MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED

STATE HIGHWAY

BUCHANAN/CLINTON COUNTIES

DESIGN DESIGNATION

US 169

A.A.D.T. - 2024 = 6,736
A.A.D.T. - 2034 = 7,473
D.H.V. = 9.53%
T = 14.16%
V = 60 M.P.H.
D = 51.7% / 48.3%

FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

ROUTE U

A.A.D.T. - 2024 = 8,563
A.A.D.T. - 2034 = 9,277
D.H.V. = 8.16%
T = 17.21%
V = 55 M.P.H.
D = 48.3% / 51.7%

FUNCTIONAL CLASSIFICATION- MINOR COLLECTOR

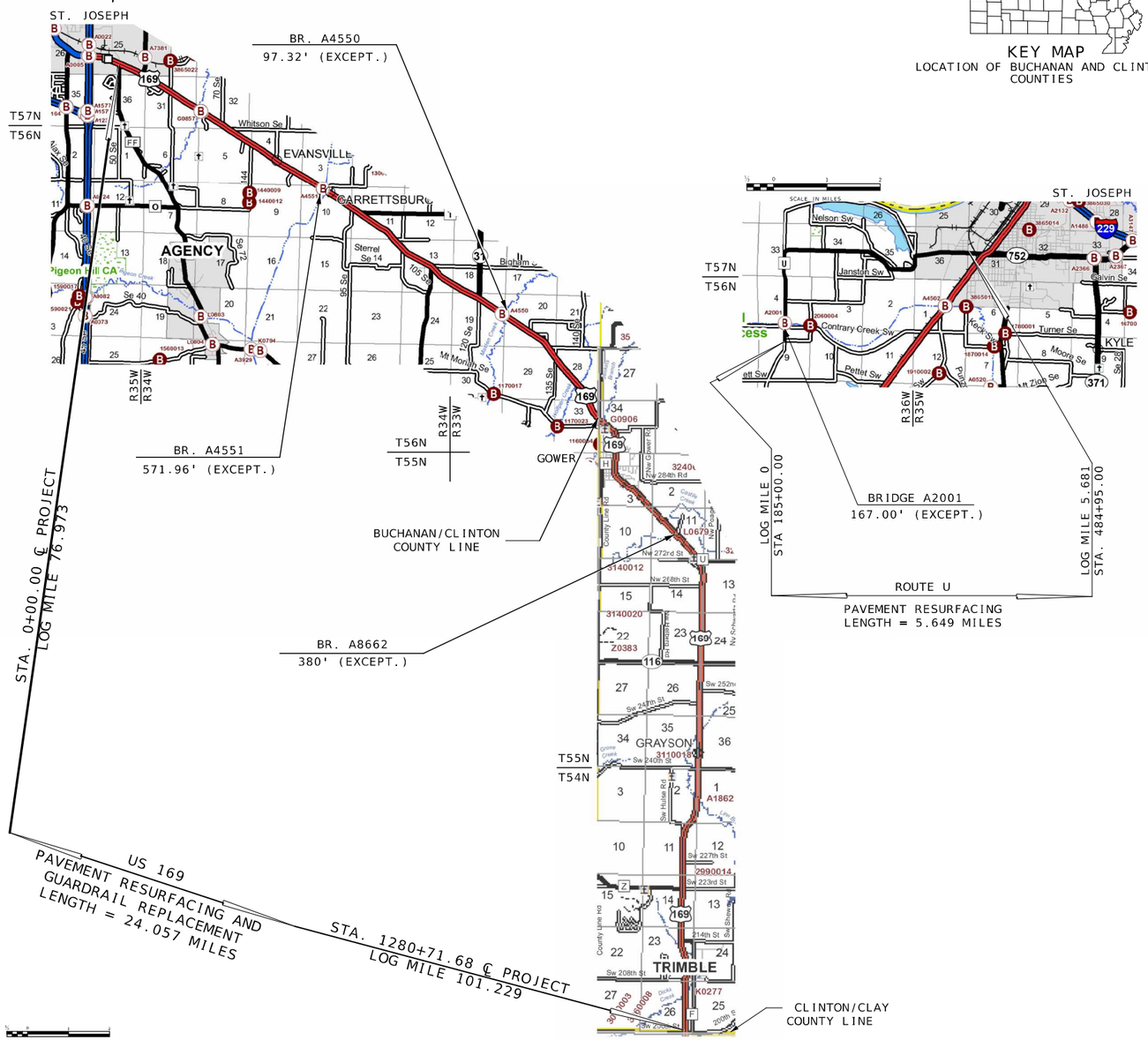
NO RIGHT-OF-WAY ACQUISITION

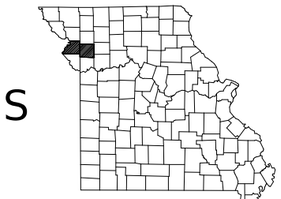
CONVENTIONAL SYMBOLS

(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	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES





KEY MAP
LOCATION OF BUCHANAN AND CLINTON COUNTIES

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) (5 SHEETS)	2
QUANTITIES (QU) (6 SHEETS)	3
SPECIAL SHEETS (SS)	4-8
TRAFFIC CONTROL (TC)	9
PAVEMENT MARKING (PM)	10-11

LENGTH OF PROJECT

RTE. 169

BEGINNING	STA.	0+00.00
END	STA.	1280+71.68
APPARENT LENGTH		128071.68 FEET
EQUATIONS AND EXCEPTIONS:		
BRIDGE A4551 STA. 236+19.87 TO STA. 241+91.83		-571.96 FEET
BRIDGE A4550 STA. 459+72.98 TO STA. 460+70.30		-97.32 FEET
BRIDGE A8662 STA. 758+57.54 TO STA. 762+37.54		-380.00 FEET
TOTAL CORRECTIONS		-1049.28 FEET
NET LENGTH		127022.40 FEET

RTE. U

BEGINNING	STA.	185+00.00
END	STA.	484+95.00
APPARENT LENGTH		29995.00 FEET
EQUATIONS AND EXCEPTIONS:		
BRIDGE A2001 STA. 200+91.50 TO STA. 202+58.50		-167.00 FEET
TOTAL CORRECTIONS		-167.00 FEET
NET LENGTH		29828.00 FEET

STATE LENGTH	29.706 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.00 ACRES

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

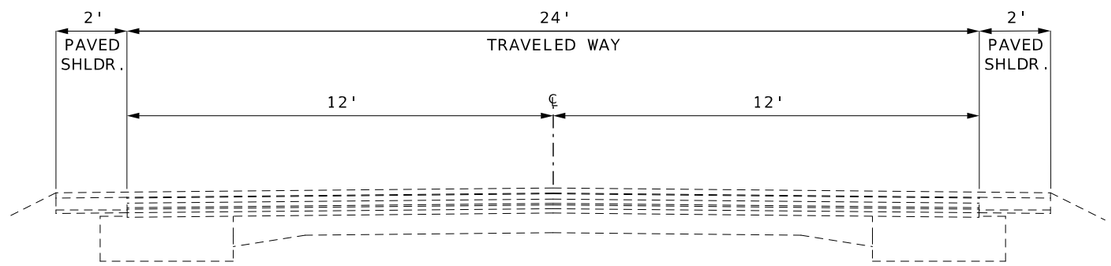
Brian M. Rosenthal
10/22/2023 7:55:06 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/28/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	1
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
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)

REV.



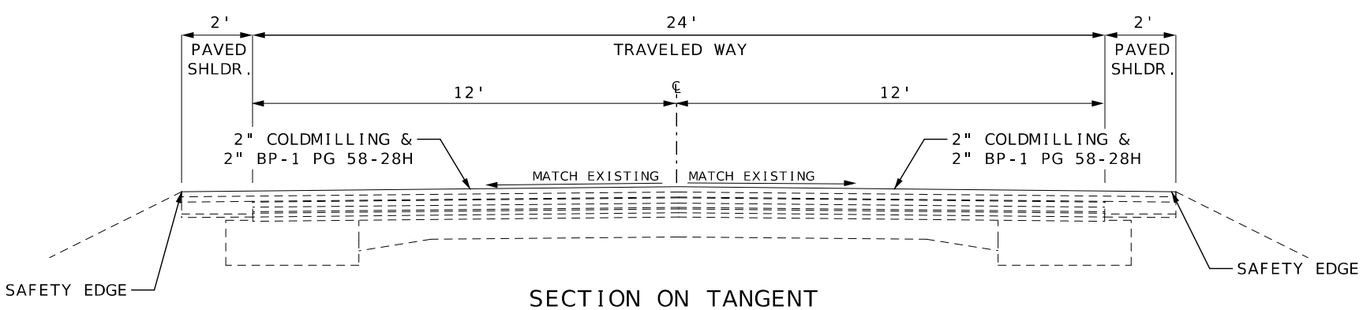
SECTION ON TANGENT

EXISTING TYPICAL SECTION RTE. 169
STA. 0+00.00 TO STA. 214+02.93
STA. 260+94.33 TO STA. 450+98.80
STA. 466+08.80 TO STA. 758+57.54 (N/E OF BR. A8662)
STA. 762+37.54 (S/E OF BR. A8662) TO STA. 1280+71.68

ESTIMATE FACTORS *		
ITEM	DESCRIPTION	FACTOR
304-99.10	PERMANENT AGGREGATE EDGE TREATMENT	1.60 TONS/CU. YD.
310-50.02	GRAVEL (A) OR CRUSHED STONE (B)	1.40 TONS/CU. YD.
401-12.31	BITUMINOUS PAVEMENT MIXTURE PG 58-28H (BP-1)	1.98 TONS/CU. YD.
407-10.05	TACK COAT - ON COLDMILLED ASPHALT	0.10 GAL/SQ. YD.
407-10.05	TACK COAT - ON EXISTING ASPHALT SURFACE	0.08 GAL/SQ. YD.

* FOR INFORMATION PURPOSES ONLY

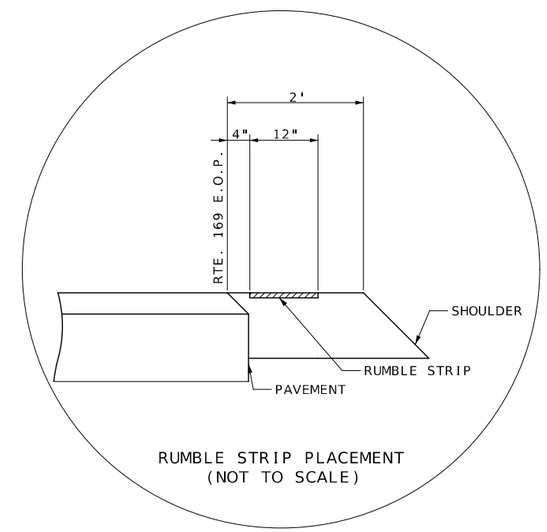
PAVEMENT HISTORY		
YEAR	DESCRIPTION	
	TRAVELED WAY	SHOULDERS
1925/1926	6-7" P.C.C.	
1954/1955	1.25" TYPE C A.C. 1.50" TYPE B A.C.	
1978	1.50" TYPE C A.C. 0.50" (MIN.) LEVELING COURSE	
1999	1.75" LEVELING COURSE	
2008	TYPE II MICROSURFACE	
2013	1.75" BIT. PVMT. PG64-22 (BP-1)	4" BIT. PVMT. PG64-22 (BASE) TYPE 1 AGGR.



SECTION ON TANGENT

PROPOSED TYPICAL SECTION RTE. 169

STA. 0+00.00 TO STA. 214+02.93
STA. 260+94.33 TO STA. 450+98.80
STA. 466+08.80 TO STA. 758+57.54 (N/E OF BR. A8662)
STA. 762+37.54 (S/E OF BR. A8662) TO STA. 1280+71.68



RUMBLE STRIP PLACEMENT
(NOT TO SCALE)

DETAIL A

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 5

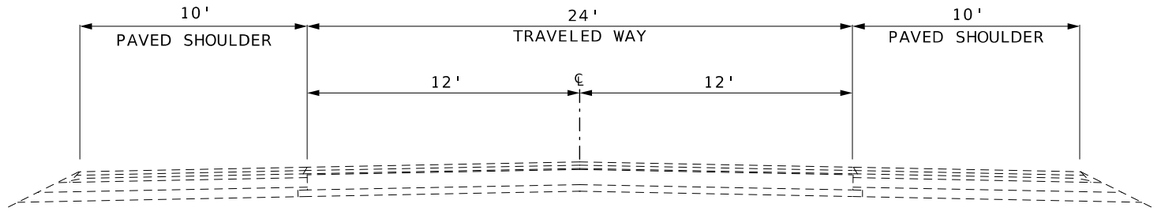
STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/02/2023 7:55:38 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	
9/28/2023	
ROUTE	STATE
169/U	MO
DISTRICT	SHEET NO.
NW	2
COUNTY	
BUCH./CLINTON	
JOB NO.	
JNW0016	
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)

REV.

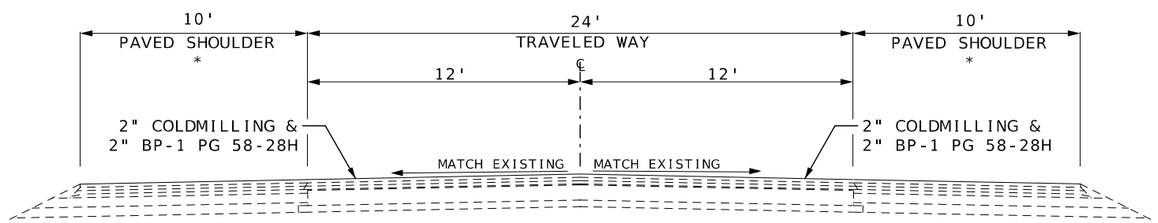


SECTION ON TANGENT

EXISTING TYPICAL SECTION RTE. 169

STA. 214+02.93 TO STA. 236+19.87 (N/E OF BR. A4551)
STA. 241+91.83 (S/E OF BR. A4551) TO STA. 260+94.33

PAVEMENT HISTORY		
	DESCRIPTION	
YEAR	TRAVELED WAY	SHOULDERS
1989	4" TYPE 3 AGG. 8" REINFORCED CONCRETE PVMT.	5" TYPE 4 AGG. 5" TYPE 1 OR 2 AGG. 2" PLANT MIX BIT. PVMT.
2008	TYPE II MICROSURFACE (NORTH OF BR.)	
2013	1.75" BIT. PVMT. PG 64-22 (BP-1) 1.75" BIT. PVMT. PG 64-22 (BP-1)	1.75" BIT PVMT. PG 64-22 (BP-1) 1.75" BIT PVMT. PG 64-22 (BP-1) TYPE 1 AGG.



SECTION ON TANGENT

PROPOSED TYPICAL SECTION RTE. 169

STA. 214+02.93 TO STA. 236+19.87 (N/E OF BR. A4551)
STA. 241+91.83 (S/E OF BR. A4551) TO STA. 260+94.33

* SEE DETAIL A, SHEET 1 OF 5
FOR RUMBLE STRIP PLACEMENT

NOT TO SCALE

TYPICAL SECTIONS
SHEET 2 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 7:56:11 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/28/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	2
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

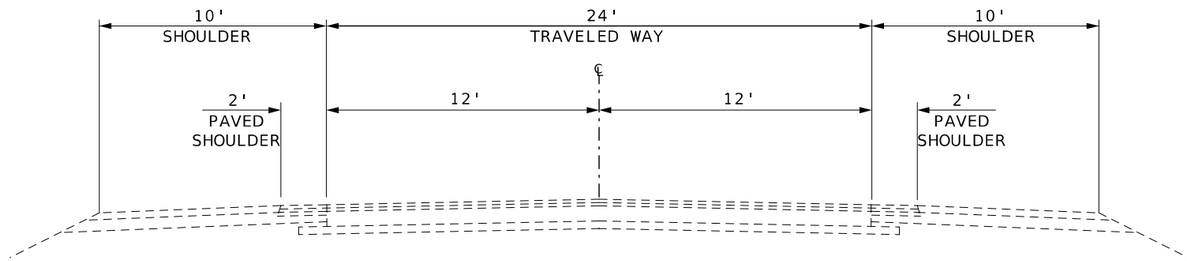
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REV.

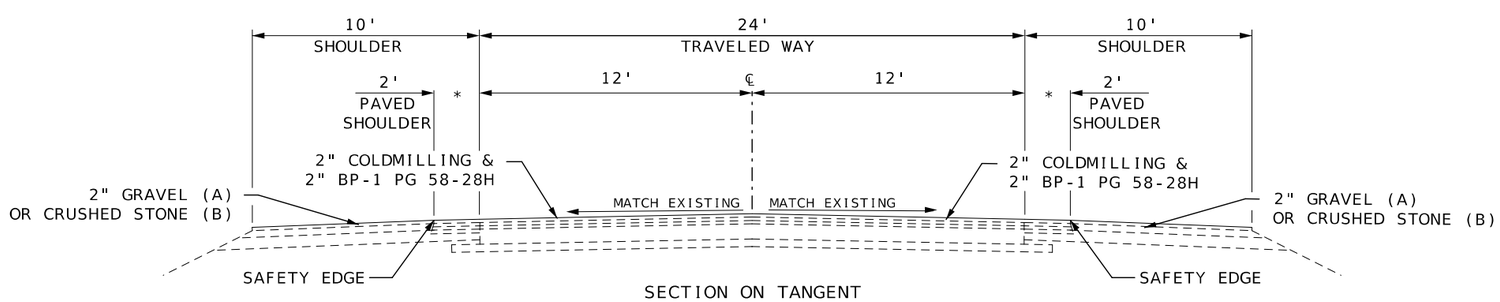


SECTION ON TANGENT

EXISTING TYPICAL SECTION RTE. 169

STA. 450+98.80 TO STA. 459+72.98 (N/E OF BR. A4550)
STA. 460+70.30 (S/E OF BR. A4550) TO STA. 466+08.80

PAVEMENT HISTORY		
	DESCRIPTION	
YEAR	TRAVELED WAY	SHOULDERS
1988	4" TYPE 3 AGG. 8" NON-REINFORCED CONCRETE PVMT.	6" TYPE 1 OR 2 AGG.
2013	1.75" BIT. PVMT. PG64-22 1.75" BIT. PVMT. PG64-23	2" BIT. PVMT. PG64-22 (BASE) TYPE 1 AGG.



SECTION ON TANGENT

PROPOSED TYPICAL SECTION RTE. 169

STA. 450+98.80 TO STA. 459+72.98 (N/E OF BR. A4550)
STA. 460+70.30 (S/E OF BR. A4550) TO STA. 466+08.80

* SEE DETAIL A, SHEET 1 OF 5
FOR RUMBLE STRIP PLACEMENT

NOT TO SCALE

TYPICAL SECTIONS
SHEET 3 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

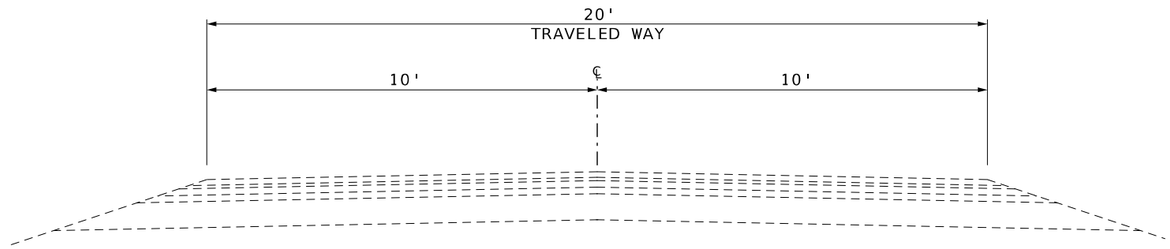
Brian M. Rosenthal
10/02/2023 7:56:43 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/28/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	2
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
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)

REV.

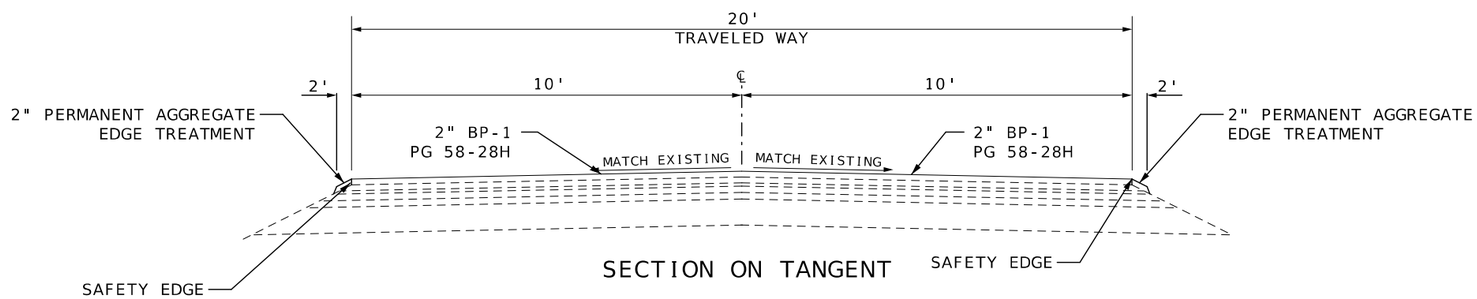


SECTION ON TANGENT

EXISTING TYPICAL SECTION RTE. U

STA. 185+00.00 TO STA. 200+91.50 (S/E OF BR. A2001)
STA. 202+58.50 (N/E OF BR. A2001) TO STA. 418+16.00

PAVEMENT HISTORY	
YEAR	DESCRIPTION
1954/1955	24' GRAN. BASE
1958	20' 2" OIL AGG.
1968	20' 2" OIL AGG. 28' R.S.B.
1991	20' 1" BIT. MAT. RESURF.
2003	20' 1 3/4" BP-1 SURFACE LEVELING



SECTION ON TANGENT

PROPOSED TYPICAL SECTION RTE. U

STA. 185+00.00 TO STA. 200+91.50 (S/E OF BR. A2001)
STA. 202+58.50 (N/E OF BR. A2001) TO STA. 418+16.00

NOT TO SCALE

TYPICAL SECTIONS
SHEET 4 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

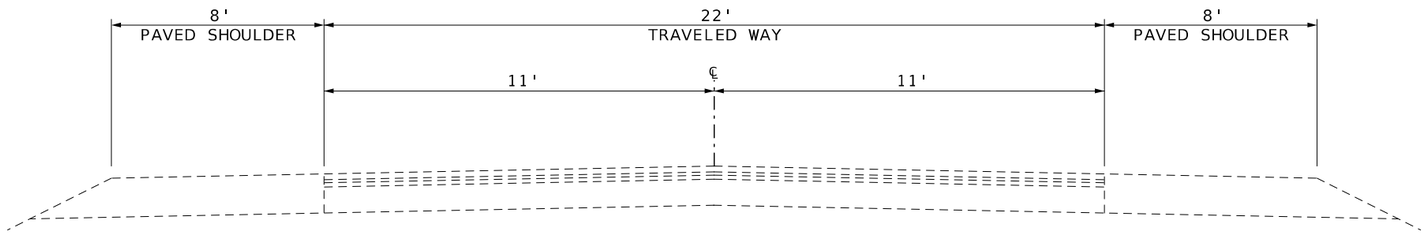
Brian M. Rosenthal
10/02/2023 7:57:10 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/28/2023
ROUTE 169/U	STATE MO
DISTRICT NW	SHEET NO. 2
COUNTY BUCH./CLINTON	
JOB NO. JNW0016	
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)

REV.



SECTION ON TANGENT
EXISTING TYPICAL SECTION RTE. U

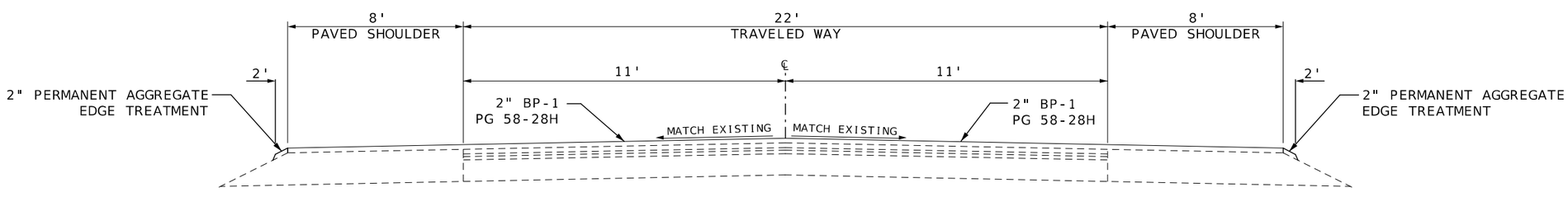
STA. 418+16.00 TO STA. 484+95.00

STA. 418+16.00 TO STA. 484+00.00:

PAVEMENT HISTORY	
YEAR	DESCRIPTION
1954/1955	22' 2" BIT. MAT. 38' 8" R.S.B.
1978	23' 1 1/4" TYPE C RESURF.
1991	22' 1" BIT. MAT. RESURF.
2003	22' 2 3/4" BP-1 SURFACE LEVELING

STA. 484+00.00 TO STA. 484+95.00:

PAVEMENT HISTORY	
YEAR	DESCRIPTION
1954/1955	24' 8" P.C.C.
1978	23' 1 1/4" TYPE C RESURF.
1991	22' 1" BIT. MAT. RESURF.
2003	22' 2 3/4" BP-1 SURFACE LEVELING



SECTION ON TANGENT
PROPOSED TYPICAL SECTION RTE. U

STA. 418+16.00 TO STA. 484+95.00

NOT TO SCALE

TYPICAL SECTIONS
SHEET 5 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 7:57:35 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
9/28/2023

ROUTE	STATE
169/U	MO
DISTRICT	SHEET NO.
NW	2

COUNTY
BUCH./CLINTON

JOB NO.
JNW0016

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)

REV.

RESURFACING (RTE. 169)

STA.	STA.	LOC.	LENGTH FT.	WIDTH FT.	DEPTH IN.	BITUMINOUS PAVEMENT MIXTURE BP-1 PG 58-28H CY	BITUMINOUS PAVEMENT MIXTURE BP-1 PG 58-28H TONS	TACK COAT GAL	REMARKS
0+00.00	14+21.45	RTE. 169	1421.45	28	2.00	245.7	486.49	442.2	BEG. OF PROJECT TO ROUTE AC INTERSECTION - CONCRETE SHLDR RT.
14+21.45	30+76.88	RTE. 169	1655.43	VARIES	2.00	316.7	627.07	570.0	AREA OF INTERSECTION WITH ROUTE AC WITH CONCRETE SHLDRS.
30+76.88	214+02.93	RTE. 169	18326.05	28	2.00	3167.5	6271.65	5701.4	END OF CONCRETE SHLDRS TO END OF 2' PAVED SHOULDER SECTION
214+02.93	236+19.87	RTE. 169	2216.94	44	2.00	602.1	1192.16	1083.8	BEGINNING OF 10' PAVED SHLDR SECTION TO N/E OF BR. A45521
241+91.83	260+94.33	RTE. 169	1902.50	44	2.00	516.7	1023.07	930.1	S/E OF BR. A4551 TO END OF 10' PAVED SHOULDER
260+94.33	459+72.98	RTE. 169	19878.65	28	2.00	3435.8	6802.88	6184.5	END OF 10' PAVED SHOULDER SECTION TO N/E OF BR. A4550
460+70.30	758+57.54	RTE. 169	29787.24	28	2.00	5148.4	10193.83	9267.1	S/E OF BR. A4550 TO N/E OF BR. A8662
762+37.54	892+85.81	RTE. 169	13048.27	28	2.00	2255.3	4465.49	4059.5	S/E OF BR. A8662 TO AREA OF INSTERSECTION WITH RTE. 116
892+85.81	913+00.26	RTE. 169	2014.45	VARIES	2.00	410.0	811.80	738.0	AREA OF INTERSECTION WITH ROUTE 116
913+00.26	1280+71.68	RTE. 169	36771.42	28	2.00	6355.6	12584.09	11440.0	AREA OF INTERSECTION WITH ROUTE 116 TO END OF PROJECT
							-		
							601.35		2% FOR SAFETY EDGE
							1539.67		64 TONS PER MILE FOR SURFACE IRREGULARITIES
						RTE. 169 TOTALS	46599.55	40416.6	

RESURFACING (RTE. U)

STA.	STA.	LOC.	LENGTH FT.	WIDTH FT.	DEPTH IN.	BITUMINOUS PAVEMENT MIXTURE BP-1 PG 58-28H CY	BITUMINOUS PAVEMENT MIXTURE BP-1 PG 58-28H TONS	TACK COAT GAL	REMARKS
185+00.00	200+91.50	RTE. U	1591.50	20	2.00	196.5	389.07	282.9	BEGIN PROJECT TO S/E OF BRIDGE A2001
202+58.50	418+16.00	RTE. U	21557.50	20	2.00	2661.4	5269.57	3832.4	N/E OF BRIDGE A2001 TO BEGIN 8' PAVED SHOULDERS
418+16.00	484+95.00	RTE. U	6679.00	38	2.00	1566.7	3102.07	2256.0	8' PAVED SHOULDERS TO END OF PROJECT
						25.6	50.688	190.6	QUANTITY FOR MODIFIED MILLED AREAS
							113.17		2% FOR SAFETY EDGE
							361.55		64 TONS PER MILE FOR SURFACE IRREGULARITIES
						RTE. U TOTALS	9286.12	6561.9	
						PAY TOTALS (RTE. 169 + RTE. U)	-	46979	
						RTE. 169 PAY TOTAL	46599.6	-	
						RTE. U PAY TOTAL	9286.1	-	

MODIFIED COLDMILLING

STA.	STA.	LOC.	WIDTH FT.	LENGTH FT.	MODIFIED COLDMILLING SY	REMARKS
185+00.00	187+00.00	RTE. U	20	200	444.4	BEGIN PROJECT
198+91.50	200+91.50	RTE. U	20	200	444.4	SOUTH END OF BRIDGE A2001
202+58.50	204+58.50	RTE. U	20	200	444.4	NORTH END OF BRIDGE A2001
482+95.00	484+95.00	RTE. U	38	200	844.4	END PROJECT
198+20.00	198+40.00	RTE. U	20	5	11.1	CONTRARY CREEK SW
199+25.60	199+45.60	RTE. U	20	5	11.1	CO. RD. 207
224+60.00	224+80.00	RTE. U	20	5	11.1	HAMMY SW
272+59.52	272+84.52	RTE. U	25	5	13.9	SW 51ST RD
275+18.24	275+38.24	RTE. U	20	5	11.1	SW 51ST RD (RAMP)
313+62.08	313+82.08	RTE. U	20	5	11.1	SW 43RD RD
353+11.52	353+21.52	RTE. U	10	5	5.6	GASPER SW (W)
371+06.72	371+26.72	RTE. U	20	5	11.1	GASPER SW (E)
386+43.20	386+63.20	RTE. U	20	5	11.1	JANSTON SW
394+29.92	394+49.92	RTE. U	20	5	11.1	NELSON SW
403+22.24	403+37.24	RTE. U	15	5	8.3	WEST LAKE DR
421+59.68	421+79.68	RTE. U	20	5	11.1	LAKEFRONT LANE
423+92.00	424+17.00	RTE. U	25	5	13.9	INGERSOL ST
432+63.20	432+93.20	RTE. U	30	5	16.7	PONY EXPRESS WAREHOUSING
441+60.80	441+90.80	RTE. U	30	5	16.7	VENTURA FOODS
445+30.40	445+80.40	RTE. U	50	5	27.8	VENTURA FOODS
445+30.40	445+70.40	RTE. U	40	5	22.2	ST JOE EXPRESS
447+89.12	448+34.12	RTE. U	45	5	25.0	VENTURA FOODS
449+79.20	449+99.20	RTE. U	20	5	11.1	INDUSTRIAL RD
456+92.00	457+12.00	RTE. U	20	5	11.1	PURTELL ST
462+20.00	462+40.00	RTE. U	20	5	11.1	DIAGONAL AVE
462+20.00	462+40.00	RTE. U	20	5	11.1	DIAGONAL AVE
464+78.72	465+38.72	RTE. U	60	5	33.3	SJSD EARLY LEARNING CENTER
467+42.72	467+82.72	RTE. U	40	5	22.2	LITTLE ST
471+65.12	471+85.12	RTE. U	20	5	11.1	COLLINS ST
476+40.32	476+60.32	RTE. U	20	5	11.1	ERIE ST
-	-	RTE. U	VARIES	5	88.9	QUANTITIES FOR PRIVATE/COMMERICAL/FIELD ENTRANCES
				TOTAL	2638.6	
				PAY TOTAL	2639	

MOBILIZATION
LUMP SUM = 1

SUMMARY OF QUANTITIES
SHEET 1 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/02/2023 7:58:05 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED 9/28/2023

ROUTE	STATE
169/U	MO

DISTRICT	SHEET NO.
NW	3

COUNTY: BUCH./CLINTON
JOB NO.: JNW0016
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)

REV.

PAVEMENT MARKING (RTE. 169) (1 OF 4)

STA.	STA.	LOC.	LENGTH FT.	4" YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	4" WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	REMARKS
0+00.00	14+41.00	RTE. 169	1441.00	2882.0	2882.0	DOUBLE YELLOW
14+41.00	30+72.00	RTE. 169	1631.00	1631.0	3262.0	DOUBLE YELLOW
30+72.00	37+75.20	RTE. 169	703.20	1406.4	1406.4	DOUBLE YELLOW
37+75.20	41+97.60	RTE. 169	422.40	528.0	844.8	SOLID LEFT, INT. RIGHT
41+97.60	48+31.20	RTE. 169	633.60	158.4	1267.2	INT. YELLOW CL
48+31.20	53+59.20	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
53+59.20	58+87.20	RTE. 169	528.00	1056.0	1056.0	DOUBLE YELLOW
58+87.20	62+04.00	RTE. 169	316.80	396.0	633.6	SOLID LEFT, INT. RIGHT
62+04.00	64+15.20	RTE. 169	211.20	52.8	422.4	INT. YELLOW CL
64+15.20	69+43.20	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
69+43.20	80+99.52	RTE. 169	1156.32	2312.6	2312.6	DOUBLE YELLOW
80+99.52	92+55.84	RTE. 169	1156.32	1445.4	2312.6	SOLID LEFT, INT. RIGHT
92+55.84	110+51.04	RTE. 169	1795.20	448.8	3590.4	INT. YELLOW CL
110+51.04	117+90.24	RTE. 169	739.20	924.0	1478.4	INT. LEFT, SOLID RIGHT
117+90.24	123+18.24	RTE. 169	528.00	1056.0	1056.0	DOUBLE YELLOW
123+18.24	130+57.44	RTE. 169	739.20	924.0	1478.4	SOLID LEFT, INT. RIGHT
130+57.44	139+02.24	RTE. 169	844.80	1056.0	1689.6	INT. LEFT, SOLID RIGHT
139+02.24	147+47.04	RTE. 169	844.80	1689.6	1689.6	DOUBLE YELLOW
147+47.04	153+75.36	RTE. 169	628.32	785.4	1256.6	SOLID LEFT, INT. RIGHT
153+75.36	163+31.04	RTE. 169	955.68	238.9	1911.4	INT. YELLOW CL
163+31.04	168+59.04	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
168+59.04	171+75.84	RTE. 169	316.80	633.6	633.6	DOUBLE YELLOW
171+75.84	182+31.84	RTE. 169	1056.00	1320.0	2112.0	SOLID LEFT, INT. RIGHT
182+31.84	190+76.64	RTE. 169	844.80	211.2	1689.6	INT. YELLOW CL
190+76.64	195+04.32	RTE. 169	427.68	534.6	855.4	SOLID LEFT, INT. RIGHT
195+04.32	199+26.72	RTE. 169	422.40	105.6	844.8	INT. YELLOW CL
199+26.72	204+54.72	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
204+54.72	206+65.92	RTE. 169	211.20	422.4	422.4	DOUBLE YELLOW
206+65.92	212+99.52	RTE. 169	633.60	792.0	1267.2	SOLID LEFT, INT. RIGHT
212+99.52	219+33.12	RTE. 169	633.60	158.4	1267.2	INT. YELLOW CL
219+33.12	225+66.72	RTE. 169	633.60	792.0	1267.2	INT. LEFT, SOLID RIGHT
225+66.72	227+77.92	RTE. 169	211.20	422.4	422.4	DOUBLE YELLOW
227+77.92	234+11.52	RTE. 169	633.60	792.0	1267.2	SOLID LEFT, INT. RIGHT
234+11.52	252+06.72	RTE. 169	1795.20	448.8	3590.4	INT. YELLOW CL
252+06.72	257+34.72	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
257+34.72	262+62.72	RTE. 169	528.00	1056.0	1056.0	DOUBLE YELLOW
262+62.72	264+73.92	RTE. 169	211.20	264.0	422.4	SOLID LEFT, INT. RIGHT
264+73.92	266+85.12	RTE. 169	211.20	52.8	422.4	INT. YELLOW CL
266+85.12	274+19.04	RTE. 169	733.92	917.4	1467.8	INT. LEFT, SOLID RIGHT
274+19.04	281+58.24	RTE. 169	739.20	1478.4	1478.4	DOUBLE YELLOW
281+58.24	289+02.72	RTE. 169	744.48	930.6	1489.0	SOLID LEFT, INT. RIGHT
289+02.72	296+36.64	RTE. 169	733.92	183.5	1467.8	INT. YELLOW CL
296+36.64	304+76.16	RTE. 169	839.52	1049.4	1679.0	INT. LEFT, SOLID RIGHT
304+76.16	354+39.36	RTE. 169	4963.20	9926.4	9926.4	DOUBLE YELLOW
354+39.36	360+78.24	RTE. 169	638.88	798.6	1277.8	SOLID LEFT, INT. RIGHT
360+78.24	370+28.64	RTE. 169	950.40	237.6	1900.8	INT. YELLOW CL
370+28.64	376+56.96	RTE. 169	628.32	785.4	1256.6	INT. LEFT, SOLID RIGHT
376+56.96	402+96.96	RTE. 169	2640.00	5280.0	5280.0	DOUBLE YELLOW
402+96.96	409+30.56	RTE. 169	633.60	792.0	1267.2	SOLID LEFT, INT. RIGHT
409+30.56	411+41.76	RTE. 169	211.20	52.8	422.4	INT. YELLOW CL
411+41.76	416+69.76	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
416+69.76	436+76.16	RTE. 169	2006.40	4012.8	4012.8	DOUBLE YELLOW
436+76.16	438+87.36	RTE. 169	211.20	264.0	422.4	INT. LEFT, SOLID RIGHT
438+87.36	470+60.64	RTE. 169	3173.28	793.3	6346.6	INT. YELLOW CL
470+60.64	474+83.04	RTE. 169	422.40	528.0	844.8	INT. LEFT, SOLID RIGHT
474+83.04	480+05.76	RTE. 169	522.72	653.4	1045.4	SOLID LEFT, INT. RIGHT
480+05.76	482+16.96	RTE. 169	211.20	422.4	422.4	DOUBLE YELLOW
482+16.96	487+44.96	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
487+44.96	526+52.16	RTE. 169	3907.20	7814.4	7814.4	DOUBLE YELLOW
526+52.16	534+96.96	RTE. 169	844.80	1056.0	1689.6	SOLID LEFT, INT. RIGHT
RTE. 169 SUBTOTALS (TABLE 1 OF 4)				69593.5	106993.8	

SUMMARY OF QUANTITIES
SHEET 2 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/02/2023 7:58:34 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED: 9/28/2023
ROUTE: 169/U
STATE: MO
DISTRICT: NW
SHEET NO.: 3
COUNTY: BUCH./CLINTON
JOB NO.: JNW0016
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)

REV.

PAVEMENT MARKING (2 OF 4)

STA.	STA.	LOC.	LENGTH FT.	4" YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	4" WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	REMARKS
534+96.96	543+41.76	RTE. 169	844.80	1056.0	1689.6	INT. LEFT, SOLID RIGHT
543+41.76	552+92.16	RTE. 169	950.40	1900.8	1900.8	DOUBLE YELLOW
552+92.16	557+14.56	RTE. 169	422.40	528.0	844.8	INT. LEFT, SOLID RIGHT
557+14.56	561+36.96	RTE. 169	422.40	105.6	844.8	INT. YELLOW CL
561+36.96	566+64.96	RTE. 169	528.00	660.0	1056.0	SOLID LEFT, INT. RIGHT
566+64.96	568+76.16	RTE. 169	211.20	52.8	422.4	INT. YELLOW CL
568+76.16	578+26.56	RTE. 169	950.40	1188.0	1900.8	INT. LEFT, SOLID RIGHT
578+26.56	615+22.56	RTE. 169	3696.00	7392.0	7392.0	DOUBLE YELLOW
615+22.56	623+67.36	RTE. 169	844.80	1056.0	1689.6	SOLID LEFT, INT. RIGHT
623+67.36	631+01.25	RTE. 169	733.92	917.4	1467.8	INT. LEFT, SOLID RIGHT
631+01.25	642+78.72	RTE. 169	1177.44	2354.9	2354.9	DOUBLE YELLOW
642+78.72	650+17.92	RTE. 169	739.20	924.0	1478.4	SOLID LEFT, INT. RIGHT
650+17.92	707+31.60	RTE. 169	5713.68	1428.4	-	INT. YELLOW CL - NO WHITE EDGE LINE THRU GOWER
707+31.60	721+93.44	RTE. 169	1461.84	365.5	2923.7	INT. YELLOW CL
721+93.44	732+49.44	RTE. 169	1056.00	1320.0	2112.0	INT. LEFT, SOLID RIGHT
732+49.44	737+77.44	RTE. 169	528.00	1056.0	1056.0	DOUBLE YELLOW
737+77.44	745+16.64	RTE. 169	739.20	924.0	1478.4	SOLID LEFT, INT. RIGHT
745+16.64	775+79.04	RTE. 169	3062.40	765.6	6124.8	INT. YELLOW CL
775+79.04	785+24.16	RTE. 169	945.12	1181.4	1890.2	INT. LEFT, SOLID RIGHT
785+24.16	843+42.72	RTE. 169	5818.56	11637.1	11637.1	DOUBLE YELLOW
843+42.72	852+93.12	RTE. 169	950.40	1188.0	1900.8	SOLID LEFT, INT. RIGHT
852+93.12	863+43.84	RTE. 169	1050.72	1313.4	2101.4	INT. LEFT, SOLID RIGHT
863+43.84	895+20.03	RTE. 169	3176.19	6352.4	6352.4	DOUBLE YELLOW
895+20.03	900+73.00	RTE. 169	552.97	553.0	1348.9	SEE SHEET 11 (EXTRA QUANTITY FOR 4" WHITE)
900+73.00	905+12.31	RTE. 169	439.31	878.6	878.6	DOUBLE YELLOW
905+12.31	911+68.97	RTE. 169	656.66	820.8	1313.3	SEE SHEET 16
911+68.97	943+64.16	RTE. 169	3195.19	6390.4	6390.4	DOUBLE YELLOW
943+64.16	948+92.16	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
948+92.16	1028+28.00	RTE. 169	7935.84	15871.7	15871.7	DOUBLE YELLOW
1028+28.00	1038+84.00	RTE. 169	1056.00	1320.0	2112.0	SOLID LEFT, INT. RIGHT
1038+84.00	1042+00.80	RTE. 169	316.80	79.2	633.6	INT. YELLOW CL
1042+00.80	1052+67.36	RTE. 169	1066.56	1333.2	2133.1	INT. LEFT, SOLID RIGHT
1052+67.36	1082+13.60	RTE. 169	2946.24	5892.5	5892.5	DOUBLE YELLOW
1082+13.60	1091+64.00	RTE. 169	950.40	1188.0	1900.8	SOLID LEFT, INT. RIGHT
1091+64.00	1101+09.12	RTE. 169	945.12	1181.4	1890.2	INT. LEFT, SOLID RIGHT
1101+09.12	1126+43.52	RTE. 169	2534.40	5068.8	5068.8	DOUBLE YELLOW
1126+43.52	1131+71.52	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
1131+71.52	1140+16.32	RTE. 169	844.80	1689.6	1689.6	DOUBLE YELLOW
1140+16.32	1144+38.72	RTE. 169	422.40	528.0	844.8	SOLID LEFT, INT. RIGHT
1144+38.72	1150+72.32	RTE. 169	633.60	1267.2	1267.2	DOUBLE YELLOW
1150+72.32	1154+94.72	RTE. 169	422.40	528.0	844.8	INT. LEFT, SOLID RIGHT
1154+94.72	1190+85.12	RTE. 169	3590.40	7180.8	7180.8	DOUBLE YELLOW
1190+85.12	1199+24.64	RTE. 169	839.52	1049.4	1679.0	SOLID LEFT, INT. RIGHT
1199+24.64	1202+46.72	RTE. 169	322.08	80.5	644.2	INT. YELLOW CL
1202+46.72	1207+74.72	RTE. 169	528.00	660.0	1056.0	INT. LEFT, SOLID RIGHT
1207+74.72	1208+80.32	RTE. 169	105.60	211.2	211.2	DOUBLE YELLOW
1208+80.32	1218+36.00	RTE. 169	955.68	1194.6	1911.4	SOLID LEFT, INT. RIGHT
1218+36.00	1221+52.80	RTE. 169	316.80	79.2	633.6	INT. YELLOW CL
1221+52.80	1228+92.00	RTE. 169	739.20	924.0	1478.4	INT. LEFT, SOLID RIGHT
1228+92.00	1235+25.60	RTE. 169	633.60	1267.2	1267.2	DOUBLE YELLOW
1235+25.60	1244+76.00	RTE. 169	950.40	1188.0	1900.8	SOLID LEFT, INT. RIGHT
1244+76.00	1253+20.80	RTE. 169	844.80	1056.0	1689.6	INT. LEFT, SOLID RIGHT
1253+20.80	1255+32.00	RTE. 169	211.20	422.4	422.4	DOUBLE YELLOW
1255+32.00	1264+82.40	RTE. 169	950.40	1188.0	1900.8	SOLID LEFT, INT. RIGHT
1264+82.40	1280+71.68	RTE. 169	1589.28	397.3	3178.6	INT. YELLOW CL
RTE. 169 SUBTOTALS (TABLE 2 OF 4)				108476.3	137965.0	
RTE. 169 TOTALS				178069.8	244958.8	

SUMMARY OF QUANTITIES
SHEET 3 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/02/2023 7:58:59 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	
9/28/2023	
ROUTE 169/U	STATE MO
DISTRICT NW	SHEET NO. 3
COUNTY BUCH./CLINTON	
JOB NO. JNW0016	
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)

REV.

PAVEMENT MARKING (3 OF 4)

STA.	STA.	LOC.	LENGTH FT.	4" YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	4" WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	REMARKS
185+00.00	192+44.48	RTE. U	744.48	186.1	1489.0	INT. YELLOW CL
192+44.48	203+05.76	RTE. U	1061.28	1326.6	2122.6	INT. LEFT, SOLID RIGHT
203+05.76	204+11.36	RTE. U	105.60	211.2	211.2	DOUBLE YELLOW
204+11.36	212+50.88	RTE. U	839.52	1049.4	1679.0	SOLID LEFT, INT. RIGHT
212+50.88	235+74.08	RTE. U	2323.20	580.8	4646.4	INT. YELLOW CL
235+74.08	244+18.88	RTE. U	844.80	1056.0	1689.6	INT. LEFT, SOLID RIGHT
244+18.88	254+74.88	RTE. U	1056.00	2112.0	2112.0	DOUBLE YELLOW
254+74.88	262+14.08	RTE. U	739.20	924.0	1478.4	SOLID LEFT, INT. RIGHT
262+14.08	264+20.00	RTE. U	205.92	51.5	411.8	INT. YELLOW CL
264+20.00	272+59.52	RTE. U	839.52	1049.4	1679.0	INT. LEFT, SOLID RIGHT
272+59.52	280+99.04	RTE. U	839.52	1679.0	1679.0	DOUBLE YELLOW
280+99.04	287+22.08	RTE. U	623.04	778.8	1246.1	SOLID LEFT, INT. RIGHT
287+22.08	350+52.80	RTE. U	6330.72	1582.7	12661.4	INT. YELLOW CL
350+52.80	358+92.32	RTE. U	839.52	1049.4	1679.0	INT. LEFT, SOLID RIGHT
358+92.32	363+14.72	RTE. U	422.40	844.8	844.8	DOUBLE YELLOW
363+14.72	368+42.72	RTE. U	528.00	660.0	1056.0	SOLID LEFT, INT. RIGHT
368+42.72	369+48.32	RTE. U	105.60	211.2	211.2	DOUBLE YELLOW
369+48.32	378+98.72	RTE. U	950.40	1188.0	1900.8	INT. LEFT, SOLID RIGHT
378+98.72	391+65.92	RTE. U	1267.20	2534.4	2534.4	DOUBLE YELLOW
391+65.92	396+93.92	RTE. U	528.00	660.0	1056.0	SOLID LEFT, INT. RIGHT
396+93.92	400+05.44	RTE. U	311.52	77.9	623.0	INT. YELLOW CL
400+05.44	407+44.64	RTE. U	739.20	924.0	1478.4	INT. LEFT, SOLID RIGHT
407+44.64	432+10.40	RTE. U	2465.76	4931.5	4931.5	DOUBLE YELLOW
432+10.40	434+21.60	RTE. U	211.20	264.0	422.4	SOLID LEFT, INT. RIGHT
434+21.60	475+34.72	RTE. U	4113.12	1028.3	8226.2	INT. YELLOW CL
475+34.72	482+73.92	RTE. U	739.20	924.0	1478.4	INT. LEFT, SOLID RIGHT
482+73.92	484+95.00	RTE. U	221.08	442.2	442.2	DOUBLE YELLOW
			RTE. U TOTALS	28327.2	59989.8	
			RTE. 169 TOTALS	178069.8	244958.8	FROM TABLE 2 OF 4
			PAY TOTALS (RTE. 169 + RTE. U)	206397	304949	

PAVEMENT MARKING (RTE. 169) (4 OF 4)

STA.	STA.	LOC.	LENGTH FT.	24" YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS LF	PREFORMED THERMOPLASTIC PAVEMENT MARKING LEFT/RIGHT ARROW EA	PREFORMED THERMOPLASTIC PAVEMENT MARKING STRAIGHT ARROW EA	REMARKS
0+00.00	30+72.00	RTE. 169	3072.00	-	-	-	INTERSECTION WITH RTE. AC (SEE SHEET 10)
16+38.27	21+41.00	RTE. 169	502.73	10.1	-	-	INTERSECTION WITH RTE. AC (SEE SHEET 10)
24+27.00	29+23.47	RTE. 169	496.47	9.9	-	-	INTERSECTION WITH RTE. AC (SEE SHEET 10)
21+41.00	-	RTE. 169	-	-	1	-	INTERSECTION WITH RTE. AC (SEE SHEET 10)
22+66.00	-	RTE. 169	-	-	1	1	INTERSECTION WITH RTE. AC (SEE SHEET 10)
25+02.00	-	RTE. 169	-	-	1	1	INTERSECTION WITH RTE. AC (SEE SHEET 10)
895+20.03	900+73.00	RTE. 169	552.97	11.1	-	-	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
902+34.00	904+77.00	RTE. 169	243.00	-	-	-	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
905+12.31	911+68.97	RTE. 169	656.66	13.1	-	-	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
900+73.00	-	RTE. 169	-	-	1	-	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
901+89.00	-	RTE. 169	-	-	1	-	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
904+32.00	-	RTE. 169	-	-	2	1	INTERSECTION WITH RTE. 116 (SEE SHEET 11)
			TOTALS	44.2	7	3	
			PAY TOTALS	44	7	3	

COLDMILLING (RTE. 169)

STA.	STA.	LOC.	LENGTH FT.	WIDTH FT.	DEPTH IN.	COLDMILLING (LESS THAN 3 IN.) SY	REMARKS
0+00.00	14+21.45	RTE. 169	1421.45	28	2	4422.3	BEG. OF PROJECT TO ROUTE AC INTERSECTION - CONCRETE SHLDR RT.
14+21.45	30+76.88	RTE. 169	1655.43	VARIES	2	5699.9	AREA OF INTERSECTION WITH ROUTE AC WITH CONCRETE SHLDRS.
30+76.88	214+02.93	RTE. 169	18326.05	28	2	57014.4	END OF CONCRETE SHLDRS TO END OF 2' PAVED SHOULDER SECTION
214+02.93	236+19.87	RTE. 169	2216.94	44	2	10838.4	BEGINNING OF 10' PAVED SHLDR SECTION TO N/E OF BR. A45521
241+91.83	260+94.33	RTE. 169	1902.50	44	2	9301.1	S/E OF BR. A4551 TO END OF 10' PAVED SHOULDER
260+94.33	459+72.98	RTE. 169	19878.65	28	2	61844.7	END OF 10' PAVED SHOULDER SECTION TO N/E OF BR. A4550
460+70.30	758+57.54	RTE. 169	29787.24	28	2	92671.4	S/E OF BR. A4550 TO N/E OF BR. A8662
762+37.54	892+85.81	RTE. 169	13048.27	28	2	40594.6	S/E OF BR. A8662 TO AREA OF INSTERSECTION WITH RTE. 116
892+85.81	913+00.26	RTE. 169	2014.45	VARIES	2	7379.9	AREA OF INTERSECTION WITH ROUTE 116
913+00.26	1280+71.68	RTE. 169	36771.42	28	2	114400.0	AREA OF INTERSECTION WITH ROUTE 116 TO END OF PROJECT
					TOTAL	404166.7	
					PAY TOTAL	404167	

SUMMARY OF QUANTITIES
SHEET 4 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/02/2023 7:59:28 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED: 9/28/2023
ROUTE: 169/U
STATE: MO
DISTRICT: NW
SHEET NO.: 3
COUNTY: BUCH./CLINTON
JOB NO.: JNW0016
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)

REV.

RUMBLE STRIPS (RTE. 169)

STA.	STA.	LOC.	LENGTH FT.	BIT. SHLDR. RUMBLE STRIP STA.	REMARKS
0+00.00	236+19.87	RTE. 169	23619.87	472.40	BEG. OF PROJECT TO N/E OF BR. A4551
241+91.83	459+72.98	RTE. 169	21781.15	435.62	S/E OF BR. A4551 TO N/E OF BR. A4550
460+70.30	634+91.60	RTE. 169	17421.30	348.43	S/E OF BR. A4550 TO GOWER CITY LIMITS
707+31.60	758+57.54	RTE. 169	5125.94	102.52	END OF GOWER CITY LIMITS TO N/E OF BR. A8862
762+37.54	983+76.60	RTE. 169	22139.06	442.78	S/E OF BR. A8862 TO GRAYSON CITY LIMITS
1004+16.60	1179+21.60	RTE. 169	17505.00	350.10	END OF GRAYSON CITY LIMITS TO TRIMBLE CITY LIMITS
1226+41.60	1280+71.68	RTE. 169	5430.08	108.60	END OF TRIMBLE CITY LIMITS TO END OF PROJECT
				-499.44	LESS QUANTITY FOR ACCESSES
			TOTAL	1761.01	
			PAY TOTAL	1761.0	

GUARDRAIL

STA.	STA.	LOC.	LENGTH FT.	MGS GUARDRAIL LF	TYPE A CRASHWORTHY END TERMINAL (MASH) EACH	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB) EACH	SHAPING SLOPES CLASS III 100 FT	REMARKS
234+07.42	236+20.67	RTE. 169 RT.	213.25	100.00	1	1	2.13	NORTH END OF BR. A4551
234+91.83	236+05.08	RTE. 169 LT.	113.25	-	1	1	1.13	NORTH END OF BR. A4551
242+06.63	243+19.88	RTE. 169 RT.	113.25	-	1	1	1.13	SOUTH END OF BR. A4551
241+91.04	244+04.29	RTE. 169 LT.	213.25	100.00	1	1	2.13	SOUTH END OF BR. A4551
457+46.99	459+60.24	RTE. 169 RT.	213.25	100.00	1	1	2.13	NORTH END OF BR. A4550
458+58.47	459+71.72	RTE. 169 LT.	113.25	-	1	1	1.13	NORTH END OF BR. A4550
460+71.56	461+84.81	RTE. 169 RT.	113.25	-	1	1	1.13	SOUTH END OF BR. A4550
460+83.04	462+96.29	RTE. 169 LT.	213.25	100.00	1	1	2.13	SOUTH END OF BR. A4550
			TOTALS	400.0	8	8	13.04	
			PAY TOTALS	400	8	8	13	

REMOVAL OF IMPROVEMENTS

STA.	STA.	LOC.	DESCRIPTION
234+07.42	243+19.88	RTE. 169 RT.	REMOVE 264' OF GUARDRAIL N AND S OF BR. A4551
234+91.83	244+04.29	RTE. 169 LT.	REMOVE 264' OF GUARDRAIL N AND S OF BR. A4551
457+46.99	461+84.81	RTE.169 RT.	REMOVE 250' OF GUARDRAIL N AND S OF BR. A4550
458+58.47	462+96.29	RTE. 169 LT.	REMOVE 250' OF GUARDRAIL N AND S OF BR. A4550
1 LUMP SUM			

EDGE TREATMENT (RTE. 169)

STA.	STA.	LOC.	LENGTH FT.	WIDTH FT.	DEPTH IN.	VOLUME CY	PERMANENT AGGREGATE EDGE TREATMENT TONS	GRAVEL (A) OR CRUSHED STONE (B) TONS	REMARKS
450+98.80	459+72.98	RTE. 169	874.18	8.0	2.00	86.34	-	120.9	BEGIN 8' AGGR. SHOULDER TO N/E OF BR. A4550
460+70.30	466+08.80	RTE. 169	538.50	8.0	2.00	53.19	-	74.5	S/E OF BR. A4550 TO END 8' AGG SHLDR.
						RTE. 169 TOTALS	-	195.4	
EDGE TREATMENT (RTE. U)									
185+00.00	200+91.50	RTE. U	1591.50	2.0	2.00	39.30	62.88	-	BEG OF PROJECT TO S/E OF BR. A2001
202+58.50	484+95.00	RTE. U	28236.50	2.0	2.00	697.20	1115.52	-	N/E OF BR. A2001 TO END OF PROJECT
								40.2	QUANTITY FOR SIDE ROADS AND ENTRANCES
						RTE. U TOTALS	1178.40	40.2	
						PAY TOTALS	1178.4	236	

SUMMARY OF QUANTITIES

SHEET 5 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 7:59:56 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED: 9/28/2023

ROUTE: 169/U | STATE: MO

DISTRICT: NW | SHEET NO.: 3

COUNTY: BUCH./CLINTON

JOB NO.: JNW0016

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)

REV.

EFFECTIVE: 04-01-2023

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT ARROW)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT ARROW)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00	9	144.00			11	BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (ARROW SYMBOL)
WO4-1aR	48X48	16.00						MERGE (ARROW SYMBOL)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING (WITH FLAGS)
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00	64	1024.0			36	UNEVEN LANES
WO8-12	48X48	16.00	34	544.00			35	NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17	48X48	16.00						SHOULDER DROP-OFF (SYMBOL)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
WO12-2X	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	15	240.00			2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00						ROAD CLOSED AHEAD
WO20-4	48X48	16.00	6	96.00			7	ONE LANE ROAD AHEAD
WO20-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	15	240.00			8	FLAGGER (SYMBOL, WITH FLAGS)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19	4	8.76			4	WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL 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
GO20-1	60X24	10.00	4	40.00			1	ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	4	32.00			26	END ROAD WORK
GO20-4	36X18	4.50	2	9.00			53	PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	4	35.00			58	PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	8	12.00			58	PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT ARROW)
MO4-9R	48X36	12.00						DETOUR (RIGHT ARROW)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR (ARROW LEFT)
MO4-10R	48X18	6.00						DETOUR (ARROW RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00						SPEED LIMIT XX
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						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						POINT OF PRESENCE
CONST-7	48X24	8.00	4	32.00			56	RATE OUR WORK ZONE
CONST-7	72X36	18.00						RATE OUR WORK ZONE
CONST-8	48X36	12.00	4	48.00			59	WORK ZONE NO PHONE ZONE

	TOTAL
616-10.05 CONSTRUCTION SIGNS	2505
616-10.10 RELOCATED SIGNS	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		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123000A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161008		ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	285	CHANNELIZER (TRIM LINE)
6161030		TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040		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		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		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		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

NOTES:

THESE QUANTITIES WERE DEVELOPED USING TEMPORARY TRAFFIC CONTROL PLANS FOR PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS, STANDARD PLAN 616.20

NO DIRECT PAY WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNS OR DEVICES

SUMMARY OF QUANTITIES

SHEET 6 OF 6

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/02/2023 8:00:21 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED 9/27/2023

ROUTE	STATE
169/U	MO
DISTRICT	SHEET NO.
NW	3

COUNTY: BUCH./CLINTON

JOB NO. JNW0016

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

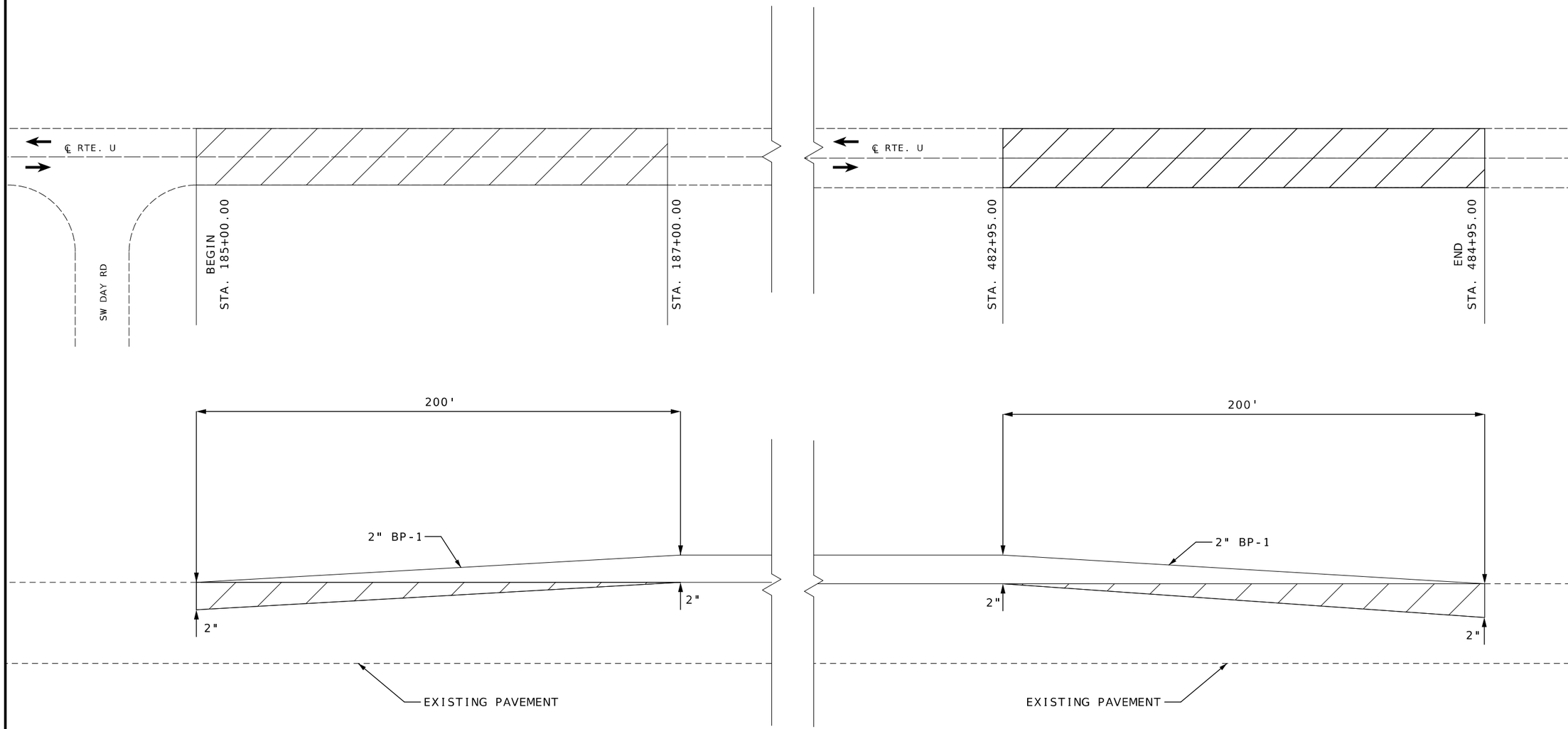
DESCRIPTION | DATE

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

REV.

DEPTH TRANSITIONS
ROUTE U
BEGINNING & END

= MODIFIED COLDMILLING



NOT TO SCALE

MODIFIED COLDMILLING PLAN
SPECIAL SHEET 1 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 8:00:46 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/27/2023
ROUTE 169/U	STATE MO
DISTRICT NW	SHEET NO. 4
COUNTY BUCH./CLINTON	
JOB NO. JNW0016	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

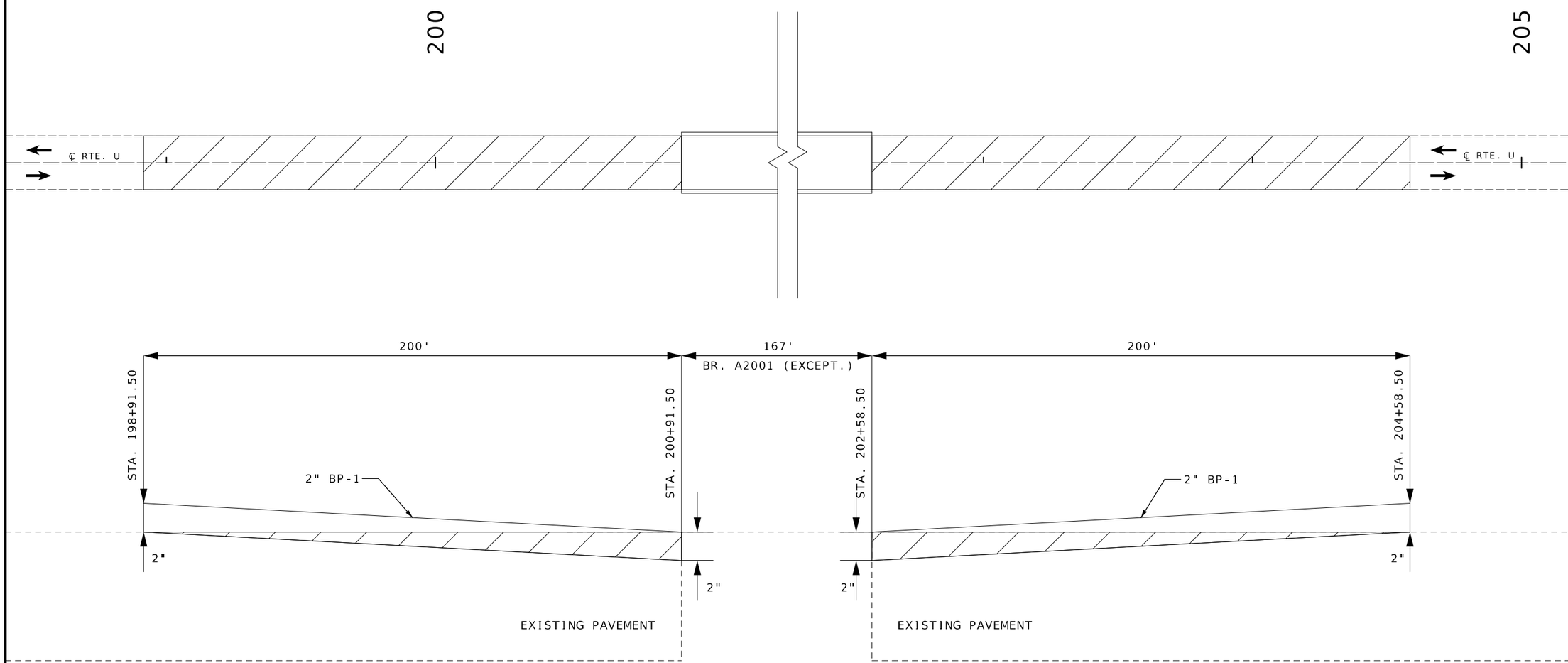
DESCRIPTION	DATE

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

REV.

DEPTH TRANSITIONS
ROUTE U
BR. A2001 OVER CONTRARY CREEK

= MODIFIED COLDMILLING



NOT TO SCALE

MODIFIED COLDMILLING PLAN
SPECIAL SHEET 2 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 8:01:16 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/27/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	5
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
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)

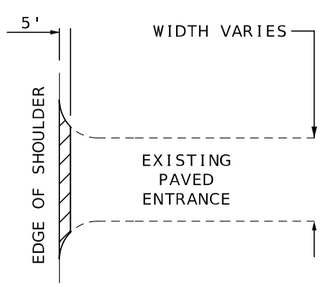
REV.

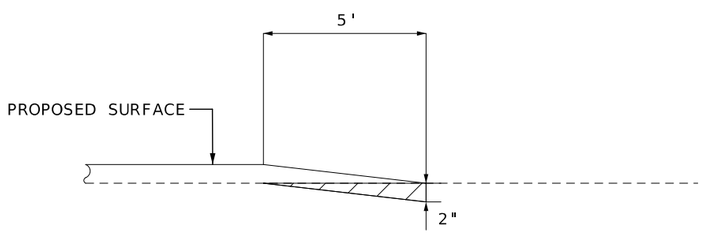
DEPTH TRANSITIONS
TYPICAL ENTRANCES

= MODIFIED COLDMILLING

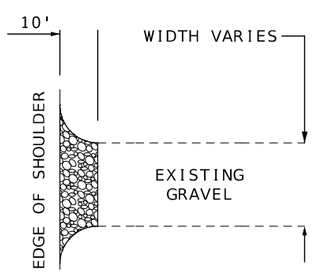
= 2" GRAVEL (A) OR CRUSHED STONE (B)

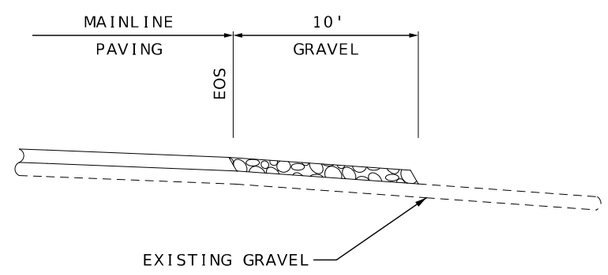
TYPICAL PAVED ENTRANCE
(FIELD, PRIVATE, OR COUNTY ROAD)
(ROUTE U ONLY)





TYPICAL GRAVEL ENTRANCE
(SIDE ROAD, PRIVATE, OR FIELD)
(ROUTE U ONLY)





NOT TO SCALE

MODIFIED COLDMILLING PLAN
SPECIAL SHEET 3 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 8:01:43 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/27/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	6
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

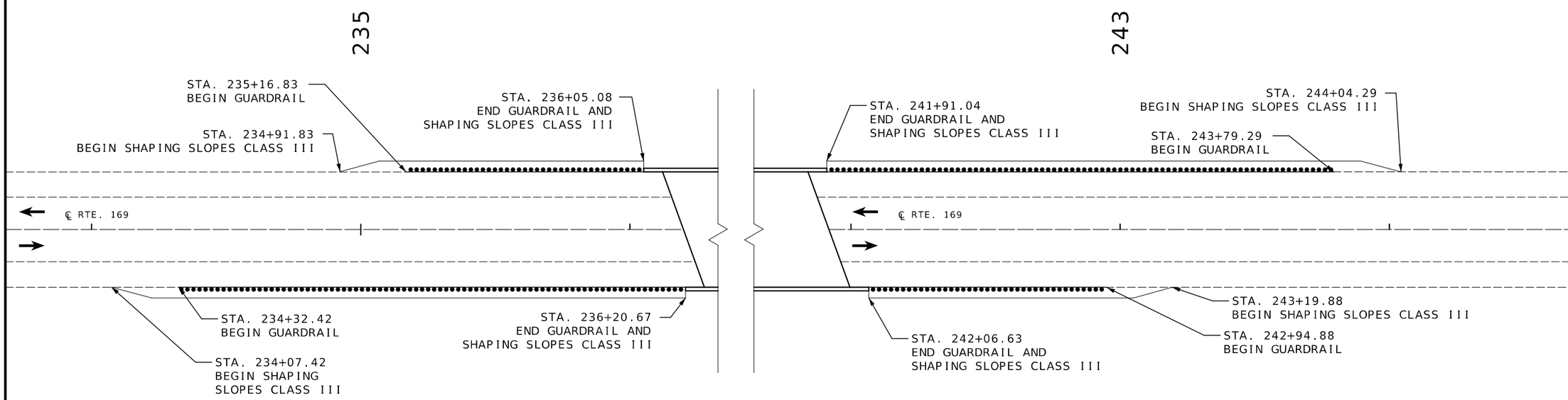
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REV.

ROUTE 169
BR. A4551 OVER PLATTE RIVER



REMOVE

264' OF EXISTING GUARDRAIL RT. AND 264' OF EXISTING GUARDRAIL LT.

BUILD

FROM STA. 234+07.42 TO STA. 236+20.67 RT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), 100' MGS GUARDRAIL, AND 213' OF SHAPING SLOPES CLASS III

FROM STA. 242+06.63 TO STA. 243+19.88 RT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), AND 113' OF SHAPING SLOPES CLASS III

FROM STA. 234+91.83 TO STA. 236+05.08 LT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), AND 113' OF SHAPING SLOPES CLASS III

FROM STA. 241+91.04 TO STA. 244+04.29 LT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), 100' MGS GUARDRAIL, AND 213' OF SHAPING SLOPES CLASS III

SCALE
0 20 40 60

GUARDRAIL PLAN
SPECIAL SHEET 4 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER
Brian M Rosenthal
10/02/2023 8:02:07 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

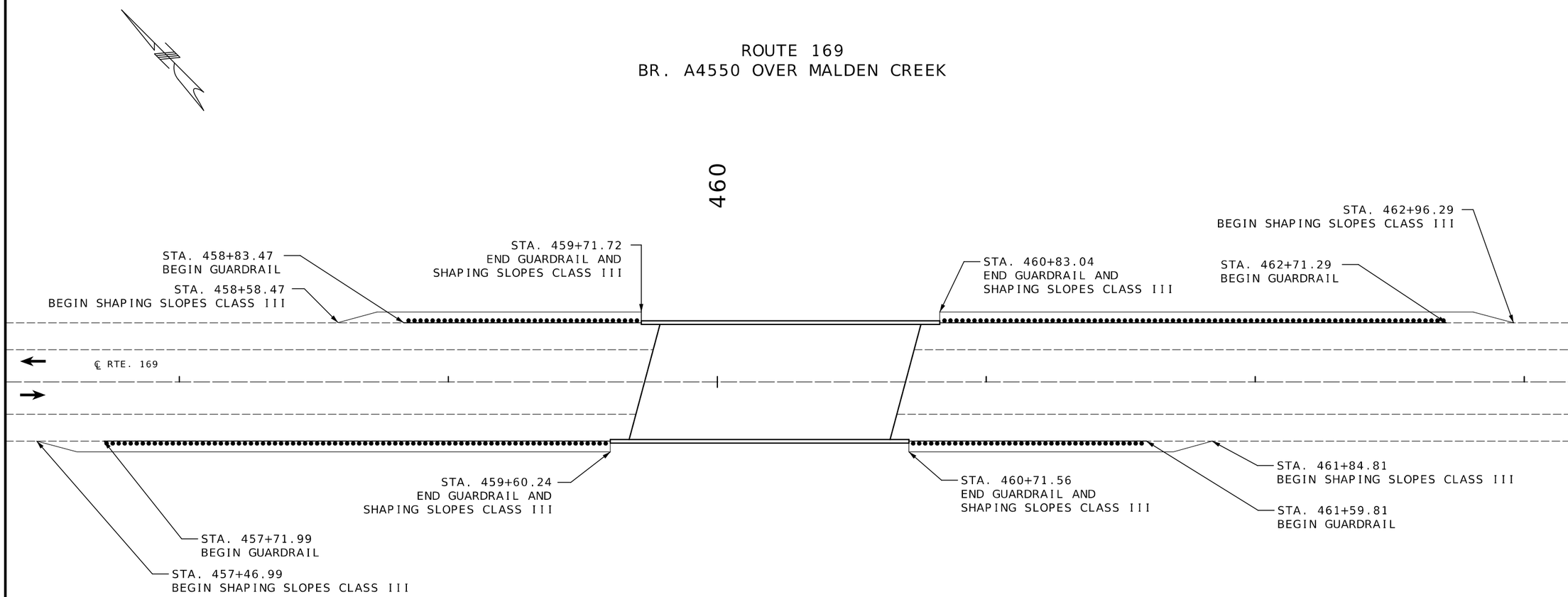
DATE PREPARED	
9/27/2023	
ROUTE	STATE
169/U	MO
DISTRICT	SHEET NO.
NW	7
COUNTY	
BUCH./CLINTON	
JOB NO.	
JNW0016	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION
DATE

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

REV.

ROUTE 169
BR. A4550 OVER MALDEN CREEK



REMOVE

250' OF EXISTING GUARDRAIL RT. AND 250' OF EXISTING GUARDRAIL LT.

BUILD

FROM STA. 457+46.99 TO STA. 459+60.24 RT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), 100' MGS GUARDRAIL, AND 213' OF SHAPING SLOPES CLASS III

FROM STA. 460+71.56 TO STA. 461+84.81 RT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), AND 113' OF SHAPING SLOPES CLASS III

FROM STA. 458+58.47 TO STA. 459+71.72 LT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), AND 113' OF SHAPING SLOPES CLASS III

FROM STA. 460+83.04 TO STA. 462+96.29 LT.
1 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR NO CURB), 1 TYPE A CRASHWORTHY END TERMINAL (MASH), 100' MGS GUARDRAIL, AND 213' OF SHAPING SLOPES CLASS III

SCALE
0 20 40 60

GUARDRAIL PLAN
SPECIAL SHEET 5 OF 5

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER
Brian M Rosenthal
10/02/2023 8:02:32 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/27/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	8
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
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)

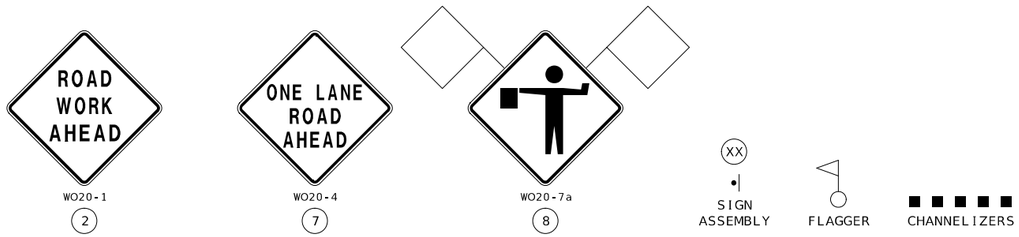
REV.

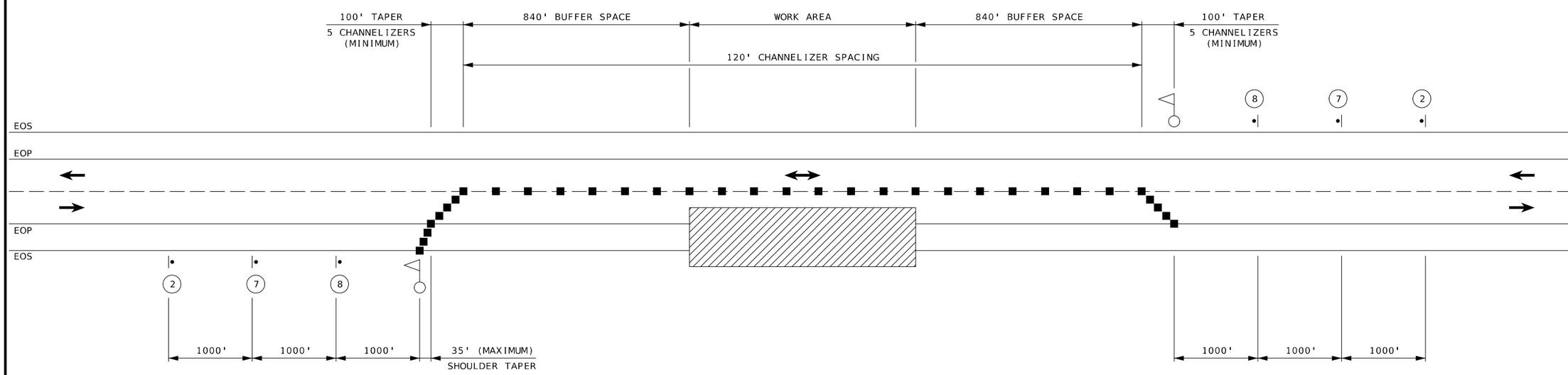
NOTES: THIS SHEET IS CONSIDERED SUPPLEMENTAL TO STANDARD PLAN 616.20.

IF USED AT NIGHT, THE FLAGGER STATIONS SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX).

SIGN SPACING MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

MIRROR TRAFFIC CONTROL SET UP FOR WORK IN THE OPPOSITE DIRECTION





NOT TO SCALE

STATIONARY LANE CLOSURE FOR GUARDRAIL REPLACEMENT

TRAFFIC CONTROL
SHEET 1 OF 1

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 8:02:59 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/27/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	9
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

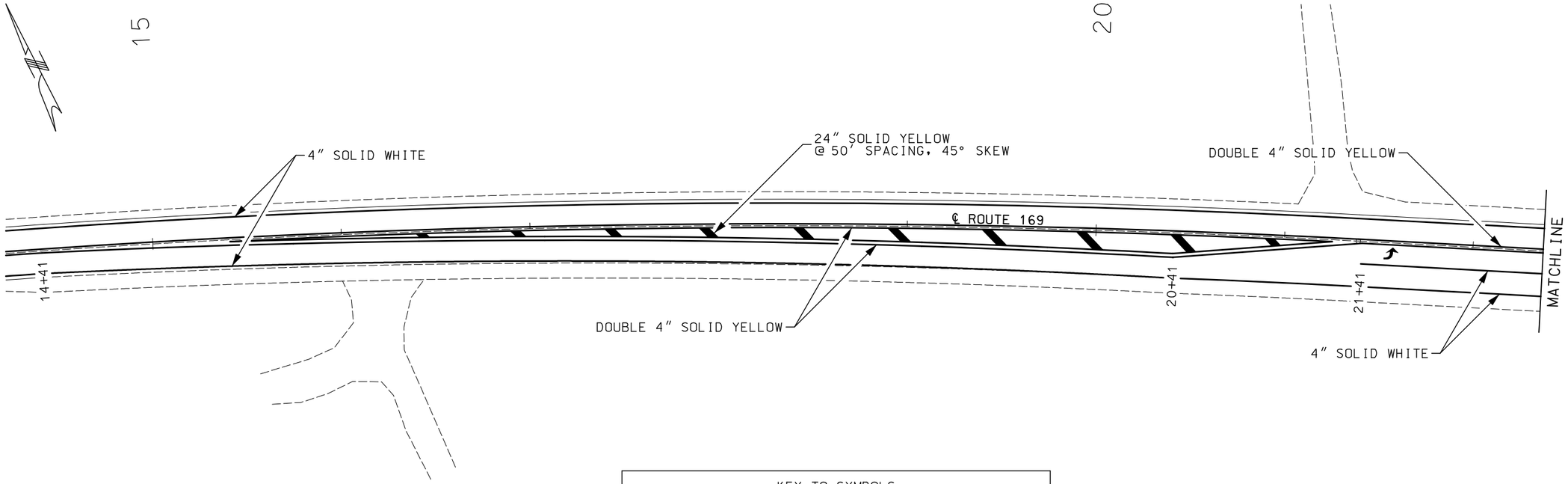
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

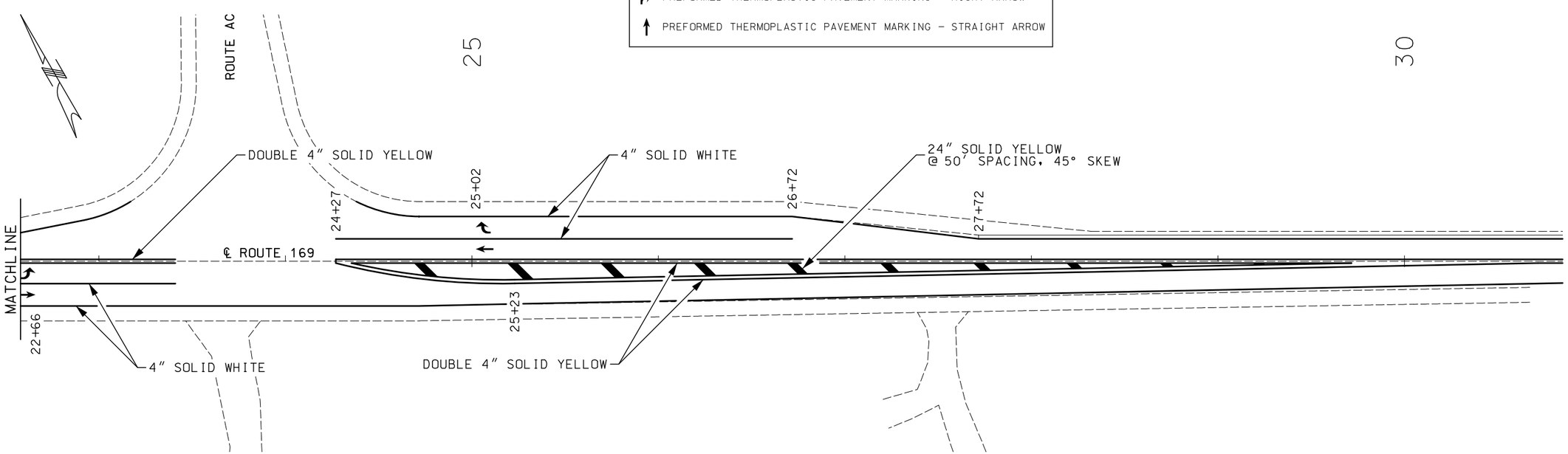
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

REV.



KEY TO SYMBOLS

- PREFORMED THERMOPLASTIC PAVEMENT MARKING - LEFT ARROW
- PREFORMED THERMOPLASTIC PAVEMENT MARKING - RIGHT ARROW
- PREFORMED THERMOPLASTIC PAVEMENT MARKING - STRAIGHT ARROW



SCALE

0 30 60 90

INTERSECTION WITH ROUTE AC

PAVEMENT MARKING
SHEET 1 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/02/2023 8:03:28 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

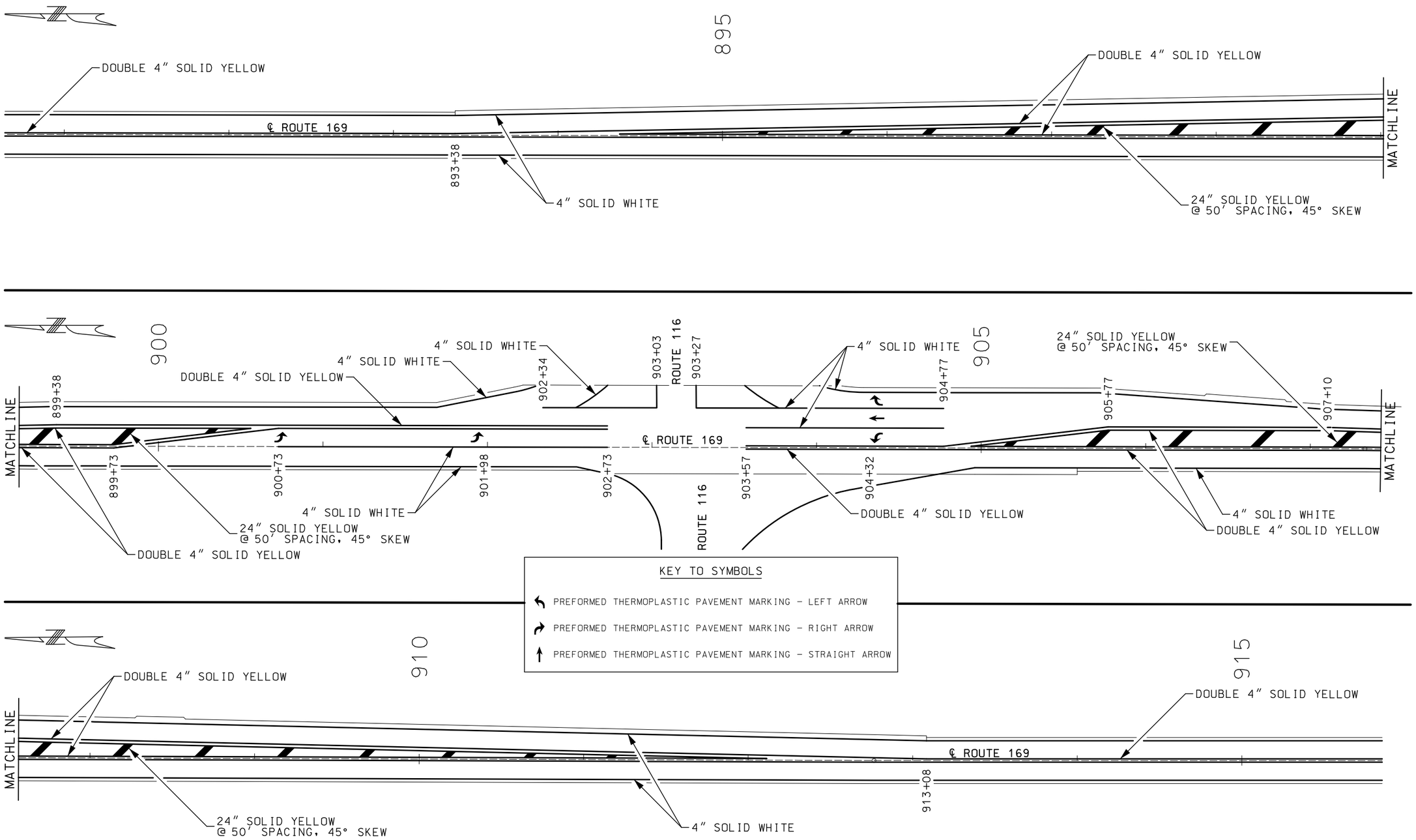
DATE PREPARED	9/28/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	10
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REV.



SCALE

0 30 60 90

INTERSECTION WITH ROUTE 116

PAVEMENT MARKING
SHEET 2 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER
PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/03/2023 8:03:56 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	9/28/2023
ROUTE	169/U
STATE	MO
DISTRICT	NW
SHEET NO.	11
COUNTY	BUCH./CLINTON
JOB NO.	JNW0016
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)

REV.