DESIGN DESIGNATION

A.A.D.T. - 2024 = 17,221
A.A.D.T. - 2044 = 18,193
D.H.V. = 7.5%
T = 16%
V = 35 M.P.H.
D = 51/49%
FUNCTIONAL CLASSIFICATION- OTHER PRINCIPAL ARTERIAL

NO NEW RIGHT-OF-WAY TO BE ACQUIRED ON THIS PROJECT

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	D	
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

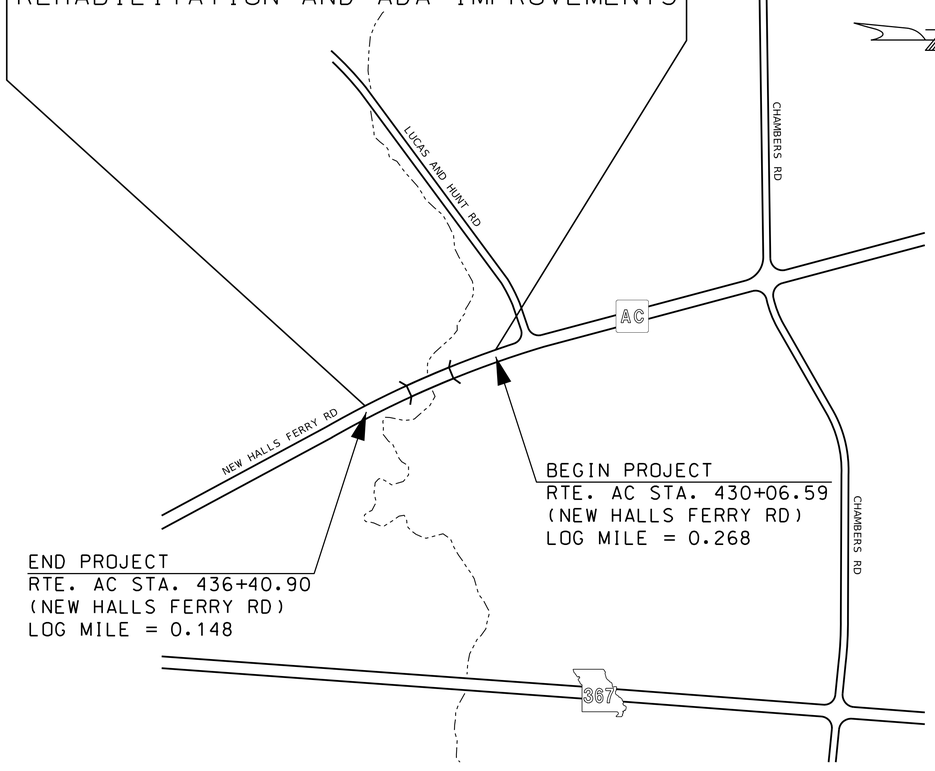
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR
STATE HIGHWAY

ST. LOUIS COUNTY

KEY MAP
LOCATION OF ST. LOUIS COUNTY

PROJECT LIMITS
BRIDGE A1109- ROUTE AC OVER
MALINE CREEK - BRIDGE
REHABILITATION AND ADA IMPROVEMENTS



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

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA.	430 + 06.59
END OF PROJECT	STA.	436 + 40.90
APPARENT LENGTH		634.31 FEET
EQUATIONS:		
TOTAL CORRECTIONS		0.00 FEET
NET LENGTH OF PROJECT		634.31 FEET
STATE LENGTH		0.120 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES		0.76 ACRES

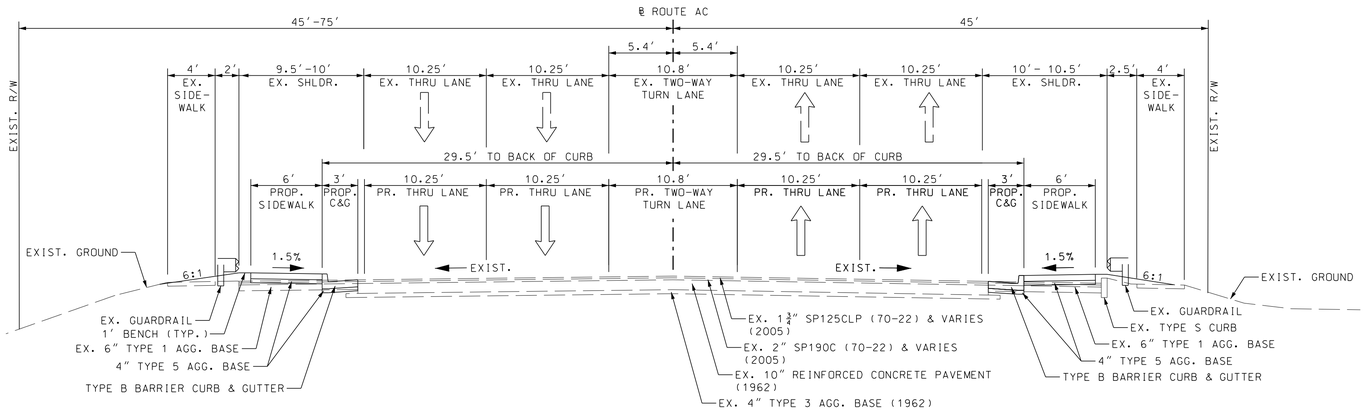
STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 1/9/2025
ROUTE: AC | STATE: MO
DISTRICT: SL | SHEET NO.: 1
COUNTY: ST. LOUIS
JOB NO.: J6I3573B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

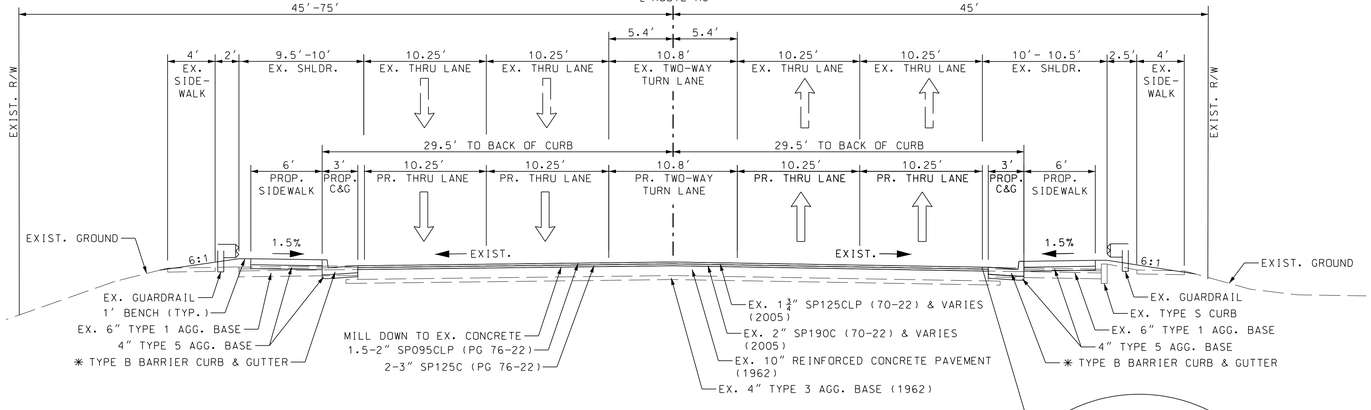
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809



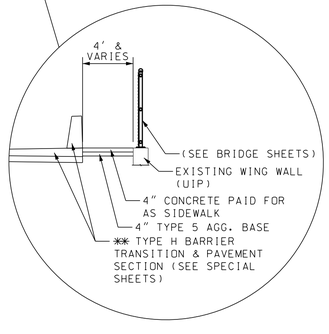
TYPICAL SECTION ROUTE AC
STA. 430+06.59 to 430+54.96 RT
STA. 433+67.38 to 434+36.17 RT

STA. 430+06.59 TO 430+54.96 LT
STA. 433+67.38 TO 436+40.90 LT



TYPICAL SECTION ROUTE AC
STA. 430+54.96 to 431+25.09 RT
STA. 430+54.96 to 431+44.82 LT
STA. 432+29.26 to 433+67.38 RT
STA. 432+96.23 to 433+67.38 LT

✱ SEE SPECIAL SHEETS FOR TYPE B C&G END STATION. THE INTENT IS TO END THE GUTTER AT THE EXISTING INLET SO WATER DOES NOT POOL AT THE BEGINNING OF THE BRIDGE.
✱✱ SEE SPECIAL SHEETS FOR BARRIER TRANSITION AND 9-IN NON-REINFORCED PAVEMENT STATIONS.



TYPICAL SECTION ROUTE AC
✱✱ SEE SPECIAL SHEETS FOR BARRIER TRANSITION, REINFORCED SIDEWALK, AND 9-IN NON-REINFORCED PAVEMENT STATIONS.

ROUTE AC TYPICAL SECTION
SHEET 1 OF 1

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	2

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority No.: 000165
BMcD Project No. 171809

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REMOVAL OF IMPROVEMENTS (ROADWAY)

PLAN SHEET NO.	ROADWAY	STATION	STATION	OFFSET	LOCATION	ITEM TO BE REMOVED	AMOUNT	UNIT	REMARKS
1	RTE AC	430+06.56	430+43.39	37	LT	SIDEWALK	37	LF	
1	RTE AC	430+77.26	431+50.06	38	LT	SIDEWALK	73	LF	
1	RTE AC	430+09.86	430+20.97	30	RT	SIDEWALK	12	LF	
1	RTE AC	430+52.57	431+22.43	38	RT	SIDEWALK	70	LF	
1	RTE AC	430+06.57	430+45.71	37	LT	CURB & GUTTER	40	LF	
1	RTE AC	430+33.33	430+44.74	42	LT	CURB & GUTTER	12	LF	
1	RTE AC	430+75.84	430+87.26	36	LT	CURB & GUTTER	12	LF	
1	RTE AC	430+06.60	430+22.47	28	RT	CURB & GUTTER	16	LF	
1	RTE AC	430+08.39	430+21.59	33	RT	CURB & GUTTER	14	LF	
1	RTE AC	430+59.39	430+80.99	35	RT	CURB & GUTTER	22	LF	
1	RTE AC	430+11.61	430+39.42	-	LT	FULL DEPTH PAVEMENT	22	SY	SHOULDER
1	RTE AC	430+39.42	430+80.99	-	LT	ENTRANCE	66	SY	
1	RTE AC	430+80.99	431+44.97	-	LT	FULL DEPTH PAVEMENT	68	SY	SHOULDER
1	RTE AC	430+06.58	430+17.39	-	RT	FULL DEPTH PAVEMENT	6	SY	SHOULDER
1	RTE AC	430+17.39	430+59.21	-	RT	ENTRANCE	66	SY	
1	RTE AC	430+59.21	431+26.61	-	RT	FULL DEPTH PAVEMENT	73	SY	SHOULDER
1	RTE AC	430+85.76	431+49.70	-	LT	GUARDRAIL	64	LF	
1	RTE AC	430+59.64	431+23.37	-	RT	GUARDRAIL	64	LF	
1	RTE AC	430+06.57	431+44.97	-	LT	SAWCUT	143	LF	ROADWAY
1	RTE AC	430+06.58	431+26.61	-	RT	SAWCUT	134	LF	ROADWAY
1	RTE AC	430+44.99	430+76.24	-	LT	SAWCUT	33	LF	COMMERCIAL ENTRANCE
1	RTE AC	430+21.88	430+51.94	-	RT	SAWCUT	31	LF	COMMERCIAL ENTRANCE
2	RTE AC	432+99.91	436+40.89	37	LT	SIDEWALK	341	LF	
2	RTE AC	432+70.13	433+71.16	37	RT	SIDEWALK	102	LF	
2	RTE AC	434+15.42	434+36.16	31	RT	SIDEWALK	21	LF	
2	RTE AC	433+52.30	436+40.90	37	LT	CURB & GUTTER	289	LF	
2	RTE AC	433+21.03	433+74.26	36	RT	CURB & GUTTER	54	LF	
2	RTE AC	434+11.23	434+36.16	30	RT	CURB & GUTTER	25	LF	
1	RTE AC	432+75.47	433+59.68	-	RT	FULL DEPTH PAVEMENT	94	SY	SHOULDER
2	RTE AC	433+59.68	434+24.56	-	RT	FULL DEPTH PAVEMENT	84	SY	SIDEROAD APPROACH
2	RTE AC	434+24.56	434+36.16	-	RT	FULL DEPTH PAVEMENT	7	SY	SHOULDER
2	RTE AC	432+95.39	436+40.93	-	LT	FULL DEPTH PAVEMENT	354	SY	SHOULDER
2	RTE AC	432+98.51	433+62.52	-	LT	GUARDRAIL	65	LF	
2	RTE AC	432+70.72	433+33.45	-	RT	GUARDRAIL	63	LF	
2	RTE AC	432+95.39	436+40.93	-	LT	SAWCUT	363	LF	ROADWAY
2	RTE AC	432+69.93	434+36.16	-	RT	SAWCUT	188	LF	ROADWAY
2	RTE AC	433+73.94	434+11.55	-	RT	SAWCUT	59	LF	SIDE ROAD
2	RTE AC	435+32.60	-	42	LT	POST & FOUNDATION	1	EA	METRO BUS STOP SIGN. NEW SIGNAGE POST PAID FOR WITH SIGNAGE QUANTITIES. KEEP SIGN FACE TO BE RELOCATED PER PLAN AND DIRECTION OF ENGINEER.
					PAY TOTAL	1	LUMP SUM		

CONCRETE CURB AND GUTTER

PLAN SHEET NO.	ROADWAY	STATION	STATION	LOCATION	LENGTH (FT)	CONCRETE CURB (6-IN HEIGHT AND UNDER) TYPE S (LF)	CURB AND GUTTER, TYPE B (LF)	TYPE 5 AGGREGATE FOR BASE (4-IN THICK) (SY)	REMARKS
1	RTE AC	430+06.57	430+20.98	LT	15.9	16.0		5.3	MEASURED IN CADD
1	RTE AC	430+06.57	430+24.07	LT	18.9	19.0		6.3	MEASURED IN CADD
1	RTE AC	430+45.29	430+45.81	LT	1.8	2.0		0.7	MEASURED IN CADD
1	RTE AC	430+99.93	431+45.50	LT	45.3	46.0		15.3	MEASURED IN CADD
1	RTE AC	430+76.98	431+03.14	RT	26.3		27.0	9.0	MEASURED IN CADD
1	RTE AC	431+03.14	431+25.73	RT	22.7	22.7		7.6	MEASURED IN CADD
2	RTE AC	432+95.98	433+19.09	LT	23.0	23.0		7.7	MEASURED IN CADD
2	RTE AC	433+19.09	433+77.25	LT	65.1		66.0	22.0	MEASURED IN CADD
2	RTE AC	433+81.69	436+40.90	LT	261.0		261.0	87.0	MEASURED IN CADD
2	RTE AC	432+74.73	432+91.85	RT	17.2	17.2		5.7	MEASURED IN CADD
2	RTE AC	432+91.85	433+49.70	RT	58.2		59.0	19.7	MEASURED IN CADD
2	SUN VALLEY	0+87.95	0+99.00	RT	11.1	12.0		4.0	MEASURED IN CADD
2	SUN VALLEY	0+90.33	0+99.58	LT	9.3	10.0		3.3	MEASURED IN CADD
					TOTAL	167.9	413.0	193.6	
					PAY TOTAL	168	413	-	

MILLING AND RESURFACING

PLAN SHEET NO.	ROADWAY	STATION	STATION	APPROX. NUMBER OF LIFTS (EA)	TACK CONVERSION FACTOR (GAL/SY)	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (GREATER THAN 3 IN. THICK) (SY)	TACK COAT (GAL)	2" MIXTURE PG (76-22) SP095CLP (TONS)	3" MIXTURE PG (76-22) SP125C (TONS)	REMARKS
1	RTE AC	430+54.96	431+35.57	2	0.1	481	96.2	51.2	77.3	
2	RTE AC	432+85.30	433+67.38	2	0.1	482	96.4	51.3	77.5	
					PAY TOTAL	963	193	102.5	154.8	

PAVED APPROACH AND SIDE STREETS

PLAN SHEET NO.	ROADWAY	STATION	LOCATION	WIDTH (LF)	PAVED APPROACH, 8-IN (SY)	TYPE 5 AGGREGATE FOR BASE (4-IN THICK) (SY)	REMARKS
1	RTE AC	430+37.22	RT	30.0	58.6	61.5	COMMERCIAL ENTRANCE
1	RTE AC	430+60.92	LT	30.0	61.7	64.8	COMMERCIAL ENTRANCE
2	RTE AC	433+95.00	RT	40.0	59.0	62.0	SIDE ROAD
				TOTAL	179.3	188.3	
				PAY TOTAL	179.3	-	

PAVEMENT PATCHING

ROADWAY	STATION	STATION	LOCATION	CLASS C PARTIAL DEPTH PAVEMENT REPAIR		REMARKS
				FURNISH & PLACE (TON)	REMOVAL (SY)	
RTE AC	430+06.57	431+44.97	LT	11.6	16.7	TO BE USED AS DIRECTED BY ENGINEER
RTE AC	430+06.59	431+26.62	RT	7.7	11.0	TO BE USED AS DIRECTED BY ENGINEER
RTE AC	432+95.39	436+40.90	LT	24.5	35.2	TO BE USED AS DIRECTED BY ENGINEER
RTE AC	432+75.47	434+36.17	RT	11.2	16.2	TO BE USED AS DIRECTED BY ENGINEER
			PAY TOTAL	55.0	79.1	

CONCRETE SIDEWALK

PLAN SHEET NO.	ROADWAY	STATION	STATION	LOCATION	CONCRETE SIDEWALK, 4-IN (SY)	TYPE 5 AGGREGATE FOR BASE (4-IN THICK) (SY)	REMARKS
1	RTE AC	430+06.59	431+45.67	LT	42.0	42.0	6' SIDEWALK
1	RTE AC	431+44.79	431+48.81	LT	2.2	2.2	CONCRETE PAID FOR AS SIDEWALK
1	RTE AC	430+06.59	431+25.56	RT	31.8	31.8	6' SIDEWALK
1	RTE AC	431+16.58	431+23.54	RT	2.8	2.8	CONCRETE PAID FOR AS SIDEWALK
2	RTE AC	432+96.17	436+40.90	LT	224.9	217.2	6' SIDEWALK
2	RTE AC	432+98.44	433+05.47	LT	3.6	3.6	CONCRETE PAID FOR AS SIDEWALK
2	RTE AC	432+74.54	434+36.16	RT	51.2	51.2	6' SIDEWALK
2	RTE AC	432+71.28	432+75.25	RT	2.2	2.2	CONCRETE PAID FOR AS SIDEWALK
				TOTAL	360.8	353.1	
				PAY TOTAL	360.8	-	

CURB RAMP AND TRUNCATED DOMES

PLAN SHEET NO.	ROADWAY	STATION	STATION	LOCATION	AREA FOR INFO ONLY (SY)	ADA CURB RAMP (EA)	TYPE 5 AGGREGATE FOR BASE (4-IN THICK) (SY)	TRUNCATED DOMES (SF)	REMARKS
1	RTE AC	430+06.59	431+36.10	LT	26.8	2	26.8		LARGE RADIUS PERPENDICULAR
1	RTE AC	430+06.59	431+36.10	RT	23.1	3	23.1		LARGE RADIUS PERPENDICULAR
2	RTE AC	433+17.38	434+36.17	RT	28.5	2	28.5	39.0	LARGE RADIUS PERPENDICULAR
				TOTAL		7	79.0	39.0	
				PAY TOTAL		7	-	39	

AGGREGATE SUMMARY TABLE

	TYPE 5 AGGREGATE FOR BASE (4-IN THICK) (SY)	TYPE 5 AGGREGATE FOR BASE (6-IN THICK) (SY)	REMARKS
	193.6		FROM CONCRETE CURB & GUTTER
	188.3		FROM PAVED APPROACHES
	353.1		FROM CONCRETE SIDEWALK
		89.6	FROM CONCRETE BASE UNDER TYPE H BARRIER
TOTAL	735.0	89.6	
PAY TOTAL	735.0	90.0	

DRAINAGE FLUME

PLAN SHEET NO.	ROADWAY	STATION	LOCATION	6.5 FT X 4 FT DRAINAGE FLUME (EA)	REMARKS
2	RTE AC	433+79	LT	1	
			PAY TOTAL	1	

EARTHWORK QUANTITY SUMMARY

ROADWAY	STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION (CY)	EMBANKMENT IN PLACE (CY)	REMARKS
RTE AC	430+07	431+05	LT	0	26	
RTE AC	433+17	436+41	LT	8	229	
RTE AC	430+07	431+05	RT	8	34	
RTE AC	433+17	434+36	RT	0	98	
			TOTAL	16	387	
			PAY TOTAL	16	387	

ROUTE AC QUANTITIES
SHEET 1 OF 4

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/9/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	3

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

PERMANENT PAVEMENT MARKING

PM SHEET NO.	ROADWAY	STATION	STATION	LOCATION	6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS		4 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS		PREFORMED THERMOPLASTIC PAVEMENT MARKING		REMARKS
					6-IN SOLID WHITE (LF)	6-IN INTERMITTENT WHITE (LF)	4-IN SOLID YELLOW (LF)	4-IN INTERMITTENT YELLOW (LF)	24-IN SOLID WHITE STOP BAR (LF)	LT/RT ARROW WHITE (EACH)	
1	RTE AC	416+50.00	421+25.81	RT	942	130	188		23		MEASURED IN CAD
1	RTE AC	423+01.37	421+26.00	RT	254	39	156				MEASURED IN CAD
1	RTE AC	426+00.00	426+54.00	LT	193	0	65			1	MEASURED IN CAD
2	RTE AC	426+54.00	432+74.00	RT	990	247	1,128	188			MEASURED IN CAD
2	RTE AC	426+54.00	432+74.00	LT	1,175	221	1,052	202			MEASURED IN CAD
3	RTE AC	432+74.00	433+64.63	RT	109						MEASURED IN CAD
3	RTE AC	434+21.21	435+32.67	RT	135						MEASURED IN CAD
3	RTE AC	436+19.36	440+00.00	RT	509						MEASURED IN CAD
3	RTE AC	432+74.00	440+00.00	RT	919	230	918	229	14		MEASURED IN CAD
3	RTE AC	432+74.00	441+28.00	LT	1,122	254	1,019	255			MEASURED IN CAD
4	RTE AC	441+28.00	442+00.00	LT	87	22	87	22			MEASURED IN CAD
				TOTAL	6,435	1,143	4,613	895	37	1	
				PAY TOTAL	7,579		5,509		37	1	

SIGNING

SIGNS					PERFORATED SQUARE STEEL TUBE				
							ANCHORS		
SIGN NO.	ROADWAY	SIGN SIZE	STATION	LOCATION	POST NO. 1 (LF)	TOTAL ITEM NO. 9031270A (LF)	DRIVEN 12-GA. ITEM NO. 9031271A (EA)	RELOCATE EXISTING SIGN(S) TO NEW POST (EA)	REMARKS
1	RTE AC	18"X24"	435+33	LT	14	14	1	1	REMOUNTING EXIST. METRO BUS STOP SIGN INCIDENTAL TO NEW POST. SEE TRAFFIC CONTROL SHEETS FOR TEMPORARY BUS STOP INFORMATION.
				PAY TOTALS	14	14	1	-	

INLET AND MANHOLE ADJUSTMENTS TO GRADE

PLAN SHEET NO.	ROADWAY	STATION	OFFSET (FT)	LOCATION	ADJUSTING MANHOLE (EA)	ADJUST WATER VALVE (EA)	CONCRETE MANHOLE APRON (EA)	REMARKS
1	RTE AC	430+52.07	40	LT		1		WATER VALVE ADJUSTMENT IN ENTRANCE
1	RTE AC	430+54.89	25	RT		1		WATER VALVE ADJUSTMENT IN ROAD
1	RTE AC	430+65.23	26	RT		1		WATER VALVE ADJUSTMENT IN ROAD
1	RTE AC	430+73.76	32	RT	1		1	SANITARY MANHOLE ADJUSTMENT IN SIDEWALK
1	RTE AC	430+78.49	18	LT	1		1	SANITARY MANHOLE ADJUSTMENT IN ROAD
2	RTE AC	433+24.88	20	LT	1		1	SANITARY MANHOLE ADJUSTMENT IN ROAD
2	RTE AC	433+64.55	21	LT	1		1	SANITARY MANHOLE ADJUSTMENT IN ROAD
2	RTE AC	433+60.27	19	RT		1		WATER VALVE ADJUSTMENT IN ROAD
2	RTE AC	433+76.96	26	RT		1		WATER VALVE ADJUSTMENT IN ROAD
				TOTAL:	4	5	4	
				PAY TOTAL:	4	-	4	

TYPE 'H' CONCRETE BARRIER TAPER

SPECIAL SHEET NO.	ROADWAY	STATION	STATION	LOCATION	AREA (SF)	AREA (SY)	TYPE H BARRIER (LF)	SIDEWALK (BRIDGES) (SF)	CONCRETE BASE (9 IN. NON-REINF) (SY)	TYPE 5 AGGREGATE FOR BASE (6-IN THICK) (SY)	REMARKS
1-2	RTE AC	431+28.04	431+44.97	LT	172.7	19.2	20.0	156.7	19.2	19.2	TYPE H BARRIER AND SIDEWALK (BRIDGES) PAID FOR AS BRIDGE ITEMS.
1-2	RTE AC	431+03.15	431+26.62	RT	236.9	26.3	20.0	156.7	26.3	26.3	
1-2	RTE AC	432+95.39	433+19.08	LT	213.3	23.7	20.0	156.7	23.7	23.7	
1-2	RTE AC	432+75.47	432+91.91	RT	183.7	20.4	20.0	156.7	20.4	20.4	
						TOTAL	80.0	626.7	89.6	89.6	
						PAY TOTAL	80.0	627.0	89.6	-	

MOBILIZATION

TOTAL	1.00	LUMP SUM

ADDITIONAL MOBILIZATION FOR SEEDING

TOTAL	1.00	EACH

CONTRACTOR FURNISHED SURVEYING AND STAKING

TOTAL	1.00	LUMP SUM

TEMPORARY EROSION CONTROL

EC SHEET NO.	ROADWAY	SILT FENCE (LF)	REMARKS
1	RTE AC	203.0	
2	RTE AC	472.0	
	TOTAL	675.0	
	PAY TOTAL	675	

SEEDING

EC SHEET NO.	ROADWAY	SEEDING AND MULCHING (SF)	COOL SEASON GRASSES (ACRE)	MULCHING (ACRE)	REMARKS
1	RTE AC	1,249.90	0.03	0.03	
2	RTE AC	3,464.54	0.08	0.08	
	TOTAL		0.11	0.11	
	PAY TOTAL		0.20	0.20	

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 1/9/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	3

COUNTY: ST. LOUIS

JOB NO.: J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

c:\bmcd_lib\pw_connect\trn\d0187261\003_QU_02_J6I3573B_I1.dgn 10:27:17 AM 1/9/2025

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 PAVEMENT MARKING

TEMP. TRAFFIC CONTROL SHEET	ROADWAY	STA	STA	LOC	4-IN TEMP PAVEMENT MARKING PAINT		4-IN TEMP. REMOVABLE TAPE		PAVEMENT MARKING REMOVAL	REMARKS
					YELLOW	WHITE	YELLOW	WHITE		
					L.F.	L.F.	L.F.	L.F.	L.F.	
2-4	RT AC	416+30	442+26	LT/RT					9818	PRE STAGE 1 - EX. PM REMOVAL
2-4	RT AC	416+30	442+26	LT/RT	3269	4212				STAGE 1
2-4	RT AC	416+30	416+30	LT/RT					8511	PRE STAGE 2
6-8	RT AC	416+30	441+47	LT/RT			3062	4552		STAGE 2
6-8	RT AC	416+31	441+47	LT/RT					7614	POST STAGE 2
				SUBTOTAL	3269	4212	3062	4552	25943	
				PAY TOTAL	7481		3062	4552	25943	

SUMMARY OF QUANTITIES
SHEET 3 OF 4

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

12/13/2024 1:51:33 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	3

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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

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)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00	1	16			15L	REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00	1	16			15R	REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
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						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 (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00	2	32			34	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
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
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	5	80			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	2	32			7	ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	2	32			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	2	32			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	2	32			8	FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19						WET PAINT (ARROW PIVOTS)

SIGN	SIZE 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						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00						END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	2	12			54	WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9bL	24X18	3.00	2	6			60	PEDESTRIAN DETOUR (LEFT)
MO4-9bR	24x18	3.00	2	6			61	PEDESTRIAN DETOUR (RIGHT)
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	13	172.3			41	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	4	48			4/25	SPEED LIMIT 25 & 35
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
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (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	2	4			66	SIDEWALK CLOSED
R9-11L	24X18	3.00	1	3			67	SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00	1	3			68	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	2	24			63	POINT OF PRESENCE
CONST-7	48X48	16.00	4	64			70	RUMBLE STRIPS AHEAD
CONST-8	48X36	12.00	2	24			62	WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL
	671

616-10.10 RELOCATED SIGNS	TOTAL
	*

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ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2024 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)
6123001	+++	TRUCK MOUNTED ATTENUATOR (TMA)
6161008	2	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	17	TYPE III MOVEABLE BARRICADE
6161033	16	DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070	18	TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	3**	CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	16**	TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D	963**	TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6174000A	6**	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A	313**	RELOCATING TEMPORARY TRAFFIC BARRIER
6175020A	2**	RELOCATING TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
6169902	8**	MISC. ADA-COMPLIANT TYPE III MOVEABLE BARRICADE
6079903	1698**	MISC. TEMPORARY PEDESTRIAN FENCING

TEMPORARY TRAFFIC CONTROL - 1 LUMP SUM

*NO DIRECT PAY WILL BE MADE FOR THE RELOCATION OF TEMPORARY SIGNING AND/OR TEMPORARY TRAFFIC CONTROL DEVICES.

** INDICATES ITEM IS NOT INCLUDED IN LUMP SUM TEMPORARY TRAFFIC CONTROL.

+++ INDICATES TMAs SHALL BE REQUIRED FOR MOBILE OPERATIONS
ON THIS JOB, BUT AT NO DIRECT PAY. THE CONTRACTOR MAY CHOOSE TO USE TMAs AT STATIONARY LOCATIONS, BUT NO PAYMENT SHALL BE MADE FOR THESE TMAs.

NOTES:
ALL TRAFFIC CONTROL ITEMS INCLUDED IN PAY ITEM 616-99.01 TEMPORARY TRAFFIC CONTROL LUMP SUM, UNLESS NOTED OTHERWISE IN THE PLANS. THESE QUANTITIES ARE ONLY AN ESTIMATE AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.

SIGN QUANTITIES HAVE BEEN ESTIMATED BASED ON THE STAGING SHOWN ON THE PLANS. IF THE CONTRACTOR CHOOSES TO SETUP TRAFFIC CONTROL DIFFERENT FROM WHAT IS PROVIDED, ANY ADDITIONAL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY TRAFFIC CONTROL SHALL FOLLOW, AT A MINIMUM, MUTCD STANDARDS, LATEST EDITION.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT SHEETING.

SUMMARY OF QUANTITIES
SHEET 4 OF 4

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/13/2024 3:37:28 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED: 12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	3

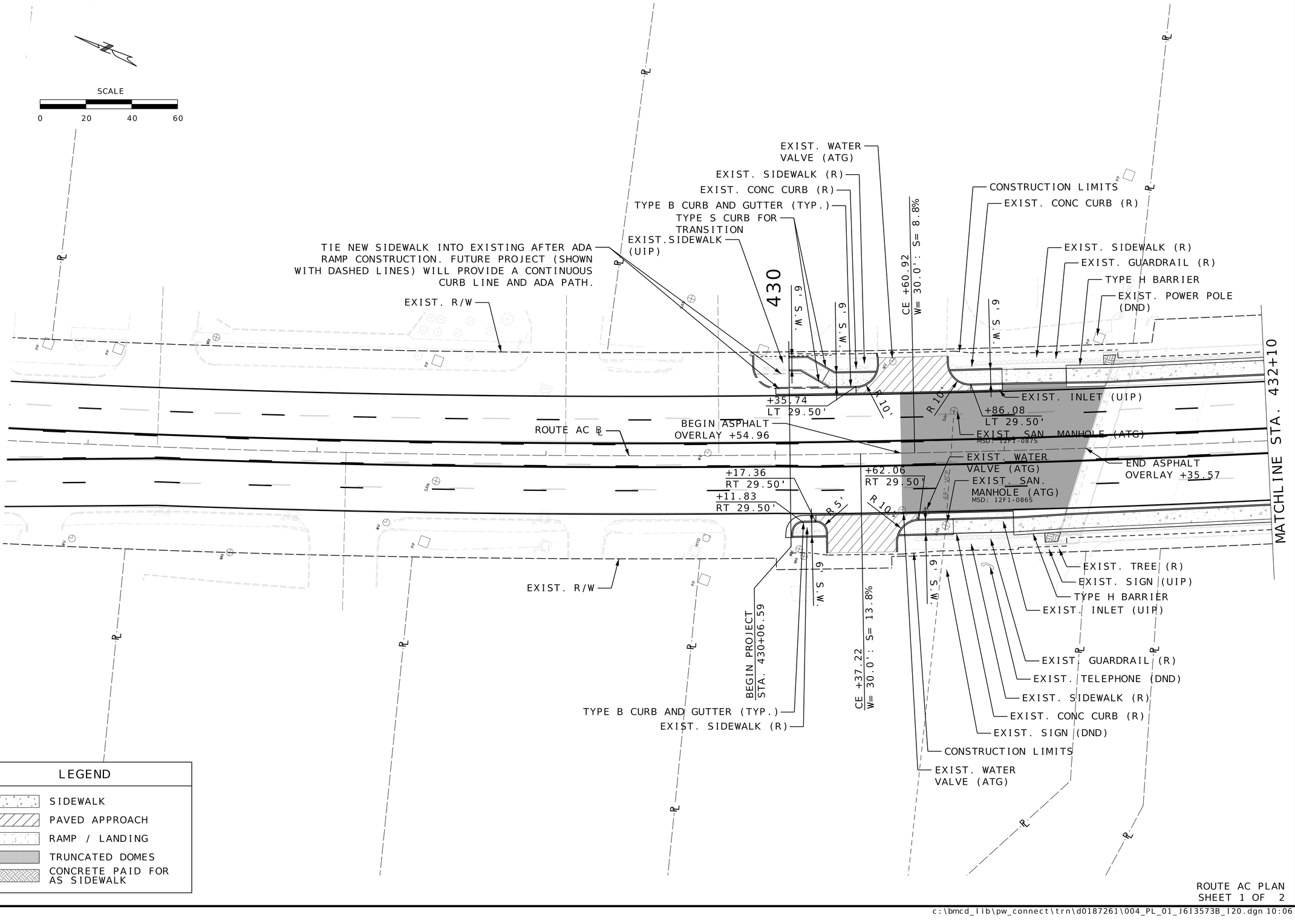
COUNTY: ST. LOUIS
JOB NO.: J6I3573B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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

O:\2022R3\MoDOT_ORD_v10.12.02.04\24069 BMcD MoDOT J6I3573 Route AC over Maline Creek\DGN\Roadway\Final\Plotsheets\003_QU_04_J6I3573B_i1_D-2bs_07-2024.dgn 3:35:29 PM 12/13/2024



ROUTE AC PLAN
SHEET 1 OF 2

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/9/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	4

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

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

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

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SCALE

0 20 40 60

EXIST. SIDEWALK (R)
EXIST. GUARDRAIL (R)
TYPE H BARRIER
EXIST. SIGN (UIP)
EXIST. PULL BOX AND RISER (DND)
EXIST. POWER POLE (DND)
EXIST. SANITARY MANHOLE (ATG) 12F1-101S
EXIST. ADA RAMP (R)
EXIST. SANITARY MANHOLE (ATG) 12F1-102S
DRAINAGE FLUME (MODOT MAINTAINED) 433+79
EXIST. R/W
EXIST. CONC. CURB (R)
TYPE B CURB AND GUTTER (TYP.)
CONSTRUCTION LIMITS
EXIST. POWER POLE (DND)
EXIST. SIGN RELOCATE TO NEW POST 435+33 36.5' LT
435
END PROJECT STA. 436+40.90
STA. 432+10
MATCHLINE STA 435+77.66 R3
EXIST. INLET (UIP)
ROUTE AC ℄
END ASPHALT OVERLAY +67.38
EXIST. WATER VALVE (ATG)
BEGIN ASPHALT OVERLAY +85.30
+64.63 RT 29.50'
+21.24 RT 29.50'
+36.17 RT 29.50'
+11.65 RT 49.50'
+74.56 RT 47.58'
6' S.W.
R 10'
12" VCP
8" VCP
EQUATION: STA 435+73.29 BK = PT STA 435+77.65
EXIST. R/W
EXIST. POWER POLE (DND)
TYPE H BARRIER
EXIST. R/W
EXIST. GUARDRAIL (R)
EXIST. SIDEWALK (R)
EXIST. CONC. CURB (R)
EXIST. FENCE (DND)
CONSTRUCTION LIMITS
EXIST. TELEPHONE POLE (DND)
SUN VALLEY DR
EXIST. CONC. CURB (R)
EXIST. SIDEWALK (R)
CONSTRUCTION LIMITS
EXIST. SIGN (UIP)
EXIST. SIGN (UIP)
EXIST. CONC. CURB (UIP)
DORWOOD DR
EXIST. R/W

LEGEND

- SIDEWALK
- PAVED APPROACH
- RAMP / LANDING
- TRUNCATED DOMES
- CONCRETE PAID FOR AS SIDEWALK

ROUTE AC PLAN
SHEET 2 OF 2

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/9/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	5

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority No.: 000165
BMcD Project No. 171809

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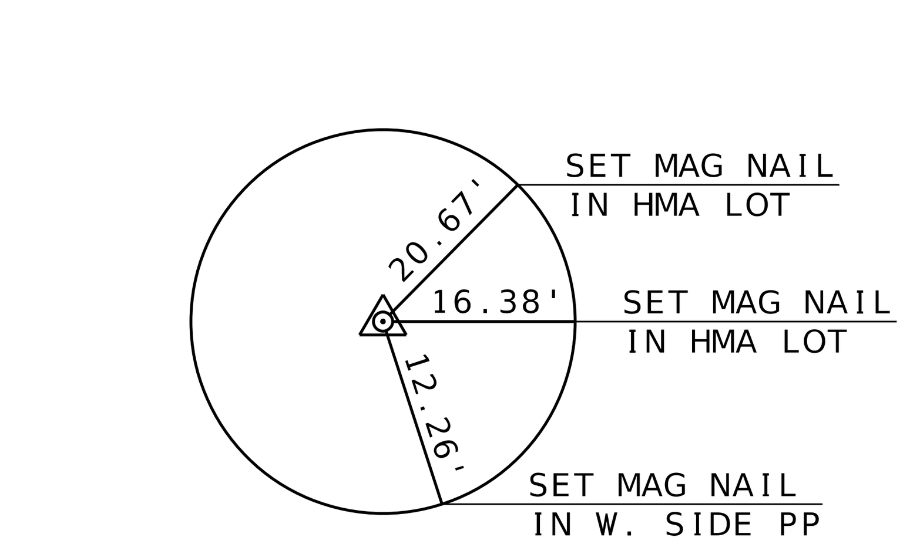
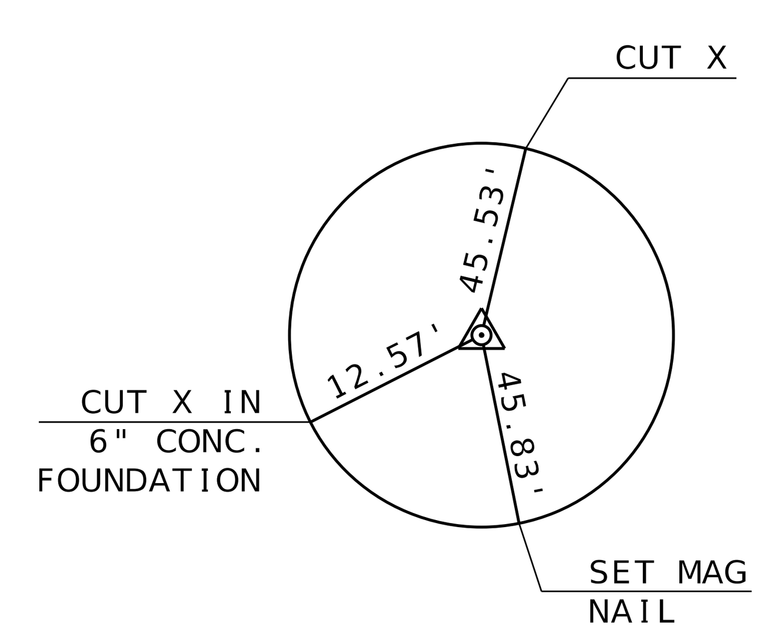


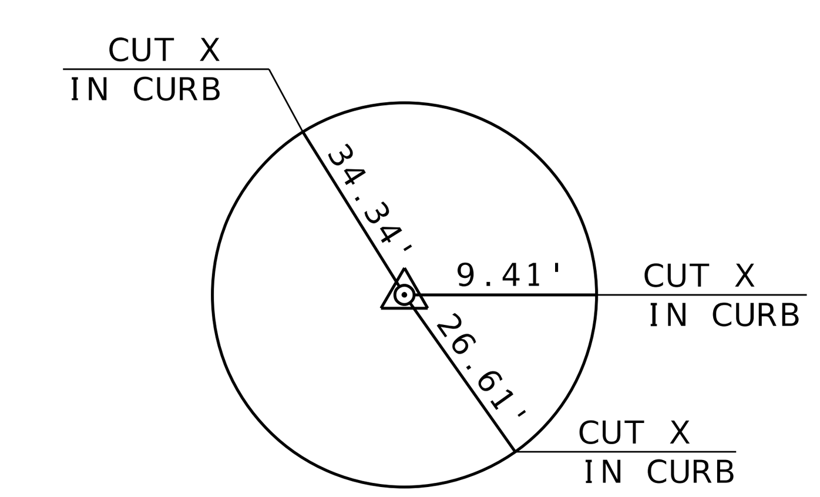
CP #PE100 - SET 5/8" REBAR W/CAP

N=1058612.756
E=891250.472
EL.=452.139



CP #PE101 - SET 5/8" REBAR W/CAP

N=1059145.533
E=890972.107
EL.=455.110



CP #PE102 - SET 5/8" REBAR W/CAP

N=1058149.534
E=891366.688
EL.=450.920

BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH MISSOURI STATE PLANE COORDINATE SYSTEM 1983 EASTERN ZONE. FROM MISSOURI GEOGRAPHIC REFERENCE SYSTEM MODOT BELLEFONT CORS ARP MOBF, N 325,298.422M, E 272023.953M, GRID FACTOR 0.99991849, DATE OF ADJUSTMENT 2011.

THE ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988. FROM MISSOURI GEOGRAPHIC REFERENCE SYSTEM MODOT BELLEFONT CORS ARP MOBF, ELEVATION 538.18 FEET, DATE OF ADJUSTMENT 2011.

ROUTE AC REFERENCE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED	
12/20/2024	
ROUTE: AC	STATE: MO
DISTRICT: SL	SHEET NO.: 6
COUNTY: ST. LOUIS	
JOB NO.: J6I3573B	
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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

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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	MO STATE PLANE 1983, EASTERN
HORIZONTAL DATUM	NAD 1983
VERTICAL DATUM	NAVD 1983
GEOID MODEL	18 US
ELEVATIONS DETERMINED BY	GPS
PROJECT PROJECTION FACTOR	1.0000878

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	BELLEFONT CORS ARP
CONTROL STATION	GPS
DESIGNATION	GPS
CORS_ID	MOBF
PID	DN6075
LATITUDE	38°45'51.51915"
LONGITUDE	90°14'47.69221"
NORTHING (M)	325,298.422
EASTING (M)	272,023.953
ZONE	EASTERN
PROJECT AVERAGE GRID FACTOR	0.9999122

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 #PE100
N 1058612.756 X 0.9999122 = N 1058519.8098
E 891250.472 X 0.9999122 = E 891172.2202

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

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								
PE100	431+32.01	HALLS FERRY	42.24'LT	1058612.756	891250.472	452.139	5/8" REBAR W/CAP	
PE101	425+37.64	HALLS FERRY	47.57'RT	1059145.533	890972.107	455.110	5/8" REBAR W/CAP	
PE102	436+06.66	HALLS FERRY	42.70'RT	1058149.534	891366.688	450.920	5/8" REBAR W/CAP	
ALIGNMENTS								
ALIGN1	397+70.81	HALLS FERRY	℄	1061849.718	890375.113		P.I.	
ALIGN1	422+63.94	HALLS FERRY	℄	1059423.427	890948.536		P.C.	
ALIGN1	429+18.61	HALLS FERRY	℄	1058783.516	891099.771		P.I.	
ALIGN1	435+73.29	HALLS FERRY	℄	1058194.503	891392.039		EQNBK	
ALIGN1	435+73.29	HALLS FERRY	℄	1058194.503	891392.039		EQNAHD	
ALIGN1	439+42.95	HALLS FERRY	℄	1057867.272	891554.411		P.C.	

ROUTE AC CONTROL POINTS
SHEET 1 OF 1

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	7

COUNTY: ST. LOUIS
JOB NO.: J6I3573B
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)

Burns & McDonnell Engineering Co., Inc.
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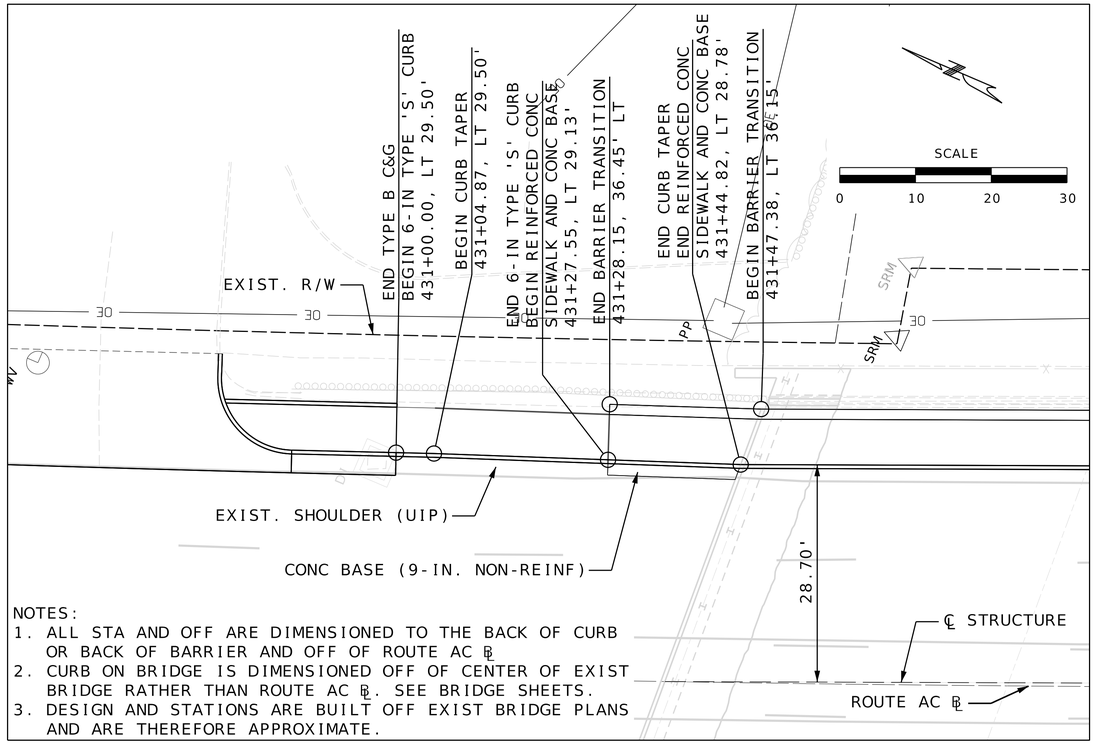

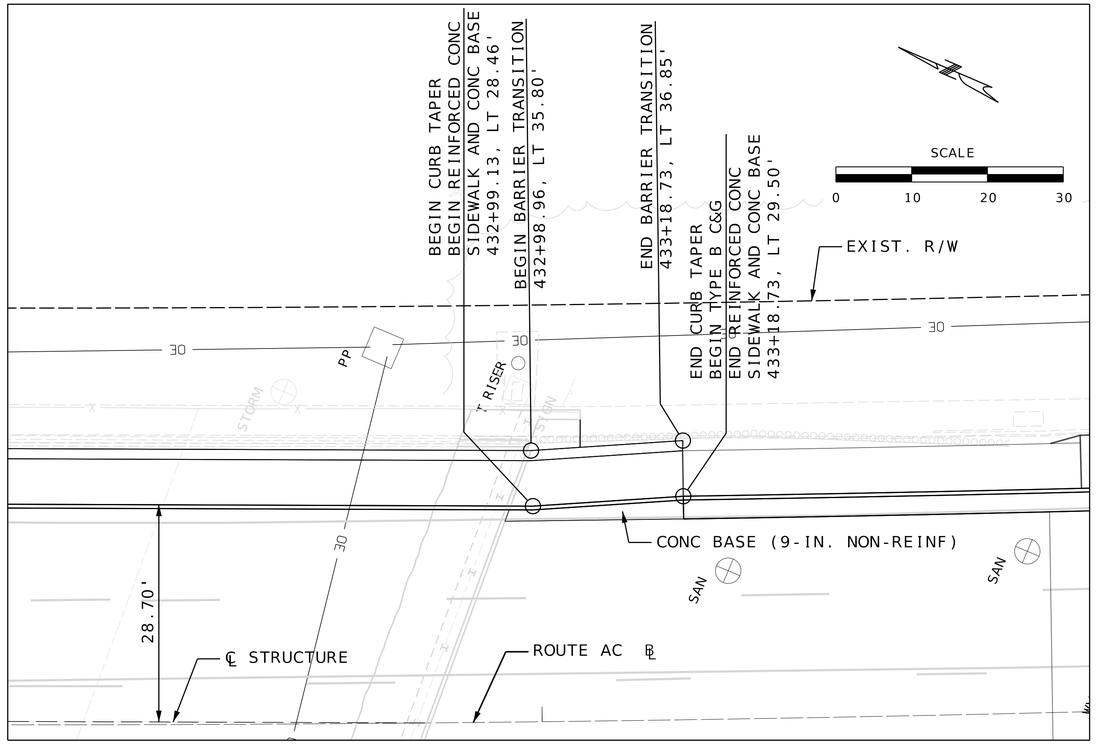

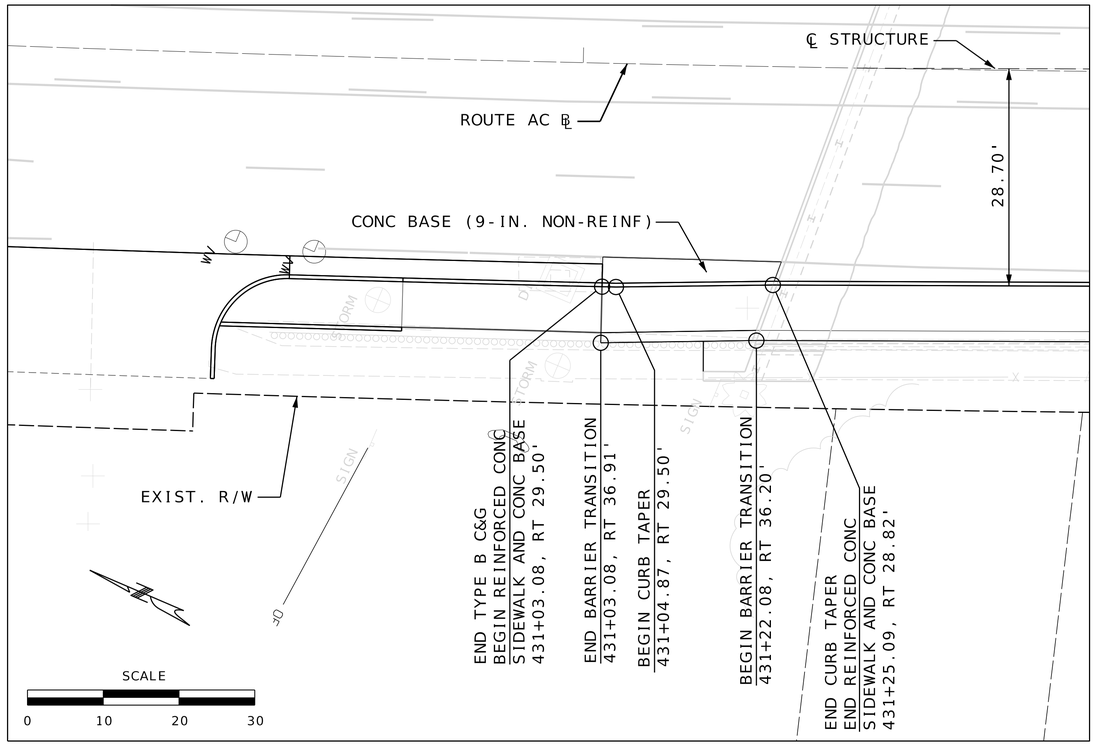

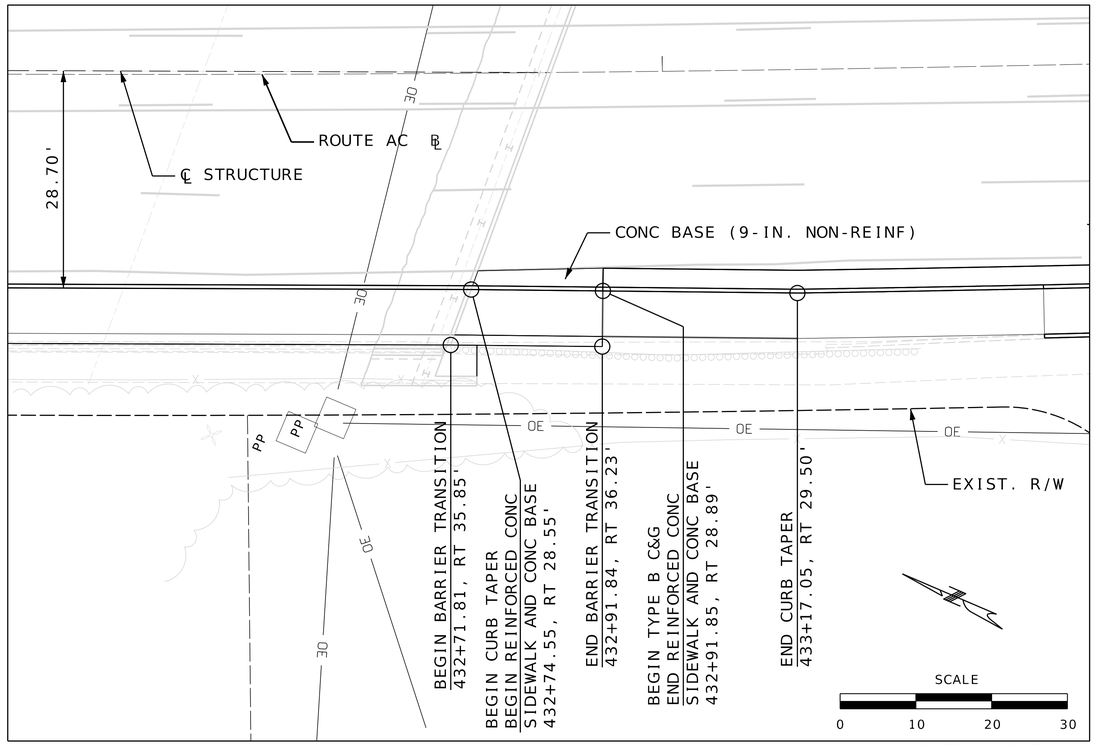

ROUTE AC SPECIAL
SHEET 1 OF 7

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	8

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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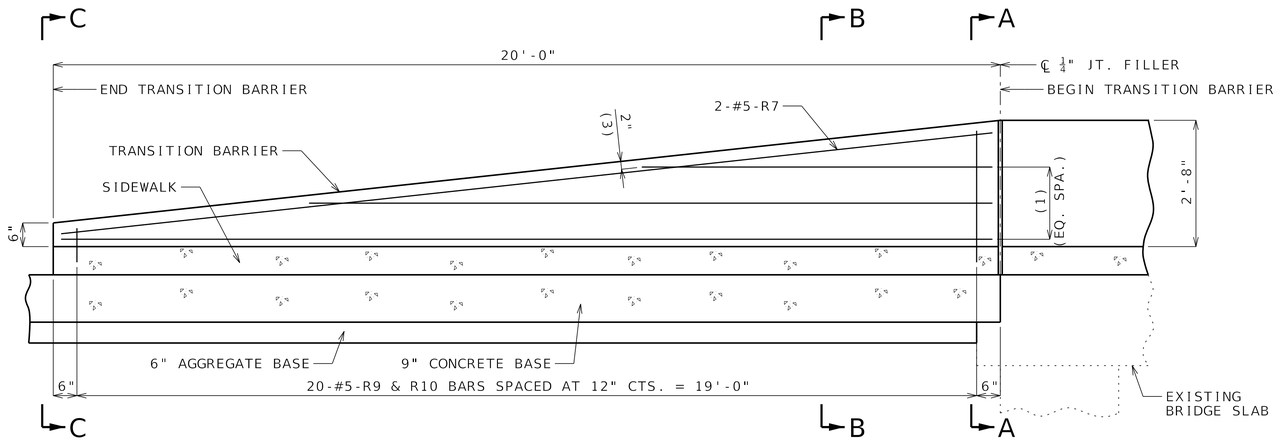
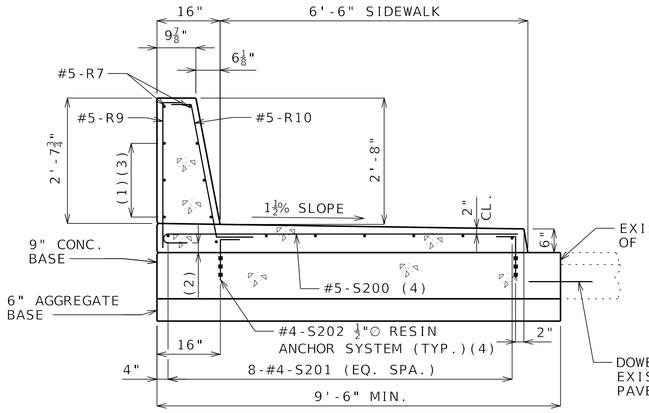
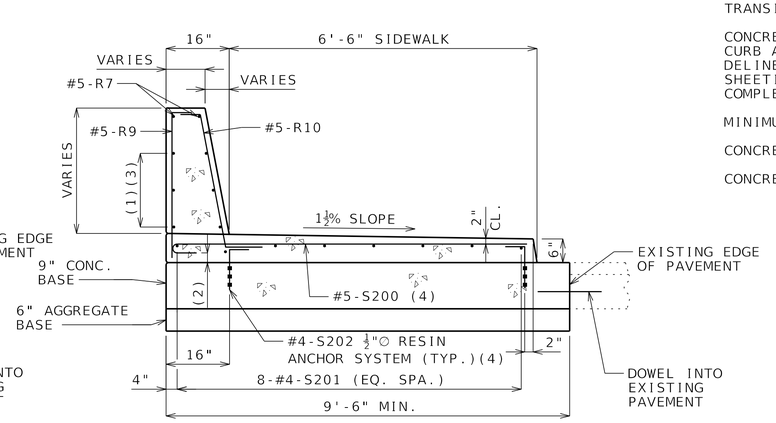


PART SECTION NEAR LEFT TRANSITION BARRIER

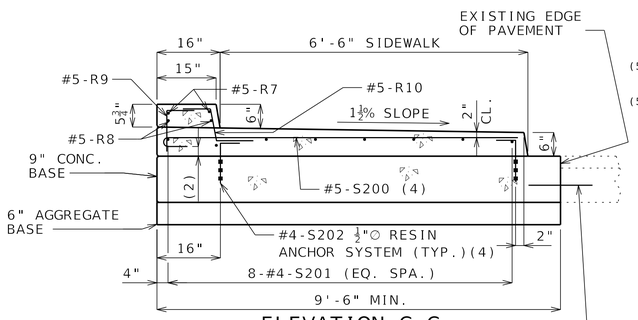
(LEFT CURB SHOWN, RIGHT CURB SIMILAR)
(BARRIER AT END BENT 1 SHOWN, END BENT 4 SIMILAR)
(SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION A-A



SECTION B-B



ELEVATION C-C

NOTES:

DIMENSIONS SHOWN ARE HORIZONTAL AND MEASURED ALONG THE INSIDE FACE OF TRANSITION BARRIER.

ALL EXPOSED EDGES OF TRANSITION BARRIER AND SIDEWALK SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

PAYMENT FOR ALL CONCRETE AND REINFORCEMENT FOR SIDEWALK, COMPLETE IN PLACE, WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR SIDEWALK (BRIDGES), PER SQUARE FOOT.

MEASUREMENT OF THE SIDEWALK IS TO THE NEAREST SQUARE FOOT FOR EACH LOCATION, MEASURED HORIZONTALLY FROM THE OUTSIDE FACE OF BARRIER TO THE INSIDE EDGE OF SIDEWALK AND FROM BEGINNING OF TRANSITION BARRIER TO END OF TRANSITION BARRIER.

THE CONTRACTOR SHALL USE ONE OF THE THE QUALIFIED RESIN ANCHOR SYSTEMS IN ACCORDANCE WITH SEC 1039.

THE MINIMUM EMBEDMENT DEPTH IN CONCRETE WITH F'C = 4,000 PSI FOR THE RESIN ANCHOR SYSTEMS SHALL BE THAT REQUIRED TO MEET THE MINIMUM ULTIMATE PULLOUT STRENGTH IN ACCORDANCE WITH SEC 1039 BUT SHALL NOT BE LESS THAN 5".

EPOXY COATED #4-S202 GRADE 60 REINFORCING BAR SHALL BE SUBSTITUTED FOR THE 1/2"∅ THREADED RODS.

COST OF FURNISHING AND INSTALLING THE RESIN ANCHOR SYSTEMS, COMPLETE IN PLACE, WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR SIDEWALK (BRIDGES).

PAYMENT FOR ALL CONCRETE AND REINFORCEMENT FOR TRANSITION BARRIER, COMPLETE IN PLACE, WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR TYPE H BARRIER.

MEASUREMENT OF TYPE H BARRIER IS TO THE NEAREST LINEAR FOOT FOR EACH LOCATION, MEASURED HORIZONTALLY ALONG THE OUSIDE FACE OF BARRIER FROM BEGINNING OF TRANSITION BARRIER TO END OF TRANSITION BARRIER.

TRANSITION BARRIER SHALL BE CAST-IN-PLACE ONLY.

CONCRETE TRAFFIC BARRIER DELINEATORS SHALL BE PLACED ON TOP OF THE TRANSITION CURB AS SHOWN ON MISSOURI STANDARD PLANS 617.10 AND IN ACCORDANCE WITH SEC 617. DELINEATORS ON BRIDGES WITH TWO-LANE, TWO-WAY TRAFFIC SHALL HAVE RETROREFLECTIVE SHEETING ON BOTH SIDES. CONCRETE TRAFFIC BARRIER DELINEATORS WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR TYPE H BARRIER.

MINIMUM CLEARANCE FOR REINFORCING STEEL IS 1 1/2" UNLESS NOTED OTHERWISE.

CONCRETE IN BARRIER SHALL BE CLASS B-1.

CONCRETE IN SIDEWALK SHALL BE CLASS B-2.

(1) 3-#5-R8 (EACH FACE)
(2) TILT TRANSVERSE SIDEWALK REINFORCEMENT HOOKS FROM VERTICAL ALIGNMENT TO MAINTAIN 1½" MINIMUM CLEARANCE.
(3) TRIM #5-R8 BARS 2 INCHES FROM TOP OF TRANSITION BARRIER AS NEEDED.
(4) SPACED WITH #5-R BARS

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		SIDEWALK (ON SHOULDER)													
(5) 82	4 S200	SIDEWALK (ON SHOULDER)	E	17		7 7.000							8 1	8 1	443
32	4 S201	SIDEWALK (ON SHOULDER)	E	20		19 9.000							19 9	19 9	422
(5) 162	4 S202	SIDEWALK (ON SHOULDER)	E	19	S	9.000	6.000						1 3	1 2	126
		TRANSITION BARRIER													
8	5 R7	TRANSITION BARRIER	E	20		19 10.000							19 10	19 10	165
24	5 R8	TRANSITION BARRIER	E	20		19 9.000							19 9	19 9	494
80	5 R9	TRANSITION BARRIER	E	19	S 4	2 10.000	6.500						3 5	3 3	
		INC. = 1.250"				10.250	6.500						1 5	1 4	191
80	5 R10	TRANSITION BARRIER	E	23	S 4	6.500	2 10.625	12.000	11.750	2.125	6.375	1.125	4 5	4 3	
		INC. = 1.375"				6.500	10.500	12.000	11.750	2.125	6.375	1.125	2 5	2 3	271

(5) TWO ADDITIONAL #4-S200 AND #4-S202 BARS INCLUDED IN TOTAL TO ACCOMODATE SKEWED SIDEWALK AT END OF BRIDGE.

Reinforcing Steel Totals (Pounds)

	Size	Sidewalk	Barrier	Total Plain	Total Epoxy
By Size	W5	0	0	0	0
	4	991	0	0	991
	5	0	1,121	0	1,121
	6	0	0	0	0
	7	0	0	0	0
	8	0	0	0	0
	9	0	0	0	0
	10	0	0	0	0
	11	0	0	0	0
	14	0	0	0	0
	18	0	0	0	0
By Type		991	1,121	0	2,112

ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE SPECIFIED.

ROUTE AC SPECIAL
SHEET 2 OF 7

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 12/20/2024
ROUTE AC | STATE MO
DISTRICT SL | SHEET NO. 9
COUNTY ST. LOUIS
JOB NO. J6I3573B
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)

Burns & McDonnell Engineering Co., Inc.
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Certificate of Authority
No.: 000165
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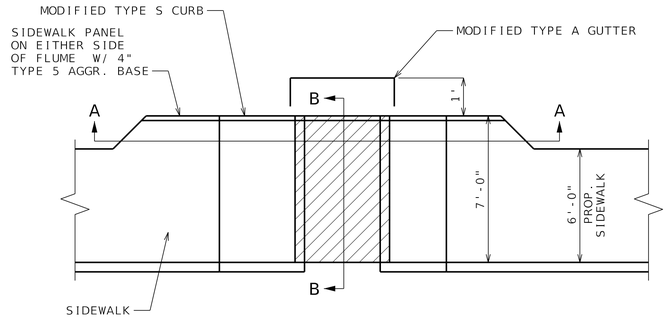
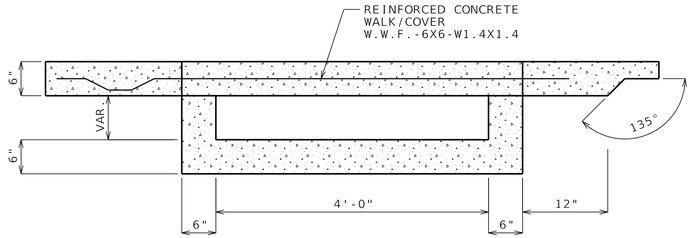
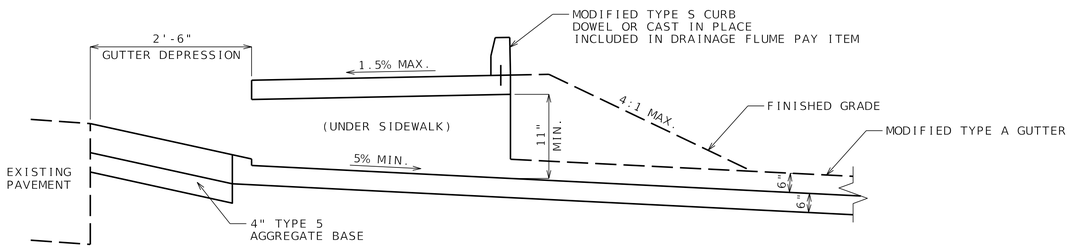


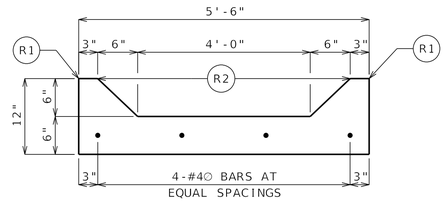
PLAN
(SIDEWALK AT BACK OF CURB)



SECTION A-A



SECTION B-B



MODIFIED TYPE A GUTTER

LEGEND

(R1) ROUND TO $\frac{1}{4}$" RADIUS.
(R2) ROUND TO $\frac{3}{4}$" RADIUS.

DISCLAIMER

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6.5 FT X 4 FT DRAINAGE FLUME DEATILS

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	10

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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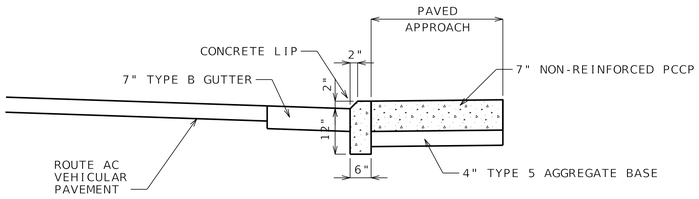

LOW VOLUME ENTRANCE SPECIAL MOUNTABLE CONCRETE CURB

NOTE:
SPECIAL MOUNTABLE CURB SHALL BE BUILT WITH THE PAVED APPROACHES AT NO DIRECT PAY. NOT FOR USE AT SIDE ROADS. SEE QUANTITY TABLE FOR LOCATIONS.

STATE OF MISSOURI
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ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	11

COUNTY
ST. LOUIS

JOB NO.
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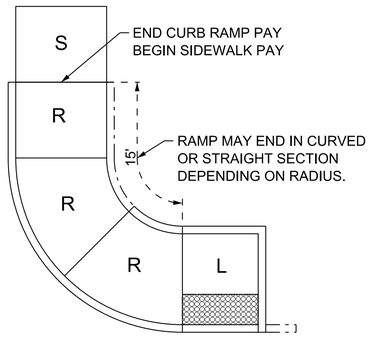
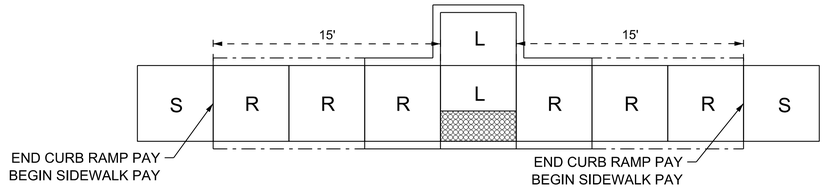
PEDESTRIAN CURB RAMP PAY LIMITS

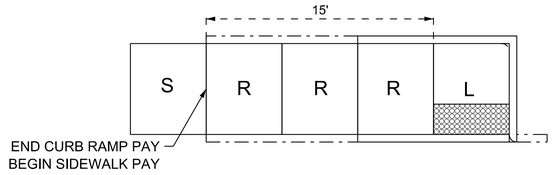


TYPE 1 PARALLEL

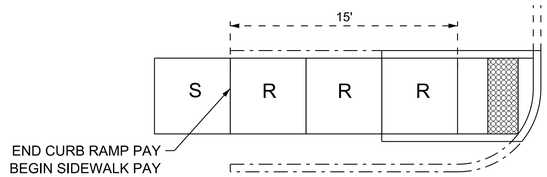
THE LENTH OF THIS RAMP SHALL BE MEASURED ON THE INSIDE/SHORT SIDE OF THE CURVE



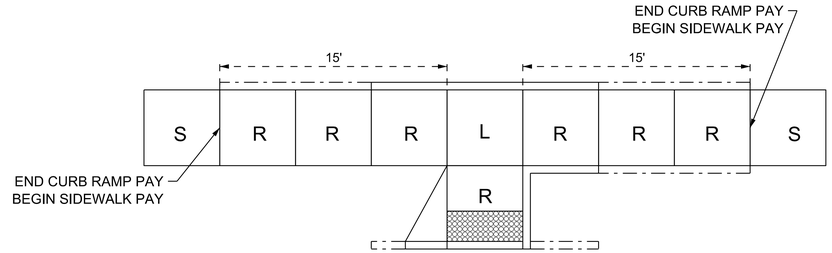
TYPE 2 PARALLEL



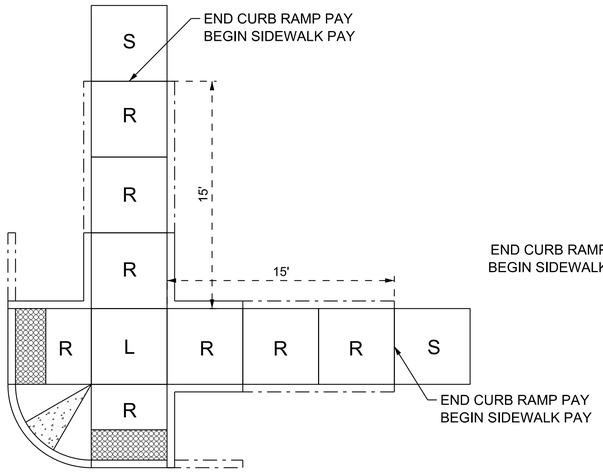
TYPE 3 PARALLEL



SMALL RADIUS PERPENDICULAR

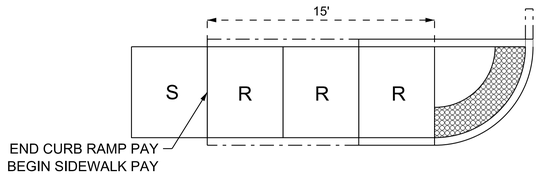


COMPOUND PERPENDICULAR

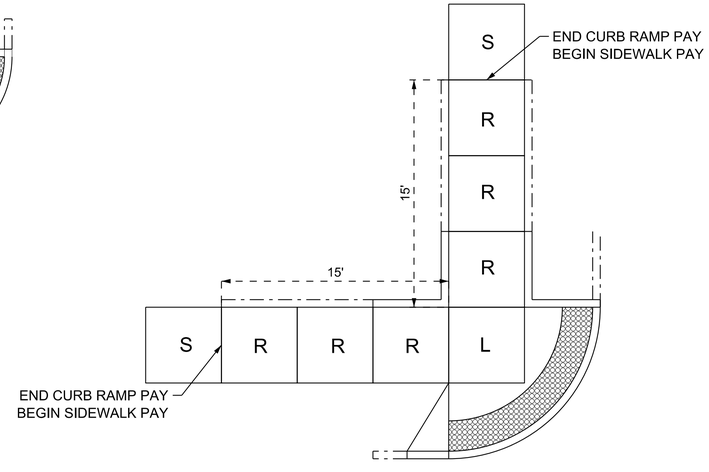


DUAL PERPENDICULAR

PAY AS 2 EACH



LARGE RADIUS PERPENDICULAR



BLENDED TRANSITION

PAY AS 2 EACH

Notes -

15 FEET OF WALKWAY SHALL BE INCLUDED IN CURB RAMP PAY, PER EACH, AS SHOWN.

L - LANDING OR CLEAR AREA FOR TURNING MOVEMENTS AND RESTS.
R - PAY AS RAMP
S - PAY AS SIDEWALK.

SEE JSP FOR OTHER INCIDENTALS INCLUDED IN CURB RAMP PAY.
SEE STANDARD PLANS 608 SERIES FOR DIMENTIONS, GRADES, AND OTHER REQUIREMENTS.
CONTRACTOR WILL HAVE OPTION TO CONSTRUCT RAMP WITH FLARE OR CURB FOR CERTAIN RAMPS ABOVE.

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SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

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DISTRICT SL | SHEET NO. 12
COUNTY ST. LOUIS
JOB NO. J6I3573B
CONTRACT ID.
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BRIDGE NO.

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

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

SUN VALLEY DRIVE
STA. 433+95.00, RT
RADIUS = 10'
WIDTH = 40'

℄ RTE AC

-1.00%

MATCH EXIST. 0+38.36
EL 450.89

EOP 0+26.50
EL 451.15

COMMERCIAL ENTRANCE
STA. 430+60.92, LT
RADIUS = 10'
WIDTH = 30.0'

℄ RTE AC

-8.77%

+0.20%

VPI -0+34.50
EL 452.61

BOC -0+29.50
EL 452.60

EOP -0+26.50
EL 452.60

MATCH EXIST. -0+41.91
EL 451.96

COMMERCIAL ENTRANCE
STA. 430+37.22, RT
RADIUS = 5' RT, 10' LT
WIDTH = 30.0'

℄ RTE AC

BOC 0+29.50
EL 452.76

VPI 0+34.50
EL 452.77

+0.20%

-13.79%

EOP 0+26.50
EL 452.76

MATCH EXIST. 0+41.96
EL 451.74

454
452
450
448
456
454
452
450
448
456
454
452
450
448

-0+70 -0+60 -0+50 -0+40 -0+30 -0+20 -0+10 0+00 0+10 0+20 0+30 0+40 0+50 0+60 0+70

ROUTE AC SPECIAL
SHEET 6 OF 7

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	13

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
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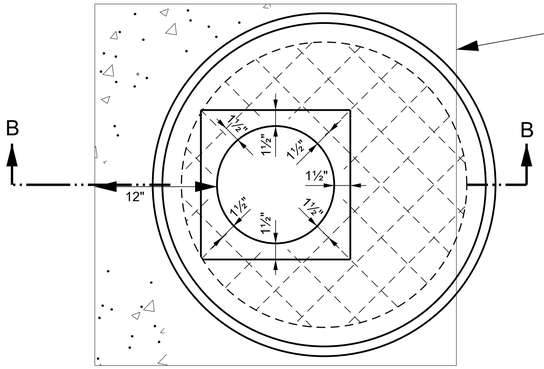
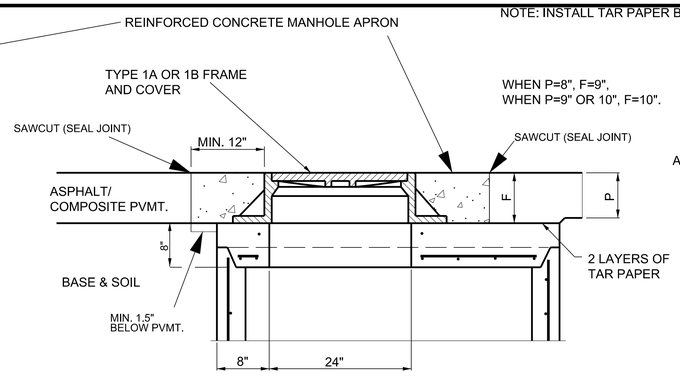
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

c:\bmcd_lib\pw_connect\trn\d0187261\013_SS_J6I3573B_I10_06.dgn 4:00:50 PM 12/20/2024

NOTE: INSTALL TAR PAPER BETWEEN FRAME & COVER AND THE NEW CONCRETE MANHOLE APRON AS DIRECTED BY THE ENGINEER.

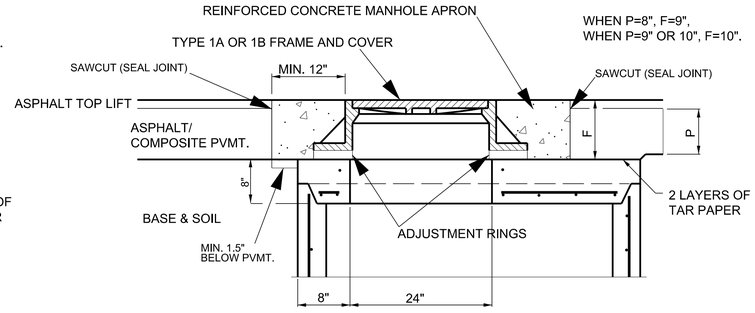


PLAN OF FLAT SLAB MANHOLE TOP



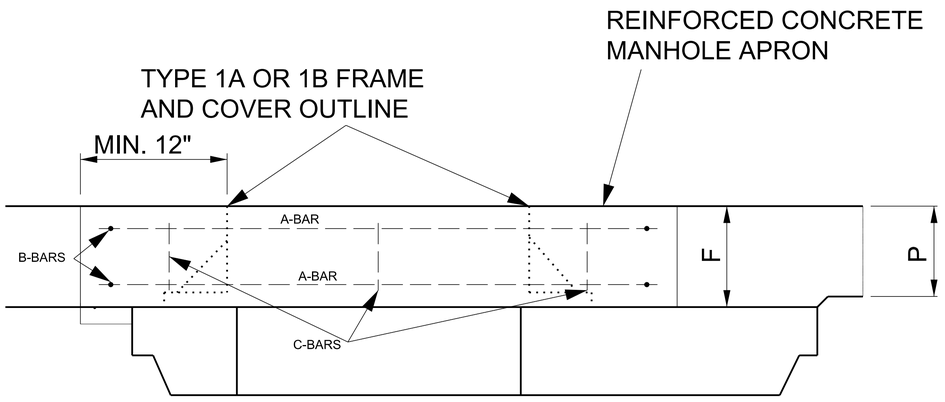
FLAT SLAB MANHOLE TOP (PAVED AREA)

SECTION B-B



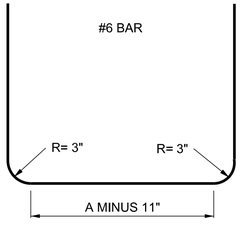
FLAT SLAB MANHOLE TOP (PAVED AREA) W/ ADJUSTMENT RINGS NEXT TO ASPHALT OVERLAY

SECTION B-B



SECTION B-B

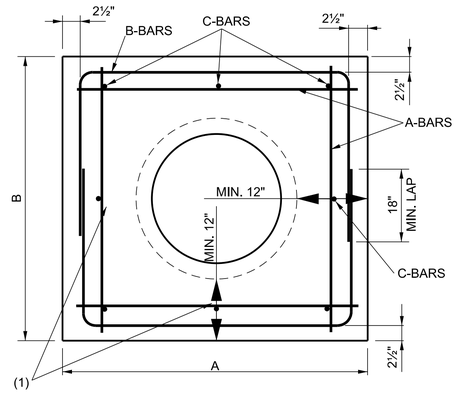
APRON REINFORCEMENT DETAIL



FOR MANHOLE APRON

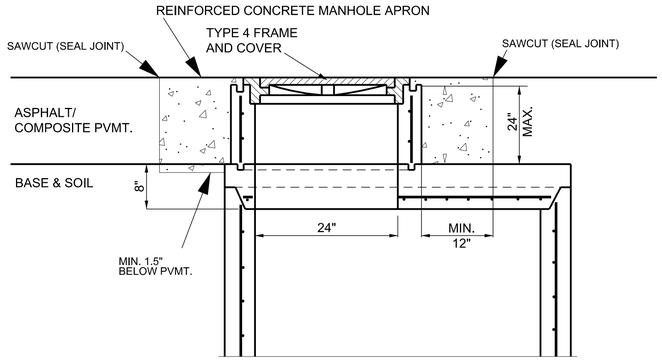
BENDING DIAGRAM FOR B-BARS

(1) PROVIDE MIN. 4.75" CLEARANCE BETWEEN REINFORCING & MANHOLE FRAME & COVER OR CIRCULAR PRECAST MANHOLE.



TOP VIEW OF MANHOLE APRON WITH REINFORCEMENT

NOTE: INSTALL 'C' BARS VERTICALLY INTO MANHOLE APRON CONCRETE. PROVIDE MIN. 1.5" CLEARANCE FROM TOP OF PAVEMENT & BOTTOM OF APRON. LENGTH OF 'C' BARS FOR 'F' DIMENSION SHALL BE 6". BAR LENGTH MAY VARY. 'C' BARS SHALL BE TIED TO 'A' REINFORCEMENT. 'B' BARS SHALL BE TIED TO 'A' REINFORCEMENT. 'A' BAR REINFORCEMENT SHALL HAVE 1.5" CLEARANCE TO EDGE OF APRON.



ALTERNATE MANHOLE TOP

GENERAL NOTES:

1. IF MANHOLE STRUCTURE DOES NOT HAVE FRAME & COVER BUT INSTEAD THE ENTIRE STRUCTURE REACHES THE TOP OF ROADWAY, THEN THIS SHEET SHALL NOT BE USED.

2. THIS SHEET SHALL TYPICALLY BE USED WHERE THE MANHOLE FRAME & COVER NEED TO BE RAISED TO GRADE, BUT CAN BE USED FOR NEW STRUCTURES AS WELL, PARTICULARLY FOR STRUCTURES INSTALLED WITHIN ASPHALT PAVEMENT.

3. THE CONTRACTOR SHALL USE 2 LAYERS OF 'A' & 'B' BAR REINFORCEMENT AS LONG AS 'F' THICKNESS NOTED ABOVE IS GREATER THAN OR EQUAL TO 9".

4. PAYMENT FOR REINFORCED CONCRETE MANHOLE APRON SHALL BE MADE PER EACH AND SHALL INCLUDE ALL NECESSARY REINFORCEMENT AND SAW CUTS OF EXISTING OR PROPOSED PAVEMENT.

5. MIN. DIMENSIONS OF 'A' AND 'B' IS THE FOLLOWING: 12" WALL + MANHOLE (INCLUDING WALL THICKNESS) + 12".

6. CONTRACTOR SHALL PROVIDE EITHER A SQUARE OR RECTANGLE SHAPED FULL DEPTH SAWCUT AROUND THE CONCRETE MANHOLE APRON AFTER CONSTRUCTION. THE MIN. WIDTH SHALL BE 12" BUT MAY VARY. THE CONTRACTOR SHALL NOT DO A CIRCULAR SAWCUT AROUND THE REINFORCED CONCRETE MANHOLE APRON.

7. CONCRETE USED FOR MANHOLE APRON SHALL BE THE SAME AS THAT USED FOR FULL DEPTH PAVEMENT REPAIRS. PLEASE SEE SECTION 613.10 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS. CONTRACTOR MAY BE ALLOWED TO USE HIGH EARLY STRENGTH CONCRETE, WITH APPROVAL FROM THE ENGINEER.

8. THE CONTRACTOR SHALL RAISE THE MANHOLE FRAME & COVER USING CONCRETE RINGS AND APPROVED MECHANICAL ADJUSTMENT DEVICES TO FINISH GRADE MATCHING PROFILE AND CROSS SLOPE.

9. REINFORCING BARS IN PAVEMENT SHALL BE EPOXY COATED AND SECURELY TIED TOGETHER AND FASTENED TO AVOID ANY POSSIBLE DISPLACEMENT DURING THE PLACING OF CONCRETE.

10. NO DIRECT PAYMENT WILL BE MADE FOR PROVIDING, CUTTING OR BENDING REINFORCING STEEL.

11. THE CONTRACTOR SHALL SEAL JOINTS FORMED BETWEEN THE INTERFACE OF THE NEW APRON AND THE ASPHALT PAVEMENT ALONG WITH JOINTS CREATED BY THE OVERCUT OF SAWING FOR THE REMOVAL OF PAVEMENT. SEE THE JSP FOR ADDITIONAL INFORMATION.

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	14

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

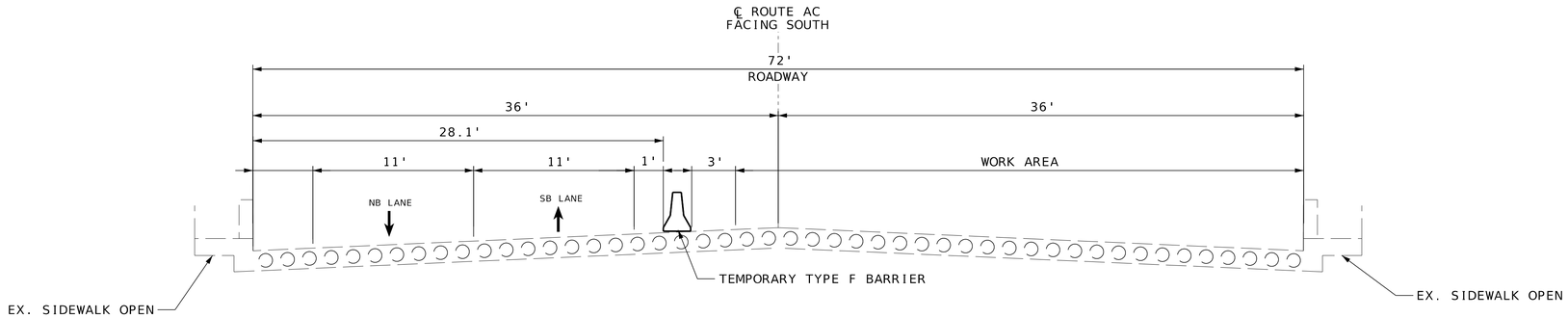
DESCRIPTION	DATE

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

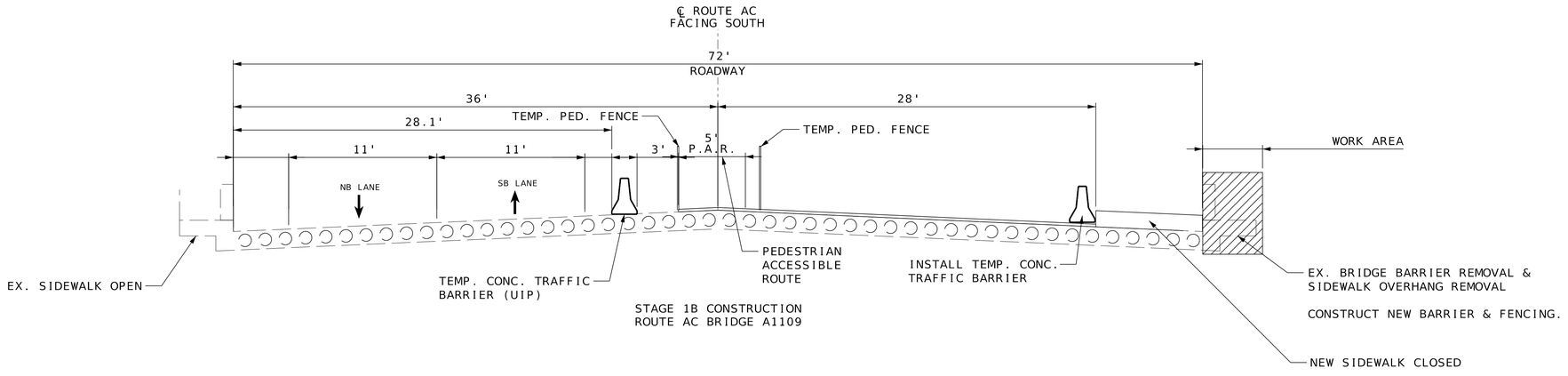
Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165

BMcD Project No. 171809

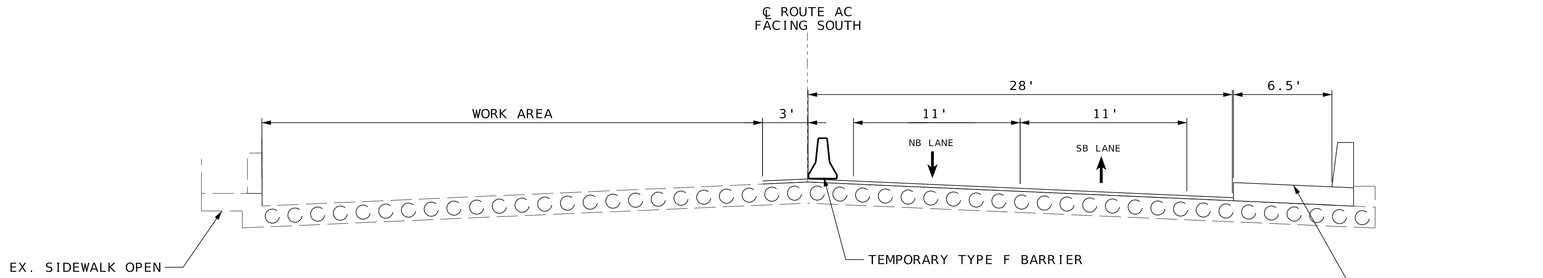
ROUTE AC SPECIAL
SHEET 7 OF 7



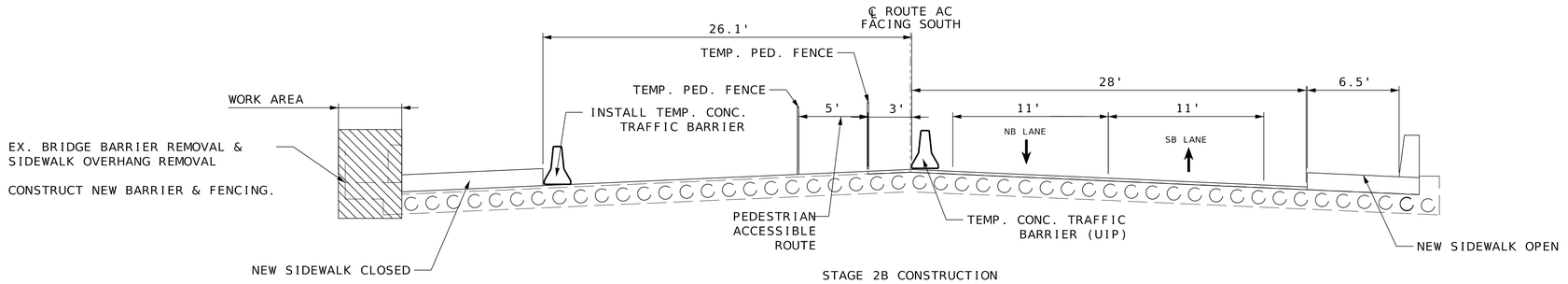
STAGE 1 CONSTRUCTION
ROUTE AC BRIDGE A1109



STAGE 1B CONSTRUCTION
ROUTE AC BRIDGE A1109



STAGE 2 CONSTRUCTION
ROUTE AC BRIDGE A1109



STAGE 2B CONSTRUCTION
ROUTE AC BRIDGE A1109

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

12/13/2024 1:55:36 PM
Margaret Ann Bruns - Civil
MO PE:2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	15

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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 PLAN
STAGING TYPICALS
SHEET 1 OF 11

WO20-1

2R

R2-1

25

WO20-5

5

WO20-6a

6

GO20-5aP

54

R2-1

4

SPECIAL

70

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420

425

MATCHLINE THIS SHEET

25

BEGIN TEMP. S.W. PAINT AND REMOVAL OF CONFLICTING PAVEMENT MARKINGS

11' LANE

200'

54

4

245' MERGE TAPER
DIBS AT 35' SPACING

250' BUFFER SPACE
TRIMLINES AT 40' MAX SPACING

2 - SETS OF TEMP. LONG TERM RUMBLE STRIPS

2 - SETS OF TEMP. LONG TERM RUMBLE STRIPS

150'

150'

2R

70

5

70

6

200'

200'

200'

MATCHLINE THIS SHEET

LUCAS-HUNT RD.

2

TEMP. S.Y. PAINT

MATCHLINE STA 426+21

ROUTE AC

11' LANE

41

41

2 - TYPE III MOVEABLE BARRICADES

TEMP. S.W. PAINT

STOP

R1-1

41

WO20-1

2

SCALE

0 40 80 120

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

TRAFFIC CONTROL PLAN
STAGE 1
SHEET 2 OF 11

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

12/13/2024 1:56:47 PM
Margaret Ann Bruns - Civil
MO PE:2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	16

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

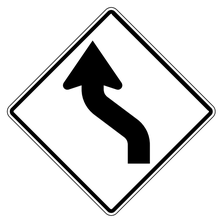
EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

WO5-5

34

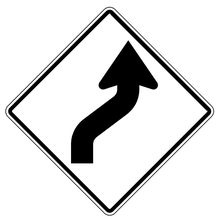
R1-1

41



WO1-4L

15L



WO1-4R

15R

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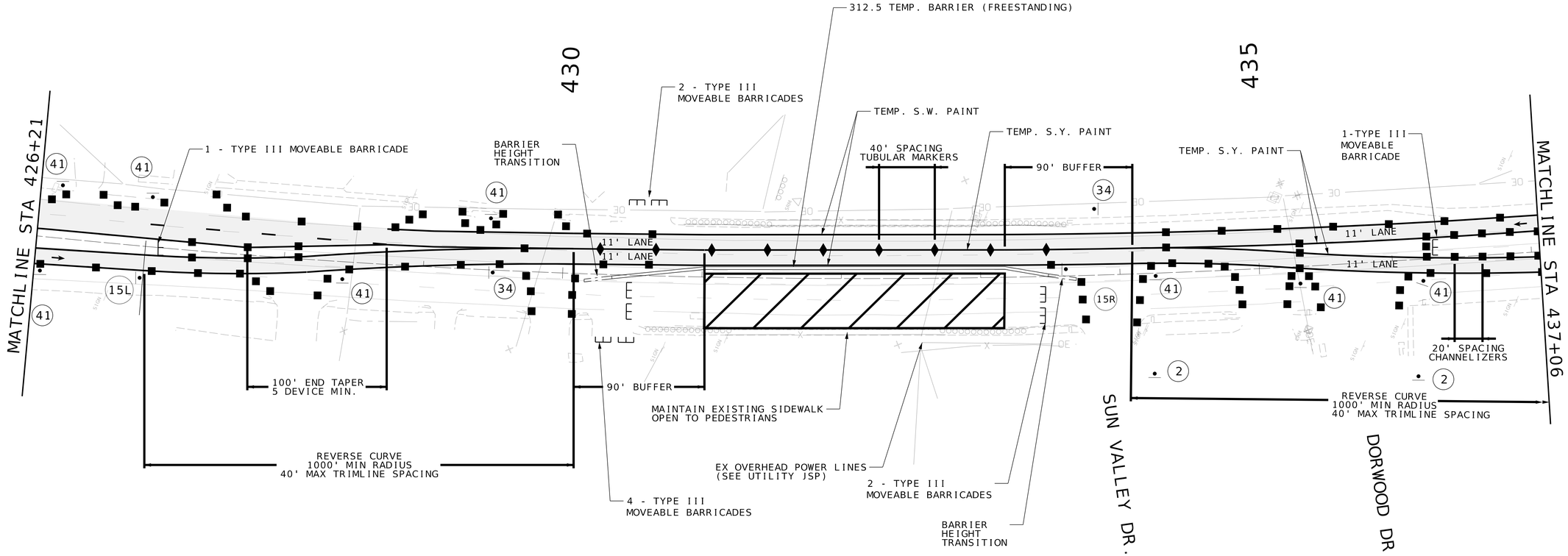


TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

SCALE

0 40 80 120

TRAFFIC CONTROL PLAN
STAGE 1
SHEET 3 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/13/2024 3:37:55 PM
Margaret Ann Bruns - Civil
MO PE:2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	17

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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

GO20-5aP

(54)

R2-1

(2)

WO20-6a

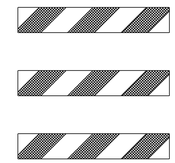
(6)

CENTER
OR
LEFT

WO20-5

(5)

CENTER LANE
OR
LEFT LANE



WO20-1

(2R)

BRIDGE
OR
RAMP

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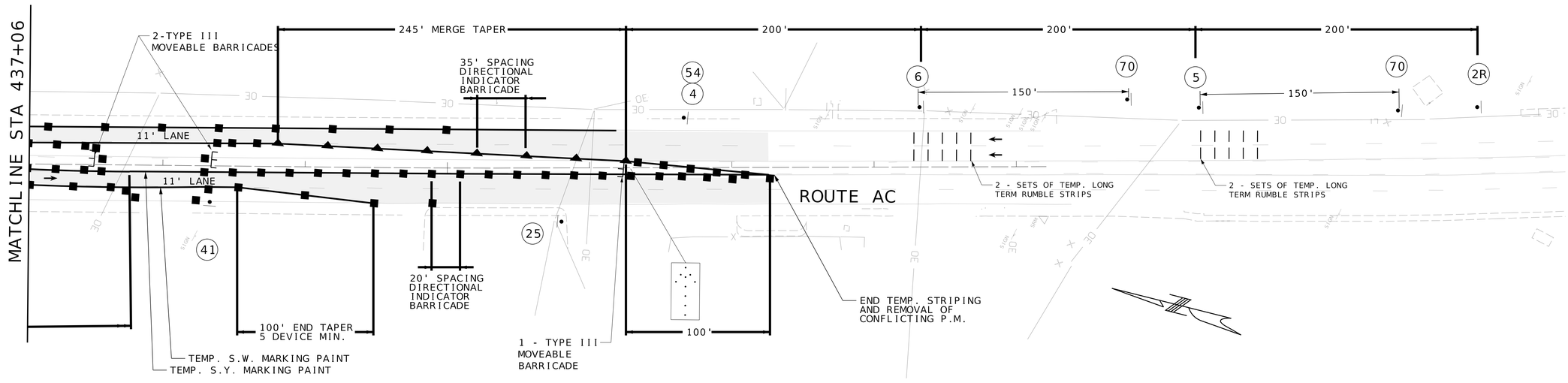
SPECIAL

(70)

440



R1-1

(41)

R2-1

(25)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

SCALE

0 40 80 120

TRAFFIC CONTROL PLAN
STAGE 1
SHEET 4 OF 11

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

12/13/2024 3:38:14 PM
Margaret Ann Bruns - Civil
MO PE:2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	18

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

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Civil Engineering Design
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Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

R9-9

66

MO4-9bL

60

MO4-9bR

61

STAGE 1B -
THIS STAGE CONSISTS OF
REMOVING THE EXISTING BRIDGE BARRIER
REMOVING EXISTING SIDEWALK OVERHANG
CONSTRUCTING NEW BRIDGE BARRIER

1) CONTRACTOR SHALL CLOSE BOTH THE NEW AND EXISTING SIDEWALK ON THE WEST SIDE OF BRIDGE DURING THIS STAGE.

2) THE CONTRACTOR SHALL INSTALL ADDITIONAL TEMP. CONCRETE TRAFFIC BARRIER IMMEDIATELY FOLLOWING EXISTING BRIDGE BARRIER REMOVAL.

3) THE CONTRACTOR SHALL BE REQUIRED TO DELINEATE A PEDESTRIAN ACCESSIBLE ROUTE (PAR) AROUND THE CONTRACTOR'S WORK AREA AS SHOWN ON THE PLANS. TEMPORARY CURB RAMPS, DETECTABLE WARNINGS, AND FENCING SHALL BE INSTALLED BY THE CONTRACTOR. NO DIRECT PAY WILL BE MADE FOR THESE ITEMS UNLESS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.

4) THE CONTRACTOR SHALL CONTROL WORK VEHICLES ACCESS TO AND FROM THE WORK SITE AND SPECIFICALLY WHERE WORK VEHICLES WILL CROSS THE PAR. AT A MINIMUM, THE CONTRACTOR WILL TEMPORARILY CLOSE THE PAR WITH FLAGGERS. BARRICADES, FENCING, AND SIGNING SHALL BE RESTORED BEFORE PAR IS REOPENED. DURATION OF TEMP. CLOSURE OF THE PAR SHALL BE TYPICALLY LIMITED TO LESS THAN 5 MINUTES OR AS DIRECTED BY THE ENGINEER.

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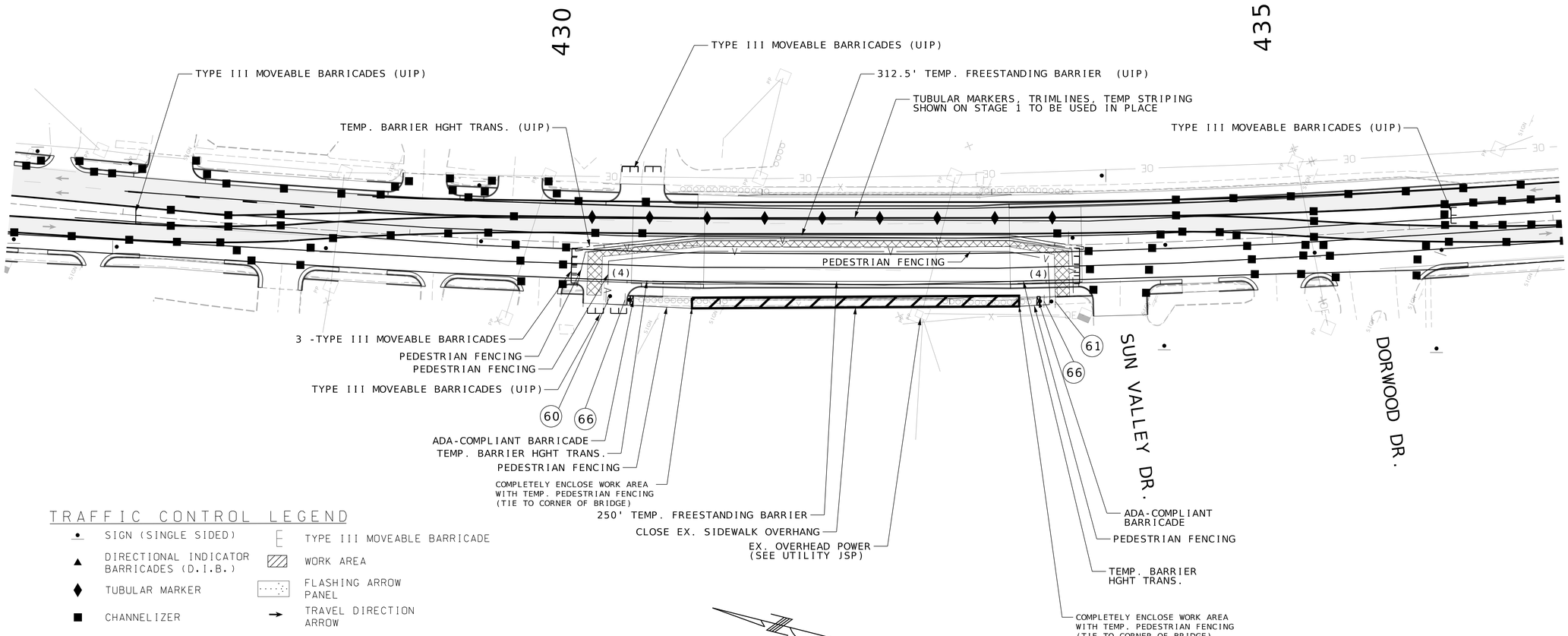

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW
- ADA-COMPLIANT TYPE III MOVEABLE BARRICADE
- TEMP. PEDESTRIAN FENCING
- TEMP. CONCRETE BARRIER
- TEMP. CONCRETE BARRIER HEIGHT TRANSITION
- TEMP. PEDESTRIAN ACCESSIBLE ROUTE (PAR)

SCALE
0 40 80 120

TRAFFIC CONTROL PLAN
STAGE 1B
SHEET 5 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/20/2024 2:38:00 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO

DISTRICT	SHEET NO.
SL	19

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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

WO20-1

2R

BRIDGE
OR
RAMP

WO20-5

5

CENTER LANE
OR
LEFT LANE

WO20-6a

6

CENTER
OR
LEFT

WORK
ZONE

GO20-5aP

54

DISCLAIMER

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R2-1

25

SPECIAL

70

R2-1

4

420

425

BEGIN TEMP. S.W. REMOVEABLE AND REMOVAL OF CONFLICTING PAVEMENT MARKINGS

TEMP. S.Y. REMOVEABLE TAPE

100' END TAPER

MATCHLINE THIS SHEET

MATCHLINE STA 426+21

ROUTE AC

11' LANE

LUCAS-HUNT RD.

200'

35' SPACING DIRECTIONAL INDICATOR BARRICADE

40' SPACING CHANNELIZER

245' LANE TAPER

250' BUFFER

TWO TYPE III MOVABLE BARRICADES

275' LANE SHIFT

TEMP. S.W. REMOVEABLE TAPE

2 - SETS OF TEMP. LONG TERM RUMBLE STRIPS

2 - SETS OF TEMP. LONG TERM RUMBLE STRIPS

150'

150'

200'

200'

200'

R1-1

41

WO20-1

2

BRIDGE
OR
RAMP

SCALE

0 40 80 120

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

TRAFFIC CONTROL PLAN
STAGE 2
SHEET 6 OF 11

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

12/13/2024 3:38:36 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	20

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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

WO5-5

34

R1-1

41

WO1-4L

15L

WO1-4R

15R

DISCLAIMER

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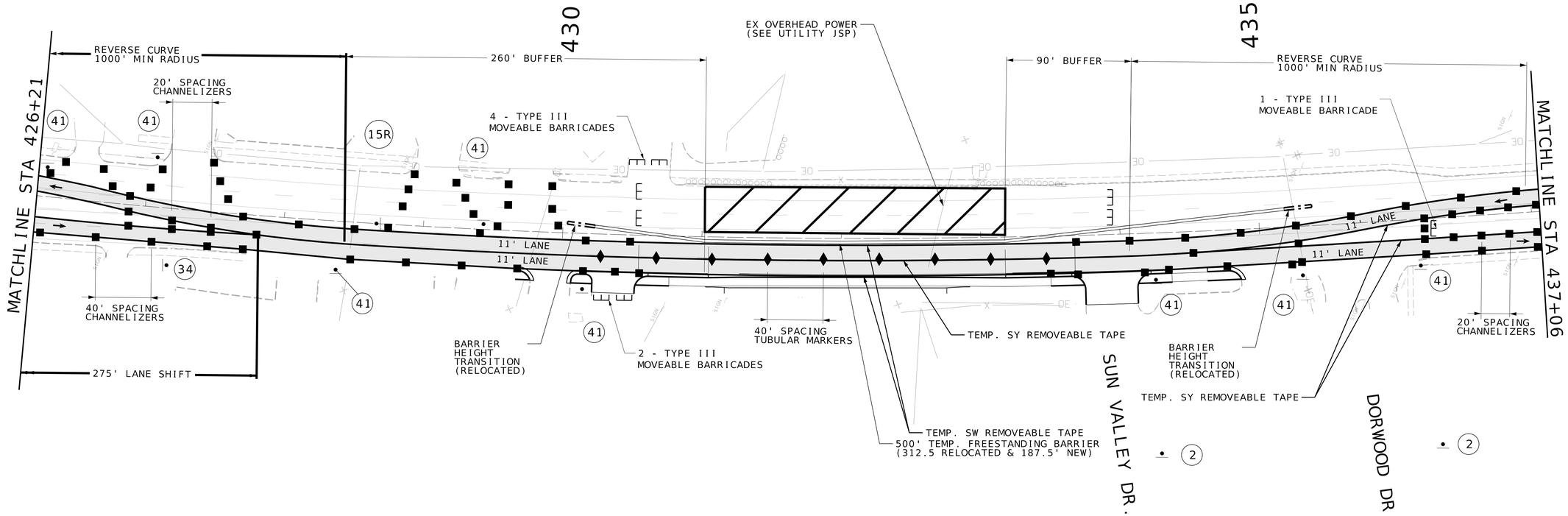

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

SCALE

0 40 80 120

WO20-1

2

BRIDGE
OR
RAMP

TRAFFIC CONTROL PLAN
STAGE 2
SHEET 7 OF 11

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

12/20/2024 2:37:40 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	21

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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
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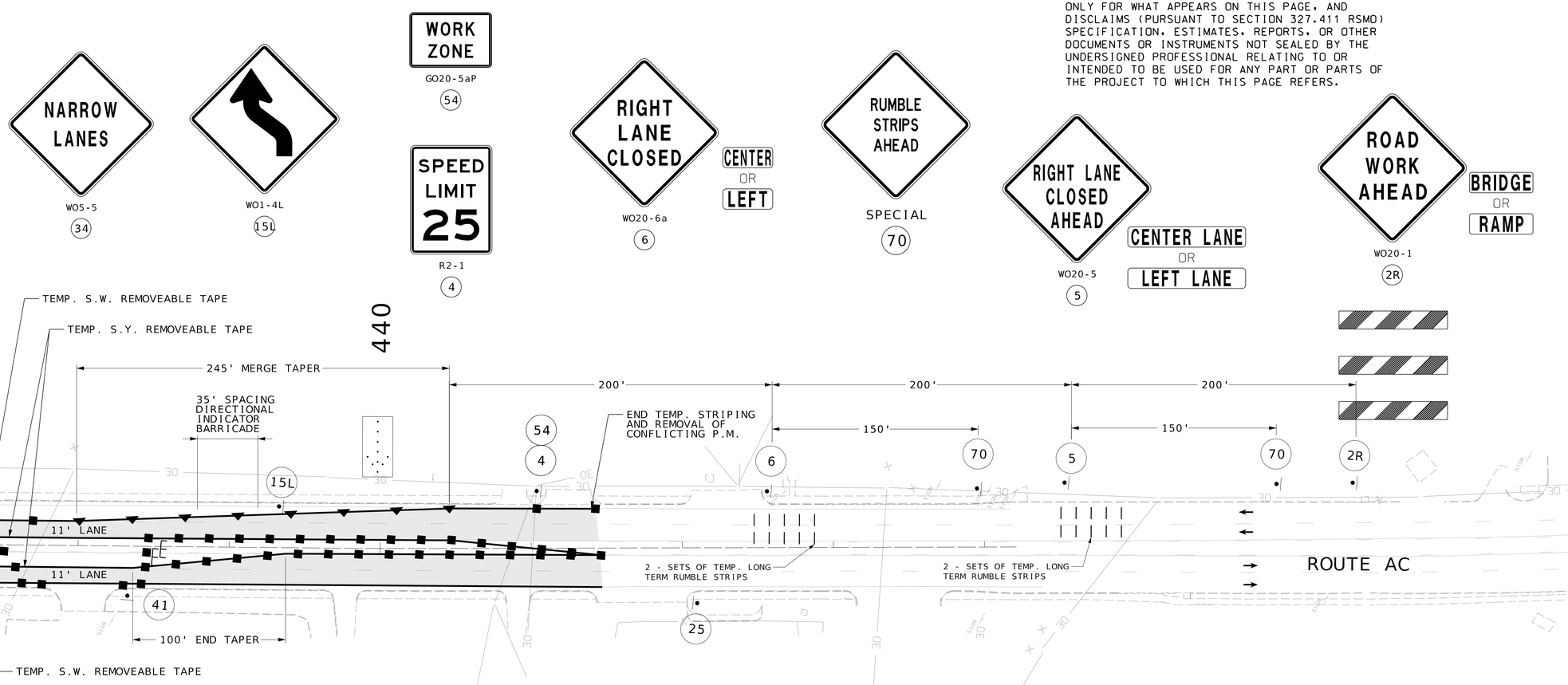

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW

SCALE
0 40 80 120

TRAFFIC CONTROL PLAN
STAGE 2
SHEET 8 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/13/2024 3:29:10 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	22

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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

STAGE 2B -
THIS STAGE CONSISTS OF
REMOVING THE EXISTING BRIDGE BARRIER
REMOVING EXISTING SIDEWALK OVERHANG
CONSTRUCTING NEW BRIDGE BARRIER

1) CONTRACTOR SHALL CLOSE BOTH THE NEW AND EXISTING SIDEWALK ON THE EAST SIDE OF BRIDGE DURING THIS STAGE.

2) THE CONTRACTOR SHALL INSTALL ADDITIONAL TEMP. CONCRETE TRAFFIC BARRIER IMMEDIATELY FOLLOWING EXISTING BRIDGE BARRIER REMOVAL.

3) THE CONTRACTOR SHALL BE REQUIRED TO DELINEATE A PEDESTRIAN ACCESSIBLE ROUTE (PAR) AROUND THE CONTRACTOR'S WORK AREA AS SHOWN ON THE PLANS. TEMPORARY CURB RAMPS, DETECTABLE WARNINGS, AND FENCING SHALL BE INSTALLED BY THE CONTRACTOR. NO DIRECT PAY WILL BE MADE FOR THESE ITEMS UNLESS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.

4) THE CONTRACTOR SHALL CONTROL WORK VEHICLES ACCESS TO AND FROM THE WORK SITE AND SPECIFICALLY WHERE WORK VEHICLES WILL CROSS THE PAR. AT A MINIMUM, THE CONTRACTOR WILL TEMPORARILY CLOSE THE PAR WITH FLAGGERS. BARRICADES, FENCING, AND SIGNING SHALL BE RESTORED BEFORE PAR IS REOPENED. DURATION OF TEMP. CLOSURE OF THE PAR SHALL BE TYPICALLY LIMITED TO LESS THAN 5 MINUTES OR AS DIRECTED BY THE ENGINEER.

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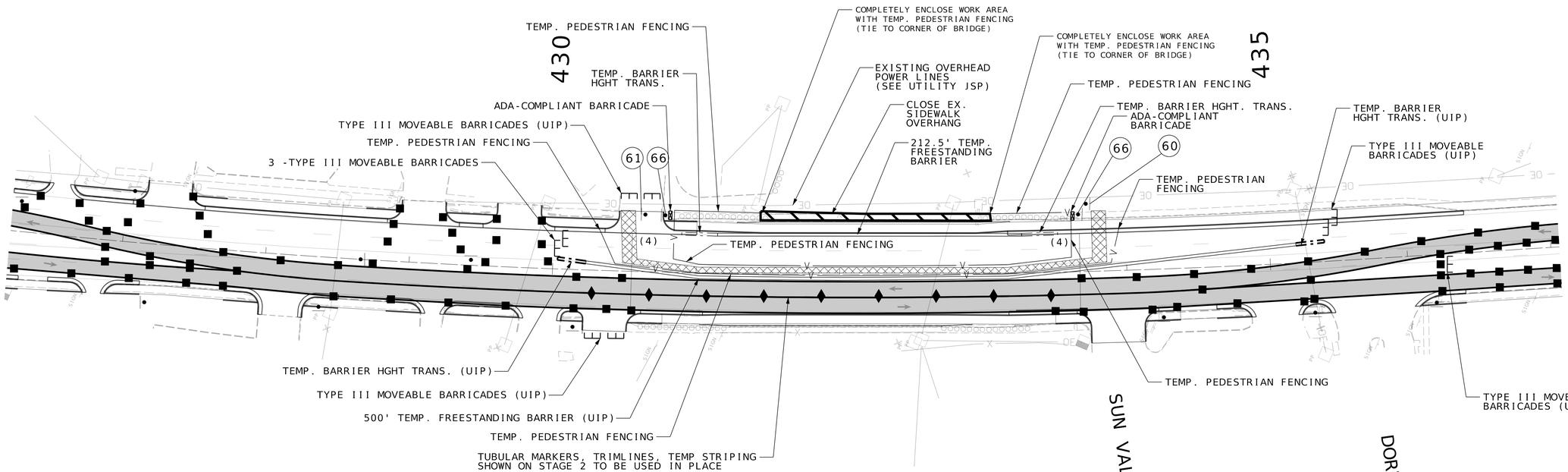

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL
- TRAVEL DIRECTION ARROW
- ADA-COMPLIANT TYPE III MOVEABLE BARRICADE
- TEMP. PEDESTRIAN FENCING
- TEMP. CONCRETE BARRIER
- TEMP. CONCRETE BARRIER HEIGHT TRANSITION
- TEMP. PEDESTRIAN ACCESSIBLE ROUTE (PAR)

SCALE
0 40 80 120

TRAFFIC CONTROL PLAN
STAGE 2B
SHEET 9 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/20/2024 2:37:22 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	23

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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
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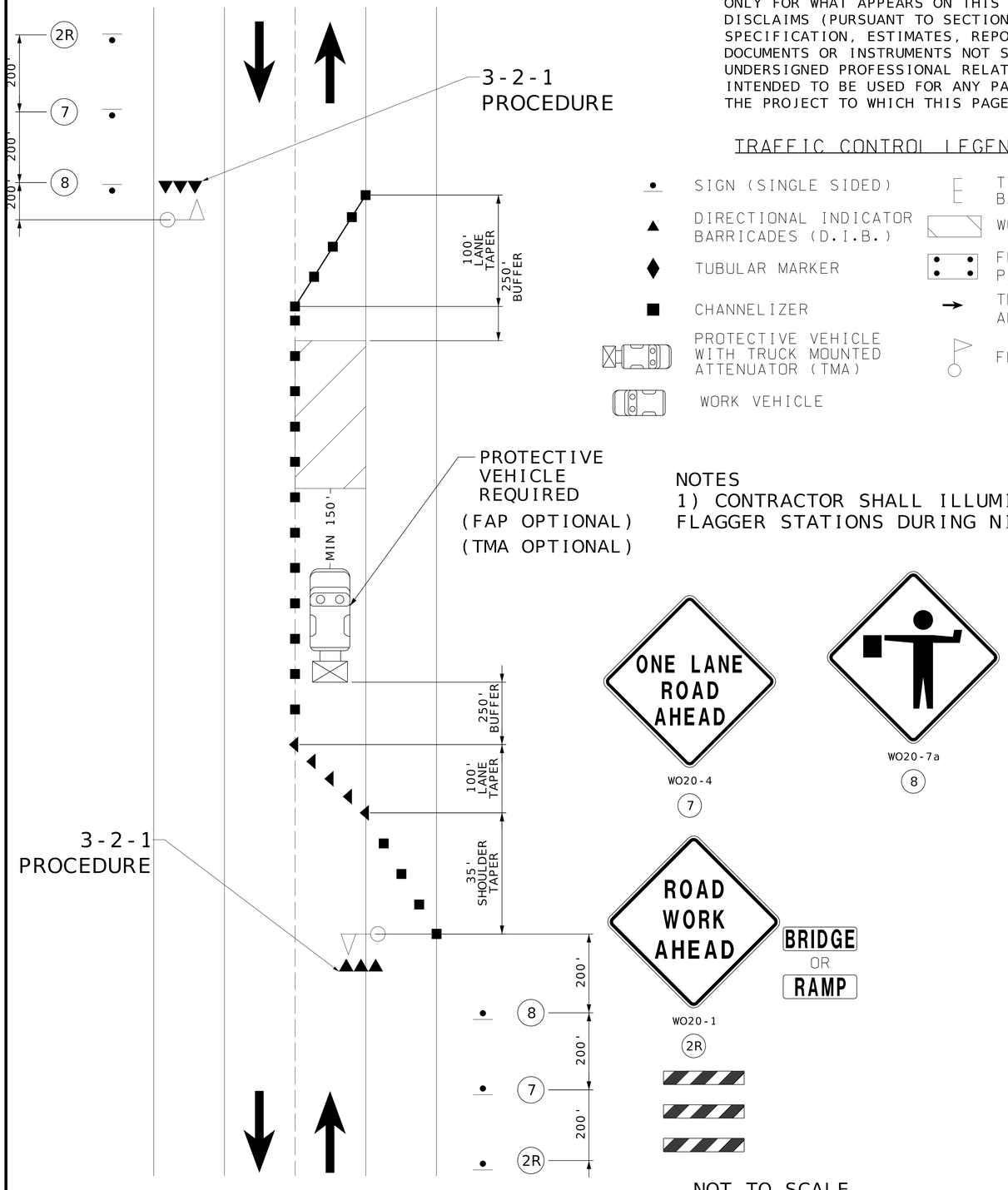
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

STATIONARY LANE CLOSURE ON A TWO-LANE HIGHWAY USING FLAGGERS



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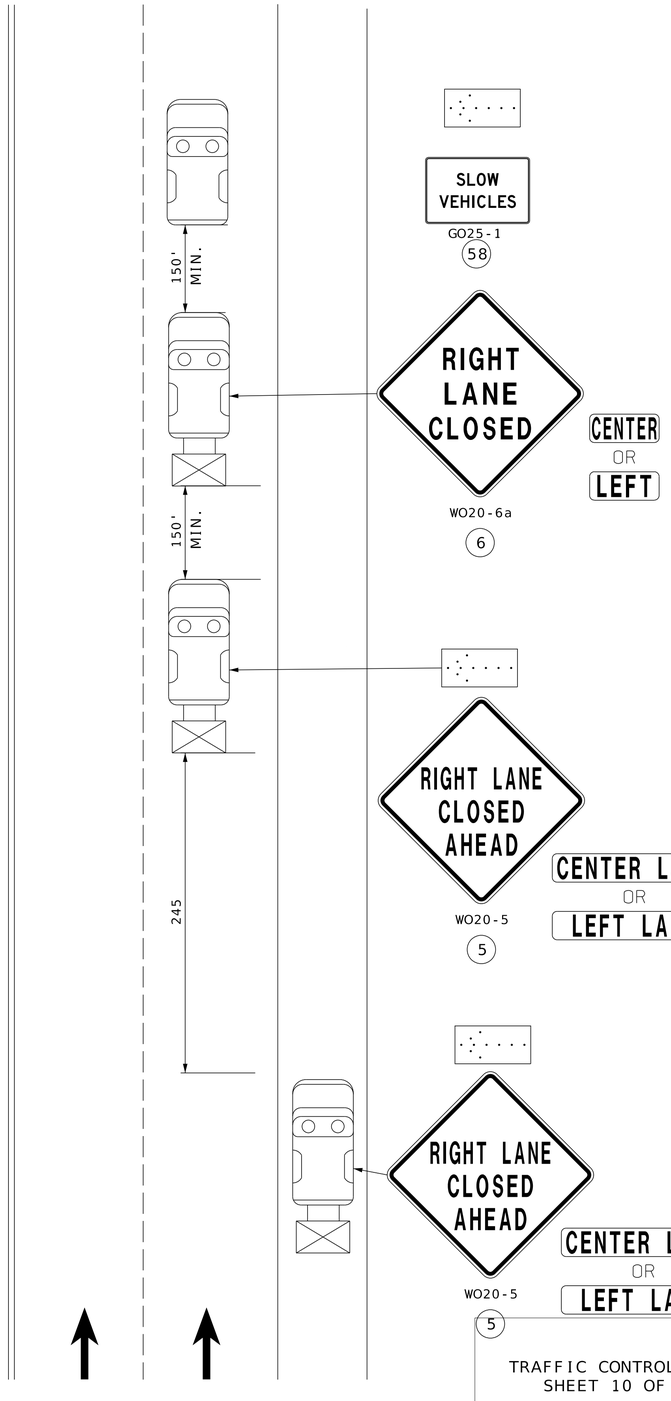
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)
- WORK VEHICLE
- TYPE III MOVEABLE BARRICADE
- WORK AREA
- FLASHING ARROW PANEL (FAP)
- TRAVEL DIRECTION ARROW
- FLAGGER

NOTES

1) CONTRACTOR SHALL ILLUMINATE THE FLAGGER STATIONS DURING NIGHTTIME HOURS.

RIGHT LANE CLOSURE WITH RIGHT SHOULDER FOR MOBILE STRIPING OPERATION



TRAFFIC CONTROL PLAN
SHEET 10 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/13/2024 3:28:27 PM
Margaret Ann Bruns - Civil
MO PE-2010000798

DATE PREPARED	12/13/2024
ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	24
COUNTY	ST. LOUIS
JOB NO.	J6I3573B
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)

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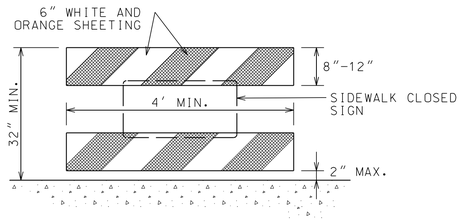
Missouri Certificate of Authority: 001578

REV.



INSTALL DETECTABLE PEDESTRIAN CHANNELIZING BARRICADES AND SIDEWALK CLOSED SIGNS AS DIRECTED BY THE ENGINEER.

WHERE CHANNELIZING DEVICES ARE USED TO CHANNELIZE PEDESTRIANS, THERE SHALL BE CONTINUOUS DETECTABLE BOTTOM AND TOP SURFACES TO BE DETECTABLE TO USERS OF LONG CANES.

GENERAL NOTES:

1. SIGN SHALL BE PLACED AT NEAREST CROSSWALK STATING SIDEWALK CLOSED.

2. ALL BUSINESSES SHALL REMAIN ACCESSIBLE BY ANOTHER ENTRANCE.

3. ALL SIGNS MAY BE RELOCATED TO MEET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIMLINES)
- WORK AREA
- ADA-COMPLIANT TYPE III MOVEABLE BARRICADE
- CHANGEABLE MESSAGE SIGN

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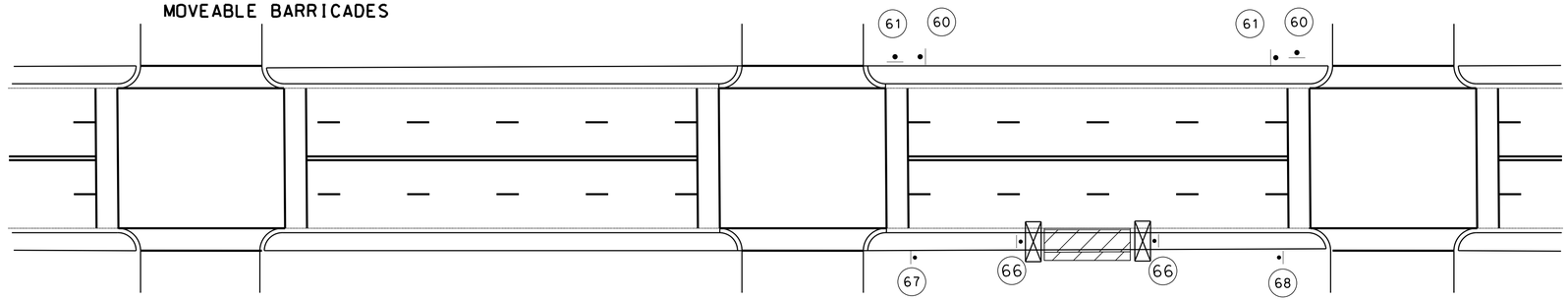
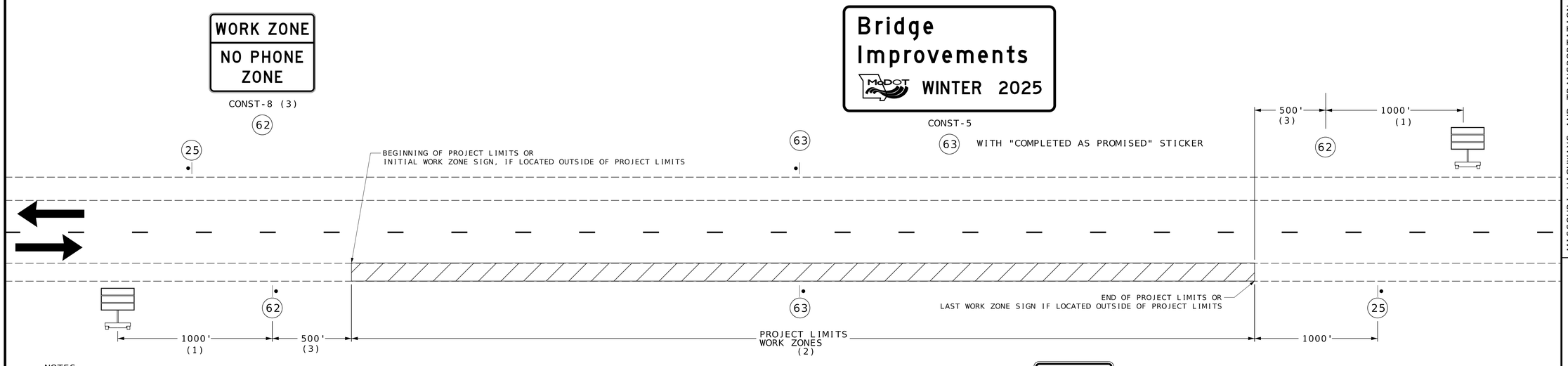
ADA-COMPLIANT TYPE IIII MOVEABLE BARRICADES



SIDEWALK CLOSURE AND PEDESTRIAN DETOUR
NOT TO SCALE



NOTES:
THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SIGNING OR PAVEMENT MARKING THAT CONFLICTS WITH THE TEMPORARY TRAFFIC CONTROL SIGNING AND DEVICES.

(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) SIGN CONSTANT-5-48 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 GO20-1 ROAD WORK NEXT XX MILES.

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

BEGIN-END OF PROJECT SIGNING
NOT TO SCALE

TRAFFIC CONTROL PLAN
SHEET 11 OF 11

STATE OF MISSOURI
MARGARET ANN BRUNS
NUMBER PE-2010000798
PROFESSIONAL ENGINEER
12/13/2024 3:30:15 PM
Margaret Ann Bruns - Civil
MO PE:2010000798

DATE PREPARED
12/13/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	25

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

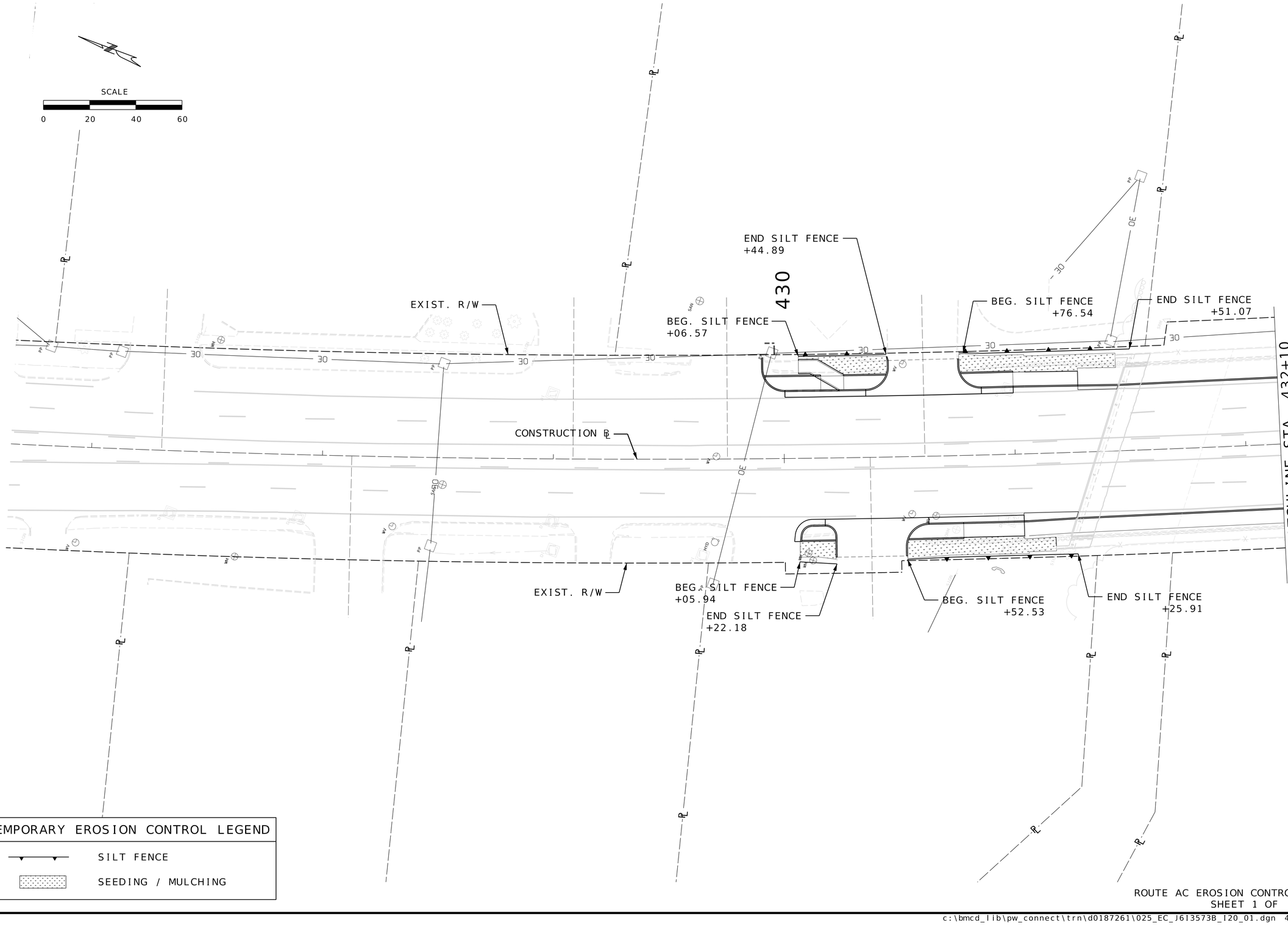
PROJECT NO.

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



ROUTE AC EROSION CONTROL
SHEET 1 OF 2

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	26

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

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SCALE

0 20 40 60

BEG. SILT FENCE
+97.48

EXIST. R/W

435

END SILT FENCE
+40.88

MATCHLINE STA. 432+10

CONSTRUCTION ℄

EQUATION:
STA 435+73.29 BK =
STA 435+77.65 PT STA 435+77.66 R3

BEG. SILT FENCE
+68.22

END SILT FENCE
+73.78

SUN VALLEY DR

EXIST. R/W

END SILT FENCE
+36.15

BEG. SILT FENCE
+11.78

DORWOOD DR

EXIST. R/W

TEMPORARY EROSION CONTROL LEGEND

SILT FENCE

SEEDING / MULCHING

ROUTE AC EROSION CONTROL
SHEET 2 OF 2

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STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	27

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.

425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500

Certificate of Authority
No. : 000165

BMcD Project No. 171809

SCALE
0 30 60 90

EXIST. R/W

420

OE

ROUTE AC ℄

BEGIN PAVEMENT MARKINGS +50

EXIST. R/W

10.6'
10.25'

6" I.W.
6" S.W.

BEGIN 4" S.Y.+82

11.0'
11.0'

END 6" I.W.
BEGIN 6" S.W. +82

END 4" S.Y.
END 6" S.W.
24" WSB +26
END 6" S.W. +23

BEGIN PAVEMENT MARKINGS +00

10.25'
10.25'
10.5'
9.9'
10.25'
10.25'

4" S.Y.
LT ARROW +9

BEGIN 4"S.Y. BEGIN TAPER +24

11.0'
10.25'

BEGIN 6" I.W.+24

BEGIN 6" S.W. +37

END TAPER +00

END 6" S.W. +29

BEGIN 6" S.W. +01

MATCHLINE STA. 424+54

NOTE:
1. CONTRAST PAVEMENT MARKINGS SHALL BE COMPLETED ON CONCRETE SURFACE AS DIRECTED BY ENGINEER AT NO DIRECT PAY.

PAVEMENT MARKING LEGEND

6" I.W.	—— ——	6" INTERMITTENT WHITE LINE (HB WP, L BEADS)
6" S.W.	————	6" SOLID WHITE LINE (HB WP, L BEADS)
4" I.Y.	—— ——	4" INTERMITTENT YELLOW LINE (HB WP, L BEADS)
4" S.Y.	————	4" SOLID YELLOW LINE (HB WP, L BEADS)
24" WSB	▬▬	24" SOLID WHITE STOP BAR (PREFORMED THERMOPASTIC)
LT ARROW	↶	LEFT TURN ARROW (PREFORMED THERMOPASTIC)

ROUTE AC PAVEMENT MARKING
SHEET 1 OF 4

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	28

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500

Certificate of Authority
No. : 000165

BMcD Project No. 171809

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SCALE
0 30 60 90

425

430

MATCHLINE STA. 424+54

MATCHLINE STA. 432+74

EXIST. R/W

END 4" D.S.Y.
BEGIN 4" I.Y.
BEGIN 4" S.Y.
+00

BEGIN 4"
D.S.Y.
+33

BEGIN 4"
D.S.Y. +35

END 4" D.S.Y.
BEGIN 4" I.Y.
BEGIN 4" S.Y.
+50

ROUTE AC ℄

EXIST. R/W

BEGIN WORK
STA. 430+06.59

10.25' 6" S.W.
10.25' 6" S.W.
10.5'
9.9' 4" S.Y.
10.25'
10.25'

14.6'

+31

6" I.W.
6" S.W.

10.25'
10.25'
10.8'
10.25'
10.25'

6" S.W.
6" I.W.
4" S.Y. 4" I.Y.
6" I.W.
6" S.W.

30

NOTE:
1. CONTRAST PAVEMENT MARKINGS SHALL BE COMPLETED ON CONCRETE SURFACE AS DIRECTED BY ENGINEER AT NO DIRECT PAY.

PAVEMENT MARKING LEGEND

6" I.W.	—— ——	6" INTERMITTENT WHITE LINE (HB WP, L BEADS)
6" S.W.	————	6" SOLID WHITE LINE (HB WP, L BEADS)
4" I.Y.	—— ——	4" INTERMITTENT YELLOW LINE (HB WP, L BEADS)
4" S.Y.	————	4" SOLID YELLOW LINE (HB WP, L BEADS)
24" WSB	▬▬▬▬	24" SOLID WHITE STOP BAR (PREFORMED THERMOPASTIC)
LT ARROW	↶	LEFT TURN ARROW (PREFORMED THERMOPASTIC)

ROUTE AC PAVEMENT MARKING
SHEET 2 OF 4

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	29

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

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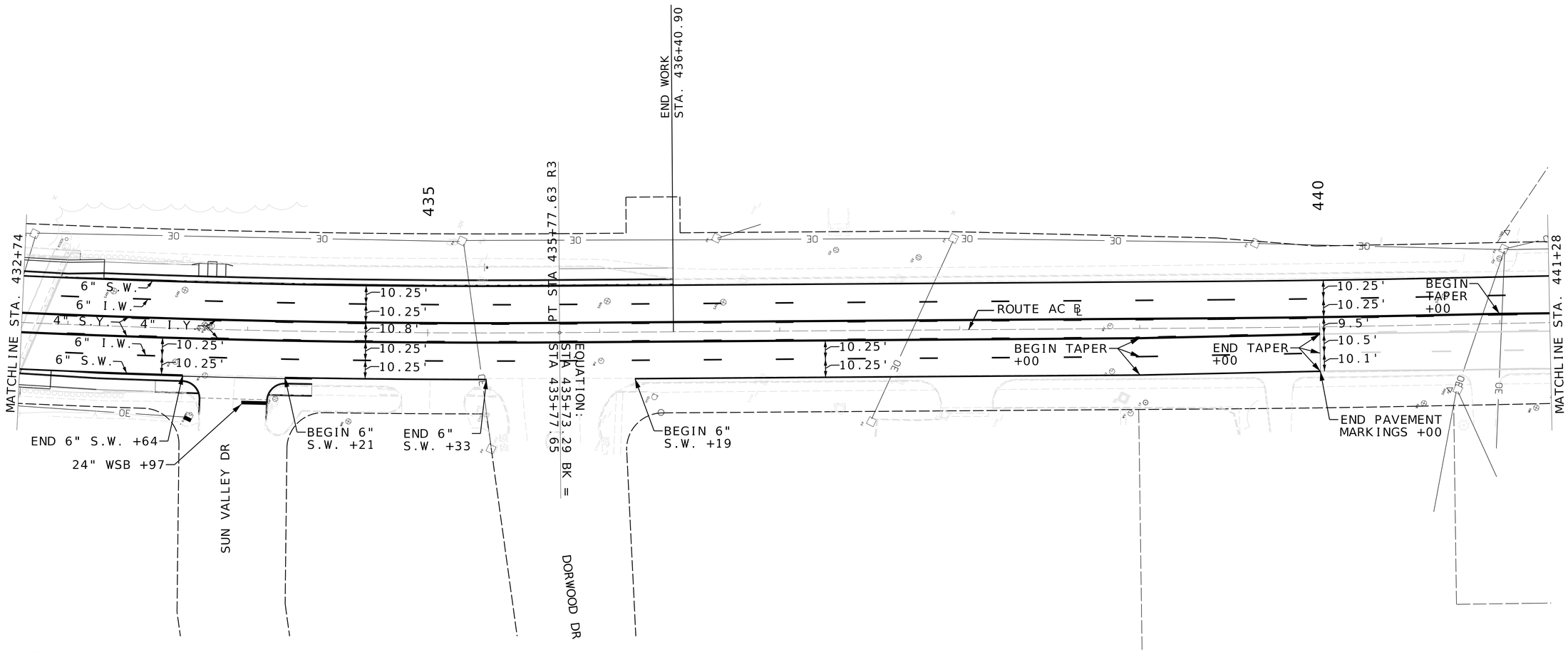
SCALE

0 30 60 90



NOTE:
1. CONTRAST PAVEMENT MARKINGS SHALL BE COMPLETED ON CONCRETE SURFACE AS DIRECTED BY ENGINEER AT NO DIRECT PAY.

PAVEMENT MARKING LEGEND

6" I.W.	—— ——	6" INTERMITTENT WHITE LINE (HB WP, L BEADS)
6" S.W.	————	6" SOLID WHITE LINE (HB WP, L BEADS)
4" I.Y.	—— ——	4" INTERMITTENT YELLOW LINE (HB WP, L BEADS)
4" S.Y.	————	4" SOLID YELLOW LINE (HB WP, L BEADS)
24" WSB	▬▬▬▬	24" SOLID WHITE STOP BAR (PREFORMED THERMOPASTIC)
LT ARROW	↰	LEFT TURN ARROW (PREFORMED THERMOPASTIC)

ROUTE AC PAVEMENT MARKING
SHEET 3 OF 4

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	30

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMcD Project No. 171809

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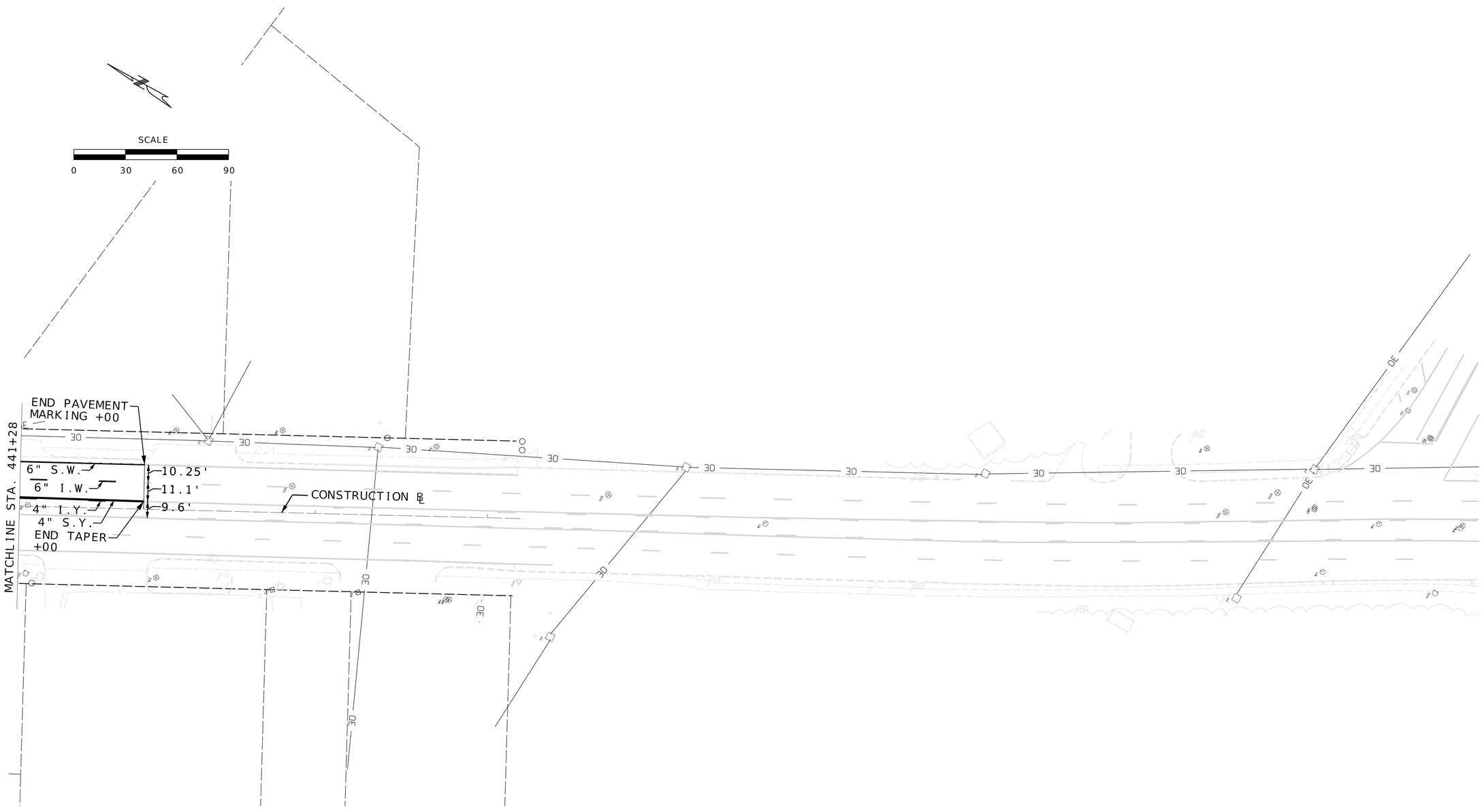

NOTE:
1. CONTRAST PAVEMENT MARKINGS SHALL BE COMPLETED ON CONCRETE SURFACE AS DIRECTED BY ENGINEER AT NO DIRECT PAY.

PAVEMENT MARKING LEGEND

6" I.W.	—— ——	6" INTERMITTENT WHITE LINE (HB WP, L BEADS)
6" S.W.	————	6" SOLID WHITE LINE (HB WP, L BEADS)
4" I.Y.	—— ——	4" INTERMITTENT YELLOW LINE (HB WP, L BEADS)
4" S.Y.	————	4" SOLID YELLOW LINE (HB WP, L BEADS)
24" WSB	▬▬▬▬	24" SOLID WHITE STOP BAR (PREFORMED THERMOPASTIC)
LT ARROW	↶	LEFT TURN ARROW (PREFORMED THERMOPASTIC)

ROUTE AC PAVEMENT MARKING
SHEET 4 OF 4

STATE OF MISSOURI
SARAH VANHOOSER
NUMBER PE-2021030310
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
12/20/2024

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
SL	31

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

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)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
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314-682-1500
Certificate of Authority
No.: 000165
BMcD Project No. 171809

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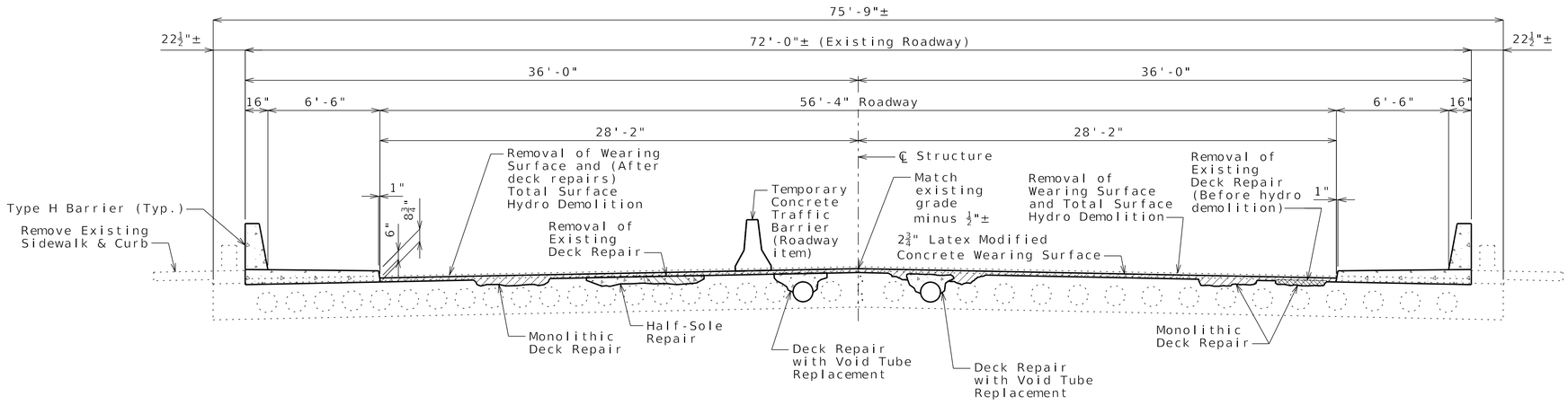
SEC/SUR 8 TWP 46N RGE 7E

U.I.P. AND REHABILITATE EXISTING (44'-58'-44') CONTINUOUS CONCRETE VOIDED SLAB SPANS (SKEW: 20°)



INSIDE SPECIAL REPAIR ZONES
(PRE-HYDRO DEMOLITION REPAIRS)

OUTSIDE SPECIAL REPAIR ZONES
(POST-HYDRO DEMOLITION REPAIRS)

TYPICAL SECTION THRU EXISTING DECK

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 7

Design Loading:

HS20-44 (1968)
Future Wearing Surface = 15 lb/sf

Design Unit Stresses:

Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Sidewalk, Half-Sole and Deck Repair with Void Tube Replacement)	f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60)	fy = 60,000 psi

Joint Filler:

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

Reinforcing Steel:

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

Miscellaneous:

Longitudinal dimensions are based on the original design plans.

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

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

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

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

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control and Sheet No. 3 for staged construction details.

Estimated Quantities

	Item		Total
	Removal of Miscellaneous ACM (Non-Friable)	sq. foot	14
	Total Surface Hydro Demolition	sq. yard	1189
	Removal of Concrete Wearing Surface	sq. foot	10,704
	Removal of Existing Deck Repair	sq. foot	1575
	Removal of Cathodic Protection System	lump sum	1
	Removal of Existing Cantilever Sidewalk	sq. foot	1598
(1)	Supplementary Wearing Surface Material	cu. yard	10
	Latex Modified Concrete Wearing Surface	sq. yard	931
	(72 in.) Pedestrian Fence (Structures)	linear foot	315
	Diamond Grinding	sq. yard	931
	Type H Barrier	linear foot	297
	Sidewalk (Bridges)	sq. foot	2329
	Half-Sole Repair	sq. foot	1000
	Deck Repair with Void Tube Replacement	sq. foot	700

(1) Supplementary wearing surface material for monolithic deck repair will be paid for at the fixed unit price in accordance with Sec 109.

Detailed: Jul. 2024
Checked: Aug. 2024

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

REPAIRS TO BRIDGE: ROUTE AC OVER MALINE CREEK

ROUTE AC FROM ROUTE I-270 TO ROUTE 367
ABOUT 2.3 MILES SOUTH OF ROUTE I-270
BEGINNING STATION 431+35.5± (MATCH EXISTING)

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/8/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11092

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)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809

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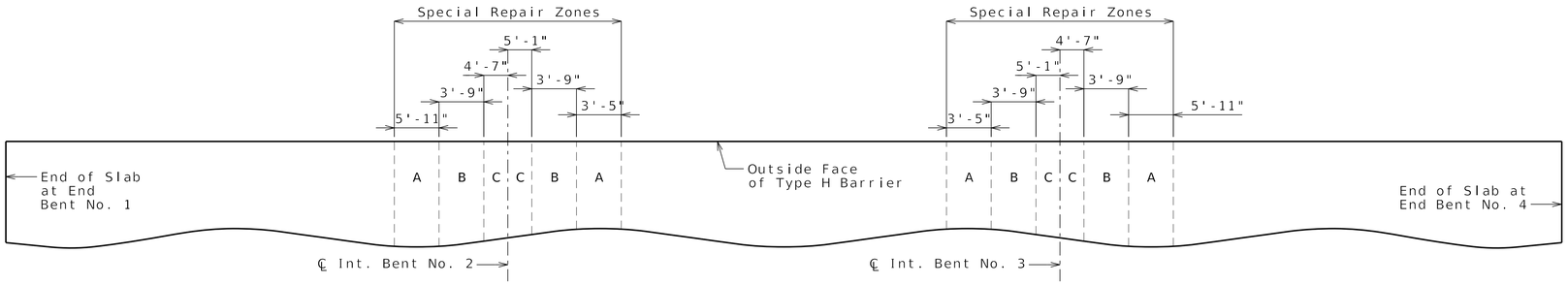
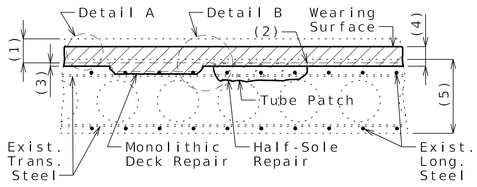
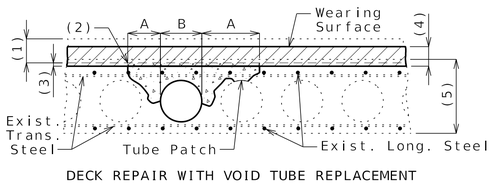


PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES



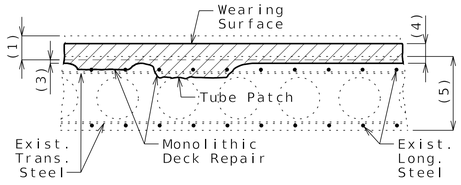
MONOLITHIC AND HALF-SOLE REPAIR



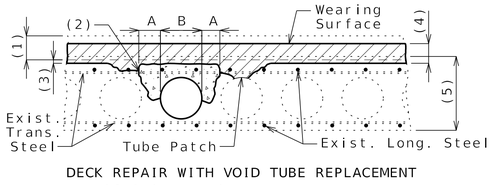
DECK REPAIR WITH VOID TUBE REPLACEMENT

A = Half-Sole Repair
B = Deck Repair with Void Tube Replacement

DECK REPAIR INSIDE SPECIAL REPAIR ZONES (BEFORE HYDRO DEMOLITION)



MONOLITHIC DECK REPAIR



DECK REPAIR WITH VOID TUBE REPLACEMENT

A = Half-Sole Repair
B = Deck Repair with Void Tube Replacement

DECK REPAIR OUTSIDE SPECIAL REPAIR ZONES (AFTER HYDRO DEMOLITION)

(1) Removal of existing $2\frac{1}{4}$"± low slump concrete wearing surface plus $\frac{1}{2}$" of existing deck

(2) 1" vertical side shall be established outside the deteriorated area.

(3) Total surface hydro demolition of sound concrete, measured to mortar line:

$\frac{1}{4}$" minimum inside special repair zones

$\frac{1}{2}$" minimum outside special repair zones

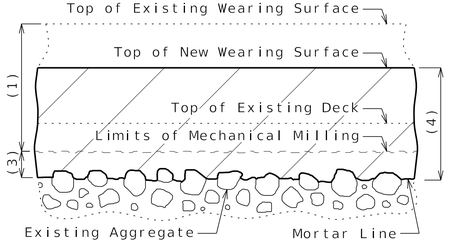
(4) Latex modified concrete wearing surface:

$2\frac{1}{2}$" minimum inside special repair zones

$2\frac{3}{4}$" minimum outside special repair zones

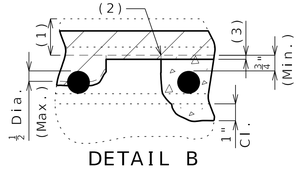
(5) Original depth minus previous scarification

(6) Restore existing weep hole, if encountered.



MILLING AND HYDRO DEMOLITION LIMITS

DETAIL A



DETAIL B

Monolithic deck repair shall be used when only half the diameter or less of the top bar is exposed.

Clearance around top bar and around bottom bar at the intersection of top bar shall be required when more than half the diameter of the top bar is exposed.

Deck Repair Notes:

Order of Repair:

1. Remove existing wearing surface plus $\frac{1}{2}$" of existing deck.
2. Power wash deck to identify sound and unsound existing deck repair.
3. Inside special repair zones, complete the following repairs:
   a. Removal of existing deck repair
   b. Half-sole repair
   c. Deck repair with void tube replacement
4. Outside special repair zones, remove existing deck repair.
5. Complete total surface hydro demolition, removing 1/4" minimum of sound concrete inside special repair zones and removing 1/2" minimum of sound concrete and all deteriorated concrete outside special repair zones.
6. Sound deck and if needed complete incidental concrete removal.
7. Outside special repair zones, complete the following repairs:
   a. Deck repair with void tube replacement
8. Place new wearing surface including additional material for areas of monolithic deck repair.

Special Repair Zones:

Deck repair required in the areas designated as special repair zones shall be completed before hydro demolition in alphabetical sequence beginning with Zone A. Zones with the same letter designation may be repaired at the same time. Hydro demolition shall not move forward until the repairs in all special repair zones are completed and properly cured.

Any deck repair in areas not designated as a special repair zone shall be completed after hydro demolition.

Removal and deck repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone.

If any single repair area does not exceed 4 square feet in size and the total repair area within a special repair zone does not exceed 12 square feet, the special repair zone may be repaired at the same time as an adjacent zone.

Void Repair:

Any damage sustained to the void tube as a result of the contractor's operations shall be patched or replaced as required by the engineer at the contractor's expense.

An exposed void in the deck shall be patched as approved by the engineer in a manner that shall maintain the void area completely free of concrete. Cost of patching an exposed void will be considered completely covered by the contract unit price for Half-Sole Repair inside special repair zones and Supplementary Wearing Surface Material outside special repair zones.

When a deteriorated portion of the void tube is beyond the point of patching as determined by the engineer, the portion of the deteriorated void tube shall be replaced. The void area shall be maintained completely free of concrete. Cutting of the longitudinal reinforcing steel will not be permitted. The fiber tubes for producing the voids shall have an outside diameter with the wall thickness the same as the existing tubes and anchored at not more than the original spacing. Cost of replacing the void tube will be considered completely covered by the contract unit price for Deck Repair with Void Tube Replacement. Measurement will be horizontal projection of the area of exposed tube in plan.

KEVIN P. HEFFERN
NUMBER PE-2007002795
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 1/7/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
BR	2

COUNTY: ST. LOUIS

JOB NO.: J6I3573B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A11092

DESCRIPTION	DATE

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

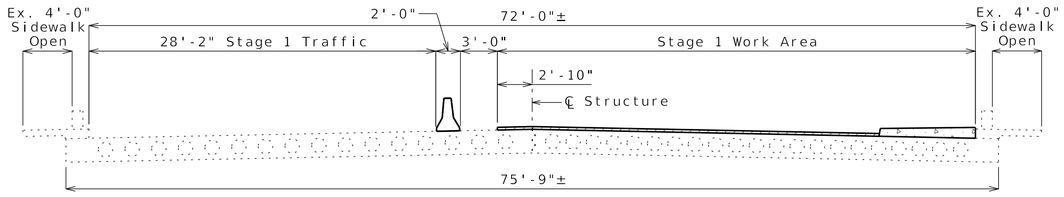
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809

DECK REPAIR DETAILS

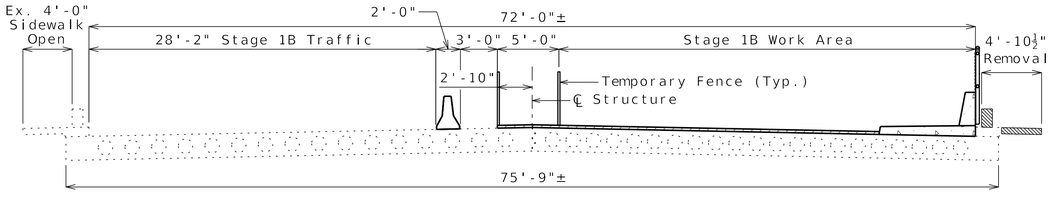
Detailed: Jul. 2024
Checked: Aug. 2024

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



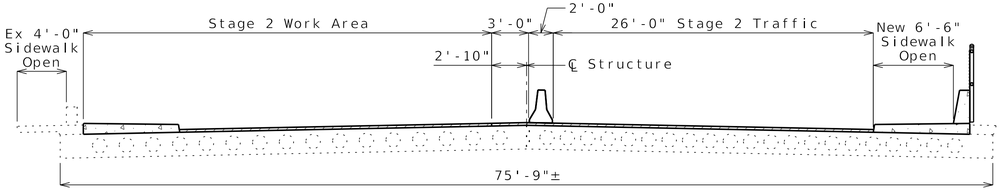
1. Remove Concrete Wearing Surface
2. Remove Cathodic Protection System
3. Additional 1/2" of Total Surface Hydrodemolition
4. Half-Sole Repairs in Special Repair Zones and Deck Repairs with Void Tube Replacement
5. Construct New Sidewalk
6. New Latex Modified Overlay (2 3/4")
7. Diamond Grind

STAGE 1



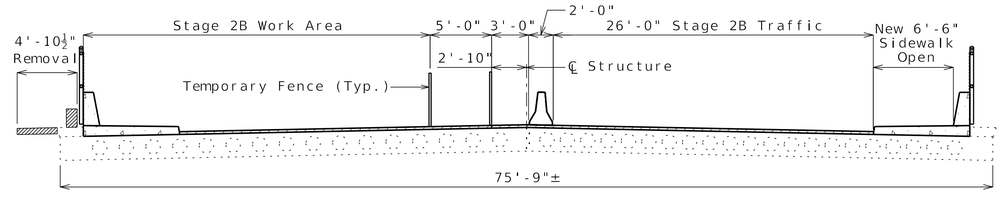
1. Remove Existing Curb (to top of existing sidewalk) and Sidewalk (3'-4" from edge of sidewalk)
2. Construct new Barrier and Fence

STAGE 1B



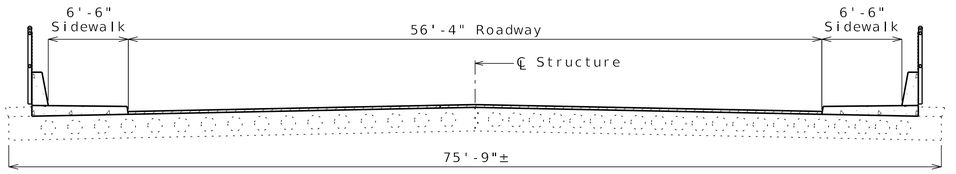
1. Remove Concrete Wearing Surface
2. Remove Cathodic Protection System
3. Additional 1/2" of Total Surface Hydrodemolition
4. Half-Sole Repairs in Special Repair Zones and Deck Repairs with Void Tube Replacement
5. Construct New Sidewalk
6. New Latex Modified Overlay (2 3/4")
7. Diamond Grind

STAGE 2



1. Remove Existing Curb (to top of existing sidewalk) and Sidewalk (3'-4" from edge of sidewalk)
2. Construct new Barrier and Fence

STAGE 2B



FINAL STAGE

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/7/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11092

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)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809

CONSTRUCTION STAGING

Detailed: Jul. 2024
Checked: Aug. 2024

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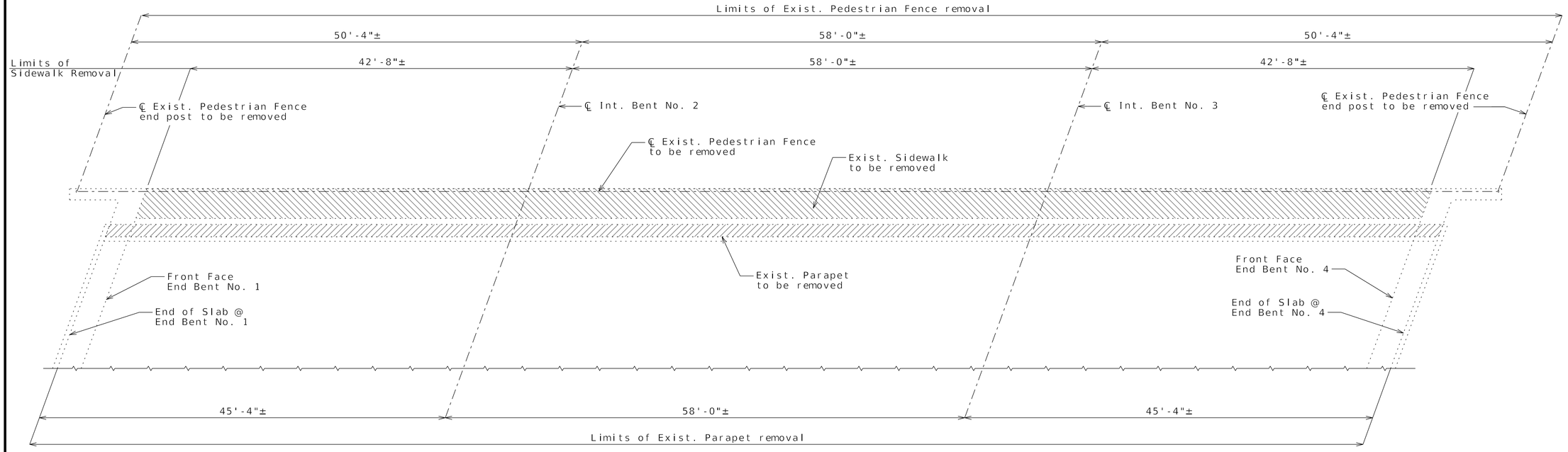
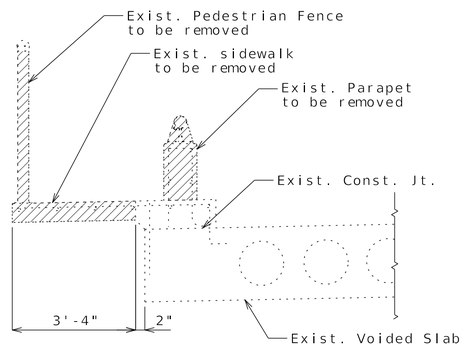


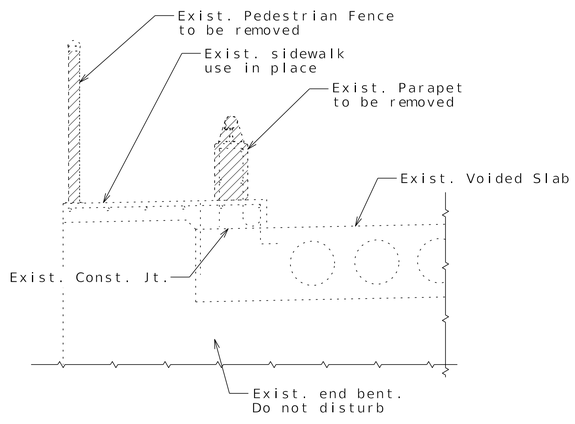
PART PLAN OF SLAB SHOWING REMOVALS

(Left sidewalk shown, right sidewalk similar)
(Pedestrian rail not shown for clarity)



TYPICAL SECTION OF REMOVALS

(Left sidewalk shown, right sidewalk similar)



TYPICAL SECTION OF REMOVALS AT END BENT

Notes:

The cost of removal of the existing sidewalks, parapet, and pedestrian fence to the limits shown will be considered completely covered by the contract unit price for Removal of Existing Cantilever Sidewalk, per square foot.

Concrete removal shall be in accordance with Sec 216.60.2.1. Areas exposed by removal of concrete and not covered by new concrete shall be coated with a qualified special mortar.

Existing reinforcing steel not utilized in the new concrete shall be cut off one inch into the concrete. Any holes outside the limits of new concrete shall be filled with a qualified special mortar.

PEDESTRIAN FENCE, SIDEWALK AND PARAPET REMOVALS

Detailed: Jul. 2024
Checked: Aug. 2024

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

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 1/7/2025
ROUTE: AC | STATE: MO
DISTRICT: BR | SHEET NO.: 4
COUNTY: ST. LOUIS
JOB NO.: J6I3573B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A11092

DESCRIPTION | DATE

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

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809

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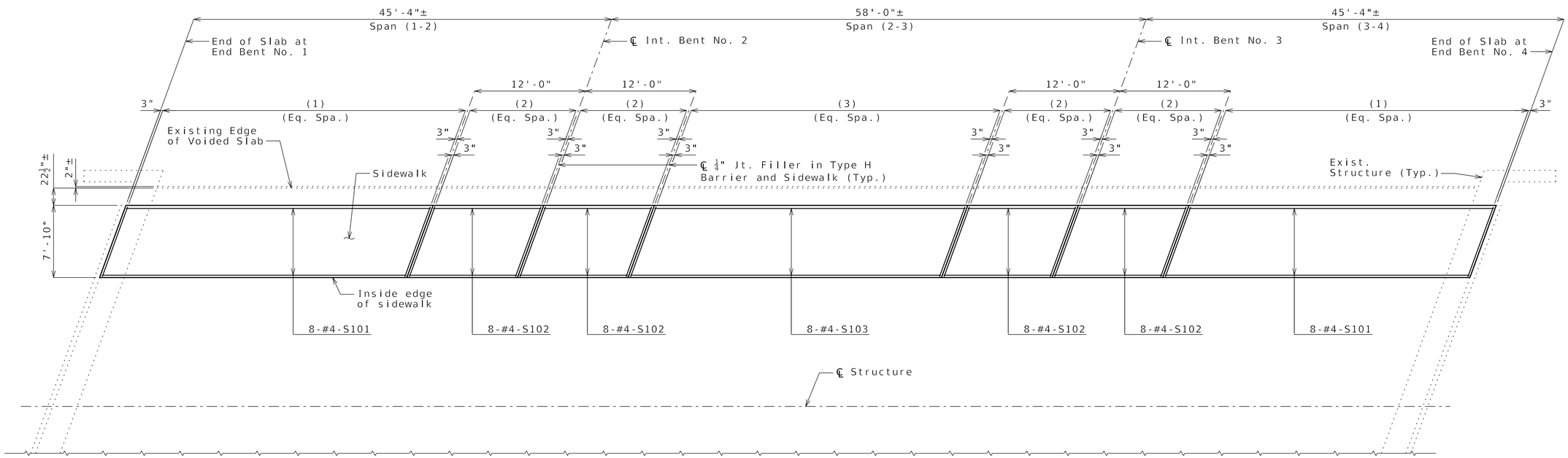


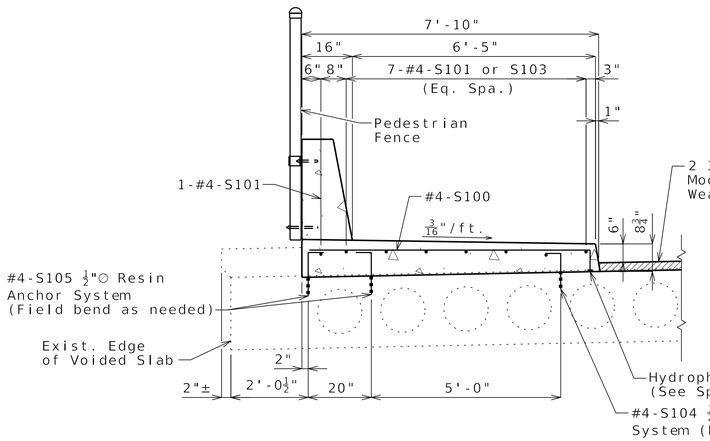
PART PLAN OF SLAB SHOWING SIDEWALK

(Left sidewalk shown, right sidewalk similar)

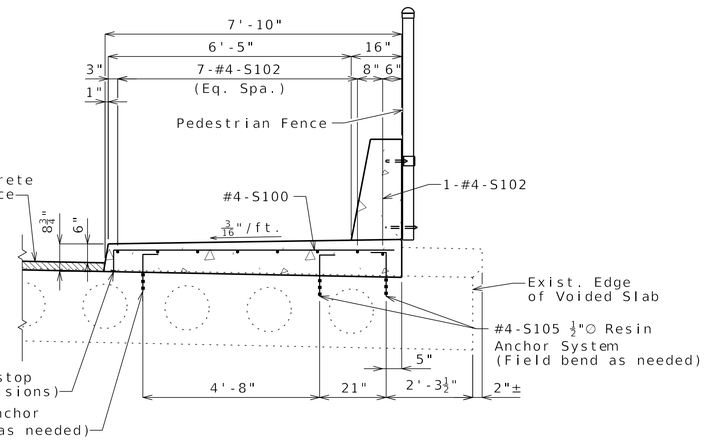
(1) 34-#4-S100, 34-#4-S104 (resin anchor system)
& 34 Pr.-#4-S105 (resin anchor system)

(2) 13-#4-S100, 13-#4-S104 (resin anchor system)
& 13 Pr.-#4-S105 (resin anchor system)

(3) 35-#4-S100, 35-#4-S104 (resin anchor system)
& 35 Pr.-#4-S105 (resin anchor system)



SIDEWALK NEAR CENTER OF SPANS



SIDEWALK NEAR INTERMEDIATE BENTS

Notes:

Dimensions shown are horizontal and measured along the outside face of sidewalk.

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

Payment for all concrete, reinforcement, and waterstop, complete in place, will be completely covered by the contract unit price for Sidewalk (Bridges), per square foot.

Concrete in the sidewalk shall be class B-2.

Measurement of the sidewalk is to the nearest square foot for each structure, measured horizontally from the outside face of barrier to the inside edge of sidewalk and from end of slab to end of slab.

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

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Sidewalk (Bridges).

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

Contractor to verify location of existing slab void tubes and reinforcing prior to installing resin anchor system. Resin anchor shall be shifted to clear existing slab voids to maintain a minimum clearance of 3".

Epoxy coated #4-S104 and #4-S105 Grade 60 reinforcing bars shall be substituted for the 1/2" dia. threaded rods.

SIDEWALK DETAILS

Detailed: Jul. 2024
Checked: Aug. 2024

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

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

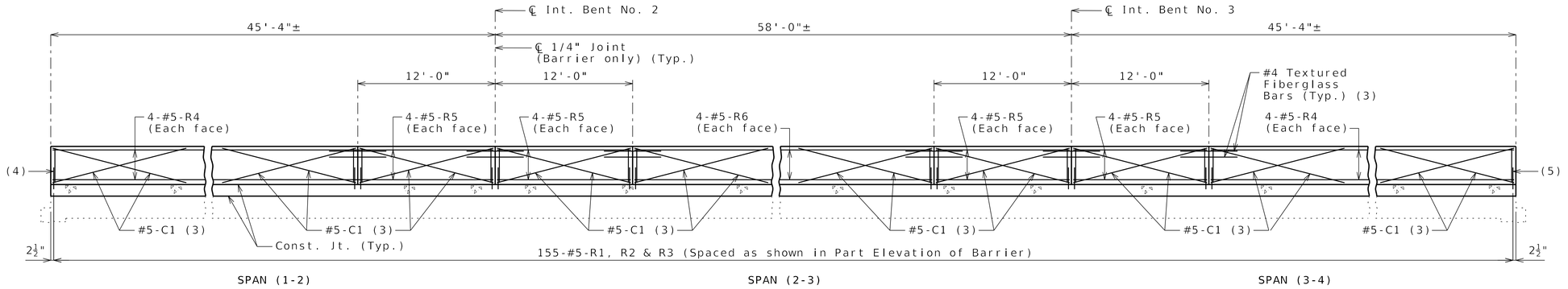
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 1/7/2025
ROUTE AC | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY ST. LOUIS
JOB NO. J6I3573B
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A11092

DESCRIPTION | DATE

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

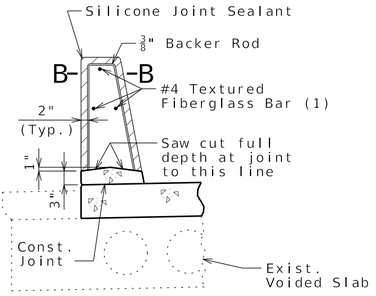
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809



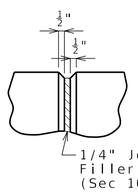
ELEVATION OF BARRIER

(Left barrier shown, right barrier similar)

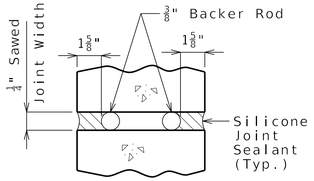
Longitudinal dimensions are horizontal.



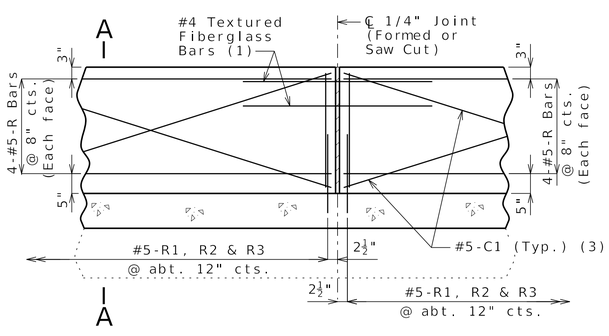
SECTION THRU
SAW CUT JOINT



PART ELEVATION
AT FORMED JOINT

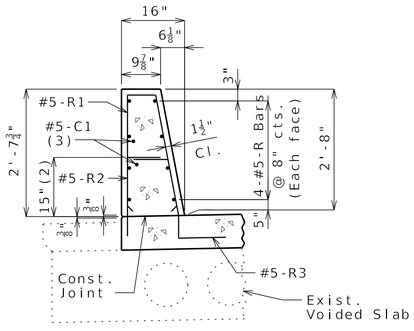


SECTION B-B



PART ELEVATION OF BARRIER

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

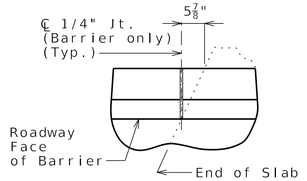


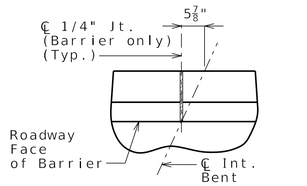
SECTION A-A

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

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar





PART PLAN SHOWING
JOINT LOCATION

General Notes:

(3) Slip-formed option only.

(4) The #5-R2 bar nearest to the barrier joint at End Bent No. 1 Left Barrier and End Bent No. 4 Right Barrier shall be trimmed to provide 1 1/2" clear to construction joint between barrier and sidewalk.

(5) The #5-R3 bar nearest to the barrier joint at End Bent No. 4 Left Barrier and End Bent No. 1 Right Barrier shall be field bent to fit, providing 1 1/2" clear to all concrete surfaces.

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

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

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

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

Concrete in barrier shall be Class B-1.

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

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

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

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

Plastic waterstop shall not be used with saw cut joints.

TYPE H BARRIER

Detailed: Jul. 2024
Checked: Aug. 2024

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

STATE OF MISSOURI
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PROFESSIONAL ENGINEER
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DATE PREPARED 1/7/2025
ROUTE AC | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY ST. LOUIS
JOB NO. J6I3573B
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A11092

DESCRIPTION	DATE

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

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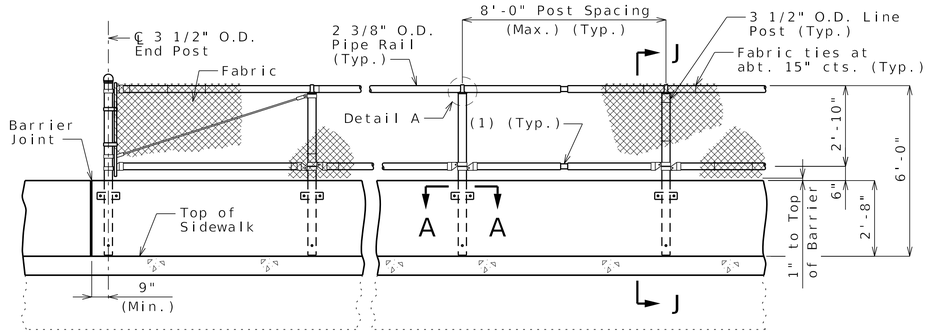
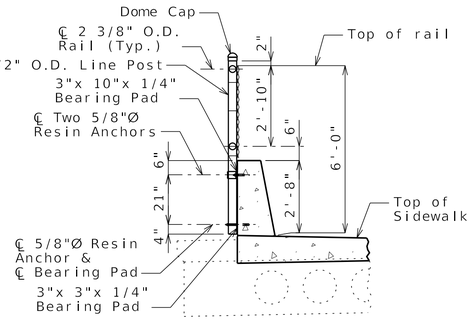
Certificate of Authority No.: 000165
BMcD Project No. 171809

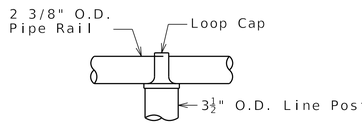


ELEVATION

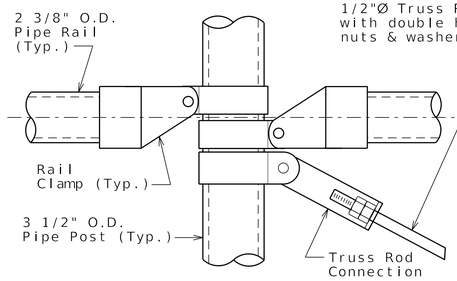
(1) 3/8" Gap for splice at about 30'-0" centers with at least one splice gap between pull or end posts.



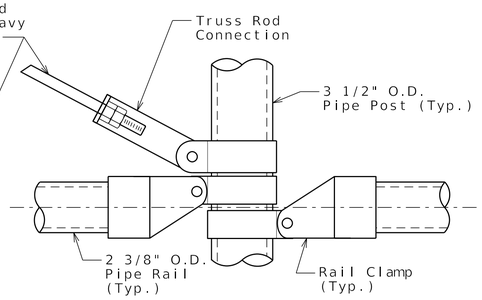
SECTION J-J (TYPE H BARRIER)



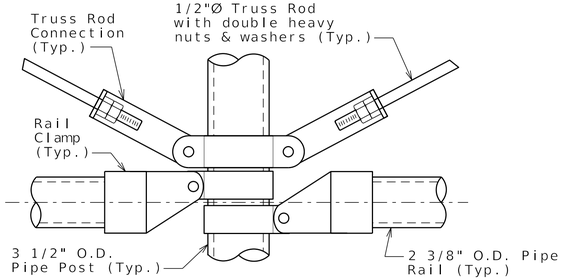
DETAIL A



UPPER TRUSS ROD CONNECTION DETAIL

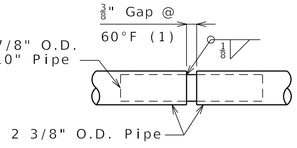


LOWER TRUSS ROD CONNECTION DETAIL



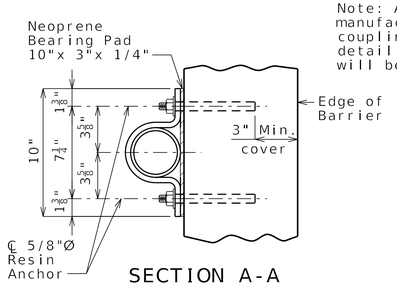
DUAL LOWER TRUSS ROD CONNECTION DETAIL

(1) 3/8" Gap for splice at about 30'-0" centers with at least one splice gap between pull or end posts.

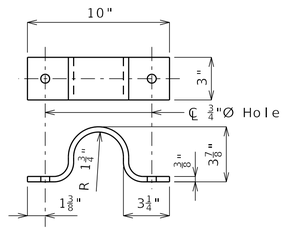


TYPICAL RAIL DETAIL AT SPLICE GAP

Note: At the contractor's option, manufacturer-approved expansion coupling may be used in lieu of detail shown. No additional payment will be made for this substitution.



SECTION A-A



STRAP DETAIL

General Notes:

Pedestrian chain link fence shall be in accordance with Sec 1043 except all fabric shall have the top and bottom edges knuckled and pipe members shall be in accordance with ASTM F1043, high strength grade (minimum yield = 50 ksi) heavy industrial steel pipe Group 1A.

All posts shall be vertical.

Payment for furnishing, galvanizing and erecting the fence and frame complete in place will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures) per linear foot.

Dimensions of pedestrian chain link fence are measured horizontally.

The maximum spacing allowed between pull posts and end posts is 100 feet. Post brace and 1/2-inch diameter truss rod are required for panels adjacent to pull post and end posts only. Connect the lower end of truss rod to bottom of pull posts and end posts to which the stretcher bar is attached.

Rail clamps, dome cap, bands, tie wires, stretcher bars and truss rod connections shall be in accordance with the manufacturer's recommendations. The truss rod and truss rod connections shall have a minimum capacity of 2000 pounds. Dome cap shall fit tightly.

Expansion joints shall be placed in the horizontal pieces at not more than 30-foot centers and at all joint filler locations in the barrier with a minimum gap of 3/8 inch at 60 degrees F.

Steel for truss rods shall be ASTM A709 Grade 36. Steel for post straps shall be ASTM A709 Grade 50. Neoprene bearing pads shall be 50 durometer and shall be in accordance with Sec 716.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

All straps, anchors, hex nuts and washers shall be galvanized in accordance with ASTM A123 and Sec 1081.

Anchors shall be ASTM F1554 Grade 36.

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

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures).

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

(72 in.) Pedestrian Fence (Structures) will be measured to the nearest linear foot for each structure, measured along the centerline fence from end of fence to end of fence.

Chain link wire fabric shall be 9 gage minimum, 2-inch diamond mesh.

The chain link fence shall be built in accordance with Sec 607 and Sec 1043.

For details of barrier, see Sheet No. 6.

For details of fence post spacing, see Sheet No. 8.

(72 IN.) PEDESTRIAN FENCE

Detailed: Jul. 2024
Checked: Aug. 2024

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

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 1/7/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
BR	7

COUNTY ST. LOUIS
JOB NO. J6I3573B
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A11092

DESCRIPTION	DATE

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

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
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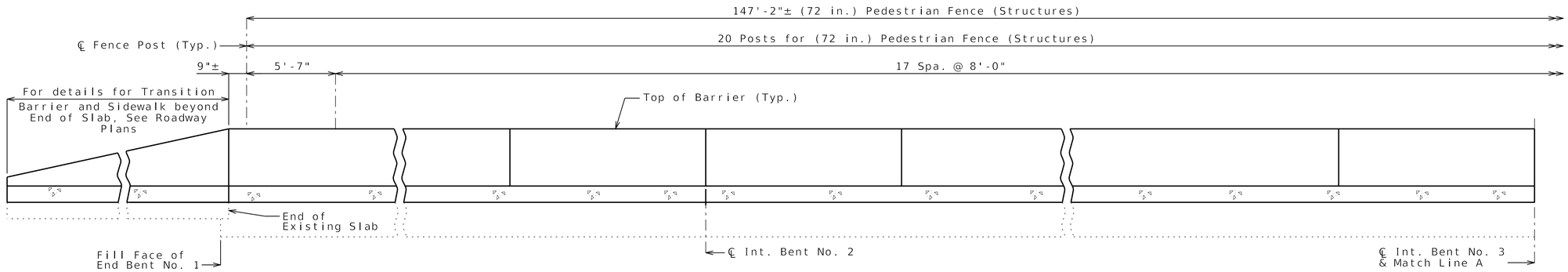
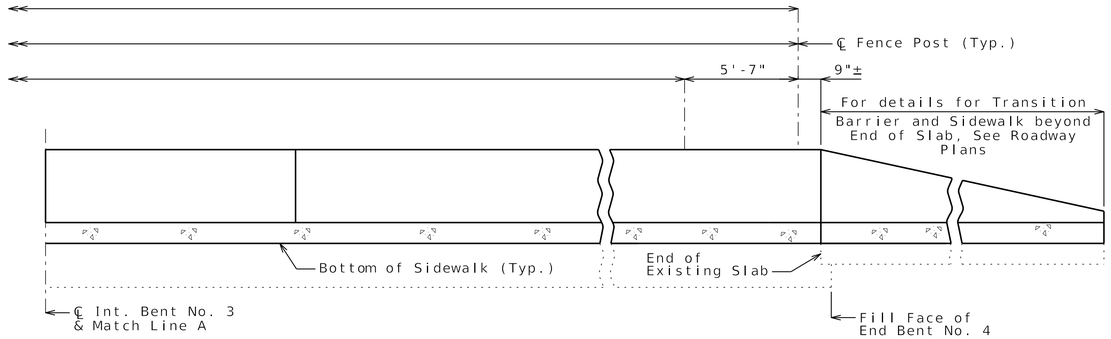
Certificate of Authority No.: 000165
BMcD Project No. 171809



PART SECTION NEAR LEFT EDGE OF SLAB SHOWING FENCE POST SPACING

(Left barrier shown; Right barrier similar)



PART SECTION NEAR LEFT EDGE OF SLAB SHOWING FENCE POST SPACING

(Left barrier shown; Right barrier similar)

Notes:

Longitudinal dimensions are horizontal.

Work this sheet with Sheets No. 6 & 7.

DETAILS OF FENCE POST SPACING

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STATE OF MISSOURI
KEVIN P. HEFFERN
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PROFESSIONAL ENGINEER

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DATE PREPARED: 1/8/2025

ROUTE	STATE
AC	MO
DISTRICT	SHEET NO.
BR	8

COUNTY: ST. LOUIS

JOB NO.: J6I3573B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A11092

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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BMcD Project No. 171809

Detailed: Jul. 2024
Checked: Aug. 2024

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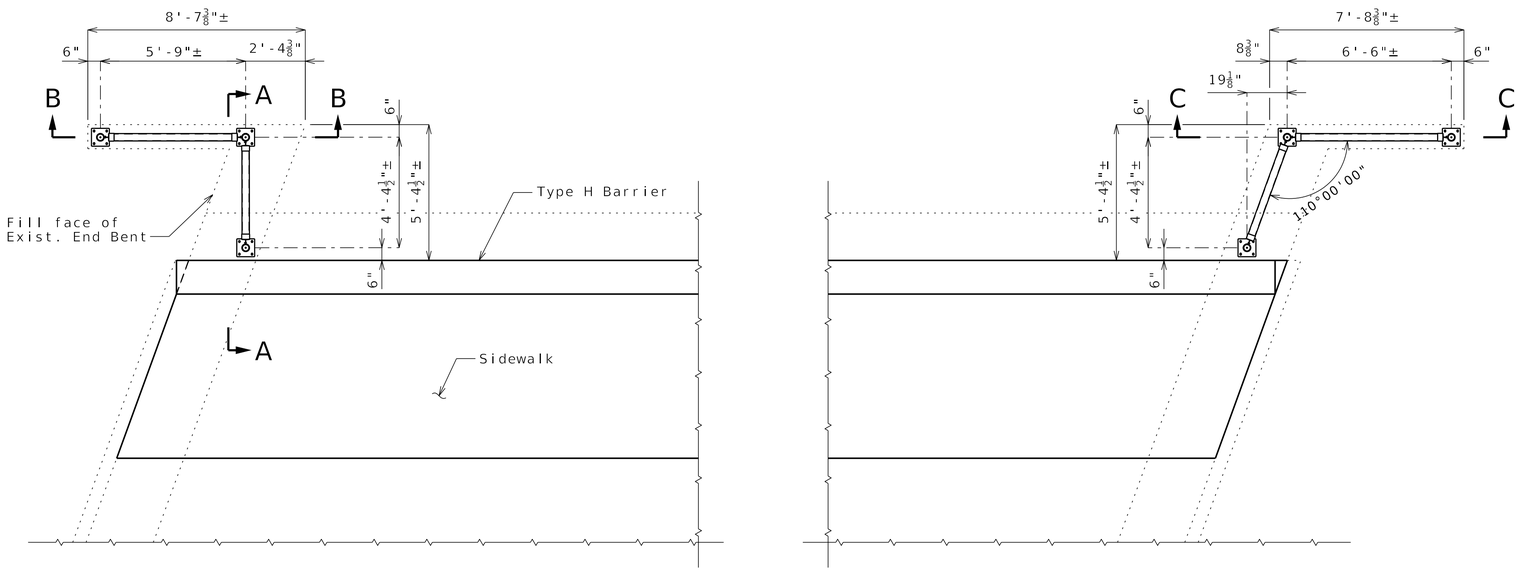
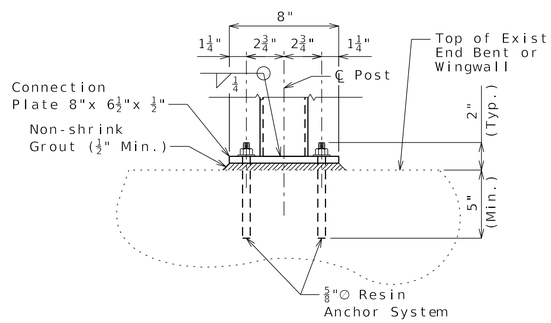
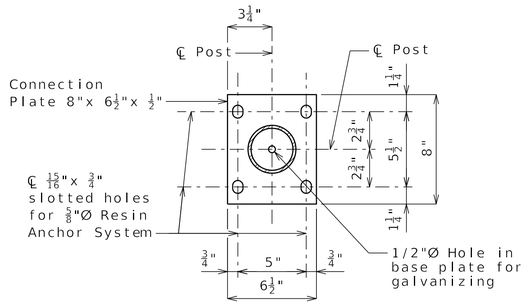


PART PLAN SHOWING (72 IN.) PEDESTRIAN FENCE ON EXISTING END BENT AND WING WALL

(Left side of bridge shown, right side similar)
(Dimensions similar at End Bent No. 1 & 4)



POST CONNECTION DETAIL



PLAN OF BASE PLATE

Notes:

For General Notes, details, and member sizes covering Pedestrian Fences, see Sheet No. 7.

All connection plates, anchor bolts, hex nuts and washers shall be galvanized in accordance with ASTM A123 and Sec 1081.

All posts shall be vertical. Grout shall be placed under post connection plates in accordance with Sec 1066.

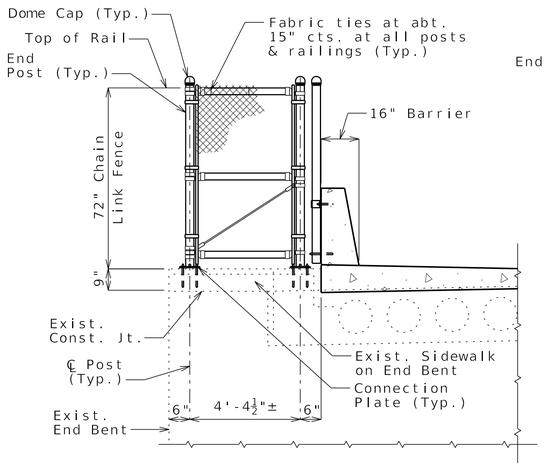
Payment for furnishing, galvanizing, finishing and erecting the (72 in.) Pedestrian fence, complete with anchor bolts and washers, will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures) per linear foot.

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

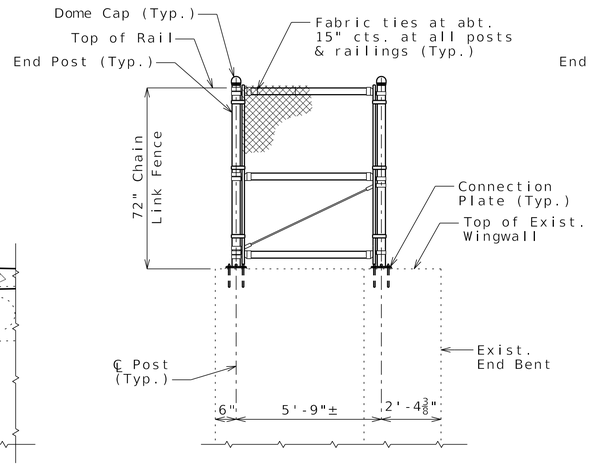
The minimum embedment depth in concrete with f`c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039, but shall not be less than 5".

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures).

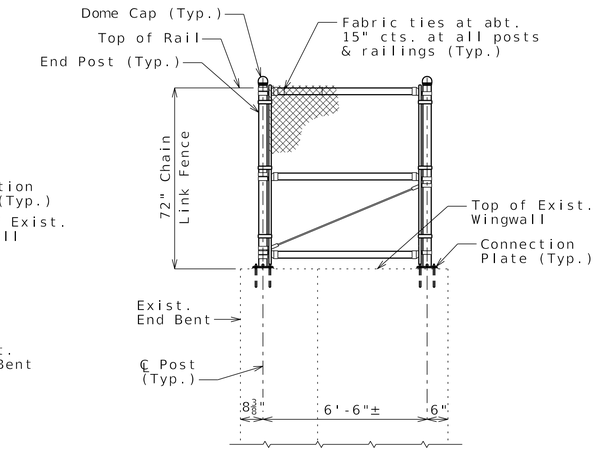
Contractor shall field verify location of installed post anchoring system prior to fabrication of the fence.



SECTION A-A



SECTION B-B



SECTION C-C

Detailed: Jul. 2024
Checked: Aug. 2024

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Sheet No. 9 of 11

(72 IN.) PEDESTRIAN FENCE

STATE OF MISSOURI
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NUMBER PE-2007002795
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DISTRICT	SHEET NO.
BR	9

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CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A11092

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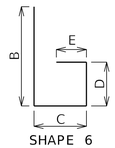
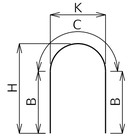


SHAPE 6
or 6S



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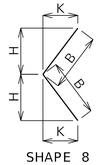

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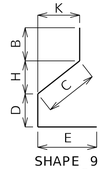

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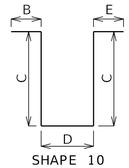

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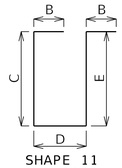

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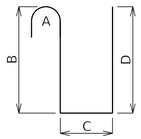
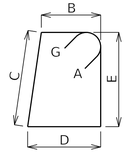


SHAPE 12



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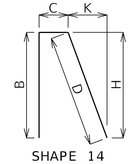

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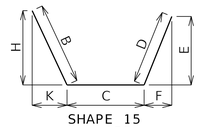
or 14S



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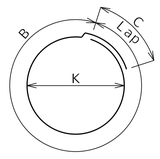
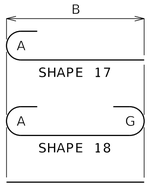
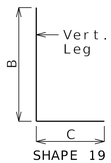
or 15S



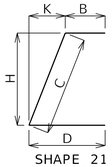
SHAPE 16



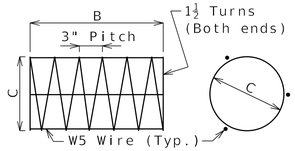
SHAPE 17
SHAPE 18
SHAPE 20



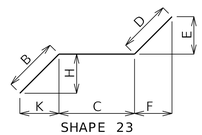
SHAPE 19
or 19S



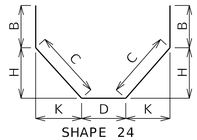
SHAPE 21
or 21S



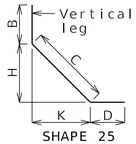
SHAPE 22



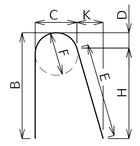
SHAPE 23
or 23S



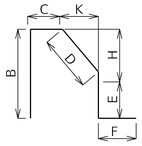
SHAPE 24
or 24S



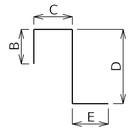
SHAPE 25
or 25S



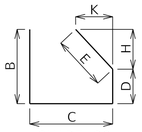
SHAPE 26



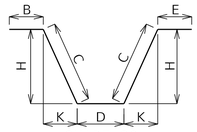
SHAPE 27S



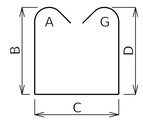
SHAPE 28
or 28S



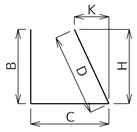
SHAPE 29
or 29S



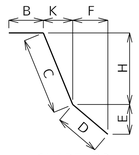
SHAPE 30
or 30S



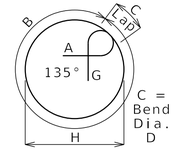
SHAPE 31S



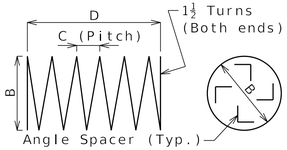
SHAPE 32
or 32S



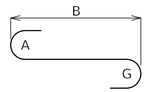
SHAPE 33
or 33S



SHAPE 34S



SHAPE 35 (1)

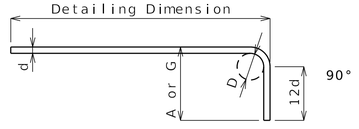


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

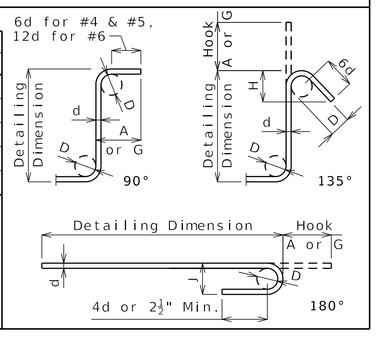


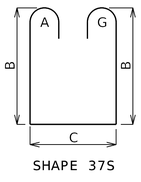
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

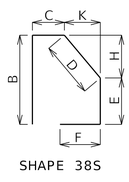
Applicable for all grades of steel.

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





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

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

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

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

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

Reinforcing Steel Totals (Pounds)

	Size	Substructure		Superstructure				Entire Bridge	
				Sidewalk					
		Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	4,210	0	0	0	4,210
	5	0	0	0	0	6,115	501	0	6,616
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	4,210	6,115	501	0	10,826

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

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: Jul. 2024
Checked: Aug. 2024

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

DATE PREPARED: 1/7/2025
ROUTE: AC
STATE: MO
DISTRICT: BR
SHEET NO.: 10
COUNTY: ST. LOUIS
JOB NO.: J6I3573B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A11092

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)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 171809

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
						ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	lb
		SIDEWALK													
310	4 S100	SIDEWALK	E	19	S	3.000	7 10.000						8 1	8 0	1657
32	4 S101	SIDEWALK	E	20		33 1.000							33 1	33 1	707
64	4 S102	SIDEWALK	E	20		11 9.000							11 9	11 9	502
16	4 S103	SIDEWALK	E	20		33 9.000							33 9	33 9	361
310	4 S104	SIDEWALK	E	19	S	12.000	6.000						1 6	1 5	293
620	4 S105	SIDEWALK	E	19	S	15.000	6.000						1 9	1 8	690
		BARRIER													
310	5 R1	BARRIER	E	14	S	2 5.000	6.500	2 5.500			2 5.000	5.500	5 5	5 3	1697
310	5 R2	BARRIER	E	19	S	23.000	9.500						2 9	2 7	835
310	5 R3	BARRIER	E	27	S		9.500	15.250	7.500	12.000	15.000	3.000	3 8	3 6	1132
32	5 R4	BARRIER	E	20		33 1.000							33 1	33 1	1104
64	5 R5	BARRIER	E	20		11 9.000							11 9	11 9	784
16	5 R6	BARRIER	E	20		33 9.000							33 9	33 9	563
		SLIP FORM													
40	5 C1	SLIP FORM	E	20		12 0.000							12 0	12 0	501

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
						ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	lb

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

For bending diagrams and steel reinforcing totals, see Sheet No. 10.

Detailed: Jul. 2024
Checked: Aug. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimensions shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

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

Sheet No. 11 of 11

BILL OF REINFORCING STEEL

STATE OF MISSOURI
KEVIN P. HEFFERN
NUMBER PE-2007002795
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
1/7/2025

ROUTE	STATE
AC	MO

DISTRICT	SHEET NO.
BR	11

COUNTY
ST. LOUIS

JOB NO.
J6I3573B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A11092

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
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Burns & McDonnell Engineering Co., Inc.
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Certificate of Authority No.: 000165
BMcD Project No. 171809

c:\bmcd_lib\pw_connect\trn\d0171822\B_A11092_11_J6I3573B_BOR_2.dgn 5:19:11 PM 1/7/2025