MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

BUTLER COUNTY

TOWNSHIP 23 NORTH, RANGE 5 EAST
SECTIONS 21, 22, 27, 28, 33 & 34

DESIGN DESIGNATION

A.A.D.T. – 2022 = 11,500
A.A.D.T. – 2042 = 15,500
D.H.V. = 10%
T = 15%
V = 70 M.P.H.
D = 50%

FUNCTIONAL CLASSIFICATION–INTERSTATE (FUTURE)

FULLY CONTROLLED ACCESS HIGHWAY

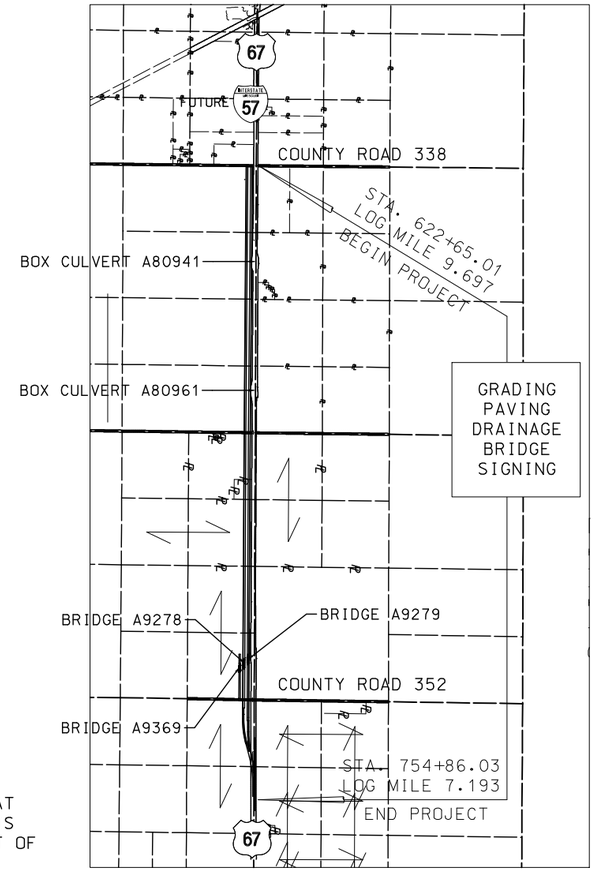
THIS SHALL BE A FULLY CONTROLLED ACCESS HIGHWAY BETWEEN STA. 529+00.00 AND STA. 622+69.53 NO ABUTTING OWNER SHALL HAVE THE RIGHT OF DIRECT ACCESS TO SAID HIGHWAY OR ITS RIGHT-OF-WAY EXCEPT THAT ACCESS WILL BE PERMITTED TO ANY ADJACENT OUTER ROADWAY OR SERVICE ROAD TO WHICH ACCESS IS NOT SPECIFICALLY PROHIBITED BY THE SPECIAL SYMBOL DENOTING "NO RIGHT OF ACCESS" AS SHOWN ON THE PLANS. NO ACCESS WILL BE PERMITTED FROM OUTER ROADWAYS AND SERVICE ROADS TO THROUGHWAYS EXCEPT ALONG ROUTES CONSTRUCTED FOR THAT PURPOSE. OUTER ROADWAYS AND SERVICE ROADS, AS THE CASE MAY BE, ARE SO DESIGNATED ON THE PLANS.

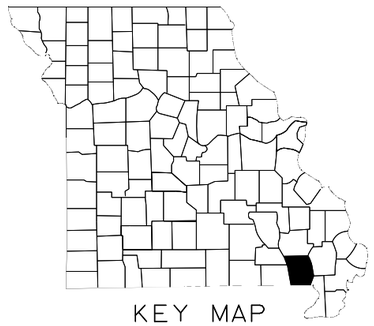
- BEGINNING AND ENDING OF CONTROLLED ACCESS
- CONTROLLED ACCESS
- NO RIGHT OF ACCESS OR CROSSING OF LINES BEARING THIS SYMBOL WILL BE PERMITTED UNDER ANY CIRCUMSTANCES.
- TEMPORARY ACCESS THROUGH FUTURE NO RIGHT OF ACCESS

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	~~FO~~
OVERHEAD CABLE TV	-OTV-	~~OTV~~
UNDERGROUND CABLE TV	-UTV-	~~UTV~~
OVERHEAD TELEPHONE	-OT-	~~OT~~
UNDERGROUND TELEPHONE	-UT-	~~UT~~
OVERHEAD POWER	-OE-	~~OE~~
UNDERGROUND POWER	-UE-	~~UE~~
SANITARY SEWER	-S-	~~S~~
STORM SEWER	-SS-	~~SS~~
GAS	-G-	~~G~~
WATER	-W-	~~W~~
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	DI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	
PERMANENT DRAINAGE EASEMENT	P.D.E.	
PERMANENT UTILITY EASEMENT	P.U.E.	
TEMPORARY CONSTRUCTION EASEMENT	T.C.E.	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES





KEY MAP
SHOWING LOCATION OF BUTLER COUNTY

N.T.S.

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.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (10 SHEETS)	2
QUANTITIES (QU) (16 SHEETS)	3
PLAN SHEETS (PS)	4-13
PROFILE SHEETS (PR)	14-20
RIGHT OF WAY SHEETS (RW)	21-30
REFERENCE POINTS (RP)	31
COORDINATE POINTS (CP)	32-33
SPECIAL SHEETS (SS)	34
TRAFFIC CONTROL SHEETS (TC)	35-58
EROSION CONTROL SHEETS (EC)	59-68
SIGNING (SN)	69-77
PAVEMENT MARKING (PM)	78-79
CULVERT SECTIONS (CS)	80-86
BRIDGE DRAWINGS (B)	
A80941	1-3
A80961	1-3
A9278	1-24
A9279	1-24
A9369	1-24
CROSS SECTIONS (XS)	1-70

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 622 + 65.01	
END OF PROJECT	STA. 754 + 86.03	
APPARENT LENGTH	13,222.34	FEET
EQUATIONS AND EXCEPTIONS:		
NONE		
TOTAL CORRECTIONS	+0.00	FEET
NET LENGTH OF PROJECT	13,222.34	FEET
STATE LENGTH	2.504	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	56.76	ACRES

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 1
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EQUIVALENT PAVEMENT DESIGNS		
CATEGORY	BASE TYPE✳✳	HMA DESIGN
US 67 MAINLINE ALTERNATE A	6" TYPE 5 AGGREGATE BASE WITH GEOGRID BASE REINFORCEMENT ✳	12.5" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 7-3/4" SP250C W/PG 64-22
	12" ROCK BASE ✳✳✳	11.5" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 6-3/4" SP250C W/PG 64-22
	18" ROCK BASE ✳✳✳	11.0" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 6-1/4" SP250C W/PG 64-22
WEST OUTER ROAD ALTERNATE E	6" TYPE 5 AGGREGATE BASE	7.0" HMA 1-3/4" BP W/PG 64-22 OVER 5-1/4" BB W/PG 64-22

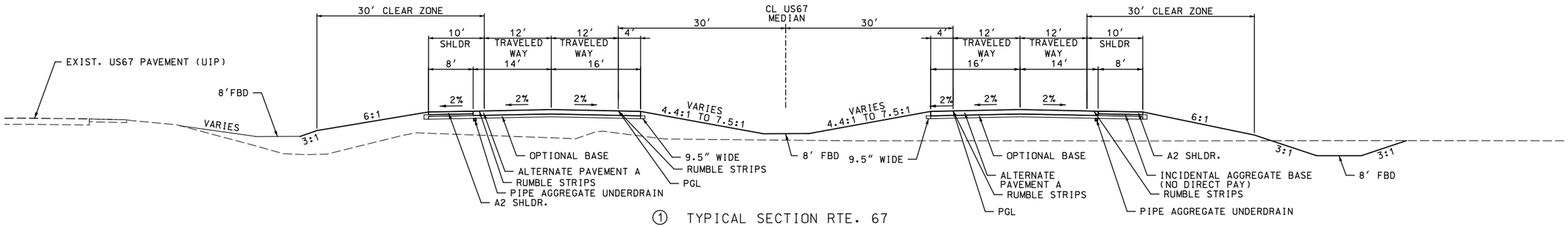
✳ INCLUDES SEPARATION GEOTEXTILE

✳✳ SECTION 205 - MODIFIED SUBGRADE SHALL BE USED ON ALL PAVEMENT DESIGNS IN ADDITION TO THE BASE REQUIREMENTS.

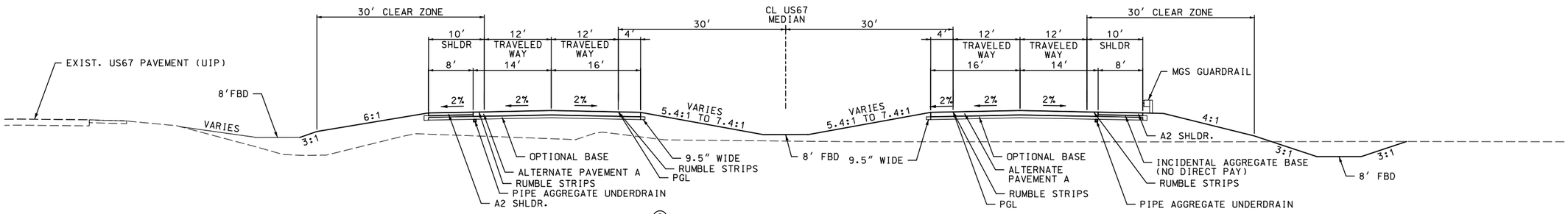
✳✳✳ DESIGNS FOR ALTERNATE TECHNICAL CONCEPT - GRADING, BASE AND PAVING, SEE JSPS PAY LIMITS FOR ROCK BASE END AT OUTSIDE EDGE OF SHOULDER

ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP125C MIX)= 1.927 TON/C.Y.
ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP250C MIX)= 1.946 TON/C.Y.
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 1.946 TON/C.Y.
BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1) = 1.948 TON/C.Y.
BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) = 1.943 TON/C.Y.

TACK COAT
NEW ASPHALT SURFACES 0.05 GAL/S.Y.
EXISTING SURFACES 0.08 GAL/S.Y.
COLDMILLED SURFACES 0.10 GAL/S.Y.



① TYPICAL SECTION RTE. 67
STA. 660+75.00 TO STA. 677+66.81
STA. 681+57.33 TO STA. 701+71.97
STA. 705+62.50 TO STA. 754+69.99
STA. 766+58.71 TO STA. 768+17.57



② TYPICAL SECTION RTE. 67
STA. 677+66.81 TO STA. 681+57.33
STA. 701+71.97 TO STA. 705+62.50

ASPHALT ALTERNATES
TYPICAL SECTIONS
SHEET 1 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2

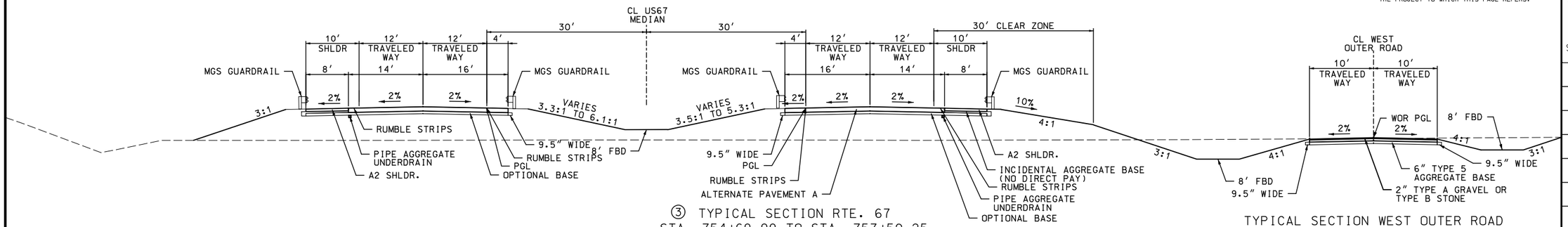
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION	REV.

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

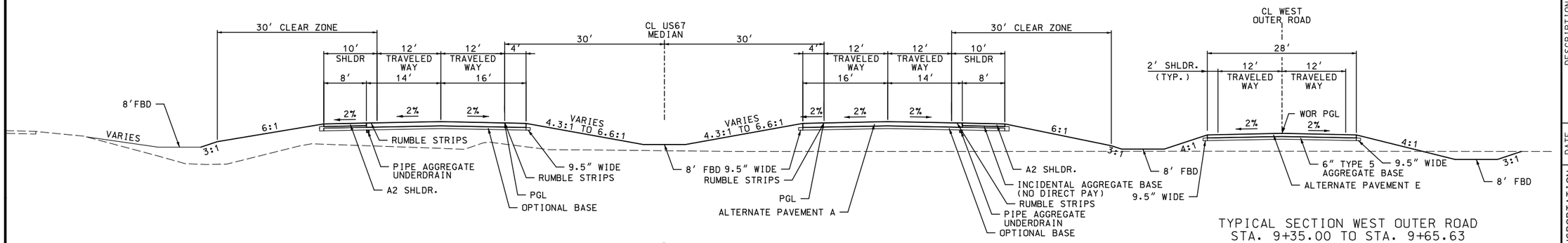
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



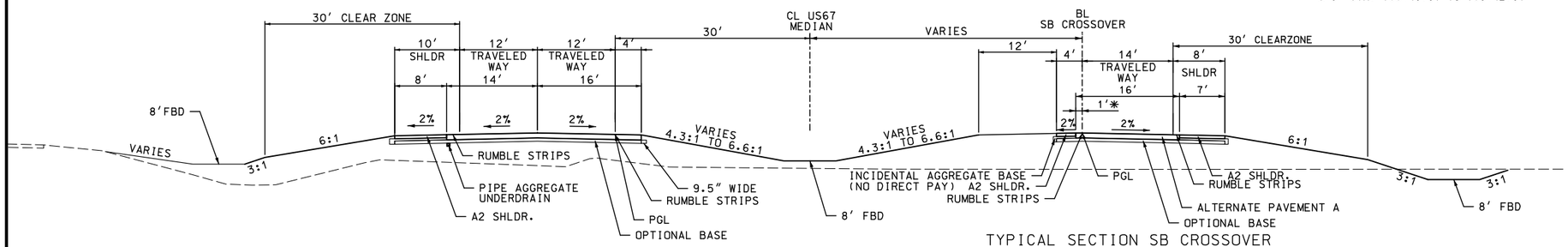
③ TYPICAL SECTION RTE. 67
STA. 754+69.99 TO STA. 757+50.25

TYPICAL SECTION WEST OUTER ROAD
STA. 7+50.00 TO STA. 9+35.00
WEST OUTER ROAD PAVEMENT
BEGINS AT US67 STA. 757+50.00



④ TYPICAL SECTION RTE. 67
STA. 757+50.25 TO STA. 757+82.04
STA. 759+99.91 TO STA. 766+58.71

TYPICAL SECTION WEST OUTER ROAD
STA. 9+35.00 TO STA. 9+65.63
STA. 10+93.49 TO STA 16+58.71



TYPICAL SECTION SB CROSSOVER
STA. 5+17.57 TO 7+67.83

⑤ TYPICAL SECTION RTE. 67
STA. 768+17.57 TO STA. 770+67.71

ASPHALT ALTERNATES
TYPICAL SECTIONS
SHEET 2 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

REV.	DATE	DESCRIPTION

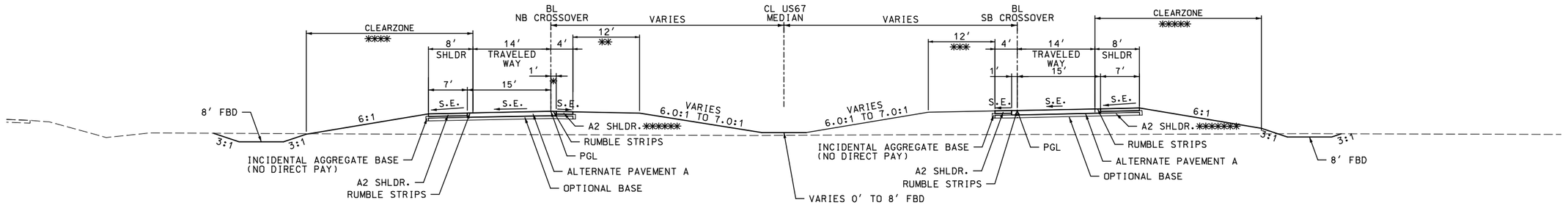
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\002_TS_XX_J9P3751.dgn 1:28:24 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

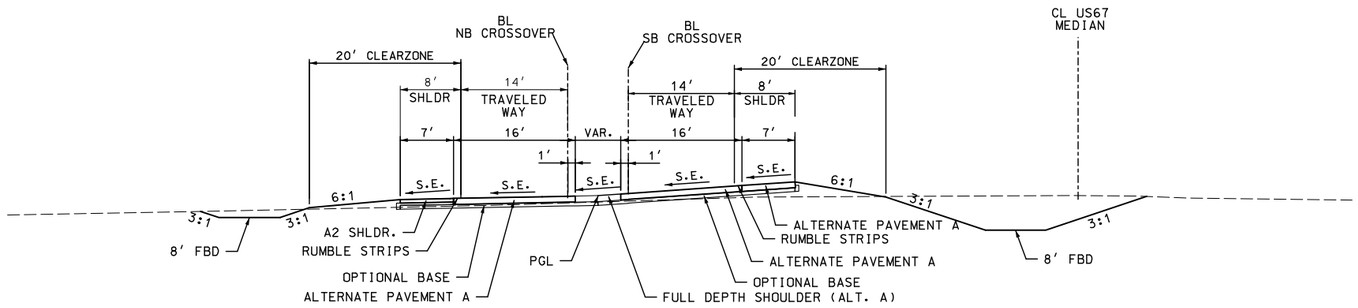
✱ 0′ STA. 2+67.59 TO 3+92.08
✱✱ VARIES 12′ TO 0′ FROM STA. 2+67.59 TO 3+67.59
✱✱✱ VARIES 12′ TO 0′ FROM STA. 7+67.83 TO 8+67.83
✱✱✱✱ VARIES 30′ TO 20′ FROM STA. 2+67.59 TO 3+67.59
✱✱✱✱✱ VARIES 30′ TO 20′ FROM STA. 7+67.83 TO 8+67.83
✱✱✱✱✱✱ BEGIN FULL DEPTH SHOULDER (ALT. A) AT STA. 7+25.00
✱✱✱✱✱✱✱ BEGIN FULL DEPTH SHOULDER (ALT. A)AT STA. 12+15.00



⑥ TYPICAL SECTION RTE. 67
STA. 770+67.71 TO STA. 776+71.41

TYPICAL SECTION NB CROSSOVER
STA. 2+67.59 TO STA. 8+71.85

TYPICAL SECTION SB CROSSOVER
STA. 7+67.83 TO STA. 13+84.19



⑦ TYPICAL SECTION RTE. 67
STA. 776+71.41 TO STA. 778+11.30

TYPICAL SECTION NB CROSSOVER
STA. 8+71.85 TO STA. 10+15.87

TYPICAL SECTION SB CROSSOVER
STA. 13+84.19 TO STA. 15+28.50

SOUTHBOUND CROSSOVER SUPERELEVATION TABLE

STATION	CROSS SLOPE		DESCRIPTION
	LEFT	RIGHT	
5+17.57	−2.00%	−2.00%	NORMAL CROWN
5+79.79	−2.00%	0.00%	SUPER RUNOFF IN
6+42.01	−2.00%	2.00%	REVERSE CROWN IN
7+97.78	−7.00%	7.00%	FULL SUPER IN
11+42.52	−7.00%	7.00%	FULL SUPER OUT
13+49.03	0.00%	0.00%	SUPER RUNOFF
15+55.54	7.00%	−7.00%	FULL SUPER IN
GORE EXCEPTION			
16+49.08	4.86%	−7.00%	MATCH NB SUPER TRANSITION
17+21.02	7.00%	−7.00%	NB FULL SUPER IN
19+12.68	7.00%	−7.00%	FULL SUPER OUT
20+46.20	2.00%	−2.00%	REVERSE CROWN OUT
20+99.53	0.00%	−2.00%	SUPER RUNOFF OUT
21+52.86	−2.00%	−2.00%	NORMAL CROWN

NORTHBOUND CROSSOVER SUPERELEVATION TABLE

STATION	CROSS SLOPE		DESCRIPTION
	LEFT	RIGHT	
2+67.59	−2.00%	−2.00%	NORMAL CROWN
3+29.93	−2.00%	0.00%	SUPER RUNOFF IN
3+92.15	−2.00%	2.00%	REVERSE CROWN IN
5+47.92	−7.00%	7.00%	FULL SUPER IN
7+37.45	−7.00%	7.00%	FULL SUPER OUT
9+72.98	0.00%	0.00%	SUPER RUNOFF
11+36.50	4.86%	−4.86%	MATCH SB SUPER TRANSITION

ASPHALT ALTERNATES
TYPICAL SECTIONS
SHEET 3 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

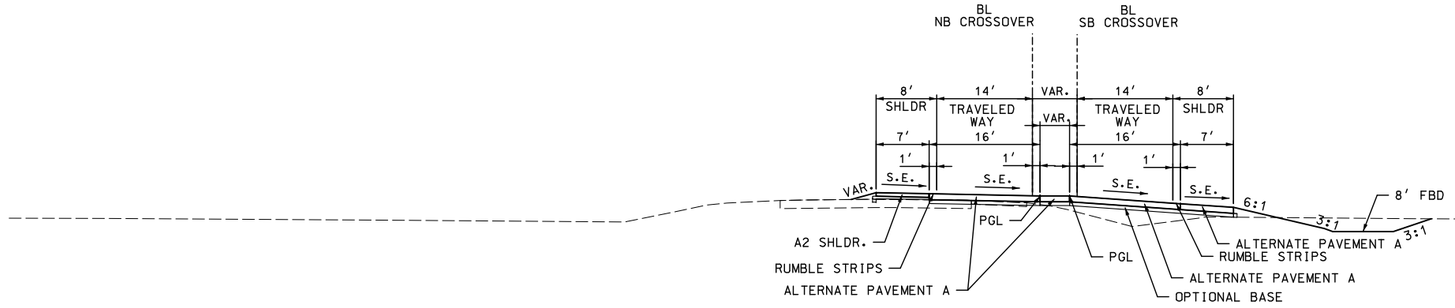
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

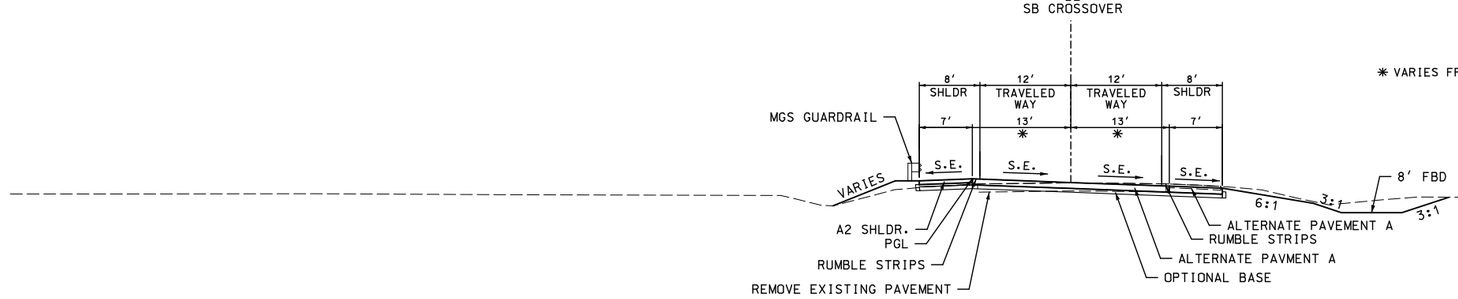
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



⑧ TYPICAL SECTION RTE. 67
STA. 778+11.30 TO STA. 779+29.62

TYPICAL SECTION NB CROSSOVER
STA. 10+15.87 TO STA. 11+36.50

TYPICAL SECTION SB CROSSOVER
STA. 15+28.50 TO STA. 16+49.08



TYPICAL SECTION SB CROSSOVER
STA. 16+49.08 TO STA. 19+12.00

⑨ TYPICAL SECTION RTE. 67
STA. 779+29.62 TO STA. 781+91.19

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

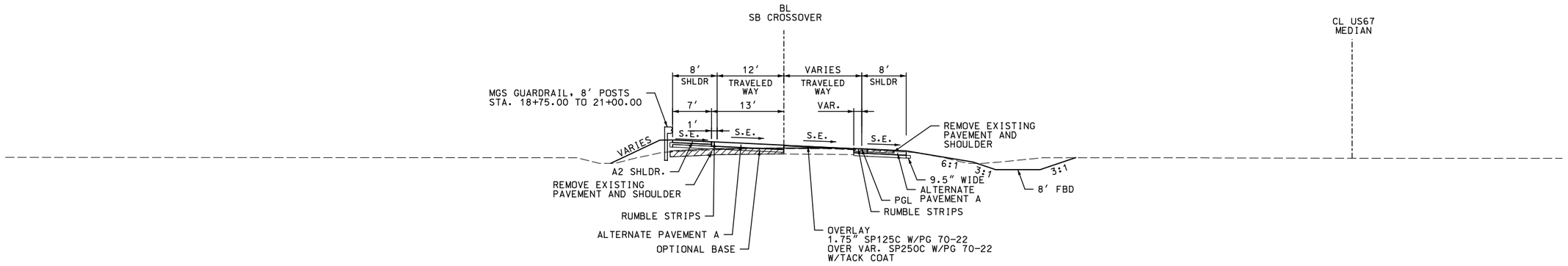
REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

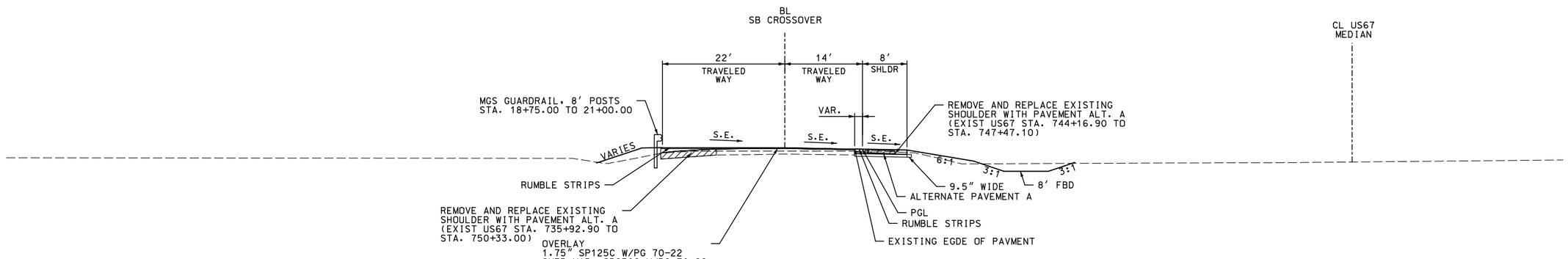
ASPHALT ALTERNATES
TYPICAL SECTIONS
SHEET 4 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TYPICAL SECTION SB CROSSOVER
STA. 19+12.00 TO STA. 20+25.00

(10) TYPICAL SECTION RTE. 67
STA. 781+91.19 TO STA. 783+17.00



TYPICAL SECTION SB CROSSOVER
STA. 20+25.00 TO STA. 21+52.87

(11)

TYPICAL SECTION RTE. 67
STA. 783+17.00 TO STA. 784+31.16

ASPHALT ALTERNATES
TYPICAL SECTIONS
SHEET 5 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

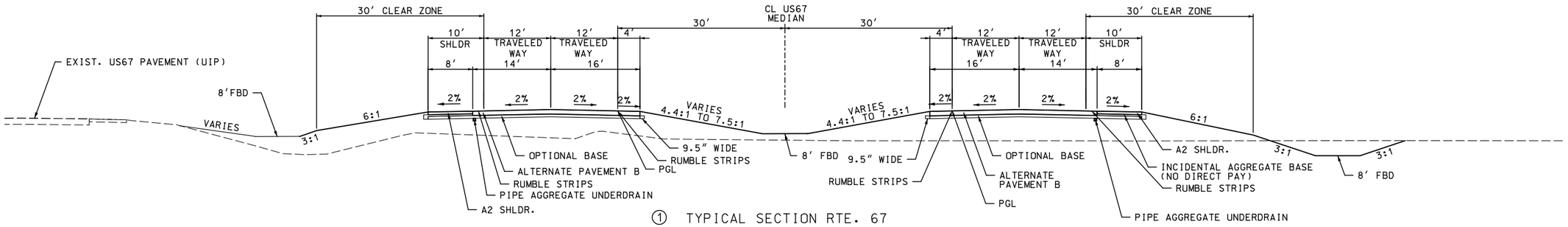
EQUIVALENT PAVEMENT DESIGNS		
CATEGORY	BASE TYPE✱✱	PCCP DESIGN
US 67 MAINLINE ALTERNATE B	6″ TYPE 5 AGGREGATE BASE WITH GEOGRID BASE REINFORCEMENT✱	9.5″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
	12″ ROCK BASE ✱✱✱	9.5″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
	18″ ROCK BASE ✱✱✱	9.0″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
WEST OUTER ROAD ALTERNATE F	6″ TYPE 5 AGGREGATE BASE	7.0″ PCCP JOINT SPACING SHOULD MATCH LANE WIDTH; 1-1/4″ DOWELS

✱ INCLUDES SEPARATION GEOTEXTILE

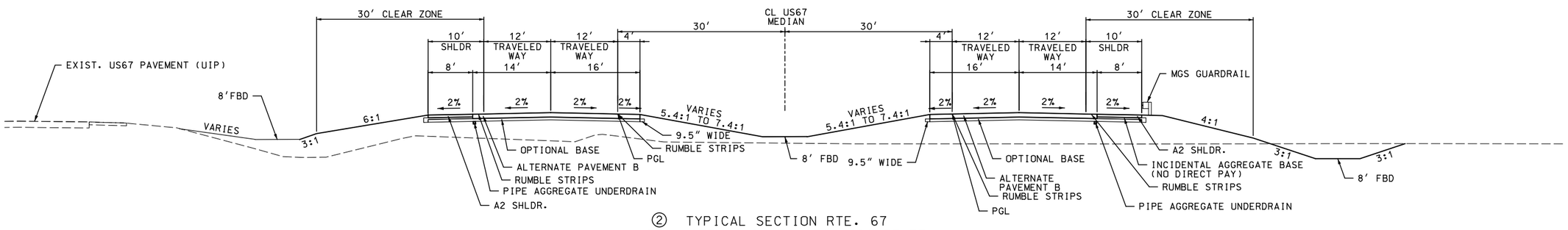
✱✱ SECTION 205 - MODIFIED SUBGRADE SHALL BE USED ON ALL PAVEMENT DESIGNS IN ADDITION TO THE BASE REQUIREMENTS.

✱✱✱ DESIGNS FOR ALTERNATE TECHNICAL CONCEPT - GRADING, BASE AND PAVING, SEE JSPS PAY LIMITS FOR ROCK BASE END AT OUTSIDE EDGE OF SHOULDER

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



① TYPICAL SECTION RTE. 67
STA. 660+75.00 TO STA. 677+66.81
STA. 681+57.33 TO STA. 701+71.97
STA. 705+62.50 TO STA. 754+69.99
STA. 766+58.71 TO STA. 768+17.57



② TYPICAL SECTION RTE. 67
STA. 677+66.81 TO STA. 681+57.33
STA. 701+71.97 TO STA. 705+62.50

CONCRETE ALTERNATES
TYPICAL SECTIONS
SHEET 6 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

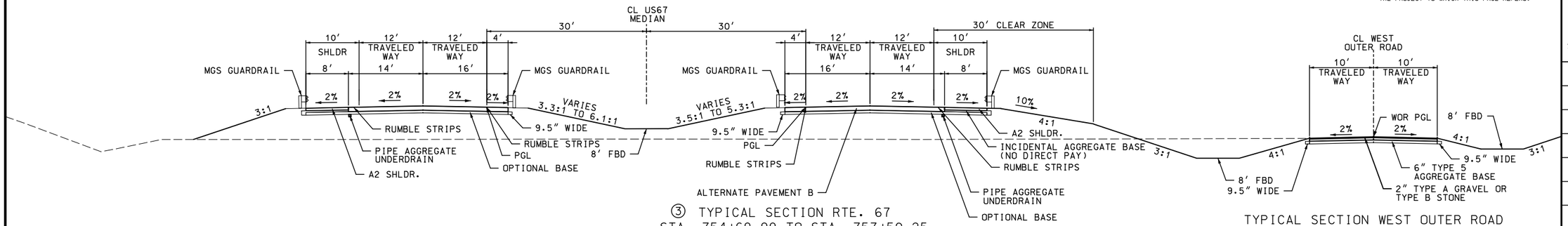
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

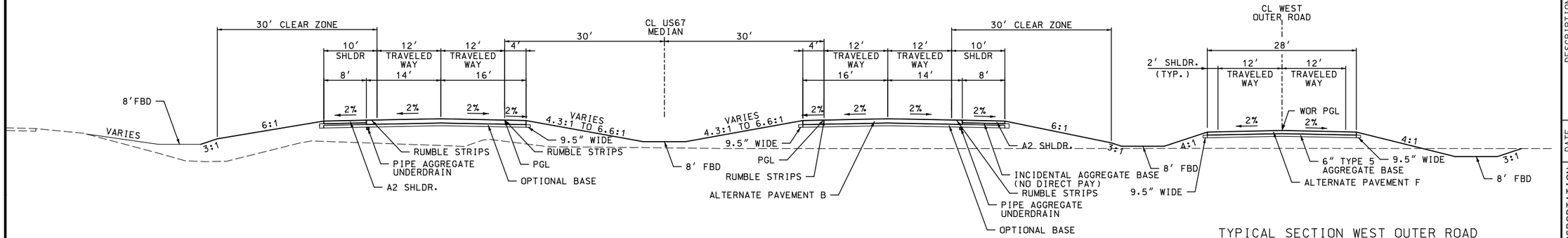
REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



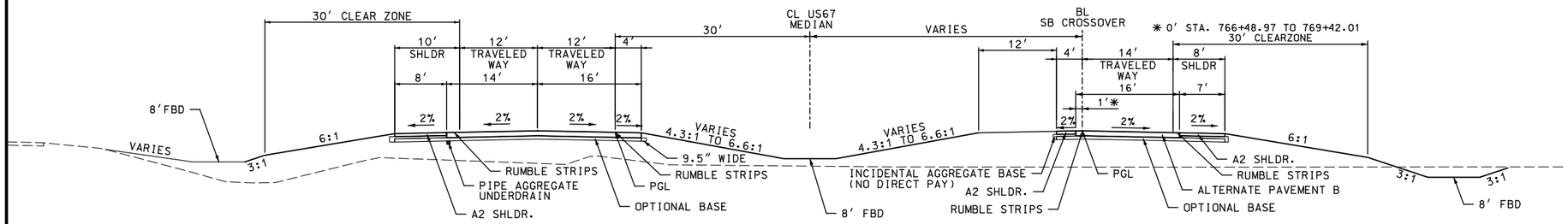
③ TYPICAL SECTION RTE. 67
STA. 754+69.99 TO STA. 757+50.25

TYPICAL SECTION WEST OUTER ROAD
STA. 7+50.00 TO STA. 9+35.00
WEST OUTER ROAD PAVEMENT
BEGINS AT US67 STA. 757+50.00



④ TYPICAL SECTION RTE. 67
STA. 757+50.25 TO STA. 766+58.71

TYPICAL SECTION WEST OUTER ROAD
STA. 9+35.00 TO STA. 16+58.71



TYPICAL SECTION SB CROSSOVER
STA. 5+17.57 TO STA. 7+67.83

⑤ TYPICAL SECTION RTE. 67
STA. 768+17.57 TO STA. 770+67.71

CONCRETE ALTERNATES

TYPICAL SECTIONS
SHEET 7 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

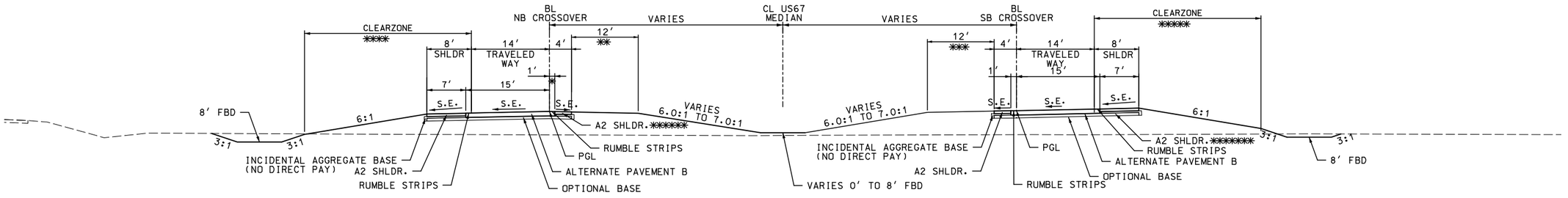
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\002_TS_XX_J9P3751.dgn 1:28:26 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

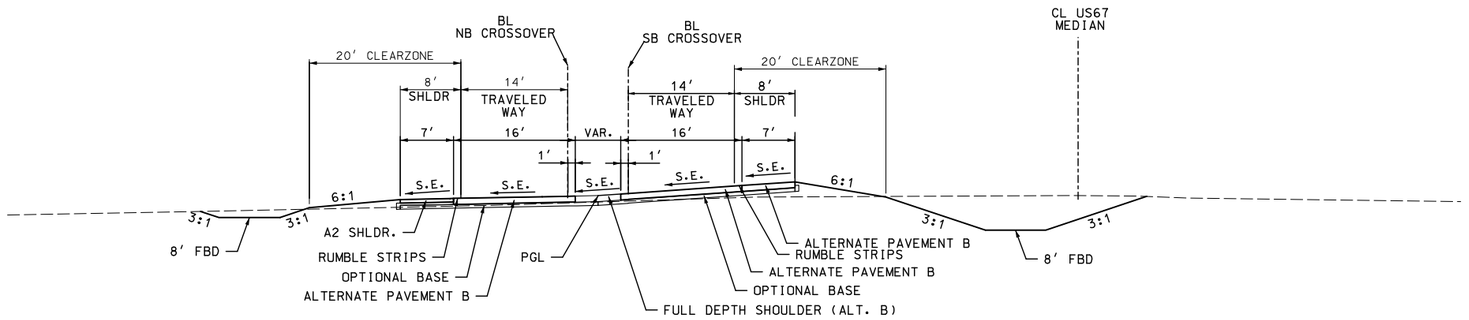
* 0' STA. 2+67.59 TO 3+92.08
** VARIES 12' TO 0' FROM STA. 2+67.59 TO 3+67.59
*** VARIES 12' TO 0' FROM STA. 7+67.83 TO 8+67.83
**** VARIES 30' TO 20' FROM STA. 2+67.59 TO 3+67.59
***** VARIES 30' TO 20' FROM STA. 7+67.83 TO 8+67.83
****** BEGIN FULL DEPTH SHOULDER (ALT. B) AT STA. 7+25.00
******* BEGIN FULL DEPTH SHOULDER (ALT. B) AT STA. 12+15.00



⑥ TYPICAL SECTION RTE. 67
STA. 770+67.71 TO STA. 776+71.41

TYPICAL SECTION NB CROSSOVER
STA. 2+67.59 TO STA. 8+71.85

TYPICAL SECTION SB CROSSOVER
STA. 7+67.83 TO STA. 13+84.19



⑦ TYPICAL SECTION RTE. 67
STA. 776+71.41 TO STA. 778+11.30

TYPICAL SECTION NB CROSSOVER
STA. 8+71.85 TO STA. 10+15.87

TYPICAL SECTION SB CROSSOVER
STA. 13+84.19 TO STA. 15+28.50

SOUTHBOUND CROSSOVER SUPERELEVATION TABLE			
STATION	CROSS SLOPE		DESCRIPTION
	LEFT	RIGHT	
5+17.57	-2.00%	-2.00%	NORMAL CROWN
5+79.79	-2.00%	0.00%	SUPER RUNOFF IN
6+42.01	-2.00%	2.00%	REVERSE CROWN IN
7+97.78	-7.00%	7.00%	FULL SUPER IN
11+42.52	-7.00%	7.00%	FULL SUPER OUT
13+49.03	0.00%	0.00%	SUPER RUNOFF
15+55.54	7.00%	-7.00%	FULL SUPER IN
GORE EXCEPTION			
16+49.08	4.86%	-7.00%	MATCH NB SUPER TRANSITION
17+21.02	7.00%	-7.00%	NB FULL SUPER IN
19+12.68	7.00%	-7.00%	FULL SUPER OUT
20+46.20	2.00%	-2.00%	REVERSE CROWN OUT
20+99.53	0.00%	-2.00%	SUPER RUNOFF OUT
21+52.86	-2.00%	-2.00%	NORMAL CROWN

NORTHBOUND CROSSOVER SUPERELEVATION TABLE			
STATION	CROSS SLOPE		DESCRIPTION
	LEFT	RIGHT	
2+67.59	-2.00%	-2.00%	NORMAL CROWN
3+29.93	-2.00%	0.00%	SUPER RUNOFF IN
3+92.15	-2.00%	2.00%	REVERSE CROWN IN
5+47.92	-7.00%	7.00%	FULL SUPER IN
7+37.45	-7.00%	7.00%	FULL SUPER OUT
9+72.98	0.00%	0.00%	SUPER RUNOFF
11+36.50	4.86%	-4.86%	MATCH SB SUPER TRANSITION

CONCRETE ALTERNATES
TYPICAL SECTIONS
SHEET 8 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

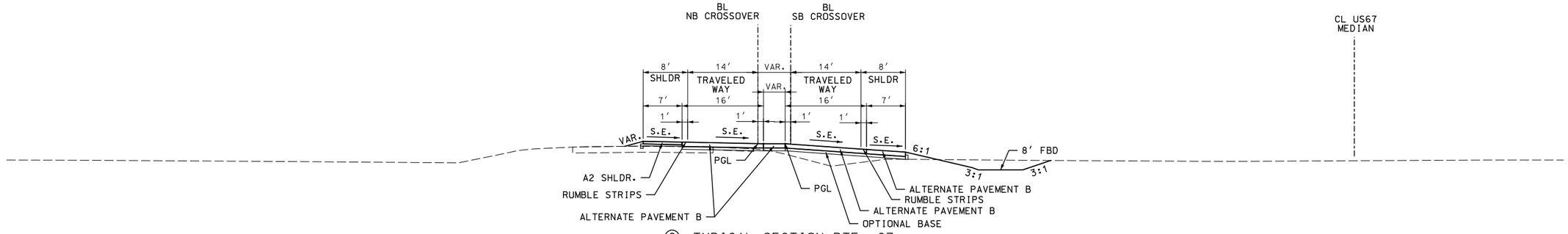
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV. | DATE | DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

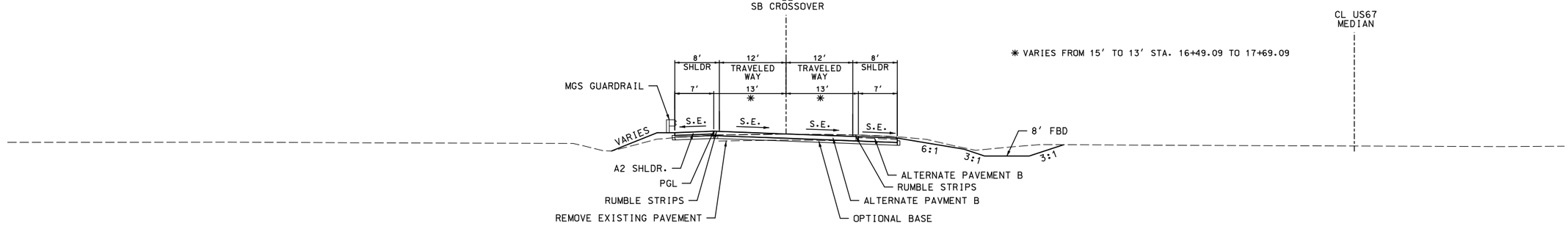
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



⑧ TYPICAL SECTION RTE. 67
STA. 778+11.30 TO STA. 779+29.62

TYPICAL SECTION NB CROSSOVER
STA. 10+15.87 TO STA. 11+36.50

TYPICAL SECTION SB CROSSOVER
STA. 15+28.50 TO STA. 16+49.08



* VARIES FROM 15′ TO 13′ STA. 16+49.09 TO 17+69.09

TYPICAL SECTION SB CROSSOVER
STA. 16+49.08 TO STA. 19+12.00

⑨ TYPICAL SECTION RTE. 67
STA. 779+29.62 TO STA. 781+91.19

CONCRETE ALTERNATES
TYPICAL SECTIONS
SHEET 9 OF 10

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	2

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

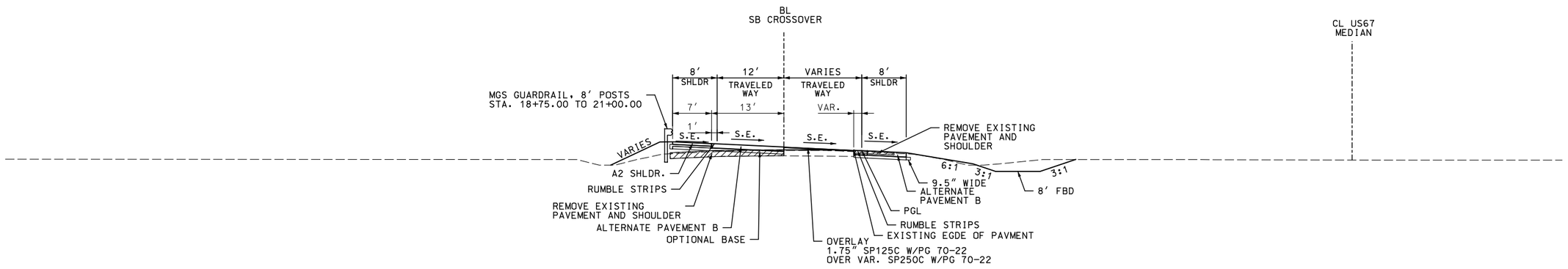
REV.	DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

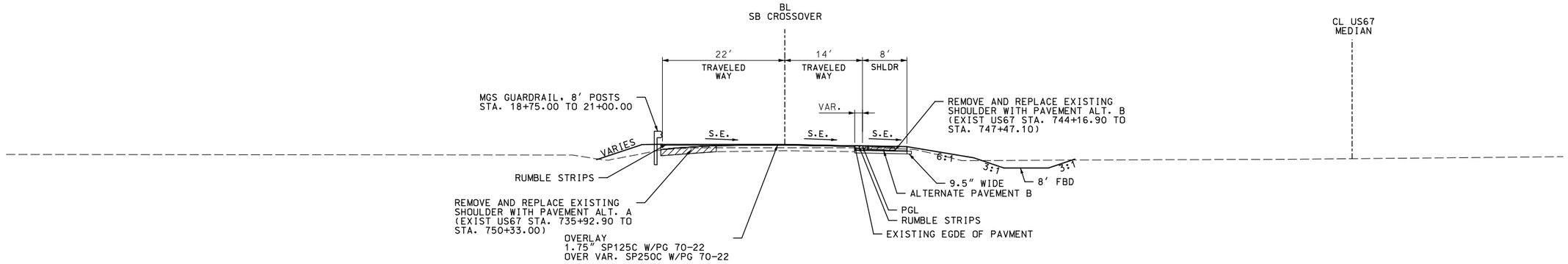
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\002_TS_XX_J9P3751.dgn 1:28:26 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TYPICAL SECTION SB CROSSOVER
STA. 19+12.00 TO STA. 20+25.00

(10) TYPICAL SECTION RTE. 67
STA. 781+91.19 TO STA. 783+17.00



TYPICAL SECTION SB CROSSOVER
STA. 20+25.00 TO STA. 21+52.87
(11)

TYPICAL SECTION RTE. 67
STA. 783+17.00 TO STA. 784+31.16

CONCRETE ALTERNATES
TYPICAL SECTIONS
SHEET 10 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 2
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REMOVAL OF IMPROVEMENTS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	DESCRIPTION	UNIT	QUANTITY	REMARKS
5	677+53	678+03	PROPOSED US67	LT	30" PIPE	LF	50	UNDER DRIVEWAY
5	680+97	681+55	PROPOSED US67	LT	18" PIPE	LF	59	UNDER DRIVEWAY
6	684+46.52		PROPOSED US67	LT	TREE	EA	1	
7	696+00	698+10	PROPOSED US67	RT	TREE	EA	13	
7	696+18.70	696+73.98	PROPOSED US67	RT	BUILDING	EA	1	
7	696+66.60	696+89.20	PROPOSED US67	RT	BUILDING	EA	1	
7	697+80.43	697+98.15	PROPOSED US67	LT	WALL	EA	1	
7	697+46.20	697+65.30	PROPOSED US67	LT	WALL	EA	1	
8	723+40.71	723+87.53	PROPOSED US67	RT	BUILDING	EA	1	
8	723+08.93		PROPOSED US67	RT	TREE	EA	1	
8	723+03.56		PROPOSED US67	LT	TREE	EA	1	
8	722+99.92		PROPOSED US67	LT	POST	EA	1	
9	724+42.47	725+41.45	PROPOSED US67	LT	BUILDING	EA	1	
9	724+92.89	725+42.65	PROPOSED US67	RT	BUILDING	EA	1	
9	725+80.46	726+03.01	PROPOSED US67	RT/LT	BUILDING	EA	1	
9	724+88.29		PROPOSED US67	LT	TREE	EA	1	
9	726+49.13		PROPOSED US67	LT	MAILBOX	EA	1	
10	740+36.04		PROPOSED US67	LT	POST	EA	1	
10	740+24.14		PROPOSED US67	LT	TREE	EA	1	
10	740+70.67		PROPOSED US67	RT	TREE	EA	1	
10	747+17.20		PROPOSED US67	RT	TREE	EA	1	
10	747+40.44		PROPOSED US67	RT	TREE	EA	1	
10	747+41.67	748+14.19	PROPOSED US67	RT	BUILDING	EA	1	
10	747+51.01	747+64.80	PROPOSED US67	RT	BUILDING	EA	1	
10	747+86	748+06	PROPOSED US67	LT	24" PIPE	LF	20	UNDER DRIVEWAY
10	748+04.84		PROPOSED US67	LT	MAILBOX	EA	1	
12	766+18.53		PROPOSED US67	LT	POST	EA	1	
12-13	738+66	743+79	EXISTING US67	RT	PAVEMENT	SY	684	SOUTHBOUND LANE
12-13	738+66	744+91	EXISTING US67	LT	PAVEMENT	SY	833	NORTHBOUND LANE
12-13	735+93	750+33	EXISTING US67	LT	SHOULDER	SY	1,280	EAST SHOULDER
12-13	744+17	747+47	EXISTING US67	RT	SHOULDER	SY	294	WEST SHOULDER
71	713+70		PROPOSED US67	LT	SIGN	EA	1	COUNTY ROAD (R&RELOCATE)
71	713+90		PROPOSED US67	LT	SIGN	EA	1	R1-1
72	766+20		PROPOSED US67	LT	SIGN	EA	1	COUNTY ROAD
72	766+20		PROPOSED US67	LT	SIGN	EA	1	R1-1
REMOVAL OF TREES AND BRUSH FELLED DURING UTILITY INSTALLATION TO BE INCIDENTAL TO REMOVAL OF IMPROVEMENTS								
TOTAL = 1 LUMP SUM								

NOTES:

1. CLEARING AND REMOVAL OF DEBRIS AND STRUCTURES WITHIN RIGHT OF WAY AND EASEMENTS IS INCIDENTAL TO REMOVAL OF IMPROVEMENTS.

2. SAWCUTS FOR PAVEMENT REMOVAL ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS.

ROUTE 67

SUMMARY OF QUANTITES
SHEET 1 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
2/29/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CLEARING AND GRUBBING

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CLEARING AND GRUBBING (ACRE)	REMARKS
5	680+09.86	680+87.46	PROPOSED US67	RT/LT	0.2	
5	680+87.12	681+22.43	PROPOSED US67	RT	0.2	
7	698+62.57	704+99.15	PROPOSED US67	RT/LT	2.3	
10	740+13.86	740+54.43	PROPOSED US67	RT	0.1	
11	754+85.08	761+13.27	PROPOSED US67	RT	1.1	
11	759+11.74	762+68.39	PROPOSED US67	RT	0.5	
12	766+00.00	766+27.99	PROPOSED US67	RT	0.2	
12	766+64.06	780+00.00	PROPOSED US67	RT	7.3	
13	780+00.00	792+97.43	PROPOSED US67	RT	7.4	
				TOTALS	19	

EARTHWORK

SHEET	FROM STATION	TO STATION	BASELINE	CUT (CUYD)	FILL (CUYD)	CLASS A EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	CLASS 3 EXCAVATION (CUYD)	REMARKS
4	660+75.00	668+00.00	US 67	1,246	7,499						
5	668+00.00	682+00.00	US 67	1,297	20,663						
6	682+00.00	696+00.00	US 67	1,243	10,679						
7	696+00.00	710+00.00	US 67	10,114	17,686						
8	710+00.00	724+00.00	US 67	4,501	10,330						
9	724+00.00	738+00.00	US 67	5,764	16,533						
10	738+00.00	752+00.00	US 67	2,842	15,688						
11	752+00.00	766+00.00	US 67	3,480	32,384						INCLUDES WOR EARTHWORK
11	757+41.80	761+28.17	US 67	1,929							EXCAVATION FOR BRIDGE ROCK LINNING
12	766+00.00	780+00.00	US 68	283	3,065						INCLUDES WOR EARTHWORK
13	5+00.00	17+00.00	SB-1	2,528	10,014						
13	17+00.00	21+50.00	SB-1	444	599						
			SUBTOTAL	38,272	145,140	38,272	112,609	32,531			
7	696+50.00	698+50.00	US 67						2.0		
9	724+50.00	726+50.00	US 67						2.0		
11	759+90.00	760+13.00	US 67						0.2		
11	5+84.00	6+61.00	WOR						0.8		
11	10+90.00	11+27.00	WOR						0.4		
7	699+64.69	701+64.54	US 67			2,601	2,601				DRAINING POND
											ALL QUANTITIES ASSUME 15% SHRINK WHEN RECOMPACTING
										1,153	* TOTAL FROM PIPE SCHEDULE
										34	* TOTAL FROM STRUCTURE SCHEDULE
					TOTALS	40,873	115,210	32,531	5.4	1,187	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 2 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/24/2023

ROUTE	STATE
67	MO

DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

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

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

BASE

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MODIFIED SUBGRADE (SQYD)	TYPE 5 AGGREGATE FOR BASE (6 IN.) (SQYD)	OPTIONAL BASE (SQYD)	GRAVEL (A) OR CRUSHED STONE (B) (TONS)	REMARKS
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	2,417		2,416.7		
4	660+75.00	668+00.00	PROPOSED US67	LEFT	2,417		2,416.7		
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
5	668+00.00	682+00.00	PROPOSED US67	LEFT	4,667		4,666.7		
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
6	682+00.00	696+00.00	PROPOSED US67	LEFT	4,667		4,666.7		
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
7	696+00.00	710+00.00	PROPOSED US67	LEFT	4,667		4,666.7		
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
8	710+00.00	724+00.00	PROPOSED US67	LEFT	4,667		4,666.7		
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
9	724+00.00	738+00.00	PROPOSED US67	LEFT	4,667		4,666.7		
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	4,667		4,666.7		
10	738+00.00	752+00.00	PROPOSED US67	LEFT	4,667		4,666.7		ALTERNATE A/B PAVEMENTS
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	2,127		2,126.8		
11	752+00.00	757+48.04	PROPOSED US67	LEFT	1,827		1,826.8		
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	1,887		1,887.0		
11	759+43.91	766+00.00	PROPOSED US67	LEFT	2,187		2,187.0		
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	725		725.2		
12	766+00.00	770+67.59	PROPOSED US67	LEFT	1,559		1,558.6		
12	2+67.59	11+36.50	NB TRANSITION	RIGHT/LEFT	1,548		1,547.9		
12	5+17.57	16+49.08	SB TRANSITION	RIGHT/LEFT	2,484		2,483.5		
12	16+49.08	17+20.81	SB TRANSITION	CL	282		282.4		
13	17+20.81	19+12.00	SB TRANSITION	RIGHT	428		428.2		
13	17+20.81	20+25.00	SB TRANSITION	LEFT	441		441.3		
12-13	735+92.90	750+33.00	EXISTING US67	LEFT	1,100		1,099.8		
12-13	743+79.39	747+47.10	EXISTING US67	RIGHT	298		297.5		
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	644		644.4		
4	660+75.00	668+00.00	PROPOSED US67	LEFT	644		644.4		
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
5	668+00.00	682+00.00	PROPOSED US67	LEFT	1,244		1,244.4		
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
6	682+00.00	696+00.00	PROPOSED US67	LEFT	1,244		1,244.4		
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
7	696+00.00	710+00.00	PROPOSED US67	LEFT	1,244		1,244.4		
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
8	710+00.00	724+00.00	PROPOSED US67	LEFT	1,244		1,244.4		
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
9	724+00.00	738+00.00	PROPOSED US67	LEFT	1,244		1,244.4		
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	1,244		1,244.4		
10	738+00.00	752+00.00	PROPOSED US67	LEFT	1,244		1,244.4		ALTERNATE C/D SHOULDERS
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	567		567.1		
11	752+00.00	757+48.04	PROPOSED US67	LEFT	487		487.1		
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	503		503.2		
11	759+43.91	766+00.00	PROPOSED US67	LEFT	583		583.2		
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	193		193.4		
12	766+00.00	770+67.61	PROPOSED US67	LEFT	416		415.6		
12	2+67.59	11+36.50	NB TRANSITION	LEFT	673		673.2		
12	2+67.59	7+25.00	NB TRANSITION	RIGHT	166		166.4		
12	5+17.57	13+84.19	SB TRANSITION	LEFT	303		302.5		
12	5+17.57	12+15.00	SB TRANSITION	RIGHT	546		546.3		
12	16+49.08	17+20.81	SB TRANSITION	LEFT	58		58.3		
13	17+20.81	20+25.00	SB TRANSITION	LEFT	237		236.5		
11	7+50.00	9+35.00	WOR	CL		486		54	INCLUDES DRIVEWAY AGGREGATE
11	9+35.00	9+65.63	WOR	CL	95	95			ALTERNATE E/F PAVEMENT
11	10+93.49	16+00.00	WOR	CL	1,576	1,576			
12	16+00.00	16+58.66	WOR	CL	245	245			
12			CR352			40		4	TEMPORARY ENTRANCE TO SMODY PROPERTY
				TOTAL	100,595	2,442	98,680.2	58	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 3 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

OVERLAY

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP125C MIX) (TONS)	ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP250C MIX) (TONS)	TACK COAT (GAL)	BITUMINOUS CENTERLINE RUMBLE STRIP (STA)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS) (SQYD)	REMARKS
13	19+12.00	20+50.00	SB CROSSOVER	RT			18	1.4	1.4	92	ASSUME HALF LANE
13	20+50.00	21+52.86	SB CROSSOVER	RT			28	1.0	1.0	137	ASSUME FULL LANE
13	20+25.00	21+25.00	SB CROSSOVER	LT			14		1.0	67	ASSUME HALF LANE
13	21+25.00	21+52.87	SB CROSSOVER	LT			8		0.3	37	ASSUME FULL LANE
13	19+12.00	21+52.87	SB CROSSOVER	RT/LT		70.1					
13	19+12.00	21+52.87	SB CROSSOVER	RT	50.6		108				
13	20+25.00	21+52.87	SB CROSSOVER	LT	26.9		56				
13	18+12.00	19+12.00	SB CROSSOVER	RT	21.0	22.4	22			111	OVERLAY TRANSITION DURING CONSTRUCTION
13	19+25.00	20+25.00	SB CROSSOVER	LT	21.0	22.4	22			111	OVERLAY TRANSITION DURING CONSTRUCTION
											TACK COAT QTY INCREASED DUE TO STAGE CONSTRUCTION
				TOTALS	119.5	114.9	276	2.4	3.7	555	

CONCRETE APPROACH PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE APPROACH PAVEMENT (SQYD)	REMARKS
11	757+48.04	757+71.04	PROPOSED US67	LEFT	143.6	
11	758+98.91	759+43.91	PROPOSED US67	LEFT	143.6	
11	758+38.04	758+83.04	PROPOSED US67	RIGHT	143.6	
11	760+10.91	760+33.91	PROPOSED US67	RIGHT	143.6	
				TOTALS	574.2	

GUARDRAIL

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS GUARDRAIL (LF)	MGS GUARDRAIL, 8 FT. POSTS, 6 FT. – 3 IN. SPACING (LF)	TYPE D GUARDRAIL (LF)	MGS BRIDGE APPROACH TRANSITION SECTION (EXTENDED CURB) (EA)	MGS LONG SPAN GUARDRAIL SECTION (EA)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	MGS END ANCHOR (EA)	CHAIN-LINK FENCE (72 IN.) (LF)	REMARKS
5	677+66.81	681+57.33	PROPOSED US67	RIGHT	213				1	1	1		EPPS DITCH BOX CULVERT
7	701+71.97	702+62.50	PROPOSED US67	RIGHT	213				1	1	1		EPPS DITCH BOX CULVERT
8	713+50.00	713+74.87	PROPOSED US67	RIGHT			25						END OF CR340, INCL. FLARED END SHOES
11	755+19.70	758+58.33	PROPOSED US67	RIGHT	250			1		1			
11	756+32.70	758+96.33	PROPOSED US67	RIGHT	175			1		1			
11	757+48.00	757+48.00	PROPOSED US67	RIGHT			25						END OF WOR, INCL. FLARED END SHOES
11	754+69.99	757+68.33	PROPOSED US67	LEFT	250			1			1		
11	758+85.61	761+49.25	PROPOSED US67	LEFT	175			1		1			
11	759+23.61	762+62.25	PROPOSED US67	LEFT	250			1		1			
12	776+82.70	776+82.70	PROPOSED US67	LEFT			38						ON EX US67, INCL. FLARED END SHOES
12	777+03.90		PROPOSED US67	LEFT								40	ON EX 67, INCLUDES FENCE SLATS
12-13	16+35.10	18+75.00	SB CROSSOVER	LEFT	238						1		ALONG CROSSOVER PAVEMENT
13	18+75.00	21+54.00	SB CROSSOVER	LEFT		225				1			ALONG CROSSOVER PAVEMENT
				TOTALS	1,763	225	88	5	2	7	4	40	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 4 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

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

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

MISCELLANEOUS				
DISPOSAL AND PLUGGING OF WELLS (EA)	MOBILIZATION (LS)	DRAINING PONDS (EA)	ADDITIONAL MOBILIZATION FOR SEEDING (EA)	CONTRACTOR FURNISHED SURVEYING AND STAKING (LS)
3	1	1	5	1

PAVEMENT MARKING												
PAVEMENT MARKING SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	PREFORMED THERMOPLASTIC PAVEMENT MARKING, 24 IN. YELLOW (LF)	4 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	4 IN. WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	4 IN. YELLOW WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	PREFORMED THERMOPLASTIC PAVEMENT MARKING, LANE REDUCTION ARROW (EA)	REMARKS
1	660+75.00	770+67.71	PROPOSED US67	LEFT			10,993					NB EDGE LINE
1	660+75.00	767+67.63	PROPOSED US67	LEFT			2,673					NB CENTERLINE
1	660+75.00	770+67.71	PROPOSED US67	LEFT				10,993				NB EDGE LINE
1	660+75.00	768+17.57	PROPOSED US67	RIGHT				10,743				SB EDGE LINE
1	660+75.00	759+77.57	PROPOSED US67	RIGHT			2,476					SB CENTERLINE
1	660+75.00	768+17.57	PROPOSED US67	RIGHT			10,743					SB EDGE LINE
1	757+44.59	757+44.59	PROPOSED US67	RIGHT							1	
1	759+44.59	759+44.59	PROPOSED US67	RIGHT							1	
1	5+17.57	9+00.00	SB CROSSOVER	RIGHT			383					SB EDGE LINE
1	5+17.57	9+00.00	SB CROSSOVER	LEFT				383				SB EDGE LINE
1	2+67.57	4+00.00	NB CROSSOVER	RIGHT			133					NB EDGE LINE
1	2+67.57	4+00.00	NB CROSSOVER	LEFT				133				NB EDGE LINE
1	9+35.00	16+14.84	WOR	CL						1,360		DOUBLE CENTERLINE
1	9+35.00	16+58.58	WOR	RIGHT					724			NB EDGE LINE
1	9+35.00	16+14.84	WOR	LEFT					680			SB EDGE LINE
2	9+00.00	21+52.87	SB CROSSOVER	RIGHT			1,252					SB EDGE LINE
2	9+00.00	16+49.08	SB CROSSOVER	LEFT				750				SB EDGE LINE
2	16+49.08	21+52.87	SB CROSSOVER	CL		1,008						DOUBLE CENTERLINE
2	16+49.08	21+52.87	SB CROSSOVER	LEFT			506					SB EDGE LINE
2	4+00.00	11+36.50	NB CROSSOVER	LEFT			734					NB EDGE LINE
2	4+00.00	11+36.50	NB CROSSOVER	RIGHT				737				NB EDGE LINE
2	13+82.00	16+49.08	SB CROSSOVER	LEFT	57							SB EDGE LINE
2	746+19.57	756+19.57	EXISTING US67	CL		2,000						DOUBLE CENTERLINE
2	746+19.57	747+48.16	EXISTING US67	RIGHT			129					SB EDGE LINE
2	746+19.57	750+34.33	EXISTING US67	LEFT			415					NB EDGE LINE
				TOTALS	57	3,008	30,437	23,739	1,404	1,360	2	

SEEDING									
SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	SEEDING – COOL SEASON GRASSES (ACRE)	MULCHING (ACRE)	SEEDING – WARM SEASON GRASSES (ACRE)	TEMPORARY SEEDING (ACRE)	REMARKS
59	660+75.00	668+00.00	PROPOSED US67	RT/LT	1.8	2.8	1.0	1.0	
60	668+00.00	682+00.00	PROPOSED US67	RT/LT	3.6	5.5	1.9	1.9	COOL SEASON SEEDING MIXTURE WITHIN FIRST 30'
61	682+00.00	696+00.00	PROPOSED US67	RT/LT	3.6	5.5	1.9	1.9	WARM SEASON SEEDING MIXTURE BEYOND THE FIRST 30'
62	696+00.00	710+00.00	PROPOSED US67	RT/LT	3.6	5.7	2.1	2.1	TEMPORARY SEEDING 25% OF PERMANENT
63	710+00.00	724+00.00	PROPOSED US67	RT/LT	3.6	5.8	2.2	2.2	
64	724+00.00	738+00.00	PROPOSED US67	RT/LT	3.5	5.6	2.1	2.1	
65	738+00.00	752+00.00	PROPOSED US67	RT/LT	3.6	5.7	2.1	2.1	
66	752+00.00	766+00.00	PROPOSED US67	RT/LT	3.6	7.1	3.5	3.5	
67	766+00.00	780+00.00	PROPOSED US67	RT/LT	3.2	6.9	3.7	3.7	
68	780+00.00	784+32.00	PROPOSED US67	RT/LT	0.3	2.6	2.4	2.4	INCLUDES CLEARED AND GRUBBED AREA BEYOND SLOPE LIMITS
				TOTALS	30.4	53.1	22.7	22.7	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 5 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
2/29/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

PAVEMENT UNDERDRAINAGE

SHEET	STA.	STA.	ALIGN.	PIPE AGGREGATE PAVEMENT EDGE DRAIN (LF)	OUTLET PIPES AND SPLASH PADS (EA)	REMARKS
4-5	660+75	679+25	NB US67	1,850		
5-7	681+00	704+00	NB US67	2,300		
7-11	706+00	756+48	NB US67	5,048		
11-12	759+44	770+68	NB US67	1,124		
4-5	660+75	679+25	SB US67	1,850		
5-7	681+00	704+00	SB US67	2,300		
7-11	706+00	758+38	SB US67	5,238		
11-12	760+34	768+18	SB US67	784		
4	662+50		US67_3751		2	NB & SB OUTER LANE OUTLET
4	665+00		US67_3751		2	NB & SB OUTER LANE OUTLET
4	667+50		US67_3751		2	NB & SB OUTER LANE OUTLET
5	670+00		US67_3751		2	NB & SB OUTER LANE OUTLET
5	672+50		US67_3751		2	NB & SB OUTER LANE OUTLET
5	675+00		US67_3751		2	NB & SB OUTER LANE OUTLET
5	677+50		US67_3751		2	NB & SB OUTER LANE OUTLET
5	679+25		US67_3751		2	NB & SB OUTER LANE OUTLET
5	681+00		US67_3751		2	NB & SB OUTER LANE OUTLET
6	682+50		US67_3751		2	NB & SB OUTER LANE OUTLET
6	685+00		US67_3751		2	NB & SB OUTER LANE OUTLET
6	687+50		US67_3751		2	NB & SB OUTER LANE OUTLET
6	690+00		US67_3751		2	NB & SB OUTER LANE OUTLET
6	692+50		US67_3751		2	NB & SB OUTER LANE OUTLET
6	695+00		US67_3751		2	NB & SB OUTER LANE OUTLET
7	697+50		US67_3751		2	NB & SB OUTER LANE OUTLET
7	700+00		US67_3751		2	NB & SB OUTER LANE OUTLET
7	702+50		US67_3751		2	NB & SB OUTER LANE OUTLET
7	704+00		US67_3751		2	NB & SB OUTER LANE OUTLET
7	706+00		US67_3751		2	NB & SB OUTER LANE OUTLET
7	707+50		US67_3751		2	NB & SB OUTER LANE OUTLET
7	710+00		US67_3751		2	NB & SB OUTER LANE OUTLET
8	712+50		US67_3751		2	NB & SB OUTER LANE OUTLET
8	715+00		US67_3751		2	NB & SB OUTER LANE OUTLET
8	717+50		US67_3751		2	NB & SB OUTER LANE OUTLET
8	720+00		US67_3751		2	NB & SB OUTER LANE OUTLET
8	722+50		US67_3751		2	NB & SB OUTER LANE OUTLET
9	725+00		US67_3751		2	NB & SB OUTER LANE OUTLET
9	727+50		US67_3751		2	NB & SB OUTER LANE OUTLET
9	730+00		US67_3751		2	NB & SB OUTER LANE OUTLET
9	732+50		US67_3751		2	NB & SB OUTER LANE OUTLET
9	735+00		US67_3751		2	NB & SB OUTER LANE OUTLET
9	737+50		US67_3751		2	NB & SB OUTER LANE OUTLET
10	740+00		US67_3751		2	NB & SB OUTER LANE OUTLET
10	742+50		US67_3751		2	NB & SB OUTER LANE OUTLET
10	745+00		US67_3751		2	NB & SB OUTER LANE OUTLET
10	747+50		US67_3751		2	NB & SB OUTER LANE OUTLET
10	750+00		US67_3751		2	NB & SB OUTER LANE OUTLET
11	752+50		US67_3751		2	NB & SB OUTER LANE OUTLET
11	755+00		US67_3751		2	NB & SB OUTER LANE OUTLET
11	756+48		US67_3751		1	NB OUTER LANE OUTLET
11	757+50		US67_3751		1	SB OUTER LANE OUTLET
11	760+50		US67_3751		1	NB OUTER LANE OUTLET
11	761+00		US67_3751		1	SB OUTER LANE OUTLET
11	762+50		US67_3751		2	NB & SB OUTER LANE OUTLET
11	765+00		US67_3751		2	NB & SB OUTER LANE OUTLET
12	767+50		US67_3751		2	NB & SB OUTER LANE OUTLET
			TOTALS	20,493	90	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 6 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/5/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DRAINAGE PIPES

SHEET	CULVERT SECTION SHEET	FROM STRUCTURE	TO STRUCTURE	CLASS 3 EXCAVATION (CUYD)	18 IN. PIPE GROUP B (LF)	18 IN. PIPE GROUP A (LF)	24 IN. PIPE GROUP A (LF)	30 IN. PIPE GROUP A (LF)	36 IN. PIPE GROUP A (LF)	REMARKS
4	1	F2	F1	19		68				
5	1	F3	F32	16			66			
5	1	F4	F33	85			171			
6	1	F7	F5	198			180			
6	2	F6	F34	39			69			
7	2	F9	F35	15			71			
7	2	F11	F8	122		179				
7	2	F14	F12	85		180				
8	3	F13	F36	27		70				
8	3	F16	F37	20		65				
8	3	F15	F38	25			64			
8	3	F17	F19	29			65			
9	3	F39	F40	22				59		
9	3	F18	F41	29				64		
10	4	F22	F42	29		70				
10	4	F23	F45	19			72			
11	4	F21	F25	224					182	
11	4	A100	OUTLET	4						STANDARD 609.40S
11	5	A104	OUTLET	8						STANDARD 609.40S
11	6	B105	OUTLET	6						STANDARD 609.40S
11	6	B106	OUTLET	6						STANDARD 609.40S
11	6	A107	OUTLET	11						STANDARD 609.40S
11	6	F27	F43	4		73				
11		F300	F301		38					WOR DRIVEWAY
12	7	F29	F26	26		176				
12	7	F28	F110	12		74				
12	7	F30	F31	14		57				
12	7	F46	F47	59			90			
12					30					TEMPORARY ENTRANCE TO SMODY PROPERTY
			TOTALS	1153 ✳	68	1012	848	123	182	

✳ SEE EARTHWORK TABLE FOR TOTAL

DRAINAGE MISC.

SHEET	STATION	ROADWAY	CULVERT CLEANOUT (EA)	REMARKS
6	688+01.81	US67_3751	1	
6	691+89.36	US67_3751	1	
7	699+57.45	US67_3751	1	
8	720+82.74	US67_3751	1	
9	732+95.56	US67_3751	1	
12	766+15.35	US67_3751	1	
13	22+14.29	SB	1	
		TOTALS	7	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 7 OF 16

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

PIPE COLLARS, FLARED END SECTIONS, AND ROCK LINING

SHEET	CULVERT SECTION SHEET	FROM STRUCTURE	TO STRUCTURE	ROCK LINING (CUYD)	18 IN. OR ALLOWED SUBSTITUTE GROUP B FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	24 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	30 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	36 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	REMARKS
4	1	F2	F1	3		2				
5	1	F3	F32	4			2			
5	1	F4	F33	4			2			
6	1	F7	F5	4			2			
6	2	F6	F34	5			2			
7	2	F9	F35	5			2			
7	2	F11	F8	5		2				
7	2	F14	F12	3		2				
8	3	F13	F36	3		2				
8	3	F16	F37	3		2				
8	3	F15	F38	5			2			
8	3	F17	F19	5			2			
9	3	F39	F40	7				2		
9	3	F18	F41	6				2		
10	4	F22	F42	3		2				
10	4	F23	F45	4			2			
11	4	F21	F25	9					2	
11	4	A100		2						
11	5	B101		2						
11	5	B102		2						
11	5	A103		2						
11	5	A104		2						
11	6	B105		2						
11	6	B106		2						
11	6	F27	F43	3		2				
11		F300	F301	2	2					WOR DRIVEWAY
12	7	F29	F26	3		2				
12	7	F28	F110	3		2				
12	7	F30	F31	3		2				
12	7	F46	F47	4			2			
12				3	2					TEMPORARY ENTRANCE TO SMODY PROPERTY
			TOTALS	113	4	20	18	4	2	

DRAINAGE STRUCTURES

STRUCTURE NUMBER	SHEET	CULVERT SECTION SHEET	SHEET	OFFSET	ROADWAY	STANDARD	TYPE	ACTUAL DEPTH	CLASS 3 EXCAVATION (CUYD)	DRAIN BASIN (EA)	PIPE OPENINGS (NUMBER-SIZE)	REMARKS
A100	11	4	757+54.46	62.00' LT	US 67	609.40S	A 4 X 2	4.00	2	1	1-12"	
B101	11	5	757+92.46	27.00' LT	US 67	609.40S	A 2 X 2	3.25	0	1	1-12"	
B102	11	5	758+44.46	27.00' RT	US 67	609.40S	A 2 X 2	3.25	0	1	1-12"	
A103	11	5	758+74.46	62.00' RT	US 67	609.40S	A 4 X 2	3.25	0	1	1-12"	
A104	11	5	759+07.49	62.00' LT	US 67	609.40S	A 4 X 2	3.25	9	1	1-12"	
B105	11	6	759+37.49	27.00' LT	US 67	609.40S	A 2 X 2	3.25	9	1	1-12"	
B106	11	6	759+89.49	27.00' RT	US 67	609.40S	A 2 X 2	3.25	7	1	1-12"	
A107	11	6	760+27.49	62.00' RT	US 67	609.40S	A 4 X 2	3.25	7	1	1-12"	
								TOTALS	34 *	8		

* SEE EARTHWORK TABLE FOR TOTAL

ROUTE 67

SUMMARY OF QUANTITES
SHEET 8 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/5/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EROSION CONTROL

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CUYD)	PLACING TYPE 2 ROCK BLANKET (CUYD)	PERMANENT EROSION CONTROL GEOTEXTILE (SQYD)	SEDIMENT TRAP EXCAVATION (CUYD)	SEDIMENT TRAP ROCK (CUYD)	ROCK DITCH CHECK (LF)	ALTERNATE DITCH CHECK (LF)	SEDIMENT REMOVAL (CUYD)	SILT FENCE (LF)	TYPE 1 TURF REINFORCEMENT MAT (SQYD)	REMARKS
59	663+43		PROP. US67	LT							21	1			
59	666+43		PROP. US67	LT							20	1			
59	664+17		PROP. US67	CL						31		1			
59	664+34		PROP. US67	CL						31		1			
59	664+16		PROP. US67	RT						22		1			
59	667+16		PROP. US67	RT							16	1			
60	669+43		PROP. US67	LT							19	1			
60	672+43		PROP. US67	LT							18	1			
60	675+43		PROP. US67	LT						22		1			
60	675+60		PROP. US67	LT						22		1			
60	678+60		PROP. US67	LT							17	1			
60	678+78	679+55	PROP. US67	LT										69	
60	680+05	680+86	PROP. US67	LT										72	
60	670+32		PROP. US67	CL						31		1			
60	670+49		PROP. US67	CL						31		1			
60	673+49		PROP. US67	CL							26	1			
60	676+49		PROP. US67	CL							27	1			
60	679+25		PROP. US67	CL							27	1			
60	679+33	679+85	PROP. US67	CL										46	
60	680+60	680+81	PROP. US67	CL										19	
60	670+30		PROP. US67	RT						20		1			
60	672+41		PROP. US67	RT							16	1			
60	675+41		PROP. US67	RT						20		1			
60	677+29		PROP. US67	RT							16	1			
60	680+23		PROP. US67	RT				1.4	2			10			
60	680+77		PROP. US67	RT						20		1			
60	681+19		PROP. US67	RT				1.4	2			10			
60	680+29	681+06	PROP. US67	LT & RT								5	504		
60	680+45	681+13	PROP. US67	RT	164	164									2' DEEP
60	680+45	681+13	PROP. US67	RT			246								
61	682+92		PROP. US67	LT						20		1			
61	683+09		PROP. US67	LT						20		1			
61	686+09		PROP. US67	LT							17	1			
61	689+09		PROP. US67	LT							20	1			
61	692+09		PROP. US67	LT							23	1			
61	695+09		PROP. US67	LT							26	1			
61	683+67		PROP. US67	CL							23	1			
61	686+67		PROP. US67	CL							21	1			
61	689+67		PROP. US67	CL						26		1			
61	689+84		PROP. US67	CL						26		1			
61	692+84		PROP. US67	CL							23	1			
61	683+10		PROP. US67	RT						20		1			
61	686+10		PROP. US67	RT							16	1			
61	689+10		PROP. US67	RT							16	1			
61	689+86		PROP. US67	RT						20		1			
61	692+86		PROP. US67	RT							20	1			
62	697+98		PROP. US67	LT							24	1			
62	699+48		PROP. US67	LT						25		1			
62	699+66		PROP. US67	LT						25		1			
62	703+00		PROP. US67	LT							21	1			
62	703+75		PROP. US67	LT						24		1			
62	703+92		PROP. US67	LT						24		1			
62	703+85	704+80	PROP. US67	LT										85	
62	705+55	706+45	PROP. US67	LT										80	
62	706+37		PROP. US67	LT						23		1			
62	706+54		PROP. US67	LT						23		1			
62	709+54		PROP. US67	LT							21	1			
62	696+42		PROP. US67	CL							24	1			
62	699+42		PROP. US67	CL						27		1			
62	699+59		PROP. US67	CL						27		1			
62	702+59		PROP. US67	CL							23	1			
62	704+19	704+50	PROP. US67	CL										28	
62	705+25	705+62	PROP. US67	CL										33	
62	707+91		PROP. US67	CL							21	1			
62	696+40		PROP. US67	RT							20	1			
				SUBTOTAL 1	164	164	246	2.8	4	580	582	77	504	432	

CONTINUES ON NEXT SHEET

ROUTE 67
SUMMARY OF QUANTITES
SHEET 9 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EROSION CONTROL (CONTINUED)

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CUYD)	PLACING TYPE 2 ROCK BLANKET (CUYD)	PERMANENT EROSION CONTROL GEOTEXTILE (SQYD)	SEDIMENT TRAP EXCAVATION (CUYD)	SEDIMENT TRAP ROCK (CUYD)	ROCK DITCH CHECK (LF)	ALTERNATE DITCH CHECK (LF)	SEDIMENT REMOVAL (CUYD)	SILT FENCE (LF)	TYPE 1 TURF REINFORCEMENT MAT (SQYD)	REMARKS
62	699+40		PROP. US67	RT						26		1			
62	701+02		PROP. US67	RT							16	1			
62	703+76		PROP. US67	RT						20		1			
62	704+00		PROP. US67	RT				1.4	2			10			
62	704+69		PROP. US67	RT				1.4	2			10			
62	706+54		PROP. US67	RT						20		1			
62	709+52		PROP. US67	RT							16	1			
62	703+88	704+92	PROP. US67	LT & RT								6	587		
62	703+97	704+08	PROP. US67	RT								1	16		
62	704+36	704+91	PROP. US67	RT								1	58		
62	702+62	703+95	PROP. US67	RT								2	163		
62	704+18	710+00	PROP. US67	RT								6	582		
62	704+07	704+53	PROP. US67	RT	100	100									2' DEEP
62	704+07	704+53	PROP. US67	RT			150								
63	712+54		PROP. US67	LT							26	1			
63	714+75		PROP. US67	LT							26	1			
63	717+75		PROP. US67	LT							27	1			
63	720+75		PROP. US67	LT						32		1			
63	720+96		PROP. US67	LT						32		1			
63	723+96		PROP. US67	LT							26	1			
63	710+91		PROP. US67	CL						29		1			
63	711+07		PROP. US67	CL						29		1			
63	715+42		PROP. US67	CL						31		1			
63	715+58		PROP. US67	CL						31		1			
63	720+76		PROP. US67	CL						27		1			
63	720+95		PROP. US67	CL						27		1			
63	723+95		PROP. US67	CL							23	1			
63	711+11		PROP. US67	RT						32		1			
63	715+40		PROP. US67	RT						32		1			
63	717+75		PROP. US67	RT							20	1			
63	720+75		PROP. US67	RT						26		1			
63	720+96		PROP. US67	RT						26		1			
63	723+85		PROP. US67	RT							20	1			
63	710+00	724+00	PROP. US67	RT								14	1400		
64	726+85		PROP. US67	LT							26	1			
64	729+85		PROP. US67	LT							22	1			
64	732+85		PROP. US67	LT						26		1			
64	733+05		PROP. US67	LT						27		1			
64	736+05		PROP. US67	LT							22	1			
64	726+85		PROP. US67	CL							23	1			
64	729+85		PROP. US67	CL							21	1			
64	732+85		PROP. US67	CL						26		1			
64	733+05		PROP. US67	CL						26		1			
64	736+05		PROP. US67	CL							22	1			
64	726+85		PROP. US67	RT							21	1			
64	729+85		PROP. US67	RT							21	1			
64	732+85		PROP. US67	RT						26		1			
64	733+05		PROP. US67	RT						26		1			
64	736+05		PROP. US67	RT							20	1			
64	724+00	738+00	PROP. US67	RT								14	1400		
65	739+05		PROP. US67	LT							25	1			
65	742+14		PROP. US67	LT							25	1			
65	745+14		PROP. US67	LT							23	1			
65	748+14		PROP. US67	LT							22	1			
65	751+14		PROP. US67	LT							20	1			
65	739+05		PROP. US67	CL							25	1			
65	741+93		PROP. US67	CL							24	1			
65	744+93		PROP. US67	CL						29		1			
65	745+09		PROP. US67	CL						29		1			
65	748+92		PROP. US67	CL							25	1			
65	751+92		PROP. US67	CL						26		1			
65	738+90		PROP. US67	RT							20	1			
65	741+90		PROP. US67	RT							20	1			
65	744+90		PROP. US67	RT						20		1			
65	745+91		PROP. US67	RT							16	1			
65	748+90		PROP. US67	RT							16	1			
65	751+90		PROP. US67	RT						20		1			
				SUBTOTAL 2	100	100	150	2.8	4	701	659	120	4,206	0	

CONTINUES ON NEXT SHEET

ROUTE 67
SUMMARY OF QUANTITES
SHEET 10 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EROSION CONTROL (CONTINUED)

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CUYD)	PLACING TYPE 2 ROCK BLANKET (CUYD)	PERMANENT EROSION CONTROL GEOTEXTILE (SQYD)	SEDIMENT TRAP EXCAVATION (CUYD)	SEDIMENT TRAP ROCK (CUYD)	ROCK DITCH CHECK (LF)	ALTERNATE DITCH CHECK (LF)	SEDIMENT REMOVAL (CUYD)	SILT FENCE (LF)	TYPE 1 TURF REINFORCEMENT MAT (SQYD)	REMARKS
65	738+00	752+00	PROP. US67	RT								14	1400		
66	754+14		PROP. US67	LT							17	1			
66	756+63		PROP. US67	LT						21		1			
66	757+62		PROP. US67	LT				1.4	2			10			
66	760+67		PROP. US67	LT							25	1			
66	763+67		PROP. US67	LT							26	1			
66	752+08		PROP. US67	CL						26		1			
66	755+08		PROP. US67	CL							19	1			
66	763+16		PROP. US67	CL						26		1			
66	763+33		PROP. US67	CL						26		1			
66	753+94		PROP. US67	RT							16	1			
66	756+93		PROP. US67	RT						20		1			
66	757+09		PROP. US67	RT						20		1			
66	757+43		PROP. US67	RT							16	1			
66	757+96		PROP. US67	RT							20	1			
66	761+66		PROP. US67	RT							19	1			
66	763+16		PROP. US67	RT						29		1			
66	763+66		PROP. US67	RT							19	1			
66	765+16		PROP. US67	RT							21	1			
66	752+00	760+02	PROP. US67	RT								8	802		
66	757+46	760+02	PROP. US67	LT & RT								4	439		
66	757+77	760+79	PROP. US67	LT & RT								4	416		
66	760+79	766+00	PROP. US67	RT								5	521		
66	757+42	761+28	PROP. US67	LT & RT	1929	1929									2' DEEP
66	757+42	761+28	PROP. US67	LT & RT			2894								
67	766+66		PROP. US67	LT						30		1			
67	766+84		PROP. US67	LT						30		1			
67	769+84		PROP. US67	LT							23	1			
67	775+94		PROP. US67	LT							16	1			
67	777+29		PROP. US67	LT						20		1			
67	777+43		PROP. US67	LT						20		1			
67	769+42		PROP. US67	CL						32		1			
67	769+58		PROP. US67	CL						32		1			
67	773+86		PROP. US67	CL						24		1			
67	774+00		PROP. US67	CL						24		1			
67	766+66		PROP. US67	RT						20		1			
67	766+84		PROP. US67	RT						20		1			
67	769+58		PROP. US67	RT						20		1			
67	773+99		PROP. US67	RT						20		1			
67	774+60		PROP. US67	RT							16	1			
67	777+47		PROP. US67	RT						20		1			
67	777+66		PROP. US67	RT						20		1			
67	766+58	780+00	PROP. US67	RT								13	1342		
68	782+57		PROP. US67	LT						20		1			
68	784+32		PROP. US67	LT				1.4	2			10			
68	780+59		PROP. US67	RT							16	1			
68	783+59		PROP. US67	RT							16	1			
68	784+40		PROP. US67	RT				1.4	2			10			
68	780+00	792+96	PROP. US67	RT								16	1561		
				SUBTOTAL 3	1,929	1,929	2,894	4.2	6	520	285	131	6,481	0	
				SUBTOTAL 2	100	100	150	2.8	4	701	659	120	4,206	0	
				SUBTOTAL 1	164	164	246	2.8	4	580	582	77	504	432	
				TOTALS	2,193	2,193	3,290	9.8	14	1,801	1,526	328	11,191	432	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 11 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION | DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE A (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	12.5 INCHES, ASPHALTIC CONCRETE PAVEMENT SP125C (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	BITUMINOUS CENTERLINE RUMBLE STRIP (STA)	REMARKS
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	2,416.7	14.5		
4	660+75.00	668+00.00	PROPOSED US67	LEFT	2,416.7	14.5		
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
5	668+00.00	682+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
6	682+00.00	696+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
7	696+00.00	710+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
8	710+00.00	724+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
9	724+00.00	738+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	4,666.7	28.0		
10	738+00.00	752+00.00	PROPOSED US67	LEFT	4,666.7	28.0		
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	2,126.8	12.8		
11	752+00.00	757+48.04	PROPOSED US67	LEFT	1,826.8	11.0		
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	1,887.0	11.3		
11	759+43.91	766+00.00	PROPOSED US67	LEFT	2,187.0	13.1		
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	725.2	4.4		
12	766+00.00	770+67.59	PROPOSED US67	LEFT	1,558.6	9.4		
12	2+67.59	11+36.50	NB TRANSITION	RIGHT/LEFT	1,547.9	8.7		INCLUDES FULL DEPTH SHOULDER
12	2+67.59	8+71.24	NB TRANSITION	RIGHT		6.0		
12	5+17.57	16+49.08	SB TRANSITION	RIGHT/LEFT	2,483.5	11.3		INCULDES FULL DEPTH SHOULDER AND GORE
12	5+17.57	13+84.19	SB TRANSITION	LEFT		8.7		
12	15+28.50	16+49.08	SB TRANSITION	LEFT			1.2	
12	16+49.08	17+20.81	SB TRANSITION	CL	282.4	1.4	0.7	INCLUDES FULL DEPTH SHOULDER
13	17+20.81	19+12.00	SB TRANSITION	RIGHT	428.2			
13	17+20.81	20+25.00	SB TRANSITION	LEFT	441.3			
13	17+20.81	19+12.00	SB TRANSITION	CL		3.8	1.9	
12-13	735+92.90	750+33.00	EXISTING US67	LEFT	1,099.8			REPLACEMENT OF EXISTING SHOULDER
12-13	743+79.39	747+47.10	EXISTING US67	RIGHT	297.5			REPLACEMENT OF EXISTING SHOULDER
13	746+19.57	750+33.00	EXISTING US67	LEFT		4.1		
13	746+19.57	747+47.10	EXISTING US67	RIGHT		1.3		
				TOTALS	77,725.8	472.3	3.8	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 12 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE B (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (9 1/2 IN. NON-REINFORCED, 15 FT. JOINTS) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	PORTLAND CEMENT CONCRETE CENTERLINE RUMBLE STRIP (STA)	REMARKS
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	2416.7	14.5		
4	660+75.00	668+00.00	PROPOSED US67	LEFT	2416.7	14.5		
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
5	668+00.00	682+00.00	PROPOSED US67	LEFT	4666.7	28.0		
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
6	682+00.00	696+00.00	PROPOSED US67	LEFT	4666.7	28.0		
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
7	696+00.00	710+00.00	PROPOSED US67	LEFT	4666.7	28.0		
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
8	710+00.00	724+00.00	PROPOSED US67	LEFT	4666.7	28.0		
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
9	724+00.00	738+00.00	PROPOSED US67	LEFT	4666.7	28.0		
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	4666.7	28.0		
10	738+00.00	752+00.00	PROPOSED US67	LEFT	4666.7	28.0		
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	2126.8	12.8		
11	752+00.00	757+48.04	PROPOSED US67	LEFT	1826.8	11.0		
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	1887.0	11.3		
11	759+43.91	766+00.00	PROPOSED US67	LEFT	2187.0	13.1		
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	725.2	4.4		
12	766+00.00	770+67.59	PROPOSED US67	LEFT	1558.6	9.4		
12	2+67.59	11+36.50	NB TRANSITION	RIGHT/LEFT	1547.9	8.7		INCLUDES FULL DEPTH SHOULDER
12	2+67.59	8+71.24	NB TRANSITION	RIGHT		6.0		
12	5+17.57	16+49.08	SB TRANSITION	RIGHT/LEFT	2483.5	11.3		INCULDES FULL DEPTH SHOULDER AND GORE
12	5+17.57	13+84.19	SB TRANSITION	LEFT		8.7		
12	15+28.50	16+49.08	SB TRANSITION	LEFT			1.2	
12	16+49.08	17+20.81	SB TRANSITION	CL	282.4	1.4	0.7	INCLUDES FULL DEPTH SHOULDER
13	17+20.81	19+12.00	SB TRANSITION	RIGHT	428.2			
13	17+20.81	20+25.00	SB TRANSITION	LEFT	441.3			
13	17+20.81	19+12.00	SB TRANSITION	CL		3.8	1.9	
12-13	735+92.90	750+33.00	EXISTING US67	LEFT	1099.8			REPLACEMENT OF EXISTING SHOULDER
12-13	743+79.39	747+47.10	EXISTING US67	RIGHT	297.5			REPLACEMENT OF EXISTING SHOULDER
13	746+19.57	750+33.00	EXISTING US67	LEFT		4.1		
13	746+19.57	747+47.10	EXISTING US67	RIGHT		1.3		
				TOTALS	77,725.8	472.3	3.8	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 13 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE C (ASPHALT) SHOULDER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	A2 SHOULDER (SQYD)	REMARKS
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	644.4	
4	660+75.00	668+00.00	PROPOSED US67	LEFT	644.4	
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	1,244.4	
5	668+00.00	682+00.00	PROPOSED US67	LEFT	1,244.4	
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	1,244.4	
6	682+00.00	696+00.00	PROPOSED US67	LEFT	1,244.4	
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	1,244.4	
7	696+00.00	710+00.00	PROPOSED US67	LEFT	1,244.4	
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	1,244.4	
8	710+00.00	724+00.00	PROPOSED US67	LEFT	1,244.4	
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	1,244.4	
9	724+00.00	738+00.00	PROPOSED US67	LEFT	1,244.4	
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	1,244.4	
10	738+00.00	752+00.00	PROPOSED US67	LEFT	1,244.4	
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	567.1	
11	752+00.00	757+48.04	PROPOSED US67	LEFT	487.1	
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	503.2	
11	759+43.91	766+00.00	PROPOSED US67	LEFT	583.2	
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	193.4	
12	766+00.00	770+67.61	PROPOSED US67	LEFT	415.6	
12	2+67.59	11+36.50	NB TRANSITION	LEFT	673.2	
12	2+67.59	7+25.00	NB TRANSITION	RIGHT	166.4	
12	5+17.57	13+84.19	SB TRANSITION	LEFT	302.5	
12	5+17.57	12+15.00	SB TRANSITION	RIGHT	546.3	
12	16+49.08	17+20.81	SB TRANSITION	LEFT	58.3	
13	17+20.81	20+25.00	SB TRANSITION	LEFT	236.5	
				TOTAL	20,954.4	

ALTERNATE D (CONCRETE) SHOULDER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	A2 SHOULDER (SQYD)	REMARKS
4	660+75.00	668+00.00	PROPOSED US67	RIGHT	644.4	
4	660+75.00	668+00.00	PROPOSED US67	LEFT	644.4	
5	668+00.00	682+00.00	PROPOSED US67	RIGHT	1,244.4	
5	668+00.00	682+00.00	PROPOSED US67	LEFT	1,244.4	
6	682+00.00	696+00.00	PROPOSED US67	RIGHT	1,244.4	
6	682+00.00	696+00.00	PROPOSED US67	LEFT	1,244.4	
7	696+00.00	710+00.00	PROPOSED US67	RIGHT	1,244.4	
7	696+00.00	710+00.00	PROPOSED US67	LEFT	1,244.4	
8	710+00.00	724+00.00	PROPOSED US67	RIGHT	1,244.4	
8	710+00.00	724+00.00	PROPOSED US67	LEFT	1,244.4	
9	724+00.00	738+00.00	PROPOSED US67	RIGHT	1,244.4	
9	724+00.00	738+00.00	PROPOSED US67	LEFT	1,244.4	
10	738+00.00	752+00.00	PROPOSED US67	RIGHT	1,244.4	
10	738+00.00	752+00.00	PROPOSED US67	LEFT	1,244.4	
11	752+00.00	758+38.04	PROPOSED US67	RIGHT	567.1	
11	752+00.00	757+48.04	PROPOSED US67	LEFT	487.1	
11	760+33.91	766+00.00	PROPOSED US67	RIGHT	503.2	
11	759+43.91	766+00.00	PROPOSED US67	LEFT	583.2	
12	766+00.00	768+17.57	PROPOSED US67	RIGHT	193.4	
12	766+00.00	770+67.61	PROPOSED US67	LEFT	415.6	
12	2+67.59	11+36.50	NB TRANSITION	LEFT	673.2	
12	2+67.59	7+25.00	NB TRANSITION	RIGHT	166.4	
12	5+17.57	13+84.19	SB TRANSITION	LEFT	302.5	
12	5+17.57	12+15.00	SB TRANSITION	RIGHT	546.3	
12	16+49.08	17+20.81	SB TRANSITION	LEFT	58.3	
13	17+20.81	20+25.00	SB TRANSITION	LEFT	236.5	
				TOTAL	20,954.4	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 14 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE E (ASPHALT) PAVEMENT							
SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	7 INCHES, BITUMINOUS PAVEMENT (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
11	9+35.00	9+65.63	WOR	CL	95.3	0.6	
11	10+93.49	16+00.00	WOR	CL	1,575.8	9.2	
12	16+00.00	16+58.66	WOR	CL	244.8	0.6	SEE AGGREGATE BASE SCHEDULE FOR WOR STA. 7+50 TO 9+35
				TOTALS	1,915.9	10.4	

ALTERNATE F (CONCRETE) PAVEMENT							
SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (7 IN. NON-REINF) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	REMARKS
11	9+35.00	9+65.63	WOR	CL	95.3	0.6	
11	10+93.49	16+00.00	WOR	CL	1,575.8	9.2	
12	16+00.00	16+58.66	WOR	CL	244.8	0.6	SEE AGGREGATE BASE SCHEDULE FOR WOR STA. 7+50 TO 9+35
				TOTALS	1,915.9	10.4	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 15 OF 16

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
W01-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	**48X48**	**16.00**	**4**	**64**			**15L**	**REVERSE CURVE (SYMBOL LEFT ARROW)**
W01-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-6	**60X30**	**12.50**	**3**	**37.5**			**16**	**HORIZONTAL ARROW (SYMBOL)**
W01-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
W01-8	18X24	3.00						CHEVRON (SYMBOL)
W01-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00						STOP AHEAD (SYMBOL)
W03-2	48X48	16.00						YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
W03-4	**48X48**	**16.00**	**2**	**32**			**11**	**BE PREPARED TO STOP**
W03-5	48X48	16.00						SPEED LIMIT AHEAD
W04-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
W04-1aL	48X48	16.00						MERGE (ARROW SYMBOL)
W04-1aR	48X48	16.00						MERGE (ARROW SYMBOL)
W05-1	**48X48**	**16.00**	**2**	**32**			**43**	**ROAD/BRIDGE/RAMP NARROWS**
W05-3	48X48	16.00						ONE LANE BRIDGE
W05-5	48X48	16.00						NARROW LANES
W06-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00						BUMP
W08-2	48X48	16.00						DIP
W08-3	48X48	16.00						PAVEMENT ENDS
W08-4	48X48	16.00						SOFT SHOULDER
W08-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
W08-6	**48X48**	**16.00**	**4**	**64**			**10**	**TRUCK CROSSING (WITH FLAGS)**
W08-6c	**48X48**	**16.00**	**4**	**64**			**9**	**TRUCK ENTRANCE**
W08-7	36X36	9.00						LOOSE GRAVEL
W08-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL
W08-9	**48X48**	**16.00**	**2**	**32**			**22**	**LOW SHOULDER**
W08-11	**48X48**	**16.00**	**2**	**32**			**36**	**UNEVEN LANES**
W08-12	48X48	16.00						NO CENTER LINE
W08-15	48X48	16.00						GROOVED PAVEMENT
W08-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00						SHOULDER DROP-OFF (SYMBOL)
W08-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
W012-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2X	24X18	3.00						LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W012-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
W012-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00						XXX FEET (PLAQUE)
W016-3	30X24	5.00						X MILE (PLAQUE)
W020-1	**48X48**	**16.00**	**4**	**64**			**2/2a**	**ROAD/BRIDGE/RAMP WORK AHEAD**
W020-2	48X48	16.00						DETOUR AHEAD
W020-3	**48X48**	**16.00**	**10**	**160**			**20/65**	**ROAD CLOSED AHEAD/ROAD CLOSED XX FT**
W020-4	**48X48**	**16.00**	**2**	**32**			**7**	**ONE LANE ROAD AHEAD**
W020-5	**48X48**	**16.00**	**2**	**32**			**5**	**RIGHT/CENTER/LEFT LANE CLOSED AHEAD**
W020-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	**48X48**	**16.00**	**2**	**32**			**6**	**RIGHT/CENTER/LEFT LANE CLOSED**
W020-7a	**48X48**	**16.00**	**2**	**32**			**8**	**FLAGGER (SYMBOL, WITH FLAGS)**
W021-2	36X36	9.00						FRESH OIL
W021-5	**48X48**	**16.00**	**2**	**32**			**21**	**SHOULDER WORK AHEAD**
W021-5a	**48X48**	**16.00**	**1**	**16**			**21a**	**RIGHT SHOULDER CLOSED**
W021-5b	**48X48**	**16.00**	**1**	**16**			**21b**	**RIGHT SHOULDER CLOSED AHEAD**
W022-1	48X48	16.00						BLASTING ZONE AHEAD
W022-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS, CONT.								
W022-3	42X36	10.50						END BLASTING ZONE
G022-1	21X15	2.19						WET PAINT (ARROW PIVOTS)
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
G020-1	**60X24**	**10.00**	**2**	**20**			**1**	**ROAD WORK NEXT 4 MILES**
G020-2	**48X24**	**8.00**	**2**	**16**			**55**	**END ROAD WORK**
G020-4	36X18	4.50						PILOT CAR FOLLOW ME
G020-4a	**42X30**	**8.75**	**2**	**17.5**			**66**	**PILOT CAR IN USE WAIT & FOLLOW**
G020-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
G020-5aP	**36X24**	**6.00**	**4**	**27**			**54**	**WORK ZONE (PLAQUE)**
M1-4	24X24	4.00						ROUTE SHIELD
M3-1	24X12	2.00						NORTH MARKER
M3-3	24X12	2.00						SOUTH MARKER
M5-1L	**21X15**	**2.19**	**4**	**8.8**			**19A**	**LEFT TURN ARROW ADVANCE**
M5-1R	**21X15**	**2.19**	**3**	**6.6**			**19B**	**RIGHT TURN ARROW ADVANCE**
M6-1	21X15	2.19						TURN ARROW
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2aP	36X30	7.50						TO ONCOMING TRAFFIC (PLAQUE)
R2-1	**36X48**	**12.00**	**4**	**48**			**4/25**	**SPEED LIMIT xx**
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	**48X48**	**16.00**	**1**	**16**			**70**	**NO LEFT TURN (SYMBOL)**
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	**36X48**	**12.00**	**1**	**12**			**46**	**DO NOT PASS**
R4-2	**36X48**	**12.00**	**1**	**12**			**46A**	**PASS WITH CARE**
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R5-1	**30X30**	**6.25**	**2**	**12.5**			**60**	**DO NOT ENTER**
R5-1a	**36X24**	**6.00**	**2**	**12**			**61**	**WRONG WAY**
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	**54X18**	**6.75**	**2**	**13.5**			**62**	**ONE WAY ARROW (RIGHT)**
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)
R11-2	**48X30**	**10.00**	**7**	**70**			**29**	**ROAD CLOSED**
R11-3a	**60X30**	**12.50**	**2**	**25**			**63**	**ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY**
R11-4	**60X30**	**12.50**	**1**	**12.5**			**64**	**ROAD CLOSED TO THRU TRAFFIC**
CONST-3A	**60X48**	**20.00**	**1**	**20**			**53**	**FINE SIGN**
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	**48X36**	**12.00**						**POINT OF PRESENCE**
CONST-5	**96X48**	**32.00**	**1**	**32**			**58**	**POINT OF PRESENCE**
CONST-8	**48X36**	**12.00**	**2**	**24**			**57**	**WORK ZONE NO PHONE ZONE**
SPECIAL	**48X48**	**16.00**	**2**	**32**			**80**	**RUMBLE STRIPS AHEAD**
W4-4bP	**24X12**	**2.00**	**1**	**2**			**67**	**ONCOMING TRAFFIC DOES NOT STOP**

	TOTAL
616-10.05 CONSTRUCTION SIGNS	1213
616-10.10 RELOCATED SIGNS	*

* NO DIRECT PAY WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNING OR DEVICES.

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014	**2**	**IMPACT ATTENUATOR 60 MPH (SAND BARRELS)**
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	**6**	**REPLACEMENT SAND BARREL**
6122030	**4**	**IMPACT ATTENUATOR (RELOCATION)**
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161008	**6**	**ADVANCED WARNING RAIL SYSTEM**
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	**200**	**CHANNELIZER (TRIM LINE)**
6161030	**20**	**TYPE III MOVEABLE BARRICADE**
6161033	**28**	**DIRECTION INDICATOR BARRICADE**
6161040	**2**	**FLASHING ARROW PANEL**
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070	**20**	**TUBULAR MARKER**
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	**3**	**CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED**
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	**18**	**TEMPORARY LONG-TERM RUMBLE STRIPS**
6173700B	**2225**	**TEMPORARY TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED**
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B	**1176**	**RELOCATING TEMPORARY TRAFFIC BARRIER ANCHORED**
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A	**40**	**TEMPORARY RAISED PAVEMENT MARKER**
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
4019905	**1022**	**S.Y. MISC. TEMP. OPTIONAL PVMT & BASE**
6207001	**15459**	**PAVEMENT MARKING REMOVAL**
6207002	**2**	**PAVEMENT MARKING REMOVAL (SYMBOLS)**
6208076	**20047**	**4 IN. TEMPORARY PAVEMENT MARKING PAINT**

NOTES:

CHANGEABLE MESSAGE BOARD LOCATIONS AND MESSAGES TO BE DETERMINED BY THE ENGINEER.

SIGN AND DEVICE LOCATION WILL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER.

SIGN QUANTITIES HAVE BEEN ESTIMATED. TEMPORARY TRAFFIC CONTROL SHALL FOLLOW AT A MINIMUM MUTCD STANDARDS, LATEST EDITION.

ALL WARNING SIGNS SHALL HAVE FLORESCENT SHEETING.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SUMMARY OF QUANTITIES
SHEET 16 OF 16

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2010000798
PROFESSIONAL ENGINEER
8/01/2024 10:49:21 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED: 8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

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.

SCALE
0 50 100 150

BEGIN PROJECT
STA. 622+65.01 EXISTING US67
STA. 660+75.00, 137.09' LT PROPOSED US67

'EXISTING AND CONSTRUCTED ENTRANCES MAY BE WIDENED TO A MAXIMUM WIDTH OF 60' BY PERMIT UNLESS OTHERWISE NOTED.

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.

N/F
SHIRLEY J. HUNT, TRUSTEE
1037/1001
NO TAKINGS

NW 1/4 NW 1/4
SEC 22
T23N R5E

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	4

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EXIST. R/W
SECTION LINE
COUNTY ROAD 338
EXIST. R/W
SECTION LINE
EXIST. R/W
EXIST. R/W
EXIST. R/W
EPPS DITCH
℄ EXIST. ROUTE 67
SECTION LINE
S.L.
8' FBD
EXIST. R/W
℄ ROUTE 67
S 0° 26' 25" W
8' FBD
S.L.
R/W LINE
MATCHLINE STA. 668+00.00, ROUTE 67
655
660
665
625
POT STA 655+00.00
POT STA 620+69.53
(UIP)
(R)
(RBO)
WELL (ABANDON)
F2
18" PIPE
F1
TEMP. ESM'T (CONST.)
622+84.62
267.09' RT
622+99.62
267.09' RT
622+84.26
371.50' RT
622+99.26
371.39' RT
(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460

NOTE:

SEE SIGNING SHEETS FOR SIGNING REMOVALS.

RIGHT OF WAY LIMITS FOR THIS PROJECT EXTEND FROM STA. 622+84.26 TO STA. 754+86.03, A DISTANCE OF 2.503 MILES.

NE 1/4
SEC 21
T23N R5E

DRAINAGE AND HATCHING/SHADING LEGEND

(A) PRECAST DROP INLET 4FT X 2FT WITH CURVED VANE GRATE AND FRAME (4FT X 2FT) TYPE A

(B) PRECAST DROP INLET 2FT X 2FT WITH CURVED VANE GRATE AND FRAME (2FT X 2FT) (TYPE A)

(F) GROUP A FLARED END SECTION

PAVEMENT REMOVAL

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NW 1/4 NW 1/4
SEC 22
T23N R5E

N/F
SHIRLEY J. HUNT, TRUSTEE
1037/1001
NO TAKINGS

SW 1/4 NW 1/4
SEC 22
T23N R5E

N/F
RODNEY RUSSELL EAKER AND
MARCUS SHANE EAKER
948/325 (BENEFICIARY DEED)
NO TAKINGS

1/4 1/4 SECTION LINE

630 635 640

670 675 680

PI STA 630+36.00

PI STA 638+98.10

EXISTING BOX CULVERT (UIP)
A8094

EXIST. R/W

EXIST. R/W

℄ EXIST. ROUTE 67

EPPS DITCH

SECTION LINE

SECTION LINE

S 0° 16' 39" W

ENTRANCE AND PIPE (R)

S.L.

S.L.

8' FBD

8' FBD

EXIST. R/W

ENTRANCE AND PIPE (R)

EXIST. R/W

HEADWALL (R)

F4

℄ ROUTE 67

24" PIPE

S 0° 26' 25" W

8' FBD

8' FBD

F3

24" PIPE

F32

F33

8' FBD

S.L.

S.L.

R/W LINE

R/W LINE

MGS LONG SPAN GUARDRAIL

-36.81 -66.81 -57.33 -77.33

MATCHLINE STA. 668+00.00, ROUTE 67

MATCHLINE STA. 682+00.00, ROUTE 67

16' x 8' BOX CULVERT EXTENSION
A80941
DHW = 304.4 FT
D.A. = 0.5 SQ MI
Q50 = 200 CFS
OVERTOPPING FLOOD DISCHARGE = N/A
OVERTOPPING FLOOD FREQUENCY > 500 YEARS

EPPS DITCH

(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460

NE 1/4
SEC 21
T23N R5E

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	5

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	6

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION

DATE

REV.

SW 1/4 NW 1/4
SEC 22
T23N R5E

645

N/F
RODNEY RUSSELL EAKER AND
MARCUS SHANE EAKER
948/325 (BENEFICIARY DEED)
NO TAKINGS

N/F
SONDRA K. GLASS, TRUSTEE
1037/5816
(TRACTS 1, 2 AND 3)
NO TAKINGS

1/4 SECTION LINE

NW 1/4 SW 1/4
SEC 22
T23N R5E

650

N/F
JOYCE EAKINS, TRUSTEE
1033/5260 (TRACT I)
NO TAKINGS

655

660

665

℄ EXIST. ROUTE 67

EXIST. R/W

SECTION LINE

S.L.

8' FBD

WINDSTREAM

UT

(R)

(RBO)

F7

F6

F5

F34

24" PIPE

℄ ROUTE 67

S 0° 26' 25" W

MATCHLINE STA. 682+00.00, ROUTE 67

MATCHLINE STA. 696+00.00, ROUTE 67

R/W LINE

657+53.74
231.00' RT

657+53.40
381.00' RT

TEMP. ESM'T
(CONST.)

NE 1/4
SEC 21
T23N R5E

28
JOAN F. FRANCIS, TRUSTEE
1029/1460

NE 1/4 SE 1/4
SEC 21
T23N R5E

EPPS DITCH

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\006_PP_03_J9P3751_i50.dgn 2:09:43 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	7

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

NW 1/4 SW 1/4
SEC 22
T23N R5E

N/F
JOYCE EAKINS, TRUSTEE
1033/5260 (TRACT I)
NO TAKINGS

SW 1/4 SW 1/4
SEC 22
T23N R5E

N/F
LISA KAY ISOM
1040/6392
NO TAKINGS

℄ 1/4 1/4 SECTION LINE

MATCHLINE STA. 696+00.00, ROUTE 67

MATCHLINE STA. 710+00.00, ROUTE 67

660 665 670 675 680 685 690 695 700 705 710

℄ EXIST. ROUTE 67
EXIST. R/W
℄ ROUTE 67
S 0° 16′ 39″ W
S 0° 20′ 06″ W
S 0° 26′ 25″ W
EXISTING BOX CULVERT (UIP) A8096
EXIST. R/W EPPS DITCH
(UIP)
SECTION LINE
ENTRANCE (R)
WALL (R)
S.L.
(CLEAN)
8′ FBD
EXIST. R/W
HEADWALL (R)
EXIST. PERMANENT ESMT. TO OZARK BORDER ELECTRIC COOPERATIVE 1033/2050
18″ PIPE
24″ PIPE
POND (R)
F8 F9 F11 F12 F14 F35
R/W LINE
PERM. UTIL. ESMT.
TEMP. ESM'T (CONST.)
BUILDINGS (R)
659+26.45 271.49′ RT
659+26.14 381.49′ RT
664+49.61 272.97′ RT
664+49.55 302.97′ RT
16′ × 9′
BOX CULVERT EXTENSION
A80961
DHW = 304.4 FT
D.A. = 0.5 SQ MI
Q50 = 200 CFS
OVERTOPPING FLOOD DISCHARGE = N/A
OVERTOPPING FLOOD FREQUENCY > 500 YEARS
MGS LONG SPAN GUARDRAIL

28
JOAN F. FRANCIS, TRUSTEE
1029/1460

EPPS DITCH

SE 1/4
SEC 21
T23N R5E

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\007_PP_04_J9P3751_i50.dgn 2:09:45 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	8

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SW 1/4 SW 1/4
SEC 22
T23N R5E

NW 1/4 NW 1/4
SEC 27
T23N R5E

N/F
LISA KAY ISOM
1040/6392
NO TAKINGS

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

675
680
685
715
720

EXIST. R/W COUNTY ROAD 340
SECTION LINE
EXIST. R/W
EPPS DITCH
℄ EXIST. ROUTE 67
SECTION LINE
S 0° 20' 06" W
S.L.
EXIST. R/W
(RBO)
(CLEAN) OE
8' FBD
EXIST. R/W
(R)
F19
24" PIPE
WELL (ABANDON)
℄ ROUTE 67
F17
S 0° 26' 25" W
S 0° 18' 13" W
F13
F16
F38
18" PIPE
180°8'11.96"
18" PIPE
24" PIPE
F36
F37
F15
BUILDING (R)
S.L.
TYPE D GUARDRAIL
S.L.
NEW R/W
R/W LINE
R/W LINE
PERM. UTIL. ESMT.
PERM. UTIL. ESMT.
SAWCUT
675+38.90
83.81' RT
675+38.89
92.95' RT
SECTION LINE
EXIST. R/W
COUNTY ROAD 340 EXIST. R/W
MATCHLINE STA. 710+00.00, ROUTE 67
MATCHLINE STA. 724+00.00, ROUTE 67

(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460

SE 1/4
SEC 21
T23N R5E

(29)

(30)
N/F
ORVILLE D. & ALICE G. ALLEN
1037/2912 (BENEFICIARY DEED)

NE 1/4 NE 1/4
SEC 28
T23N R5E

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\008_PP_05_J9P3751_i50.dgn 2:09:47 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	9

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

SW 1/4 NW 1/4
SEC 27
T23N R5E

NW 1/4 NW 1/4
SEC 27
T23N R5E

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

690 695

725 730 735

℄ EXIST. ROUTE 67

EPPS DITCH

EXIST. R/W

SECTION LINE

S 0° 20′ 06″ W

S.L.

CLEAN OUT

ENTRANCE (R)

F41

30″ PIPE

F18

F40

F39

S 0° 18′ 13″ W

℄ ROUTE 67

BUILDINGS (R)

8′ FBD

MATCHLINE STA. 724+00.00, ROUTE 67

MATCHLINE STA. 738+00.00, ROUTE 67

R/W LINE

PERM. UTIL. ESMT.

29
N/F
PENNINGTON,
DAVID E.
1026/6910

30
N/F
ORVILLE D. & ALICE G. ALLEN
1037/2912 (BENEFICIARY DEED)

30A
N/F
ORVILLE D. & ALICE G. ALLEN
602/929 (BENEFICIARY DEED)

NE 1/4 NE 1/4
SEC 28
T23N R5E

1/4 1/4 SECTION LINE

SE 1/4 NE 1/4
SEC 28
T23N R5E

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

CURVE 67CLPH21
PI 706+96.80
PC 704+96.80
PT 708+96.80
Δ 0° 20′ 00.0″ (LT)
D 0° 05′ 00.0″
L 400.00′
T 200.00′
R 68,754.94′

SW 1/4 NW 1/4
SEC 27
T23N R5E

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

SW 1/4
SEC 27
T23N R5E

N/F
MARILYN FISHER HALE
752/670
NO TAKINGS

1/4 1/4 SECTION LINE

700 705 710 740 745 750

PC STA 704+96.80
PT STA 708+96.80

ENTRANCE (R)
EPPS DITCH
℄ EXIST. ROUTE 67
EXIST. R/W
SECTION LINE
S 0° 20′ 06″ W
S 0° 00′ 06″ W
701+61.38
S.L.
(RBO)
(R)
FBD
OE
UT
W

℄ ROUTE 67
S 0° 18′ 13″ W
F22
18″ PIPE
F42
F23
24″ PIPE
F45
BUILDING (R)
WELL (ABANDON)
8′ FBD
R/W LINE
PERM. UTIL. ESMT.

MATCHLINE STA. 738+00.00 ROUTE 67
MATCHLINE STA. 752+00.00 ROUTE 67
POT STA 2+00.00

30
N/F
ORVILLE D. & ALICE G. ALLEN
602/929
(BENEFICIARY DEED)

31
N/F
JAMES PATRICK TRENTELMAN
1041/1742 (AFFIDAVIT)

S 89° 39′ 55″ E
L = 5261.49′

FND – 1-1/2″ IRON PIPE (10″ DEEP)
WEST 1/4 CORNER SECTION 28, T23N, R5E

SE 1/4 NE 1/4
SEC 28
T23N R5E

NE 1/4 SE 1/4
SEC 28
T23N R5E

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	10

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

	OVER HARVIEL DITCH		
	NB BRIDGE A9278	SB BRIDGE A9279	WOR BRIDGE A9369
D.H.W.	303.0 FT	302.9 FT	302.8 FT
D.A.	9.3 SQ MI	9.3 SQ MI	9.3 SQ MI
Q50	1,060 CFS	1,060 CFS	1,060 CFS
OVERTOPPING FLOOD DISCHARGE	N/A	N/A	N/A
OVERTOPPING FLOOD FREQUENCY	℄ 500 YEAR	℄ 500 YEAR	℄ 500 YEAR

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 11
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

HARVIELL DITCH
715 720 725 730 735 740 745 750 755 760 765
EXISTING BRIDGE F0665 (UIP)
EPPS DITCH
EXIST. R/W
SECTION LINE
STA 720+25.00
N/F MARILYN FISHER HALE 752/670 NO TAKINGS
SW 1/4 SEC 27 T23N R5E
℄ EXIST. ROUTE 67
S 0° 00′ 06″ W
S 0° 01′ 22″ W
727+73.86
S.L.
A100 A104 F25
PROP. BRIDGE A9279
B101 B105
36″ PIPE
TRIM OUT AND AROUND DITCH
B102 B106
PROP. BRIDGE A9278
℄ ROUTE 67
S 0° 18′ 13″ W
F23 F27
24″ PIPE
18″ PIPE
F45 F21 A103 A107 F43
TYPE D GUARDRAIL
PROP. BRIDGE A9369
R/W LINE
BEGIN CONSTRUCTION STA. 7+50.00 WOR
℄ WEST OUTER ROAD STATION 2+00.00 = ℄ ROUTE 67 STATION 752+00.00, 126.00′ RT
PERM. UTIL. ESMT.
℄ WEST OUTER RD.
WIDTH TRANSITION STA. 9+20.00 TO STA. 9+35.00
TYPE I DRWY. RT.
WOR STA. 7+70.00
US67 STA. 757+70.00 CL
US67 STA. 757+70.00 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
15″ X 38.0′ GR. B PIPE
PROPOSED GRADE: +0.25%
EXISTING GRADE: N/A
MATCHLINE STA. 752+00.00. ROUTE 67
MATCHLINE STA. 766+00.00. ROUTE 67
NE 1/4 SE 1/4 SEC 28 T23N R5E
1/4 1/4 SECTION LINE
(31)
N/F JAMES PATRICK TRENTELMAN 1041/1742 (AFFIDAVIT)
SE 1/4 SE 1/4 SEC 28 T23N R5E
N 89° 58′ 38.14″ W
L = 5277.57′
FND - 1-1/2″ IRON PIPE SOUTHWEST CORNER SECTION 28, T23N, R5E DOCUMENT NO. 600-29489
8′ FBD
EXIST. R/W
(RBO)
OE
UT

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\011_PP_08_J9P3751_i50.dgn 2:09:53 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NW 1/4 NW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

SE 1/4 SEC. 27 T23N R5E
EXIST. R/W 40'
SECTION LINE
COUNTY ROAD 352
EXIST. R/W
730
735
740
SW 1/4 NW 1/4 SEC 34, T23N R5E
℄ EXIST. ROUTE 67
PDT STA 0+00.00
730+00.00
PI STA 1+99.94
PC STA 4+85.72
735+92.90 EX. 67
PT STA 8+13.84
PC STA 12+14.46
PI STA 14+93.88
PT STA 19+74.34
PC STA 21+36.50
TYPE D GUARDRAIL
6' FENCE WITH SLATS TO BLOCK VIEW OF NORTHBOUND TRAFFIC
EXIST. R/W
SECTION LINE
S 0° 01' 22" W
S 0° 00' 59" W
S 10° 11' 34" E
(CLEAN)
(RBO)
(R)
F29
F46
F47
F30
F31
F28
F110
F26
179°50'0"
S 0° 18' 13" W
S 0° 08' 13" W
3+92.08
℄ NB CROSSOVER
℄ SB CROSSOVER
℄ ROUTE 67
18" PIPE
6+42.01
17+00.00
+67.09
+17.57
8' FBD
S.L.
S 15° 04' 43" E
24" PIPE
84.19 SB
12+00.00
28+50
15' TYP.
BEGIN LANE WIDTH TAPER
SB STA. 16+49.09
(KUIP)
WELL
SIGN
HYD
MANHOLE
PED
PROPANE
MATCHLINE STA. 766+00.00, ROUTE 67
MATCHLINE STA. 780+00.00, ROUTE 67
R/W LINE
PERM. UTIL. ESMT.
SAWCUT
EXIST. R/W
SE 1/4 SE 1/4 SEC 28 T23N R5E
SECTION LINE
EXIST. R/W
COUNTY ROAD 352
1/4 1/4 SECTION LINE
SE 1/4 NE 1/4 SEC 33 T23N R5E

STA. 768+00.00 US67 =
STA. 5+00.00, 42.00' LT SB CROSSOVER =
STA. 0+00.00, 42.00' RT NB CROSSOVER

(32)
N/F
MORRIS WAYNE LANSDALE AND
LISA MICHELLE LANSDALE
1043/3248

NE 1/4 NE 1/4
SEC 33
T23N R5E

CURVE NB-K_5
PI 6+50.22
PC 4+85.72
PT 8+13.84
Δ 10° 19' 46.7" (LT)
D 3° 08' 53.2"
L 328.12'
T 164.51'
R 1,820.00'
DS 60 MPH
SE 7%

CURVE SB_3
PI 9+71.63
PC 7+25.84
PT 12+14.46
Δ 15° 22' 56.2" (LT)
D 3° 08' 53.2"
L 488.62'
T 245.79'
R 1,820.00'
DS 60 MPH
SE 7%

CURVE SB_6
PI 17+35.52
PC 14+93.88
PT 19+74.34
Δ 15° 07' 32.1" (RT)
D 3° 08' 53.2"
L 480.46'
T 241.64'
R 1,820.00'
DS 60 MPH
SE 7%

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 12
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\012_PP_09_J9P3751_i50.dgn 2:09:55 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	13

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SW 1/4 NW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

NW 1/4 SW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

N/F
JAMES & CASSIE ISOM
852/886
NO TAKINGS

(UIP)

END CONSTRUCTION
STA. 746+19.57 EXISTING US67
STA. 21+52.87 SB TRANSITION
STA. 784+31.16, 166.29' LT PROPOSED US67

PT STA 19+74.34

EXIST. R/W

SECTION LINE

℄ EXIST. ROUTE 67

POT STA 26+61.32

750+33.00
EX. 67

747+47.10
EX. 67

+25.00
+12.00
8' FBD

℄ SB CROSSOVER

END LANE WIDTH TAPER
SB STA. 17+69.09

PI STA 783+20.00

S 0° 08' 13" W

180°10'0"

℄ ROUTE 67

S 0° 1' 47" E

END PROJECT
STA. 754+86.03 EXISTING US67
STA. 792+97.86, 117.47'LT PROPOSED US67

754+86.03
50.00' RT

N/F
RILEY, DANIEL
420/233
NO TAKINGS

CLEAR AND GRUB PROPOSED RIGHT OF WAY AND EASEMENTS

R/W LINE

PERM. UTIL. ESMT.

754+82.54
327.45' RT

754+82.92
297.46' RT

N/F
RILEY, DANIEL M
& JOEY D
1028/4479
NO TAKINGS

1/4 1/4 SECTION LINE

NE 1/4 SE 1/4
SEC 33
T23N R5E

MATCHLINE STA. 780+00.00, ROUTE 67

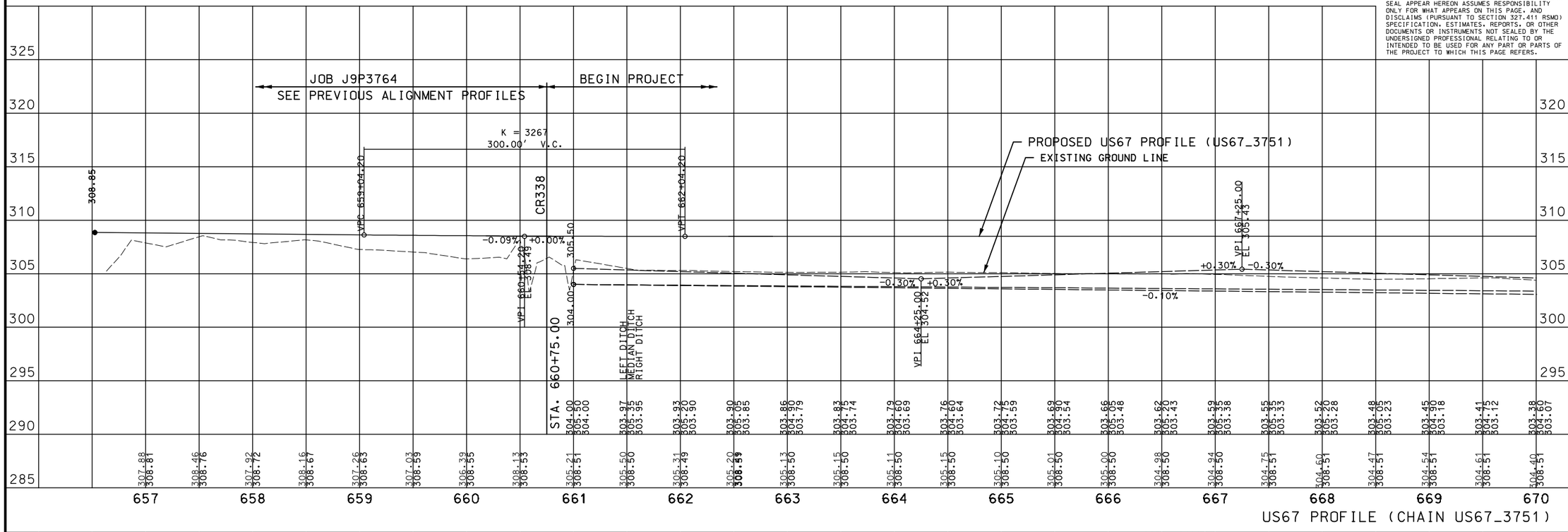
(32)

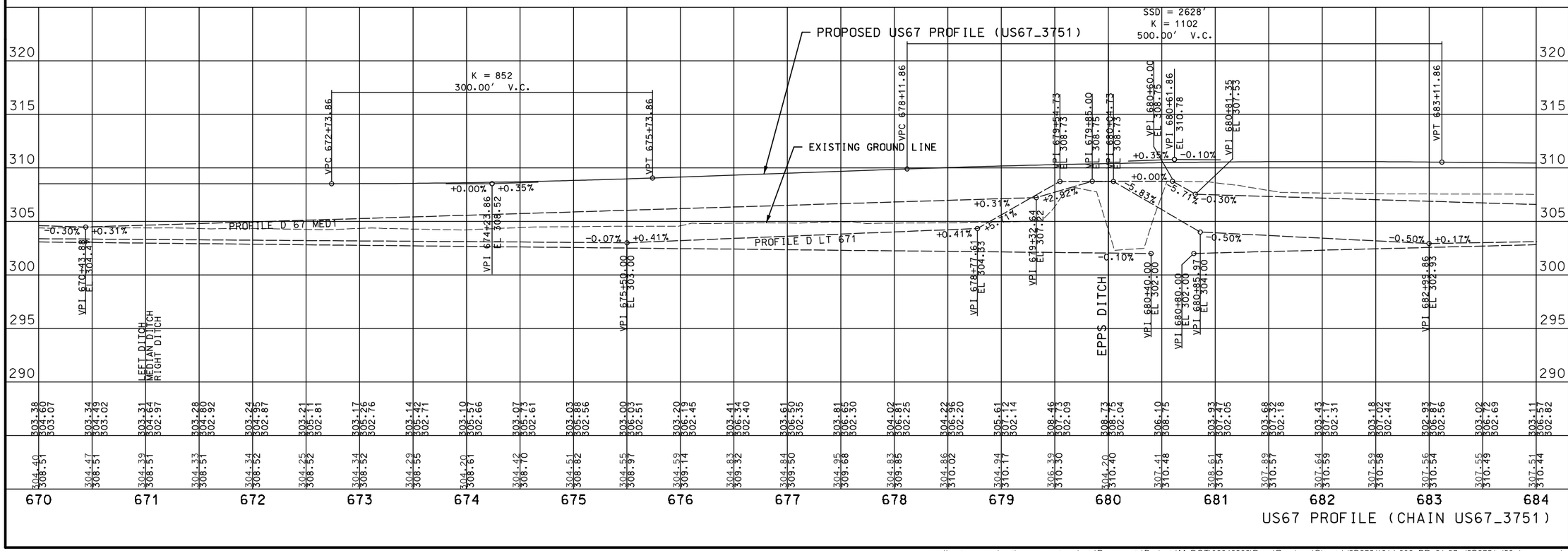
N/F
MORRIS WAYNE LANSDALE AND
LISA MICHELLE LANSDALE
1043/3248

SE 1/4 NE 1/4
SEC 33
T23N R5E

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\013_PP_10_J9P3751_i50.dgn 2:09:56 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	14

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

NO.	DESCRIPTION	DATE

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

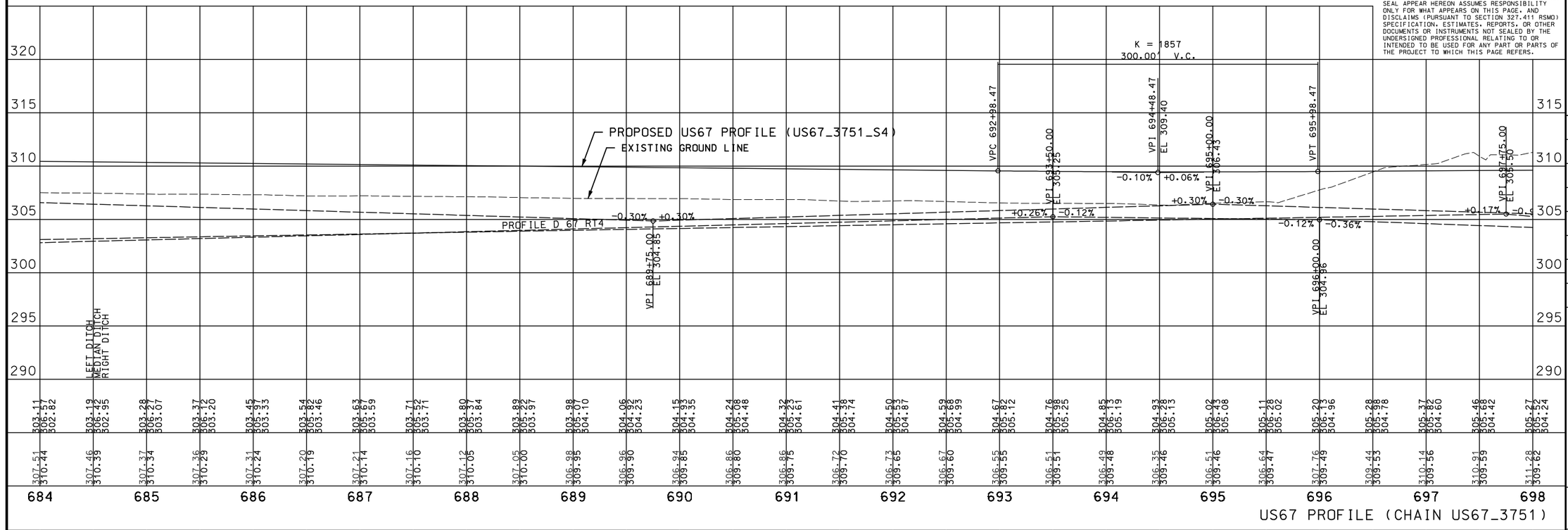
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

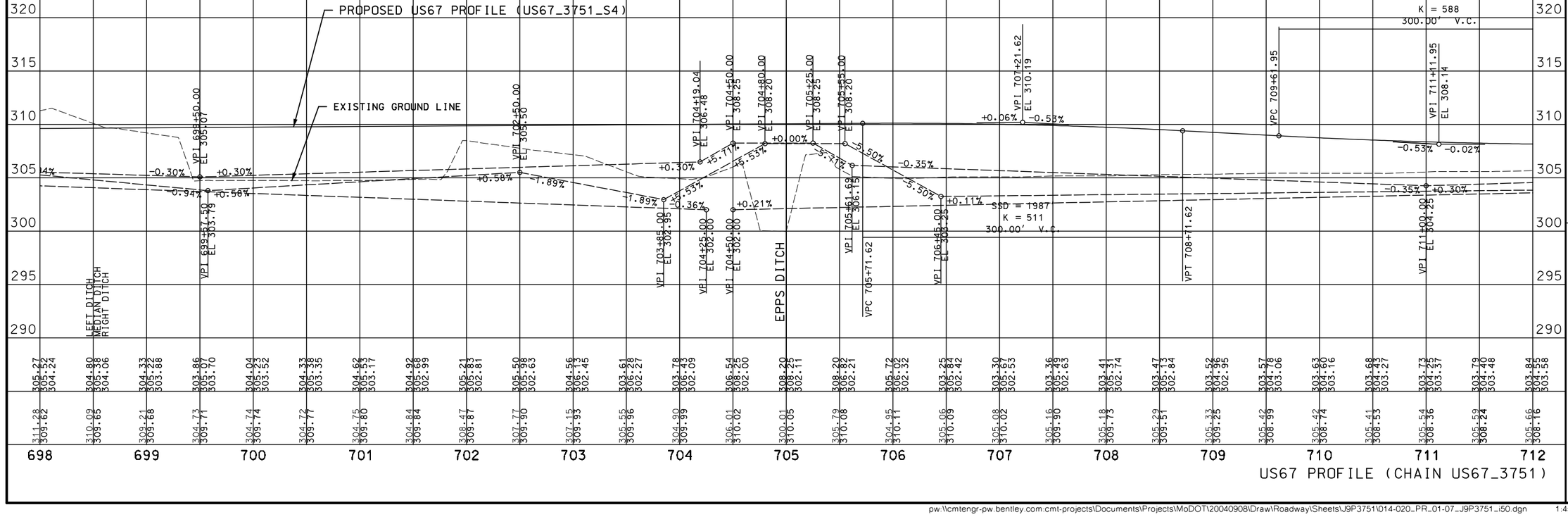
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\014-020_PR_01-07_J9P3751_i50.dgn 1:45:25 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	15
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

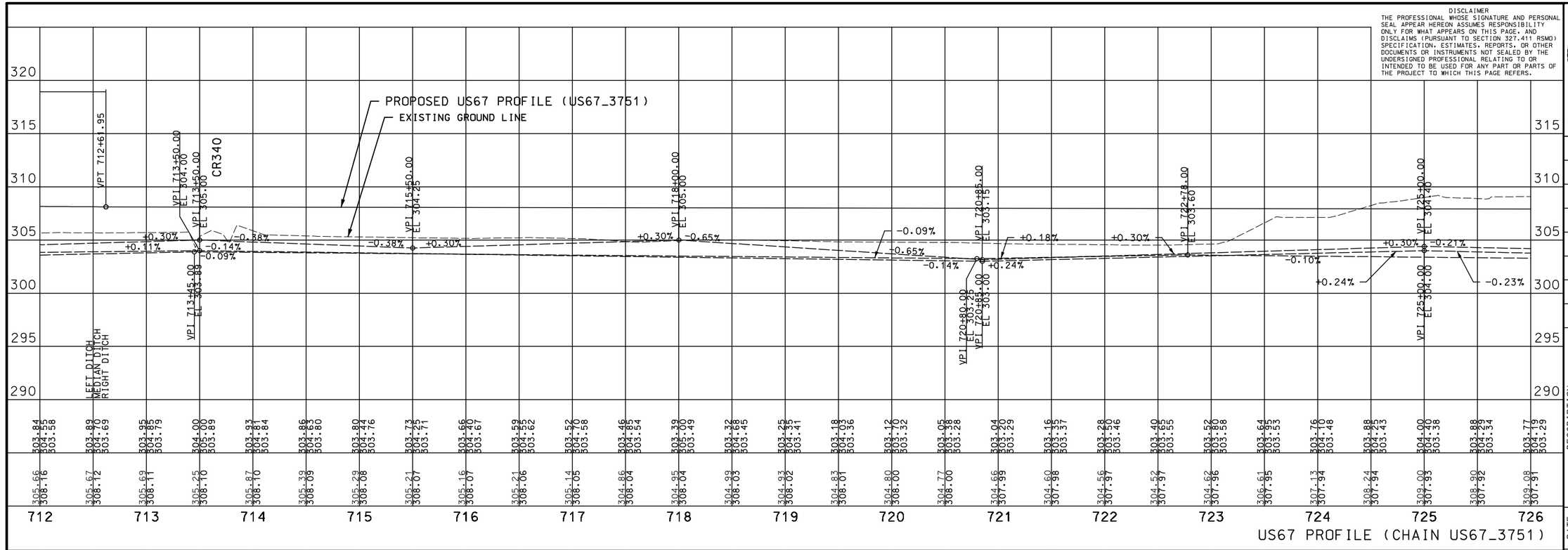
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

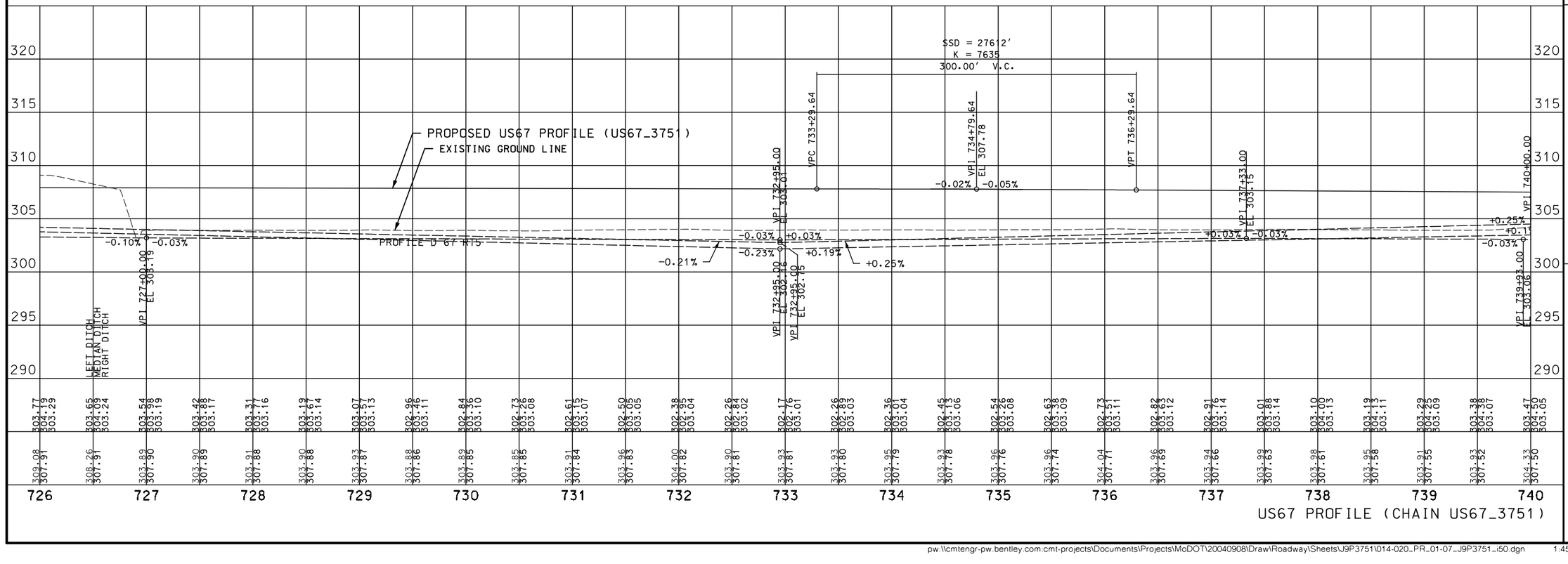
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	16
COUNTY	BUTLER
JOB NO.	J9P3751
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

NO.	DESCRIPTION	DATE

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

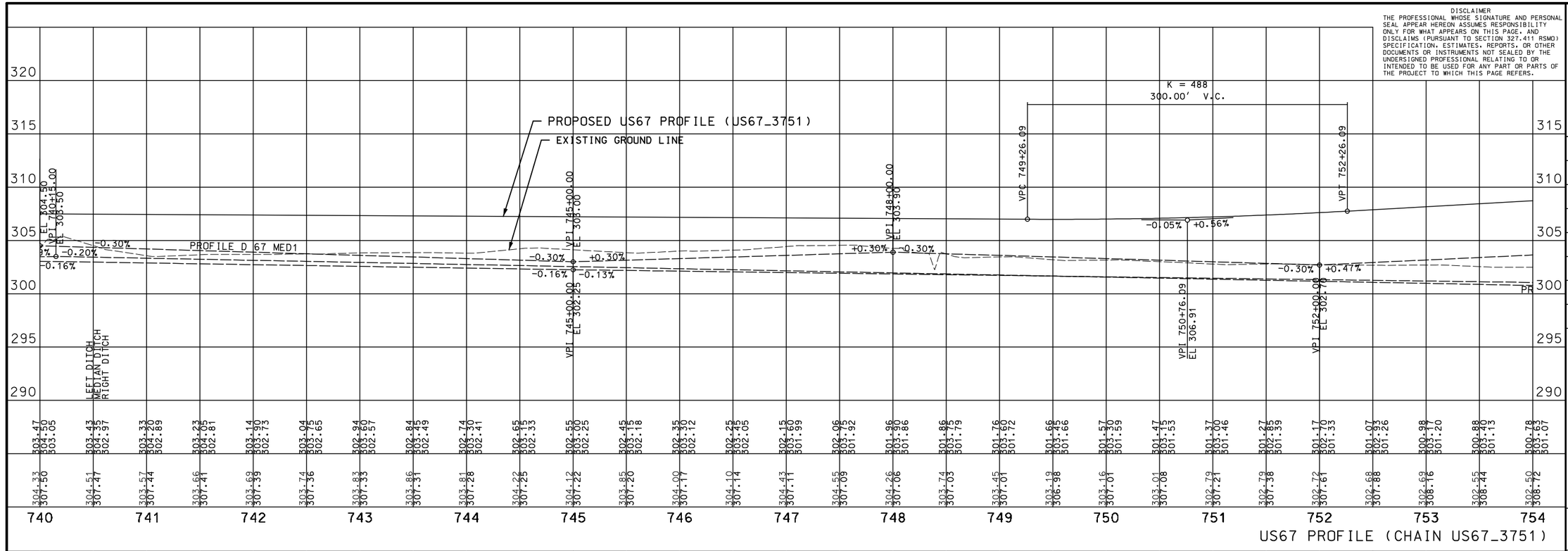
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\014-020_PR_01-07_J9P3751_i50.dgn 1:45:26 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	17
COUNTY	BUTLER
JOB NO.	J9P3751
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

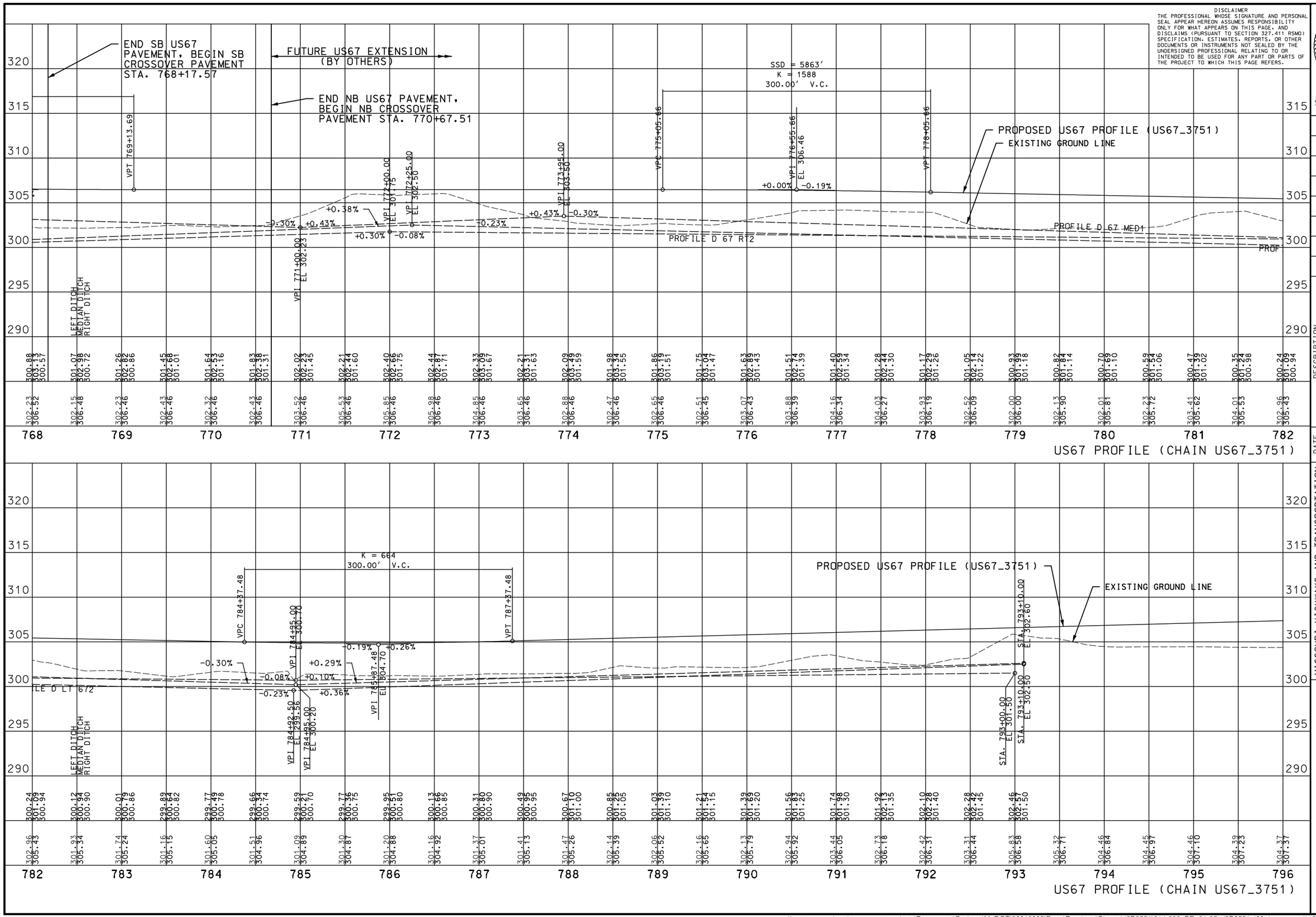
DATE	DESCRIPTION

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	18

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

NO.	DESCRIPTION	DATE
REV.		

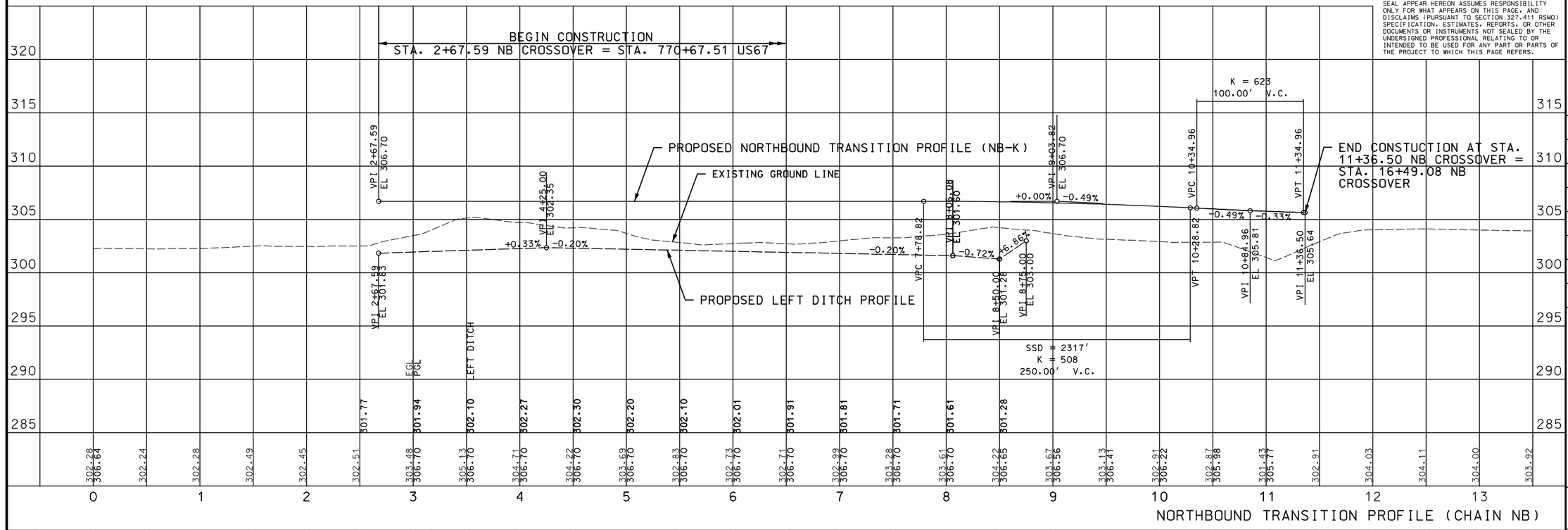
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\014-020_PR_01-07_J9P3751_i50.dgn 1:45:27 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	19
COUNTY	BUTLER
JOB NO.	J9P3751
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

NO.	DESCRIPTION	DATE

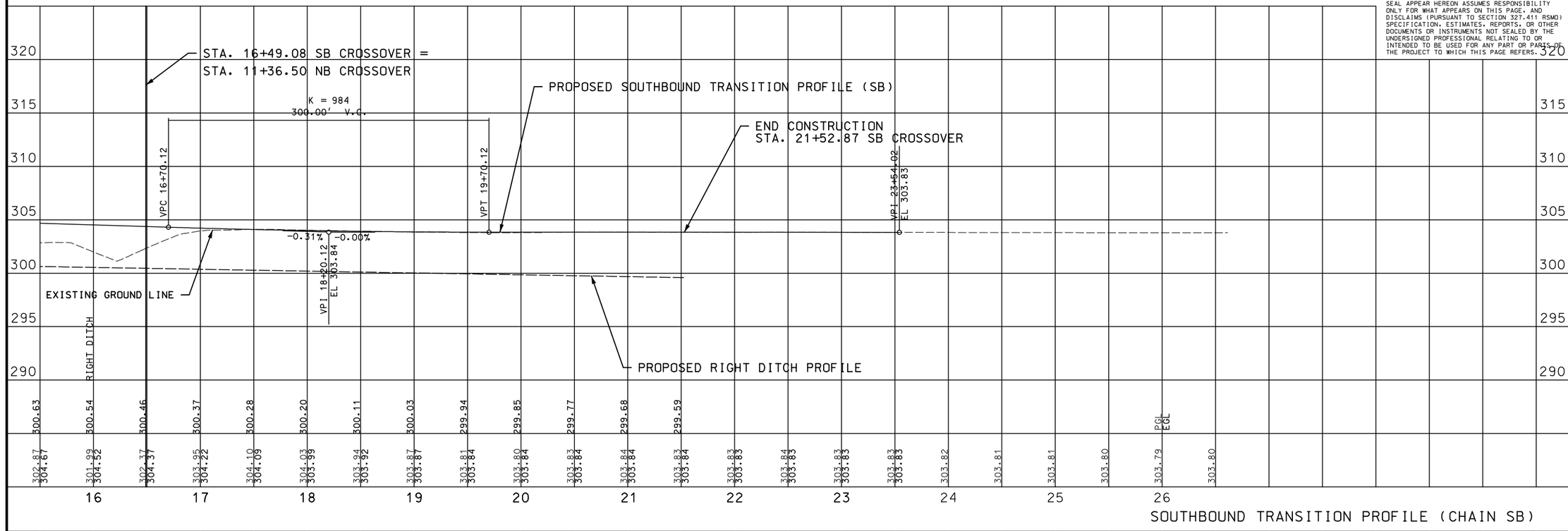
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

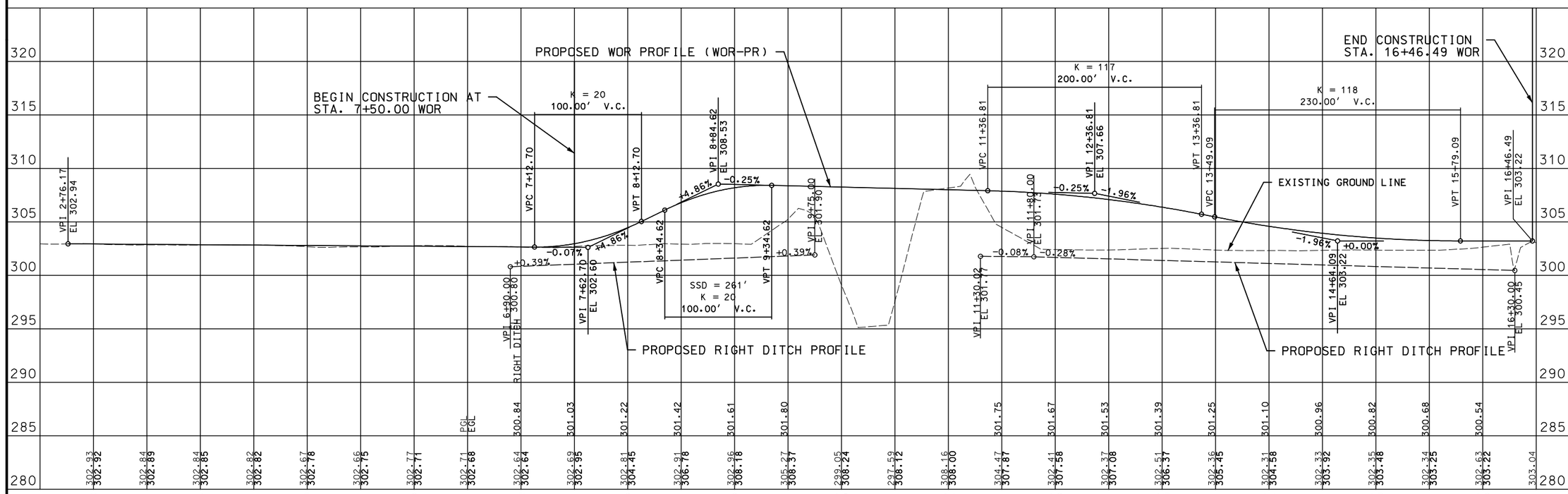
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	20

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

NO.	DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\014-020_PR_01-07_J9P3751_i50.dgn 1:45:28 PM 3/3/2023

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.

SCALE
0 50 100 150

BEGIN PROJECT
STA. 622+63.69 EXISTING US67
STA. 660+75.00, 137.09' RT PROPOSED US67

EXISTING AND CONSTRUCTED ENTRANCES MAY BE WIDENED TO A MAXIMUM WIDTH OF 60' BY PERMIT UNLESS OTHERWISE NOTED.

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.

N/F
SHIRLEY J. HUNT, TRUSTEE
1037/1001
NO TAKINGS

NW 1/4 NW 1/4
SEC 22
T23N R5E

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 21
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EXIST. R/W
SECTION LINE
COUNTY ROAD 338
EXIST. R/W
SECTION LINE
EXIST. R/W
655
660
665
POT STA 655+00.00
POT STA 620+69.53
EXIST. R/W
EXIST. R/W
EPPS DITCH
℄ EXIST. ROUTE 67
SECTION LINE
S 0° 25' 58" W
S.L.
EXIST. R/W
℄ ROUTE 67
S 0° 26' 25" W
MATCHLINE STA. 668+00.00, ROUTE 67
S.L.
R/W LINE
TEMP. ESM'T (CONST.)
622+84.62
267.09' RT
622+99.62
267.09' RT
622+84.26
371.50' RT
622+99.26
371.39' RT

(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460
25.90 AC NEW R/W
0.74 AC PERM. ESM'T. (UTIL.)
0.04 AC TEMP. ESM'T. (CONST.) (NORTH)
0.44 AC TEMP. ESM'T. (CONST.) (SOUTH)
593.75 AC REMAINING

RIGHT OF WAY LIMITS FOR THIS PROJECT EXTEND FROM STA. 622+84.26 TO STA. 754+86.03, A DISTANCE OF 2.503 MILES.

N 1/2 NE 1/4
SEC 21
T23N R5E

RIGHT OF WAY SHEET
1 OF 10

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\021_RW_01_J9P3751_i50.dgn 2:10:14 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NW 1/4 NW 1/4
SEC 22
T23N R5E

N/F
SHIRLEY J. HUNT, TRUSTEE
1037/1001
NO TAKINGS

SW 1/4 NW 1/4
SEC 22
T23N R5E

N/F
RODNEY RUSSELL EAKER AND
MARCUS SHANE EAKER
948/325 (BENEFICIARY DEED)
NO TAKINGS

630 635 640

1/4 1/4 SECTION LINE

PI STA 630+36.00

PI STA 638+98.10

670 675 680

EXIST. R/W

EXIST. R/W

℄ EXIST. ROUTE 67

EPPS DITCH

EXIST. R/W

SECTION LINE

SECTION LINE

S 0° 32' 07" W

S 0° 16' 39" W

S.L.

S.L.

EXIST. R/W

EXIST. R/W

EXIST. R/W

℄ ROUTE 67

S 0° 26' 25" W

MATCHLINE STA. 668+00.00, ROUTE 67

MATCHLINE STA. 682+00.00, ROUTE 67

S.L.

S.L.

R/W LINE

R/W LINE

EPPS DITCH

(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460
SEE SHEET 1 OF 10 FOR TAKINGS

N 1/2 NE 1/4
SEC 21
T23N R5E

1/4 1/4 SECTION LINE

S 1/2 NE 1/4
SEC 21
T23N R5E

RIGHT OF WAY SHEET
2 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	22

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\022_RW_02_J9P3751_i50.dgn 2:10:18 PM 3/3/2023

SCALE
0 50 100 150

SW 1/4 NW 1/4
SEC 22
T23N R5E

645

N/F
RODNEY RUSSELL EAKER AND
MARCUS SHANE EAKER
948/325 (BENEFICIARY DEED)
NO TAKINGS

N/F
SONDRA K. GLASS, TRUSTEE
1037/5816
(TRACTS 1, 2 AND 3)
NO TAKINGS

1/4 SECTION LINE

NW 1/4 SW 1/4
SEC 22
T23N R5E

650

N/F
JOYCE EAKINS, TRUSTEE
1033/5260 (TRACT I)
NO TAKINGS

655

689

EXIST. R/W

SECTION LINE

℄ EXIST. ROUTE 67

660

S 0° 16' 39" W

665

EXIST. R/W

SECTION LINE

s.l.

s.l.

EXIST. R/W

EXIST. R/W

MATCHLINE STA. 682+00.00, ROUTE 67

MATCHLINE STA. 696+00.00, ROUTE 67

℄ ROUTE 67

S 0° 26' 25" W

s.l.

s.l.

R/W LINE

R/W LINE

657+53.74
281.00' RT

657+53.40
381.00' RT

TEMP. ESM'T
(CONST.)

S 1/2 NE 1/4
SEC 21
T23N R5E

EPPS DITCH

1/4 SECTION LINE

N 1/2 SE 1/4
SEC 21
T23N R5E

(28)

JOAN F. FRANCIS, TRUSTEE
1029/1460

SEE SHEET 1 OF 10 FOR TAKINGS

RIGHT OF WAY SHEET
3 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	23

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DATE	DESCRIPTION

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\023_RW_03_J9P3751_i50.dgn 2:10:21 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	24

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SW 1/4 SW 1/4
SEC 22
T23N R5E

NW 1/4 SW 1/4
SEC 22
T23N R5E

N/F
JOYCE EAKINS, TRUSTEE
1033/5260 (TRACT I)
NO TAKINGS

N/F
LISA KAY ISOM
1040/6392
NO TAKINGS

660 665 670

1/4 1/4 SECTION LINE

700 705 710

℄ EXIST. ROUTE 67
EXIST. R/W
EPPS DITCH
SECTION LINE
S 0° 16' 39" W
S 0° 20' 06" W
S.L.
EXIST. R/W
EXIST. PERMANENT ESMT. TO OZARK BORDER ELECTRIC COOPERATIVE 1033/2050
℄ ROUTE 67
S 0° 26' 25" W

MATCHLINE STA. 696+00.00, ROUTE 67
MATCHLINE STA. 710+00.00, ROUTE 67

R/W LINE
PERM. UTIL. ESMT.
659+26.45
271.49' RT
659+26.14
381.49' RT
664+49.61
272.97' RT
664+49.55
302.97' RT
TEMP. ESM'T (CONST.)

28
JOAN F. FRANCIS, TRUSTEE
1029/1460
SEE SHEET 1 OF 10 FOR TAKINGS

PERMANENT ESMT. TO OZARK BORDER ELECTRIC COOPERATIVE 1033/2050

N 1/2 SE 1/4
SEC 21
T23N R5E

S 1/2 SE 1/4
SEC 21
T23N R5E

EPPS DITCH

RIGHT OF WAY SHEET
4 OF 10

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\024_RW_04_J9P3751_i50.dgn 2:10:25 PM 3/3/2023

SCALE
0 50 100 150

SW 1/4 SW 1/4
SEC 22
T23N R5E

NW 1/4 NW 1/4
SEC 27
T23N R5E

N/F
LISA KAY ISOM
1040/6392
NO TAKINGS

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

675
680
685
715
720

SECTION LINE
EXIST. R/W
COUNTY ROAD 340
EPPS DITCH
℄ EXIST. ROUTE 67
S 0° 20' 06" W
S 0° 26' 25" W
S 0° 18' 13" W
℄ ROUTE 67
s.l.
EXIST. R/W
R/W LINE
PERM. UTIL. ESMT.
MATCHLINE STA. 710+00.00, ROUTE 67
MATCHLINE STA. 724+00.00, ROUTE 67
PI STA 713+50.65
675+39.06
274.96' RT
675+39.08
304.96' RT

(29)
SEE SHEET 6
OF 10 FOR
TAKINGS

(28)
JOAN F. FRANCIS, TRUSTEE
1029/1460
SEE SHEET 1 OF 10 FOR TAKINGS

S 1/2 SE 1/4
SEC 21
T23N R5E

(30)
N/F
ORVILLE D. & ALICE G. ALLEN
1037/2912 (BENEFICIARY DEED)
4.68 AC NEW R/W
0.63 AC PERM. ESM'T. (UTIL.)
29.30 AC REMAINING

NE 1/4 NE 1/4
SEC 28
T23N R5E

RIGHT OF WAY SHEET
5 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	25

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	26

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

NW 1/4 NW 1/4
SEC 27
T23N R5E

SW 1/4 NW 1/4
SEC 27
T23N R5E

690

695

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

725

730

735

℄ EXIST. ROUTE 67

EPPS DITCH

EXIST. R/W

EXIST. R/W

SECTION LINE

SECTION LINE

S 0° 20' 06" W

S.L.

S.L.

EXIST. R/W

EXIST. R/W

MATCHLINE STA. 724+00.00, ROUTE 67

MATCHLINE STA. 738+00.00, ROUTE 67

S 0° 18' 13" W

℄ ROUTE 67

S.L.

S.L.

R/W LINE

R/W LINE

PERM. UTIL. ESMT.

PERM. UTIL. ESMT.

29
N/F
PENNINGTON,
DAVID E.
1026/6910

2.04 AC NEW R/W
0.27 AC PERM. ESM'T. (UTIL.)
1.12 AC REMAINING

30
N/F
ORVILLE D. & ALICE G. ALLEN
1037/2912 (BENEFICIARY DEED)
SEE SHEET 5 OF 10 FOR TAKINGS

NE 1/4 NE 1/4
SEC 28
T23N R5E

1/4 1/4 SECTION LINE

30A
N/F
ORVILLE D. & ALICE G. ALLEN
602/929 (BENEFICIARY DEED)

6.80 AC NEW R/W
0.91 AC PERM. ESM'T. (UTIL.)
70.51 AC REMAINING

SE 1/4 NE 1/4
SEC 28
T23N R5E

RIGHT OF WAY SHEET
6 OF 10

REV.	DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\026_RW_06_J9P3751_i50.dgn 2:10:32 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

CURVE 67CLPH21
PI 706+96.80
PC 704+96.80
PT 708+96.80
Δ 0° 20' 00.0" (LT)
D 0° 05' 00.0"
L 400.00'
T 200.00'
R 68,754.94'

SW 1/4 NW 1/4
SEC 27
T23N R5E

N/F
ORVILLE D. & ALICE G. ALLEN
1037/2911(BENEFICIARY DEED)
NO TAKINGS

SW 1/4
SEC 27
T23N R5E

N/F
MARILYN FISHER HALE
752/670
NO TAKINGS

1/4 1/4 SECTION LINE

700 740 705 745 710 750

PC STA 704+96.80
PT STA 708+96.80

EPPS DITCH
℄ EXIST. ROUTE 67
EXIST. R/W
SECTION LINE
S 0° 20' 06" W
S 0° 00' 06" W
701+61.38
S.L.
℄ ROUTE 67
S 0° 18' 13" W
BUILDING (R)
R/W LINE
PERM. UTIL. ESMT.

MATCHLINE STA. 738+00.00 ROUTE 67
MATCHLINE STA. 752+00.00 ROUTE 67
POT STA 2+00.00

30
N/F
ORVILLE D. & ALICE G. ALLEN
602/929
(BENEFICIARY DEED)

SEE SHEET 5 OF 10 FOR TAKINGS

S 89° 39' 55" E
L = 5261.49'
1/4 1/4 SECTION LINE

FND - 1-1/2" IRON PIPE (10" DEEP)
WEST 1/4 CORNER SECTION 28, T23N, R5E

SE 1/4 NE 1/4
SEC 28
T23N R5E

31
N/F
JAMES PATRICK TRENTELMAN
1041/1742 (AFFIDAVIT)

14.97 AC NEW R/W
1.96 AC PERM. ESM'T. (UTIL.)
61.04 AC REMAINING

NE 1/4 SE 1/4
SEC 28
T23N R5E

RIGHT OF WAY SHEET
7 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	27

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DATE	DESCRIPTION

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\027_RW_07_J9P3751_i50.dgn 2:10:35 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	28

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SW 1/4
SEC 27
T23N R5E

715 720 725

HARVIELL DITCH

EPPS DITCH

N/F
MARILYN FISHER HALE
752/670
NO TAKINGS

EXIST. R/W

SECTION LINE

S 0° 00' 06" W

s.l.

℄ STA 720+25.00

755 760 765

EXIST. R/W

℄ EXIST. ROUTE 67

SECTION LINE

S 0° 01' 22" W

727+73.86

s.l.

EXIST. R/W

MATCHLINE STA. 752+00.00, ROUTE 67

MATCHLINE STA. 766+00.00, ROUTE 67

℄ ROUTE 67

S 0° 18' 13" W

s.l.

S 0° 18' 13" W

R/W LINE

PERM. UTIL. ESMT.

715+61.75
307.79' RT

718+61.69
319.38' RT

718+61.90
279.38' RT

720+86.51
380.54' RT

720+86.66
350.54' RT

PERM. UTIL. ESMT.

723+86.51
382.01' RT

723+86.65
352.01' RT

724+86.60
362.50' RT

724+86.75
332.50' RT

s.l.

R/W LINE

NE 1/4 SE 1/4
SEC 28
T23N R5E

5 10 15

1/4 1/4 SECTION LINE

(31)
N/F
JAMES PATRICK TRENTELMAN
1041/1742 (AFFIDAVIT)

SEE SHEET 7 OF 10 FOR TAKINGS

SE 1/4 SE 1/4
SEC 28
T23N R5E

HARVIELL DITCH

L = 527.57'
N 8° 38' 14" W

FND - 1-1/2" IRON PIPE SOUTHWEST CORNER SECTION 28, T23N, R5E
DOCUMENT NO. 600-29489

RIGHT OF WAY SHEET
8 OF 10

SCALE
0 50 100 150

NW 1/4 NW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	29

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EXIST. R/W
SECTION LINE
EXIST. R/W
COUNTY RO
SE 1/4 SEC 27 T23N R5E
730
735
740
770
775
780
0
5
10
15
10
SW 1/4 NW 1/4 SEC 34, T23N R5E
℄ EXIST. ROUTE 67
EXIST. R/W
SECTION LINE
S 0° 01′ 22″ W
S 0° 00′ 59″ W
EXIST. R/W
S.L.
EXIST. R/W
S 10° 11′ 34″ E
S 0° 18′ 13″ W
S 0° 08′ 13″ W
℄ NB CROSSOVER
S 15° 04′ 43″ E
℄ SB CROSSOVER
S 0° 18′ 13″ W
S 0° 08′ 13″ W
℄ ROUTE 67
S 0° 18′ 13″ W
℄ SB CROSSOVER
S.L.
S.L.
R/W LINE
R/W LINE
PERM. UTIL. ESMT.
PERM. UTIL. ESMT.
MATCHLINE STA. 766+00.00, ROUTE 67
MATCHLINE STA. 780+00.00, ROUTE 67
1/4 1/4 SECTION LINE
SE 1/4 NE 1/4 SEC 33 T23N R5E
POT STA 0+00.00
PI STA 1+99.94
PC STA 4+85.72
PI STA 7+25.84
PT STA 8+13.84
PC STA 12+14.46
PT STA 14+93.88
PI STA 11+36.50
POT STA 17+00.00
PI STA 770+00.00
PI STA 730+00.00
0+00.00
17+00.00
SE 1/4 SE 1/4 SEC 28 T23N R5E
EXIST. R/W
SECTION LINE
COUNTY ROAD 352
EXIST. R/W
728+14.89
364.11′ RT
728+15.48
334.11′ RT
728+55.87
314.31′ RT
728+56.46
284.31′ RT
STA. 768+00.00 US67 =
STA. 5+00.00, 42.00′ LT SB CROSSOVER =
STA. 0+00.00, 42.00′ RT NB CROSSOVER

(32)
N/F
MORRIS WAYNE LANSDALE AND
LISA MICHELLE LANSDALE
1043/3248

14.52 AC NEW R/W
1.81 AC PERM. ESM'T. (UTIL.)
62.28 AC REMAINING

NE 1/4 NE 1/4
SEC 33
T23N R5E

CURVE NB-K_5
PI 6+50.22
PC 4+85.72
PT 8+13.84
Δ 10° 19′ 46.7″ (LT)
D 3° 08′ 53.2″
L 328.12′
T 164.51′
R 1,820.00′
DS 60 MPH
SE 7%

CURVE SB_3
PI 9+71.63
PC 7+25.84
PT 12+14.46
Δ 15° 22′ 56.2″ (LT)
D 3° 08′ 53.2″
L 488.62′
T 245.79′
R 1,820.00′
DS 60 MPH
SE 7%

CURVE SB_6
PI 17+35.52
PC 14+93.88
PT 19+74.34
Δ 15° 07′ 32.1″ (RT)
D 3° 08′ 53.2″
L 480.46′
T 241.64′
R 1,820.00′
DS 60 MPH
SE 7%

RIGHT OF WAY SHEET
9 OF 10

SCALE
0 50 100 150

SW 1/4 NW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

20 745

25 750

PT STA 19+74.34

EXIST. R/W

S.L.

SECTION LINE

END CONSTRUCTION
STA. 746+19.57 EXISTING US67
STA. 21+52.87 SB TRANSITION
STA. 784+31.16, 166.29' LT PROPOSED US67

℄ EXIST. ROUTE 67

N 0° 2' 49" E

POT STA 26+61.32

785

790

℄ SB CROSSOVER

PI STA 783+20.00

EXIST. R/W

S.L.

S 0° 08' 13" W

S 0° 01' 47" E

℄ ROUTE 67

MATCHLINE STA. 780+00.00, ROUTE 67

R/W LINE

PERM. UTIL. ESMT.

R/W LINE

PERM. UTIL. ESMT.

NW 1/4 SW 1/4
SEC 34
T23N R5E

N/F
ZELMA FAYE SMODY
MICHAEL & PATRICIA SMODY
1035/4632
NO TAKINGS

755

N/F
JAMES & CASSIE ISOM
852/886
NO TAKINGS

EXIST. R/W

SECTION LINE

S 0° 00' 59" W

EXIST. R/W

END PROJECT
STA. 754+86.03 EXISTING US67
STA. 792+97.86, 117.47'LT PROPOSED US67

754+86.03
50.00' RT

N/F
RILEY, DANIEL
420/233
NO TAKINGS

754+82.92
297.46' RT

754+82.54
327.45' RT

N/F
RILEY, DANIEL M
& JOEY D
1028/4479
NO TAKINGS

NE 1/4 SE 1/4
SEC 33
T23N R5E

1/4 1/4 SECTION LINE

(32)

N/F
MORRIS WAYNE LANSDALE AND
LISA MICHELLE LANSDALE
1043/3248

SEE SHEET 9 OF 10 FOR TAKINGS

SE 1/4 NE 1/4
SEC 33
T23N R5E

RIGHT OF WAY SHEET
10 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	30

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

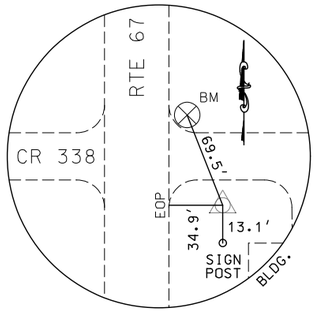
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

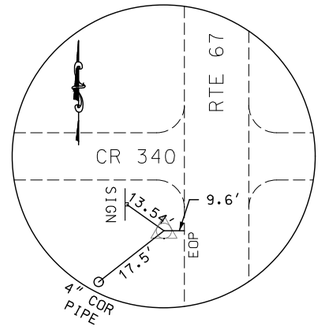
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

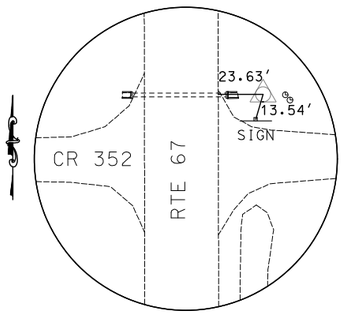
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



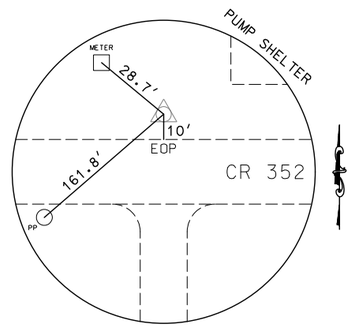
CONTROL POINT NO. 107
5/8" REBAR WITH PLASTIC MODOT CAP
N: 291748.991
E: 814377.926
EL: 305.71
RT 67 STA. 661+29.89



CONTROL POINT NO. 127
5/8" REBAR WITH PLASTIC MODOT CAP
N: 286494.358
E: 814261.015
EL: 305.47
RT 67 STA. 713+85.54



CONTROL POINT NO. 129
5/8" REBAR WITH PLASTIC MODOT CAP
N: 281264.970
E: 814315.180
EL: 302.52
RT 67 STA. 766+14.57



CONTROL POINT NO. 130
5/8" REBAR WITH PLASTIC MODOT CAP
N: 281230.800
E: 815601.044
EL: 304.01
RT 67 STA. 766+14.93

REFERENCE POINTS
SHEET 1 OF 1

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	31

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

CURVE SB_3	
PI	9+71.63
PC	7+25.84
PT	12+14.46
Δ	15° 22′ 56.2″ (LT)
D	3° 08′ 53.2″
L	488.62′
T	245.79′
R	1,820.00′

CURVE SB_6	
PI	17+35.52
PC	14+93.88
PT	19+74.34
Δ	15° 07′ 32.1″ (RT)
D	3° 08′ 53.2″
L	480.46′
T	241.64′
R	1,820.00′

CURVE 67CLPH21	
PI	706+96.80
PC	704+96.80
PT	708+96.80
Δ	0° 20′ 00.0″ (LT)
D	0° 05′ 00.0″
L	400.00′
T	200.00′
R	68,754.94′

CURVE NB_3	
PI	6+43.15
PC	4+75.98
PT	8+09.39
Δ	10° 29′ 46.7″ (LT)
D	3° 08′ 53.2″
L	333.42′
T	167.18′
R	1,820.00′

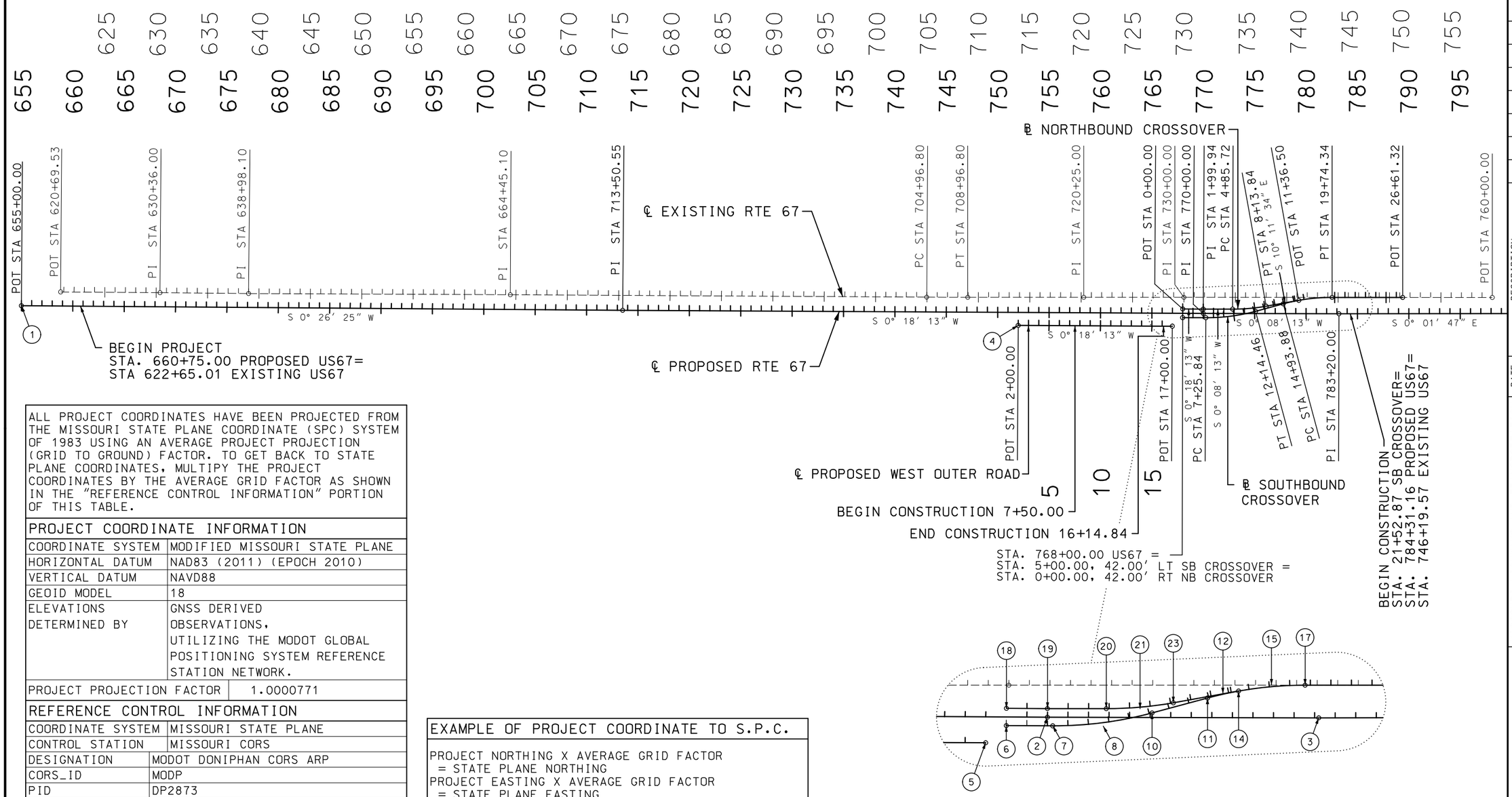
CURVE NB_6	
PI	12+99.64
PC	11+36.58
PT	14+61.84
Δ	10° 14′ 22.6″ (RT)
D	3° 08′ 53.2″
L	325.26′
T	163.06′
R	1,820.00′

CURVE NB-K_5	
PI	6+50.22
PC	4+85.72
PT	8+13.84
Δ	10° 19′ 46.7″ (LT)
D	3° 08′ 53.2″
L	328.12′
T	164.51′
R	1,820.00′

SCALE

0 500 1000 1500 2000

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.	
PROJECT COORDINATE INFORMATION	
COORDINATE SYSTEM	MODIFIED MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83 (2011) (EPOCH 2010)
VERTICAL DATUM	NAVD88
GEOID MODEL	18
ELEVATIONS DETERMINED BY	GNSS DERIVED OBSERVATIONS, UTILIZING THE MODOT GLOBAL POSITIONING SYSTEM REFERENCE STATION NETWORK.
PROJECT PROJECTION FACTOR	1.0000771
REFERENCE CONTROL INFORMATION	
COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MISSOURI CORS
DESIGNATION	MODOT DONIPHAN CORS ARP
CORS_ID	MODP
PID	DP2873
LATITUDE	N 36° 38′ 42.39207″
LONGITUDE	W 90° 47′ 52.77641″
NORTHING (M)	90,112.77
EASTING (M)	233,354.08
ZONE	EAST
PROJECT AVERAGE GRID FACTOR	0.9999188

EXAMPLE OF PROJECT COORDINATE TO S.P.C.
PROJECT NORTHING X AVERAGE GRID FACTOR = STATE PLANE NORTHING PROJECT EASTING X AVERAGE GRID FACTOR = STATE PLANE EASTING EXAMPLE: CONTROL POINT #500 N 297070.265 X 0.9999229 = N 297047.371 E 817001.748 X 0.9999229 = E 816938.784
LINEAR UNIT CONVERSION
1 METER = 3.280833333 US SURVEY FEET (USFT)

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	32

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

ROUTE 67
COORDINATE POINTS
SHEET 1 OF 2

COORDINATE POINT LISTING						
			MODIFIED STATE PLANE (GROUND)			
STATION	LOCATION	OFFSET (US FT)	NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	DESCRIPTION	GPK POINT ID
ALIGNMENTS						
℄ PROPOSED ROUTE 67						
655+00.00	℄ PROP RTE 67	0	292380.34	814191.01	POT	1
770+00.00	℄ PROP RTE 67	0	280880.59	814116.13	PI	2
783+20.00	℄ PROP RTE 67	0	279560.59	814112.98	PI	3
℄ PROPOSED WEST OUTER ROAD						
2+00.00	℄ PROP WOR	0	282681.23	813999.67	POT	4
17+00.00	℄ PROP WOR	0	281181.25	813991.72	POT	5
℄ SOUTHBOUND CROSSOVER						
5+00.00	℄ SB CROSSOVER	0	281080.81	814075.19	POT	6
7+25.84	℄ SB CROSSOVER	0	280854.97	814074.00	PC	7
9+71.63	℄ SB CROSSOVER	16.52	280609.19	814072.69	PI	8
X	℄ SB CROSSOVER	1820.00	280845.33	815893.97	CC	9
12+14.46	℄ SB CROSSOVER	0	280371.86	814136.63	PT	10
14+93.88	℄ SB CROSSOVER	0	280102.06	814209.33	PC	11
17+35.52	℄ SB CROSSOVER	15.91	279869.22	814272.06	PI	12
X	℄ SB CROSSOVER	1820.00	279628.59	812451.99	CC	13
14+93.88	℄ SB CROSSOVER	0	280102.06	814209.33	PC	14
℄ NORTHBOUND CROSSOVER						
12+99.64	℄ NB CROSSOVER	7.29	279790.17	814272.12	PI	15
X	℄ NB CROSSOVER	1820.00	279628.59	812451.99	CC	16
19+74.34	℄ NB CROSSOVER	0	279627.11	814271.99	PT	17
0+00.00	℄ NB CROSSOVER	0	281080.36	814159.19	POT	18
1+99.94	℄ NB CROSSOVER	0	280880.43	814158.13	PI	19
4+85.72	℄ NB CROSSOVER	0	280594.65	814157.45	PC	20
6+43.15	℄ NB CROSSOVER	7.42	280430.14	814157.06	PI	21
X	℄ NB CROSSOVER	1820.00	280590.30	815977.44	CC	22
8+13.84	℄ NB CROSSOVER	0	280268.23	814186.17	PT	23

COORDINATE POINT LISTING								
				MODIFIED STATE PLANE (GROUND)				
SHEET NO	STATION	LOCATION	OFFSET (USFT)	NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
ALIGNMENTS								
℄ TEMPORARY NORTHBOUND 67 (BL_NBTEMP)								
53	5+00.00	℄ TEMP NB 67	0	280368.084	814171.061		POB	
53	7+62.03	℄ TEMP NB 67	0	280108.014	814203.055		PI	
53	10+24.06	℄ TEMP NB 67	0	279847.944	814235.048		POE	
℄ TEMPORARY SOUTHBOUND 67 (BL_SBTEMP)								
58	10+00.00	℄ STAGE 2&3 SB	0	280478.789	814111.262		POB	
58	14+98.60	℄ STAGE 2&3 SB	0	279990.403	814211.679		PC	
58	16.82.12	℄ STAGE 2&3 SB	9.35 LT	279810.644	814248.639		PI	
58	18+64.37	℄ STAGE 2&3 SB	0	279627.126	814248.489		PRC	
58	19+53.03	℄ STAGE 2&3 SB	2.55 RT	279538.470	814248.416		PI	
58	20+41.49	℄ STAGE 2&3 SB	0	279450.389	814258.808		PRC	
58	21+57.82	℄ STAGE 2&3 SB	3.34 LT	279334.811	814271.750		PI	
58	22+73.90	℄ STAGE 2&3 SB	0	279218.477	814271.655		PT	

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	33

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

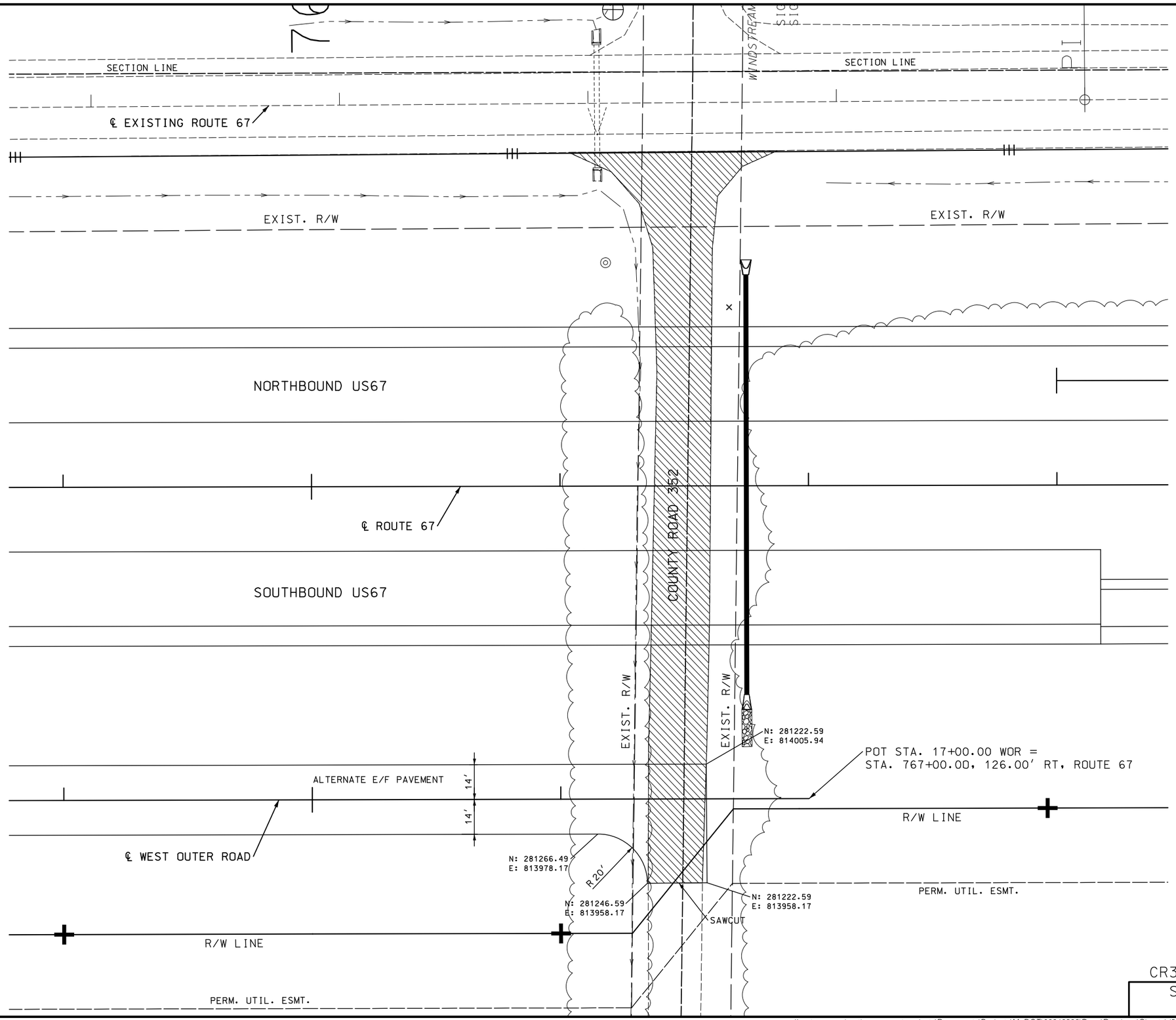
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

ROUTE 67
COORDINATE POINTS
SHEET 2 OF 2



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	34
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

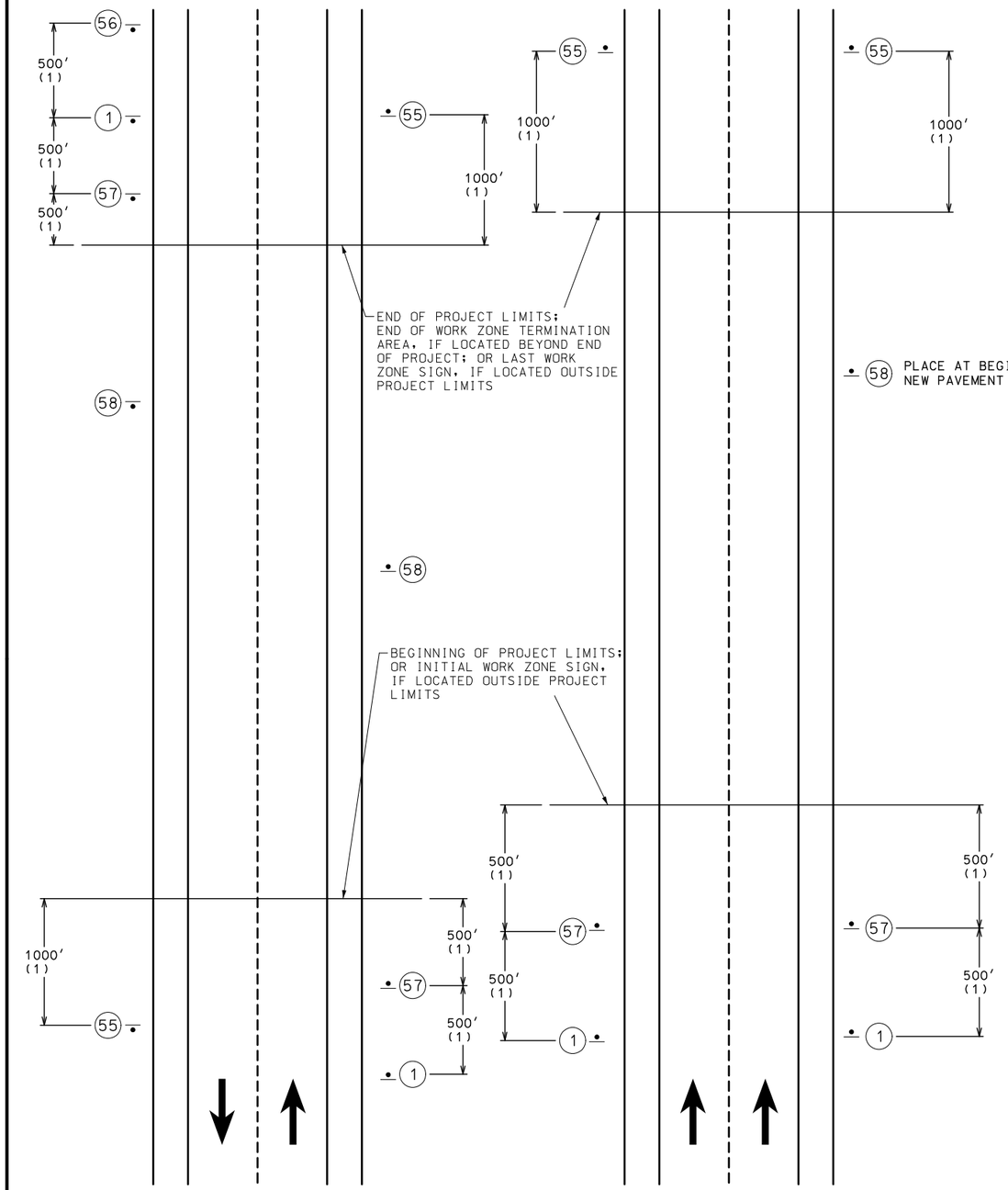
REV.	DESCRIPTION	DATE

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

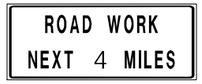
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CR352 INTERSECTION
SPECIAL SHEETS
SHEET 1 OF 1

BEGIN/END OF PROJECT SIGNING



NOT TO SCALE



GO20-1

(1)

CONST-8

(3)

GO20-2

(55)

CONST-5-96

(58)

(2)

GENERAL NOTES:

SIGN GO20-1 IS REQUIRED PER EPG 616.6.56.

SIGN GO20-2 IS USED ON ALL PROJECTS WHERE SIGN GO20-1 IS USED.

OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.

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

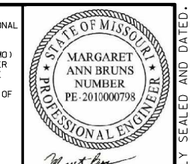
(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

TRAFFIC CONTROL
SHEET 1 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED: 8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	35

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

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

REV.	DATE	DESCRIPTION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

GENERAL TCP NOTES:
ALL EXISTING SIGNS THAT CONFLICT WITH THE PROPOSED TCP SHALL BE COVERED, NO DIRECT PAY.
NO DIRECT PAYMENT FOR RELOCATION OF TCP SIGNS.
ALL WARNING SIGNS SHALL HAVE FLUORESCENT SHEETING.
BUFFER LENGTH MAY BE ELIMINATED, ADJUSTED OR SHORTENED BASED ON FIELD CONDITIONS.
SEE BEGIN/END OF PROJECT SIGNING SHEET FOR ADDITIONAL SIGNS.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

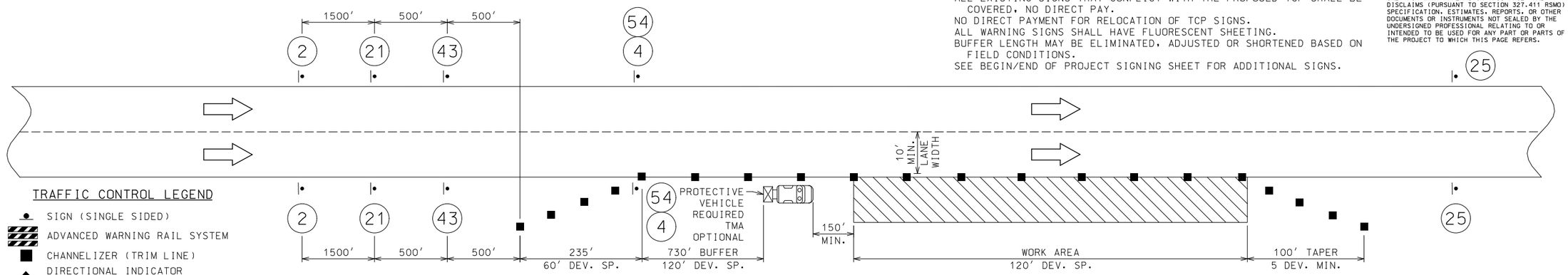
STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
8/1/2024 11:49:26 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED 8/1/2024
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 36
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

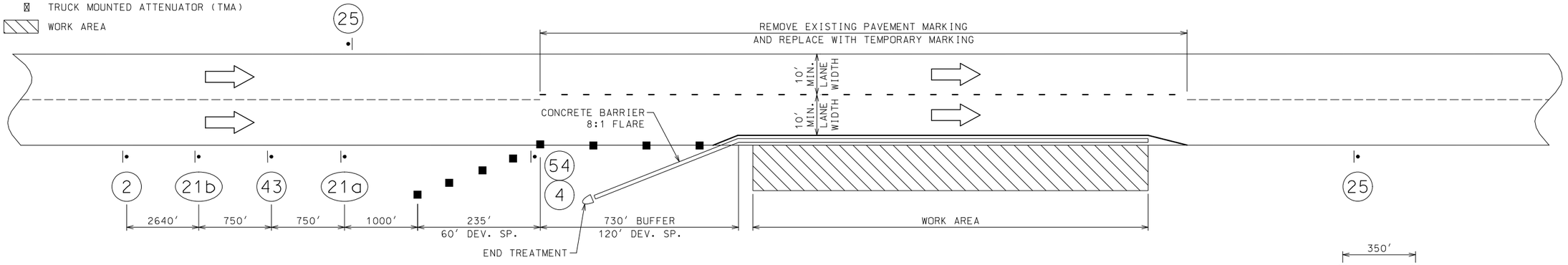
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

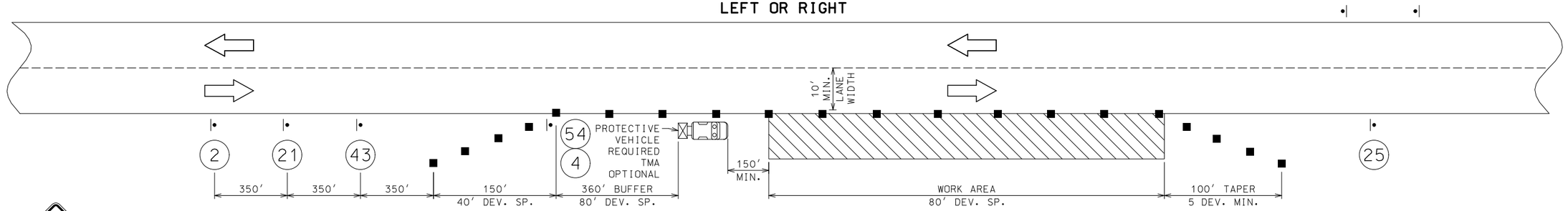
TRAFFIC CONTROL LEGEND
- SIGN (SINGLE SIDED)
- ADVANCED WARNING RAIL SYSTEM
- CHANNELIZER (TRIM LINE)
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- PROTECTIVE VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- WORK AREA



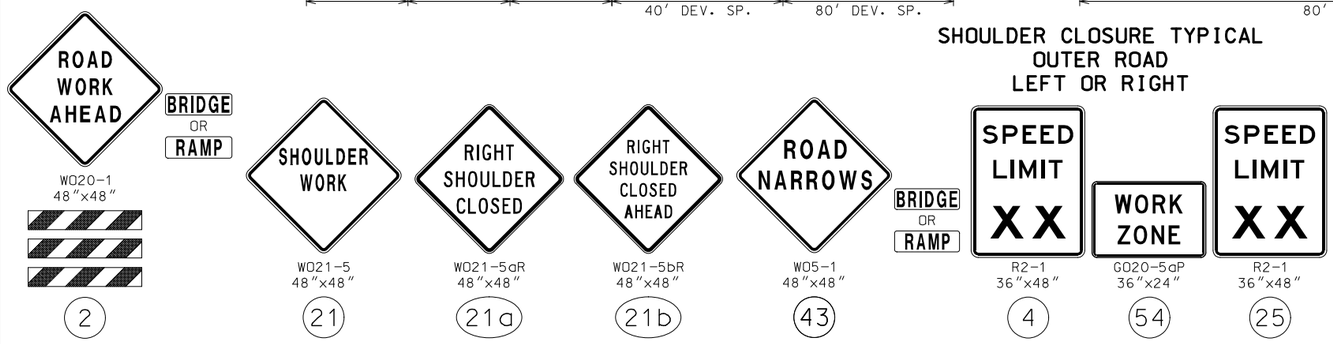
SHOULDER CLOSURE TYPICAL
ROUTE 67
LEFT OR RIGHT



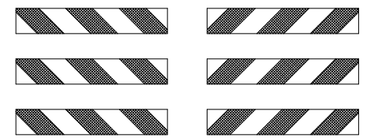
SHOULDER CLOSURE TYPICAL
ROUTE 67
LEFT OR RIGHT



SHOULDER CLOSURE TYPICAL
OUTER ROAD
LEFT OR RIGHT



ADVANCE WARNING RAIL SYSTEM

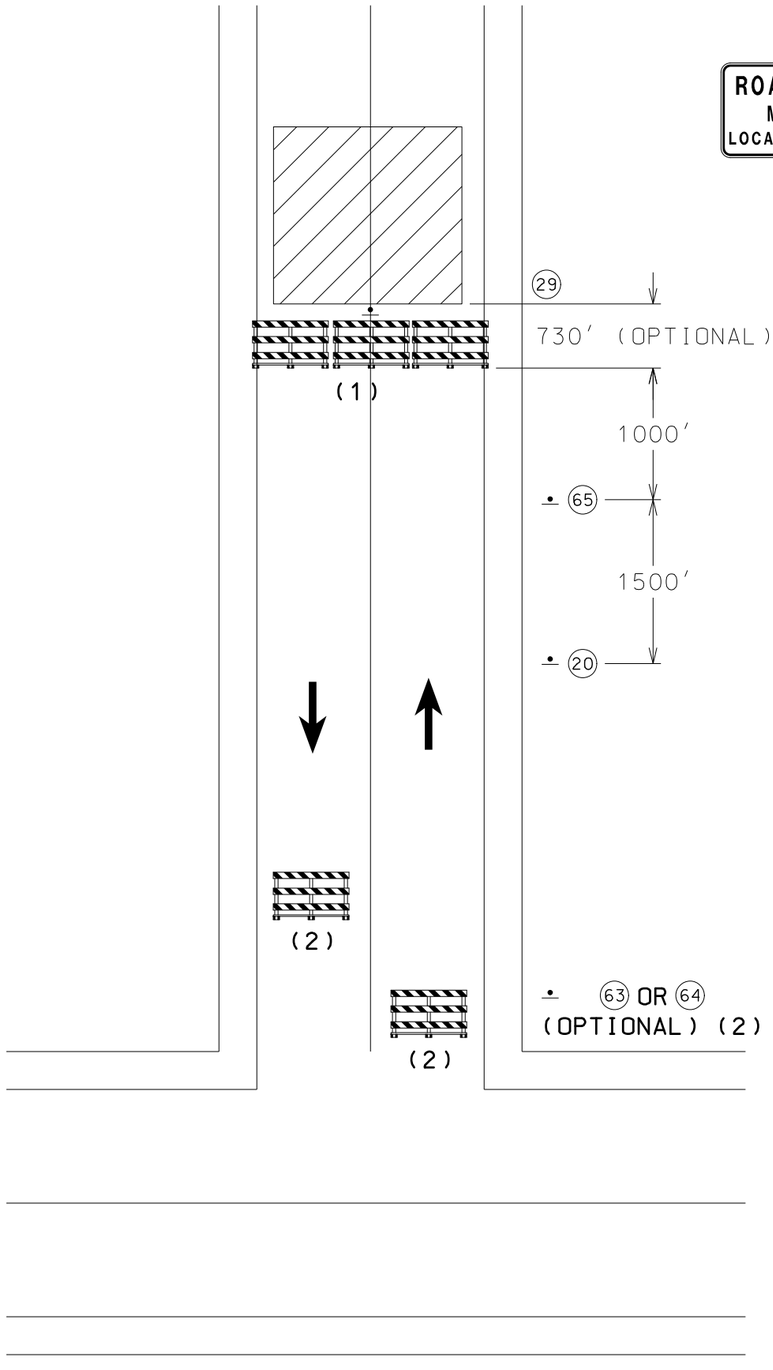


TRAFFIC CONTROL SHEET 2 OF 24

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

HIGHWAY CLOSURE



R11-3a
63

R11-4
64

R11-2
29

W020-3
20

W020-3
65

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- ADVANCED RAIL WARNING SYSTEM

NOTES:

(1) ROAD CLOSED SIGN MAY BE PLACED 7-10 FEET BEHIND THE BARRICADES AND 7′ HIGH.
ONE BARRICADE SHOULD BE REQUIRED TO COMPLETELY CLOSE EACH 8-FEET OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

(2) IF USED, 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, ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE. ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR WORK VEHICLES, LOCAL TRAFFIC, ETC.

TRAFFIC CONTROL SHOULD BE REMOVED AS SOON AS PRACTICAL AFTER CONDITION FOR THE CLOSURE NO LONGER EXISTS.

ADDITIONAL WARNING SIGNS SHOULD BE ERECTED AT EACH INTERSECTION WITHIN THE WORK ZONE.

SEE STANDARD PLAN 616.10 FOR USE OF BARRICADES AND SIGNS.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/01/2024 10:49:49 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	37

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

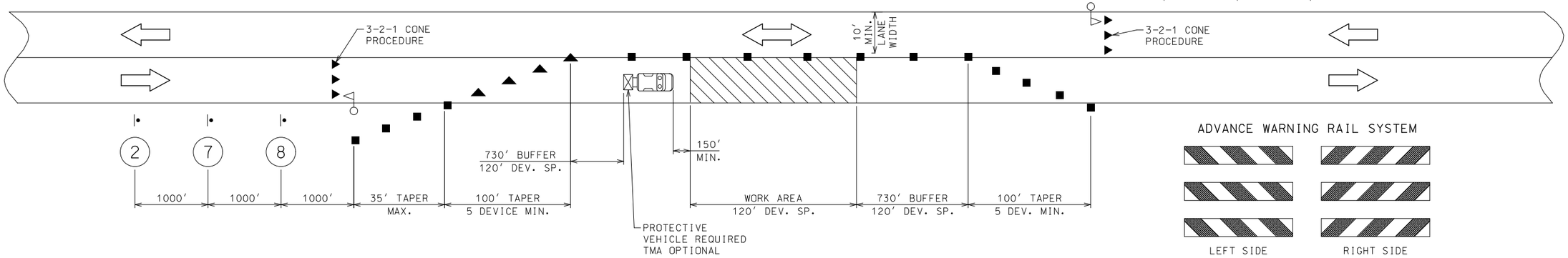
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL LEGEND

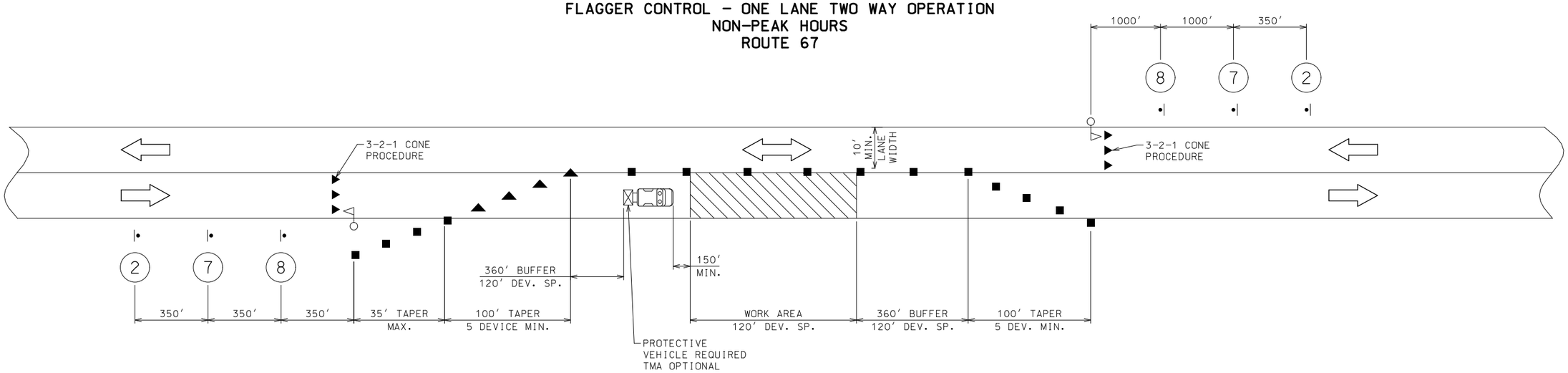
- SIGN (SINGLE SIDED)
- ADVANCED WARNING RAIL SYSTEM
- CHANNELIZER (TRIM LINE)
- DIRECTIONAL INDICATOR BARRICADE
- CONE
- FLASHING ARROW PANEL
- PROTECTIVE VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- WORK AREA
- FLAGGER

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

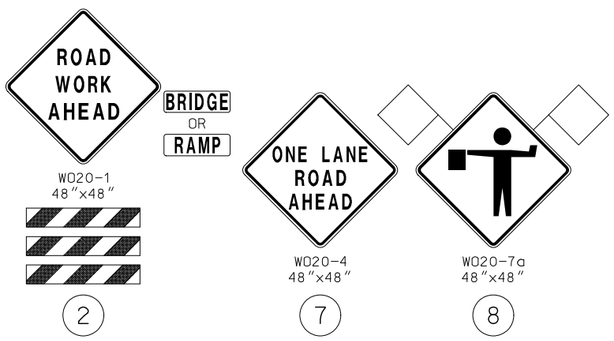


ADVANCE WARNING RAIL SYSTEM

FLAGGER CONTROL – ONE LANE TWO WAY OPERATION
NON-PEAK HOURS
ROUTE 67



FLAGGER CONTROL – ONE LANE TWO WAY OPERATION
NON-PEAK HOURS
OUTER ROAD



TRAFFIC CONTROL
SHEET 4 OF 24

STATE OF MISSOURI
PROFESSIONAL ENGINEER
MARGARET ANN BRUNS
NUMBER PE-2010000798
8/01/2024 10:50:15 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	38

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

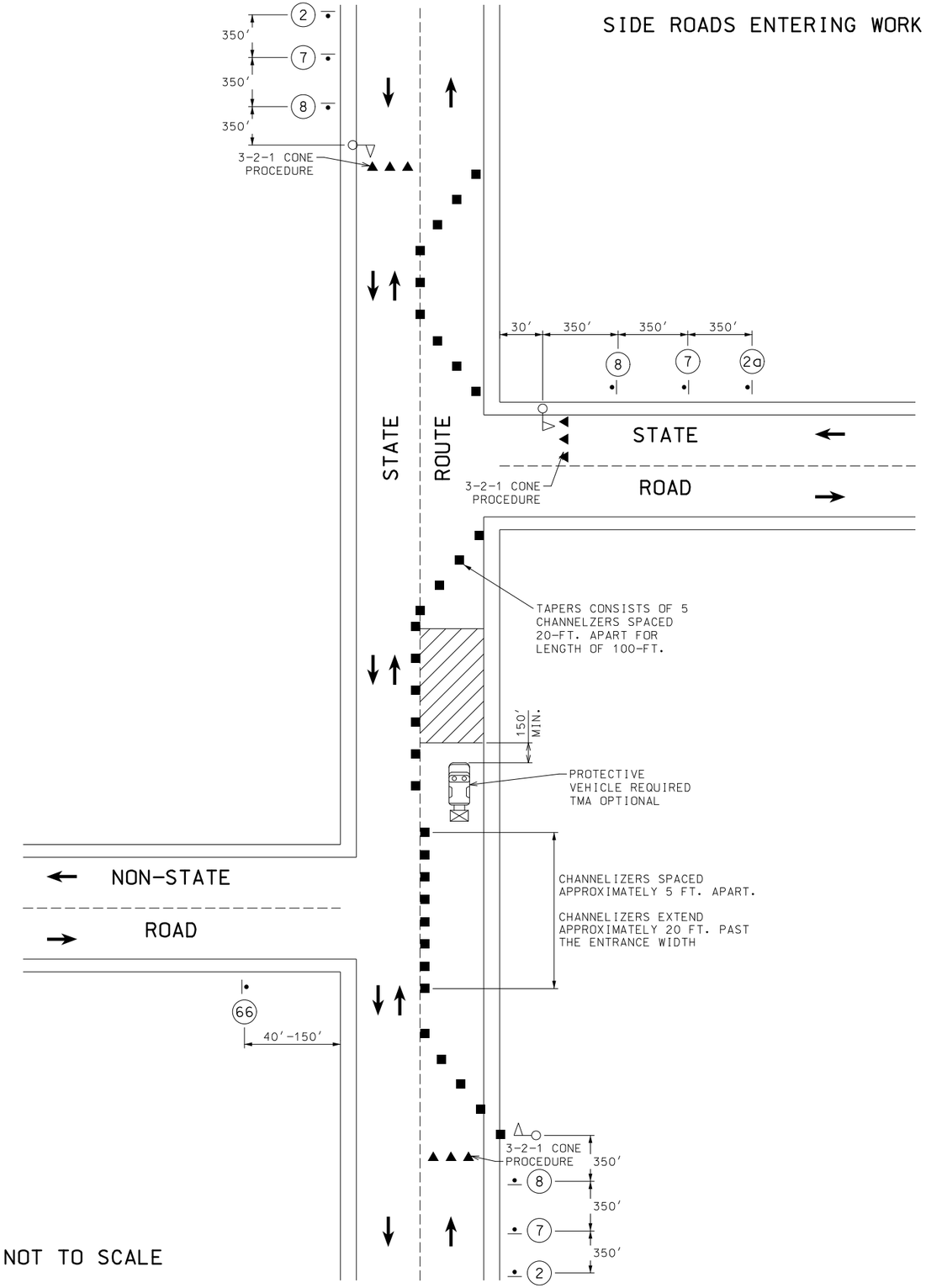
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

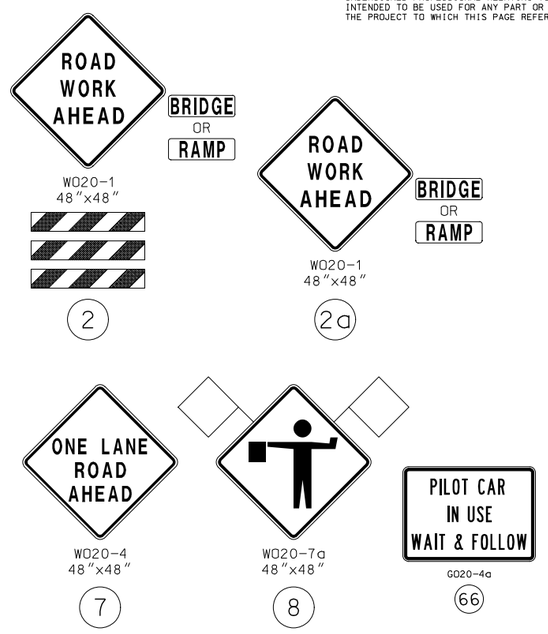
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

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

REV.

SIDE ROADS ENTERING WORK ZONES

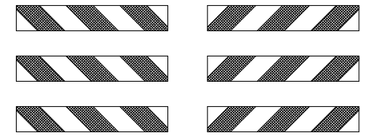




TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- FLAGGER

ADVANCE WARNING RAIL SYSTEM



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
8/1/2024 10:50:41 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED 8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	39

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

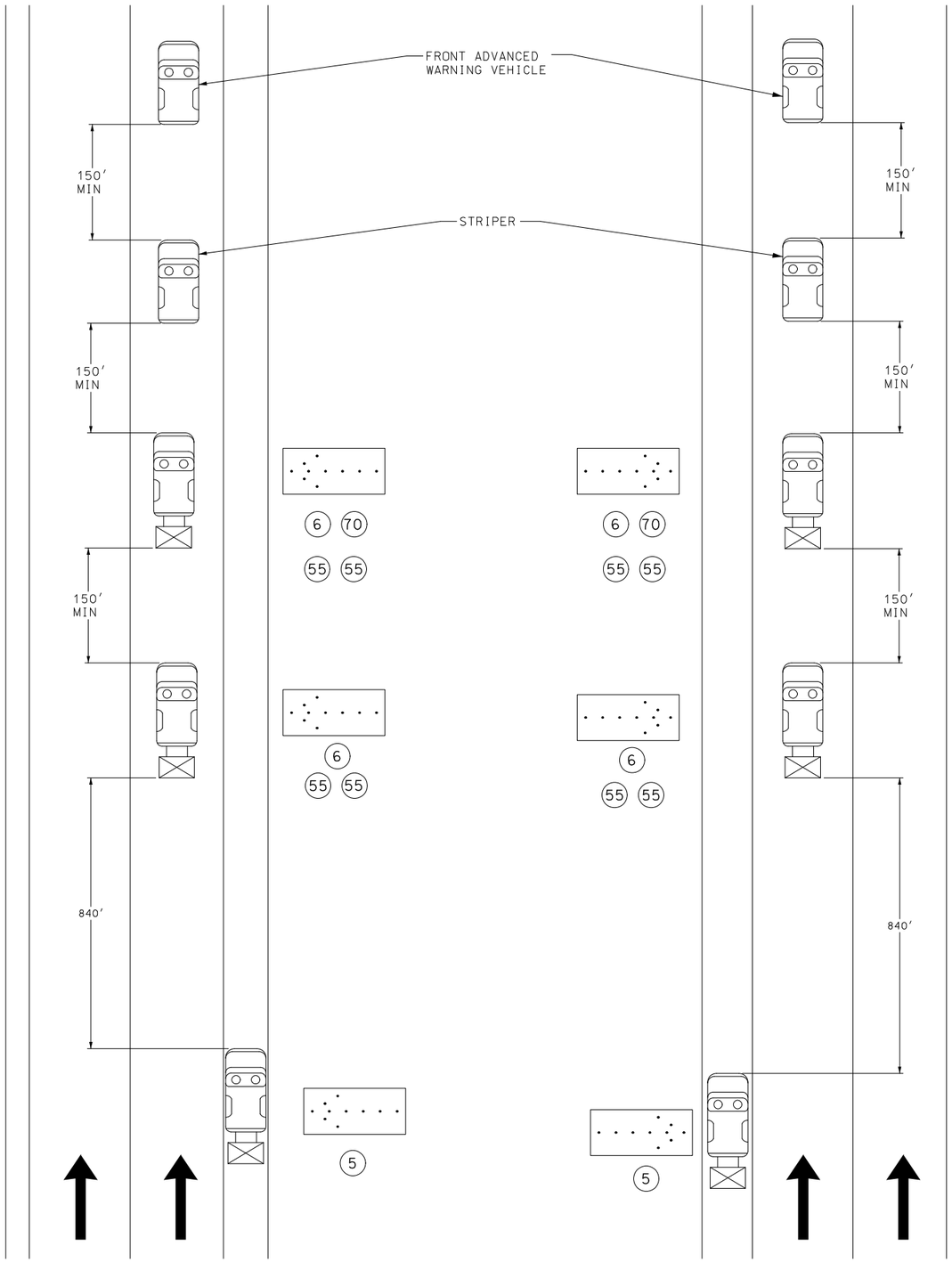
REV.	DATE	DESCRIPTION

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

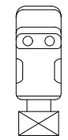
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL
SHEET 5 OF 24

MOBILE OPERATIONS FOR PAVEMENT MARKING FOR A 2 LANE DIVIDED HIGHWAY



LEGEND



PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL

NOTES:

UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH INTENSITY ROTATING, FLASHING, OSCIALLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE IS CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

W020-5
5

W020-6a
6

G022-1
21"x15"
55

SPECIAL SIGN
70

NOT TO SCALE

TRAFFIC CONTROL
SHEET 6 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/01/2024 10:51:29 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED	
8/1/2024	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	40
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

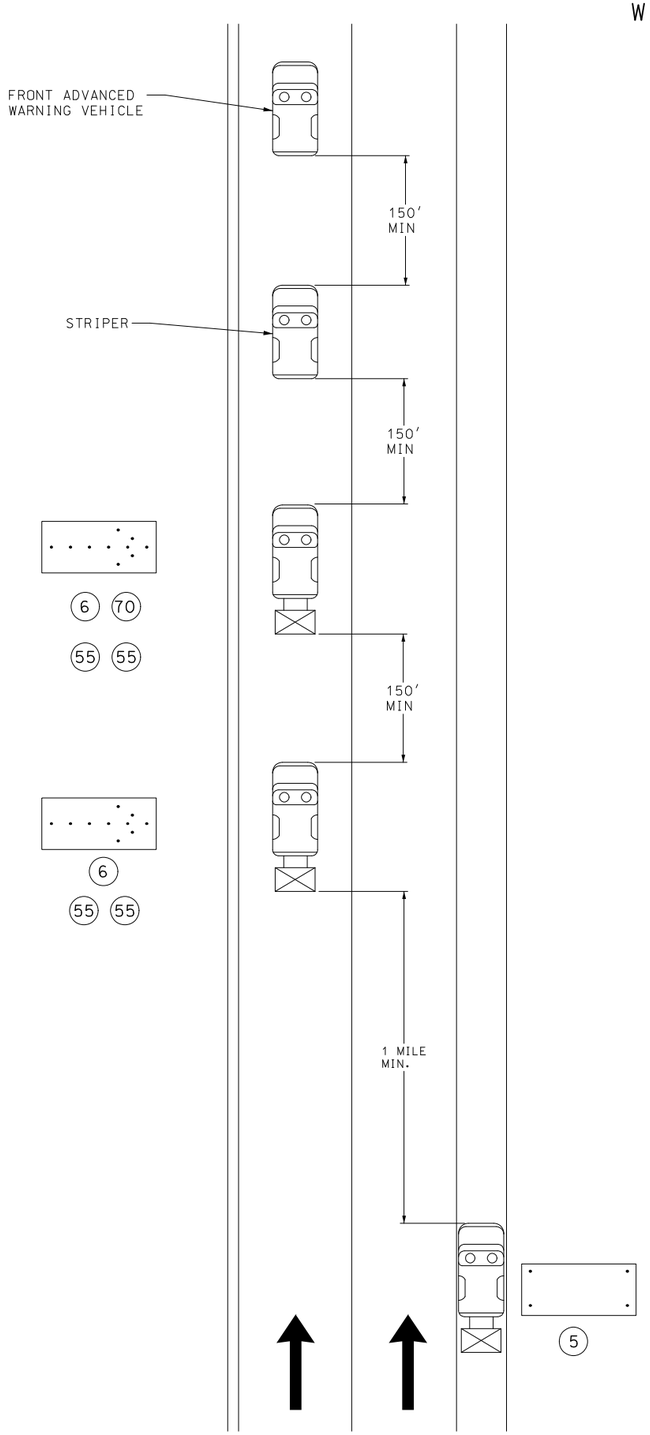
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

MOBILE OPERATIONS FOR PAVEMENT MARKING FOR A 2 LANE DIVIDED HIGHWAY WITH NARROW/NO SHOULDER



LEGEND

PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)

OR

FLASHING ARROW PANEL

NOTES:

UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH INTENSITY ROTATING, FLASHING, OSCIALLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE IS CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

W020-5
5

W020-6a
6

G022-1
21"x15"
55

SPECIAL SIGN
70

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/1/2024 10:52:08 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED: 8/1/2024

ROUTE	STATE
67	MO

DISTRICT	SHEET NO.
SE	41

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

NOT TO SCALE

TRAFFIC CONTROL
SHEET 7 OF 24

REV.

SEE STAGE 1B J9P3764 FOR TRAFFIC CONTROL NORTH OF CR 338

660 625 665 630 670

EXIST. R/W

℄ EXIST. ROUTE 67

EXIST. R/W EXIST. R/W EXIST. R/W

20 19A

29 2-TYPE III MOVABLE BARRICADES

EXIST. R/W EXIST. R/W

MATCHLINE STA 672+00 (RTE 67) THIS SHEET

℄ ROUTE 67

CR 338

ROAD CLOSED AHEAD
W020-3
48"x48"
20

* USE ONCE CR 338 APPROACH HAS BEEN OBLITERATED.

M5-1L
21"x15"
19A

ROAD CLOSED
R11-2
48"x30"
29

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

STAGE 1: CONSTRUCT NEW PAVEMENT OF US-67. TWO LANES OF TRAFFIC TO BE MAINTAINED ON EXISTING US-67.

WORK ZONE
G020-5aP
36"x24"
54

SPEED LIMIT 50
R2-1
36"x48"
4

675 680

℄ EXIST. ROUTE 67

54 4

EXIST. R/W EXIST. R/W

EXIST. R/W EXIST. R/W EXIST. R/W

MATCHLINE STA 672+00 (RTE 67) THIS SHEET

MATCHLINE STA 685+00 (RTE 67) TRAFFIC CONTROL SHEET 10

℄ ROUTE 67

R/W LINE

EPPS DITCH

SCALE
0 50 100 150

ROUTE 67 – STAGE 1
TRAFFIC CONTROL
SHEET 8 OF 24

TCP GENERAL NOTES:
1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET WAS SEALED, SIGNED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 42
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

650 690 695

℄ EXIST. ROUTE 67

EXIST. R/W

℄ ROUTE 67

EXIST. R/W

MATCHLINE STA 685+00 (RTE 67)
TRAFFIC CONTROL SHEET 9

MATCHLINE STA 698+00 (RTE 67)
THIS SHEET

ROAD CLOSED AHEAD

W020-3
48"x48"
(20)

M5-1R
21"x15"
(19B)

* USE ONCE CR 340 APPROACH HAS BEEN OBLITERATED.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

STAGE 1: CONSTRUCT NEW PAVEMENT OF US-67. TWO LANES OF TRAFFIC TO BE MAINTAINED ON EXISTING US-67.

SCALE
0 50 100 150

700 705 710

℄ EXIST. ROUTE 67

EXIST. R/W

EXIST. R/W

(20)(19B)*

EXIST. R/W

EXIST. R/W

EXIST. PERMANENT ESMT. TO OZARK BORDER ELECTRIC COOPERATIVE 1033/2050

MATCHLINE STA 698+00 (RTE 67)
THIS SHEET

MATCHLINE STA 711+00 (RTE 67)
TRAFFIC CONTROL SHEET 11

POND (R)

℄ ROUTE 67

R/W LINE

R/W LINE

NEW R/W

PERM. UTIL. ESMT.

EPPS DITCH

ROUTE 67 - STAGE 1
TRAFFIC CONTROL
SHEET 9 OF 24

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	43

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

675 680 715 720

EXIST. R/W — CR 340 — EXIST. R/W — ℄ EXIST. ROUTE 67 — EXIST. R/W

EXIST. R/W — ℄ ROUTE 67 — EXIST. R/W

MATCHLINE STA 711+00 (RTE 67)
TRAFFIC CONTROL SHEET 10

MATCHLINE STA 724+00 (RTE 67)
THIS SHEET

(20) ✱ (19A)

(29) 2-TYPE III MOVABLE BARRICADES

(29) 2-TYPE III MOVABLE BARRICADES

R/W LINE — R/W LINE

PERM. UTIL. ESMT. — PERM. UTIL. ESMT.

CR 340

SEE TRAFFIC CONTROL SHEET 3 FOR DETIALS AND ADDITIONAL DEVICES FOR HIGHWAY CLOSURE

STAGE 1: CONSTRUCT NEW PAVEMENT OF US-67. TWO LANES OF TRAFFIC TO BE MAINTAINED ON EXISTING US-67.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150

ROAD CLOSED AHEAD
WO20-3
48"x48"
(20)

✱ USE ONCE CR 340 APPROACH HAS BEEN OBLITERATED.

M5-1L
21"x15"
(19A)

ROAD CLOSED
R11-2
48"x30"
(29)

725 730 735

EXIST. R/W — ℄ EXIST. ROUTE 67 — EXIST. R/W

EXIST. R/W — ℄ ROUTE 67

MATCHLINE STA 724+00 (RTE 67)
THIS SHEET

MATCHLINE STA 737+00 (RTE 67)
TRAFFIC CONTROL SHEET 12

R/W LINE — R/W LINE

PERM. UTIL. ESMT. — PERM. UTIL. ESMT.

℄

ROUTE 67 – STAGE 1

TRAFFIC CONTROL
SHEET 10 OF 24

THIS SHEET IS SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

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

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	44

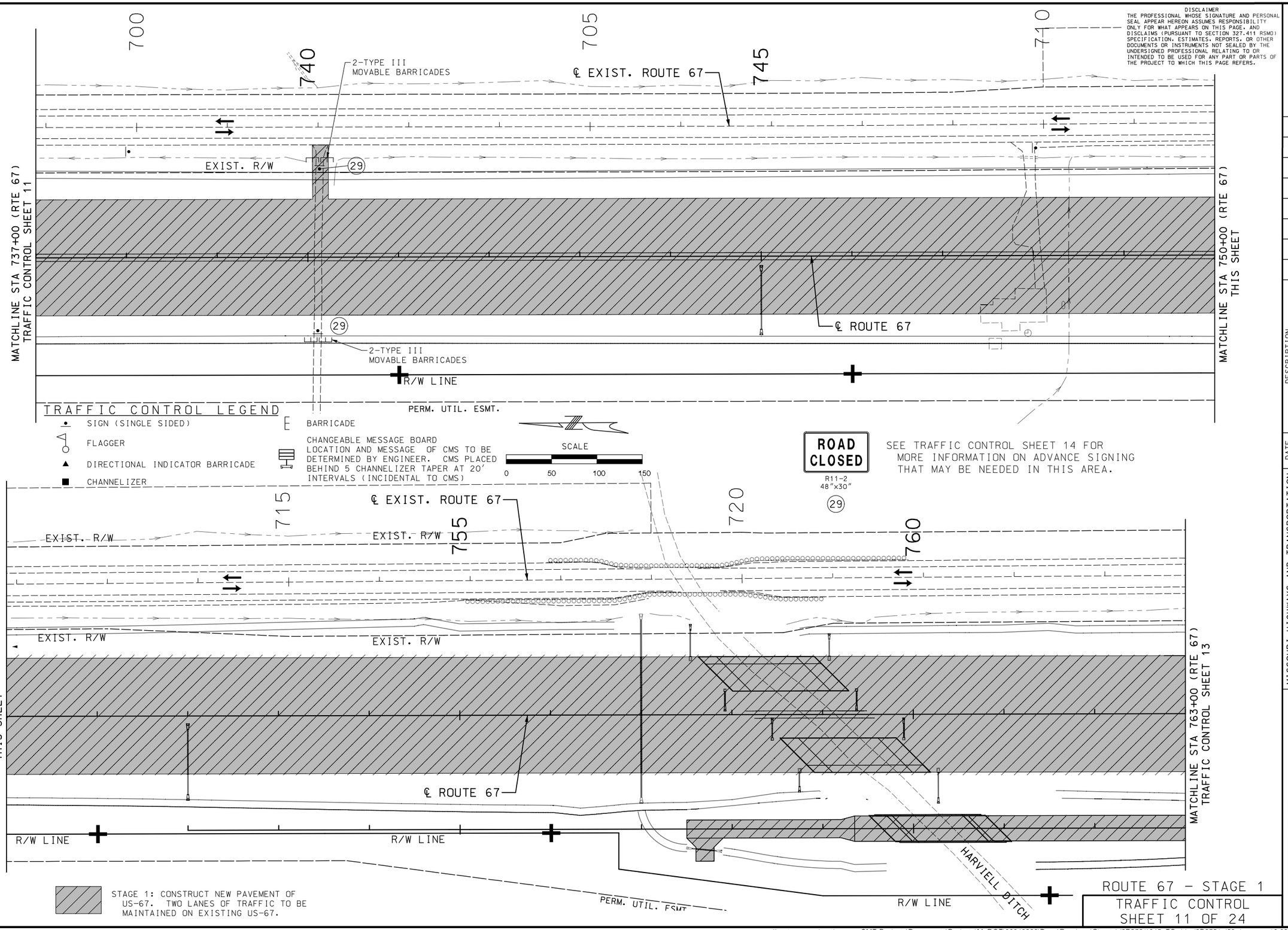
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	45

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67 – STAGE 1
TRAFFIC CONTROL
SHEET 11 OF 24

REV.

MATCHLINE STA 763+00 (RTE 67)
TRAFFIC CONTROL SHEET 12

725 730 735

CR 352

EXIST. R/W

SEE TRAFFIC CONTROL SHEET 13 FOR DETAILS OF EXIST. US 67 SHOULDER CONSTRUCTION IN THIS AREA

℄ EXIST. ROUTE 67

CONTRACTOR TO COORDINATE WITH ENGINEER ON LOCATION OF TEMPORARY DRIVEWAY

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

EXIST. R/W

2-TYPE III MOVABLE BARRICADES

℄ ROUTE 67

765 770 775

MATCHLINE STA 776+00 (RTE 67)
THIS SHEET

PERM. UTIL. ESMT.

SEE TRAFFIC CONTROL SHEET 3 FOR DETAILS AND ADDITIONAL DEVICES FOR HIGHWAY CLOSURE

2-TYPE III MOVABLE BARRICADES

CR 352

✱ USE ONCE CR 352 APPROACH HAS BEEN OBLITERATED.

SEE TRAFFIC CONTROL SHEET 13 FOR MORE INFORMATION ON ADVANCE SIGNING THAT MAY BE NEEDED IN THIS AREA.

ROAD CLOSED AHEAD ✱
W020-3
48″x48″
20

ROAD CLOSED
R11-2
48″x30″
29

M5-1R
21″x15″
19B

740 745 750

SEE TRAFFIC CONTROL SHEET 13 FOR DETAILS OF EXIST. US 67 SHOULDER CONSTRUCTION IN THIS AREA

EXIST. R/W

CONSTRUCT PIPE WITH SAFETY END SLOPE ON EAST SIDE

EXIST. R/W

℄ EXIST. ROUTE 67

780

℄ ROUTE 67

MATCHLINE STA 776+00 (RTE 67)
THIS SHEET

STAGE 1: CONSTRUCT NEW PAVEMENT OF US-67. TWO LANES OF TRAFFIC TO BE MAINTAINED ON EXISTING US-67.

TEMPORARY PAVEMENT CONSTRUCTION

SEE TRAFFIC CONTROL SHEET 13 FOR DETAILS OF EXIST. US 67 SHOULDER CONSTRUCTION IN THIS AREA

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150

ROUTE 67 – STAGE 1
TRAFFIC CONTROL
SHEET 12 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	46

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION	REV.

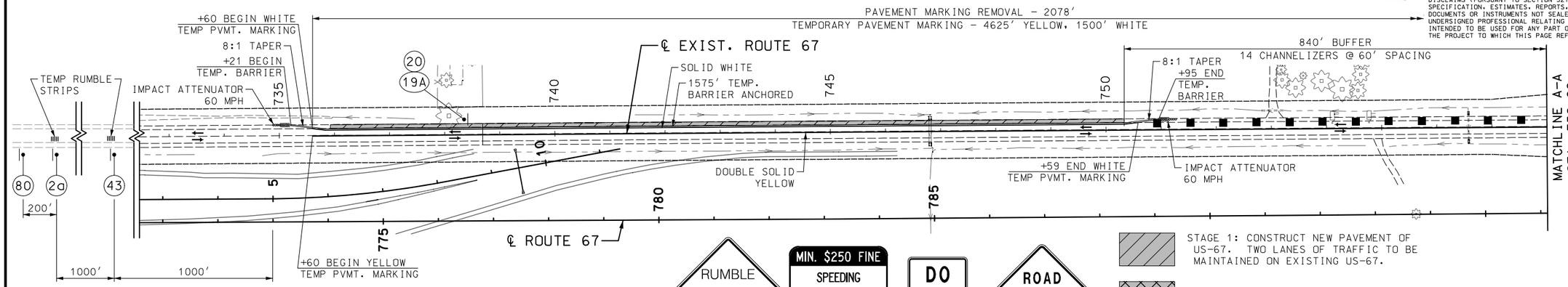
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

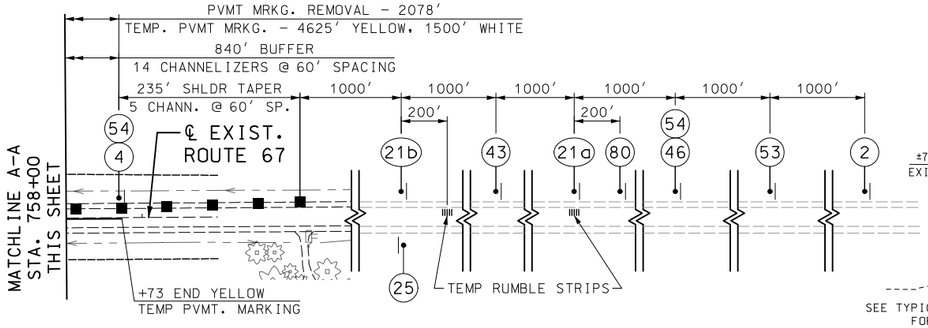
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\046_TC_12_J9P3751_i50.dgn 12:29:26 PM 3/1/2023

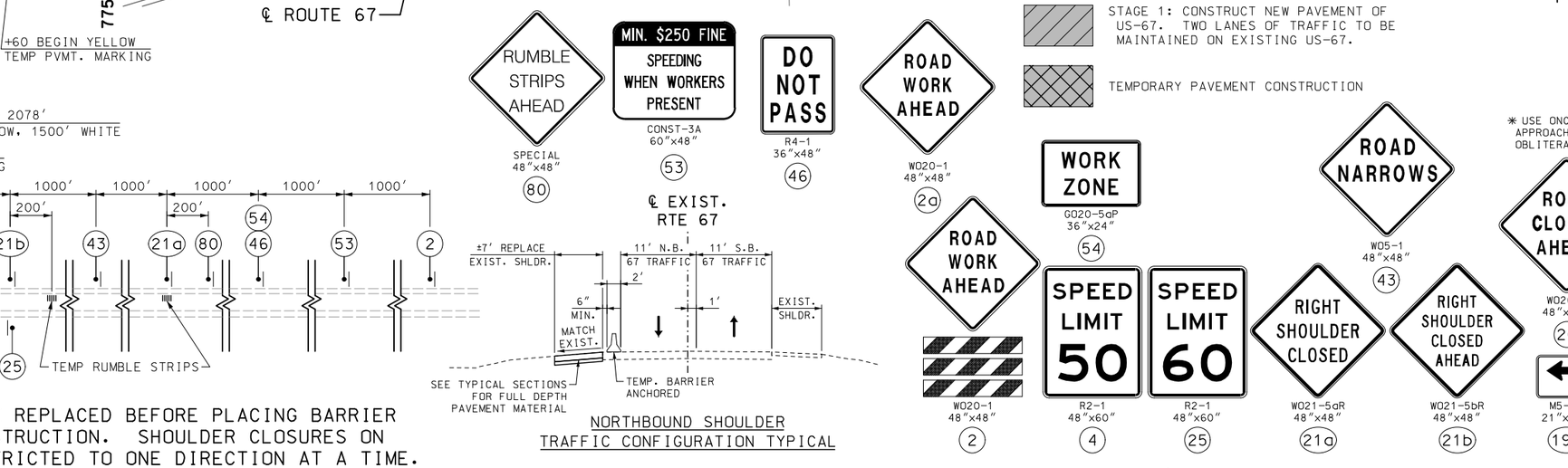
SEE TRAFFIC CONTROL SHEET 12 FOR ADDITIONAL DETAILS OF STAGE 1.

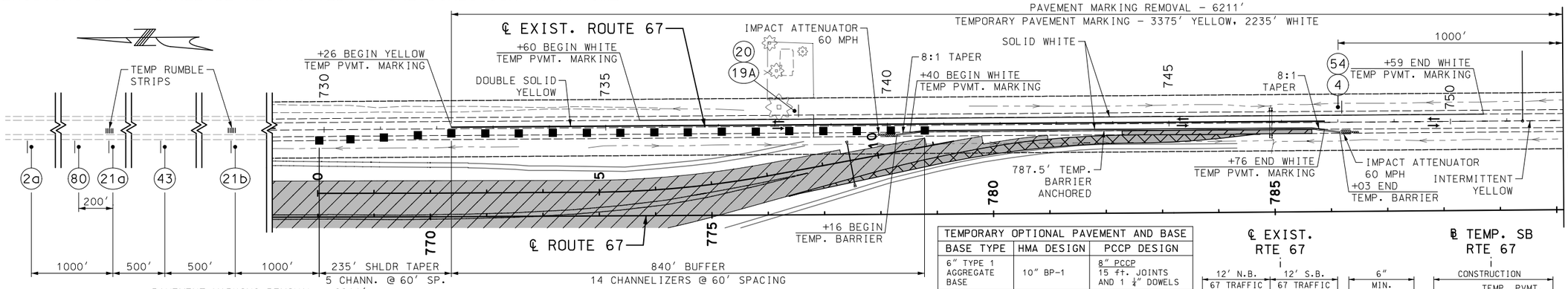




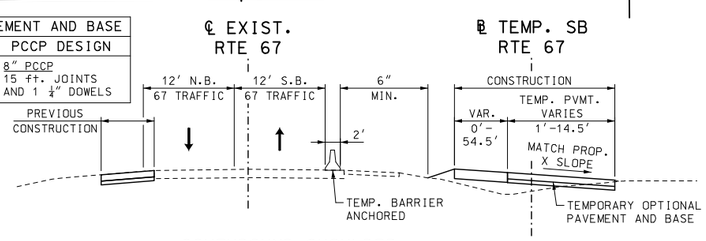
NORTHBOUND SHOULDER SHALL BE REPLACED BEFORE PLACING BARRIER FOR SOUTHBOUND SHOULDER CONSTRUCTION. SHOULDER CLOSURES ON EXISTING US 67 SHALL BE RESTRICTED TO ONE DIRECTION AT A TIME.

NORTHBOUND SHOULDER
TRAFFIC CONFIGURATION TYPICAL

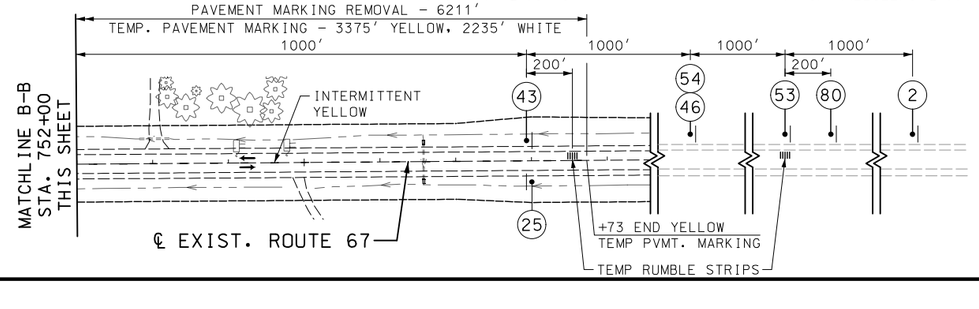




TEMPORARY OPTIONAL PAVEMENT AND BASE		
BASE TYPE	HMA DESIGN	PCCP DESIGN
6″ TYPE 1 AGGREGATE BASE	10″ BP-1	8″ PCCP 15 ft. JOINTS AND 1 ½″ DOWELS



SOUTHBOUND SHOULDER
TRAFFIC CONFIGURATION TYPICAL



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- TEMPORARY LONG TERM RUMBLE STRIPS
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

SCALE
0 100 200 300

ROUTE 67 – STAGE 1
TRAFFIC CONTROL SHEET 13 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2010000798
PROFESSIONAL ENGINEER
7/30/2024 10:52:38 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED 7/30/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	47

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

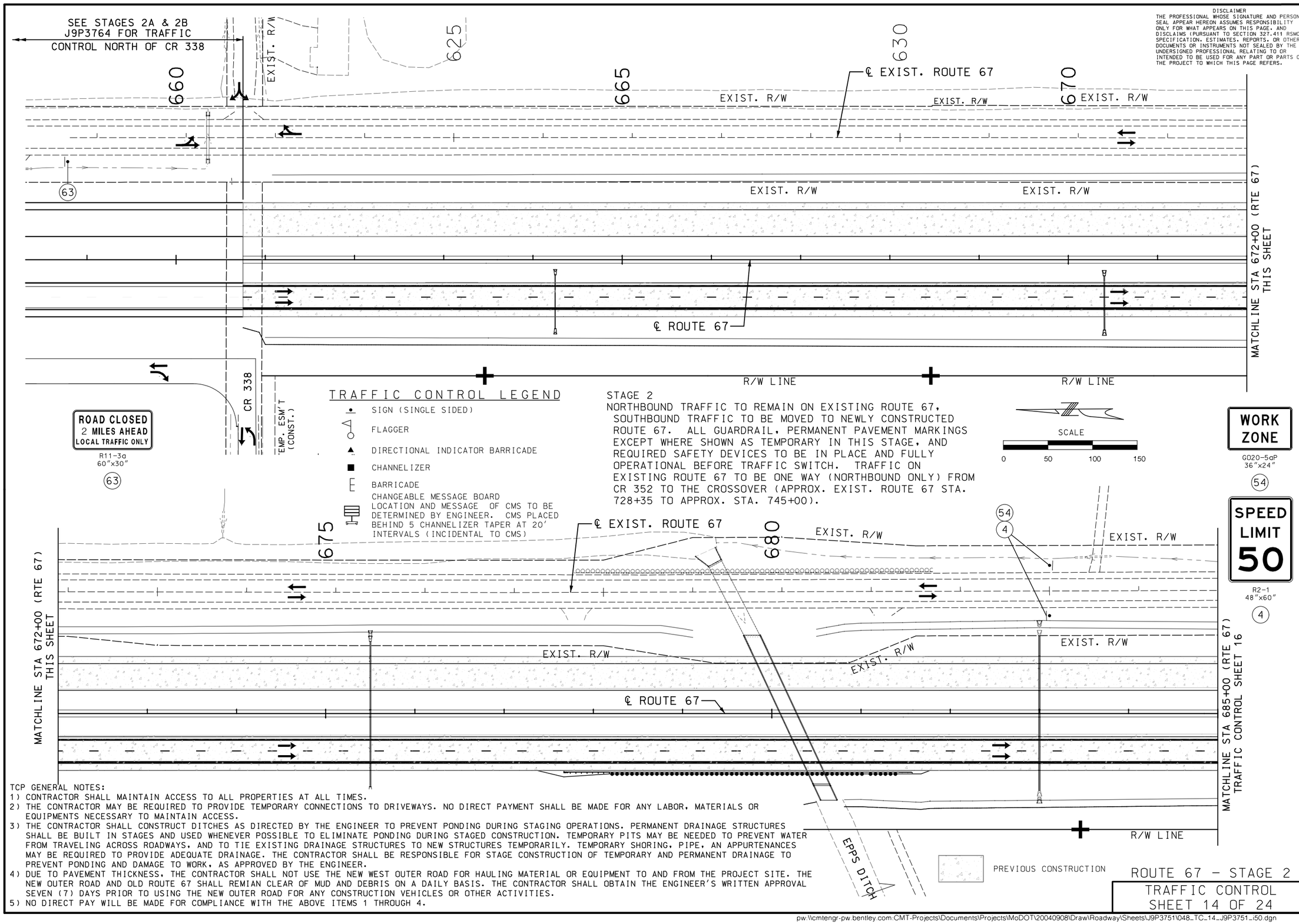
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.



TCP GENERAL NOTES:

1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.

ROUTE 67 – STAGE 2
TRAFFIC CONTROL
SHEET 14 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	48

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

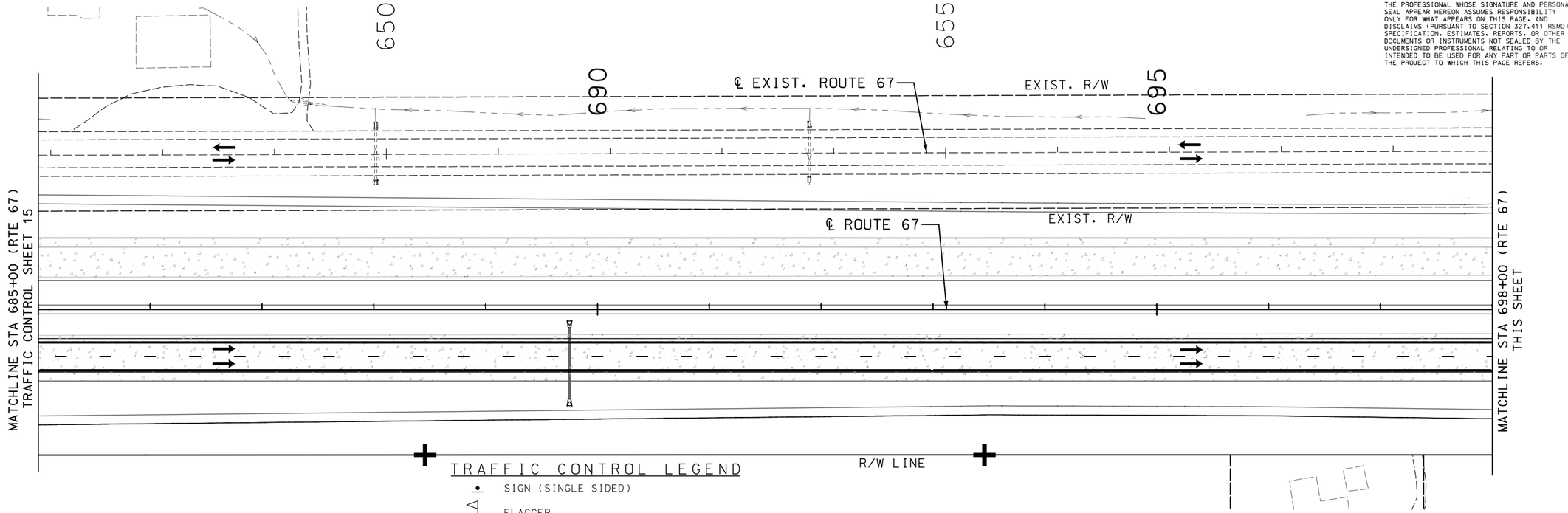
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250 MO 63021
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

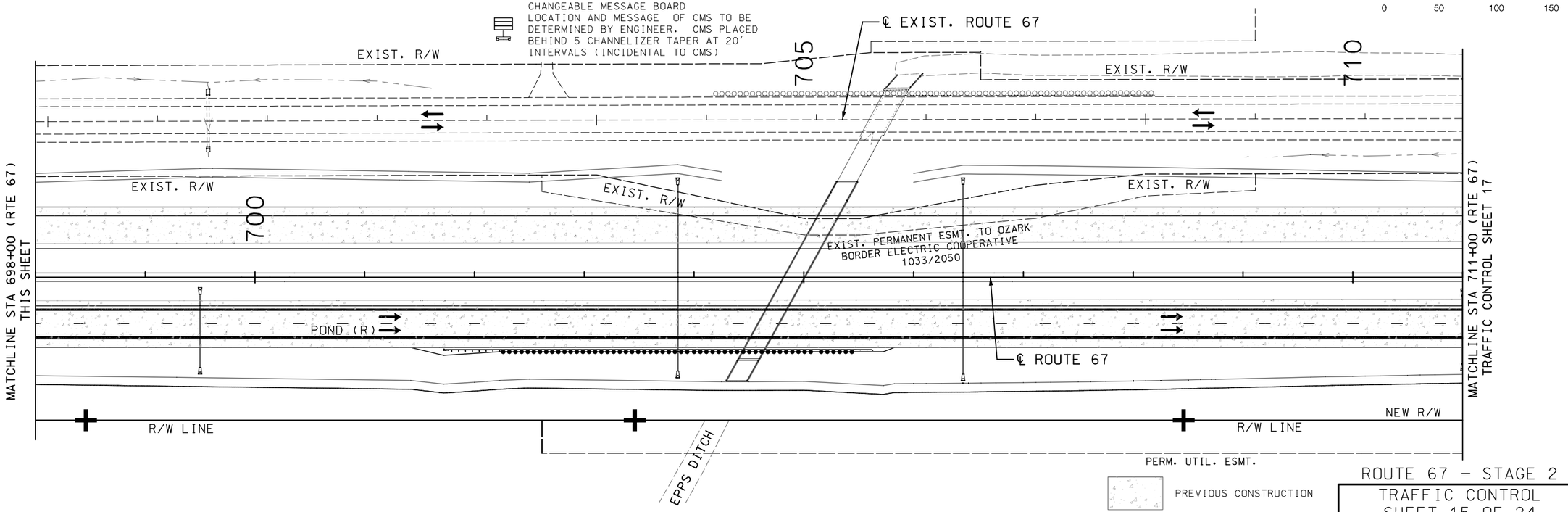
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150



PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 2
TRAFFIC CONTROL
SHEET 15 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023326
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 49
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV. | DESCRIPTION | DATE

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

675 680 715 720

CR 340

EXIST. R/W EXIST. R/W ℄ EXIST. ROUTE 67 EXIST. R/W

63

EXIST. R/W ℄ ROUTE 67 EXIST. R/W

MATCHLINE STA 711+00 (RTE 67)
TRAFFIC CONTROL SHEET 16

MATCHLINE STA 724+00 (RTE 67)
THIS SHEET

R/W LINE R/W LINE

PERM. UTIL. ESMT. PERM. UTIL. ESMT.

CR 340

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150

ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3a
60"x30"

63

725 730 735

EXIST. R/W EXIST. R/W

℄ EXIST. ROUTE 67

EXIST. R/W

℄ ROUTE 67

MATCHLINE STA 724+00 (RTE 67)
THIS SHEET

MATCHLINE STA 737+00 (RTE 67)
TRAFFIC CONTROL SHEET 18

R/W LINE R/W LINE

PERM. UTIL. ESMT. PERM. UTIL. ESMT.

℄

PREVIOUS CONSTRUCTION

ROUTE 67 - STAGE 2
TRAFFIC CONTROL
SHEET 16 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	50

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\050_TC_16_J9P3751_i50.dgn 3:49:05 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

700 740 705 745 710

℄ EXIST. ROUTE 67

EXIST. R/W

20 1000′

℄ ROUTE 67

MATCHLINE STA 737+00 (RTE 67)
TRAFFIC CONTROL SHEET 17

MATCHLINE STA 750+00 (RTE 67)
THIS SHEET

80 200′ 2a 1500′

R/W LINE

PERM. UTIL. ESMT.

WO20-3 48″x48″ (65)
WO20-3 48″x48″ (20)
WO5-1 48″x48″ (43)
WO20-1 48″x48″ (2a)
SPECIAL 48″x48″ (80)

715 ℄ EXIST. ROUTE 67 720 760

EXIST. R/W EXIST. R/W

755

1000′ 1000′

65

EXIST. R/W EXIST. R/W

MATCHLINE STA 750+00 (RTE 67)
THIS SHEET

MATCHLINE STA 763+00 (RTE 67)
TRAFFIC CONTROL SHEET 19

43

℄ ROUTE 67
1500′ 1000′

R/W LINE

HARVIELL DITCH

SCALE
0 50 100 150

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)
- PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 2
TRAFFIC CONTROL
SHEET 17 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	51

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

STAGE 2 – CLOSE SOUTHBOUND LANE OF EXISTING ROUTE 67 FROM CR 352 TO THE CROSSOVER (APPROX. EXIST. ROUTE 67 STA. 728+35 TO APPROX. STA. 745+00). NORTHBOUND TRAFFIC TO REMAIN ON EXISTING ROUTE 67. DIRECT SOUTHBOUND TRAFFIC OVER NEW US-67 AND TEMPORARY PAVEMENT WIDENING. OVERLAY AND WEDGE EXISTING PAVEMENT.

TEMPORARY PAVEMENT CONSTRUCTION

PREVIOUSLY CONSTRUCTED TEMPORARY PAVEMENT

PREVIOUS CONSTRUCTION

SCALE 0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI · PAUL JOSEPH KRONLAGE · NUMBER EN 023326 · REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

725 730 735 740 745 750 765 770 775 780

EXIST. F
CR 352
EXIST. R/W
1000′
UIP EXISTING STOP SIGN (70)
10′ TYP.
30′ TYP.
℄ EXIST. ROUTE 67
PAVEMENT MARKING REMOVAL – 7170′
TEMPORARY PAVEMENT MARKING – 1920′ SOLID YELLOW, 1664′ SOLID WHITE
390′ SHIFTING TAPER
14 CHANNELIZERS @ 30′ SPACING
60′ TYP.
℄ TEMP. SB ROUTE 67
1-TYPE III MOVABLE BARRICADE PLACED NOT TO BLOCK SIGHT DISTANCE
℄ ROUTE 67
60′ (TYP)
MATCHLINE STA 763+00 (RTE 67) TRAFFIC CONTROL SHEET 19
MATCHLINE STA 776+00 (RTE 67) THIS SHEET
420′ SHIFTING TAPER
8 CHANNELIZERS @ 60′ SPACING
TEMPORARY PAVEMENT MARKING
1274′ SOLID YELLOW
1134′ SOLID WHITE
PERM. UTIL. ESMT.

WORK ZONE G020-5aP 36″x24″ (54)
MIN. $250 FINE SPEEDING WHEN WORKERS PRESENT CONST-3A 60″x48″ (53)
DO NOT PASS R4-1 36″x48″ (46)
WO1-4L 48″x48″ (15L)
WO1-6 60″x30″ (16)
SPEED LIMIT 60 R2-1 36″x48″ (25)
ROAD CLOSED R11-2 48″x30″ (29)
ROAD NARROWS WO5-1 48″x48″ (43)
DO NOT ENTER R5-1 30″x30″ (60)
WRONG WAY R5-1a 36″x24″ (61)
ONE WAY R6-1R 54″x18″ (62)
R3-2 48″x48″ (70)
RUMBLE STRIPS AHEAD SPECIAL 48″x48″ (80)
ONCOMING TRAFFIC DOES NOT STOP W4-4bP 24″x12″ (67)
ROAD WORK AHEAD WO20-1 48″x48″ (2)
SPEED LIMIT 50 R2-1 36″x48″ (4)

PAVEMENT MARKING REMOVAL – 7170′
TEMPORARY PAVEMENT MARKING – 1920′ SOLID YELLOW, 1664′ SOLID WHITE
190′ BUFFER
6 CHANN. @ 30′ SP.
390′ SHIFTING TAPER
14 CHANNELIZERS @ 30′ SPACING
387.5′ TEMP. BARRIER ANCHORED
8:1 FLARE
IMPACT ATTENUATOR 60 MPH
390′ SHIFTING TAPER
14 CHANNELIZERS @ 30′ SPACING
IMPACT ATTENUATOR 60 MPH
8:1 FLARE
30′ TYP.
100′ TAPER
5 DEVICE MIN.
MATCHLINE STA 751+25 (EXIST. RTE 67) THIS SHEET
MATCHLINE STA 776+00 (RTE 67) THIS SHEET
60′ (TYP)
2-TYPE III MOVABLE BARRICADES
650′ TEMP. BARRIER ANCHORED
TEMPORARY PAVEMENT MARKING
1274′ SOLID YELLOW
1134′ SOLID WHITE
CONSTRUCT TEMPORARY PAVEMENT
℄ SB CROSSOVER
℄ TEMP. SB ROUTE 67
℄ EXIST. ROUTE 67
EXIST. R/W

TRAFFIC CONTROL LEGEND
- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

235′ SHLDR TAPER
5 CHANN. @ 60′ SP.
1000′ 1000′ 1000′ 1000′
200′ 200′
30′ TYP.
TEMP RUMBLE STRIPS
CMS
MATCHLINE STA 751+25 (EXIST. RTE 67) THIS SHEET

ROUTE 67 – STAGE 2
TRAFFIC CONTROL SHEET 18 OF 24

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 52
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

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

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

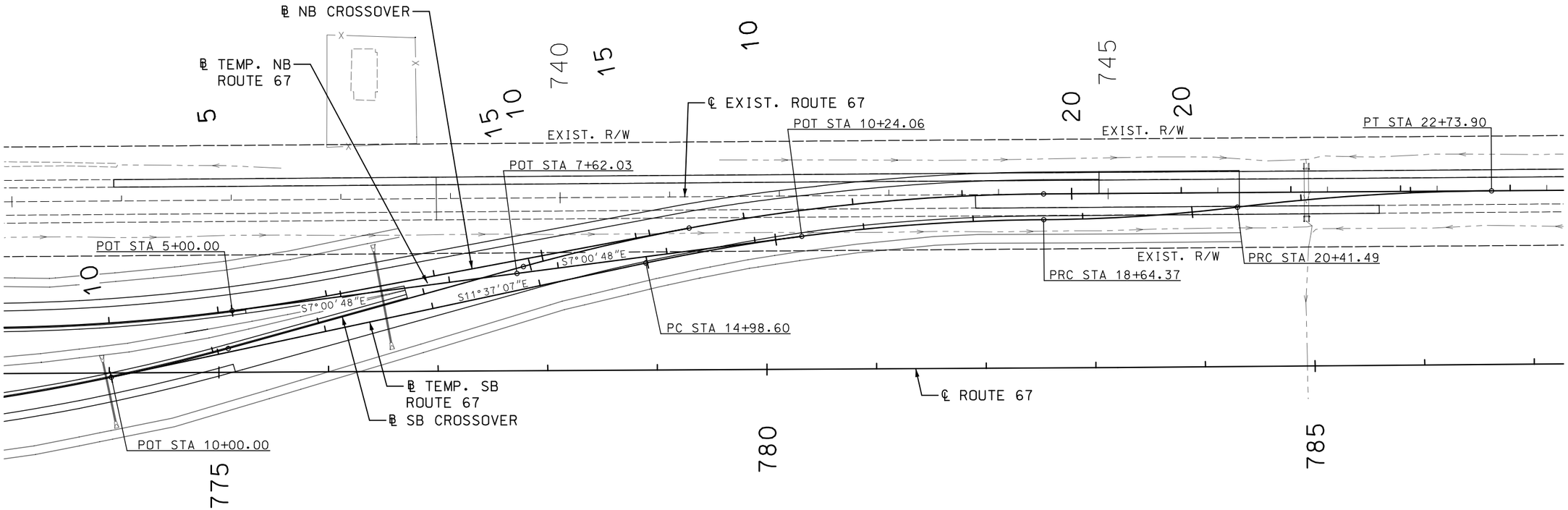
STAGE 2 – CLOSE SOUTHBOUND LANE OF EXISTING ROUTE 67 FROM CR 352 TO THE CROSSOVER (APPROX. EXIST. ROUTE 67 STA. 728+35 TO APPROX. STA. 745+00). NORTHBOUND TRAFFIC TO REMAIN ON EXISTING ROUTE 67. DIRECT SOUTHBOUND TRAFFIC OVER NEW US-67 AND TEMPORARY PAVEMENT WIDENING. OVERLAY AND WEDGE EXISTING PAVEMENT.

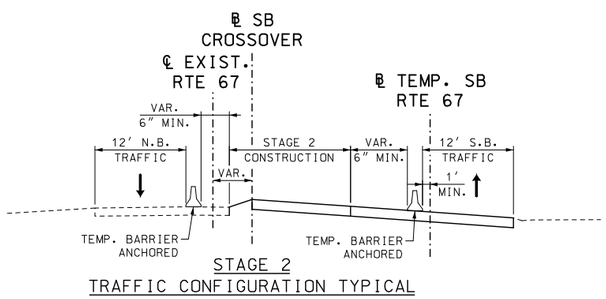
TEMPORARY PAVEMENT CONSTRUCTION

PREVIOUSLY CONSTRUCTED TEMPORARY PAVEMENT

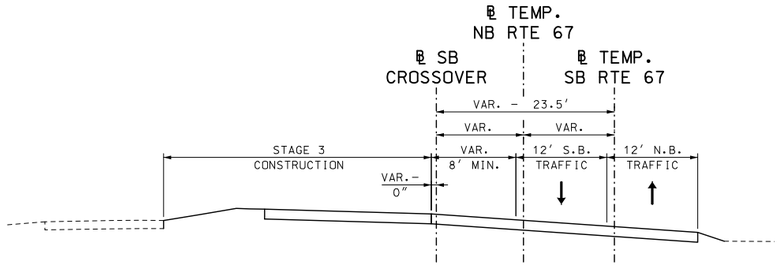
PREVIOUS CONSTRUCTION

PI	16+82.12	PI	19+53.03	PI	21+57.82
PC	14+98.60	PRC	18+64.37	PRC	20+41.49
PRC	18+64.37	PRC	20+41.49	PT	22+73.90
Δ	11° 39′ 55.6″ (RT)	Δ	6° 34′ 58.2″ (LT)	Δ	6° 34′ 58.2″ (RT)
D	3° 11′ 21.5″	D	3° 42′ 59.9″	D	2° 49′ 56.6″
L	365.77′	L	177.12′	L	232.41′
T	183.52′	T	88.66′	T	116.33′
R	1,796.50′	R	1,541.60′	R	2,022.88′





STAGE 2
TRAFFIC CONFIGURATION TYPICAL



STAGE 3
TRAFFIC CONFIGURATION TYPICAL

SCALE
0 50 100 150

ROUTE 67 – STAGES 2 & 3

TRAFFIC CONTROL
SHEET 19 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	53

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

SEE STAGE 3
J9P3764 FOR TRAFFIC
CONTROL NORTH OF CR 338

660 625 665 630 670

EXIST. R/W

℄ EXIST. ROUTE 67

EXIST. R/W EXIST. R/W EXIST. R/W

63

EXIST. R/W EXIST. R/W

MATCHLINE STA 672+00 (RTE 67)
THIS SHEET

℄ ROUTE 67

CR 338

TEMP. ESM'T (CONST.)

R/W LINE R/W LINE

ROAD CLOSED
2 MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3a
60"x30"

63 (UIP)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150

WORK ZONE
G020-5aP
36"x24"
54

675 680

℄ EXIST. ROUTE 67

EXIST. R/W

54
4

EXIST. R/W

SPEED LIMIT 50
R2-1
48"x60"
4

EXIST. R/W EXIST. R/W EXIST. R/W

MATCHLINE STA 672+00 (RTE 67)
THIS SHEET

MATCHLINE STA 685+00 (RTE 67)
TRAFFIC CONTROL SHEET 21

℄ ROUTE 67

R/W LINE

EPPS DITCH

PREVIOUS CONSTRUCTION

TCP GENERAL NOTES:

1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.

ROUTE 67 - STAGE 3
TRAFFIC CONTROL
SHEET 20 OF 24

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

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

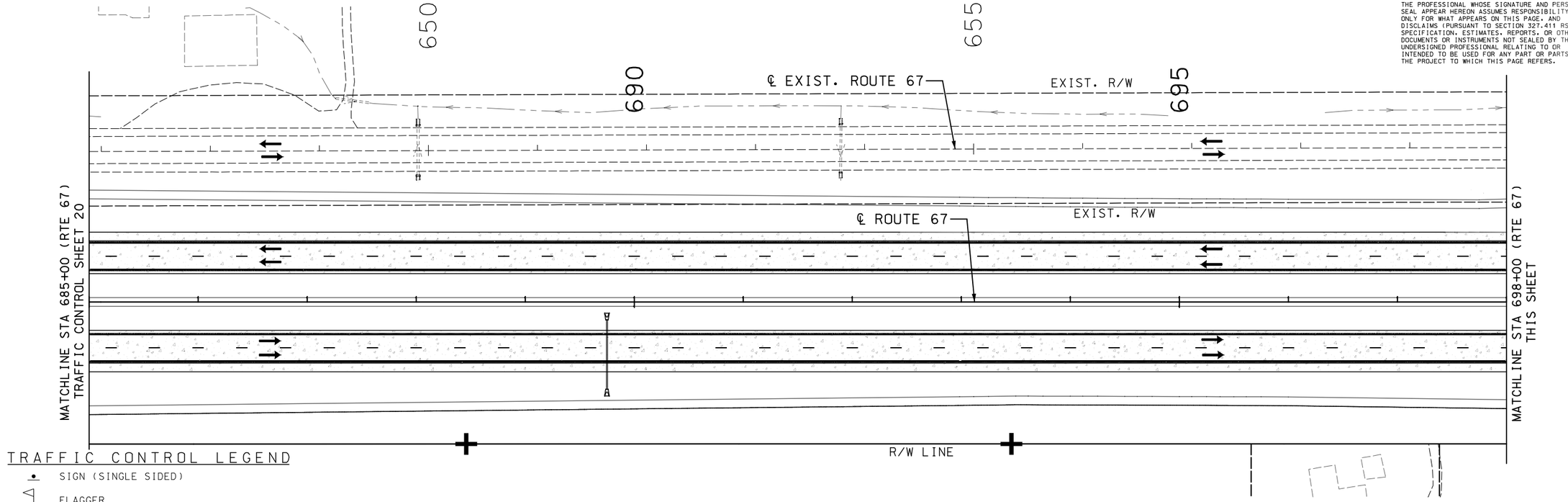
DATE PREPARED	3/1/2023
ROUTE	67
STATE	MO
DISTRICT	SE
SHEET NO.	54
COUNTY	BUTLER
JOB NO.	J9P3751
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION	REV.

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

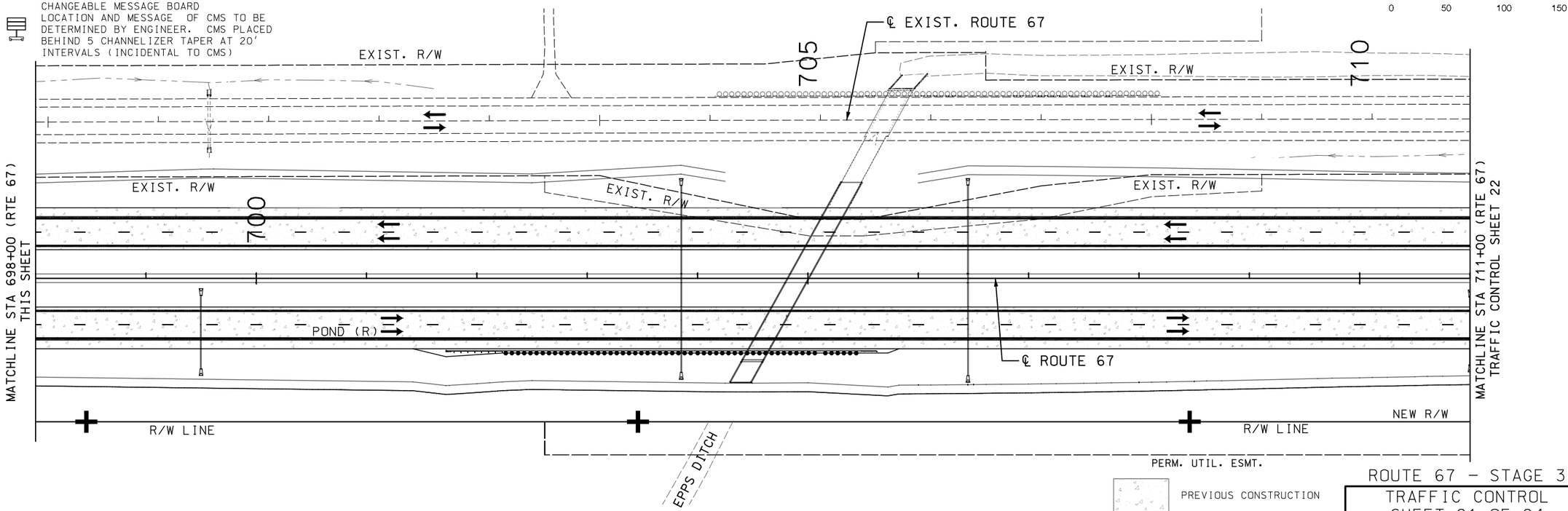
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150



PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 3
TRAFFIC CONTROL
SHEET 21 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 55
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

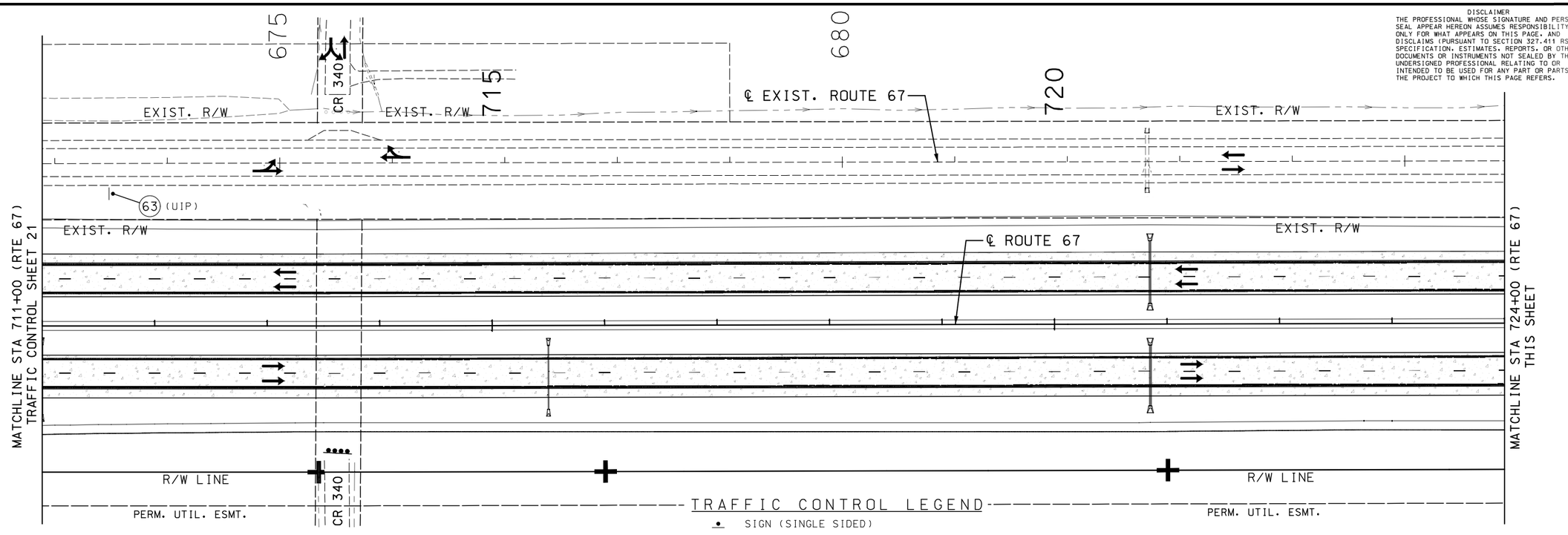
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\055_TC_21_J9P3751_i50.dgn 3:49:22 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

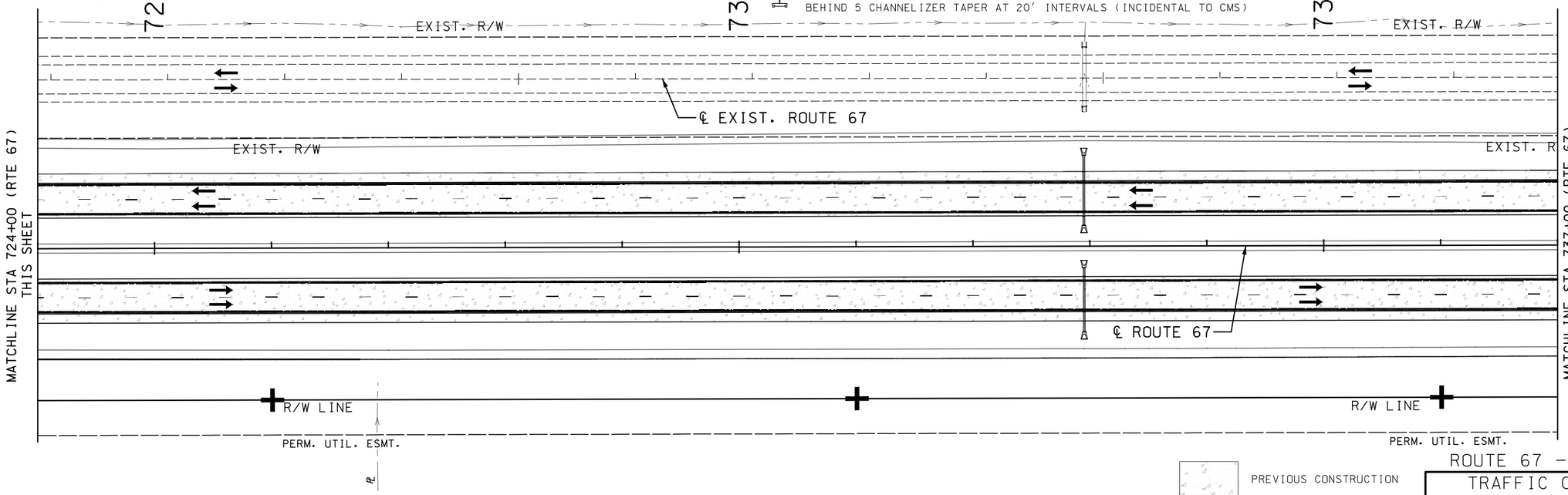


TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SCALE
0 50 100 150

ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3a
60"x30"
63



PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 3
TRAFFIC CONTROL
SHEET 22 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	56

COUNTY
BUTLER
JOB NO.
J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV.	DESCRIPTION	DATE

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

700 740 705 745 710

℄ EXIST. ROUTE 67

EXIST. R/W

MATCHLINE STA 737+00 (RTE 67)
TRAFFIC CONTROL SHEET 22

(UIP) 20 — 1000′

℄ ROUTE 67

(UIP) 80 — 200′ — 1500′

(UIP) 2a

MATCHLINE STA 750+00 (RTE 67)
THIS SHEET

R/W LINE

PERM. UTIL. ESMT.

ROAD CLOSED 1000 FT	ROAD CLOSED AHEAD	ROAD NARROWS	ROAD WORK AHEAD	RUMBLE STRIPS AHEAD
W020-3 48″x48″ (65)	W020-3 48″x48″ (20)	W05-1 48″x48″ (43)	W020-1 48″x48″ (2a)	SPECIAL 48″x48″ (80)

715 720 760

℄ EXIST. ROUTE 67

755

EXIST. R/W EXIST. R/W

1000′ 1000′

(65) (UIP)

EXIST. R/W EXIST. R/W

MATCHLINE STA 750+00 (RTE 67)
THIS SHEET

℄ ROUTE 67

(43) (UIP)

1500′ 1000′

MATCHLINE STA 763+00 (RTE 67)
TRAFFIC CONTROL SHEET 24

R/W LINE

HARVIELL DITCH

SCALE
0 50 100 150

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)
- PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 3
TRAFFIC CONTROL
SHEET 23 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	57

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\057_TC_23_J9P3751_i50.dgn 8:29:52 AM 3/2/2023

SCALE
0 50 100 150

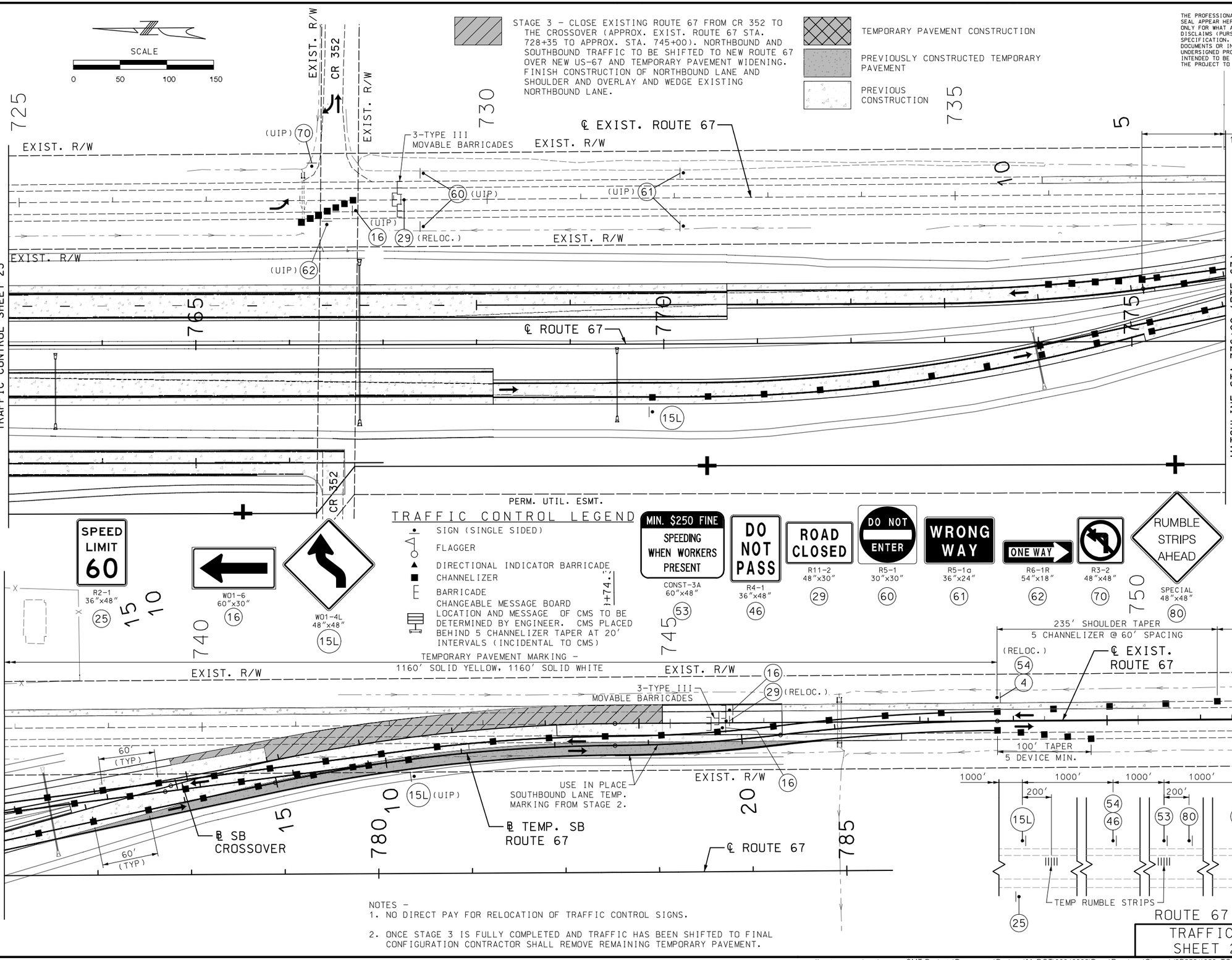
STAGE 3 – CLOSE EXISTING ROUTE 67 FROM CR 352 TO THE CROSSOVER (APPROX. EXIST. ROUTE 67 STA. 728+35 TO APPROX. STA. 745+00). NORTHBOUND AND SOUTHBOUND TRAFFIC TO BE SHIFTED TO NEW ROUTE 67 OVER NEW US-67 AND TEMPORARY PAVEMENT WIDENING. FINISH CONSTRUCTION OF NORTHBOUND LANE AND SHOULDER AND OVERLAY AND WEDGE EXISTING NORTHBOUND LANE.

TEMPORARY PAVEMENT CONSTRUCTION

PREVIOUSLY CONSTRUCTED TEMPORARY PAVEMENT

PREVIOUS CONSTRUCTION

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTES –
1. NO DIRECT PAY FOR RELOCATION OF TRAFFIC CONTROL SIGNS.
2. ONCE STAGE 3 IS FULLY COMPLETED AND TRAFFIC HAS BEEN SHIFTED TO FINAL CONFIGURATION CONTRACTOR SHALL REMOVE REMAINING TEMPORARY PAVEMENT.

ROUTE 67 – STAGE 3

TRAFFIC CONTROL
SHEET 24 OF 24

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 58
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

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

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\058_TC_24_J9P3751_i50.dgn 3:49:38 PM 3/1/2023

SCALE

0 50 100 150

EROSION CONTROL NOTES

1. LONGITUDINAL SLOPES OF PROPOSED DITCHES ARE LESS THAN 0.50% UNLESS OTHERWIDE NOTED.
2. MAXIMUM ROCK DITCH CHECK SPACING FOR LONGITUDINAL DITCH SLOPES LESS THAN 0.5% IS 300 FEET.
3. PRIMARY RECEIVING WATERS ARE EPPS DITCH AND HARVIELL DITCH.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	59

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

POT STA 655+00.00
655
660
POT STA 620+69.53
COUNTY ROAD 338
WATER MARKING STATION
665
625
EPPS DITCH
BEGIN PROJECT STA. 660+75.00
17" ALTERNATE DITCH CHECK IN EXTERIOR DITCHES
℄ ROUTE 67
26" ROCK DITCH CHECK IN MEDIAN
17" ROCK DITCH CHECK IN EXTERIOR DITCHES
18"
SLC
R/W LINE
SEED ALL DIRT AREAS FROM EXISTING SHOULDER TO EDGE OF ROW/EASEMENT, WHICHEVER IS GREATER
MATCHLINE STA. 668+00.00, ROUTE 67
TEMP. ESM'T (CONST.)

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
1 OF 10

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\059_EC_01_J9P3751_i50.dgn 2:09:23 PM 3/3/2023

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

630 635 640 670 675 680

PI STA 630+36.00

PI STA 638+98.10

EPPS DITCH

SLC

8' FBD @ 5.71% GRADE
678+78
679+55

8' FBD @ 5.83% GRADE
680+05
680+86

8' FBD @ 2.92% GRADE
679+33
679+85

8' FBD @ 5.71% GRADE
680+60
680+81

℄ ROUTE 67

24"

504 LF SILT FENCE

184 LF OF 16' x 8' BOX CULVERT EXTENSION

2' THICK TYPE 2 ROCK BLANKET WITH EROSION CONTROL GEOTEXTILE FABRIC

MATCHLINE STA. 668+00.00, ROUTE 67

MATCHLINE STA. 682+00.00, ROUTE 67

R/W LINE

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
2 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	60

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE

0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

645 650 655

690 695

MATCHLINE STA. 682+00.00, ROUTE 67

MATCHLINE STA. 696+00.00, ROUTE 67

℄ ROUTE 67

24"

24"

SLC

SLC

SLC

SLC

OE

OE

OE

R/W LINE

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
3 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	61

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	62

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

MATCHLINE STA. 696+00.00, ROUTE 67

MATCHLINE STA. 710+00.00, ROUTE 67

ROCK DITCH CHECKS SPA @ 150' 8' FBD @ 0.94% GRADE

ROCK DITCH CHECKS SPA @ 300' 8' FBD @ 0.58% GRADE

ROCK DITCH CHECKS SPA @ 75' 8' FBD @ 1.89% GRADE

8' FBD @ 5.53% GRADE

8' FBD @ 5.50% GRADE

8' FBD @ 5.71% GRADE

8' FBD @ 5.71% GRADE

697+75 699+57 703+85 704+80 705+55 706+45

704+19 704+50 705+25 705+62

660 665 670 675 680 685 690 695 700 705 710

EPPS DITCH

℄ ROUTE 67

SLC

OE

W

18" 24"

187 LF OF 16' X 9' BOX CULVERT EXTENSION

587 LF SILT FENCE

58 LF SILT FENCE

582 LF SILT FENCE

16 LF SILT FENCE

163 LF SILT FENCE

2' THICK TYPE 2 ROCK BLANKET WITH EROSION CONTROL GEOTEXTILE FABRIC

EXTEND SEEDING TO PERMANENT EASEMENT

R/W LINE

PERM. UTIL. ESMT.

TEMP. ESM'T (CONST.)

TEMPORARY EROSION CONTROL LEGEND

R	ROCK DITCH CHECK
S	SEDIMENT TRAP
A	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
4 OF 10

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\062_EC_04_J9P3751_i50.dgn 2:09:27 PM 3/3/2023

SCALE

0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

675 680 685

710 715 720

MATCHLINE STA. 710+00.00, ROUTE 67

MATCHLINE STA. 724+00.00, ROUTE 67

℄ ROUTE 67

℄ STA. 713+50.65

SLC

SLF

W

OE

UT

R/W LINE

PERM. UTIL. ESMT.

1400 LF SILT FENCE

18"

24"

WATER POND W/ELEC

P. RISER

COUNTY ROAD 340

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
5 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	63

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

SCALE

0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

690

695

725

730

735

EPPS DITCH

MATCHLINE STA. 724+00.00, ROUTE 67

MATCHLINE STA. 738+00.00, ROUTE 67

WATER PUMP W/ELEC

ELEC SHUTOFF BOX

WATER PUMP W/ELEC

EM

TELEPHONE

P RISER

TRANSFORMER

P RISER

P RISER W/METER

SLC

SLC

SLC

SLC

30"

30"

℄ ROUTE 67

R/W LINE

PERM. UTIL. ESMT.

1400 LF SILT FENCE

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
6 OF 10

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	64

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE

0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

700 705 710

740 745 750

PC STA 704+96.80

PT STA 708+96.80

SLC

℄ ROUTE 67

MATCHLINE STA. 738+00.00, ROUTE 67

MATCHLINE STA. 752+00.00, ROUTE 67

18"

R/W LINE

PERM. UTIL. ESMT.

1400 LF SILT FENCE

POT STA 2+00.00

TEMPORARY EROSION CONTROL LEGEND

R	ROCK DITCH CHECK
S	SEDIMENT TRAP
A	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	65

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EROSION CONTROL
7 OF 10

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

HARVIELL DITCH

EPPS DITCH

715 720 725 755 760 765

STA 720+25.00

WATER SAMPLING STATION

SLC

OE

439 LF SILT FENCE

416 LF SILT FENCE

802 LF SILT FENCE

521 LF SILT FENCE

24"

18"

℄ ROUTE 67

MATCHLINE STA. 752+00.00, ROUTE 67

MATCHLINE STA. 766+00.00, ROUTE 67

R/W LINE

PERM. UTIL. ESMT.

2' THICK TYPE 2 ROCK BLANKET WITH EROSION CONTROL GEOTEXTILE FABRIC

5 10 15

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
8 OF 10

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	66

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

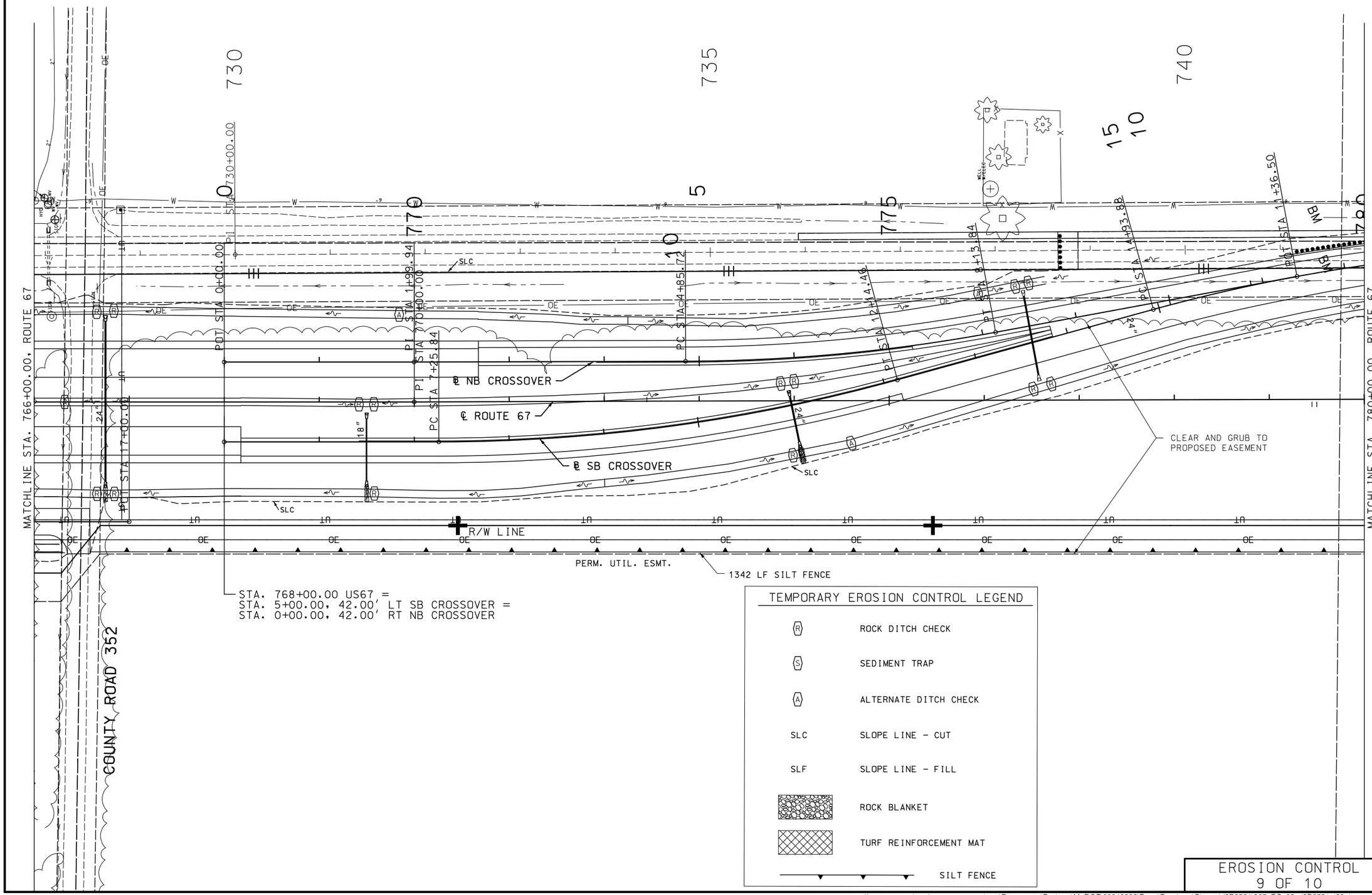
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

SCALE

0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
9 OF 10

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	67
COUNTY	BUTLER
JOB NO.	J9P3751
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	68

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

MATCHLINE STA. 780+00.00, ROUTE 67

20 745 25 750 755

PT STA 19+74.34

PI STA 783+20.00

POT STA 26+61.32

785 790

END CONSTRUCTION
STA. 746+19.57 EXISTING US67
STA. 21+52.87 SB TRANSITION
STA. 784+31.16, 166.29' LT PROPOSED US67

SLC

SLC

℄ ROUTE 67

CLEAR AND GRUB TO PROPOSED EASEMENT

R/W LINE

PERM. UTIL. ESMT.

1561 LF SILT FENCE

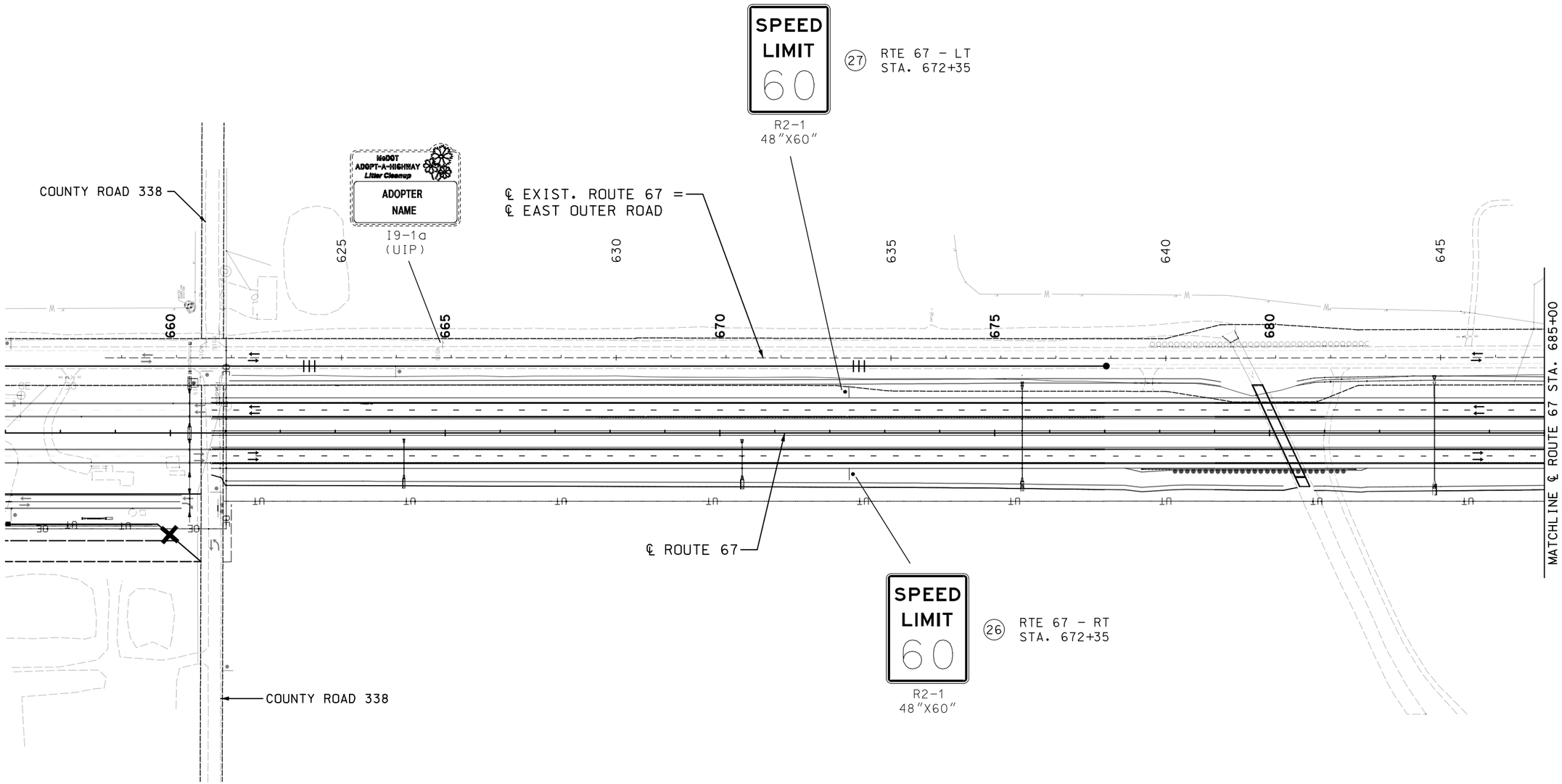
TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
SLC	SLOPE LINE – CUT
SLF	SLOPE LINE – FILL
	ROCK BLANKET
	TURF REINFORCEMENT MAT
	SILT FENCE

EROSION CONTROL
10 OF 10

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\068_EC_10_J9P3751_i50.dgn 2:09:37 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SCALE
0 100 200 300 400 500

NOTES:
1. SEE J9P3764 FOR SIGNING DETAILS NORTH OF CR 338.
2. EXISTING SIGNS NOT SHOWN ARE TO BE U.I.P.
3. SIGNS THIS SHEET: 26-27

ROUTE 67
SIGNING SHEET
1 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 69
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

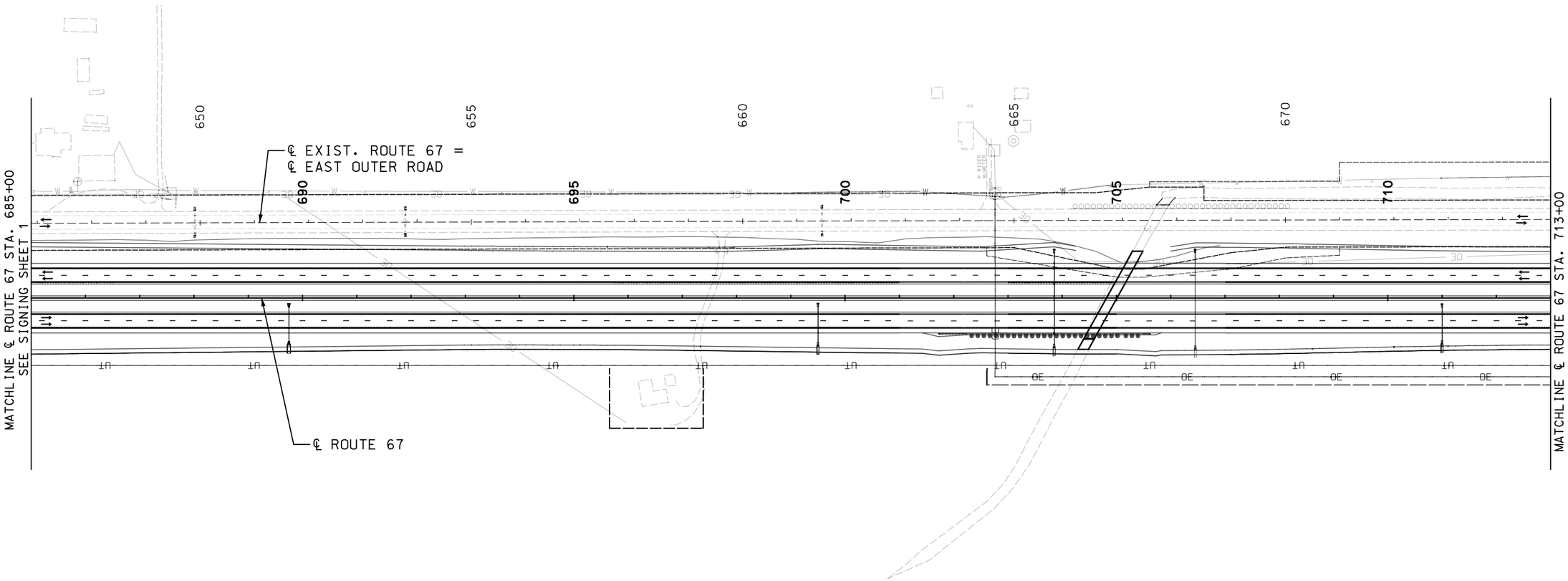
REV. | DATE | DESCRIPTION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\069_SN_01_J9P3751_i100.dgn 1:04:36 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SCALE
0 100 200 300 400 500

ROUTE 67
SIGNING SHEET
2 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	70

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

BK TO BK
BUTLER 340 COUNTY
M1-6
(RELOCATED)

(28) EOR - LT
STA. 675+79

STOP
R1-1
(UIP)

(1) EOR - RT
STA. 675+52

W1-7
48"X24"

BK TO BK
BUTLER 340 COUNTY
M1-6
(R&RELOC)

STOP
R1-1
(R)

COUNTY ROAD 340

675

MATCHLINE ℄ ROUTE 67 STA. 713+00
SEE SIGNING SHEET 2

715 720 725 730 735 740

MATCHLINE ℄ ROUTE 67 STA. 741+00
SEE SIGNING SHEET 4

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

℄ ROUTE 67

(2) RTE 67 - RT
STA. 713+63

4 OM4-3
18"X18"

CR 371

NO OUTLET
W14-2
30"x30"

(3) RTE 67 - RT
STA. 713+85
OFF. 2,425'

COUNTY ROAD 355

NO OUTLET
W14-2
30"x30"

(4) RTE 67 - RT
STA. 713+83
OFF. 5,050'

SCALE
0 100 200 300 400 500

NOTES:
1. SIGNS THIS SHEET: 1-4, 28

ROUTE 67
SIGNING SHEET
3 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	71

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DATE	DESCRIPTION

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

EOR – RT STA. 728+37 (9)
W1-7 48"X24"

EOR – RT STA. 729+08 (10)
ROAD ENDS
W14-13 36"X36"
900 FEET
W16-2P 24"X18"

LEFT LANE ENDS
W9-1L 48"X48"
ROUTE 67 – RT STA. 744+78 (25)
1500 FEET
W16-2P 30"X24"

LEFT LANE ENDS
W9-1L 48"X48"
(5) ROUTE 67 – RT STA. 748+78

ROUTE 67 – RT STA. 757+78 (7)
W4-2L 48"X48"

(15) ROUTE 67 – RT STA. 760+26
W6-2 48"X48"

ROUTE 67 – RT STA. 762+76 (22)
W1-4L 48"x48"
50 M.P.H.
W13-1P 30"x30"

BUTLER 352 COUNTY
M1-6 (R)

STOP
R1-1 (UIP)

STOP
R1-1 (R)

705 710 715 720 725 730

℄ EXISTING ROUTE 67 = ℄ EAST OUTER ROAD

745 750 755 760 765 0

COUNTY ROAD 352

PRIVATE SIGN (R)

MATCHLINE ℄ ROUTE 67 STA. 741+00
SEE SIGNING SHEET 3

MATCHLINE ℄ ROUTE 67 STA. 769+00
SEE SIGNING SHEET 5

℄ ROUTE 67

LEFT LANE ENDS
W9-1L 48"X48"
ROUTE 67 – RT STA. 744+78 (24)
1500 FEET
W16-2P 30"X24"

LEFT LANE ENDS
W9-1L 48"X48"
(6) ROUTE 67 – RT STA. 748+78

ROUTE 67 – RT STA. 757+78 (8)
W4-2L 48"X48"

(14) ROUTE 67 – RT STA. 760+26
W6-2 48"X48"

4 OM4-3 18"X18"
(29) WOR STA. 7+46

W1-4L 48"x48"
50 M.P.H.
(23) ROUTE 67 – RT STA. 762+76
W13-1P 30"x30"

NO OUTLET
(12) ROUTE 67 – RT STA. 766+69 OFF. 2,410'
W14-2 30"X30"

CR 371

4 OM4-3 18"X18"
(11) WOR STA. 16+49

CR 355

NO OUTLET
(13) ROUTE 67 – RT STA. 766+67 OFF. 5,075'
W14-2 30"X30"

SCALE
0 100 200 300 400 500

NOTES:
1. SIGNS THIS SHEET: 5-15, 22-25, 29

ROUTE 67
SIGNING SHEET
4 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023326
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	72

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

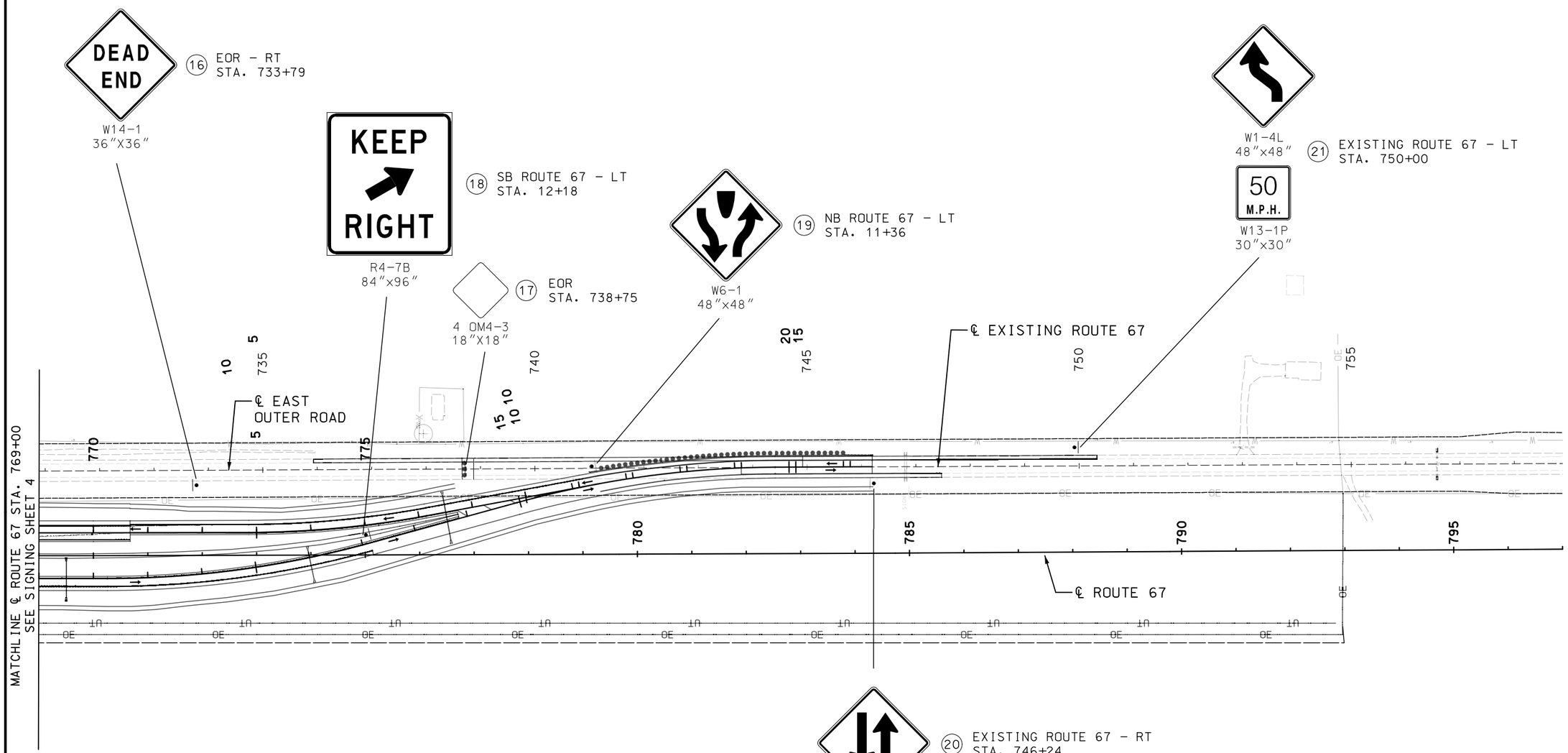
REV.	DESCRIPTION	DATE

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

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

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



20 EXISTING ROUTE 67 - RT
STA. 746+24

SCALE
0 100 200 300 400 500

NOTES:
1. SIGNS THIS SHEET: 16-21

ROUTE 67
SIGNING SHEET
5 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	73

COUNTY
BUTLER
JOB NO.
J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr Phone 314-394-3100
Suite 250 Fax 314-394-3199
St. Louis, MO 63021
Missouri Certificate of Authority: 001578

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\073_SN_05_J9P3751_i100.dgn 1:04:43 PM 3/1/2023

EFFECTIVE 07-01-2022

SIGNS 902 SIGNAL SIGNS TABULATED ON D-37A SHEET						CONCRETE FOOTINGS EMBEDDED	STRUCTURAL STEEL POSTS ✳						PIPE POSTS ✳					BACKING BARS ✳✳					U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE												REMARKS AND OTHER REQUIRED ITEMS
																								2 IN. POST						2.5 IN. POST						BREAK-AWAY ASSEMBLY	
																										ANCHORS						ANCHORS			
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	ITEM NO. 9031010	POST DES NO.	POST NO.1	POST NO.2	POST NO.3	LBS PER FT	TOTAL ITEM NO. 9031210	PIPE SIZE	POST NO.1	POST NO.2	LBS PER FT	TOTAL ITEM NO. 9031220	NO. EACH	LGTH	TOTAL	TOTAL	ITEM NO. 9031250A	POST NO.1	POST NO.2	TOTAL ITEM NO. 9031270A	DRIVEN 12-GA. ITEM NO. 9031271A	DRIVEN 7-GA. ITEM NO. 9031273A	CONCRETE 7-GA. ITEM NO. 9031274	POST NO.1	POST NO.2	TOTAL ITEM NO. 9031280	2.25" INSERT (6 FT) ITEM NO. 9031272A	DRIVEN 7-GA. ITEM NO. 9031281A	CONCRETE 7-GA. ITEM NO. 9031285	ITEM NO. 9031241	
						CY		LF	LF	LF		LBS	IN.	LF	LF		LBS	EACH	IN.	LF	LBS	LF	LF	LF	LF	EA	EA	EA	LF	LF	LF	EA	EA	EA	EA	
1	48"x24"	675+52		EOR-RT																			16	16	32	1										7 FT. CHANNEL POST
2	18"x18"	713+63		RTE 67-RT																			16		16	1										DELINEATOR, WHITE - 48 EA.
2	18"x18"	713+63		RTE 67-RT																			16		16	1										
2	18"x18"	713+63		RTE 67-RT																			16		16	1										
2	18"x18"	713+63		RTE 67-RT																			16		16	1										
3	30"x30"	713+85		RTE 67-RT																			16		16	1										
4	30"x30"	713+83		RTE 67-RT																			16		16	1										
5	48"x48"	748+78		RTE 67-RT																									16		16		1			
6	48"x48"	748+78		RTE 67-RT																									16		16		1			
7	48"x48"	757+78		RTE 67-RT																									16		16		1			
8	48"x48"	757+78		RTE 67-RT																									16		16		1			
9	48"x24"	728+37		EOR-RT																			16	16	32	1										
10	ASSY	729+08		EOR-RT																									16		16		1			
11	18"x18"	766+50		RTE 67-RT																			16		16	1										
11	18"x18"	766+50		RTE 67-RT																			16		16	1										
11	18"x18"	766+50		RTE 67-RT																			16		16	1										
11	18"x18"	766+50		RTE 67-RT																			16		16	1										
12	30"x30"	766+69		RTE 67-RT																			16		16	1										
13	30"x30"	766+67		RTE 67-RT																			16		16	1										
14	48"x48"	760+26		RTE 67-RT																									16		16		1			
15	48"x48"	760+26		RTE 67-RT																									16		16		1			
16	36"x36"	733+79		EOR-RT																			16		16	1										
17	18"x18"	738+75		EOR																			16		16	1										
17	18"x18"	738+75		EOR																			16		16	1										
17	18"x18"	738+75		EOR																			16		16	1										
17	18"x18"	738+75		EOR																			16		16	1										
18	84"x96"	12+18		SB RTE 67-LT	8	0.94	2	20.75	20.75		15	622.5																								
19	48"x48"	11+36		NB RTE 67-LT																									16		16		1			
20	48"x48"	746+24		EXRTE 67-RT																									16		16		1			
21	ASSY	750+00		EXRTE 67-LT																									16		16	1	1		1	
22	ASSY	762+76		RTE 67-RT																									16		16	1	1		1	
23	ASSY	762+76		RTE 67-RT																									16		16	1	1		1	
24	ASSY	744+78		RTE 67-RT																									16		16	1	1		1	
25	ASSY	744+78		RTE 67-RT																									16		16	1	1		1	
26	48"x60"	672+35		RTE 67-RT																									16	16	32		1		2	
27	48"x60"	672+35		RTE 67-LT																									16	16	32		1		2	
28	RELOC	675+79		EOR-LT																			16		16	1										
29	18"x18"	7+46		WOR																			16		16	1										
29	18"x18"	7+46		WOR																			16		16	1										
29	18"x18"	7+46		WOR																			16		16	1										
29	18"x18"	7+46		WOR																			16		16	1										
SUBTOTAL						0.94						622.5													416	24					288	5	16		9	
TOTAL						0.90						630										✳✳			416	24					288	5	16		9	

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

ROUND PIPE POST AND FOOTING DATA TABLE

NOM. SIZE (IN.)	WEIGHT LBS/FT	WEIGHT LBS/IN	STUB LENGTH	FOOTING DIA.	FOOTING DEPTH	CONCRETE C.Y.
2½	5.79	0.48	4'-3½"	12"	4'-6"	0.13
3	7.58	0.63	4'-3½"	12"	4'-6"	0.13
4	10.79	0.90	5'-3½"	18"	5'-6"	0.36

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

POST DES. NO.	NOM. SIZE	POST WEIGHT LBS/FT	POST WEIGHT LBS/IN	POST STUB LENGTH	FOOTING DIA.	FOOTING LEVEL GROUND DEPTH	FOOTING LEVEL GROUND C.Y.	FOOTING 6:1 GRADE DEPTH	FOOTING 6:1 GRADE C.Y.	FOOTING 4:1 GRADE DEPTH	FOOTING 4:1 GRADE C.Y.	FOOTING 3:1 OR 2:1 GRADE DEPTH	FOOTING 3:1 OR 2:1 GRADE C.Y.
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

SIGNING SHEET 6 OF 9

D-29

PAUL JOSEPH KRONLAGE NUMBER EN 023328 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	74

COUNTY BUTLER

JOB NO. J9P3751

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)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

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

REV.

EFFECTIVE 10-01-2016

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE: W1-7 48"x24"	OM4-3 18"x18"	W14-2 30"x30"	W9-1L 48"x48"	W4-2L 48"x48"	W14-13 36"x36"	W6-2 48"x48"	R2-1 48"x60"	W6-1 48"x48"	W6-3 48"x48"	W16-2P 24"x18"	R4-7B 84"x96"	W1-4L 48"x48"	W13-1P 30"x30"	W16-2P 30"x24"	W14-1 36"x36"
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH															
1	675+52	EOR-RT	1															
2	713+63	RTE 67-RT		4														
3	713+85	RTE 67-RT			1													
4	713+83	RTE 67-RT			1													
5	748+78	RTE 67-RT				1												
6	748+78	RTE 67-RT				1												
7	757+78	RTE 67-RT					1											
8	757+78	RTE 67-RT					1											
9	728+37	EOR-RT	1															
10	729+08	EOR-RT						1					1					
11	766+50	RTE 67-RT		4														
12	766+69	RTE 67-RT			1													
13	766+67	RTE 67-RT			1													
14	760+26	RTE 67-RT							1									
15	760+26	RTE 67-RT							1									
16	733+79	EOR-RT																1
17	738+75	EOR		4														
18	12+18	SB RTE 67-LT												1				
19	11+36	NB RTE 67-LT									1							
20	746+24	EXRTE 67										1						
21	750+00	EXRTE 67													1	1		
22	762+76	RTE 67-RT													1	1		
23	762+76	RTE 67-RT													1	1		
24	744+78	RTE 67-RT				1											1	
25	744+78	RTE 67-RT				1											1	
26	672+35	RTE 67-RT								1								
27	672+35	RTE 67-LT								1								
29	7+46	WOR		4														

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET: SIZE	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLUORESCENT SHF * ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A	STRUCTURAL FLUORESCENT STF * ITEM NO. 9035071A
W1-7		2	48"x24"		16		
OM4-3		16	18"x18"	36			
W14-2		4	30"x30"		25		
W9-1L		4	48"x48"		64		
W4-2L		2	48"x48"		32		
W14-13		1	36"x36"		9		
W6-2		2	48"x48"		32		
R2-1		2	48"x60"	40			
W6-1		1	48"x48"		16		
W6-3		1	48"x48"		16		
W16-2P		1	24"x18"		3		
SPECIAL SIGN (R4-7B)	8 OF 9	1	84"x96"			56	
W1-4L		3	48"x48"		48		
W13-1P		3	30"x30"		18.8		
W16-2P		2	30"x24"		10		
W14-1		1	36"x36"		9		
TOTAL				76	299	56	

* ORANGE, YELLOW & YELLOW/GREEN

SIGNING SHEET
7 OF 9

D-30

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	75

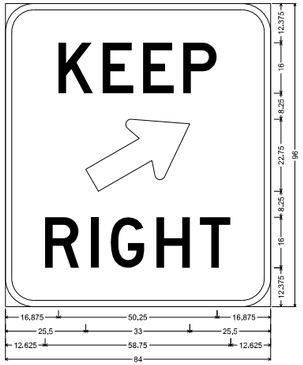
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE | REV.

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



SIGN NO.	18
STATION	12+18
ROADWAY	SB RTE 67

R4-7b-84 ST-STRUCTURAL;
9.000" Radius, 2.000" Border, Black on. White:
"KEEP". D: Standard Arrow Custom 35.750" X 21.625" 30';
"RIGHT". D:
Table of letter and object lefts

K 16.875	E 30.875	C 43.625	P 56.375
27 25.500			
R 12.625	I 27.125	G 33.375	H 47.875	T 61.625

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	76

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

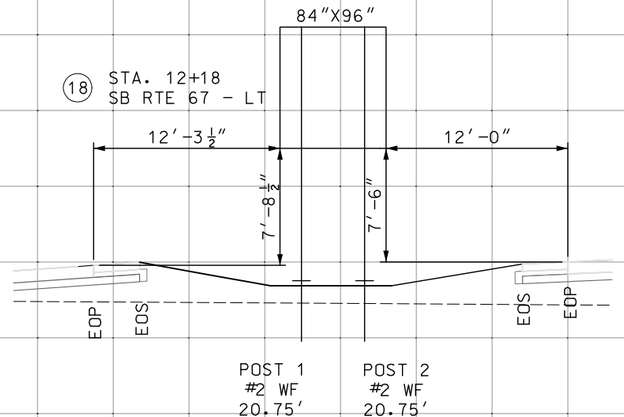
MoDOT

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67
SIGNING SHEET
8 OF 9

D-31



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	77

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

5'

ROUTE 67
SIGNING SHEET
GROUND SECTIONS
SHEET 9 OF 9

STRIPING KEY

S – SOLID

I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

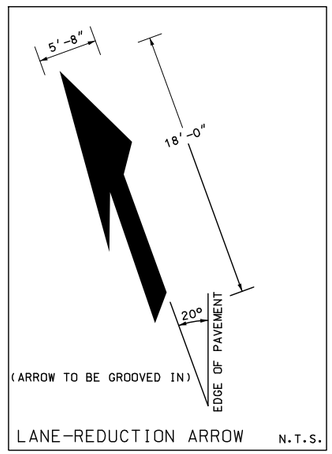
PREFORMED MARKING MATERIAL

↑ STRAIGHT ARROW

↷ LEFT OR RIGHT TURN ARROW

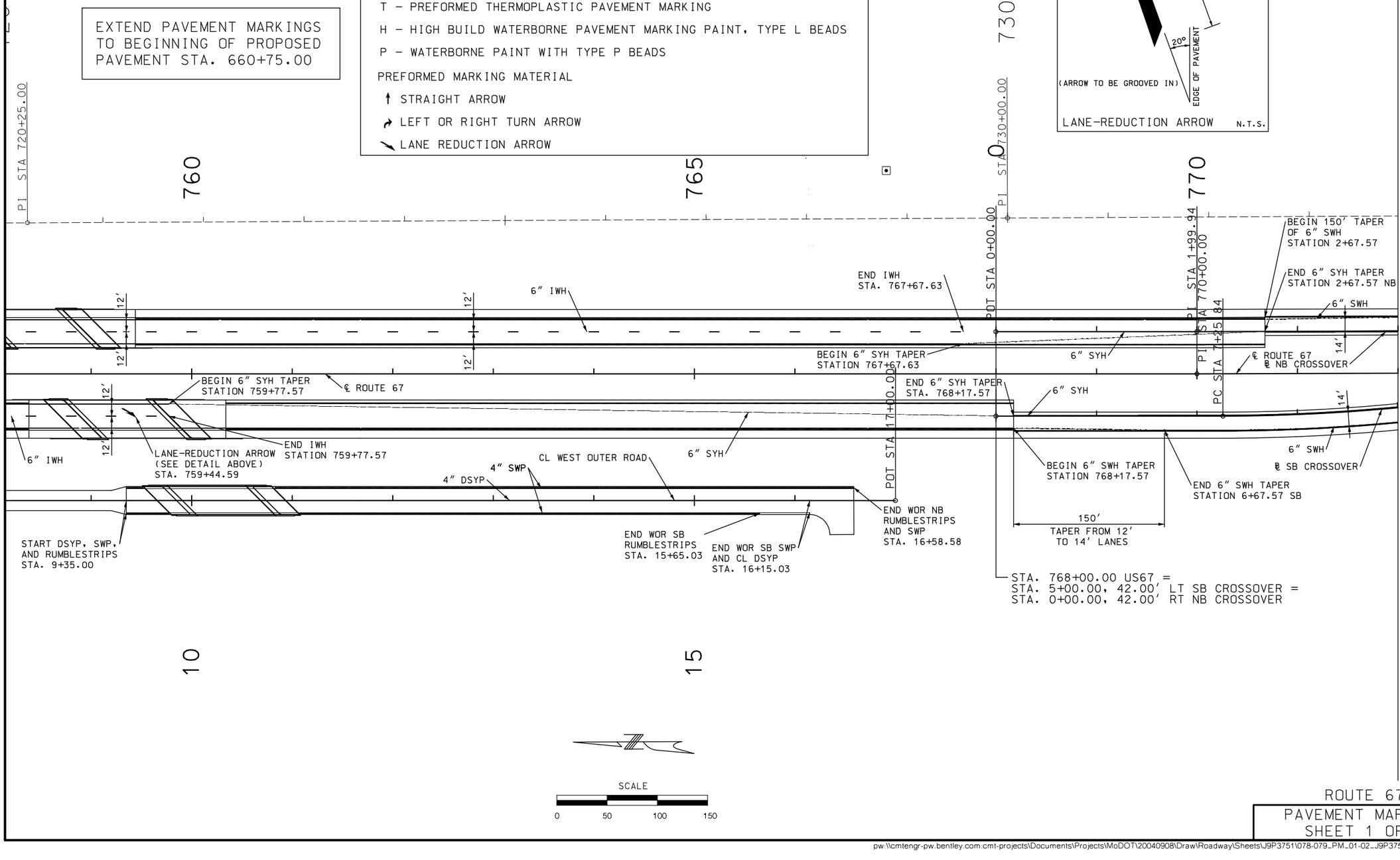
LANE REDUCTION ARROW

EXTEND PAVEMENT MARKINGS TO BEGINNING OF PROPOSED PAVEMENT STA. 660+75.00



LANE-REDUCTION ARROW N.T.S.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SCALE
0 50 100 150

ROUTE 67
PAVEMENT MARKING
SHEET 1 OF 2

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	78
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	79

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION | DATE

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

MATCHLINE STA. 772+00.00, ROUTE 67

735 | 740 | 745 | 775 | 780 | 785

PC STA 4+85.72
PT STA 12+14.46
PC STA 8+13.84
PC STA 14+93.88
BEGIN DSYH STATION 16+49.08 SB
PT STA 11+36.50
PT STA 19+74.34
PI STA 783+20.00
℄ NB CROSSOVER
6" SWH
6" SYH
END 150' TAPER OF 6" SWH STATION 4+17.58
14'
24" SYT @ 50'SPACING
END EDGE LINE RUMBLESTRIP STA. 13+84.19 SB
BEGIN CL RUMBLESTRIP STA. 15+28.50 SB
6" SYH
START TAPER STA. 16+49.08 SB
125' TAPER FROM 14' TO 12' LANES
END TAPER STA. 17+74.08 SB
4" DSYH
12'
MATCH EXISTING EDGE LINES STATION 746+19.57 EX. US67
℄ SB CROSSOVER
6" SWH
℄ ROUTE 67

DOUBLE SOLID YELLOW LINE EXTENDS TO STATION 756+19.57. EXISTING PAVEMENT MARKING REMOVAL TO STATION 756+19.57.

STRIPING KEY

S – SOLID
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D – DOUBLE
W – WHITE
Y – YELLOW
T – PREFORMED THERMOPLASTIC PAVEMENT MARKING
H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
P – WATERBORNE PAINT WITH TYPE P BEADS

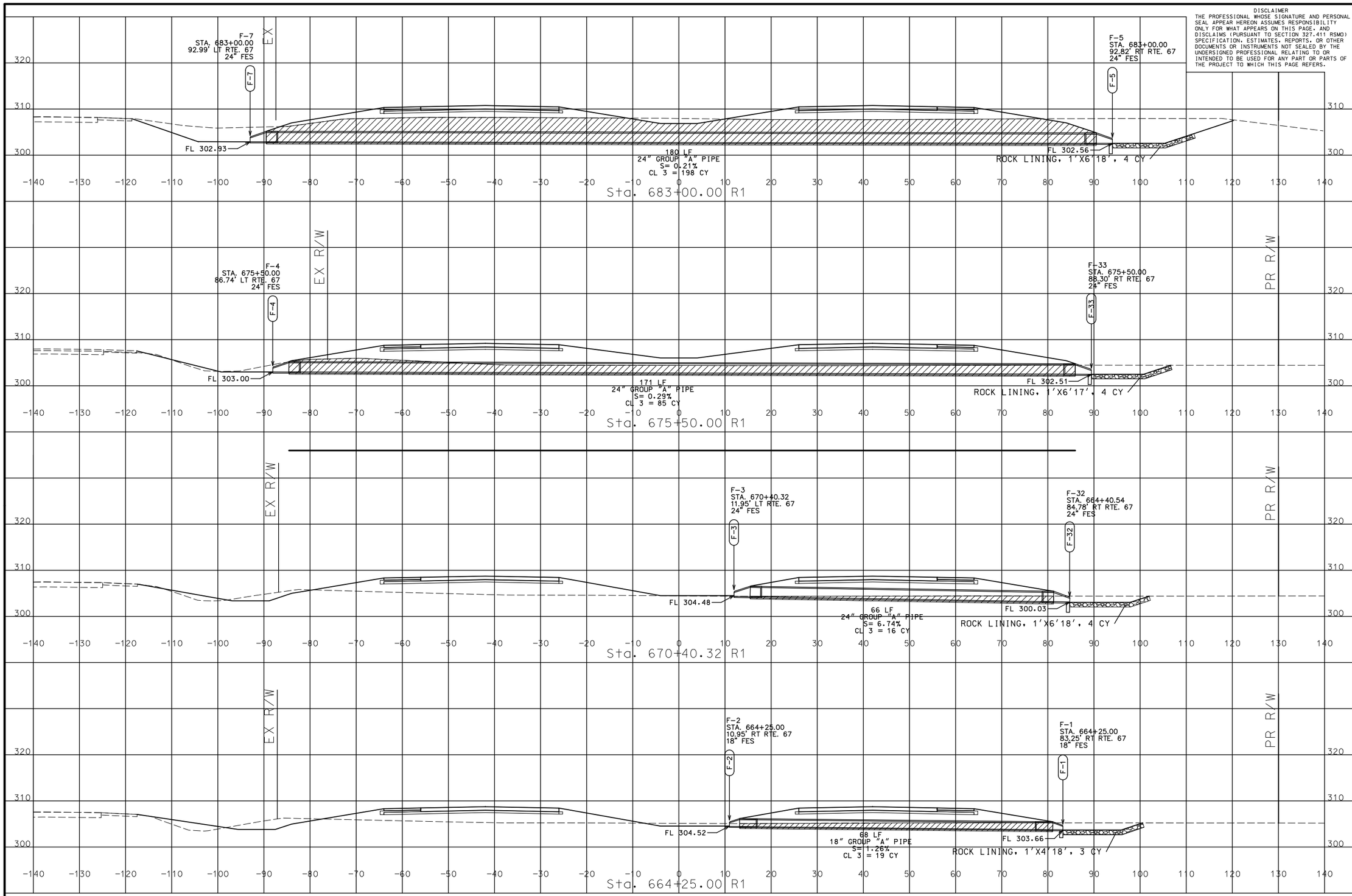
PREFORMED MARKING MATERIAL
↑ STRAIGHT ARROW
↱ LEFT OR RIGHT TURN ARROW
↘ LANE REDUCTION ARROW

SCALE
0 50 100 150

ROUTE 67
PAVEMENT MARKING
SHEET 2 OF 2

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	80

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

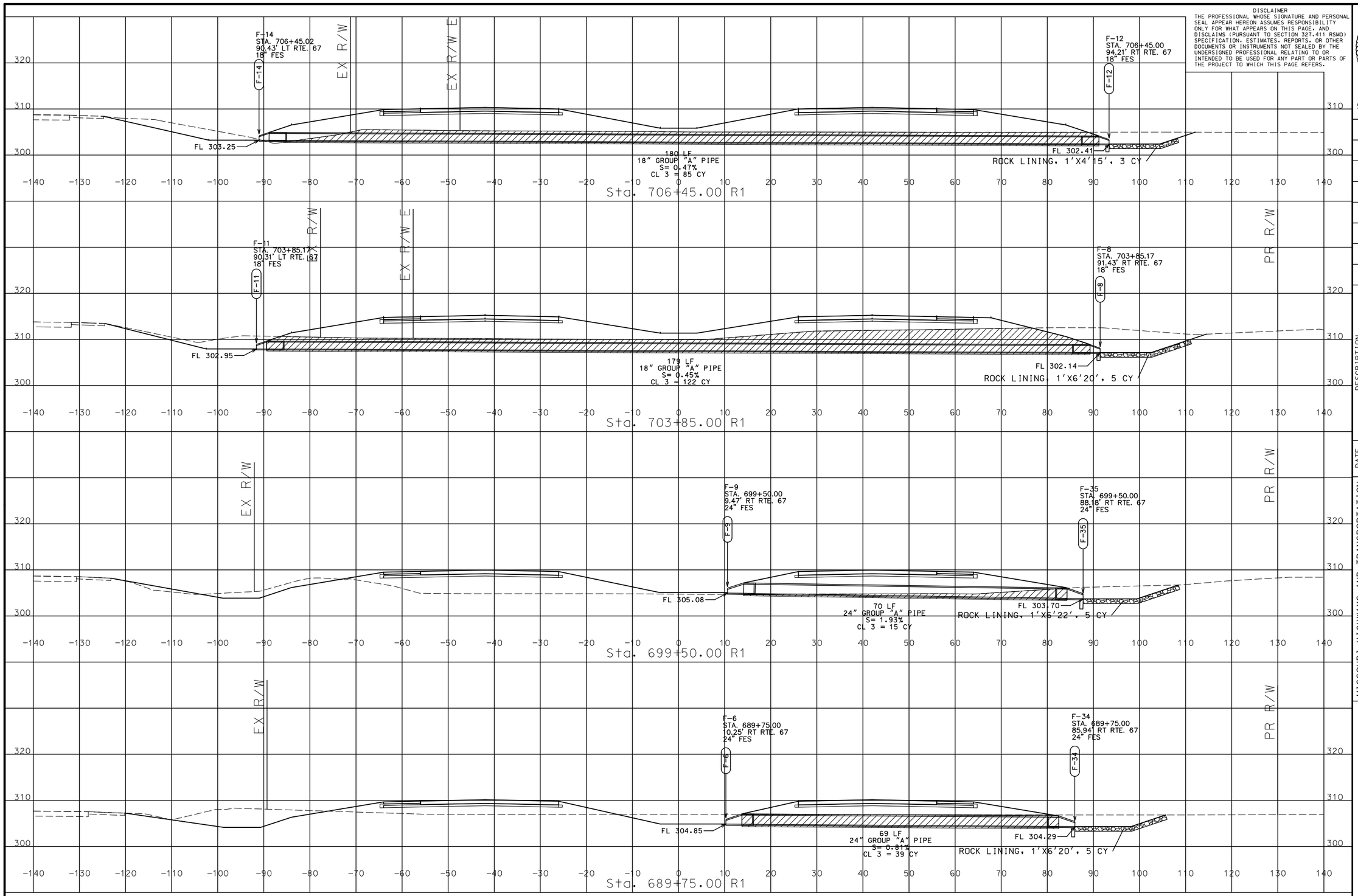
REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 1 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:00 PM 3/3/2023



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	81

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION	REV.

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

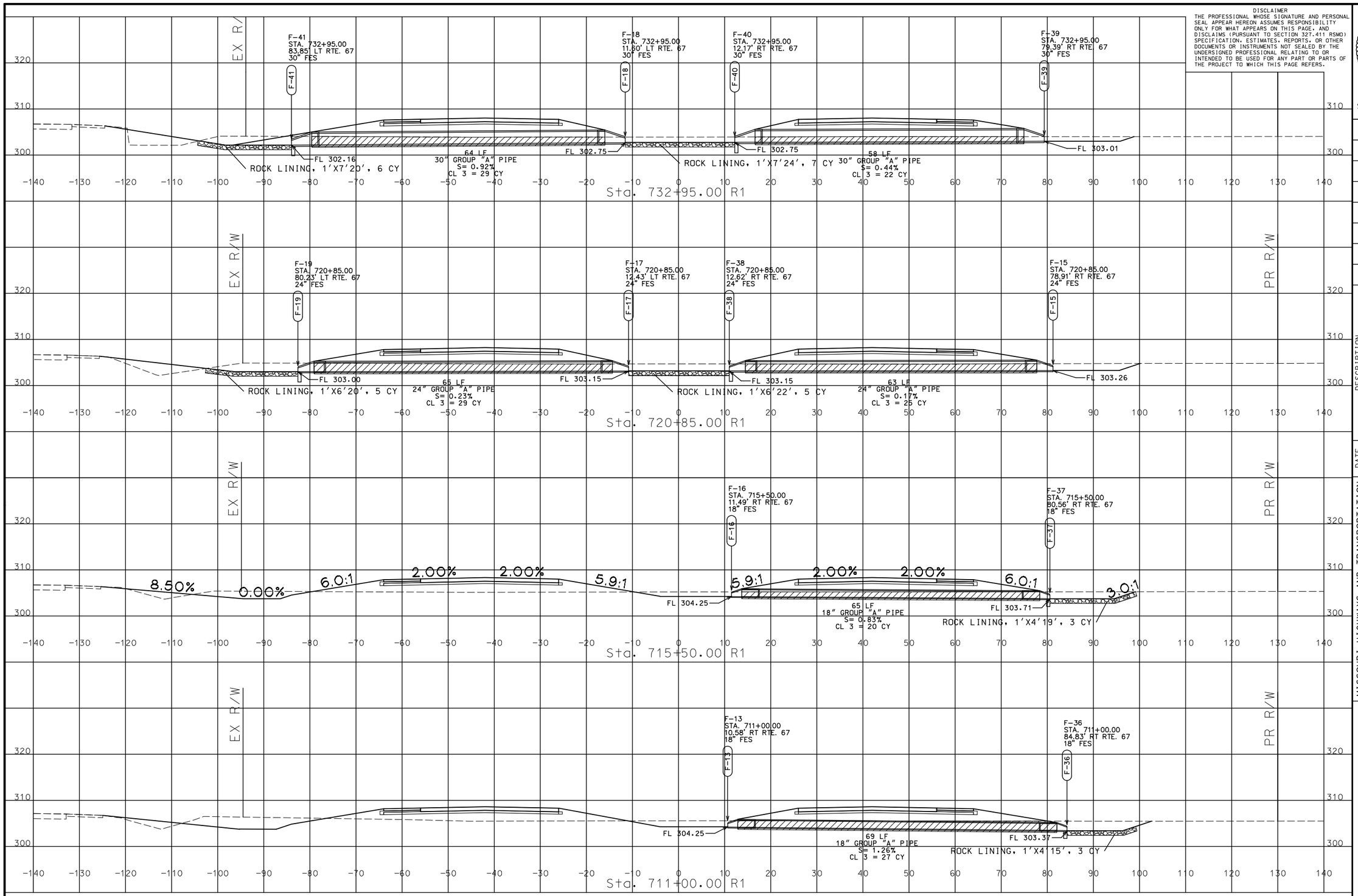
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 2 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:00 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	82

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

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

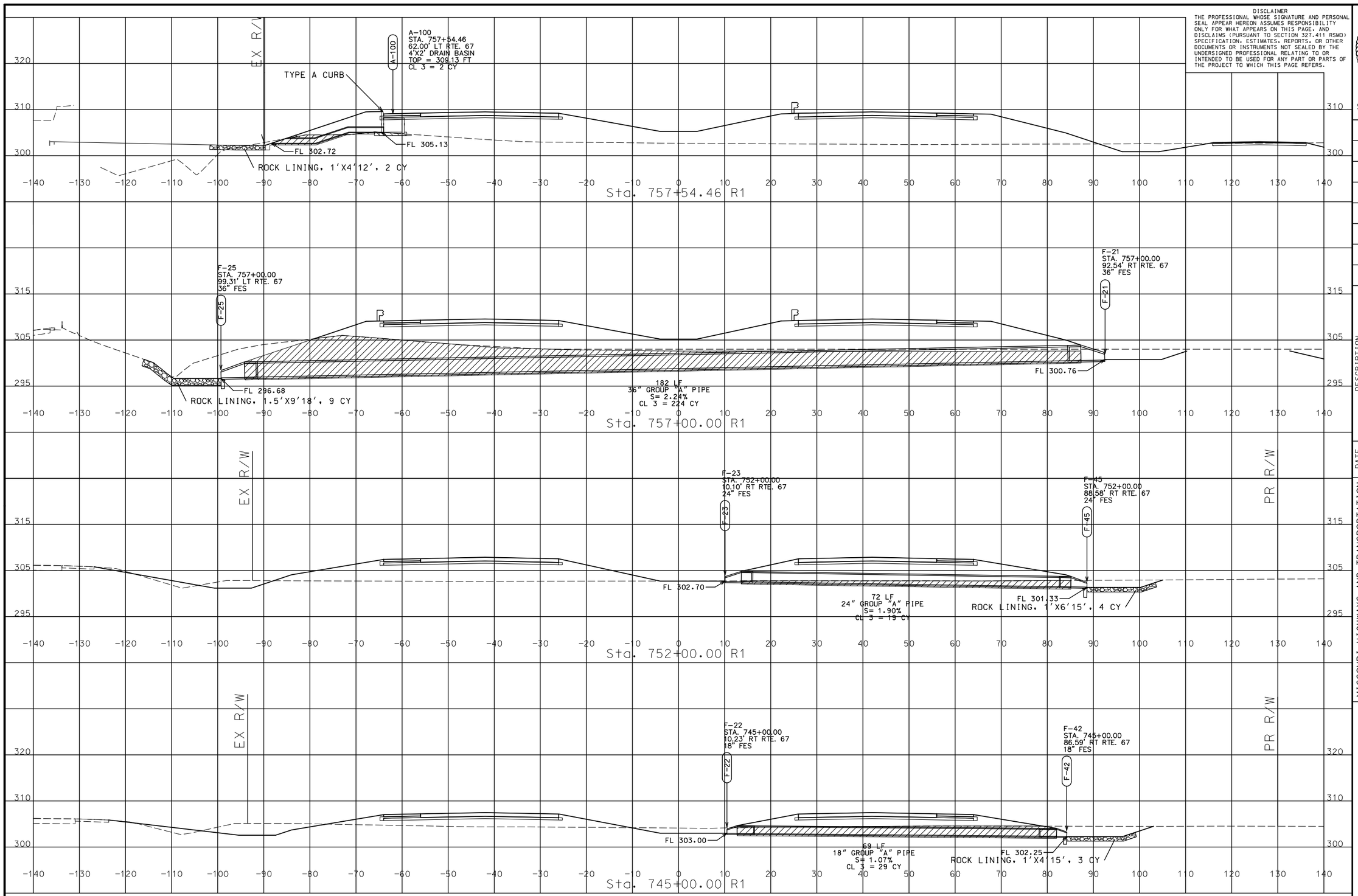
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

CULVERT SECTIONS
SHEET 3 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:01 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	83

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE	REV.

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

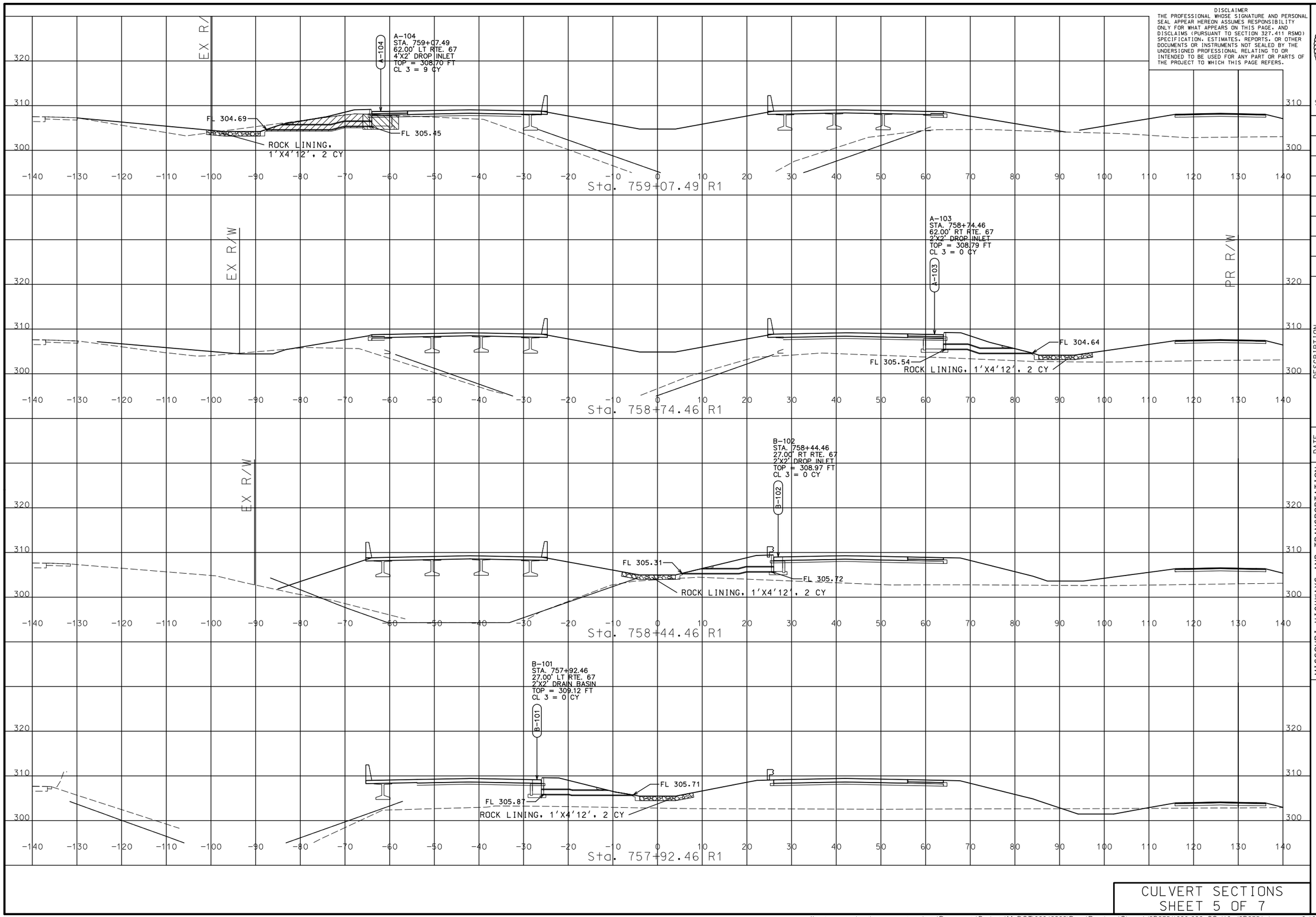
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 4 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:01 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	84

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

REV.	DESCRIPTION	DATE

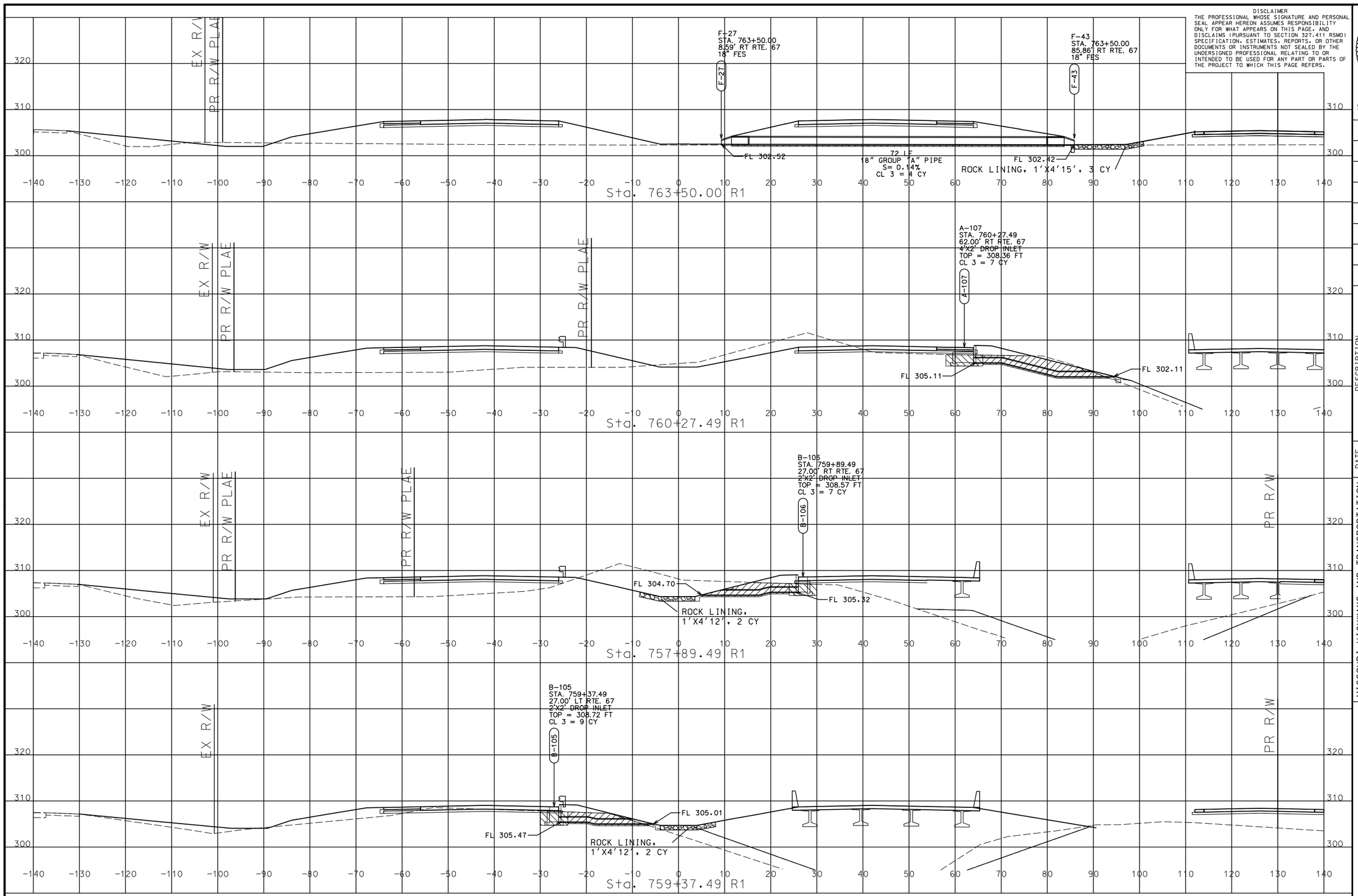
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 5 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:01 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	85

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

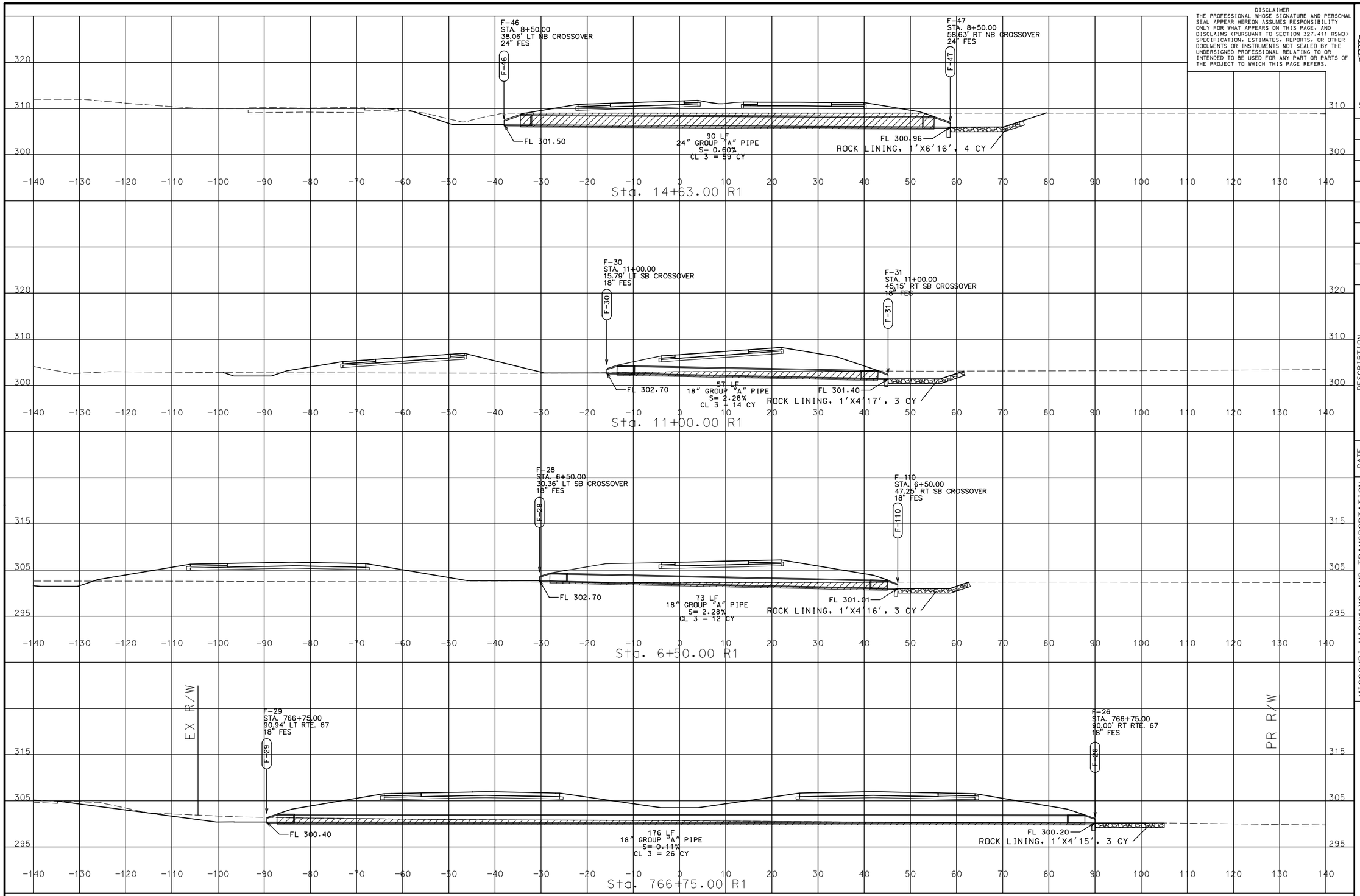
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 6 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:02 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	86

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

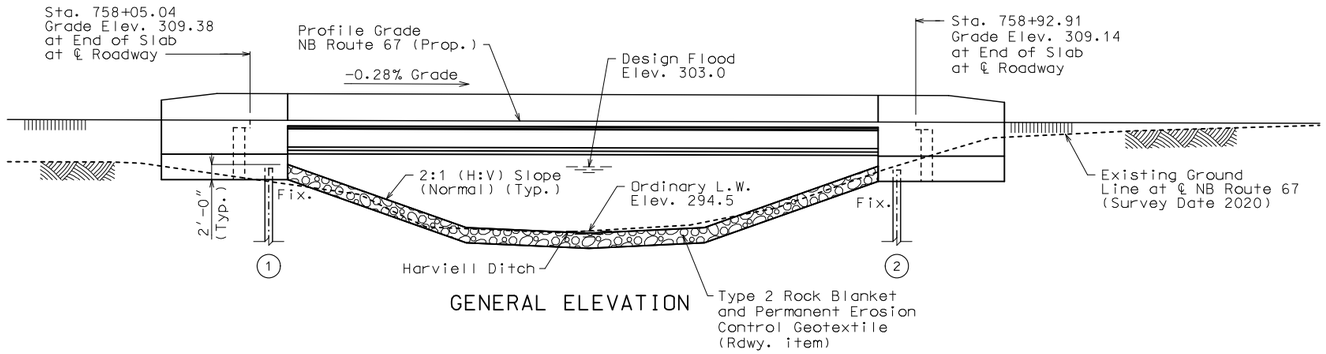
CULVERT SECTIONS
SHEET 7 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3751\080-086_CS_i10_J9P3751.dgn 2:12:02 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION

SEC./SUR. 28 TWP. 23N RGE. 5E

(82.9′) PRESTRESSED CONCRETE NU-GIRDER SPAN

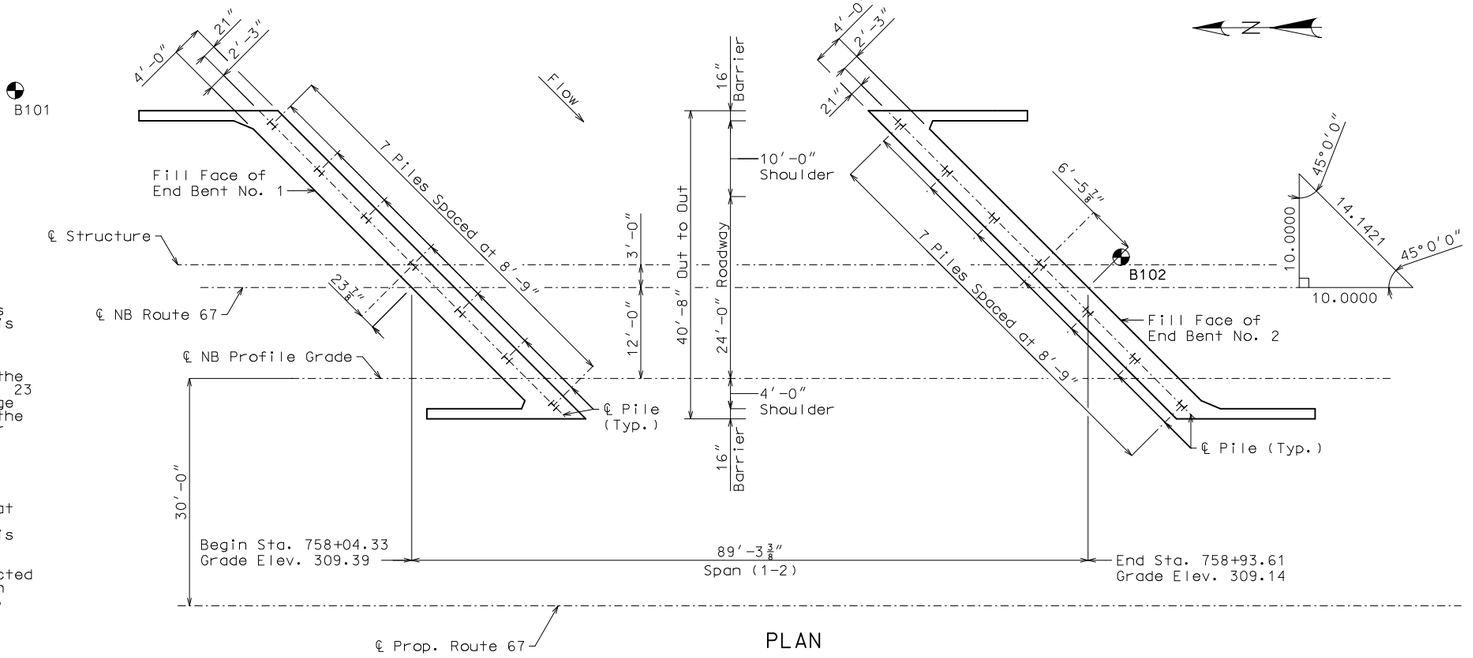


GENERAL ELEVATION

Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

Hydrologic Data
Drainage Area = 9.3 mi²
Design Flood Frequency = 50 years
Design Flood Discharge = 1,060 cfs
Design Flood (D.F.) Elevation = 303.0
Base Flood (100-year)
Base Flood Elevation = 303.5
Base Flood Discharge = 1,210 cfs
Estimated Backwater = 0.1 ft
Average Velocity thru Opening = 2.5 ft/s
Freeboard (50-year)
Freeboard = 1.4 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency = >500 years
500 Year Flood Elevation = 304.8



PLAN

● Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 23 & 24 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

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

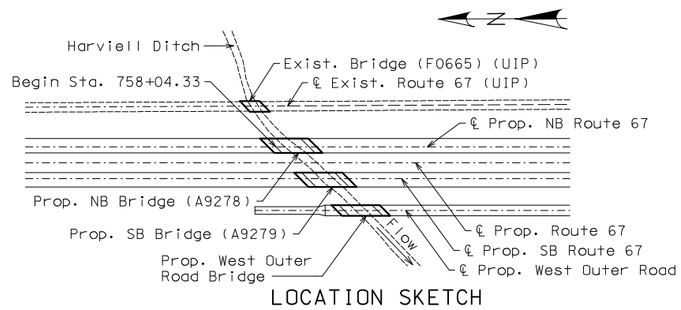
General Notes:

Longitudinal dimensions are measured horizontal.

For General Notes, Estimated Quantities and Foundation Data see Sheet No. 2.

B.M. #32
N: 282085.74
E: 814254.75
Sta. 719+83.75 Exist. Rte 67
Elev. 308.27
Chisled "□" on SW corner of west barrier curb on bridge F0665

Control Point #129
N: 281264.97
E: 814315.18
Sta. 728+04.49 Exist. Rte 67
Elev. 302.52
5/8" rebar with MoDOT cap



LOCATION SKETCH

BRIDGE: ROUTE 67 NB OVER HARVIELL DITCH

ROUTE 67 FROM ROUTE 158 TO ROUTE 142
ABOUT 3.2 MILES NORTH OF ROUTE 142
BEGINNING STATION 758+04.33 (℄ NB ROUTE 67)

GENERAL PLAN AND ELEVATION

Designed Sep. 2022
Detailed Oct. 2022
Checked Oct. 2022

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

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	1

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9278

DATE	DESCRIPTION	REV.

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.) and 2014 Interim Revisions (Seismic)
Seismic Design Category = C
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.34
Acceleration Coefficient (effective peak ground acceleration coefficient), A_s = 0.37

Design Loading:

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

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Barrier)	f'c = 4,000 psi
Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 12.

For prestressed girder stresses, see Sheets No. 10 & 11.

Neoprene Pads:

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

Joint Filler:

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

Reinforcing Steel:

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

Traffic Handling:

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

Miscellaneous:

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

☐ Constant Joint Filler
☐ Variable Joint Filler

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	161
Reinforcing Steel (Epoxy Coated)	pound	33,320

Notes:

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

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

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

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

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

Estimated Quantities

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	75		75
Bridge Approach Slab (Major)	sq. yard		171	171
Galvanized Structural Steel Piles (12 in.)	linear foot	1106		1106
Pile Point Reinforcement	each	14		14
Class B Concrete (Substructure)	cu. yard	62.1		62.1
Type D Barrier	linear foot		235	235
Slab on Concrete NU-Girder	sq. yard		398	398
NU 43, Prestressed Concrete NU-Girder	linear foot		335	335
Slab Drain	each		14	14
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8

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

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Cost of L4x4 ASTM A709 Grade 36 HP pile anchors and 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts, complete in place, will be considered completely covered by the contract unit price for Galvanized Structural Steel Piles (12 in.).

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	7	7
	Approximate Length Per Each	ft	79	79
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	281	281
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	523	523

DF = FHWA-modified Gates Dynamic Pile Formula

Load Bearing Pile:

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

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

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

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

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	2

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

DESCRIPTION | DATE

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

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

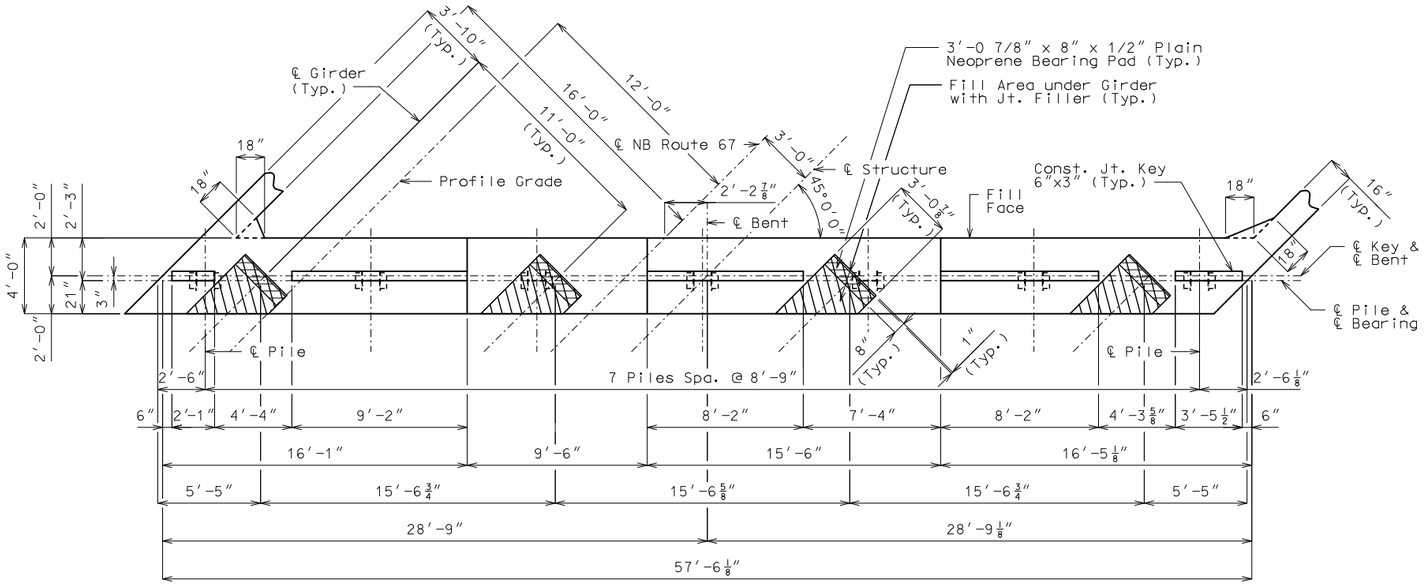
REV.

ESTIMATED QUANTITIES AND GENERAL NOTES

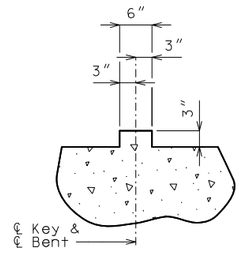
Detailed Oct. 2022
Checked Oct. 2022

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

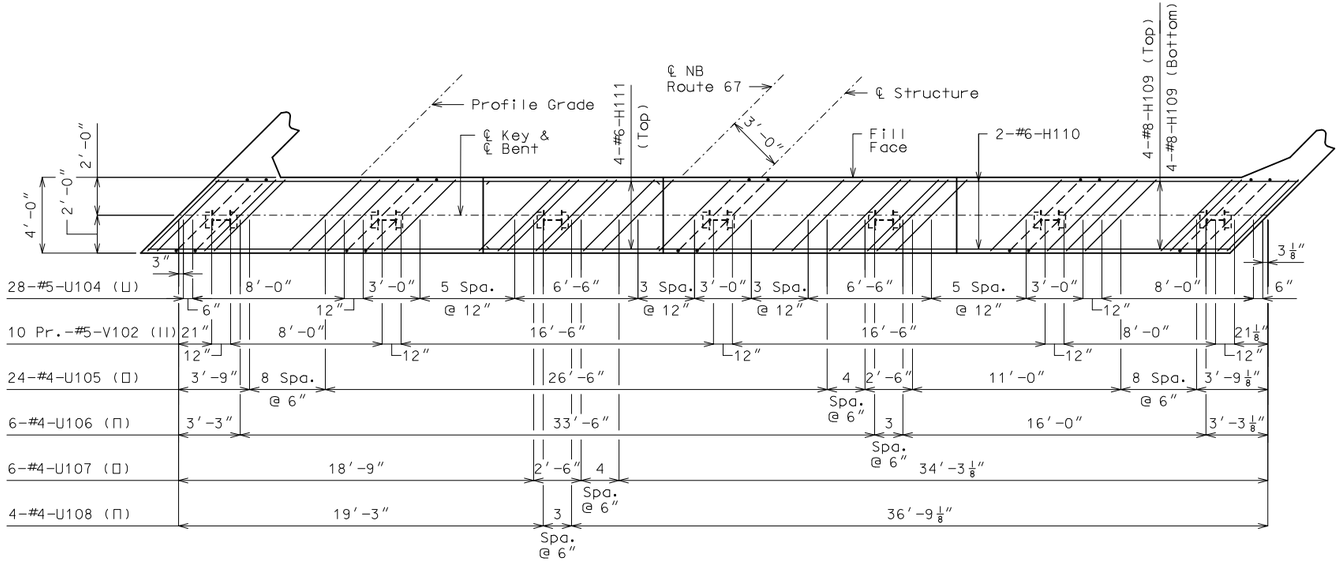
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_002_J9P3751_Estimated_Quantities_and_General_Notes.dgn 8:57:57 AM 3/3/2023



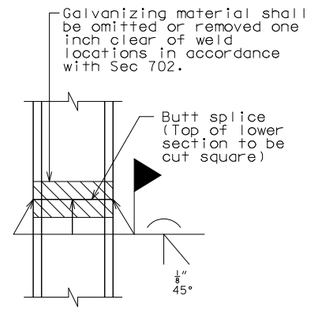
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 4 & 5.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 1

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

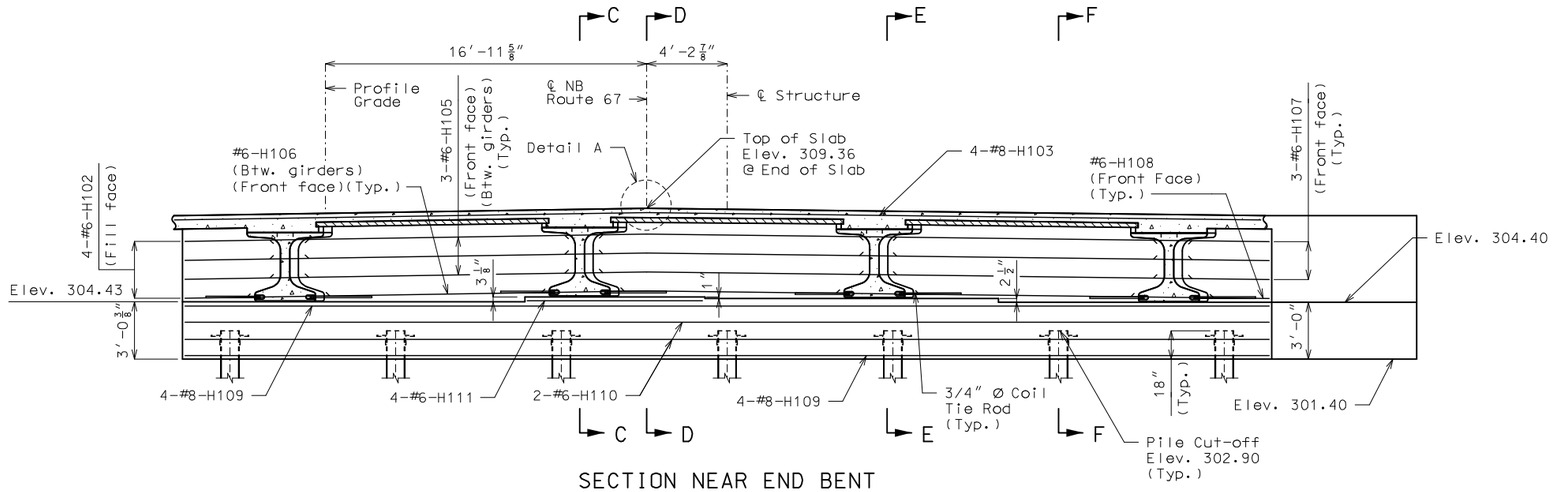
DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

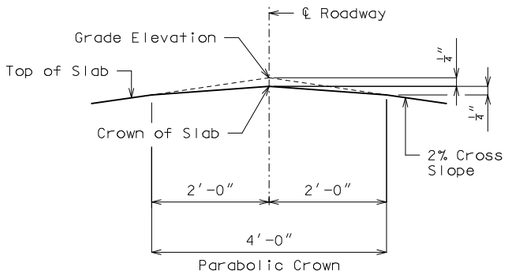
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

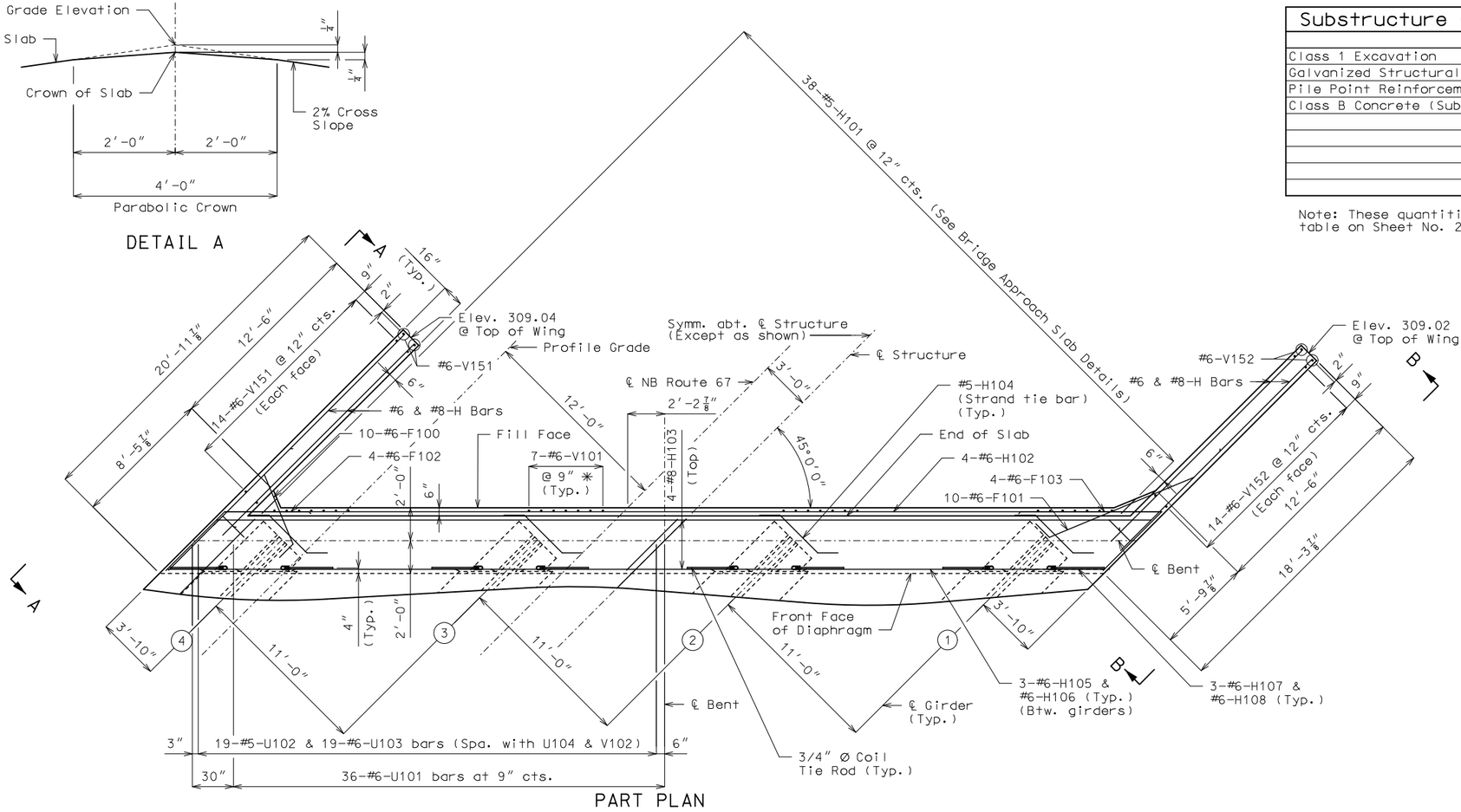


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



PART PLAN

✳ Centered behind girders

DETAILS OF END BENT NO. 1

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 5.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 5.

For Elevations A-A & B-B, see Sheet No. 5.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H104 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2″.

The #6-F100 and #6-F101 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

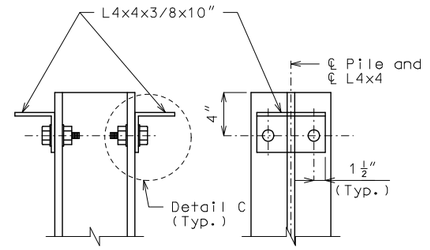
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

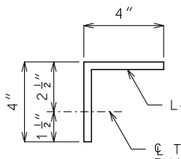
Substructure Quantity Table for Bent No. 1

Item		Quantity
Class 1 Excavation	cu. yard	10
Galvanized Structural Steel Piles (12 in.)	linear foot	553
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	31.0

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	4

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9278

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

REV.	DESCRIPTION	DATE

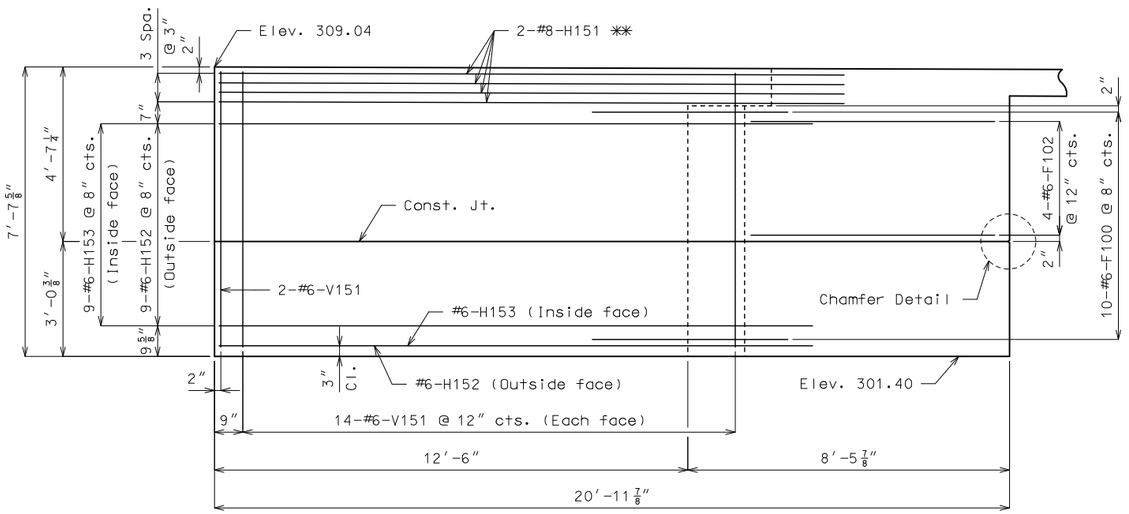
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

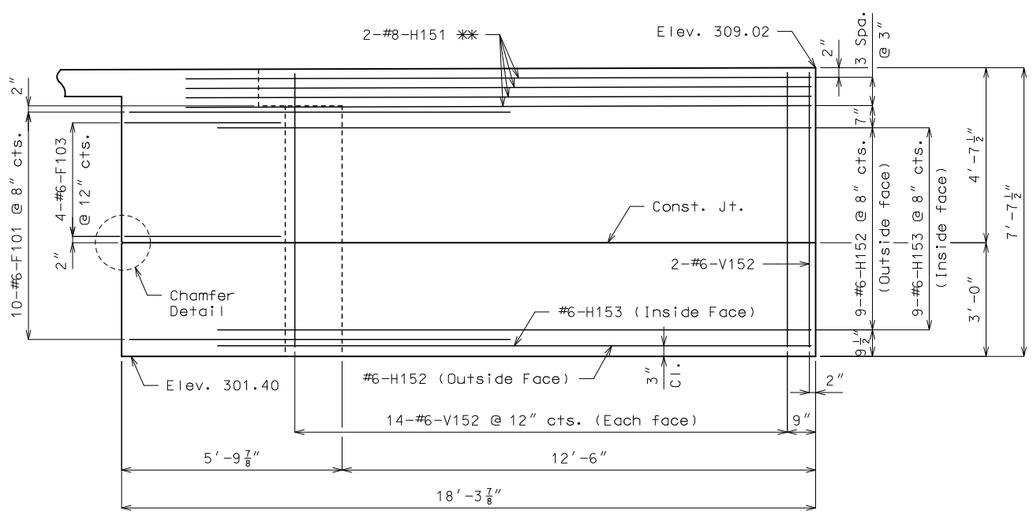
Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_004_J9P3751_End_Bent_1_Details.dgn 8:57:59 AM 3/3/2023

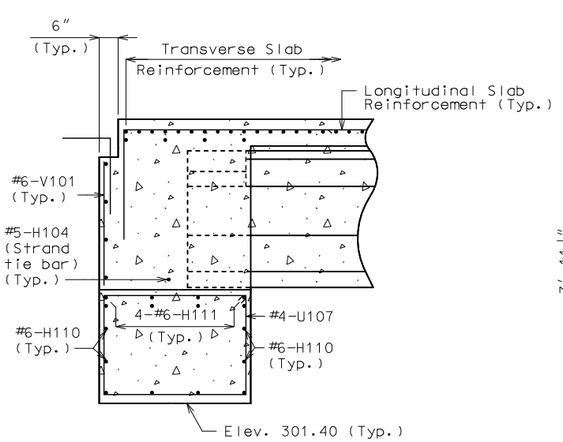


ELEVATION A-A

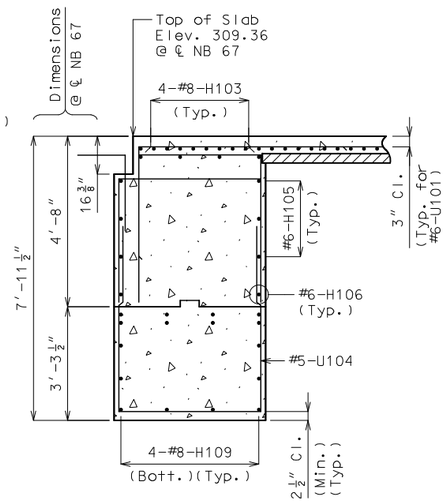


ELEVATION B-B

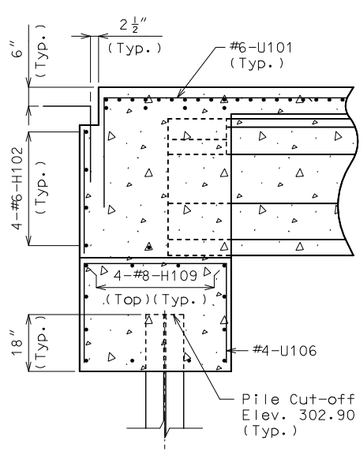
** (Place with grade)



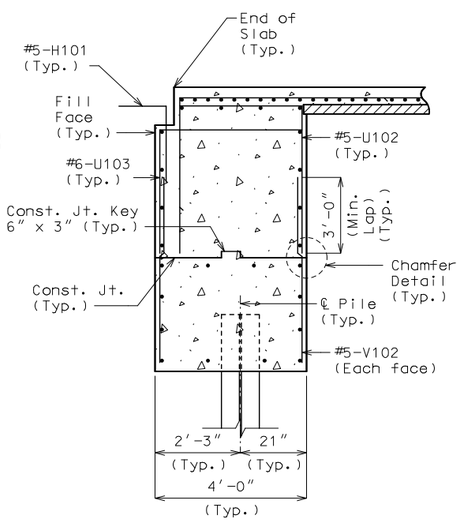
SECTION C-C



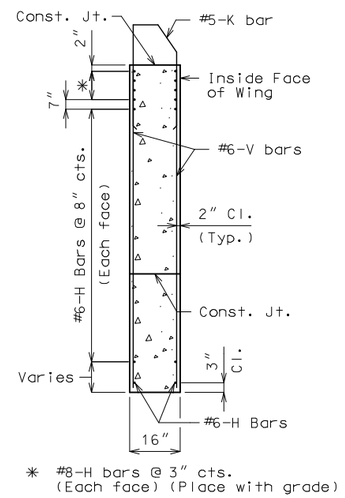
SECTION D-D



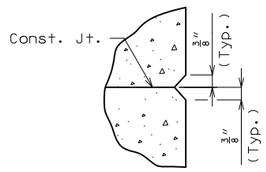
SECTION E-E



SECTION F-F



TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 4.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F100 and #6-F101 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H104 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 4.

For location of Elevations A-A & B-B, see Sheet No. 4.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 1

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	5

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

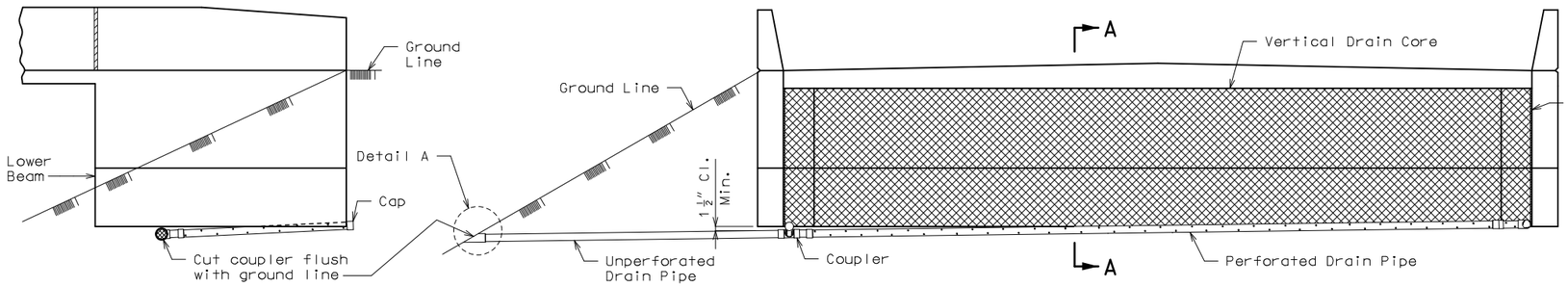
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

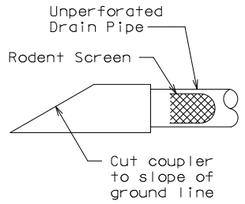
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

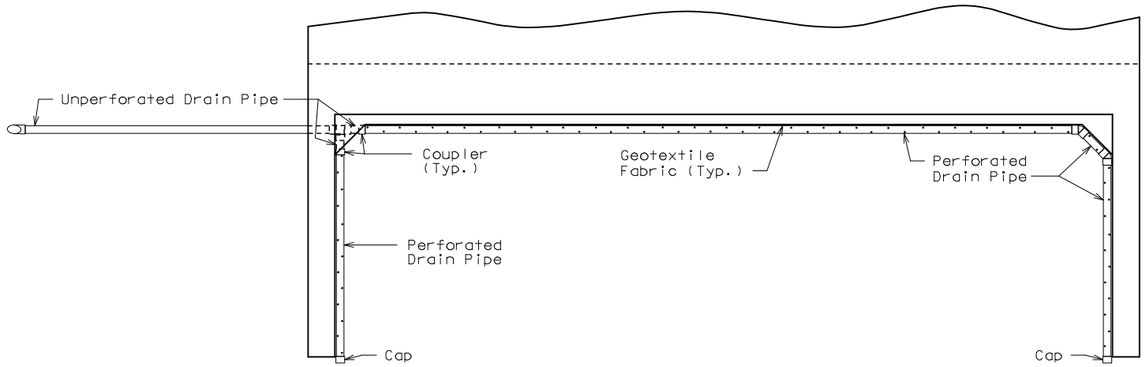


ELEVATION OF WING

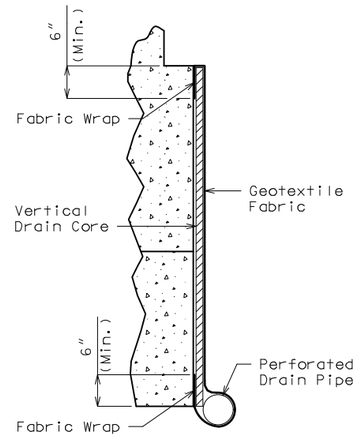
ELEVATION OF END BENT



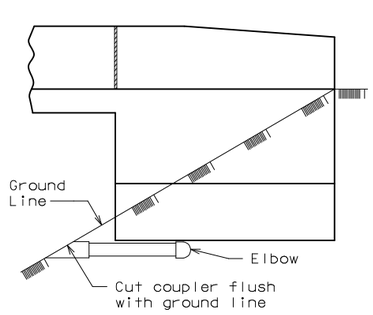
DETAIL A



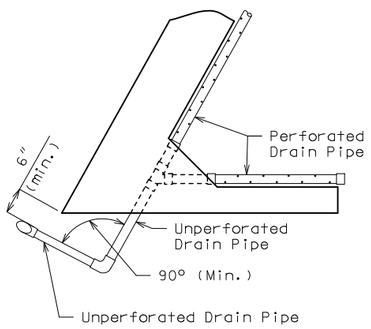
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

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

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

VERTICAL DRAIN AT END BENTS
(Squared end bent shown, skewed end bent similar)

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	6

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

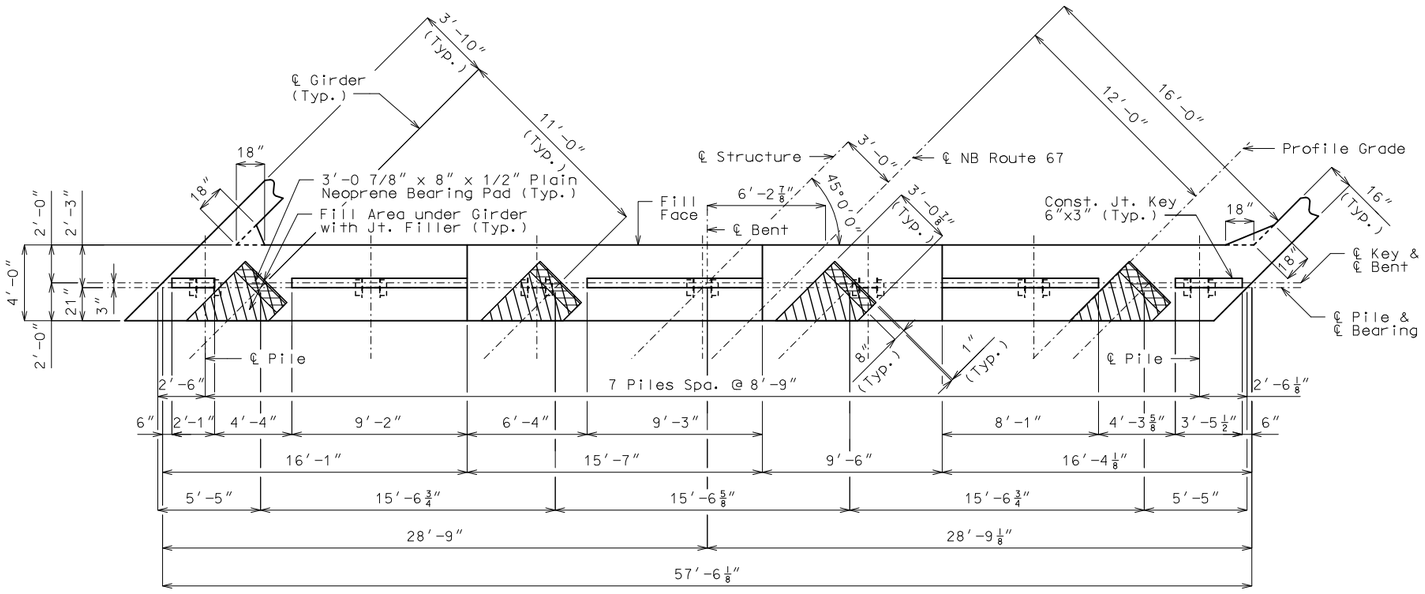
DESCRIPTION	DATE

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

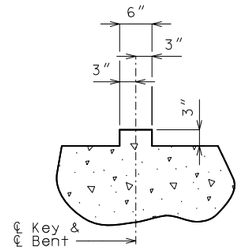
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

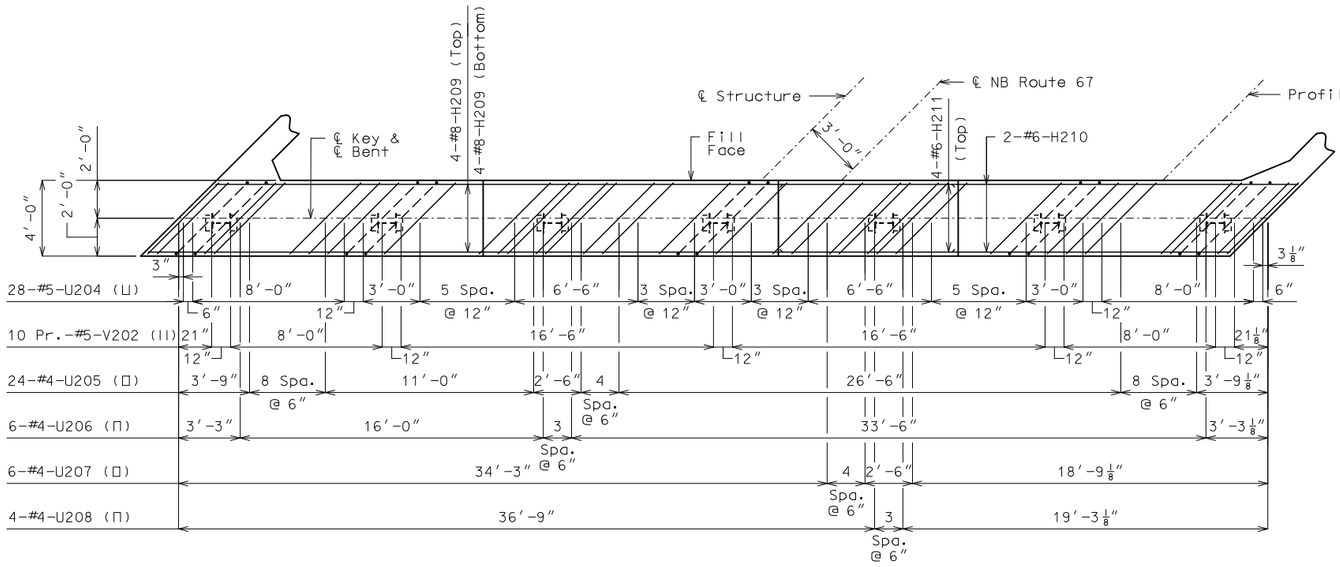
REV.



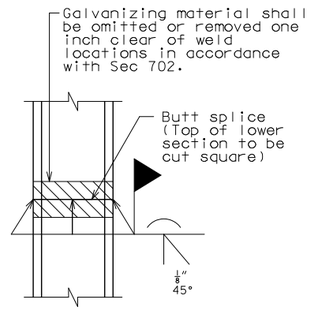
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 8 & 9.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 2

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_007_J9P3751_End_Bent_2_Details.dgn 8:58:03 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	7

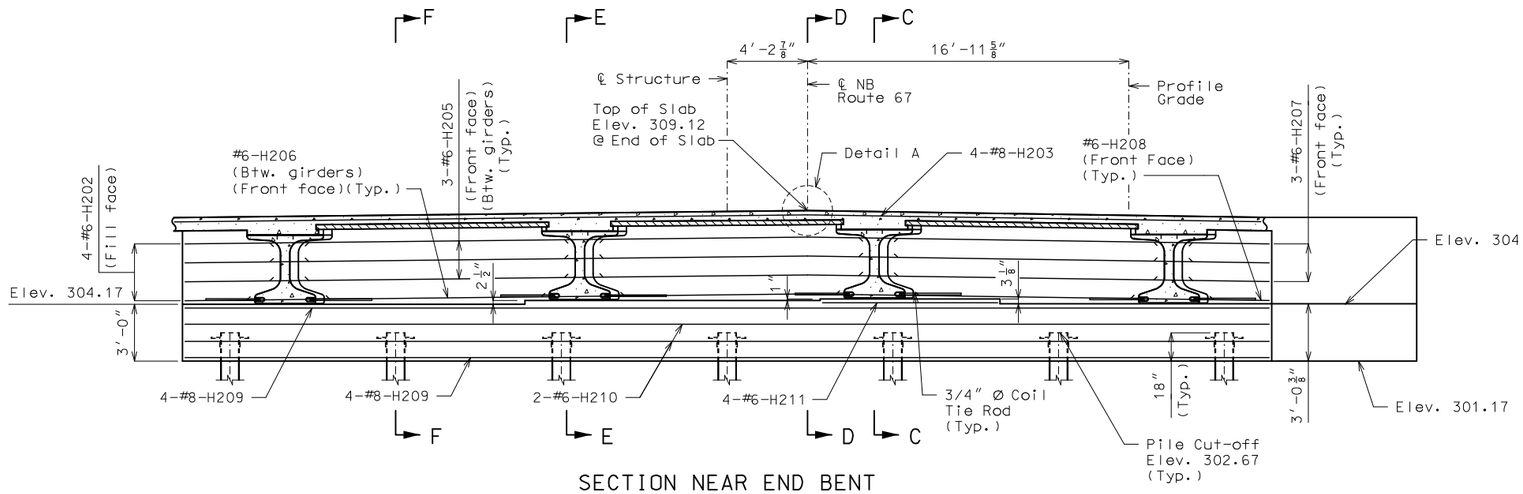
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

REV.	DESCRIPTION	DATE

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

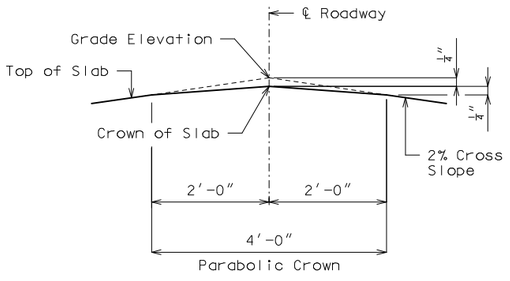
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

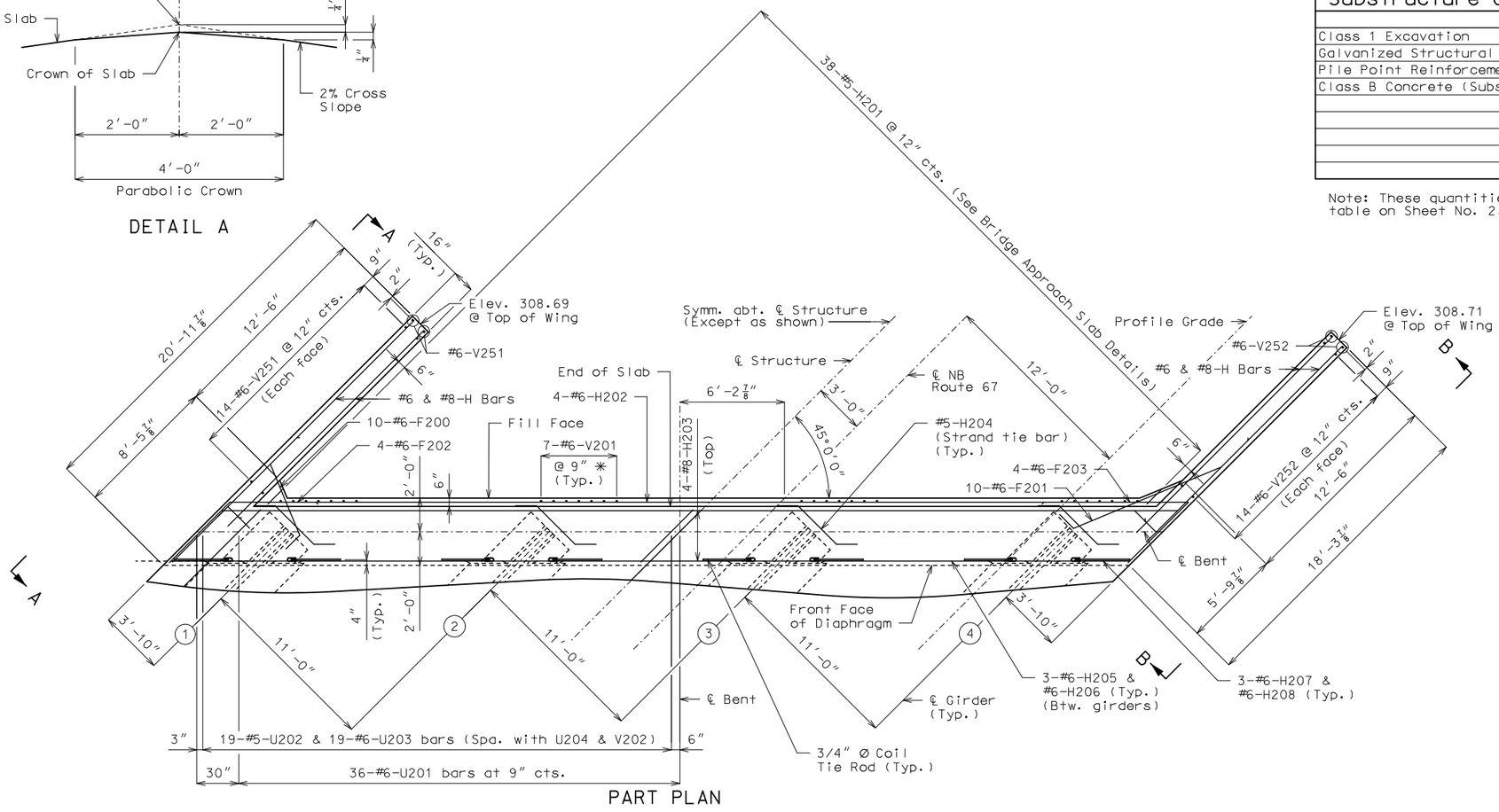


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



✳ Centered behind girders

DETAILS OF END BENT NO. 2

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 9.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 9.

For Elevations A-A & B-B, see Sheet No. 9.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H204 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2″.

The #6-F200 and #6-F201 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

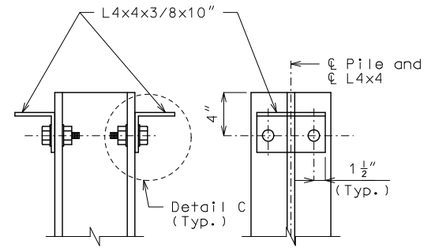
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

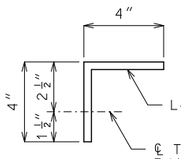
Substructure Quantity Table for Bent No. 2

Item		Quantity
Class 1 Excavation	cu. yard	65
Galvanized Structural Steel Piles (12 in.)	linear foot	553
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	31.1

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	8

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9278

REV.	DESCRIPTION	DATE

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

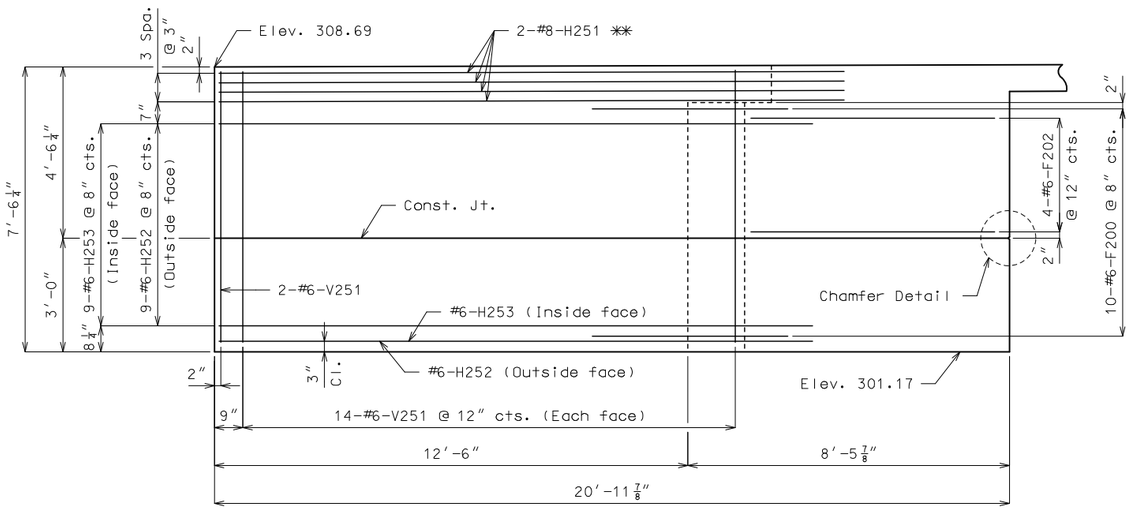
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

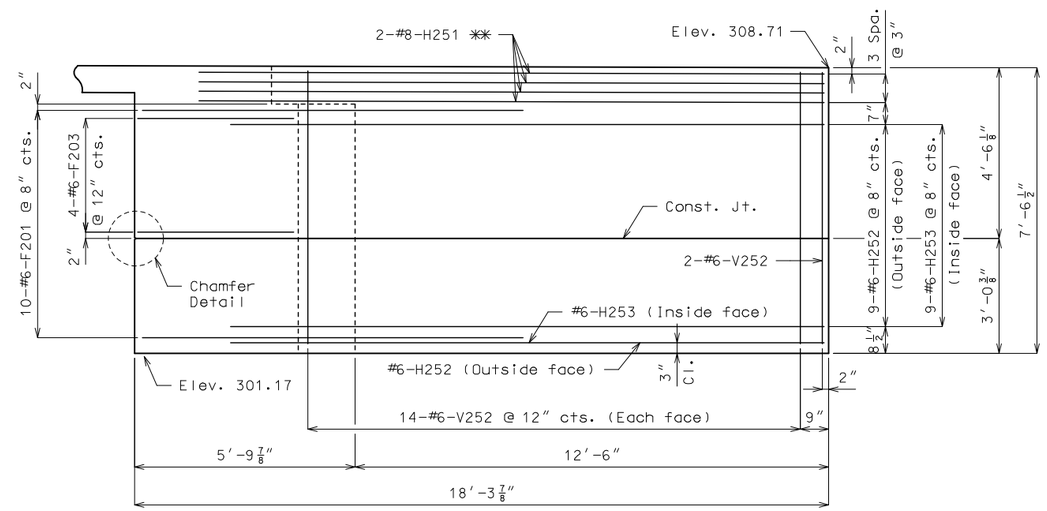
Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_008_J9P3751_End_Bent_2_Details.dgn 8:58:04 AM 3/3/2023

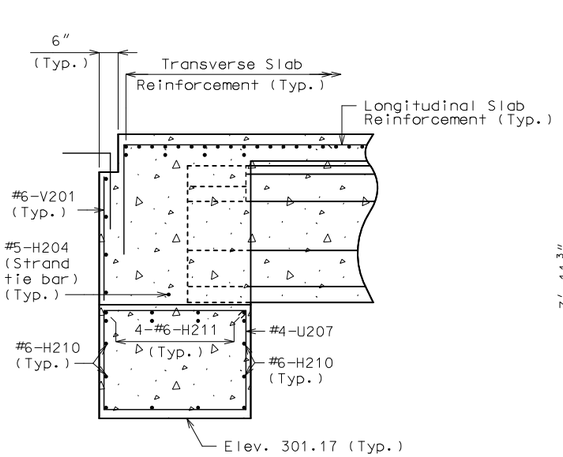


ELEVATION A-A

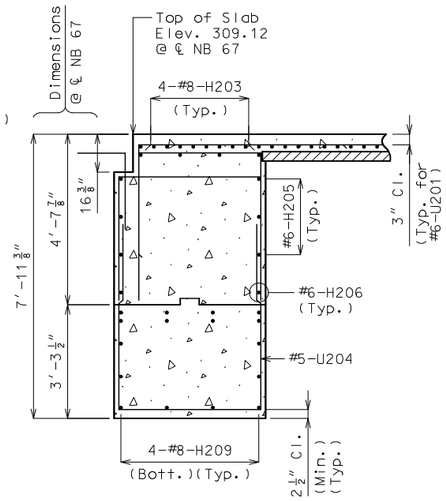


ELEVATION B-B

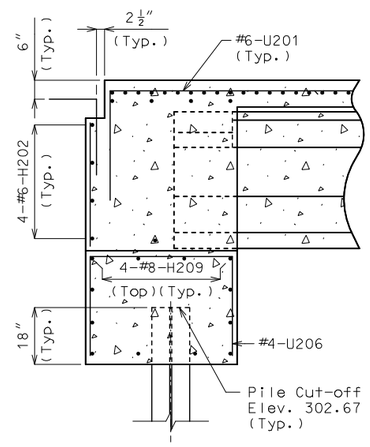
** (Place with grade)



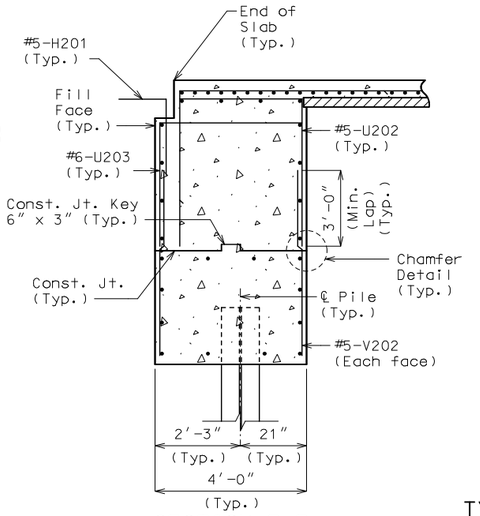
SECTION C-C



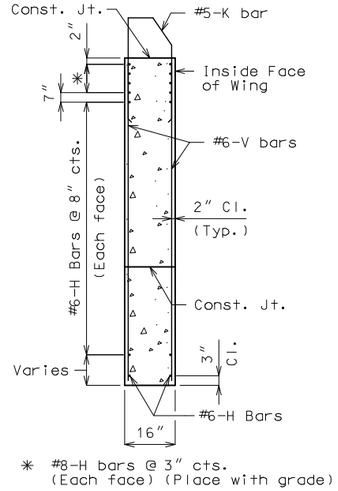
SECTION D-D



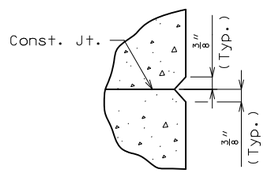
SECTION E-E



SECTION F-F



TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 8.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F200 and #6-F201 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H204 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 8.

For location of Elevations A-A & B-B, see Sheet No. 8.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 2

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	9

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9278

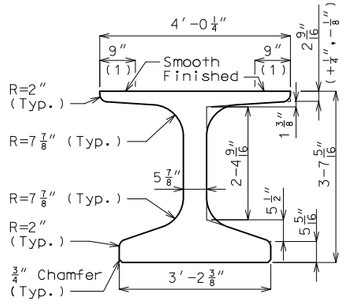
DESCRIPTION	DATE	REV.

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

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

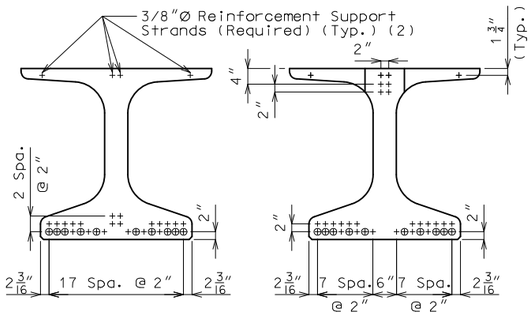
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

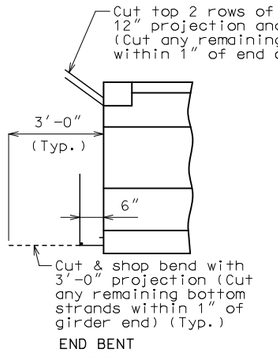


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

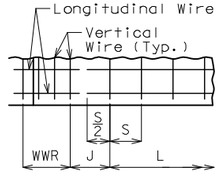
\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.



END BENT

STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

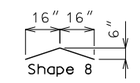
Bars Each Girder

No.	Size/Mark	Length	Shape
105	3 G1	2′-10″	8
2	4 G3	5′-5″	20
14	4 G6	Varies	20

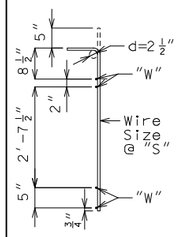
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4″	W12	4′-4″	8″
WWR2	D31	8″	W12	22′-8″	12″
WWR3	D31	12″	W12	23′-0″	–
WWR6	D31	2″	W12	16″	2¾″

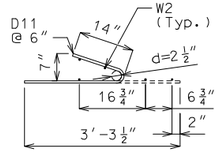
Bending Diagrams



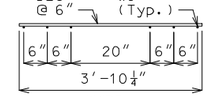
Shape 20



WWR1, WWR2, WWR3 & WWR6



WWR4



WWR5

All dimensions are out to out.

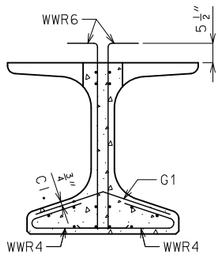
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

Minimum clearance to reinforcing shall be 1″, unless otherwise shown.

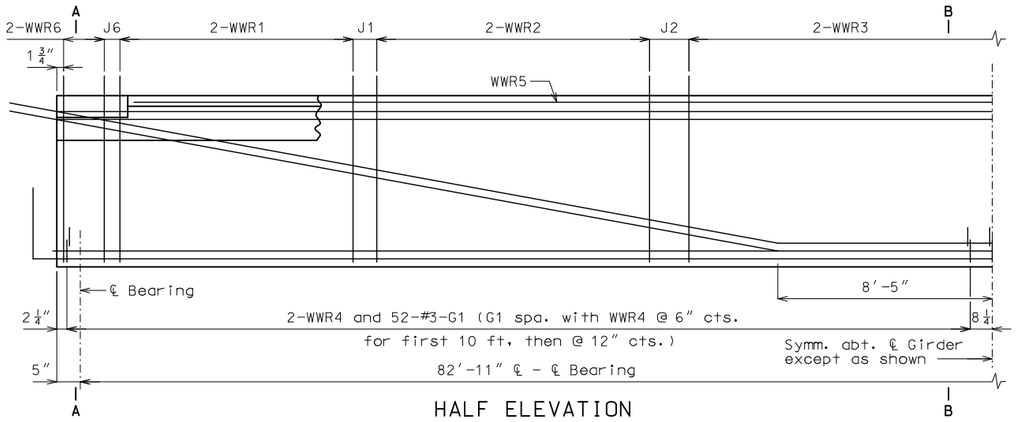
All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.



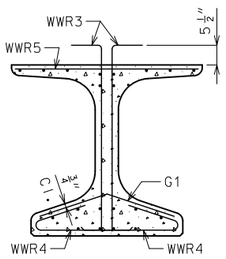
SECTION A-A

Strands not shown for clarity.



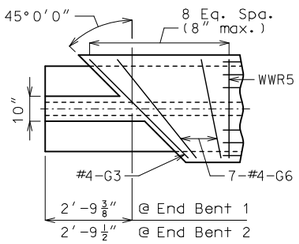
HALF ELEVATION

Reinforcement support strands not shown for clarity.

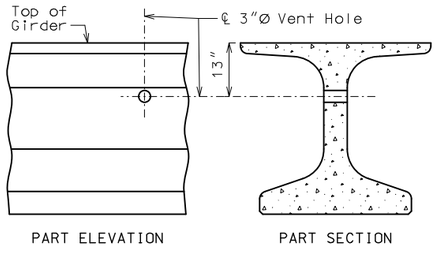


SECTION B-B

Strands not shown for clarity.



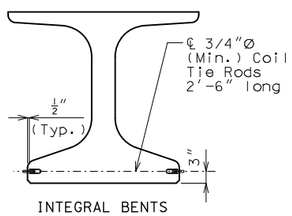
TOP FLANGE BLOCKOUT



PART ELEVATION PART SECTION

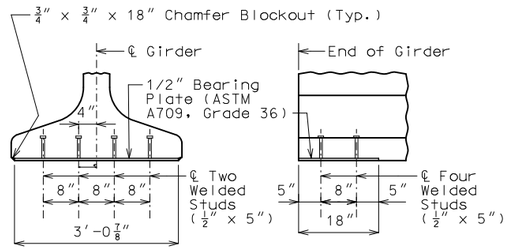
VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



INTEGRAL BENTS

COIL TIES



END VIEW SIDE VIEW

BEARING PLATE

NU-GIRDERS - SPAN (1-2)

General Notes:

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

Use 30 strands, 0.6″Ø Grade 270, with an initial prestress force of 1318 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bents see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE 67 | STATE MO

DISTRICT BR | SHEET NO. 10

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9278

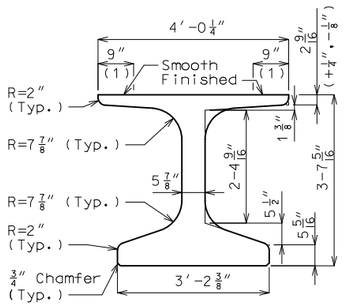
DESCRIPTION | DATE | REV.

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

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

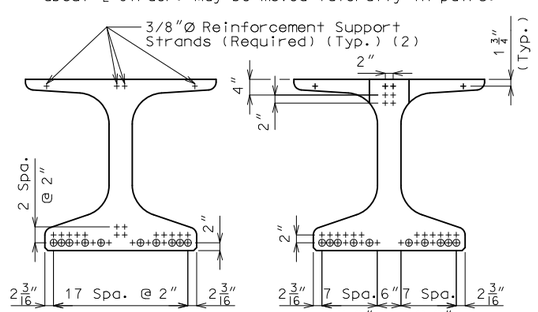
CMT
© Copyright CMT, Inc
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

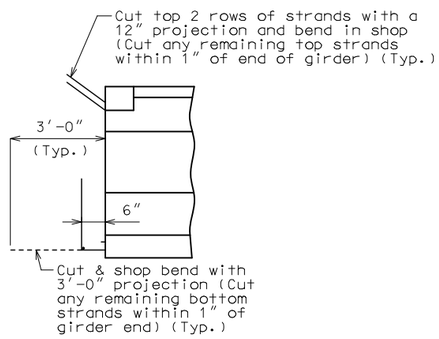


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.



END BENT

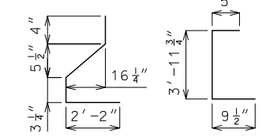
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder

No.	Size/ Mark	Length	Shape
216	5 B1	5′-0″	11
236	4 D1	4′-0″	9
2	4 G3	5′-5″	20
14	4 G6	Varies	20

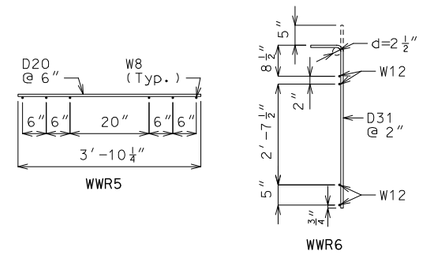
Bending Diagrams

Shape 20



Shape 9 Shape 11

Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

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

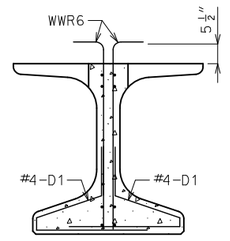
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1″.

All bar reinforcement shall be Grade 60.

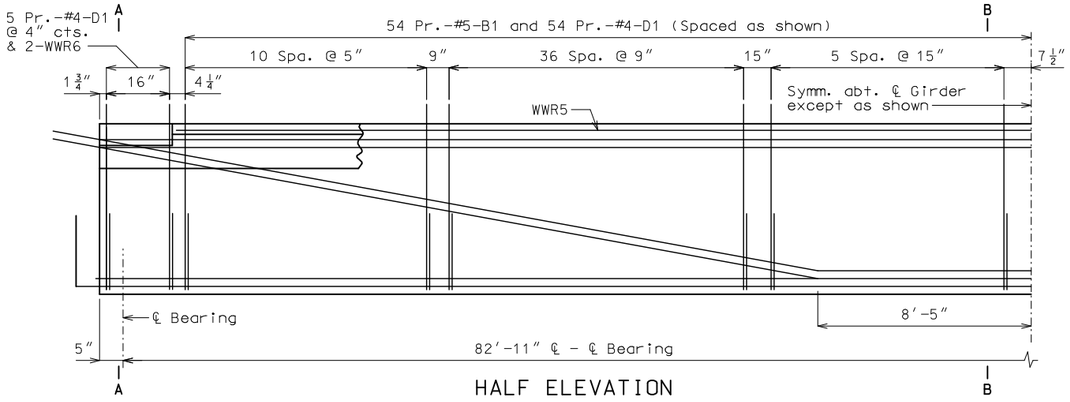
The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.



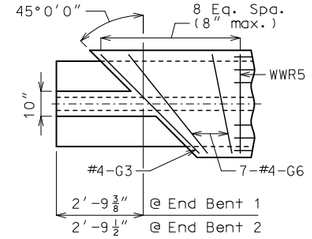
SECTION A-A

Strands not shown for clarity.

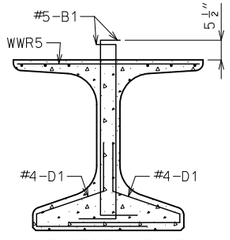


HALF ELEVATION

Reinforcement support strands not shown for clarity.

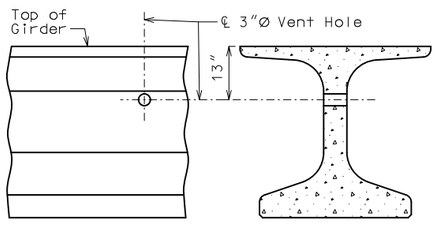


TOP FLANGE BLOCKOUT



SECTION B-B

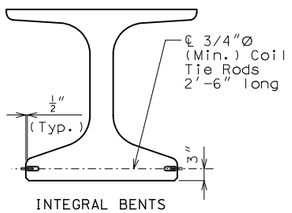
Strands not shown for clarity.



PART ELEVATION PART SECTION

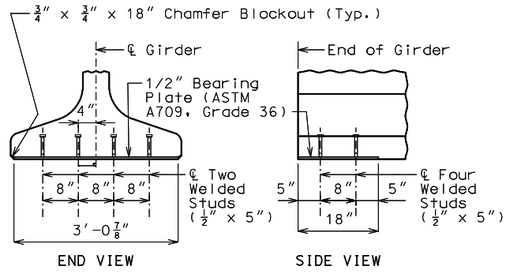
VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



INTEGRAL BENTS

COIL TIES



END VIEW SIDE VIEW

BEARING PLATE

General Notes:

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

Use 30 strands, 0.6″Ø Grade 270, with an initial prestress force of 1318 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bent, see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	11

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9278

REV.	DESCRIPTION	DATE

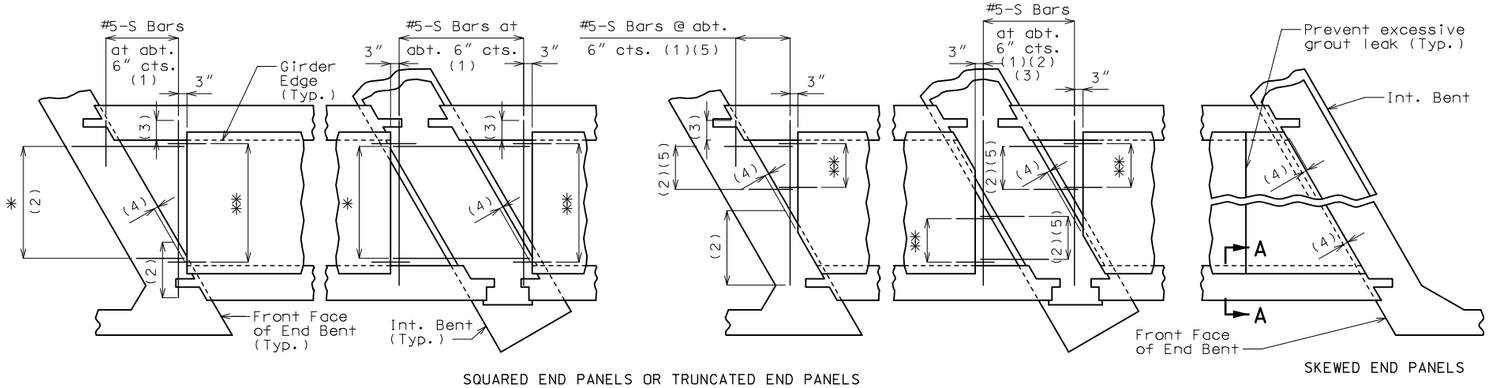
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

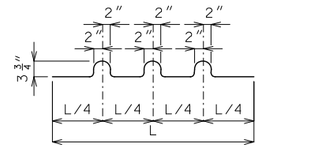
© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



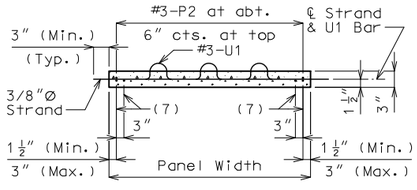
PLAN SHOWING PANELS PLACEMENT

✳ #5-S Bars at abt. 9" cts. (1)
✳✳ #3-P1 at 12" cts. (End panels only)

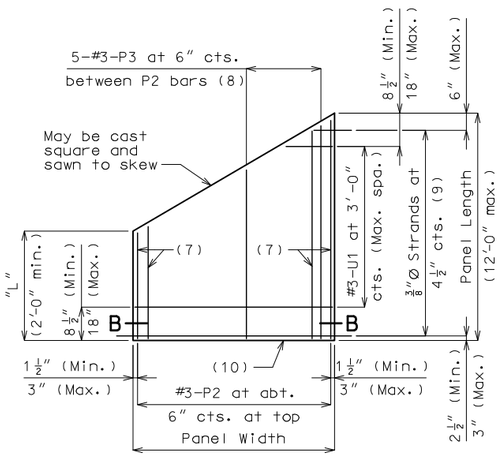


BENDING DIAGRAM FOR U1 BAR

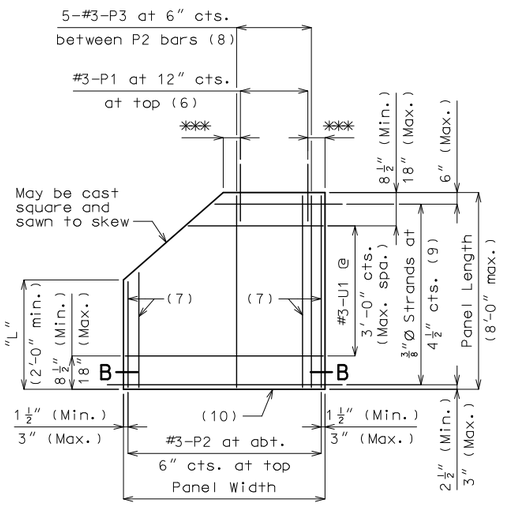
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



SECTION B-B

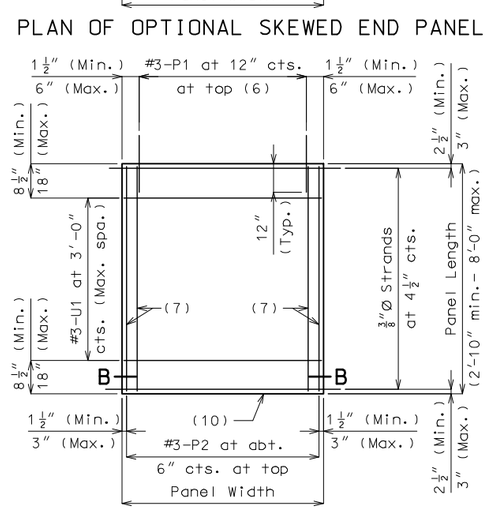


PLAN OF OPTIONAL SKEWED END PANEL

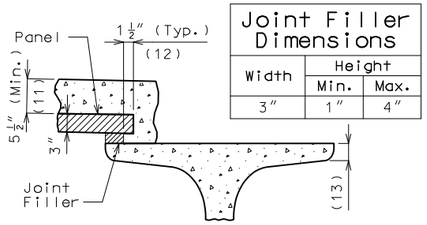


PLAN OF OPTIONAL TRUNCATED END PANEL

✳✳✳ 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL



SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"

Reference Notes:

Plan of Panels Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:

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

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

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

Initial prestressing force = 17.2 kips/strand.

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

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

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

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

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

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

Reinforcing Steel:

All dimensions are out to out.

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

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

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

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

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

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

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

All reinforcement other than prestressing strands shall be epoxy coated.

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

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

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

Joint Filler:

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

Use Slab Haunching Diagram on Sheet No. 14 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

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

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/4 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

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

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

DETAILS OF PRESTRESSED PANELS

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	12

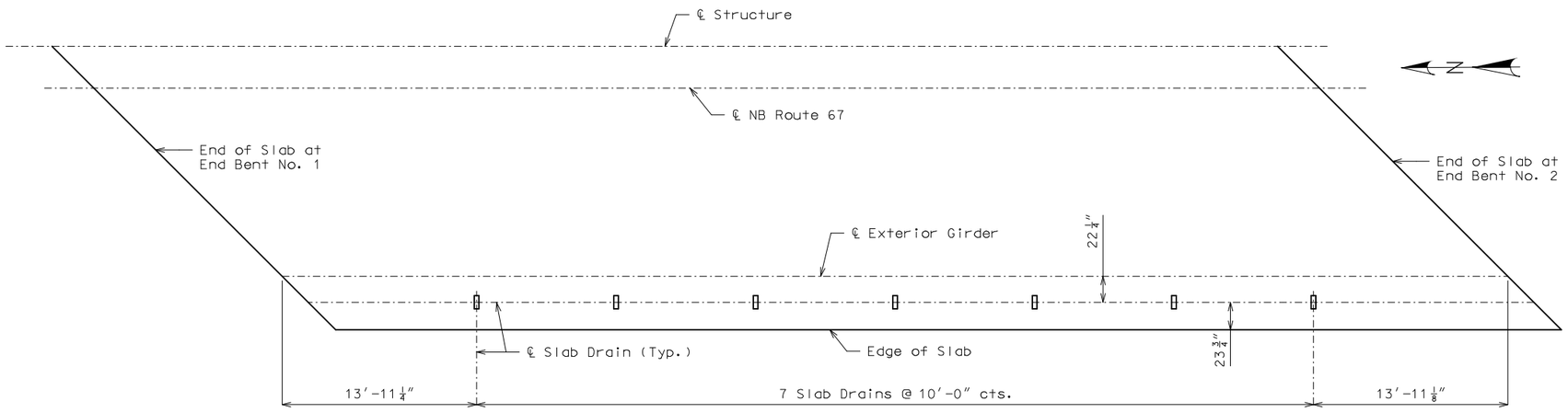
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

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

REV.	DATE	DESCRIPTION

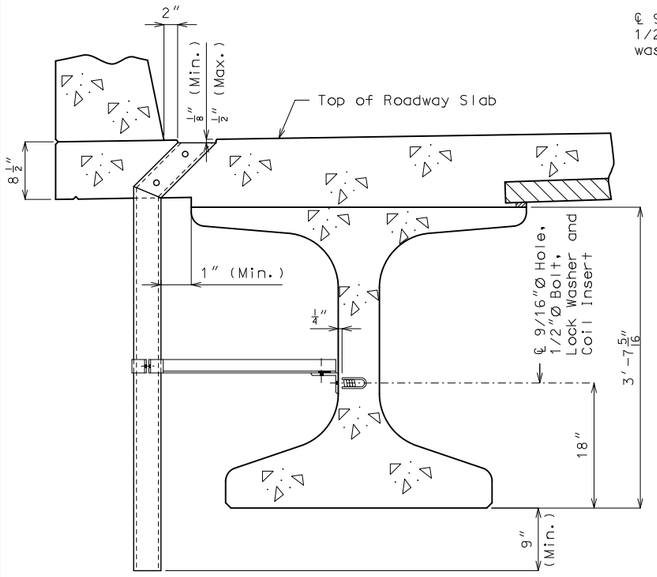
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

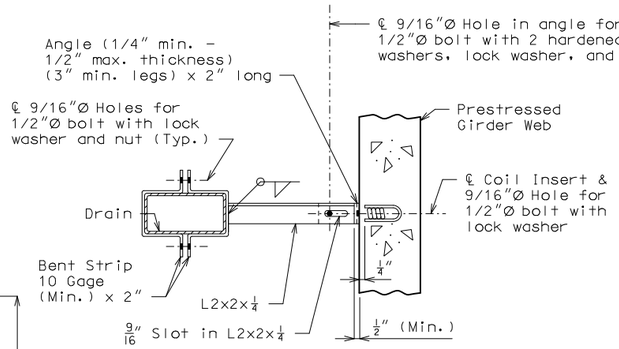


PART PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

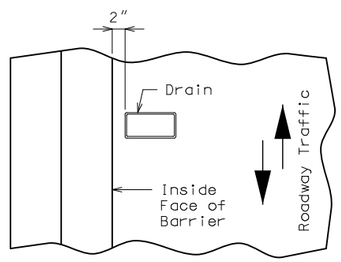
(Right side shown, left side similar)
Note: Longitudinal dimensions are horizontal.



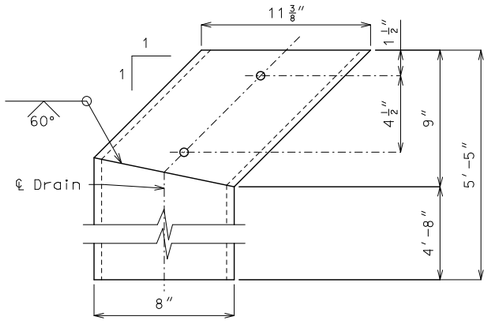
PART SECTION NEAR DRAIN



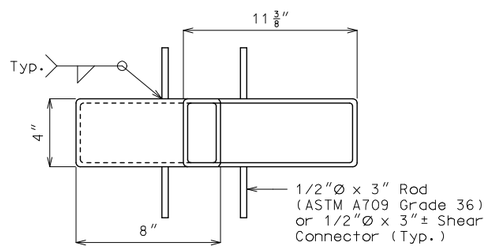
PART SECTION SHOWING BRACKET ASSEMBLY



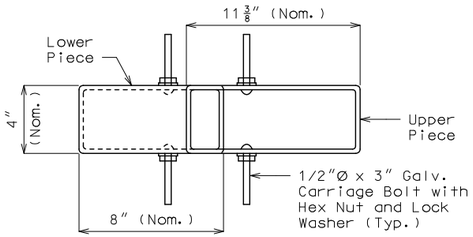
PART PLAN OF SLAB AT DRAIN



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

SLAB DRAINS

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 coil inserts and 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.

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

The coil insert required for the bracket assembly attachment shall be located on the prestressed girder shop drawings.

Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 2,500 pounds in 5,000 psi concrete.

The bolt required to attach the slab drain bracket assembly to the prestressed girder web shall be supplied by the prestressed girder fabricator.

Notes for Steel Drain:

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

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

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

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

Minimum reinforced wall thickness shall be 1/4 inch.

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

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

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

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

Both upper and lower drain pieces shall be rigidly connected to each other. Drain flow shall not be obstructed. Approval of the engineer is required.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	13
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9278	

REV.	DESCRIPTION	DATE

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

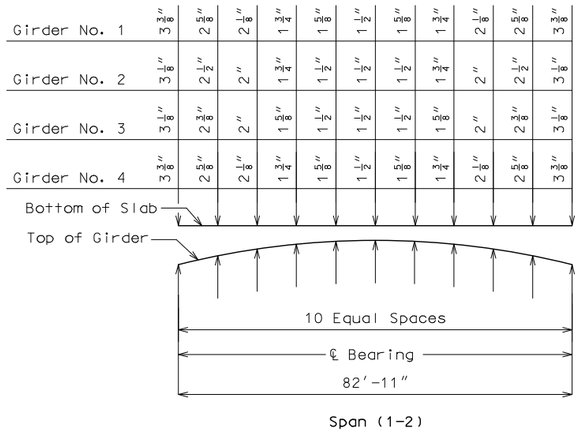
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_013_J9P3751_Slab_Drain.dgn 8:58:11 AM 3/3/2023



Span (1-2)

THEORETICAL SLAB HAUNCHING DIAGRAM

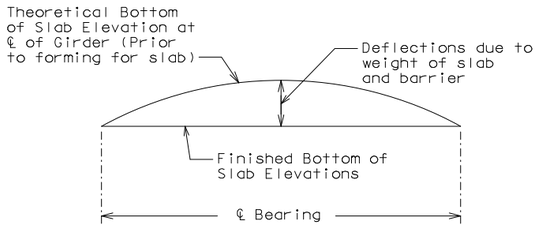
If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

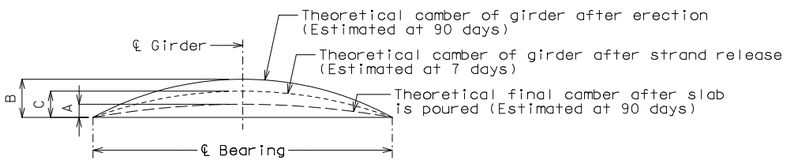
Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (82'-11" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	308.33	308.35	308.36	308.36	308.35	308.33	308.31	308.27	308.22	308.16	308.10
2	308.52	308.54	308.55	308.56	308.56	308.54	308.51	308.47	308.42	308.35	308.29
3	308.61	308.63	308.64	308.65	308.65	308.63	308.60	308.56	308.50	308.44	308.38
4	308.36	308.37	308.38	308.39	308.38	308.36	308.33	308.29	308.24	308.19	308.13

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.



TYPICAL SLAB ELEVATIONS DIAGRAM



Girder	Span (1-2)		
	A	B	C
Exterior	1 7/8"	3 1/4"	1 7/8"
Interior	1 5/8"		

GIRDER CAMBER DIAGRAM

Conversion factors for girder camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

TBOS, HAUNCHING AND CAMBER

Detailed Oct. 2022
Checked Oct. 2022

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

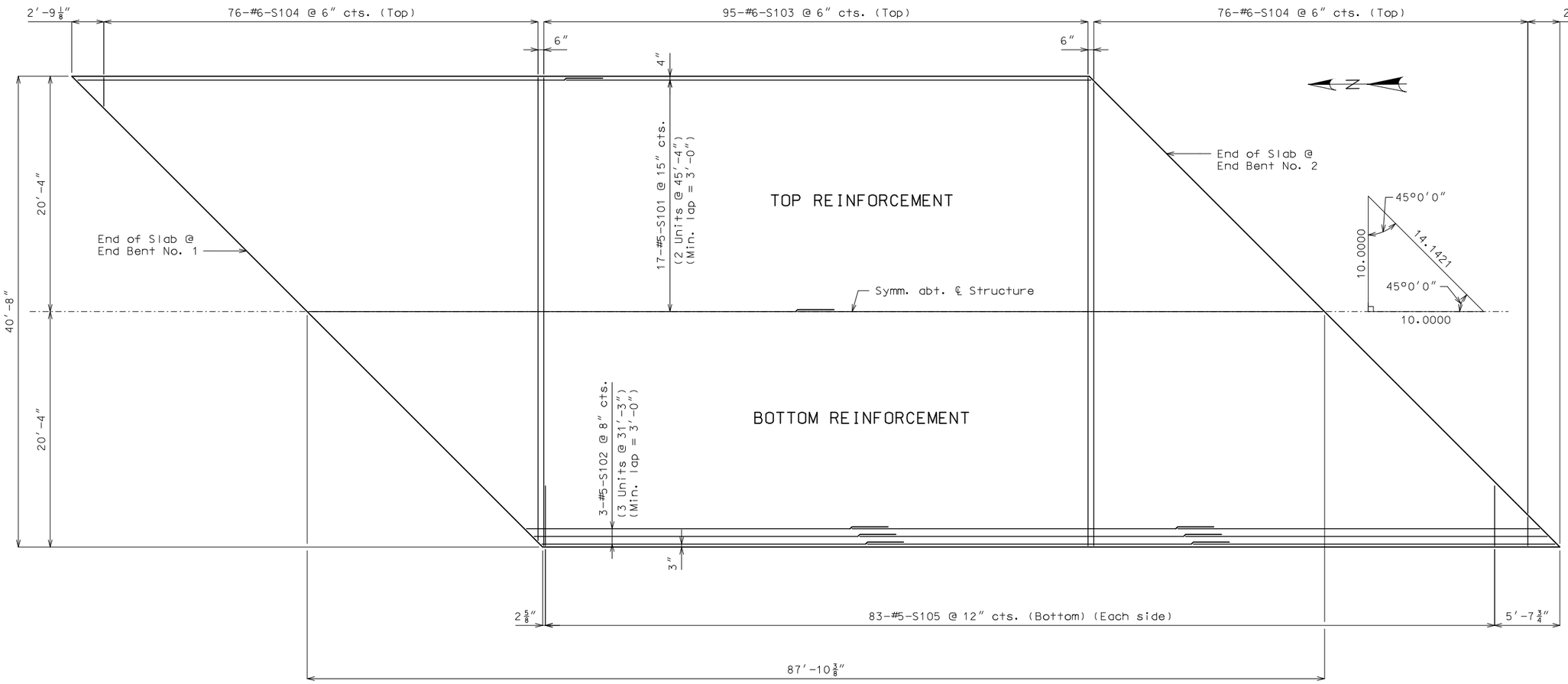
STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 14
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PLAN OF SLAB SHOWING REINFORCEMENT

General Notes:

Longitudinal slab dimensions shown are horizontally.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Section Thru Slab, see Sheet No. 16.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 and 18.

SLAB REINFORCEMENT DETAILS

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_015_J9P3751_Slab_Reinforcement.dgn 8:58:13 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	15

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9278

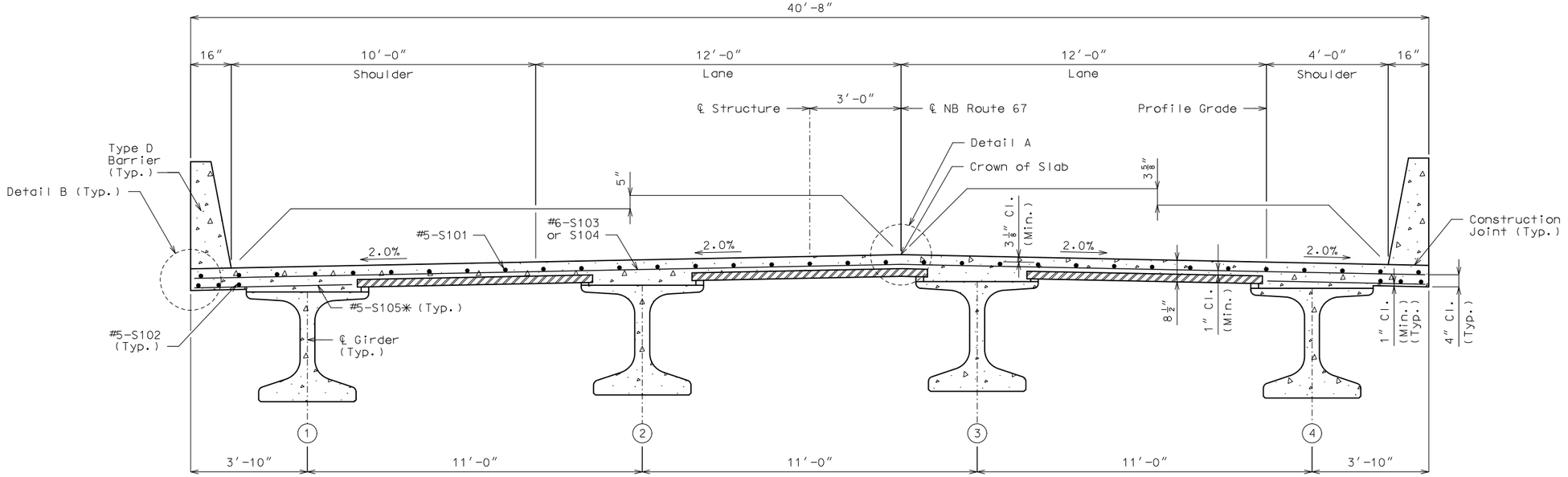
DESCRIPTION	DATE

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

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

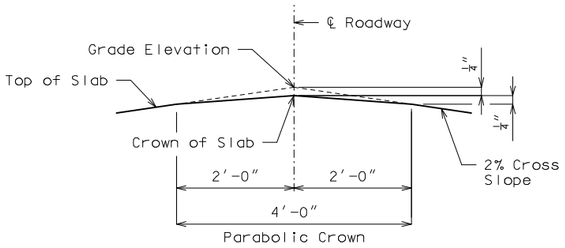
© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

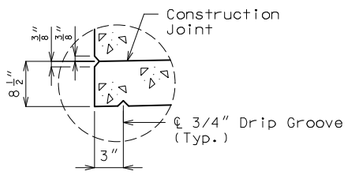


SECTION THRU SLAB

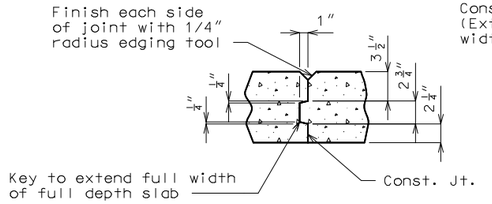
✳ Alternate bar shape available, see barrier sheets.



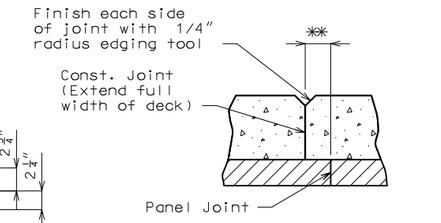
DETAIL A



DETAIL B



FULL DEPTH SLAB

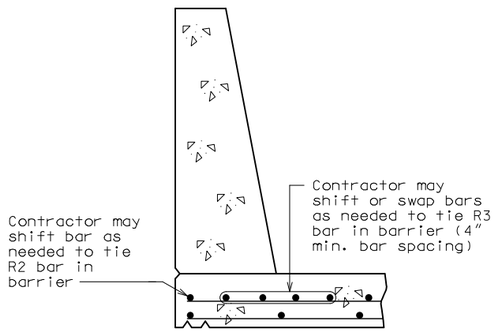


✳✳ Adjust the construction joint to a clearance of 6 inches minimum from the panel joint.

SLAB ON PANELS

SLAB CONSTRUCTION JOINT

(If needed)



OPTIONAL SHIFTING TOP BARS AT BARRIER

General Notes:

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 & 18.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Plan of Slab Showing Reinforcement, see Sheet No. 15.

The contractor shall pour and satisfactorily finish the roadway slab at a rate of not less than 25 cubic yards per hour.

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

DETAILS OF SLAB REINFORCING

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_016_J9P3751_Section_thru_Slab.dgn 8:58:15 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	16

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

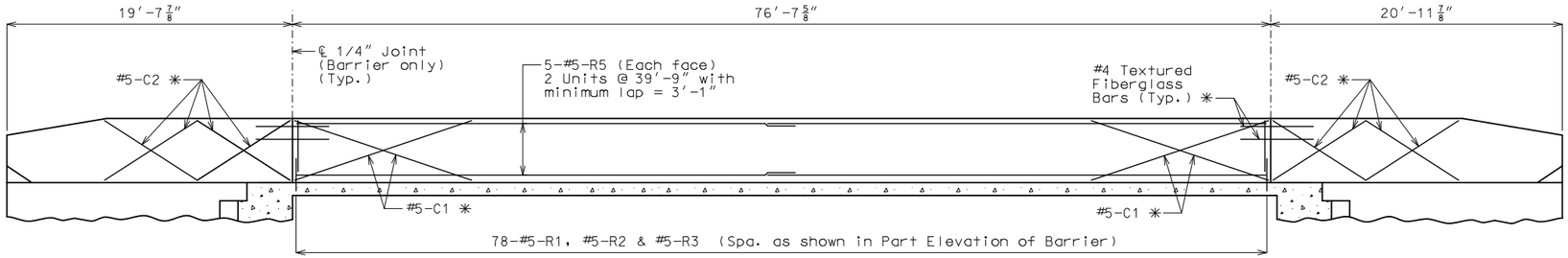
BRIDGE NO.
A9278

DESCRIPTION	DATE	REV.

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

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

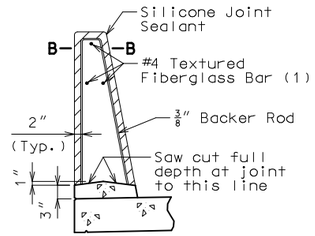
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



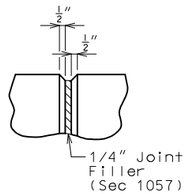
Span (1-2)

ELEVATION OF BARRIER

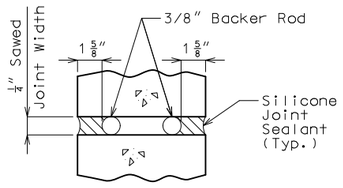
(Left barrier shown, right barrier similar by 180° rotation)
Longitudinal dimensions are horizontal.



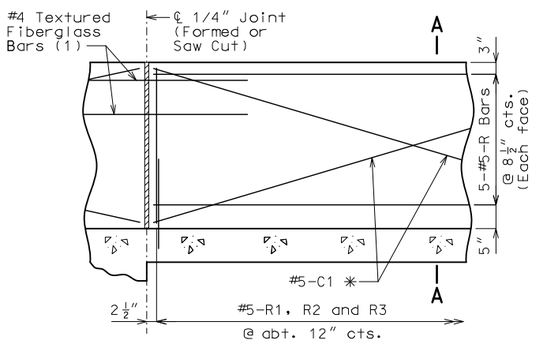
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

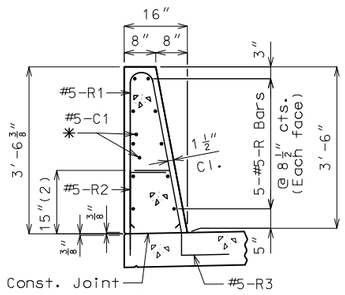


SECTION B-B



PART ELEVATION OF BARRIER

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

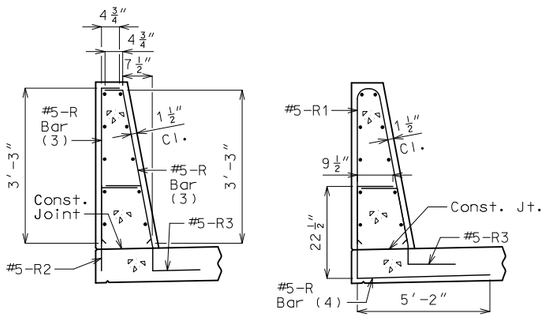


SECTION A-A

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.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

✳ Slip-formed option only.

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

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

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type 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 wing to end of wing.

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

TYPE D BARRIER

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_017_J9P3751_Barrier_Elevations.dgn 8:58:16 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	17

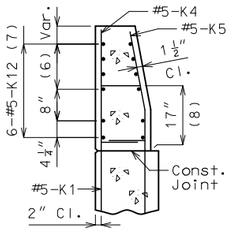
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9278

REV.	DESCRIPTION	DATE

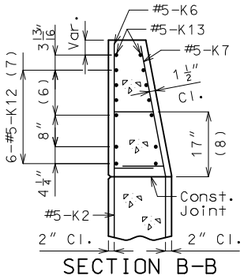
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

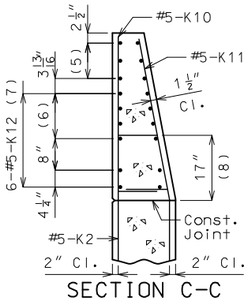
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



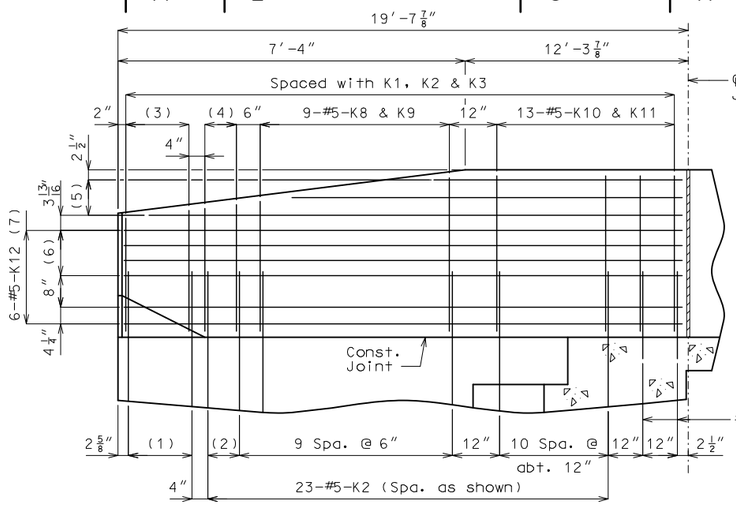
SECTION A-A



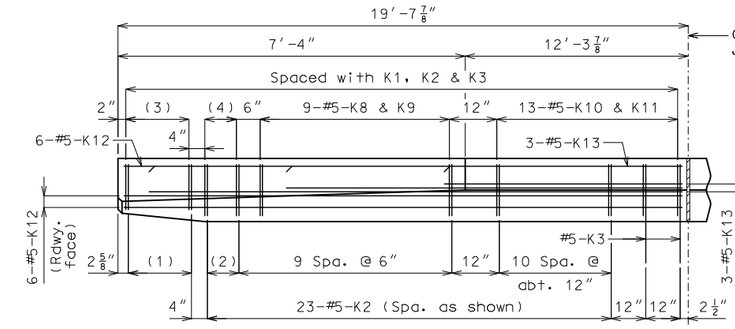
SECTION B-B



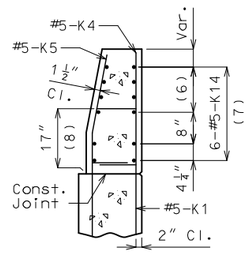
SECTION C-C



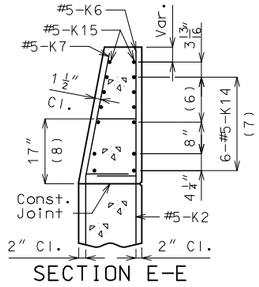
PART ELEVATION



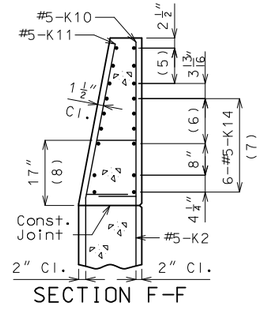
PART PLAN



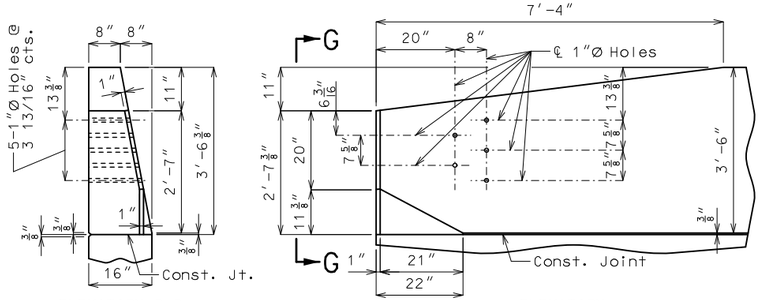
SECTION D-D



SECTION E-E

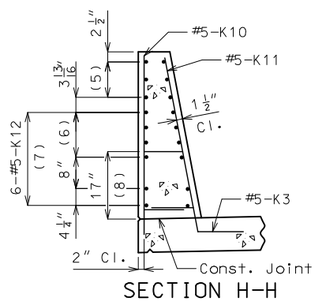


SECTION F-F



ELEVATION G-G

ELEVATION



SECTION H-H

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

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

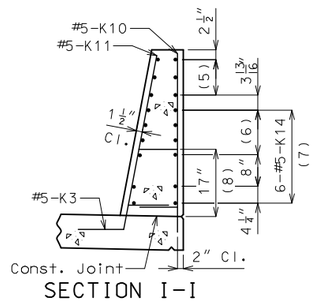
(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

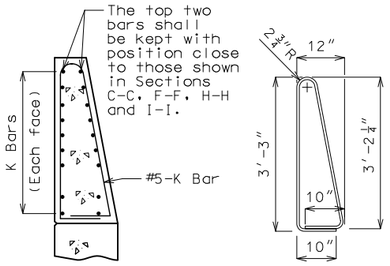
(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar



SECTION I-I

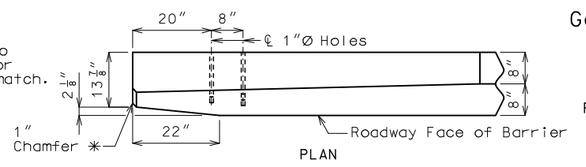


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(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.



PLAN

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

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

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

Reinforcing Steel:

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

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar by 180° rotation)

Detailed Oct. 2022
Checked Oct. 2022

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

Sheet No. 18 of 24

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	18

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9278

DESCRIPTION	DATE

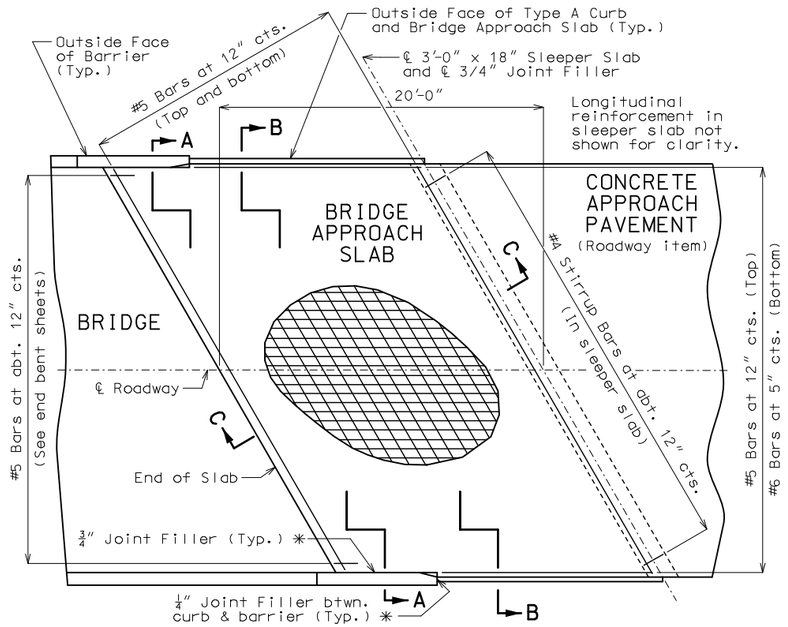
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

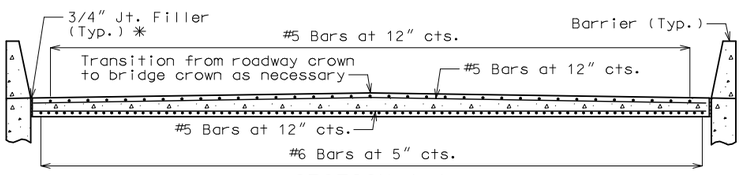
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

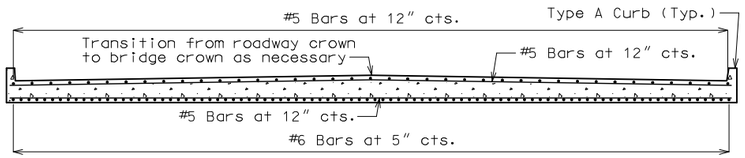
REV.



PART PLAN SHOWING REINFORCEMENT

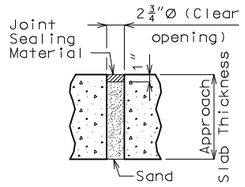


SECTION A-A



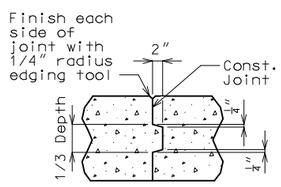
SECTION B-B

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



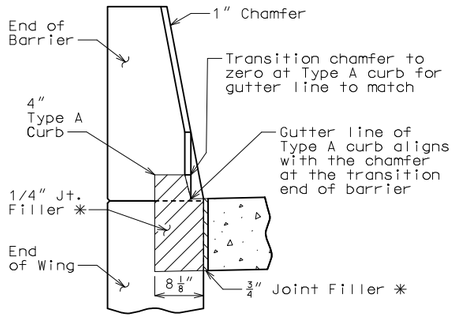
UNDERSEAL ACCESS HOLE DETAIL

(If required)

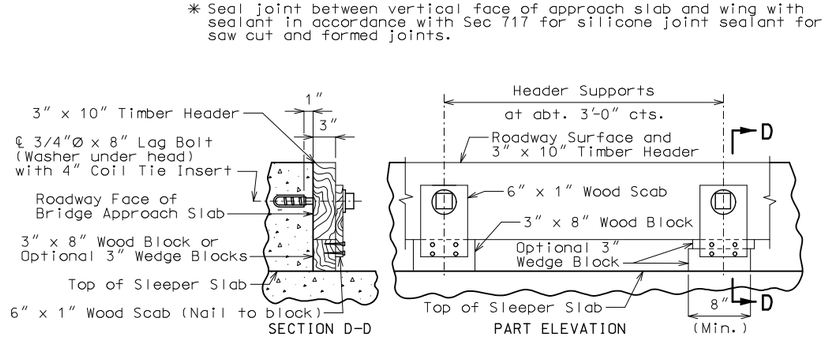


CONSTRUCTION JOINT DETAIL

(If required)

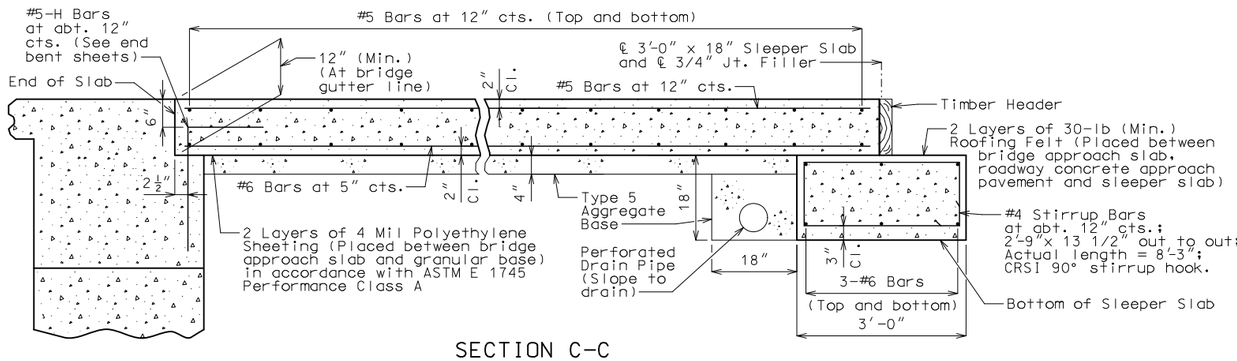


SECTION BETWEEN CURB AND BARRIER



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.



SECTION C-C

BRIDGE APPROACH SLAB (MAJOR)

General Notes:

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

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

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

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

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

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

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

For concrete approach pavement details, see roadway plans.

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

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

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	19

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9278

DATE	DESCRIPTION

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed Oct. 2022
Checked Oct. 2022

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

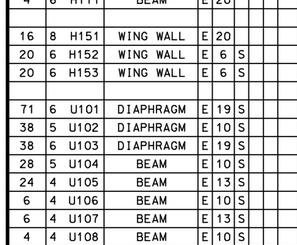
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_019_J9P3751_Approach_Slab.dgn 8:58:18 AM 3/3/2023

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
10	6	F100	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250		2	1.000	10.250		8	0	7	9	117
10	6	F101	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250		2	1.000	13.000		5.250		12	11	12	10	193
4	6	F102	DIAPHRAGM	E	23					5	2.250	5	1.000							3	8.000	3	8.000	10	4	10	3	62
4	6	F103	DIAPHRAGM	E	21					8	7.500	5	1.000							6	1.250	6	1.250	13	9	13	6	82
38	5	H101	DIAPHRAGM	E	19					2	0.000		15.000											3	3	3	2	126
4	6	H102	DIAPHRAGM	E	20					57	1.000													57	1	57	1	343
4	8	H103	DIAPHRAGM	E	20					57	1.000													57	1	57	1	610
4	5	H104	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750		5	10	5	9	24
9	6	H105	DIAPHRAGM	E	20					14	0.000													14	0	14	0	190
3	6	H106	DIAPHRAGM	E	20					10	8.000													10	8	10	8	49
6	6	H107	DIAPHRAGM	E	20					4	5.000													4	5	4	5	40
2	6	H108	DIAPHRAGM	E	20					2	9.000													2	9	2	9	9
8	8	H109	BEAM	E	20					57	1.000													57	1	57	1	1220
4	6	H110	BEAM	E	20					57	1.000													57	1	57	1	343
4	6	H111	BEAM	E	20					9	3.000													9	3	9	3	56
16	8	H151	WING WALL	E	20					16	6.000													16	6	16	6	705
20	6	H152	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
20	6	H153	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
71	6	U101	DIAPHRAGM	E	19	S				3	4.000	7	0.000											10	4	10	3	1094
38	5	U102	DIAPHRAGM	E	10	S						4	1.500	4	7.000									12	10	12	8	503
38	6	U103	DIAPHRAGM	E	19	S				3	0.000	5	3.000											8	3	8	2	467
28	5	U104	BEAM	E	10	S						6	3.250	5	3.000									17	10	17	7	514
24	4	U105	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000							16	7	16	4	262
6	4	U106	BEAM	E	10	S						2	8.000	5	3.000									10	7	10	5	42
6	4	U107	BEAM	E	13	S				5	3.000	2	11.000	5	3.000	2	11.000							17	1	16	10	68
4	4	U108	BEAM	E	10	S						2	11.000	5	3.000									11	1	10	11	30
28	6	V101	DIAPHRAGM	E	20					3	0.000													3	0	3	0	127
20	5	V102	BEAM	E	20					6	3.000													6	3	6	3	131
30	6	V151	WING WALL	E	20					7	2.000													7	2	7	2	323
30	6	V152	WING WALL	E	20					7	2.000													7	2	7	2	323
			END BENT 2																									
10	6	F200	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250		2	1.000	10.250		8	0	7	9	117
10	6	F201	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250		2	1.000	13.000		5.250		12	11	12	10	193
4	6	F202	DIAPHRAGM	E	23					5	2.250	5	1.000							3	8.000	3	8.000	10	4	10	3	62
4	6	F203	DIAPHRAGM	E	21					8	7.500	5	1.000							6	1.250	6	1.250	13	9	13	6	82
38	5	H201	DIAPHRAGM	E	19					2	0.000		15.000											3	3	3	2	126
4	6	H202	DIAPHRAGM	E	20					57	1.000													57	1	57	1	343
4	8	H203	DIAPHRAGM	E	20					57	1.000													57	1	57	1	610
4	5	H204	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750		5	10	5	9	24
9	6	H205	DIAPHRAGM	E	20					14	0.000													14	0	14	0	190
3	6	H206	DIAPHRAGM	E	20					10	8.000													10	8	10	8	49
6	6	H207	DIAPHRAGM	E	20					4	5.000													4	5	4	5	40
2	6	H208	DIAPHRAGM	E	20					2	9.000													2	9	2	9	9
8	8	H209	BEAM	E	20					57	1.000													57	1	57	1	1220
4	6	H210	BEAM	E	20					57	1.000													57	1	57	1	343
4	6	H211	BEAM	E	20					9	3.000													9	3	9	3	56

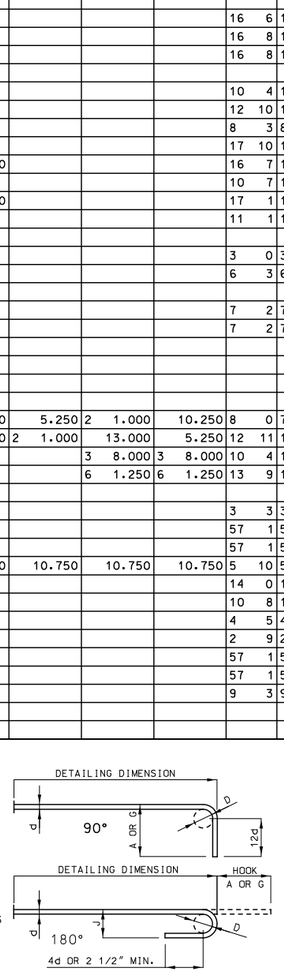
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
16	8	H251	WING WALL	E	20					16	6.000													16	6	16	6	705
20	6	H252	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
20	6	H253	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
71	6	U201	DIAPHRAGM	E	19	S				3	4.000	7	0.000											10	4	10	3	1094
38	5	U202	DIAPHRAGM	E	10	S						4	1.500	4	7.000									12	10	12	8	503
38	6	U203	DIAPHRAGM	E	19	S				3	0.000	5	3.000											8	3	8	2	467
28	5	U204	BEAM	E	10	S						6	3.000	5	3.000									17	9	17	7	514
24	4	U205	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000							16	7	16	4	262
6	4	U206	BEAM	E	10	S						2	8.000	5	3.000									10	7	10	5	42
6	4	U207	BEAM	E	13	S				5	3.000	2	11.000	5	3.000	2	11.000							17	1	16	10	68
4	4	U208	BEAM	E	10	S						2	11.000	5	3.000									11	1	10	11	30
28	6	V201	DIAPHRAGM	E	20					3	0.000													3	0	3	0	127
20	5	V202	BEAM	E	20					6	3.000													6	3	6	3	131
30	6	V251	WING WALL	E	20					7	1.000													7	1	7	1	320
30	6	V252	WING WALL	E	20					7	1.000													7	1	7	1	320
			SLAB																									
66	5	S101	SLAB	E	20					45	4.000													45	4	45	4	3121
18	5	S102	SLAB	E	20					31	3.000													31	3	31	3	587
95	6	S103	SLAB	E	20					40	5.000													40	5	40	5	5768
152	6	S104	SLAB	E	20			V	2	39	11.500													40	0	40	0	
			INCR. = 0.5′							2	5.500													2	6	2	6	4852
166	5	S105	SLAB	E	20					5	2.000													5	2	5	2	895
			TYPE D BARRIER																									
156	5	R1	BARRIER	E	26					3	3.000		5.500	3	0.750					3	3.000		6.750	6	11	6	8	1085
156	5	R2	BARRIER	E	19	S					20.500		9.500											2	6	2	5	394
156	5	R3	BARRIER	E	27	S							9.500	15.250		5.000		12.000		15.000		3.000		3	6	3	4	543
40	5	R5	BARRIER	E	20					39	9.000													39	9	39	9	1659
20	5	K1	BARRIER	E	27	S				3	8.000		9.250	5.250		3	2.750				5.250		1.000	8	2	8	0	167
94	5	K2	BARRIER	E	27	S				3	8.000		9.250	14.500		2	5.750				14.250		2.750	8	2	8	0	785
8	5	K3	BARRIER	E	27	S					22.500		9.250	14.750		7.750		12.000		14.500		2.750		5	7	5	3	44
20	5	K4	BARRIER	E	19	S	V	4	2	4.250		10.000												3	3	3	1	
			INCR. = 0.5″						2	6.250		10.000												3	5	3	3	67
20	5	K5	BARRIER	E	14	S	V	4		8.250		9.500		18.500							4.000		18.000	3	1	2	11	
			INCR. = 0.5″							8.250		9.500		20.500							4.500		20.000	3	3	3	1	63
12	5	K6	BARRIER	E	19	S	V	4	2	6.750		10.000												3	5	3	4	
			INCR. = 0.5″						2	7.750		10.000												3	6	3	5	43
12	5	K7	BARRIER	E	21	S	V	4	2	6.750		10.000								2	6.000		6.250	3	5	3	4	
			INCR. = 0.5″						2	7.750		10.000								2	7.000		6.500	3	6	3	5	43
36	5	K8	BARRIER	E	19	S	V	4	2	8.500		10.000												3	7	3	6	
			INCR. = 0.75′						3	2.500		10.000												4	1	4	0	141
36	5	K9	BARRIER	E	21	S	V	4	2	8.500		10.000								2	7.750		6.750	3	7	3	6	
			INCR. = 0.75′						3	2.500		10.000								3	1.750		7.750	4	1	4	0	141
54	5	K10	BARRIER	E	19	S				3	3.000		10.000											4	1	4	0	226
54	5	K11	BARRIER	E	21	S				3	3.000		10.000							3	2.250		7.750	4	1	4	0	226
24	5	K12	BARRIER	E	20					19	4.000													19	4	19	4	484
12	5	K13	BARRIER	E	20		V	4		18	7.000													18	7	18	7	
			INCR. = 3′							12	7.000													12	7	12	7	196
24	5	K14	BARRIER	E	20					20	8.000													20	8	20	8	518
12	5	K15	BARRIER	E	20		V	4		19	11.000													19	11	19	11	
			INCR. = 3′							13	11.000													13	11	13	11	212



STIRRUP HOOK DIMENSIONS					
GRADES 40 – 50 – 60 KSI					
BAR SIZE	D (IN.)	90° HOOK		135° HOOK	
		HOOK A OR G		HOOK A OR G	APPROX. H
#4	2″	4 1/2″		4 1/2″	3″
#5	2 1/2″	6″		5 1/2″	3 3/4″
#6	4 1/2″	12″		8″	4 1/2″

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4″	5″	3″	6″
#4	3″	6″	4″	8″
#5	3 3/4″	7″	5″	10″
#6	4 1/2″	8″	6″	12″
#7	5 1/4″	10″	7″	14″
#8	6″	11″	8″	16″
#9	9 1/2″	15″	11 3/4″	19″
#10	10 3/4″	17″	13 1/4″	22″
#11	12″	19″	14 3/4″	2′-0″
#14	18 1/4″	2′-3″	21 3/4″	2′-7″

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

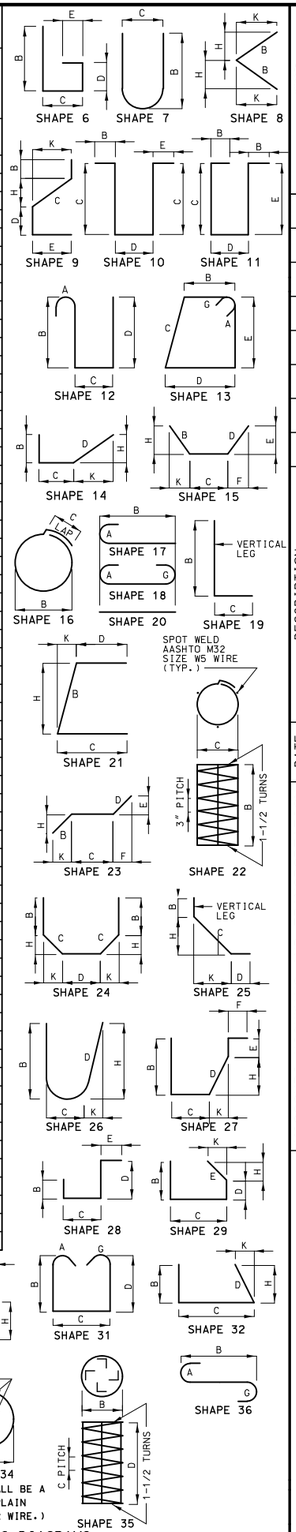
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60.000 PSI.



BENDING DIAGRAMS

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	20

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Oct. 2022
Checked Oct. 2022

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

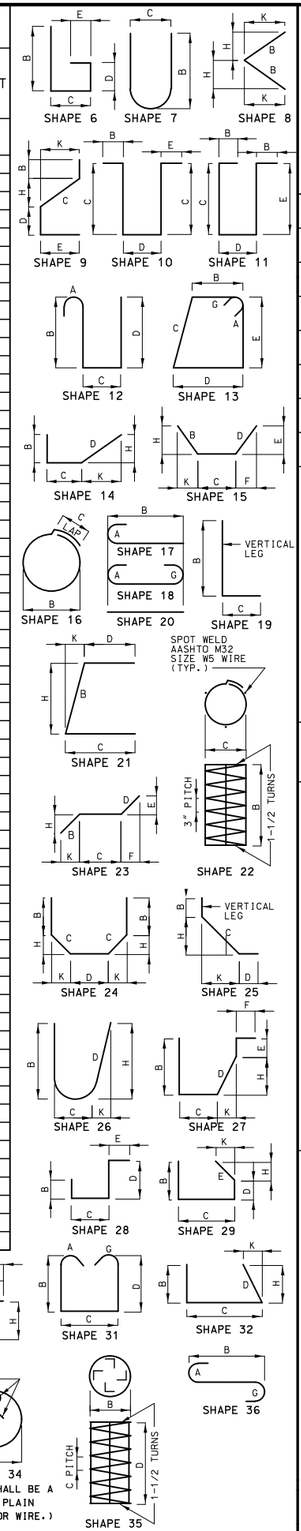
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_020_J9P3751_Bill_of_Reinforcing1.dgn 8:58:19 AM 3/3/2023

BILL OF REINFORCING STEEL

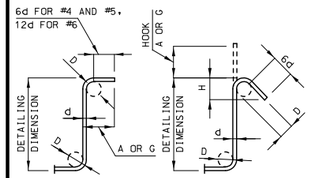
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
8	5	C1	SLIP FORM	E	20					12	0.000													12	0	12	0	101
16	5	C2	SLIP FORM	E	20					8	0.000													8	0	8	0	134
			TOTALS																									
	4			E																								804
	5			E																								14471
	6			E																								20246
	8			E																								5070
			TOTAL	E																								40591
			SLAB ON																									
			CONCRETE																									
			NU-GIRDER																									
	4			E																								804
	5			E																								7199
	6			E																								20246
	8			E																								5070
			TOTAL	E																								33319
			TYPE D																									
			BARRIER																									
	5			E																								7037
			TOTAL	E																								7037
			SLIP FORM OPTION																									
	5			E																								235
			TOTAL	E																								235

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.



BENDING DIAGRAMS

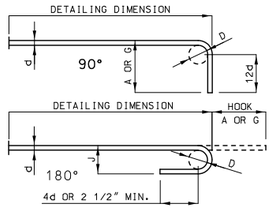


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS

BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS A OR G	ALL GRADES 180° HOOKS J	ALL GRADES 90° HOOKS A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60,000 PSI.

Detailed Oct. 2022
Checked Oct. 2022

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

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	21

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

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

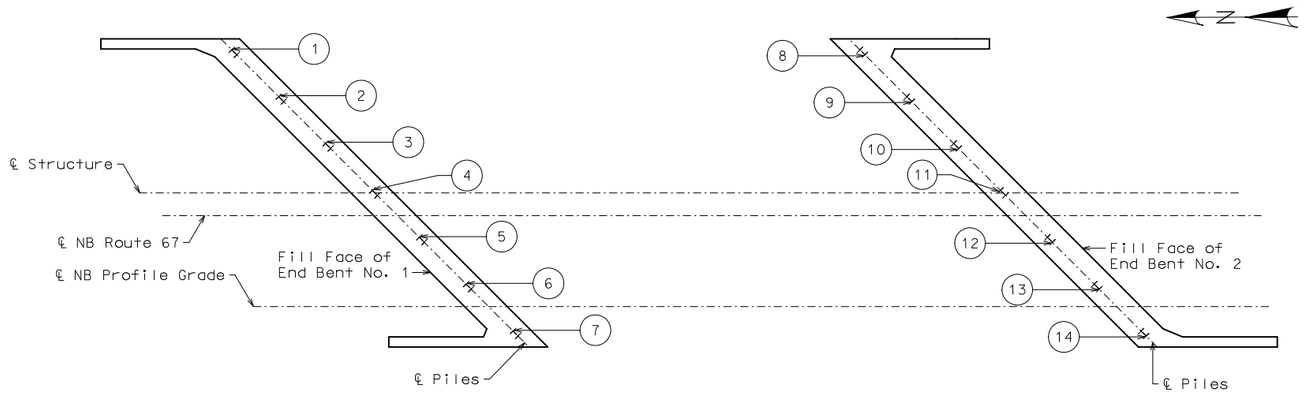
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

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

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 2
8			
9			
10			
11			
12			
13			
14			

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

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_022_J9P3751_Pile_Data.dgn 8:58:21 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	22

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9278

REV.	DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-101

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri
DATE STARTED 12/8/21 **COMPLETED** 12/8/21
GROUND ELEVATION 305.2 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750)
AT TIME OF DRILLING ---
LOGGED BY NB **CHECKED BY** CM
AT END OF DRILLING ---
STATION 757+52 **OFFSET** 68' LT
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 2 inches										
		(SC) CLAYEY SAND: Brown, moist, medium dense	SPT SS1	56	1-2-3 (5)			14				53
			SPT SS2	78	6-10-13 (23)			12				48
			SPT SS3	94	5-8-9 (17)			11				47
10			SPT SS4	72	3-6-9 (15)			12				32
		(SP) GRAVELLY SAND: Gray, moist, loose	SPT SS5	72	4-4-2 (6)			32				25
20		(SP) SAND: Gray, moist, loose	SPT SS6	100	2-1-4 (5)			20				22
			SPT SS7	72	2-1-2 (3)			22				25
30			SPT SS8	56	5-9-7 (16)			21				27
			SPT SS9	67	4-6-13 (19)			22				26
40			SPT SS10	50	6-7-9 (16)			21				26
			SPT SS11	72	16-21-25 (46)			18				22
50		(SP) GRAVELLY SAND: Gray to brown, moist, medium dense to very dense	SPT SS12	33	7-7-7 (14)			18				43

(Continued Next Page)

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

B-101

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-101

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(SP) GRAVELLY SAND: Gray to brown, moist, medium dense to very dense *(continued)*	SPT SS13	39	10-12-12 (24)			22				28
			SPT SS14	44	11-15-14 (29)			17				27
			SPT SS15	61	10-12-15 (27)			15				25
70			SPT SS16	44	15-18-23 (41)			23				32
			SPT SS17	11	16-22-22 (44)							44
		Refusal at 79.8 feet. Bottom of borehole at 79.8 feet.	SPT SS18	83	50/4"			14				44

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

B-101

BORING DATA

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

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

Sheet No. 23 of 24

Detailed Oct. 2022
Checked Oct. 2022

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9278

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

REV.	DESCRIPTION	DATE

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9278\B_A9278_023_J9P3751_Boring_Log1.dgn 8:58:22 AM 3/3/2023

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-102

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri
DATE STARTED 12/20/21 **COMPLETED** 12/21/21
GROUND ELEVATION 305.4 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750)
▽ **AT TIME OF DRILLING** 20.00 ft / Elev 285.40 ft
LOGGED BY NB **CHECKED BY** CM
AT END OF DRILLING ---
STATION 758+98 **OFFSET** 46' LT
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 7 inches										
		(SC) CLAYEY SAND: Brown to graysih brown, moist, medium dense	SPT SS1	78	1-2-1 (3)			17				43
			SPT SS2	86	3-6-4 (10)			11				45
			SPT SS3	75	2-2-3 (5)			14				48
10		(SP-SC) SAND WITH CLAY: Pale brown to gray, moist, medium dense	SPT SS4	94	3-5-5 (10)			9				26
			SPT SS5	83	6-7-8 (15)			20				20
20	▽		SPT SS6	44	5-8-6 (14)			22				28
		(SP) SAND: Gray, moist, very loose to medium dense	SPT SS7	50	0-0-1 (1)			23				30
30			SPT SS8	50	4-1-2 (3)			22				31
			SPT SS9	72	5-6-7 (13)			22				23
40			SPT SS10	61	7-11-13 (24)			21				24
			SPT SS11	67	14-11-20 (31)			19				23
50		(SP) GRAVELLY SAND: Gray, moist, medium dense	SPT SS12	50	6-6-8 (14)			20				24

(Continued Next Page)

B-102

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-102

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SP) GRAVELLY SAND: Gray, moist, medium dense *(continued)*										
			SPT SS13	56	9-9-10 (19)			19				26
60			SPT SS14	61	6-9-12 (21)			20				25
			SPT SS15	56	6-9-10 (19)			19				31
70			SPT SS16	58	5-6-9 (15)			20				28
		(SP) GRAVELLY SAND WITH CLAY: Gray, moist, medium dense	SPT SS17	53	7-7-4 (11)			15				36
80		(SP) GRAVELLY SAND: Gray, moist, medium dense	SPT SS18	64	10-12-14 (26)			17				29
		Refusal at 82.0 feet. Bottom of borehole at 82.0 feet.										

B-102

BORING DATA

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

Detailed Oct. 2022
Checked Oct. 2022

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

Sheet No. 24 of 24

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	24

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9278

DATE	DESCRIPTION

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

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

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

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

SEC./SUR. 28 TWP. 23N RGE. 5E

Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

Hydrologic Data
Drainage Area = 9.3 mi^2
Design Flood Frequency = 50 years
Design Flood Discharge = 1,060 cfs
Design Flood (D.F.) Elevation = 302.9
Base Flood (100-year)
Base Flood Elevation = 303.4
Base Flood Discharge = 1,210 cfs
Estimated Backwater = 0.1 ft
Average Velocity thru Opening = 2.5 ft/s
Freeboard (50-year)
Freeboard = 1.3 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency = >500 years
500 Year Flood Elevation = 304.6

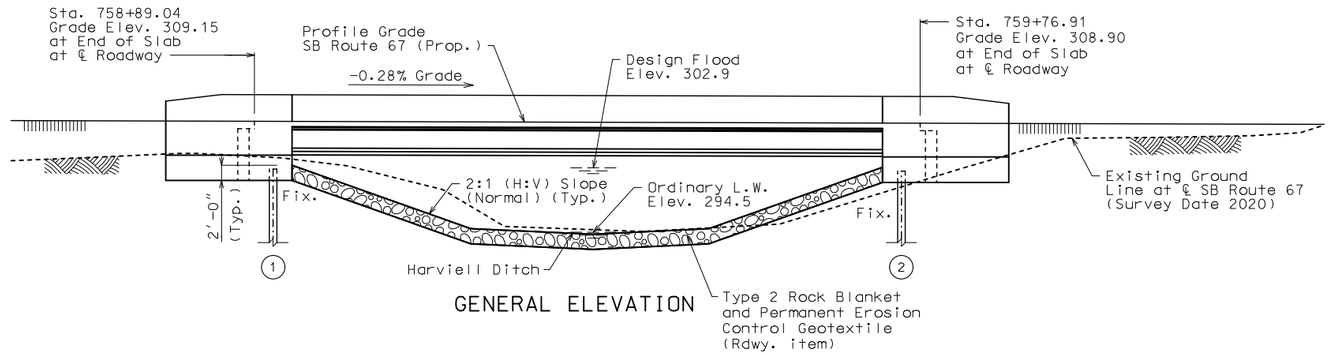
Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

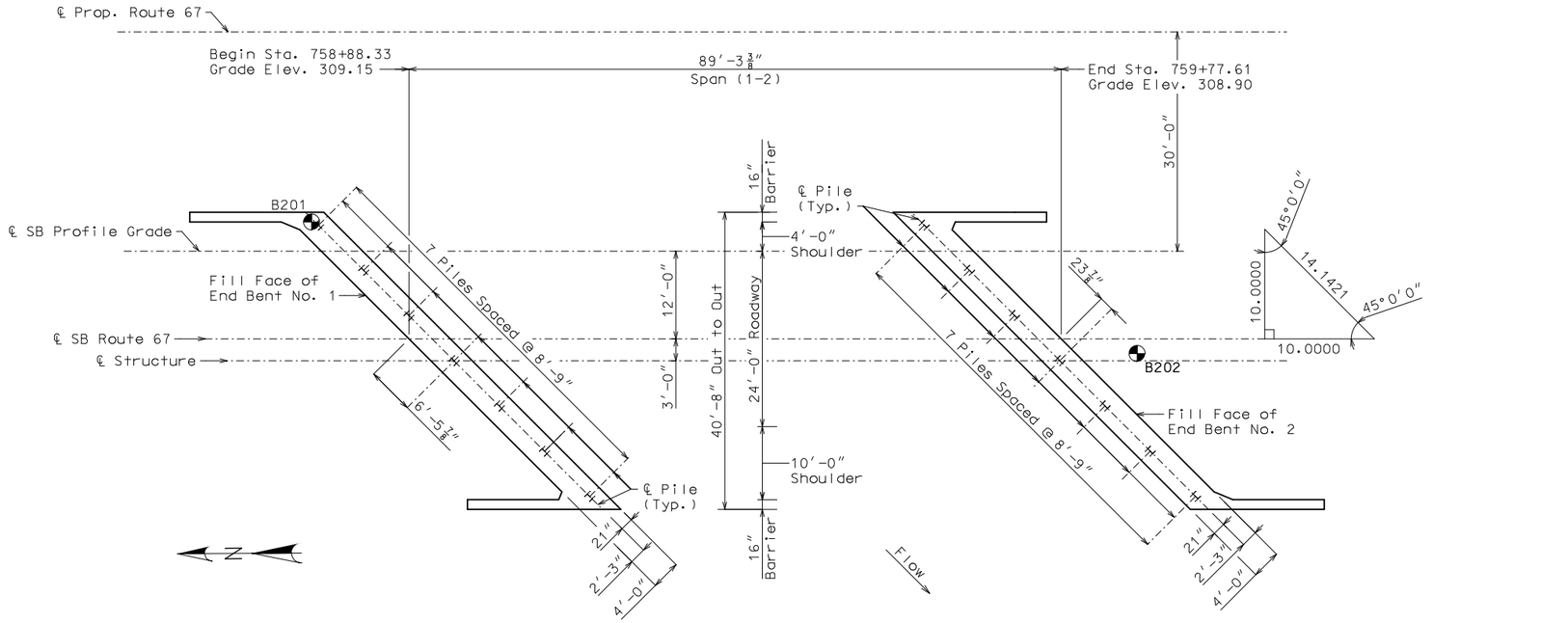
The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 23 & 24 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

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

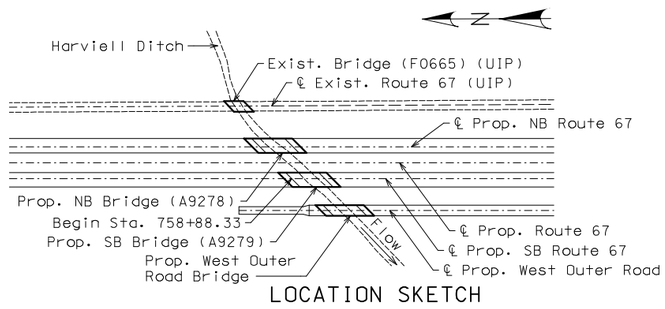
(82.9′) PRESTRESSED CONCRETE NU-GIRDER SPAN



GENERAL ELEVATION



PLAN



LOCATION SKETCH

General Notes:

Longitudinal dimensions are measured horizontal.

For General Notes, Estimated Quantities and Foundation Data see Sheet No. 2.

B.M. #32
N: 282085.74
E: 814254.75
Sta. 719+83.75 Exist. Rte 67
Elev. 308.27
Chisled "□" on SW corner of west barrier curb on bridge F0665

Control Point #129
N: 281264.97
E: 814315.18
Sta. 728+04.49 Exist. Rte 67
Elev. 302.52
5/8″ rebar with MoDOT cap

BRIDGE: ROUTE 67 SB OVER HARVIELL DITCH

ROUTE 67 FROM ROUTE 158 TO ROUTE 142
ABOUT 3.2 MILES NORTH OF ROUTE 142
BEGINNING STATION 758+88.33 (℄ SB ROUTE 67)

GENERAL PLAN AND ELEVATION

Designed Sep. 2022
Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	1

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9279

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.) and 2014 Interim Revisions (Seismic)
Seismic Design Category = C
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.34
Acceleration Coefficient (effective peak ground acceleration coefficient), A_s = 0.37

Design Loading:

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

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Barrier)	f'c = 4,000 psi
Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 12.

For prestressed girder stresses, see Sheets No. 10 & 11.

Neoprene Pads:

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

Joint Filler:

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

Reinforcing Steel:

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

Traffic Handling:

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

Miscellaneous:

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

☐ Constant Joint Filler
☐ Variable Joint Filler

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	161
Reinforcing Steel (Epoxy Coated)	pound	33,550

Notes:

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

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

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

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

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

Estimated Quantities

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	95		95
Bridge Approach Slab (Major)	sq. yard		171	171
Galvanized Structural Steel Piles (12 in.)	linear foot	1120		1120
Pile Point Reinforcement	each	14		14
Class B Concrete (Substructure)	cu. yard	63.8		63.8
Type D Barrier	linear foot		235	235
Slab on Concrete NU-Girder	sq. yard		398	398
NU 43, Prestressed Concrete NU-Girder	linear foot		335	335
Slab Drain	each		14	14
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8

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

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Cost of L4x4 ASTM A709 Grade 36 HP pile anchors and 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts, complete in place, will be considered completely covered by the contract unit price for Galvanized Structural Steel Piles (12 in.).

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	7	7
	Approximate Length Per Each	ft	79	81
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	281	280
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	523	523

DF = FHWA-modified Gates Dynamic Pile Formula

Load Bearing Pile:

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

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

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

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

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

REV.	DESCRIPTION	DATE

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

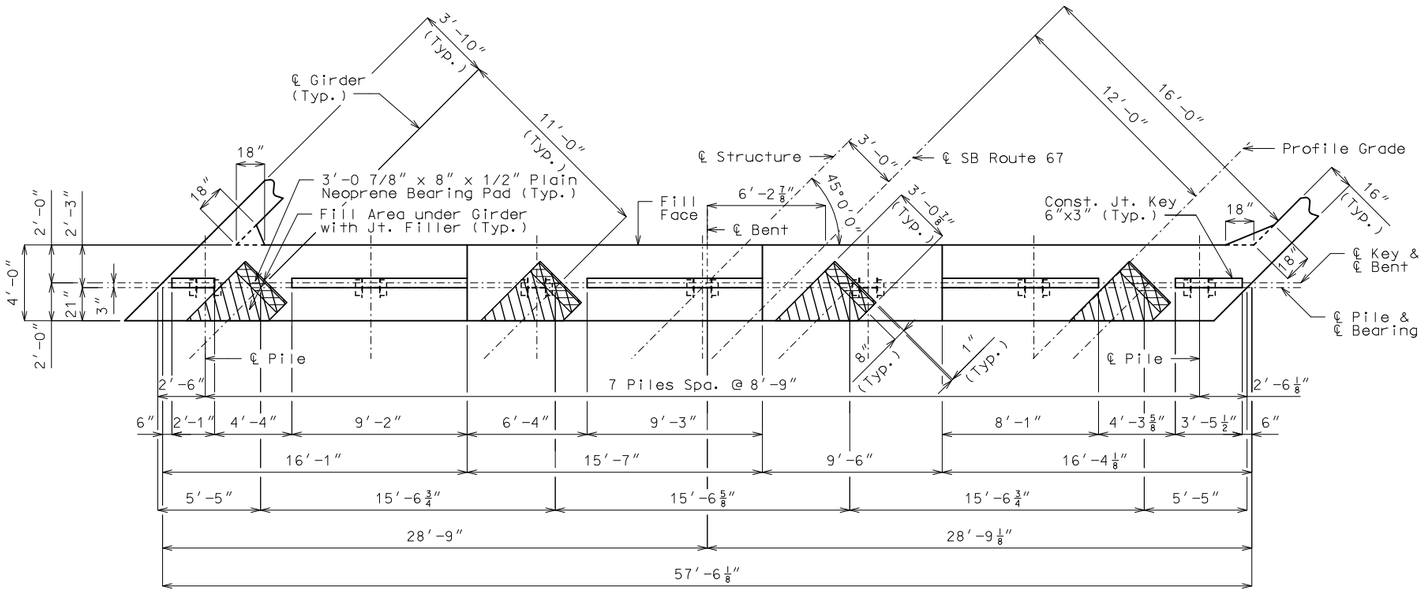
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

ESTIMATED QUANTITIES AND GENERAL NOTES

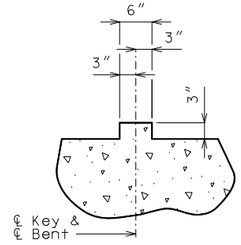
Detailed Oct. 2022
Checked Oct. 2022

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

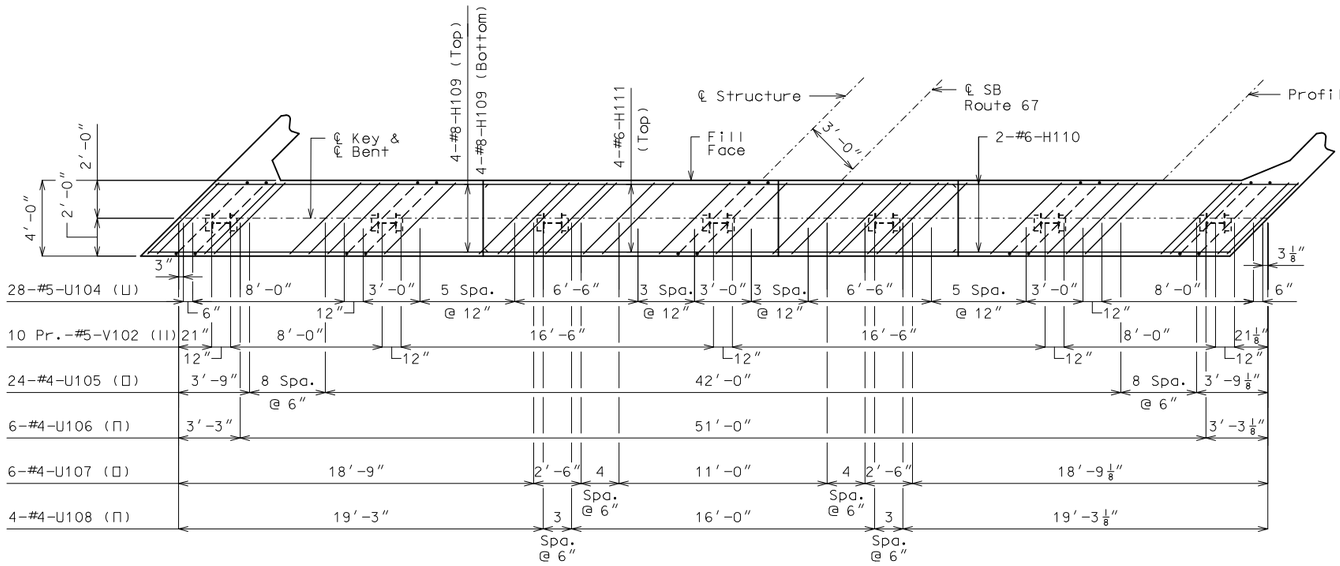
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_002_J9P3751_Estimated_Quantities_and_General_Notes.dgn 10:08:03 AM 3/3/2023



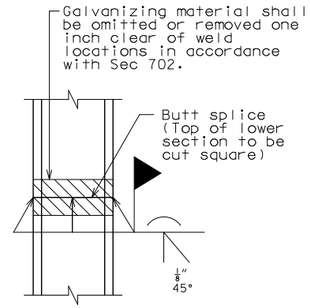
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 4 & 5.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 1

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_003_J9P3751_End_Bent_1_Details.dgn 10:08:04 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	3

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

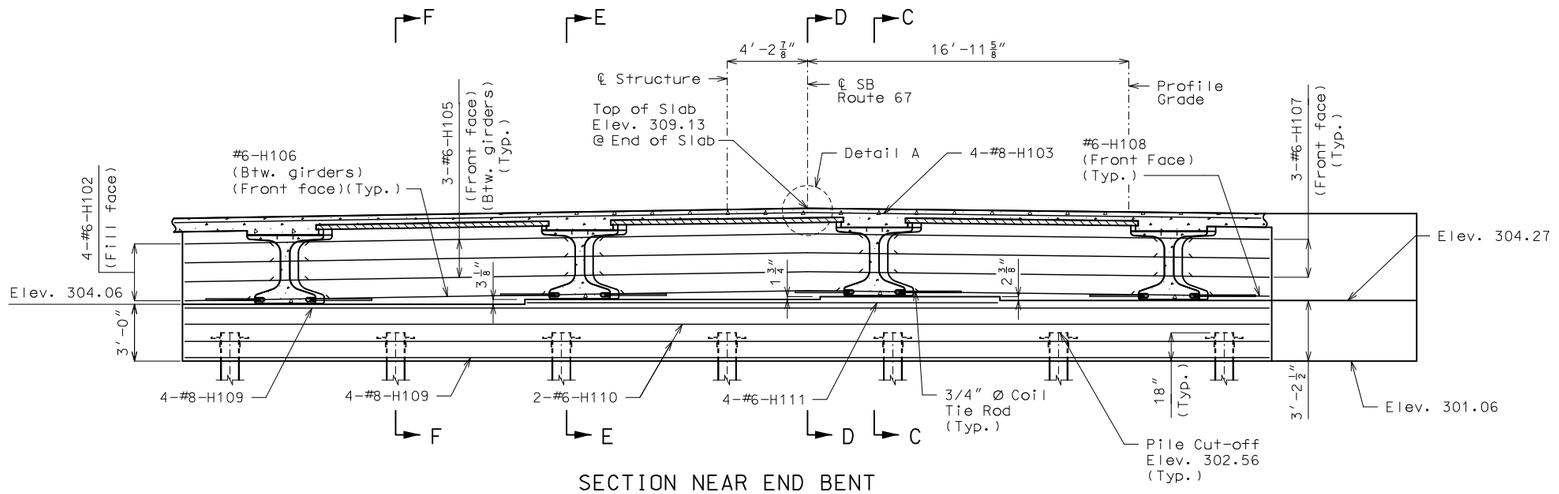
DESCRIPTION	DATE

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

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

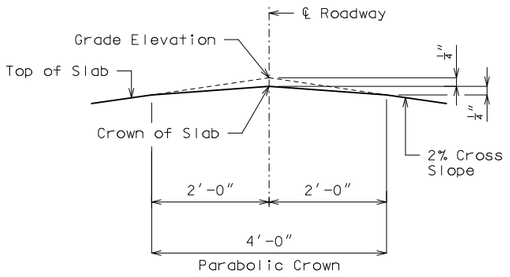
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

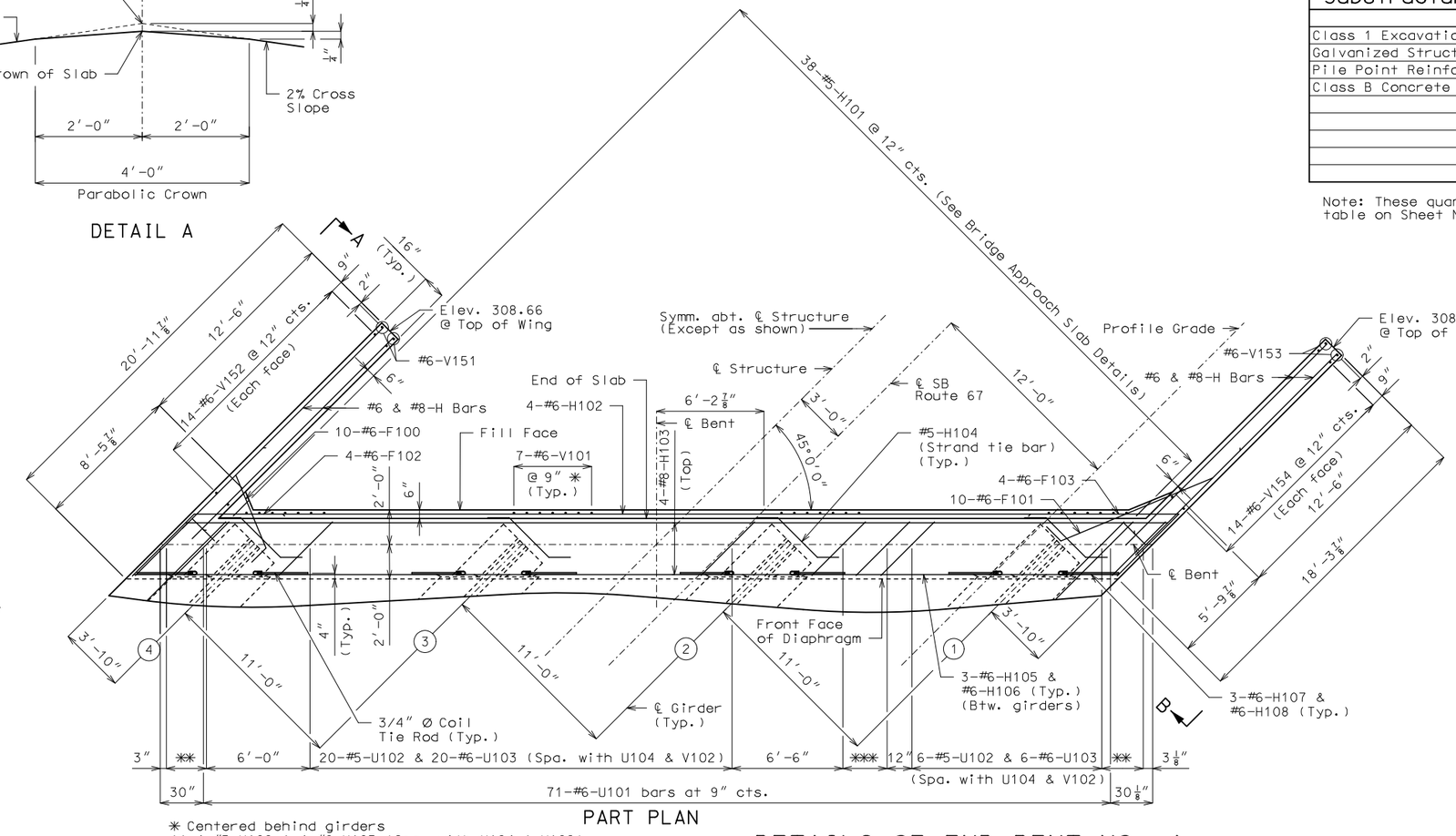


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



PART PLAN

✳ Centered behind girders
✳✳ 4-#5-U109 & 4-#6-U103 (Spa. with U104 & V102)
✳✳✳ 4-#5-U109 & 4-#6-U103 (Spa. with U104)

DETAILS OF END BENT NO. 1

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 5.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 5.

For Elevations A-A & B-B, see Sheet No. 5.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H104 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2″.

The #6-F100 and #6-F101 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

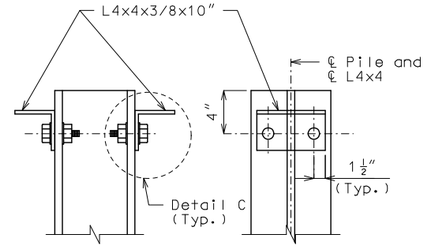
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

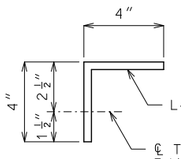
Substructure Quantity Table for Bent No. 1

Item		Quantity
Class 1 Excavation	cu. yard	75
Galvanized Structural Steel Piles (12 in.)	linear foot	553
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	31.9

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	4

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9279

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

REV.	DESCRIPTION	DATE

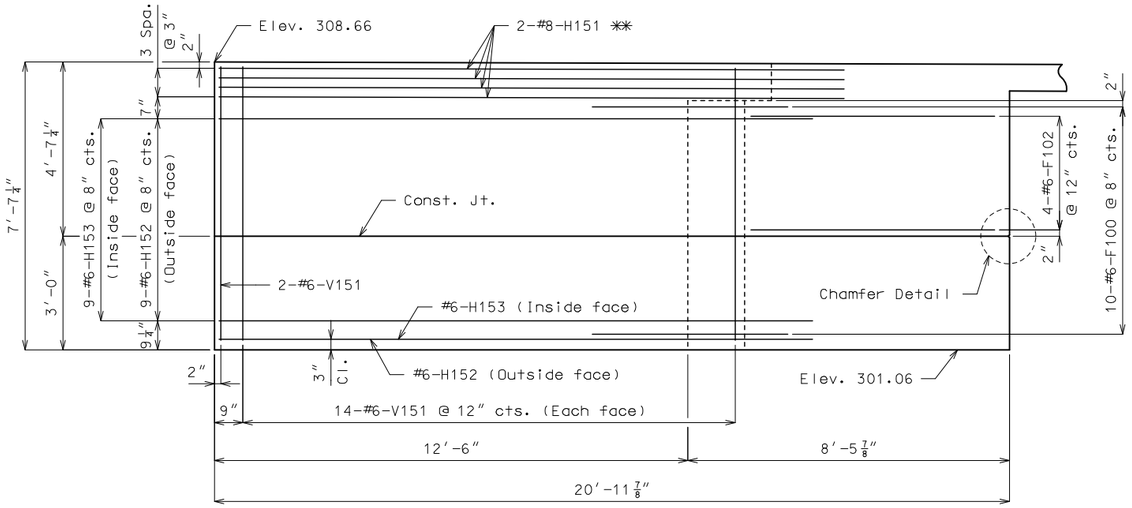
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

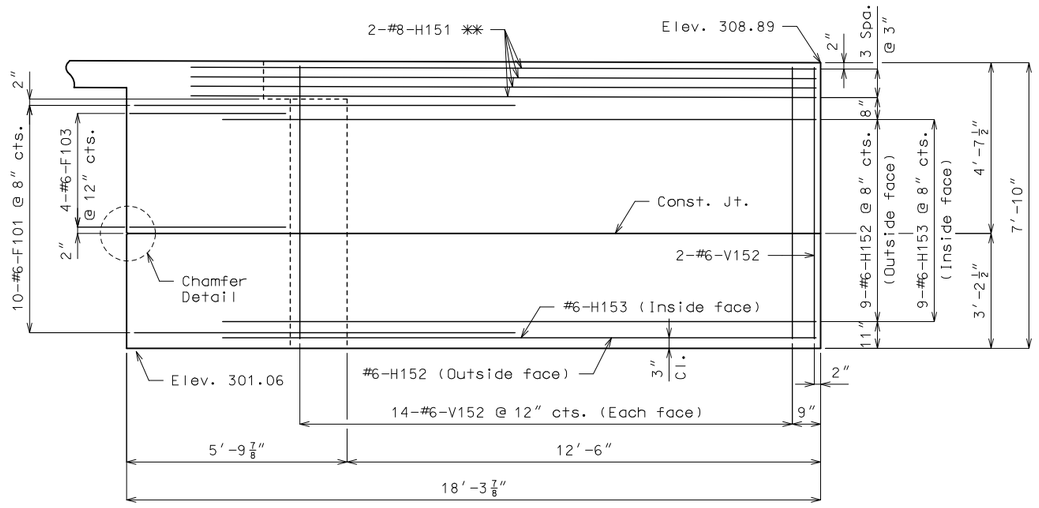
Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_004_J9P3751_End_Bent_1_Details.dgn 10:08:05 AM 3/3/2023

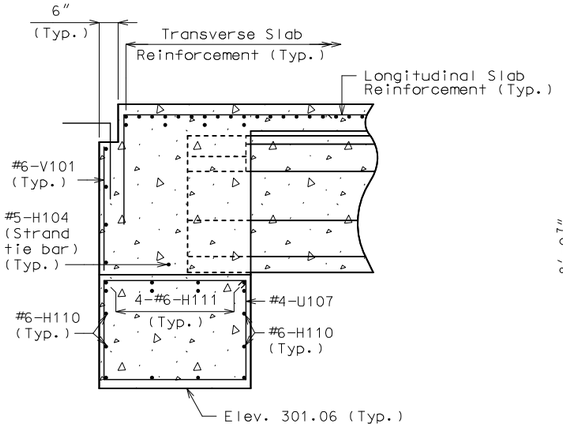


ELEVATION A-A

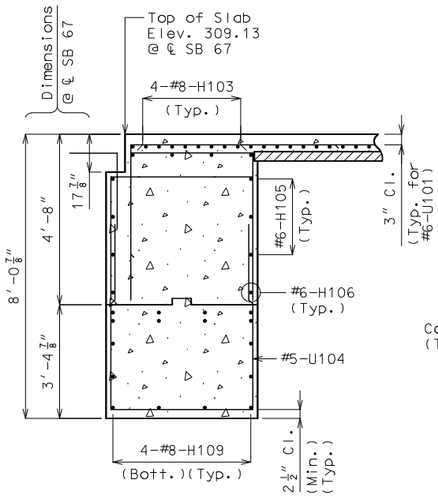


ELEVATION B-B

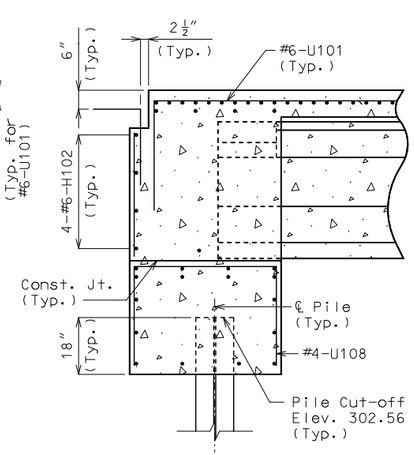
** (Place with grade)



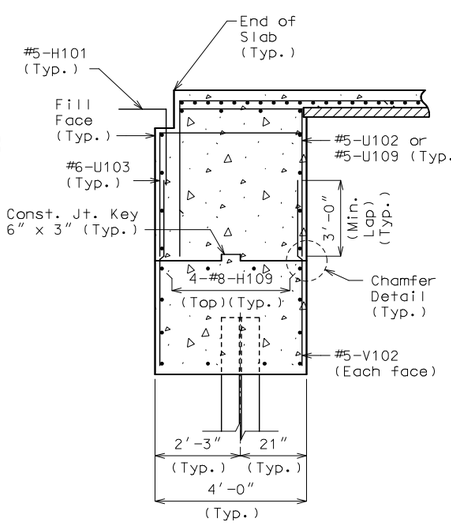
SECTION C-C



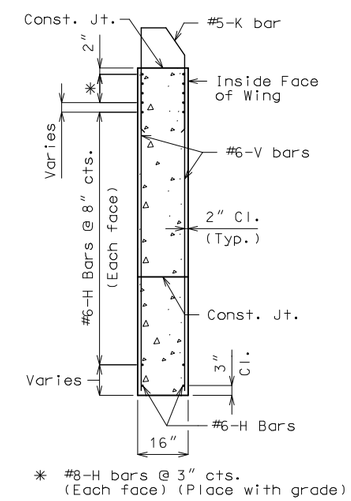
SECTION D-D



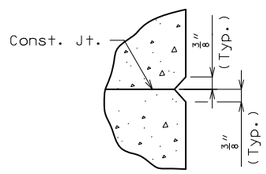
SECTION E-E



SECTION F-F



TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 4.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F100 and #6-F101 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H104 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 4.

For location of Elevations A-A & B-B, see Sheet No. 4.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 1

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	5

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9279

DESCRIPTION	DATE

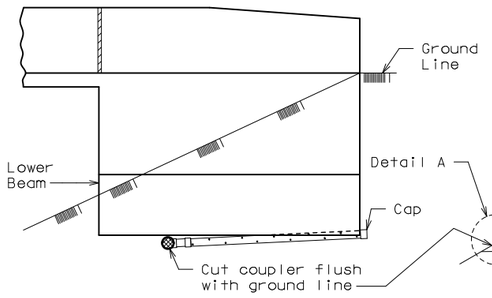
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

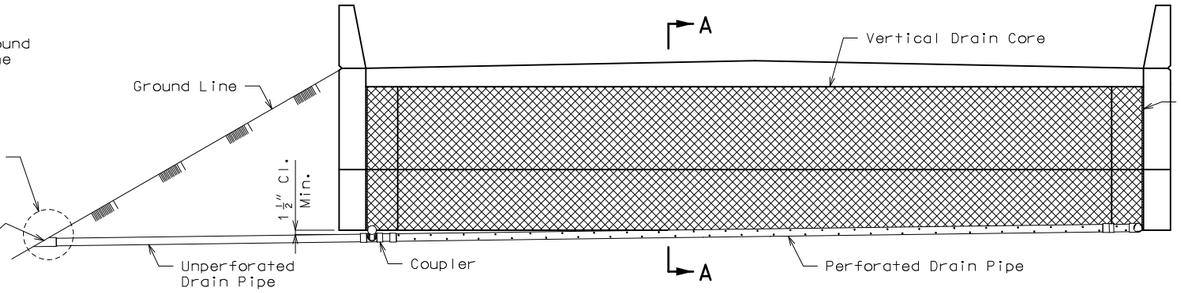
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

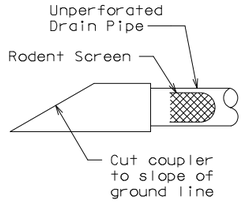
REV.



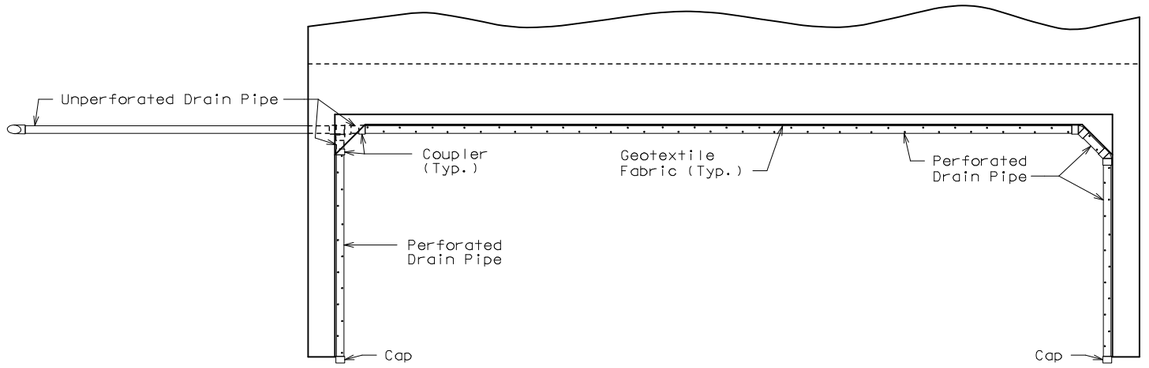


ELEVATION OF WING

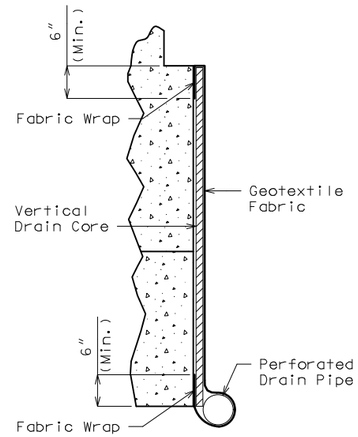
ELEVATION OF END BENT



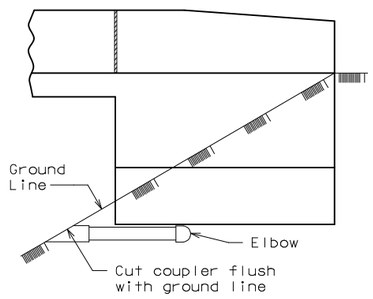
DETAIL A



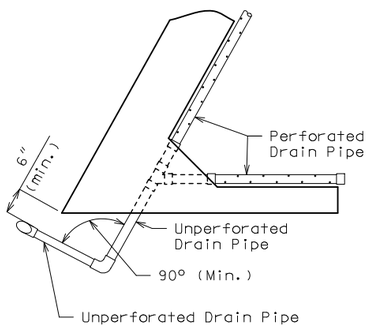
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

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

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

VERTICAL DRAIN AT END BENTS
(Squared end bent shown, skewed end bent similar)

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	6

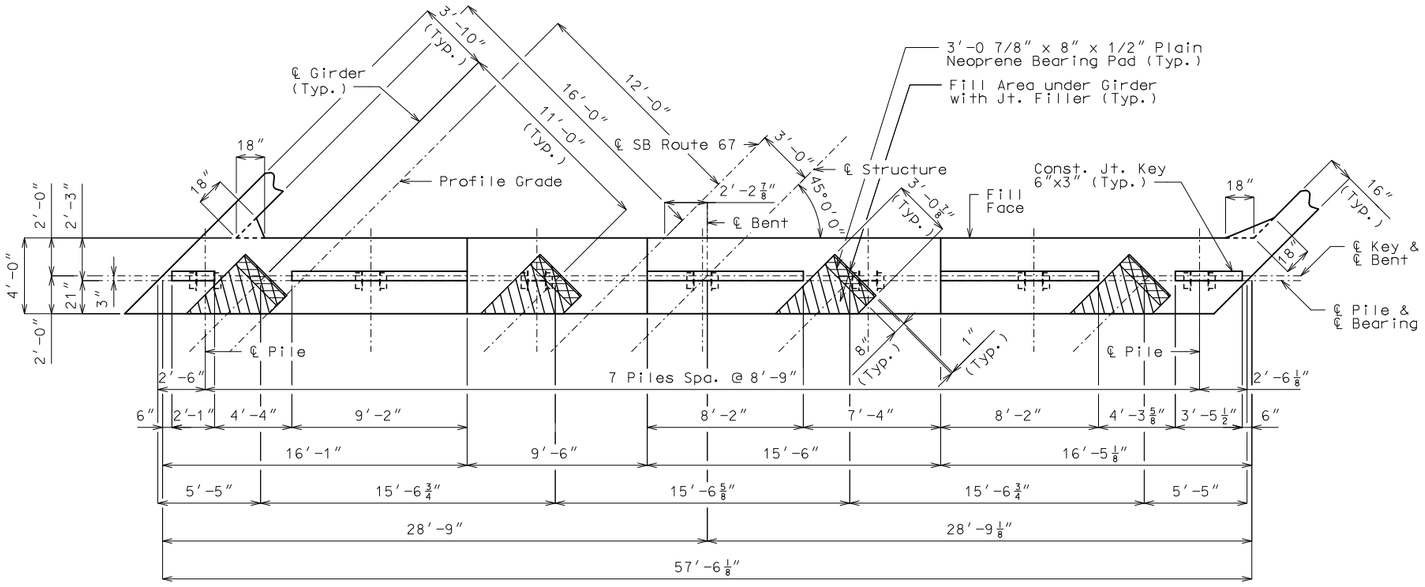
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

REV.	DESCRIPTION	DATE

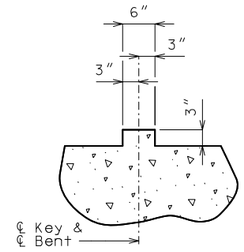
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

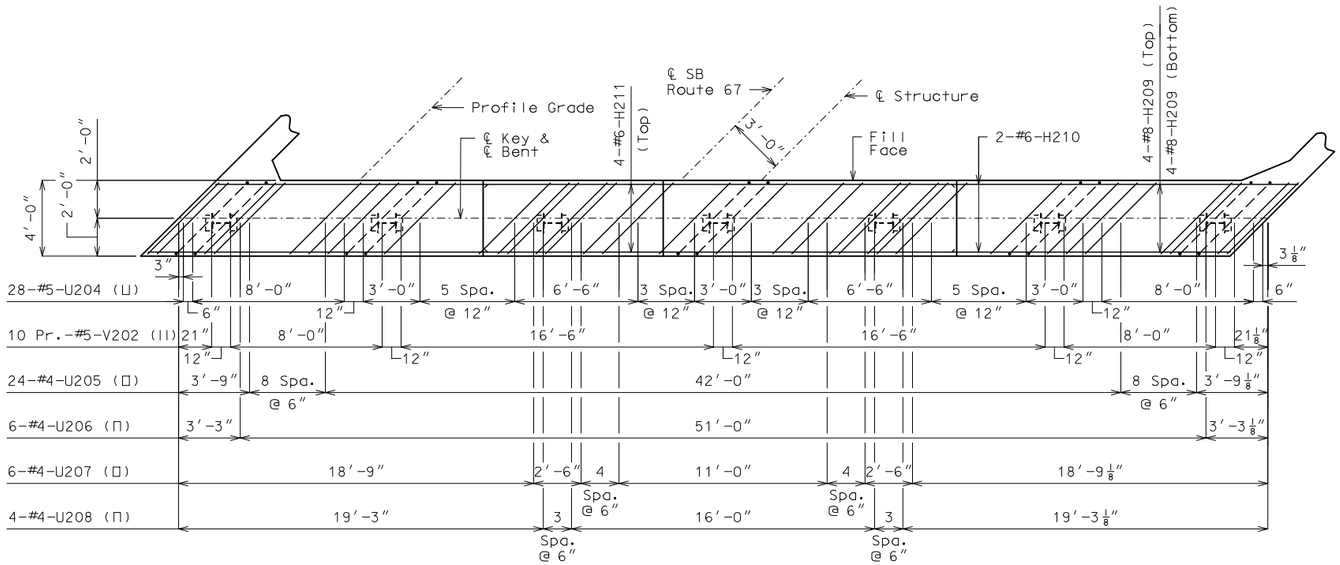
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



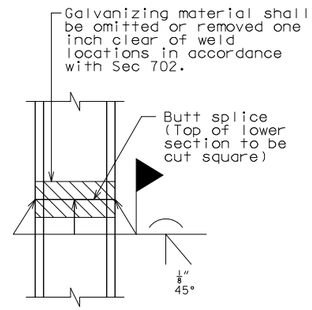
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 8 & 9.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 2

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_007_J9P3751_End_Bent_2_Details.dgn 10:08:09 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	7

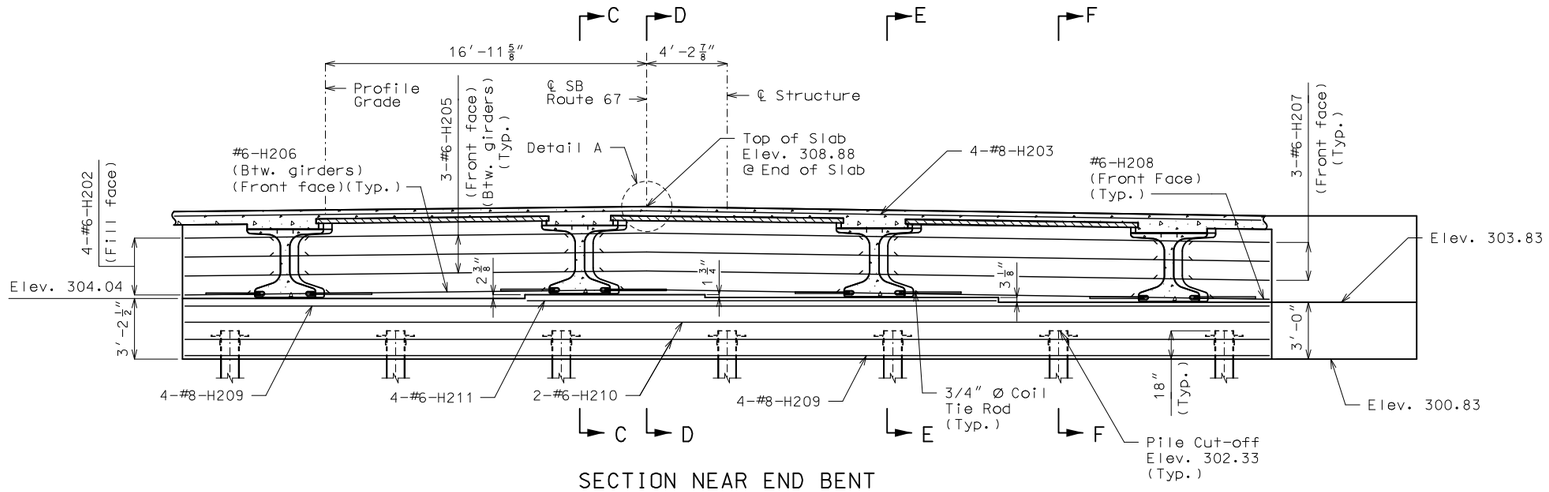
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

REV.	DESCRIPTION	DATE

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

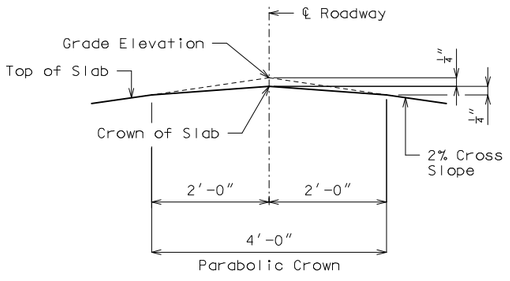
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

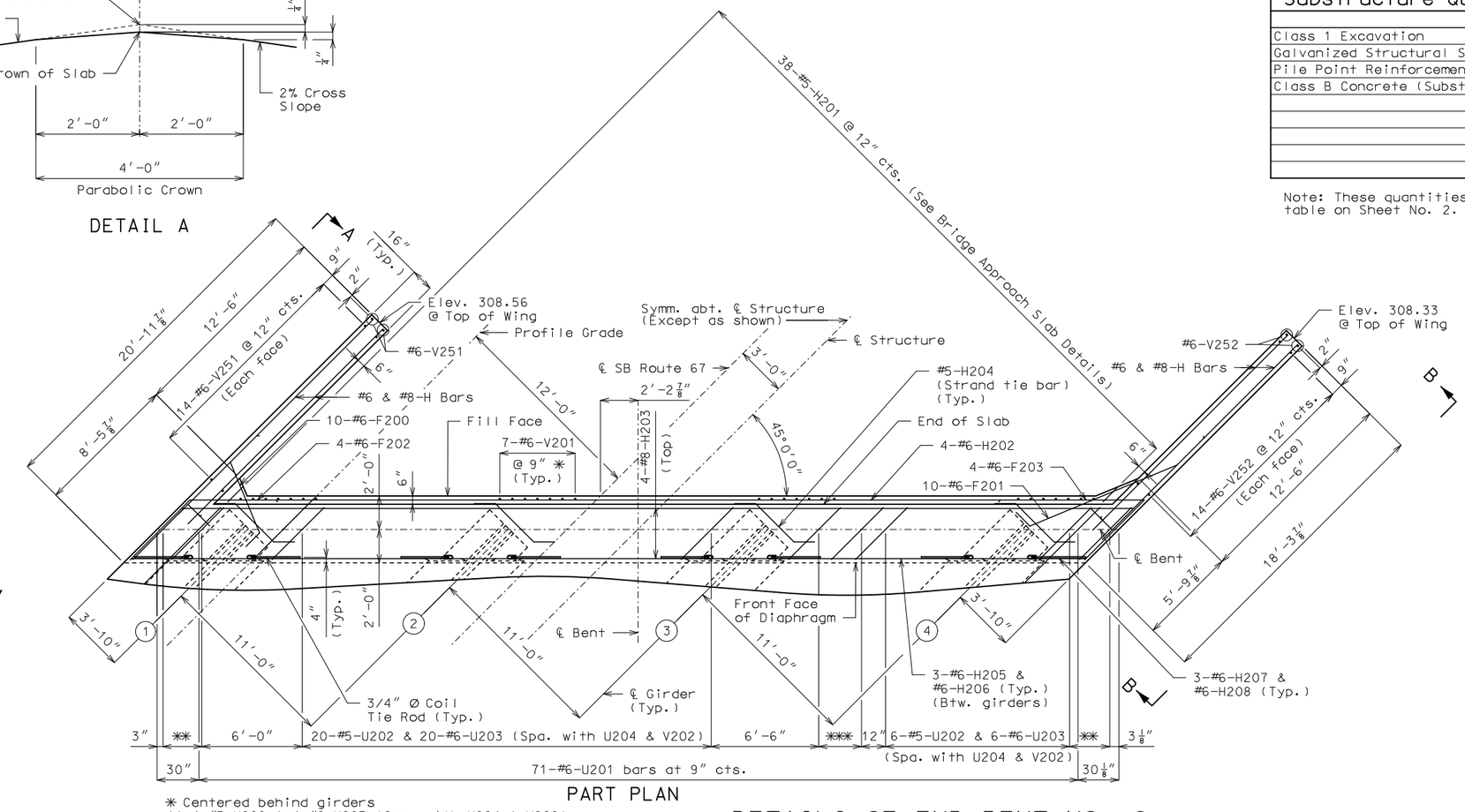


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



PART PLAN

✳ Centered behind girders
✳✳ 4-#5-U209 & 4-#6-U203 (Spa. with U204 & V202)
✳✳✳ 4-#5-U209 & 4-#6-U203 (Spa. with U204)

DETAILS OF END BENT NO. 2

Detailed Oct. 2022
Checked Oct. 2022

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

Sheet No. 8 of 24

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 9.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 9.

For Elevations A-A & B-B, see Sheet No. 9.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H204 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2″.

The #6-F200 and #6-F201 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

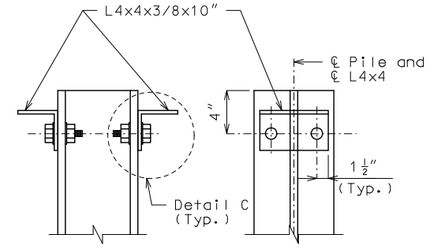
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

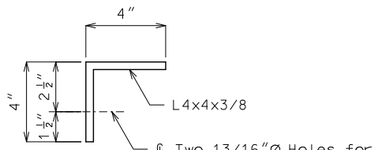
Substructure Quantity Table for Bent No. 2

Item		Quantity
Class 1 Excavation	cu. yard	20
Galvanized Structural Steel Piles (12 in.)	linear foot	567
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	31.9

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	8

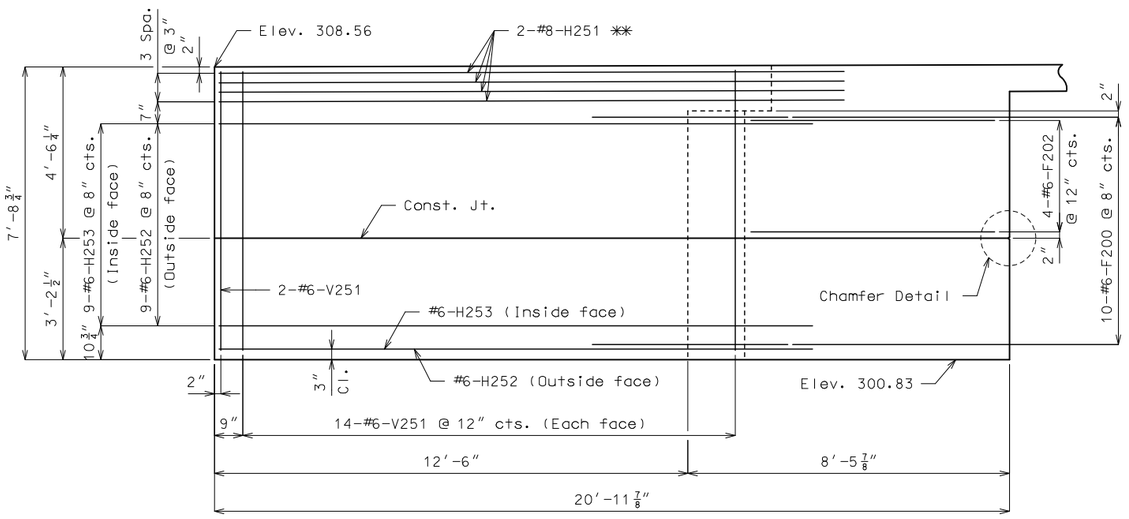
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

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

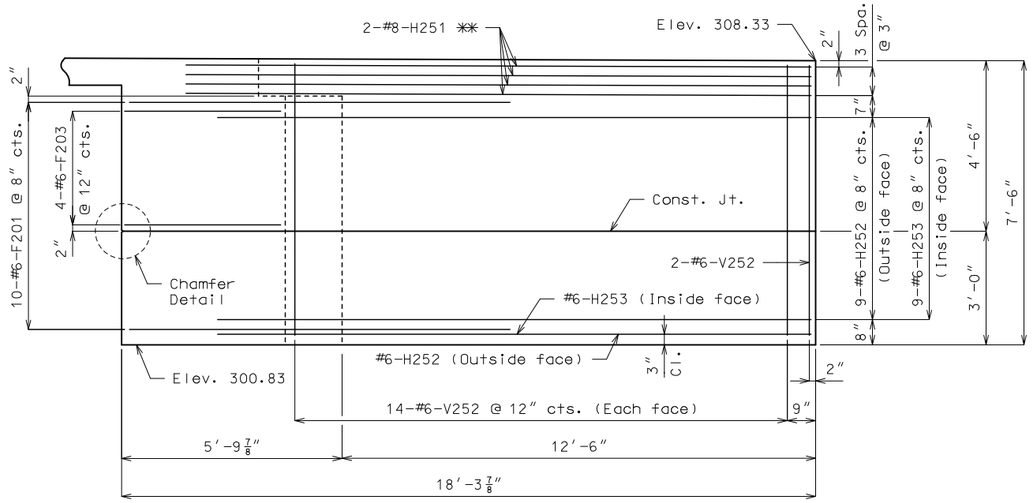
REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

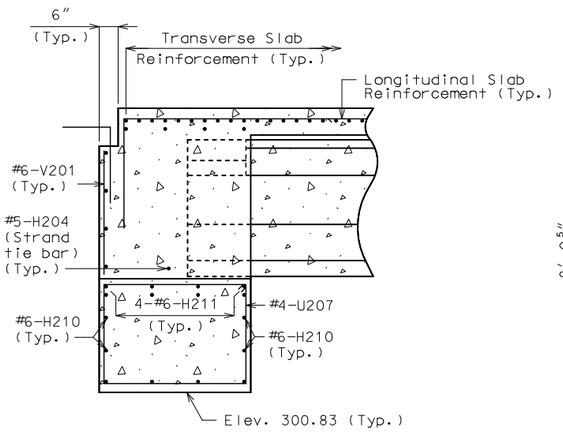


ELEVATION A-A

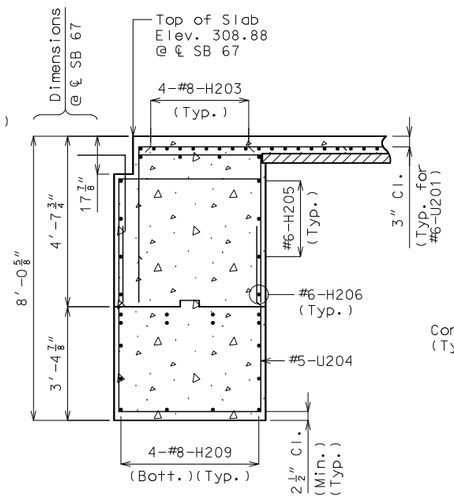


ELEVATION B-B

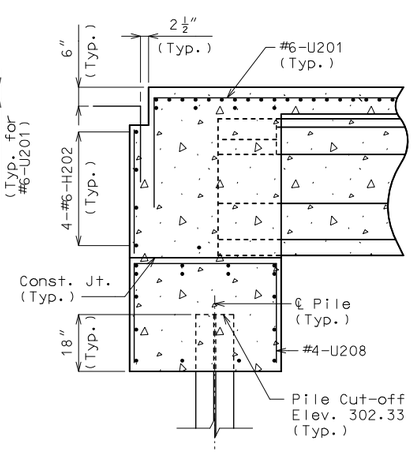
** (Place with grade)



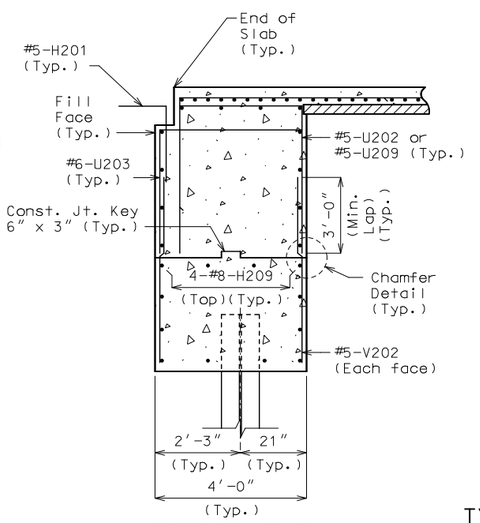
SECTION C-C



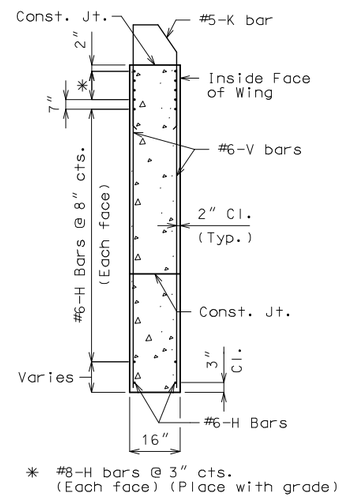
SECTION D-D



SECTION E-E

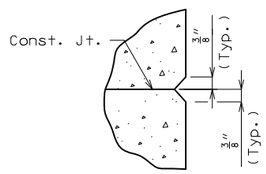


SECTION F-F



* #8-H bars @ 3″ cts. (Each face) (Place with grade)

TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 8.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F200 and #6-F201 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H204 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 8.

For location of Elevations A-A & B-B, see Sheet No. 8.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 2

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	9

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

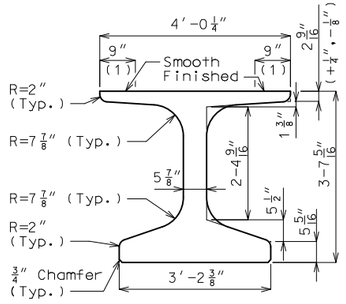
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE	REV.

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

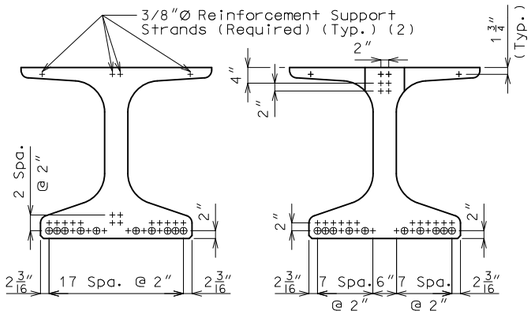
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

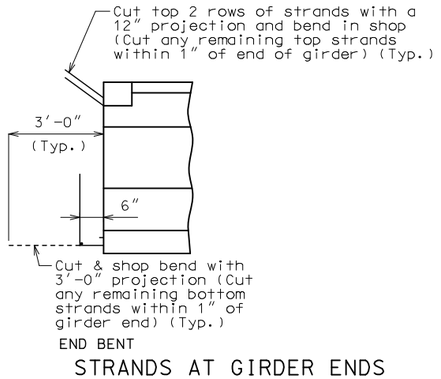


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

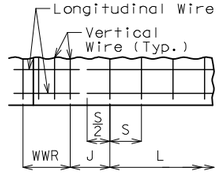
\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.



END BENT

STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

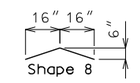
Bars Each Girder

No.	Size/Mark	Length	Shape
105	3 G1	2′-10″	8
2	4 G3	5′-5″	20
14	4 G6	Varies	20

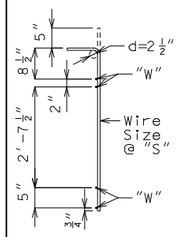
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4″	W12	4′-4″	8″
WWR2	D31	8″	W12	22′-8″	12″
WWR3	D31	12″	W12	23′-0″	–
WWR6	D31	2″	W12	16″	2¾″

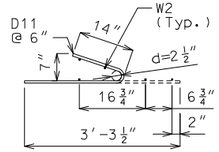
Bending Diagrams



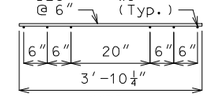
Shape 20



WWR1, WWR2, WWR3 & WWR6



WWR4



WWR5

All dimensions are out to out.

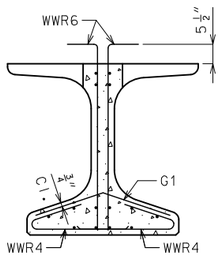
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

Minimum clearance to reinforcing shall be 1″, unless otherwise shown.

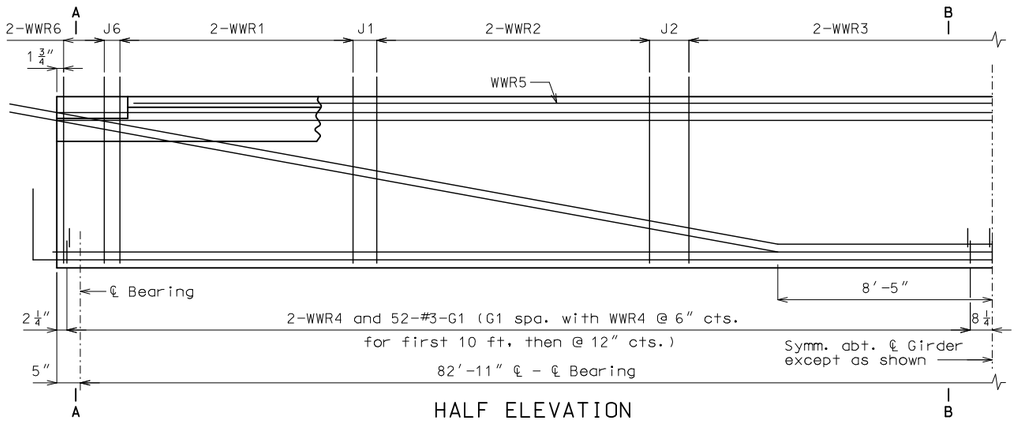
All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.



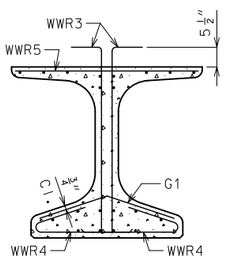
SECTION A-A

Strands not shown for clarity.



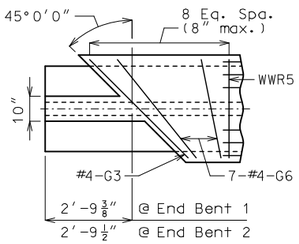
HALF ELEVATION

Reinforcement support strands not shown for clarity.

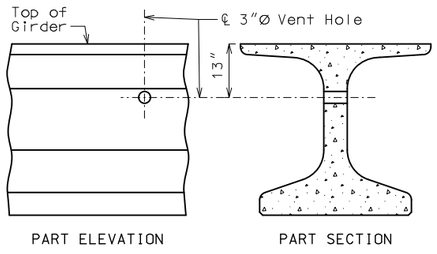


SECTION B-B

Strands not shown for clarity.



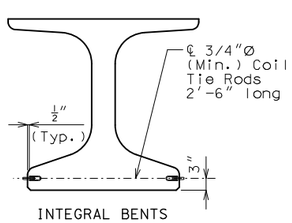
TOP FLANGE BLOCKOUT



PART ELEVATION PART SECTION

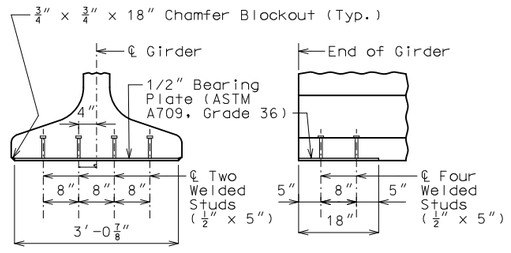
VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



INTEGRAL BENTS

COIL TIES



END VIEW SIDE VIEW

BEARING PLATE

General Notes:

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

Use 30 strands, 0.6″Ø Grade 270, with an initial prestress force of 1318 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bents see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

NU-GIRDERS - SPAN (1-2)

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	10

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9279

DESCRIPTION	DATE

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

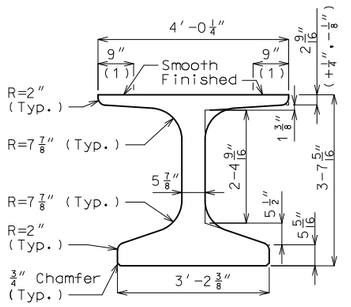
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

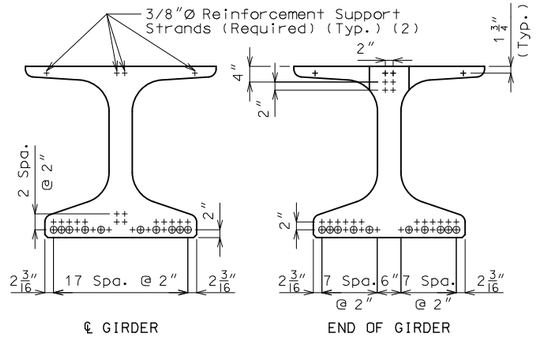
REV.

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



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

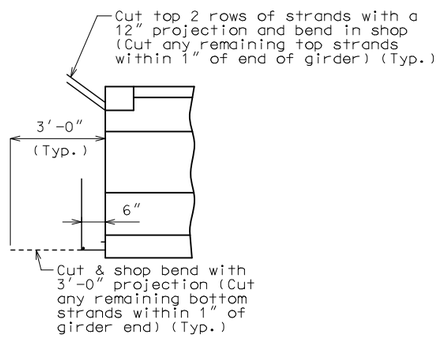


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.



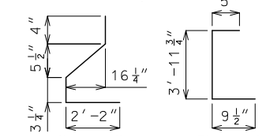
END BENT

STRANDS AT GIRDER ENDS

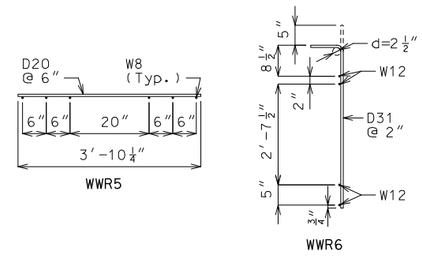
Bill of Reinforcing Steel - Each Girder

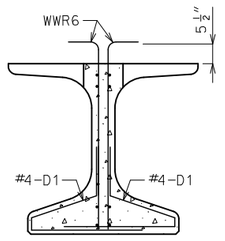
No.	Size/ Mark	Length	Shape
216	5 B1	5′-0″	11
236	4 D1	4′-0″	9
2	4 G3	5′-5″	20
14	4 G6	Varies	20

Bending Diagrams



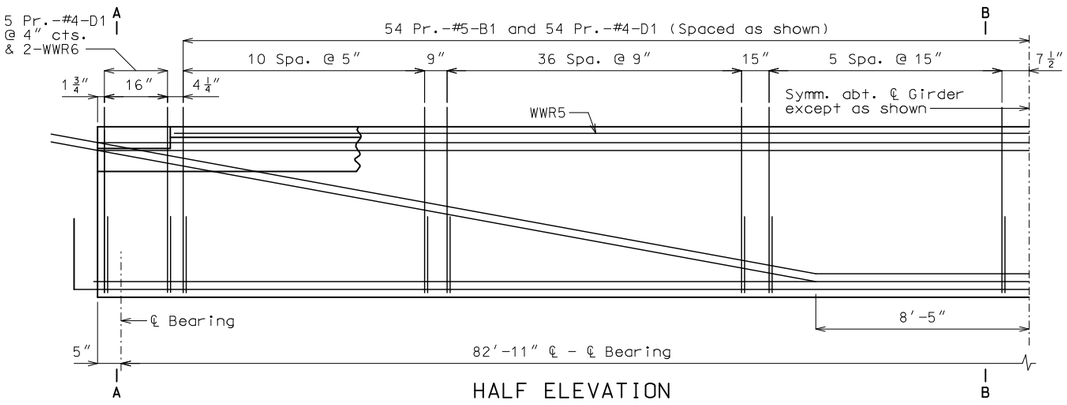
Welded Wire Reinforcement - Each Girder





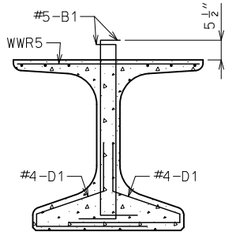
SECTION A-A

Strands not shown for clarity.



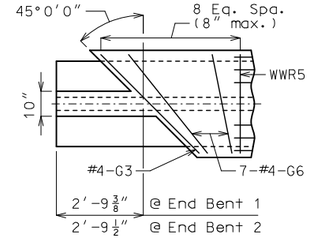
HALF ELEVATION

Reinforcement support strands not shown for clarity.

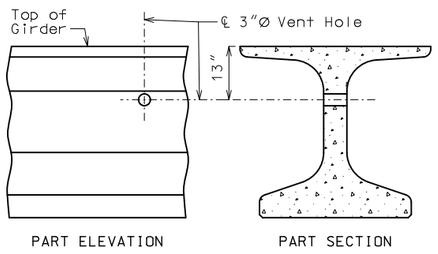


SECTION B-B

Strands not shown for clarity.

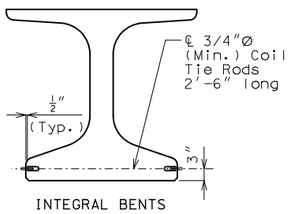


TOP FLANGE BLOCKOUT



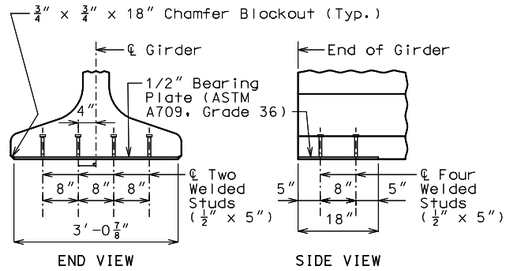
VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



INTEGRAL BENTS

COIL TIES



BEARING PLATE

All dimensions are out to out.

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

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

Minimum clearance to reinforcing shall be 1″.

All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.

General Notes:

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

Use 30 strands, 0.6″Ø Grade 270, with an initial prestress force of 1318 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bent, see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	11

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9279

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

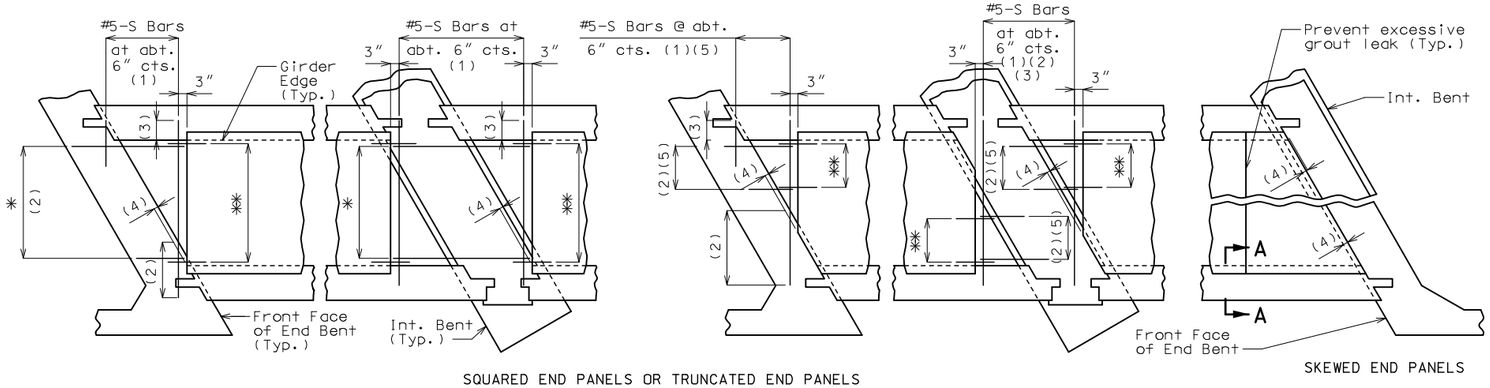
REV.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

Detailed Oct. 2022
Checked Oct. 2022

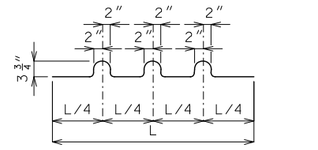
Note: This drawing is not to scale. Follow dimensions.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_011_J9P3751_NU_Girder_Bar.dgn 10:08:13 AM 3/3/2023



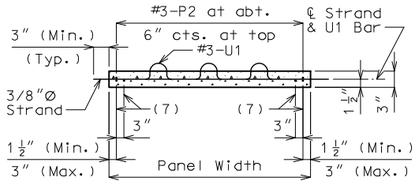
PLAN SHOWING PANELS PLACEMENT

✳ #5-S Bars at abt. 9" cts. (1)
✳✳ #3-P1 at 12" cts. (End panels only)

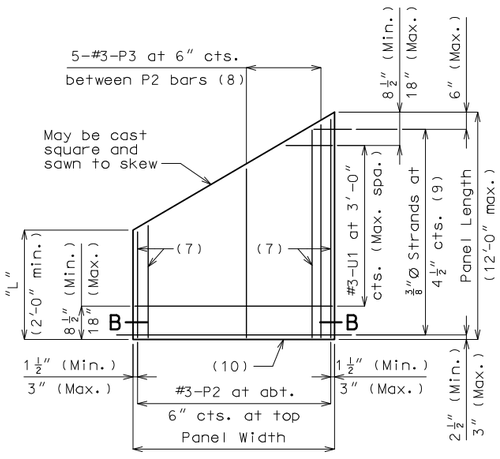


BENDING DIAGRAM FOR U1 BAR

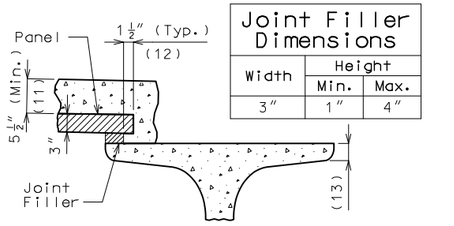
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



SECTION B-B

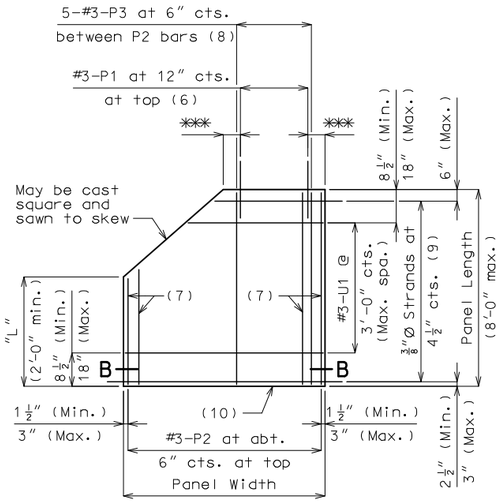


PLAN OF OPTIONAL SKEWED END PANEL



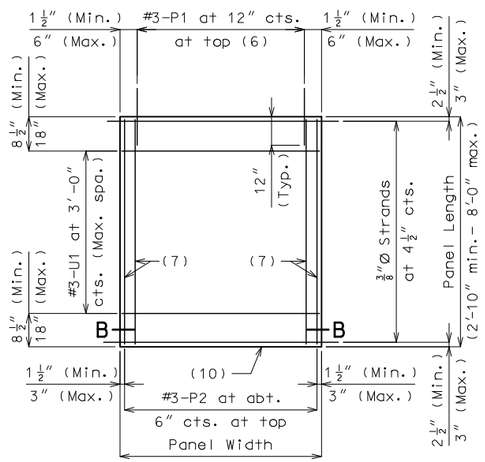
Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"

SECTION A-A



PLAN OF OPTIONAL TRUNCATED END PANEL

✳✳✳ 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

DETAILS OF PRESTRESSED PANELS

Reference Notes:

Plan of Panels Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:

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

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

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

Initial prestressing force = 17.2 kips/strand.

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

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

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

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

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

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

Reinforcing Steel:

All dimensions are out to out.

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

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

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

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

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

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

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

All reinforcement other than prestressing strands shall be epoxy coated.

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

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

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

Joint Filler:

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

Use Slab Haunching Diagram on Sheet No. 14 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

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

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/4 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

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

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

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	12

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

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

DESCRIPTION | DATE | REV.

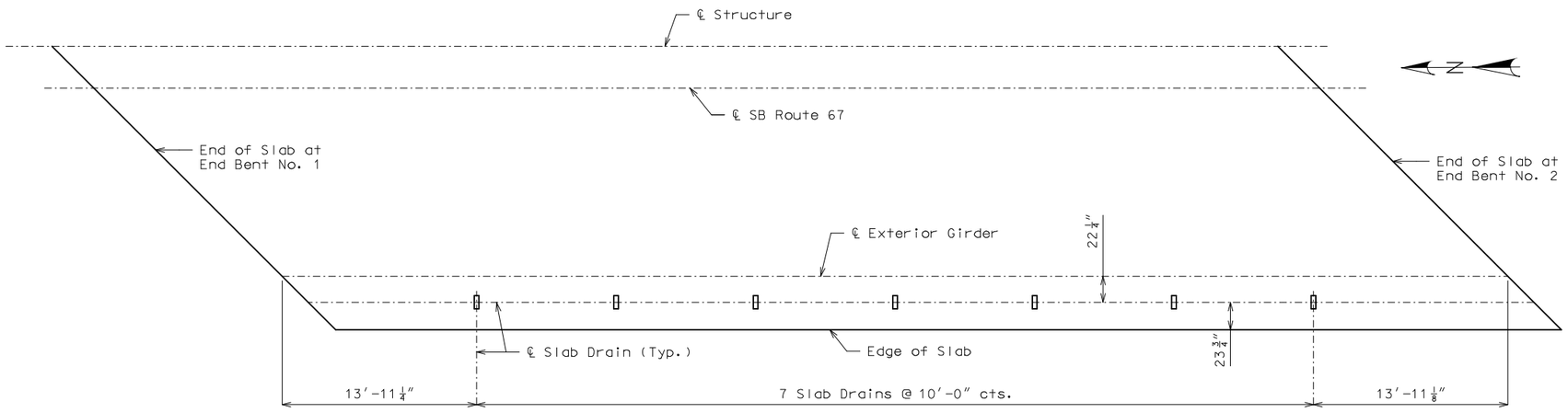
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Oct. 2022
Checked Oct. 2022

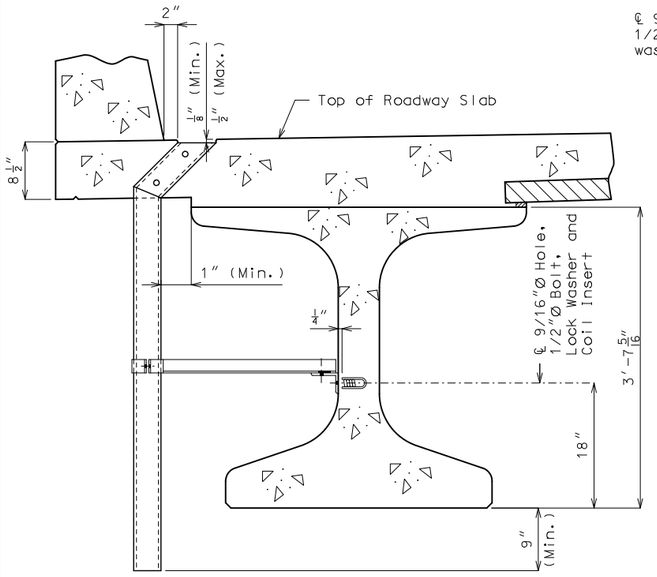
Note: This drawing is not to scale. Follow dimensions.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_012_J9P3751_Precast_Prestressed_Panels.dgn 10:08:15 AM 3/3/2023

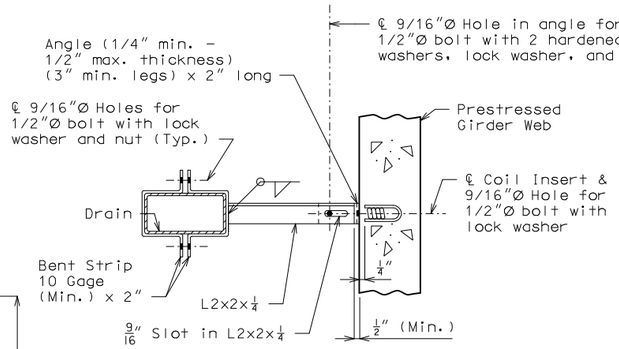


PART PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

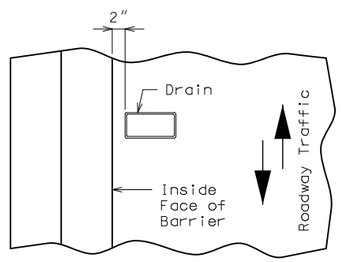
(Right side shown, left side similar)
Note: Longitudinal dimensions are horizontal.



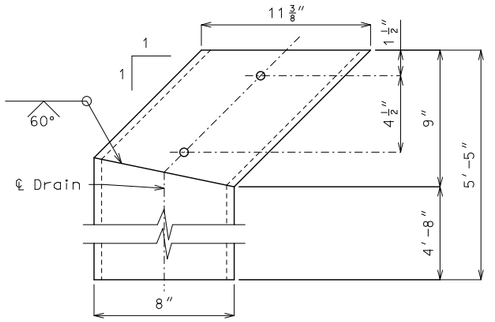
PART SECTION NEAR DRAIN



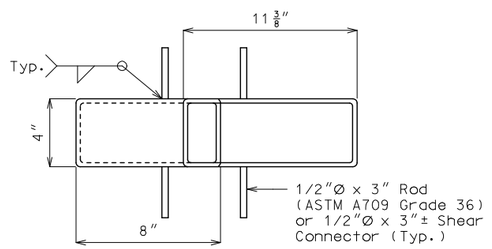
PART SECTION SHOWING BRACKET ASSEMBLY



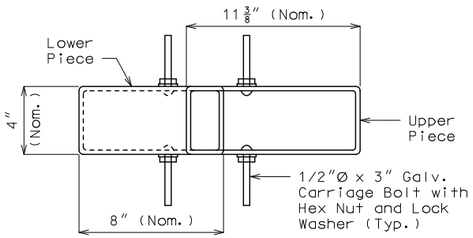
PART PLAN OF SLAB AT DRAIN



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

SLAB DRAINS

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 coil inserts and 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.

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

The coil insert required for the bracket assembly attachment shall be located on the prestressed girder shop drawings.

Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 2,500 pounds in 5,000 psi concrete.

The bolt required to attach the slab drain bracket assembly to the prestressed girder web shall be supplied by the prestressed girder fabricator.

Notes for Steel Drain:

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

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

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

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

Minimum reinforced wall thickness shall be 1/4 inch.

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

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

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

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

Both upper and lower drain pieces shall be rigidly connected to each other. Drain flow shall not be obstructed. Approval of the engineer is required.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	13
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9279	

REV.	DESCRIPTION	DATE

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

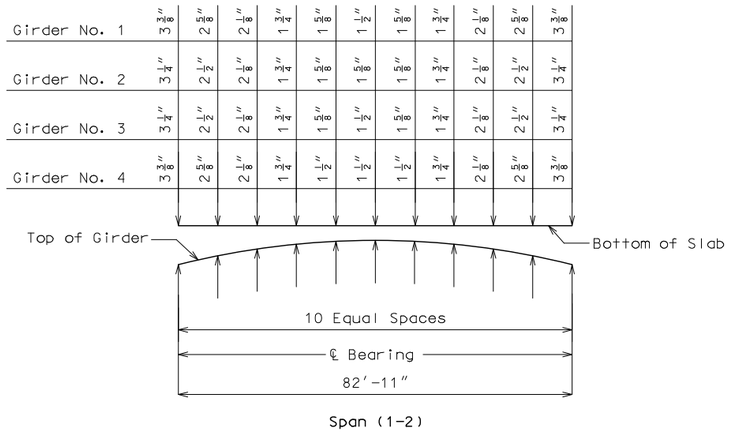
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harvell Ditch\A9279\B_A9279_013_J9P3751_Slab_Drain.dgn 10:08:16 AM 3/3/2023



Span (1-2)

THEORETICAL SLAB HAUNCHING DIAGRAM

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Girder	Span (1-2)		
	A	B	C
Exterior	1 7/8″	3 1/4″	1 7/8″
Interior	1 5/8″		

GIRDER CAMBER DIAGRAM

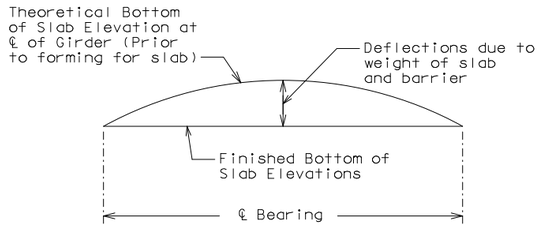
Conversion factors for girder camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (82′-11″ ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	307.92	307.96	307.98	307.99	307.98	307.96	307.93	307.89	307.84	307.78	307.69
2	308.12	308.16	308.17	308.17	308.16	308.14	308.12	308.08	308.03	307.97	307.89
3	307.97	308.01	308.02	308.02	308.01	307.99	307.97	307.93	307.88	307.82	307.74
4	307.71	307.75	307.77	307.78	307.77	307.75	307.72	307.68	307.63	307.57	307.48

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.



TYPICAL SLAB ELEVATIONS DIAGRAM

TBOS, HAUNCHING AND CAMBER

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

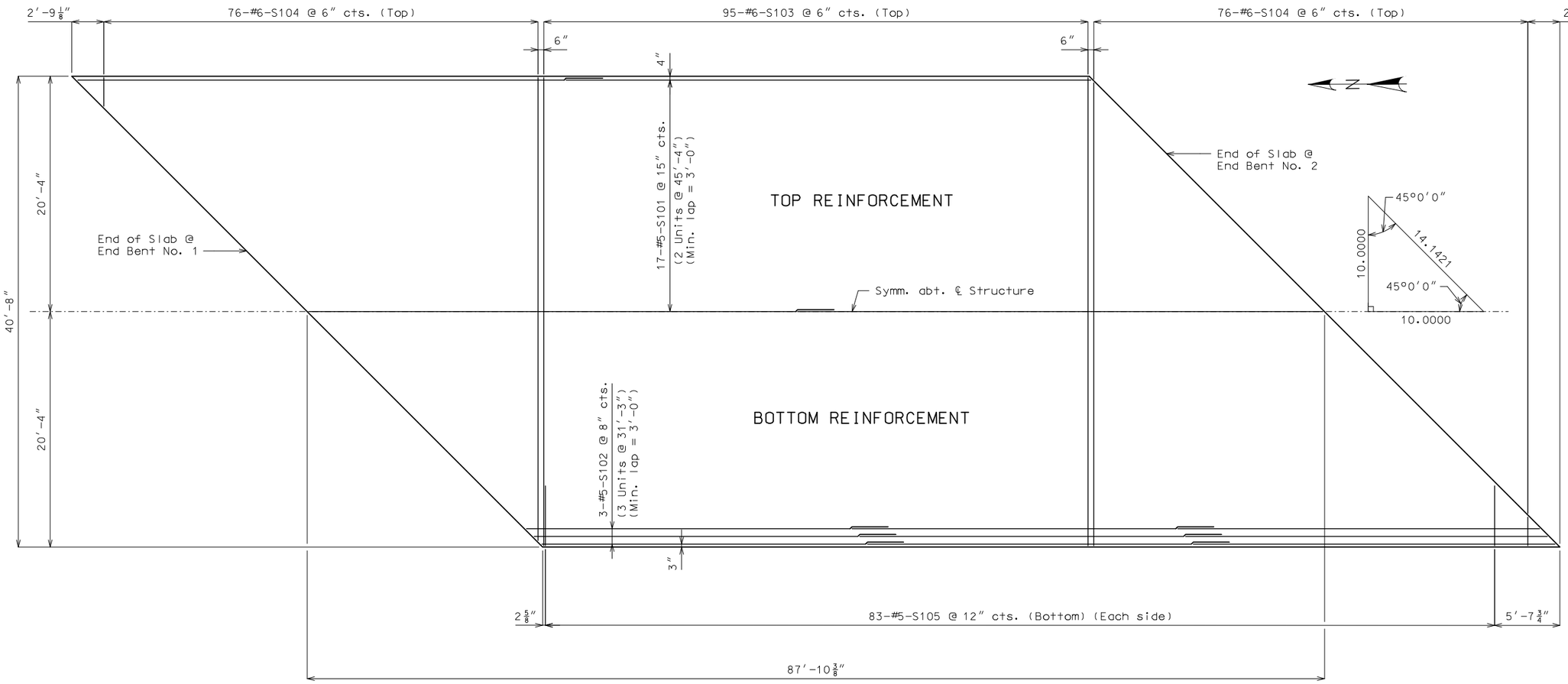
DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 14
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

REV.	DESCRIPTION	DATE

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.



PLAN OF SLAB SHOWING REINFORCEMENT

General Notes:

Longitudinal slab dimensions shown are horizontally.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Section Thru Slab, see Sheet No. 16.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 and 18.

SLAB REINFORCEMENT DETAILS

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	15

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

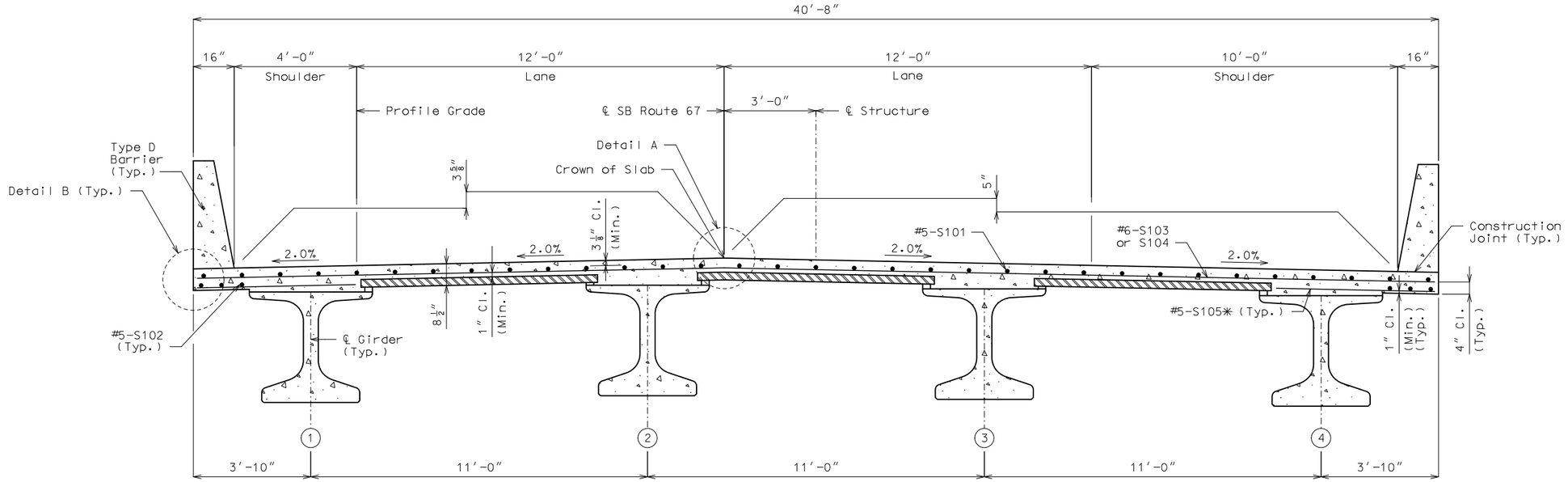
DESCRIPTION	DATE

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

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

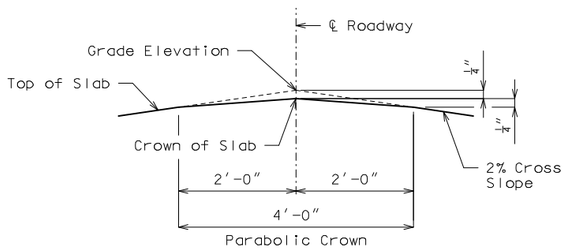
© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

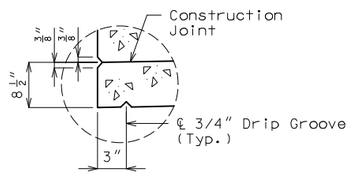


SECTION THRU SLAB

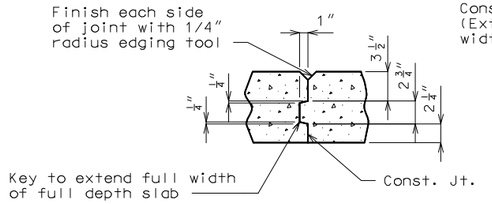
✱ Alternate bar shape available, see barrier sheets.



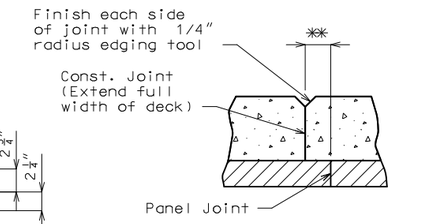
DETAIL A



DETAIL B



FULL DEPTH SLAB

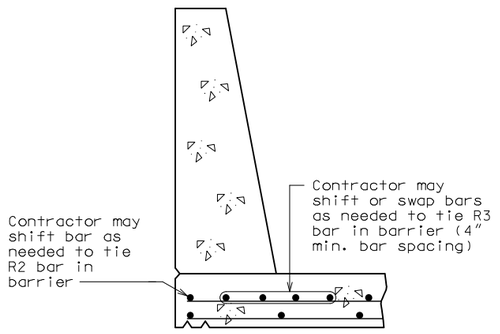


✱✱ Adjust the construction joint to a clearance of 6 inches minimum from the panel joint.

SLAB ON PANELS

SLAB CONSTRUCTION JOINT

(If needed)



OPTIONAL SHIFTING TOP BARS AT BARRIER

General Notes:

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 & 18.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Plan of Slab Showing Reinforcement, see Sheet No. 15.

The contractor shall pour and satisfactorily finish the roadway slab at a rate of not less than 25 cubic yards per hour.

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

DETAILS OF SLAB REINFORCING

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_016_J9P3751_Section_thru_Slab.dgn 10:08:19 AM 3/3/2023

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	16

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9279

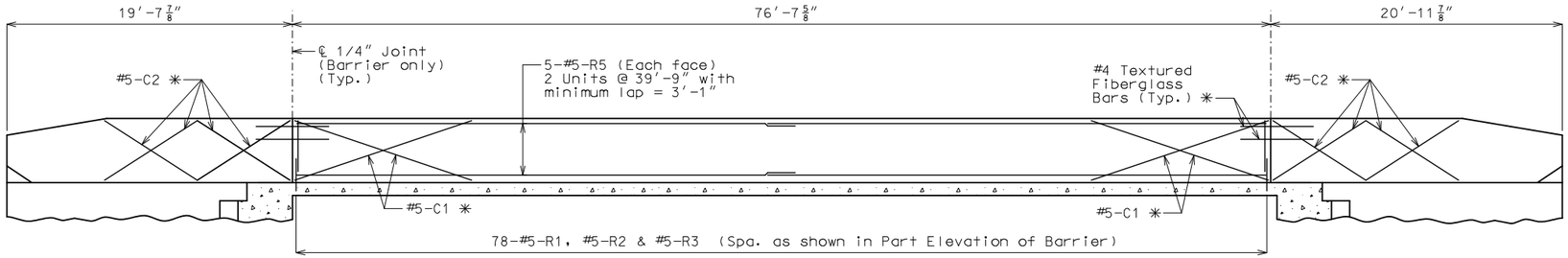
DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

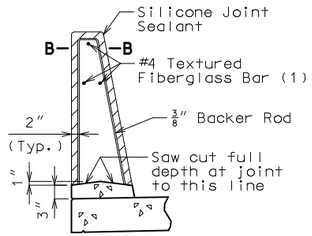


Span (1-2)

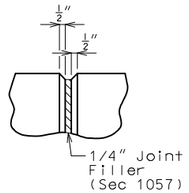
ELEVATION OF BARRIER

(Left barrier shown, right barrier similar by 180° rotation)

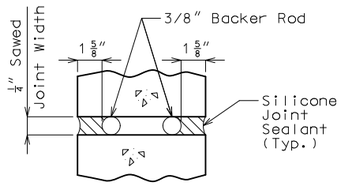
Longitudinal dimensions are horizontal.



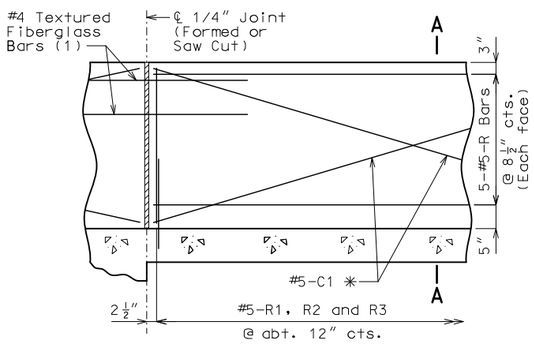
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

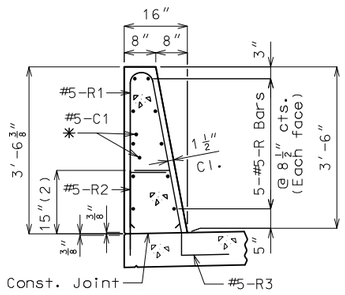


SECTION B-B



PART ELEVATION OF BARRIER

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

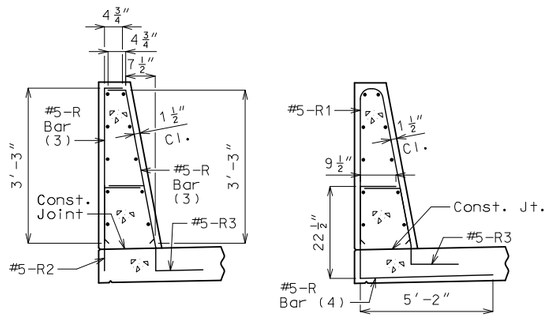


SECTION A-A

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.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

✳ Slip-formed option only.

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

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

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type 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 wing to end of wing.

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

TYPE D BARRIER

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_017_J9P3751_Barrier_Elevations.dgn 10:08:20 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	17

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

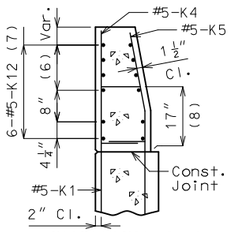
BRIDGE NO. A9279

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

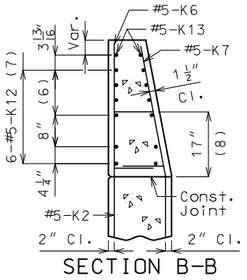
REV.	DESCRIPTION	DATE

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

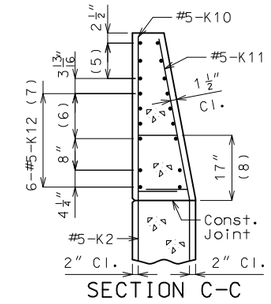
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



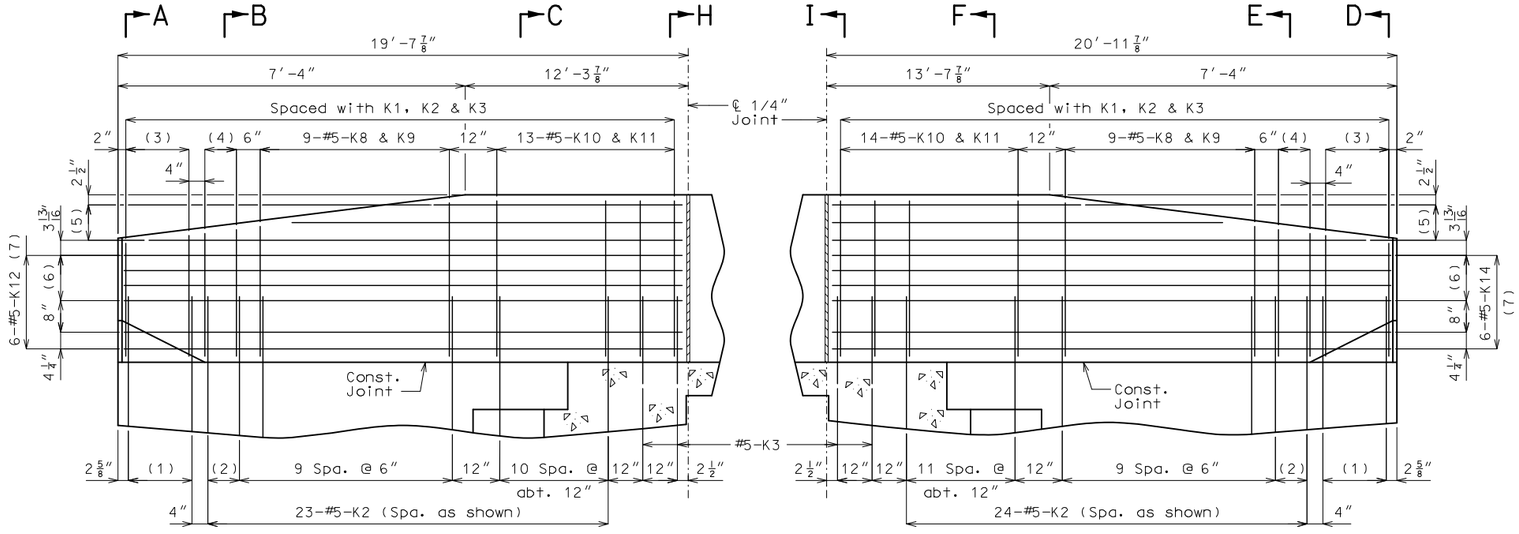
SECTION A-A



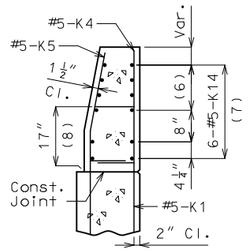
SECTION B-B



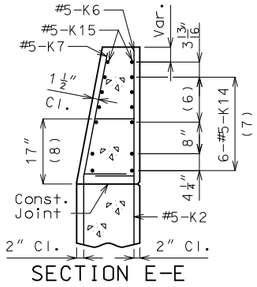
SECTION C-C



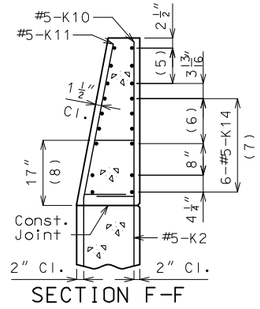
PART ELEVATION



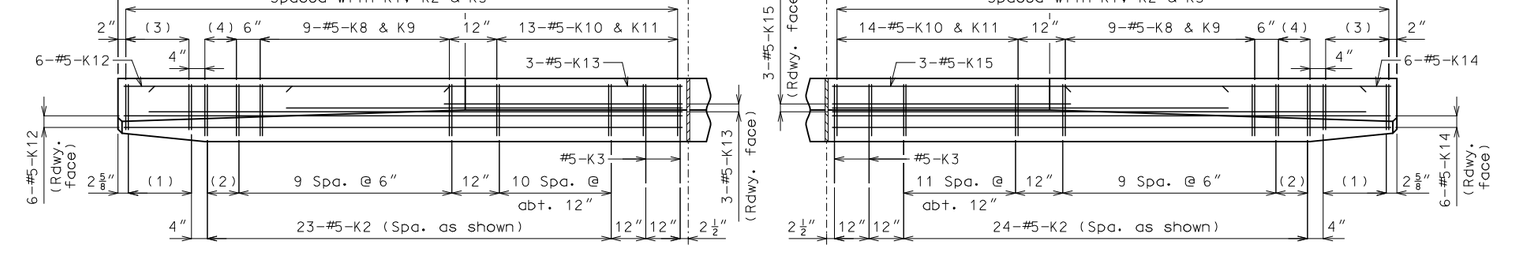
SECTION D-D



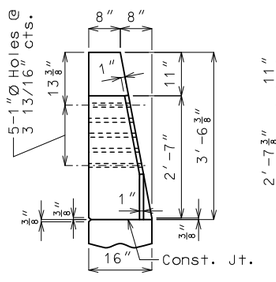
SECTION E-E



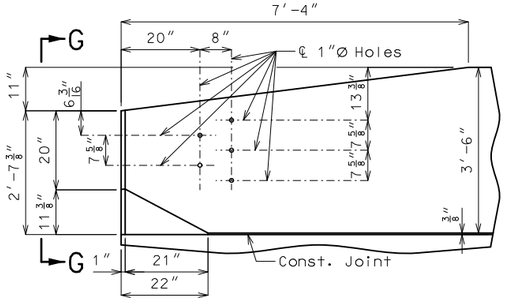
SECTION F-F



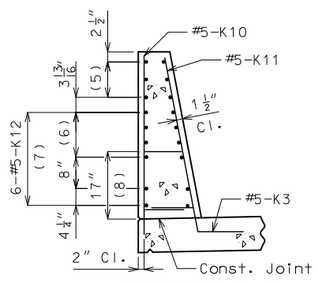
PART PLAN



ELEVATION G-G



ELEVATION



SECTION H-H

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

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

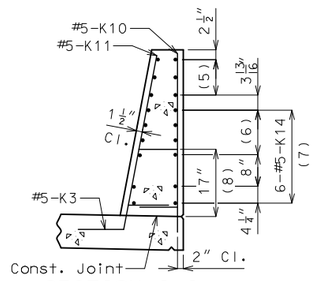
(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

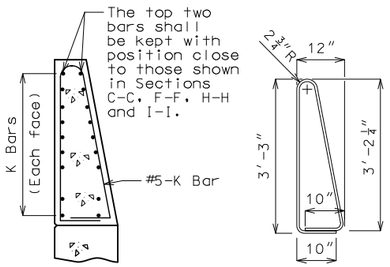
(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar



SECTION I-I

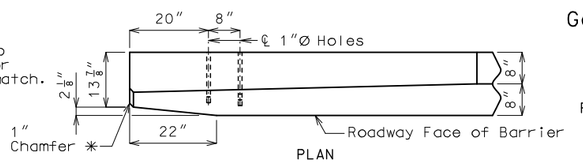


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(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.



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

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

Reinforcing Steel:

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

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar by 180° rotation)

Detailed Oct. 2022
Checked Oct. 2022

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

Sheet No. 18 of 24

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	18

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

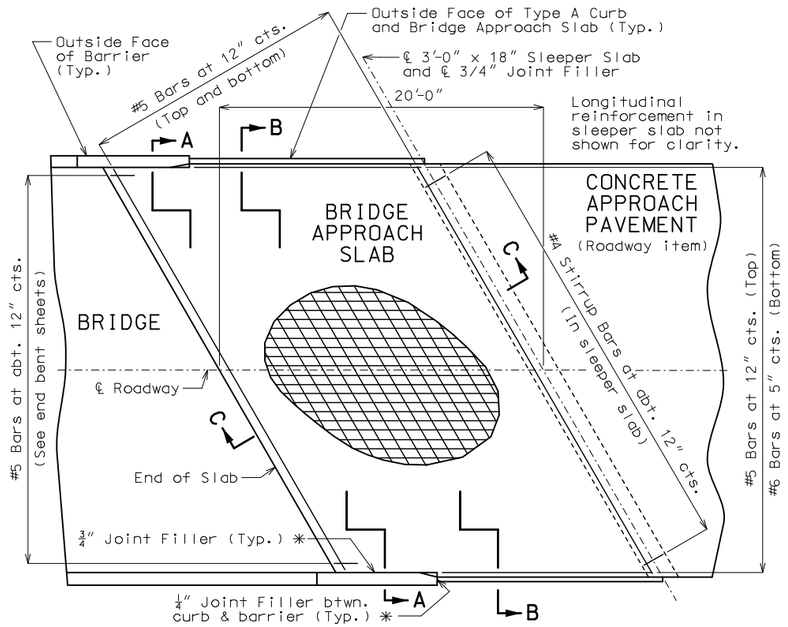
DESCRIPTION	DATE

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

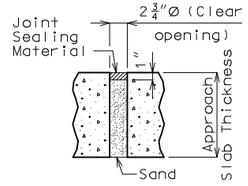
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

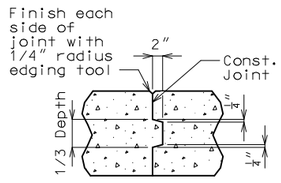


PART PLAN SHOWING REINFORCEMENT



UNDERSEAL ACCESS HOLE DETAIL

(If required)



CONSTRUCTION JOINT DETAIL

(If required)

General Notes:

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

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

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

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

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

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

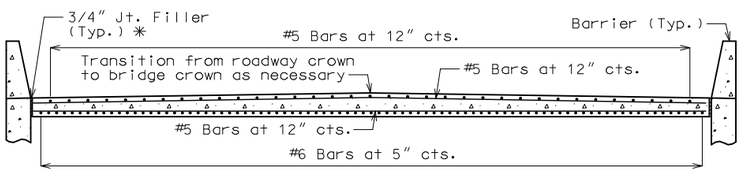
Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

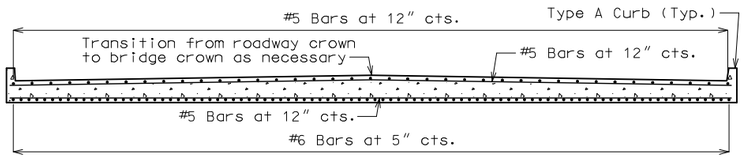
See Missouri Standard Plan 609.00 for details of Type A curb.

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

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

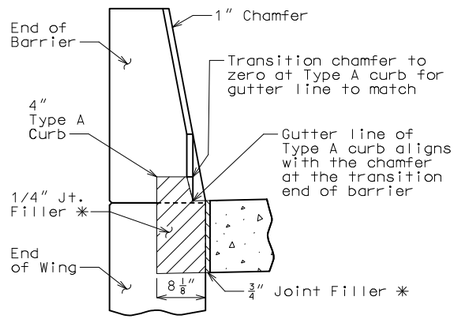


SECTION A-A

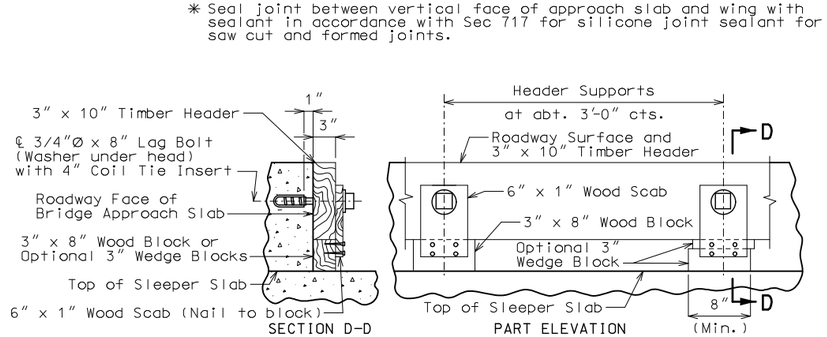


SECTION B-B

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

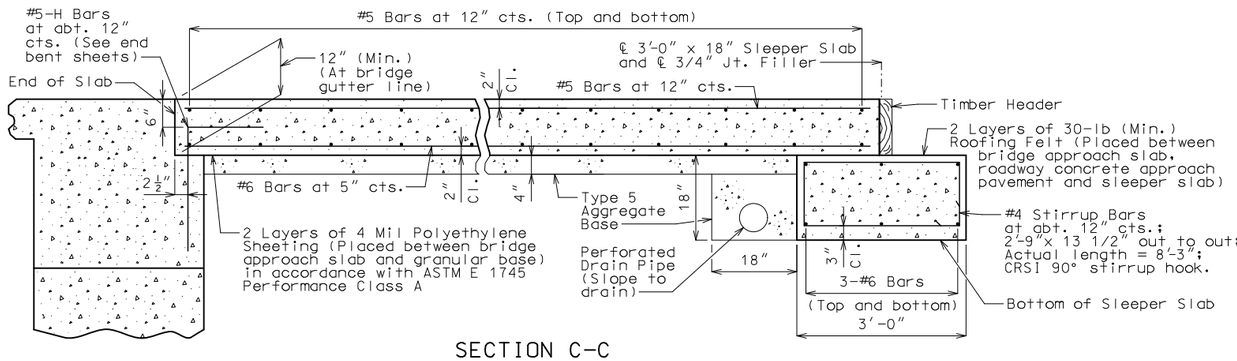


SECTION BETWEEN CURB AND BARRIER



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.



SECTION C-C

BRIDGE APPROACH SLAB (MAJOR)

JOSHUA D. JOLLIFF NUMBER PE-2006002824 PROFESSIONAL ENGINEER STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	19

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9279

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed Oct. 2022
Checked Oct. 2022

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

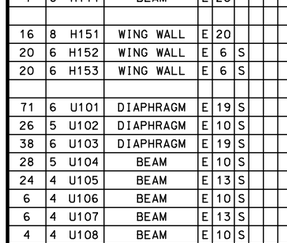
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_019_J9P3751_Approach_Slab.dgn 10:08:22 AM 3/3/2023

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
10	6	F100	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250		2	1.000	10.250		8	0	7	9	117
10	6	F101	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250		2	1.000	13.000		5.250		12	11	12	10	193
4	6	F102	DIAPHRAGM	E	23					5	2.250	5	1.000							3	8.000	3	8.000	10	4	10	3	62
4	6	F103	DIAPHRAGM	E	21					8	7.500	5	1.000							6	1.250	6	1.250	13	9	13	6	82
38	5	H101	DIAPHRAGM	E	19					2	0.000	15.000												3	3	3	2	126
4	6	H102	DIAPHRAGM	E	20					57	1.000													57	1	57	1	343
4	8	H103	DIAPHRAGM	E	20					57	1.000													57	1	57	1	610
4	5	H104	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750		5	10	5	9	24
9	6	H105	DIAPHRAGM	E	20					14	0.000													14	0	14	0	190
3	6	H106	DIAPHRAGM	E	20					10	8.000													10	8	10	8	49
6	6	H107	DIAPHRAGM	E	20					4	5.000													4	5	4	5	40
2	6	H108	DIAPHRAGM	E	20					2	9.000													2	9	2	9	9
8	8	H109	BEAM	E	20					57	1.000													57	1	57	1	1220
4	6	H110	BEAM	E	20					57	1.000													57	1	57	1	343
4	6	H111	BEAM	E	20					24	10.000													24	10	24	10	150
16	8	H151	WING WALL	E	20					16	6.000													16	6	16	6	705
20	6	H152	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
20	6	H153	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
71	6	U101	DIAPHRAGM	E	19	S				3	5.000	7	0.000											10	5	10	4	1102
26	5	U102	DIAPHRAGM	E	10	S						4	2.750	4	7.000									13	1	12	10	349
38	6	U103	DIAPHRAGM	E	19	S				3	0.000	5	3.000											8	3	8	2	467
28	5	U104	BEAM	E	10	S						6	3.000	5	3.000									17	9	17	7	514
24	4	U105	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000							16	7	16	4	262
6	4	U106	BEAM	E	10	S						2	8.000	5	3.000									10	7	10	5	42
6	4	U107	BEAM	E	13	S				5	3.000	2	11.000	5	3.000	2	11.000							17	1	16	10	68
4	4	U108	BEAM	E	10	S						2	11.000	5	3.000									11	1	10	11	30
12	5	U109	DIAPHRAGM	E	10	S						4	1.750	4	7.000									12	11	12	8	159
28	6	V101	DIAPHRAGM	E	20					2	11.000													2	11	2	11	123
20	5	V102	BEAM	E	20					6	3.000													6	3	6	3	131
30	6	V151	WING WALL	E	20					7	2.000													7	2	7	2	323
30	6	V152	WING WALL	E	20					7	5.000													7	5	7	5	335
			END BENT 2																									
10	6	F200	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250		2	1.000	10.250		8	0	7	9	117
10	6	F201	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250		2	1.000	13.000		5.250		12	11	12	10	193
4	6	F202	DIAPHRAGM	E	23					5	2.250	5	1.000							3	8.000	3	8.000	10	4	10	3	62
4	6	F203	DIAPHRAGM	E	21					8	7.500	5	1.000							6	1.250	6	1.250	13	9	13	6	82
38	5	H201	DIAPHRAGM	E	19					2	0.000	15.000												3	3	3	2	126
4	6	H202	DIAPHRAGM	E	20					57	1.000													57	1	57	1	343
4	8	H203	DIAPHRAGM	E	20					57	1.000													57	1	57	1	610
4	5	H204	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750		5	10	5	9	24
9	6	H205	DIAPHRAGM	E	20					14	0.000													14	0	14	0	190
3	6	H206	DIAPHRAGM	E	20					10	8.000													10	8	10	8	49
6	6	H207	DIAPHRAGM	E	20					4	5.000													4	5	4	5	40
2	6	H208	DIAPHRAGM	E	20					2	9.000													2	9	2	9	9
8	8	H209	BEAM	E	20					57	1.000													57	1	57	1	1220
4	6	H210	BEAM	E	20					57	1.000													57	1	57	1	343
4	6	H211	BEAM	E	20					24	9.000													24	9	24	9	149

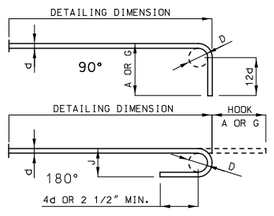
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
16	8	H251	WING WALL	E	20					16	6.000													16	6	16	6	705
20	6	H252	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
20	6	H253	WING WALL	E	6	S				15	8.000		12.000											16	8	16	7	499
71	6	U201	DIAPHRAGM	E	19	S				3	5.000	7	0.000											10	5	10	4	1102
26	5	U202	DIAPHRAGM	E	10	S						4	3.000	4	7.000									13	1	12	11	351
38	6	U203	DIAPHRAGM	E	19	S				3	0.000	5	3.000											8	3	8	2	467
28	5	U204	BEAM	E	10	S						6	2.750	5	3.000									17	9	17	6	512
24	4	U205	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000							16	7	16	4	262
6	4	U206	BEAM	E	10	S						2	8.000	5	3.000									10	7	10	5	42
6	4	U207	BEAM	E	13	S				5	3.000	2	11.000	5	3.000	2	11.000							17	1	16	10	68
4	4	U208	BEAM	E	10	S						2	11.000	5	3.000									11	1	10	11	30
12	5	U209	DIAPHRAGM	E	10	S						4	1.500	4	7.000									12	10	12	8	159
28	6	V201	DIAPHRAGM	E	20					2	11.000													2	11	2	11	123
20	5	V202	BEAM	E	20					6	2.000													6	2	6	2	129
30	6	V251	WING WALL	E	20					7	4.000													7	4	7	4	331
30	6	V252	WING WALL	E	20					7	1.000													7	1	7	1	320
			SLAB																									
66	5	S101	SLAB	E	20					45	4.000													45	4	45	4	3121
18	5	S102	SLAB	E	20					31	3.000													31	3	31	3	587
95	6	S103	SLAB	E	20					40	5.000													40	5	40	5	5768
152	6	S104	SLAB	E	20			V	2	39	11.500													40	0	40	0	
			INCR. = 0.5′							2	5.500													2	6	2	6	4852
166	5	S105	SLAB	E	20					5	2.000													5	2	5	2	895
			TYPE D BARRIER																									
156	5	R1	BARRIER	E	26					3	3.000	5.500		3	0.750					3	3.000	6.750		6	11	6	8	1085
156	5	R2	BARRIER	E	19	S					20.500	9.500												2	6	2	5	394
156	5	R3	BARRIER	E	27	S						9.500		15.250		5.000		12.000		15.000		3.000		3	6	3	4	543
40	5	R5	BARRIER	E	20					39	9.000													39	9	39	9	1659
20	5	K1	BARRIER	E	27	S				3	8.000	9.250		5.250		3	2.750			5.250		1.000		8	2	8	0	167
94	5	K2	BARRIER	E	27	S				3	8.000	9.250		14.500		2	5.750			14.250		2.750		8	2	8	0	785
8	5	K3	BARRIER	E	27	S					22.500	9.250		14.750		7.750		12.000		14.500		2.750		5	7	5	3	44
20	5	K4	BARRIER	E	19	S		V	4	2	4.250	10.000												3	3	3	1	
			INCR. = 0.5″							2	6.250	10.000												3	5	3	3	67
20	5	K5	BARRIER	E	14	S		V	4		8.250	9.500		18.500						4.000		18.000		3	1	2	11	
			INCR. = 0.5″								8.250	9.500		20.500						4.500		20.000		3	3	3	1	63
12	5	K6	BARRIER	E	19	S		V	4	2	6.750	10.000												3	5	3	4	
			INCR. = 0.5″							2	7.750	10.000												3	6	3	5	43
12	5	K7	BARRIER	E	21	S		V	4	2	6.750	10.000								2	6.000	6.250		3	5	3	4	
			INCR. = 0.5″							2	7.750	10.000								2	7.000	6.500		3	6	3	5	43
36	5	K8	BARRIER	E	19	S		V	4	2	8.500	10.000												3	7	3	6	
			INCR. = 0.75″							3	2.500	10.000												4	1	4	0	141
36	5	K9	BARRIER	E	21	S		V	4	2	8.500	10.000								2	7.750	6.750		3	7	3	6	
			INCR. = 0.75′							3	2.500	10.000								3	1.750	7.750		4	1	4	0	141
54	5	K10	BARRIER	E	19	S				3	3.000	10.000												4	1	4	0	226
54	5	K11	BARRIER	E	21	S				3	3.000	10.000								3	2.250	7.750		4	1	4	0	226
24	5	K12	BARRIER	E	20					19	4.000													19	4	19	4	484
12	5	K13	BARRIER	E	20			V	4	18	7.000													18	7	18	7	
			INCR. = 3′							12	7.000													12	7	12	7	196
24	5	K14	BARRIER	E	20					20	8.000													20	8	20	8	518



STIRRUP HOOK DIMENSIONS					
GRADES 40 - 50 - 60 KSI					
BAR SIZE	D (IN.)	90° HOOK		135° HOOK	
		HOOK A OR G		HOOK A OR G	APPROX. H
#4	2″	4 1/2″		4 1/2″	3″
#5	2 1/2″	6″		5 1/2″	3 3/4″
#6	4 1/2″	12″		8″	4 1/2″

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4″	5″	3″	6″
#4	3″	6″	4″	8″
#5	3 3/4″	7″	5″	10″
#6	4 1/2″	8″	6″	12″
#7	5 1/4″	10″	7″	14″
#8	6″	11″	8″	16″
#9	9 1/2″	15″	11 3/4″	19″
#10	10 3/4″	17″	13 1/4″	22″
#11	12″	19″	14 3/4″	2′-0″
#14	18 1/4″	2′-3″	21 3/4″	2′-7″

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

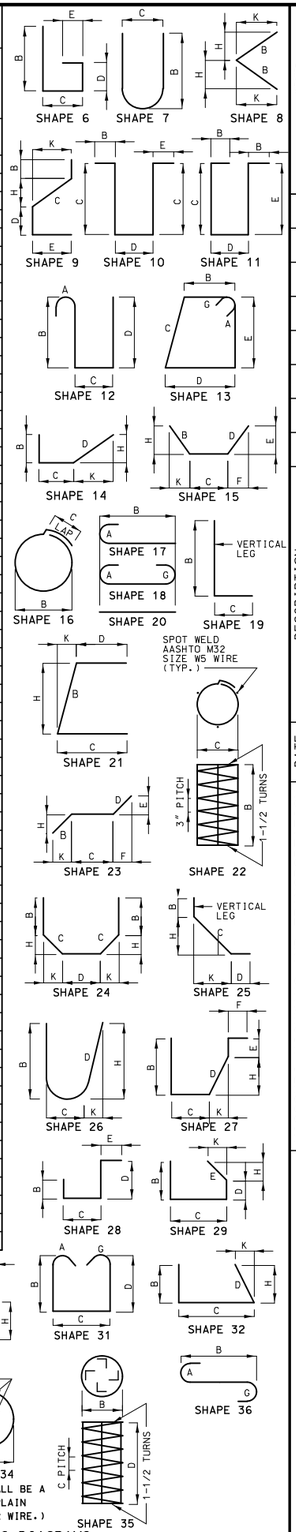
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60,000 PSI.



BENDING DIAGRAMS

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	20

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Oct. 2022
Checked Oct. 2022

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

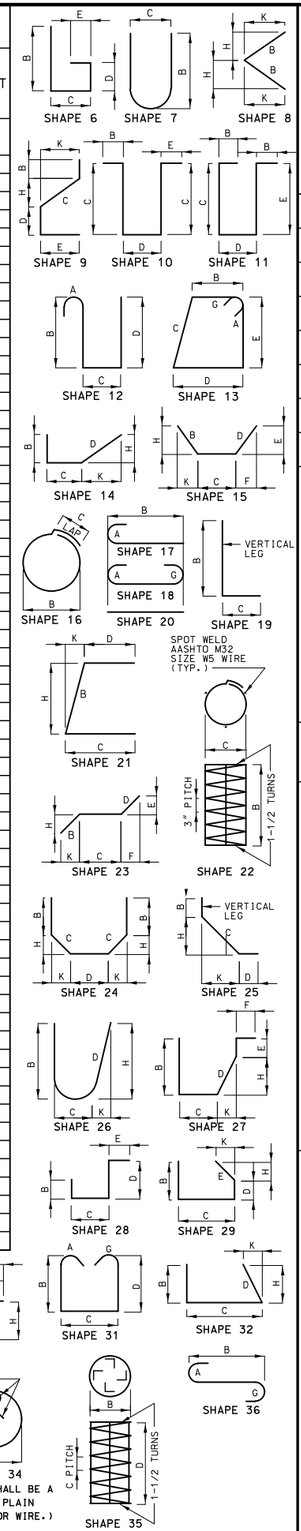
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_020_J9P3751_Bill_of_Reinforcing1.dgn 10:08:23 AM 3/3/2023

BILL OF REINFORCING STEEL

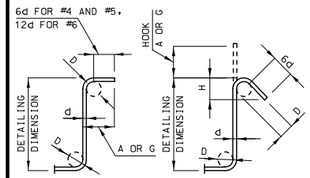
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
12	5	K15	BARRIER	E	20			V	4	19	11.000													19	11	19	11	
			INCR. = 3'							13	11.000													13	11	13	11	212
8	5	C1	SLIP FORM	E	20					12	0.000													12	0	12	0	101
16	5	C2	SLIP FORM	E	20					8	0.000													8	0	8	0	134
			TOTALS																									
	4			E																								804
	5			E																								14479
	6			E																								20464
	8			E																								5070
			TOTAL	E																								40817
			SLAB ON CONCRETE NU-GIRDER																									
	4			E																								804
	5			E																								7207
	6			E																								20464
	8			E																								5070
			TOTAL	E																								33545
			TYPE D BARRIER																									
	5			E																								7037
			TOTAL	E																								7037
			SLIP FORM OPTION																									
	5			E																								235
			TOTAL	E																								235

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

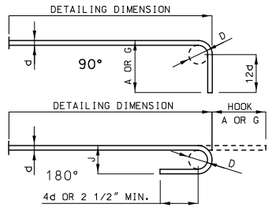


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60,000 PSI.

Detailed Oct. 2022
Checked Oct. 2022

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	21

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9279

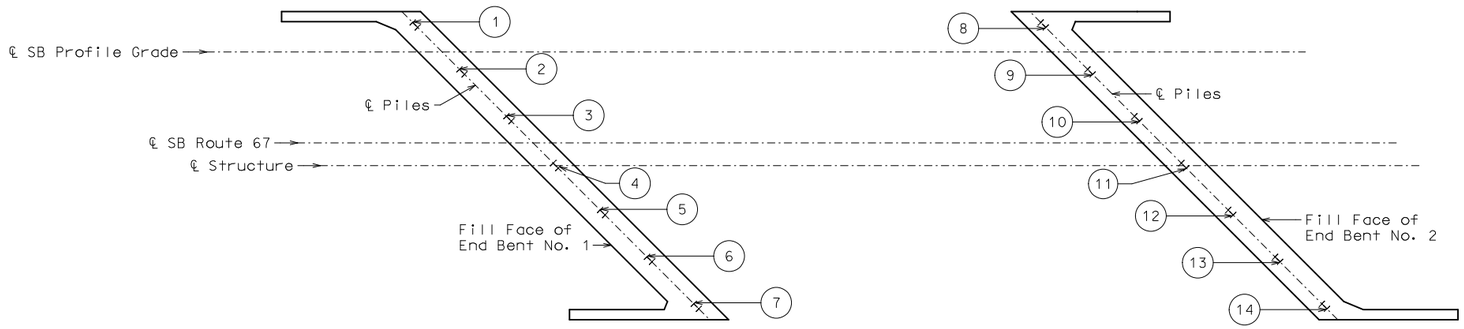
DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

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



PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

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

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 2
8			
9			
10			
11			
12			
13			
14			

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

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed Oct. 2022
Checked Oct. 2022

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_022_J9P3751_Pile_Data.dgn 10:08:26 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	22

COUNTY
BUTLER

JOB NO.
J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9279

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-201

PAGE 1 OF 2

CLIENT MoDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri
DATE STARTED 12/7/21 **COMPLETED** 12/7/21
GROUND ELEVATION 303.7 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750)
AT TIME OF DRILLING ---
LOGGED BY NB **CHECKED BY** CM
AT END OF DRILLING ---
STATION 758+75 **OFFSET** 26' RT
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 6 inches										
		(CL) SANDY LEAN CLAY: Light gray, moist, stiff to hard	SPT SS1	100	5-6-7 (13)			4				45
			SPT SS2	72	6-11-15 (26)			10				52
			SPT SS3	94	9-17-17 (34)			6				28
10			SPT SS4	89	5-6-8 (14)			10				17
		(SP) SAND: Gray to grayish brown, moist, very loose to medium dense	SPT SS5	83	4-7-4 (11)			24				24
20			SPT SS6	89	1-2-1 (3)			21				16
			SPT SS7	44	5-2-2 (4)			23				31
30			SPT SS8	67	5-10-9 (19)			20				22
			SPT SS9	67	8-9-7 (16)			23				28
40			SPT SS10	61	9-12-14 (26)			21				21
			SPT SS11	61	7-7-12 (19)			22				23
50			SPT SS12	0	8-5-5 (10)							

(Continued Next Page)

B-201

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-201

PAGE 2 OF 2

CLIENT MoDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SP) SAND: Gray to grayish brown, moist, very loose to medium dense *(continued)*										
		(SP) GRAVELLY SAND: Graysih brown, moist, medium dense	SPT SS13	56	9-8-8 (16)			16				31
60			SPT SS14	39	10-11-9 (20)			14				35
			SPT SS15	6	13-10-9 (19)			15				
70			SPT SS16	39	9-10-11 (21)			13				
		(SP) SAND: Grayish brown, moist, medium dense	SPT SS17	44	11-11-12 (23)			20				30
80		(SP) GRAVELLY SAND: Graysih brown, moist, very dense	SPT SS18	83	12-50/1"			13				
		Refusal at 80.1 feet. Bottom of borehole at 80.1 feet.										

B-201

BORING DATA

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

Detailed Oct. 2022
Checked Oct. 2022

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

Sheet No. 23 of 24

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9279

DESCRIPTION | DATE | REV.

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

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-202

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri
DATE STARTED 12/14/21 **COMPLETED** 12/15/21
GROUND ELEVATION 304.8 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750)
AT TIME OF DRILLING 19.50 ft / Elev 285.30 ft
LOGGED BY NB **CHECKED BY** CM
AT END OF DRILLING ---
STATION 759+88 **OFFSET** 44' RT
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 6 inches										
		(CL) SANDY LEAN CLAY: Grayish brown, moist, soft to medium stiff	SPT SS1	61	1-2-3 (5)			15				57
			SPT SS2	100	1-1-1 (2)			17				61
			SPT SS3	100	1-3-5 (8)			16				55
10		(SP-SC) SAND WITH CLAY: Light brownish gray to gray, moist, medium dense	SPT SS4	92	3-5-7 (12)			13				38
			SPT SS5	89	5-9-12 (21)			19				39
20			SPT SS6	86	5-8-10 (18)			19				37
		(SP) SAND: Gray, moist, loose to medium dense	SPT SS7	44	1-2-3 (5)			20				60
30			SPT SS8	56	5-6-7 (13)			19				43
			SPT SS9	61	8-8-8 (16)			20				51
40		(SP) GRAVELLY SAND: Gray, moist, medium dense to dense	SPT SS10	67	5-8-12 (20)			19				39
			SPT SS11	64	4-8-10 (18)			20				24
50			SPT SS12	58	6-9-8 (17)			19				24

(Continued Next Page)

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-202

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SP) GRAVELLY SAND: Gray, moist, medium dense to dense *(continued)*										
			SPT SS13	0	4-6-6 (12)			18				21
60			SPT SS14	72	6-9-12 (21)			15				24
			SPT SS15	100	5-10-11 (21)			19				19
70			SPT SS16	61	8-13-12 (25)			17				24
			SPT SS17	72	8-9-15 (24)			20				23
80			SPT SS18	64	11-15-17 (32)			17				21
		Refusal at 83.0 feet. Bottom of borehole at 83.0 feet.										

BORING DATA

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

Detailed Oct. 2022
Checked Oct. 2022

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

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 24
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9279

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9279\B_A9279_024_J9P3751_Boring_Log2.dgn 10:08:40 AM 3/3/2023

SEC./SUR. 28 TWP. 23N RGE. 5E

Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

Hydrologic Data
Drainage Area = 9.3 mi²
Design Flood Frequency = 50 years
Design Flood Discharge = 1,060 cfs
Design Flood (D.F.) Elevation = 302.8
Base Flood (100-year)
Base Flood Elevation = 303.3
Base Flood Discharge = 1,210 cfs
Estimated Backwater = 0.1 ft
Average Velocity thru Opening = 2.8 ft/s
Freeboard (50-year)
Freeboard = 1.2 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency = >500 years
500 Year Flood Elevation = 304.5

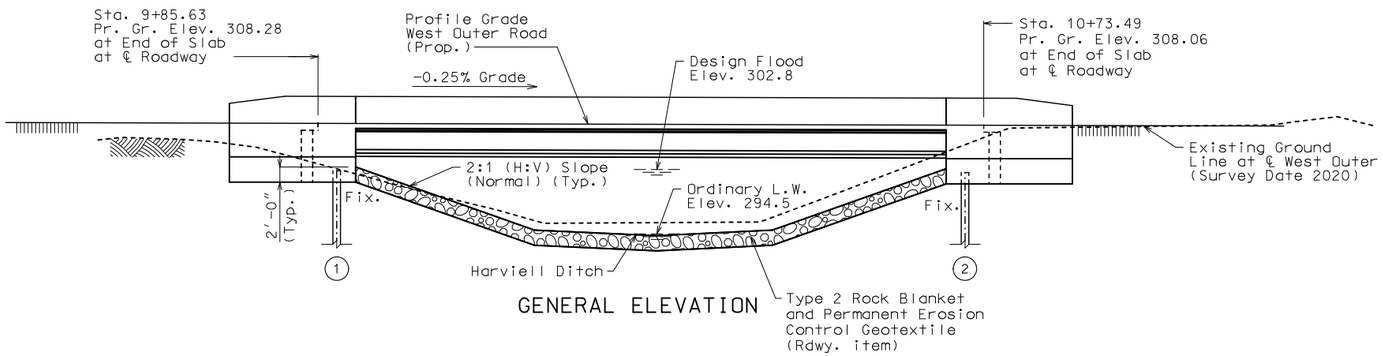
◓ Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

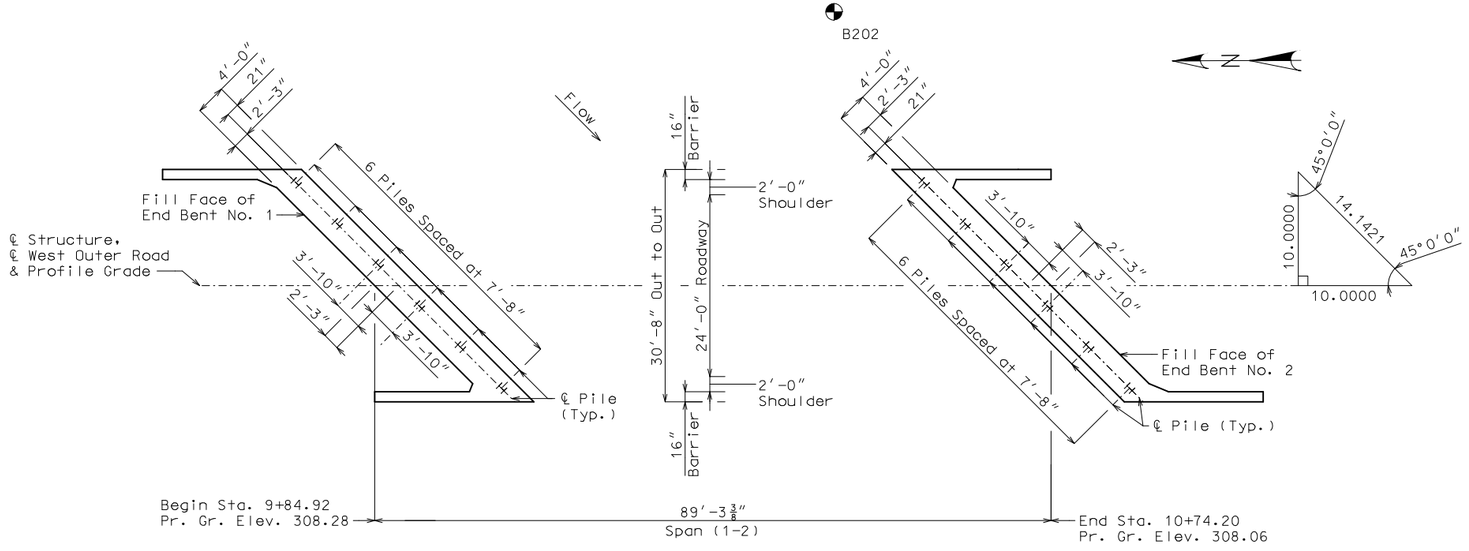
The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 23 & 24 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

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

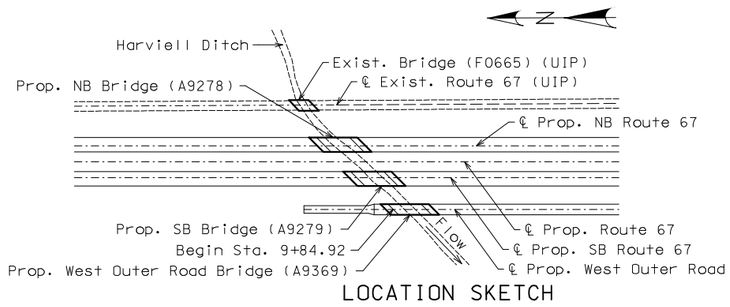
(82.9′) PRESTRESSED CONCRETE NU-GIRDER SPAN



GENERAL ELEVATION



PLAN



LOCATION SKETCH

General Notes:

Longitudinal dimensions are measured horizontal.

For General Notes, Estimated Quantities and Foundation Data see Sheet No. 2.

B.M. #32
N: 282085.74
E: 814254.75
Sta. 719+83.75 Exist. Rte 67
Elev. 308.27
Chisled "□" on SW corner of west barrier curb on bridge F0665

Control Point #129
N: 281264.97
E: 814315.18
Sta. 728+04.49 Exist. Rte 67
Elev. 302.52
5/8" rebar with MoDOT cap

GENERAL PLAN AND ELEVATION

BRIDGE: ROUTE 67 WEST OUTER ROAD OVER HARVIELL DITCH

ROUTE 67 WEST OUTER ROAD FROM COUNTY ROAD 352
ABOUT 3.2 MILES NORTH OF ROUTE 142
BEGINNING STATION 9+84.92 (℄ WEST OUTER ROAD ROUTE 67)

Designed Jan. 2023
Detailed Jan. 2023
Checked Jan. 2023

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

Sheet No. 1 of 24

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	1

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_001_J9P3751_General_Plan_and_Elevation.dgn 10:25:03 AM 3/3/2023

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.) and 2014 Interim Revisions (Seismic Details)
Seismic Design Category = C
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.34
Acceleration Coefficient (effective peak ground acceleration coefficient), A_s = 0.37

Design Loading:

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

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Barrier)	f'c = 4,000 psi
Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 12.

For prestressed girder stresses, see Sheets No. 10 & 11.

Neoprene Pads:

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

Joint Filler:

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

Reinforcing Steel:

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

Traffic Handling:

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

Miscellaneous:

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

☐ Constant Joint Filler
☐ Variable Joint Filler

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	126
Reinforcing Steel (Epoxy Coated)	pound	25,590

Notes:

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

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

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

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

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

Estimated Quantities

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	160		160
Bridge Approach Slab (Minor)	sq. yard		127	127
Galvanized Structural Steel Piles (12 in.)	linear foot	960		960
Pile Point Reinforcement	each	12		12
Class B Concrete (Substructure)	cu. yard	48.8		48.8
Type D Barrier	linear foot		235	235
Slab on Concrete NU-Girder	sq. yard		300	300
NU 43, Prestressed Concrete NU-Girder	linear foot		335	335
Slab Drain	each		14	14
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8

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

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Cost of L4x4 ASTM A709 Grade 36 HP pile anchors and 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts, complete in place, will be considered completely covered by the contract unit price for Galvanized Structural Steel Piles (12 in.).

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	6	6
	Approximate Length Per Each	ft	79	81
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	281	280
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	500	500

DF = FHWA-modified Gates Dynamic Pile Formula

Load Bearing Pile:

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

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

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

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

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	2

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

DESCRIPTION | DATE

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

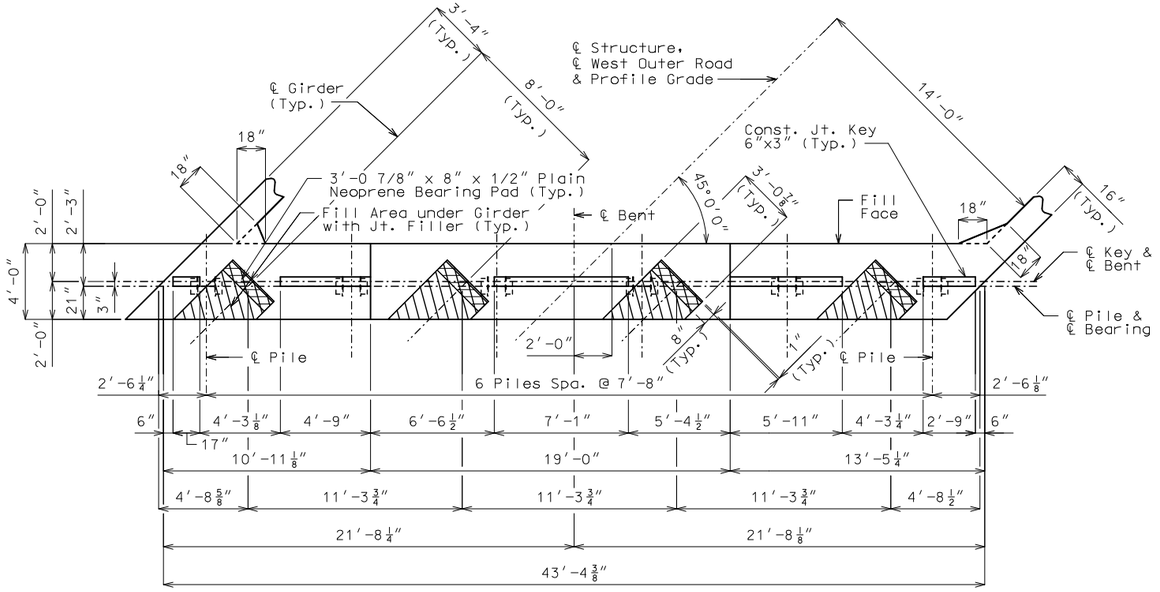
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

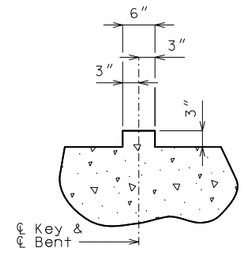
REV.

ESTIMATED QUANTITIES AND GENERAL NOTES

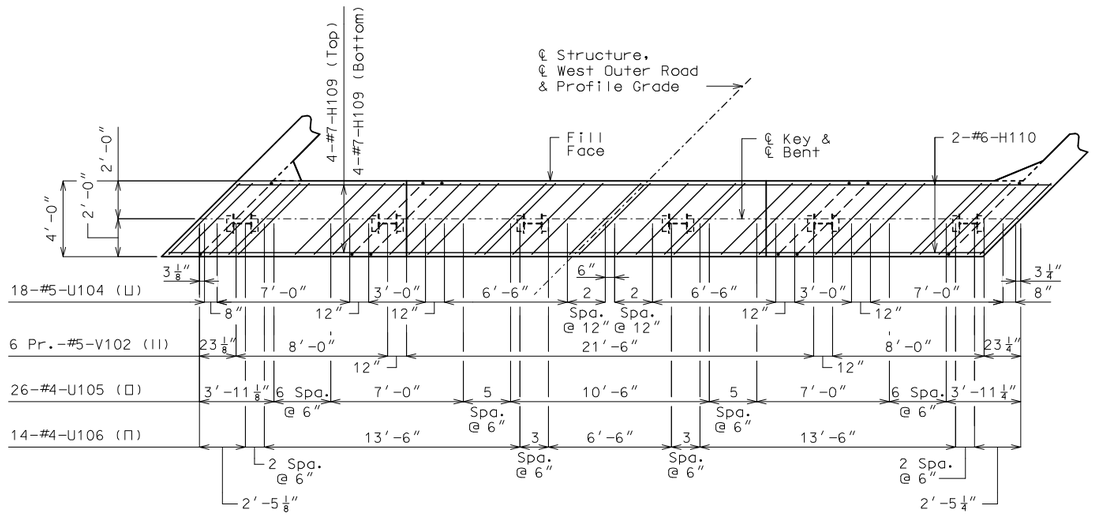
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_002_J9P3751_Estimated_Quantities_and_General_Notes.dgn 10:25:04 AM 3/3/2023



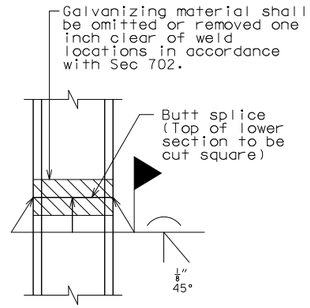
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 4 & 5.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 1

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	3

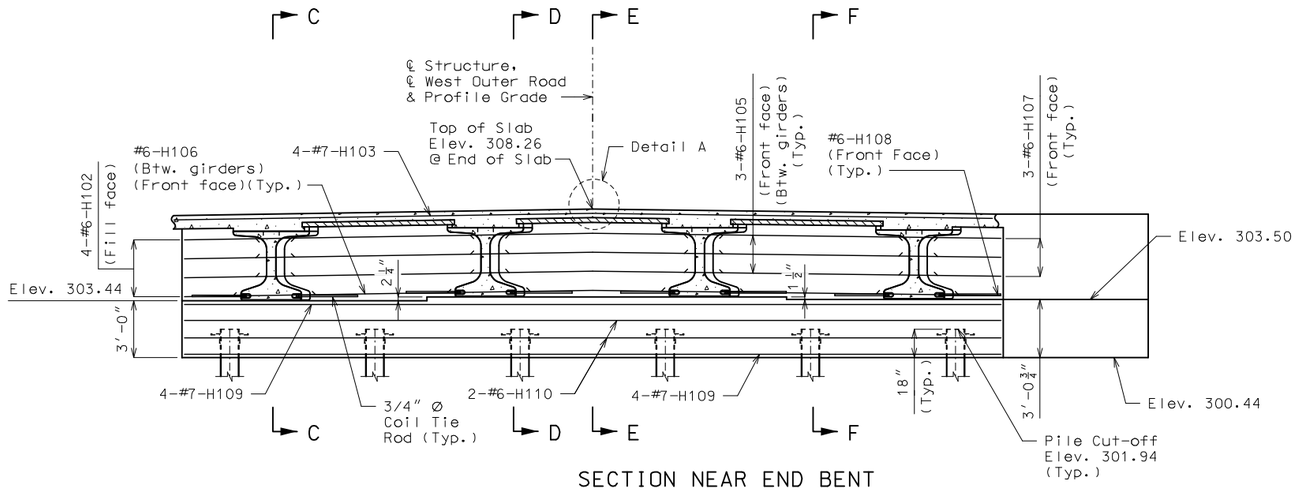
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

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

DESCRIPTION | DATE | REV.

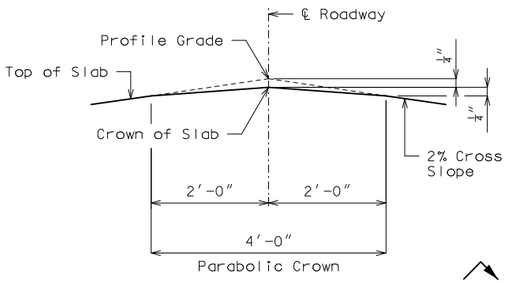
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

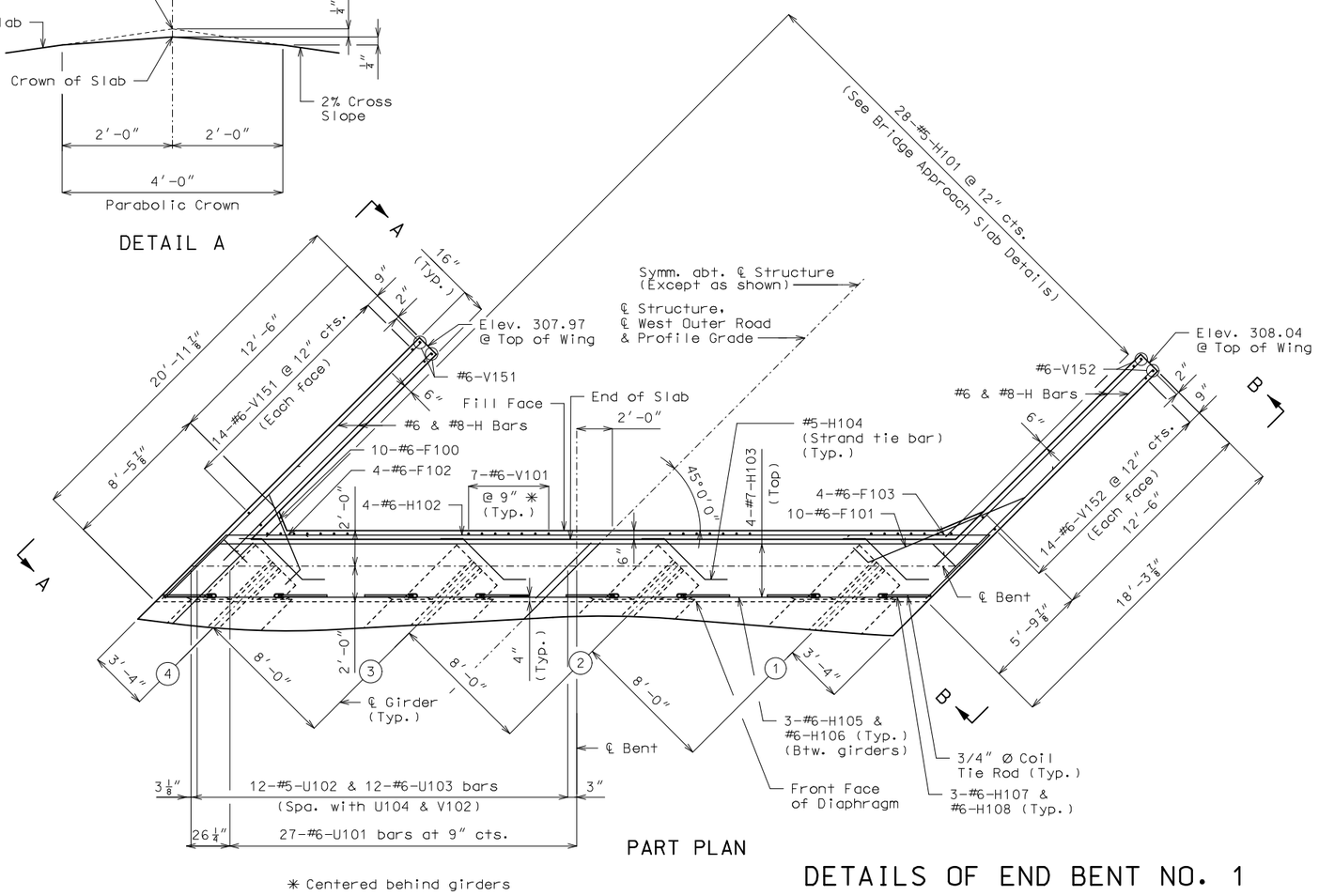


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



PART PLAN

* Centered behind girders

DETAILS OF END BENT NO. 1

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 5.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 5.

For Elevations A-A & B-B, see Sheet No. 5.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H104 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

The #6-F100 and #6-F101 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

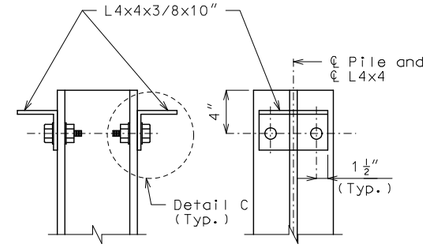
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

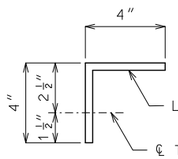
Substructure Quantity Table for Bent No. 1

Item		Quantity
Class 1 Excavation	cu. yard	45
Galvanized Structural Steel Piles (12 in.)	linear foot	474
Pile Point Reinforcement	each	6
Class B Concrete (Substructure)	cu. yard	24.4

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	4

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9369

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

REV.	DESCRIPTION	DATE

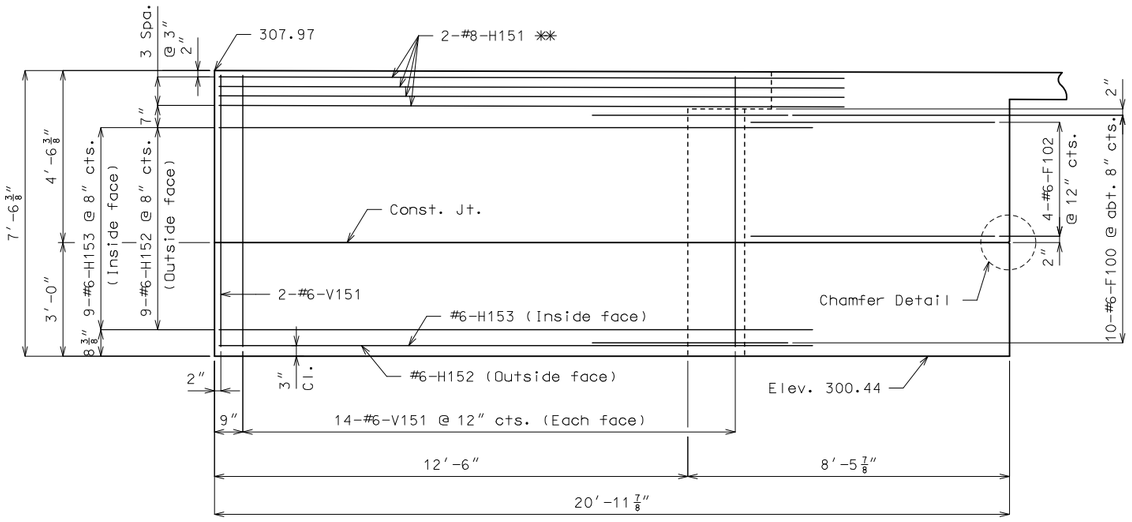
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

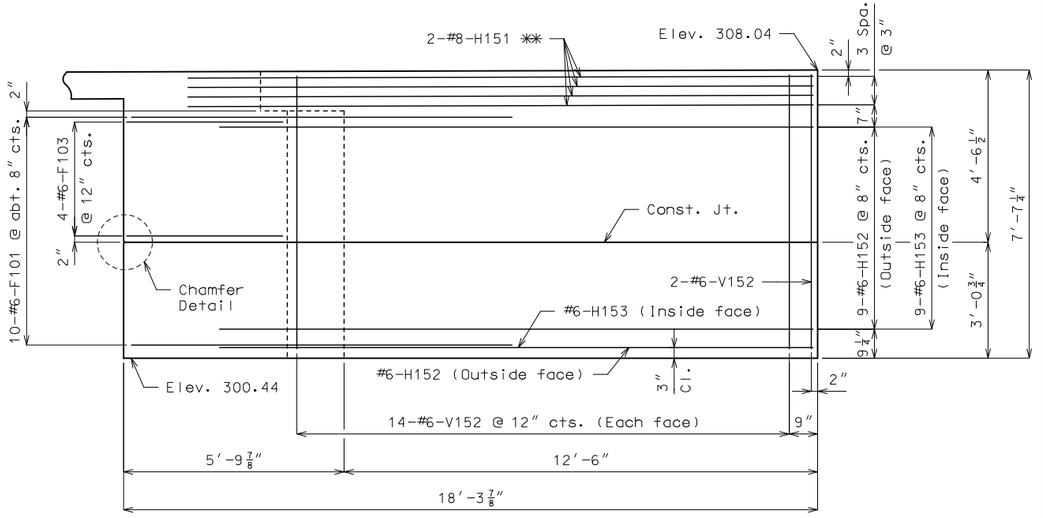
Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_004_J9P3751_End_Bent_1_Details.dgn 10:25:07 AM 3/3/2023

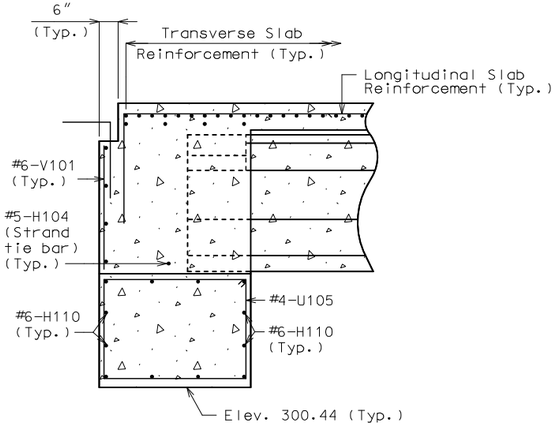


ELEVATION A-A

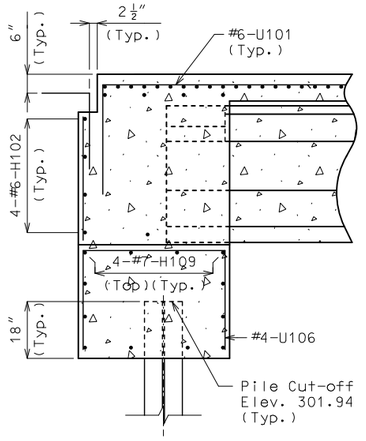


ELEVATION B-B

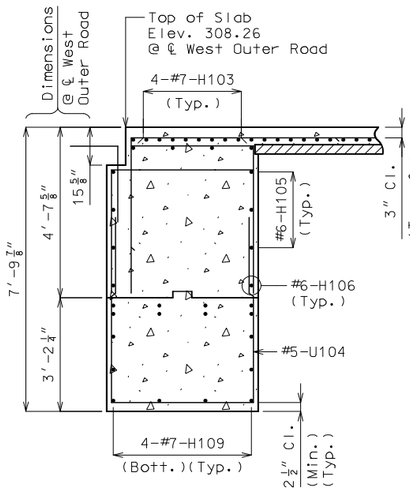
✱✱ (Place with grade)



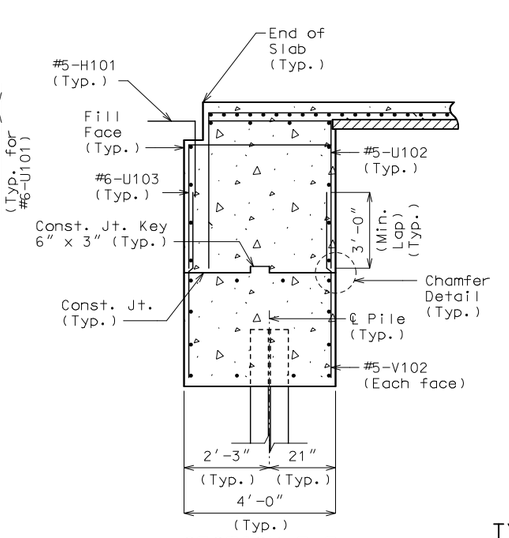
SECTION C-C



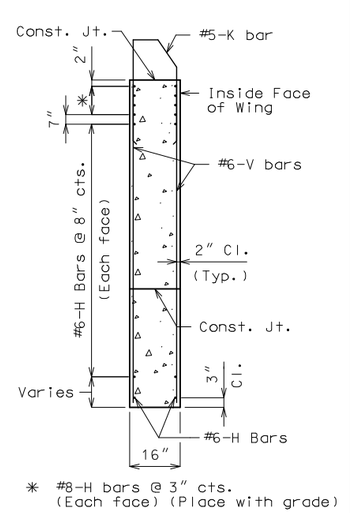
SECTION D-D



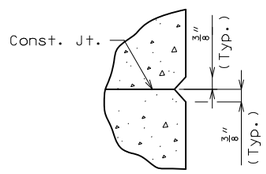
SECTION E-E



SECTION F-F



TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 4.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F100 and #6-F101 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H104 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 4.

For location of Elevations A-A & B-B, see Sheet No. 4.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 1

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	5

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

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

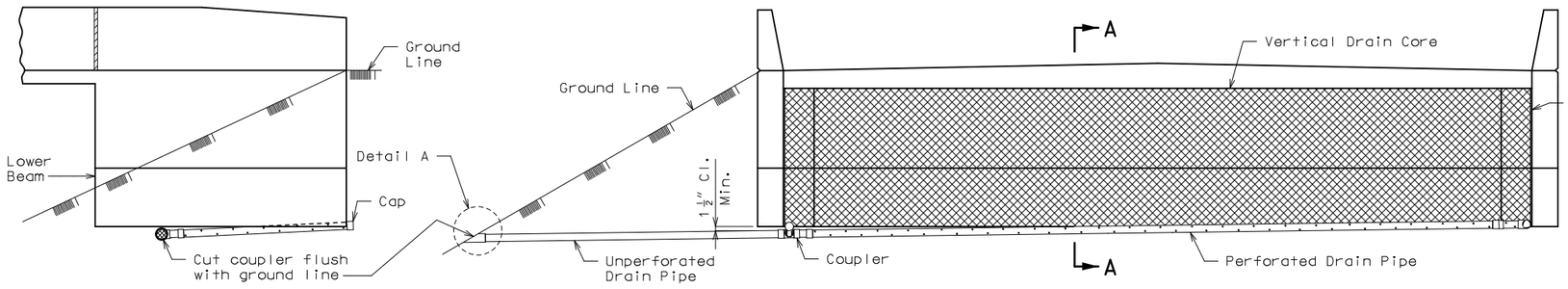
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

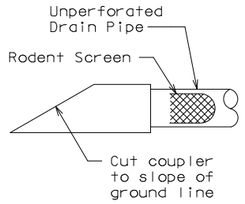
© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

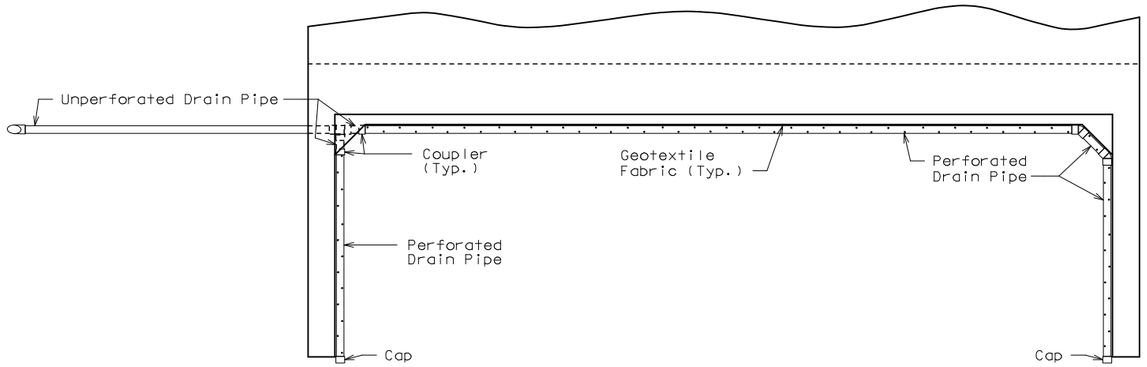


ELEVATION OF WING

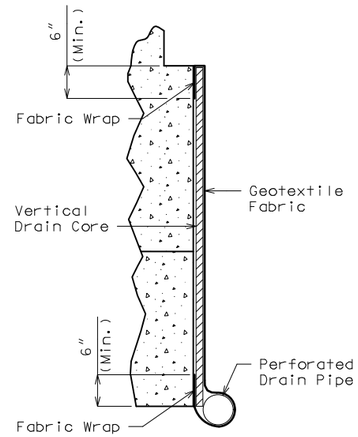
ELEVATION OF END BENT



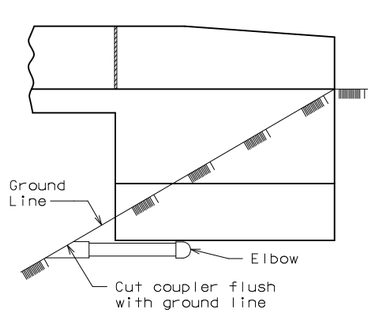
DETAIL A



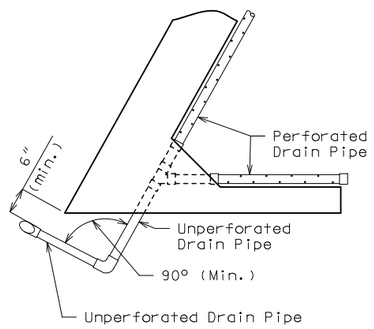
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

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

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

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	6

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

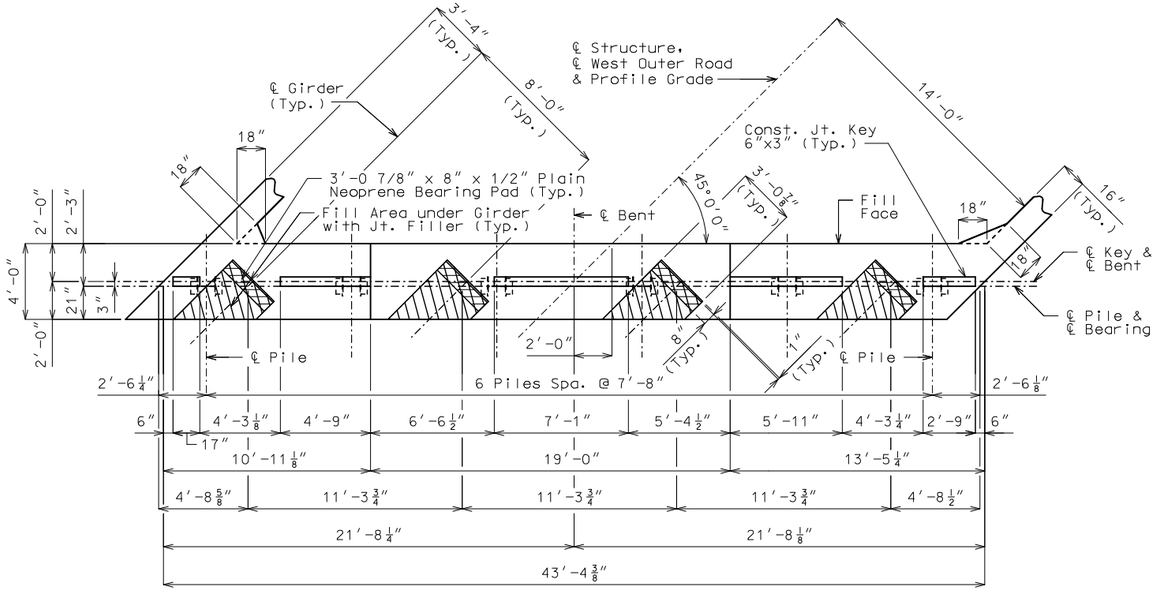
DESCRIPTION	DATE

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

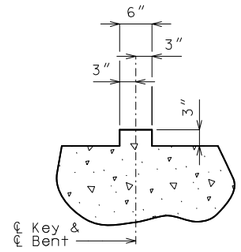
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

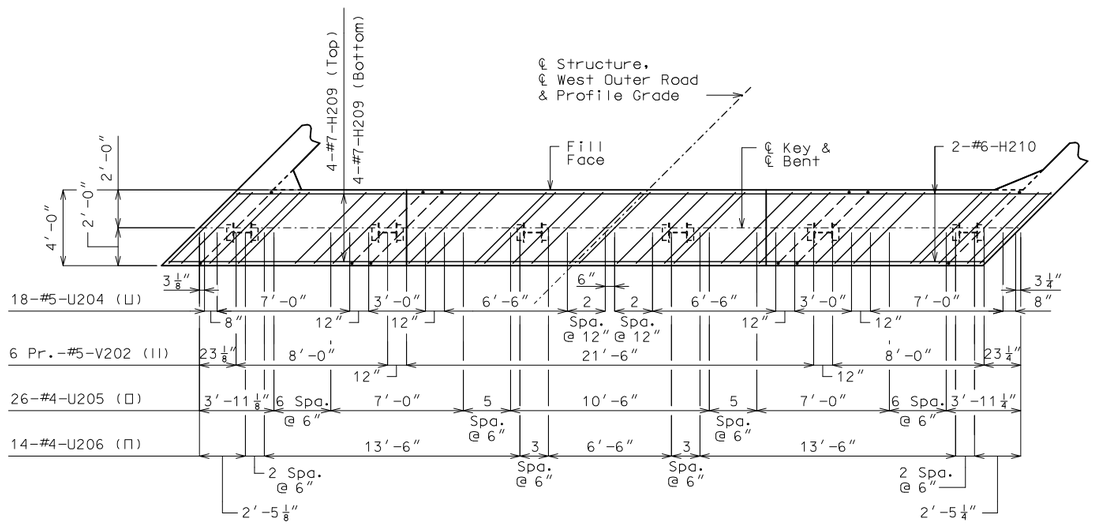
REV.



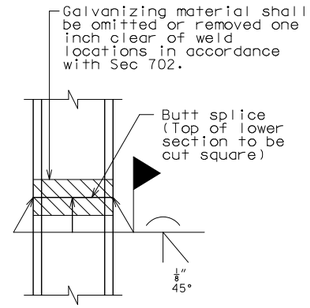
PLAN OF BEAM SHOWING DIMENSIONS



TYPICAL SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity)



STEEL PILE SPLICE
(If required)

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 8 & 9.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 2

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	7

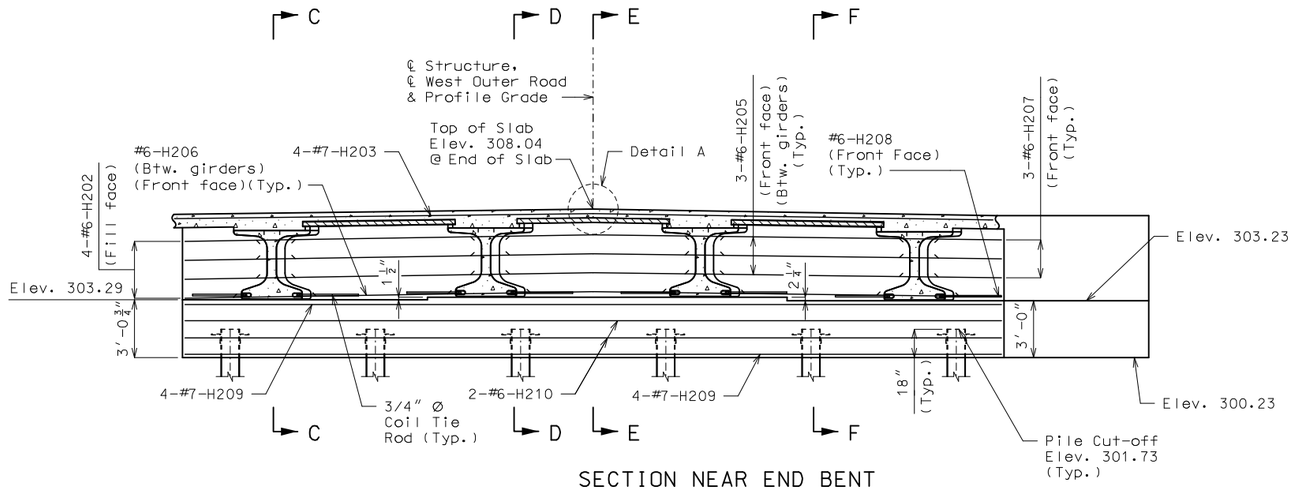
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9369

DESCRIPTION | DATE | REV.

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

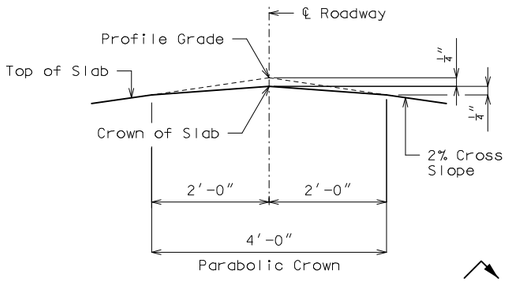
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

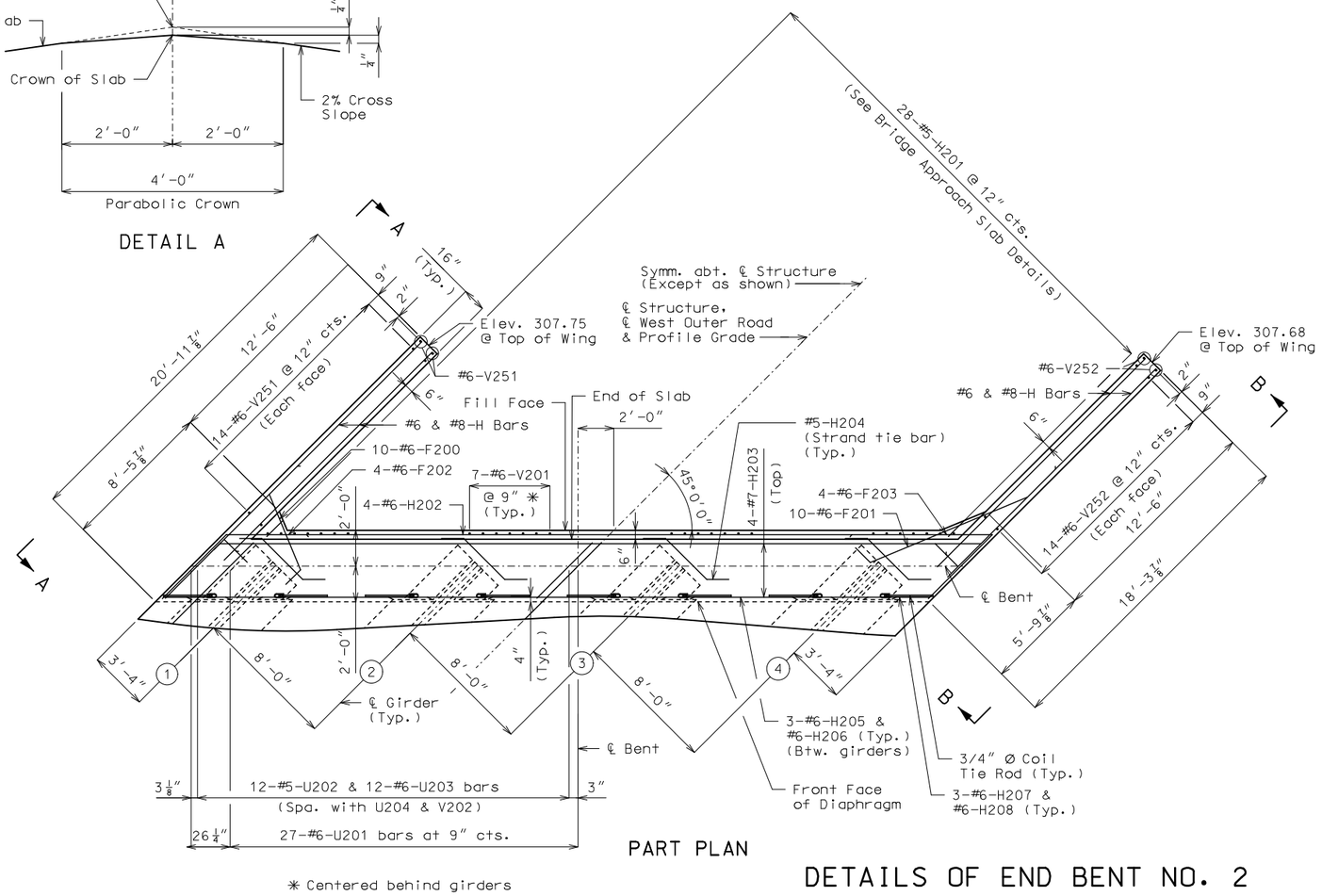


SECTION NEAR END BENT

Keys not shown for clarity.



DETAIL A



PART PLAN

✱ Centered behind girders

DETAILS OF END BENT NO. 2

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 9.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 9.

For Elevations A-A & B-B, see Sheet No. 9.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H204 (Strand Tie Bar), see Sheets No. 10 and 11.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2″.

The #6-F200 and #6-F201 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

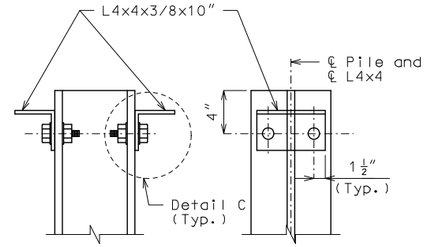
For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Bridge Approach Slab, see Sheet No. 19.

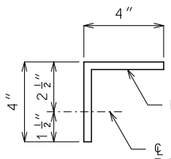
Substructure Quantity Table for Bent No. 2

Item		Quantity
Class 1 Excavation	cu. yard	115
Galvanized Structural Steel Piles (12 in.)	linear foot	486
Pile Point Reinforcement	each	6
Class B Concrete (Substructure)	cu. yard	24.4

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



DETAILS OF HP PILE ANCHORS



DETAIL C

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	8

COUNTY: BUTLER

JOB NO.: J9P3751

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9369

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

REV.	DESCRIPTION	DATE

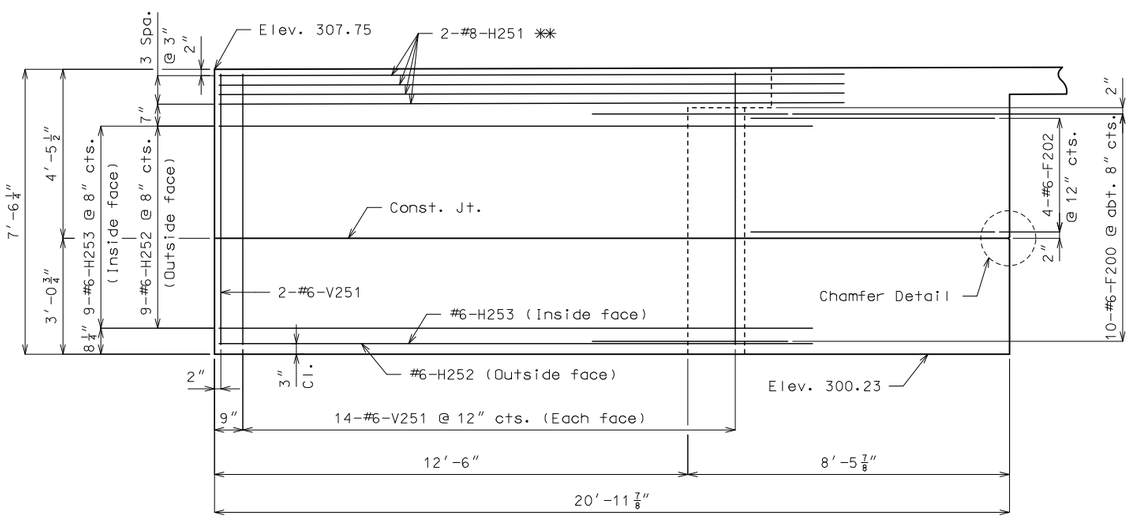
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

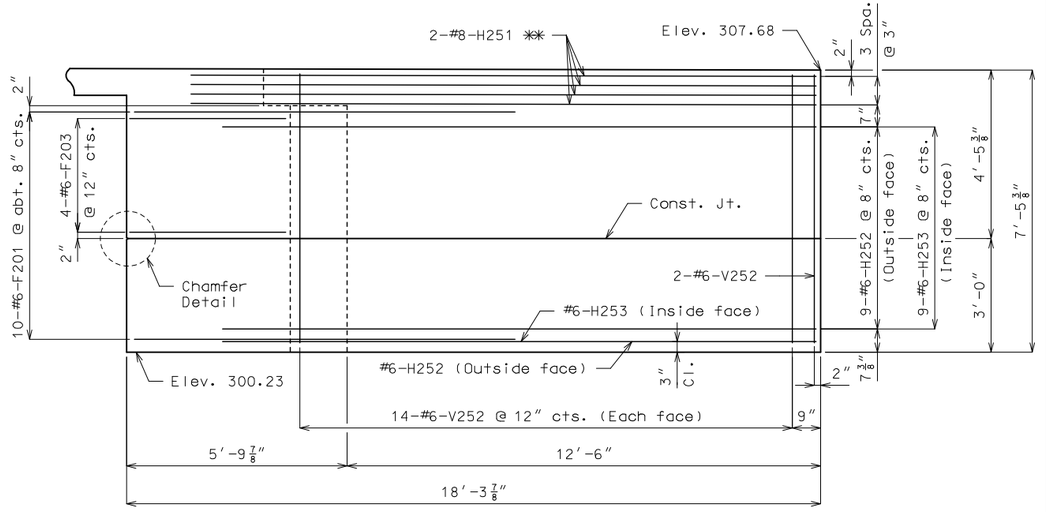
Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_008_J9P3751_End_Bent_2_Details.dgn 10:25:12 AM 3/3/2023

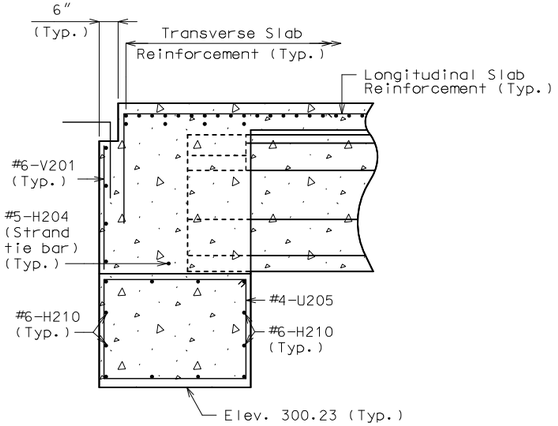


ELEVATION A-A

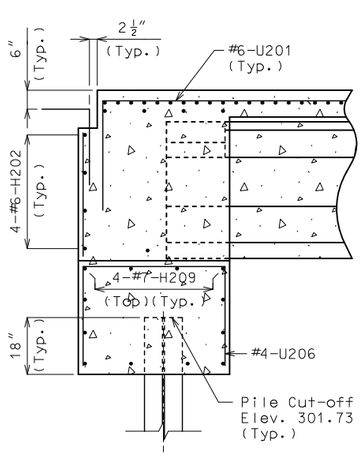


ELEVATION B-B

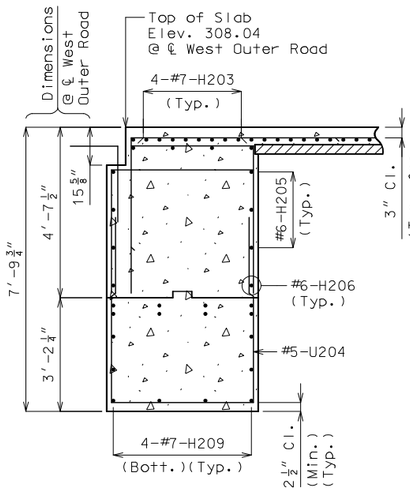
** (Place with grade)



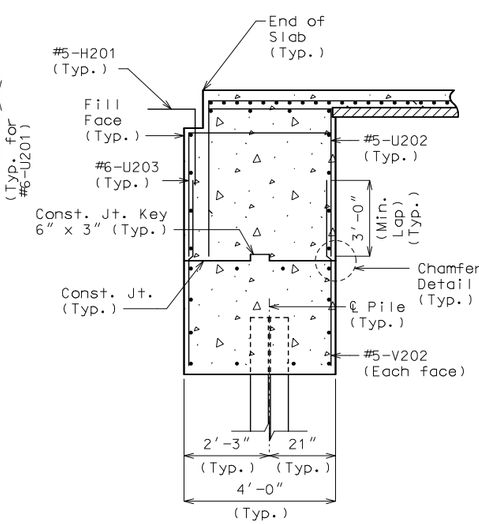
SECTION C-C



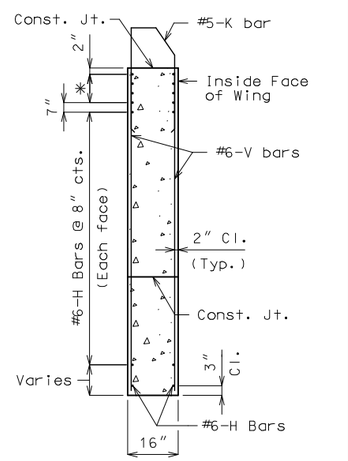
SECTION D-D



SECTION E-E

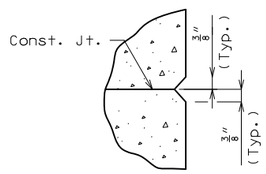


SECTION F-F



* #8-H bars @ 3″ cts. (Each face) (Place with grade)

TYPICAL SECTION THRU WING



CHAMFER DETAIL

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. 7 & 8.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

The #6-F200 and #6-F201 bars shall be bent in field to clear girders.

For details and reinforcement of the Type D Barrier, see Sheet No. 18.

For details of Vertical Drain at End Bents, see Sheet No. 6.

For location of #5-H204 (Strand tie bar), see Sheets No. 10 and 11.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 8.

For location of Elevations A-A & B-B, see Sheet No. 8.

For details of Bridge Approach Slab, see Sheet No. 19.

DETAILS OF END BENT NO. 2

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	9

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

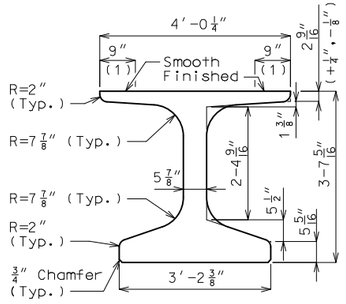
DESCRIPTION | DATE | REV.

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

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

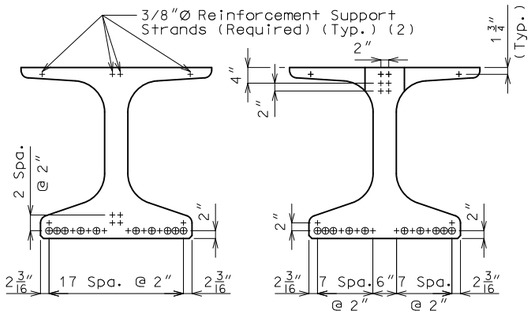
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

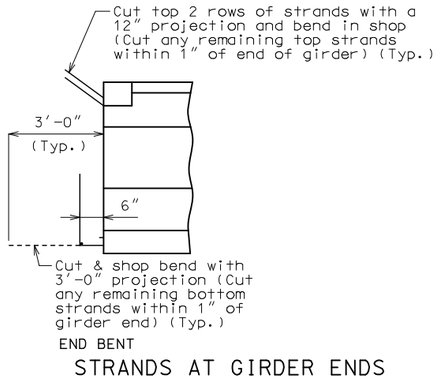


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

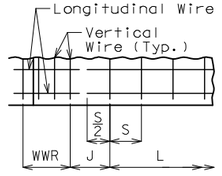
+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.



END BENT

STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

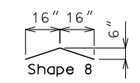
Bars Each Girder

No.	Size/Mark	Length	Shape
105	3 G1	2′-10″	8
2	4 G3	5′-5″	20
14	4 G6	Varies	20

Welded Wire Each Girder

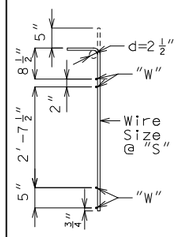
Mark	Size	S	W	L	J
WWR1	D31	4″	W12	4′-4″	8″
WWR2	D31	8″	W12	22′-8″	12″
WWR3	D31	12″	W12	23′-0″	–
WWR6	D31	2″	W12	16″	2¾″

Bending Diagrams

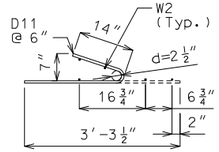


Shape 8

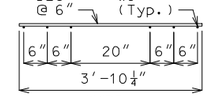
Shape 20



WWR1, WWR2, WWR3 & WWR6



WWR4



WWR5

All dimensions are out to out.

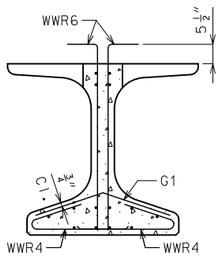
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

Minimum clearance to reinforcing shall be 1″, unless otherwise shown.

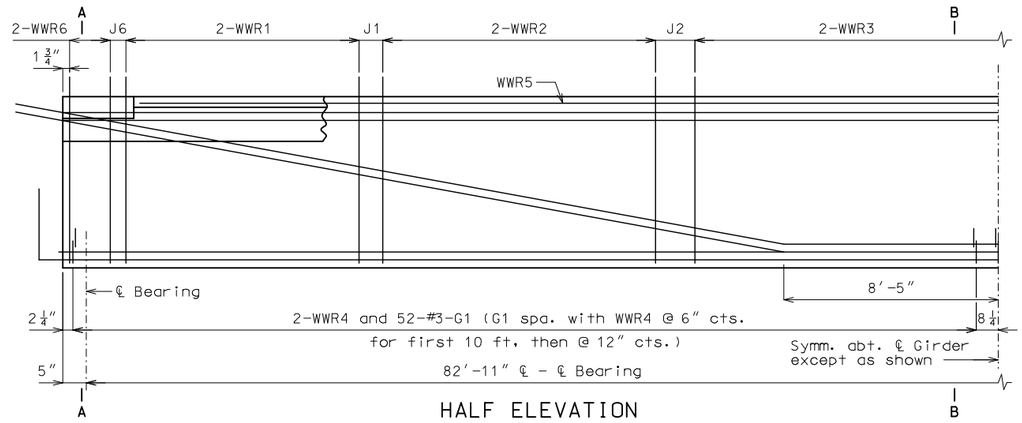
All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.



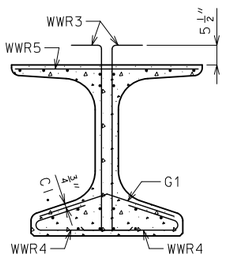
SECTION A-A

Strands not shown for clarity.



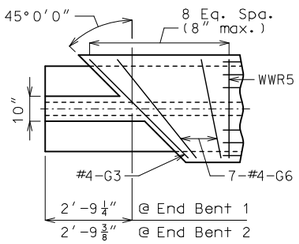
HALF ELEVATION

Reinforcement support strands not shown for clarity.

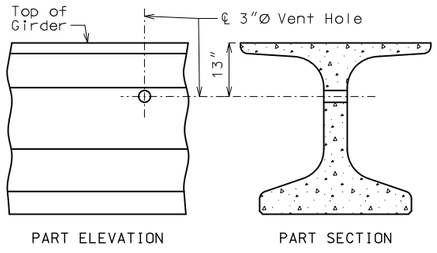


SECTION B-B

Strands not shown for clarity.



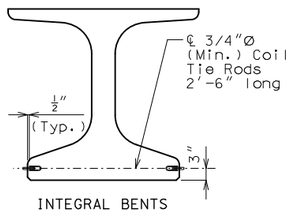
TOP FLANGE BLOCKOUT



PART ELEVATION PART SECTION

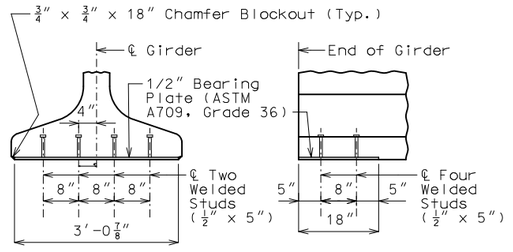
VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



INTEGRAL BENTS

COIL TIES



END VIEW SIDE VIEW

BEARING PLATE

NU-GIRDERS - SPAN (1-2)

General Notes:

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

Use 22 strands, 0.6″Ø Grade 270, with an initial prestress force of 967 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bents see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	10

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

REV.	DESCRIPTION	DATE

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

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

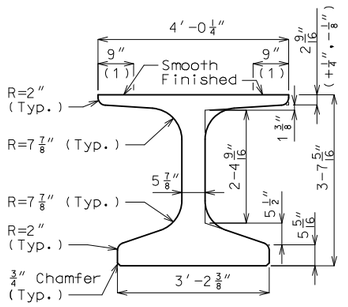
CMT
© Copyright CMT, Inc
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Jan. 2023
Checked Jan. 2023

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

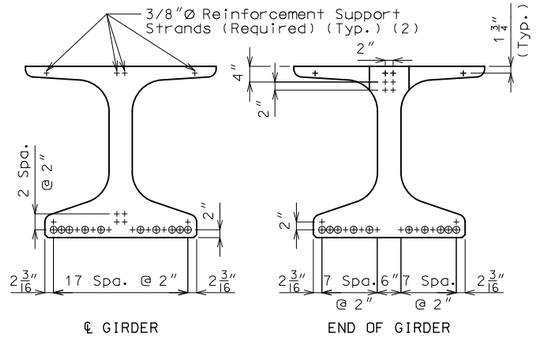
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_010_J9P3751_NU_Girder_WWR.dgn 10:25:16 AM 3/3/2023

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



DIMENSIONS

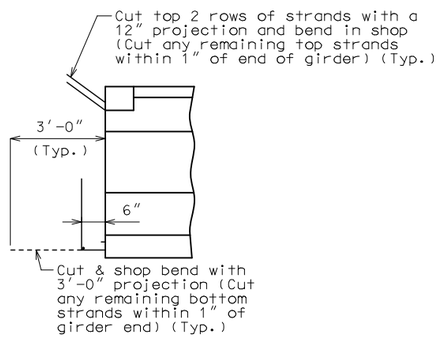
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



STRAND ARRANGEMENT

+ Indicates prestressing strand.

o Indicates cut & shop bend with 3′-0″ projection.

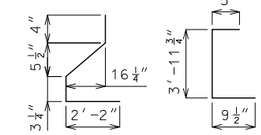


STRANDS AT GIRDER ENDS

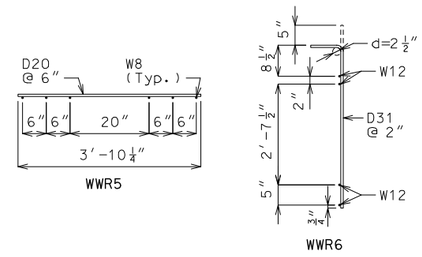
Bill of Reinforcing Steel - Each Girder

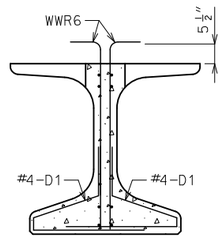
No.	Size/ Mark	Length	Shape
216	5 B1	5′-0″	11
236	4 D1	4′-0″	9
2	4 G3	5′-5″	20
14	4 G6	Varies	20

Bending Diagrams



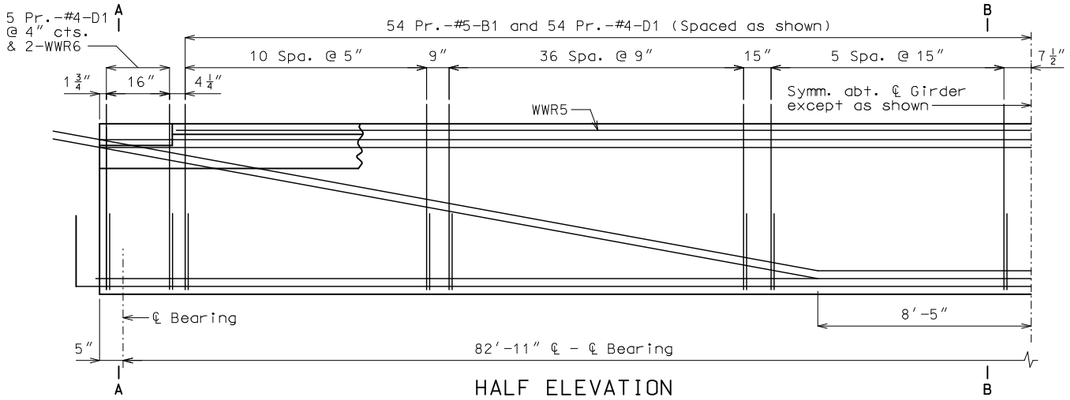
Welded Wire Reinforcement - Each Girder





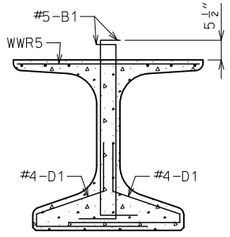
SECTION A-A

Strands not shown for clarity.



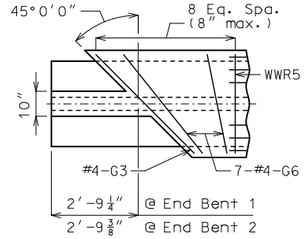
HALF ELEVATION

Reinforcement support strands not shown for clarity.

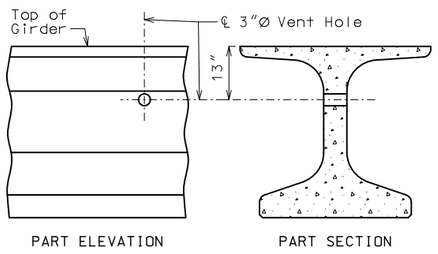


SECTION B-B

Strands not shown for clarity.

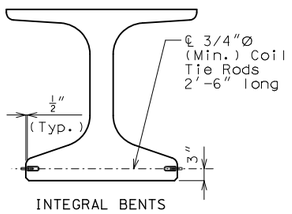


TOP FLANGE BLOCKOUT

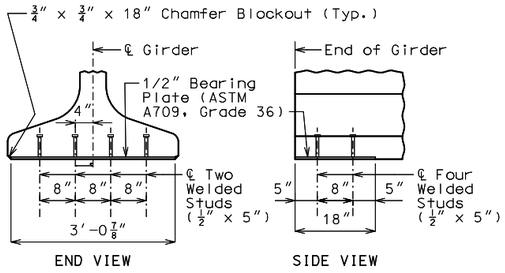


VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2″ minimum.



COIL TIES



BEARING PLATE

All dimensions are out to out.

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

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

Minimum clearance to reinforcing shall be 1″.

All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.

General Notes:

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

Use 22 strands, 0.6″Ø Grade 270, with an initial prestress force of 967 kips.

Pretensioned members shall be in accordance with Sec 1029.

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

Exterior and interior girders are the same except: application of bond breaker, coil inserts for slab drains.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil inserts at slab drains, see Sheet No. 13.

For location of coil ties at integral bent, see Sheets No. 4 and 8.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	11

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

DESCRIPTION	DATE

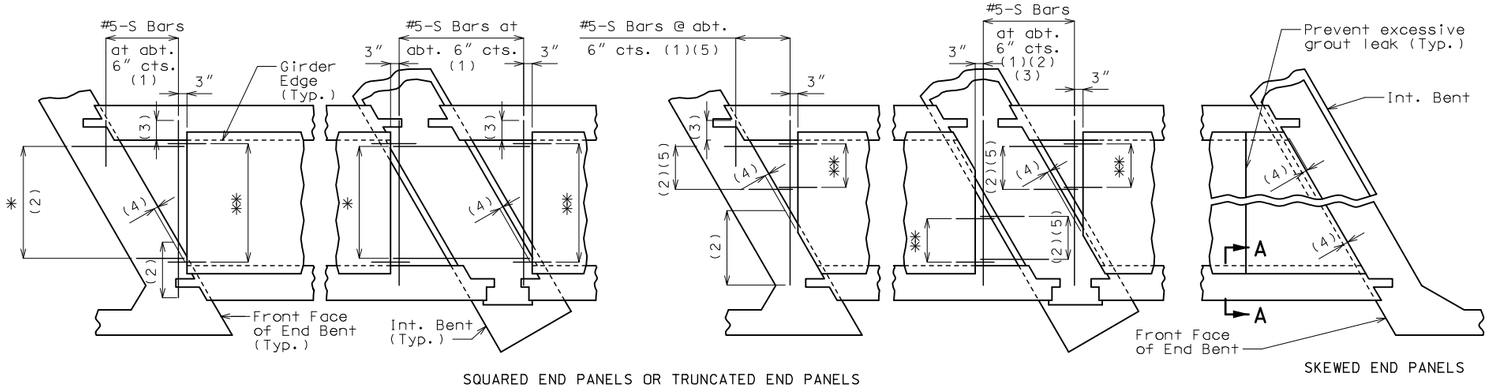
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

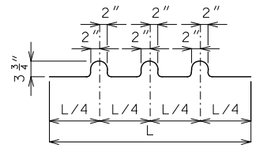
© Copyright CMT, Inc.

REV.

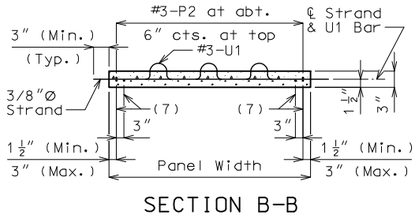


SQUARED END PANELS OR TRUNCATED END PANELS

SKEWED END PANELS

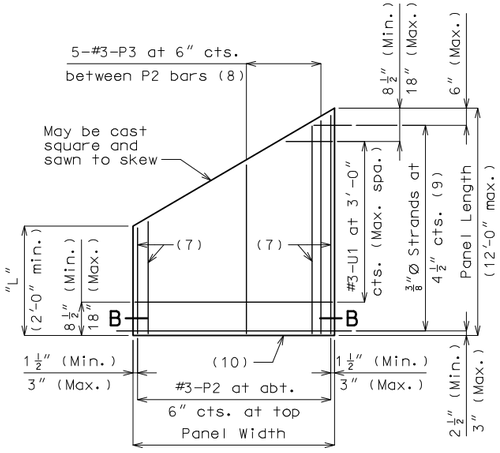


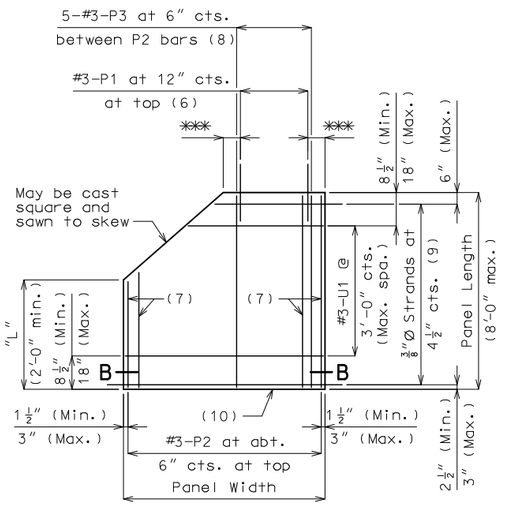
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



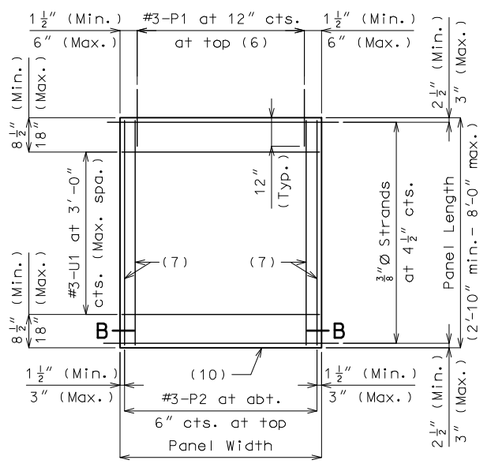
PLAN SHOWING PANELS PLACEMENT

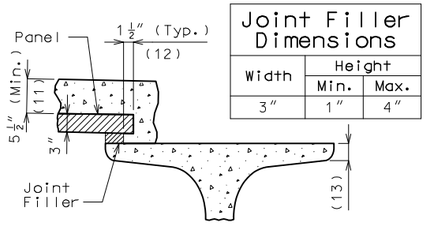
✳ #5-S Bars at abt. 9" cts. (1)
✳✳ #3-P1 at 12" cts. (End panels only)





✳✳✳ 3" (Min.), 6" (Max.)





Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"

Reference Notes:

Plan of Panels Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:

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

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

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

Initial prestressing force = 17.2 kips/strand.

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

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

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

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

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

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

Reinforcing Steel:

All dimensions are out to out.

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

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

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

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

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

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

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

All reinforcement other than prestressing strands shall be epoxy coated.

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

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

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

Joint Filler:

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

Use Slab Haunching Diagram on Sheet No. 14 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

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

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/4 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

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

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

DETAILS OF PRESTRESSED PANELS

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

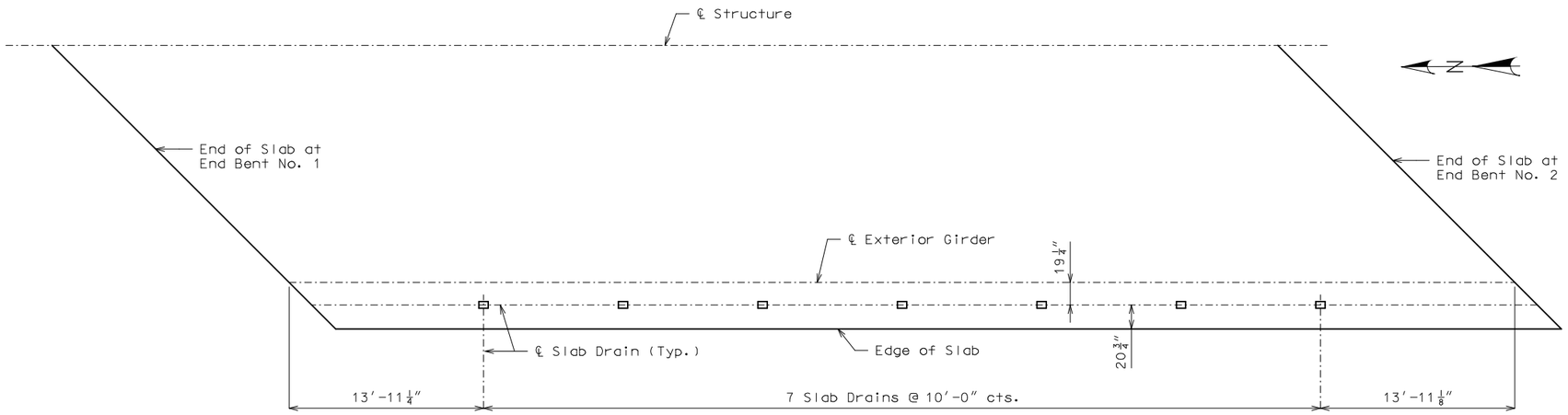
DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	12
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9369	

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

REV.	DATE	DESCRIPTION

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

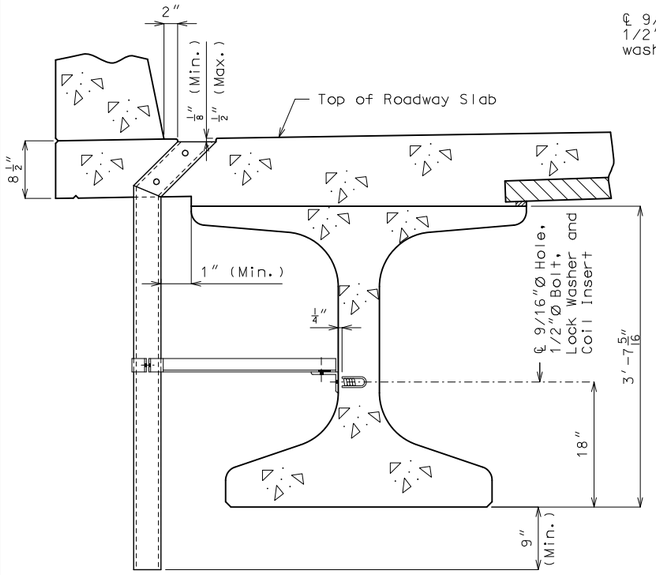
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



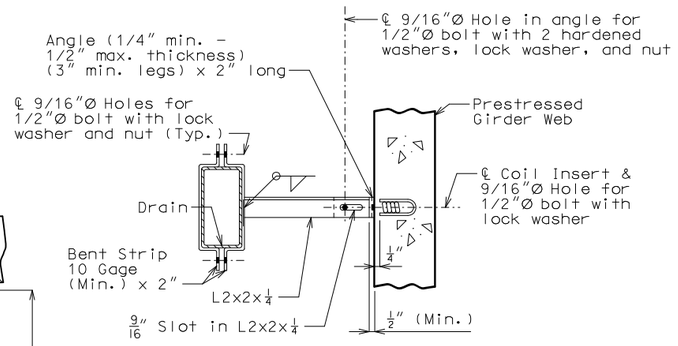
PART PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

(Right side shown, left side similar)

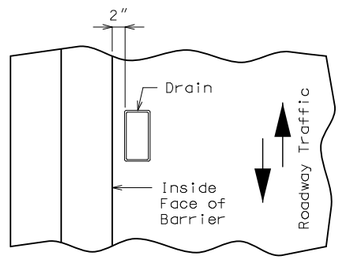
Note: Longitudinal dimensions are horizontal.



PART SECTION NEAR DRAIN

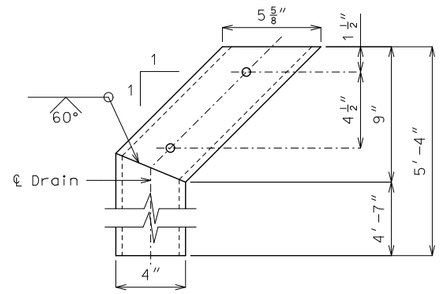


PART SECTION SHOWING BRACKET ASSEMBLY

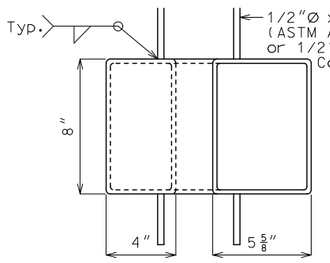


PART PLAN OF SLAB AT DRAIN

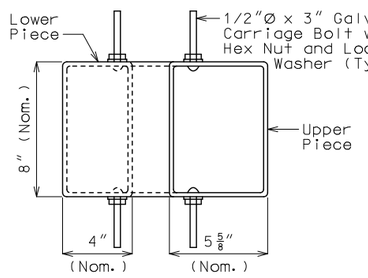
SLAB DRAINS



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 coil inserts and 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.

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

The coil insert required for the bracket assembly attachment shall be located on the prestressed girder shop drawings.

Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 2,500 pounds in 5,000 psi concrete.

The bolt required to attach the slab drain bracket assembly to the prestressed girder web shall be supplied by the prestressed girder fabricator.

Notes for Steel Drain:

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

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

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

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

Minimum reinforced wall thickness shall be 1/4 inch.

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

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

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

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

Both upper and lower drain pieces shall be rigidly connected to each other. Drain flow shall not be obstructed. Approval of the engineer is required.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	13
COUNTY	
BUTLER	
JOB NO.	
J9P3751	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9369	

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

DATE	DESCRIPTION	REV.

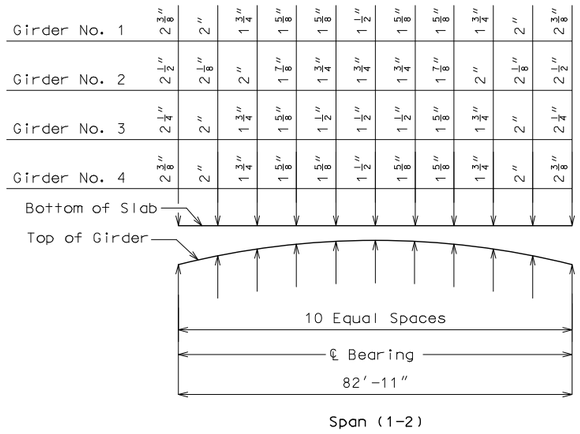
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_013_J9P3751_Slab_Drain.dgn 10:25:20 AM 3/3/2023

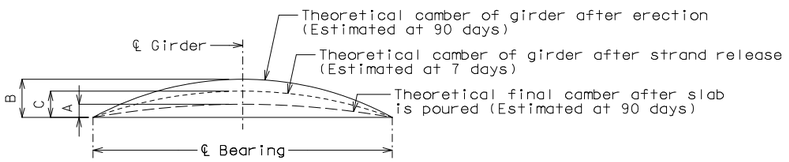


Span (1-2)

THEORETICAL SLAB HAUNCHING DIAGRAM

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.



Girder	Span (1-2)		
	A	B	C
Exterior	7/8"	2"	1 1/8"
Interior	3/4"		

GIRDER CAMBER DIAGRAM

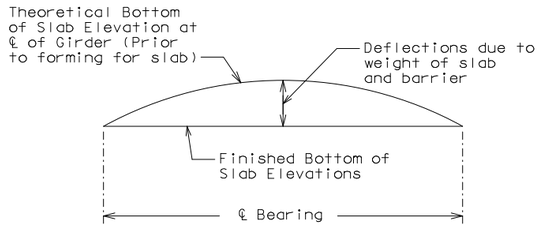
Conversion factors for girder camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (82'-11" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	307.35	307.36	307.37	307.37	307.36	307.35	307.32	307.29	307.24	307.20	307.15
2	307.49	307.50	307.51	307.52	307.51	307.49	307.47	307.43	307.39	307.34	307.29
3	307.47	307.48	307.49	307.50	307.49	307.47	307.45	307.41	307.37	307.32	307.27
4	307.29	307.30	307.31	307.31	307.30	307.29	307.26	307.23	307.18	307.14	307.09

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.



TYPICAL SLAB ELEVATIONS DIAGRAM

TBOS, HAUNCHING AND CAMBER

Detailed Jan. 2023
Checked Jan. 2023

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

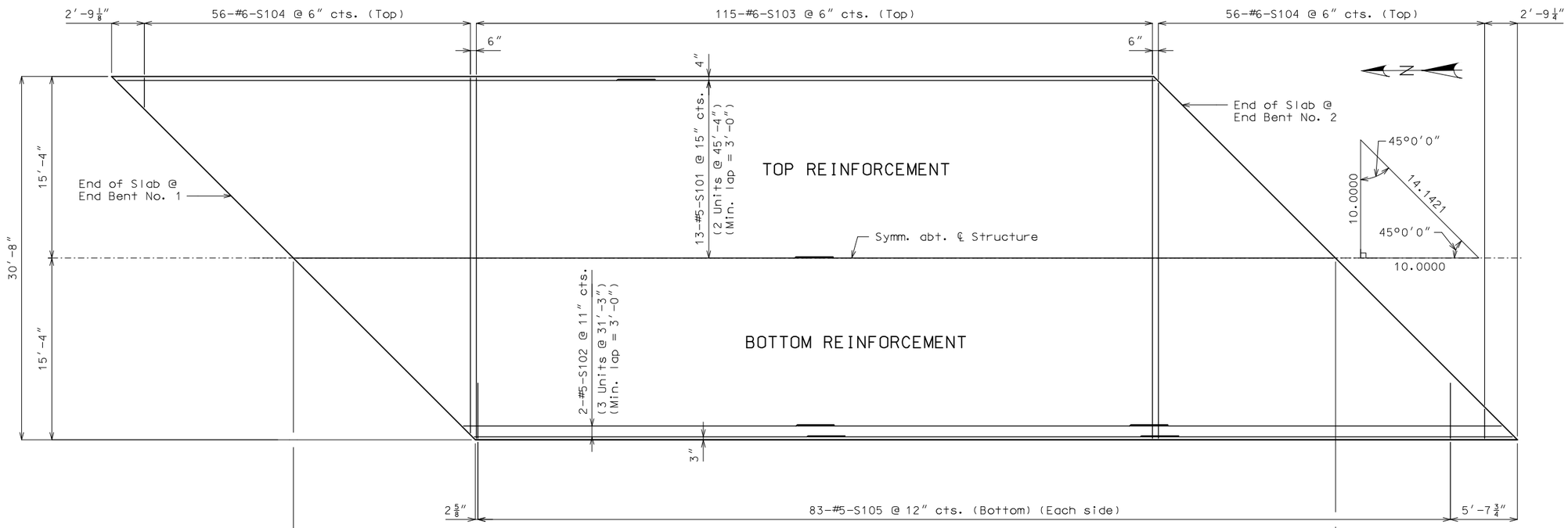
STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 14
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

REV. | DESCRIPTION | DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PLAN OF SLAB SHOWING REINFORCEMENT

General Notes:

Longitudinal slab dimensions shown are horizontally.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Section Thru Slab, see Sheet No. 16.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 and 18.

SLAB REINFORCEMENT DETAILS

Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_015_J9P3751_Slab_Reinforcement.dgn 10:25:22 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	15

COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9369

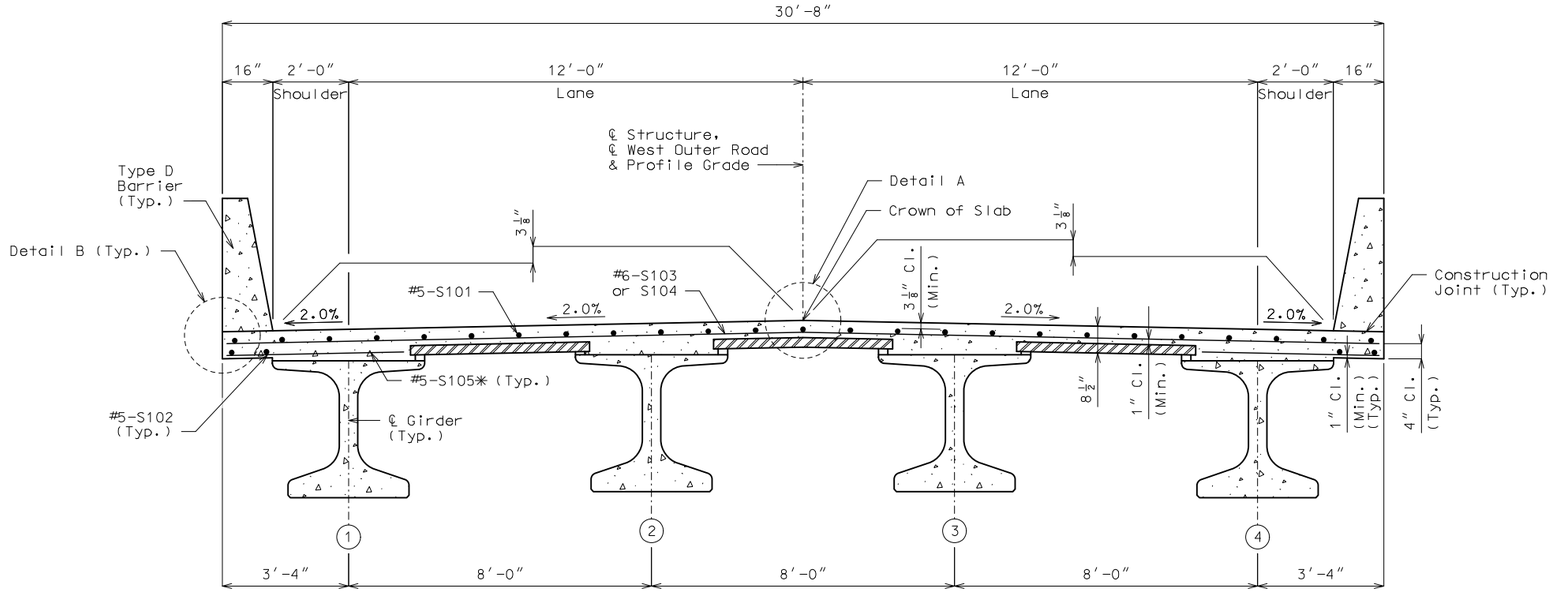
DESCRIPTION	DATE	REV.

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

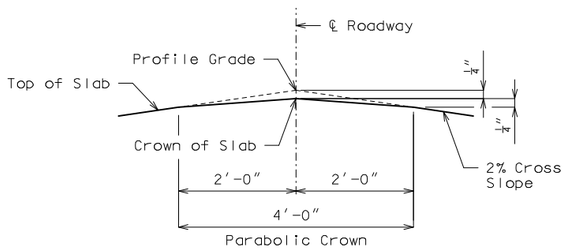
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

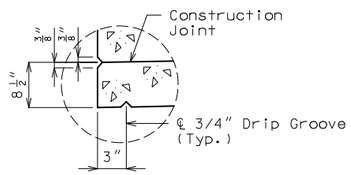


SECTION THRU SLAB

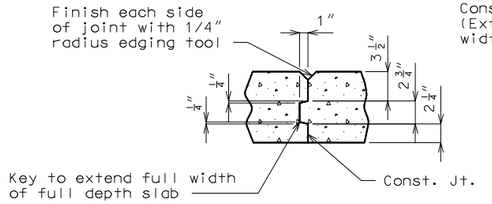
✳ Alternate bar shape available, see barrier sheets.



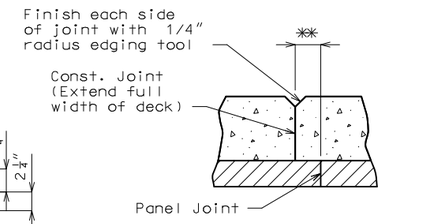
DETAIL A



DETAIL B



FULL DEPTH SLAB

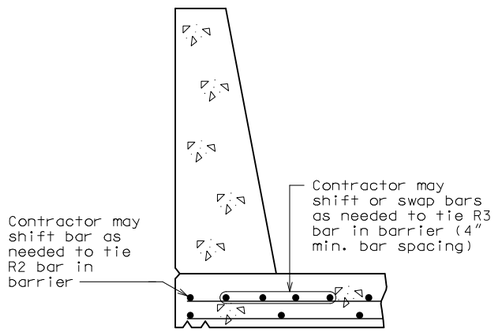


✳✳ Adjust the construction joint to a clearance of 6 inches minimum from the panel joint.

SLAB ON PANELS

SLAB CONSTRUCTION JOINT

(If needed)



OPTIONAL SHIFTING TOP BARS AT BARRIER

General Notes:

For details and reinforcement of Type D Barrier not shown, see Sheets No. 17 & 18.

For details of Precast Prestressed Panels, see Sheet No. 12.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Plan of Slab Showing Reinforcement, see Sheet No. 15.

The contractor shall pour and satisfactorily finish the roadway slab at a rate of not less than 25 cubic yards per hour.

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

DETAILS OF SLAB REINFORCING

Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_016_J9P3751_Section_thru_Slab.dgn 10:25:23 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	16

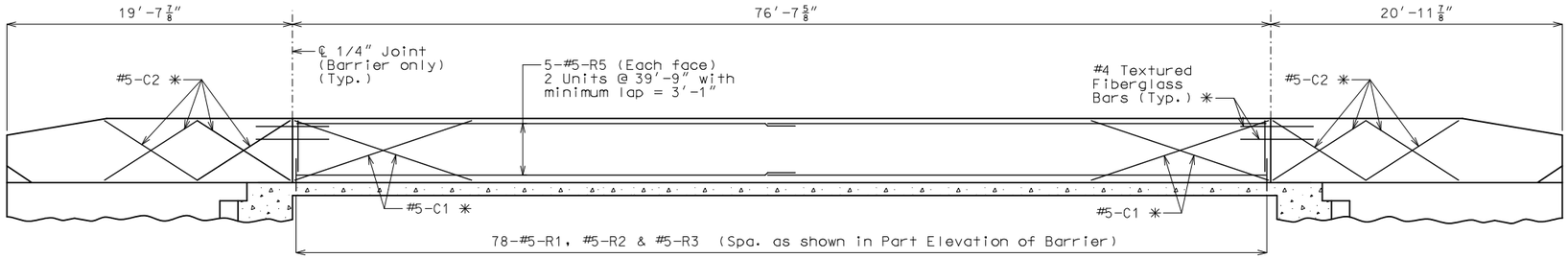
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

DESCRIPTION	DATE	REV.

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

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

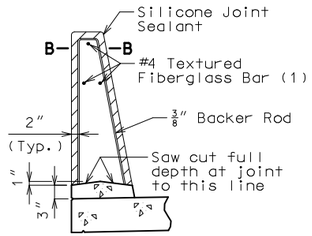
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



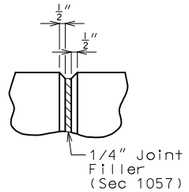
Span (1-2)

ELEVATION OF BARRIER

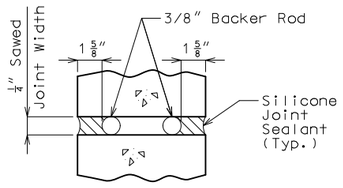
(Left barrier shown, right barrier similar by 180° rotation)
Longitudinal dimensions are horizontal.



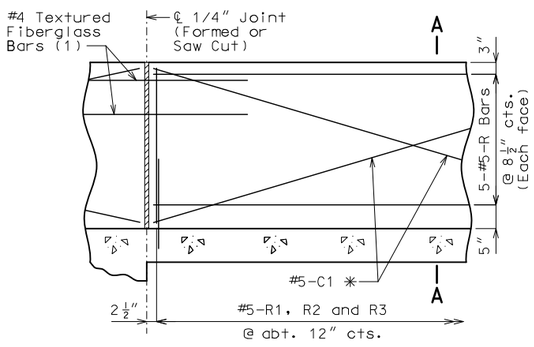
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

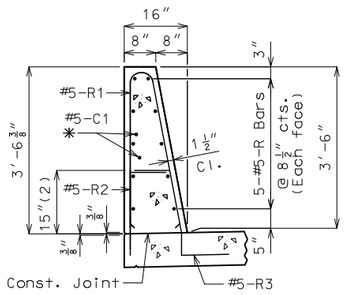


SECTION B-B



PART ELEVATION OF BARRIER

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

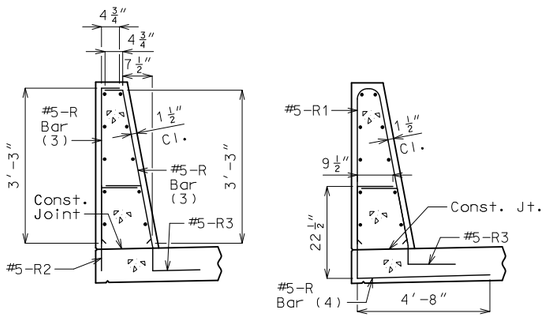


SECTION A-A

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.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

✳ Slip-formed option only.

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

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

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type 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 wing to end of wing.

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

TYPE D BARRIER

Detailed Jan. 2023
Checked Jan. 2023

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_017_J9P3751_Barrier_Elevations.dgn 10:25:24 AM 3/3/2023

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	17

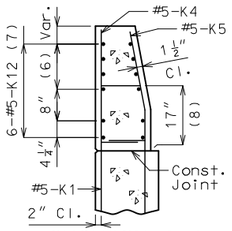
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9369

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

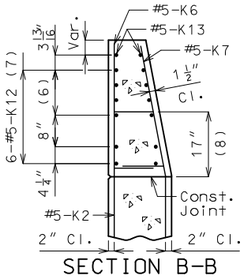
REV. | DESCRIPTION | DATE

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

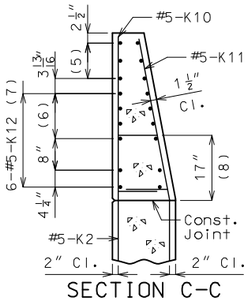
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



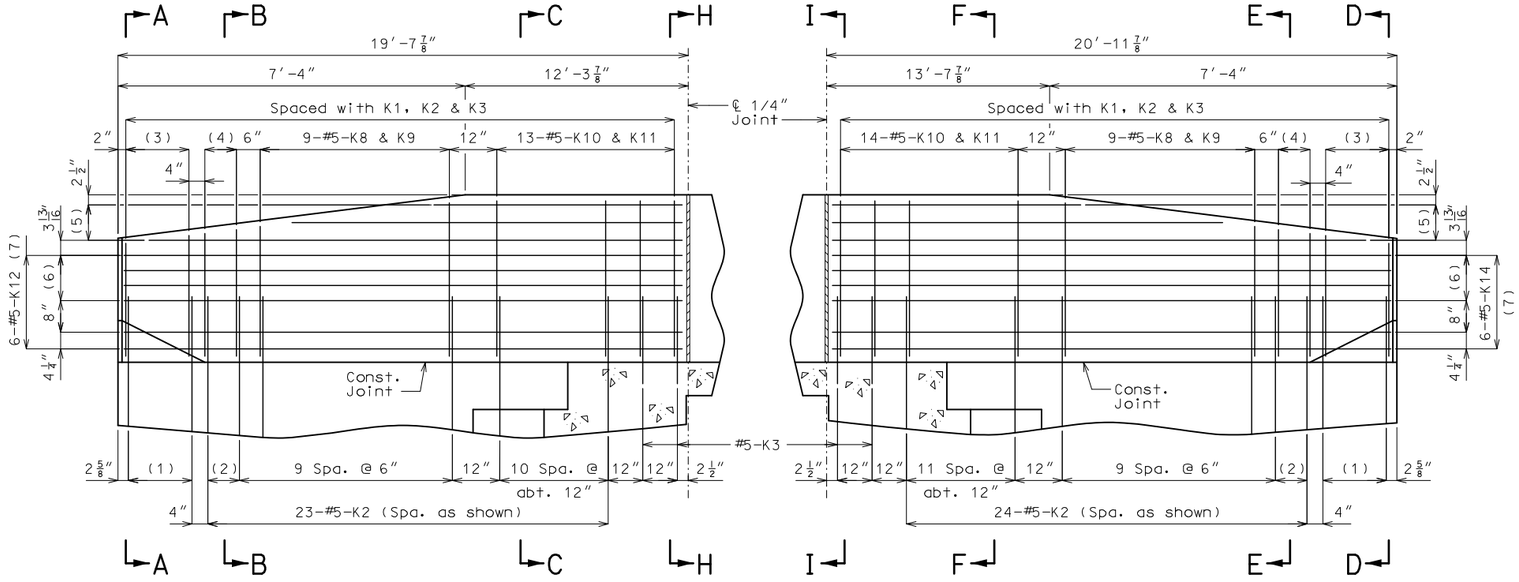
SECTION A-A



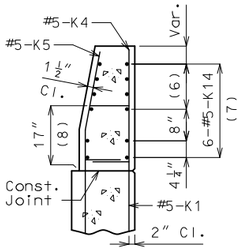
SECTION B-B



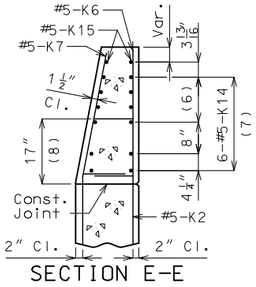
SECTION C-C



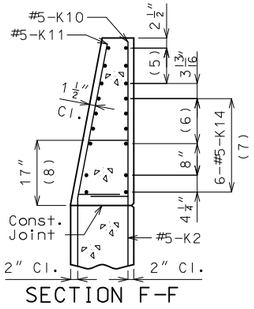
PART ELEVATION



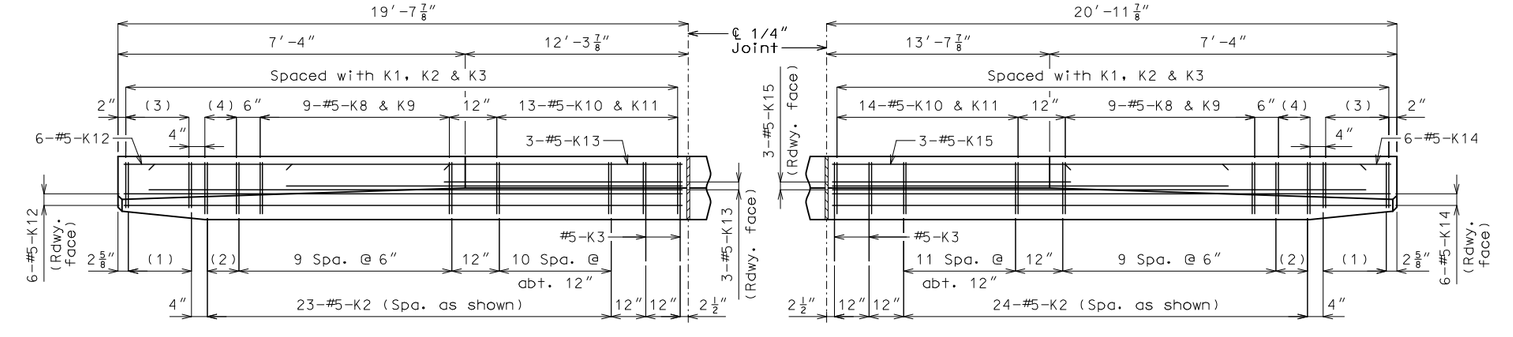
SECTION D-D



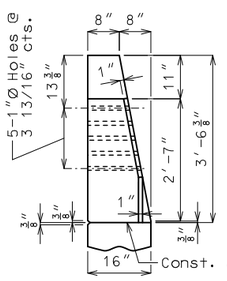
SECTION E-E



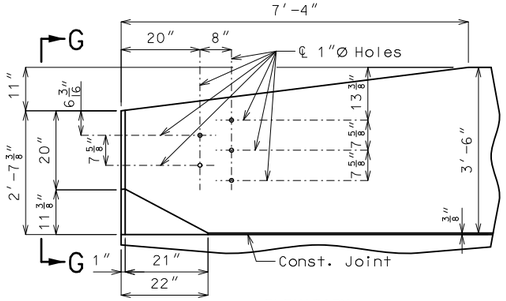
SECTION F-F



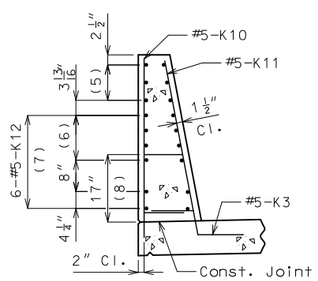
PART PLAN



ELEVATION G-G



ELEVATION



SECTION H-H

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

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

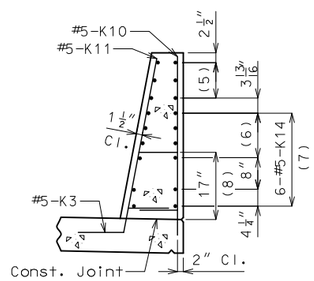
(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

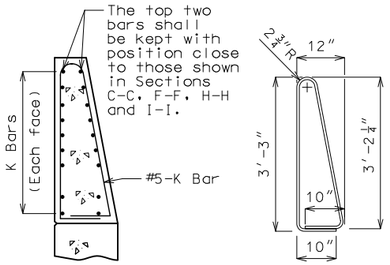
(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar



SECTION I-I

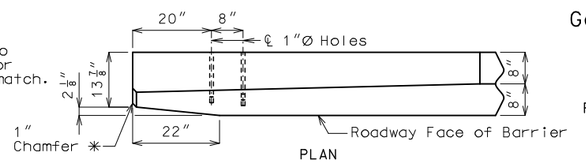


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(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.



PLAN

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

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

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

Reinforcing Steel:

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

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar by 180° rotation)

Detailed Jan. 2023
Checked Jan. 2023

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

Sheet No. 18 of 24

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	18

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

DESCRIPTION	DATE

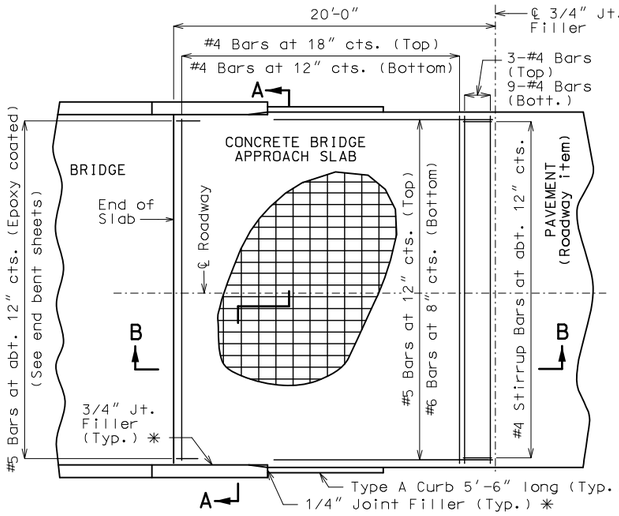
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

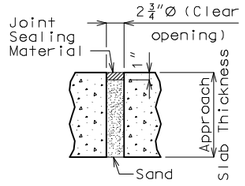
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

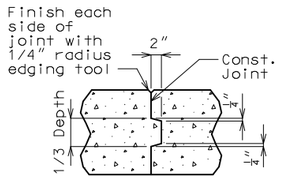
REV.



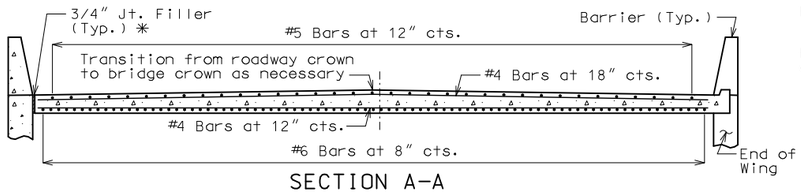
PART PLAN OF SQUARED STRUCTURE
(Skewed structure similar)



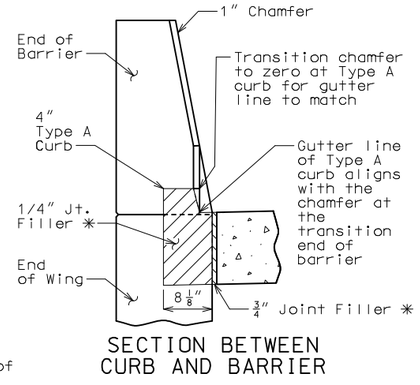
UNDERSEAL ACCESS HOLE DETAIL
(If required)



CONSTRUCTION JOINT DETAIL



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



SECTION BETWEEN CURB AND BARRIER

Notes For Concrete Slab Only:

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

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

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

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

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

Mechanical bar splices shall be in accordance with Sec 710.

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

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

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

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

General Notes:

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

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

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

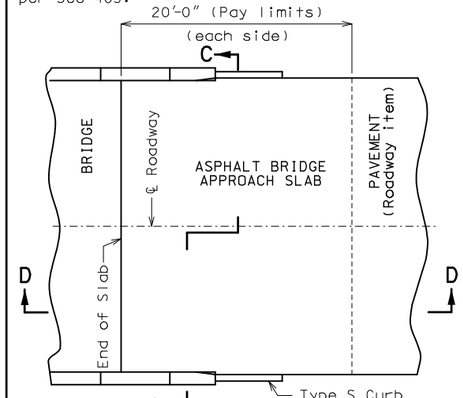
MoDOT Construction personnel will indicate the bridge approach slab used for this structure:

☐ Concrete Bridge Approach Slab
☐ Asphalt Bridge Approach Slab

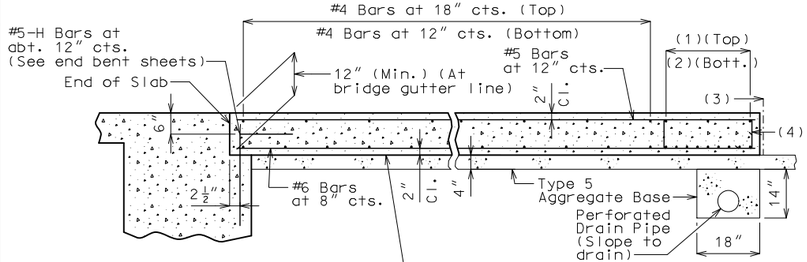
Notes For Asphalt Slab Only:

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

Application of tack is required between lifts per Sec 403.

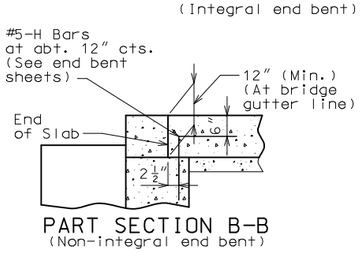


PART PLAN
(Squared structure shown, skewed structure similar)

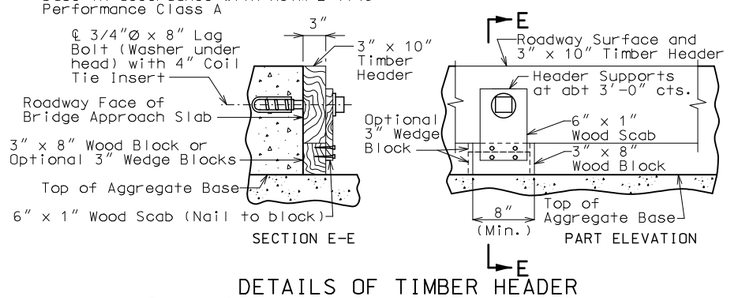


(1) 3-#4 Bars
(2) 9-#4 Bars
(3) ℄ 3/4" Jt. Filler
(4) #4 Stirrup Bars at abt. 12" cts.; 2'-0"x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.

SECTION B-B
(Integral end bent)

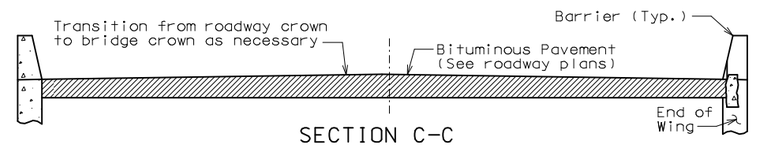


PART SECTION B-B
(Non-integral end bent)

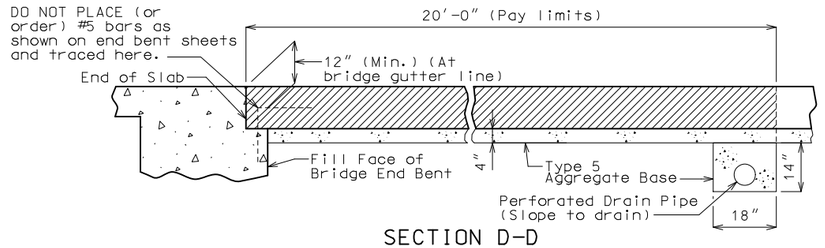


DETAILS OF TIMBER HEADER
Remove timber header when concrete pavement is placed.

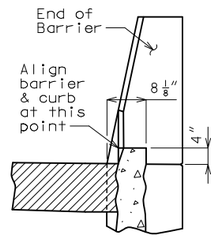
OPTIONAL CONCRETE SLAB



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



SECTION D-D
OPTIONAL ASPHALT SLAB
(NOT ALLOWED WITH CONCRETE PAVEMENT)



4" TYPE S CURB
See Missouri Standard Plan 609.00 for details of Type S curb.

BRIDGE APPROACH SLAB (MINOR)
Integral end bents shown, non-integral end bent similar.

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	19

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

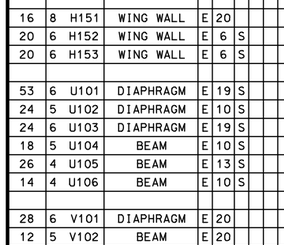
pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_019_J9P3751_Approach_Slab.dgn 10:25:26 AM 3/3/2023

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
10	6	F100	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250	2	1.000		10.250	8	0	7	9	117
10	6	F101	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250	2	1.000		13.000		5.250	12	11	12	10	193
4	6	F102	DIAPHRAGM	E	23					4	6.000	5	1.000						3	2.250	3	2.250	9	7	9	6	58
4	6	F103	DIAPHRAGM	E	21					7	10.750	5	1.000						5	7.000	5	7.000	13	0	12	9	77
28	5	H101	DIAPHRAGM	E	19					2	0.000	15.000											3	3	3	2	93
4	6	H102	DIAPHRAGM	E	20					43	0.000												43	0	43	0	259
4	7	H103	DIAPHRAGM	E	20					43	0.000												43	0	43	0	352
4	5	H104	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750	5	10	5	9	24
9	6	H105	DIAPHRAGM	E	20					9	9.000												9	9	9	9	132
3	6	H106	DIAPHRAGM	E	20					6	5.000												6	5	6	5	29
6	6	H107	DIAPHRAGM	E	20					3	9.000												3	9	3	9	34
2	6	H108	DIAPHRAGM	E	20					2	1.000												2	1	2	1	7
8	7	H109	BEAM	E	20					43	0.000												43	0	43	0	704
4	6	H110	BEAM	E	20					43	0.000												43	0	43	0	259
16	8	H151	WING WALL	E	20					16	6.000												16	6	16	6	705
20	6	H152	WING WALL	E	6	S				15	8.000	12.000											16	8	16	7	499
20	6	H153	WING WALL	E	6	S				15	8.000	12.000											16	8	16	7	499
53	6	U101	DIAPHRAGM	E	19	S				3	3.000	7	0.000										10	3	10	2	810
24	5	U102	DIAPHRAGM	E	10	S						4	1.000	4	7.000								12	9	12	7	315
24	6	U103	DIAPHRAGM	E	19	S				3	0.250	5	3.000										8	4	8	2	295
18	5	U104	BEAM	E	10	S						6	2.000	5	3.000								17	7	17	5	327
26	4	U105	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000						16	7	16	4	284
14	4	U106	BEAM	E	10	S						2	8.000	5	3.000								10	7	10	5	98
28	6	V101	DIAPHRAGM	E	20					3	1.000												3	1	3	1	130
12	5	V102	BEAM	E	20					6	2.000												6	2	6	2	78
30	6	V151	WING WALL	E	20					7	1.000												7	1	7	1	320
30	6	V152	WING WALL	E	20					7	2.000												7	2	7	2	323
			END BENT 2																									
10	6	F200	WING BRACE	E	23					2	3.000	4	6.750	14.000		13.000		5.250	2	1.000		10.250	8	0	7	9	117
10	6	F201	WING BRACE	E	15						14.000	9	6.000	2	3.000	10.250	2	1.000		13.000		5.250	12	11	12	10	193
4	6	F202	DIAPHRAGM	E	23					4	6.000	5	1.000						3	2.250	3	2.250	9	7	9	6	58
4	6	F203	DIAPHRAGM	E	21					7	10.750	5	1.000						5	7.000	5	7.000	13	0	12	9	77
28	5	H201	DIAPHRAGM	E	19					2	0.000	15.000											3	3	3	2	93
4	6	H202	DIAPHRAGM	E	20					43	0.000												43	0	43	0	259
4	7	H203	DIAPHRAGM	E	20					43	0.000												43	0	43	0	352
4	5	H204	DIAPHRAGM	E	23						15.250	3	3.000	15.250		10.750		10.750		10.750		10.750	5	10	5	9	24
9	6	H205	DIAPHRAGM	E	20					9	9.000												9	9	9	9	132
3	6	H206	DIAPHRAGM	E	20					6	5.000												6	5	6	5	29
6	6	H207	DIAPHRAGM	E	20					3	9.000												3	9	3	9	34
2	6	H208	DIAPHRAGM	E	20					2	1.000												2	1	2	1	7
8	7	H209	BEAM	E	20					43	0.000												43	0	43	0	704
4	6	H210	BEAM	E	20					43	0.000												43	0	43	0	259
16	8	H251	WING WALL	E	20					16	6.000												16	6	16	6	705
20	6	H252	WING WALL	E	6	S				15	8.000	12.000											16	8	16	7	499
20	6	H253	WING WALL	E	6	S				15	8.000	12.000											16	8	16	7	499

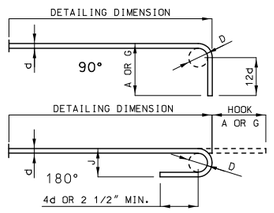
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
53	6	U201	DIAPHRAGM	E	19	S				3	3.000	7	0.000										10	3	10	2	810
24	5	U202	DIAPHRAGM	E	10	S						4	1.000	4	7.000								12	9	12	7	315
24	6	U203	DIAPHRAGM	E	19	S				3	0.250	5	3.000										8	4	8	2	295
18	5	U204	BEAM	E	10	S						6	2.000	5	3.000								17	7	17	5	327
26	4	U205	BEAM	E	13	S				5	3.000	2	8.000	5	3.000	2	8.000						16	7	16	4	284
14	4	U206	BEAM	E	10	S						2	8.000	5	3.000								10	7	10	5	98
28	6	V201	DIAPHRAGM	E	20					3	0.000												3	0	3	0	127
12	5	V202	BEAM	E	20					6	2.000												6	2	6	2	78
30	6	V251	WING WALL	E	20					7	1.000												7	1	7	1	320
30	6	V252	WING WALL	E	20					7	0.000												7	0	7	0	316
			SLAB																									
50	5	S101	SLAB	E	20					45	4.000												45	4	45	4	2365
12	5	S102	SLAB	E	20					31	3.000												31	3	31	3	392
115	6	S103	SLAB	E	20					30	5.000												30	5	30	5	5254
112	6	S104	SLAB	E	20			V	2	29	11.500												30	0	30	0	
			INCR. = 0.5′							2	5.500												2	6	2	6	2734
166	5	S105	SLAB	E	20					4	8.000												4	8	4	8	808
			TYPE D BARRIER																									
156	5	R1	BARRIER	E	26					3	3.000	5.500		3	0.750				3	3.000	6.750		6	11	6	8	1085
156	5	R2	BARRIER	E	19	S					20.500	9.500											2	6	2	5	394
156	5	R3	BARRIER	E	27	S						9.500		15.250		5.000		12.000		15.000		3.000	3	6	3	4	543
40	5	R5	BARRIER	E	20					39	9.000												39	9	39	9	1659
20	5	K1	BARRIER	E	27	S				3	8.000	9.250		5.250		3	2.750			5.250		1.000	8	2	8	0	167
94	5	K2	BARRIER	E	27	S				3	8.000	9.250		14.500		2	5.750			14.250		2.750	8	2	8	0	785
8	5	K3	BARRIER	E	27	S					22.500	9.250		14.750		7.750		12.000		14.500		2.750	5	7	5	3	44
20	5	K4	BARRIER	E	19	S		V	4	2	4.250	10.000											3	3	3	1	
			INCR. = 0.5″							2	6.250	10.000											3	5	3	3	67
20	5	K5	BARRIER	E	14	S		V	4		8.250	9.500		18.500						4.000		18.000	3	1	2	11	
			INCR. = 0.5″								8.250	9.500		20.500						4.500		20.000	3	3	3	1	63
12	5	K6	BARRIER	E	19	S		V	4	2	6.750	10.000											3	5	3	4	
			INCR. = 0.5″							2	7.750	10.000											3	6	3	5	43
12	5	K7	BARRIER	E	21	S		V	4	2	6.750	10.000								2	6.000	6.250	3	5	3	4	
			INCR. = 0.5″							2	7.750	10.000								2	7.000	6.500	3	6	3	5	43
36	5	K8	BARRIER	E	19	S		V	4	2	8.500	10.000											3	7	3	6	
			INCR. = 0.75′							3	2.500	10.000											4	1	4	0	141
36	5	K9	BARRIER	E	21	S		V	4	2	8.500	10.000								2	7.750	6.750	3	7	3	6	
			INCR. = 0.75′							3	2.500	10.000								3	1.750	7.750	4	1	4	0	141
54	5	K10	BARRIER	E	19	S				3	3.000	10.000											4	1	4	0	226
54	5	K11	BARRIER	E	21	S				3	3.000	10.000								3	2.250	7.750	4	1	4	0	226
24	5	K12	BARRIER	E	20					19	4.000												19	4	19	4	484
12	5	K13	BARRIER	E	20			V	4	18	7.000												18	7	18	7	
			INCR. = 3′							12	7.000												12	7	12	7	196
24	5	K14	BARRIER	E	20					20	8.000												20	8	20	8	518
12	5	K15	BARRIER	E	20			V	4	19	11.000												19	11	19	11	
			INCR. = 3′							13	11.000												13	11	13	11	212
8	5	C1	SLIP FORM	E	20					12	0.000												12	0	12	0	101
16	5	C2	SLIP FORM	E	20					8	0.000												8	0	8	0	134



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2″	4 1/2″	4 1/2″	3″
#5	2 1/2″	6″	5 1/2″	3 3/4″
#6	4 1/2″	12″	8″	4 1/2″

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4″	5″	3″	6″
#4	3″	6″	4″	8″
#5	3 3/4″	7″	5″	10″
#6	4 1/2″	8″	6″	12″
#7	5 1/4″	10″	7″	14″
#8	6″	11″	8″	16″
#9	9 1/2″	15″	11 3/4″	19″
#10	10 3/4″	17″	13 1/4″	22″
#11	12″	19″	14 3/4″	2′-0″
#14	18 1/4″	2′-3″	21 3/4″	2′-7″

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

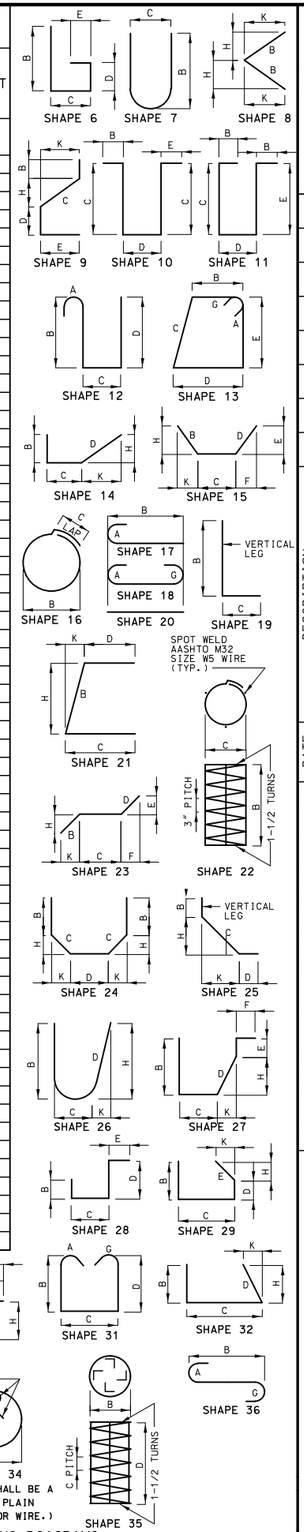
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60,000 PSI.



BENDING DIAGRAMS

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	20

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

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

DATE	DESCRIPTION	REV.

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

Detailed Jan. 2023
Checked Jan. 2023

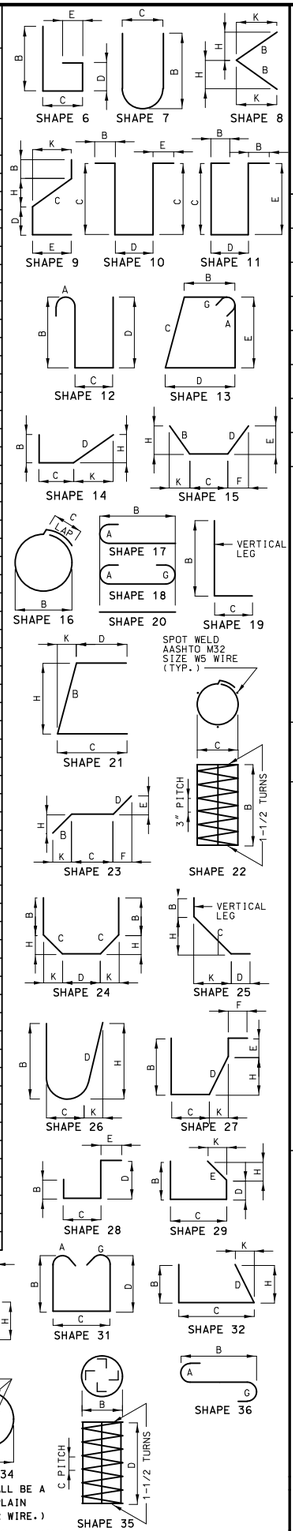
Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

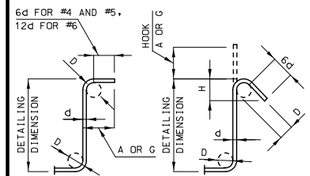
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			TOTALS																									
	4			E																								764
	5			E																								12511
	6			E																								16060
	7			E																								2112
	8			E																								1410
			TOTAL	E																								32857
			SLAB ON CONCRETE NU-GIRDER																									
	4			E																								764
	5			E																								5239
	6			E																								16060
	7			E																								2112
	8			E																								1410
			TOTAL	E																								25585
			TYPE D BARRIER																									
	5			E																								7037
			TOTAL	E																								7037
			SLIP FORM OPTION																									
	5			E																								235
			TOTAL	E																								235

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.



BENDING DIAGRAMS

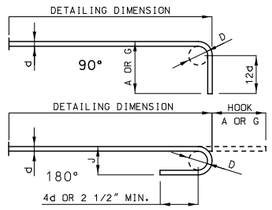


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS

BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.

NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)

ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

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 (GRADE 60) FY = 60,000 PSI.

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	21

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

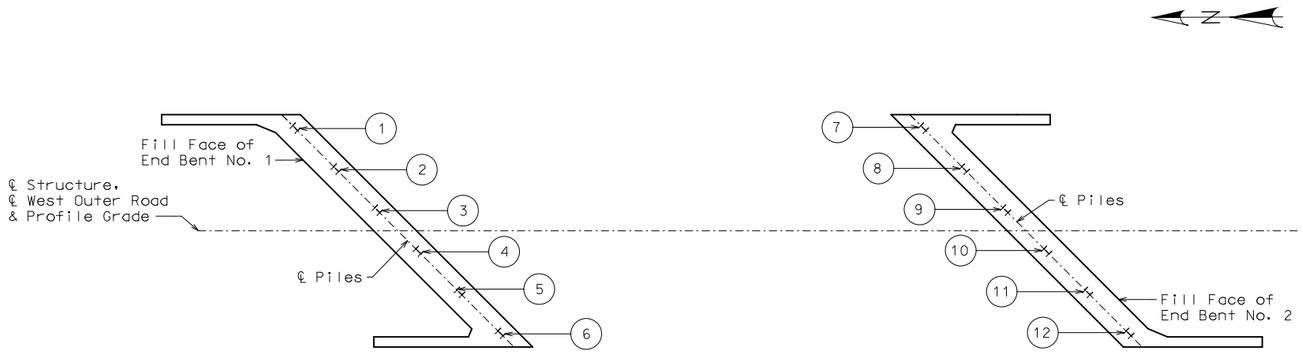
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

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

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 2
7			
8			
9			
10			
11			
12			

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

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed Jan. 2023
Checked Jan. 2023

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	22

COUNTY BUTLER

JOB NO. J9P3751

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9369

DESCRIPTION	DATE

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

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-201

CLIENT MoDOT **PROJECT NAME** Route 67 over Harviell Ditch
PROJECT NUMBER 20284 **PROJECT LOCATION** Butler County, Missouri
DATE STARTED 12/7/21 **COMPLETED** 12/7/21 **GROUND ELEVATION** 303.7 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750) **AT TIME OF DRILLING** ---
LOGGED BY NB **CHECKED BY** CM **AT END OF DRILLING** ---
STATION 758+75 **OFFSET** 26' RT **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 6 inches										
		(CL) SANDY LEAN CLAY: Light gray, moist, stiff to hard	SPT SS1	100	5-6-7 (13)			4				45
			SPT SS2	72	6-11-15 (26)			10				52
			SPT SS3	94	9-17-17 (34)			6				28
10			SPT SS4	89	5-6-8 (14)			10				17
		(SP) SAND: Gray to grayish brown, moist, very loose to medium dense	SPT SS5	83	4-7-4 (11)			24				24
20			SPT SS6	89	1-2-1 (3)			21				16
			SPT SS7	44	5-2-2 (4)			23				31
30			SPT SS8	67	5-10-9 (19)			20				22
			SPT SS9	67	8-9-7 (16)			23				28
40			SPT SS10	61	9-12-14 (26)			21				21
			SPT SS11	61	7-7-12 (19)			22				23
50			SPT SS12	0	8-5-5 (10)							

(Continued Next Page)

B-201

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-201

CLIENT MoDOT **PROJECT NAME** Route 67 over Harviell Ditch
PROJECT NUMBER 20284 **PROJECT LOCATION** Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SP) SAND: Gray to grayish brown, moist, very loose to medium dense *(continued)*										
		(SP) GRAVELLY SAND: Graysih brown, moist, medium dense	SPT SS13	56	9-8-8 (16)			16				31
60			SPT SS14	39	10-11-9 (20)			14				35
			SPT SS15	6	13-10-9 (19)			15				
70			SPT SS16	39	9-10-11 (21)			13				
		(SP) SAND: Grayish brown, moist, medium dense	SPT SS17	44	11-11-12 (23)			20				30
80		(SP) GRAVELLY SAND: Graysih brown, moist, very dense	SPT SS18	83	12-50/1"			13				
		Refusal at 80.1 feet. Bottom of borehole at 80.1 feet.										

B-201

BORING DATA

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

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

Sheet No. 23 of 24

Detailed Jan. 2023
Checked Jan. 2023

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 STATE MO
DISTRICT BR SHEET NO. 23
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9369

DESCRIPTION | DATE | REV.

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-202

PAGE 1 OF 2

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri
DATE STARTED 12/14/21 **COMPLETED** 12/15/21
GROUND ELEVATION 304.8 ft **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Smith & Co. **DRILLED BY** Smith & Co
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger and Mud Rotary (CME-750)
AT TIME OF DRILLING 19.50 ft / Elev 285.30 ft
LOGGED BY NB **CHECKED BY** CM
AT END OF DRILLING ---
STATION 759+88 **OFFSET** 44' RT
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		TOPSOIL - 6 inches										
		(CL) SANDY LEAN CLAY: Grayish brown, moist, soft to medium stiff	SPT SS1	61	1-2-3 (5)			15				57
			SPT SS2	100	1-1-1 (2)			17				61
			SPT SS3	100	1-3-5 (8)			16				55
10		(SP-SC) SAND WITH CLAY: Light brownish gray to gray, moist, medium dense	SPT SS4	92	3-5-7 (12)			13				38
			SPT SS5	89	5-9-12 (21)			19				39
20			SPT SS6	86	5-8-10 (18)			19				37
		(SP) SAND: Gray, moist, loose to medium dense	SPT SS7	44	1-2-3 (5)			20				60
30			SPT SS8	56	5-6-7 (13)			19				43
			SPT SS9	61	8-8-8 (16)			20				51
40		(SP) GRAVELLY SAND: Gray, moist, medium dense to dense	SPT SS10	67	5-8-12 (20)			19				39
			SPT SS11	64	4-8-10 (18)			20				24
50			SPT SS12	58	6-9-8 (17)			19				24

(Continued Next Page)

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

B-202

Bacon Farmer Workman Engineering & Testing Inc.
500 S 17th St
Paducah, KY 42003
Telephone: 2704431995
Fax: 2704431904

BORING NUMBER B-202

PAGE 2 OF 2

CLIENT McDOT
PROJECT NAME Route 67 over Harviell Ditch
PROJECT NUMBER 20284
PROJECT LOCATION Butler County, Missouri

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SP) GRAVELLY SAND: Gray, moist, medium dense to dense *(continued)*										
			SPT SS13	0	4-6-6 (12)			18				21
60			SPT SS14	72	6-9-12 (21)			15				24
			SPT SS15	100	5-10-11 (21)			19				19
70			SPT SS16	61	8-13-12 (25)			17				24
			SPT SS17	72	8-9-15 (24)			20				23
80			SPT SS18	64	11-15-17 (32)			17				21
		Refusal at 83.0 feet. Bottom of borehole at 83.0 feet.										

GEOTECH BH COLUMNS - GINT STD US LAB 2021.GDT - 4/29/22 17:32 - C:\USERS\CMATHEWS\DESKTOP\US 67\20284 - MODOT US 67 BUTLER COUNTY.GPJ

B-202

BORING DATA

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

Detailed Jan. 2023
Checked Jan. 2023

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

Sheet No. 24 of 24

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 24
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9369

DATE	DESCRIPTION	REV.

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

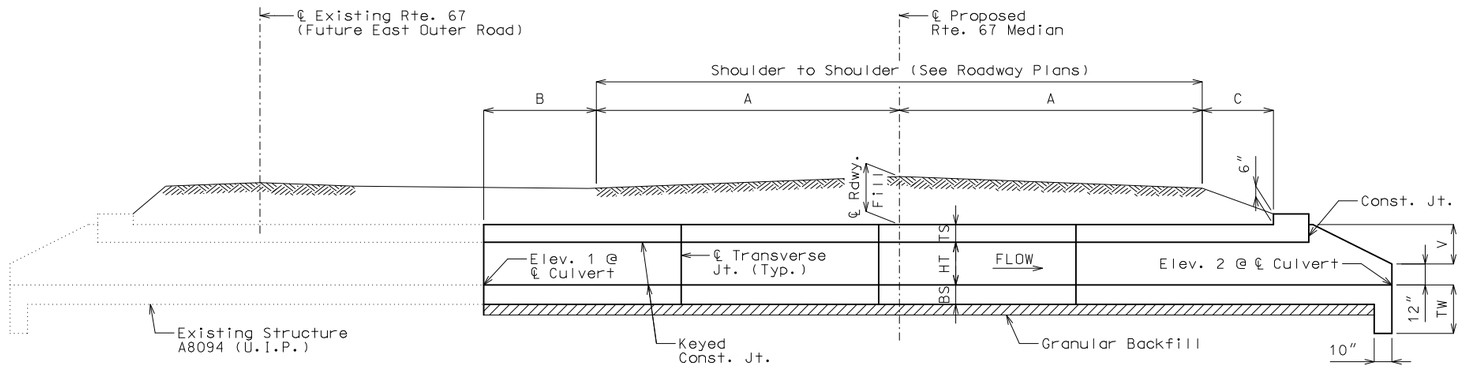
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\Harviell Ditch\A9369\B_A9369_024_J9P3751_Boring_Log2.dgn 10:25:45 AM 3/3/2023

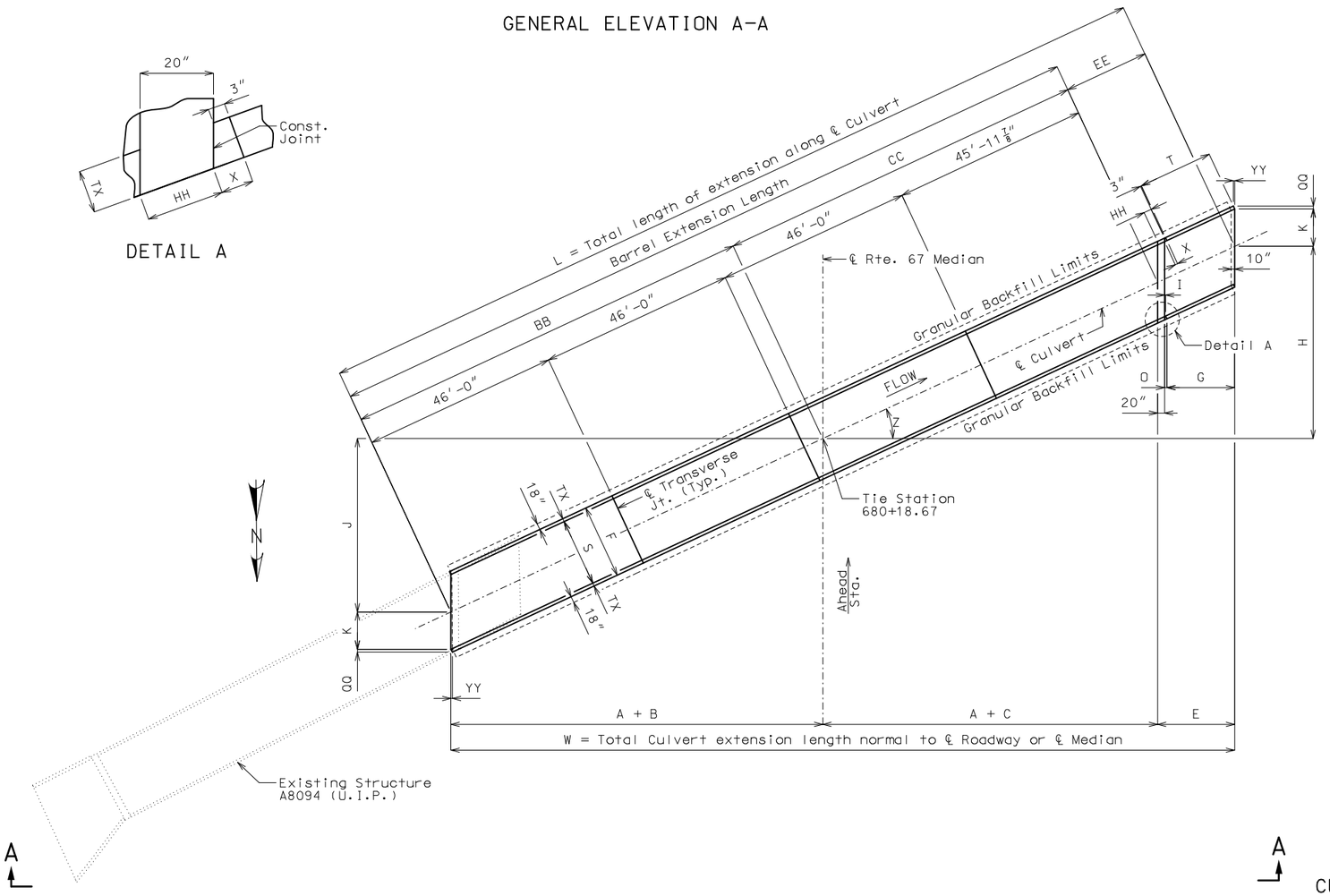
U.I.P. AND EXTEND EXISTING SINGLE 16′×8′ CONCRETE BOX CULVERT

SEC/SUR 21/22 TWP 23N RGE 5E



GENERAL ELEVATION A-A

DETAIL A

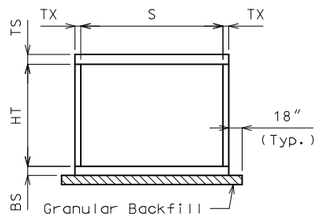


PLAN OF LAYOUT DIMENSIONS

Layout Dimensions

Var.	Equation	Dim.
S	- - -	16′-0″±
HT	- - -	8′-0″±
TS	- - -	12″
BS	- - -	13″
TX	- - -	9″
A	- - -	64′-0″
B	- - -	23′-9″
C	- - -	15′-0″
E	G + O + 20″	18′-2½″
F	S + 2TX	17′-6″
G	2V	16′-0″
H	(A + C + E)(tan Z)	45′-4″
I	3″(cos Z)	2¾″
J	(A + B)(tan Z)	40′-11″
K	(S/2)(sec Z)	8′-9⅞″
L	EE + BB + CC	204′-1″
O	I + YY	6½″
T	G(sec Z)	17′-7⅞″
V	HT + TS - 12″	8′-0″
W	2A + B + C + E	184′-11½″
X	3″ + TX(tan Z)	7¼″
Z	Skew Angle	25°00′00″
BB	(A + B)(sec Z)	96′-9⅞″
CC	(A + C)(sec Z)	87′-2″
EE	E(sec Z)	20′-1⅛″
HH	20″(sec Z)	22⅛″
QQ	TX(cos Z)	8⅛″
YY	TX(sin Z)	3¾″
TW	Max{3′-4″ or (BS + 12″)}	3′-4″

Dimensions are based on end units.



SECTION THRU BOX
(Normal to ℄ Structure)

Notes:

For Hydrologic Data and General Notes, See Sheet No. 2.

Construction joint not shown for clarity, see standard plans for details.

B.M. 32 = CHISELED SQUARE AT SOUTHWEST CORNER WEST BART CURB BR F0665, ELEV. = 308.27′

B.M. 29 = 3″ ALUM. MODOT CAP IN CENTER EAST HEADWALL BOX CULVERT. ELEV. 307.71

CULVERT-BRIDGE: ROUTE 67 OVER EPPS DITCH (NORTH)

ROUTE 67 FROM ROUTE 142 TO ROUTE 158
ABOUT 4.7 MILES NORTH OF ROUTE 142
TIE STATION 680+18.67

Designed MAY 2022
Detailed MAY 2022
Checked MAY 2022

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

STATE OF MISSOURI
ALEX BENZ
NUMBER PE-2018003121
PROFESSIONAL ENGINEER

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A80941

DESCRIPTION | DATE | REV.

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

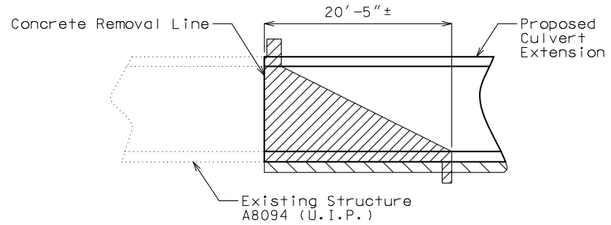
Estimated Quantities			Final
Class 4 Excavation	cu. yard	295	
Dewatering	lump sum	1	
Partial Removal of Culvert-Bridge Concrete	lump sum	1	
Class B-1 Concrete (Culverts-Bridge)	cu. yard	353.5	
Reinforcing Steel (Culverts-Bridge)	pound	69,340	

Hydrologic Data
Drainage Area = 0.5 mi^2
Design Flood Frequency = 50 years
Design Flood Discharge = 200 cfs
Design Flood (D.F.) Elevation = 304.4
Base Flood (100-year)
Base Flood Elevation = 305.1
Base Flood Discharge = 230 cfs
Estimated Backwater = 0.0 ft
Outlet Velocity = 2.2 ft/s
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency > 500 years
Overtopping Flood Elevation = 307.7

Elevations
Upstream (Elev. 1) = 298.38± (Match Existing)
Downstream (Elev. 2) = 297.83
Pr. Gr. at Tie Sta. = 310.44

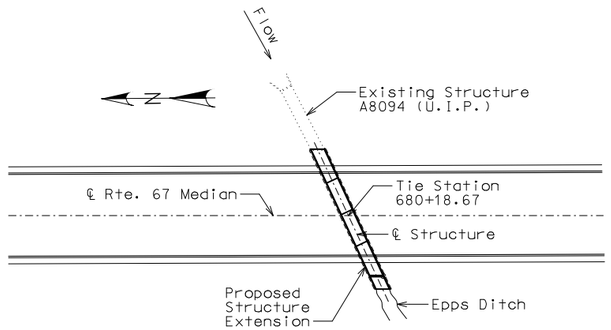
Fill heights are measured from the top of top slab to the top of earth fill or roadway.

Fill Heights
℄ Rdwy at ℄ Culvert = 3.32 ft
Design (All units) = 3.00 ft



PART ELEVATION SHOWING REMOVAL

Note: Horizontal dimensions measured along ℄ Culvert



LOCATION SKETCH

GENERAL NOTES:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions.

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.).

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi.

Standard Plans:
703.14, 703.16, 703.17,
703.37, 703.38, 706.35

Miscellaneous:
MoDOT Construction personnel will indicate the type of box culvert constructed:

☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item).

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover (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.

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.

Bottom of top slab, top of bottom slab, and inside faces of walls shall be built flush with existing structure.

Traffic Handling:
Traffic to be maintained on existing structure during construction. See roadway plans for traffic control.

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

GENERAL NOTES

STATE OF MISSOURI
ALEX BENZ
NUMBER PE-2018003121
PROFESSIONAL ENGINEER

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

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A80941

DESCRIPTION	DATE

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

Detailed MAY 2022
Checked MAY 2022

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

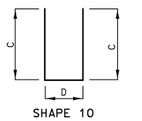
pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\B_A80941_002_J9P3751_General Notes.dgn 8:34:48 AM 3/3/2023

BILL OF REINFORCING STEEL

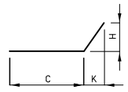
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	SHAPE NO.	STIRRUP (S)	EPOXY (E)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	C FT.	D or F FT.	E FT.	H FT.	K FT.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
.	.		Barrel Section	.	.	.	.	.	.	.	.	.	.	.	.	.	.
			Cut Section 1														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.092	9.667					12'-9"	12'-7"	3524
186	6	J4	Bottom Corner	19				1	8.750	5.333					14'-1"	13'-11"	3894
94	5	B2	Exterior Wall	10				1		1.000	9.667				11'-8"	11'-5"	1118
54	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1651
			Cut Section 2														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.092	9.667					12'-9"	12'-7"	3524
186	6	J4	Bottom Corner	19				1	8.750	5.333					14'-1"	13'-11"	3894
94	5	B2	Exterior Wall	10				1		1.000	9.667				11'-8"	11'-5"	1118
54	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1651
			Cut Section 3														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.092	9.667					12'-9"	12'-7"	3524
186	6	J4	Bottom Corner	19				1	8.750	5.333					14'-1"	13'-11"	3894
94	5	B2	Exterior Wall	10				1		1.000	9.667				11'-8"	11'-5"	1118
54	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1651
			Lower End Section														
87	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3056
80	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	2810
15	7	A3	Top Slab	20			V	1	17.012		Incr =	12.867	Inches		17'-0"	17'-0"	292
									2.000						2'-0"	2'-0"	
191	6	J3	Top Corner	19				1	3.092	9.667					12'-9"	12'-7"	3618
196	6	J4	Bottom Corner	19				1	8.750	5.333					14'-1"	13'-11"	4104
98	5	B2	Exterior Walls	10				1		1.000	9.667				11'-8"	11'-5"	1166
10	4	F60	Temp. Steel	20				1	43.562						43'-7"	43'-7"	291
1	4	F61	Temp. Steel	20				1	48.069						48'-1"	48'-1"	32
1	4	F72	Temp. Steel	20				1	47.059						47'-1"	47'-1"	31
10	4	F73	Temp. Steel	20				1	51.567						51'-7"	51'-7"	345
1	4	F74	Temp. Steel	20				1	46.049						46'-1"	46'-1"	31
1	4	F79	Temp. Steel	20				1	49.080						49'-1"	49'-1"	33
32	4	F80	Temp. Steel	20			V	2	51.567		Incr =	6.404	Inches		51'-7"	51'-7"	1017
									43.562						43'-7"	43'-7"	
			Lower Wings and Headwall														
35	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	1229
13	7	A10	Bottom Slab	20			V	1	15.939			Incr =	13.939	Inches	15'-11"	15'-11"	239
									2.000						2'-0"	2'-0"	
2	8	D1	Headwall	20				1	19.033						19'-0"	19'-0"	102
8	5	E2	Heel	20				1	4.000						4'-0"	4'-0"	33
12	4	F42	Wings	20			V	2	19.038		Incr =	30.895	Inches		19'-0"	19'-0"	101
									6.166						6'-2"	6'-2"	
4	4	F44	Bottom Slab	20				1	20.142						20'-2"	20'-2"	54
15	4	F45	Bottom Slab	20				1	20.142						20'-2"	20'-2"	202
36	5	G2	Exterior Wings	20			V	2	9.823		Incr =	5.438	Inches		9'-10"	9'-10"	225
									2.120						2'-1"	2'-1"	
4	8	H10	Headwall	20				1	19.033						19'-0"	19'-0"	203
8	7	J1	Wings	20		FB		1	22.982						22'-12"	22'-12"	376
34	4	J5	Wings	19			V	2	9.370	5.333	Incr =	5.438	Inches		14'-8"	14'-7"	250
									2.120	5.333					7'-5"	7'-4"	
20	5	R3	HeadWall	10	S			1		1.417	1.250				4'-1"	3'-11"	81
			Totals														
	4																7340
	5																4859
	6																29976
	7																26866
	8																305
	9																0
	10																0
	11																0
			TOTALS														69340.0

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	SHAPE NO.	STIRRUP (S)	EPOXY (E)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	C FT.	D or F FT.	E FT.	H FT.	K FT.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.



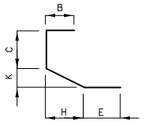
SHAPE 10



SHAPE 15

SHAPE 19

SHAPE 20

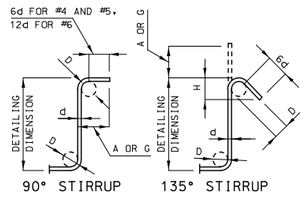


SHAPE 27

SPLICE LENGTH	
BAR SIZE	NON-EPOXY
#4	21 IN.
#5	26 IN.
#6	31 IN.
#7	39 IN.
#8	51 IN.
#9	65 IN.
#10	82 IN.
#11	101 IN.

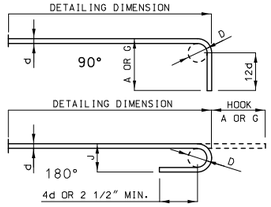
MAX BAR LENGTH	
BAR SIZE	NON-EPOXY
#4	60 FT.
#5	60 FT.
#6	60 FT.
#7	60 FT.
#8	60 FT.
#9	60 FT.
#10	60 FT.
#11	60 FT.

NOTE:
THE BAR LIST IS BASED ON THE MISSOURI STANDARD PLANS.
THIS BAR LIST IS FOR QUANTITY ESTIMATION PURPOSE ONLY AND SHALL BE VERIFIED OR MODIFIED BY THE CONTRACTOR.



STIRRUP HOOK DIMENSIONS				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	GRADE 60		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	24"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
FB = BARS MAY BE BENT IN FIELD TO FIT.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE. A BLANK IN THE SECOND LINE REPRESENTS THE SAME BAR DIMENSION AS THAT IN THE FIRST LINE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADD A SPLICE LENGTH TO A BAR LENGTH WHICH EXCEEDS ITS MAXIMUM ALLOWABLE LENGTH.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.

Detailed MAY 2022
Checked MAY 2022

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

ALEX BENZ
STATE OF MISSOURI
NUMBER PE-2010003121
PROFESSIONAL ENGINEER

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A80941

DATE	DESCRIPTION

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

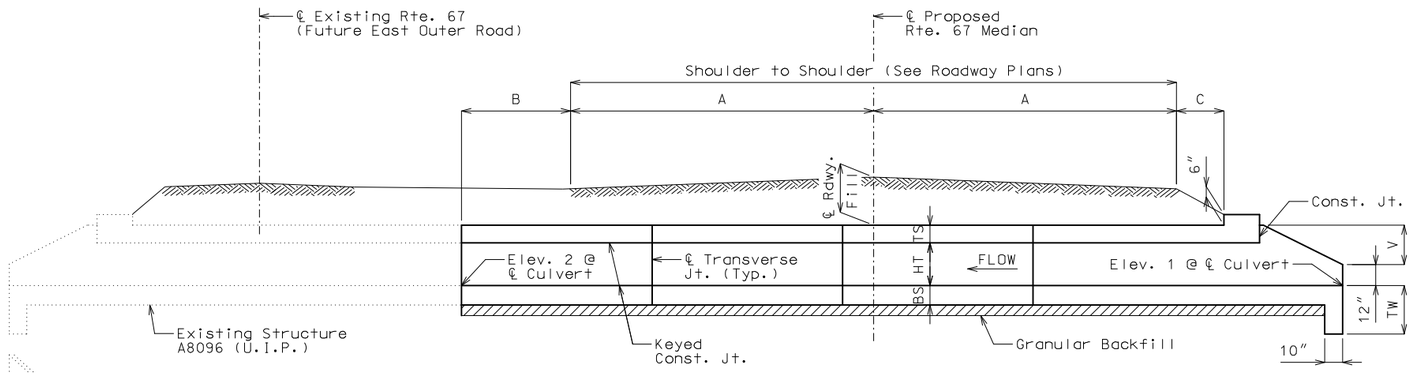
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

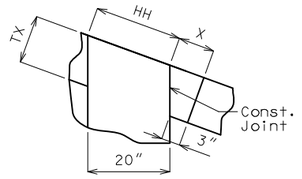
REV.

U.I.P. AND EXTEND EXISTING SINGLE 16′x9′ CONCRETE BOX CULVERT

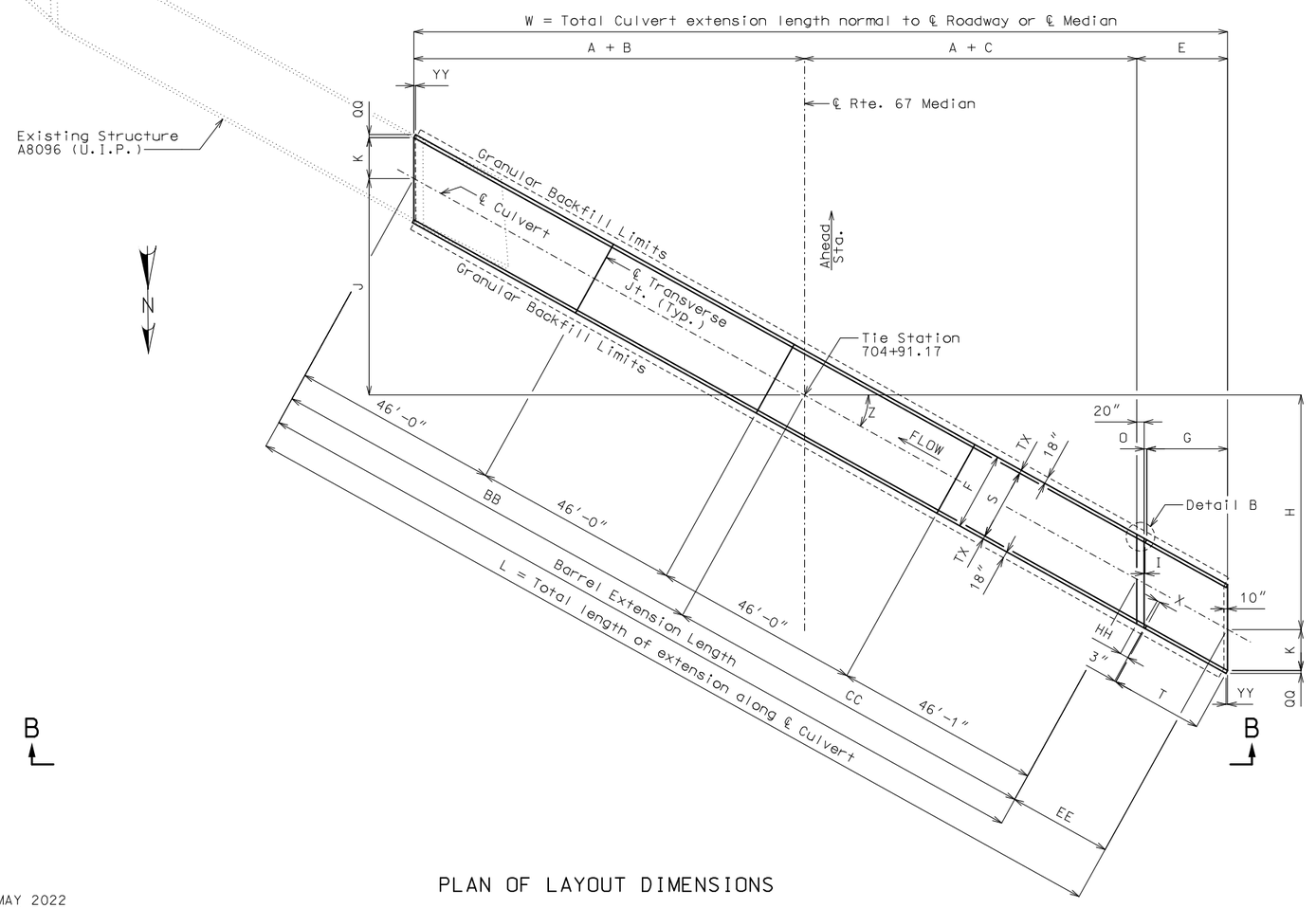
SEC/SUR 21/22 TWP 23N RGE 5E



GENERAL ELEVATION B–B



DETAIL B

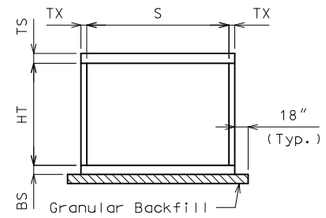


PLAN OF LAYOUT DIMENSIONS

Layout Dimensions

Var.	Equation	Dim.
S	– – –	16′-0″±
HT	– – –	9′-0″±
TS	– – –	12″
BS	– – –	13″
TX	– – –	9″
A	– – –	64′-0″
B	– – –	23′-0″
C	– – –	10′-0″
E	G + O + 20″	20′-3″
F	S + 2TX	17′-6″
G	2V	18′-0″
H	(A + C + E)(tan Z)	52′-2 7/8″
I	3″(cos Z)	2 5/8″
J	(A + B)(tan Z)	48′-2 3/4″
K	(S/2)(sec Z)	9′-1 3/4″
L	EE + BB + CC	207′-2 3/4″
O	I + YY	7″
T	G(sec Z)	20′-7″
V	HT + TS – 12″	9′-0″
W	2A + B + C + E	181′-3″
X	3″ + TX(tan Z)	8″
Z	Skew Angle	29°00′00″
BB	(A + B)(sec Z)	99′-5 5/8″
CC	(A + C)(sec Z)	84′-7 1/4″
EE	E(sec Z)	23′-1 7/8″
HH	20″(sec Z)	22 7/8″
QQ	TX(cos Z)	7 7/8″
YY	TX(sin Z)	4 5/8″
TW	Max{3′-4″ or (BS + 12″)}	3′-4″

Dimensions are based on end units.



SECTION THRU BOX
(Normal to ℄ Structure)

Notes:

For Hydrologic Data and General Notes, See Sheet No. 2.

Construction joint not shown for clarity, see standard plans for details.

B.M. 32 = CHISELED SQUARE AT SOUTHWEST CORNER
WEST BART CURB BR F0665, ELEV. = 308.27′

B.M. 30 = 3″ ALUM. MODOT CAP IN CENTER EAST
HEADWALL BOX CULVERT. ELEV. 307.60′

CULVERT–BRIDGE: ROUTE 67 OVER EPPS DITCH (SOUTH)

ROUTE 67 FROM ROUTE 142 TO ROUTE 158
ABOUT 4.2 MILES NORTH OF ROUTE 142
TIE STATION 704+91.17

Designed MAY 2022
Detailed MAY 2022
Checked MAY 2022

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

STATE OF MISSOURI
ALEX BENZ
NUMBER PE-2018003121
PROFESSIONAL ENGINEER

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr Phone 314-394-3100
Suite 250 Fax 314-394-3199
St. Louis, MO 63021
Missouri Certificate of Authority: 001578

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
BR	1

COUNTY: BUTLER
JOB NO.: J9P3751
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A80961

REV.	DESCRIPTION	DATE

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

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

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\B_A80961_001_J9P3751_Front_Sheet.dgn 8:38:17 AM 3/3/2023

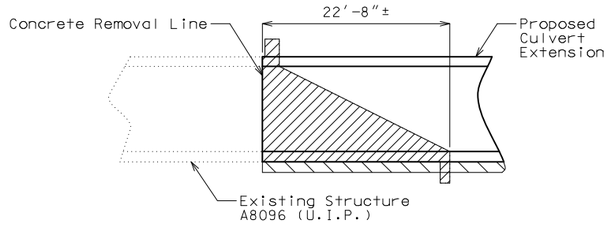
Estimated Quantities			Final
Class 4 Excavation	cu. yard	285	
Dewatering	lump sum	1	
Partial Removal of Culvert-Bridge Concrete	lump sum	1	
Class B-1 Concrete (Culverts-Bridge)	cu. yard	367.3	
Reinforcing Steel (Culverts-Bridge)	pound	72,170	

Hydrologic Data
Drainage Area = 0.7 mi^2
Design Flood Frequency = 50 years
Design Flood Discharge = 240 cfs
Design Flood (D.F.) Elevation = 302.9
Base Flood (100-year)
Base Flood Elevation = 303.2
Base Flood Discharge = 280 cfs
Estimated Backwater = 0.1 ft
Outlet Velocity = 3.1 ft/s
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency > 500 years
Overtopping Flood Elevation = 303.9

Elevations
Upstream (Elev. 1) = 297.5
Downstream (Elev. 2) = 297.17± (Match Existing)
Pr. Gr. at Tie Sta. = 310.05

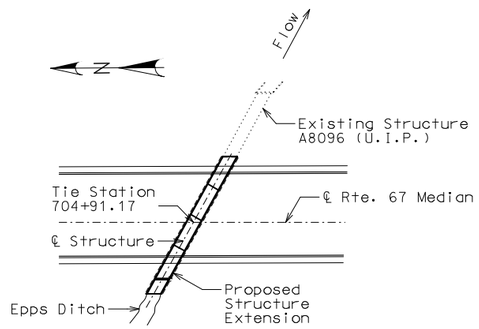
Fill heights are measured from the top of top slab to the top of earth fill or roadway.

Fill Heights
℄ Rdwy at ℄ Culvert = 2.72 ft
Design (All units) = 2.40 ft



PART ELEVATION SHOWING REMOVAL

Note: Horizontal dimensions measured along ℄ Culvert



LOCATION SKETCH

GENERAL NOTES:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions.

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.).

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi.

Standard Plans:
703.14, 703.16, 703.17,
703.37, 703.38, 706.35

Miscellaneous:
MoDOT Construction personnel will indicate the type of box culvert constructed:

☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item).

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover (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.

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.

Bottom of top slab, top of bottom slab, and inside faces of walls shall be built flush with existing structure.

Traffic Handling:
Traffic to be maintained on existing structure during construction. See roadway plans for traffic control.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2″, unless otherwise shown.

GENERAL NOTES

STATE OF MISSOURI
ALEX BENZ
NUMBER PE-2018003121
PROFESSIONAL ENGINEER

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

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A80961

REV.	DESCRIPTION	DATE

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

Detailed MAY 2022
Checked MAY 2022

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

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Structures\Sheets\B_A80961_002_J9P3751_General Notes.dgn 8:38:39 AM 3/3/2023

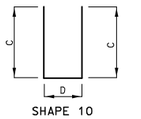
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	SHAPE NO.	STIRRUP (S)	EPOXY (E)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	C FT.	D or F FT.	E FT.	H FT.	K FT.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
.	.		Barrel Section	.	.	.	.	.	.	.	.	.	.	.	.	.	.
			Cut Section 1														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.417	9.667					13'-1"	12'-11"	3615
186	6	J4	Bottom Corner	19				1	9.750	5.333					15'-1"	14'-11"	4174
94	5	B2	Exterior Wall	10				1		1.000	10.667				12'-8"	12'-5"	1216
56	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1712
			Cut Section 2														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.417	9.667					13'-1"	12'-11"	3615
186	6	J4	Bottom Corner	19				1	9.750	5.333					15'-1"	14'-11"	4174
94	5	B2	Exterior Wall	10				1		1.000	10.667				12'-8"	12'-5"	1216
56	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1712
			Cut Section 3														
93	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	3267
86	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	3021
186	6	J3	Top Corner	19				1	3.417	9.667					13'-1"	12'-11"	3615
186	6	J4	Bottom Corner	19				1	9.750	5.333					15'-1"	14'-11"	4174
94	5	B2	Exterior Wall	10				1		1.000	10.667				12'-8"	12'-5"	1216
56	4	F1	Temp. Steel	20				1	45.750						45'-9"	45'-9"	1712
			Upper End Section														
85	7	A1	Top Slab	20				1	17.167						17'-2"	17'-2"	2986
79	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	2775
17	7	A3	Top Slab	20			V	1	16.432		Incr =	10.824	inches		16'-5"	16'-5"	321
									2.000						2'-0"	2'-0"	
190	6	J3	Top Corner	19				1	3.417	9.667					13'-1"	12'-11"	3692
196	6	J4	Bottom Corner	19				1	9.750	5.333					15'-1"	14'-11"	4398
98	5	B2	Exterior Walls	10				1		1.000	10.667				12'-8"	12'-5"	1268
11	4	F10	Temp. Steel	20				1	42.483						42'-6"	42'-6"	312
1	4	F11	Temp. Steel	20				1	47.842						47'-10"	47'-10"	32
1	4	F22	Temp. Steel	20				1	46.641						46'-8"	46'-8"	31
11	4	F23	Temp. Steel	20				1	51.999						51'-12"	51'-12"	382
1	4	F24	Temp. Steel	20				1	45.440						45'-5"	45'-5"	30
1	4	F29	Temp. Steel	20				1	49.043						49'-1"	49'-1"	33
32	4	F30	Temp. Steel	20			V	2	51.999		Incr =	7.613	inches		51'-12"	51'-12"	1010
									42.483						42'-6"	42'-6"	
			Upper Wings and Headwall														
41	7	A2	Bottom Slab	20				1	17.167						17'-2"	17'-2"	1440
16	7	A10	Bottom Slab	20			V	1	16.658		Incr =	11.726	inches		16'-8"	16'-8"	305
									2.000						2'-0"	2'-0"	
2	8	D1	Headwall	20				1	19.723						19'-9"	19'-9"	105
8	5	E1	Toe	20				1	4.000						4'-0"	4'-0"	33
14	4	F52	Straight Wings	20			V	2	22.472		Incr =	32.014	inches		22'-6"	22'-6"	135
									6.465						6'-6"	6'-6"	
4	4	F54	Bottom Slab	20				1	23.615						23'-7"	23'-7"	63
15	4	F55	Bottom Slab	20				1	23.615						23'-7"	23'-7"	237
42	5	G2	Exterior Wings	20			V	2	10.850		Incr =	5.248	inches		10'-10"	10'-10"	284
									2.104						2'-1"	2'-1"	
4	8	H10	Headwall	20				1	19.723						19'-9"	19'-9"	211
8	7	J1	Straight Wings	20		FB		1	26.128						26'-2"	26'-2"	428
40	5	J5	Exterior Wings	19			V	2	10.413	5.333	Incr =	5.248	inches		15'-9"	15'-9"	479
									2.104	5.333					7'-5"	7'-4"	
21	5	R1	HeadWall	27	S			1	1.417	0.906		2.198	0.344	0.344	5'-0"	4'-11"	107
21	5	R2	HeadWall	10	S			1		0.875	1.250				3'-0"	2'-9"	61
			Totals														
	4																7401
	5																5880
	6																31457
	7																27119
	8																316
	9																0
	10																0
	11																0
			TOTALS														72170.0

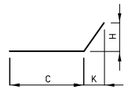
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	SHAPE NO.	STIRRUP (S)	EPOXY (E)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	C FT.	D or F FT.	E FT.	H FT.	K FT.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.

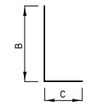
SHAPE 10



SHAPE 15

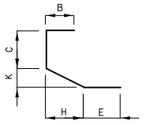


SHAPE 19



SHAPE 20

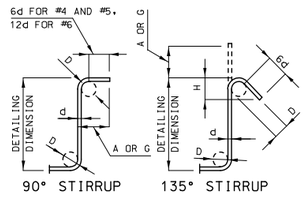
SHAPE 27



SPLICE LENGTH	
BAR SIZE	NON-EPOXY
#4	21 IN.
#5	26 IN.
#6	31 IN.
#7	39 IN.
#8	51 IN.
#9	65 IN.
#10	82 IN.
#11	101 IN.

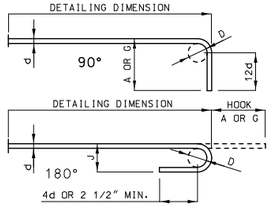
MAX BAR LENGTH	
BAR SIZE	NON-EPOXY
#4	60 FT.
#5	60 FT.
#6	60 FT.
#7	60 FT.
#8	60 FT.
#9	60 FT.
#10	60 FT.
#11	60 FT.

NOTE:
THE BAR LIST IS BASED ON THE MISSOURI STANDARD PLANS.
THIS BAR LIST IS FOR QUANTITY ESTIMATION PURPOSE ONLY AND SHALL BE VERIFIED OR MODIFIED BY THE CONTRACTOR.



STIRRUP HOOK DIMENSIONS				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	GRADE 60		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	24"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
FB = BARS MAY BE BENT IN FIELD TO FIT.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE. A BLANK IN THE SECOND LINE REPRESENTS THE SAME BAR DIMENSION AS THAT IN THE FIRST LINE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADD A SPLICE LENGTH TO A BAR LENGTH WHICH EXCEEDS ITS MAXIMUM ALLOWABLE LENGTH.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.

Detailed MAY 2022
Checked MAY 2022

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

STATE OF MISSOURI
ALEX BENZ
NUMBER PE-2010003121
PROFESSIONAL ENGINEER

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY BUTLER
JOB NO. J9P3751
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A80961

DATE	DESCRIPTION

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

DESIGN DESIGNATION

A.A.D.T. – 2022 = 11,500
A.A.D.T. – 2042 = 15,500
D.H.V. = 10%
T = 15%
V = 70 M.P.H.
D = 50%

FUNCTIONAL CLASSIFICATION–INTERSTATE (FUTURE)

FULLY CONTROLLED ACCESS HIGHWAY

THIS SHALL BE A FULLY CONTROLLED ACCESS HIGHWAY BETWEEN STA. 529+00.00 AND STA. 622+69.53 NO ABUTTING OWNER SHALL HAVE THE RIGHT OF DIRECT ACCESS TO SAID HIGHWAY OR ITS RIGHT-OF-WAY EXCEPT THAT ACCESS WILL BE PERMITTED TO ANY ADJACENT OUTER ROADWAY OR SERVICE ROAD TO WHICH ACCESS IS NOT SPECIFICALLY PROHIBITED BY THE SPECIAL SYMBOL DENOTING "NO RIGHT OF ACCESS" AS SHOWN ON THE PLANS. NO ACCESS WILL BE PERMITTED FROM OUTER ROADWAYS AND SERVICE ROADS TO THROUGHWAYS EXCEPT ALONG ROUTES CONSTRUCTED FOR THAT PURPOSE. OUTER ROADWAYS AND SERVICE ROADS, AS THE CASE MAY BE, ARE SO DESIGNATED ON THE PLANS.

- BEGINNING AND ENDING OF CONTROLLED ACCESS
- CONTROLLED ACCESS
- NO RIGHT OF ACCESS OR CROSSING OF LINES BEARING THIS SYMBOL WILL BE PERMITTED UNDER ANY CIRCUMSTANCES.
- TEMPORARY ACCESS THROUGH FUTURE NO RIGHT OF ACCESS

CONVENTIONAL SYMBOLS
(USED IN PLANS)

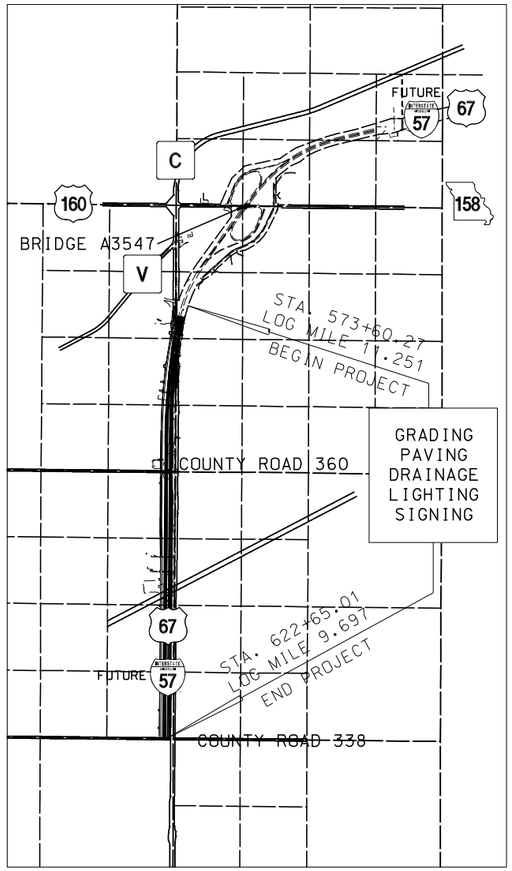
	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	~~FO~~
OVERHEAD CABLE TV	-OTV-	~~OTV~~
UNDERGROUND CABLE TV	-UTV-	~~UTV~~
OVERHEAD TELEPHONE	-OT-	~~OT~~
UNDERGROUND TELEPHONE	-UT-	~~UT~~
OVERHEAD POWER	-OE-	~~OE~~
UNDERGROUND POWER	-UE-	~~UE~~
SANITARY SEWER	-S-	~~S~~
STORM SEWER	-SS-	~~SS~~
GAS	-G-	~~G~~
WATER	-W-	~~W~~
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	
PERMANENT DRAINAGE EASEMENT	P.D.E.	
PERMANENT UTILITY EASEMENT	P.U.E.	
TEMPORARY CONSTRUCTION EASEMENT	T.C.E.	

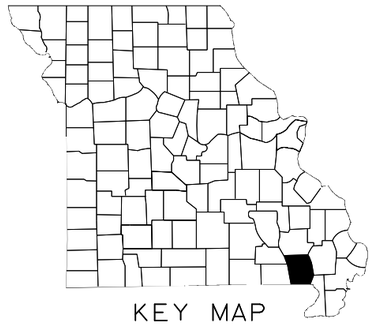
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

BUTLER COUNTY

TOWNSHIP 23 NORTH, RANGE 5 EAST
SECTIONS 3, 9, 10, 15, 16, 21 & 22





KEY MAP
SHOWING LOCATION OF BUTLER COUNTY

N.T.S.

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.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (6 SHEETS)	2
QUANTITIES (QU) (17 SHEETS)	3
PLAN SHEETS (PS)	4–11
PROFILE SHEETS (PR)	12–22
RIGHT OF WAY (RW)	23–30
REFERENCE POINTS (RP)	31
COORDINATE POINTS (CP)	32–35
SPECIAL SHEETS (SS)	36–41
TRAFFIC CONTROL SHEETS (TC)	42–72
EROSION CONTROL SHEETS (EC)	73–80
SIGNING (SN)	81–89
PAVEMENT MARKING (PM)	90–104
CULVERT SECTIONS (CS)	105–111
CROSS SECTIONS (XS)	1–107

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 573 + 60.27	
END OF PROJECT	STA. 622 + 65.01	
APPARENT LENGTH	4,904.74	FEET
EQUATIONS AND EXCEPTIONS:		
STA. 584+53.13 (BK) STA. 546+63.20 (AH)	+3,789.93	FEET
TOTAL CORRECTIONS	+3,789.93	FEET
NET LENGTH OF PROJECT	8,694.67	FEET
STATE LENGTH	1.647	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	44	ACRES

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 2/29/2024
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 1
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

EQUIVALENT PAVEMENT DESIGNS		
CATEGORY	BASE TYPE✱✱	HMA DESIGN
US 67 MAINLINE ALTERNATE G	6" TYPE 5 AGGREGATE BASE WITH GEOGRID BASE REINFORCEMENT✱	12.5" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 7-3/4" SP250C W/PG 64-22
	12" ROCK BASE ✱✱✱	11.5" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 6-3/4" SP250C W/PG 64-22
	18" ROCK BASE ✱✱✱	11.0" HMA 1-3/4" SP125C W/PG 70-22 OVER 3" SP250C W/PG 70-22 OVER 6-1/4" SP250C W/PG 64-22
OUTER ROADS ALTERNATE K	6" TYPE 5 AGGREGATE BASE	7.0" HMA 1-3/4" BP W/PG 64-22 OVER 5-1/4" BB W/PG 64-22

NOTE: ALL SLOPES STEEPER THAN 3:1 WILL REQUIRE ROCK BLANKET, SEE EROSION CONTROL PLANS FOR ROCK BLANKET LOCATION

BASE INCIDENTAL FOR A2 SHOULDERS

✱ INCLUDES SEPARATION GEOTEXTILE

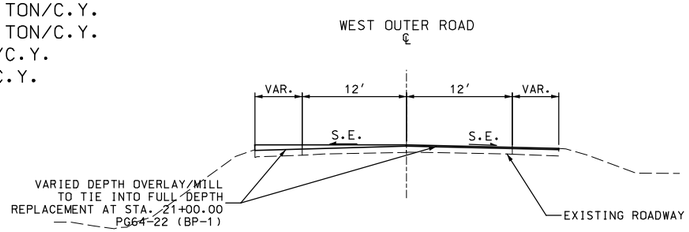
✱✱ SECTION 205 - MODIFIED SUBGRADE SHALL BE USED ON ALL PAVEMENT DESIGNS IN ADDITION TO THE BASE REQUIREMENTS.

✱✱✱ DESIGNS FOR ALTERNATE TECHNICAL CONCEPT - GRADING, BASE AND PAVING, SEE JSPS PAY LIMITS FOR ROCK BASE END AT OUTSIDE EDGE OF SHOULDER

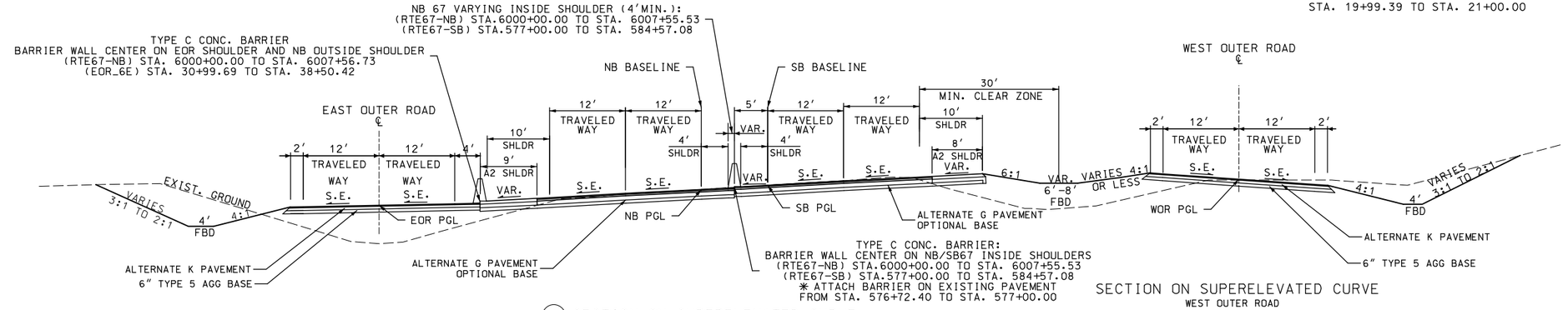
ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP125C MIX)= 1.927 TON/C.Y.
ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP250C MIX)= 1.946 TON/C.Y.
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 1.946 TON/C.Y.
BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1) = 1.948 TON/C.Y.
BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) = 1.943 TON/C.Y.

TACK COAT
NEW ASPHALT SURFACES 0.05 GAL/S.Y.
EXISTING SURFACES 0.08 GAL/S.Y.
COLDMILLED SURFACES 0.10 GAL/S.Y.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



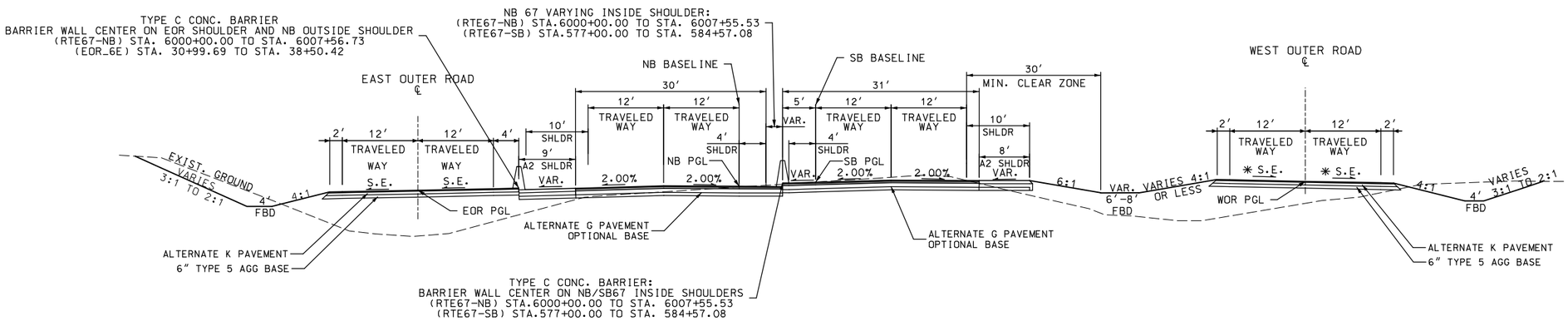
SECTION ON SUPERELEVATED CURVE
WEST OUTER ROAD
STA. 19+99.39 TO STA. 21+00.00



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. 30+99.66 TO STA. 33+95.73

(1) SECTION ON SUPERELEVATED CURVE
ROUTE 67
ALIGN. RTE67-SB: STA. 577+00.00 TO STA. 579+99.94
ALIGN. RTE67-NB: STA. 6000+00.00 TO STA. 6002+99.26

SECTION ON SUPERELEVATED CURVE
WEST OUTER ROAD
STA. 21+00.00 TO STA. 26+71.66



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. STA. 33+95.73 TO STA. 38+50.78

(2) SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 579+99.94 TO STA. 584+57.08
RTE67-NB: STA. 6002+99.26 TO STA. 6007+55.93

SECTION ON SUPERELEVATED CURVE
WEST OUTER ROAD
STA. 26+71.66 TO STA. 31+31.93
✱ NORMAL CROWN AT PRWOR3 STA. 26+81.82

ASPHALT ALTERNATIVES
TYPICAL SECTIONS
SHEET 1 OF 6

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/24/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

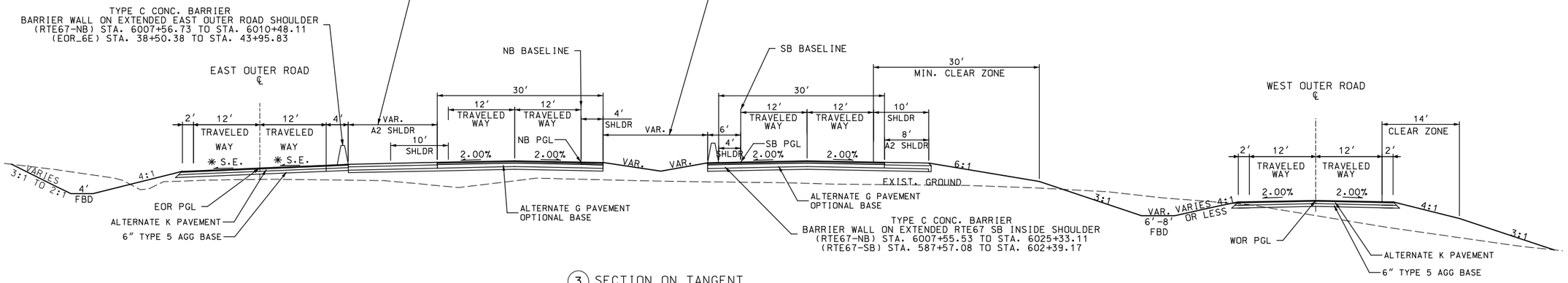
DESCRIPTION | DATE | REV.

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

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
BFW
411 WASHINGTON AVENUE, SUITE 600 MUNHALL, PA 15120 (412) 462-0300 FAX (412) 462-0301
941 WEHRMANN DRIVE, SUITE 201 O'FALLON, IL 62269 (618) 624-4488 FAX (618) 624-4489
WWW.BFWINC.COM
COPYRIGHT © 2017 | BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

NOTE: ALL SLOPES STEEPER THAN 3:1 WILL REQUIRE ROCK BLANKET, SEE PLANS FOR ROCK BLANKET LOCATION

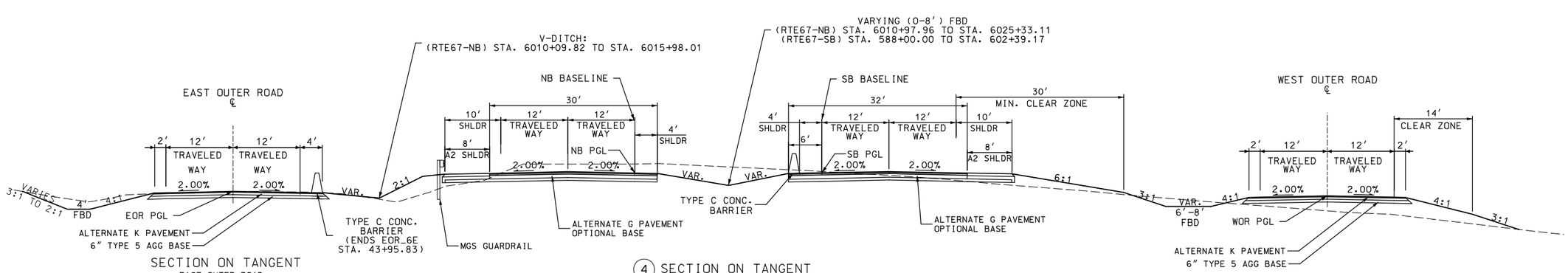
BASE INCIDENTAL FOR A2 SHOUDLERS



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. 38+50.78 TO 41+92.53
* NORMAL CROWN AT EOR_6E STA. 42+63.51

3 SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 584+57.06 TO STA. 588+00.00
RTE67-NB: STA. 6007+55.93 TO STA. 6010+98.31

SECTION ON TANGENT
WEST OUTER ROAD
STA. 31+31.93 TO STA. 33+77.40



SECTION ON TANGENT
EAST OUTER ROAD
STA. 41+92.53 TO STA. 45+00.00

4 SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 588+00.00 TO STA. 591+00.00
RTE67-NB: STA. 6010+98.31 TO STA. 6013+97.67

SECTION ON TANGENT
WEST OUTER ROAD
STA. 34+77.40 TO STA. 37+79.68

ASPHALT ALTERNATIVES
TYPICAL SECTIONS
SHEET 2 OF 6

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/24/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

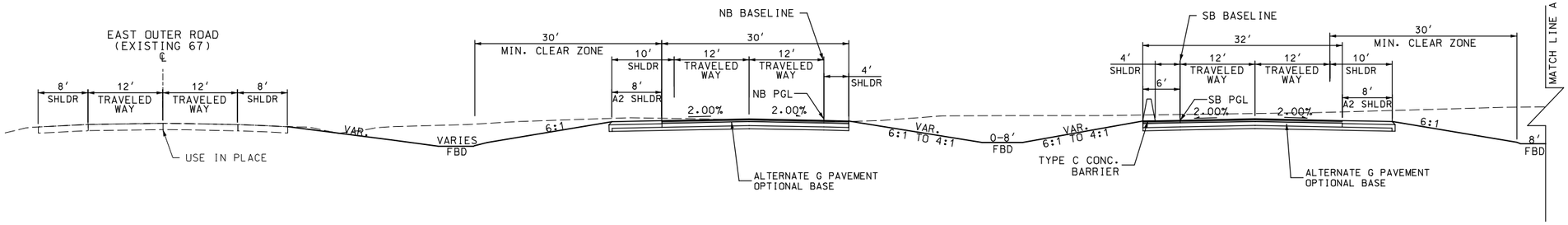
REV.	DESCRIPTION	DATE

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

BFW
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
811 GRAND AVENUE, SUITE 300 • KANSAS CITY, MISSOURI 64106 • (816) 221-1024
2400 PINE STREET • ST. LOUIS, MISSOURI 63103 • (314) 621-3355
DOCUMENT ID: 67_SECTION_ROADWAY_TYPICAL_SECTIONS_2_OF_6.DGN
WWW.BFWENGINEERING.COM

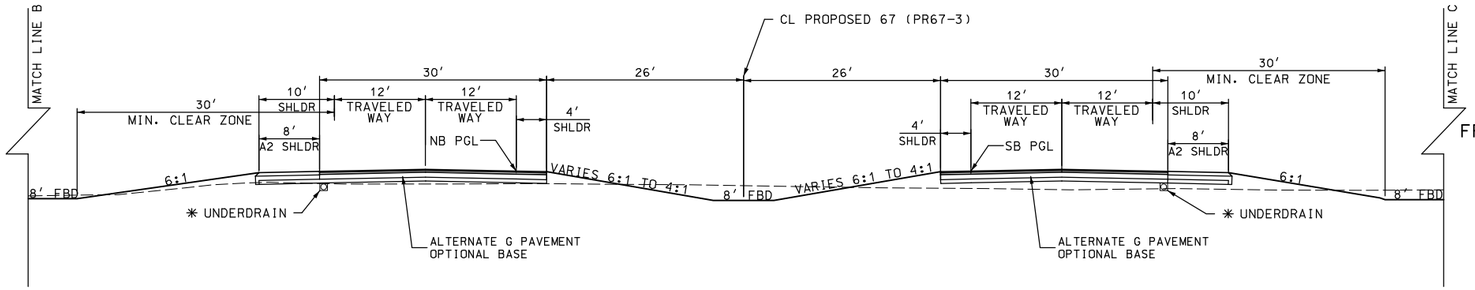
pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\002_TS_01-06_J9P3764.dgn 2:00:32 PM 3/24/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



(5) SECTION ON TANGENT
ROUTE 67

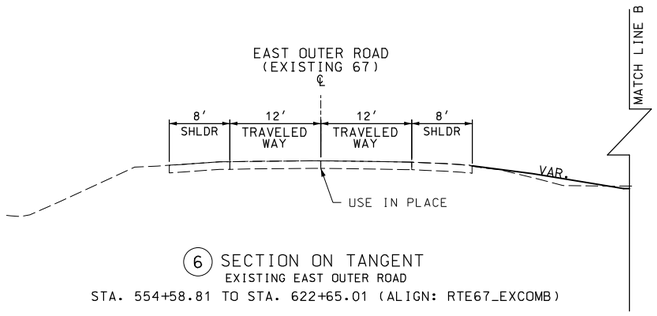
ALIGN. RTE67-SB: STA. 591+00.00 TO STA. 602+39.17
ALIGN. RTE67-NB: STA. 6013+97.67 TO STA. 6025+33.11



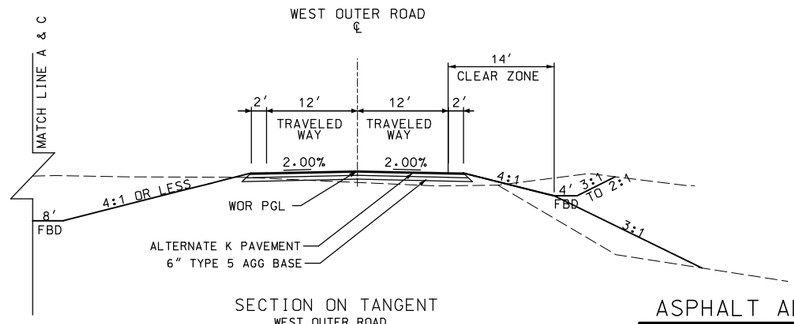
(6) SECTION ON TANGENT
ROUTE 67

ALIGN. PR67-3: STA. 602+39.17 TO STA. 660+75.00

✳ UNDERDRAINS FOR PROPOSED 67 NB/SB OUTSIDE LANES TO BE CONSTRUCTED FROM STA. 620+00.00 TO 660+75.00 (END OF J9P3764)



(6) SECTION ON TANGENT
EXISTING EAST OUTER ROAD
STA. 554+58.81 TO STA. 622+65.01 (ALIGN: RTE67_EXCOMB)



SECTION ON TANGENT
WEST OUTER ROAD
STA. 37+79.68 TO STA. 107+64.00

ASPHALT ALTERNATIVES
TYPICAL SECTIONS
SHEET 3 OF 6

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

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/24/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3764
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)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
BFW

811 GRATIOT STREET • ST. LOUIS, MISSOURI 63101 • (314) 621-3333
2400 PERSHALL ROAD • KANSAS CITY, MISSOURI 64153 • (816) 880-2222
WWW.BFWINC.COM

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

EQUIVALENT PAVEMENT DESIGNS		
CATEGORY	BASE TYPE✱✱	PCCP DESIGN
US 67 MAINLINE ALTERNATE H	6″ TYPE 5 AGGREGATE BASE WITH GEOGRID BASE REINFORCEMENT✱	9.5″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
	12″ ROCK BASE ✱✱✱	9.5″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
	18″ ROCK BASE ✱✱✱	9.0″ PCCP 15 FT. JOINTS AND 1-1/4″ DOWELS
OUTER ROADS ALTERNATE L	6″ TYPE 5 AGGREGATE BASE	7.0″ PCCP JOINT SPACING SHOULD MATCH LANE WIDTH; 1-1/4″ DOWELS

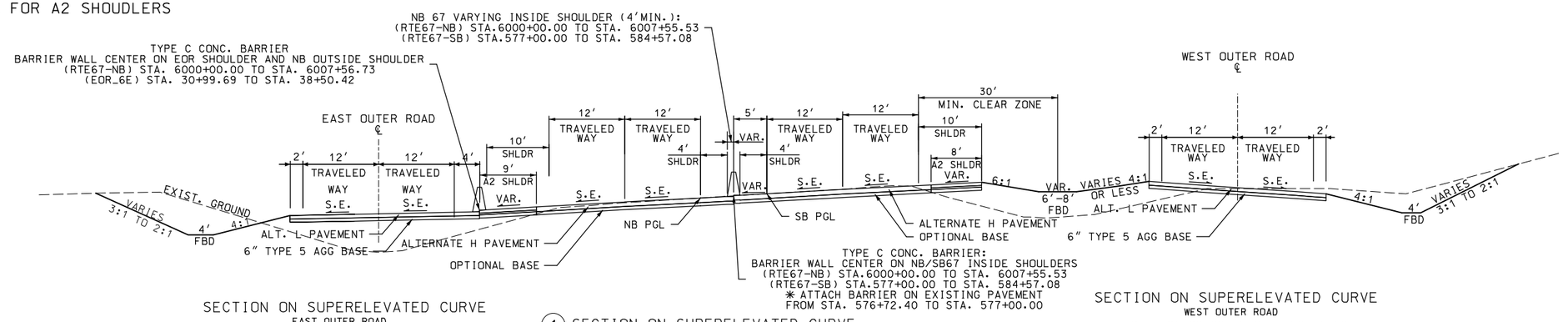
✱ INCLUDES SEPARATION GEOTEXTILE

✱✱ SECTION 205 - MODIFIED SUBGRADE SHALL BE USED ON ALL PAVEMENT DESIGNS IN ADDITION TO THE BASE REQUIREMENTS.

✱✱✱ DESIGNS FOR ALTERNATE TECHNICAL CONCEPT - GRADING, BASE AND PAVING, SEE JSPS PAY LIMITS FOR ROCK BASE END AT OUTSIDE EDGE OF SHOULDER

NOTE: ALL SLOPES STEEPER THAN 3:1 WILL REQUIRE ROCK BLANKET, SEE EROSION CONTROL PLANS FOR ROCK BLANKET LOCATION

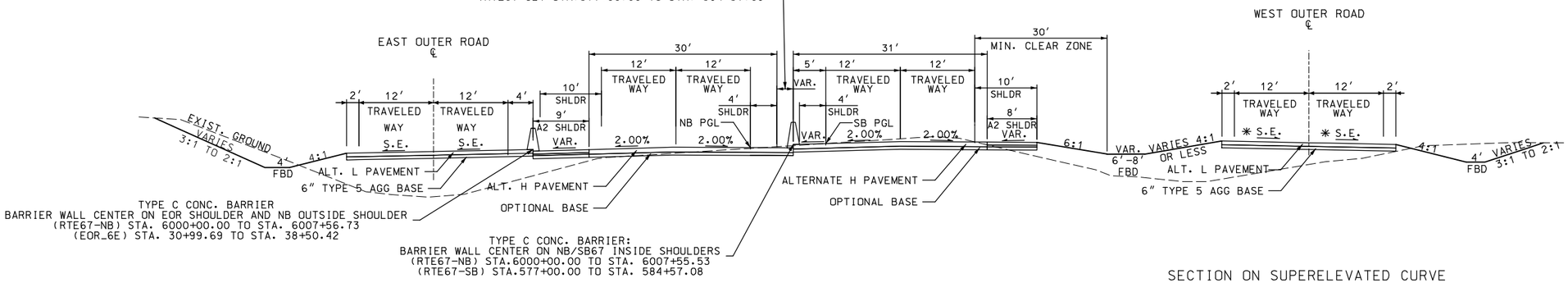
BASE INCIDENTAL FOR A2 SHOULDERS



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. 30+99.66 TO STA. 33+95.73

① SECTION ON SUPERELEVATED CURVE
ROUTE 67
ALIGN. RTE67-SB: STA. 577+00.00 TO STA. 579+99.94
ALIGN. RTE67-NB: STA. 6000+00.00 TO STA. 6002+99.26

SECTION ON SUPERELEVATED CURVE
WEST OUTER ROAD
STA. 21+00.00 TO STA. 26+71.66



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. STA. 33+95.73 TO STA. 38+50.78

② SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 579+99.94 TO STA. 584+57.06
RTE67-NB: STA. 6002+99.26 TO STA. 6007+55.93

SECTION ON SUPERELEVATED CURVE
WEST OUTER ROAD
STA. 26+71.66 TO STA. 31+31.93
✱ NORMAL CROWN AT PRWOR3 STA. 26+81.82

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/24/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

REV. | DATE | DESCRIPTION

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

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
BFW

801 NORTH CLIFF STREET • (417) 862-6008 • FAX (417) 862-6018
SPRINGFIELD, MO 65802
411 S. GRAND AVENUE, EAST • (573) 635-2318 • FAX (573) 635-2321
SPRINGFIELD, IL 62704
WWW.BFWINC.COM

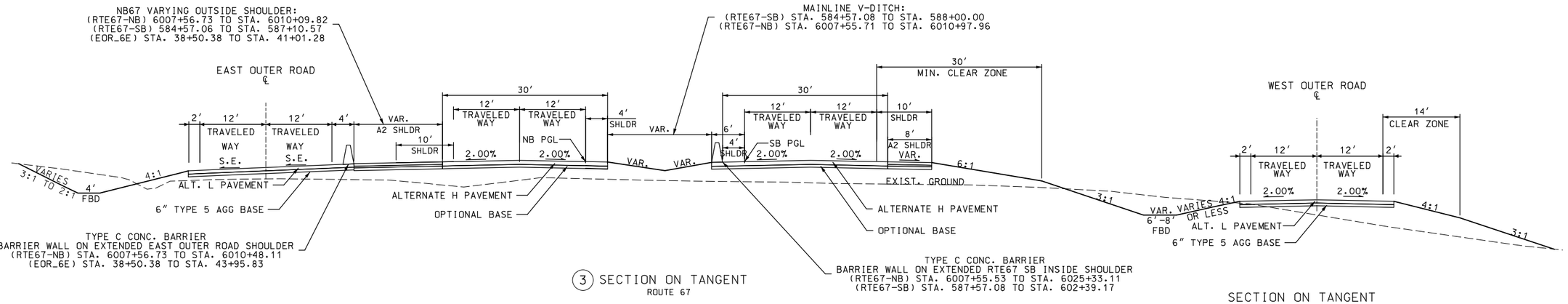
CONTENTS © 2011 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

CONCRETE ALTERNATIVES
TYPICAL SECTIONS
SHEET 4 OF 6

NOTE: ALL SLOPES STEEPER THAN 3:1
WILL REQUIRE ROCK BLANKET, SEE PLANS
FOR ROCK BLANKET LOCATION

BASE INCIDENTAL FOR A2 SHOUDLERS

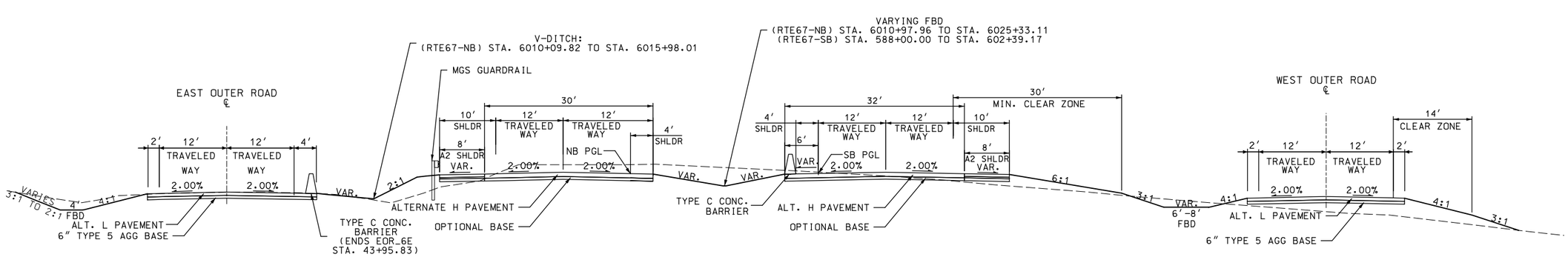
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SECTION ON SUPERELEVATED CURVE
EAST OUTER ROAD
STA. 38+50.78 TO 41+92.53
✳ NORMAL CROWN AT EOR_6E STA. 42+63.51

(3) SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 584+57.06 TO STA. 588+00.00
RTE67-NB: STA. 6007+55.93 TO STA. 6010+98.31

SECTION ON TANGENT
WEST OUTER ROAD
STA. 31+31.93 TO STA. 33+77.40



SECTION ON TANGENT
EAST OUTER ROAD
ALIGN: EOR_6E STA. 41+92.53 TO STA. 45+00.00

(4) SECTION ON TANGENT
ROUTE 67
RTE 67-SB: STA. 588+00.00 TO STA. 591+00.00
RTE67-NB: STA. 6010+98.31 TO STA. 6013+97.67

SECTION ON TANGENT
WEST OUTER ROAD
STA. 34+77.40 TO STA. 37+79.68

CONCRETE ALTERNATIVES
TYPICAL SECTIONS
SHEET 5 OF 6

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

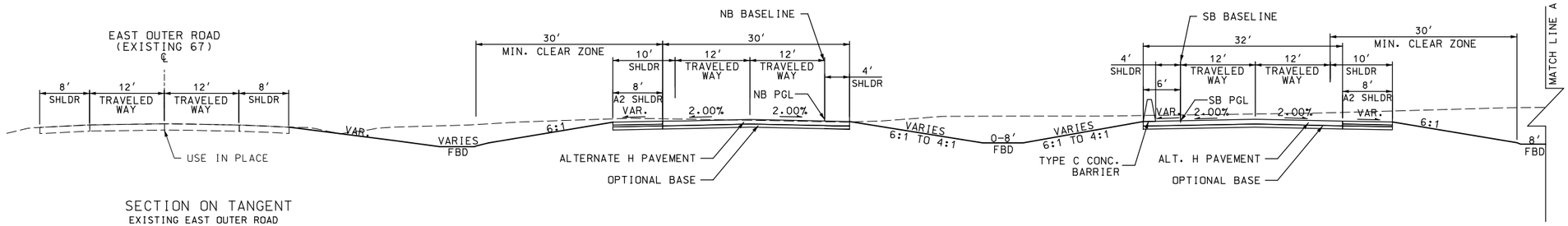
DATE PREPARED 3/24/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

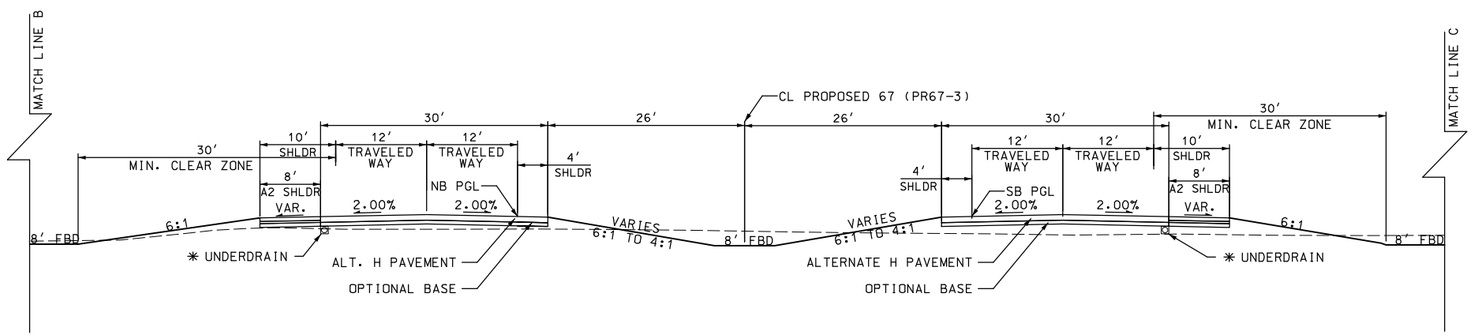


SECTION ON TANGENT
EXISTING EAST OUTER ROAD

STA. 554+58.81 TO STA. 622+65.01 (ALIGN: RTE67_EXCOMB)
FULL DEPTH REPLACEMENT ENDS STA. 45+00.00 (ALIGN: EOR_6E)

(5) SECTION ON TANGENT
ROUTE 67

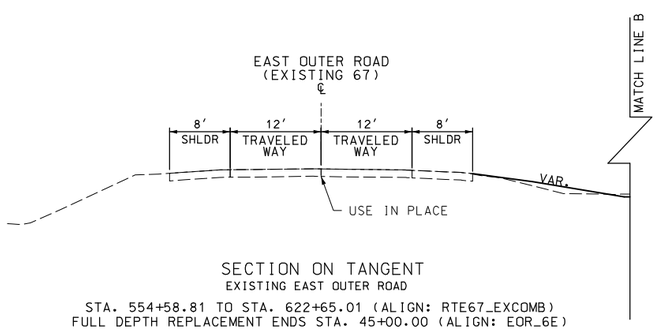
ALIGN. RTE67-SB: STA. 591+00.00 TO STA. 602+39.17
ALIGN. RTE67-NB: STA. 6013+97.67 TO STA. 6025+33.11



✳ UNDERDRAINS FOR PROPOSED 67 NB/SB OUTSIDE LANES TO BE CONSTRUCTED FROM STA. 620+00 TO 660+75

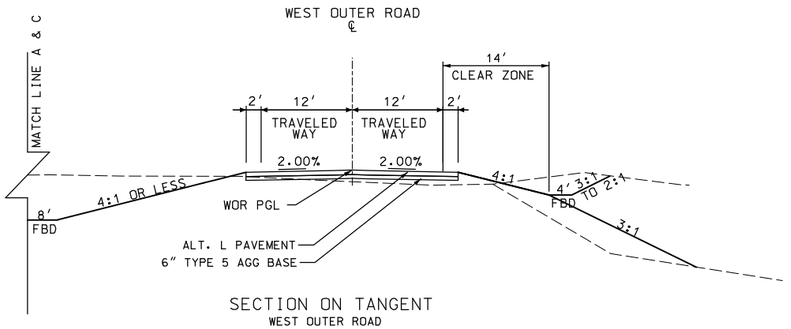
(6) SECTION ON TANGENT
ROUTE 67

ALIGN. PR67-3: STA. 602+39.17 TO STA. 660+75.00



SECTION ON TANGENT
EXISTING EAST OUTER ROAD

STA. 554+58.81 TO STA. 622+65.01 (ALIGN: RTE67_EXCOMB)
FULL DEPTH REPLACEMENT ENDS STA. 45+00.00 (ALIGN: EOR_6E)



SECTION ON TANGENT
WEST OUTER ROAD
STA. 37+79.68 TO STA. 107+64.00

CONCRETE ALTERNATIVES
TYPICAL SECTIONS
SHEET 6 OF 6

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/24/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 2
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION	REV.

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

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

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
BFW

411 WASHINGTON STREET • ST. CHARLES, MISSOURI 63301 • (636) 940-0808
2400 PERSHALL ROAD • KANSAS CITY, MISSOURI 64153 • (816) 880-2500
WWW.BFWINC.COM
CONTRACT ID: BFW17-BFW20 FOR BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REMOVAL OF IMPROVEMENTS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	DESCRIPTION	UNIT	QUANTITY	REMARKS
4	576+72.40		RTE67_EXCOMB	CL	CRASHWORTHY END TERMINAL	EA	1	
4	577+00.00		RTE67_EXCOMB	LT	CRASHWORTHY END TERMINAL	EA	1	
4	21+00.00	25+67.66	WOR	CL	CONCRETE PAVEMENT	SY	1,449	
4	24+87.57	25+37.77	WOR	RT	CONCRETE PAVEMENT	SY	247	DRIVEWAY
4	25+20.99		WOR	RT	18" PIPE	LF	61	UNDER DRIVEWAY
4	25+65.02		WOR	RT	18" PIPE	LF	40	
4	577+00.00	579+00.00	RTE67-SB	RT/LT	CONCRETE PAVEMENT	SY	1,156	
5	579+00.00	592+07.70	RTE67-SB	RT/LT	CONCRETE PAVEMENT	SY	6,170	
5	45+00.00	46+00.19	EOR	RT	SAWCUT	LF	101	
5	45+00.00	45+99.80	EOR	LT	SAWCUT	LF	100	
5	580+99.91		RTE67_EXCOMB	RT	24" FLARED END SECTION	EA	1	
5	581+00.00		RTE67_EXCOMB	LT	24" FLARED END SECTION	EA	1	
5	33+93.22	34+83.47	EOR	LT	24" PIPE	LF	91	
5	27+66.29	28+01.20	WOR	LT	RIPRAP	SY	190	
5	35+87.48		EOR	LT	18" PIPE	LF	109	
5	36+71.00	37+18.86	EOR	RT	CONCRETE PAVEMENT	SY	61	
5	36+93.21		EOR	LT	18" PIPE	LF	90	
5	38+49.37		EOR	LT	MAILBOX	EA	1	
5	38+49.90		EOR	LT	POST	EA	1	
5	38+56.65		EOR	LT	CONCRETE PAVEMENT	SY	27	DRIVEWAY
5	40+29.23		EOR	LT	12" PIPE	LF	30	
5	41+30.73		EOR	LT	12" PIPE	LF	51	
5	33+48.93		WOR	LT	TREE	EA	1	
5	33+97.44		WOR	LT	CONCRETE PAVEMENT	SY	39	DRIVEWAY
5	34+12.23		WOR	LT	18" PIPE	LF	45	UNDER DRIVEWAY
5	34+86.80		WOR	RT	TREE	EA	1	
5	25+63.25	34+82.95	WOR	RT/LT	FENCE	LF	942	INCLUDE GATE
5	36+64.46		WOR	LT	MAILBOX	EA	1	
5	36+56.70		WOR	LT	18" PIPE	LF	27	
5	20+57.58		EOR	LT	12" PIPE	LF	29	UNDER DRIVEWAY
5	38+54.29		WOR	LT	18" PIPE	LF	31	
5	20+57.58		EOR	LT	TREE	EA	1	
5	36+00.00		WOR	LT	BUILDING	EA	1	
5	589+40.35		PROPOSED US67	RT	FOUNDATION	EA	1	
5	591+80.00		PROPOSED US67	RT	BUILDING	EA	1	
6	41+29.47		WOR	LT	MAILBOX	EA	2	
6	41+18.33		WOR	LT	TREE	EA	1	
6	40+56.07		WOR	LT	TREE	EA	1	
6	39+12.75		WOR	LT	TREE	EA	1	
6	592+25.55	592+65.43	PROPOSED US67	LT	BUILDING	EA	1	
6	592+50.92	593+50.80	PROPOSED US67	LT	BUILDING	EA	1	
6	594+04.01	594+68.87	PROPOSED US67	LT	BUILDING	EA	1	
6	604+11.29		PROPOSED US67	LT	15" PIPE	LF	69	
7	605+00.00		PROPOSED US67	RT	BUILDING	EA	2	
7	606+11.47	606+57.12	PROPOSED US67	RT	BUILDING	EA	1	
7	607+53.31		PROPOSED US67	LT	POST	EA	1	
7	607+51.58	608+22.79	PROPOSED US67	LT	SAWCUT	LF	72	
7	607+88.93		PROPOSED US67	LT	18" PIPE	LF	54	
7	608+00.00	613+50.00	PROPOSED US67	LT/RT	TREE	EA	27	
7	608+75.00		PROPOSED US67	RT	FOUNDATION	EA	1	
8	623+00.00	629+00.00	PROPOSED US67	LT/RT	TREE	EA	25	
8	624+77.81		PROPOSED US67	LT	24" PIPE	LF	33	
8	624+90.00		PROPOSED US67	RT	MAILBOX	EA	1	
8	627+65.58		PROPOSED US67	LT	21" PIPE	LF	26	
8	628+07.91		PROPOSED US67	LT	24" PIPE	LF	41	
8	629+64.79		PROPOSED US67	RT	FOUNDATION	EA	1	
8	630+50.00		PROPOSED US67	RT	FOUNDATION	EA	1	
9	632+40.52		PROPOSED US67	LT	24" PIPE	LF	41	
9	632+27.32	632+64.63	PROPOSED US67	LT	POST	EA	9	
9	631+87.88		PROPOSED US67	RT	TREE	EA	1	
9	632+20.09		PROPOSED US67	RT	TREE	EA	1	
9	633+39.18		PROPOSED US67	RT	FLAG POLE	EA	1	

CONTINUES ON NEXT SHEET

ROUTE 67
SUMMARY OF QUANTITES
SHEET 1 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
2/29/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REMOVAL OF IMPROVEMENTS (CONTINUED)

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	DESCRIPTION	UNIT	QUANTITY	REMARKS
9	633+41.87		PROPOSED US67	RT	SIGN	EA	1	PRIVATE BRICK SIGN
9	633+62.62		PROPOSED US67	RT	POST	EA	1	
9	633+76.78	634+60.68	PROPOSED US67	LT	BUILDING	EA	1	
9	634+90.00		PROPOSED US67	RT	FABRICATED BUILDING	EA	1	
10	647+20.00	653+20.00	PROPOSED US67	RT/LT	TREE	EA	33	
10	647+65.00		PROPOSED US67	LT	BUILDING	EA	1	
10	647+70.00		PROPOSED US67	RT	BUILDING	EA	1	
10	648+24.45		PROPOSED US67	RT	FOUNDATION	EA	1	
10	657+02.46		PROPOSED US67	RT	TREE	EA	4	
10	654+54.62		PROPOSED US67	LT	24" PIPE	EA	60	
10	655+30.49		PROPOSED US67	LT	FOUNDATION	EA	1	
10	654+56.07		PROPOSED US67	RT	FOUNDATION	EA	1	
10	656+50.00		PROPOSED US67	LT	POLE	EA	1	
10-11	656+50.00	657+24.00	PROPOSED US67	LT	CONCRETE PAVEMENT	SY	340	
10	654+70.00		PROPOSED US67	LT	CONCRETE PAVEMENT	SY	300	DRIVEWAY
11	657+00.00	660+50.00	PROPOSED US67	LT/RT	TREE	EA	27	
11	658+93.08		PROPOSED US67	RT	FOUNDATION	EA	1	
11	658+18.08		PROPOSED US67	LT	24" PIPE	LF	41	
11	660+41.78	661+07.76	PROPOSED US67	LT	SAWCUT	LF	66	
11	660+69.56	660+92.73	PROPOSED US67	RT	SAWCUT	LF	24	
11	660+05.00		PROPOSED US67	RT	FABRICATED BUILDING	EA	1	
11	660+15.00		PROPOSED US67	RT	FABRICATED BUILDING	EA	1	
					SAWCUTS FOR PAVEMENT REMOVAL	LF		INCIDENTAL TO REMOVAL OF IMPROVEMENTS
81	485+76		RTE67_EXCOMB	RT	SIGN	EA	1	STRUCTURAL SIGN
81	511+00		RTE67_EXCOMB	RT	SIGN	EA	1	STRUCTURAL SIGN
81	532+31		RTE67_EXCOMB	RT	SIGN	EA	1	STRUCTURAL SIGN
81	560+20		RTE67_EXCOMB	RT	SIGN	EA	1	W6-1
82	565+00		RTE67_EXCOMB	RT	SIGN	EA	1	W6-3
82	567+50		RTE67_EXCOMB	RT	SIGN	EA	1	R4-7
82	21+50		WOR	RT/LT	SIGN	EA	2	W14-1
82	25+80		WOR	RT/LT	SIGN	EA	3	OM4-1
82	580+10		US67 SB	RT	SIGN	EA	1	R4-17
82	579+00		US67 SB	LT	SIGN	EA	1	W6-1
82	583+50		US67 SB	LT	SIGN	EA	1	W6-3
82	37+40		EOR	LT	SIGN	EA	1	R4-7
82	39+10		EOR	LT	SIGN	EA	1	W6-1
82	585+20		US67 SB	RT	SIGN	EA	1	STRUCTURAL SIGN (R&RELOC.)
82	42+50		EOR	RT	SIGN	EA	1	R4-17
82	42+65		EOR	LT	SIGN	EA	1	R4-1 (R&RELOC.)
83	592+00		US67 SB	LT	SIGN	EA	1	R2-1
83			CR360		SIGN	EA	1	W14-1
83	569+10		RTE67_EXCOMB	RT	SIGN	EA	2	COUNTY SIGN (R&RELOC.)
83	570+05		RTE67_EXCOMB	RT	SIGN	EA	1	R1-1
84	582+90		RTE67_EXCOMB	LT	SIGN	EA	1	R4-7B
84	584+90		RTE67_EXCOMB	LT	SIGN	EA	1	STRUCTURAL SIGN
85	622+40		RTE67_EXCOMB	RT	SIGN	EA	2	COUNTY SIGN (R&RELOC.)
85	622+80.00		RTE67_EXCOMB	RT	SIGN	EA	1	R1-1
90	531+98	539+00	RTE67_EXCOMB	RT	36" SURFACE MOUNT DELINEATOR POST	EA	18	
92	539+00	552+00	RTE67_EXCOMB	RT	36" SURFACE MOUNT DELINEATOR POST	EA	33	
94	552+00	560+13.6	RTE67_EXCOMB	RT	36" SURFACE MOUNT DELINEATOR POST	EA	21	
REMOVAL OF TREES AND BRUSH FELLED DURING UTILITY INSTALLATION TO BE INCIDENTAL TO REMOVAL OF IMPROVEMENTS								
TOTAL = 1 LUMP SUM								

NOTES:

1. CLEARING AND REMOVAL OF DEBRIS AND STRUCTURES WITHIN RIGHT OF WAY AND EASEMENTS IS INCIDENTAL TO REMOVAL OF IMPROVEMENTS.

2. SAWCUTS FOR PAVEMENT REMOVAL ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS.

ROUTE 67
SUMMARY OF QUANTITES
SHEET 2 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
2/29/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

PAVEMENT MARKING REMOVAL

PAVEMENT MARKING SHEET	FROM STATION	TO STATION	ALIGN	PAVEMENT MARKING REMOVAL (LF)	REMARKS
1	529+00	531+98	RTE67_EXCOMB	450	6" RT RTE 67 EDGE LINE
1	531+98	534+45.48	RTE67_EXCOMB	750	12" RT RTE 67 GORE LINE
1	531+98	534+45.48	RTE67_EXCOMB	750	12" RAMP 2 GORE LINE
1	534+45.48	539+00	RTE67_EXCOMB	682	6" RT RTE 67 EDGE LINE
1	534+45.48	537+80.82	RTE67_EXCOMB	504	6" LT RAMP 2 EDGE LINE
3	539+00	552+00	RTE67_EXCOMB	1,950	6" RT RTE 67 EDGE LINE
5	552+00	558+10	RTE67_EXCOMB	915	6" RT RTE 67 EDGE LINE
5	588+10	560+13.94	RTE67_EXCOMB	612	12" RT RTE 67 GORE LINE
5	558+50	560+13.94	RTE67_EXCOMB	495	12" RAMP 1 GORE LINE
5	558+88.24	565+50	RAMP1_1/RTE67_EXCOMB	993	6" RAMP1 & RT RTE 67 EDGE LINE
5	560+13.94	565+50	RTE67_EXCOMB	210	6" RAMP 1/RTE 67 DOTTED TAPER LINE
7	565+50	571+50	RTE67_EXCOMB	225	6" RT RTE 67 DOTTED TAPER LINE
7	565+50	577+00	RTE67_EXCOMB	1,751	6" RT RTE 67 EDGE LINE
7	572+31.53	577+00	RTE67_EXCOMB	846	6" LT RTE 67 EDGE LINE
7	577+00	579+00	RTE67_EXCOMB	240	24" HASH BARS
7	29+00	30+99	EOR_6E	240	4" EAST OUTER ROAD EDGE LINE
9	579+00BK	545+45AH	RTE67_EXCOMB	1,935	6" RTE 67 YELLOW EDGE LINE
9	579+00BK	545+45AH	RTE67_EXCOMB	414	24" HASH BARS
N/A	–	–	–	10,305	TOTAL TCP PAVEMENT MARKING REMOVAL
			TOTAL	24,267	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 3 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/24/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EARTHWORK

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CUT (CUYD)	FILL (CUYD)	CLASS A EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	CLASS 3 EXCAVATION (CUYD)	LINEAR GRADING CLASS 2 (STA)	REMARKS
4	21+00	23+66.59	PRWOR3	LT/RT	944	175							WOR START
4	577+00	579+00	RTE67-SB	LT/RT	1,230	599							NB67,SB67,WOR,EOR
5	579+00	592+00	RTE67-SB	LT/RT	4,653	25,604							NB67,SB67,WOR,EOR
6	592+00	602+39.17	RTE67-SB	LT/RT	12,300	17,419							NB67,SB67,WOR,EOR
6	602+39.17	605+00	PR67-3	LT/RT	5,674	1,268							NB67,SB67,WOR
7	605+00	618+00	PR67-3	LT/RT	54,781	19,146							NB67,SB67,WOR
8	618+00	631+00	PR67-3	LT/RT	7,388	9,619							NB67,SB67,WOR
9	631+00	644+00	PR67-3	LT/RT	506	25,991							NB67,SB67,WOR
10	644+00	657+00	PR67-3	LT/RT	4,857	19,164							NB67,SB67,WOR
11	657+00	660+75.00	PR67-3	LT/RT	3,282	1,096							NB67,SB67,WOR
				SUBTOTAL	95,615	120,081	95,615	38,808	81,273				
7	611+00		PR67-3	RT	581	1,308	581	1,308					ADD QTY POND STA. 611+00
8	624+00		PR67-3	RT	846	1,904	846	1,904					ADD QTY POND STA. 624+00
10	655+00		PR67-3	LT/RT	3,605	8,113	3,605	8,113					ADD QTY POND STA. 655+00
4	31+82.41	32+28.95	EOR_6E	LT/RT						0.5			
4	21+00.00	25+68.23	PRWOR3	LT/RT						4.7			
5	588+39.84	589+41.66	RTE67-SB	LT/RT						1.0			
5	6010+96.28	6012+63.77	RTE67-NB	LT/RT						1.7			
6	597+89.20	612+71.50	RTE67-SB	LT/RT						14.8			
6	41+88.22	45+19.05	PRWOR3	LT/RT						3.3			
7	10+28.27	11+88.27	PR360_NEW	LT/RT						1.6			
7	53+00.83	56+98.60	PRWOR3	LT/RT						4.0			
7	58+10.94	58+74.50	PRWOR3	LT/RT						0.6			
7	64+59.30	67+40.66	PRWOR3	LT/RT						2.8			
10	646+48.11	646+63.15	PR67-3	LT/RT						0.2			
10	654+34.86	654+75.09	PR67-3	LT/RT						0.4			
10	94+00.00	94+09.15	PRWOR3	LT/RT						0.1			
5	591+44.52	591+44.52	RTE67-SB	RT			1,900						ROCK DISSIPATOR
6	604+39.91	604+39.91	PR67-3	RT			2,853						ROCK DISSIPATOR
4	25+21.00		PRWOR3	RT								0.6	
4	32+09.43		EOR_6E	LT								0.5	
5	27+20.36		PRWOR3	RT								0.5	
5	33+85.34		PRWOR3	RT								0.4	
5	37+00.00		PRWOR3	RT								0.7	
5	38+74.76		PRWOR3	RT								0.8	
5	34+48.62		EOR_6E	LT								0.6	
5	35+98.51		EOR_6E	LT								0.3	
5	36+85.39		EOR_6E	LT								0.3	
5	38+80.20		EOR_6E	LT								0.2	
5	40+27.78		EOR_6E	LT								0.2	
5	41+30.12		EOR_6E	LT								0.2	
5	43+86.27		EOR_6E	LT								0.3	
7	52+50.00		PRWOR3	RT								0.3	
7	10+28.27		PR360_NEW	LT/RT								1.6	
7	57+00.00		PRWOR3	RT								0.3	
8	68+00.00		PRWOR3	RT								0.3	
8	71+65.40		PRWOR3	RT								0.3	
8	74+55.86		PRWOR3	RT								0.3	
8	76+00.00		PRWOR3	RT								0.4	
8	77+50.00		PRWOR3	RT								0.4	
9	81+30.00		PRWOR3	RT								0.3	
10	92+25.00		PRWOR3	RT								0.3	
10	95+00.25		PRWOR3	RT								0.4	
10	102+00.00		PRWOR3	RT								0.3	
11	105+50.00		PRWOR3	RT								0.3	
11	12+07.00		PRCRD338	LT/RT								0.9	
													ALL QUANTITIES ASSUME 15% SHRINK WHEN RECOMPACTING
											1,721		*TOTAL FRM PIPE SCHEDULE
											376		*TOTAL FROM STRUCTURE SCHEUDLE
											815		*TOTAL FROM DRIVEWAY SCHEDULE
				TOTALS	105,400	50,133	81,273	35.7	2,912	12.0			

ROUTE 67

SUMMARY OF QUANTITES
SHEET 4 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

BASE								
SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MODIFIED SUBGRADE (SQYD)	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK) (SQYD)	OPTIONAL BASE (SQYD)	REMARKS
4	577+00.00	579+00.00	SB US67	CL	691		690.7	ALTERNATE A/B PAVEMENTS
4	6000+00.00	6002+00.00	NB US67	CL	703		703.1	
5	579+00.00	592+00.00	SB US67	CL	4,564		4,563.7	
5	6002+00.00	6015+00.00	NB US67	CL	4,830		4,829.7	
6	592+00.00	602+39.17	SB US67	CL	3,697		3,697.4	
6	6015+00.00	6025+33.11	NB US67	CL	3,442		3,441.9	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	1,739		1,738.9	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	8,667		8,666.7	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	8,667		8,666.7	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	8,667		8,666.7	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	8,667		8,666.7	
11	657+00.00	660+75.00	PROPOSED US67	BOTH	2,500		2,500.0	
4	577+00.00	579+00.00	SB US67	CL	179		179.1	ALTERNATE C/D SHOULDERS
4	6000+00.00	6002+00.00	NB US67	CL	198		198.0	
5	579+00.00	592+00.00	SB US67	CL	1,158		1,157.8	
5	6002+00.00	6015+00.00	NB US67	CL	1,315		1,314.7	
6	592+00.00	602+39.17	SB US67	CL	926		925.5	
6	6015+00.00	6025+33.11	NB US67	CL	917		917.0	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	464		463.7	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	2,311		2,311.1	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	2,311		2,311.1	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	2,311		2,311.1	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	2,311		2,311.1	
11	657+00.00	660+79.52	PROPOSED US67	BOTH	667		666.7	
4	30+99.75	33+00.00	EAST OUTER ROAD	CL	665	665		ALTERNATE E/F PAVEMENTS
4	21+00.00	26+00.00	WEST OUTER ROAD	CL	1,622	1,622		
5	33+00.00	45+00.00	EAST OUTER ROAD	CL	3,982	3,982		
5	26+00.00	39+00.00	WEST OUTER ROAD	CL	4,044	4,044		
6	39+00.00	52+00.00	WEST OUTER ROAD	CL	4,044	4,044		
7	52+00.00	65+00.00	WEST OUTER ROAD	CL	4,306	4,306		
8	65+00.00	78+00.00	WEST OUTER ROAD	CL	4,044	4,044		
9	78+00.00	91+00.00	WEST OUTER ROAD	CL	4,044	4,044		
10	91+00.00	104+00.00	WEST OUTER ROAD	CL	4,044	4,044		
11	104+00.00	107+67.57	WEST OUTER ROAD	CL	1,414	1,414		
4	32+09.43	0+00.00	EOR	LEFT		20		DRIVEWAYS
4	25+21.00	0+00.00	WOR	RIGHT		57		
5	37+00.00	0+00.00	WOR	RIGHT		54		
5	33+85.34	0+00.00	WOR	RIGHT		52		
5	37+00.00	0+00.00	WOR	RIGHT		28		
5	38+74.76	0+00.00	WOR	RIGHT		30		
5	34+48.62	0+00.00	EOR	LEFT		21		
5	35+98.51	0+00.00	EOR	LEFT		18		
5	36+85.39	0+00.00	EOR	LEFT		18		
5	38+80.20	0+00.00	EOR	LEFT		10		
5	40+27.78	0+00.00	EOR	LEFT		9		
5	41+30.12	0+00.00	EOR	LEFT		10		
5	43+86.27	0+00.00	EOR	LEFT		13		
7	52+50.00	0+00.00	WOR	RIGHT		13		
7	57+00.00	0+00.00	WOR	RIGHT		13		
8	71+65.40	0+00.00	WOR	RIGHT		13		
8	74+55.86	0+00.00	WOR	RIGHT		11		
8	76+00.00	0+00.00	WOR	RIGHT		15		
8	77+50.00	0+00.00	WOR	RIGHT		29		
9	81+30.00	0+00.00	WOR	RIGHT		13		
10	92+25.00	0+00.00	WOR	RIGHT		20		
10	95+00.25	0+00.00	WOR	RIGHT		15		
10	102+00.00	0+00.00	WOR	RIGHT		11		
11	105+50.00	0+00.00	WOR	RIGHT		11		
7	10+28.26	11+46.82	PR360	LT/RT		36		
			TOTAL		104,111	32,749	71,899.1	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 5 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DRIVEWAYS ✳

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CLASS 3 EXCAVATION (CUYD)	GRAVEL (A) OR CRUSHED STONE (B) (TONS)	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1) (TONS)	CONCRETE PAVEMENT (7 IN. NON-REINF) (SQYD)	ROCK LINING (CUYD)	18 IN. PIPE GROUP B (LF)	18 IN. OR ALLOWED SUBSTITUTE GROUP B FLARED END SECTION (EA)	REMARKS
4	25+21.00		WOR	RIGHT				342.2				
4	24+35.21	25+94.08	WOR	RIGHT	70				2	146	2	
4	32+09.43		EOR	LEFT		10	3.7					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	34+48.62		EOR	LEFT		11	3.7					
5	35+73.23	36+26.91	EOR	LEFT	50				2	42	2	
5	35+98.51		EOR	LEFT		7	4.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	36+55.22	37+13.36	EOR	LEFT	50				2	47	2	
5	36+85.39		EOR	LEFT		7	36.0					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	38+55.11	39+03.74	EOR	LEFT	40				2	37	2	
5	38+80.20		EOR	LEFT		2	4.5					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	40+04.96	40+48.50	EOR	LEFT	40				2	32	2	
5	40+27.78		EOR	LEFT		3	3.3					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	41+02.61	41+60.72	EOR	LEFT	50				2	46	2	
5	41+30.12		EOR	LEFT		4	3.4					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	43+64.90	44+05.85	EOR	LEFT	30				2	32	2	
5	43+86.27		EOR	LEFT		5	3.9					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	26+29.79	27+68.13	WOR	RIGHT	65				2	129	2	
5	27+20.36		WOR	RIGHT				328.2				
5	33+85.34		WOR	RIGHT				314.5				
5	37+00.00		WOR	RIGHT		15	3.7					2" ASPHALT APRON, 2" GRAVEL REMAINDER
5	38+74.76		WOR	RIGHT		16	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
7	52+26.10	52+74.90	WOR	RIGHT	40				2	37	2	
7	52+50.00		WOR	RIGHT		5	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
7	56+75.89	57+24.72	WOR	RIGHT	40				2	37	2	
7	57+00.00		WOR	RIGHT		5	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
8	67+75.09	68+24.08	WOR	RIGHT	40				2	37	2	
8	68+00.00		WOR	RIGHT		5	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
8	71+46.74	71+84.10	WOR	RIGHT	30				2	32	2	
8	71+65.40		WOR	RIGHT		5	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
8	74+36.34	74+75.01	WOR	RIGHT	30				2	32	2	
8	74+55.86		WOR	RIGHT		3	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
8	75+78.14	76+22.90	WOR	RIGHT	30				2	33	2	
8	76+00.00		WOR	RIGHT		6	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
8	77+20.59	77+80.44	WOR	RIGHT	50				2	48	2	
8	77+50.00		WOR	RIGHT		13	6.7					2" ASPHALT APRON, 2" GRAVEL REMAINDER
9	81+09.46	81+51.59	WOR	RIGHT	30				2	32	2	
9	81+30.00		WOR	RIGHT		5	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
10	91+99.60	92+49.92	WOR	RIGHT	40				2	39	2	
10	92+25.00		WOR	RIGHT		8	5.2					2" ASPHALT APRON, 2" GRAVEL REMAINDER
10	94+80.00	95+20.79	WOR	RIGHT	30				2	32	2	
10	95+00.25		WOR	RIGHT		6	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
10	101+83.81	102+1579	WOR	RIGHT	30				2	32	2	
10	102+00.00		WOR	RIGHT		3	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
11	105+30.58	105+68.97	WOR	RIGHT	30				2	32	2	
11	105+50.00		WOR	RIGHT		3	3.8					2" ASPHALT APRON, 2" GRAVEL REMAINDER
7	10+28.26	11+46.82	PR360	LT/RT		24						COUNTY ROAD 360
				TOTALS	815 ✳✳	172	120.1 ✳✳✳✳	984.9	40 ✳✳✳	934	40	

✳ SEE AGGREGATE BASE SCHEDULE FOR BASE AND SEE EARTHWORK SCHEDULE FOR LINEAR GRADING

✳✳ SEE EARTHWORK SCHEDULE FOR TOTAL

✳✳✳ SEE FLARED END SECTION SCHEDULE FOR TOTAL

✳✳✳✳ SEE OVERLAY SCHEDULE FOR TOTAL

ROUTE 67

SUMMARY OF QUANTITES

SHEET 6 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 2/29/2024

ROUTE 67 | STATE MO

DISTRICT SE | SHEET NO. 3

COUNTY BUTLER

JOB NO. J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

WEST OUTER ROAD COLDMILL & OVERLAY

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	BIT. PAVEMENT MIX PG64-22 (BP-1) ✳ (TON)	MODIFIED COLDMILLING (DEPTH TRANS.) (SY)	TACK COAT (GAL)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
4	19+99.39	21+00.00	PRWOR3	CL	125.0	481	83	1.0	VARIED COLDMILL TRANSITION AND OVERLAY FOR WOR TIE INTO FULL DEPTH
					120.1				✳ SEE DRIVEWAY SCHEDULE FOR TOTAL
				TOTALS	245.1	481	83	1.0	

GUARDRAIL

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS GUARDRAIL (LF)	MGS VERTICAL CONCRETE BARRIER TRANSITION (EA)	MGS END ANCHOR (EA)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	TYPE C CRASHWORTHY END TERMINAL (EA)	REMARKS
2	6010+09.82	6015+48.11	RTE67-NB	LEFT	475		1	1		
2	43+95.83	44+32.16	EOR	RIGHT		1		1		
3	602+39.17		RTE67-SB	LEFT					1	
				TOTALS	475	1	1	2	1	

CLEARING AND GRUBBING

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CLEARING AND GRUBBING (ACRE)	REMARKS
5	587+87.69	592+00.00	PROPOSED US67	RT/LT	1.9	
6	592+00.00	592+46.02	PROPOSED US67	RT	0.0	
6	593+60.72	594+30.90	PROPOSED US67	RT	0.1	
6	593+85.05	598+95.78	PROPOSED US67	RT/LT	1.9	
6	599+44.27	604+93.30	PROPOSED US67	RT/LT	1.9	
7	609+58.76	610+43.74	PROPOSED US67	RT/LT	0.1	
9	632+01.07	633+39.51	PROPOSED US67	RT/LT	0.4	
10	644+80.09	647+76.40	PROPOSED US67	RT/LT	1.5	
10	648+29.31	655+12.13	PROPOSED US67	RT/LT	1.6	
10	655+79.86	656+67.25	PROPOSED US67	RT/LT	0.0	
				TOTALS	9	

MISCELLANEOUS

MOBILIZATION (LS)	ADDITIONAL MOBILIZATION FOR SEEDING (EA)	DRAINING PONDS (EA)	CONTRACTOR FURNISHED SURVEYING AND STAKING (LS)
1	5	3	1

MEDIAN

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE TRAFFIC BARRIER, TYPE C (LF)	REMARKS
4	576+72.40	579+00.00	SB US67	LEFT	228	BETWEEN NB AND SB US67
4	31+00.00	33+00.00	EOR	RIGHT	200	BETWEEN NB US67 AND EOR
5	579+00.00	592+00.00	SB US67	LEFT	1,300	BETWEEN NB AND SB US67
5	33+00.00	43+95.83	EOR	RIGHT	1,096	BETWEEN NB US67 AND EOR
6	592+00.00	602+39.17	SB US67	LEFT	1,039	BETWEEN NB AND SB US67
				TOTALS	3,863	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 7 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

PAVEMENT MARKING

PAVEMENT MARKING SHEET	STA	STA	ALIGN	6" WHITE LF	6" YELLOW LF	12" WHITE LF	4" WHITE LF	4" YELLOW LF	REMARKS
2	529+00	539+00	RTE67_EXCOMB	252					RT RTE 67 INTER WHITE LANE LINE
2	531+98	537+80.82	RTE67_EXCOMB	147					RT RTE 67 DOTTED LINE
2	537+80.82	539+00	RTE67_EXCOMB			164			RT RTE 67/RAMP 2 GORE LINE
4	539+00	552+00	RTE67_EXCOMB	327					RT RTE 67 INTER WHITE LANE LINE
4	539+00	540+24.13	RTE67_EXCOMB			236			RT RTE 67/RAMP 2 GORE LINE
4	540+24.13	552+00	RTE67_EXCOMB	1,185					RT RTE 67 EDGELINE
6	552+00	565+50	RTE67_EXCOMB	338					RT RTE 67 INTER WHITE LANE LINE
6	552+00	558+12.80	RTE67_EXCOMB	613					RT RTE 67 EDGELINE
6	558+12.80	559+89.51	RTE67_EXCOMB			177			RT RTE 67/RAMP 4 GORELINE
6	559+89.51	565+50	RTE67_EXCOMB	141					RT RTE 67 DOTTED LINE
6	559+88.64	565+50	RTE67_EXCOMB	562					RT RTE 67 EDGELINE
6	14+43.95	15+52.22	RAMP1_1			110			RAMP 1 GORE LINE
6	14+81.87	15+81.04	RAMP1_1	100					RAMP 1 EDGELINE
8	565+50	579+00	RTE67_EXCOMB	339					RT RTE 67 INTER WHITE LANE LINE
8	565+50	579+00	RTE67_EXCOMB	1,360					RT RTE 67 EDGELINE
8	565+50	571+24.79	RTE67_EXCOMB	146					RT RTE 67 DOTTED LINE
8	572+00	579+00	RTE67_EXCOMB	174					LT RTE 67 INTER WHITE LANE LINE
8	572+31.5	579+00	RTE67_EXCOMB	662					LT RTE 67 EDGELINE
8	29+00	33+00	EOR_6E				800		LT & RT EAST OUTER ROAD EDGE LINE
8	29+00	33+00	EOR_6E					800	LT & RT EAST OUTER ROAD DOUBLE CENTERLINE
8	21+00	26+00	PRWOR3				1,000		LT & RT WEST OUTER ROAD EDGE LINE
8	21+00	26+00	PRWOR3					1,000	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
9	579+00	592+00	RTE67-SB	650					NB & SB RTE 67 INTER WHITE LANE LINE
9	579+00	592+00	RTE67-SB	2,597					NB & SB RTE 67 EDGELINE
9	579+00	592+00	RTE67-SB		2,598				NB & SB RTE 67 EDGELINE
9	33+00	45+90	EOR_6E				2,402		LT & RT EAST OUTER ROAD EDGE LINE
9	33+00	45+90	EOR_6E					2,401	LT & RT EAST OUTER ROAD DOUBLE CENTERLINE
9	26+00	39+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
9	26+00	39+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
10	592+00	605+00	PR67-3	650					NB & SB RTE 67 INTER WHITE LANE LINE
10	592+00	605+00	PR67-3	2,597					NB & SB RTE 67 EDGELINE
10	592+00	605+00	PR67-3		2,597				NB & SB RTE 67 EDGELINE
10	39+00	52+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
10	39+00	52+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
11	605+00	618+00	PR67-3	650					NB & SB RTE 67 INTER WHITE LANE LINE
11	605+00	618+00	PR67-3	2,600					NB & SB RTE 67 EDGELINE
11	605+00	618+00	PR67-3		2,600				NB & SB RTE 67 EDGELINE
11	52+00	65+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
11	52+00	65+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
12	618+00	631+00	PR67-3	650					NB & SB RTE 67 INTER WHITE LANE LINE
12	618+00	631+00	PR67-3	2,600					NB & SB RTE 67 EDGELINE
12	618+00	631+00	PR67-3		2,600				NB & SB RTE 67 EDGELINE
12	65+00	78+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
12	65+00	78+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
13	631+00	644+00	PR67-3	650					NB & SB RTE 67 INTER WHITE LANE LINE
13	631+00	644+00	PR67-3	2,600					NB & SB RTE 67 EDGELINE
13	631+00	644+00	PR67-3		2,600				NB & SB RTE 67 EDGELINE
13	78+00	91+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
13	78+00	91+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
			SUBTOTAL 1	22,590	12,995	687	17,202	17,201	

CONTINUES ON NEXT SHEET

ROUTE 67
SUMMARY OF QUANTITES
SHEET 8 OF 17

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

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/6/2023
ROUTE: 67
STATE: MO
DISTRICT: SE
SHEET NO.: 3
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

PAVEMENT MARKING (CONT'D)

PAVEMNENT MARKING SHEET	STA	STA	ALIGN	6" WHITE LF	6" YELLOW LF	12" WHITE LF	4" WHITE LF	4" YELLOW LF	REMARKS
14	644+00	657+00	PR67-3	650					NB & SB RTE 67 INTER WHITE LANE LINE
14	644+00	657+00	PR67-3	2,600					NB & SB RTE 67 EDGELINE
14	644+00	657+00	PR67-3		2,600				NB & SB RTE 67 EDGELINE
14	91+00	104+00	PRWOR3				2,600		LT & RT WEST OUTER ROAD EDGE LINE
14	91+00	104+00	PRWOR3					2,600	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
15	657+00	660+75	PR67-3	188					NB & SB RTE 67 INTER WHITE LANE LINE
15	657+00	660+75	PR67-3	750					NB & SB RTE 67 EDGELINE
15	657+00	660+75	PR67-3		750				NB & SB RTE 67 EDGELINE
15	104+00	107+64.11	PRWOR3				616		LT & RT WEST OUTER ROAD EDGE LINE
15	104+00	107+64.11	PRWOR3					613	LT & RT WEST OUTER ROAD DOUBLE CENTERLINE
			SUBTOTAL 2	4,188	3,350	0	3,216	3,213	
			SUBTOTAL 1	22,590	12,995	687	17,202	17,201	
			TOTAL	26,778	16,345	687	20,418	20,414	

PAVEMENT UNDERDRAINAGE

SHEET	STA.	STA.	ALIGN.	PIPE AGGREGATE PAVEMENT EDGE DRAIN (LF)	OUTLET PIPES AND SPLASH PADS (EA)	REMARKS
8-11	620+00	660+75	PR67-3	8,150		PROPOSED 67 NB & SB OUTSIDE LANES
8	620+00		PR67-3		2	NB & SB OUTER LANE OUTLET
8	622+50		PR67-3		2	NB & SB OUTER LANE OUTLET
8	625+00		PR67-3		2	NB & SB OUTER LANE OUTLET
8	627+50		PR67-3		2	NB & SB OUTER LANE OUTLET
8	630+00		PR67-3		2	NB & SB OUTER LANE OUTLET
9	632+50		PR67-3		2	NB & SB OUTER LANE OUTLET
9	635+00		PR67-3		2	NB & SB OUTER LANE OUTLET
9	637+50		PR67-3		2	NB & SB OUTER LANE OUTLET
9	640+00		PR67-3		2	NB & SB OUTER LANE OUTLET
9	642+50		PR67-3		2	NB & SB OUTER LANE OUTLET
10	645+00		PR67-3		2	NB & SB OUTER LANE OUTLET
10	647+50		PR67-3		2	NB & SB OUTER LANE OUTLET
10	650+00		PR67-3		2	NB & SB OUTER LANE OUTLET
10	652+50		PR67-3		2	NB & SB OUTER LANE OUTLET
10	655+00		PR67-3		2	NB & SB OUTER LANE OUTLET
11	657+50		PR67-3		2	NB & SB OUTER LANE OUTLET
11	660+00		PR67-3		2	NB & SB OUTER LANE OUTLET
			TOTAL	8,150	34	

DRAINAGE MISC.

SHEET	STATION	ROADWAY	CULVERT CLEANOUT (EA)	REMARKS
5	581+00.00	RTE67_EXCOMB	2	24" PIPE BETEWEEN H107 AND F108
6	596+00.00	RTE67_EXCOMB	1	24" PIPE UNDER EXISTING US67
7	608+60.00	PR67-3	1	18" PIPE UNDER EXISTING US67
8	629+70.00	PR67-3	1	36" PIPE UNDER EXISTING US67
11	660+35.00	PR67-3	1	3'X2' BOX UNDER EXISTING US67
		TOTALS	6	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 9 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DRAINAGE PIPES

SHEET	CULVERT SECTION SHEET	FROM STRUCTURE	TO STRUCTURE	CLASS 3 EXCAVATION (CUYD)	12 IN. PIPE GROUP A (LF)	18 IN. PIPE GROUP A (LF)	24 IN. PIPE GROUP A (LF)	36 IN. PIPE GROUP A (LF)	REMARKS
5	1	H107	A30	15			42		
5	1	A30	COLLAR	3			4		
5	1	COLLAR	S44-A	5			4		
5	1	S44-B	COLLAR	6			4		
5	1	COLLAR	J131	4			15		
5	1	J131	F108	13			68		
5	1	B92	S91	15	47				
5	1	S91	F94	7		64			
5	1	B42	H85	18	53				
5	2	H84	F95	94		82			
5	2	J93	J97	69		88			
5	2	J97	F98	76				97	
6	2	J136	J135	82		81			
6	2	J135	J76	75		83			
6	2	J76	COLLAR	2			5		
6	3	J143	J144	111			89		
6	3	J144	J145	117			87		
6	3	J145	F168	135			84		
7	4	F71	F75	42			58		
7	4	F73	F72	50			62		
8	4	F174	F173	23			45		
8	4	F172	F171	35			64		
8	4	F170	F169	37			63		
8	4	F175	F176	14			42		
8	4	F177	F178	23			63		
8	4	F179	F180	30			64		
9	5	F181	F182	0			55		
9	5	F183	F184	3			58		
10	5	F185	F186	0			61		
10	5	F187	F188	0			66		
10	5	F189	F190	1			50		
10	5	F191	F192	12			42		
10	5	F193	F194	23			62		
10	5	F195	F196	32			65		
11	6	F227	F228	22			42		
11	6	F197	F198	42			61		
11	6	F199	F200	41			62		
4	6	B81	B90	23	48				
5	6	B90	B96	20	38				
5	6	B96	B86	21	38				
5	6	B86	B82	22	38				
5	6	B82	B44	50	79				
5	6	B87	B88	61	123				
5	6	B88	S91	48	98				
5	7	H130	H85	67	123				
5	7	H85	H84	83	98				
4	7	B65	B111	49	73				
			TOTALS	1721✳	856	398	1,487	97	

✳ SEE EARTHWORK TABLE FOR TOTAL

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ROUTE 67
SUMMARY OF QUANTITES
SHEET 10 OF 17

PIPE COLLARS, FLARED END SECTIONS, AND ROCK LINING

SHEET	CULVERT SECTION SHEET	FROM STRUCTURE	TO STRUCTURE	PIPE COLLAR, TYPE A (EA)	ROCK LINING (CUYD)	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	24 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	36 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	REMARKS
5	1	A30	EXIST	1					
5	1	EXIST	S44	1					
5	1	S44	EXIST	1					
5	1	EXIST	J131	1					
5	1	J131	F108		4		1		
5	1	S91	F94		3	1			
5	2	H84	F95		3	1			
5	2	J97	F98					1	SEE DITCH LINER SCHEDULE
6	2	J76	EXIST	1					
6	3	J145	F168				1		SEE DITCH LINER SCHEDULE
7	4	F71	F75		6		2		
7	4	F73	F72		4		2		
8	4	F174	F173		5		2		
8	4	F172	F171		5		2		
8	4	F170	F169		5		2		
8	4	F175	F176		5		2		
8	4	F177	F178		5		2		
8	4	F179	F180		5		2		
9	5	F181	F182		6		2		
9	5	F183	F184		6		2		
10	5	F185	F186		6		2		
10	5	F187	F188		4		2		
10	5	F189	F190		4		2		
10	5	F191	F192		5		2		
10	5	F193	F194		5		2		
10	5	F195	F196		5		2		
11	6	F227	F228		6		2		
11	6	F197	F198		6		2		
11	6	F199	F200		6		2		
					40				*TOTAL FROM DRIVEWAY SCHEDULE
			TOTALS	5	149	2	40	1	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 11 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 2/29/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DRAINAGE STRUCTURES

STRUCTURE NUMBER	SHEET	CULVERT SECTION SHEET	STATION	OFFSET	ROADWAY	STANDARD	TYPE	ACTUAL DEPTH	CLASS 3 EXCAVATION (CUYD)	CURVED VANE GRATE AND FRAME (2 FT. X 2 FT. OR 600MM X 600MM) (EA)	GRATE AND BEARING PLATE (3 FT. X 3 FT. OR 914 MM X 914 MM) (EA)	PRECAST CONCRETE DROP INLET 2 FT X 2 FT (FT)	PRECAST CONCRETE DROP INLET 3 FT X 3 FT (FT)	SPECIAL INLET NO. 1 (FT)	SPECIAL INLET NO. 2 (FT)	PIPE OPENINGS (NUMBER-SIZE)	REMARKS
H107	5	1	580+95.68	93.73' LT	RTE67-SB	731.10S	S-1 3X3	4.00	14		1		4			1-18", 1-24"	
A30	5	1	580+98.51	48.31' LT	RTE67-SB	SPC	SPC-1	9.19	30	1				8		2-24"	
S44	5	1	581+01.04	3.01' LT 7.51' LT	RTE67-SB	SPC	SPC-2	10.39	64	2					9	1-12", 2-24"	
J131	5	1	581+05.15	57.77' RT	RTE67-SB	731.10S	S-2 3X3	8.00	5		1		8			2-24"	
B92	5	1	584+50.45	55.97' LT	RTE67-SB	731.10S	B 2 X 2	4.00	7	1		3				1-12"	
S91	5	1	584+50.00	2.75' LT 7.25' LT	RTE67-SB	SPC	SPC-2	6.00	6	2					5	2-12", 1-18"	
B42	5	1	586+98.28	69.63' LT	RTE67-SB	731.10S	B 2 X 2	4.00	5	1		3				1-12"	
H85	5	1	587+00.07	14.21' LT	RTE67-SB	731.10S	S-1 3X3	6.68	16		1		7			3-12"	
H84	5	2	588+00.00	15.34' LT	RTE67-SB	731.10S	S-1 3X3	7.00	22		1		7			1-12", 1-18"	
J93	5	2	591+39.97	19.50' LT	RTE67-SB	731.10S	S-2 3X3	5.00	14		1		5			1-18"	
J97	5	2	591+44.73	70.12' RT	RTE67-SB	731.10S	S-1 3X3	6.00	13		1		6			1-18", 1-36"	
J136	6	2	595+95.98	58.60' RT	RTE67-SB	731.10S	S-2 3X3	4.00	14		1		4			1-18"	
J135	6	2	595+94.51	24.64' LT	RTE67-SB	731.10S	S-2 3X3	6.00	17		1		6			2-18"	
J76	6	2	595+94.36	110.16' LT	RTE67-SB	731.10S	S-2 3X3	9.21	3		1		9			1-18", 1-24"	
J143	6	3	602+39.94	92.00' LT	PR67-3	731.10S	S-2 3X3	3.25	12		1		3			1-24"	
J144	6	3	602+39.44	CL	PR67-3	731.10S	S-2 3X3	3.72	13		1		4			2-24"	
J145	6	3	604+39.45	90.00' RT	PR67-3	731.10S	S-2 3X3	4.15	14		1		4			2-24"	
B81	4	6	578+50.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.00	11	1		3				1-12"	
B90	5	6	579+00.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.36	12	1		3				2-12"	
B96	5	6	579+40.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.61	13	1		4				2-12"	
B86	5	6	579+80.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.84	13	1		4				2-12"	
B82	5	6	580+20.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	5.00	14	1		4				2-12"	
B87	5	6	582+25.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.00	11	1		3				1-12"	
B88	5	6	583+50.00	2.75' LT	RTE67-SB	731.10S	B 2 X 2	4.00	11	1		3				2-12"	
H130	5	6	585+75.00	13.95' LT	RTE67-SB	731.10S	S-1 3X3	4.00	11		1		4			1-12"	
B111	4	7	577+75.00	2.25' RT	RTE67-SB	731.10S	B 2 X 2	5.00	11	1		4				1-12"	
							TOTALS		376 *	15	13	34	71	8	14		

* SEE EARTHWORK TABLE FOR TOTAL

ROUTE 67
SUMMARY OF QUANTITES
SHEET 12 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

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)

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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

TEMPORARY EROSION CONTROL

EROSION CONTROL SHEET	ALIGN	SILT FENCE (LF)	ROCK DITCH CHECK (LF)	ALTERNATE DITCH CHECK (LF)	CURB INLET CHECK (EA)	SEDIMENT TRAP EXCAVATION (CY)	SEDIMENT TRAP ROCK (CY)	SEDIMENT REMOVAL (CY)	TEMPORARY SEEDING (AC)	REMARKS
1 OF 8	RTE67_EXCOMB		196		3			14	0.10	
2 OF 8	RTE67_EXCOMB	1,500	714		14	10.0	10.0	87	0.10	
3 OF 8	RTE67_EXCOMB	1,483	714			10.0	10.0	87	1.10	
4 OF 8	RTE67_EXCOMB	945	1,442			20.0	20.0	103	0.90	
5 OF 8	RTE67_EXCOMB	329	266	546				58	0.20	
6 OF 8	RTE67_EXCOMB	580	42	532				41	0.10	
7 OF 8	RTE67_EXCOMB	1,182	126	504				45	1.00	
8 OF 8	RTE67_EXCOMB	380	42	126		10.0	10.0	12	0.10	
	TOTAL	6,399	3,542	1,708	17	50.0	50.0	447	3.6	

SEEDING

EROSION CONTROL SHEET	SEEDING - COOL SEASON MIXTURES (AC)	MULCHING (AC)	SEEDING - WARM SEASON MIXTURES (AC)	REMARK
1 OF 8	0.5	0.6	0.1	LT/RT
2 OF 8	3.2	3.3	0.1	LT/RT
3 OF 8	5.1	6.2	1.1	LT/RT
4 OF 8	5.3	6.2	0.9	LT/RT
5 OF 8	5.0	5.2	0.2	LT/RT
6 OF 8	5.1	5.2	0.1	LT/RT
7 OF 8	5.0	6.0	1.0	LT/RT
8 OF 8	1.5	1.6	0.1	LT/RT
TOTAL	30.7	34.3	3.6	
COOL SEASON SEEDING MIXTURE WITHIN FIRST 30'				
WARM SEASON SEEDING MIXTURE BEYOND THE FIRST 30'				

ROCK DITCH LINER & ROCK BLANKET

EROSION CONTROL SHEET	FURNISHING TYPE 2 ROCK DITCH LINER (CY)	PLACING TYPE 2 ROCK DITCH LINER (CY)	FURNISHING TYPE 3 ROCK DITCH LINER (CY)	PLACING TYPE 3 ROCK DITCH LINER (CY)	BEDDING MATERIAL FOR ROCK DITCH LINER (CY)	FURNISHING TYPE 1 ROCK BLANKET (CY)	PLACING TYPE 1 ROCK BLANKET (CY)	PERMANENT EROSION CONTROL GEOTEXTILE (SY)	REMARKS
1 OF 8						438	438		EOR/WOR BACKSLOPE
2 OF 8	309	309				402	402	683	NB67/EOR DITCH; EOR BACKSLOPE
2 OF 8			220	220	73			329	ROCK DISSIPATOR
3 OF 8	16	16						39	NB67/EOR DITCH
3 OF 8			211	211	70			316	ROCK DISSIPATOR
7 OF 8						17	17		OUTER ROAD BACKSLOPE
TOTALS	325	325	431	431	143	857	857	1,367	

ROUTE 67

SUMMARY OF QUANTITES
SHEET 13 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/6/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE G (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	12.5 INCHES, ASPHALTIC CONCRETE PAVEMENT SP125C (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
4	577+00.00	579+00.00	SB US67	CL	690.7	4.0	
4	6000+00.00	6002+00.00	NB US67	CL	703.1	4.0	
5	579+00.00	592+00.00	SB US67	CL	4,563.7	26.0	
5	6002+00.00	6015+00.00	NB US67	CL	4,829.7	26.0	
6	592+00.00	602+39.17	SB US67	CL	3,697.4	20.8	
6	6015+00.00	6025+33.11	NB US67	CL	3,441.9	20.7	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	1,738.9	10.4	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
11	657+00.00	660+75.00	PROPOSED US67	BOTH	2,500.0	15.0	
				TOTALS	56,832.2	334.9	

ALTERNATE H (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (9 1/2 IN. NON-REINFORCED, 15 FT. JOINTS) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	REMARKS
4	577+00.00	579+00.00	SB US67	CL	690.7	4.0	
4	6000+00.00	6002+00.00	NB US67	CL	703.1	4.0	
5	579+00.00	592+00.00	SB US67	CL	4,563.7	26.0	
5	6002+00.00	6015+00.00	NB US67	CL	4,829.7	26.0	
6	592+00.00	602+39.17	SB US67	CL	3,697.4	20.8	
6	6015+00.00	6025+33.11	NB US67	CL	3,441.9	20.7	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	1,738.9	10.4	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	8,666.7	52.0	
11	657+00.00	660+75.00	PROPOSED US67	BOTH	2,500.0	15.0	
				TOTALS	56,832.2	334.9	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 14 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/24/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION	DATE

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

© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE I (ASPHALT) SHOULDER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	REMARKS
4	577+00.00	579+00.00	SB US67	CL	179.1	
4	6000+00.00	6002+00.00	NB US67	CL	198.0	
5	579+00.00	592+00.00	SB US67	CL	1,157.8	
5	6002+00.00	6015+00.00	NB US67	CL	1,314.7	
6	592+00.00	602+39.17	SB US67	CL	925.5	
6	6015+00.00	6025+33.11	NB US67	CL	917.0	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	463.7	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	2,311.1	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	2,311.1	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	2,311.1	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	2,311.1	
11	657+00.00	660+79.52	PROPOSED US67	BOTH	666.7	
				TOTALS	15,066.9	

ALTERNATE J (CONCRETE) SHOULDER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	REMARKS
4	577+00.00	579+00.00	SB US67	CL	179.1	
4	6000+00.00	6002+00.00	NB US67	CL	198.0	
5	579+00.00	592+00.00	SB US67	CL	1,157.8	
5	6002+00.00	6015+00.00	NB US67	CL	1,314.7	
6	592+00.00	602+39.17	SB US67	CL	925.5	
6	6015+00.00	6025+33.11	NB US67	CL	917.0	
6	602+39.17	605+00.00	PROPOSED US67	BOTH	463.7	
7	605+00.00	618+00.00	PROPOSED US67	BOTH	2,311.1	
8	618+00.00	631+00.00	PROPOSED US67	BOTH	2,311.1	
9	631+00.00	644+00.00	PROPOSED US67	BOTH	2,311.1	
10	644+00.00	657+00.00	PROPOSED US67	BOTH	2,311.1	
11	657+00.00	660+79.52	PROPOSED US67	BOTH	666.7	
				TOTALS	15,066.9	

ROUTE 67
SUMMARY OF QUANTITES
SHEET 15 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/24/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ALTERNATE K (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	7 INCHES, BITUMINOUS PAVEMENT (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
4	30+99.75	33+00.00	EAST OUTER ROAD	CL	665.2	2.0	INCLUDES FULL-DEPTH SHOULDERS
4	21+00.00	26+00.00	WEST OUTER ROAD	CL	1,621.7	7.3	
5	33+00.00	45+00.00	EAST OUTER ROAD	CL	3,981.9	10.0	
5	26+00.00	39+00.00	WEST OUTER ROAD	CL	4,044.4	17.6	
6	39+00.00	52+00.00	WEST OUTER ROAD	CL	4,044.4	26.0	
7	52+00.00	65+00.00	WEST OUTER ROAD	CL	4,306.2	18.7	*INCLUDES CR360 INTERSECTION
8	65+00.00	78+00.00	WEST OUTER ROAD	CL	4,044.4	16.0	
9	78+00.00	91+00.00	WEST OUTER ROAD	CL	4,044.4	24.0	
10	91+00.00	104+00.00	WEST OUTER ROAD	CL	4,044.4	19.9	
11	104+00.00	107+67.57	WEST OUTER ROAD	CL	1,413.8	3.4	INCLUDES CR338 INTERSECTION
				TOTALS	32,210.8	144.9	

*SEE DRIVEWAY SCHEDULES FOR CR360 AGGREGATE

ALTERNATE L (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (7 IN. NON-REINF) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	REMARKS
4	30+99.75	33+00.00	EAST OUTER ROAD	CL	665.2	2.0	INCLUDES FULL-DEPTH SHOULDERS
4	21+00.00	26+00.00	WEST OUTER ROAD	CL	1,621.7	7.3	
5	33+00.00	45+00.00	EAST OUTER ROAD	CL	3,981.9	10.0	
5	26+00.00	39+00.00	WEST OUTER ROAD	CL	4,044.4	17.6	
6	39+00.00	52+00.00	WEST OUTER ROAD	CL	4,044.4	26.0	
7	52+00.00	65+00.00	WEST OUTER ROAD	CL	4,306.2	18.7	*INCLUDES CR360 INTERSECTION
8	65+00.00	78+00.00	WEST OUTER ROAD	CL	4,044.4	16.0	
9	78+00.00	91+00.00	WEST OUTER ROAD	CL	4,044.4	24.0	
10	91+00.00	104+00.00	WEST OUTER ROAD	CL	4,044.4	19.9	
11	104+00.00	107+67.57	WEST OUTER ROAD	CL	1,413.8	3.4	INCLUDES CR338 INTERSECTION
				TOTALS	32,210.8	144.9	

*SEE DRIVEWAY SCHEDULES FOR CR360 AGGREGATE

ROUTE 67
SUMMARY OF QUANTITES
SHEET 16 OF 17

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/24/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
W01-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	**48X48**	**16.00**	**1**	**16**			**14**	**REVERSE CURVE (SYMBOL LEFT ARROW)**
W01-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
W01-8	18X24	3.00						CHEVRON (SYMBOL)
W01-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00						STOP AHEAD (SYMBOL)
W03-2	**48X48**	**16.00**	**1**	**16**			**40**	**YIELD AHEAD (SYMBOL)**
W03-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
W03-4	**48X48**	**16.00**	**4**	**64**			**11**	**BE PREPARED TO STOP**
W03-5	**48X48**	**16.00**	**2**	**32**			**3**	**SPEED LIMIT AHEAD**
W04-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
W04-1aL	48X48	16.00						MERGE (ARROW SYMBOL)
W04-1aR	48X48	16.00						MERGE (ARROW SYMBOL)
W05-1	**48X48**	**16.00**	**4**	**64**			**43**	**ROAD/BRIDGE/RAMP NARROWS**
W05-3	48X48	16.00						ONE LANE BRIDGE
W05-5	48X48	16.00						NARROW LANES
W06-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00						BUMP
W08-2	48X48	16.00						DIP
W08-3	48X48	16.00						PAVEMENT ENDS
W08-4	48X48	16.00						SOFT SHOULDER
W08-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
W08-6	**48X48**	**16.00**	**4**	**64**			**10**	**TRUCK CROSSING (WITH FLAGS)**
W08-6c	**48X48**	**16.00**	**4**	**64**			**9**	**TRUCK ENTRANCE**
W08-7	36X36	9.00						LOOSE GRAVEL
W08-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL
W08-9	**48X48**	**16.00**	**2**	**32**			**22**	**LOW SHOULDER**
W08-11	**48X48**	**16.00**	**2**	**32**			**36**	**UNEVEN LANES**
W08-12	48X48	16.00						NO CENTER LINE
W08-15	48X48	16.00						GROOVED PAVEMENT
W08-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
W08-17	**48X48**	**16.00**	**2**	**32**			**23**	**SHOULDER DROP-OFF (SYMBOL)**
W08-17P	**30X24**	**5.00**	**2**	**10**			**23**	**SHOULDER DROP-OFF (PLAQUE)**
W10-1	42RND.	9.62						RAILROAD CROSSING
W012-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2X	24X18	3.00						LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W012-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
W012-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00						XXX FEET (PLAQUE)
W016-3	30X24	5.00						X MILE (PLAQUE)
W020-1	**48X48**	**16.00**	**10**	**160**			**2/2a**	**ROAD/BRIDGE/RAMP WORK AHEAD**
W020-2	48X48	16.00						DETOUR AHEAD
W020-3	**48X48**	**16.00**	**10**	**160**			**20/65**	**ROAD CLOSED AHEAD**
W020-4	**48X48**	**16.00**	**3**	**48**			**7**	**ONE LANE ROAD AHEAD**
W020-5	**48X48**	**16.00**	**4**	**64**			**5**	**RIGHT/CENTER/LEFT LANE CLOSED AHEAD**
W020-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	**48X48**	**16.00**	**6**	**96**			**6**	**RIGHT/CENTER/LEFT LANE CLOSED**
W020-7a	**48X48**	**16.00**	**4**	**64**			**8**	**FLAGGER (SYMBOL, WITH FLAGS)**
W021-2	36X36	9.00						FRESH OIL
W021-5	**48X48**	**16.00**	**8**	**128**			**21**	**SHOULDER WORK AHEAD**
W021-5a	**48X48**	**16.00**	**2**	**32**			**21a**	**RIGHT SHOULDER CLOSED**
W021-5b	**42X36**	**10.50**	**2**	**25**			**21b**	**RIGHT SHOULDER CLOSED AHEAD**
W022-3	42X36	10.50						END BLASTING ZONE
G022-1	21X15	2.19						WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
G020-1	**60X24**	**10.00**	**2**	**20**			**1**	**ROAD WORK NEXT 4 MILES**
G020-2	**48X24**	**8.00**	**2**	**16**			**55**	**END ROAD WORK**
G020-4	**36X18**	**4.50**	**2**	**9**				**PILOT CAR FOLLOW ME**
G020-4a	**42X30**	**8.75**	**2**	**17.5**			**66**	**PILOT CAR IN USE WAIT & FOLLOW**
G020-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
G020-5aP	**36X24**	**6.00**	**9**	**54**			**54**	**WORK ZONE (PLAQUE)**
M04-8a	24X18	3.00						END DETOUR
M04-9L	48X36	12.00						DETOUR (LEFT ARROW)
M04-9R	48X36	12.00						DETOUR (RIGHT ARROW)
M04-9P	48X12	4.00						STREET NAME (PLAQUE)
M05-1L	**21X15**	**2.19**	**2**	**4.38**			**19A**	**ADVANCE LEFT ARROW**
M05-1R	**21X15**	**2.19**	**2**	**4.38**			**19B**	**ADVANCE RIGHT ARROW**
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	**48TRI.**	**6.93**	**1**	**6.93**			**13**	**YIELD**
R1-2a	**36X36**	**9.00**	**1**	**9**			**13**	**TO ONCOMING TRAFFIC (PLAQUE)**
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	**36X48**	**12.00**	**6**	**72**			**4/25**	**SPEED LIMIT 50/60**
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	**48X48**	**16.00**	**4**	**64**			**70**	**NO LEFT TURN (SYMBOL)**
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R5-1	**30X30**	**6.25**	**4**	**25**			**60**	**DO NOT ENTER**
R5-1a	**36X24**	**6.00**	**4**	**24**			**61**	**WRONG WAY**
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	**54X18**	**6.75**	**4**	**27**			**62**	**ONE WAY ARROW (RIGHT)**
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)
R11-2	**48X30**	**10.00**	**12**	**120**			**29**	**ROAD CLOSED**
R11-3a	**60X30**	**12.50**	**4**	**50**			**63**	**ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY**
R11-4	**60X30**	**12.50**	**4**	**50**			**64**	**ROAD CLOSED TO THRU TRAFFIC**
CONST-3A	**60X48**	**20.00**	**3**	**60**			**53**	**FINE SIGN**
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	**96X48**	**32.00**	**1**	**32**			**58**	**POINT OF PRESENCE**
CONST-8	**48X36**	**12.00**	**2**	**24**			**57**	**WORK ZONE NO PHONE ZONE**
SPECIAL	**48X48**	**16.00**	**3**	**48**			**80**	**RUMBLE STRIPS AHEAD**

616-10.05 CONSTRUCTION SIGNS	TOTAL	1940
616-10.10 RELOCATED SIGNS	TOTAL	0

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014	**4**	**IMPACT ATTENUATOR 60 MPH (SAND BARRELS)**
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	**10**	**REPLACEMENT SAND BARREL**
6122030	**6**	**IMPACT ATTENUATOR (RELOCATION)**
6122040	**1**	**WORK ZONE CRASH CUSHION (NARROW)**
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161008	**6**	**ADVANCED WARNING RAIL SYSTEM**
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	**300**	**CHANNELIZER (TRIM LINE)**
6161030	**30**	**TYPE III MOVEABLE BARRICADE**
6161033	**28**	**DIRECTION INDICATOR BARRICADE**
6161040	**2**	**FLASHING ARROW PANEL**
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	**6**	**CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED**
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	**18**	**TEMPORARY LONG-TERM RUMBLE STRIPS**
6162004		TEMPORARY SHORT-TERM RUMBLE STRIPS
6173600D	**463**	**TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED**
6173700B	**4088**	**TEMPORARY TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED**
6173706	**325**	**TEMPORARY TRAFFIC BARRIER STIFFNESS TRANS SECT, CONTRACTOR FURNISHED/RETAINED**
6174000A	**2**	**TEMP. TRAFFIC BARRIER HEIGHT TRANSITION**
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A	**133**	**TEMPORARY RAISED PAVEMENT MARKER**
6175011B	**113**	**RELOCATING TEMPORARY TRAFFIC BARRIER ANCHORED**
4019905	**2169**	**S.Y. MISC. TEMP. OPTIONAL PVMT & BASE**
6191000	**480**	**PAVEMENT EDGE TREATMENT**
6207001	*	PAVEMENT MARKING REMOVAL
6208076	**16192**	**4 IN. TEMPORARY PAVEMENT MARKING PAINT**

*SEE PAVEMENT MARKING SUMMARY OF QUANTITIES FOR PAVEMENT MARKING REMOVALS FOR TEMPORARY TRAFFIC CONTROL.

NOTES:
1. NO DIRECT PAYMENT FOR RELOCATED SIGNS
2. SIGN AND DEVICE LOCATION WILL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER
3. CHANGEABLE MESSAGE BOARD LOCATIONS AND MESSAGES TO BE DETERMINED BY THE ENGINEER.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SUMMARY OF QUANTITIES
SHEET 17 OF 17

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2013000798
PROFESSIONAL ENGINEER
07/01/2024 11:55:17 AM
Margaret Ann Bruns - Civil
MO PE-2013000798

DATE PREPARED: 8/1/2024
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 3
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

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

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

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

N/F
ROBERT W. AND
BRANDI D. BURGETT, H/W
1036/2736

N/F
MAX L, AND DONNA J. SMITH, H/W
1027/5456

N/F
DONNA SMITH, ET. ALI.
1031/55

N/F
ELDON S. AND LOIS E. REDUS, H/W
1028/4079

N/F
FRANK J. AND VESTA A. EVANS
1031/55

N/F
FALLON AND BO BLACKWELL, W/H
1041/4300

N/F
FRANK J. AND VESTA A. EVANS
1034/55

N/F
RICE & WOOLARD MANUFACTURING, INC
1031/3770

℄ EXIST. EAST OUTER ROAD

℄ EAST OUTER ROAD

℄ EXIST. ROUTE 67

℄ WEST OUTER ROAD

℄ ROUTE 67 NB

℄ ROUTE 67 SB

EXIST. R/W

EXIST. PERM. ESM'T (DRAINAGE)

EXIST. 30'W PERM. ESM'T (UTILITY)

NOTE:

SEE SIGNING SHEETS FOR SIGNING REMOVALS.

SCALE

0 50 100 150

RTE67-SB_2	
P.I.	578+19.75
D	3° 31′ 25″
T	180.27′
L	294.68′
R	2870.03′
Xs	294.55
Ys	7.03

EOR_6E_3	
PI	24+62.44
PC	22+33.70
PCC	26+82.63
Δ	27° 04′ 02″ (LT)
D	6° 01′ 46″
L	448.92′
T	228.73′
R	950.28′
eMAX	8%
eDESIGN	8%

EOR_6E_4	
PI	28+91.60
PCC	26+82.63
PCC	30+99.80
Δ	8° 30′ 38″ (LT)
D	2° 02′ 24″
L	417.17′
T	208.97′
R	2.808.53′
eMAX	8%
eDESIGN	4.4%

STA. EQUATION
STA. 576+99.89 EX 67 BK=
PC STA. 577+00.00, 5.25′ RT SB 67 AH=
PC STA. 6000+00.00, 5.25′ LT NB 67 AH

BEGIN PROJECT STA. 573+60.27
BEGIN CONSTRUCTION WOR
STA. 19+99.39

BEGIN CONSTRUCTION EOR
STA. 30+99.80

BEGIN BARRIER
STA. 576+72.40

BEGIN RECONSTRUCTION WOR
STA. 21+00.00

SE 1/4 NE 1/4
SEC 9
T23N R5E

NW 1/4 NW 1/4
SEC 10
T23N R5E

SW 1/4 NW 1/4
SEC 10
T23N R5E

SECTION LINE

N 48° 14′ 05″ E

N 00° 00′ 02″ W

USE MODIFIED COLDMILLING AND OVERLAY TO TIE INTO FULL DEPTH WEST OUTER ROAD REPLACEMENT FROM STA. 19+99.39 TO 21+00.00 (CHAIN: PRWOR3) SEE SPECIAL SHEETS

SEE SHEET 39 FOR MILLING DETAILS

TYPE I DRWY. LT.
EOR STA. 32+09.43
US67 STA. 578+11.78 CL
US67 STA. 578+11.81 ROW
00°03′00″ RA SKEW
20.0′ TOP
PROPOSED GRADE: 10.20%
EXISTING GRADE: 8.56%

TYPE 3 DRWY. RT.
WOR STA. 25+21.00
US67 STA. 578+53.52 CL
US67 STA. 578+46.03 ROW
(40′ ACCESS BREAK)
40.0′ TOP
18″ x 158.0′
GR. B PIPE
PROP. GRADE: 11.53%
EXIST. GRADE: 7.41%

CS STA 6000+87.36
PT STA 31+85.49
PC STA 10+00.00
CS STA 577+05.25
CL STA 21+93.72
29.48.28

MATCHLINE STA. 26+00, WEST OUTER ROAD
MATCHLINE STA. 33+00, EAST OUTER ROAD
MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB

4′ FBD
6′ FBD

B90 B65 B111 B81

(CLEAN) (UIP) (R) (RBO)

SIGN (R)

DRAINAGE AND HATCHING/SHADING LEGEND

- (A) SPECIAL INLET NO. 1 – PRECAST DROP INLET 2FT X 2FT WITH CURVED VANE GRATE AND FRAME (2FT X 2FT) (TYPE B) ON PRECAST CONCRETE MANHOLE BASE
- (B) PRECAST DROP INLET 2FT X 2FT WITH CURVED VANE GRATE AND FRAME (2FT X 2FT) (TYPE B)
- (F) GROUP A FLARED END SECTION
- (H) S-1 TYPE MEDIAN INLET
- (J) S-2 TYPE MEDIAN INLET
- (S) SPECIAL INLET NO. 2 – PRECAST DROP INLET 2FT X 2FT WITH CURVED VANE GRATE AND FRAME (2FT X 2FT) (TYPE B) ON PRECAST CONCRETE MANHOLE BASE
- PAVEMENT REMOVAL
- MODIFIED COLDMILLING

EOR_6E_5	
PI	31+42.65
PCC	30+99.80
PT	31+85.49
Δ	1° 44′ 53″ (LT)
D	2° 02′ 24″
L	85.68′
T	42.84′
R	2,808.53′
eMAX	8%
eDESIGN	4.4%

RTE67_EXCOMB_15	
PI	574+73.15
PC	565+40.72
PT	583+43.62
Δ	36° 03′ 29.0″ (LT)
D	2° 00′ 00.0″
L	1,802.90′
T	932.43′
R	2,864.78′
eMAX	8%
eDESIGN	6.4%

PRWOR3_3	
PI	23+60.27
PC	21+93.73
PRC	25+25.46
Δ	12° 40′ 15.4″ (RT)
D	3° 49′ 11.0″
L	331.72′
T	166.54′
R	1,500.00′
eMAX	8%
eDESIGN	7%

RTE67-SB_1	
PI	577+02.62
PC	577+00.00
CS	577+05.25
Δ	0° 06′ 17.2″ (LT)
D	1° 59′ 46.8″
L	5.25′
T	2.62′
R	2,870.03′
eMAX	8%
eDESIGN	6.4%

RTE67-NB_1	
PI	6000+43.68
PC	6000+00.00
CS	6000+87.36
Δ	1° 45′ 01.4″ (LT)
D	2° 00′ 13.2″
L	87.36′
T	43.68′
R	2,859.53′
eMAX	8%
eDESIGN	6.4%

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
2/29/2024	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	4
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

SW 1/4 NW 1/4
SEC 10
T23N R5E

NW 1/4 SW 1/4
SEC 10
T23N R5E

N/F
FALLON
AND BO
BLACKWELL,
W/H
1041/4300

N/F
CLIFFORD R. AND
JESSIE I. BROWNING, H/W
572/447

N/F
LYNN MUSETTE AND BOBBY A.
SHEPPARD, H/H
904/684

N/F
BOBBY A.
AND LYNN M.
SHEPPARD, H/W
1032/3651

N/F
SHAWN AND
AUTUMN DUCKETT, H/W
1032/2015

N/F
LYNN M. AND
BOBBY A.
SHEPPARD, H/H
806/914

1/4 SECTION LINE

TYPE I DRWY. LT.
EOR STA. 34+48.62
US67 STA. 580+53.81 CL
US67 STA. 580+57.61 ROW
1°59'30" LA SKEW
20.0' TOP
18" x 64.0' GR. B PIPE
PROPOSED GRADE: 12.07%
EXISTING GRADE: 11.81%

TYPE I DRWY. LT.
EOR STA. 35+98.51
US67 STA. 582+03.35 CL
US67 STA. 582+12.93 ROW
0°28'26" LA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 54.0' GR. B PIPE
PROPOSED GRADE: 0.50%
EXISTING GRADE: 8.73%

TYPE I DRWY. LT.
EOR STA. 36+85.39
US67 STA. 582+93.60 CL
US67 STA. 582+99.60 ROW
2°36'18" RA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 58.0' GR. B PIPE
PROPOSED GRADE: 3.03%
EXISTING GRADE: 6.14%

TYPE I DRWY. LT.
EOR STA. 38+80.20
US67 STA. 546+89.31 CL
US67 STA. 546+93.18 ROW
2°50'27" RA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 48.0' GR. B PIPE
PROPOSED GRADE: 3.57%
EXISTING GRADE: 9.77%

TYPE I DRWY. LT.
EOR STA. 40+27.78
US67 STA. 548+36.32 CL
US67 STA. 548+40.94 ROW
0°52'41" RA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 44.0' GR. B PIPE
PROPOSED GRADE: 3.00%
EXISTING GRADE: 11.64%

TYPE I DRWY. LT.
EOR STA. 41+30.12
US67 STA. 549+39.12 CL
US67 STA. 549+41.14 ROW
3°23'05" RA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 57.0' GR. B PIPE
PROPOSED GRADE: 3.81%
EXISTING GRADE: 8.10%

TYPE I DRWY. LT.
EOR STA. 43+86.27
US67 STA. 551+95.39 CL
US67 STA. 551+96.52 ROW
3°00'32" RA SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 42.0' GR. B PIPE
PROPOSED GRADE: 3.96%
EXISTING GRADE: 5.63%

MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD

MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB

MATCHLINE STA. 26+00, WEST OUTER ROAD

MATCHLINE STA. 39+00, WEST OUTER ROAD

℄ EAST OUTER ROAD

℄ EXIST. ROUTE 67

℄ ROUTE 67 NB

℄ ROUTE 67 SB

℄ WEST OUTER ROAD

SC STA 579+99.94

PC STA 34+74.52

SC STA 6003+79.51

PC STA 38+49.10
SC STA 584+63.13 BK =
SC STA 546+63.20 AH

CC STA 41+76.38

END CONSTRUCTION EOR
STA. 45+00.00

STA. 44+83.29

STA. 43+95.83

STA. 6009+34.34

STA. 6010+09.82

STA. 588+66.05

TYPE C BARRIER

EXIST. R/W

EXIST. 30'W PERM. ESM'T (UTILITY)

PERM. ESM'T. DRAINAGE

EXIST. PERM. ESM'T (DRAINAGE)

PERM. ESM'T (UTILITY)

24" PIPE

12" PIPE

18" PIPE

36" PIPE

4' FBD

6' FBD

8' FBD

VAR. 0-8' FBD

BLDG (DND)

BLDG (R)

FDN (R)

SAWCUT

S.L.

R/W LINE

T.C.E.

ROCK DISSIPATOR

SIGN(R&RE)

F83 H107 A30 S44-A S44-B B82 B87 J131 B86 B96 F108 B92 S91-A S91-B B88 F94 B42 H130 H85 H84 F95 J93 J97 F98

(11) N/F
JS RICE COMPANY, LLC
1036/5604 (NORTH PART)
SE 1/4 NE 1/4
SEC 9
T23N R5E

(11) N/F
JS RICE COMPANY, LLC
1036/5604 (SOUTH PART)
NE 1/4 SE 1/4
SEC 9
T23N R5E

(13) N/F
THOMAS E. AND MELINA MOBLEY, H/W
878/353

(14)

(12) N/F
BRANDON AND WHITNEY LOWE, H/W
1035/658

TYPE 3 DRWY. RT.
WOR STA. 27+20.36
US67 STA. 580+52.02 CL
US67 STA. 580+37.33 ROW
(40' ACCESS BREAK)
40.0' TOP
18" x 140.0'
GR. B PIPE
PROP. GRADE: 7.31%
EXIST. GRADE: N/A

TYPE 3 DRWY. RT.
WOR STA. 33+85.34
US67 STA. 549+14.80 CL
US67 STA. 548+82.78 ROW
(40' ACCESS BREAK)
40.0' TOP
PROPOSED GRADE: 4.00%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA. 37+00.00
US67 STA. 552+24.88 CL
US67 STA. 551+94.64 ROW
1°19'15" LA SKEW
(20' ACCESS BREAK)
20.0' TOP
PROPOSED GRADE: 13.36%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA. 38+74.76
US67 STA. 553+96.37 CL
US67 STA. 553+72.31 ROW
0°46'46" LA SKEW
(20' ACCESS BREAK)
20.0' TOP
NO PIPE
PROPOSED GRADE: 14.97%
EXISTING GRADE: N/A

EOR_6E_20	
PI	36+61.83
PC	34+74.52
PCC	38+49.10
Δ	1° 29' 07" (LT)
D	0° 23' 48"
L	374.58'
T	187.30'
R	14,449.00'
eMAX	8%
eDESIGN	R.C.

EOR_6E_21	
PI	40+12.87
PCC	38+49.10
PT	41+76.38
Δ	5° 29' 39" (LT)
D	1° 40' 44"
L	327.27'
T	163.76'
R	3,412.97'
eMAX	8%
eDESIGN	R.C.

RTE67-NB_2	
P.I.	6002+00.82
D	3° 30' 15"
T	178.76'
L	292.15'
R	2859.53'
Xs	292.02
Ys	6.93

PRWOR3_4	
PI	36+00.41
PRC	25+25.46
PT	46+67.14
Δ	12° 16' 15.4" (LT)
D	0° 34' 22.6"
L	2,141.69'
T	1,074.95'
R	10,000.00'
eMAX	8%
eDESIGN	N.C.

RTE67-SB_3	
PI	591+21.78
SC	579+99.94
PT	602+39.17
Δ	8° 50' 53.5" (LT)
D	0° 23' 42.5"
L	2,239.24'
T	1,121.85'
R	14,500.00'
eMAX	8%
eDESIGN	N.C.

RTE67-NB_3	
PI	6012+94.59
SC	6003+79.51
PT	6022+07.25
Δ	7° 13' 19.9" (LT)
D	0° 23' 42.5"
L	1,827.74'
T	915.08'
R	14,500.00'
eMAX	8%
eDESIGN	N.C.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	5

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

NW 1/4 SW 1/4
SEC 10
T23N R5E

SW 1/4 SW 1/4
SEC 10
T23N R5E

1/4 1/4 SECTION LINE

N/F
JOSEPH JOHN BALLANCE
983/404 (TRACTs 1, 2 AND 3)

N/F
CHAD KEENEY
1036/5303

555 560 565

595 600 605

6020 6025

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATION EQUATION:
STA. 6025+33.11 US67 NB, 30' LT =
STA. 602+39.17 US67 SB, 30' RT =
STA. 602+39.17 US67 (AH)

MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB

POT STA 46+50.00

EXIST. R/W

SECTION LINE

24" PIPE

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

N 00° 26' 25" W

POT STA 6022+07.25

POT STA 6025+33.11

STA. 6015+48.10

℄ ROUTE 67 NB

℄ ROUTE 67 SB

VAR. 0-8' FBD

18" PIPE

J76 J135 J136 J143 J144 J145

POT STA 602+39.17

℄ ROUTE 67

8' FBD

PT STA 602+39.17

24" PIPE

END MEDIAN BARRIER
STA. 602+39.17

TYPE C
C.E.T.

PT STA 46+67.4

℄ WEST OUTER ROAD

3' FBD

4' FBD

F168

R/W LINE

S.L.

PERM. ESM'T (UTILITY)

ROCK DISSIPATOR

PERM. ESM'T. DRAINAGE

TEMP. ESM'T

BLDG (R)

MATCHLINE STA. 605+00, PROP. ROUTE 67

MATCHLINE STA. 52+00, WEST OUTER ROAD

MATCHLINE STA. 39+00, WEST OUTER ROAD

(14) N/F
PHILLIP E. JOHNSON
1035/5799

(15) N/F
THOMAS E. AND
MELINA MOBLEY, H/W
878/351

(16) N/F
THOMAS E. MOBLEY AND
ROSEMARY BARRETT
1037/94

(17) N/F
JOAN F. FRANCIS, TRUSTEE
1029/1460

NE 1/4 SE 1/4
SEC 9
T23N R5E

SE 1/4 SE 1/4
SEC 9
T23N R5E

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	6

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\006_PS_03_J9P3764_i50.dgn 3:48:54 PM 3/3/2023

SW 1/4 SW 1/4
SEC 10
T23N R5E

NW 1/4 NW 1/4
SEC 15
T23N R5E

N/F
CHAD KEENEY
1036/5303

N/F
HILDA HOPKINS EDUCATIONAL TRUST
1034/1618

SECTION LINE

COUNTY ROAD 360

570

575

610

615

605

620

WATER LINE
ABANDON (BY OTHERS)

SAWCUT

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

SIGN
(U/P)

18" PIPE
(CLEAN)

SIGN(R&R)

8' FBD

F72

24" PIPE

F73

F75

FDN (R)

F71

BLDG (R)

℄ ROUTE 67

℄ WEST OUTER ROAD

4' FBD

S.L.

R/W LINE

PERM. ESM'T (UTILITY)

POND (R)

BLDG (DND)

BLDG (R)

TEMP. ESM'T

TYPE I DRWY. RT.
WOR STA. 52+50.00
US67 STA. 567+51.65 CL
US67 STA. 567+51.65 ROW
(20' ACCESS BREAK)
20.0' TOP
18" x 49.0' GR. B PIPE
PROPOSED GRADE: 7.33%
EXISTING GRADE: 6.14%

TYPE I DRWY. RT.
WOR STA. 57+00.00
US67 STA. 572+01.65 CL
US67 STA. 572+01.65 ROW
(20' ACCESS BREAK)
20.0' TOP
18" x 49.0' GR. B PIPE
PROPOSED GRADE: 5.14%
EXISTING GRADE: N/A

MATCHLINE STA. 605+00,
PROP. ROUTE 67

MATCHLINE STA. 618+00,
PROP. ROUTE 67

MATCHLINE STA. 52+00,
WEST OUTER ROAD

MATCHLINE STA. 65+00,
WEST OUTER ROAD

PC STA 64+00.00

STA. 54+84.35 WOR=
STA. 12+03.24 CR360

EXIST. R/W

EXIST. R/W

BEGIN CONSTRUCTION CR360
STA. 10+28.26

17

N/F
JOAN F. FRANCIS, TRUSTEE
1029/1460

SE 1/4 SE 1/4
SEC 9
T23N R5E

19

N/F
MARK ALLEN KEENEY
1031/551

NE 1/4 NE 1/4
SEC 16
T23N R5E

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	7
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

NW 1/4 NW 1/4
SEC 15
T23N R5E

SW 1/4 NW 1/4
SEC 15
T23N R5E

1/4 1/4 SECTION LINE

N/F
HILDA HOPKINS EDUCATIONAL TRUST
1034/1618

580 585 590

CURVE PRWOR3_7	
PI	65+41.44
PC	64+00.00
PRC	66+82.86
Δ	2° 01′ 32.9″ (LT)
D	0° 42′ 58.3″
L	282.86′
T	141.44′
R	8,000.00′
eMAX	8%
eDESIGN	N.C.

CURVE PRWOR3_8	
PI	68+24.30
PRC	66+82.86
PT	69+65.72
Δ	2° 01′ 32.9″ (RT)
D	0° 42′ 58.3″
L	282.86′
T	141.44′
R	8,000.00′
eMAX	8%
eDESIGN	N.C.

FORMER ST. LOUIS-SAN FRANCISCO RAILROAD RIGHT OF WAY (100′W.)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	8

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DATE	DESCRIPTION

620 625 630

EXIST. R/W

SECTION LINE

(R) F.O.P.

SIGN(R)

(UIP)

(UIP) (CLEAN)

N 00° 26′ 25″ W

36″ PIPE

SECTION LINE

(CLEAN)

(UIP)

(RBO)

(R)

8′ FBD

S.L.

EXIST. R/W

F169

F180

24″ PIPE

(RBO)

EXIST. R/W

65 70 75

F170

F179

24″ PIPE

F171

F178

24″ PIPE

FDN (R)

8′ FBD

℄ ROUTE 67

PRC STA 66+82.86

PT STA 69+65.72

F173

F172

8′ FBD

F177

8′ FBD

POND (R)

℄ WEST OUTER ROAD

STA. 624+98.54

F176

24″ PIPE

STA. 627+25.00

24″ PIPE

FDN (R)

F174

R/W LINE

T.C.E.

F175

S.L.

4′ FBD

TEMP. ESM'T

PERM. ESM'T (UTILITY)

T.C.E.

MATCHLINE STA. 618+00, PROP. ROUTE 67

MATCHLINE STA. 631+00, PROP. ROUTE 67

MATCHLINE STA. 65+00, WEST OUTER ROAD

MATCHLINE STA. 78+00, WEST OUTER ROAD

TYPE I DRWY. RT.
WOR STA. 68+00.00
US67 STA. 582+96.10 CL
US67 STA. 583+02.51 ROW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 49.0′ GR. B PIPE
PROPOSED GRADE: +0.25%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 71+65.40
US67 STA. 586+66.93 CL
US67 STA. 586+66.93 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 38.0′ GR. B PIPE
PROPOSED GRADE: 2.80%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 74+55.86
US67 STA. 589+57.39 CL
US67 STA. 589+57.39 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 38.0′ GR. B PIPE
PROPOSED GRADE: 9.59%
EXISTING GRADE: 0.41%

TYPE I DRWY. RT.
WOR STA 76+00.00
US67 STA. 591+01.52 CL
US67 STA. 591+01.52 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 45.0′ GR. B PIPE
PROPOSED GRADE: 9.99%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 77+50.00
US67 STA. 592+51.53 CL
US67 STA. 592+51.53 ROW
NO SKEW
(40′ ACCESS BREAK)
40.0′ TOP
18″ x 60.0′ GR. B PIPE
PROPOSED GRADE: 7.79%
EXISTING GRADE: N/A

BLDG (UIP)

(19) N/F
MARK ALLEN KEENEY
1031/551

NE 1/4 NE 1/4
SEC 16
T23N R5E

(20) N/F
JAMES R. & KIM L. PATTY
518/376

SE 1/4 NE 1/4
SEC 16
T23N R5E

(21) N/F
LEON JOHNSON
488/391

(22) N/F
WAGON LOADERS, LLC
1040/784

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	9

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

SW 1/4 NW 1/4
SEC 15
T23N R5E

NW 1/4 SW 1/4
SEC 15
T23N R5E

1/4 SECTION LINE

N/F
HILDA HOPKINS EDUCATIONAL TRUST
1034/1618

N/F
RODNEY R. AND RENEE EAKER, H/W
692/612

595 600 605

EXIST. 10' WATERLINE ESM'T

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

S.L.

635 640

(RBO) (R) (UIP) 8' FBD F184 24" PIPE F183 F182 F181

BRICK SIGN (R)

BLDG (R)

PARKING LOT (R)

℄ ROUTE 67

MATCHLINE STA. 631+00, PROP. ROUTE 67

MATCHLINE STA. 644+00, PROP. ROUTE 67

MATCHLINE STA. 78+00, WEST OUTER ROAD

MATCHLINE STA. 91+00, WEST OUTER ROAD

R/W LINE

4' FBD

T.C.E.

℄ WEST OUTER ROAD

PERM. ESM'T (UTILITY)

(22)
N/F
WAGON LOADERS, LLC
1040/784

SE 1/4 NE 1/4
SEC 16
T23N R5E

FORMER ST. LOUIS RAILROAD RIGHT OF-

(23)
N/F
FELLOWSHIP SOUTHERN BAPTIST CHURCH
852/707

TYPE I DRWY. RT.
WOR STA 81+30.00
US67 STA. 596+31.53 CL
US67 STA. 596+31.53 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 42.0' GR. B PIPE
PROP. GRADE: 11.62%
EXIST. GRADE: N/A

NE 1/4 SE 1/4
SEC 16
T23N R5E

(24)
N/F
THE JOHN PAUL TATE, JR. AND
BARBARA S. TATE REVOCABLE LIVING TRUST
1038/4290

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

NW 1/4 SW 1/4
SEC 15
T23N R5E

SW 1/4 SW 1/4
SEC 15
T23N R5E

1/4 1/4 SECTION LINE

N/F
JOE L. AND
ZUNA M.
WOOLARD, H/W
1034/3879

N/F
LANA LEE STEERE
1031/884

N/F
JACK AND LISA STULL, H/W
1037/1697

N/F
RODNEY R. AND RENEE EAKER, H/W
692/612

N/F
ROY LEE
BRIDGEWATER AND
PHEBA GEARLDINE
BRIDGEWATER
1038/1080

610 615

645 650 655

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

MATCHLINE STA. 644+00,
PROP. ROUTE 67

MATCHLINE STA. 657+00,
PROP. ROUTE 67

F185 F186 F187 F188 F189 F190 F191 F192 F193 F194 F195 F196

24" PIPE

8' FBD

4' FBD

BLDG (R)

FDN (R)

POND (R)

POND (DND)

℄ WEST OUTER ROAD

℄ ROUTE 67

MATCHLINE STA. 91+00,
WEST OUTER ROAD

MATCHLINE STA. 104+00,
WEST OUTER ROAD

T.C.E.

R/W LINE

PERM. ESM'T (UTILITY)

TEMP. ESM'T

S.L.

TYPE I DRWY. RT.
WOR STA 92+25.00
US67 STA. 607+26.52 CL
US67 STA. 607+26.52 ROW
NO SKEW
(30' ACCESS BREAK)
30.0' TOP
18" x 50.0' GR. B PIPE
PROPOSED GRADE: 9.71%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 95+00.25
US67 STA. 610+01.77 CL
US67 STA. 610+01.77 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 41.0' GR. B PIPE
PROPOSED GRADE: 9.38%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 102+00.00
US67 STA. 617+01.53 CL
US67 STA. 617+01.53 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
NO PIPE
PROPOSED GRADE: 2.08%
EXISTING GRADE: N/A

24 N/F
THE JOHN PAUL TATE, JR. AND
BARBARA S. TATE REVOCABLE LIVING TRUST
1038/4290

25 N/F
ADKIN F. AND JAN S. FORNEY, H/W
AND CHERON PEARSON
1027/6483

26 N/F
NORMAN F., JR AND
TINA M. MAGILL, H/W
1030/5544

27

NE 1/4 SE 1/4
SEC 16
T23N R5E

SE 1/4 SE 1/4
SEC 16
T23N R5E

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	10
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

REV.	DATE	DESCRIPTION

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SW 1/4 SW 1/4
SEC 15
T23N R5E

NW 1/4 NW 1/4
SEC 22
T23N R5E

SECTION LINE

EXIST. R/W

N/F
JACK AND LISA STULL, H/W
1037/1697

N/F
SHIRLEY J. HUNT, TRUSTEE
1037/1001

COUNTY ROAD 338

620 625 630 660 665 670

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

WATER METERING STATION

EPPS DITCH

SAWCUT

SECTION LINE N 00° 26' 25" W

8' FBD

F200 F199 F198 F197

24" PIPE

END PROJECT
EXISTING US67 STA. 622+65.01 =
PROPOSED US67 STA. 660+75.00

℄ ROUTE 67

FUTURE US-67 WIDENING
(MODOT J9P3751)

STA 107+64.11 WEST OUTER ROAD =
STA 25+30.70 COUNTY RD. 338

TYPE I DRWY. RT.
WOR STA 105+50.00
US67 STA. 620+51.42 CL
US67 STA. 620+51.55 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
18" X 38' GR. B PIPE
PROPOSED GRADE: 5.76%
EXISTING GRADE: N/A

MATCHLINE STA. 657+00,
PROP. ROUTE 67

MATCHLINE STA. 104+00,
WEST OUTER ROAD

FDN. (R)

R/W LINE

4' FBD

S.L.

PERM. ESM'T (UTILITY)

TEMP. ESM'T

POND (DND)

POND (DND)

27

N/F
CHRISTOPHER E. CASINGER
1037/3959

P01 STA 11+00.39

EXIST. R/W

N/F
JOAN F. FRANCIS, TRUSTEE
1029/1460

NE 1/4 NE 1/4
SEC 21
T23N R5E

SE 1/4 SE 1/4
SEC 16
T23N R5

℄ COUNTY ROAD 338

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	11

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

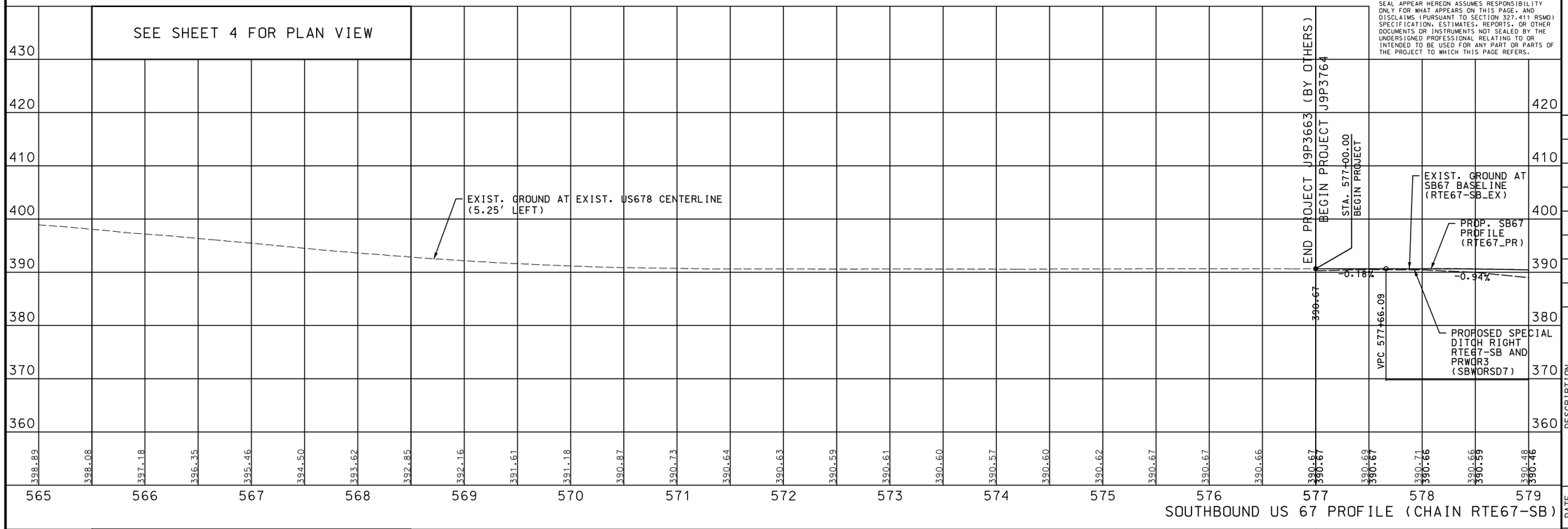
BRIDGE NO.

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

REV.	DESCRIPTION	DATE

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

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	12

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

BFW WORLD CLASS ENGINEERS • 417 S. GRAY'S SUMMIT DRIVE, SUITE 101, COLUMBIA, MO 65203, PHONE: 573.443.4513 • 201 LINDEN BLVD., SUITE 1, KIRKSVILLE, MO 63501, PHONE: 660.665.6867

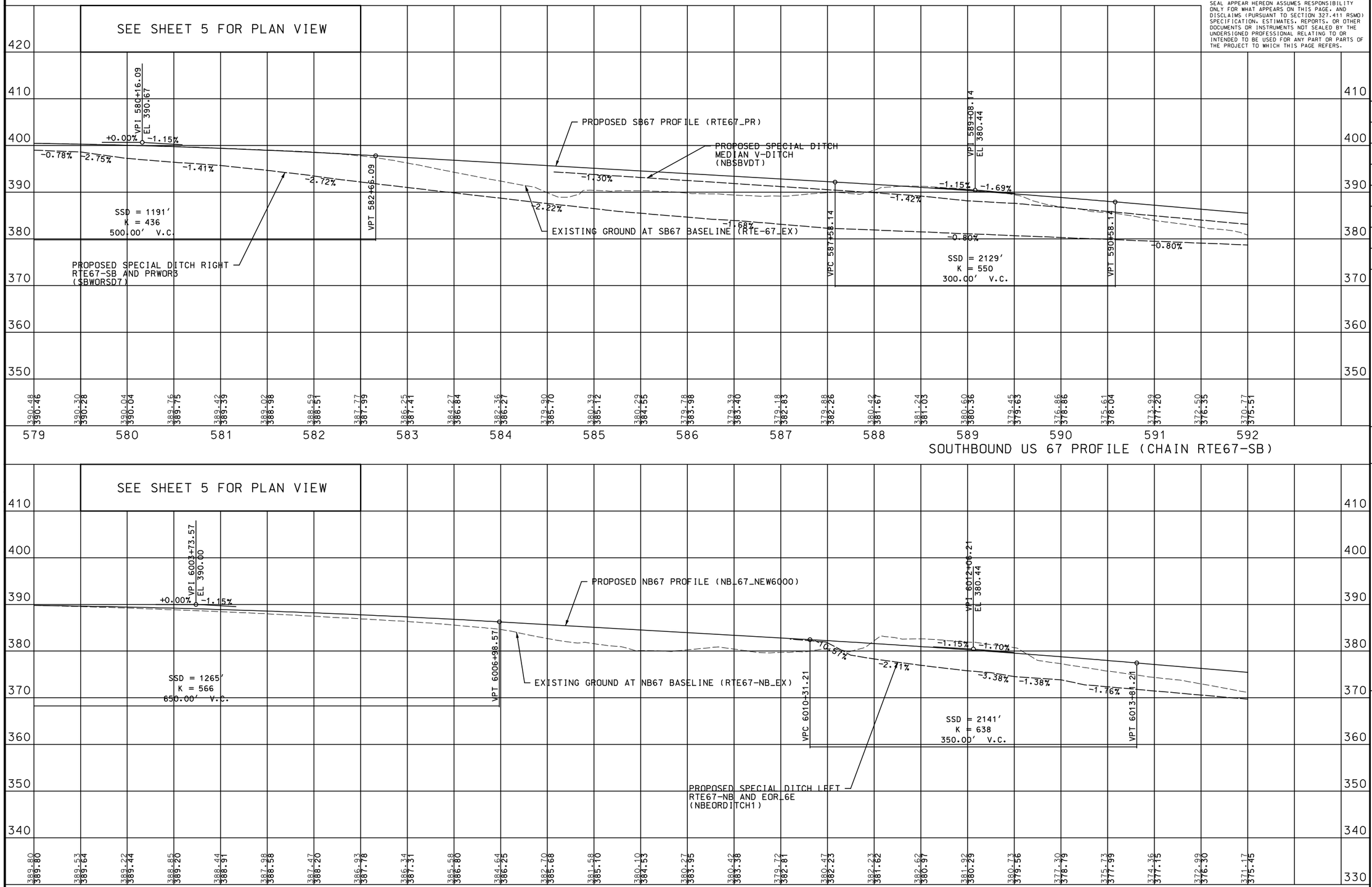
COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

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

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\012-022_PR_01-11_J9P3764_i50.dgn 2:40:17 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	13

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

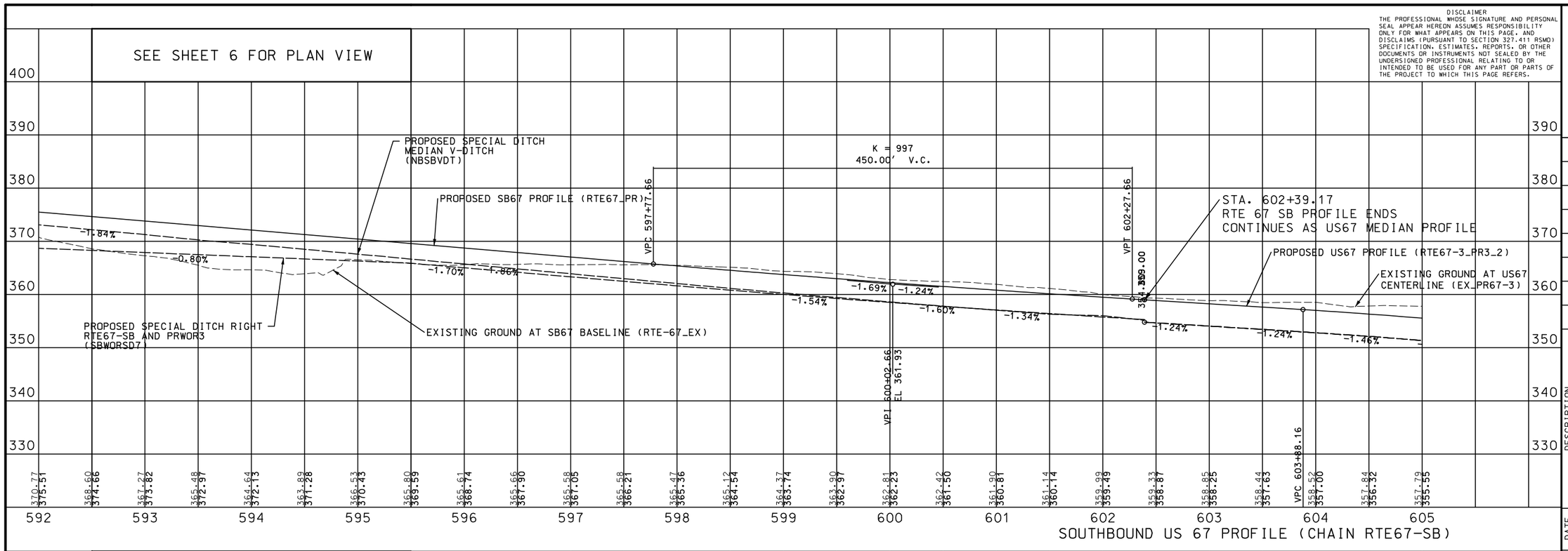
BRIDGE NO.

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

REV.	DATE	DESCRIPTION

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

BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.
BFW ENGINEERING, INC. • 417 S. GRAY'S SUMMIT DRIVE • SUITE 101 • COLUMBIA, MO 65203 • PHONE: 573.443.4513 • FAX: 573.443.4514
BFW ENGINEERING, INC. • 2011 S. BROADWAY, SUITE 1 • SEDALIA, MO 65301 • PHONE: 660.827.0516 • FAX: 660.827.0520
WWW.BFWENGINEERING.COM
COPYRIGHT © 2013 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 14
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

941 WOODS CROSS ROAD • ST. LOUIS/ST. CHARLES (636) 946-6525
SUITE 220 • FAX (636) 946-6529
CHESTERFIELD, MO 63017 • FAX (314) 432-0144
PHONE (314) 432-0550 • FAX (314) 432-0551
WWW.BFWENG.COM

COPYRIGHT © 2013 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

SEE SHEET 7 FOR PLAN VIEW

VPI 607+78.16
EL 352.32

-1.24% -3.96%

PROPOSED SPECIAL DITCH RIGHT
PR67-3 AND PRWOR3
(WOR_SB_SD)

1.69% -1.92% -2.15% -2.38% -3.41% -4.00% -0.15% -3.37%

PROPOSED SPECIAL DITCH LEFT
PR67-3 AND EXISTING 67 (EOR)
(EOR_NB_SD)

PROPOSED SPECIAL DITCH
MAINLINE MEDIAN
(NBSB_MED)

SSD = 787'
K = 287
780.00' V.C.

VPT 611+68.76

VPC 612+15.81

K = 304
1,200.00' V.C.

-3.63% -3.86% -3.96% -3.66% -3.45% -3.23% -3.72% -2.91% -2.69% -2.48% -2.26% -3.9

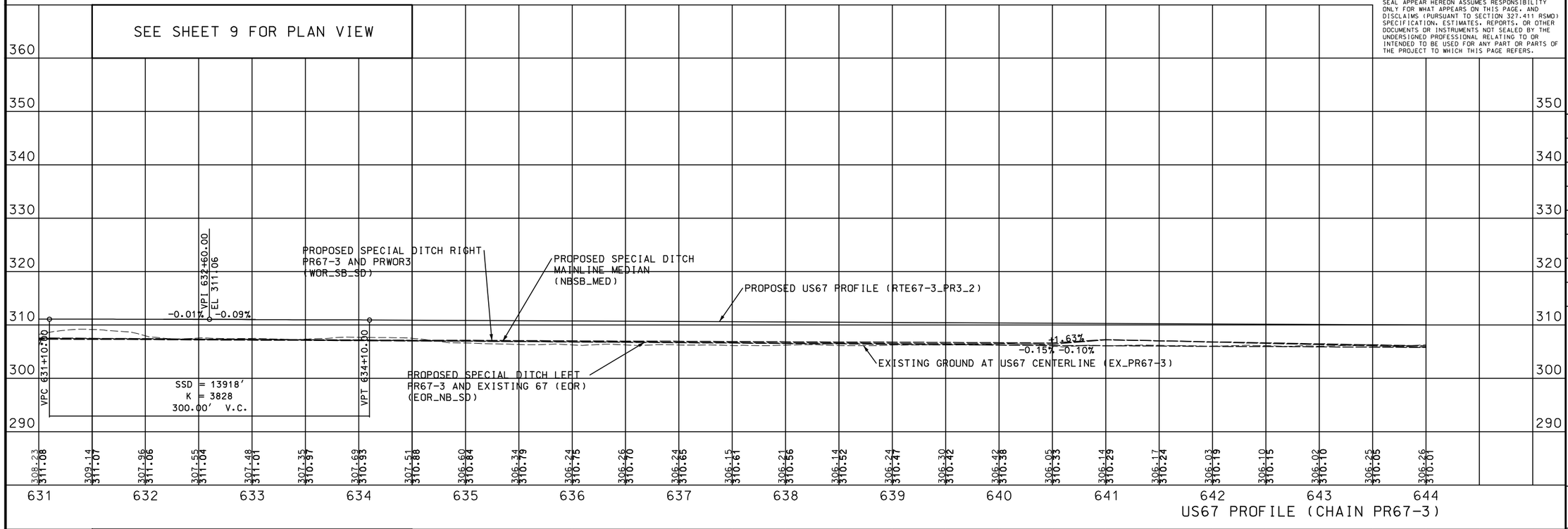
PROPOSED US67 PROFILE (RTE67-3_PR3_2)

EXISTING GROUND AT US67 CENTERLINE (EX_PR67-3)

| | | |

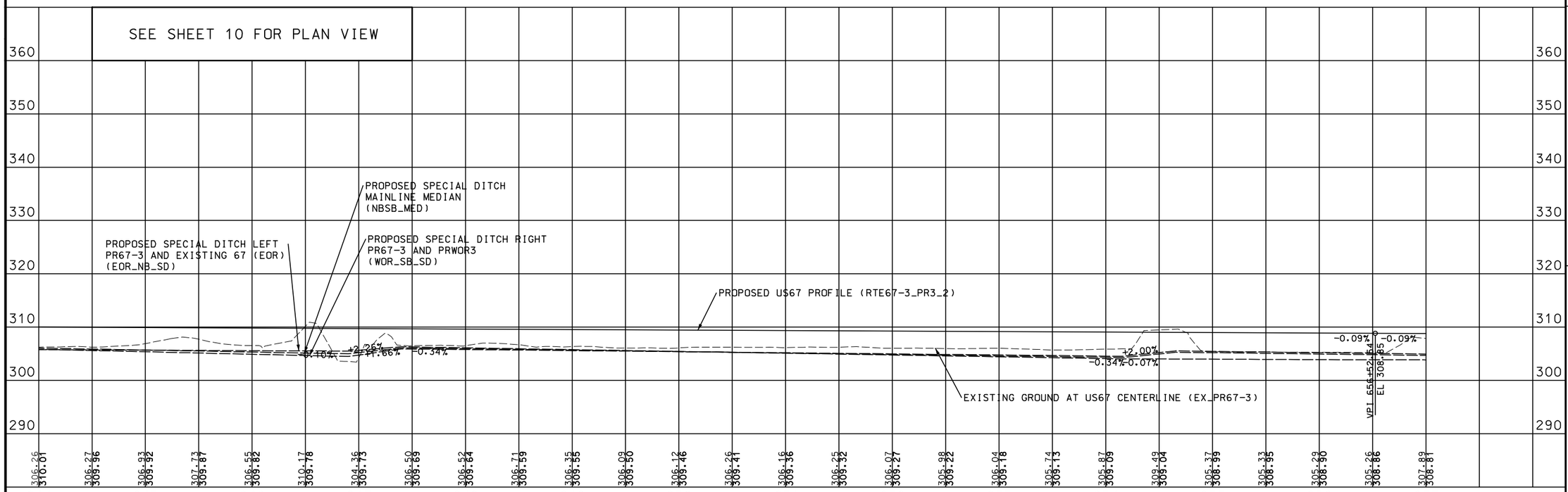
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SEE SHEET 9 FOR PLAN VIEW



US67 PROFILE (CHAIN PR67-3)

SEE SHEET 10 FOR PLAN VIEW



US67 PROFILE (CHAIN PR67-3)

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	16

COUNTY
BUTLER

JOB NO.
J9P3764

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)

BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.
BFW ENGINEERING, INC. • 411 S. GRAND AVENUE WEST, SPRINGFIELD, MO 65806 • PH: (417) 862-9292 • FAX: (417) 862-9295 • WWW.BFWENG.COM

COPYRIGHT © 2019 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

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

REV.

SEE SHEET 11 FOR PLAN VIEW

END PROJECT J9P3764
BEGIN PROJECT J9P3751 (BY OTHERS)

PROPOSED US67 PROFILE (RTE67-3_PR3_2)

EXISTING GROUND AT US67 CENTERLINE (EX_PR67-3)

K = 3181
300.00' V.C.

VPC 659+04.20

VPT 662+04.20

PROPOSED SPECIAL DITCH MAINLINE MEDIAN (NBSB_MED)

-0.09% +0.00% +2.00%

VPI 660+54.20
EL 308.49

304.00

PROPOSED SPECIAL DITCH RIGHT PR67-3 AND PRWOR3 (WOR_SB_SD)

PROPOSED SPECIAL DITCH LEFT PR67-3 AND EXISTING 67 (EOR) (EOR_NB_SD)

-0.07%

307.89	308.46	307.92	308.16	307.26	307.03	306.39	308.12	305.21	305.50	305.31	305.20	305.13	305.15	305.18	305.16	305.10	305.01	304.94	304.90	305.13	305.23	305.35	305.85	305.53	304.23	303.35	304.49	306.52
308.81	308.76	308.72	308.67	308.63	308.58	308.55	308.52	308.50	308.49	308.49	308.49	308.49	308.49	308.50	308.50	308.50	308.50	308.50	308.50	308.50	308.51	308.51	308.51	308.51	308.51	308.51	308.51	308.52

657 658 659 660 661 662 663 664 665 666 667 668 669 670 671

US67 PROFILE (CHAIN PR67-3)

SEE SHEET 7 FOR PLAN VIEW

SEE SHEET 11 FOR PLAN VIEW

EXISTING GROUND AT CR360 CENTERLINE (PR360_EX)

VPI 11+08.27
EL 355.02

354.22

349.44

+6.98% +1.00%

PROPOSED CR360 PROFILE (PR360_1)

VPC 10+28.27

SSD = 215'
K = 20
160.00' V.C.

346.52	351.65	350.84	356.37	353.16	359.67	354.24

11

CR360 PROFILE (CHAIN PR360_NEW)

PROPOSED CR338 PROFILE (CRD338)

306.46

VPI 13+00.44
EL 308.33

308.05

+2.00% +2.00%

EXISTING GROUND AT CR338 CENTERLINE (EX_CRD338)

306.69	306.59	306.48	306.40	306.45	306.48	307.32	306.56	308.32

12 13

CR338 PROFILE (CHAIN PRCRD338)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	17

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

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

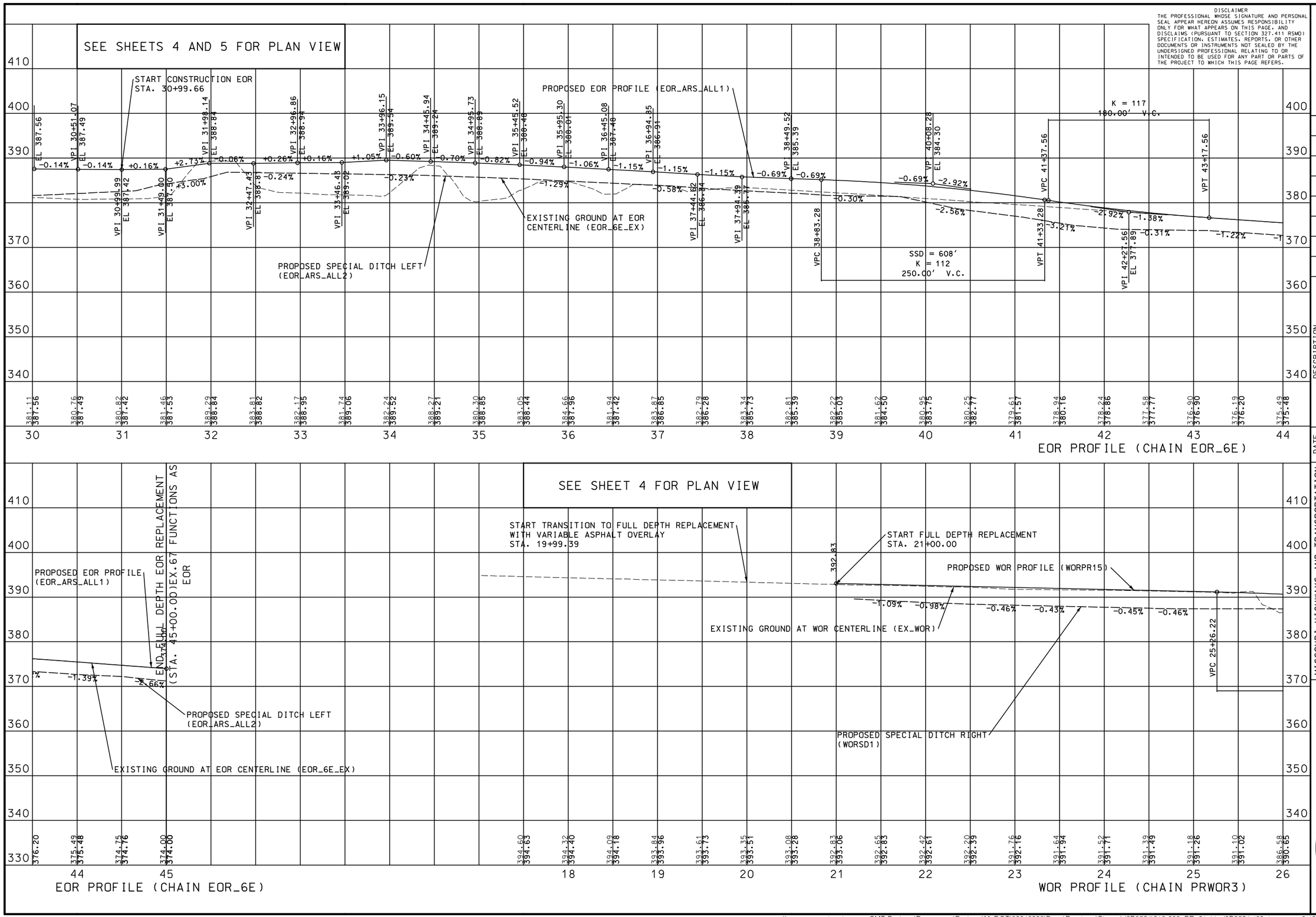
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

BFW
BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.

COPYRIGHT © 2013 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\012-022_PR_01-11_J9P3764_i50.dgn 2:40:19 PM 3/3/2023



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 18
COUNTY BUTLER
JOB NO. J9P3764
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)

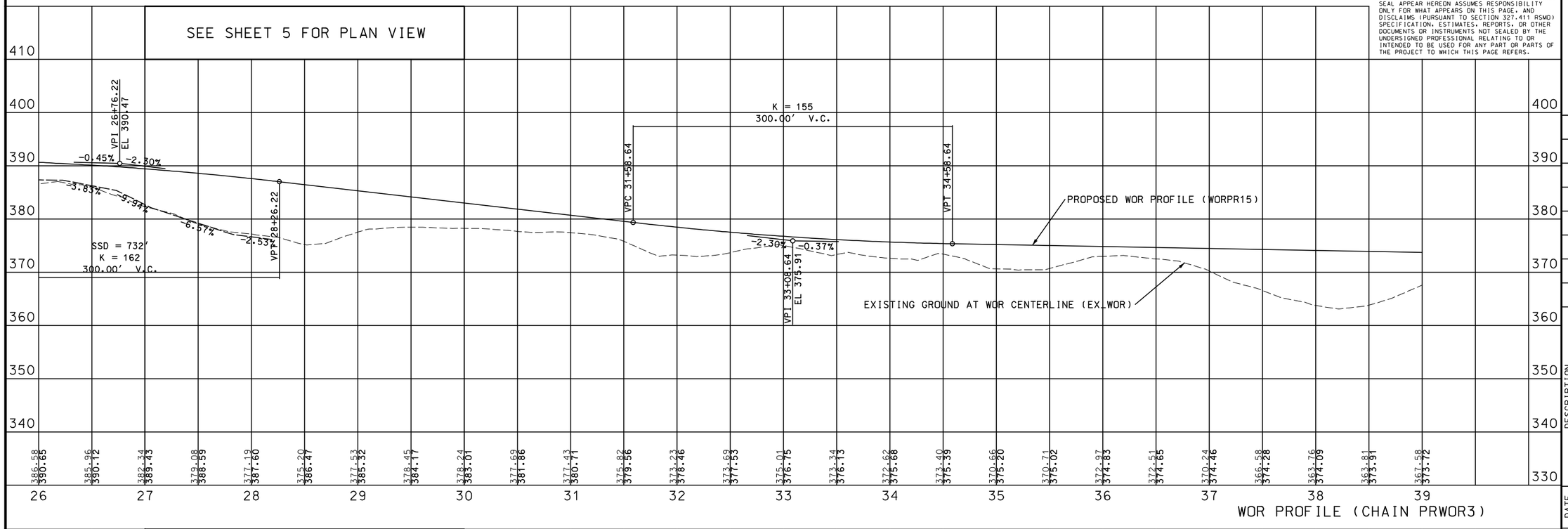
BFW
BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.
COPYRIGHT © 2013 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

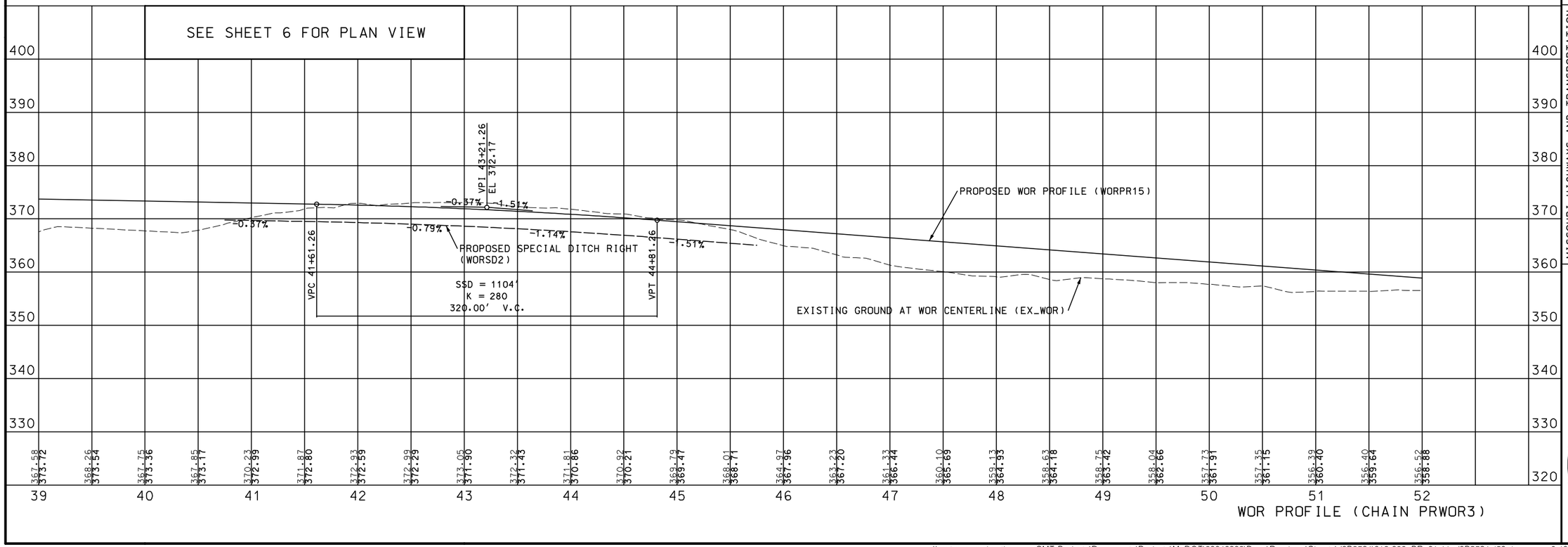
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."





DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO

DISTRICT	SHEET NO.
SE	19

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

NO.	DESCRIPTION	DATE

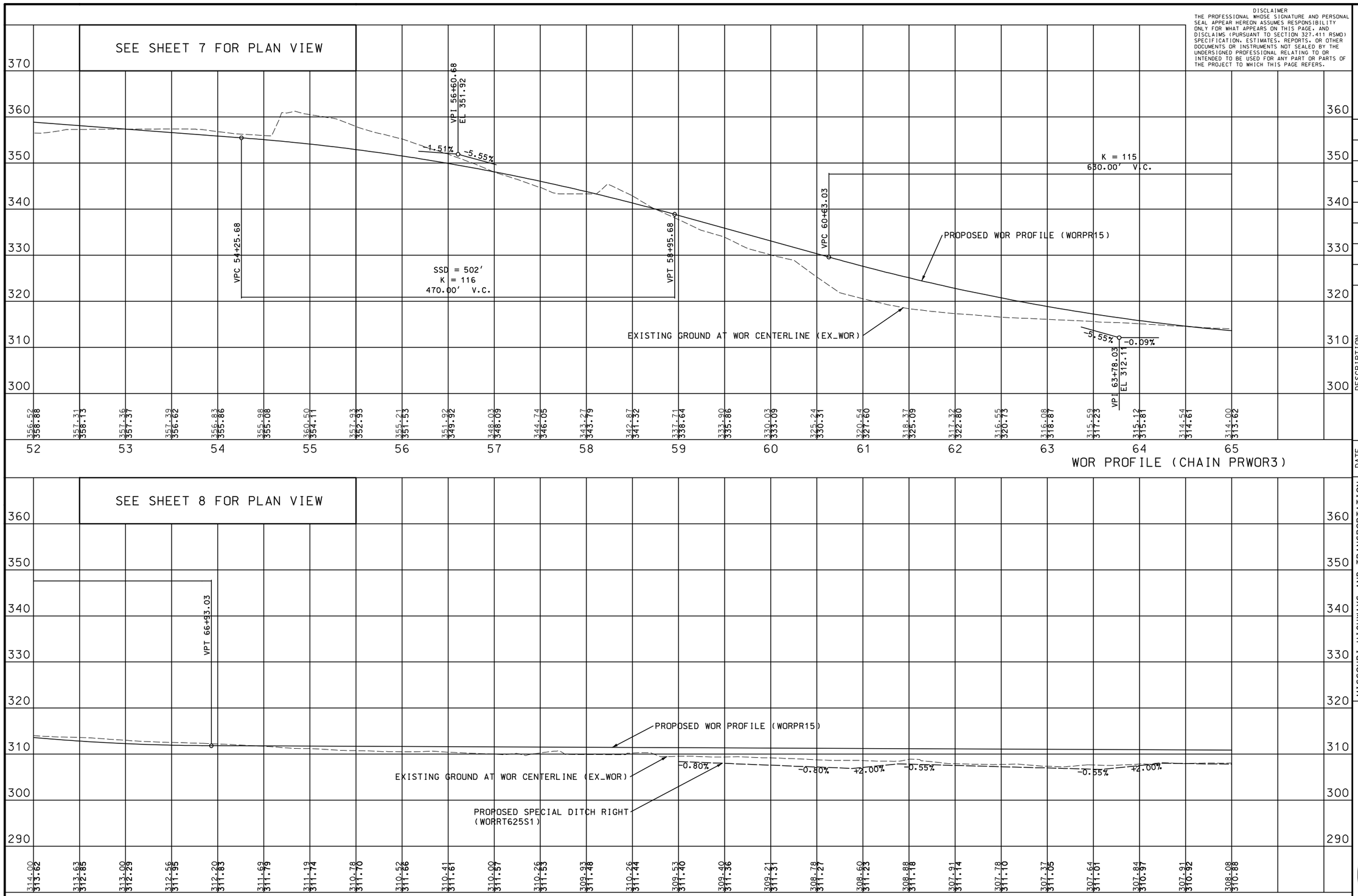
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.
941 S. GRAY'S SUMMIT DRIVE • SUITE A • COLUMBIA, MO 65203 • PHONE: 573.445.4349
257 CAMARGO ROAD • CAMDENTON, MO 65020 • PHONE: 573.346.4349
WWW.BFWENGINEERING.COM

COPYRIGHT © 2013 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

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

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	20

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

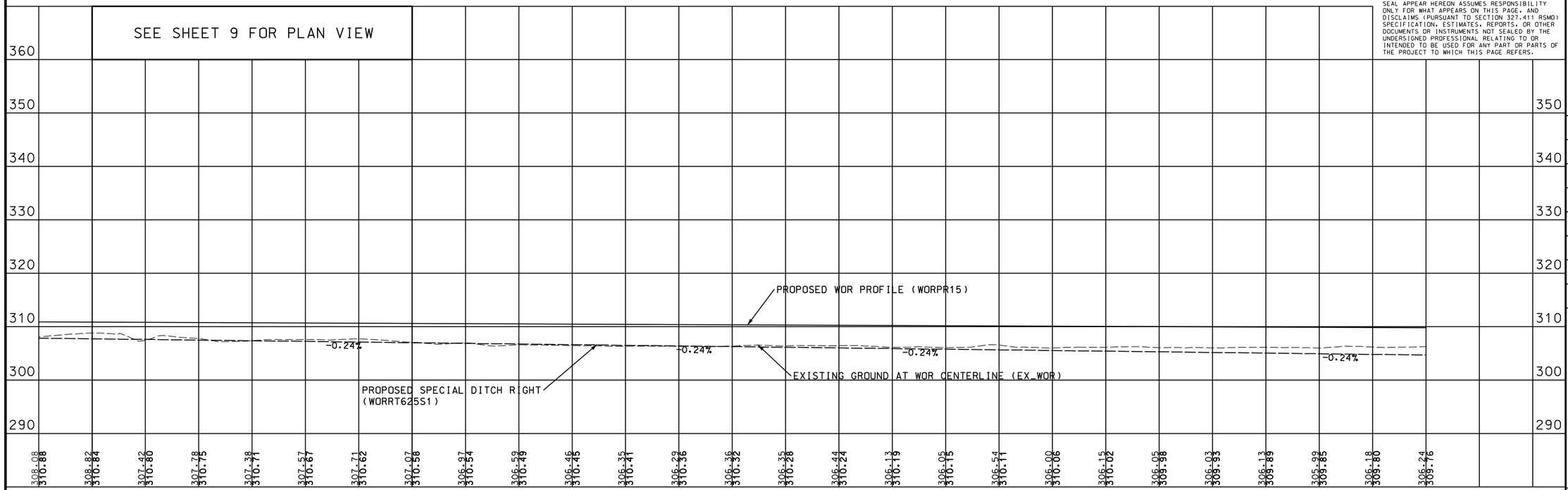
BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

941 WOODS CROSS ROAD • SUITE A • SPRINGFIELD, MO 65807 • PHONE: 417.887.4400 • FAX: 417.887.4401
2400 MAID MARIAN LANE • SUITE 100 • COLUMBIA, MO 65201 • PHONE: 573.777.9545 • FAX: 573.777.9546
WWW.BFWENGINEERING.COM

COPYRIGHT © 2019 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

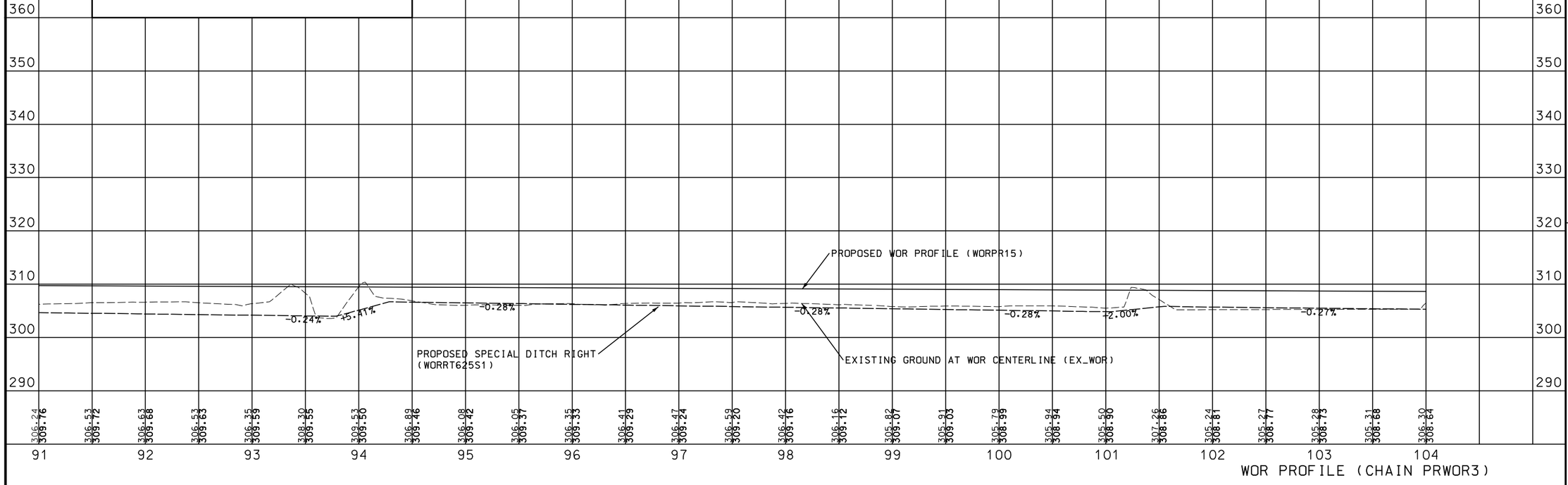
REV.

SEE SHEET 9 FOR PLAN VIEW



WOR PROFILE (CHAIN PRWOR3)

SEE SHEET 10 FOR PLAN VIEW



WOR PROFILE (CHAIN PRWOR3)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 21
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE | DESCRIPTION | REV.

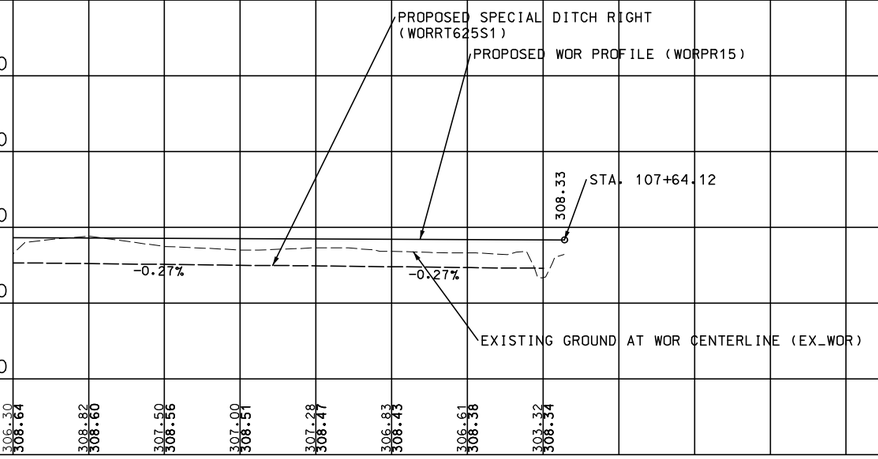
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
BFW
417 S. GRAY'S PARK DRIVE • P.O. BOX 1009, JEFFERSON CITY, MO 65102
PHONE: 573.635.2748 • FAX: 573.635.3017
WWW.BFWENGINEERING.COM

COPYRIGHT © 2019 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

SEE SHEET 11 FOR PLAN VIEW



WOR PROFILE (CHAIN PRWOR3)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	22

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
941 WOODS CROSS ROAD • SUITE A • SPRINGFIELD, MISSOURI 65807 • PHONE: 417-823-4990
401 S. JEFFERSON AVENUE • SUITE 400 • SPRINGFIELD, MISSOURI 65806 • PHONE: 417-862-6314
WWW.BFWENGINEERING.COM
COPYRIGHT © 2011 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\012-022_PR_01-11_J9P3764_i50.dgn 2:40:22 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	23
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

RTE67-SB_2
P.I. 578+19.75
D - 3° 31′ 25″
T - 180.27′
L - 294.68′
R - 2870.03′
Xs - 294.55
Ys - 7.03

LEGEND
T.C.E. = TEMPORARY CONSTRUCTION EASEMENT
P.U.E. = PERMANENT UTILITY EASEMENT
P.D.E. = PERMANENT DRAINAGE EASEMENT

STA. EQUATION
STA. 576+99.89 EX 67 BK=
PC STA. 577+00.00, 5.25′ RT SB 67 AH=
PC STA. 6000+00.00, 5.25′ LT NB 67 AH

BEGIN PROJECT STA. 573+60.27
BEGIN CONSTRUCTION WOR
STA. 19+99.39

℄ EAST OUTER ROAD
PROP. ROW AND EASEMENTS ACQUIRED BY JOB J9P3663
℄ EXIST. ROUTE 67
EXIST. R/W
EXIST. PERM. ESM'T (DRAINAGE)
PROP. ROW ACQUIRED BY JOB J9P3663
℄ PROP. WEST OUTER ROAD
EXIST. PERM. ESM'T (DRAINAGE)
EXIST. R/W
EXIST. 30′W PERM. ESM'T (UTIL.)
578+91.58
140.00′ RT
578+95.87
170.39′ RT

PC STA 21+93.73
PC STA 57+05.25
CS STA 57+87.36
CS STA 60+87.36
PT STA 31+85.49
PRC STA 25+25.46
PCC STA 30+88.88 RELOC. EOR

MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD
SEE SHEET 2 OF 8

MATCHLINE STA. 26+00, WEST OUTER ROAD
SEE SHEET 2 OF 8

TYPE 3 DRWY. RT.
WOR STA. 25+21.00
US67 STA. 578+53.52 CL
US67 STA. 578+46.03 ROW
(40′ ACCESS BREAK)
40.0′ TOP
18″ x 48.0′
RR. B PIPE
PROP. GRADE: 10.31%
EXIST. GRADE: 7.41%

NOTE:

STATION AND OFFSET LOCATIONS ARE TAKEN FROM US 67 MEDIAN CENTERLINE UNLESS OTHERWISE NOTED.

1/4 1/4 SECTION LINE
SECTION LINE
SW 1/4 NW 1/4 SEC 10 T23N R5E
NW 1/4 NW 1/4 SEC 10 T23N R5E
SE 1/4 NE 1/4 SEC 9 T23N R5E
NE 1/4 NE 1/4 SEC 9 T23N R5E
N 48° 14′ 05″ E
N 00° 00′ 02″ W

EOR_ARS4_3

PI	24+62.43
PC	22+33.70
PCC	26+82.78
Δ	26° 48′ 08.3″ (LT)
D	5° 58′ 05.9″
L	449.08′
T	228.72′
R	960.00′
eMAX	8%
eDESIGN	8%

EOR_ARS4_4

PI	28+91.77
PC	26+82.78
PT	30+99.99
Δ	8° 30′ 30.1″ (LT)
D	2° 02′ 21.6″
L	417.21′
T	208.99′
R	2,809.53′
eMAX	8%
eDESIGN	4.4%

EOR_ARS4_5

PI	31+42.91
PC	30+99.99
PT	31+85.82
Δ	1° 45′ 01.4″ (LT)
D	2° 02′ 21.6″
L	85.83′
T	42.92′
R	2,809.53′
eMAX	8%
eDESIGN	4.4%

RTE67_EXCOMB_15

PI	574+73.15
PC	565+40.72
PT	583+43.62
Δ	36° 03′ 29.0″ (LT)
D	2° 00′ 00.0″
L	1,802.90′
T	932.43′
R	2,864.78′
eMAX	8%
eDESIGN	6.4%

PRWOR3_3

PI	23+60.27
PC	21+93.73
PRC	25+25.46
Δ	12° 40′ 15.4″ (RT)
D	3° 49′ 11.0″
L	331.72′
T	166.54′
R	1,500.00′
eMAX	8%
eDESIGN	7%

RTE67-SB_1

PI	577+02.62
PC	577+00.00
CS	577+05.25
Δ	0° 06′ 17.2″ (LT)
D	1° 59′ 46.8″
L	5.25′
T	2.62′
R	2,870.03′
eMAX	8%
eDESIGN	6.4%

RTE67-NB_1

PI	6000+43.68
PC	6000+00.00
CS	6000+87.36
Δ	1° 45′ 01.4″ (LT)
D	2° 00′ 13.2″
L	87.36′
T	43.68′
R	2,859.53′
eMAX	8%
eDESIGN	6.4%

RIGHT OF WAY
SHEET 1 OF 8

SW 1/4 NW 1/4
SEC 10
T23N R5E

NW 1/4 SW 1/4
SEC 10
T23N R5E

RTE67-NB_2	
P.I.	6002+00.82
D	3° 30′ 15″
T	178.76′
L	292.15′
R	2859.53′
Xs	292.02
Ys	6.93

EOR_ARS_20	
PI	36+62.23
PC	34+74.92
PCC	38+49.52
Δ	1° 29′ 07.3″ (LT)
D	0° 23′ 47.4″
L	374.61′
T	187.31′
R	14,450.00′
eMAX	8%
eDESIGN	R.C.

EOR_ARS_21	
PI	40+13.36
PCC	38+49.52
PT	41+76.92
Δ	5° 44′ 11.3″ (LT)
D	1° 45′ 07.8″
L	327.39′
T	163.83′
R	3,270.00′
eMAX	8%
eDESIGN	R.C.

CURVE RTE67_MED_TRA_1	
PI	21+01.10
PC	10+00.00
PT	31+97.98
Δ	8° 41′ 06.6″ (LT)
D	0° 23′ 42.5″
L	2,197.98′
T	1,101.10′
R	14,500.00′
eMAX	8%
eDESIGN	N.C.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

TYPE I DRWY. LT.
EOR STA. 35+98.66
US67 STA. 582+03.35 CL
US67 STA. 582+12.93 ROW
0°28′26″ LA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 0.47%
EXISTING GRADE: 8.73%

TYPE I DRWY. LT.
EOR STA. 36+86.20
US67 STA. 582+93.60 CL
US67 STA. 582+99.60 ROW
2°36′18″ RA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 2.87%
EXISTING GRADE: 6.14%

TYPE I DRWY. LT.
EOR STA. 38+80.97
US67 STA. 546+89.31 CL
US67 STA. 546+93.18 ROW
2°50′27″ RA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 3.23%
EXISTING GRADE: 9.77%

TYPE I DRWY. LT.
EOR STA. 40+27.78
US67 STA. 548+36.32 CL
US67 STA. 548+40.94 ROW
0°52′41″ RA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 2.79%
EXISTING GRADE: 11.64%

TYPE I DRWY. LT.
EOR STA. 41+30.31
US67 STA. 549+39.12 CL
US67 STA. 549+41.14 ROW
3°23′05″ RA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 3.60%
EXISTING GRADE: 8.10%

TYPE I DRWY. RT.
WOR STA. 37+00.00
US67 STA. 552+24.88 CL
US67 STA. 551+94.64 ROW
1°19′15″ LA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 13.36%
EXISTING GRADE: N/A

TYPE I DRWY. LT.
EOR STA. 43+86.55
US67 STA. 551+95.39 CL
US67 STA. 551+96.52 ROW
3°00′32″ RA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 3.77%
EXISTING GRADE: 5.63%

TYPE I DRWY. RT.
WOR STA. 38+74.76
US67 STA. 553+96.37 CL
US67 STA. 553+72.31 ROW
0°46′46″ LA SKEW
(20′ ACCESS BREAK)
20.0′ TOP
NO PIPE
PROPOSED GRADE: 14.97%
EXISTING GRADE: N/A

SEE SHEET 1 OF 8
MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD

1/4 SECTION LINE

EAST OUTER ROAD
℄ EXIST. ROUTE 67
℄ ROUTE 67 NB
℄ ROUTE 67 SB
℄ WEST OUTER ROAD

EXIST. R/W
EXIST. PERM. ESM'T (DRAINAGE)
EXIST. 30′W PERM. ESM'T (UTIL.)
PROP. R/W
PERM. ESM'T (UTIL.)
SECTION LINE
EXIST. R/W

PC STA 34+74.92
SC STA 579+99.94
SC STA 6003+79.51
PC STA 38+49.10
EQUATION: Sta 584+63.13 BK = Sta 546+63.20 AH
PT STA 41+76.38
PT STA 551+43.20
SC STA 585+43.62

N 00° 26′ 25″ E

SEE SHEET 1 OF 8
MATCHLINE STA. 26+00, WEST OUTER ROAD

MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB
SEE SHEET 3 OF 8

MATCHLINE STA. 39+00, WEST OUTER ROAD
SEE SHEET 3 OF 8

TYPE 3 DRWY. RT.
WOR STA. 27+20.36
US67 STA. 580+52.02 CL
US67 STA. 580+37.33 ROW
(40′ ACCESS BREAK)
40.0′ TOP
18″ x 74.0′
GR. B PIPE
PROP. GRADE: 7.30%
EXIST. GRADE: N/A

N/F
JS RICE COMPANY, LLC
1036/5604 (NORTH PART)

SE 1/4 NE 1/4
SEC 9
T23N R5E

581+83.40 177.19′ RT
581+79.91 206.98′ RT

(11) N/F
JS RICE COMPANY, LLC
1036/5604 (SOUTH PART)
119,056 SF NEW R/W
28,123 SF PERM. ESM'T (UTIL.)
3,804 SF TEMP. ESM'T (CONST.)
20.78 AC REMAINING

NE 1/4 SE 1/4
SEC 9
T23N R5E

TYPE 3 DRWY. RT.
WOR STA. 33+85.34
US67 STA. 549+14.80 CL
US67 STA. 548+82.78 ROW
(40′ ACCESS BREAK)
40.0′ TOP
PROPOSED GRADE: 4.00%
EXISTING GRADE: N/A

548+41.75 235.81′ RT
548+35.63 281.53′ RT
549+17.73 292.39′ RT
549+23.80 246.66′ RT

T.C.E.

551+68.68 278.49′ RT
T.C.E.
551+64.84 308.25′ RT

(13) N/F
THOMAS E. AND
MELINA MOBLEY, H/W
878/353
14,370 SF NEW R/W
1,802 SF PERM. ESM'T (UTIL.)
1,548 SF PERM. ESM'T (DRAINAGE)
1,215 SF TEMP. ESM'T (CONST.)
0.07 AC REMAINING

(12) N/F
BRANDON AND WHITNEY LOWE, H/W
1035/658
75,780 SF NEW R/W
9,968 SF PERM. ESM'T (UTIL.)
3,019 SF PERM. ESM'T (DRAINAGE)
1,800 SF TEMP. ESM'T (CONST.)
7.96 AC REMAINING

552+24.35 315.92′ RT
552+28.19 286.17′ RT
552+88.10 293.90′ RT
552+86.23 372.52′ RT
553+24.71 328.87′ RT
553+27.42 298.97′ RT
553+57.96 300.57′ RT
553+56.21 374.19′ RT

A 553+47.33 300.01′ RT
B 553+44.94 329.93′ RT
C 553+97.28 302.64′ RT
D 553+94.89 332.55′ RT

T.C.E.
P.C.E.
P.T.E.

(15A)

CURVE RTE67_MED_TRA_1	
PI	21+01.10
PC	10+00.00
PT	31+97.98
Δ	8° 41′ 06.6″ (LT)
D	0° 23′ 42.5″
L	2,197.98′
T	1,101.10′
R	14,500.00′
eMAX	8%
eDESIGN	NC

RTE67_EXCOMB_18	
PI	549+03.20
PC	546+63.20
PT	551+43.20
Δ	0° 24′ 00.0″ (RT)
D	0° 05′ 00.0″
L	480.00′
T	240.00′
R	68,754.78′
eMAX	8%
eDESIGN	6.4%

PRWOR3_4	
PI	36+00.41
PRC	25+25.46
PT	46+67.14
Δ	12° 16′ 15.4″ (LT)
D	0° 34′ 22.6″
L	2,141.69′
T	1,074.95′
R	10,000.00′
eMAX	4%
eDESIGN	N.C.

RTE67-SB_3	
PI	591+21.78
SC	579+99.94
PT	602+39.17
Δ	8° 50′ 53.5″ (LT)
D	0° 23′ 42.5″
L	2,239.24′
T	1,121.85′
R	14,500.00′
eMAX	4%
eDESIGN	N.C.

RTE67-NB_3	
PI	6012+94.59
SC	6003+79.51
PT	6022+07.25
Δ	7° 13′ 19.9″ (LT)
D	0° 23′ 42.5″
L	1,827.74′
T	915.08′
R	14,500.00′
eMAX	8%
eDESIGN	N.C.

RIGHT OF WAY
SHEET 2 OF 8

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	24

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE | DESCRIPTION | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

NW 1/4 SW 1/4
SEC 10
T23N R5E

1/4 1/4 SECTION LINE

NW 1/4 SW 1/4
SEC 10
T23N R5E

555 560 565

6020 6025

595 600

40 45 50

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

STATION EQUATION:
STA. 6025+33.11 US67 NB, 30′ LT =
STA. 602+39.17 US67 SB, 30′ RT =
STA. 602+39.17 US67 (AH)

POT STA 46+50.00

EXIST. R/W

SECTION LINE

N 00° 26′ 25″ W

EXIST. R/W

SECTION LINE

EXIST. R/W

℄ PROP. ROUTE 67 NB

PT STA 602+07.25

POT STA 6025+33.11

N 00° 26′ 25″ W

℄ PROP. ROUTE 67 SB

POT STA 602+39.17

N 00° 26′ 25″ W

℄ PROP. WEST OUTER ROAD

PT STA 46+67.14

PT STA 602+39.17

N 00° 26′ 25″ W

SEE SHEET 2 OF 8
MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB

MATCHLINE STA. 605+00,
PROP. ROUTE 67
SEE SHEET 4 OF 8

MATCHLINE STA. 52+00,
WEST OUTER ROAD
SEE SHEET 4 OF 8

SEE SHEET 2 OF 8
MATCHLINE STA. 39+00, WEST OUTER ROAD

MOBILE HOME
CAMPER
FRAME SHED

RROP. R/W

PROP. R/W

PERM. ESM'T (UTIL.)

556+89.59
318.00′ RT

556+88.80
348.00′ RT

565+93.89
318.00′ RT

565+92.29
385.23′ RT

566+63.91
318.00′ RT

566+62.27
386.90′ RT

566+75.01
318.00′ RT

566+75.01
448.00′ RT

P.D.E.

T.C.E.

(14)
N/F
PHILLIP E. JOHNSON
1035/5799
42,503 SF NEW R/W
4,976 SF PERM. ESM'T (UTIL.)
285 SF TEMP. ESM'T (CONST.)
0.17 AC REMAINING

(15)
N/F
THOMAS E. AND
MELINA MOBLEY, H/W
878/351
21,079 SF NEW R/W
0.0 AC REMAINING

(15A)
N/F
THOMAS E. AND
MELINA MOBLEY, H/W
878/351
717 SF PERM. ESM'T (DRAINAGE)
7.44 AC REMAINING

(16)
N/F
THOMAS E. MOBLEY AND
ROSEMARY BARRETT
1037/94
6,422 SF NEW R/W
3,154 SF PERM. ESM'T (UTIL.)
0.11 AC REMAINING

(17)
N/F
JOAN F. FRANCIS, TRUSTEE
1029/1460
341,928 SF NEW R/W
4,766 SF PERM. ESM'T (DRAINAGE)
38,536 SF PERM. ESM'T (UTIL.)
30,253 SF TEMP. ESM'T (CONST.)
69.85 AC REMAINING

NE 1/4 SE 1/4
SEC 9
T23N R5E

SE 1/4 SE 1/4
SEC 9
T23N R5E

RIGHT OF WAY
SHEET 3 OF 8

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	25

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\025_RW_003_J9P3764_i50.dgn 3:49:12 PM 3/3/2023

SW 1/4 SW 1/4
SEC 10
T23N R5E

NW 1/4 NW 1/4
SEC 15
T23N R5E

SECTION LINE

℄ COUNTY ROAD 360

570

575

STA. 569+77.96

CONCRETE NAIL IN PAVEMENT AT THE COMMON CORNER OF SECTIONS 9, 10, 15, & 16, TOWNSHIP 23 NORTH, RANGE 5 EAST, BUTLER COUNTY, FOUND BY SAMUEL H. SMITH, RLS #1290 AND RECORDED IN DOCUMENT NO. 600-52512.

N 89° 33' 35" W
L = 1.78'

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

605

610

615

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

WATER LINE
ABANDON (BY OTHERS)

55

60

℄ ROUTE 67

SEE SHEET 3 OF 8
MATCHLINE STA. 605+00, PROP. ROUTE 67

MATCHLINE STA. 618+00, PROP. ROUTE 67
SEE SHEET 5 OF 8

PC STA 64+00.00

℄ WEST OUTER ROAD

STA 54+84.35 WEST OUTER ROAD =
STA 12+03.24 COUNTY RD. 360

PROP. R/W

PERM. ESM'T (UTIL.)

SEE SHEET 3 OF 8
MATCHLINE STA. 52+00, WEST OUTER ROAD

MATCHLINE STA. 65+00, WEST OUTER ROAD
SEE SHEET 5 OF 8

569+07.73
318.00' RT
569+26.69
318.00' RT
569+56.69
348.00' RT

℄ COUNTY ROAD 360

N 88° 47' 48" E

T.C.E.

POT STA 10+00.00

569+07.73
448.00' RT

569+96.33
447.26' RT

570+12.81
447.32' RT

570+12.84
348.00' RT

570+42.84
318.00' RT

571+60.73
318.00' RT

572+83.60
400.42' RT

573+10.42
401.04' RT

573+55.02
318.00' RT

TYPE I DRWY. RT.
WOR STA. 52+50.00
US67 STA. 567+51.65 CL
US67 STA. 567+51.65 ROW
(20' ACCESS BREAK)
20.0' TOP
18" x 28.0' GR. B PIPE
PROPOSED GRADE: 2.00%
EXISTING GRADE: 6.14%

TYPE I DRWY. RT.
WOR STA. 57+00.00
US67 STA. 572+01.65 CL
US67 STA. 572+01.65 ROW
(20' ACCESS BREAK)
20.0' TOP
18" x 28.0' GR. B PIPE
PROPOSED GRADE: -6.02%
EXISTING GRADE: N/A

(17)
N/F
JOAN F. FRANCIS,
TRUSTEE
1029/1460
SEE SHEET 3 OF 8
FOR TAKINGS

SE 1/4 SE 1/4
SEC 9
T23N R5E

NE 1/4 NE 1/4
SEC 16
T23N R5E

(19)
N/F
MARK ALLEN KEENEY
1031/551
407,742 SF NEW R/W
45,413 PERM. ESM'T (UTIL.)
9,134 TEMP. ESM'T (CONST.)
38.66 AC REMAINING

RIGHT OF WAY
SHEET 4 OF 8

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	26

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\026_RW_004_J9P3764_i50.dgn 3:49:14 PM 3/3/2023

NW 1/4 NW 1/4
SEC 15
T23N R5E

SW 1/4 NW 1/4
SEC 15
T23N R5E

1/4 1/4 SECTION LINE

580 585 590

FORMER ST. LOUIS-SAN FRANCISCO RAILROAD RIGHT OF WAY (100' W.)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

CURVE PRWOR3_7	
PI	65+41.44
PC	64+00.00
PRC	66+82.86
Δ	2° 01′ 32.9″ (LT)
D	0° 42′ 58.3″
L	282.86′
T	141.44′
R	8,000.00′
eMAX	8%
eDESIGN	N.C.

CURVE PRWOR3_8	
PI	68+24.30
PRC	66+82.86
PT	69+65.72
Δ	2° 01′ 32.9″ (RT)
D	0° 42′ 58.3″
L	282.86′
T	141.44′
R	8,000.00′
eMAX	8%
eDESIGN	N.C.

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W 620 EXIST. R/W 625 EXIST. R/W 630

SECTION LINE N 00° 26′ 25″ W SECTION LINE

EXIST. R/W 65 70 75 EXIST. R/W

SEE SHEET 4 OF 8
MATCHLINE STA. 618+00, PROP. ROUTE 67

MATCHLINE STA. 631+00, PROP. ROUTE 67
SEE SHEET 6 OF 8

℄ ROUTE 67

PRC STA 66+82.86

PT STA 69+65.72

℄ WEST OUTER ROAD

N 00° 26′ 25″ W

MEDIAN OUTER ROAD

METAL BUILDING

SEE SHEET 4 OF 8
MATCHLINE STA. 65+00, WEST OUTER ROAD

MATCHLINE STA. 78+00, WEST OUTER ROAD
SEE SHEET 6 OF 8

PROP. R/W

PERM. ESM'T (UTIL.)

581+27.49 318.00′ RT
581+28.20 348.00′ RT

TYPE I DRWY. RT.
WOR STA. 68+00.00
US67 STA. 582+96.10 CL
US67 STA. 583+02.51 ROW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: +0.25%
EXISTING GRADE: N/A

584+67.95 332.00′ RT
584+67.24 302.00′ RT
585+68.52 302.00′ RT
585+68.52 342.00′ RT

T.C.E.

586+77.99 342.00′ RT
586+77.99 302.00′ RT

TYPE I DRWY. RT.
WOR STA 71+65.40
US67 STA. 586+66.93 CL
US67 STA. 586+66.93 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 2.80%
EXISTING GRADE: N/A

590+81.53 302.00′ RT
590+81.53 322.00′ RT
591+21.53 322.00′ RT
591+21.53 302.00′ RT
591+91.42 302.00′ RT
591+91.22 360.28′ RT

T.C.E.

TYPE I DRWY. RT.
WOR STA 74+55.86
US67 STA. 589+57.39 CL
US67 STA. 589+57.39 ROW
NO SKEW
(20′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 9.59%
EXISTING GRADE: 0.41%

TYPE I DRWY. RT.
WOR STA. 590+00.00
US67 STA. 590+98.89 CL
US67 STA. 590+98.89 ROW
NO SKEW
(40′ ACCESS BREAK)
20.0′ TOP
18″ x 28.0′ GR. B PIPE
PROPOSED GRADE: 9.99%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 77+50.00
US67 STA. 592+51.53 CL
US67 STA. 592+51.53 ROW
NO SKEW
(40′ ACCESS BREAK)
18″ x 46.0′ GR. B PIPE
PROPOSED GRADE: 7.79%
EXISTING GRADE: N/A

(19)
N/F
MARK ALLEN KEENEY
1031/551
SEE SHEET 4 OF 8
FOR TAKINGS

(20)
N/F
JAMES R. & KIM L. PATTY
1041/6931
36,974 SF NEW R/W
4,392 PERM. ESM'T (UTIL.)
4,379 TEMP. ESM'T (CONST.)
3.59 AC REMAINING

(21)
N/F
LEON JOHNSON
816/885
70,451 NEW R/W
8,375 SF PERM. ESM'T. (UTIL.)
3.47 AC REMAINING

(22)
N/F
WAGON LOADERS, LLC
1040/784
106,132 SF NEW R/W
14,902 SF PERM. ESM'T. (UTIL.)
7,117 SF TEMP. ESM'T. (CONST.) (SOUTH)
800 SF TEMP. ESM'T. (CONST.) (NORTH)
17.92 AC REMAINING

NE 1/4 NE 1/4
SEC 16
T23N R5E

SE 1/4 NE 1/4
SEC 16
T23N R5E

RIGHT OF WAY
SHEET 5 OF 8

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	27
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\027_RW_005_J9P3764_i50.dgn 3:49:17 PM 3/3/2023

SW 1/4 NW 1/4
SEC 15
T23N R5E

NW 1/4 SW 1/4
SEC 15
T23N R5E

1/4 SECTION LINE

595 600 605

635 640

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

SEE SHEET 5 OF 8
MATCHLINE STA. 631+00, PROP. ROUTE 67

SEE SHEET 7 OF 8
MATCHLINE STA. 644+00, PROP. ROUTE 67

580 585 590

EXIST. R/W

℄ ROUTE 67

SEE SHEET 5 OF 8
MATCHLINE STA. 78+00, WEST OUTER ROAD

SEE SHEET 7 OF 8
MATCHLINE STA. 91+00, WEST OUTER ROAD

PROP. R/W

T.C.E.

593+12.92
360.69' RT

593+13.11
302.00' RT

596+11.53
302.00' RT

596+11.53
347.00' RT

596+51.53
317.00' RT

596+51.53
302.00' RT

FORMER ST. LOUIS-SAN FRANCISCO RAILROAD RIGHT OF WAY (100' W.)

℄ WEST OUTER ROAD

PERM. ESM'T (UTIL.)

TYPE I DRWY. RT.
WOR STA 81+30.00
US67 STA. 596+31.53 CL
US67 STA. 596+31.53 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
NO PIPE
PROP. GRADE: 11.55%
EXIST. GRADE: N/A

NE 1/4 SE 1/4
SEC 16
T23N R5E

SE 1/4 NE 1/4
SEC 16
T23N R5E

(22)
N/F
WAGON LOADERS, LLC
1040/784
SEE SHEET 5 OF 8
FOR TAKINGS

(23)
N/F
FELLOWSHIP SOUTHERN
BAPTIST CHURCH
852/707 & 852/709
104,781 SF NEW R/W
10,451 SF PERM. ESM'T (UTIL.)
600 SF TEMP. ESM'T (CONST.)
2.68 AC REMAINING

(24)
N/F
THE JOHN PAUL TATE, JR. AND
BARBARA S. TATE REVOCABLE LIVING TRUST
1038/4290
276,630 SF NEW R/W
33,936 SF PERM. ESM'T (UTIL.)
850 SF TEMP. ESM'T (CONST.)
25.71 AC REMAINING

RIGHT OF WAY
SHEET 6 OF 8

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	28

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

NW 1/4 SW 1/4
SEC 15
T23N R5E

1/4 1/4 SECTION LINE

SW 1/4 SW 1/4
SEC 15
T23N R5E

610 615

645 650 655

EXIST. R/W

SECTION LINE

N 00° 26' 25" W

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

EXIST. R/W

EXIST. R/W

SEE SHEET 6 OF 8
MATCHLINE STA. 644+00, PROP. ROUTE 67

MATCHLINE STA. 657+00, PROP. ROUTE 67
SEE SHEET 8 OF 8

95 100

N 00° 26' 25" W

℄ ROUTE 67

℄ WEST OUTER ROAD

N 00° 26' 25" W

SEE SHEET 6 OF 8
MATCHLINE STA. 91+00, WEST OUTER ROAD

MATCHLINE STA. 104+00, WEST OUTER ROAD
SEE SHEET 8 OF 8

PROP. R/W

T.C.E.

T.C.E.

PERM. ESM'T (UTIL.)

PROP. R/W

TEMP. ESM'T

607+01.53 302.00' RT
607+01.53 319.00' RT
607+51.53 319.00' RT
607+51.53 302.00' RT

TYPE I DRWY. RT.
WOR STA 92+25.00
US67 STA. 607+26.52 CL
US67 STA. 607+26.52 ROW
NO SKEW
(30' ACCESS BREAK)
30.0' TOP
38" GR. B PIPE
PROPOSED GRADE: 9.71%
EXISTING GRADE: N/A

609+81.78 302.00' RT
609+81.78 322.00' RT
610+21.78 322.00' RT
610+21.78 302.00' RT

TYPE I DRWY. RT.
WOR STA 95+00.25
US67 STA. 610+01.77 CL
US67 STA. 610+01.77 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 28.0' GR. B PIPE
PROPOSED GRADE: 9.68%
EXISTING GRADE: N/A

TYPE I DRWY. RT.
WOR STA 102+00.00
US67 STA. 617+01.53 CL
US67 STA. 617+01.53 ROW
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
NO PIPE
PROPOSED GRADE: 2.08%
EXISTING GRADE: N/A

616+04.55 302.00' RT
616+04.29 369.89' RT

NE 1/4 SE 1/4
SEC 16
T23N R5E

(24)

N/F
THE JOHN PAUL TATE, JR. AND
BARBARA S. TATE
REVOCABLE LIVING TRUST
1038/4290

SEE SHEET 6 OF 8
FOR TAKINGS

(25)

N/F
ADKIN F. AND JAN S. FORNEY, H/W
AND CHERON PEARSON
1027/6483

167,224 SF NEW R/W
19,839 SF PERM. ESM'T (UTIL.)
800 SF TEMP. ESM'T (CONST.)
15.43 AC REMAINING

SE 1/4 SE 1/4
SEC 16
T23N R5E

(26)

N/F
MILAM, KAREN
1042/7441

61,023 SF NEW R/W
7,239 SF PERM ESM'T. (UTIL.)
16,382 SF TEMP. ESM'T. (CONST.)
10.03 AC REMAINING

(27)

RIGHT OF WAY
SHEET 7 OF 8

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	29

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\029_RW_007_J9P3764_i50.dgn 3:49:24 PM 3/3/2023

SW 1/4 SW 1/4
SEC 15
T23N R5E

NW 1/4 NW 1/4
SEC 22
T23N R5E

SECTION LINE

COUNTY ROAD 338

620

625

630

660

665

670

℄ EXIST. ROUTE 67 =
℄ EAST OUTER ROAD

EXIST. R/W

SECTION LINE N 00° 26' 25" W

EXIST. R/W

EXIST. R/W

105

N 00° 26' 25" W

END PROJECT
EXISTING US67 STA. 622+65.01 =
PROPOSED US67 STA. 660+75.00

℄ ROUTE 67

STA 107+64.11 WEST OUTER ROAD =
STA 25+30.70 COUNTY RD. 338

N 00° 26' 25" W

PROP. R/W

621+66.95
302.00' RT

PROP. R/W

622+01.72
332.00' RT

PERM. ESM'T (UTIL.)

TEMP. ESM'T

622+45.63
369.89' RT

TYPE I DRWY. RT.
WOR STA 105+50.00
US67 STA. 620+51.55
NO SKEW
(20' ACCESS BREAK)
20.0' TOP
18" x 38' GR B PIPE
PROPOSED GRADE: 5.76%
EXISTING GRADE: N/A

(27)

N/F
CHRISTOPHER E. CASINGER
1037/3959
103,883 SF NEW R/W
10,156 SF PERM. ESM'T. (UTIL.)
24,476 SF TEMP. ESM'T. (CONST.)
4.85 AC REMAINING

POT STA 11+00.39

SE 1/4 SE 1/4
SEC 16
T23N R5E

EXIST. R/W

EXIST. R/W

℄ COUNTY ROAD 338

NE 1/4 NE 1/4
SEC 21
T23N R5E

01

SEE SHEET 7 OF 8
MATCHLINE STA. 657+00. PROP. ROUTE 67

SEE SHEET 7 OF 8
MATCHLINE STA. 104+00. WEST OUTER ROAD

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	30

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

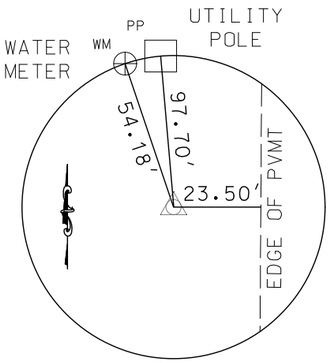
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

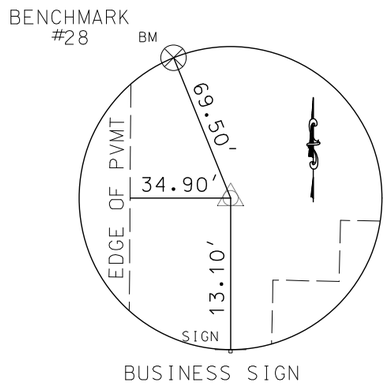
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

RIGHT OF WAY
SHEET 8 OF 8

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

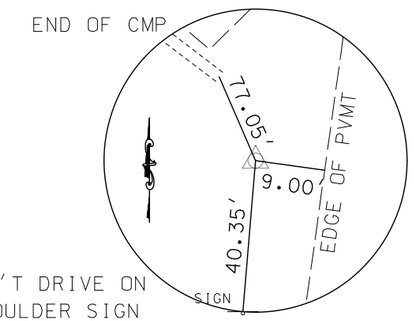


CONTROL POINT NO. 106
5/8" REBAR WITH ALUMINUM CAP
N: 292988.542
E: 814289.595
EL: 305.83
EXISTING RTE 67 STA. 610+81.07

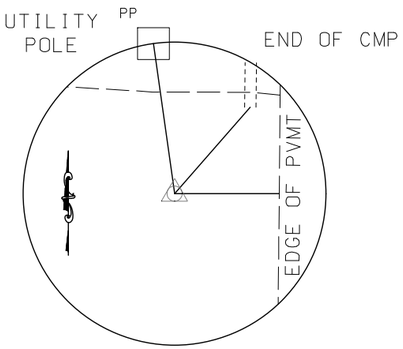


BUSINESS SIGN

CONTROL POINT NO. 107
5/8" REBAR WITH ALUMINUM CAP
N: 291748.991
E: 814377.926
EL: 305.71
EXISTING RTE 67 STA. 623+19.91



CONTROL POINT NO. 125
5/8" REBAR WITH MODOT CAP
N: 299906.329
E: 814370.658
EL: 389.40
EXISTING RTE 67 STA. 579+66.11



CONTROL POINT NO. 126
5/8" REBAR WITH MODOT CAP
N: 298862.234
E: 814330.968
EL: 376.46
EXISTING RTE 67 STA. 552+07.24

ROUTE 67
REFERENCE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

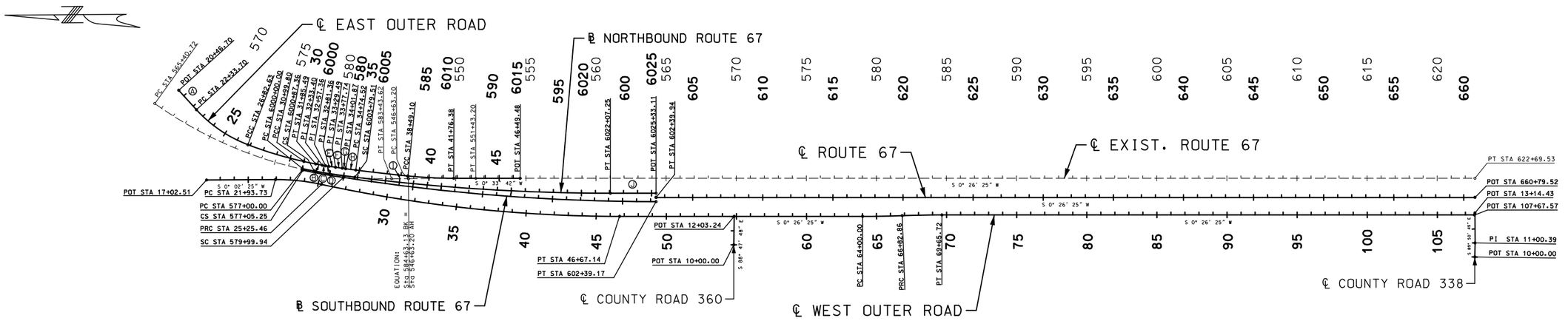
DATE PREPARED: 3/1/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 31
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION	
COORDINATE SYSTEM	MODIFIED MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83 (2011) (EPOCH 2010)
VERTICAL DATUM	NAVD88
GEOID MODEL	18
ELEVATIONS DETERMINED BY	GNSS DERIVED OBSERVATIONS, UTILIZING THE MODOT GLOBAL POSITIONING SYSTEM REFERENCE STATION NETWORK.
PROJECT PROJECTION FACTOR	1.0000771

REFERENCE CONTROL INFORMATION	
COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MISSOURI CORS
DESIGNATION	MODOT DONIPHAN CORS ARP
CORS_ID	MODP
PID	DP2873
LATITUDE	N 36 33/64 38′ 42.39207″
LONGITUDE	W 90 33/64 47′ 52.77641″
NORTHING (M)	90,112.77
EASTING (M)	233,354.08
ZONE	EAST
PROJECT AVERAGE GRID FACTOR	0.9999188

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #500
N 297070.265 X 0.9999229 = N 297047.371
E 817001.748 X 0.9999229 = E 816938.784

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

Ⓐ S 48° 14′ 05″ W
Ⓑ S 7° 49′ 48″ W
Ⓒ S 8° 13′ 12″ W
Ⓓ S 8° 35′ 07″ W
Ⓔ S 9° 06′ 43″ W
Ⓕ S 9° 38′ 27″ W
Ⓖ S 10° 04′ 10″ W
Ⓗ S 10° 43′ 45″ W
Ⓘ S 0° 02′ 25″ W
Ⓙ S 0° 26′ 25″ W

CURVE_EOR_6E_3
PI 24+62.44
PC 22+33.70
PCC 26+82.63
Δ 27° 04′ 02.3″ (LT)
D 6° 01′ 45.7″
L 448.93′
T 228.73′
R 950.28′

CURVE_PRWOR3_3
PI 23+60.27
PC 21+93.73
PRC 25+25.46
Δ 12° 40′ 15.4″ (RT)
D 3° 49′ 11.0″
L 331.72′
T 166.54′
R 1,500.00′

CURVE_EOR_6E_4
PI 28+91.60
PCC 26+82.63
PCC 30+99.80
Δ 8° 30′ 38.2″ (LT)
D 2° 02′ 24.2″
L 417.17′
T 208.97′
R 2,808.53′

CURVE_RTE67-NB_1
PI 6000+43.68
PC 6000+00.00
CS 6000+87.36
Δ 1° 45′ 01.4″ (LT)
D 2° 00′ 13.2″
L 87.36′
T 43.68′
R 2,859.53′

CURVE_RTE67-SB_1
PI 577+02.62
PC 577+00.00
CS 577+05.25
Δ 0° 06′ 17.2″ (LT)
D 1° 59′ 46.8″
L 5.25′
T 2.62′
R 2,870.03′

CURVE_PRWOR3_4
PI 36+00.41
PRC 25+25.46
PT 46+67.14
Δ 12° 16′ 15.4″ (LT)
D 0° 34′ 22.6″
L 2,141.69′
T 1,074.95′
R 10,000.00′

CURVE_EOR_6E_5
PI 31+42.65
PCC 30+99.80
PT 31+85.49
Δ 1° 44′ 53.0″ (LT)
D 2° 02′ 24.2″
L 85.69′
T 42.85′
R 2,808.53′

SPIRAL RTE67-NB_2
PI
PC
CS
Δ (LT)
D
L
T
R

SPIRAL RTE67-SB_2
PI
PC
CS
Δ (LT)
D
L
T
R

CURVE_PRWOR3_7
PI 65+41.44
PC 64+00.00
PRC 66+82.86
Δ 2° 01′ 32.9″ (LT)
D 0° 42′ 58.3″
L 282.86′
T 141.44′
R 8,000.00′

CURVE_RTE67_EXCOMB_15
PI 574+73.15
PC 565+40.72
PT 583+43.62
Δ 36° 03′ 29.0″ (LT)
D 2° 00′ 00.0″
L 1,802.90′
T 932.43′
R 2,864.78′

CURVE_EOR_6E_20
PI 36+61.83
PC 34+74.52
PCC 38+49.10
Δ 1° 29′ 07.3″ (LT)
D 0° 23′ 47.5″
L 374.58′
T 187.30′
R 14,449.00′

CURVE_RTE67-NB_3
PI 6012+94.59
SC 6003+79.51
PT 6022+07.25
Δ 7° 13′ 19.9″ (LT)
D 0° 23′ 42.5″
L 1,827.74′
T 915.08′
R 14,500.00′

CURVE_RTE67-SB_3
PI 591+21.78
SC 579+99.94
PT 602+39.17
Δ 8° 50′ 53.5″ (LT)
D 0° 23′ 42.5″
L 2,239.24′
T 1,121.85′
R 14,500.00′

CURVE_PRWOR3_8
PI 68+24.30
PRC 66+82.86
PT 69+65.72
Δ 2° 01′ 32.9″ (RT)
D 0° 42′ 58.3″
L 282.86′
T 141.44′
R 8,000.00′

CURVE_RTE67_EXCOMB_18
PI 549+03.20
PC 546+63.20
PT 551+43.20
Δ 0° 24′ 00.0″ (RT)
D 0° 05′ 00.0″
L 480.00′
T 240.00′
R 68,754.78′

CURVE_EOR_6E_21
PI 40+12.87
PCC 38+49.10
PT 41+76.38
Δ 5° 29′ 38.9″ (LT)
D 1° 40′ 43.5″
L 327.27′
T 163.76′
R 3,412.98′

SCALE
0 200 400 600 800 1000

ROUTE 67
COORDINATE POINTS
SHEET 1 OF 4

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 2/28/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 32
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
PROJECT CONTROL POINTS								
20	648+91.06	℄ PR RTE 67	93.91 LT	292988.542	814289.595	305.83	5/8" REBAR WITH ALUMINUM CAP	106
22	623+19.91	℄ EXIST RTE 67	55.76 LT	291748.991	814377.926	305.71	5/8" REBAR WITH ALUMINUM CAP	107
7	579+67.65	℔ RTE 67 SB	26.06 RT	299906.329	814370.658	389.40	5/8" REBAR WITH MODOT CAP	125
7	6013+08.58	℔ RTE 67 NB	32.38 LT	298862.234	814330.968	376.46	5/8" REBAR WITH MODOT CAP	126

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
ALIGNMENTS								
℔ PROPOSED ROUTE 67 NB (RTE67-NB)								
4	6000+00.00	℔ RTE 67 NB	0	300162.523	814457.009		POB/PC	
4	576+99.89	℄ EXIST RTE 67	5.25 RT	300163.694	814451.892		EQUATION BACK	
4	6000+00.00	℔ RTE 67 NB	0	300162.523	814457.009		EQUATION AHEAD	
4	6000+43.68	℔ RTE 67 NB	0.33 RT	300119.945	814447.245		PI	
4	6000+87.36	℔ RTE 67 NB	0	300077.089	814438.785		CS	
7	6002+00.82	℔ RTE 67 NB	2.02 RT	299965.772	814416.811		SPI	
7	6003+79.51	℔ RTE 67 NB	0	299788.600	814392.975		SC	
7	6012+94.59	℔ RTE 67 NB	28.85 RT	298881.688	814270.962		PI	
10	6022+07.25	℔ RTE 67 NB	0	297966.632	814263.931		PT	
10	6025+33.11	℔ RTE 67 NB	0	297640.780	814261.428		POE	
10	6025+33.11	℔ RTE 67 NB	0	297640.780	814261.428		EQUATION BACK	
10	602+39.17	℄ PR RTE 67	30.00 RT	297641.011	814231.429		EQUATION AHEAD	
℔ PROPOSED ROUTE 67 SB (RTE67-SB)								
4	577+00.00	℔ RTE 67 SB	0	300164.870	814446.775		POB/PC	
4	576+99.89	℄ EXIST RTE 67	5.25 LT	300163.694	814451.892		EQUATION BACK	
4	577+00.00	℔ RTE 67 SB	0	300164.870	814446.775		EQUATION AHEAD	
4	577+02.62	℔ RTE 67 SB	0	300162.312	814446.188		PI	
4	577+05.25	℔ RTE 67 SB	0	300159.753	814445.606		CS	
4	578+19.75	℔ RTE 67 SB	2.05 RT	300048.104	814420.216		SPI	
7	579+99.94	℔ RTE 67 SB	0	299870.195	814391.119		SC	
7	591+21.78	℔ RTE 67 SB	43.33 RT	298763.056	814210.048		PI	
10	602+39.17	℔ RTE 67 SB	0	297641.241	814201.429		POE/PT	
10	602+39.17	℔ RTE 67 SB	0	297641.241	814201.429		EQUATION BACK	
10	602+39.17	℄ PR RTE 67	30.00 LT	297641.011	814231.429		EQUATION AHEAD	
℄ PROPOSED RTE 67 (PR67-3)								
10	602+39.17	℄ PR RTE 67	0	297641.011	814231.429		POB	
22	660+79.52	℄ PR RTE 67	0	291800.833	814186.558		POE	
℄ PROPOSED EAST OUTER ROAD (EOR_6E)								
4	30+99.80	℄ PR EOR	0	300151.014	814506.694		PCC	
4	31+42.65	℄ PR EOR	0.33 RT	300109.252	814497.118		PI	
4	31+85.49	℄ PR EOR	0	300067.216	814488.820		PT	
4	32+33.40	℄ PR EOR	0	300020.147	814479.901		PI	
4	32+57.36	℄ PR EOR	0	299996.552	814475.712		PI	
4	32+81.36	℄ PR EOR	0	299972.893	814471.693		PI	
7	33+29.49	℄ PR EOR	0	299925.372	814464.071		PI	
7	33+77.74	℄ PR EOR	0	299877.659	814456.868		PI	
7	34+01.87	℄ PR EOR	0	299853.775	814453.417		PI	
7	34+74.52	℄ PR EOR	0	299781.800	814443.520		PC	
7	36+61.83	℄ PR EOR	1.21 RT	299596.172	814418.546		PI	
7	38+49.10	℄ PR EOR	0	299409.959	814398.392		PCC	
7	40+12.87	℄ PR EOR	3.93 RT	299247.110	814381.115		PI	
7	41+76.38	℄ PR EOR	0	299083.355	814379.509		PT	
10	46+49.48	℄ PR EOR	0	298610.280	814374.872		POE/POT	

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 33
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67
COORDINATE POINTS
SHEET 2 OF 4

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
ALIGNMENTS								
℄ PROPOSED WEST OUTER ROAD (PRWOR3)								
4	17+02.51	℄ PR WOR	0	300846.192	814380.327		POB	
4	21+93.73	℄ PR WOR	0	300354.971	814379.983		PC	
4	23+60.27	℄ PR WOR	9.22 LT	300188.429	814379.866		PI	
4	25+25.46	℄ PR WOR	0	300025.969	814343.221		PRC	
7	36+00.41	℄ PR WOR	57.61 RT	298977.360	814106.692		PI	
10	46+67.14	℄ PR WOR	0	297902.437	814098.433		PT	
13	54+84.35	℄ PR WOR	0	297085.249	814092.155		CR 360 ACCESS	
13	64+00.00	℄ PR WOR	0	296169.629	814085.120		PC	
16	65+41.44	℄ PR WOR	1.25 RT	296028.190	814084.033		PI	
16	66+82.86	℄ PR WOR	0	295886.801	814087.947		PRC	
16	68+24.30	℄ PR WOR	1.25 LT	295745.412	814091.861		PI	
16	69+65.72	℄ PR WOR	0	295603.972	814090.774		PT	
22	107+64.11	℄ PR WOR	0	291805.687	814061.592		POE/CR360 ACCESS	
℄ EXISTING ROUTE 67 (RTE67_EXCOMB)								
4	565+40.72	℄ EXIST RTE 67	0	301211.242	814929.475		PC	
4	574+73.15	℄ EXIST RTE 67	147.93 RT	300457.850	814380.087		PI	
7	583+43.62	℄ EXIST RTE 67	0	299525.420	814379.401		PT	
7	584+63.13	℄ EXIST RTE 67	0	299405.906	814379.317		EQUATION BACK	
7	546+63.20	℄ EXIST RTE 67	0	299405.906	814379.317		EQUATION AHEAD	
7	546+63.20	℄ EXIST RTE 67	0	299405.906	814379.317		PC	
7	549+03.20	℄ EXIST RTE 67	0.42 LT	299165.906	814379.148		PI	
7	551+43.20	℄ EXIST RTE 67	0	298925.914	814377.305		PT	
22	622+69.53	℄ EXIST RTE 67	0	291799.793	814322.554		POE/POT	
℄ STAGE 1B NB (BL_1BTEMPNB)								
54	30+00.00	℄ STAGE 1B NB	0	300162.123	814458.372		POB	
54	30+30.84	℄ STAGE 1B NB	0	300132.048	814451.545		PI	
54	30+80.47	℄ STAGE 1B NB	0	300083.462	814441.441		PI	
54	31+30.49	℄ STAGE 1B NB	0	300034.309	814431.165		PI	
54	31+80.09	℄ STAGE 1B NB	0	299985.435	814423.690		PI	
54	32+30.04	℄ STAGE 1B NB	0	299936.084	814415.968		PI	
54	32+79.82	℄ STAGE 1B NB	0	299886.751	814409.311		PI	
54	33+29.83	℄ STAGE 1B NB	0	299837.069	814403.612		PI	
54	33+79.07	℄ STAGE 1B NB	0	299788.108	814398.333		PC	
54	35+42.05	℄ STAGE 1B NB	4.77 RT	299626.248	814379.337		PI	
54	37+04.65	℄ STAGE 1B NB	0	299463.276	814379.358		PRC	
54	37+76.73	℄ STAGE 1B NB	0.04 RT	299391.192	814379.343		PI	
54	29+48.81	℄ STAGE 1B NB	0	299319.108	814379.201		PT	
℄ STAGE 1B SB (BL_1BTEMPSB)								
54	10+00.00	℄ STAGE 1B SB	0	300945.080	814751.060		POB	
54	11+79.27	℄ STAGE 1B SB	0	300795.164	814670.048		PC	
54	15+10.90	℄ STAGE 1B SB	19.12 RT	300487.384	814524.075		PI	
54	18+39.60	℄ STAGE 1B SB	0	300164.143	814449.943		PCC	
54	19+86.39	℄ STAGE 1B SB	5.38 RT	300021.060	814417.128		PI	
54	21+32.67	℄ STAGE 1B SB	0	299874.719	814405.557		PRC	
54	21+94.54	℄ STAGE 1B SB	0.38 LT	299813.040	814400.680		PI	
54	22+56.40	℄ STAGE 1B SB	0	299751.501	814394.282		PT	

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 34
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67
COORDINATE POINTS
SHEET 3 OF 4

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
ALIGNMENTS								
℄ STAGE 2A (BL_24TEMP)								
59	10+00.00	℄ STAGE 2A	0	300163.402	814453.082		PC	
59	10+19.98	℄ STAGE 2A	0.07 RT	300143.980	814448.386		PI	
59	10+39.96	℄ STAGE 2A	0	300124.496	814443.951		PCC	
59	11+69.78	℄ STAGE 2A	1.62 RT	299997.447	814417.308		PI	
59	12+99.53	℄ STAGE 2A	0	299869.227	814397.040		PCC	
59	13+69.24	℄ STAGE 2A	0.17 RT	299800.436	814385.790		PI	
59	14+38.94	℄ STAGE 2A	0	299731.540	814375.201		PCC	
59	16+14.08	℄ STAGE 2A	10.11 RT	299558.432	814348.597		PI	
59	17+87.67	℄ STAGE 2A	0	299383.827	814362.269		PRC	
59	18+51.19	℄ STAGE 2A	1.34 LT	299320.495	814367.228		PI	
59	19+14.64	℄ STAGE 2A	0	299256.972	814366.815		PT	
59	24+18.17	℄ STAGE 2A	0	298753.453	814363.540		PI	
59	32+59.41	℄ STAGE 2A	0	297912.239	814369.516		POE	
℄ STAGE 2B (BL_2BTEMP)								
64	10+00.00	℄ STAGE 2B	0	300190.051	814479.922		PC	
64	10+56.49	℄ STAGE 2B	1.06 RT	300135.132	814466.680		PI	
64	11+12.93	℄ STAGE 2B	0	3000079.373	814457.598		PT	
64	13+03.71	℄ STAGE 2B	0	299891.075	814426.942		PI	
64	14+14.72	℄ STAGE 2B	0	299781.056	814412.140		PC	
64	15+40.95	℄ STAGE 2B	5.26 RT	299655.958	814395.310		PI	
64	16+66.59	℄ STAGE 2B	0	299529.800	814399.455		PRC	
64	17+80.82	℄ STAGE 2B	4.34 LT	299415.631	814403.206		PI	
64	18+94.61	℄ STAGE 2B	0	299302.211	814389.626		PRC	
64	19+79.15	℄ STAGE 2B	2.36 RT	299218.269	814379.575		PI	
64	20+63.52	℄ STAGE 2B	0	299133.729	814378.944		PT	
64	22+57.93	℄ STAGE 2B	0	298939.323	814377.494		POE	

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 35
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

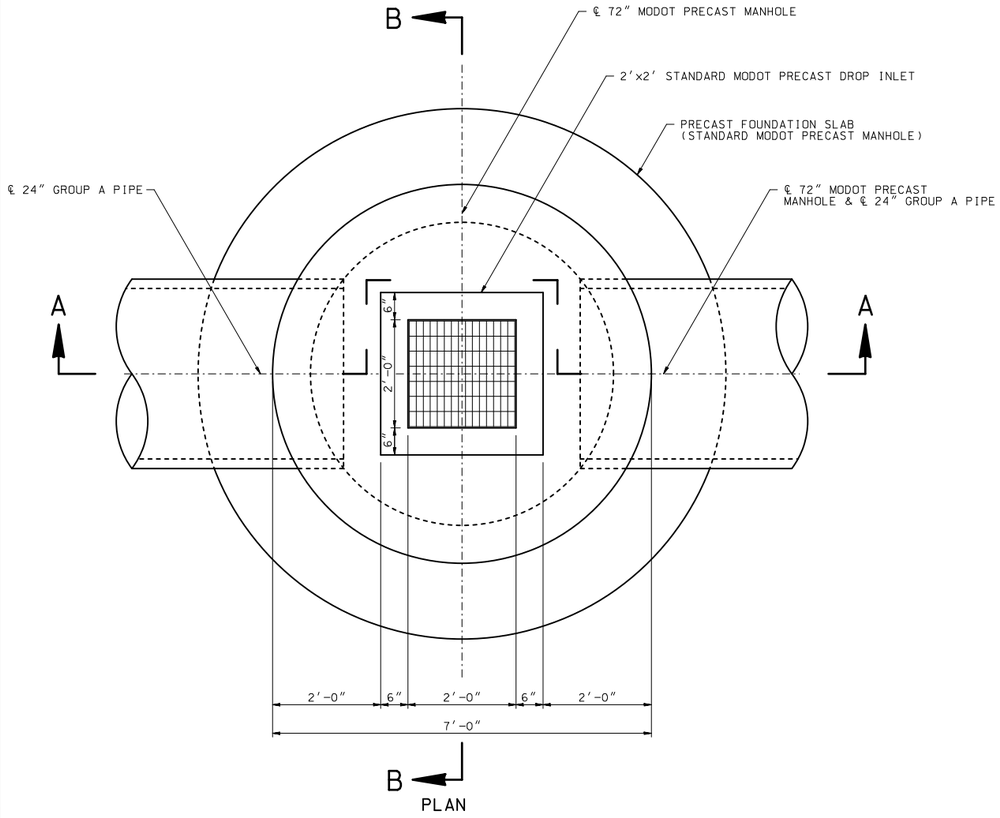
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

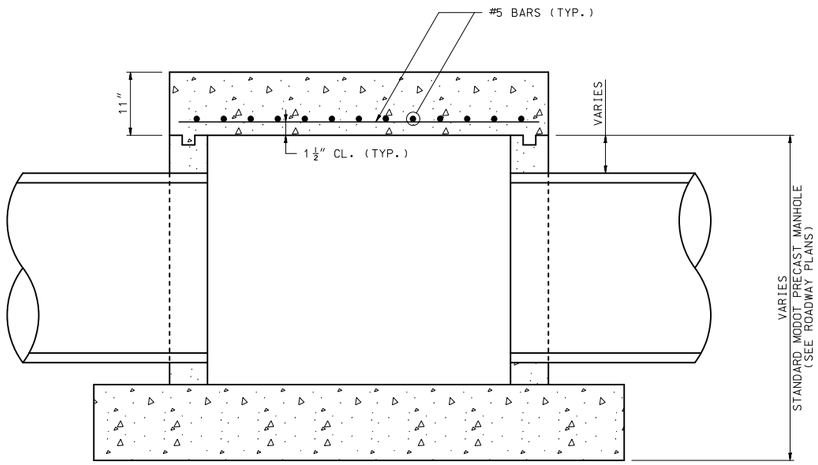
REV. | DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

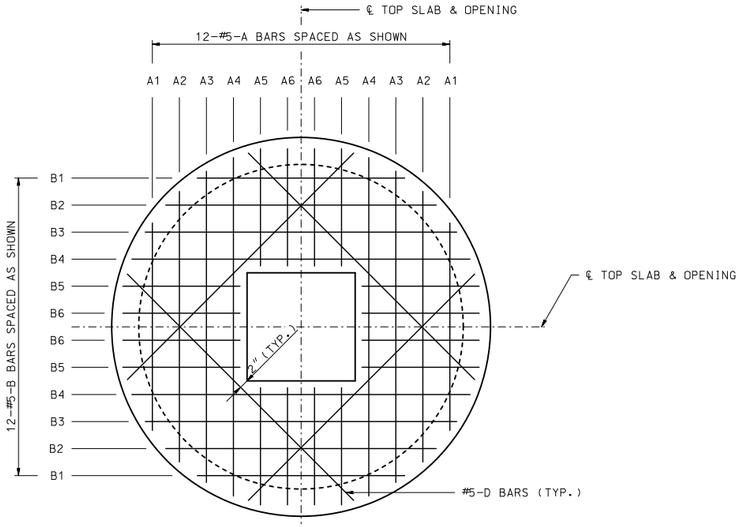
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67
COORDINATE POINTS
SHEET 4 OF 4





SECTION A-A



TOP SLAB PLAN OF REINFORCEMENT

PAVEMENT THICKNESS	"T" DIMENSION
LESS THAN OR EQUAL TO 11"	11"
12"	12"
13"	13"
GREATER THAN OR EQUAL TO 14"	14"

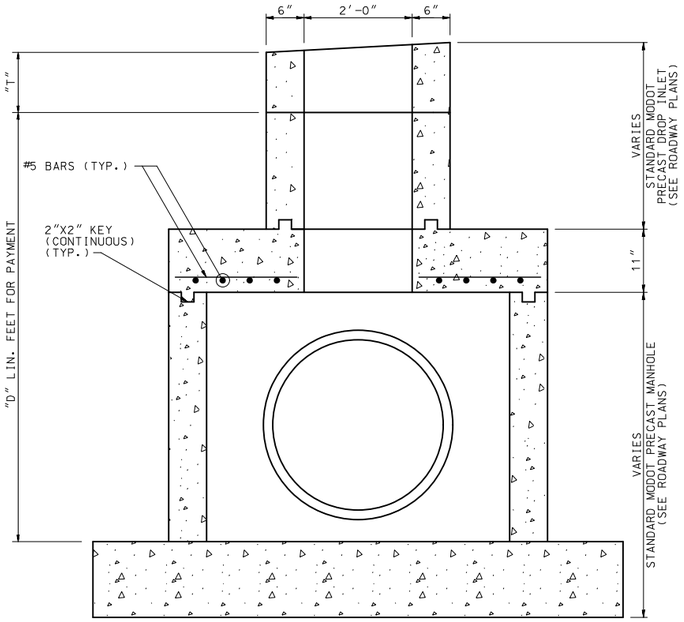
BARBILL FOR TOP SLAB

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 A1	2	3'-10"	8
#5 A2	2	5'-0"	11
#5 A3	2	5'-9"	12
#5 A4	2	6'-3"	14
#5 A5	4	2'-2"	10
#5 A6	4	2'-2"	10
#5 B1	2	3'-10"	8
#5 B2	2	5'-0"	11
#5 B3	2	5'-9"	12
#5 B4	2	6'-3"	14
#5 B5	4	2'-2"	10
#5 B6	4	2'-2"	10
#5 D	4	5'-11"	25

QUANTITY TOTALS (PER TOP SLAB):

REINFORCING STEEL = 155 LBS.

CLASS B-1 CONCRETE = 1.21 CU. YDS.



SECTION B-B

NOTES:

ALL WORK INCLUDING STEEL, CONCRETE, REINFORCING BARS AND BACKFILL NECESSARY TO COMPLETE THE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE COST OF SPECIAL INLET.

ALL CAST-IN-PLACE CONCRETE SHALL MEET THE SPECIFICATIONS OF MODOT CLASS B-1 CONCRETE.

SEE CULVERT SECTIONS FOR PIPE INVERT ELEVATIONS.

FIELD VERIFY ALL SIZES AND LOCATIONS PRIOR TO CONSTRUCTION/INSTALLATION OF DRAINAGE STRUCTURES AND PIPES.

ALL REINFORCING TO BE GRADE 60 EPOXY COATED STEEL AND SHALL BE IN ACCORDANCE WITH SEC 706.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2" UNLESS OTHERWISE SHOWN.

DETAILS OF SPECIAL INLET (2 FT. X 2 FT. DROP INLET ON 72 IN. MANHOLE BASE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SPECIAL INLET NO.1

SPECIAL SHEETS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	36

COUNTY: BUTLER

JOB NO.: J9P3764

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

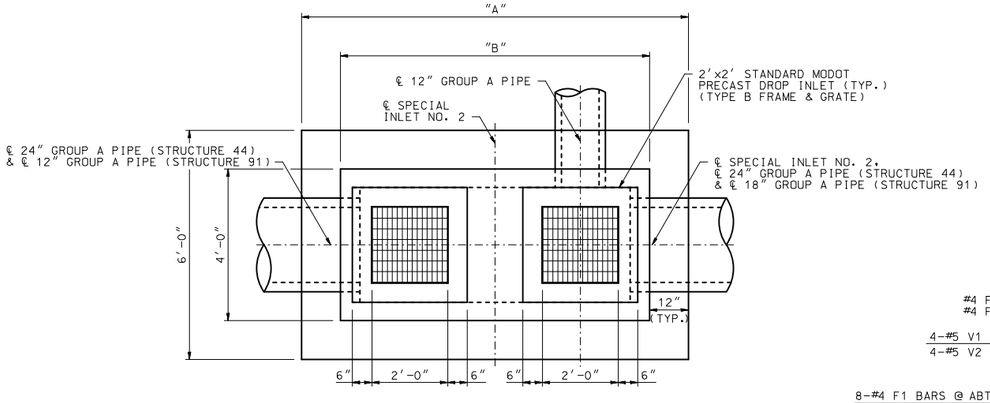
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

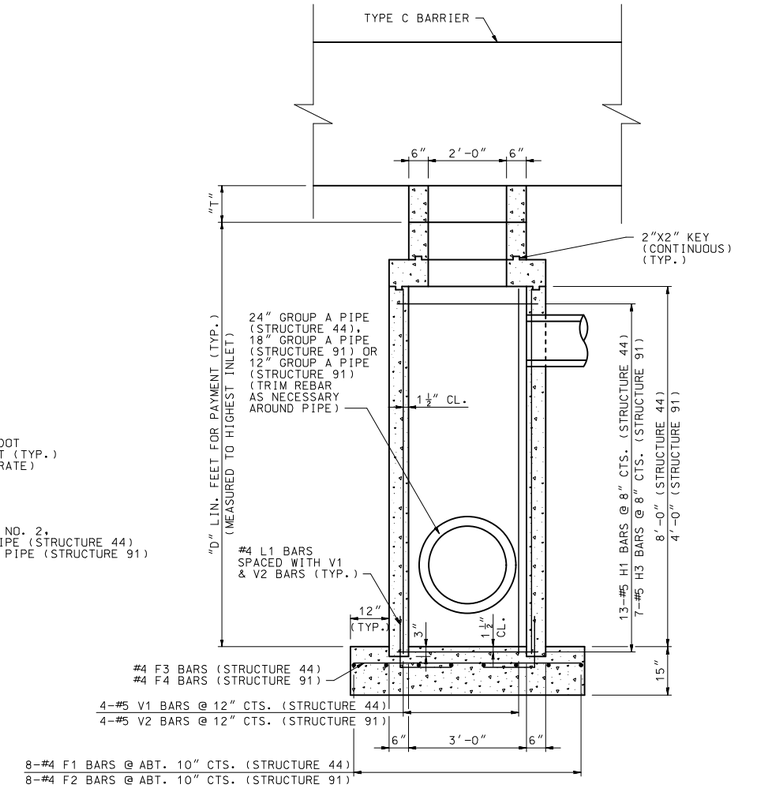
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

VARYING DIMENSIONS		
	STRUCTURE 44	STRUCTURE 91
A	10′-3″	10′-2″
B	8′-3″	8′-2″
C	7′-3′	7′-2″
E	10 3/8″	10″
F	2′-6 1/4″	2′-6″
G	4 3/8″	4 1/4″
H	2 3/8″	2″

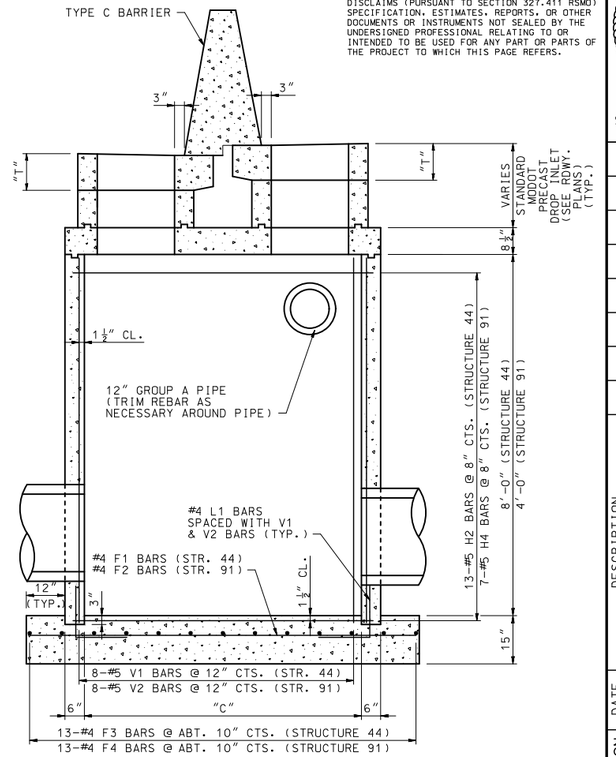


PLAN



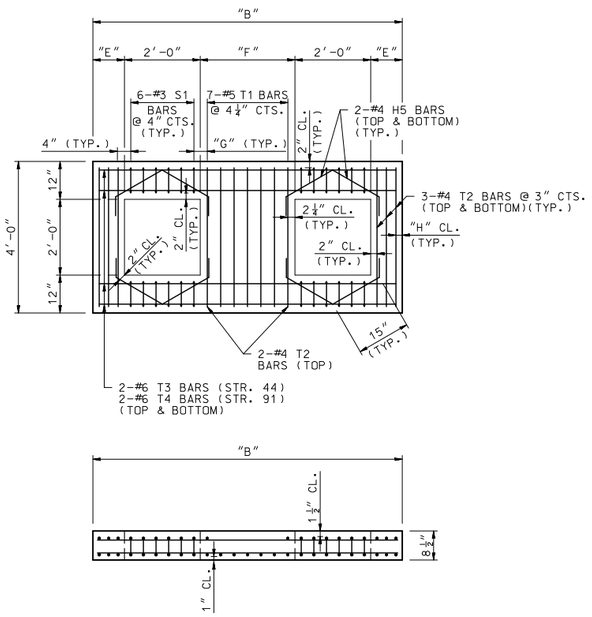
FRONT ELEVATION

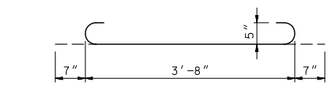
NOTE: REINFORCEMENT IS THE SAME FOR THE BACK WALL.



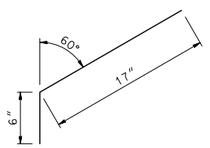
SIDE ELEVATION

NOTE: REINFORCEMENT IS THE SAME FOR THE OTHER SIDE WALL.

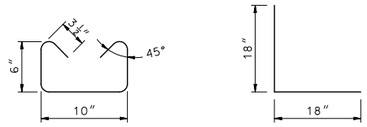




T1 BAR



H5 BAR



S1 BAR

L1 BAR

REINFORCED LID DETAILS

BARBILL FOR STRUCTURE 44			
BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	7	4′-10″	36
#4 T2	14	3′-8″	35
#6 T3	8	7′-11″	96
#3 S1	24	2′-5″	22
#4 H5	16	1′-11″	21
#5 V1	24	8′-0″	201
#5 H1	26	3′-6″	95
#5 H2	26	7′-9″	211
#4 F1	8	10′-0″	54
#4 F3	13	5′-9″	50
#4 L1	24	3′-0″	49

QUANTITY TOTALS (PER STRUCTURE 44):

REINFORCING STEEL = 870 LBS.

CLASS B-1 CONCRETE = 6.71 CU. YDS.

BARBILL FOR STRUCTURE 91			
BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	7	4′-10″	36
#4 T2	14	3′-8″	35
#6 T4	8	7′-10″	95
#3 S1	24	2′-5″	22
#4 H5	16	1′-11″	21
#5 V2	24	4′-0″	101
#5 H3	14	3′-6″	52
#5 H4	14	7′-8″	112
#4 F2	8	9′-11″	53
#4 F4	13	5′-9″	50
#4 L1	24	3′-0″	49

QUANTITY TOTALS (PER STRUCTURE 91):

REINFORCING STEEL = 626 LBS.

CLASS B-1 CONCRETE = 5.06 CU. YDS.

PAVEMENT THICKNESS	"T" DIMENSION
LESS THAN OR EQUAL TO 11″	11″
12″	12″
13″	13″
GREATER THAN OR EQUAL TO 14″	14″

NOTES:

ALL WORK INCLUDING STEEL, CONCRETE, REINFORCING BARS AND BACKFILL NECESSARY TO COMPLETE THE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE COST OF SPECIAL INLET.

ALL CAST-IN-PLACE CONCRETE SHALL MEET THE SPECIFICATIONS OF MODOT CLASS B-1 CONCRETE.

SEE CULVERT SECTIONS FOR PIPE INVERT ELEVATIONS.

FIELD VERIFY ALL SIZES AND LOCATIONS PRIOR TO CONSTRUCTION/INSTALLATION OF DRAINAGE STRUCTURES AND PIPES.

ALL REINFORCING TO BE GRADE 60 EPOXY COATED STEEL AND SHALL BE IN ACCORDANCE WITH SEC 706.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2″ UNLESS OTHERWISE SHOWN.

EXPOSED EDGES SHALL BE BEVELED 3/4″.

DETAILS OF SPECIAL INLET (2 FT. X 2 FT. DOUBLE DROP INLET ON RECTANGULAR BASE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SPECIAL INLET NO.2

SPECIAL SHEETS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	37

COUNTY: BUTLER

JOB NO.: J9P3764

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

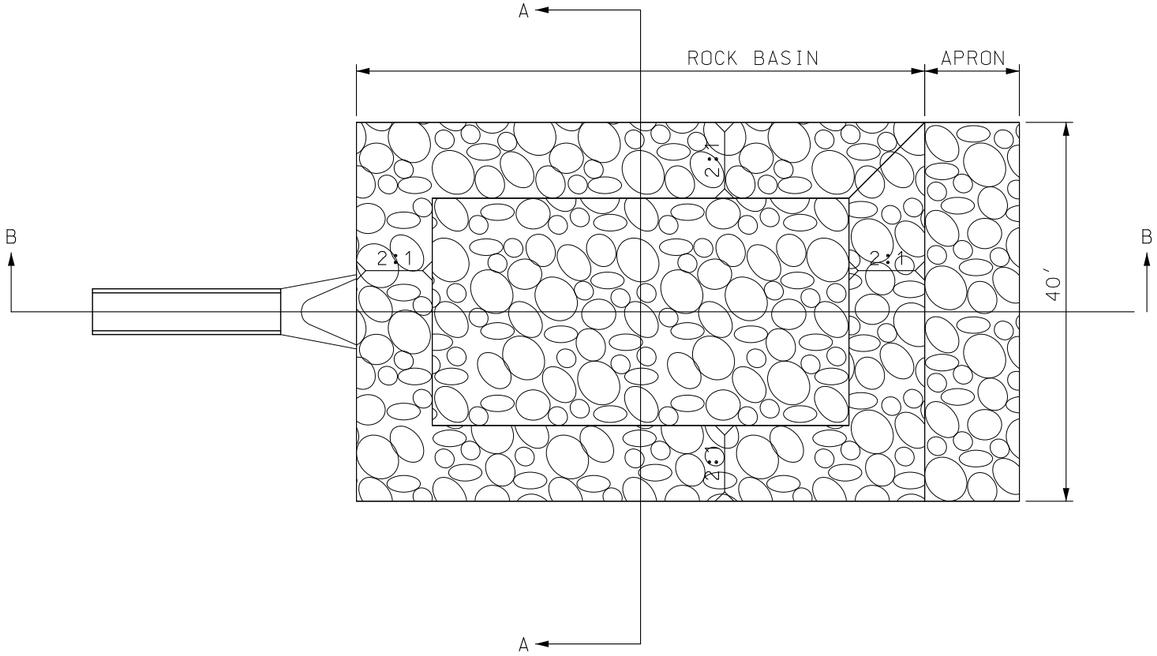
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

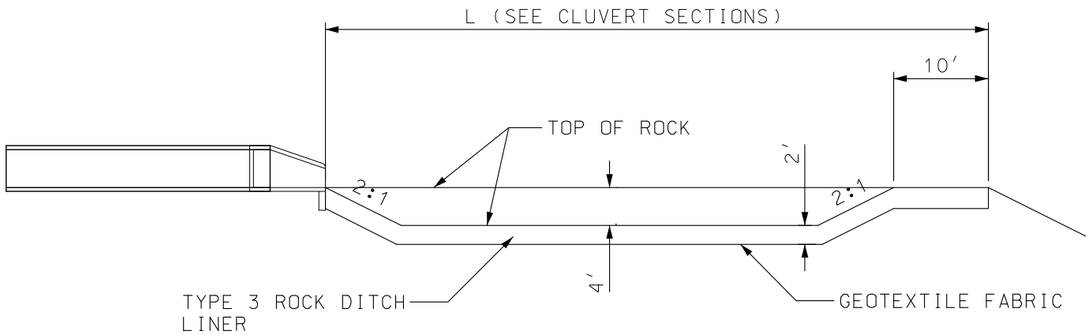
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

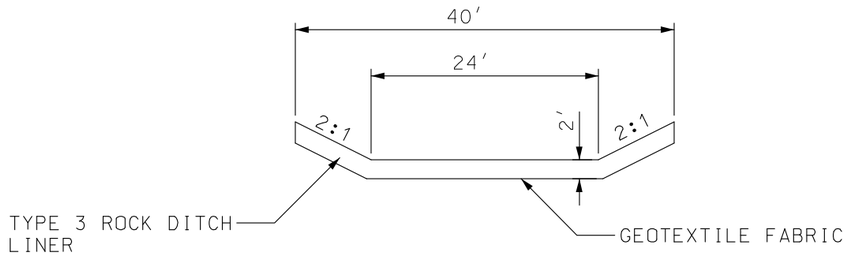
ROCK ENERGY DISSIPATOR



PLAN



SECTION B-B



SECTION A-A

NOTES:

NO DIRECT PAYMENT WILL BE MADE FOR EXCAVATION REQUIRED DURING CONSTRUCTION OF ROCK ENERGY DISSIPATOR

TYPICAL ROCK BASIN

SPECIAL SHEETS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	38

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

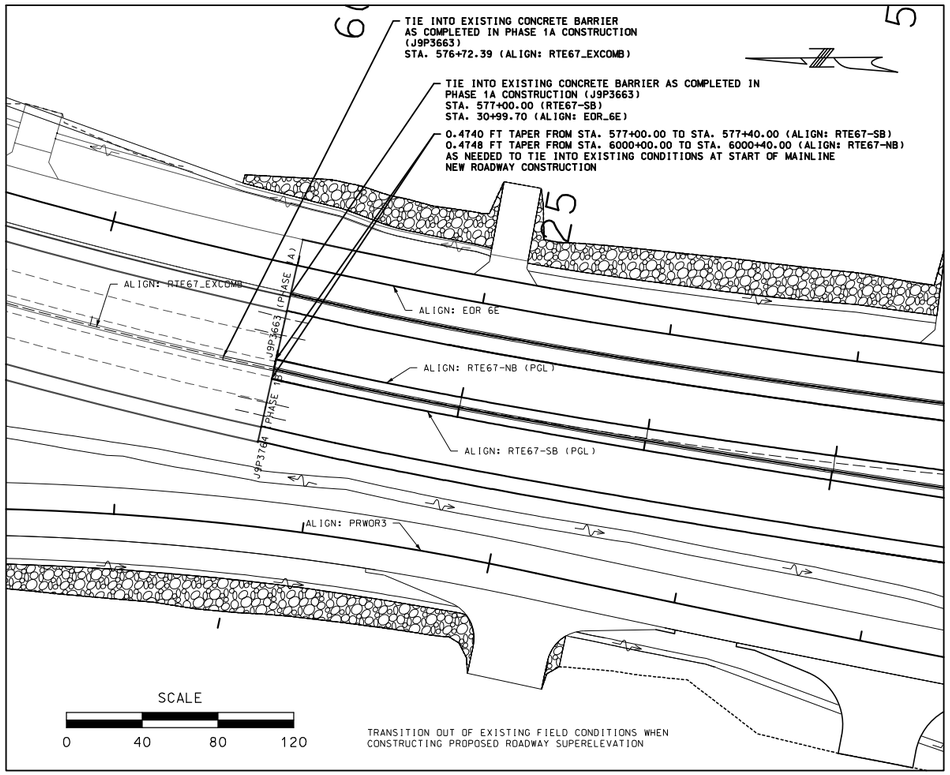
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

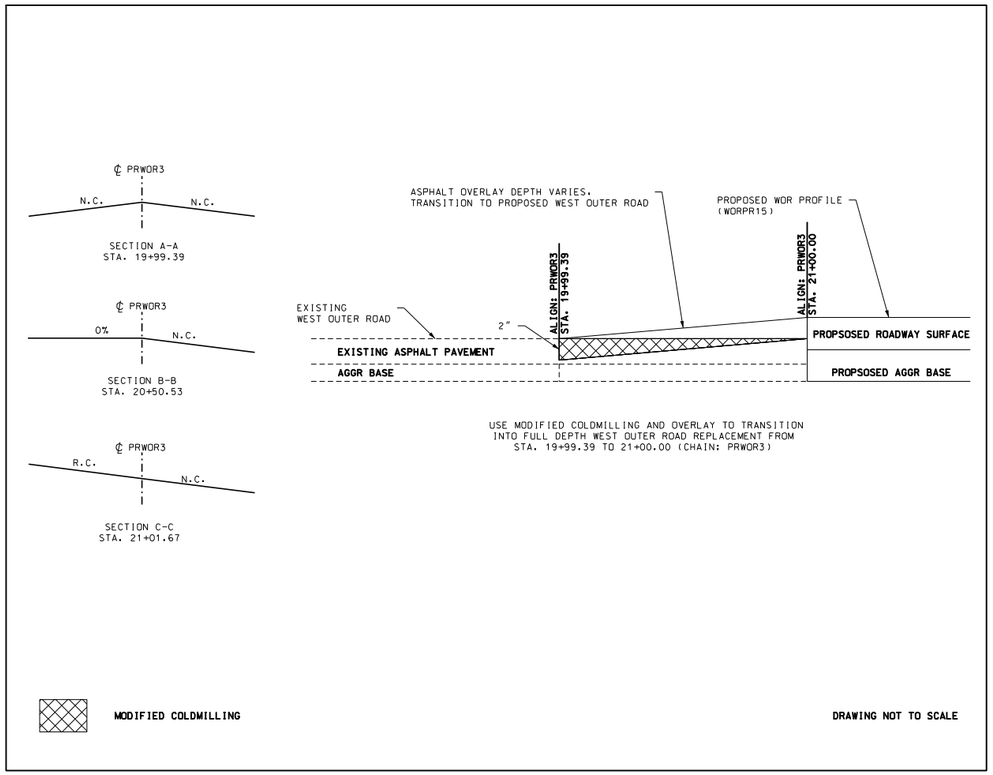
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



PHASE 1A/1B TIE (RTE67-SB & RTE67-NB ALIGNMENTS)



PHASE 1A/1B TIE (PRWOR3 ALIGNMENT)

PHASE 1A/1B TIE

SPECIAL SHEETS

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	39
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

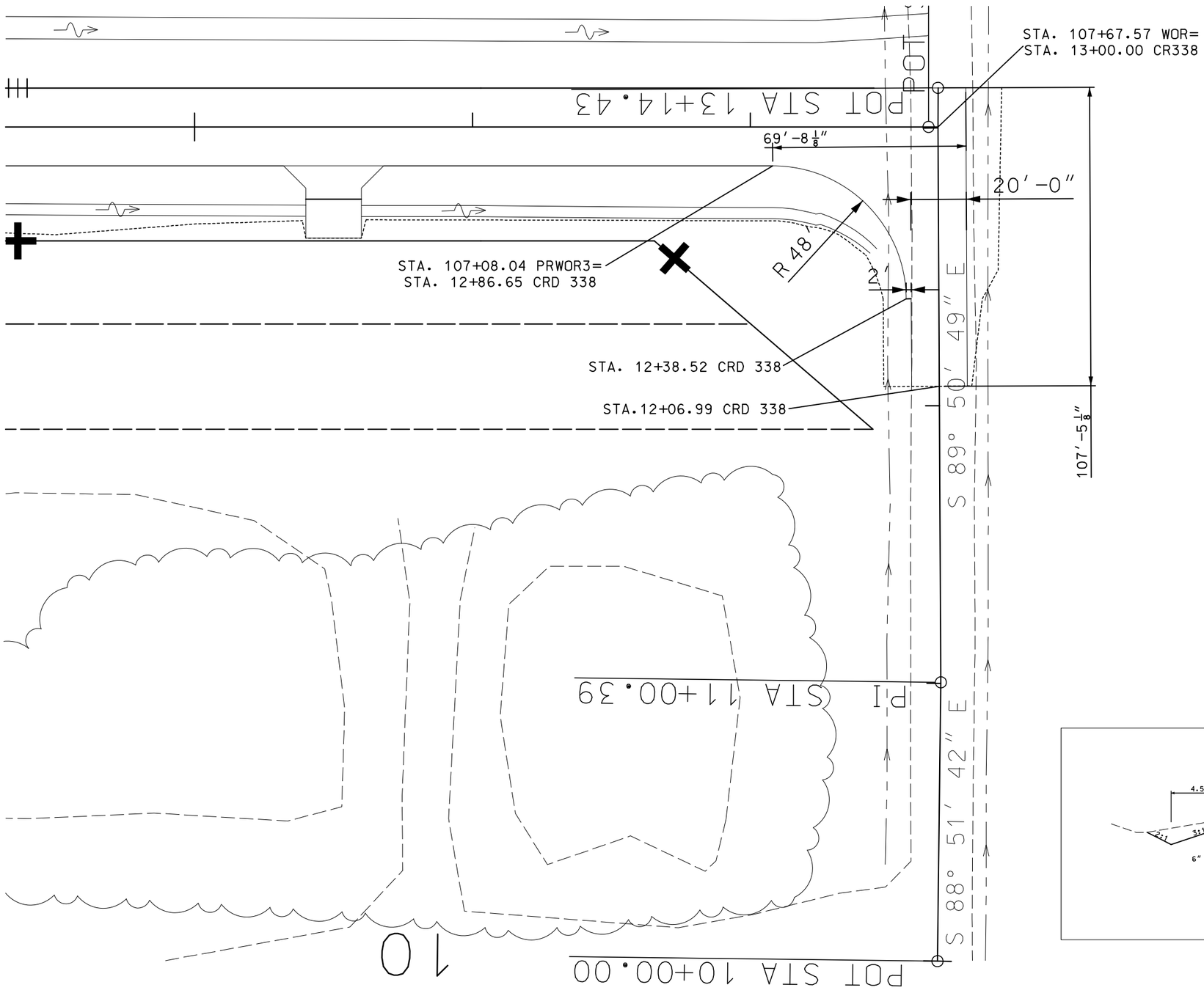
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

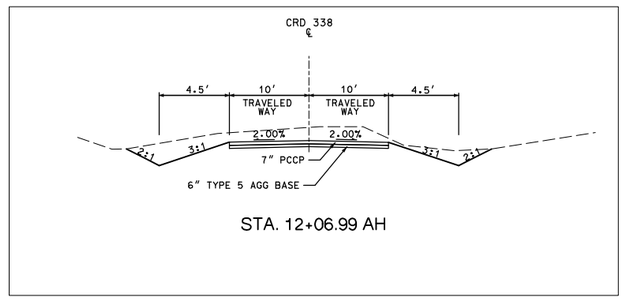
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
BFW

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.



SCALE

0 20 40 60



STA. 12+06.99 AH

CRD 338

SPECIAL SHEETS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	40

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

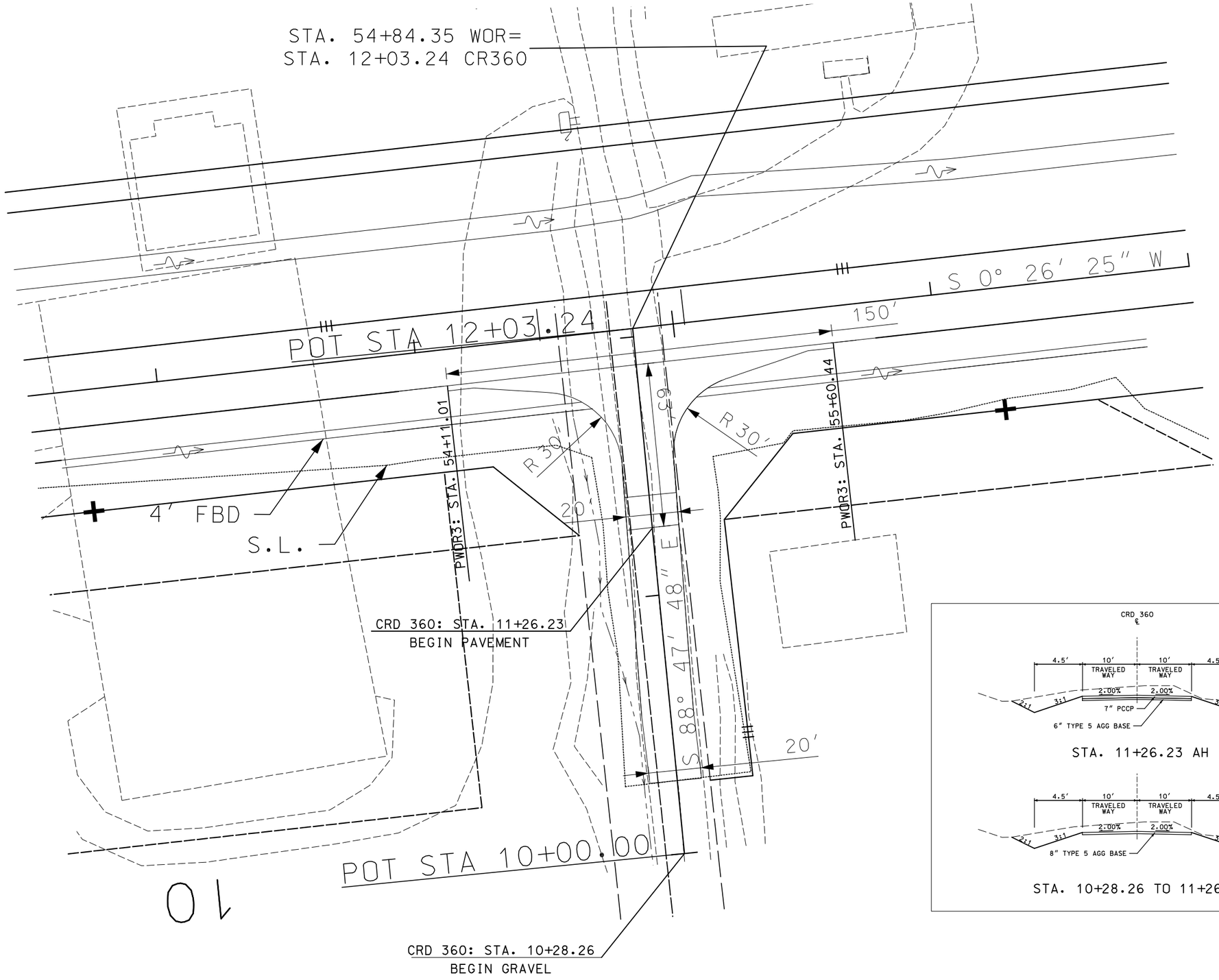
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.

BFW
411 WASHINGTON STREET • 411 S. SPRING PARK AVE. • 2917 BROADWAY, SUITE C
MARION, IL 62959 • SPRINGFIELD, IL 62704 • CAPE GIRARDEAU, MO 63703
PHONE: 618-997-1331 • PHONE: 217-787-2952 • PHONE: 573-803-2972
WWW.BFWINC.NET/LOCATION

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 20 40 60

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

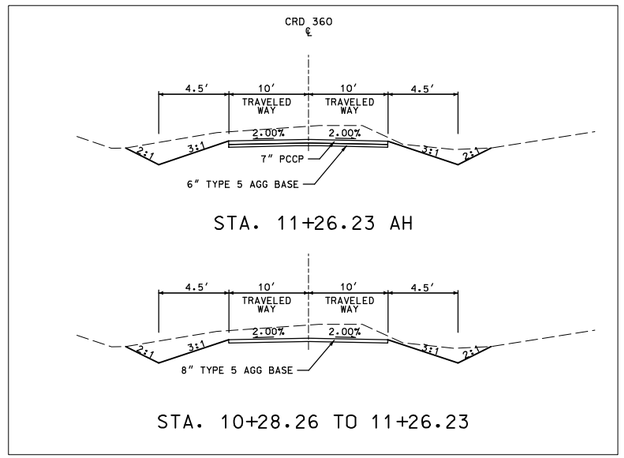
DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	41

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
BFW
411 WASHINGTON AVENUE, SUITE 1 • SAINT LOUIS, MISSOURI 63101 • PHONE 314.241.6540 • FAX 314.241.6544
WWW.BFWINC.COM
CONTRACT OF BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

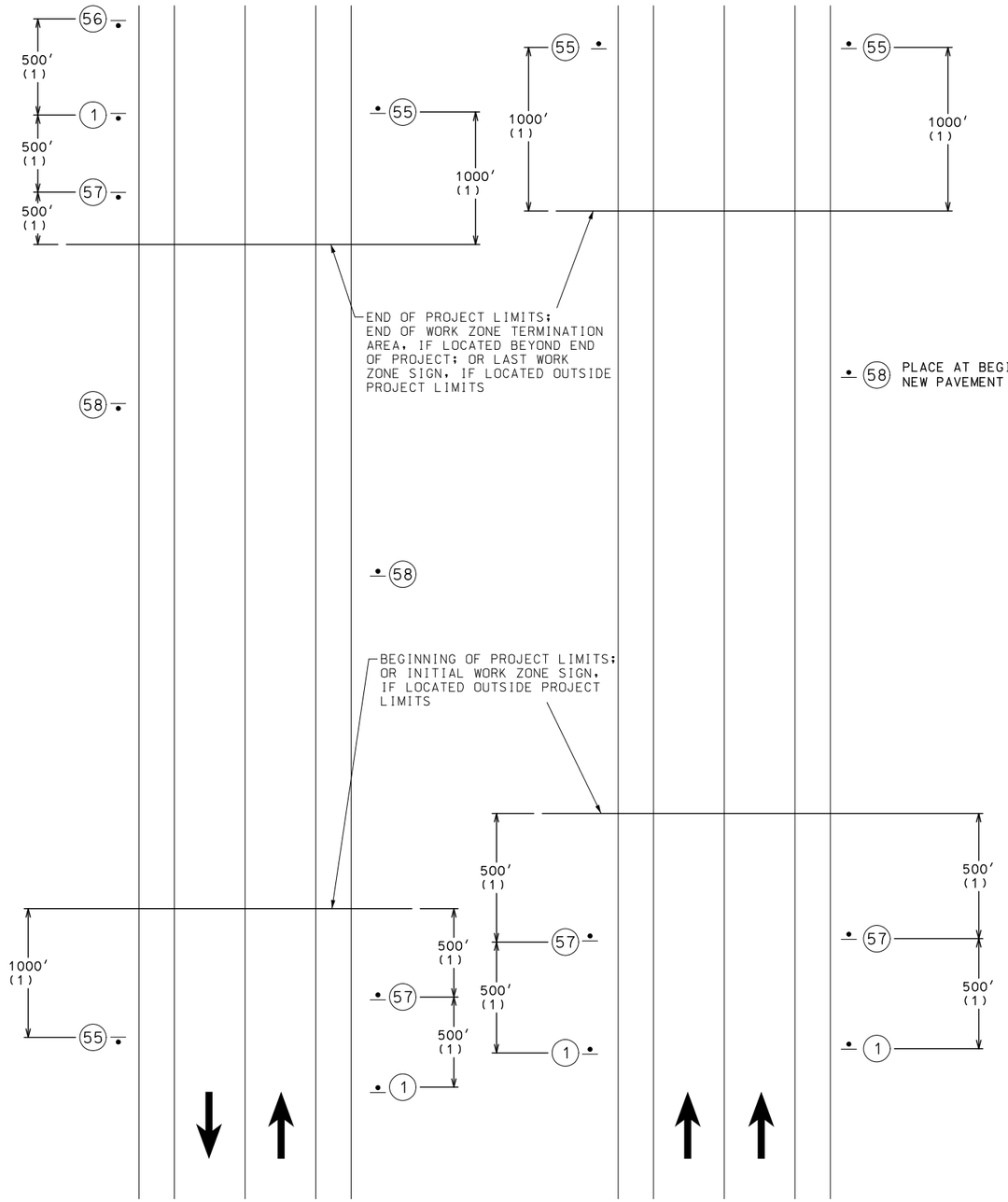
CRD 360

SPECIAL SHEETS

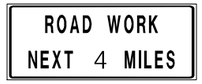
REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\039-041_SS_04-06_J9P3764_i50.dgn 3:31:10 PM 3/3/2023

BEGIN/END OF PROJECT SIGNING



NOT TO SCALE



GO20-1

(1)

CONST-8

(3)

GO20-2

(1)

CONST-5-96

(2)

GENERAL NOTES:

SIGN GO20-1 IS REQUIRED PER EPG 616.6.56.

SIGN GO20-2 IS USED ON ALL PROJECTS WHERE SIGN GO20-1 IS USED.

OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

TRAFFIC CONTROL
SHEET 1 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/01/2024 11:54:31 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	42

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

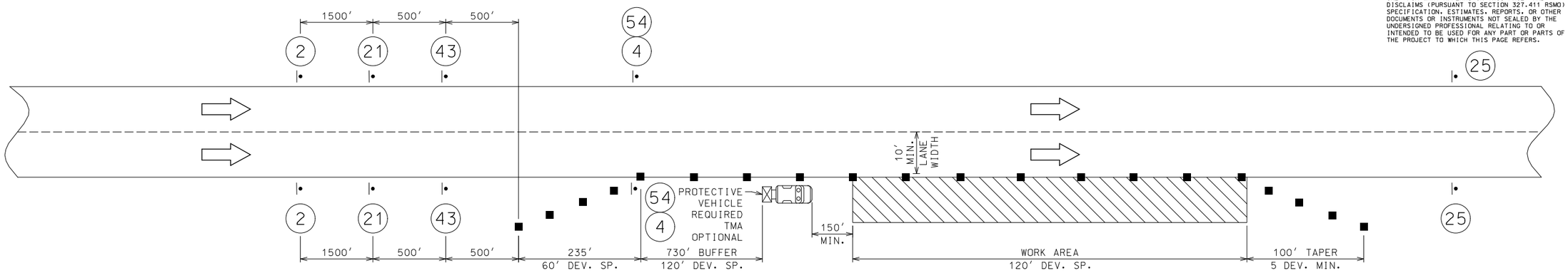
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

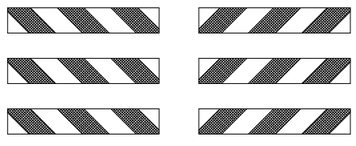


SHOULDER CLOSURE TYPICAL
ROUTE 67
LEFT OR RIGHT

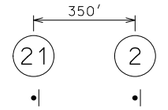
TRAFFIC CONTROL LEGEND

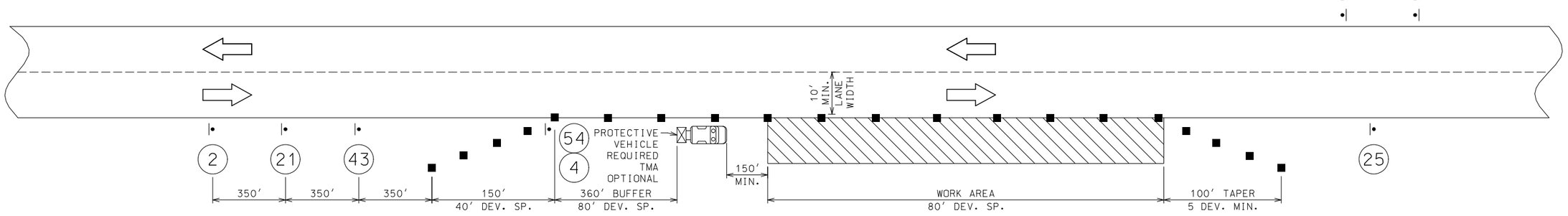
- SIGN (SINGLE SIDED)
- ADVANCED WARNING RAIL SYSTEM
- CHANNELIZER (TRIM LINE)
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- TRUCK MOUNTED ATTENUATOR
- WORK AREA

ADVANCE WARNING RAIL SYSTEM

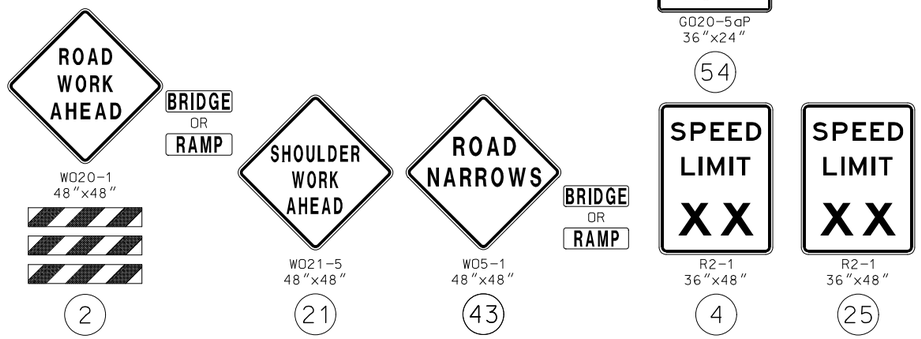


GENERAL TCP NOTES:
ALL EXISTING SIGNS THAT CONFLICT WITH THE PROPOSED TCP SHALL BE COVERED, NO DIRECT PAY.
NO DIRECT PAYMENT FOR RELOCATION OF TCP SIGNS.
ALL WARNING SIGNS SHALL HAVE FLUORESCENT SHEETING.
BUFFER LENGTH MAY BE ELIMINATED, ADJUSTED OR SHORTENED BASED ON FIELD CONDITIONS.
SEE BEGIN/END OF PROJECT SIGNING SHEET FOR ADDITIONAL SIGNS.





SHOULDER CLOSURE TYPICAL
OUTER ROAD
LEFT OR RIGHT



TRAFFIC CONTROL SHEET 2 OF 31

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

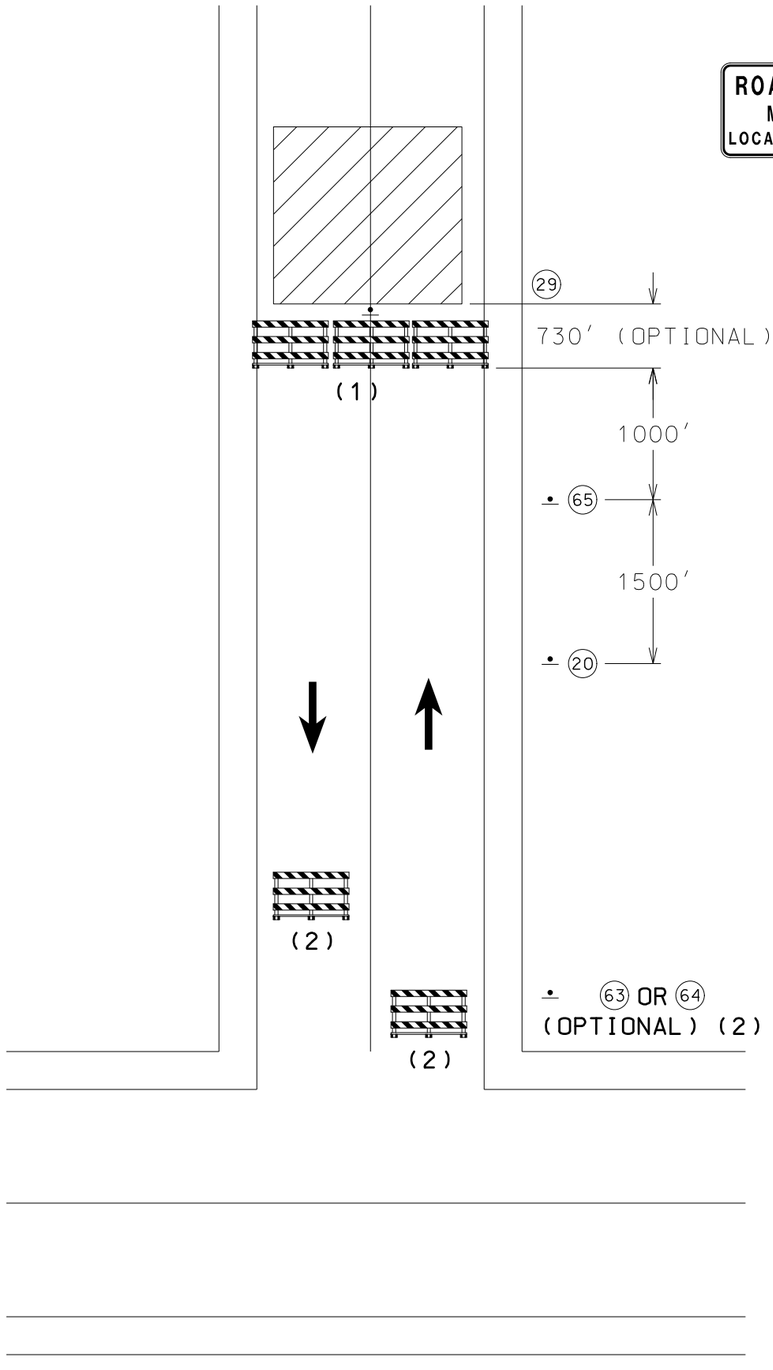
MARGARET ANN BRUNS NUMBER PE 2010000798
PROFESSIONAL ENGINEER — STATE OF MISSOURI
8/1/2024 11:54:51 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED	
8/1/2024	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	43
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

HIGHWAY CLOSURE



R11-3a
63

R11-4
64

R11-2
29

W020-3
20

W020-3
65

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- TYPE III MOVEABLE BARRICADE
- WORK AREA

NOTES:

(1) ROAD CLOSED SIGN MAY BE PLACED 7–10 FEET BEHIND THE BARRICADES AND 7′ HIGH.
ONE BARRICADE SHOULD BE REQUIRED TO COMPLETELY CLOSE EACH 8–FEET OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

(2) IF USED, 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, ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE. ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR WORK VEHICLES, LOCAL TRAFFIC, ETC.

TRAFFIC CONTROL SHOULD BE REMOVED AS SOON AS PRACTICAL AFTER CONDITION FOR THE CLOSURE NO LONGER EXISTS.

ADDITIONAL WARNING SIGNS SHOULD BE ERECTED AT EACH INTERSECTION WITHIN THE WORK ZONE.

SEE STANDARD PLAN 616.10 FOR USE OF BARRICADES AND SIGNS.

NOT TO SCALE

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/01/2024 11:54:01 AM
Margaret Ann Bruns - Civil
MO-PE-2010000798

DATE PREPARED
8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	44

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

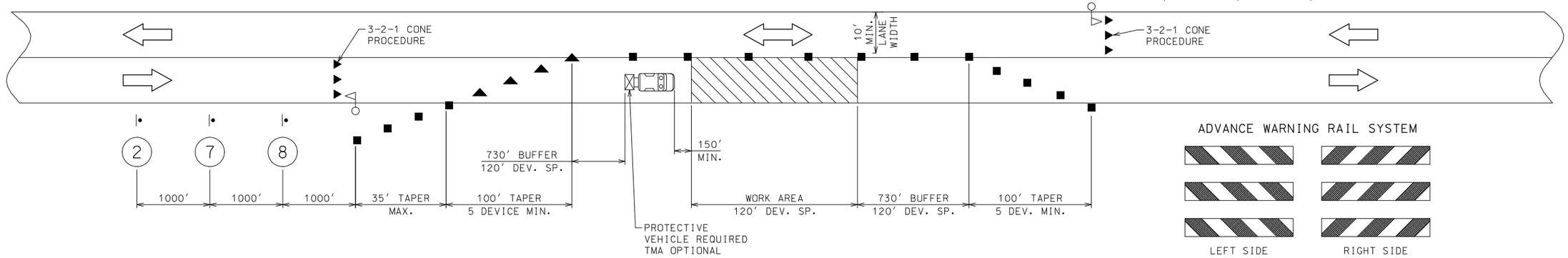
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL
SHEET 3 OF 31

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ADVANCED WARNING RAIL SYSTEM
- CHANNELIZER (TRIM LINE)
- DIRECTIONAL INDICATOR BARRICADE
- CONE
- FLASHING ARROW PANEL
- PROTECTIVE VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- WORK AREA
- FLAGGER

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

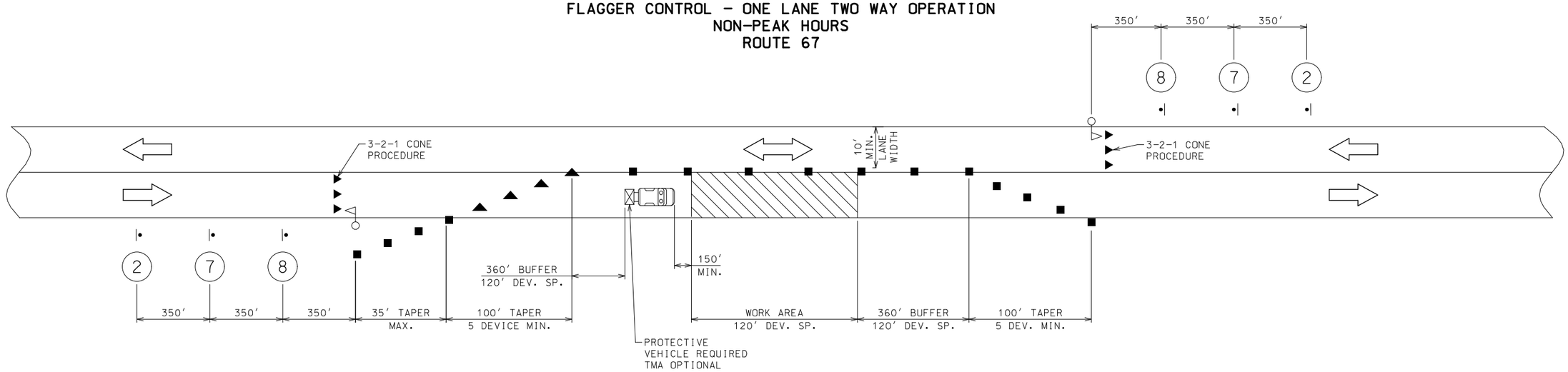


ADVANCE WARNING RAIL SYSTEM

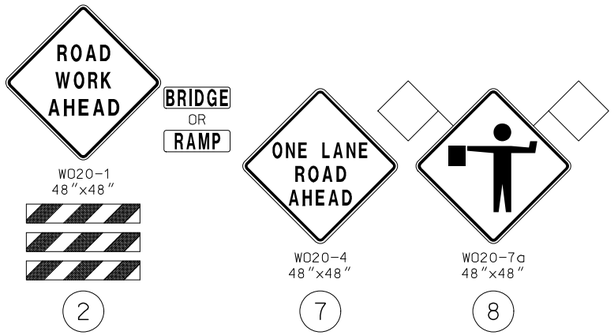
LEFT SIDE OF ROAD

RIGHT SIDE OF ROAD

FLAGGER CONTROL – ONE LANE TWO WAY OPERATION
NON-PEAK HOURS
ROUTE 67



FLAGGER CONTROL – ONE LANE TWO WAY OPERATION
NON-PEAK HOURS
OUTER ROAD



TRAFFIC CONTROL
SHEET 4 OF 31

STATE OF MISSOURI
PROFESSIONAL ENGINEER
MARGARET ANN BRUNS
NUMBER PE-2010000798
8/01/2024 11:53:44 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	45

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

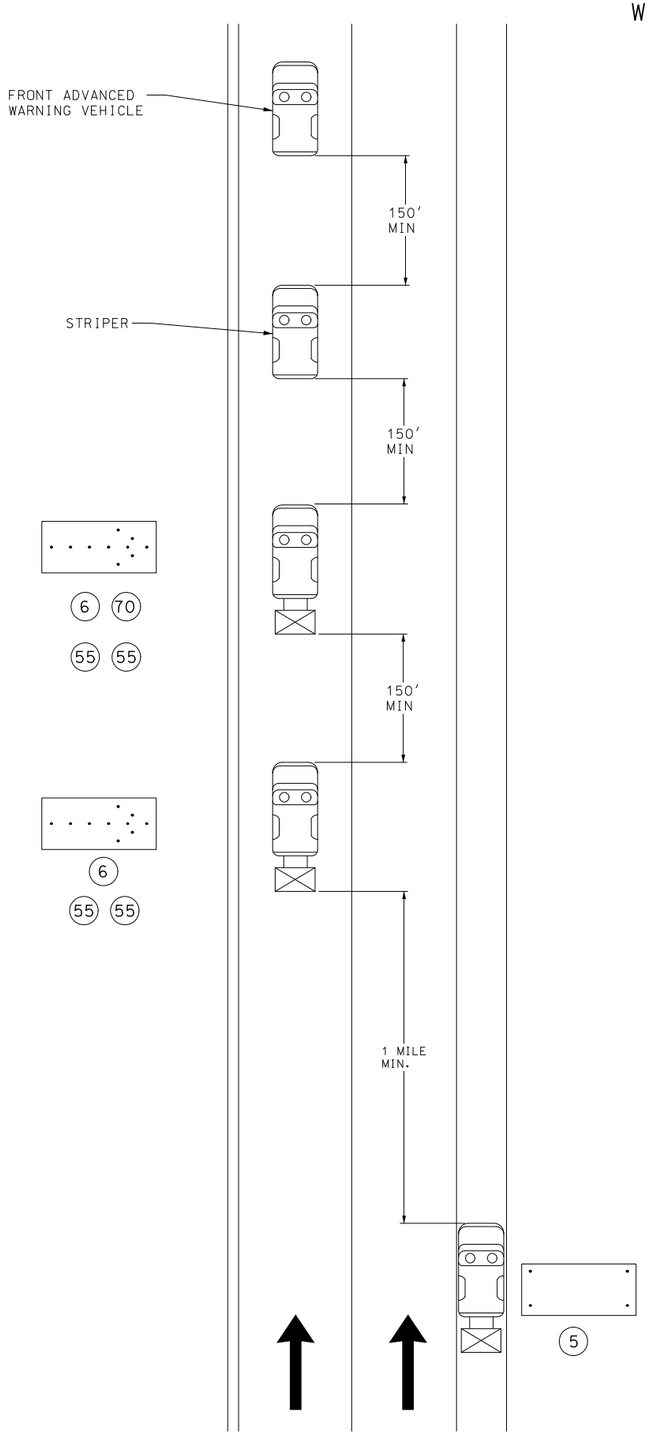
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

MOBILE OPERATIONS FOR PAVEMENT MARKING FOR A 2 LANE DIVIDED HIGHWAY WITH NARROW/NO SHOULDER



LEGEND

PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)

OR

FLASHING ARROW PANEL

NOTES:

UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH INTENSITY ROTATING, FLASHING, OSCIALLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE IS CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

W020-5
5

W020-6a
6

G022-1
21"x15"
55

SPECIAL SIGN
70

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

08/01/2024 11:53:28 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/1/2024	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	46
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

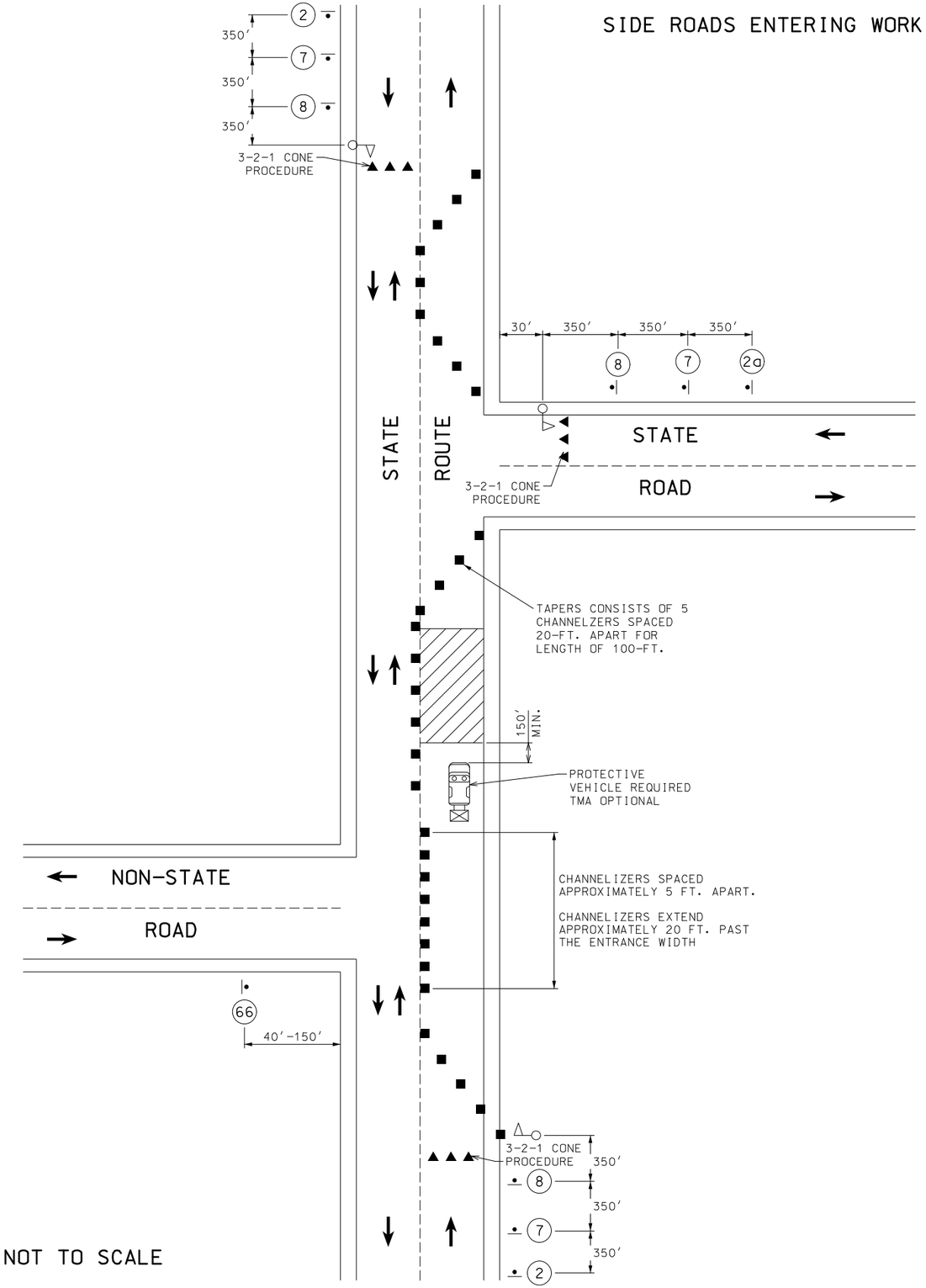
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

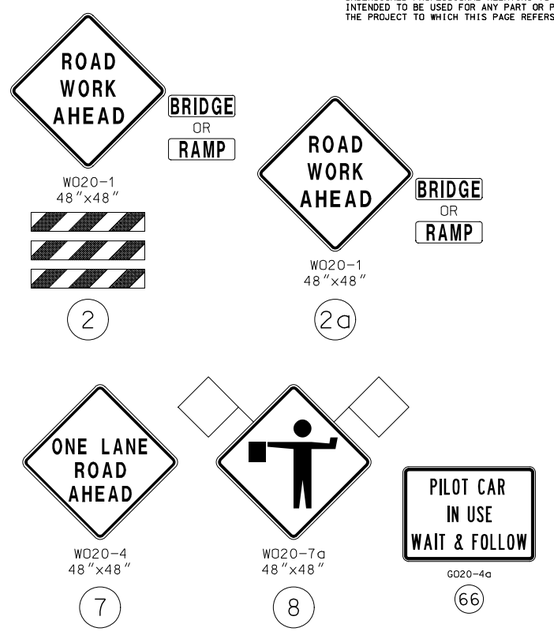
TRAFFIC CONTROL
SHEET 5 OF 31

REV.

SIDE ROADS ENTERING WORK ZONES



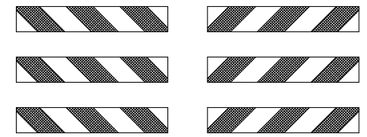
NOT TO SCALE



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- FLAGGER

ADVANCE WARNING RAIL SYSTEM



LEFT SIDE OF ROAD

RIGHT SIDE OF ROAD

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER

8/01/2024 11:53:08 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED: 8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	47

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

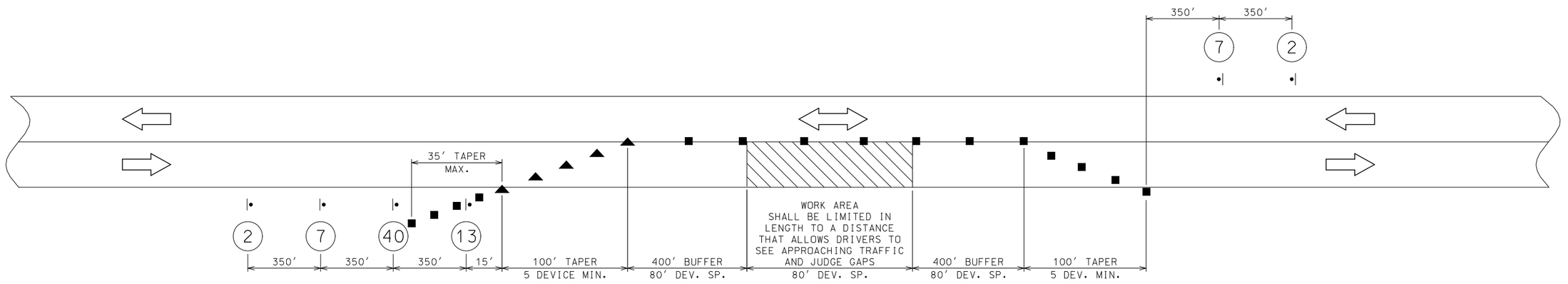
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL
SHEET 6 OF 31

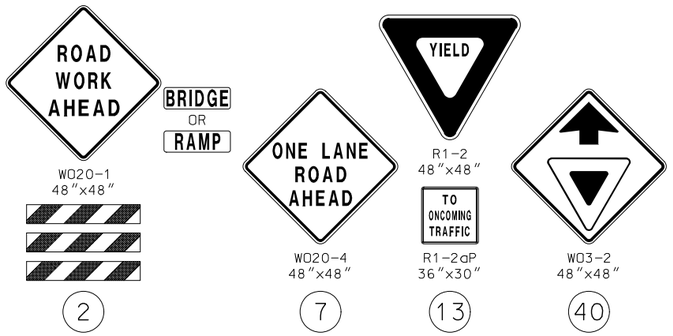
REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NON-WORKING HOURS – ONE LANE TWO WAY OPERATION
LOW VOLUME ROADS

ONLY FOR USE ON STAGE 3
HIGHWAY CLOSURE FOR LOCAL TRAFFIC ONLY



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ADVANCED WARNING RAIL SYSTEM
- CHANNELIZER (TRIM LINE)
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- TRUCK MOUNTED ATTENUATOR
- WORK AREA

TRAFFIC CONTROL
SHEET 7 OF 31

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 8/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	48

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

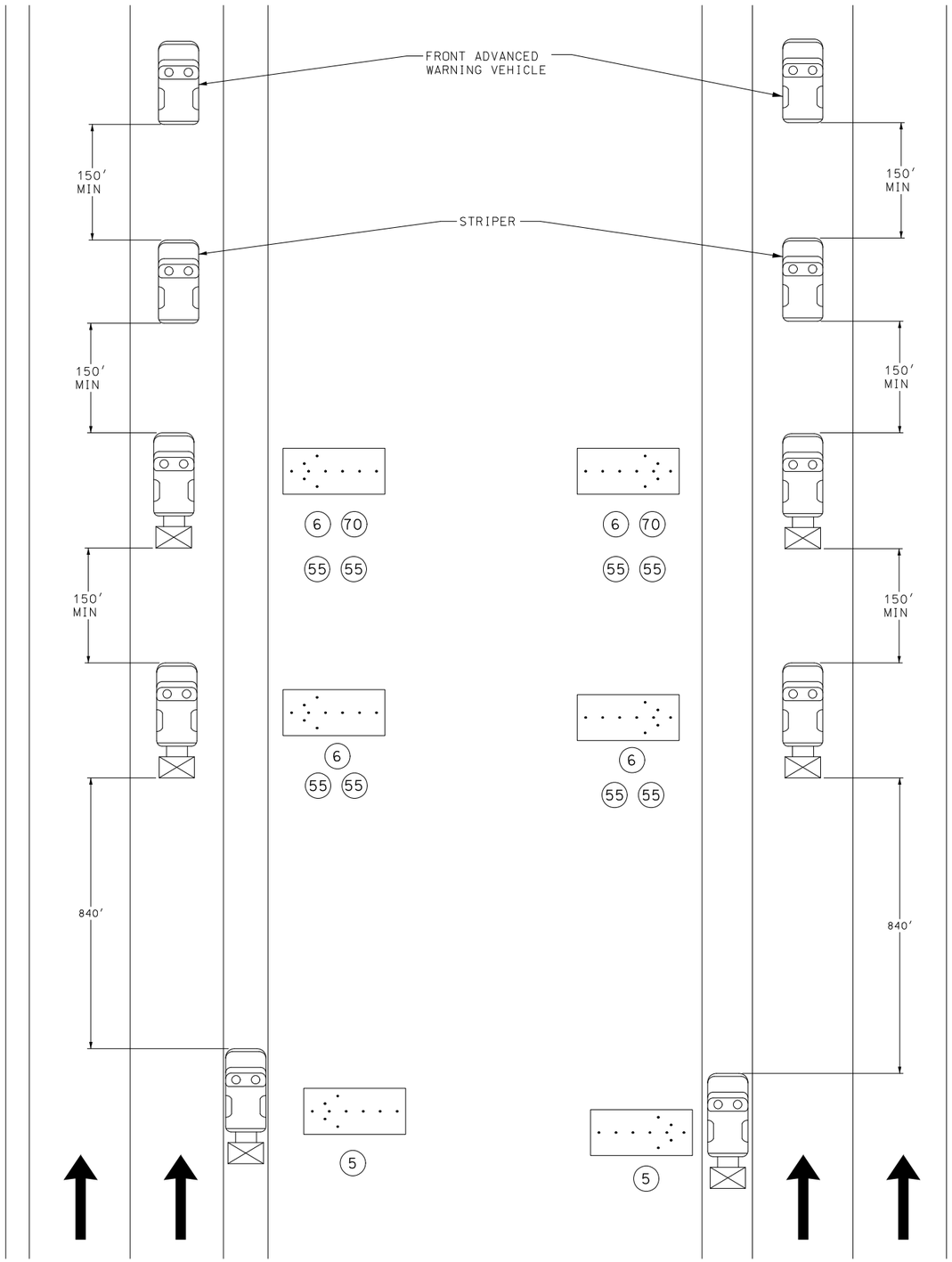
REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\048_TC_07_J9P3764_i1.dgn 11:25:09 AM 8/1/2024

MOBILE OPERATIONS FOR PAVEMENT MARKING FOR A 2 LANE DIVIDED HIGHWAY



LEGEND

PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL OR FLASHING ARROW PANEL

NOTES:

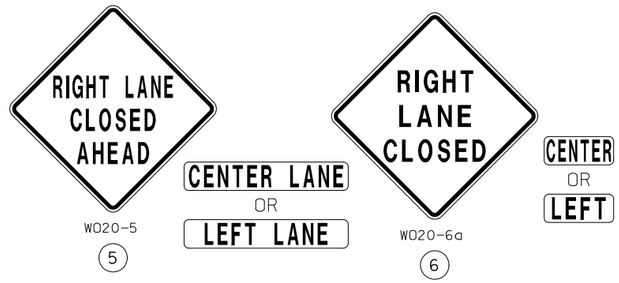
UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH INTENSITY ROTATING, FLASHING, OSCIALLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE IS CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.



NOT TO SCALE

TRAFFIC CONTROL
SHEET 8 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
8/01/2024 11:52:52 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED: 8/1/2024
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 49
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

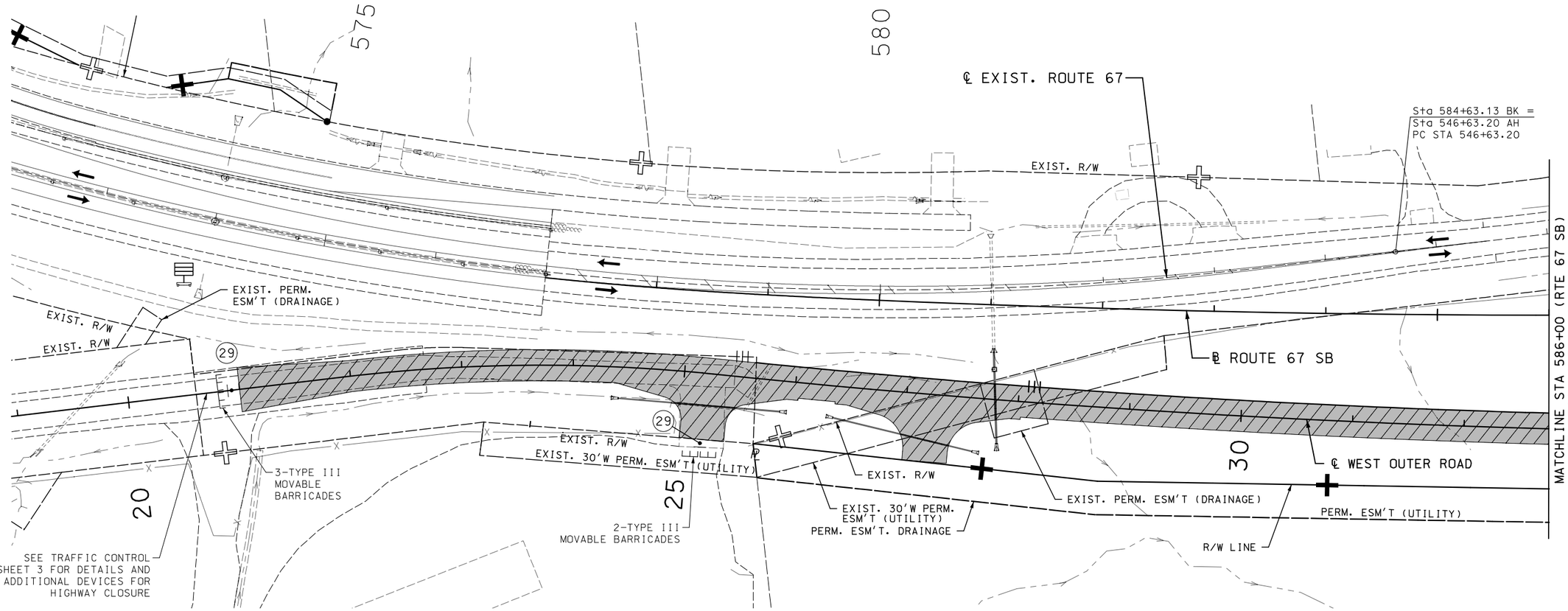
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TCP GENERAL NOTES:

1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

ROAD CLOSED
R11-2
48"x30"
29

STAGE 1A: CONSTRUCT WEST OUTER ROAD WHILE MAINTAINING ACCESS TO ALL DRIVEWAYS WEST OF US 67 (MAY REQUIRE BUILDING TEMPORARY DRIVEWAYS - NO DIRECT PAY).

SCALE
0 50 100 150

ROUTE 67 - STAGE 1A
TRAFFIC CONTROL
SHEET 9 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	50

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

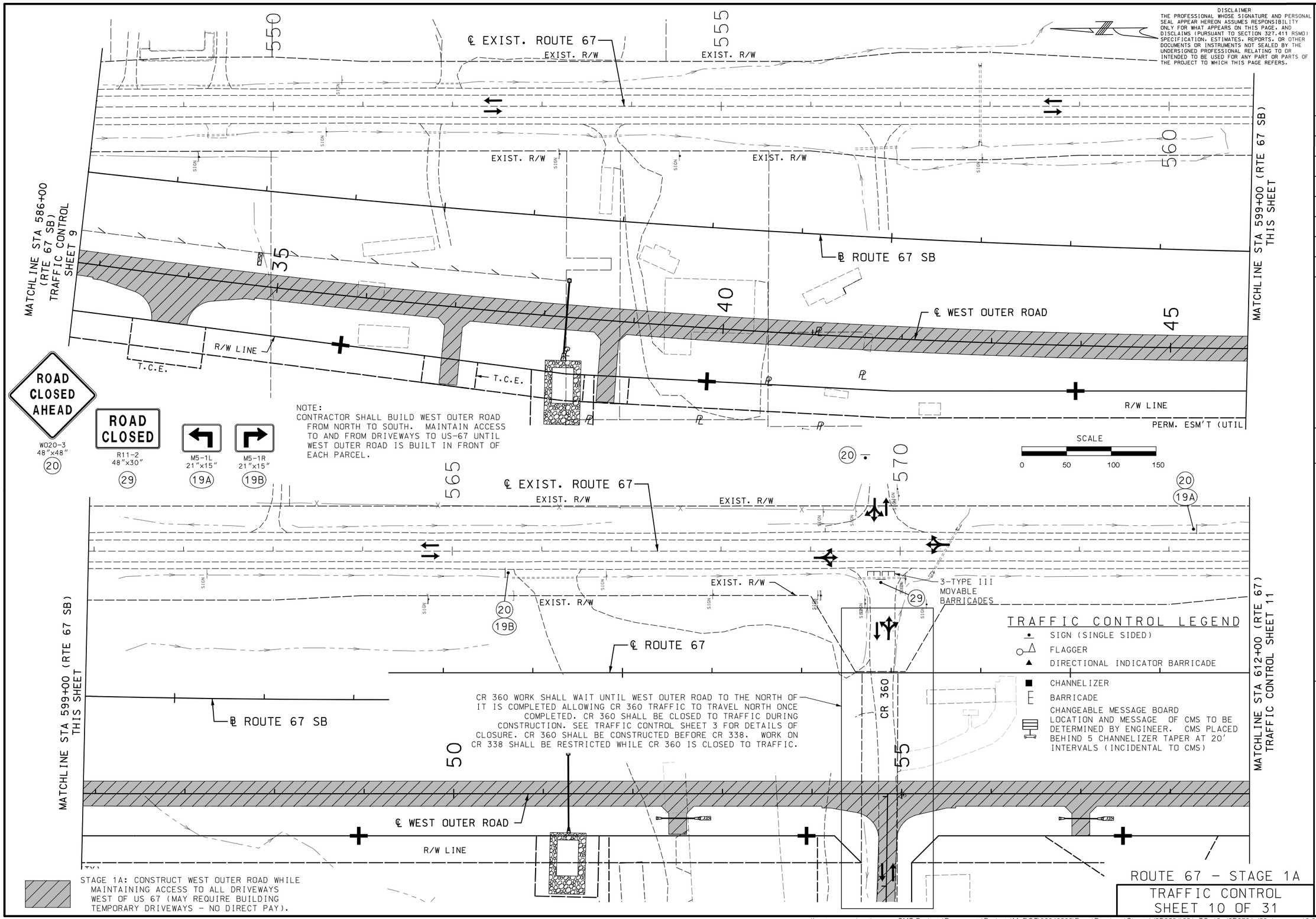
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\050_TC_09_J9P3764_i50.dgn 3:14:28 PM 3/1/2023



ROUTE 67 – STAGE 1A

TRAFFIC CONTROL SHEET 10 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

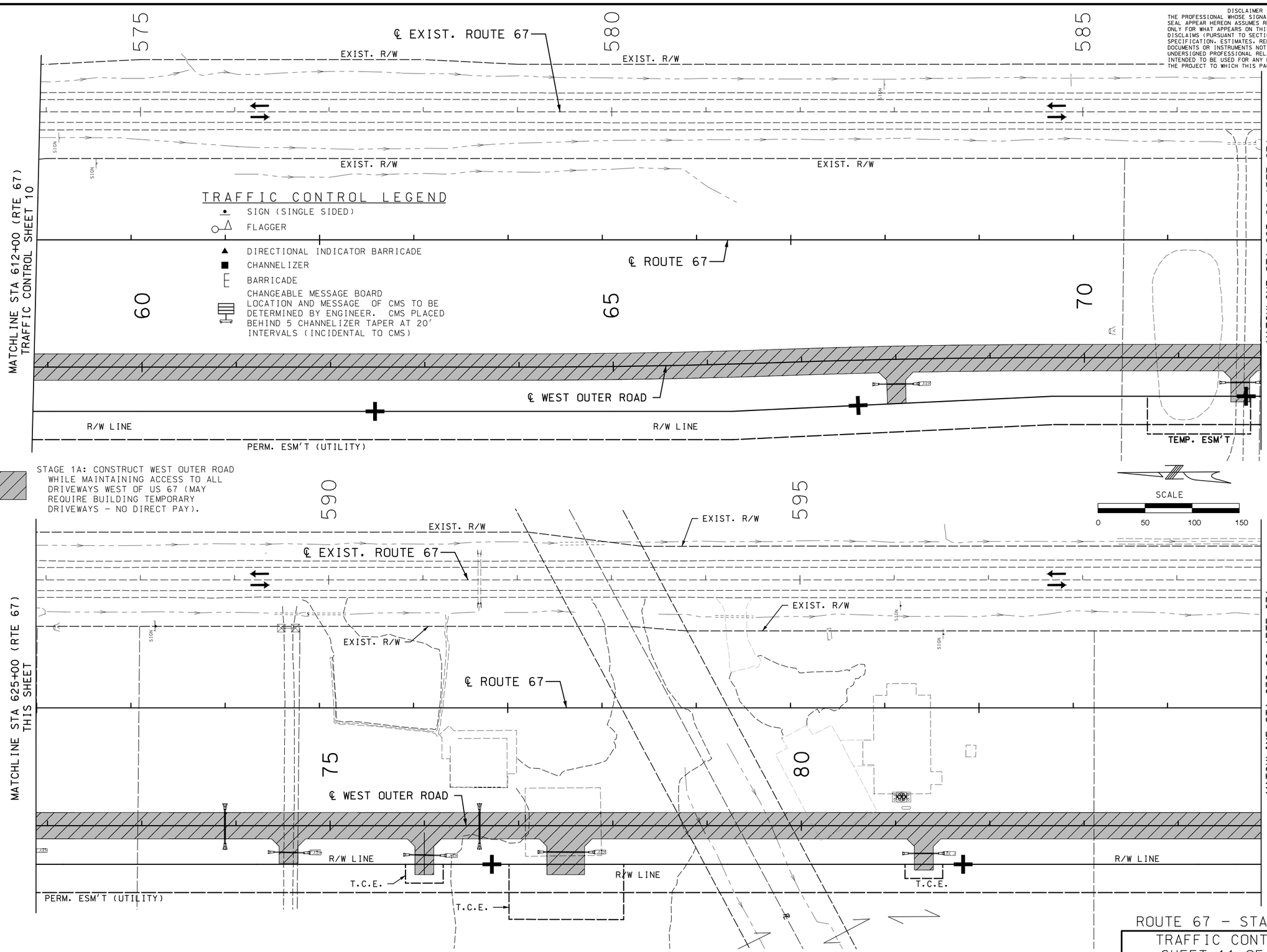
DATE PREPARED	3/1/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	51
COUNTY	BUTLER
JOB NO.	J9P3764
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\051_TC_10_J9P3764_i50.dgn 12:04:30 PM 3/1/2023



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
3/1/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	52
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

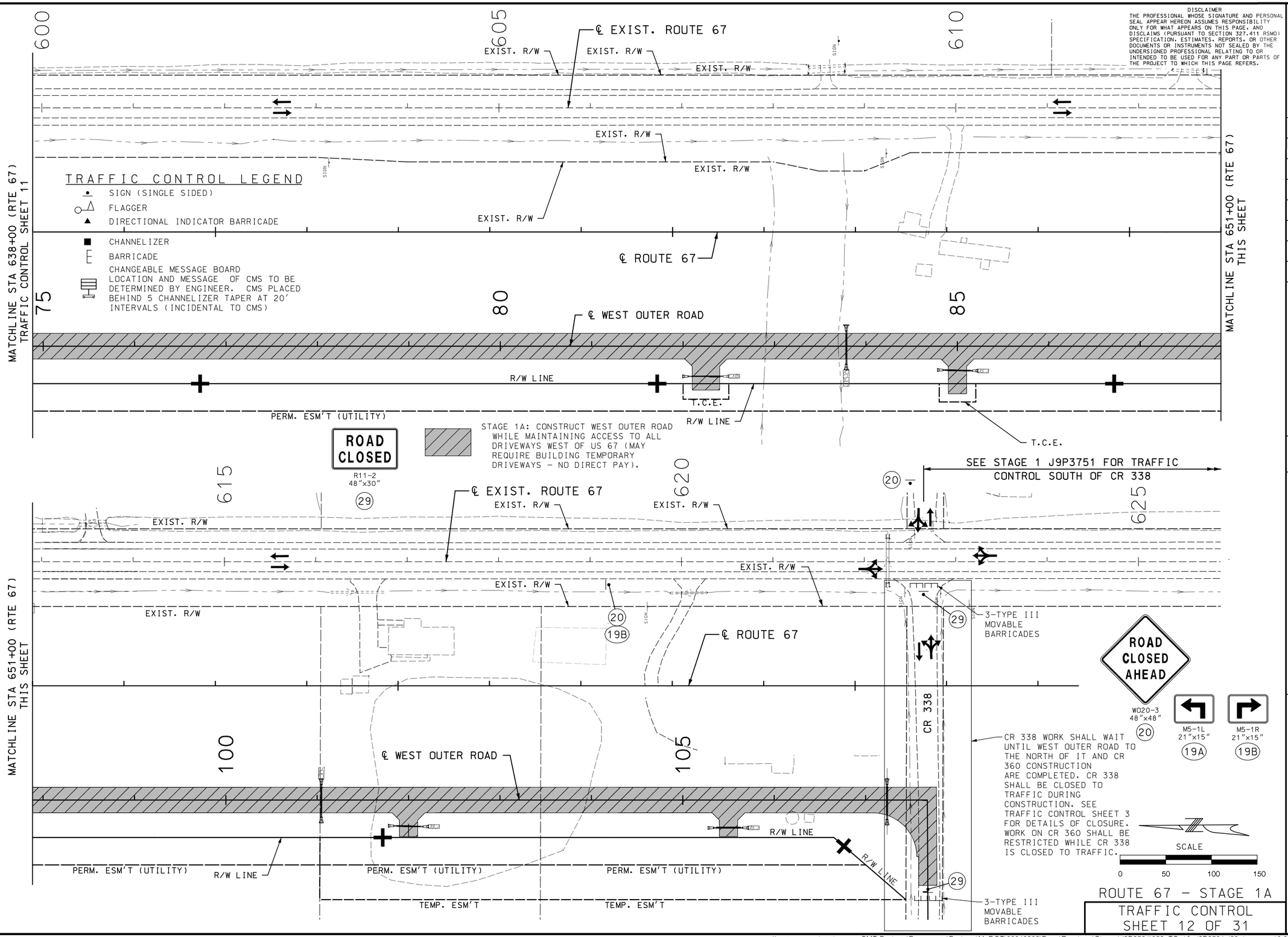
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

ROUTE 67 – STAGE 1A
TRAFFIC CONTROL
SHEET 11 OF 31



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER E-23328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 53
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67 - STAGE 1A
TRAFFIC CONTROL
SHEET 12 OF 31

REV.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD — LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)
- PAVEMENT EDGE TREATMENT

STAGE 1B:
OPEN WEST OUTER ROAD TO TRAFFIC INCLUDING ALL DRIVEWAYS. CONSTRUCT US-67 SOUTH OF STA. 585+07 TO CR 338 (CONSTRUCTION CONTINUES WITH PROJECT J9P3751) CONSTRUCT THE WEST SHOULDER AND WESTERN MOST SOUTHBOUND LANE OF US-67 NORTH OF STA. 585+07 CONSTRUCT EAST SHOULDER TO NORTH OF STA. 580+79 (SHALL CARRY 1 NORTHBOUND LANE OF TRAFFIC IN STAGE 2B)

PREVIOUS CONSTRUCTION

SPEED LIMIT 60 — R2-1 36"x48" — (25)

ROAD WORK AHEAD — WO20-1 48"x48" — (2)

ROAD WORK AHEAD — WO20-1 48"x48" — (2a)

WORK ZONE — G020-5aP 36"x24" — (54)

SPEED LIMIT 50 — R2-1 36"x48" — (4)

RUMBLE STRIPS AHEAD — SPECIAL 48"x48" — (80)

ROAD NARROWS — WO5-1 48"x48" — (43)

MIN. $250 FINE / SPEEDING WHEN WORKERS PRESENT — CONST-3A 60"x48" — (53)

ROAD CLOSED — R11-2 48"x30" — (29)

SHOULDER WORK AHEAD — WO21-5 48"x48" — (21)

ONE LANE ROAD AHEAD — WO20-4 48"x48" — (7)

TCP GENERAL NOTES:
SEE TRAFFIC CONTROL SHEET 14 FOR GENERAL NOTES.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI — PAUL JOSEPH KRONLAGE — NUMBER EN 023328 — REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

℄ EXIST. ROUTE 67

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

2 — 1000′ — 53 — 1000′ — 21 — 80 — 200′ — 43 — 1000′

STA 556+54 — 350′ — 2a — 21

℄ EAST OUTER ROAD

2a — 350′ — 7 — 350′ — 40 — 350′

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

℄ EXIST. ROUTE 67

25 — STA 560+55 — CMS — 1000′ — 54 — 4

235′ SHOULDER TAPER
5 CHANELIZER @ 60′ SP.

180′ SHIFTING TAPER
3 CHANELIZER @ 60′ SP.

660′
5 CHANELIZER @ 120′ SP.

PAVEMENT MARKING REMOVAL – 1480′
TEMP. PVMT. MRKG. – 840′ SOLID YELLOW, 840′ SOLID WHT.

TEMPORARY PAVEMENT – SEE TCP SHEET 19 FOR MORE INFORMATON AND BASELINE STAGE 2B TEMP. PROFILE FOR CONSTRUCTION

REMOVE AND REPLACE WITH ABSORB M NARROW ATTENUATOR

PAVEMENT MARKING REMOVAL – 1805′
TEMPORARY PAVEMENT MARKING – 1700′ SOLID YELLOW, 1700′ SOLID WHITE

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

350′ — 50′ TAPER — 15′ — 200′ BUFFER — 4 CHANELIZER @ 50′ SP. — IMPACT ATTENUATOR 55 MPH — +50 BEGIN TEMP. BARRIER — 100′ TAPER — 5 CHAN. MIN. — 8:1 TAPER — 13

+54 END TEMP. BARRIER

BARRIER HEIGHT TRANSITION
1- TYPE III MOVEABLE BARRICADE

CONSTRUCT TEMPORARY PAVEMENT TO TEMPORARY PROFILE. SEE TCP SHEET 19 FOR MORE INFORMATION.

480′ PAVEMENT EDGE TREATMENT

℄ ROUTE 67 NB
℄ EAST OUTER ROAD

500′ TEMP. BARRIER ANCHORED

EXIST. R/W

℄ EXIST. ROUTE 67

Sta 584+63.13 BK = Sta 546+63.20 AH
PC STA 546+63.20

20′ TYP. — 20′ TYP.

IMPACT ATTENUATOR 60 MPH — 8:1 TAPER — +78 BEGIN TEMP. BARRIER

EXIST. R/W
EXIST. R/W

120′ TYP.

℄ ROUTE 67 SB

450′ TEMP. BARRIER ANCHORED

EXIST. R/W
EXIST. 30′W PERM. ESM′T (UTILITY)

IMPACT ATTENUATOR 60 MPH

℄ WEST OUTER ROAD
INSTALL PERMANENT PAVEMENT MARKING AND SIGNING BEFORE OPENING TO TRAFFIC

BARRIER NORTH OF 584+40 SHALL NOT BE CONSTRUCTED UNTIL STAGE 2B

MATCHLINE STA 586+00 (RTE 67 SB)
TRAFFIC CONTROL SHEET 15

EXIST. R/W — +24 END TEMP. BARRIER

EXIST. 30′W PERM. ESM′T (UTILITY)
PERM. ESM′T. DRAINAGE

660′
5 CHANELIZER @ 120′ SP.

PAVEMENT MARKING REMOVAL – 1480′
TEMPORARY PAVEMENT MARKING – 840′ SOLID YELLOW, 840′ SOLID WHITE

20 — 25 — 30 — 6000 — 6005 — 580 — 585 — 35

SCALE
0 — 50 — 100 — 150

ROUTE 67 – STAGE 1B
TRAFFIC CONTROL
SHEET 13 OF 31

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

MATCHLINE STA 586+00 (RTE 67 SB) TRAFFIC CONTROL SHEET 15

STOP — R1-1 30"x30" — (40)

YIELD — R1-2 48" — (13)

TO ONCOMING TRAFFIC — R1-2aP 36"x36"

WO3-2 48"x48"

DATE PREPARED: 3/1/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 54
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\054_TC_13_J9P3764_i50.dgn 12:04:46 PM 3/1/2023

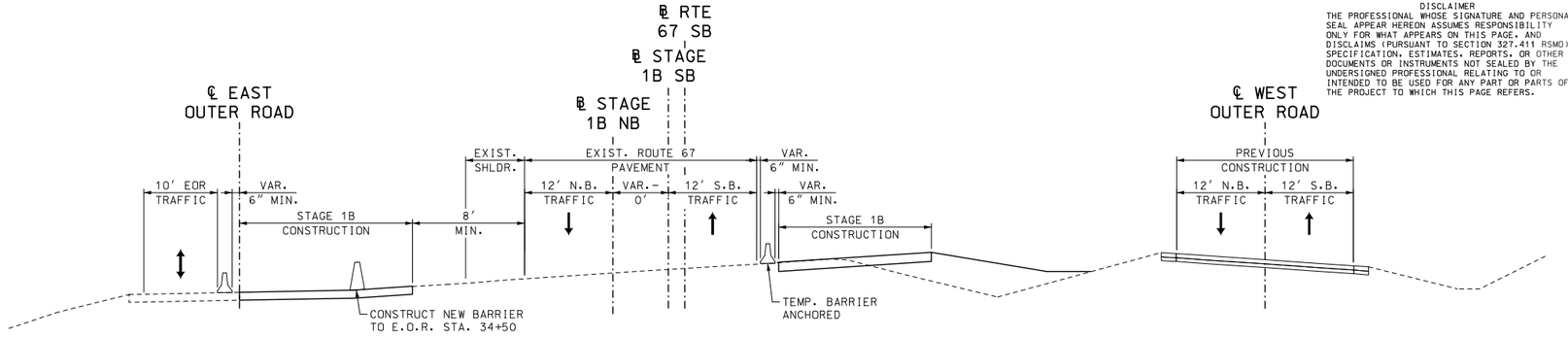
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)
- PAVEMENT EDGE TREATMENT

STAGE 1B:
OPEN WEST OUTER ROAD TO TRAFFIC INCLUDING ALL DRIVEWAYS. CONSTRUCT US-67 SOUTH OF STA. 585+07 TO CR 338 (CONSTRUCTION CONTINUES WITH PROJECT J9P3751) CONSTRUCT THE WEST SHOULDER AND WESTERN MOST SOUTHBOUND LANE OF US-67 NORTH OF STA. 585+07 CONSTRUCT EAST SHOULDER TO NORTH OF STA. 580+79 (SHALL CARRY 1 NORTHBOUND LANE OF TRAFFIC IN STAGE 2B)

PREVIOUS CONSTRUCTION

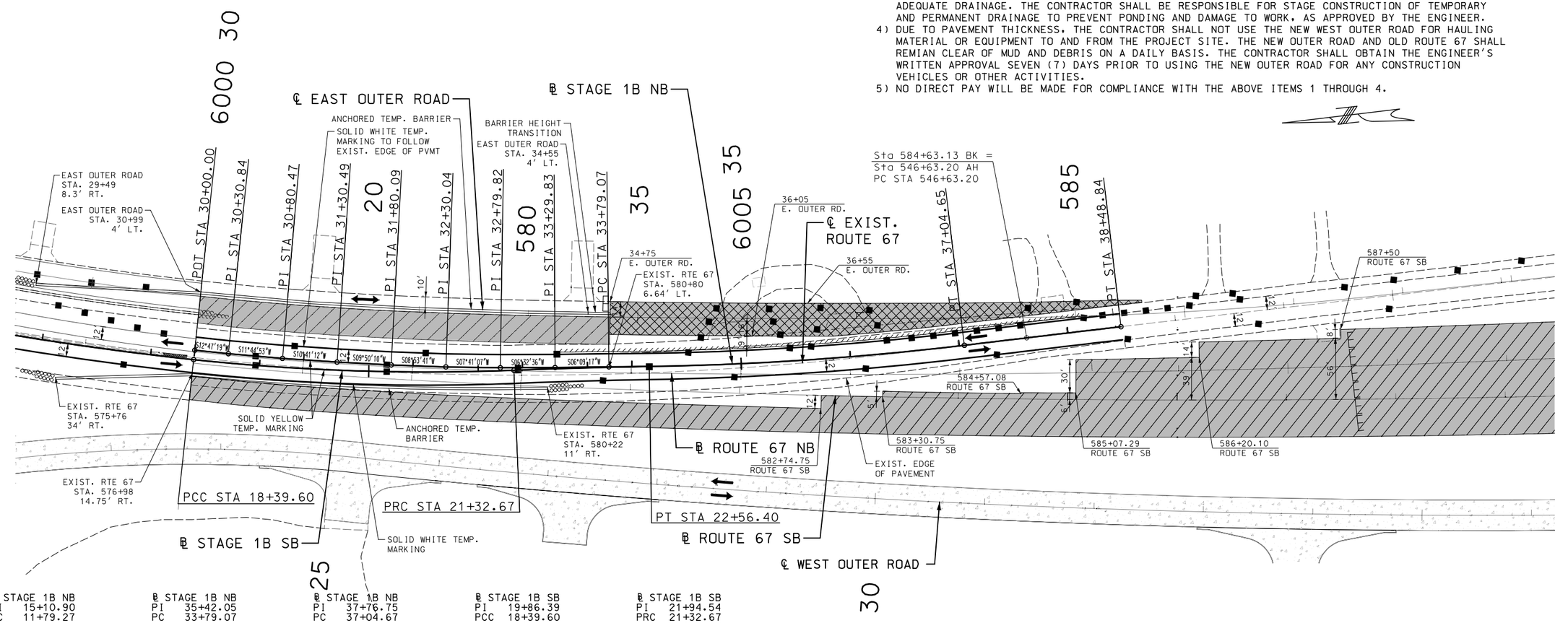
TEMPORARY PAVEMENT - SEE TCP SHEET 19 FOR MORE INFORMATON AND BASELINE STAGE 2B TEMP. PROFILE FOR CONSTRUCTION



STAGE 1B
TRAFFIC CONFIGURATION TYPICAL

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TCP GENERAL NOTES:
1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.



℄ STAGE 1B NB		℄ STAGE 1B NB		℄ STAGE 1B NB		℄ STAGE 1B SB		℄ STAGE 1B SB	
PI	15+10.90	PI	35+42.05	PI	37+76.75	PI	19+86.39	PI	21+94.54
PC	11+79.27	PC	33+79.07	PC	37+04.67	PCC	18+39.60	PRC	21+32.67
PCC	18+39.60	PT	37+04.65	PT	38+48.84	PRC	21+32.67	PT	22+56.40
Δ	13° 11′ 50.7″ (LT)	Δ	6° 42′ 04.2″ (LT)	Δ	0° 07′ 12.5″ (RT)	Δ	8° 23′ 45.1″ (LT)	Δ	1° 24′ 52.2″ (RT)
D	1° 59′ 55.0″	D	2° 03′ 29.8″	D	0° 05′ 00.0″	D	2° 51′ 53.2″	D	1° 08′ 35.4″
L	660.33′	L	325.57′	L	144.17′	L	293.07′	L	123.74′
T	331.63′	T	162.97′	T	72.08′	T	146.80′	T	61.87′
R	2,866.78′	R	2,783.67′	R	68,754.78′	R	2,000.00′	R	5,012.00′

NOTE:
STATION AND OFFSET GIVEN TO TRAFFIC FACE OF THE BARRIER UNLESS OTHERWISE NOTED.

SCALE
0 50 100 150

ROUTE 67 - STAGE 1B
TRAFFIC CONTROL
SHEET 14 OF 31

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	55

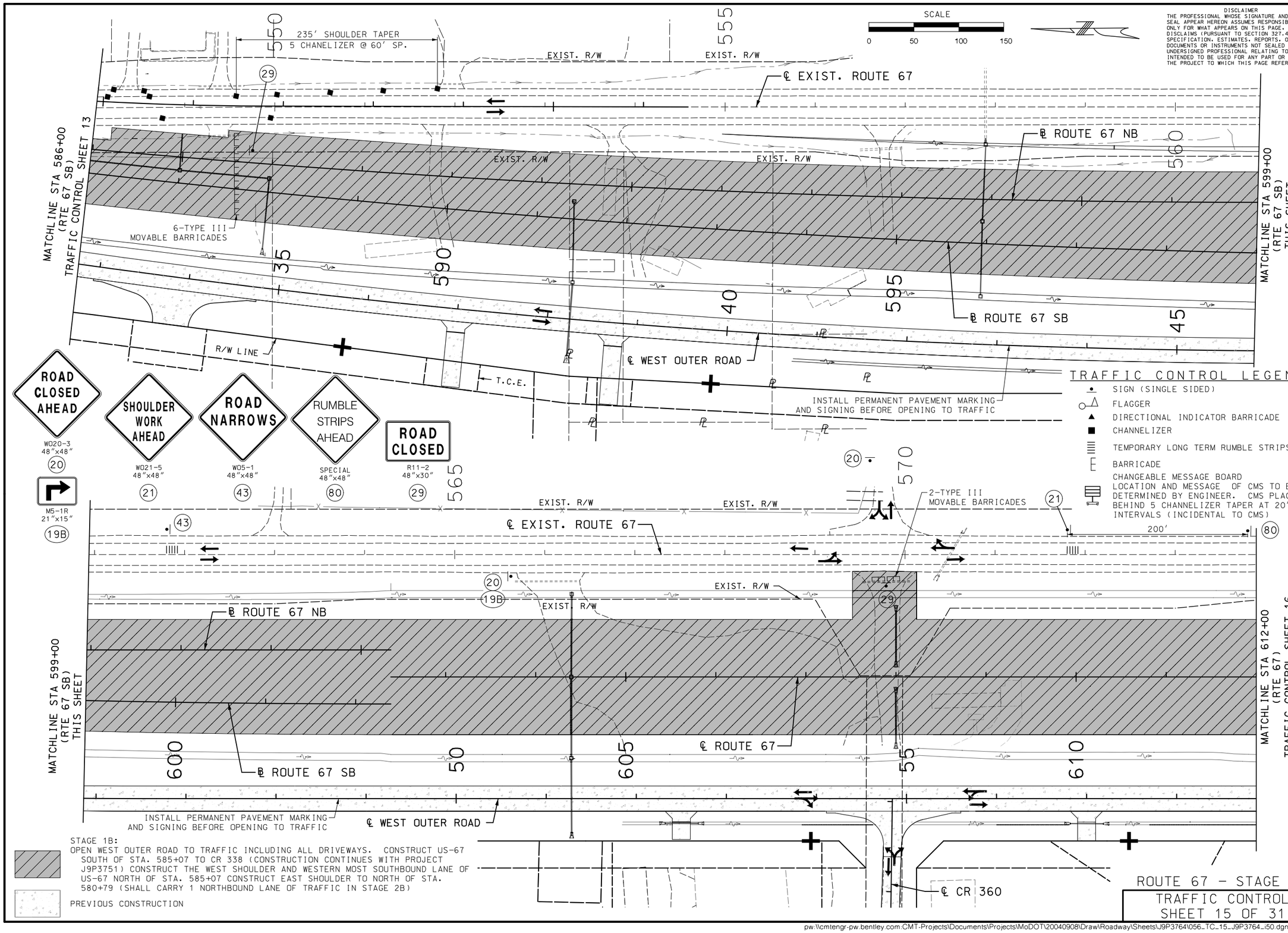
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



SCALE
0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER E-N 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	56

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

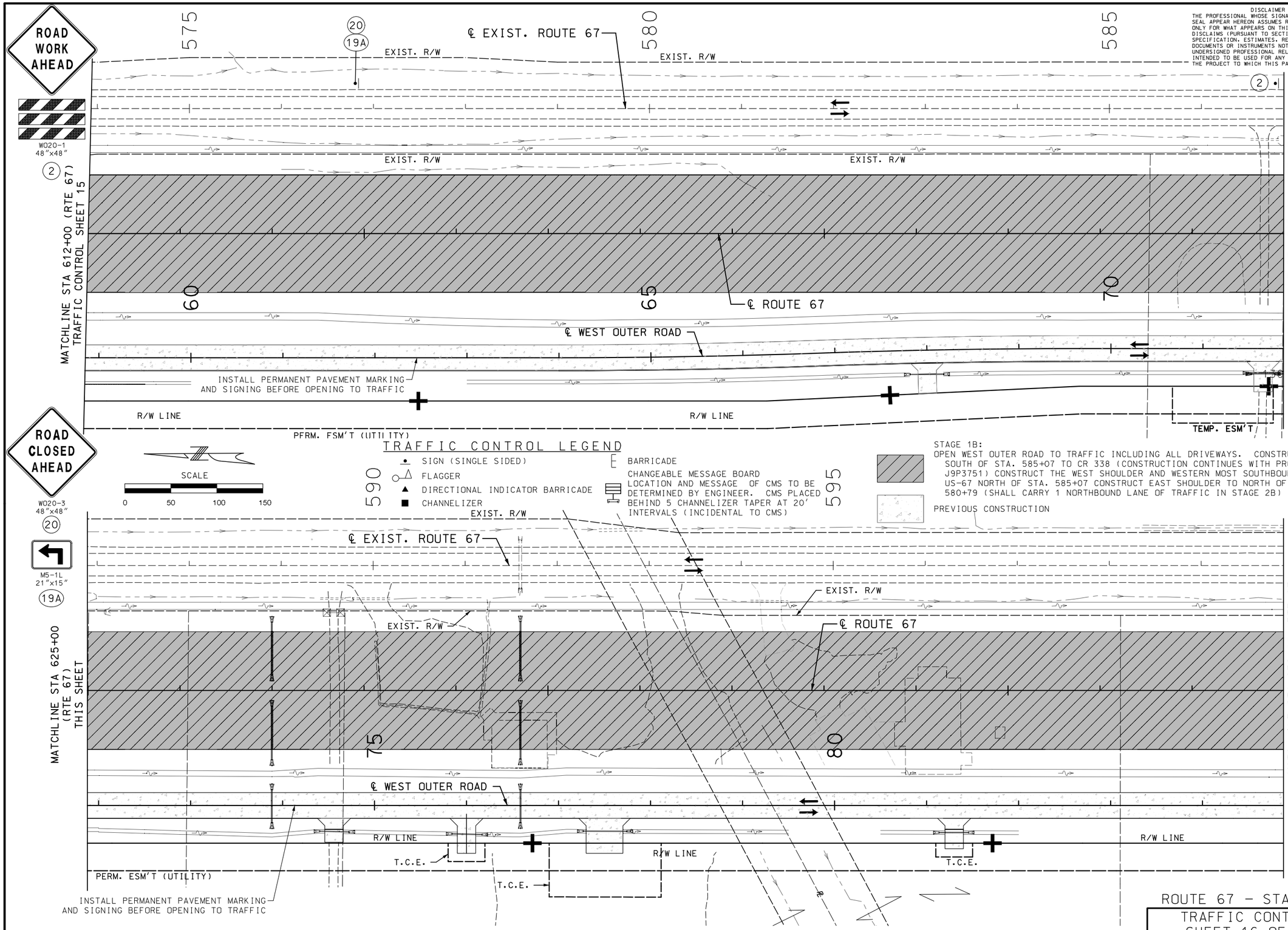
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr Phone 314-394-3100
Suite 250 Fax 314-394-3199
St. Louis, MO 63021
Missouri Certificate of Authority: 001578

ROUTE 67 – STAGE 1B
TRAFFIC CONTROL
SHEET 15 OF 31

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\056_TC_15_J9P3764_i50.dgn 8:58:39 AM 3/2/2023



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/1/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	57
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

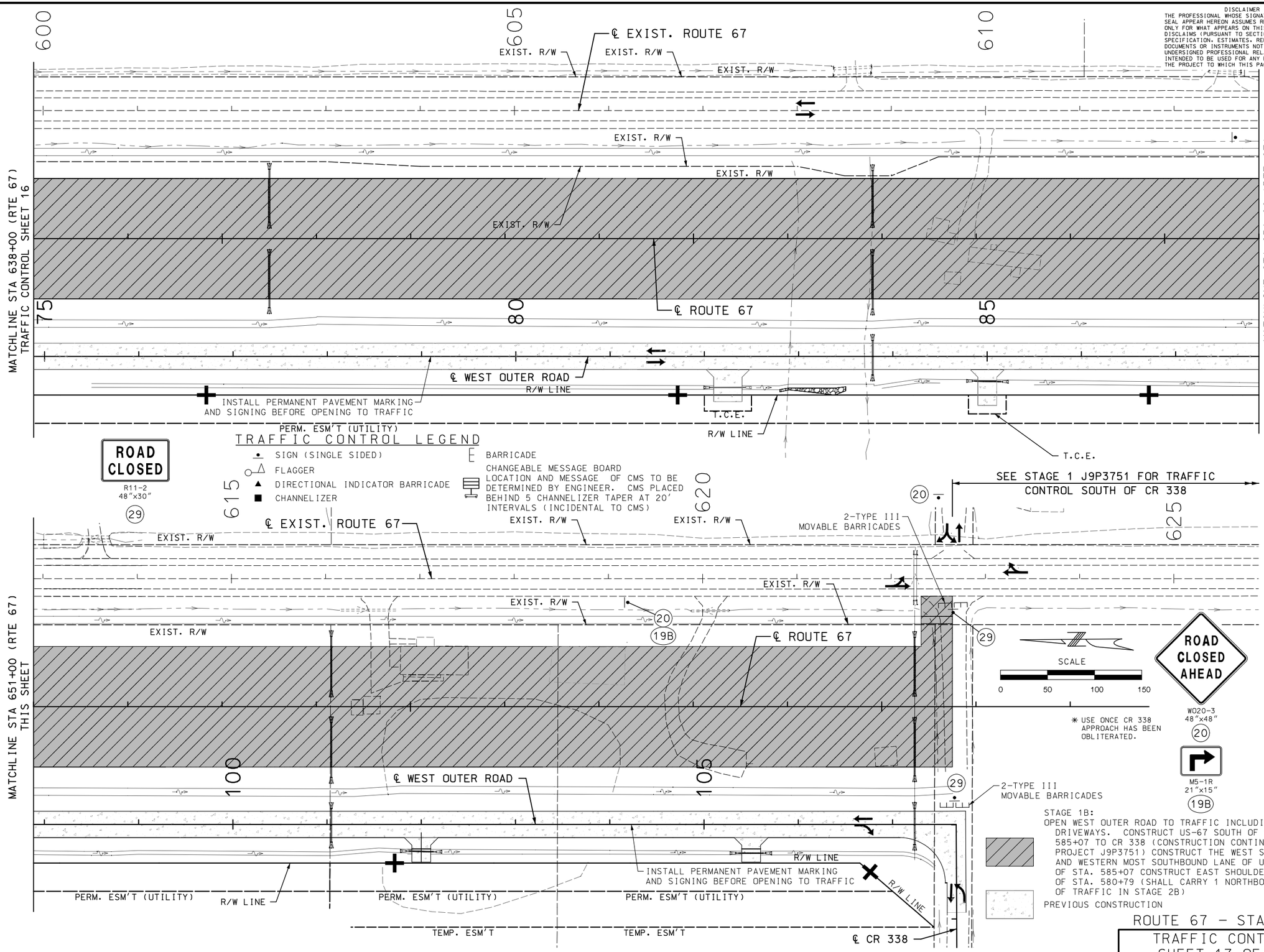
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67 – STAGE 1B
TRAFFIC CONTROL
SHEET 16 OF 31



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	58

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67 – STAGE 1B
TRAFFIC CONTROL
SHEET 17 OF 31

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)
- PAVEMENT EDGE TREATMENT

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST TO ALLOW PAVEMENT CONSTRUCTION FROM STA. ±6000+00 – STA. ±6007+42 NECESSARY FOR STAGE 2B TRAFFIC SHIFT.

PREVIOUS CONSTRUCTION

SPEED LIMIT 60 — R2-1 36"x48" — (25)

ROAD WORK AHEAD — W020-1 48"x48" — (2)

ROAD WORK AHEAD — W020-1 48"x48" — (2a)

WORK ZONE — G020-5aP 36"x24" — (54)

SPEED LIMIT 50 — R2-1 36"x48" — (4)

YIELD — R1-2 48"

TO ONCOMING TRAFFIC — R1-2aP 36"x36" — (13)

ROAD CLOSED — R11-2 48"x30" — (29)

ROAD NARROWS — W05-1 48"x48" — (43)

MIN. $250 FINE SPEEDING WHEN WORKERS PRESENT — CONST-3A 60"x48" — (53)

RUMBLE STRIPS AHEAD — SPECIAL 48"x48" — (80)

SHOULDER WORK AHEAD — W021-5 48"x48" — (21)

ONE LANE ROAD AHEAD — W020-4 48"x48" — (7)

W03-2 48"x48" — (40)

SCALE 0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

℄ EXIST. ROUTE 67

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

2 (UIP) 1000' 53 (UIP) 1000' 21 (UIP) 80 (UIP) 200' 1000' 43 (UIP)

STA 556+54 1000'

21 (UIP)

2a (UIP) 350'

℄ EAST OUTER ROAD 350'

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

2a (UIP)

(UIP) 25

STA 560+55 CMS

54 (UIP) 4

1000'

235' SHOULDER TAPER
5 CHANNELIZER @ 60' SP.

℄ EXIST. ROUTE 67

360'
5 CHANNELIZER @ 60' SP.

840' SHIFTING TAPER 30 CHANNELIZER @ 60' SP.
NARROW LANES FROM 12' TO 10'

PAVEMENT MARKING REMOVAL – 650'
TEMPORARY PAVEMENT MARKING – 840' SOLID YELLOW, 840' SOLID WHITE

TEMPORARY PAVEMENT – SEE TCP SHEET 19 FOR MORE INFORMATON AND BASELINE STAGE 2B PROFILE FOR CONSTRUCTION

PREVIOUSLY CONSTRUCTED TEMPORARY PAVEMENT

PAVEMENT MARKING REMOVAL – 3400'
TEMPORARY PAVEMENT MARKING – 1725' SOLID YELLOW, 1725' SOLID WHITE

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

350' 350' 350'

7 100' TAPER 5 CHANN. MIN. 30 6000

℄ EXIST. ROUTE 67
℄ ROUTE 67 NB
℄ EAST OUTER ROAD
PERMANENT BARRIER

40 13

TEMP. BARRIER HEIGHT TRANS. 15' 50' TAPER 35

975' TEMP. BARRIER ANCHORED 6005

2-TYPE III MOVEABLE BARRICADE 25' TYP.

2-TYPE III MOVEABLE BARRICADE 10' MIN.

1-TYPE III MOVEABLE BARRICADE 29 585

EXIST. R/W

EXIST. PERM. ESM'T (DRAINAGE)

ABSORB M (UIP)

EXIST. R/W
840' SHIFTING TAPER 30 CHANNELIZER @ 60' SP.
NARROW LANES FROM 12' TO 10'

60' TYP.

℄ ROUTE 67 SB
IMPACT ATTENUATOR 60 MPH

+32 BEGIN PERM. WHITE EDGE MARKING

MATCHLINE STA 586+00 (RTE 67 SB) TRAFFIC CONTROL SHEET 20

EXIST. R/W
EXIST. 30'W PERM. ESM'T (UTILITY)

20 25 30

℄ WEST OUTER ROAD

PAVEMENT MARKING REMOVAL – 650'
TEMP. PVMT. MARKING – 1700' SOLID YELLOW, 1700' SOLID WHITE

EXIST. R/W

EXIST. PERM. ESM'T (DRAINAGE)

EXIST. 30'W PERM. ESM'T (UTILITY)
PERM. ESM'T. DRAINAGE

TCP GENERAL NOTES:
SEE TRAFFIC CONTROL SHEET 19 FOR GENERAL NOTES.

ROUTE 67 – STAGE 2A
TRAFFIC CONTROL
SHEET 18 OF 31

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN-023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	59

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

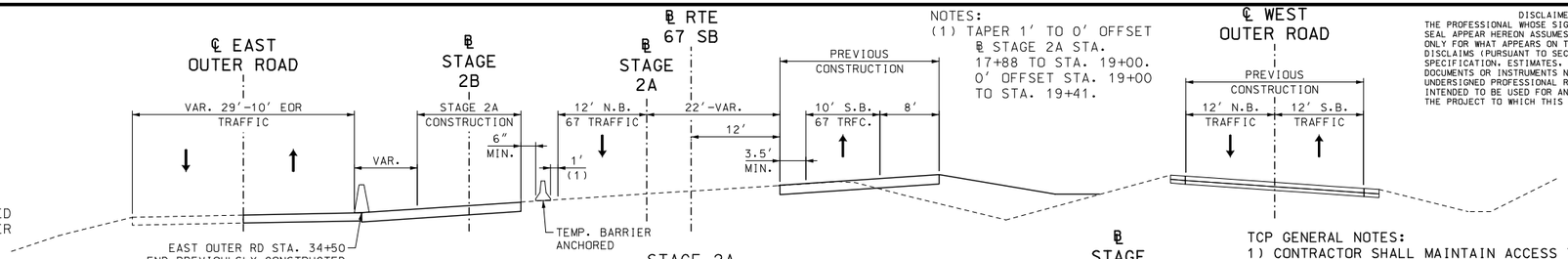
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\059_TC_18_J9P3764_i50.dgn 12:05:13 PM 3/1/2023

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)
- PAVEMENT EDGE TREATMENT



STAGE 2A
TRAFFIC CONFIGURATION TYPICAL

NOTES:
(1) TAPER 1′ TO 0′ OFFSET ℄ STAGE 2A STA. 17+88 TO STA. 19+00. 0′ OFFSET STA. 19+00 TO STA. 19+41.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

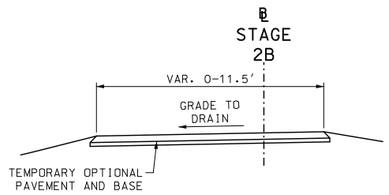
STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST TO ALLOW PAVEMENT CONSTRUCTION FROM STA. ±6000+00 – STA. ±6007+42 NECESSARY FOR STAGE 2B TRAFFIC SHIFT.

PREVIOUS CONSTRUCTION

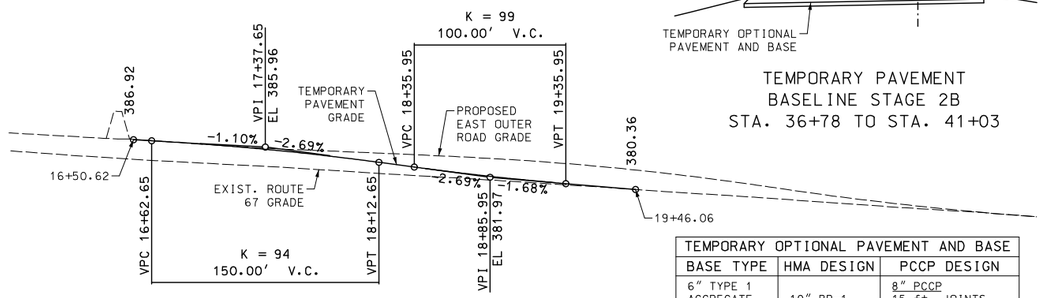
TEMPORARY PAVEMENT – SEE BASELINE STAGE 2B PROFILE FOR CONSTRUCTION

TEMPORARY PAVEMENT TO BE CONSTRUCTED AFTER BARRIER IS REMOVED FROM STAGE 2A USING STANDARD SHOULDER CLOSURE WITH LANE REDUCTION TO 10′ – SEE BASELINE STAGE 2B TEMPORARY PROFILE FOR CONSTRUCTION

PREVIOUSLY CONSTRUCTED TEMPORARY PAVEMENT



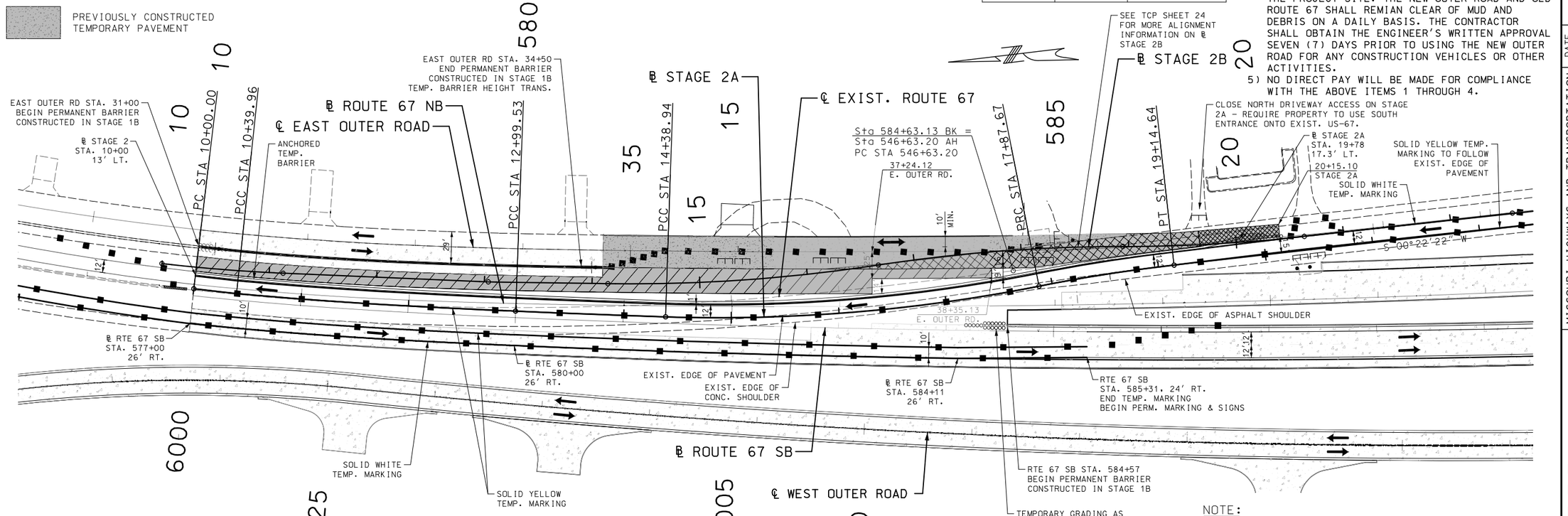
TEMPORARY PAVEMENT
BASELINE STAGE 2B
STA. 36+78 TO STA. 41+03



BASELINE STAGE 2B TEMPORARY PROFILE

TEMPORARY OPTIONAL PAVEMENT AND BASE		
BASE TYPE	HMA DESIGN	PCCP DESIGN
6″ TYPE 1 AGGREGATE BASE	10″ BP-1	8″ PCCP 15 ft. JOINTS AND 1 ½″ DOWELS

TCP GENERAL NOTES:
1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.



NOTE:
STATION AND OFFSET GIVEN TO TRAFFIC FACE OF THE BARRIER UNLESS OTHERWISE NOTED.

PI	10+19.98	PI	11+69.78	PI	13+69.24	PI	16+14.08	PI	18+51.19
PC	10+00.00	PCC	10+39.96	PCC	12+99.53	PCC	14+38.94	PRC	17+87.67
PCC	10+39.96	PCC	12+99.53	PCC	14+38.94	PRC	17+87.67	PT	19+14.64
Δ	0° 45′ 57.0″ (LT)	Δ	2° 51′ 39.8″ (LT)	Δ	0° 33′ 03.9″ (LT)	Δ	13° 12′ 52.7″ (LT)	Δ	4° 51′ 00.2″ (RT)
D	1° 54′ 58.9″	D	1° 06′ 08.0″	D	0° 23′ 43.1″	D	3° 47′ 21.9″	D	3° 49′ 11.0″
L	39.96′	L	259.57′	L	139.41′	L	348.73′	L	126.97′
T	19.98′	T	129.81′	T	69.70′	T	175.14′	T	63.52′
R	2,989.83′	R	5,198.21′	R	14,494.00′	R	1,512.00′	R	1,500.00′

SCALE
0 50 100 150

ROUTE 67 – STAGE 2A
TRAFFIC CONTROL
SHEET 19 OF 31

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
7/30/2024 11:52:32 AM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
7/30/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	60

COUNTY
BUTLER

JOB NO.
J9P3764

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)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

PAVEMENT MARKING REMOVAL – 3400′
TEMP. PVMT MRKG.–1725′ SOLID YELLOW, 1725′ SOLID WHT.
IMPACT ATTENUATOR 60 MPH
+66 END TEMP. BARRIER
1–TYPE III MOVABLE BARRICADE
2–TYPE III MOVABLE BARRICADES
EXIST. R/W
PAVEMENT MARKING REMOVAL – 2520′
TEMP. PVMT MRKG.–840′ SOLID YELLOW, 840′ SOLID WHT.
840′ SHIFTING TAPER
30 CHANELIZER @ 60′ SP.
℄ EXIST. ROUTE 67
℄ ROUTE 67 NB
℄ ROUTE 67 SB
℄ WEST OUTER ROAD
MATCHLINE STA 586+00 (RTE 67 SB) TRAFFIC CONTROL SHEET 18
+53 BEGIN PERM. INTERMITTENT CENTERLINE MARKING
INSTALL PERMANENT PAVEMENT MARKING AND SIGNING BEFORE OPENING TO TRAFFIC
MATCHLINE STA 599+00 (RTE 67 SB) THIS SHEET

WORK ZONE G020-5aP 36″x24″ (54)
SPEED LIMIT 50 R2-1 36″x48″ (4)
W01-4L 48″x48″ (14)
ROAD NARROWS W05-1 48″x48″ (43)
DO NOT ENTER R5-1 30″x30″ (60)
WRONG WAY R5-1a 36″x24″ (61)
ONE WAY R6-1R 54″x18″ (62)
R3-2 48″x48″ (70)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

1000′
235′ SHOULDER TAPER
5 CHANELIZER @ 60′ SP.
℄ EXIST. ROUTE 67
℄ ROUTE 67 NB
℄ ROUTE 67 SB
℄ WEST OUTER ROAD
℄ ROUTE 67
℄ CR 360
INSTALL PERMANENT PAVEMENT MARKING AND SIGNING BEFORE OPENING TO TRAFFIC
MATCHLINE STA 599+00 (RTE 67 SB) THIS SHEET
MATCHLINE STA 612+00 (RTE 67) TRAFFIC CONTROL SHEET 21

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US–67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US–67 (EXISTING US–67 SHALL OPERATE AS ONE–WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST TO ALLOW PAVEMENT CONSTRUCTION FROM STA. ±6000+00 – STA. ±6007+42 NECESSARY FOR STAGE 2B TRAFFIC SHIFT.

PREVIOUS CONSTRUCTION

TEMPORARY PAVEMENT – SEE BASELINE STAGE 2B PROFILE FOR CONSTRUCTION

TEMPORARY PAVEMENT TO BE CONSTRUCTED AFTER BARRIER IS REMOVED FROM STAGE 2A USING STANDARD SHOULDER CLOSURE WITH LANE REDUCTION TO 10′ – SEE BASELINE STAGE 2B TEMPORARY PROFILE FOR CONSTRUCTION

SCALE 0 50 100 150

ROUTE 67 – STAGE 2A

TRAFFIC CONTROL SHEET 20 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	61

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1–888–ASK–MODOT (1–888–275–6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314–394–3100
Fax 314–394–3199
Missouri Certificate of Authority: 001578

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

575 580 585

EXIST. R/W — 1000′ — EXIST. R/W — (21) — 200′ — (80) — 1000′

℄ EXIST. ROUTE 67

EXIST. R/W — ℄ ROUTE 67 — EXIST. R/W

MATCHLINE STA 612+00 (RTE 67) TRAFFIC CONTROL SHEET 20

60 65 70

INSTALL PERMANENT PAVEMENT MARKING AND SIGNING BEFORE OPENING TO TRAFFIC

MATCHLINE STA 625+00 (RTE 67) THIS SHEET

℄ WEST OUTER ROAD

R/W LINE

PERM. ESM'T (UTILITY)

TEMP. ESM'T

SHOULDER WORK AHEAD — W021-5 48″×48″ — (21)

MIN. $250 FINE SPEEDING WHEN WORKERS PRESENT — CONST-3A 60″×48″ — (53)

RUMBLE STRIPS AHEAD — SPECIAL 48″×48″ — (80)

SCALE 0 50 100 150

590 595

1000′ — (53) — 1000′

℄ EXIST. ROUTE 67 — EXIST. R/W

EXIST. R/W — EXIST. R/W

MATCHLINE STA 625+00 (RTE 67) THIS SHEET

INSTALL PERMANENT PAVEMENT MARKING AND SIGNING BEFORE OPENING TO TRAFFIC

75 ℄ ROUTE 67 80

MATCHLINE STA 638+00 (RTE 67) TRAFFIC CONTROL SHEET 22

℄ WEST OUTER ROAD

R/W LINE — R/W LINE

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST TO ALLOW PAVEMENT CONSTRUCTION FROM STA. ±6000+00 – STA. ±6007+42 NECESSARY FOR STAGE 2B TRAFFIC SHIFT.

PREVIOUS CONSTRUCTION

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)

ROUTE 67 – STAGE 2A
TRAFFIC CONTROL
SHEET 21 OF 31

STATE OF MISSOURI — PAUL JOSEPH KRONLAGE — NUMBER EN 023328 — REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

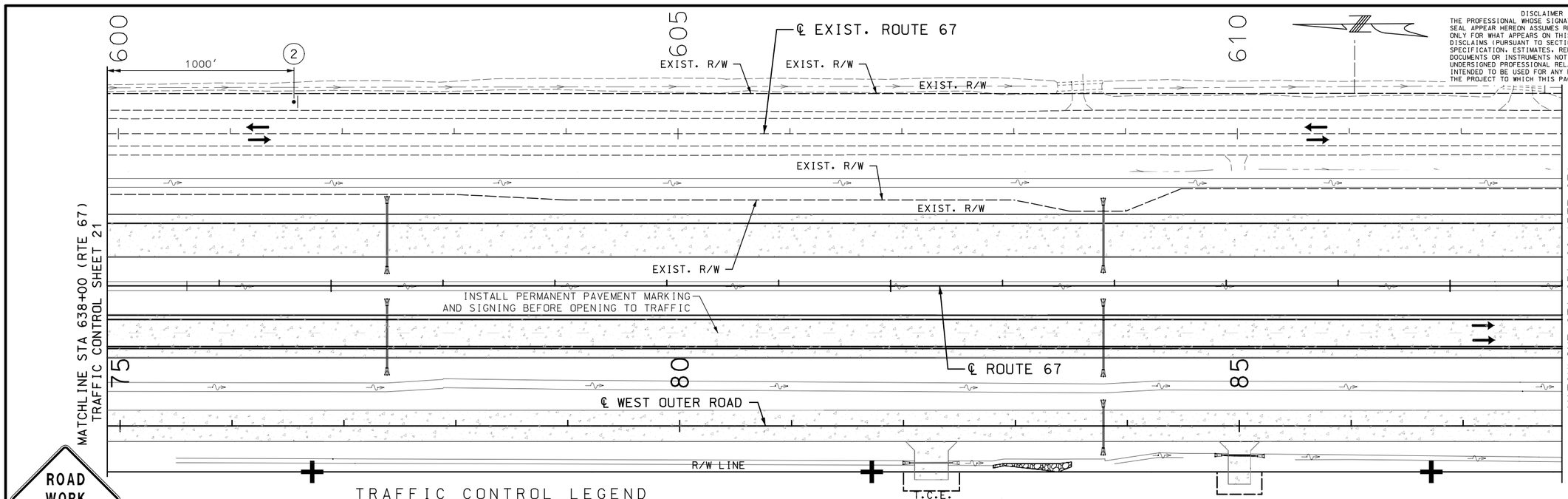
DATE PREPARED 3/2/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 62
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



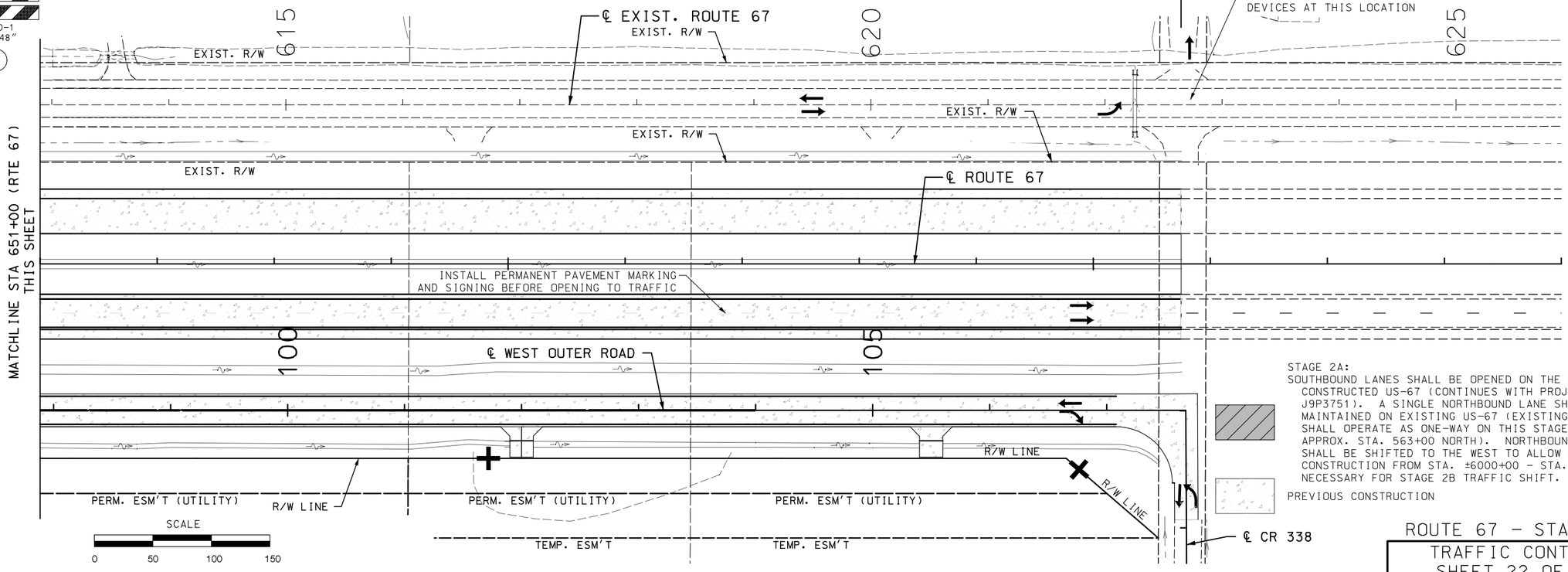
W020-1
48"×48"
(2)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

SEE STAGE 2 J9P3751 FOR TRAFFIC CONTROL SOUTH OF CR 338

SEE J9P3751 FOR SIGNS AND DEVICES AT THIS LOCATION



SCALE
0 50 100 150

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST TO ALLOW PAVEMENT CONSTRUCTION FROM STA. ±6000+00 - STA. ±6007+42 NECESSARY FOR STAGE 2B TRAFFIC SHIFT.

PREVIOUS CONSTRUCTION

ROUTE 67 - STAGE 2A
TRAFFIC CONTROL
SHEET 22 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/1/2023
ROUTE	67
STATE	MO
DISTRICT	SE
SHEET NO.	63
COUNTY	BUTLER
JOB NO.	J9P3764
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)

SPEED LIMIT 60 — R2-1 36"x48" — (25)

ROAD WORK AHEAD — WO20-1 48"x48" — (2)

WORK ZONE — G020-5aP 36"x24" — (54)

SPEED LIMIT 50 — R2-1 36"x48" — (4)

RUMBLE STRIPS AHEAD — SPECIAL 48"x48" — (80)

ROAD WORK AHEAD — WO20-1 48"x48" — (2a)

R3-2 48"x48" — (70)

SHOULDER WORK AHEAD — WO21-5 48"x48" — (21)

ROAD NARROWS — WO5-1 48"x48" — (43)

MIN. $250 FINE SPEEDING WHEN WORKERS PRESENT — CONST-3A 60"x48" — (53)

ONE WAY — R6-1R 54"x18" — (62)

PREVIOUS CONSTRUCTION OF TEMPORARY PAVEMENT

COLDMILL/OVERLAY & WEDGE

SCALE 0 50 100 150

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTY US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). CONSTRUCT US-67 BETWEEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC NORTH OF STA. ±587+50 (SB RTE 67).

PREVIOUS CONSTRUCTION

℄ EXIST. ROUTE 67

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

MATCHLINE STA 559+00 (EXIST. RTE 67) THIS SHEET

(2) 1000′ (UIP) (53) 1000′ (UIP) (21) (UIP) (80) 200′ (43) (UIP) 1000′

STA 556+54

(21) (UIP)

(UIP) (2a) 350′

℄ EAST OUTER ROAD

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

(UIP) (25)

STA 560+55 — CMS

(54) (4) (UIP) 235′ SHOULDER TAPER, 5 CHANNELIZERS @ 60′ SP.

1000′

340′ 5 CHANNELIZERS @ 60′ SP.

840′ SHIFTING TAPER, 28 CHANNELIZERS @ 60′ SP.

USE IN PLACE PAVEMENT MARKING FROM STAGE 2A

PAVEMENT MARKING REMOVAL – 450′
TEMPORARY PAVEMENT MARKING – 1255′ SOLID YELLOW, 1255′ SOLID WHITE

MATCHLINE STA 572+50 (EXIST. RTE 67) THIS SHEET

IMPACT ATTENUATOR (60 MPH)

100′ TAPER, 5 CHAN. MIN.

+75 END TEMP. BARRIER

462.5′ TEMP. BARRIER FREESTANDING

℄ ROUTE 67 NB

℄ EAST OUTER ROAD

112.5′ TEMP. BARRIER ANCHORED

162.5′ STIFNESS TRANS. SECT.

PERM. BARRIER

BEGIN BARRIER STA 576+99.97

+51 BEGIN TEMP. BARRIER

8:1 TAPER

EXIST. R/W

840′ SHIFTING TAPER, 28 CHANNELIZERS @ 60′ SP.

EXIST. R/W

EXIST. 30′W PERM. ESM′T (UTILITY)

USE IN PLACE PAVEMENT MARKING FROM STAGE 2A

300′ TEMP. BARRIER ANCHORED

℄ EXIST. ROUTE 67

+55 BEGIN TEMP. BARRIER

EXIST. R/W

912.5′ TEMP. BARRIER ANCHORED

EXIST. R/W

℄ WEST OUTER ROAD

60′ TYP

℄ ROUTE 67 SB

8:1 TAPER

162.5′ STIFNESS TRANS. SECT.

Sta 584+63.13 BK = Sta 546+63.20 AH
PC STA 546+63.20

IMPACT ATTENUATOR (60 MPH)

+47 END TEMP. BARRIER

8:1 TAPER

250′ TEMP. BARRIER ANCHORED

(62) (70)

+60 END TEMP. BARRIER

100′ TAPER, 5 CHAN. MIN.

MATCHLINE STA 586+00 (RTE 67 SB) TRAFFIC CONTROL SHEET 25

6000 30 580 35 6005 585 20 25 30

TCP GENERAL NOTES:
SEE TRAFFIC CONTROL SHEET 24 FOR GENERAL NOTES.

ROUTE 67 – STAGE 2B
TRAFFIC CONTROL
SHEET 23 OF 31

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI — PAUL JOSEPH KRONLAGE NUMBER EN-023328 — REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/1/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	64

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

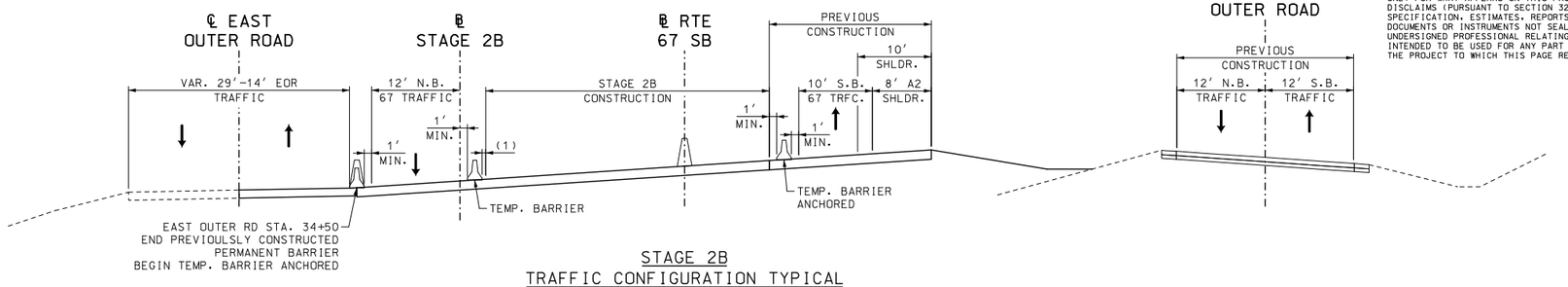
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\064_TC_23_J9P3764_i50.dgn 12:05:49 PM 3/1/2023

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD
  LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20′ INTERVALS (INCIDENTAL TO CMS)
- EXISTING TUBULAR MARKER (USE IN PLACE)
- PAVEMENT EDGE TREATMENT



STAGE 2B
TRAFFIC CONFIGURATION TYPICAL

NOTES:
(1) 0.5′ MINIMUM OFFSET REQUIRED ℄ STAGE 2A STA. 10+07 TO STA. 11+20.
3′ MINIMUM OFFSET REQUIRED ℄ STAGE 2A STA. 11+20 TO STA. 21+56.

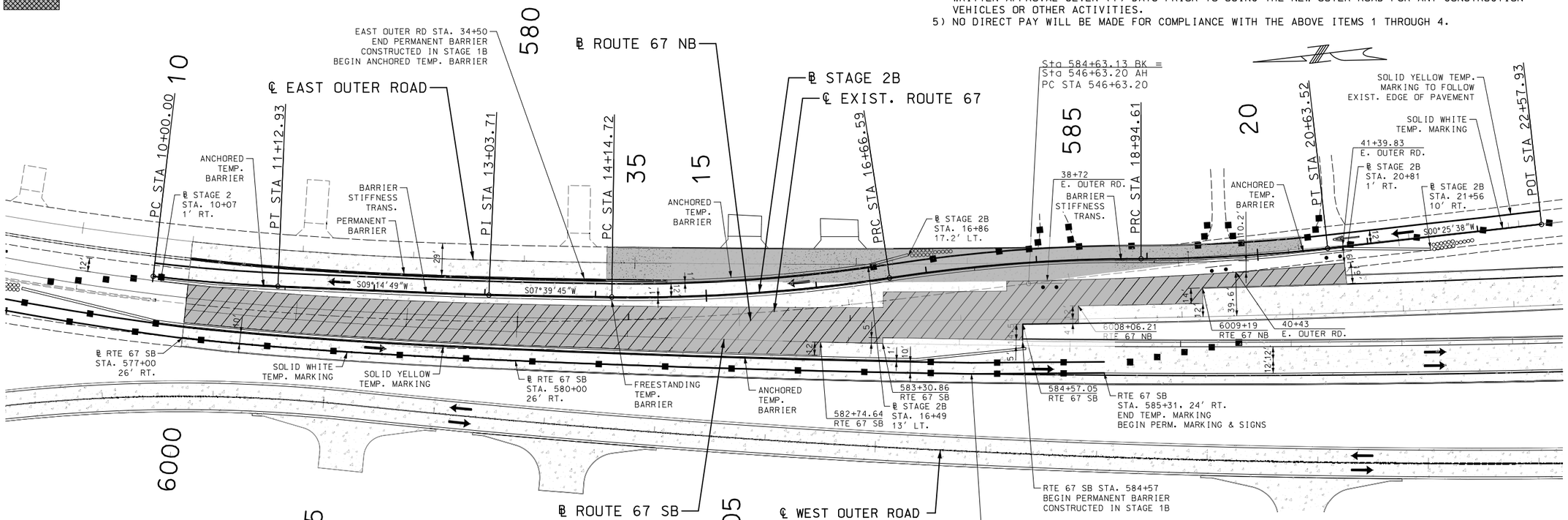
STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). CONSTRUCT US-67 BETWEEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC NORTH OF STA. ±587+50 (SB RTE 67).

PREVIOUS CONSTRUCTION

PREVIOUS CONSTRUCTION OF TEMPORARY PAVEMENT

COLDMILL/OVERLAY & WEDGE

TCP GENERAL NOTES:
1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.



NOTE:
STATION AND OFFSET GIVEN TO TRAFFIC FACE OF THE BARRIER UNLESS OTHERWISE NOTED.

PI	10+56.49	PI	15+40.95	PI	17+80.82	PI	19+79.15
PC	10+00.00	PC	14+14.72	PRC	16+66.59	PRC	18+94.61
PT	11+12.93	PRC	16+66.59	PRC	18+94.61	PT	20+63.52
Δ	4° 18′ 49.6″ (LT)	Δ	9° 32′ 39.4″ (LT)	Δ	8° 42′ 35.1″ (RT)	Δ	6° 24′ 02.2″ (LT)
D	3° 49′ 11.0″	D	3° 47′ 21.9″	D	3° 49′ 11.0″	D	3° 47′ 21.9″
L	112.93′	L	251.87′	L	228.02′	L	168.91′
T	56.49′	T	126.23′	T	114.23′	T	84.54′
R	1,500.00′	R	1,512.00′	R	1,500.00′	R	1,512.00′

SCALE
0 50 100 150

ROUTE 67 – STAGE 2B
TRAFFIC CONTROL
SHEET 24 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 65
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

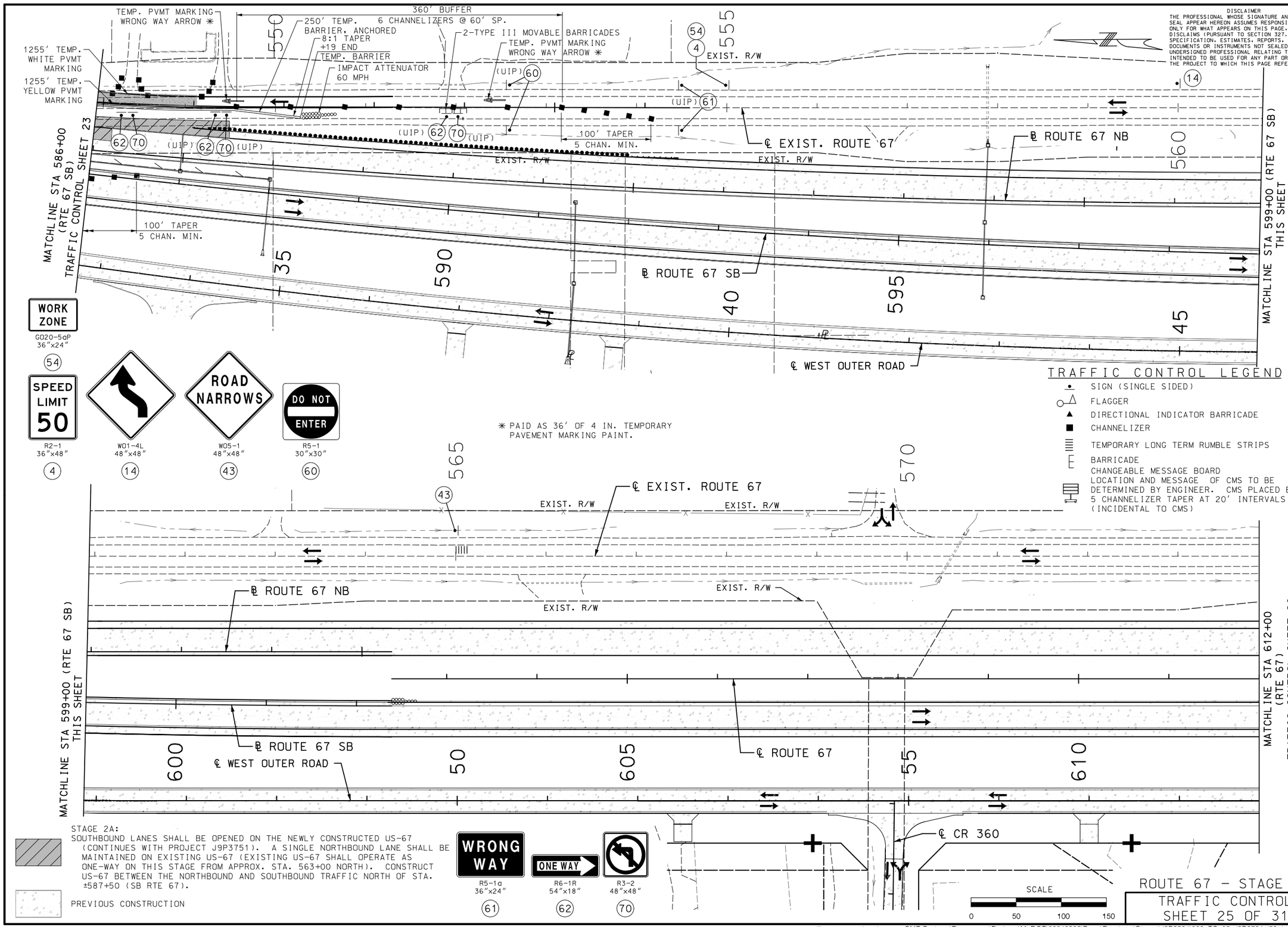
DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\065_TC_24_J9P3764_i50.dgn 3:16:38 PM 3/1/2023



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	66

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

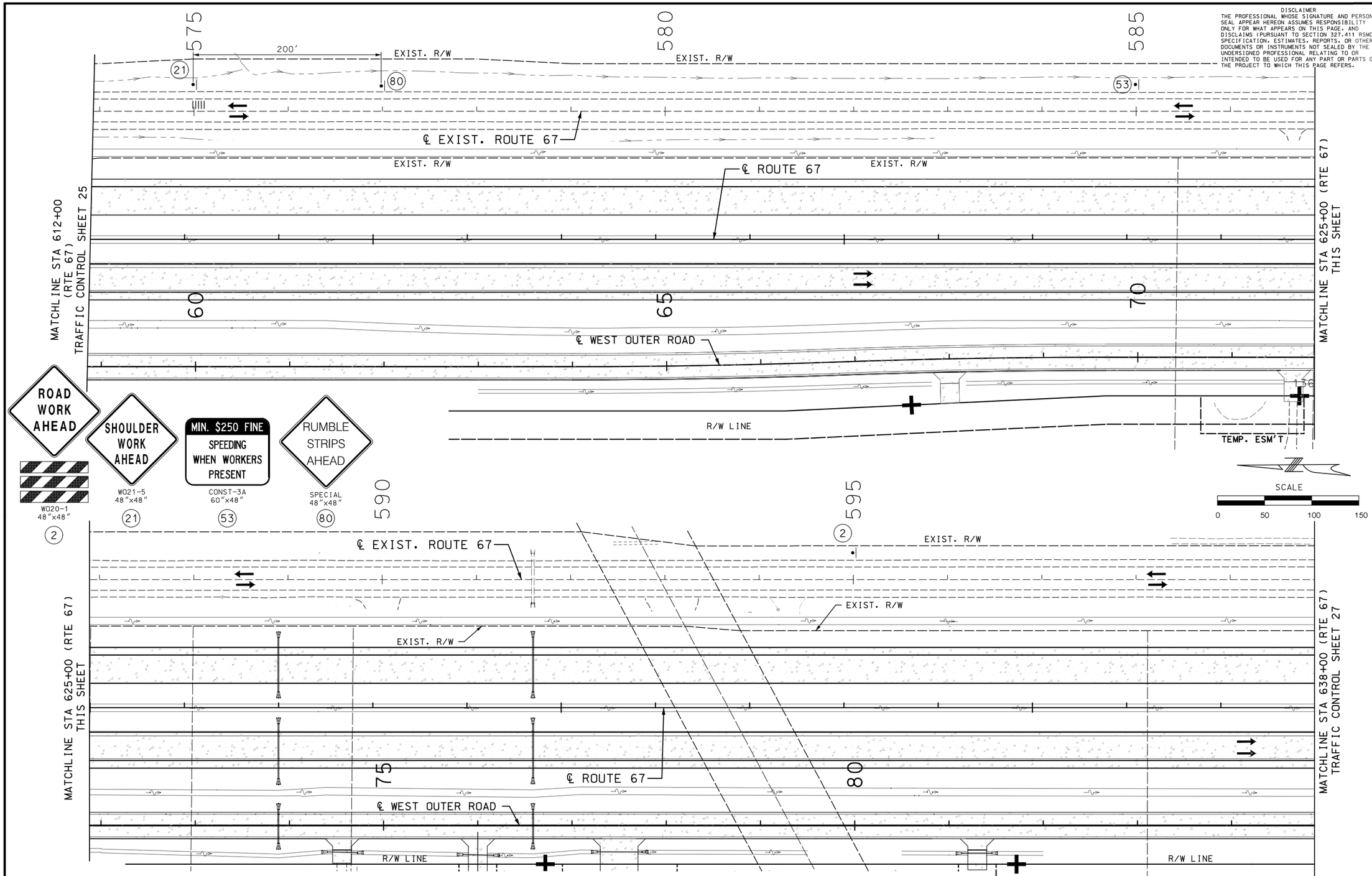
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67 – STAGE 2B
TRAFFIC CONTROL SHEET 25 OF 31



STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). CONSTRUCT US-67 BETWEEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC NORTH OF STA. ±587+50 (SB RTE 67).

PREVIOUS CONSTRUCTION

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

ROUTE 67 - STAGE 2B
TRAFFIC CONTROL
SHEET 26 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

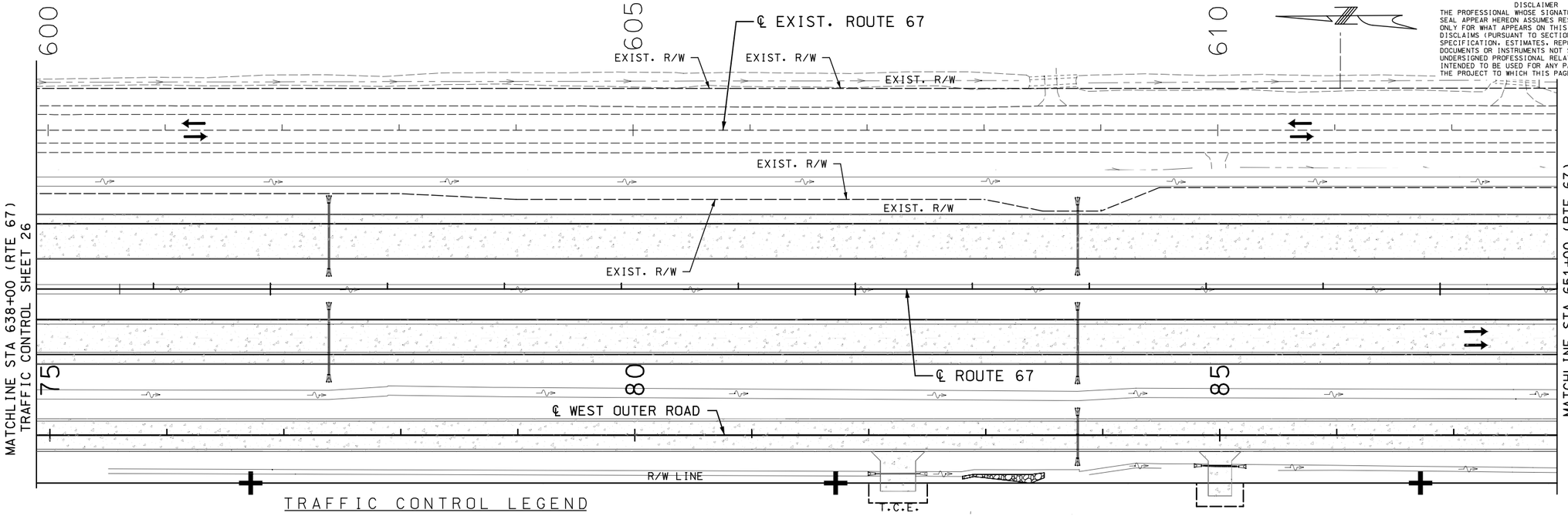
DATE PREPARED 3/2/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 67
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE | DESCRIPTION | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

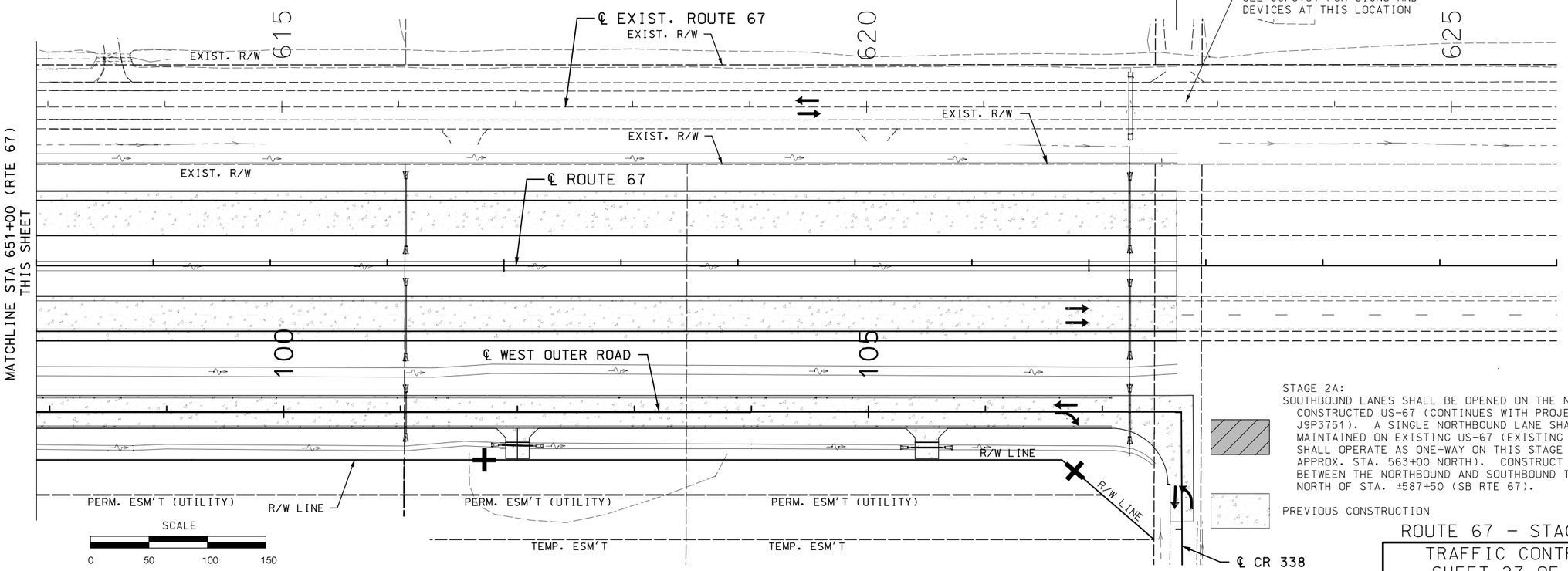
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)



SEE STAGE 2 J9P3751 FOR TRAFFIC CONTROL SOUTH OF CR 338

SEE J9P3751 FOR SIGNS AND DEVICES AT THIS LOCATION

STAGE 2A:
SOUTHBOUND LANES SHALL BE OPENED ON THE NEWLY CONSTRUCTED US-67 (CONTINUES WITH PROJECT J9P3751). A SINGLE NORTHBOUND LANE SHALL BE MAINTAINED ON EXISTING US-67 (EXISTING US-67 SHALL OPERATE AS ONE-WAY ON THIS STAGE FROM APPROX. STA. 563+00 NORTH). CONSTRUCT US-67 BETWEEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC NORTH OF STA. ±587+50 (SB RTE 67).

PREVIOUS CONSTRUCTION

ROUTE 67 – STAGE 2B

TRAFFIC CONTROL SHEET 27 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN-023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	68

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- TEMPORARY LONG TERM RUMBLE STRIPS
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

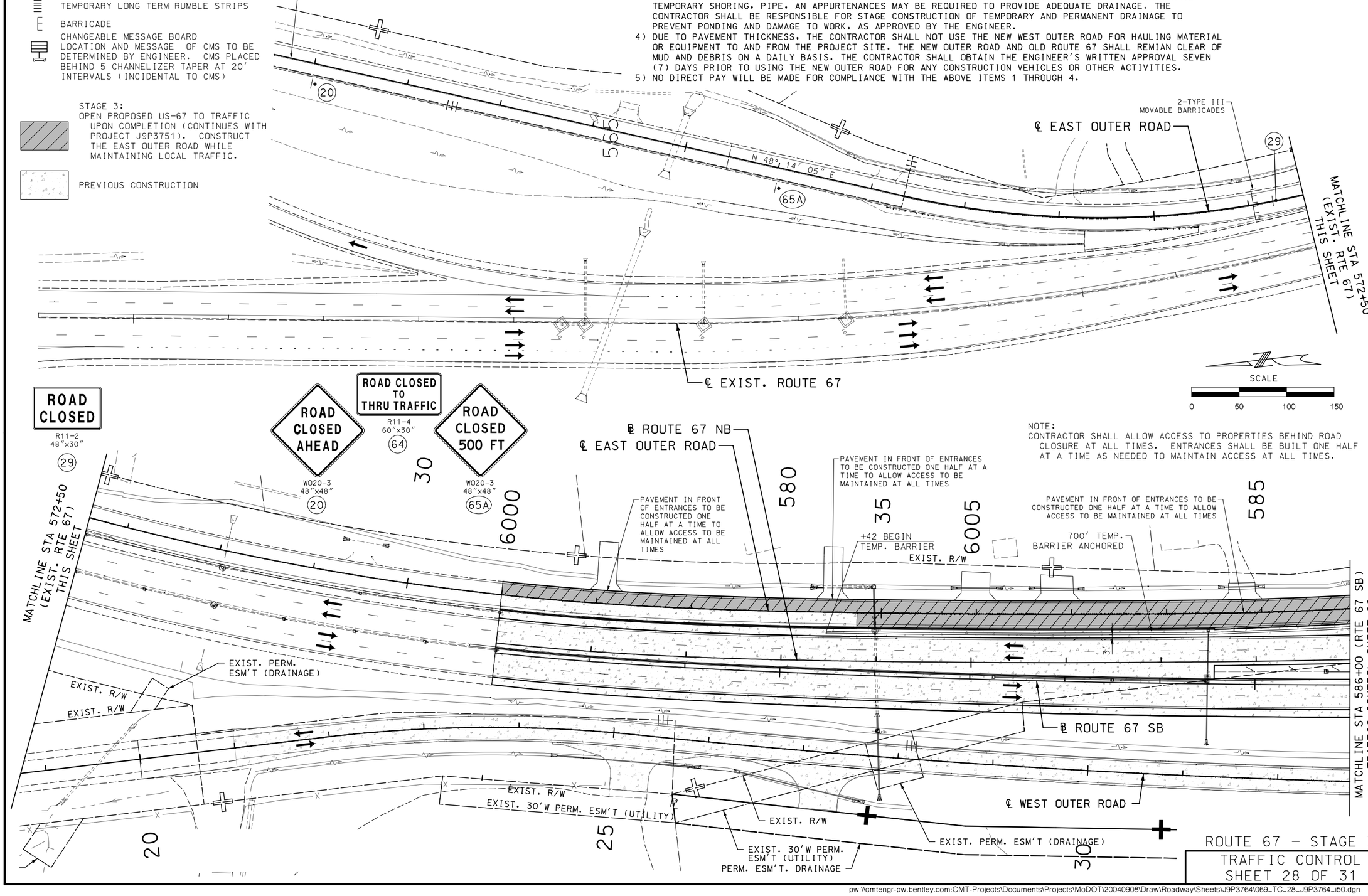
STAGE 3:
OPEN PROPOSED US-67 TO TRAFFIC UPON COMPLETION (CONTINUES WITH PROJECT J9P3751). CONSTRUCT THE EAST OUTER ROAD WHILE MAINTAINING LOCAL TRAFFIC.

PREVIOUS CONSTRUCTION

(64) DURING STAGE 3 TRAFFIC THROUGH THIS SECTION OF THE EAST OUTER ROAD IS TO BE LIMITED TO LOCAL TRAFFIC ONLY. SEE TRAFFIC CONTROL SHEET 3 FOR DETAILS OF SETTING UP A CLOSURE AT EAST OUTER ROAD AND ROUTE 158.

TCP GENERAL NOTES:
1) CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.
2) THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY CONNECTIONS TO DRIVEWAYS. NO DIRECT PAYMENT SHALL BE MADE FOR ANY LABOR, MATERIALS OR EQUIPMENTS NECESSARY TO MAINTAIN ACCESS.
3) THE CONTRACTOR SHALL CONSTRUCT DITCHES AS DIRECTED BY THE ENGINEER TO PREVENT PONDING DURING STAGING OPERATIONS. PERMANENT DRAINAGE STRUCTURES SHALL BE BUILT IN STAGES AND USED WHENEVER POSSIBLE TO ELIMINATE PONDING DURING STAGED CONSTRUCTION. TEMPORARY PITS MAY BE NEEDED TO PREVENT WATER FROM TRAVELING ACROSS ROADWAYS, AND TO TIE EXISTING DRAINAGE STRUCTURES TO NEW STRUCTURES TEMPORARILY. TEMPORARY SHORING, PIPE, AN APPURTENANCES MAY BE REQUIRED TO PROVIDE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE CONSTRUCTION OF TEMPORARY AND PERMANENT DRAINAGE TO PREVENT PONDING AND DAMAGE TO WORK, AS APPROVED BY THE ENGINEER.
4) DUE TO PAVEMENT THICKNESS, THE CONTRACTOR SHALL NOT USE THE NEW WEST OUTER ROAD FOR HAULING MATERIAL OR EQUIPMENT TO AND FROM THE PROJECT SITE. THE NEW OUTER ROAD AND OLD ROUTE 67 SHALL REMIAN CLEAR OF MUD AND DEBRIS ON A DAILY BASIS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S WRITTEN APPROVAL SEVEN (7) DAYS PRIOR TO USING THE NEW OUTER ROAD FOR ANY CONSTRUCTION VEHICLES OR OTHER ACTIVITIES.
5) NO DIRECT PAY WILL BE MADE FOR COMPLIANCE WITH THE ABOVE ITEMS 1 THROUGH 4.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



ROUTE 67 – STAGE 3
TRAFFIC CONTROL
SHEET 28 OF 31

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	69

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\069_TC_28_J9P3764_i50.dgn 3:19:56 PM 3/1/2023

PAVEMENT IN FRONT OF ENTRANCES TO BE CONSTRUCTED ONE HALF AT A TIME TO ALLOW ACCESS TO BE MAINTAINED AT ALL TIMES

PAVEMENT IN FRONT OF ENTRANCES TO BE CONSTRUCTED ONE HALF AT A TIME TO ALLOW ACCESS TO BE MAINTAINED AT ALL TIMES

IMPACT ATTENUATOR 60 MPH

EXIST. R/W

℄ EXIST. ROUTE 67

2-TYPE III MOVABLE BARRICADES

MATCHLINE STA 586+00 (RTE 67 SB) TRAFFIC CONTROL SHEET 28

700' TEMP. BARRIER ANCHORED

+40 END TEMP. BARRIER

℄ ROUTE 67 NB

℄ ROUTE 67 SB

℄ WEST OUTER ROAD

MATCHLINE STA 599+00 (RTE 67 SB) THIS SHEET

ROAD CLOSED

R11-2 48"x30"

29

ROAD CLOSED 1000 FT

W020-3 48"x48"

65

NOTE:
CONTRACTOR SHALL ALLOW ACCESS TO PROPERTIES BEHIND ROAD CLOSURE AT ALL TIMES. ENTRANCES SHALL BE BUILT ONE HALF AT A TIME AS NEEDED TO MAINTAIN ACCESS AT ALL TIMES.

DURING STAGE 3 TRAFFIC THROUGH THIS SECTION OF THE EAST OUTER ROAD IS TO BE LIMITED TO LOCAL TRAFFIC ONLY. SEE TRAFFIC CONTROL SHEET 3 FOR DETAILS OF SETTING UP A CLOSURE.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

℄ EXIST. ROUTE 67

EXIST. R/W

℄ ROUTE 67 NB

℄ ROUTE 67 SB

℄ WEST OUTER ROAD

℄ ROUTE 67

℄ CR 360

MATCHLINE STA 599+00 (RTE 67 SB) THIS SHEET

MATCHLINE STA 612+00 (RTE 67) TRAFFIC CONTROL SHEET 30

STAGE 3:
OPEN PROPOSED US-67 TO TRAFFIC UPON COMPLETION (CONTINUES WITH PROJECT J9P3751). CONSTRUCT THE EAST OUTER ROAD WHILE MAINTAINING LOCAL TRAFFIC.

PREVIOUS CONSTRUCTION

SCALE
0 50 100 150

ROUTE 67 – STAGE 3
TRAFFIC CONTROL
SHEET 29 OF 31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	70

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

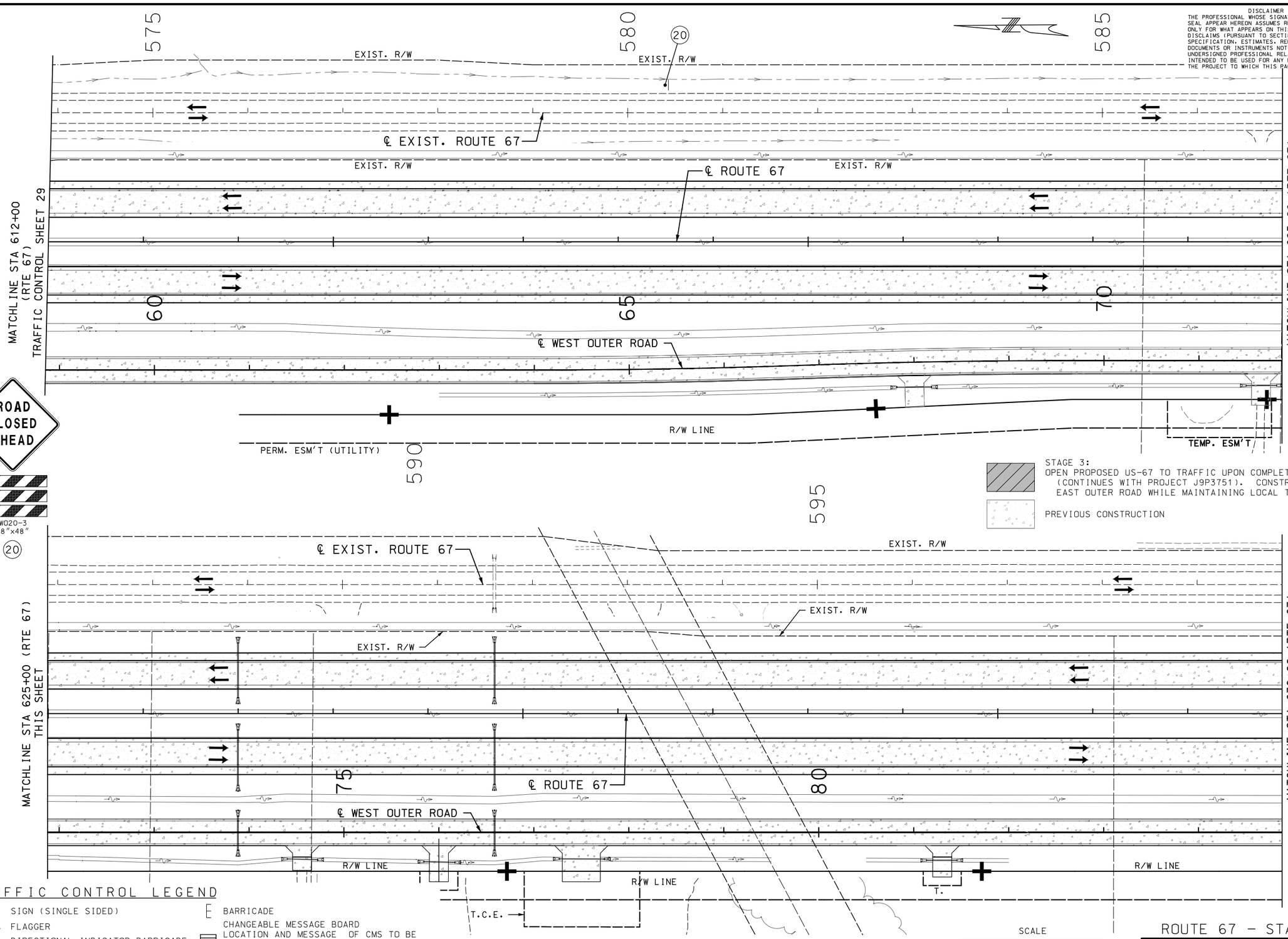
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\070_TC_29_J9P3764_i50.dgn 12:06:28 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



STAGE 3:
OPEN PROPOSED US-67 TO TRAFFIC UPON COMPLETION (CONTINUES WITH PROJECT J9P3751). CONSTRUCT THE EAST OUTER ROAD WHILE MAINTAINING LOCAL TRAFFIC.

PREVIOUS CONSTRUCTION

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

ROUTE 67 - STAGE 3
TRAFFIC CONTROL
SHEET 30 OF 31

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER E-N 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	71

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

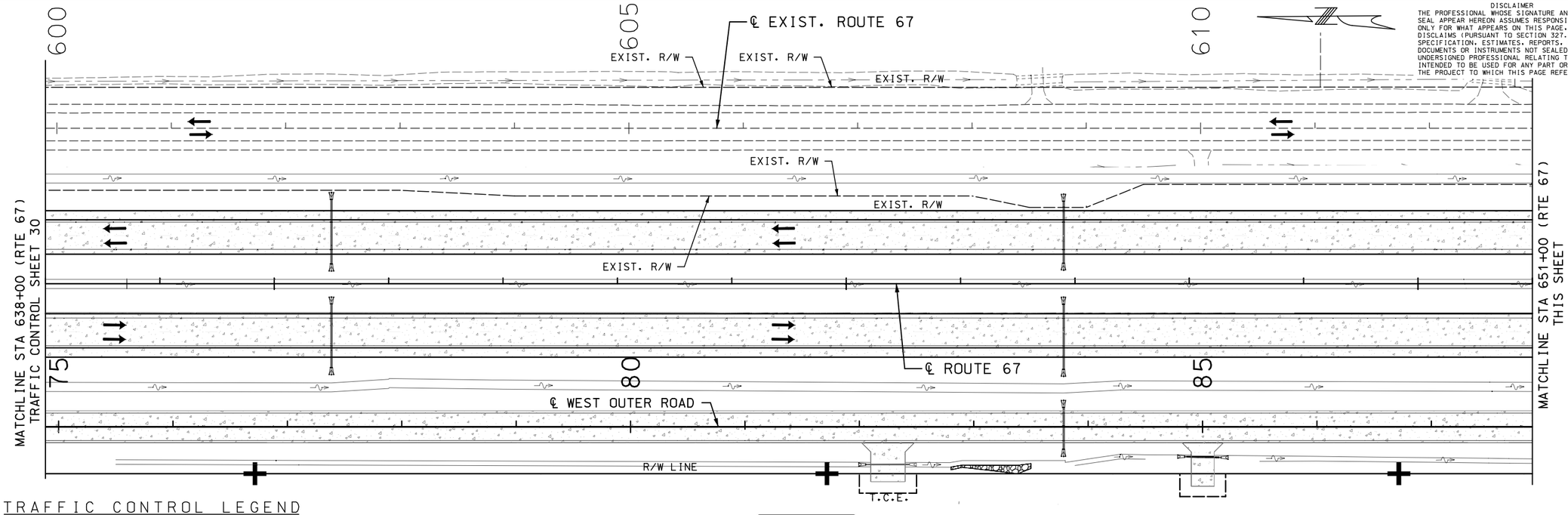
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 72
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

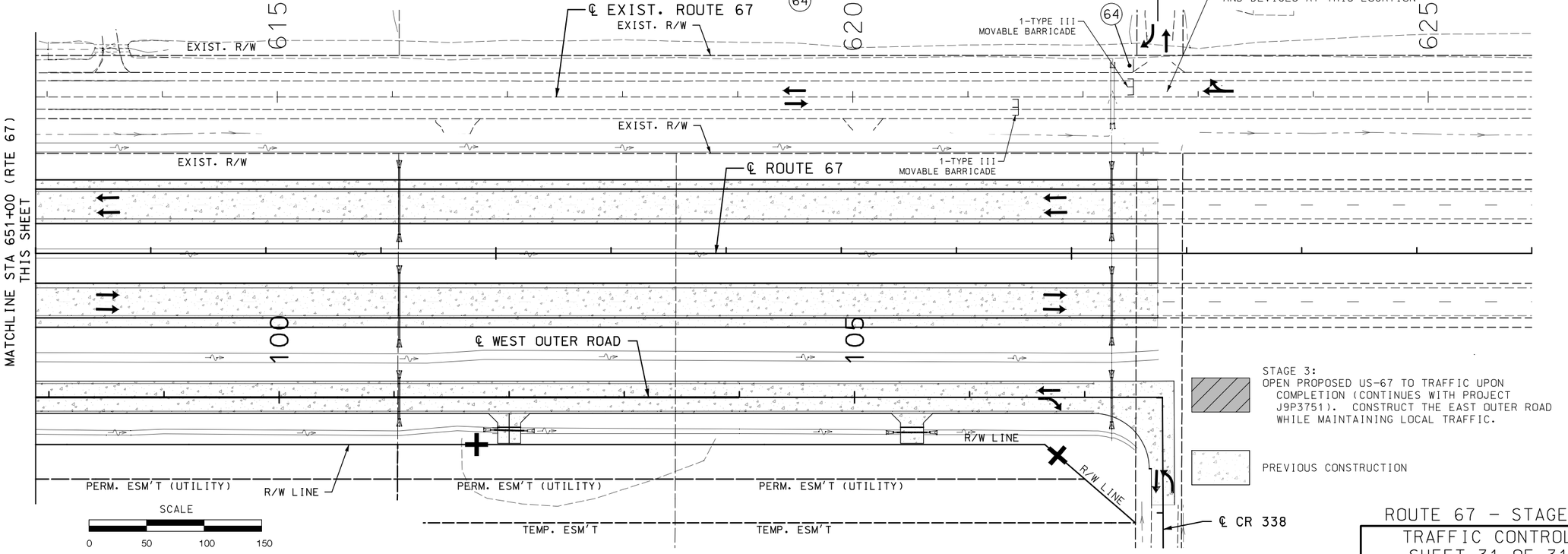
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD LOCATION AND MESSAGE OF CMS TO BE DETERMINED BY ENGINEER. CMS PLACED BEHIND 5 CHANNELIZER TAPER AT 20' INTERVALS (INCIDENTAL TO CMS)

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"x30"
64

SEE STAGE 3 J9P3751 FOR TRAFFIC CONTROL SOUTH OF CR 338
SEE J9P3751 FOR ADDITIONAL SIGNS AND DEVICES AT THIS LOCATION



SCALE
0 50 100 150

STAGE 3:
OPEN PROPOSED US-67 TO TRAFFIC UPON COMPLETION (CONTINUES WITH PROJECT J9P3751). CONSTRUCT THE EAST OUTER ROAD WHILE MAINTAINING LOCAL TRAFFIC.

PREVIOUS CONSTRUCTION

ROUTE 67 - STAGE 3
TRAFFIC CONTROL
SHEET 31 OF 31

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK·Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\072_TC_31_J9P3764_i50.dgn 12:06:42 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING *
- SILT FENCE

* ROCK BLANKET WHERE NOTED IN EROSION CONTROL PLAN

PREVIOUSLY COMPLETED UNDER J9P3663
MATCHLINE STA. 19+00, PROP. EAST OUTER ROAD

PREVIOUSLY COMPLETED UNDER J9P3663
MATCHLINE STA. 566+00, EXIST. ROUTE 67

570 25 575 30 6000 35 20

OUTFALL #5

ROCK BLANKET
ALIGN:EOR_6E
STA. 30+62.00

MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD
SEE ECP SHEET 2 OF 8

ROCK BLANKET
ALIGN:PRWOR3
STA. 21+75.03

EXISTING ROW (TYP.)

ROCK BLANKET
ALIGN:PRWOR3
STA. 25+47.62

MATCHLINE STA. 26+00, WEST OUTER ROAD
SEE ECP SHEET 2 OF 8

EROSION CONTROL SHEET
SHEET 1 OF 8

DATE PREPARED	3/3/2023
ROUTE	67
STATE	MO
DISTRICT	SE
SHEET NO.	73
COUNTY	BUTLER
JOB NO.	J9P3764
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
811 GRAND COURT STREET • 411 S. SPRING PARK WAY, SUITE 800 • 1901 A BALLPARK ROAD, SUITE 401
KNOXVILLE, TN 37934 • JACKSON, TN 38305 • CHARLESTON, SC 29407
PHONE: (865) 671-5500 • FAX: (865) 671-5501
WWW.BFWINC.COM
COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\073_EC_01_J9P3764_i50.dgn 4:10:43 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING *
- SILT FENCE

* ROCK BLANKET WHERE NOTED IN EROSION CONTROL PLAN

SEE ECP SHEET 1 OF 8
MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD

SEE ECP SHEET 1 OF 8
MATCHLINE STA. 26+00, WEST OUTER ROAD

ROCK BLANKET
ALIGN:EOR_6E
STA. 34+38.62

EXISTING ROW (TYP.)

ROCK BLANKET
ALIGN:EOR_6E
STA. 38+50.25

TYPE 2 ROCK DITCH LINER
ALIGN: RTE67-NB
STA. 6010+09.82

ROCK BLANKET
ALIGN:EOR_6E
STA. 43+75.77

SEE ECP SHEET 3 OF 8
MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB

SEE ECP SHEET 3 OF 8
MATCHLINE STA. 39+00, WEST OUTER ROAD

OUTFALL #7

PROPOSED ROW (TYP.)

PROPOSED EASEMENT (TYP.)

OUTFALL #7

EROSION CONTROL SHEET
SHEET 2 OF 8

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	74
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\074_EC_02_J9P3764_i50.dgn 4:10:44 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

555 560 565

6015 6020 6025

595 600 605

40 45 50

SEE ECP SHEET 2 OF 8
MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB

TYPE 2 ROCK DITCH LINER
ALIGN: RTE67-NB
STA. 6015+23.43

EXISTING ROW (TYP.)

SEE ECP SHEET 2 OF 8
MATCHLINE STA. 39+00, WEST OUTER ROAD

MATCHLINE STA. 605+00,
PROP. ROUTE 67
SEE ECP SHEET 4 OF 8

MATCHLINE STA. 52+00,
WEST OUTER ROAD
SEE ECP SHEET 4 OF 8

PROPOSED EASEMENT (TYP.)

PROPOSED ROW (TYP.)

OUTFALL #8

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING
- SILT FENCE

EROSION CONTROL SHEET
SHEET 3 OF 8

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	75

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
BFW ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\075_EC_03_J9P3764_i50.dgn 4:10:46 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING
- SILT FENCE

570
575
610
615
55
60
10

EXISTING ROW (TYP.)

SEE ECP SHEET 3 OF 8
MATCHLINE STA. 52+00,
WEST OUTER ROAD

SEE ECP SHEET 3 OF 8
MATCHLINE STA. 605+00,
PROP. ROUTE 67

MATCHLINE STA. 618+00,
PROP. ROUTE 67
SEE ECP SHEET 5 OF 8

MATCHLINE STA. 65+00,
WEST OUTER ROAD
SEE SEE ECP SHEET 5 OF 8

PROPOSED
EASEMENT (TYP.)

PROPOSED
ROW (TYP.)

EROSION CONTROL SHEET
SHEET 4 OF 8

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	76

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.

941 WHEELER STREET • 417 S. GRAND AVENUE, WEST SUITE 1 SPRINGFIELD, MO 65806 PHONE: 417.862.6314
301 NORTH KEENE STREET COLUMBIA, MO 65201 PHONE: 573.443.4513
WWW.BFWINC.COM

COPYRIGHT © 2017 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING
- SILT FENCE

ROCK CHECKS

STA. 620+00.00 AH., USE ALT CHECKS UNLESS NOTED OTHERWISE

580 585 590 620 625 630 65 70 75

EXISTING ROW (TYP.)

SEE ECP SHEET 4 OF 8
MATCHLINE STA. 618+00,
PROP. ROUTE 67

SEE ECP SHEET 4 OF 8
MATCHLINE STA. 65+00,
WEST OUTER ROAD

MATCHLINE STA. 631+00,
PROP. ROUTE 67
SEE ECP SHEET 6 OF 8

MATCHLINE STA. 78+00,
WEST OUTER ROAD
SEE ECP SHEET 6 OF 8

PROPOSED
ROW (TYP.)

PROPOSED
EASEMENT (TYP.)

EROSION CONTROL SHEET
SHEET 5 OF 8

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	77

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

811 GRAND COURT STREET • (573) 635-2994 • WWW.BFWENG.COM
KANSAS CITY, MISSOURI 64106 • (816) 221-1024
SPRINGFIELD, MISSOURI 65804 • (417) 887-4847

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\077_EC_05_J9P3764_i50.dgn 4:10:49 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING
- SILT FENCE

595 600 605

635 640

80 85 90

EXISTING ROW (TYP.)

SEE ECP SHEET 5 OF 8
MATCHLINE STA. 631+00,
PROP. ROUTE 67

SEE ECP SHEET 5 OF 8
MATCHLINE STA. 78+00,
WEST OUTER ROAD

MATCHLINE STA. 644+00,
PROP. ROUTE 67
SEE ECP SHEET 7 OF 8

MATCHLINE STA. 91+00,
WEST OUTER ROAD
SEE ECP SHEET 7 OF 8

PROPOSED
EASEMENT (TYP.)

PROPOSED
ROW (TYP.)

EROSION CONTROL SHEET
SHEET 6 OF 8

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	78

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
401 SOUTH 18TH STREET, SUITE 200 • ST. LOUIS (CLAYTON), MISSOURI 63105 • (314) 721-7979
1400 BURLOW DRIVE, SUITE 200 • CHESTERFIELD, MISSOURI 63017 • (636) 532-0723
WWW.BFWENGINEERING.COM
CONTRACTOR OF CHOICE AWARDED 2020 AND 2021 BY THE ST. LOUIS REGIONAL CHAMBER

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\078_EC_06_J9P3764_r50.dgn 4:10:50 PM 3/3/2023

TEMPORARY EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- (A) ALTERNATE DITCH CHECK
- (C) INLET DITCH CHECK
- ROCK DITCH LINING ✱
- SILT FENCE

✱ ROCK BLANKET WHERE NOTED IN EROSION CONTROL PLAN

610 615

EXISTING ROW (TYP.)

645 650 655

95 100

SEE ECP SHEET 6 OF 8
MATCHLINE STA. 644+00,
PROP. ROUTE 67

SEE ECP SHEET 6 OF 8
MATCHLINE STA. 91+00,
WEST OUTER ROAD

MATCHLINE STA. 657+00,
PROP. ROUTE 67
SEE ECP SHEET 8 OF 8

MATCHLINE STA. 104+00,
WEST OUTER ROAD
SEE ECP SHEET 8 OF 8

ROCK BLANKET
ALIGN:PRWOR3
STA. 92+80.00 TO
STA. 93+50.00

PROPOSED
EASEMENT (TYP.)

PROPOSED
ROW (TYP.)

EROSION CONTROL SHEET
SHEET 7 OF 8

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	79

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

NO.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.

941 WOODS CROSS ROAD, SUITE 100 • ST. CHARLES, MO 63301 • PHONE: (636) 940-6161
401 S. JEFFERSON AVE., SUITE 500 • SPRINGFIELD, MO 65806 • PHONE: (417) 887-4300

COPYRIGHT © 2019 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

620 625 630 660 665 670

EXISTING ROW (TYP.)

105

SEE ECP SHEET 7 OF 8
MATCHLINE STA. 657+00,
PROP. ROUTE 67

SEE ECP SHEET 7 OF 8
MATCHLINE STA. 104+00,
WEST OUTER ROAD

POT STA 13+14.43

POT STA 107+64.11

PROPOSED
ROW (TYP.)

PROPOSED
EASEMENT (TYP.)

OUTFALL #9

POT STA 11+00.39

10

POT STA 10+00.00

TEMPORARY EROSION CONTROL LEGEND

(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
(A)	ALTERNATE DITCH CHECK
(C)	INLET DITCH CHECK
	ROCK DITCH LINING
	SILT FENCE

EROSION CONTROL SHEET
SHEET 8 OF 8

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	80
COUNTY	BUTLER
JOB NO.	J9P3764
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
CONTACT: BRYAN BACON, P.E. (573) 635-2748 BRYAN@BFWENGINEERING.COM
CONTACT: MATT BACON, P.E. (573) 635-2748 MATT@BFWENGINEERING.COM
CONTACT: JEFF FARMER (573) 635-2748 JEFF@BFWENGINEERING.COM
CONTACT: JOSH WORKMAN, P.E. (573) 635-2748 JOSH@BFWENGINEERING.COM
WWW.BFWENGINEERING.COM

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

MATCHLINE STA. 528+00
SEE THIS SHEET

158 160 Harviell Doniphan EXIT 1 MILE
RIGHT LANE ONLY
(R)

158 160 Harviell Doniphan
E1-1
180"X168"

1 ROUTE 67 – RT
APPROX. STA. 485+76

158 160 Harviell Doniphan
2 ROUTE 67 – RT
STA. 532+31
E1-1
180"X168"

158 160 Harviell Doniphan
RIGHT LANE ONLY
(R)

W4-1R
(UIP)

NO ACCESS TO 67
W14-14
72"X36"
3 EOR – RT
STA. 1+00

SPEED LIMIT 30
R2-1
36"X48"
4 EOR – RT
STA. 2+50

EXIT 40 M.P.H.
W13-2
(UIP)

℄ RELOCATED
EAST OUTER ROAD

SPEED LIMIT 30
R2-1
36"X48"
24 EOR – RT
STA. 9+00

℄ RAMP 4

158 160 Harviell Doniphan EXIT 1/2 MILE
RIGHT LANE ONLY
(R)

EXIT
E5-1
(UIP)

℄ MO-158

℄ RAMP 2

℄ RAMP 3

℄ ROUTE 67

W2-6

ROUNDABOUT
W16-17P

25 M.P.H.
W13-1P
(UIP)

Poplar Bluff 8
Greenville 37
St. Louis 160
(UIP)

SPEED LIMIT 65
R2-1
(UIP)

W2-6

ROUNDABOUT
W16-17P

25 M.P.H.
W13-1P
(UIP)

℄ RAMP 1

W4-1R
(UIP)

MATCHLINE STA. 561+00
SEE SIGNING SHEET 2

NORTH
M3-1

67
M1-4
(UIP)

W6-1
(R)

MATCHLINE STA. 528+00
SEE THIS SHEET

NOTES:
1. SIGNS THIS SHEET: 1-4, 24
2. EXISTING SIGNS NOT SHOWN ARE TO BE U.I.P.

SCALE
0 200 400 600 800 1000

ROUTE 67
SIGNING SHEET
1 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 81
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

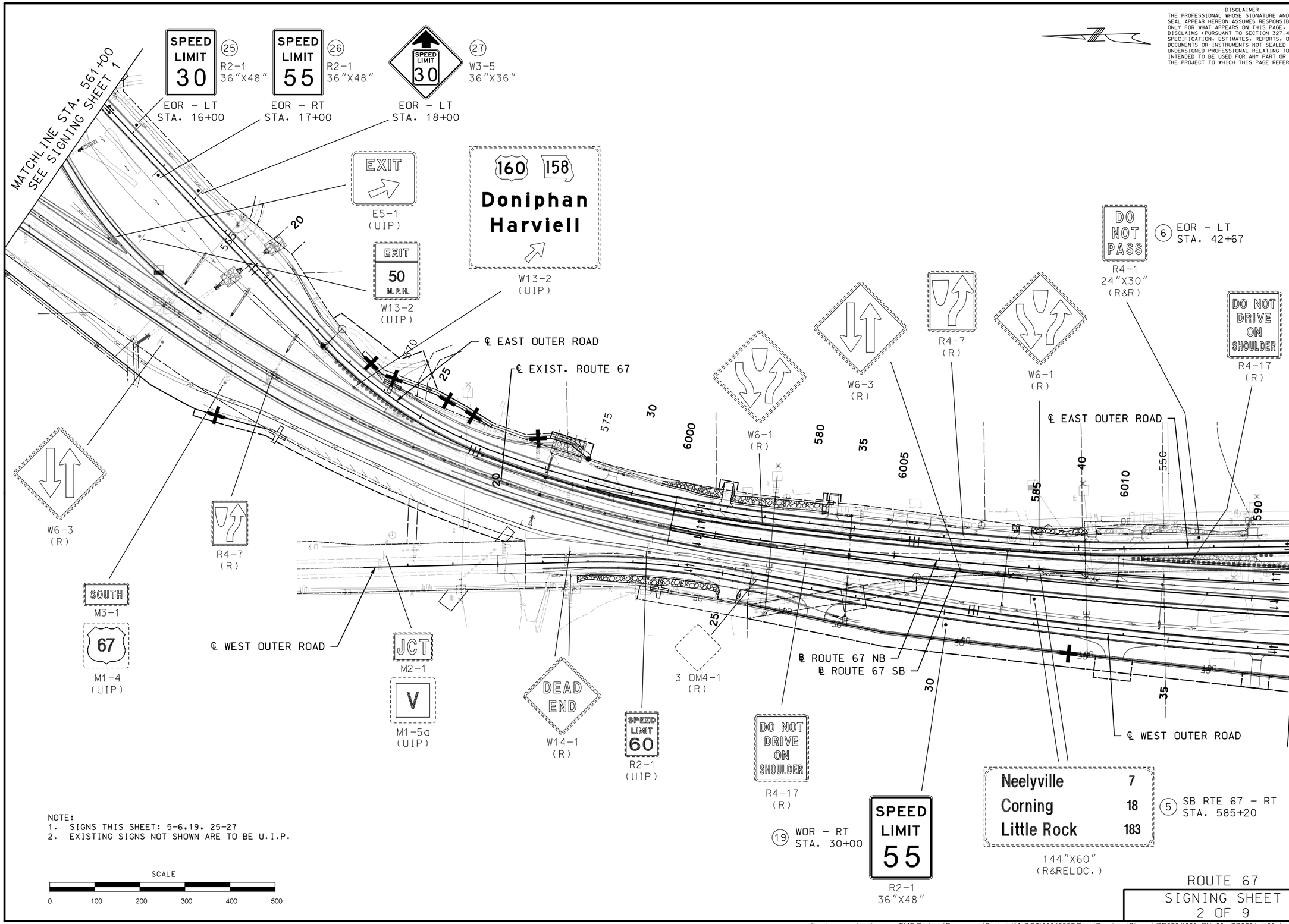
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\081_SN_01_J9P3764_i200.dgn 1:11:19 PM 3/1/2023



NOTE:
1. SIGNS THIS SHEET: 5-6,19, 25-27
2. EXISTING SIGNS NOT SHOWN ARE TO BE U.I.P.

SCALE

0 100 200 300 400 500

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	82

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

ROUTE 67
SIGNING SHEET
2 OF 9

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\082_SN_02_J9P3764_i100.dgn 1:11:22 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 83
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SPEED LIMIT 60
R2-1 (R)

DO NOT DRIVE ON SHOULDER
R4-17 (UIP)

MoDOT ADOPT-A-HIGHWAY Litter Cleanup
ADOPTER NAME
I9-1a (UIP)

BUTLER 360 COUNTY
(R&R) BK TO BK

7 EOR – RT
STA. 569+64

W1-7
48″x24″

BK TO BK
STOP
R1-1 (UIP)

DEAD END
W14-1 (UIP)

DEAD END
W14-1 (R)

DEAD END
W14-1
36″X36″

8 EOR – LT
STA. 570+14

BUTLER 360 COUNTY
RELOCATED SIGNS
BK TO BK

23 EOR – LT
STA. 570+39

STOP
R1-1 (R)

W6-3
(UIP)

MATCHLINE ℄ SB ROUTE 67 STA. 591+00
SEE SIGNING SHEET 2

℄ NORTHBOUND ROUTE 67

℄ WEST OUTER ROAD

℄ SOUTHBOUND ROUTE 67

COUNTY RD 360

℄ EXISTING RTE 67 =
℄ EAST OUTER ROAD

℄ ROUTE 67

MATCHLINE ℄ ROUTE 67 STA. 619+00 SEE SIGNING SHEET 4

WOR – RT
STA. 54+07
10

BUTLER 360 COUNTY
M1-6
24″X24″
BK TO BK

STOP
R1-1
30″x30″

11 CR 360 – RT
STA. 11+59

W1-7
48″x24″

9 WOR – LT
STA. 54+91

SCALE
0 100 200 300 400 500

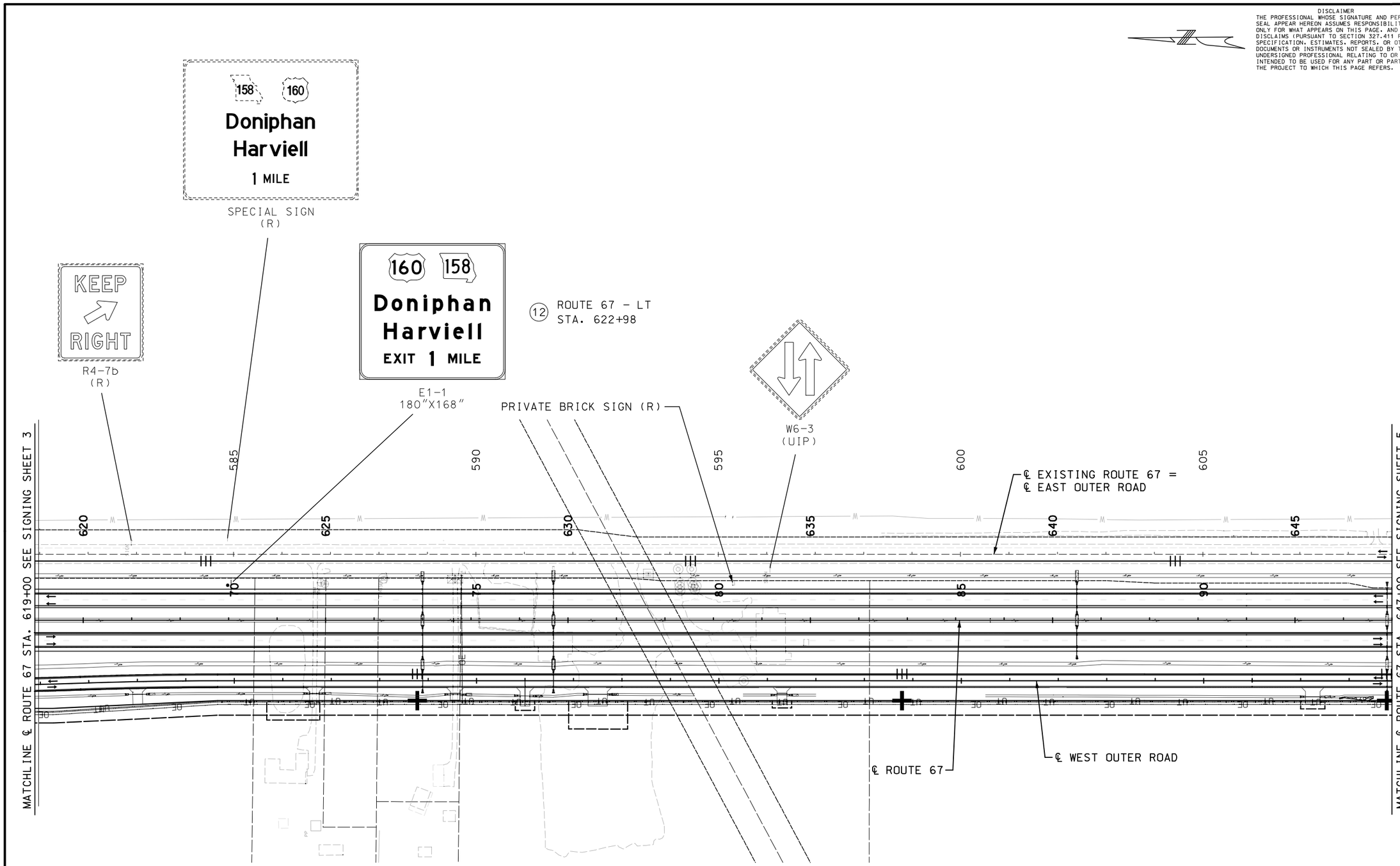
NOTE:
1. SIGNS THIS SHEET: 7-11, 23
2. EXISTING SIGNS NOT SHOWN ARE TO BE U.I.P.

ROUTE 67
SIGNING SHEET
3 OF 9

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



SCALE

0 100 200 300 400 500

NOTE:
1. SIGNS THIS SHEET: 12
2. EXISTING SIGNS NOT SHOWN ARE TO BE U.I.P.

ROUTE 67
SIGNING SHEET
4 OF 9

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	84

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

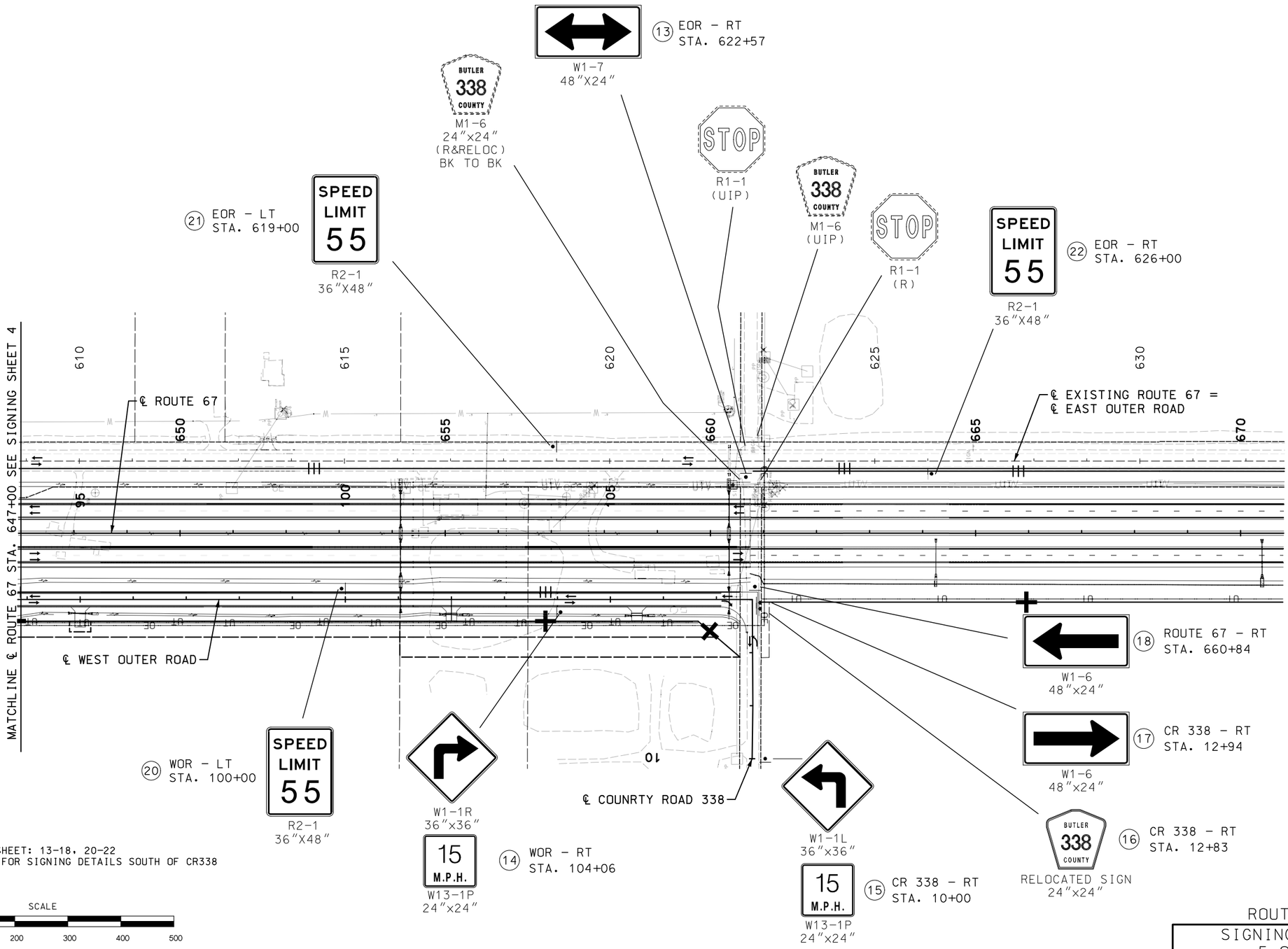
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\084_SN_04_J9P3764_i100.dgn 1:11:32 PM 3/1/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTES:
1. SIGNS THIS SHEET: 13-18, 20-22
2. SEE J9P3571 FOR SIGNING DETAILS SOUTH OF CR338

SCALE
0 100 200 300 400 500

ROUTE 67
SIGNING SHEET
5 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023326
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023
ROUTE 67 | STATE MO
DISTRICT SE | SHEET NO. 85
COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

EFFECTIVE 07-01-2022

SIGNS 902 SIGNAL SIGNS TABULATED ON D-37A SHEET						CONCRETE FOOTINGS EMBEDDED	STRUCTURAL STEEL POSTS ✳						PIPE POSTS ✳					BACKING BARS ✳✳					U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE												REMARKS AND OTHER REQUIRED ITEMS
																							2 IN. POST						2.5 IN. POST						BREAK-AWAY ASSEMBLY	
																										ANCHORS					ANCHORS			
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	ITEM NO. 9031010 CY	POST DES NO.	POST NO.1 LF	POST NO.2 LF	POST NO.3 LF	LBS PER FT	TOTAL ITEM NO. 9031210 LBS	PIPE SIZE IN.	POST NO.1 LF	POST NO.2 LF	LBS PER FT	TOTAL ITEM NO. 9031220 LBS	2" X 3/8" BARS @ 2.55 LBS PER FT NO. EACH	LGTH IN.	TOTAL LF	TOTAL LBS	U-CHANNEL POST ITEM NO. 9031250A LF	POST NO.1 LF	POST NO.2 LF	TOTAL ITEM NO. 9031270A LF	DRIVEN 12-GA. ITEM NO. 9031271A EA	DRIVEN 7-GA. ITEM NO. 9031273A EA	CONCRETE 7-GA. ITEM NO. 9031274 EA	POST NO.1 LF	POST NO.2 LF	TOTAL ITEM NO. 9031280 LF	2.25" INSERT (6 FT) ITEM NO. 9031272A EA	DRIVEN 7-GA. ITEM NO. 9031281A EA	CONCRETE 7-GA. ITEM NO. 9031285 EA	ITEM NO. 9031241 EA	
1	180"x168"	485+76		RTE 67-RT	8	2.78	4	28.0	30.0		22	1276.00																									7 FT. CHANNEL POST
3	72"x36"	1+00		EOR-RT	8	0.32	1	17.5	18.75		9	326.25																									DELINEATOR, WHITE - 40 EA.
4	36"x48"	2+50		EOR-RT																										16		16		1			
5	144"X60"	585+20		RTE 67-RT		0.30	1	16.75	17.75		9	310.50																									
6	24"x30"	42+67		EOR-LT																			16		16	1										
7	48"x24"	569+64		EOR-RT																			16	16	32	2										
8	36"x36"	570+14		EOR-LT																			16		16	1										
9	48"x24"	54+91		WOR-LT																			16	16	32	2										
10	24"x24"	54+07		WOR-RT																			16		16	1										
11	30"x30"	11+59		CR360-RT																			16		16	1										
12	180"x168"	622+98		RTE 67-LT	8	2.72	4	29.25	28.25		22	1265.00																									
13	48"x24"	622+57		EOR-RT																			16	16	32	2										
14	ASSY	104+06		WOR-RT																										16		16		1			
15	ASSY	10+00		CR338-RT																										16		16		1			
16	24"x24"	12+83		CR338-RT																			16		16	1										
17	48"x24"	12+94		CR338-RT																			16	16	32	2										
18	48"x24"	660+84		RTE 67-RT																			16	16	32	2										
19	36"x48"	30+00		WOR-RT																										16		16		1			
20	36"x48"	100+00		WOR-LT																										16		16		1			
21	36"x48"	619+00		EOR-LT																										16		16		1			
22	36"x48"	626+00		EOR-RT																										16		16		1			
23	24"x24"	570+39		EOR-LT																			16		16	1										
24	36"x48"	9+00		EOR-RT																										16		16		1			
25	36"x48"	16+00		EOR-LT																										16		16		1			
26	36"x48"	17+00		EOR-RT																										16		16		1			
27	36"x36"	18+00		EOR-LT																			16		16	1										
SUBTOTAL						6.1						3177.8												272	17					160		10			
TOTAL						6.1						3180										✳✳		272	17					160		10			

✳ BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.
✳✳ BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

ROUND PIPE POST AND FOOTING DATA TABLE

NOM. SIZE (IN.)	WEIGHT LBS/FT	WEIGHT LBS/IN	STUB LENGTH	FOOTING DIA.	FOOTING DEPTH	CONCRETE C.Y.
2½	5.79	0.48	4'-3½"	12"	4'-6"	0.13
3	7.58	0.63	4'-3½"	12"	4'-6"	0.13
4	10.79	0.90	5'-3½"	18"	5'-6"	0.36

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

POST DES. NO.	POST NOM. SIZE	POST WEIGHT LBS/FT	POST WEIGHT LBS/IN	POST STUB LENGTH	FOOTING DIA.	FOOTING LEVEL GROUND DEPTH	FOOTING LEVEL GROUND C.Y.	FOOTING 6:1 GRADE DEPTH	FOOTING 6:1 GRADE C.Y.	FOOTING 4:1 GRADE DEPTH	FOOTING 4:1 GRADE C.Y.	FOOTING 3:1 OR 2:1 GRADE DEPTH	FOOTING 3:1 OR 2:1 GRADE C.Y.
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

SIGNING SHEET 6 OF 9

D-29

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	86

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

EFFECTIVE 10-01-2016

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE: W1-7 48"x24"	W14-1 36"x36"	R1-1 30"x30"	W1-1R 36"x36"	W13-1P 24"x24"	W1-1L 36"x36"	W1-6 48"x24"	R2-1 36"x48"	M1-6 24"x24"	R2-1 36"x48"	W3-5 36"x36"
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH										
4	2+50	EOR-RT										1	
7	569+64	EOR-RT	1										
8	570+14	EOR-LT		1									
9	54+91	WOR-LT	1										
10	54+07	WOR-RT									2		
11	11+59	CR360-RT			1								
13	622+57	EOR-RT	1										
14	104+06	WOR-RT				1	1						
15	10+00	CR338-RT					1	1					
17	12+94	CR338-RT							1				
18	660+84	RTE 67-RT							1				
19	30+00	WOR-RT								1			
20	100+00	WOR-LT								1			
21	619+00	EOR-LT								1			
22	626+00	EOR-RT								1			
24	9+00	EOR-RT										1	
25	16+00	EOR-LT										1	
26	17+00	EOR-RT								1			
27	18+00	EOR-LT											1

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET: SIZE	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLUORESCENT SHF * ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A	STRUCTURAL FLUORESCENT STF * ITEM NO. 9035071A
W1-7		3	48"x24"		24		
W14-1		1	36"x36"		9		
R1-1		1	30"x30"	6.3			
W1-1R		1	36"x36"		9		
W13-1P		2	24"x24"		8		
W1-1L		1	36"x36"		9		
W1-6		2	48"x24"		16		
R2-1		8	36"x48"	96			
M1-6		2	24"x24"	8			
W3-5		1	36"x36"		9		
SIGN 1 (E1-1)	8 OF 9	1	180"x168"			210	
SIGN 2 (E1-1)	8 OF 9	1	180"x168"			210	
SIGN 3 (W14-14)	8 OF 9	1	72"x36"				18
SIGN 12 (E1-1)	8 OF 9	1	180"x168"			210	
TOTAL				110	84	630	18

* ORANGE, YELLOW & YELLOW/GREEN

SIGNING SHEET
7 OF 9

D-30

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/2/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	87

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

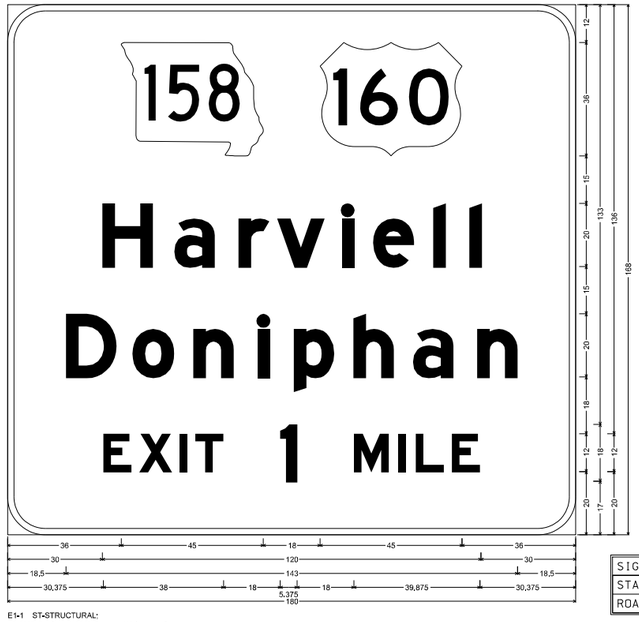
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

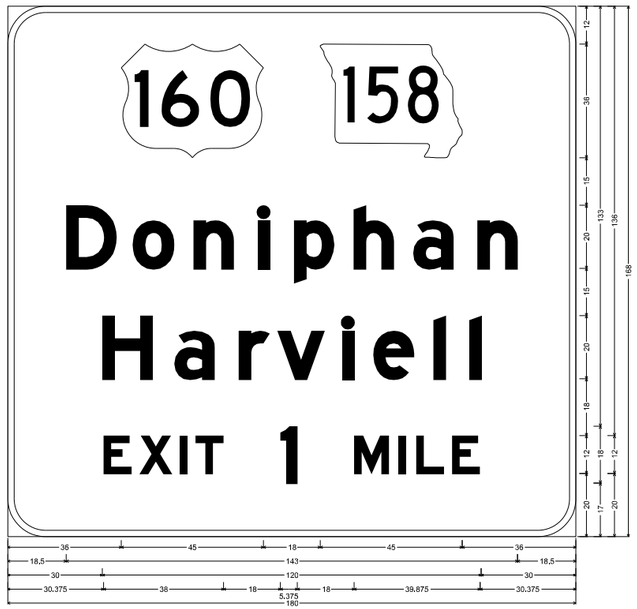
pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\087_SN_07_J9P3764_i1_D30.dgn 10:07:10 AM 3/2/2023



SIGN NO.	1
STATION	APPROX. 485+76
ROADWAY	RTE 67

E1-1 ST-STRUCTURAL:
12.000" Radius, 2.000" Border, White on, Green;
State Highway 158 M1-6a4 18.000" C; "Harviell", E Mod; "Doniphan", E Mod; "EXIT", E Mod; "1", E Mod; "MILE", E Mod;
Table of letter and object lefts

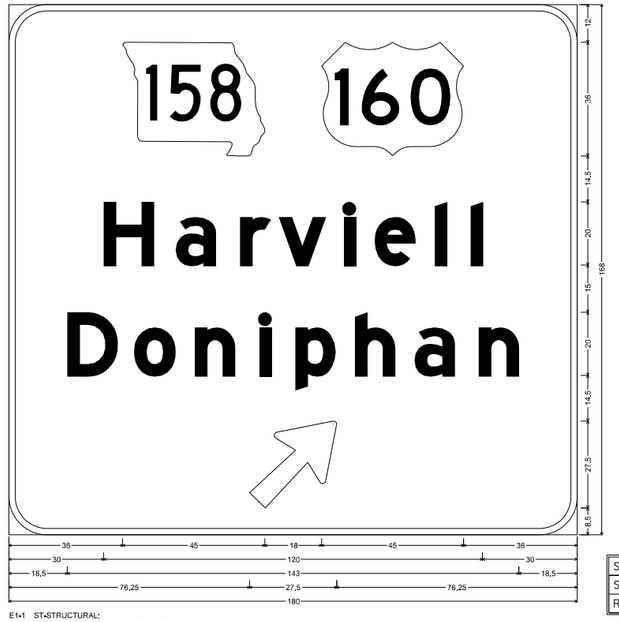
36,000	99,000							
H 30,000	a 52,750	r 73,125	v 85,375	l 105,875	e 115,750	i 134,875	l 146,250	
D 18,500	o 39,625	n 58,875	l 79,250	p 90,625	h 109,500	a 128,500	n 148,750	
E 30,375	X 41,750	I 54,625	T 59,500	I 86,375	M 109,750	I 123,875	L 129,375	E 140,750



SIGN NO.	12
STATION	622+98
ROADWAY	RTE 67

E1-1 ST-STRUCTURAL:
12.000" Radius, 2.000" Border, White on, Green;
State Highway 158 M1-6a4 18.000" C; "Doniphan", E Mod; "Harviell", E Mod; "EXIT", E Mod; "1", E Mod; "MILE", E Mod;
Table of letter and object lefts

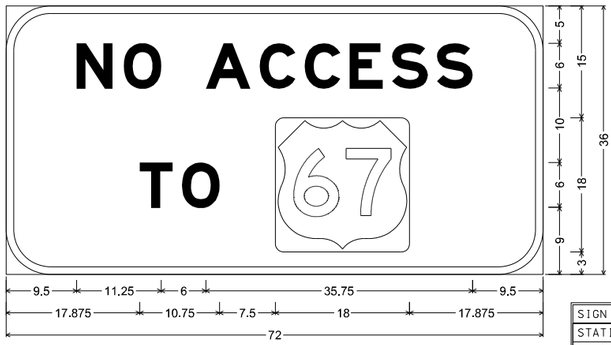
36,000	99,000							
D 18,500	o 39,625	n 58,875	l 79,250	p 90,625	h 109,500	a 128,500	n 148,750	
H 30,000	a 52,750	r 73,125	v 85,375	l 105,875	e 115,750	i 134,875	l 146,250	
E 30,375	X 41,750	I 54,625	T 59,500	I 86,375	M 109,750	I 123,875	L 129,375	E 140,750



SIGN NO.	2
STATION	532+31
ROADWAY	RTE 67

E1-1 ST-STRUCTURAL:
12.000" Radius, 2.000" Border, White on, Green;
State Highway 158 M1-6a4 18.000" C; "Harviell", E Mod; "Doniphan", E Mod; Arrow 160 - 35.000" 45°;
Table of letter and object lefts

36,000	99,000							
H 30,000	a 52,750	r 73,125	v 85,375	l 105,875	e 115,750	i 134,875	l 146,250	
D 18,500	o 39,625	n 58,875	l 79,250	p 90,625	h 109,500	a 128,500	n 148,750	
76,250								



SIGN NO.	3
STATION	1+00
ROADWAY	EAST OUTER RD

W14-14 STF-STRUCTURAL FLUORESCENT;
6.000" Radius, 1.000" Border, Black on, Yellow;
"NO ACCESS", E Mod; "TO", E Mod;
Table of letter and object lefts

N 9.500	O 15.750	A 26.750	C 34.000	C 40.000	E 46.000	S 51.750	S 57.750
T 17.875	O 23.625	36.125					

ROUTE 67
SIGNING SHEET
8 OF 9

D-31

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/1/2023
ROUTE: 67 | STATE: MO
DISTRICT: SE | SHEET NO.: 88
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

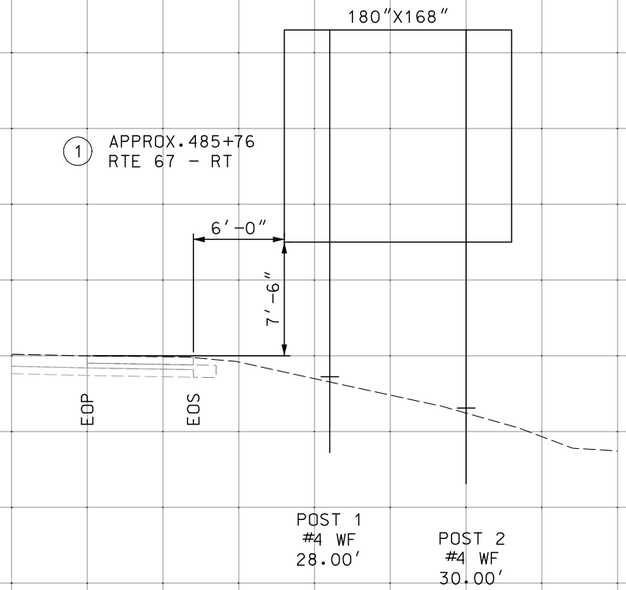
DESCRIPTION	DATE

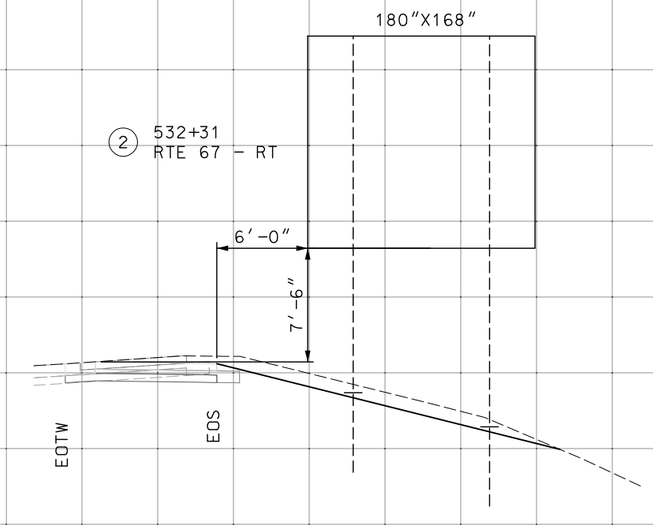
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

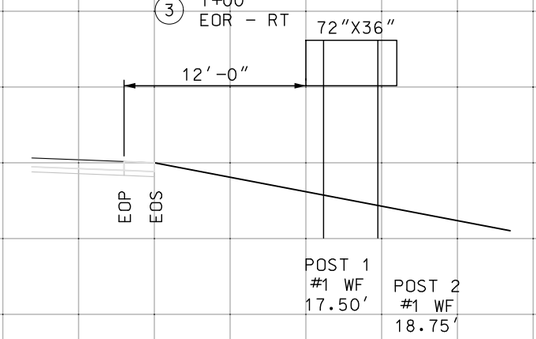
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

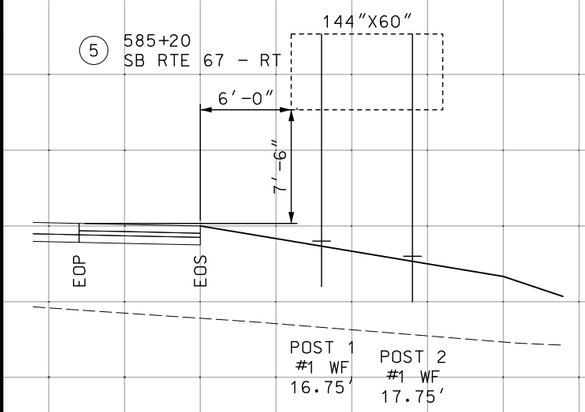
REV.

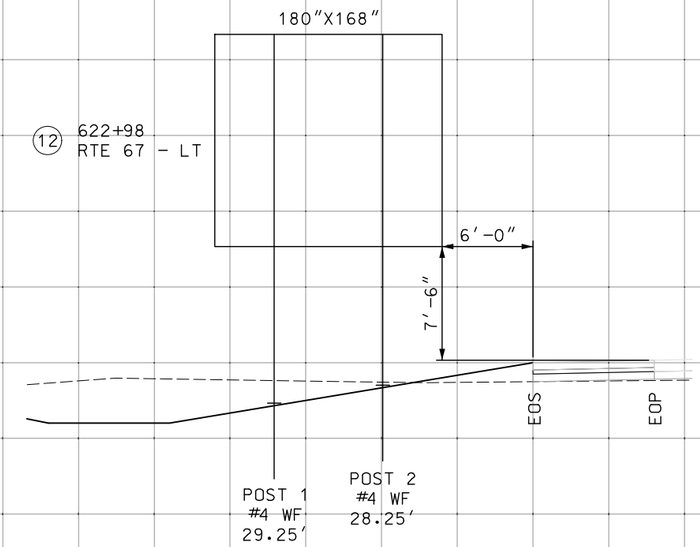
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.











ROUTE 67
SIGNING SHEET
GROUND SECTIONS
SHEET 9 OF 9

STATE OF MISSOURI
PAUL JOSEPH KRONLAGE
NUMBER EN 023328
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	89

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	90

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
BFW
417 S. GRAND AVENUE WEST • SPRINGFIELD, MO 65806
PHONE 417.831.4214 • FAX 417.831.4342
WWW.BFWENGINEERING.COM
COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

530

535

PC STA 528+21.85

STA 529+00 TO STA 531+98
REMOVE 6" SWH, 300'

STA 534+45.48 TO STA 539+00
REMOVE 6" SWH
455' RTE 67

PC STA 0+00.00

PT STA 0+12.84

MATCHLINE STA. 539+00, EXIST. ROUTE 67
SEE SHEET 2

12'12' 00.00
12'12'
12
12
+98.00
+45.48
+80.82

36"SURFACE MOUNT DELINEATOR POST (TO BE REMOVED)

STA 534+45.48 TO STA 537+80.82
REMOVE 6" SWH REMOVE 336'

STA 531+98 TO STA 534+45.48
REMOVE 12" SWH;250' RTE 67; 250' RAMP 2

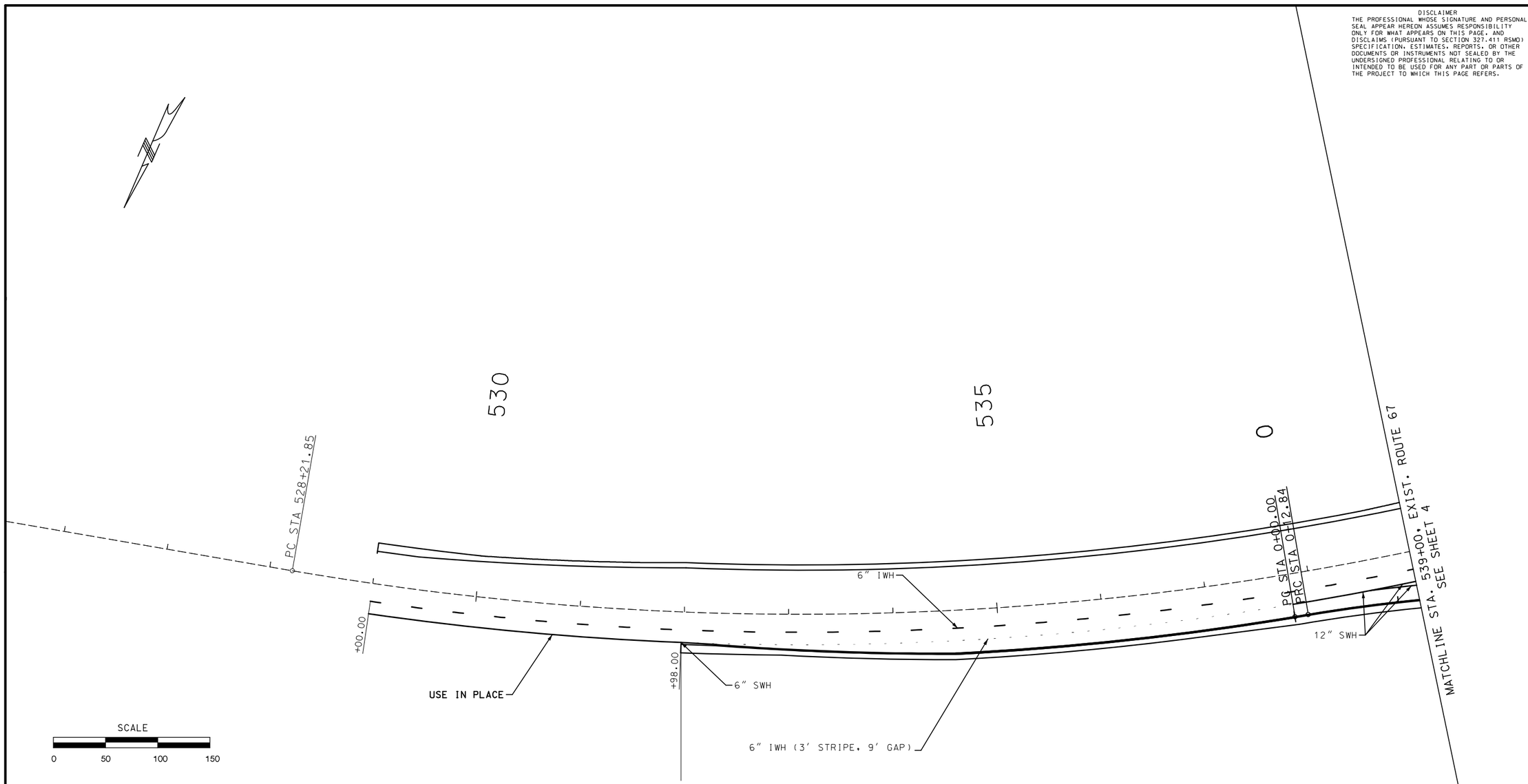
SCALE
0 50 100 150

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOUBLE
W - WHITE
Y - YELLOW
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

PAVEMENT MARKING
1 OF 15

REV.



STRIPING KEY

S – SOLID

I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	3/3/2023
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	91
COUNTY	BUTLER
JOB NO.	J9P3764
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

401 S. BOND AVENUE, 6TH FLOOR • SPRINGFIELD, MO 65806 • PHONE: 417.887.0549
941 WORLD'S FAIR DRIVE, SUITE 200 • SAINT LOUIS, MO 63026 • PHONE: 314.394.0900
WWW.BFWENGINEERING.COM

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

PAVEMENT MARKING
2 OF 15

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\091_PM_02_J9P3764_i50.dgn 4:56:10 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	92

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
BFW
811 GRAND COURT STREET • SUITE 300 • KANSAS CITY, MISSOURI 64106 • (816) 221-5275
2400 PERSHING ROAD • SUITE 400 • KANSAS CITY, MISSOURI 64108 • (816) 471-8401
WWW.BFWINC.COM
COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

MATCHLINE STA. 539+00. EXIST. ROUTE 67

PC STA 10+00.00

12'-12'-12'

+08.15

STA 539+00 TO STA 552+00
REMOVE 6" SWH
1300' RTE 67

36" SURFACE MOUNT
DELINEATOR POST
(TO BE REMOVED)

PT STA 6+08.92

S 19° 36' 51" W

PC STA 7+78.69

PT STA 19+18.18

PCC STA 17+24.61

S 20° 38' 05" W

PC STA 2+24.91

S 24° 50' 31" W

STA 14+29.71

PT STA 6+00.00

+50.18

+61.86

+10.98

MATCHLINE STA. 552+00. EXIST. ROUTE 67

STRIPING KEY

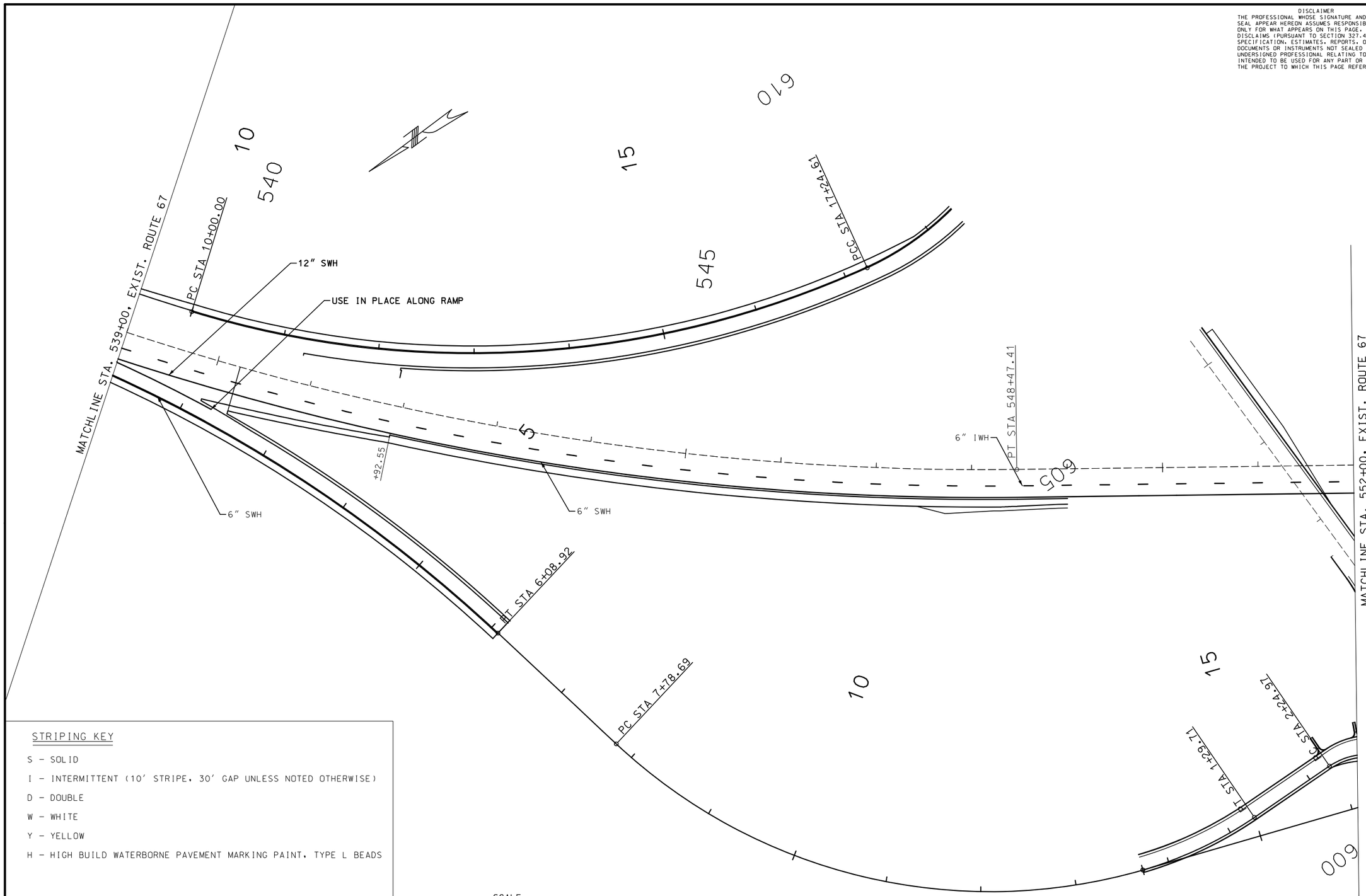
S – SOLID
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D – DOUBLE
W – WHITE
Y – YELLOW
H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

SCALE
0 50 100 150

PAVEMENT MARKING
3 OF 15

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\092_PM_03_J9P3764_i50.dgn 4:56:11 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



STRIPING KEY

S – SOLID

I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

SCALE
0 50 100 150

PAVEMENT MARKING
4 OF 15

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	93
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

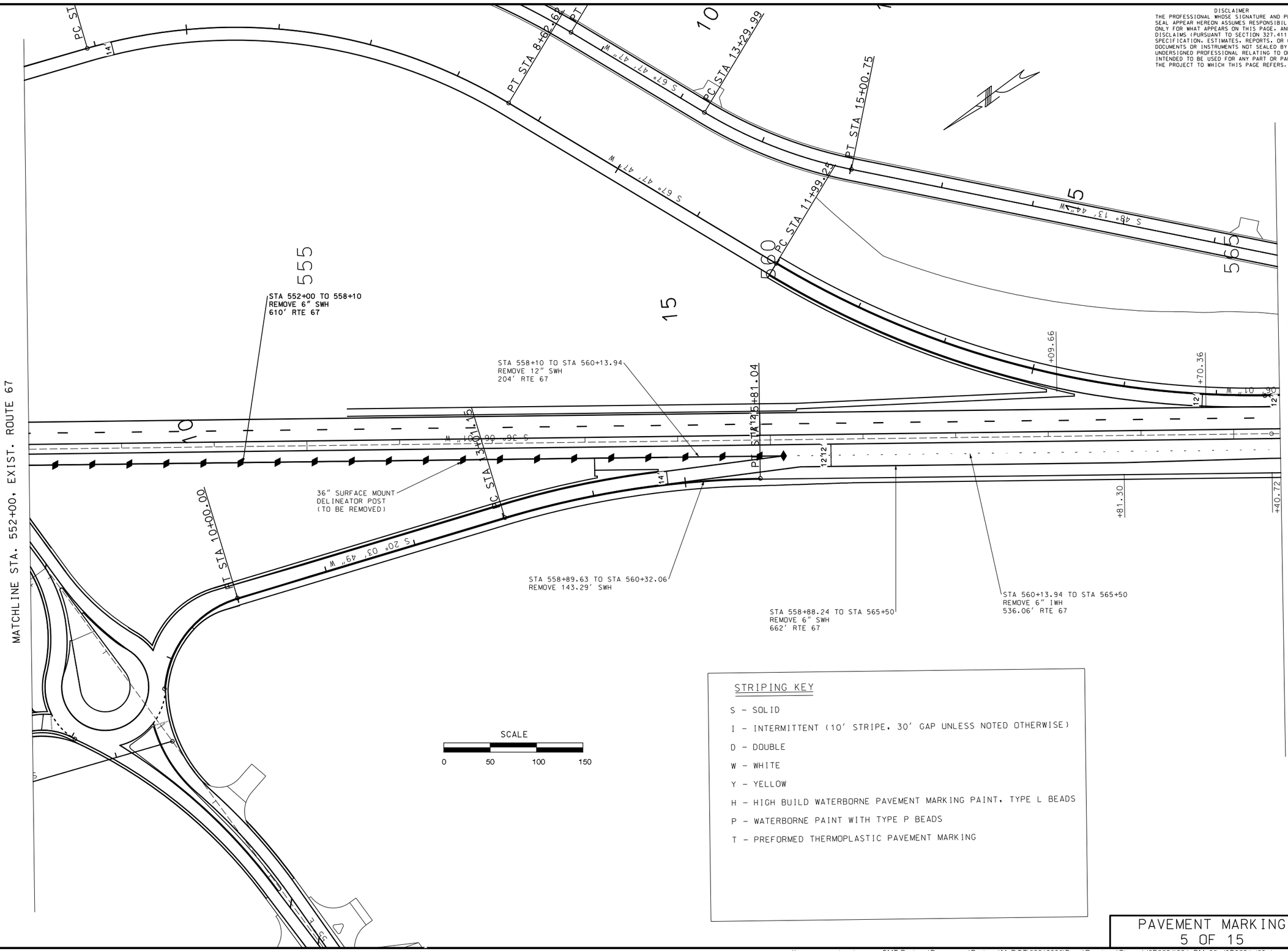
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\093_PM_04_J9P3764_i50.dgn 4:56:12 PM 3/3/2023

REV.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STRIPING KEY

S - SOLID

I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D - DOUBLE

W - WHITE

Y - YELLOW

H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P - WATERBORNE PAINT WITH TYPE P BEADS

T - PREFORMED THERMOPLASTIC PAVEMENT MARKING

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	94

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.

PAVEMENT MARKING
5 OF 15

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\094_PM_05_J9P3764_i50.dgn 4:56:14 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	95

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

BFW
401 S. BOND AVENUE, 6TH FLOOR • SPRINGFIELD, MO 65806 • 417.862.6314
WWW.BFWENGINEERING.COM

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

PC ST
PT STA 8+62.62
PC STA 13+29.99
PT STA 15+00.75
PC STA 11+99.24
PT STA 15+81.04
PC STA 565+40.72
PT STA 10+00.00
BC STA 13+10.19
EC STA 13+89.63
+10.17
+89.63
S 67° 47' 47" W
S 48° 13' 44" W
S 36° 06' 01" W
S 20° 03' 49" W
S 55° E
555
560
565
15
10
5
6" IWH
6" SWH
12" SWH
3'/9" IWH
MATCHLINE STA. 552+00, EXIST. ROUTE 67
MATCHLINE STA. 565+50, EXIST. ROUTE 67

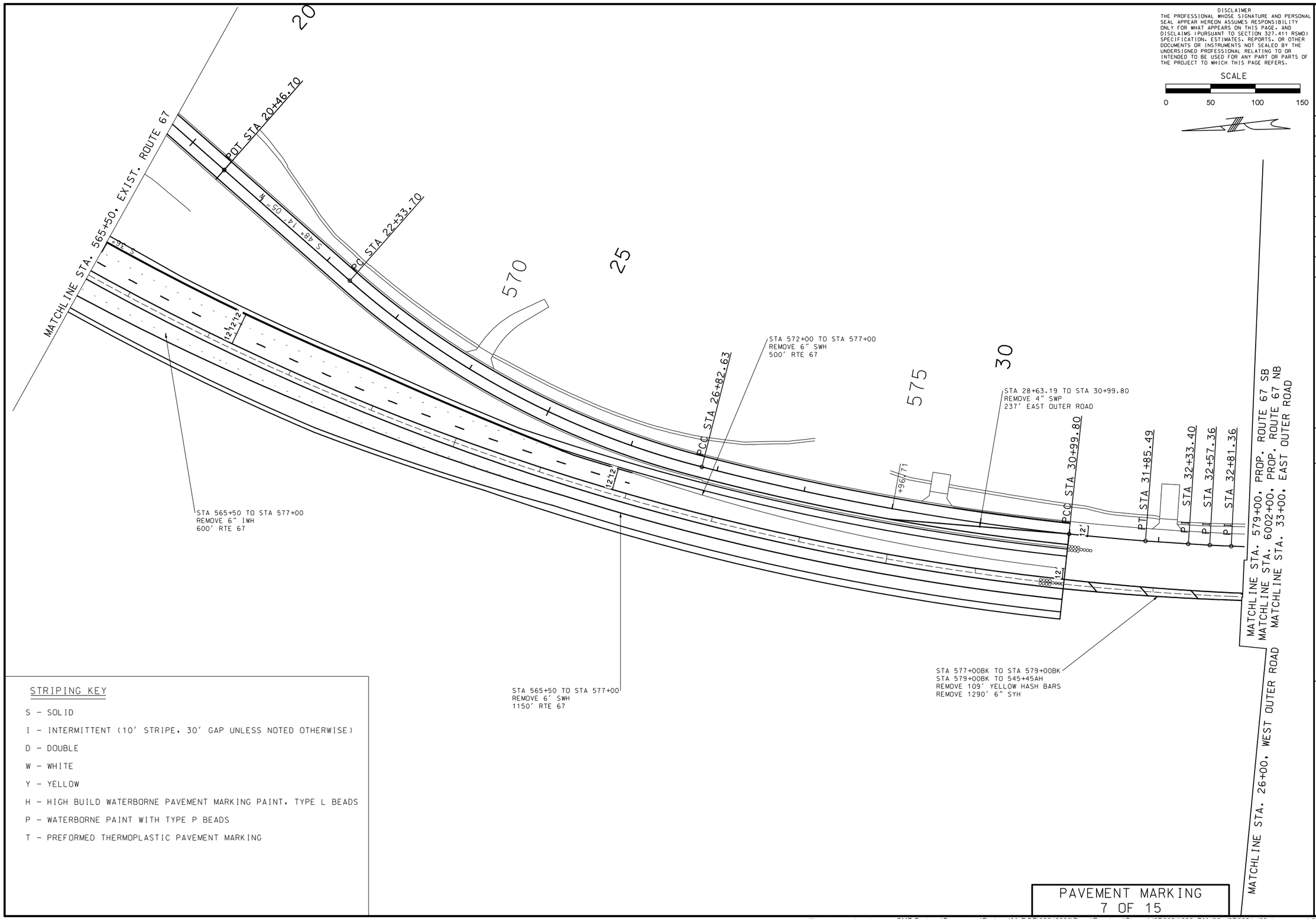
SCALE
0 50 100 150

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOUBLE
W - WHITE
Y - YELLOW
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
P - WATERBORNE PAINT WITH TYPE P BEADS
T - PREFORMED THERMOPLASTIC PAVEMENT MARKING

PAVEMENT MARKING
6 OF 15

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\095_PM_06_J9P3764_i50.dgn 4:56:17 PM 3/3/2023



STRIPING KEY

S – SOLID

I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING

PAVEMENT MARKING
7 OF 15

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	96

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

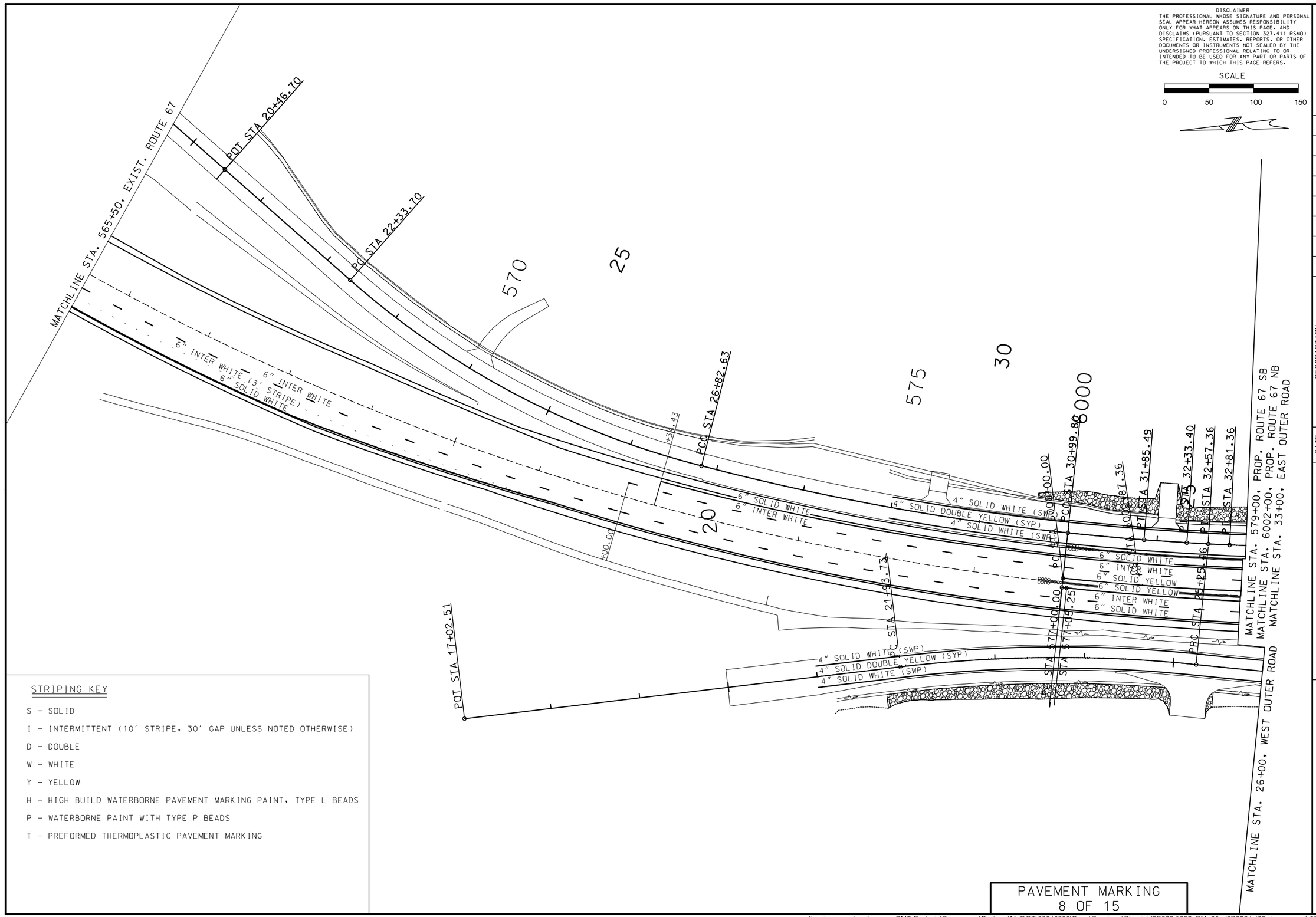
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\096_PM_07_J9P3764_i50.dgn 4:56:17 PM 3/3/2023



STRIPING KEY

S – SOLID

I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING

PAVEMENT MARKING
8 OF 15

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	97

COUNTY: BUTLER
JOB NO.: J9P3764
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)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

STRIPING KEY

S – SOLID

I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	98

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
811 GRAND AVENUE, SUITE 300 • KANSAS CITY, MISSOURI 64106 • PHONE: 816.221.1122 • FAX: 816.221.1044
201 JOHNSON ROAD, SUITE D • HOUSE SPRINGS, MISSOURI 63051 • PHONE: 636.671.0016 • FAX: 636.671.0019
WWW.BFWENGINEERING.COM
COPYRIGHT © 2017 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

REV.

SEE SHEET 8
MATCHLINE STA. 579+00, PROP. ROUTE 67 SB
MATCHLINE STA. 6002+00, PROP. ROUTE 67 NB
MATCHLINE STA. 33+00, EAST OUTER ROAD

SEE SHEET 10
MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB
MATCHLINE STA. 49+91.3, PROP. EAST OUTER ROAD

MATCHLINE STA. 26+00, WEST OUTER ROAD

SEE SHEET 10
MATCHLINE STA. 39+00, WEST OUTER ROAD

P.I. STA 33+29.49
P.I. STA 33+77.74
P.I. STA 34+01.82
P.C. STA 34+74.52
P.C. STA 583+43.62
P.C.C. STA 38+49.10
P.C. STA 546+63.20
P.T. STA 41+76.38
P.T. STA 551+43.20

4" SOLID WHITE (SWP)
4" SOLID DOUBLE YELLOW (SYP)
4" SOLID WHITE (SWP)
6" SOLID WHITE
6" SOLID YELLOW
6" INTER WHITE
6" SOLID WHITE
6" SOLID YELLOW
6" INTER WHITE
4" SOLID WHITE (SWP)
4" SOLID DOUBLE YELLOW (SYP)
4" SOLID WHITE (SWP)

SC STA 579+99.94
SC STA 6003+79.51

EQUATION:
Back 584+63.13
Ahead 546+63.20

PAVEMENT MARKING
9 OF 15

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\098_PM_09_J9P3764_i50.dgn 5:10:16 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	99

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
191 NORTH CLEMENT AVENUE • 415 S. ANKENY BOULEVARD, SUITE 205 • 901 LARKIN WILLIAMS ROAD, SUITE 1
SUITE 300 • FERGUSON, MO 63135 • ANKENY, IA 50023 • FENTON, MO 63026
PHONE: 314.427.0666 • PHONE: 515.963.5464 • PHONE: 636.343.0888
COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.
WWW.BFWINC.COM

REV.

SEE SHEET 7
MATCHLINE STA. 6015+00, PROP. ROUTE 67 NB
MATCHLINE STA. 592+00, PROP. ROUTE 67 SB
MATCHLINE STA. 49+91.3, PROP. EAST OUTER ROAD

PDT STA 46+49.48
END EAST OUTER ROAD

555 560 565
595 600 605
6020 6025
40 45 50

PT STA 6022+07.25
PDT STA 6025+38.11
PDT STA 602+39.17
PT STA 602+39.17
PT STA 46+67.14

6" SOLID WHITE
6" INTER WHITE
6" SOLID YELLOW
S 0° 26' 25" W

6" SOLID YELLOW
6" INTER WHITE
6" SOLID WHITE

4" SOLID WHITE
4" SOLID DOUBLE YELLOW
4" SOLID WHITE

MATCHLINE STA. 605+00,
PROP. ROUTE 67
SEE SHEET 13

MATCHLINE STA. 52+00,
WEST OUTER ROAD
SEE SHEET 13

SEE SHEET 7
MATCHLINE STA. 39+00, WEST OUTER ROAD

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOUBLE
W - WHITE
Y - YELLOW
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
P - WATERBORNE PAINT WITH TYPE P BEADS
T - PREFORMED THERMOPLASTIC PAVEMENT MARKING

PAVEMENT MARKING
10 OF 15

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\099_PM_010_J9P3764_i50.dgn 4:56:25 PM 3/3/2023

STRIPING KEY

S – SOLID

I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

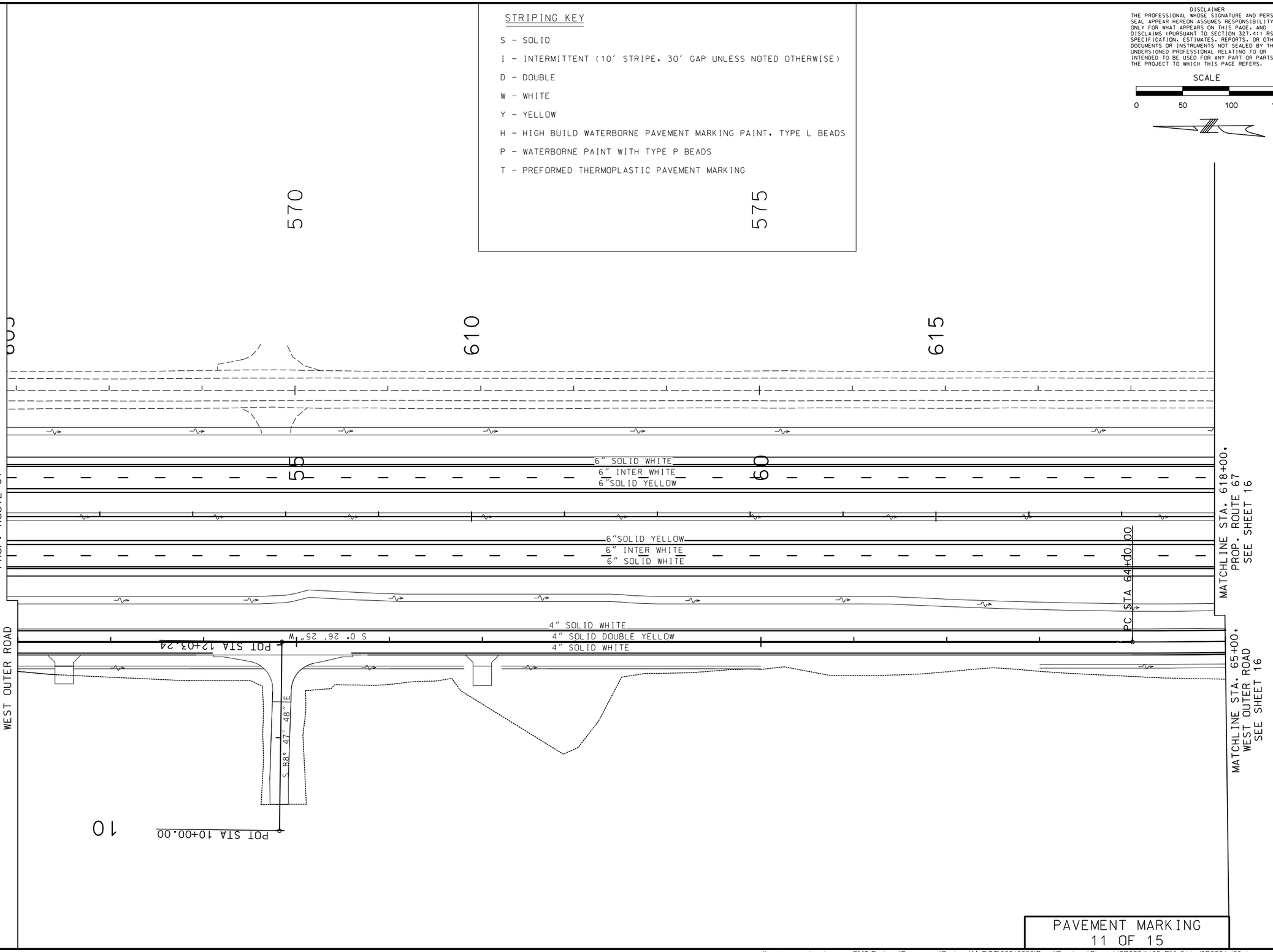
W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING



PAVEMENT MARKING
11 OF 15

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	100

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BFW
BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

REV.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764100_PM_011_J9P3764_i50.dgn 4:56:28 PM 3/3/2023

STRIPING KEY

S - SOLID

I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D - DOUBLE

W - WHITE

Y - YELLOW

H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

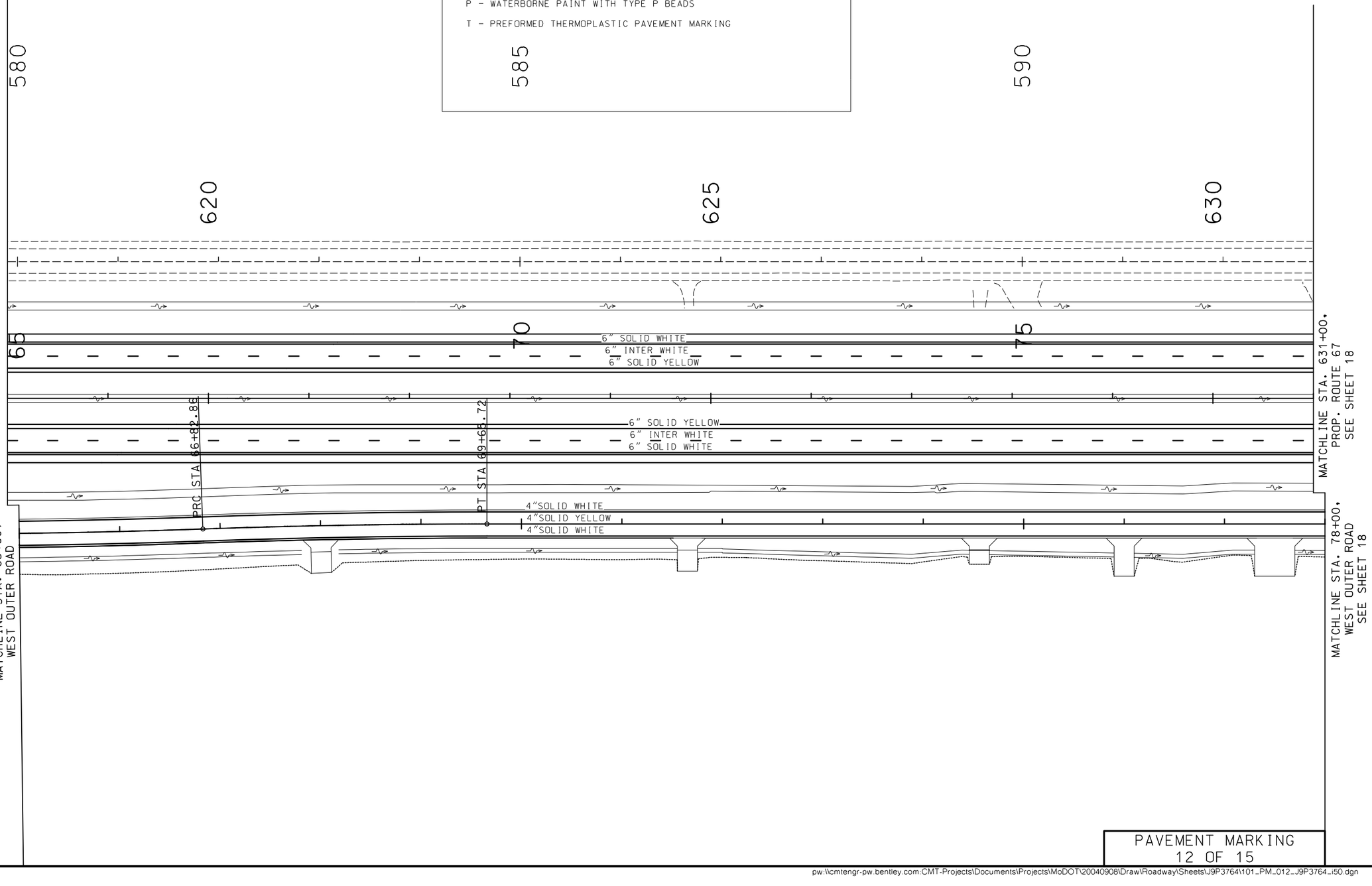
P - WATERBORNE PAINT WITH TYPE P BEADS

T - PREFORMED THERMOPLASTIC PAVEMENT MARKING

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE

0 50 100 150



PAVEMENT MARKING
12 OF 15

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	101

COUNTY
BUTLER

JOB NO.
J9P3764

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)

BACON|FARMER|WORKMAN
ENGINEERING & TESTING, INC.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

STRIPING KEY

S – SOLID

I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOUBLE

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P – WATERBORNE PAINT WITH TYPE P BEADS

T – PREFORMED THERMOPLASTIC PAVEMENT MARKING

595

600

605

635

640

S 0° 26' 25" W

6" SOLID WHITE
6" INTER WHITE
6" SOLID YELLOW

S 0° 26' 25" W

6" SOLID YELLOW
6" INTER WHITE
6" SOLID WHITE

4" SOLID WHITE
4" SOLID DOUBLE YELLOW
4" SOLID WHITE

S 0° 26' 25" W

SEE SHEET 16
MATCHLINE STA. 631+00,
PROP. ROUTE 67

SEE SHEET 16
MATCHLINE STA. 78+00,
WEST OUTER ROAD

MATCHLINE STA. 644+00,
PROP. ROUTE 67
SEE SHEET 20

MATCHLINE STA. 91+00,
WEST OUTER ROAD
SEE SHEET 20

PAVEMENT MARKING
13 OF 15

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	102

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

COPYRIGHT © 2021 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\102_PM_013_J9P3764_i50.dgn 4:56:32 PM 3/3/2023

STRIPING KEY

S - SOLID

I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D - DOUBLE

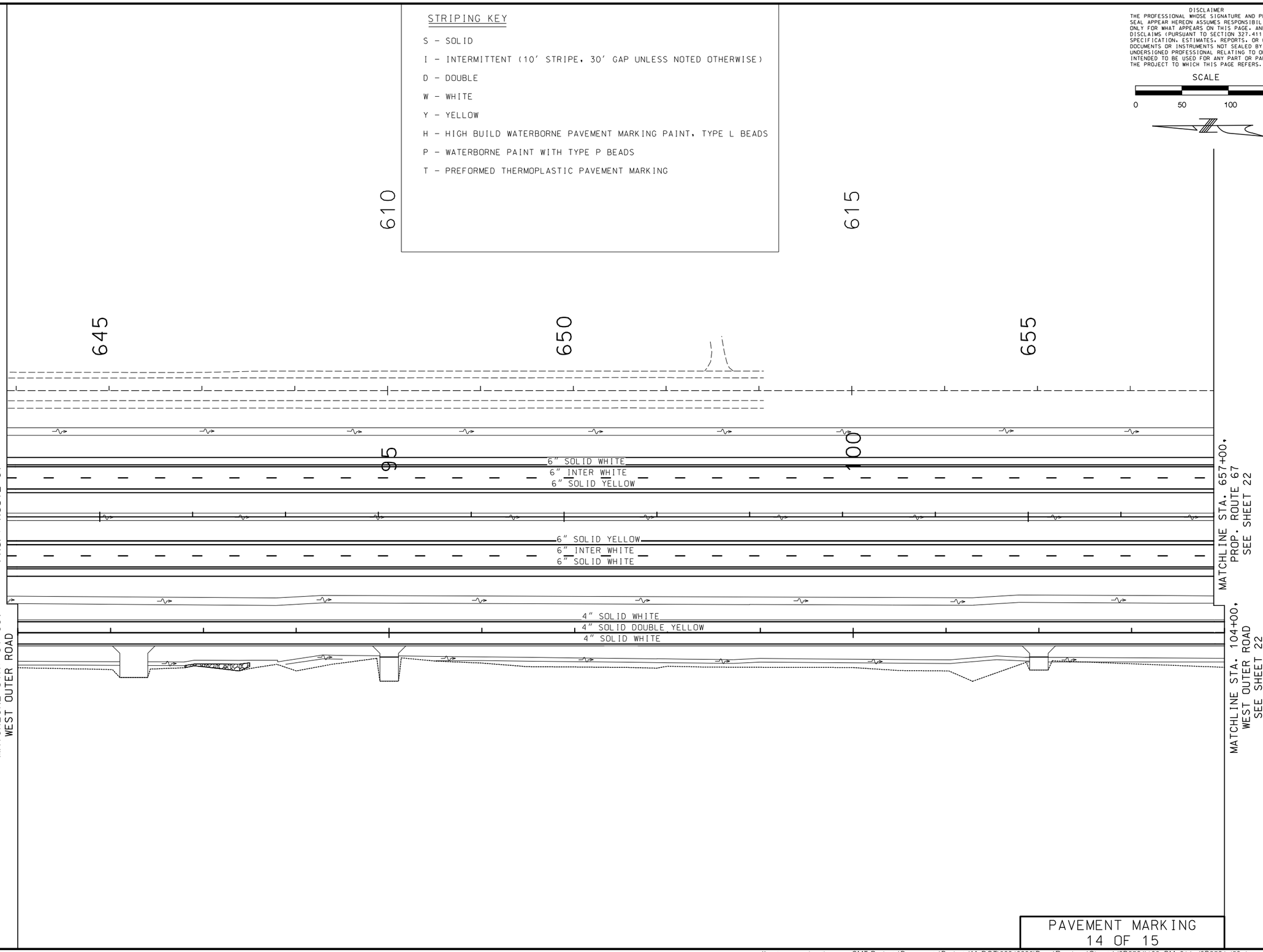
W - WHITE

Y - YELLOW

H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

P - WATERBORNE PAINT WITH TYPE P BEADS

T - PREFORMED THERMOPLASTIC PAVEMENT MARKING



PAVEMENT MARKING
14 OF 15

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	103

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
401 S. LAFAYETTE STREET • SUITE 300 • KANSAS CITY, MO 64108
816.931.0111 • FAX 816.931.0104
WWW.BFWENGINEERING.COM
COPYRIGHT © 2017 | BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\103_PM_014_J9P3764_i50.dgn 4:56:34 PM 3/3/2023

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SCALE
0 50 100 150

STATE OF MISSOURI
BARRY DEAN HORST
NUMBER PE-23844
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	104

COUNTY BUTLER
JOB NO. J9P3764
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

620 660 625 665 630 670

END PHASE 1B
MATCHLINE STA. 660+75.00
PROP. ROUTE 67

SEE SHEET 20
MATCHLINE STA. 657+00.
PROP. ROUTE 67

105

6" SOLID WHITE
6" INTER WHITE
6" SOLID YELLOW

6" SOLID YELLOW
6" INTER WHITE
6" SOLID WHITE

POT STA 10764.11

4" SOLID WHITE
4" SOLID DOUBLE YELLOW
4" SOLID WHITE

POT STA 13+14.43

±08.06

S 89° 50' 49" E

SEE SHEET 20
MATCHLINE STA. 104+00.
WEST OUTER ROAD

PI STA 11+00.39

S 88° 51' 42" E

POT STA 10+00.00

10

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOUBLE
W - WHITE
Y - YELLOW
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
P - WATERBORNE PAINT WITH TYPE P BEADS
T - PREFORMED THERMOPLASTIC PAVEMENT MARKING

PAVEMENT MARKING
15 OF 15

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BACON|FARMER|WORKMAN ENGINEERING & TESTING, INC.
COPYRIGHT © 2023 BACON FARMER WORKMAN ENGINEERING & TESTING, INC.

B42
STA. 586+98.28
69.63' LT RTE. 67
2'X2' PRECAST DROP INLET
TOP = 382.53 FT
D = 4 FT
CL 3 = 5 CY

H85
STA. 587+00.07
14.21' LT RTE. 67
3'X3' TYPE S-1 INLET
TOP = 381.19 FT
D = 7 FT
CL 3 = 16 CY

20'

FL 378.53

53 LF
12" GROUP "A" PIPE
S= 4.23%
CL 3 = 18 CY

FL 376.24
FL 374.51
FL 374.61

B92
STA. 584+50.45
56.97' LT RTE. 67
2'X2' PRECAST DROP INLET
D = 4 FT
TOP = 385.50 FT
CL 3 = 7 CY

S91
STA. 584+50.00
7.25' LT RTE. 67(A)
2.75' LT RTE. 67(B)
SPECIAL INLET NO.2
TOP = 386.38 FT (A)
TOP = 385.64 FT (B)
D = 6 FT
CL 3 = 6 CY

F94
STA. 584+49.71
64.08' RT RTE. 67
18" FES

FL 381.50

47 LF
12" GROUP "A" PIPE
S= 2.17%
CL 3 = 15 CY

FL 380.48
FL 381.64
FL 379.64

64 LF
18" GROUP "A" PIPE
S= 3.20%
CL 3 = 7 CY

FL 377.59

ROCK LINING, 1'X4'15', 3 CY

H107
STA. 580+95.68
93.73' LT RTE. 67
3'X3' TYPE S-1 INLET
TOP = 385.81 FT
D = 4 FT
CL 3 = 14 CY

A30
STA. 580+98.51
48.31' LT RTE. 67
SPECIAL INLET NO.1
TOP = 388.76 FT
D = 10 FT
CL 3 = 30 CY

S44
STA. 581+01.04
7.51' LT RTE. 67 (A)
3.01' LT RTE. 67 (B)
SPECIAL INLET NO.2
TOP = 388.75 FT (A)
TOP = 389.32 FT (B)
D = 11 FT
CL 3 = 64 CY

J131
STA. 581+05.15
57.77' RT RTE. 67
3'X3' TYPE S-2 INLET
TOP = 385.60 FT
D = 8 FT
CL 3 = 5 CY

F108
STA. 581+09.58
131.08' RT RTE. 67
24" FES

FL 382.81
(BY OTHERS)

381.81

42 LF
24" GROUP "A" PIPE
S= 2.67%
CL 3 = 15 CY

FL 380.69

TYPE A COLLAR
TYPE A COLLAR
EXISTING 24" CMP
FL 379.57

4 LF
24" GROUP "A" PIPE
S= 1.46%
CL 3 = 3 CY

FL 379.03

4 LF
24" GROUP "A" PIPE
S= 1.46%
CL 3 = 5 CY

FL 384.27
TYPE A COLLAR
EXISTING 24" CMP
FL 378.93

4 LF
24" GROUP "A" PIPE
S= 1.34%
CL 3 = 6 CY

TYPE A COLLAR

FL 378.14

15 LF
24" GROUP "A" PIPE
S= 1.34%
CL 3 = 4 CY

FL 377.60

68 LF
24" GROUP "A" PIPE
S= 0.75%
CL 3 = 13 CY

FL 377.09

ROCK LINING, 1'X6'15', 4 CY

EX R/W
PR R/W PE
PR R/W
PR R/W

CULVERT SECTIONS
SHEET 1 OF 7

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHLICHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	105

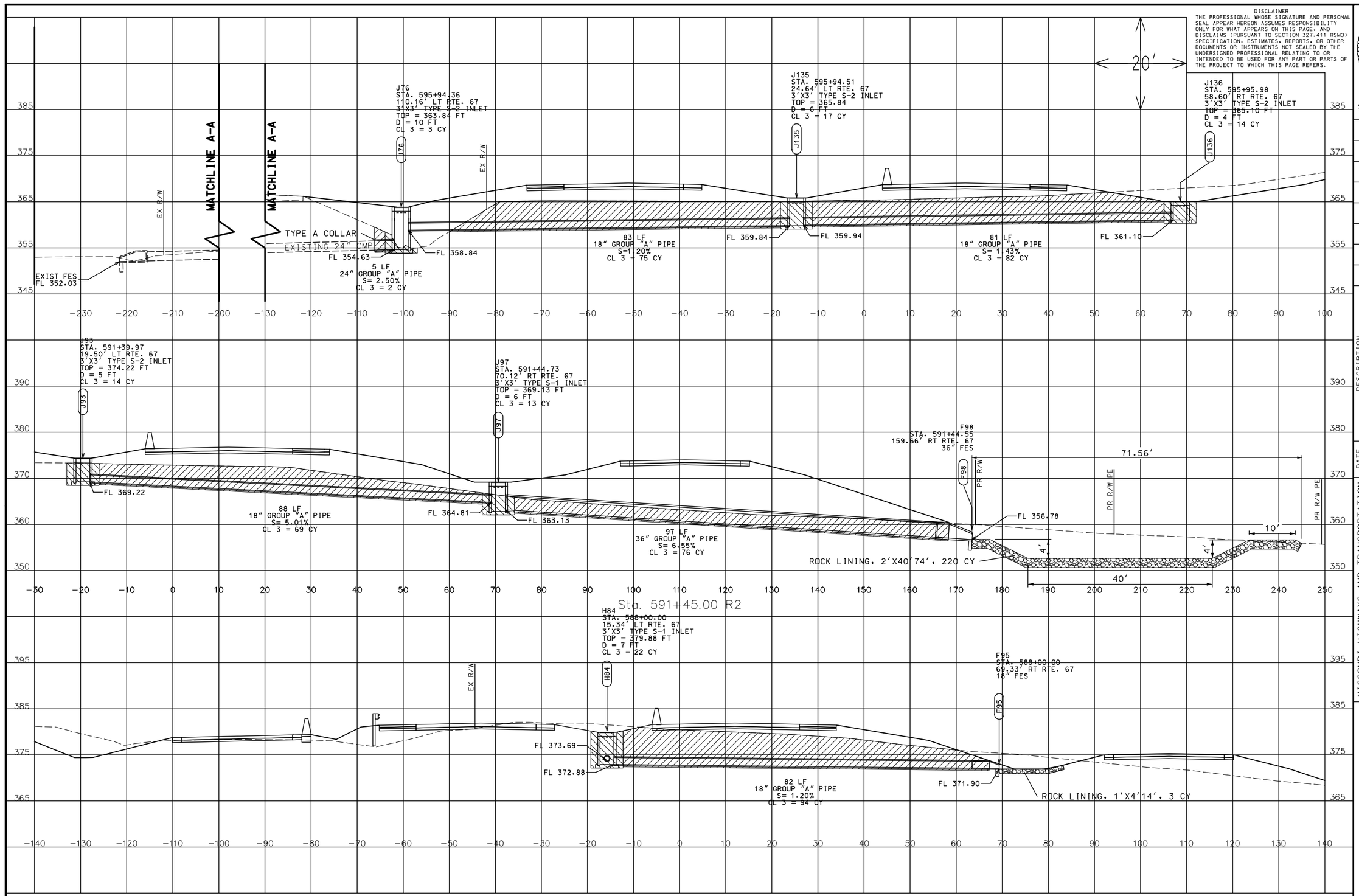
COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/1/2024	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	106
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION	REV.

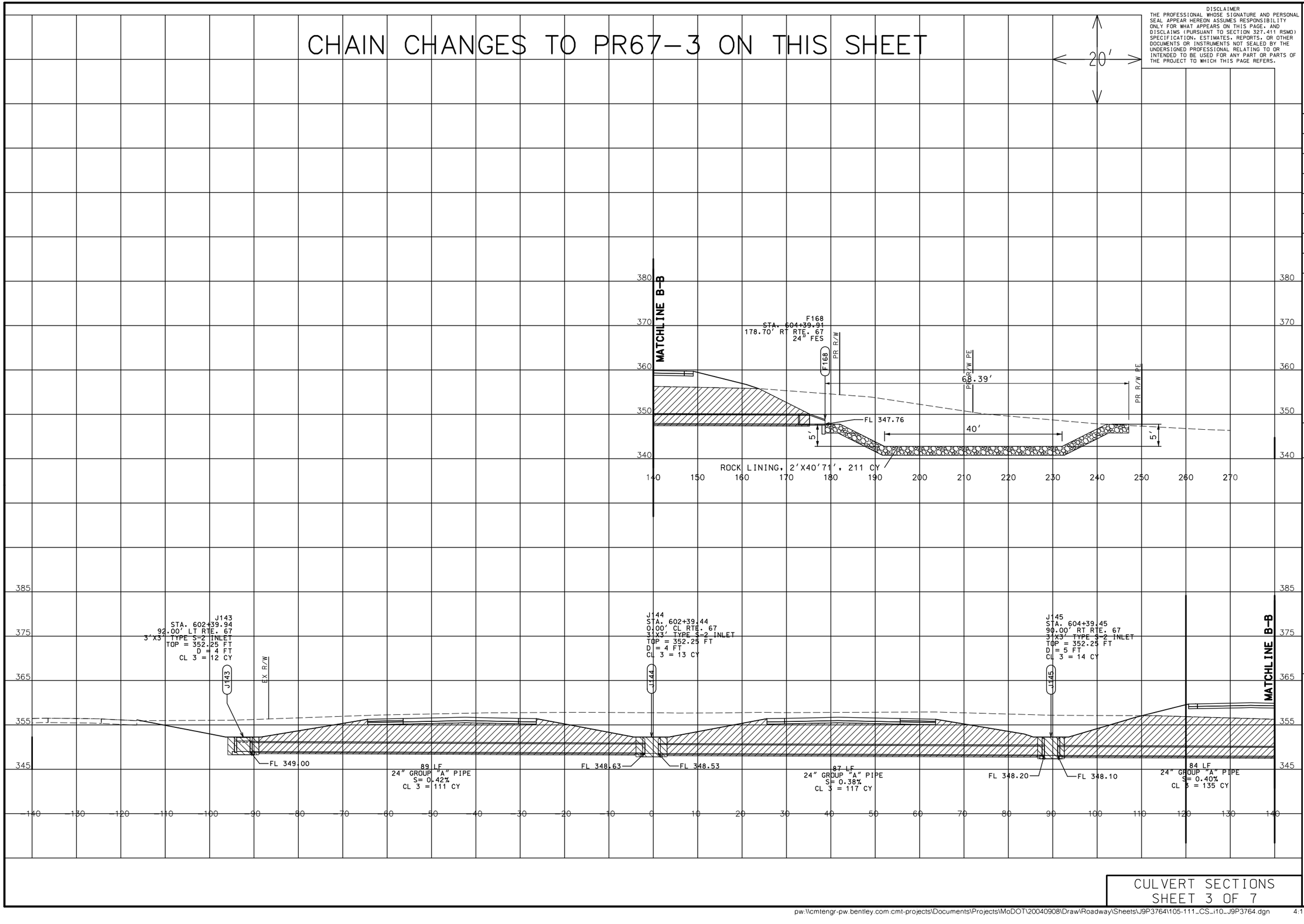
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 2 OF 7

CHAIN CHANGES TO PR67-3 ON THIS SHEET



CULVERT SECTIONS
SHEET 3 OF 7

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	107

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

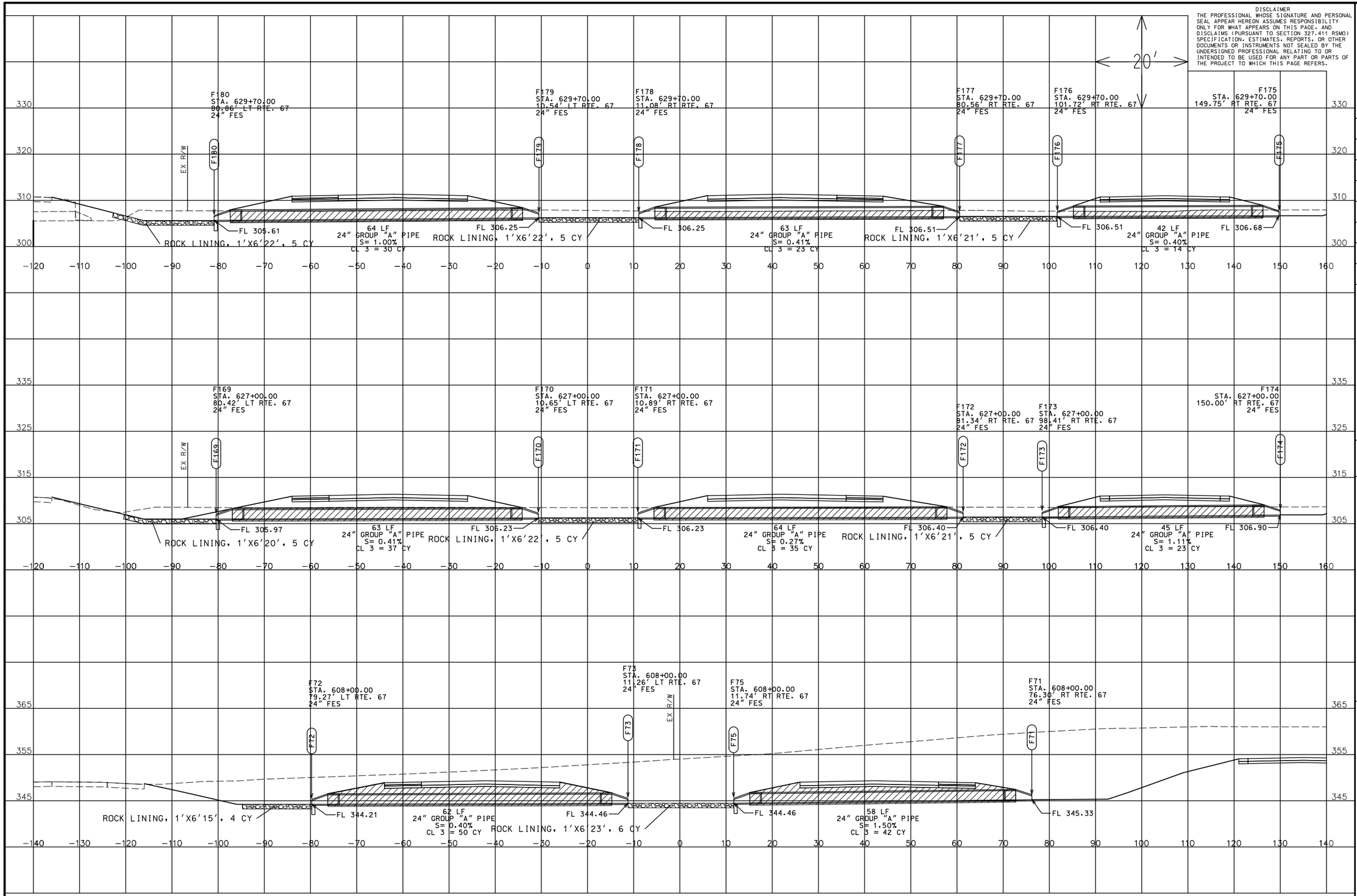
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\105-111_CS_i10_J9P3764.dgn 4:11:00 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



CULVERT SECTIONS
SHEET 4 OF 7

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/3/2023

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	108

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

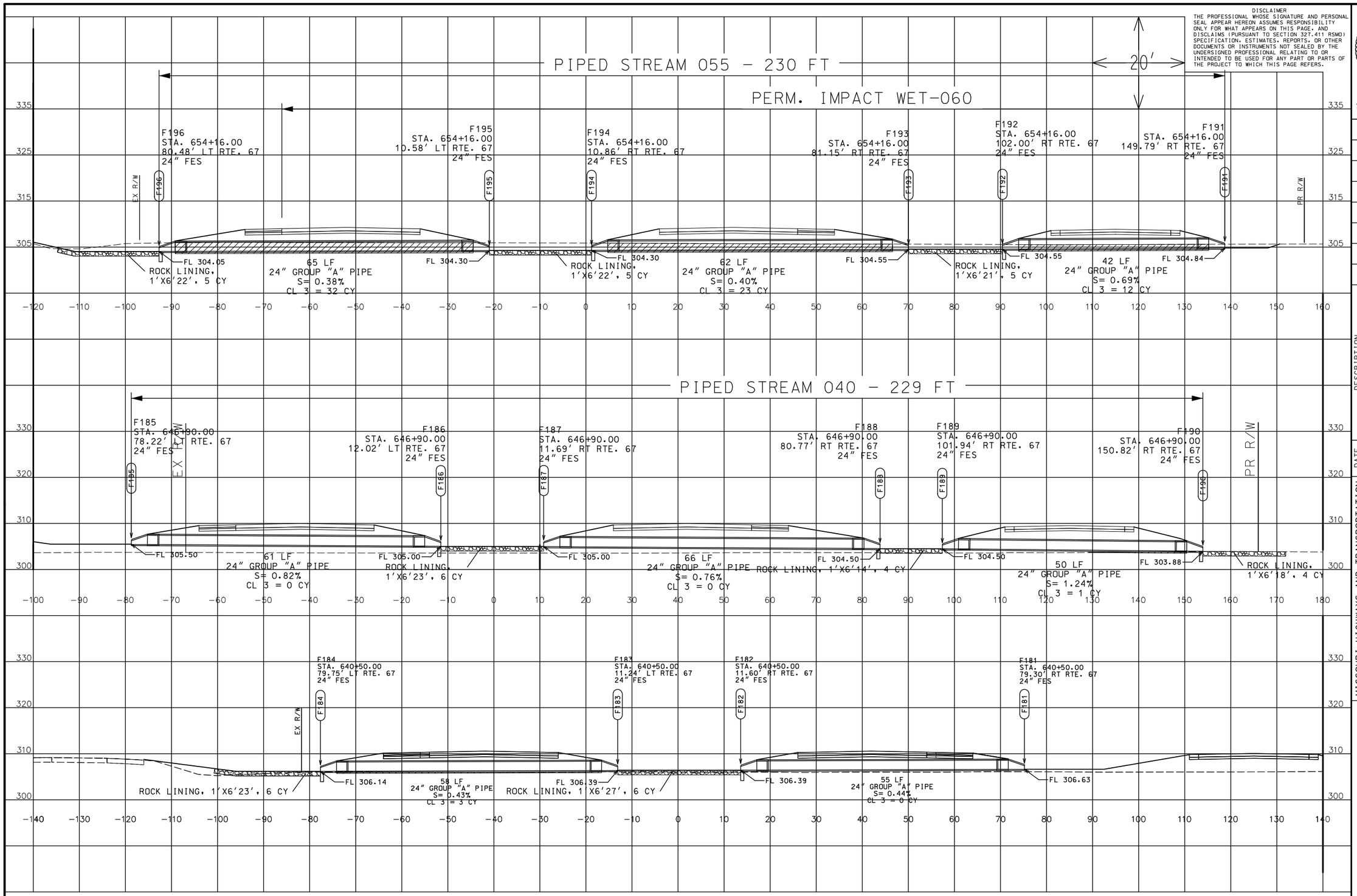
REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\105-111_CS_i10_J9P3764.dgn 4:11:00 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	109

COUNTY: BUTLER
JOB NO.: J9P3764
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

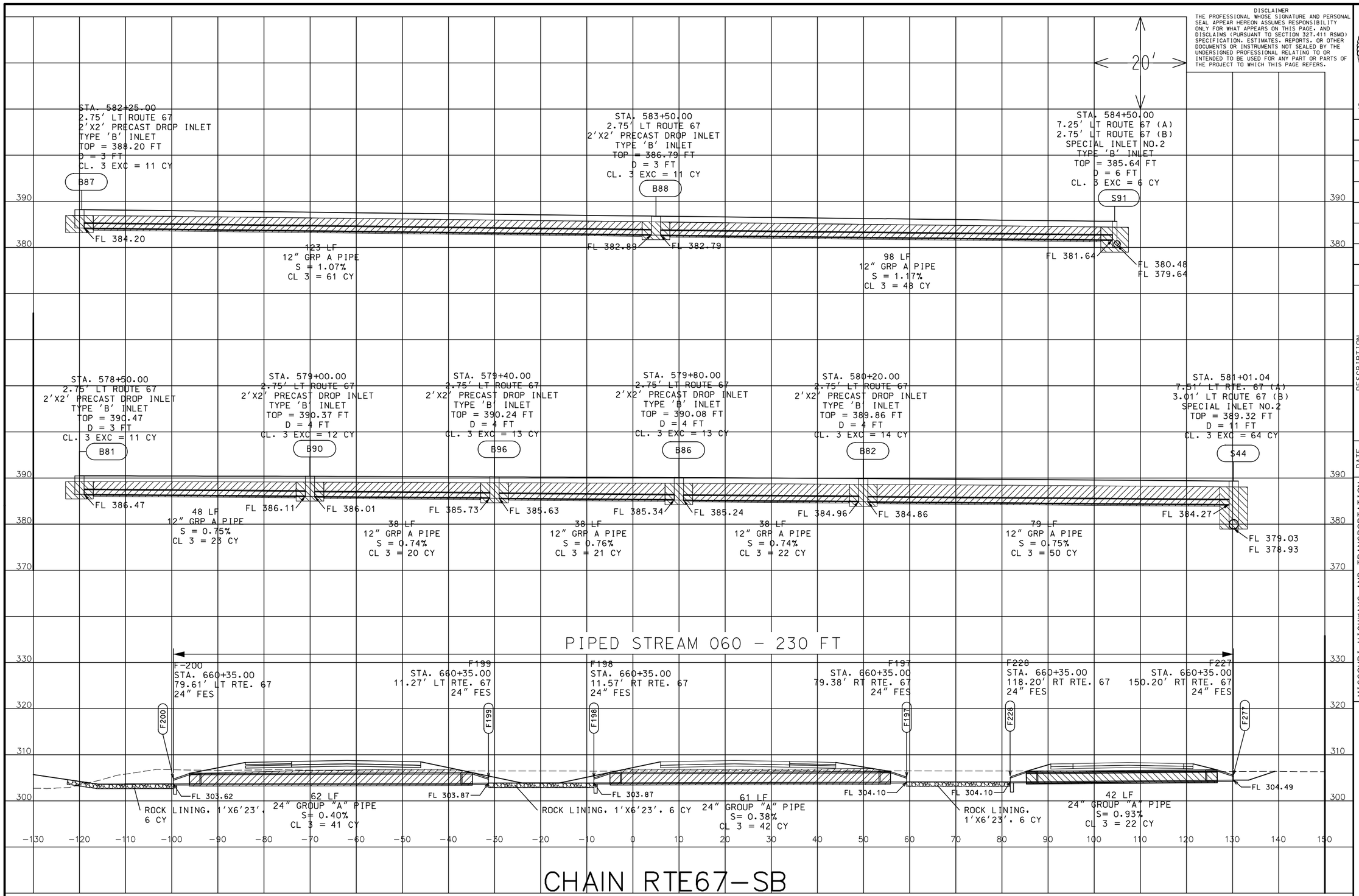
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 5 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\105-111_CS_i10_J9P3764.dgn 4:11:00 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2024

ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	110

COUNTY
BUTLER

JOB NO.
J9P3764

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

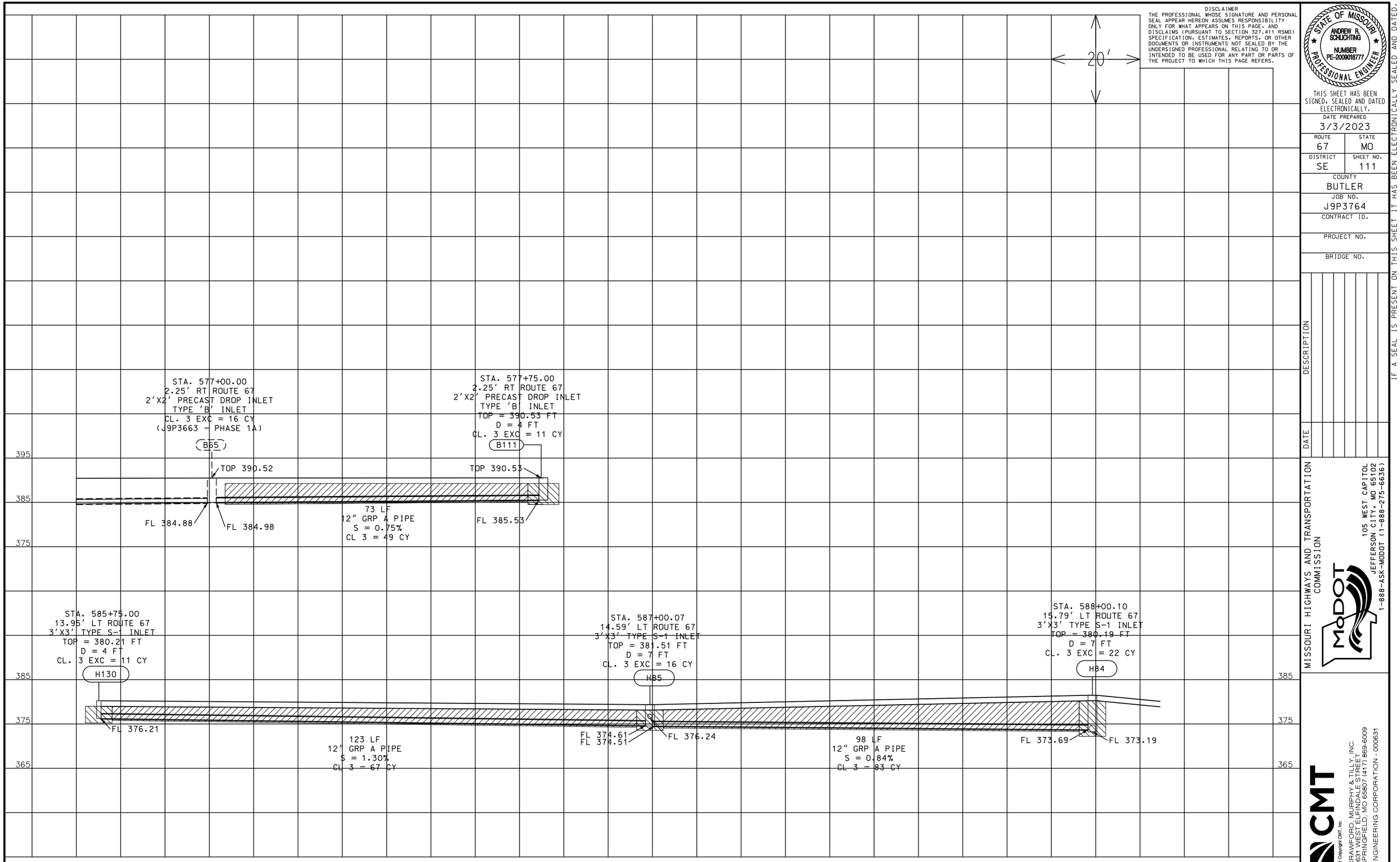
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 6 OF 7



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ANDREW R. SCHUCHTING
NUMBER PE-2009018777
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
3/3/2023	
ROUTE	STATE
67	MO
DISTRICT	SHEET NO.
SE	111
COUNTY	
BUTLER	
JOB NO.	
J9P3764	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CULVERT SECTIONS
SHEET 7 OF 7

pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\MoDOT\20040908\Draw\Roadway\Sheets\J9P3764\105-111_CS_i10_J9P3764.dgn 4:11:01 PM 3/3/2023

PRELIMINARY - NOT FOR CONSTRUCTION