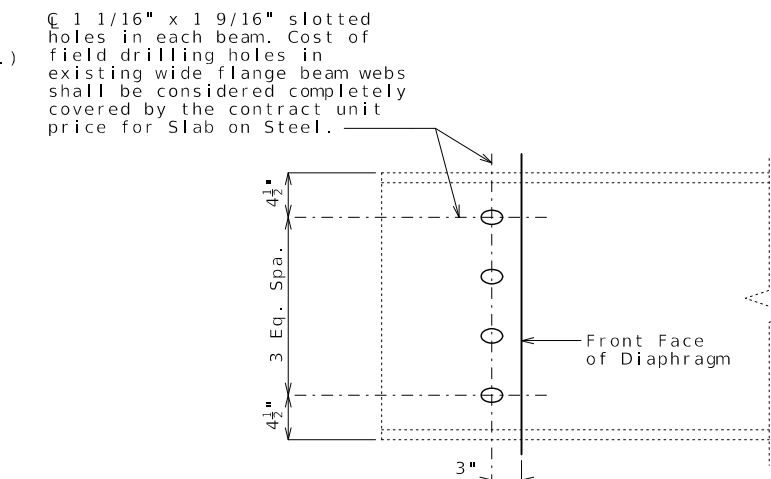
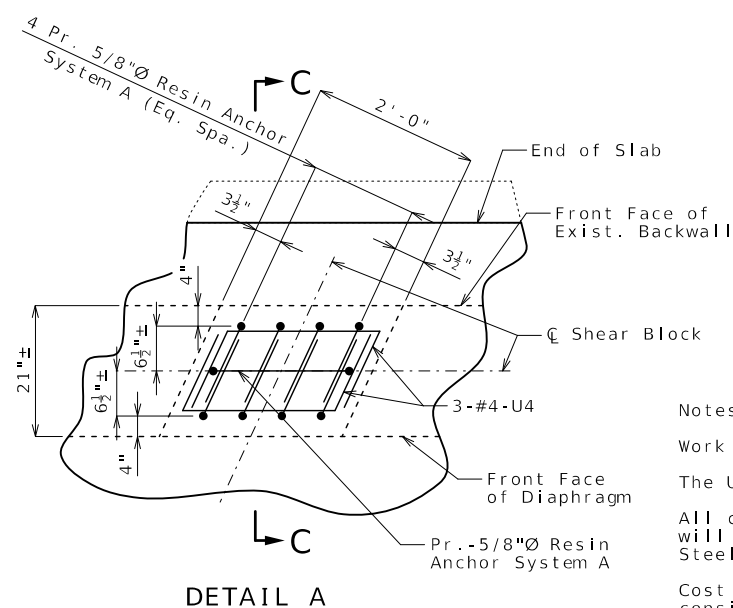
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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DETAILS OF RESIN ANCHOR SYSTEMS



SECTION B-B



Notes:

Work this sheet with Sheet No. 3.

The U-bars shall be placed parallel to C of Roadway.

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

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

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SPCC-2-3 surface preparation and coated with minimum one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased will be completely covered by the contract unit price for Slab on Steel.

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

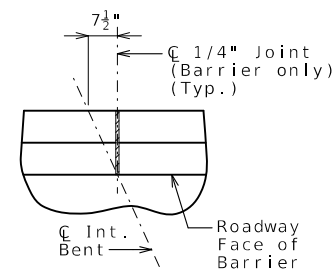
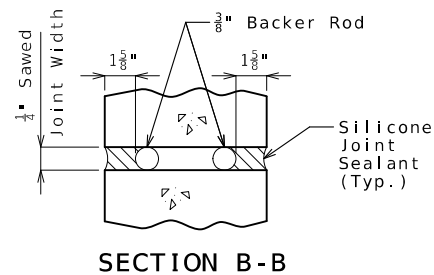
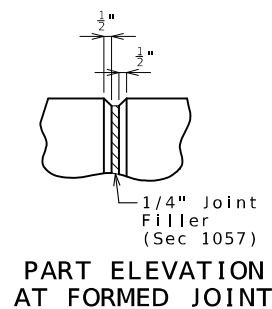
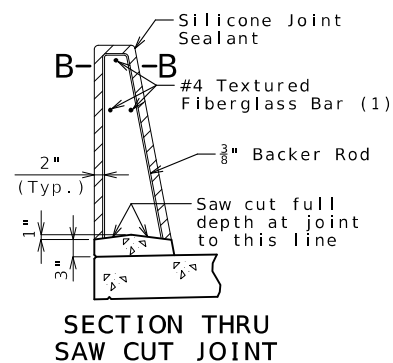
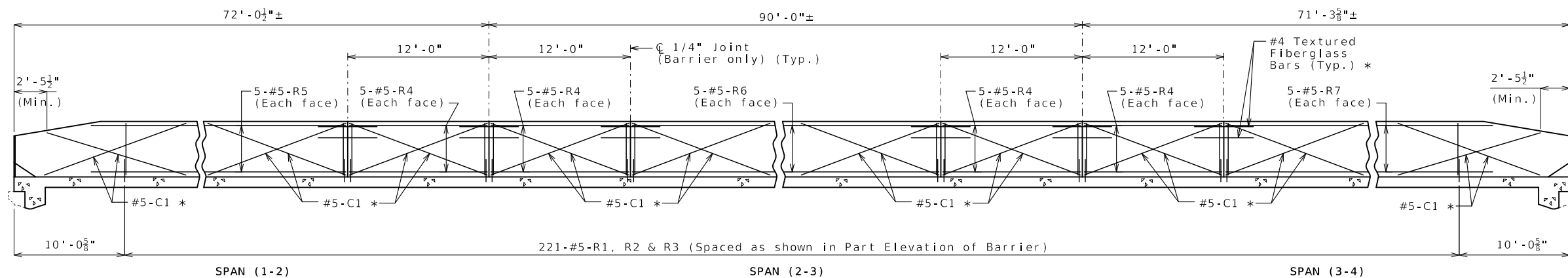
Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

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

An epoxy coated #5 Grade 60 reinforcing bar as shown shall be substituted for the 5/8"Ø threaded rod.

For details and reinforcement of Type H Barrier not shown, see Sheets No. 7 & 8.

<p>TED S. KOESTER NUMBER PE-2013000591</p> <p><i>Ted Koester</i> 07/13/2025 8:09:07 AM TED S. KOESTER - CIVIL MO-PE-2013000591</p>					
DATE PREPARED					
1/13/2025					
ROUTE		STATE			
AA		MO			
DISTRICT		SHEET NO.			
BR		4			
COUNTY					
MARIES					
JOB NO.					
J5S3543					
CONTRACT ID.					
PROJECT NO.					
BRIDGE NO.					
A18581					
DESCRIPTION					
DATE					
<div style="display: flex; justify-content: space-between;"> MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION <div style="text-align: center;"> MISSOURI DOT </div> 105 WEST CAPITAL JEFFERSON CITY, MO 65102 </div>					



General Notes:

* Slip-formed option only.

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

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

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

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

Concrete in barrier shall be Class B-1.

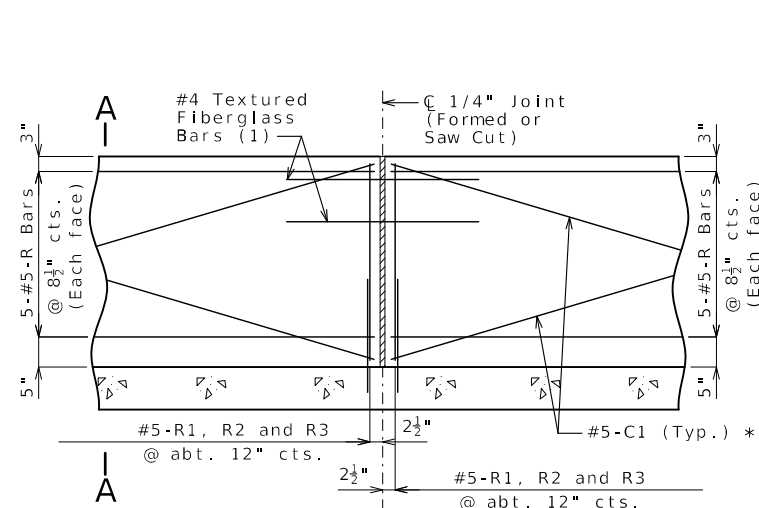
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

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

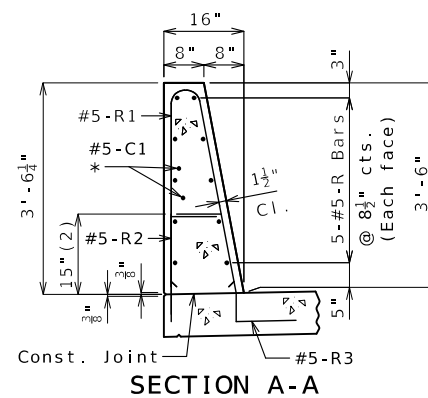
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

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

Plastic waterstop shall not be used with saw cut joints.



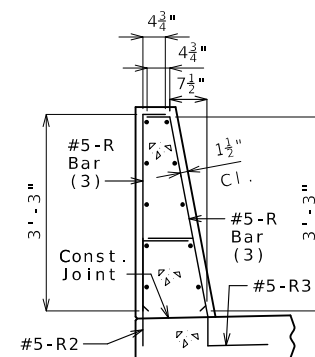
(1) Four feet long, centered on joint.



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

The cross-sectional area above the slab is 3.52 square feet.

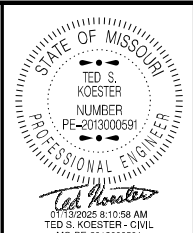
(2) To top of bar



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

TYPE D BARRIER

Sheet No. 7 of 11



DATE PREPARED
1/13/2025

ROUTE	STATE
AA	MO

AA	MO
DISTRICT	SHEET NO.

DISTRICT	SHEET NO.
BR	7

COUNTY

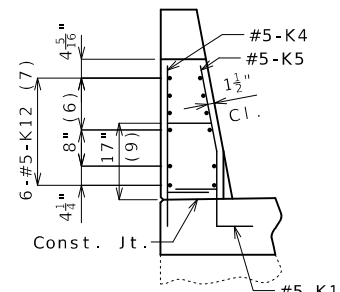
MARIES
LOB NO

J5S3543

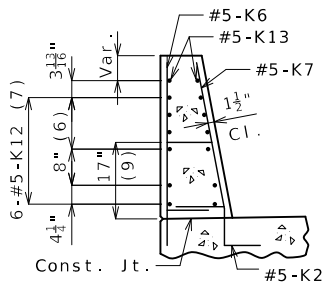
CONTRACT ID.

		PROJECT NO.	
		BRIDGE NO.	
		A18581	
DATE			
DESCRIPTION			

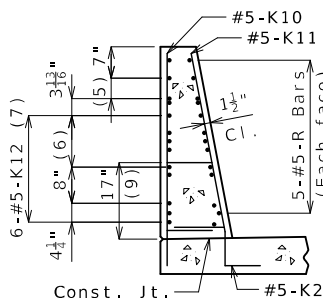
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



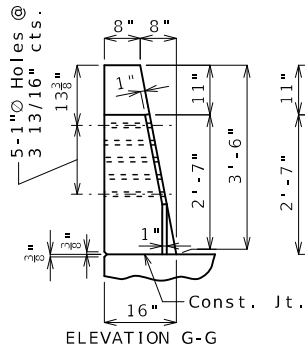
ELEVATION A-A



SECTION B-B

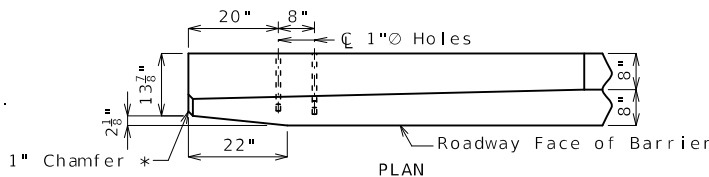


SECTION C-C

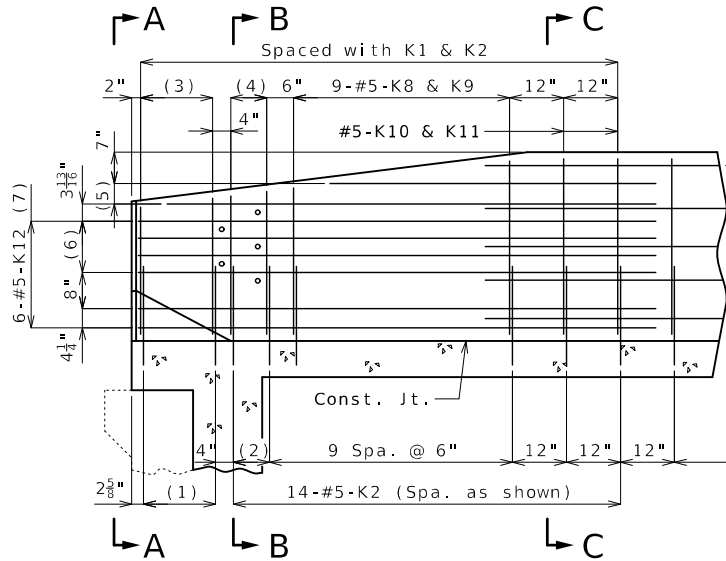


ELEVATION G-G

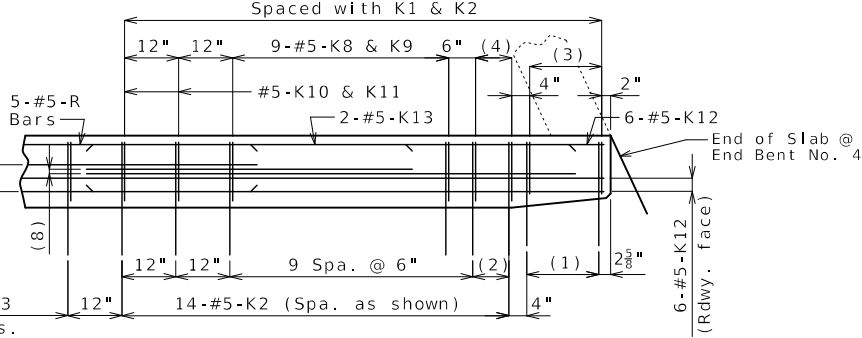
* Transition to zero at Type A curb for gutter lines to match.



DETAILS OF GUARD RAIL ATTACHMENT

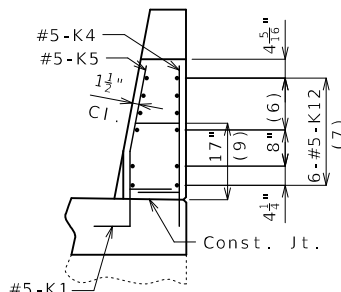
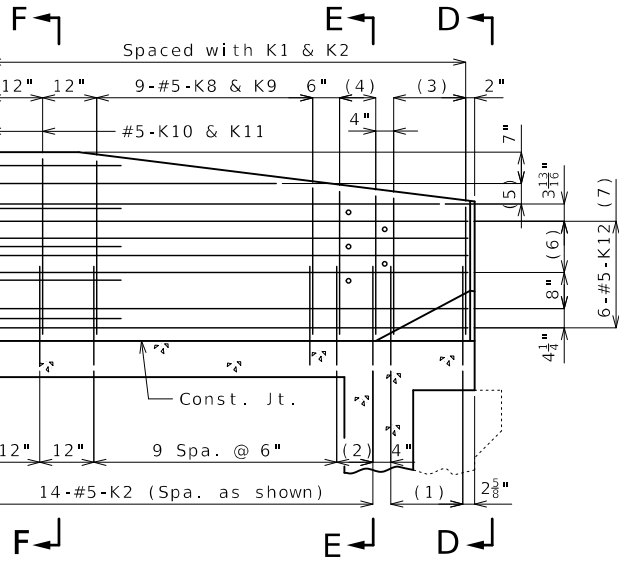


PART ELEVATION

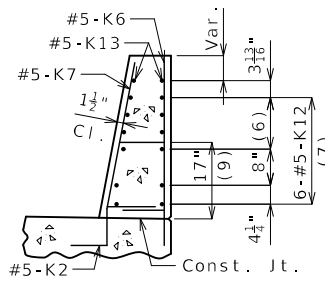


PART PLAN

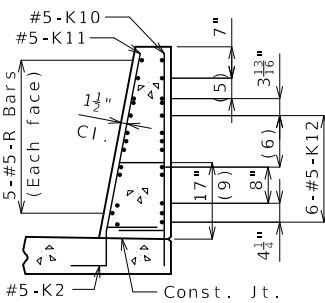
(Top of barrier not shown for clarity.)



ELEVATION D-D



SECTION E-E



SECTION F-F

General Notes:

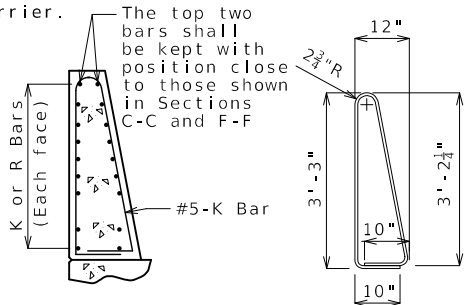
Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered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

Reinforcing Steel:

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

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

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 2-#5-K13 @ 4 1/2" cts., each face
- (6) 3 spaces @ 3 13/16"
- (7) Spaced as shown, each face
- (8) 2-#5-K13 (Roadway face)
- (9) To top of bar



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

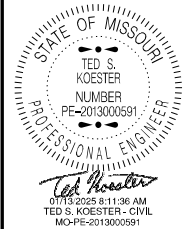
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar)



DATE PREPARED

1/13/2025

ROUTE AA STATE MO

DISTRICT BR SHEET NO. 8

COUNTY

MARIES

JOB NO.

J553543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A18581

DESCRIPTION

DATE

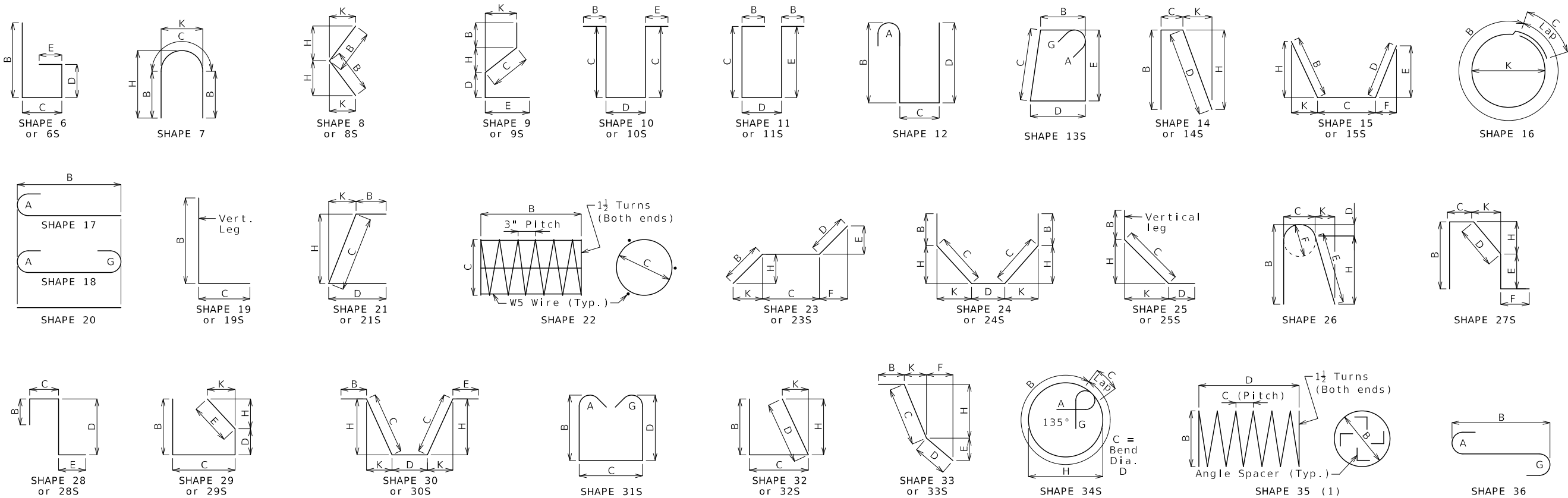
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

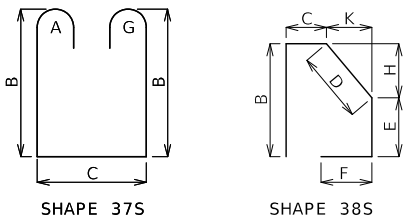
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MODOT



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



BENDING DIAGRAMS

All dimensions are out to out.

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

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

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

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

Reinforcing Steel Totals (Pounds)							
Size	Substructure		Superstructure			Entire Bridge	
	Plain	Epoxy	Slab	Barrier	Slip Form	Plain	Epoxy
W5	0	0	0	0	0	0	0
4	0	0	63	0	0	0	63
5	543	0	26,441	11,874	0	543	38,315
6	681	0	30,092	0	0	681	30,092
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
By Type	1,224	0	56,596	11,874	0	1,224	68,470

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

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

STATE OF MISSOURI

TED S. KOESTER

NUMBER

PE-2013000591

PROFESSIONAL ENGINEER

01/13/2025 8:12:44 AM

TED S. KOESTER - CIVIL

MO-PE-2013000591

DATE PREPARED

1/13/2025

ROUTE

AA

STATE

MO

DISTRICT

BR

SHEET NO.

10

COUNTY

MARIES

JOB NO.

J5S3543

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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DATE

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JEFFERSON CITY, MO 65102
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