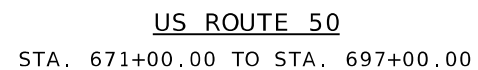
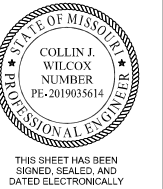


STA. 666+90.00 TO STA. 671+00.00
STA. 697+00.00 TO STA. 702+32.12



TYPICAL SECTIONS
(SHEET 1 OF 6)



DATE PREPARED
4/8/2024

ROUTE	STATE
5.0	MO

DISTRICT	SHEET NO.
CD	2

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



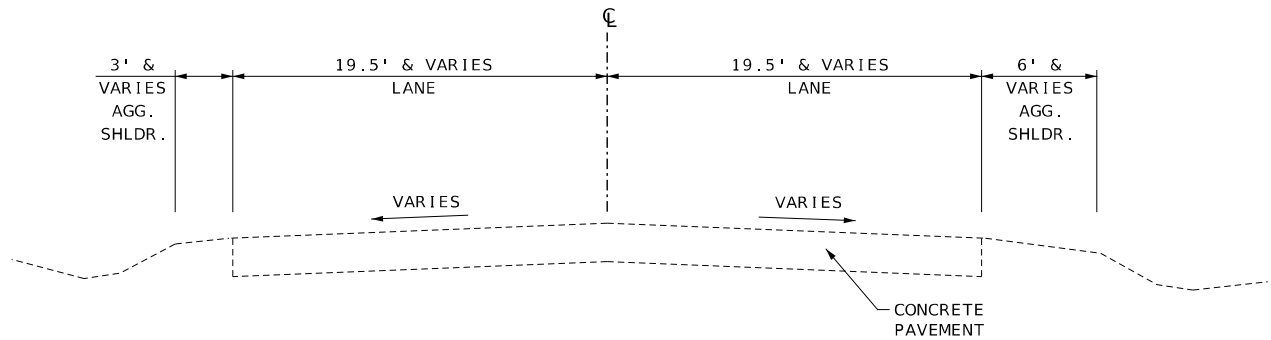
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



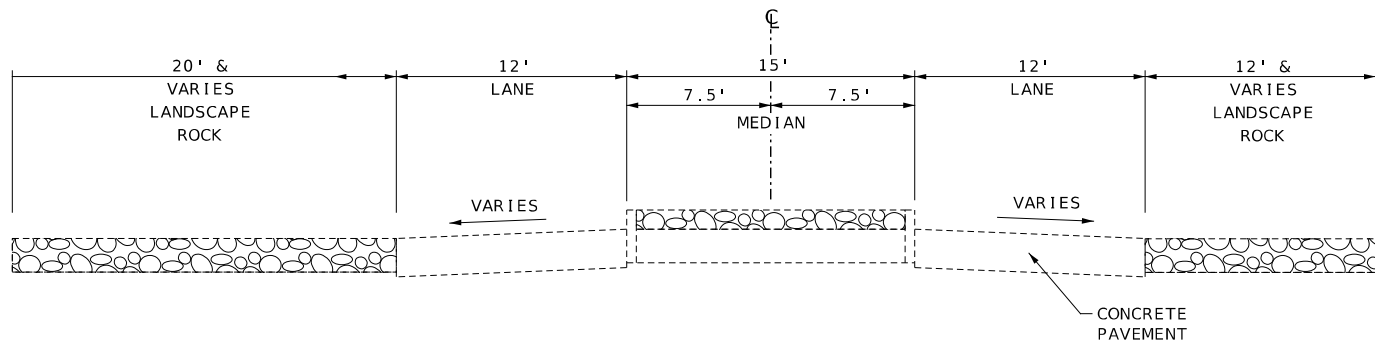
10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

REV.

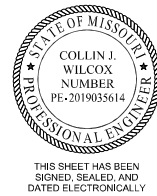


TECHNOLOGY DR.
STA. 0+29.00 TO STA. 0+75.40



TECHNOLOGY DR.
STA. 0+75.40 TO STA. 1+00.00

TYPICAL SECTIONS
(SHEET 2 OF 6)



DATE PREPARED
4/8/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 2

COUNTY OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
.

BRIDGE NO.
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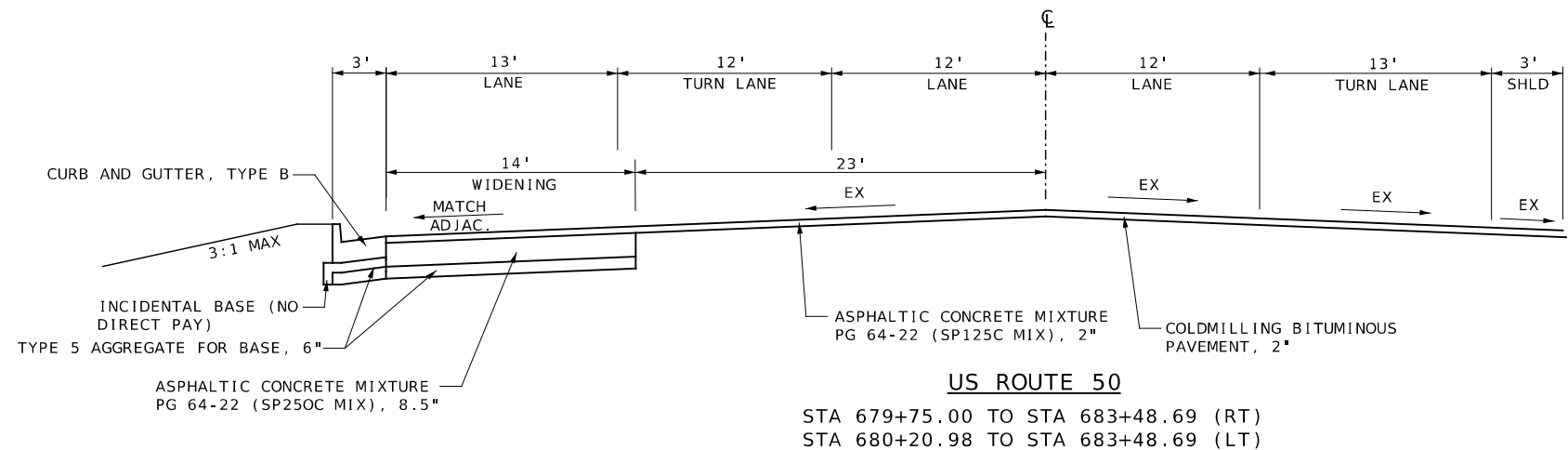
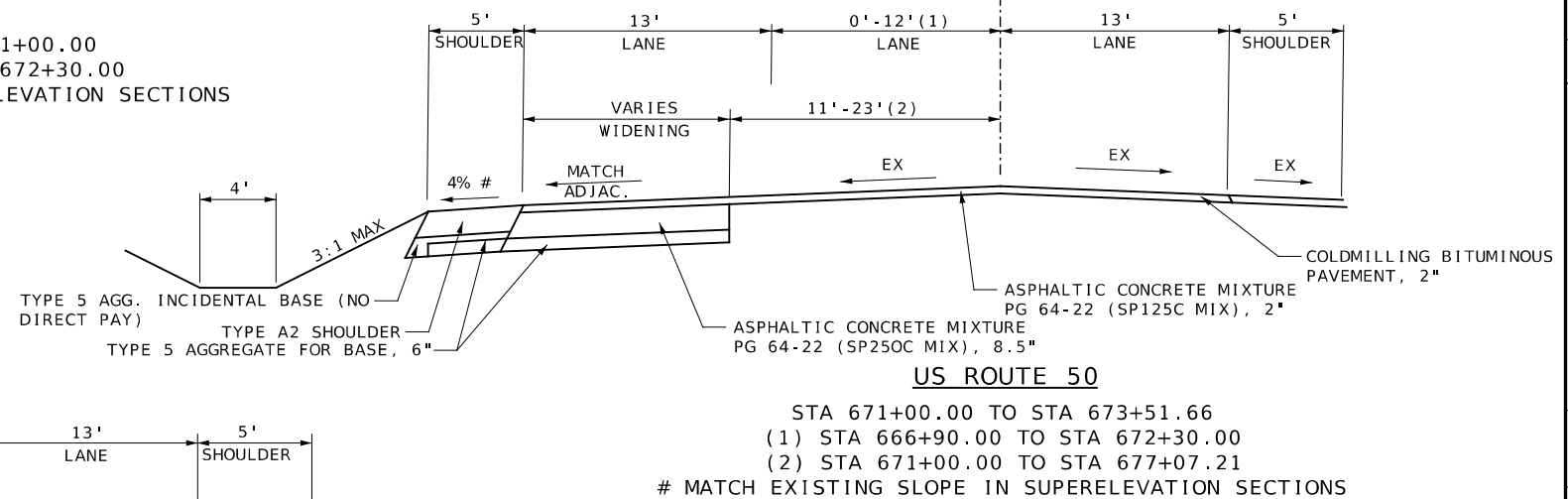
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

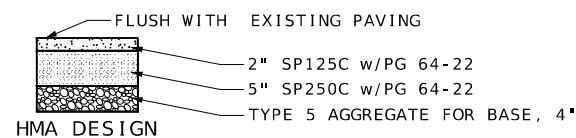
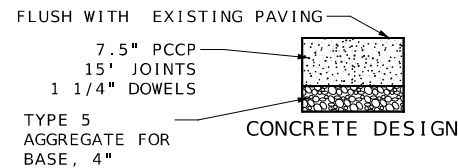


PAVEMENT REMOVAL

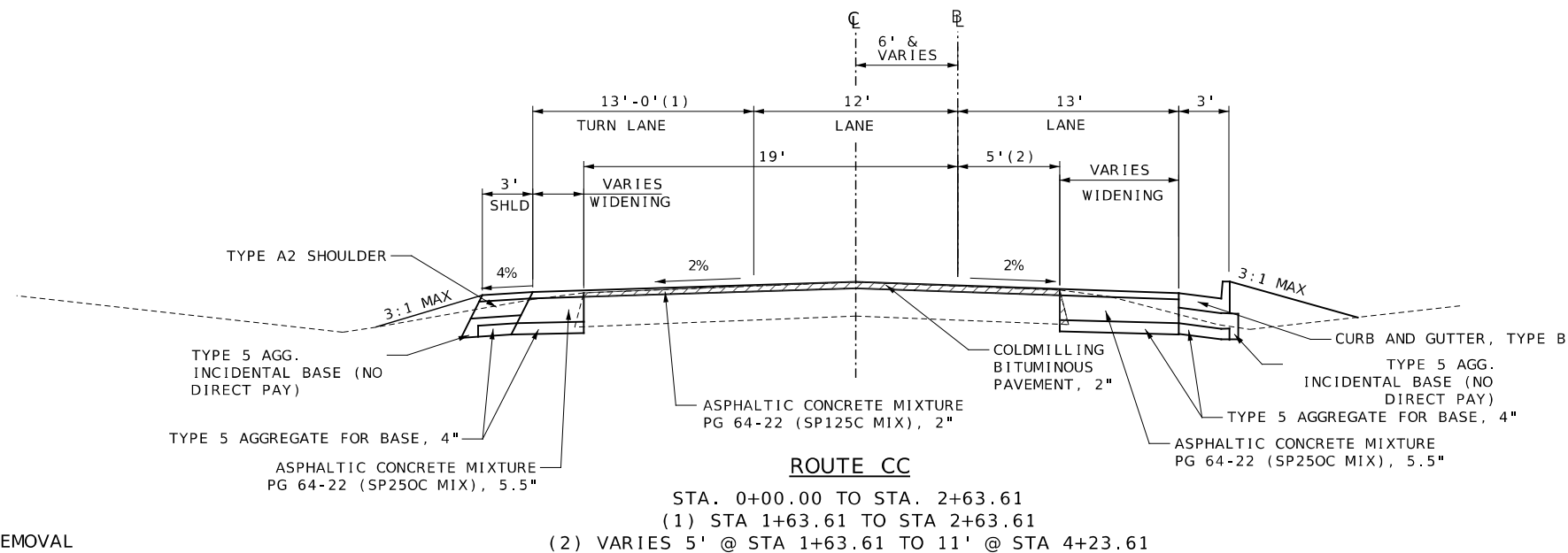
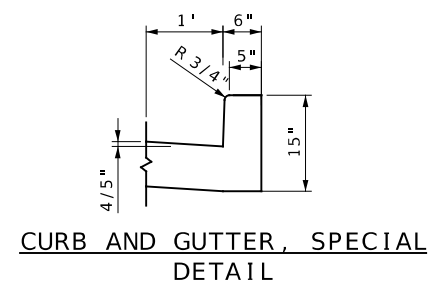
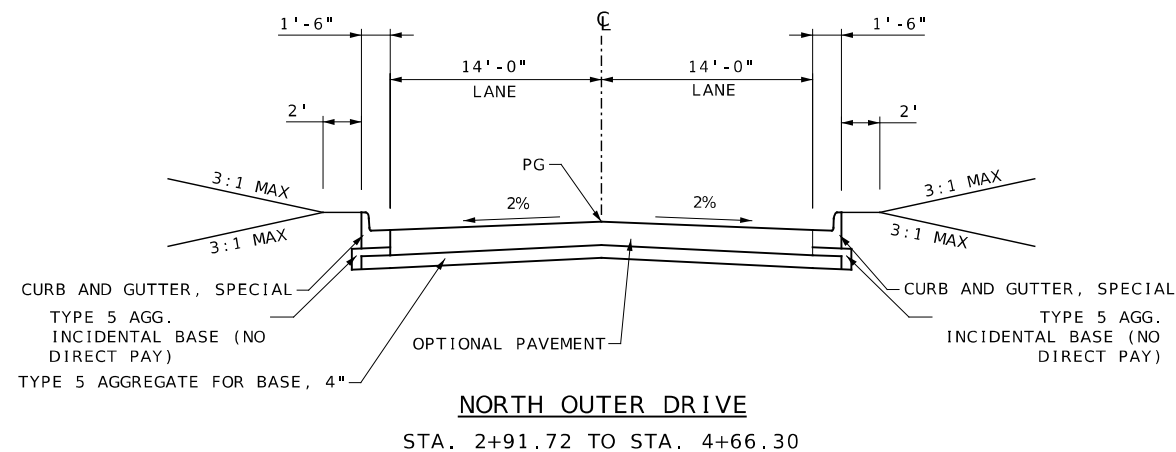
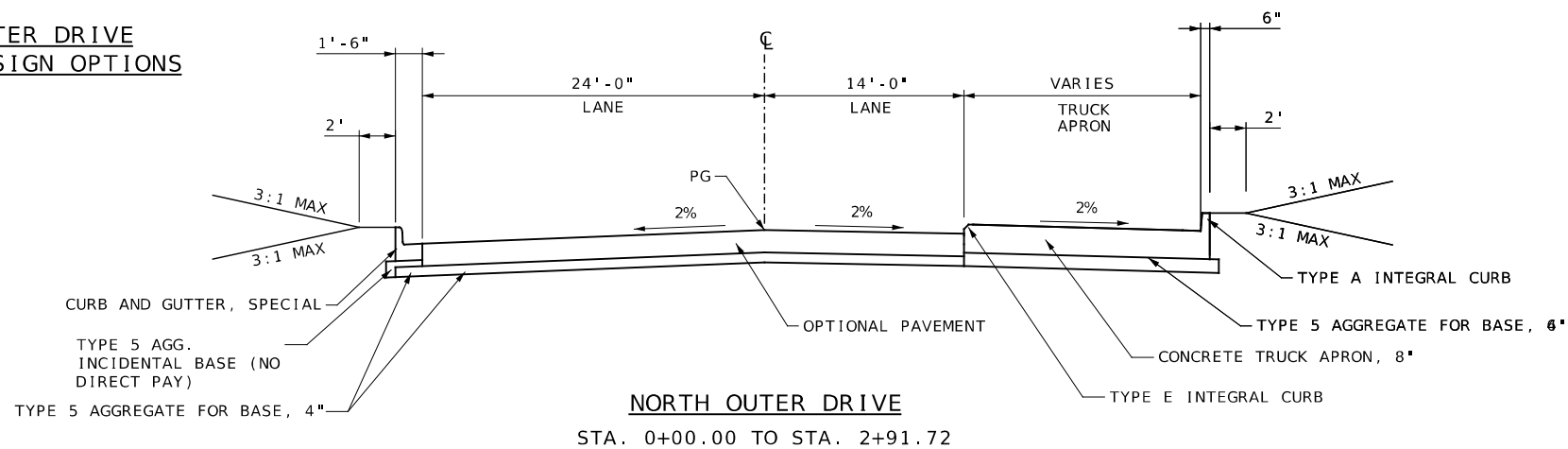
\$FILE\$	\$TIME\$	\$DATE\$
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REV: IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED



NORTH OUTER DRIVE PAVEMENT DESIGN OPTIONS



TYPICAL SECTIONS
(SHEET 5 OF 6)

STATE OF MISSOURI
COLLIN J. WILCOX
NUMBER
PE-2019035614
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 2

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

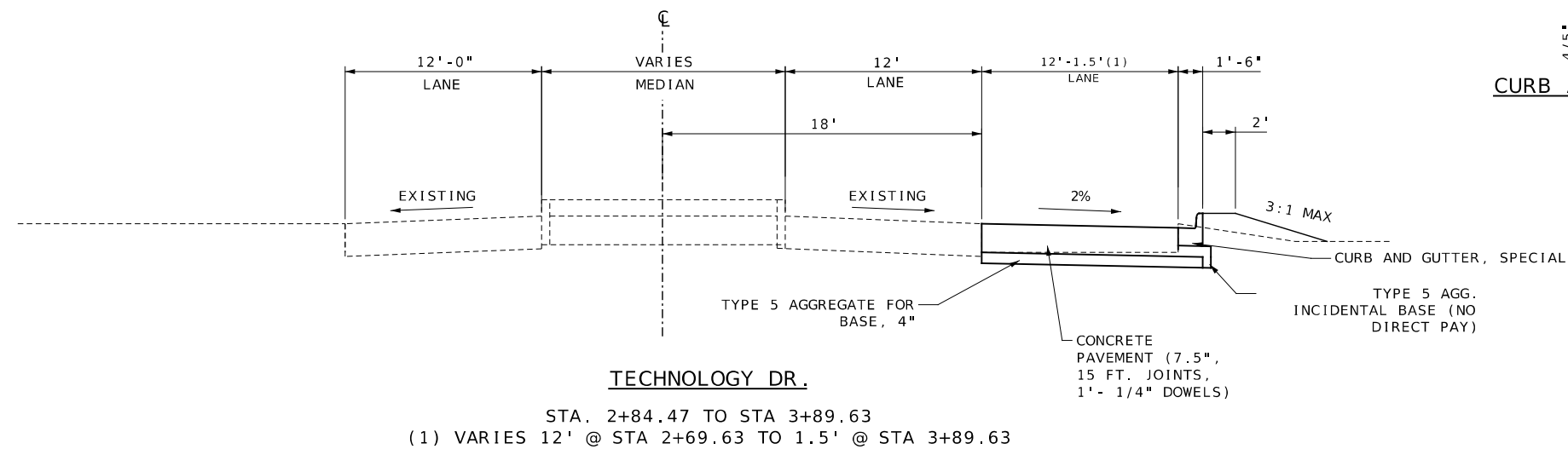
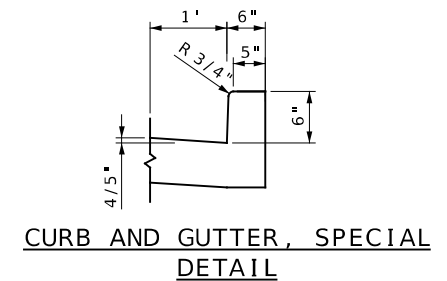
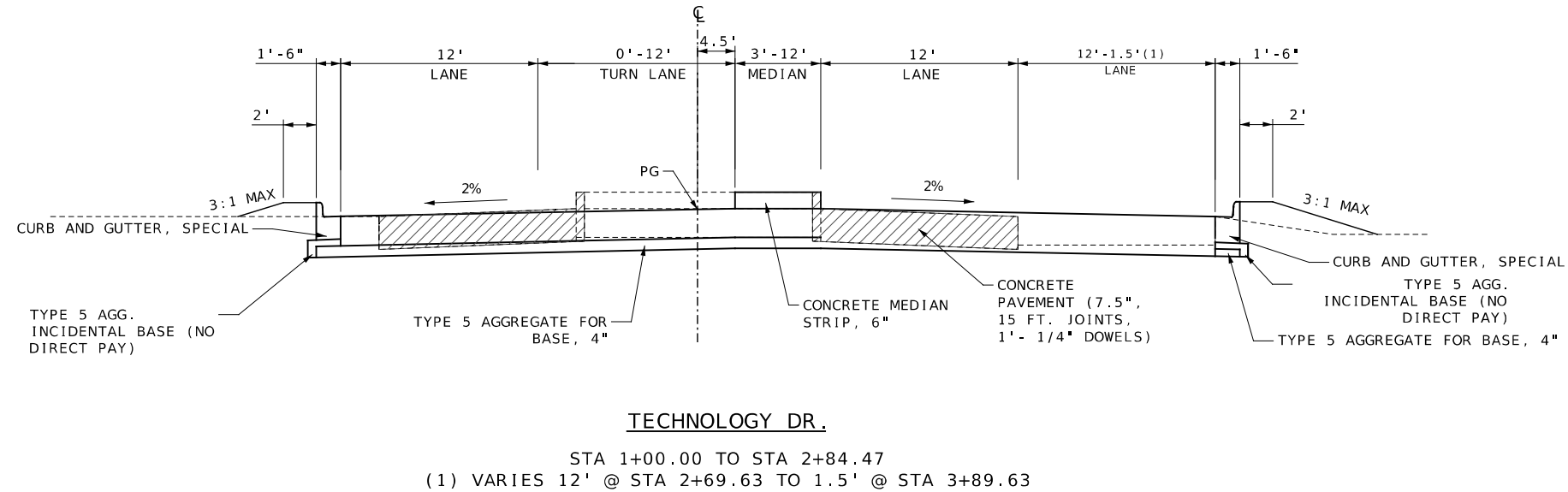
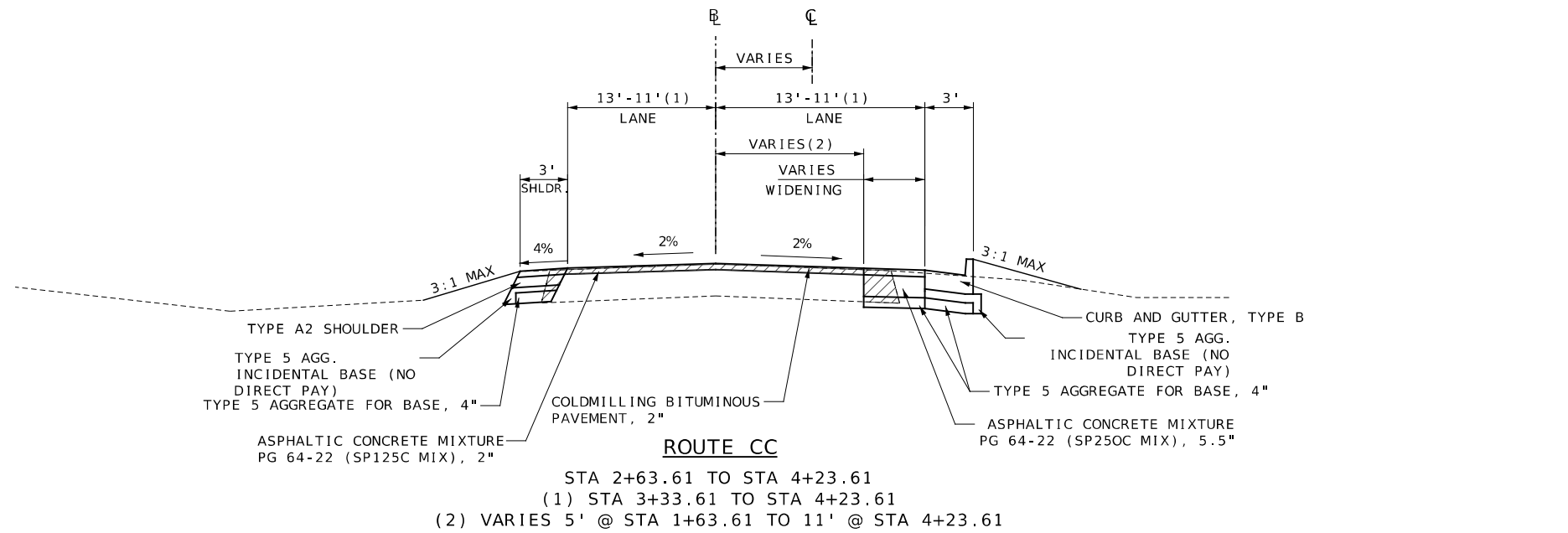
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

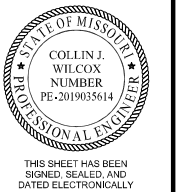
LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

REV.



TYPICAL SECTIONS
 (SHEET 6 OF 6)



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 2
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

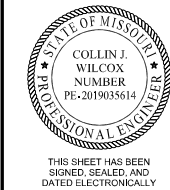
LOCHMUELLER GROUP

411 North 10th Street, Suite 200
 St. Louis, MO 63101
 Phone: 314.621.3395

EARTHWORK					
ROADWAY	FROM STATION	TO STATION	CLASS A EXCAVATION	COMPACTING EMBANKMENT	REMARKS
			(CY)	(CY)	
ROUTE 50	666+83.94	667+00.00	0.0	0	
ROUTE 50	667+00.00	667+50.00	3.3	0	
ROUTE 50	667+50.00	668+00.00	25.1	0.4	
ROUTE 50	668+00.00	668+50.00	37.3	1.9	
ROUTE 50	668+50.00	669+00.00	49.2	39.8	
ROUTE 50	669+00.00	669+18.36	34.8	115.8	
ROUTE 50	669+18.36	669+50.00	5.6	76.5	
ROUTE 50	669+50.00	670+00.00	16.0	105.2	
ROUTE 50	670+00.00	670+50.00	65.5	46.2	
ROUTE 50	670+50.00	671+00.00	80.6	2.6	
ROUTE 50	671+00.00	671+50.00	55.4	0	
ROUTE 50	671+50.00	672+00.00	38.1	0	
ROUTE 50	672+00.00	672+50.00	34.7	0	
ROUTE 50	672+50.00	673+00.00	44.4	0	
ROUTE 50	673+00.00	673+22.68	45.8	0	
ROUTE 50	673+22.68	673+46.44	21.5	0	
ROUTE 50	673+46.44	673+50.00	27.3	0	
ROUTE 50	673+50.00	674+00.00	4.2	0	
ROUTE 50	674+00.00	674+50.00	41.4	0.2	
ROUTE 50	674+50.00	675+00.00	22.0	0.4	
ROUTE 50	675+00.00	675+50.00	19.6	0.4	
ROUTE 50	675+50.00	676+00.00	20.1	0.4	
ROUTE 50	676+00.00	676+44.37	21.3	0.4	
ROUTE 50	676+44.37	676+50.00	28.9	0.2	
ROUTE 50	676+50.00	676+97.14	4.9	0	
ROUTE 50	676+97.14	677+00.00	40.6	0	
ROUTE 50	677+00.00	677+50.00	2.5	0	
ROUTE 50	677+50.00	677+80.55	38.0	0	
ROUTE 50	677+80.55	678+00.00	21.5	0	
ROUTE 50	678+00.00	678+50.00	14.2	0	
ROUTE 50	678+50.00	679+00.00	36.0	0.1	
ROUTE 50	679+00.00	679+45.42	35.6	0.2	
ROUTE 50	679+45.42	679+50.00	39.8	0	
ROUTE 50	679+50.00	680+00.00	4.9	0	
ROUTE 50	680+00.00	680+47.47	45.9	0.1	
ROUTE 50	680+47.47	680+50.00	52.9	0.1	
ROUTE 50	680+50.00	681+00.00	3.7	0	
ROUTE 50	681+00.00	681+03.89	77.8	0	
ROUTE 50	681+03.89	681+50.00	6.4	0	
ROUTE 50	681+50.00	682+00.00	58.7	14.3	
ROUTE 50	682+00.00	682+50.00	42.5	34.9	
ROUTE 50	682+50.00	683+00.00	37.7	41.3	
ROUTE 50	683+00.00	683+50.00	17.9	21.9	
ROUTE 50	683+50.00	684+00.00	0.0	0	
ROUTE 50	684+00.00	684+50.00	8.0	15.3	
ROUTE 50	684+50.00	685+00.00	72.4	15.8	
ROUTE 50	685+00.00	685+50.00	81.4	13.6	
ROUTE 50	685+50.00	686+00.00	48.6	20.4	
ROUTE 50	686+00.00	686+50.00	62.5	15	
ROUTE 50	686+50.00	687+00.00	42.7	48.2	
ROUTE 50	687+00.00	687+50.00	24.9	63.5	
ROUTE 50	687+50.00	687+84.70	21.1	71.1	
ROUTE 50	687+84.70	688+00.00	10.9	61.3	
ROUTE 50	688+00.00	688+50.00	4.7	23.2	
ROUTE 50	688+50.00	689+00.00	16.3	55.9	

EARTHWORK					
ROADWAY	FROM STATION	TO STATION	CLASS A EXCAVATION	COMPACTING EMBANKMENT	REMARKS
			(CY)	(CY)	
ROUTE 50	689+00.00	689+50.00	16.5	43.7	
ROUTE 50	689+50.00	690+00.00	16.6	45.2	
ROUTE 50	690+00.00	690+50.00	16.4	27.3	
ROUTE 50	690+50.00	691+00.00	18.6	5.3	
ROUTE 50	691+00.00	691+50.00	23.1	0	
ROUTE 50	691+50.00	692+00.00	19.1	56.2	
ROUTE 50	694+50.00	695+00.00	21.2	31.3	
ROUTE 50	695+00.00	695+50.00	31.0	38.9	
ROUTE 50	695+50.00	695+50.20	32.4	51.2	
ROUTE 50	695+50.20	696+00.00	0.1	0.2	
ROUTE 50	696+00.00	696+50.00	35.2	53	
ROUTE 50	696+50.00	697+00.00	64.3	43.7	
ROUTE 50	697+00.00	697+50.00	93.6	69.7	
ROUTE 50	697+50.00	698+00.00	125.5	52.6	
ROUTE 50	698+00.00	698+50.00	147.4	0	
ROUTE 50	698+50.00	699+00.00	150.0	0	
ROUTE 50	699+00.00	699+07.94	205.1	0	
ROUTE 50	699+07.94	699+50.00	40.8	0	
ROUTE 50	699+50.00	700+00.00	239.0	0	
ROUTE 50	700+00.00	700+50.00	342.3	0	
ROUTE 50	700+50.00	701+00.00	379.8	0	
ROUTE 50	701+00.00	701+50.00	309.2	0	
ROUTE 50	701+50.00	702+00.00	192.6	0	
ROUTE 50	702+00.00	702+32.12	104.1	0.1	
ROUTE 50	702+32.12	702+50.00	18.5	0.1	
ROUTE CC	0+00.00	0+71.18	38.4	44.5	
ROUTE CC	0+71.18	0+99.89	18.0	12.2	
ROUTE CC	0+99.89	1+00.00	0.1	0	
ROUTE CC	1+00.00	2+00.00	90.6	23	
ROUTE CC	2+00.00	2+17.32	19.4	2.7	
ROUTE CC	2+17.32	2+32.63	18.5	0.6	
ROUTE CC	2+32.63	2+68.14	45.3	1	
ROUTE CC	2+68.14	3+00.00	37.7	6	
ROUTE CC	3+00.00	4+00.00	66.8	39.9	
ROUTE CC	4+00.00	4+22.30	11.6	9.9	
N OUTER DR	0+00.00	1+00.00	155.4	0	
N OUTER DR	1+00.00	1+50.00	235.4	0	
N OUTER DR	1+50.00	2+00.00	303.5	0	
N OUTER DR	2+00.00	2+50.00	240.2	0	
N OUTER DR	2+50.00	3+00.00	202.6	0	
N OUTER DR	3+00.00	3+50.00	179.9	0	
N OUTER DR	3+50.00	4+00.00	136.7	3.6	
N OUTER DR	4+00.00	4+50.00	111.5	0	
N OUTER DR	4+50.00	4+95.90	75.0	0	
TECHNOLOGY DR	1+00.00	2+00.00	92.0	14.6	
TECHNOLOGY DR	2+00.00	2+50.00	97.5	18.4	
TECHNOLOGY DR	2+50.00	3+00.00	77.5	12.5	
TECHNOLOGY DR	3+00.00	3+50.00	46.8	2.7	
TECHNOLOGY DR	3+50.00	3+89.63	30.4	1.5	
TOTALS			6690.3	1618.2	

EARTHWORK SUMMARY			
PHASE	CLASS A EXCAVATION	COMPACTING EMBANKMENT	REMARKS
	(CY)	(CY)	
PHASE 1A	173.2	69.9	
PHASE 1B	173.2	69.9	
PHASE 1C	1241.3	524.3	
PHASE 2B	2218.9	388.6	
PHASE 3A	1648.0	114.9	
PHASE 3B	812.6	74.4	
PHASE 3C	423.2	376.2	
TOTAL	6690	1618	



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 3
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

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)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

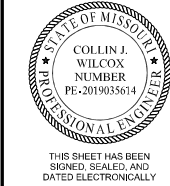
ASPHALTIC CONCRETE MIXTURE										
PLAN SHEET	STAGE	ROADWAY	FROM STATION	TO STATION	LOCATION	ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)	ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP125C MIX)	TYPE 5 AGG. BASE 6 IN. THICK	TYPE 5 AGG. BASE 4 IN. THICK	REMARKS
						(TONS)	(TONS)	(SY)	(SY)	
4	1A	RTE CC	0+06.91	1+40.00	LT	40.7	9.6	88.0		
9	1A	RTE CC	1+40.00	2+13.72	LT	15.0	3.5	32.5		
4	1B	RTE CC	0+26.61	1+40.00	RT	88.1	20.7	190.7		
9	1B	RTE CC	1+40.00	4+03.89	RT	66.1	15.6	143.1		
5	1C	ROUTE 50	689+60.14	690+00.00	LT	29.8	7.0	64.5		
6	1C	ROUTE 50	690+90.00	695+20.00	LT	548.7	129.1	1187.1		
7	1C	ROUTE 50	695+20.00	700+50.00	LT	304.4	71.6	658.7		
8	1C	ROUTE 50	700+50.00	702+32.12	LT	37.3	8.8	80.7		
4	2A	ROUTE 50	683+98.00	684+30.05	RT	7.9	1.8	17.0		
1	2B	ROUTE 50	666+90.00	668+40.00	LT	28.1	6.6	60.8		
2	2B	ROUTE 50	668+40.00	673+03.77	LT	258.8	60.9	559.9		
2	3A	ROUTE 50	673+03.77	673+90.00	LT	35.1	8.3	76.0		
3	3A	ROUTE 50	673+90.00	679+30.00	LT	222.5	52.4	481.4		
4	3A	ROUTE 50	679+30.00	684+08.09	LT	403.3	94.9	872.7		
4	3B	ROUTE 50	684+08.09	684+70.00	LT	69.1	16.3	149.5		
5	3B	ROUTE 50	684+70.00	686+35.64	LT	189.3	44.5	409.5		
5	3B	RTE CC	3+34.11	3+83.56	LT	55.3	20.1		185.0	
5	3C	RTE CC	3+83.56	4+19.72	LT	31.1	11.3		104.1	
5	3C	ROUTE 50	686+35.87	689+60.14	LT	235.2	55.3	508.9		
TOTALS						2665.8	638.3	5581.0	289.1	

TYPE A2 SHOULDER								
PLAN SHEET	STAGE	ROADWAY	FROM STATION	TO STATION	LOCATION	TYPE A2 SHOULDER	TYPE 5 AGG. BASE 6 IN. THICK	REMARKS
						(SY)	(SY)	
4	1A	RTE CC	0+08.56	1+40.00	LT	55.6	55.6	
9	1A	RTE CC	1+40.00	4+22.89	LT	62.4	62.4	
6	1C	RTE 50	691+36.17	695+20.00	LT	158.3	158.3	
7	1C	RTE 50	695+20.00	698+71.18	LT	195.7	195.7	
1	2B	RTE 50	666+89.87	668+40.00	LT	82.8	82.8	
2	2B	RTE 50	668+40.00	672+94.01	LT	247.1	247.1	
7	2B	RTE 50	698+71.18	700+50.00	LT	96.8	96.8	
8	2B	RTE 50	700+50.00	702+32.35	LT	100.0	100.0	
TOTALS						998.6	998.6	

ENTRANCES							
PLAN SHEET	ROADWAY	FROM STATION	TO STATION	LOCATION	PAVED APPROACH, 8"	TYPE 5 AGG. BASE 4 IN. THICK	REMARKS
					(SY)	(SY)	
2	RTE 50	672+82.73	673+53.32	LT	120.7	120.7	
3	RTE 50	676+24.64	676+69.96	LT	76.2	76.2	
3	RTE 50	676+69.96	677+24.04	LT	97.2	97.2	
3	RTE 50	677+24.04	678+36.05	LT	127.1	127.1	
4	RTE 50	679+05.42	679+90.15	LT	105.4	106.4	
4	RTE 50	680+25.81	680+76.86	LT	60.3	60.8	
4	RTE 50	680+88.39	681+49.59	LT	127.3	127.3	
4	N. OUTER	1+96.64	2+03.20	LT	17.1	17.1	
5	N.OUTER	2+00.84	2+11.64	LT	31.1	31.1	
9	RTE CC	1+79.12	2+58.07	RT	122.3	122.3	
9	RTE CC	2+28.89	3+22.64	LT	118.6	118.6	
TOTAL					1004.8	1004.8	

COLDMILL BITUMINOUS PAVEMENT								
PLAN SHEET	STAGE	ROADWAY	FROM STATION	TO STATION	LOCATION	TACK COAT	COLDMILL BIT. PVM.T. 3" OR LESS	REMARKS
						(GAL)	(SY)	
4	1A	RTE CC	0+08.56	1+40.00	LT	11.1	222.2	
9	1A	RTE CC	1+40.00	4+23.00	LT	7.9	157.8	
4	1B	RTE CC	0+26.61	1+40.00	RT	12.7	253.4	
9	1B	RTE CC	1+40.00	4+24.15	RT	18.1	362.9	
5	1C	RTE 50	689+59.38	690+00.00	LT	5.2	104.4	
6	1C	RTE 50	690+00.00	695+20.00	LT	58.4	1167.2	
7	1C	RTE 50	695+20.00	698+71.18	LT	23.4	468.5	
1	2A	RTE 50	666+90.00	668+40.00	RT	14.6	292.2	
2	2A	RTE 50	668+40.00	673+90.00	RT	52.6	1051.6	
3	2A	RTE 50	673+90.00	679+30.00	RT	54.0	1080.0	
4	2A	RTE 50	679+30.00	684+70.00	RT	67.8	1355.0	
5	2A	RTE 50	684+70.00	690+00.00	RT	51.6	1031.6	
6	2A	RTE 50	690+00.00	695+20.00	RT	51.0	1019.9	
7	2A	RTE 50	695+20.00	700+50.00	RT	50.2	1003.8	
8	2A	RTE 50	700+50.00	702+32.12	RT	17.5	350.3	
1	2B	RTE 50	666+90.00	668+40.00	LT	9.1	182.9	
2	2B	RTE 50	668+40.00	673+03.97	LT	22.8	455.1	
7	2B	RTE 50	698+71.18	700+50.00	LT	10.8	215.3	
8	2B	RTE 50	700+50.00	702+32.12	LT	11.1	221.7	
2	3A	RTE 50	673+03.97	673+90.00	LT	6.6	131.8	
3	3A	RTE 50	673+90.00	679+30.00	LT	63.4	1267.5	
4	3A	RTE 50	679+30.00	684+08.09	LT	61.1	1221.8	
4	3B	RTE 50	684+08.09	684+70.00	LT	7.9	158.2	
5	3B	RTE 50	684+70.00	686+35.87	LT	21.2	423.9	
5	3C	RTE 50	686+35.87	689+58.42	LT	41.4	827.9	
TOTALS						752.0	15027	

QUANTITY SHEETS
3 OF 8



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 3
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

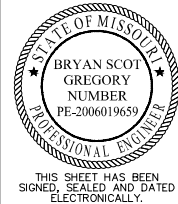
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

EFFECTIVE: 04-01-2023																							
SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN									ITEM	TOTAL						
IN.	SQ.FT.	EACH	SQ.FT.	EACH	SQ.FT.	NUM.	DESCRIPTION								NUMBER	QTY	DESCRIPTION						
WARNING SIGNS																							
WO1-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)	E05-1	36X48	12.00						GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)				
WO1-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)	E05-2	48X36	12.00						EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)				
WO1-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)	E05-2a	48X36	12.00						EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)				
WO1-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)	GO20-1	60X24	10.00	2	20.00			1	ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)				
WO1-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)	GO20-2	48X24	8.00	2	16.00			26	END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)				
WO1-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)	GO20-4	36X18	4.50						PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)				
WO1-4L	48X48	16.00	2	32.00		15L	REVERSE CURVE (SYMBOL LEFT ARROW)	GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)				
WO1-4R	48X48	16.00	2	32.00		15R	REVERSE CURVE (SYMBOL RIGHT ARROW)	GO20-4a	18X12	1.50	1	1.50			58	PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL				
WO1-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)				
WO1-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-8a	24X18	3.00						END DETOUR	6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)				
WO1-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MO4-9L	48X36	12.00	5	60.00			38	DETOUR (LEFT ARROW)	6161008	2	ADVANCED WARNING RAIL SYSTEM				
WO1-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-9R	48X36	12.00	6	72.00			39	DETOUR (RIGHT ARROW)	6161012		BUOYS (BOATS KEEP OUT)				
WO1-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00	4	16.00			41	STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)				
WO1-6a	72X36	18.00					HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00						DETOUR (ARROW LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)				
WO1-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00						DETOUR (ARROW RIGHT)	6161025	150	CHANNELIZER (TRIM LINE)				
WO1-7a	72X36	18.00					DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	REGULATORY SIGNS								6161030	14	TYPE III MOVEABLE BARRICADE					
WO1-8	18X24	3.00					CHEVRON (SYMBOL)	R1-1	48X48	13.25						STOP	6161033	30	DIRECTION INDICATOR BARRICADE				
WO1-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.	6.93						YIELD	6161040	1	FLASHING ARROW PANEL				
WO3-1	48X48	16.00					STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER				
WO3-2	48X48	16.00					YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161055	30	SEQUENTIAL FLASHING WARNING LIGHT				
WO3-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00						SPEED LIMIT XX	6161070		TUBULAR MARKER				
WO3-4	48X48	16.00	4	64.00		11	BE PREPARED TO STOP	R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM				
WO3-5	48X48	16.00					SPEED LIMIT AHEAD	R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)			CHANGEABLE MESSAGE SIGN,				
WO4-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00						NO TURNS	6161096		COMMISSION FURNISHED/RETAINED				
WO4-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00						NO U-TURN (SYMBOL)			CHANGEABLE MESSAGE SIGN W/O COMM.				
WO4-1aL	48X48	16.00					MERGE (ARROW SYMBOL)	R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT	6161098A	6**	INTERFACE - CONTRACTOR FURNISHED/RETAINED				
WO4-1aR	48X48	16.00					MERGE (ARROW SYMBOL)	R3-7R	30X30	6.25	2	12.50			43	RIGHT LANE MUST TURN RIGHT			CHANGEABLE MESSAGE SIGN WITH COMM.				
WO5-1	48X48	16.00					ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00						DO NOT PASS	6161099		INTERFACE - CONTRACTOR FURNISHED/RETAINED				
WO5-3	48X48	16.00					ONE LANE BRIDGE	R4-2	36X48	12.00						PASS WITH CARE	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM				
WO5-5	48X48	16.00	1	16.00		34	NARROW LANES	R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)	6162002	4**	TEMPORARY LONG-TERM RUMBLE STRIPS				
WO6-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)	R4-7a	36X48	12.00	1	12.00			42	KEEP RIGHT (HORIZONTAL ARROW)			TEMPORARY TRAFFIC BARRIER				
WO6-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25						DO NOT ENTER	6173600D		CONTRACTOR FURNISHED/RETAINED				
WO6-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00						WRONG WAY			TEMPORARY TRAFFIC BARRIER				
WO7-3a	30X24	5.00					NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED				
WO8-1	48X48	16.00					BUMP	R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION				
WO8-2	48X48	16.00					DIP	R6-2L	24X30	5.00						ONE WAY (LEFT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER				
WO8-3	48X48	16.00					PAVEMENT ENDS	R6-2R	24X30	5.00						ONE WAY (RIGHT)			TEMPORARY TRAFFIC BARRIER				
WO8-4	48X48	16.00					SOFT SHOULDER	R9-9	24X12	2.00						SIDEWALK CLOSED	6176000B		COMMISSION FURNISHED/RETAINED				
WO8-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)									SIDEWALK CLOSED AHEAD,			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION				
WO8-6	48X48	16.00					TRUCK CROSSING (WITH FLAGS)	R9-11L	24X18	3.00						(ARROW LEFT) CROSS HERE	6177000B		COMMISSION FURNISHED/RETAINED				
WO8-6c	48X48	16.00					TRUCK ENTRANCE									SIDEWALK CLOSED AHEAD,	6205301B	8130**	TEMPORARY REMOVABLE MARKING TAPE 4IN,WHITE				
WO8-7	36X36	9.00					LOOSE GRAVEL	R9-11R	24X18	3.00						(ARROW RIGHT) CROSS HERE	6205303B	9000**	TEMPORARY REMOVABLE MARKING TAPE 4IN,YELLO				
WO8-7a	36X36	9.00					FRESH OIL/LOOSE GRAVEL	R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)	6208064A		TEMPORARY RAISED PAVEMENT MARKER				
WO8-9	48X48	16.00					LOW SHOULDER	R11-2	48X30	10.00	4	40.00			29	ROAD CLOSED	9029400		TEMPORARY TRAFFIC SIGNALS				
WO8-11	48X48	16.00	4	64.00			UNEVEN LANES									ROAD CLOSED XX MILES AHEAD	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING				
WO8-12	48X48	16.00	4	64.00			NO CENTER LINE	R11-3a	60X30	12.50						LOCAL TRAFFIC ONLY							
WO8-15	48X48	16.00					GROOVED PAVEMENT	R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC							
WO8-15P	30X24	5.00					MOTORCYCLE (PLAQUE)	CONST-3A	60X48	20.00						FINE SIGN							
WO8-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)	CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)							
WO8-17P	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)	MISCELLANEOUS SIGNS								**NOT INCLUDED IN TEMPORARY TRAFFIC CONTROL - 1 LUMP SUM QUANTITY							
W10-1	42RND.	9.62					RAILROAD CROSSING	CONST-5	48X36	12.00	2	24.00			62	POINT OF PRESENCE							
WO12-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)	CONST-5	96X48	32.00						POINT OF PRESENCE							
WO12-2	48X48	16.00					LOW CLEARANCE (SYMBOL)	CONST-7	48X24	8.00	2	16.00			66	RATE OUR WORK ZONE							
WO12-2X	24X18	3.00					LOW CLEARANCE (PLAQUE)	CONST-7	72X36	18.00						RATE OUR WORK ZONE							
WO12-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)	CONST-8	48X36	12.00	2	24.00			33	WORK ZONE NO PHONE ZONE							
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	10	160.00		2	ROAD/BRIDGE/RAMP WORK AHEAD																
WO20-2	48X48	16.00	2	32.00		45	DETOUR AHEAD	616-10.05		TOTAL													
WO20-3	48X48	16.00					ROAD CLOSED AHEAD	CONSTRUCTION SIGNS		954.0													
WO20-4	48X48	16.00	1	16.00		7	ONE LANE ROAD AHEAD	616-10.10		TOTAL													
WO20-5	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED AHEAD	RELOCATED SIGNS		0						NO DIRECT PAYMENT WILL BE MADE FOR RELOCATED SIGNS							
WO20-5a	48X48	16.00					2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD																
WO20-6a	48X48	16.00	2	32.00		6	RIGHT/CENTER/LEFT LANE CLOSED																
WO20-7a	48X48	16.00	5	80.00		8	FLAGGER (SYMBOL, WITH FLAGS)																
WO21-2	36X36	9.00					FRESH OIL																
WO21-5	48X48	16.00	3	48.00		21	SHOULDER WORK AHEAD																
WO22-1	48X48	16.00					BLASTING ZONE AHEAD																
WO22-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE																
WO22-3	42X36	10.50					END BLASTING ZONE																
GO22-1	21X15	2.19					WET PAINT (ARROW PIVOTS)																
																				QUANTITIES			



DATE PREPARED
4/4/2024

ROUTE	STA
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DISTRICT	SHEET
CD	3

COUNTY
OSAGE

JOB NO.
15P3574

CONTRACT ID.	
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PROJECT NO.

BRIDGE NO.

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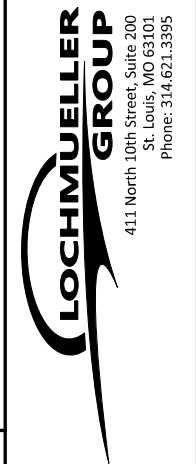
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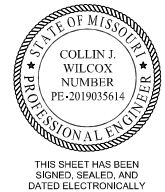
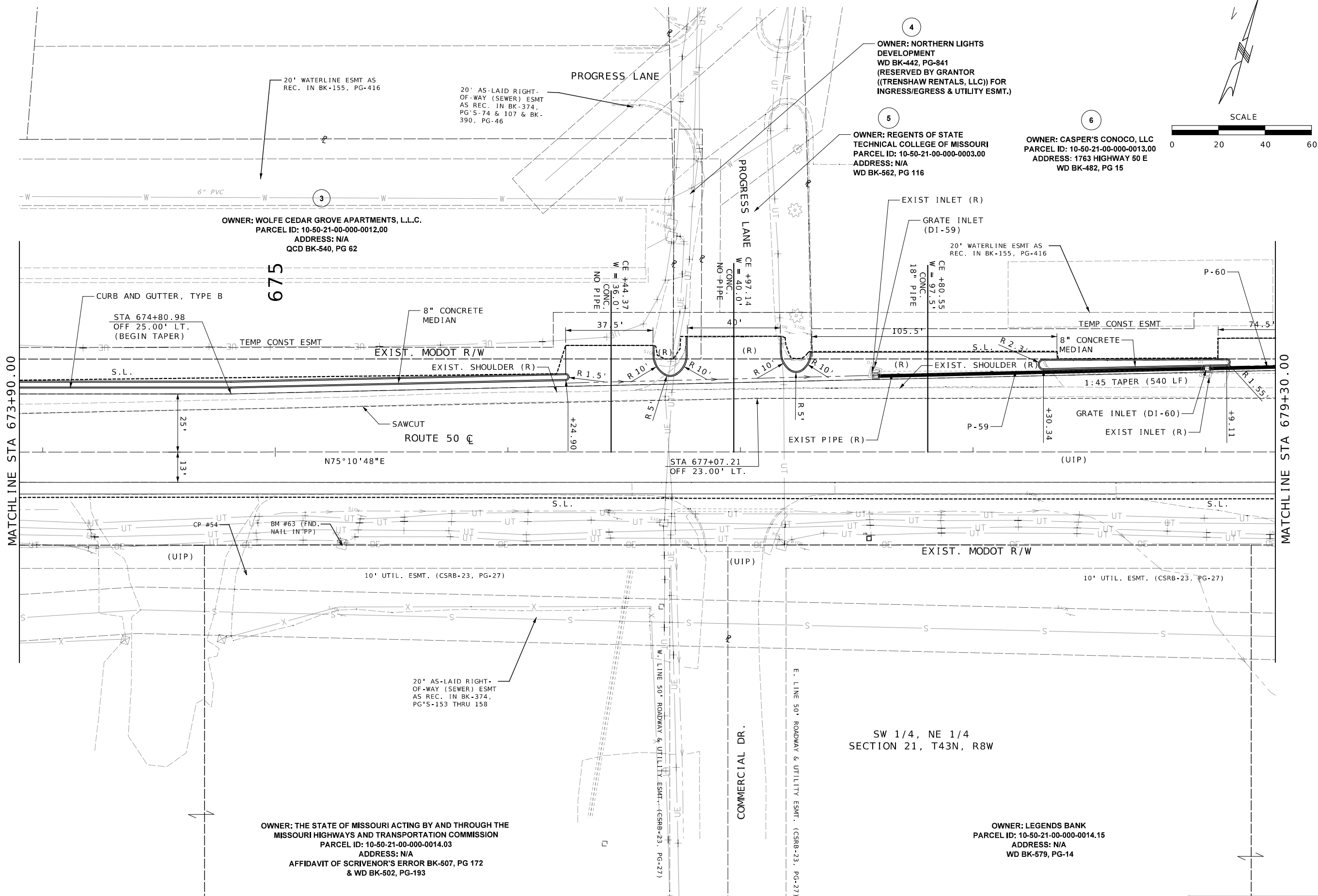
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 6
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

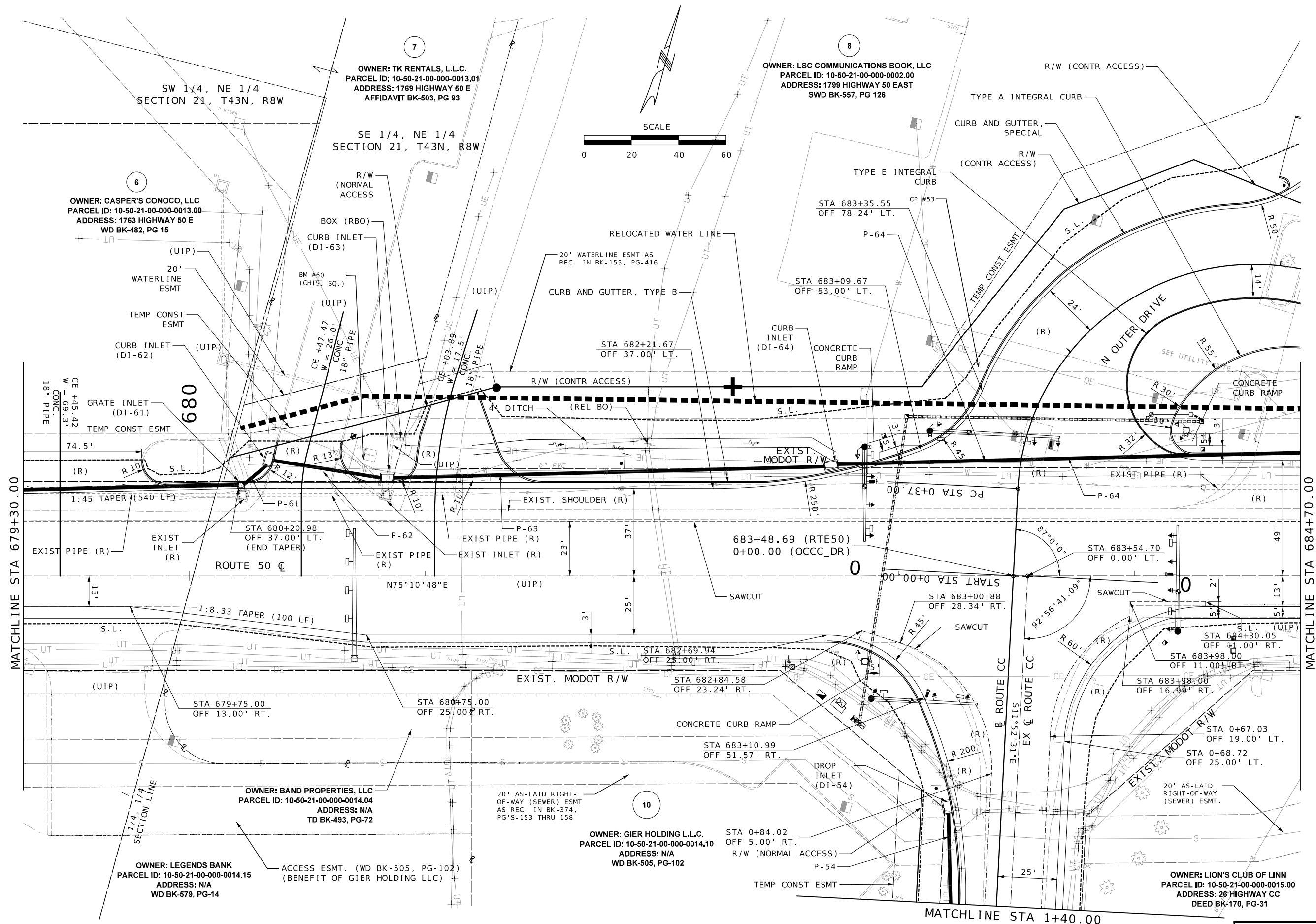
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

LOCHMUELLER GROUP

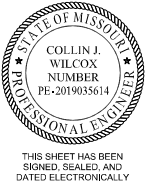
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

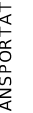


RTE 50 PLAN SHEET
4 OF 10

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DATE PREPARED	
4/8/2024	
ROUTE	STATE
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DISTRICT	SHEET NO.
CD	7
COUNTY	
OSAGE	
JOB NO.	
J5P3574	
CONTRACT ID.	
PROJECT NO.	
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)

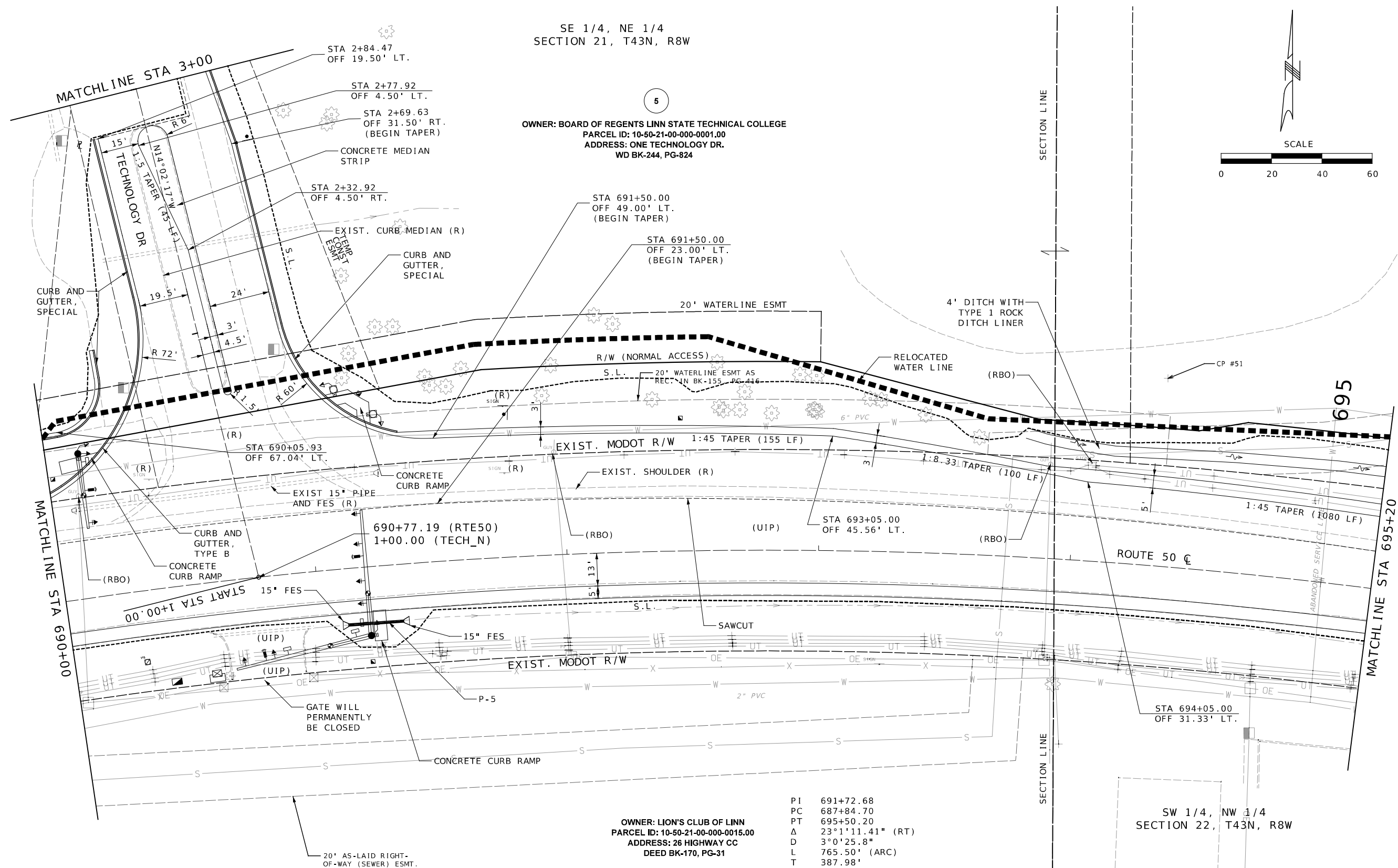


**MUPELLER
GROUP**
4111 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

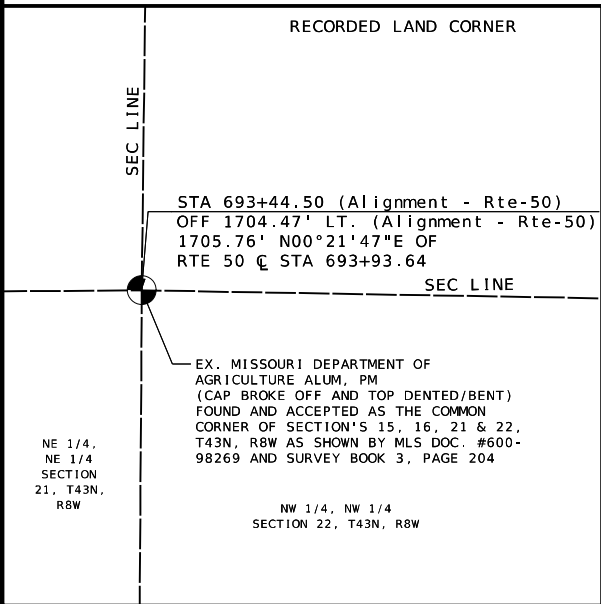
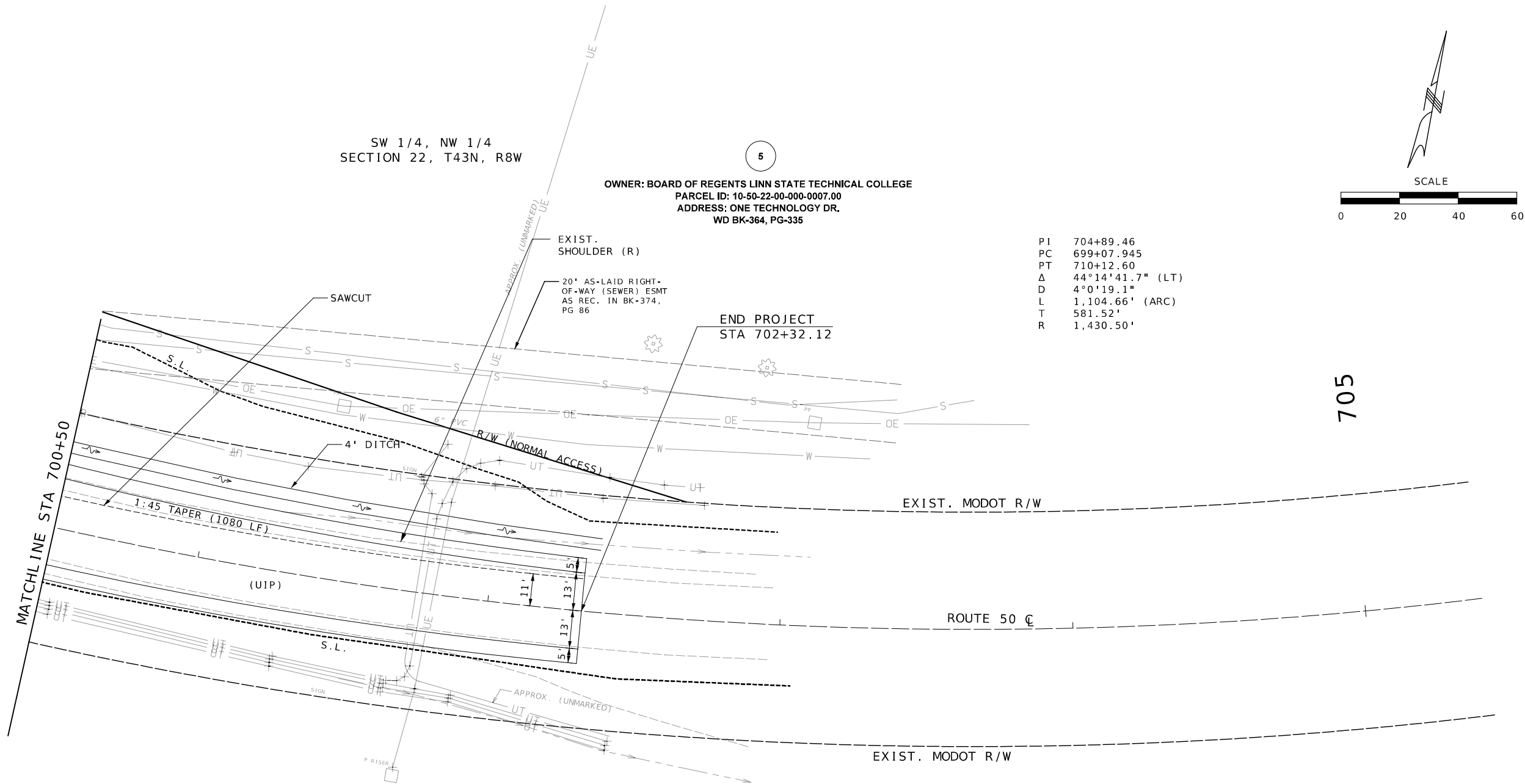
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OWNER: BOARD OF REGENTS LINN STATE TECHNICAL COLLEGE
PARCEL ID: 10-50-22-00-000-0007.00
ADDRESS: ONE TECHNOLOGY DR.
WD BK-364, PG-335

PI 704+89.46
PC 699+07.945
PT 710+12.60
 Δ 44°14'41.7" (LT)
D 4°0'19.1"
L 1,104.66' (ARC)
T 581.52'
R 1,430.50'

OWNER: REORGANIZED SCHOOL DISTRICT NO. R-II OF OSAGE COUNTY
PARCEL ID: 10-50-22-00-000-0013.00
ADDRESS: N/A
DEED BK-178, PG-18, BK-206, PG-415

DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 11

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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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)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

OWNER: LION'S CLUB OF LINN
PARCEL ID: 10-50-21-00-000-0015.00
ADDRESS: 26 HIGHWAY CC
DEED BK-170, PG-31



STATE OF MISSOURI
COLLIN J. WILCOX
NUMBER
PE-2019035614
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED,
AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE	STATE
50	MO

DISTRICT	SHEET NO.
CD	12

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO. _____

BRIDGE NO.
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COMMISSION

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

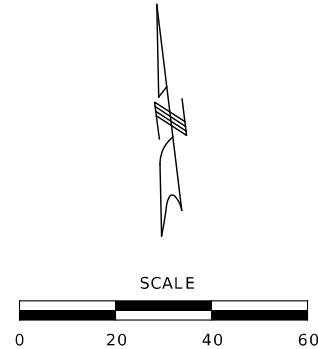
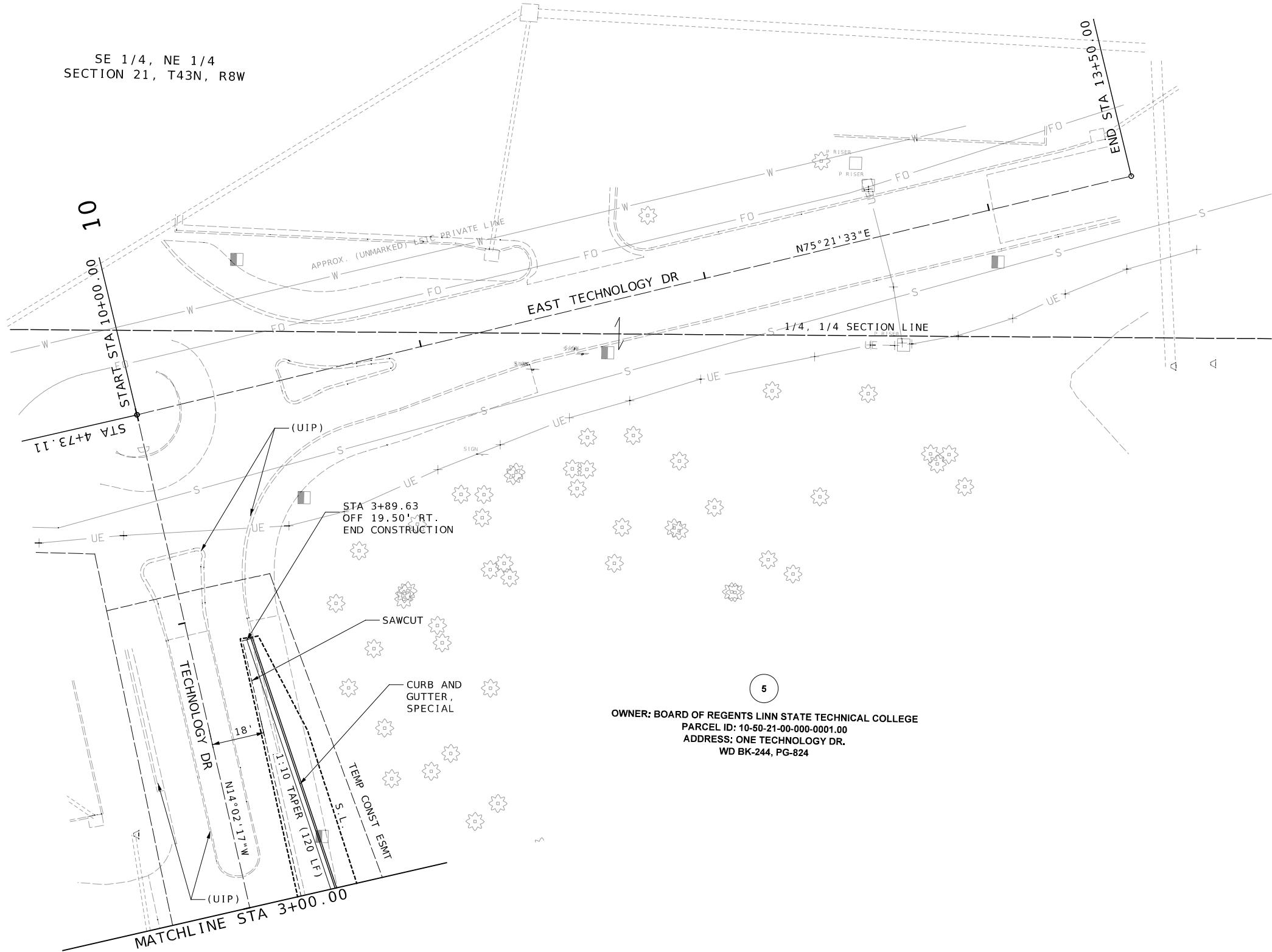
LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

RTE 50 PLAN SHEET
9 OF 10

\$FILE\$	\$TIME\$	\$DATE\$
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REV. _____ IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SE 1/4, NE 1/4
SECTION 21, T43N, R8W



5
OWNER: BOARD OF REGENTS LINN STATE TECHNICAL COLLEGE
PARCEL ID: 10-50-21-00-000-0001.00
ADDRESS: ONE TECHNOLOGY DR.
WD BK-244, PG-824

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 13

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
.

BRIDGE NO.
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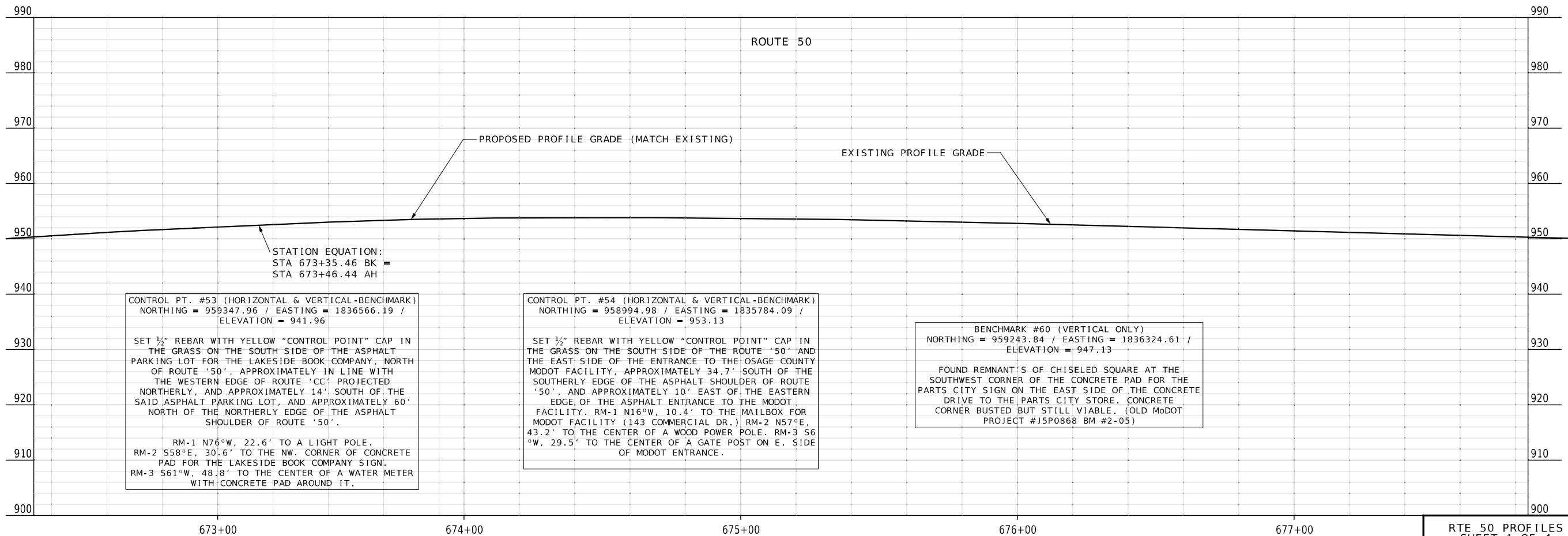
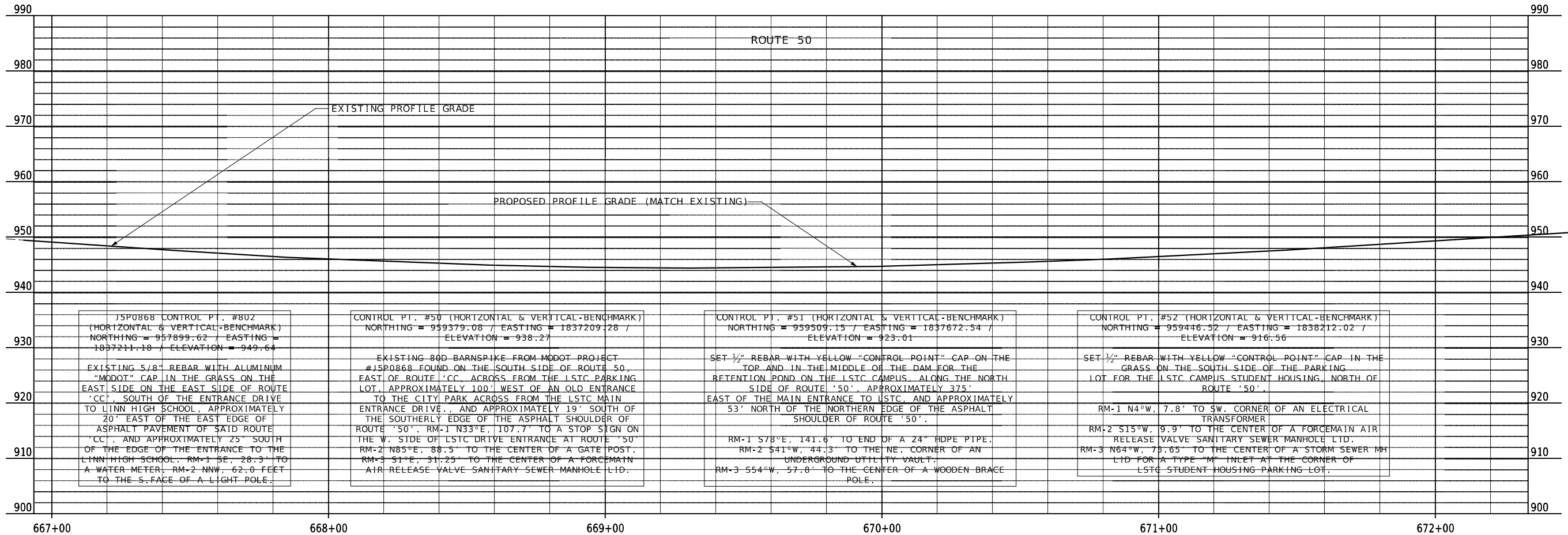
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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REV.



RTE 50 PROFILES
SHEET 1 OF 4



THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 14

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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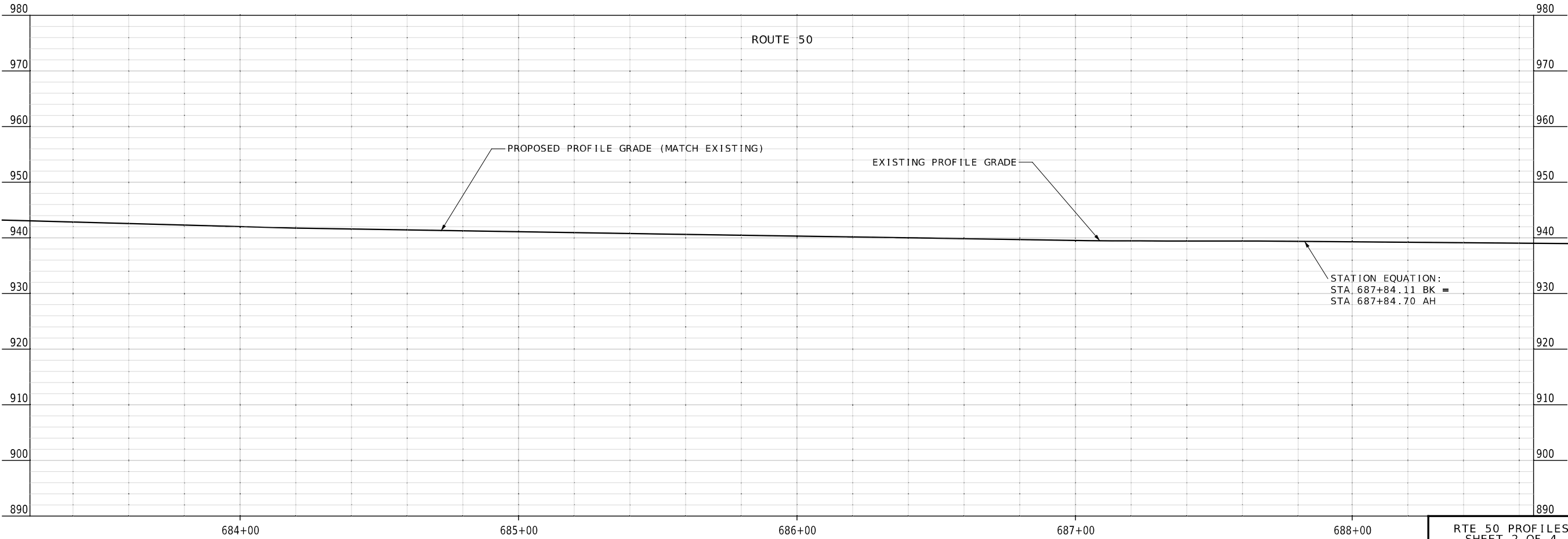
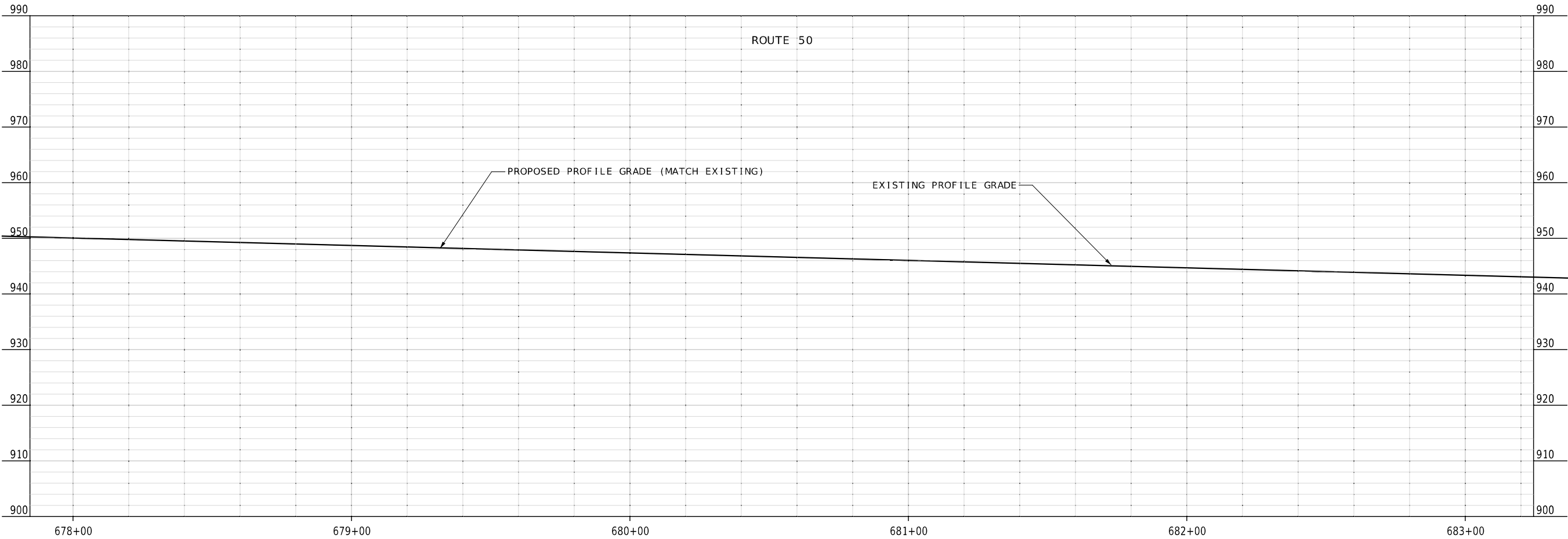
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

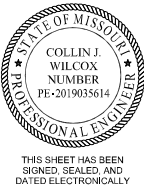
LOCHMUELLER GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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RTE 50 PROFILES
SHEET 2 OF 4



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 15
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

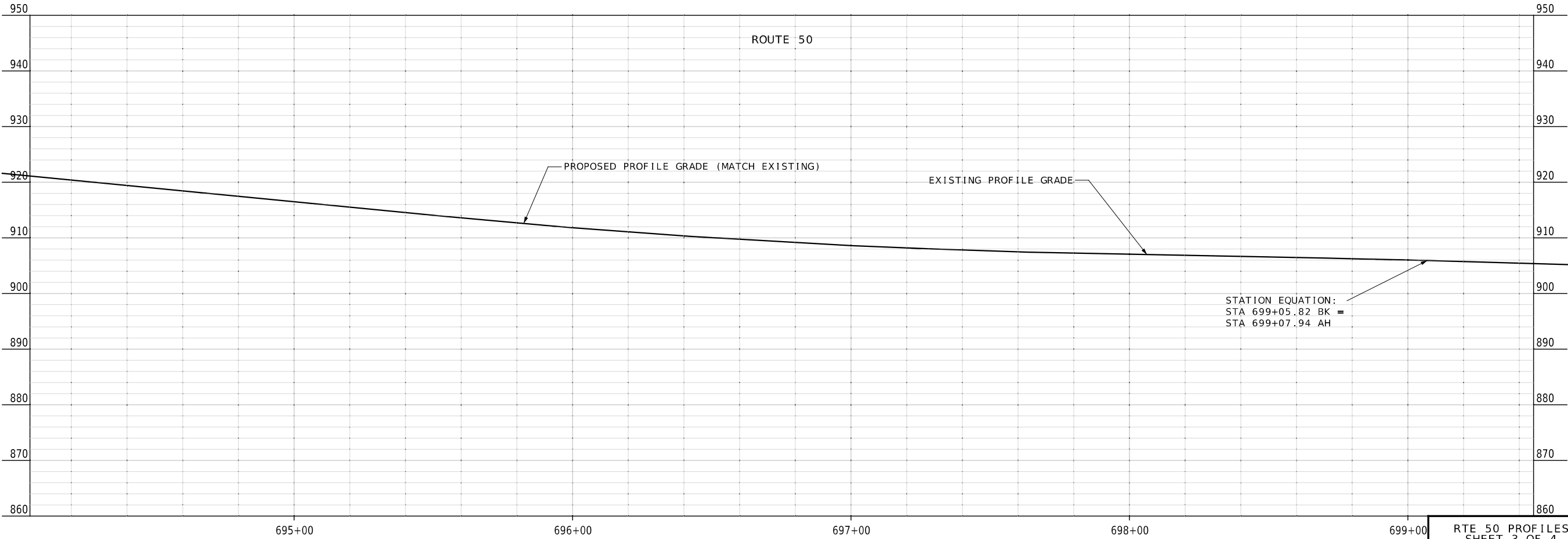
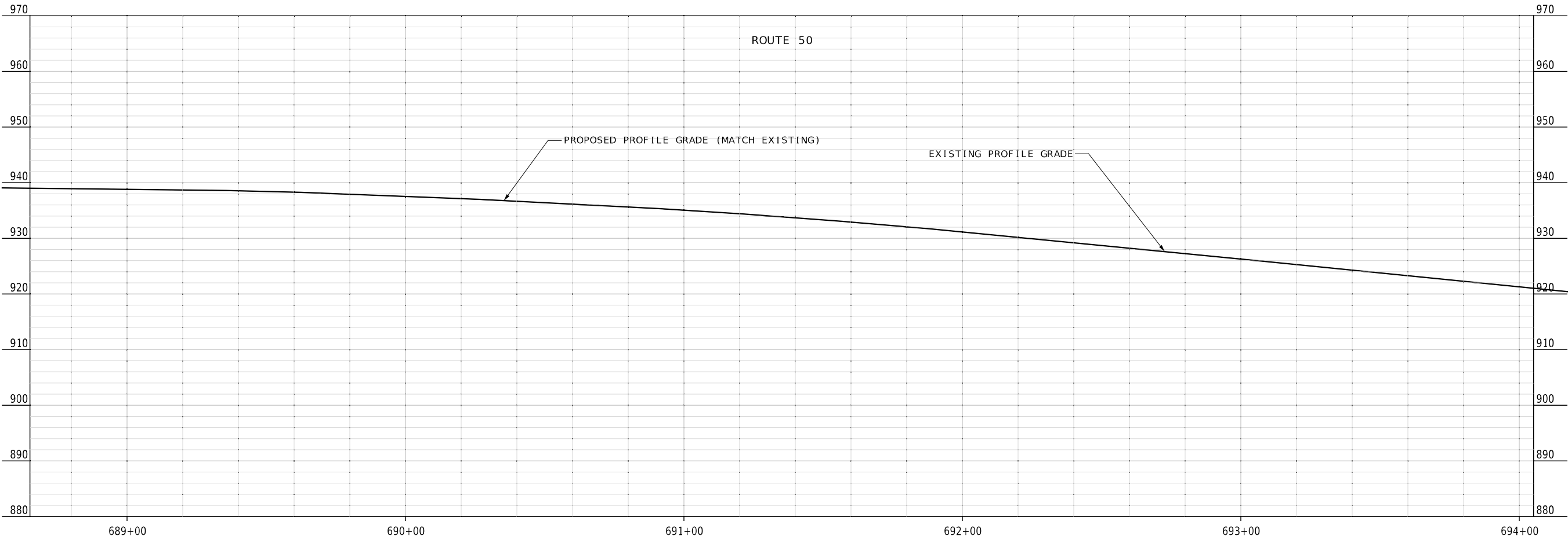
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

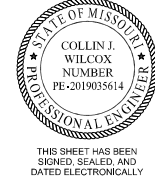
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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



RTE 50 PROFILES
SHEET 3 OF 4



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 16
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

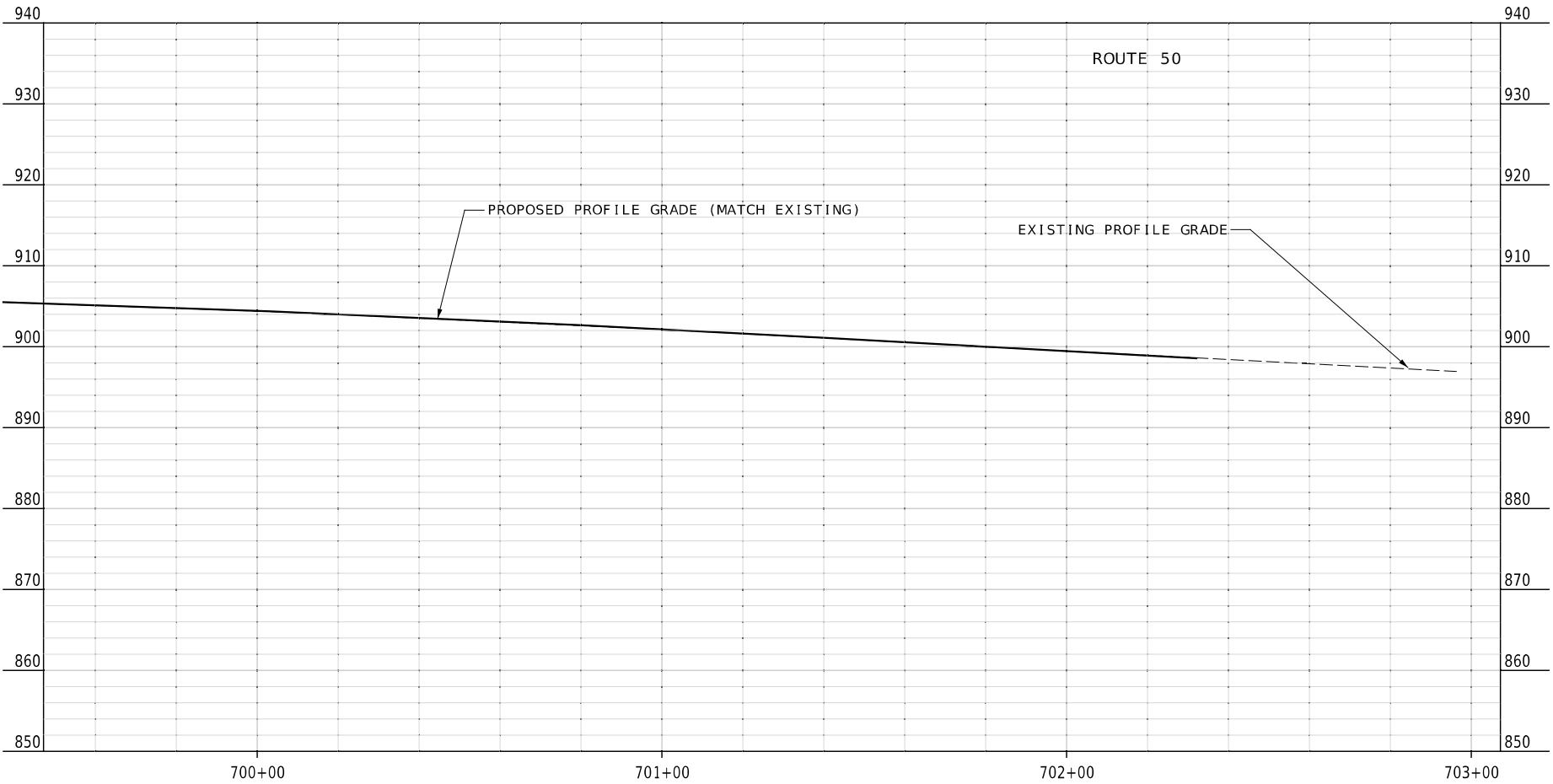
MoDOT

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

LOCHMUELLER GROUP


411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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




DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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



411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

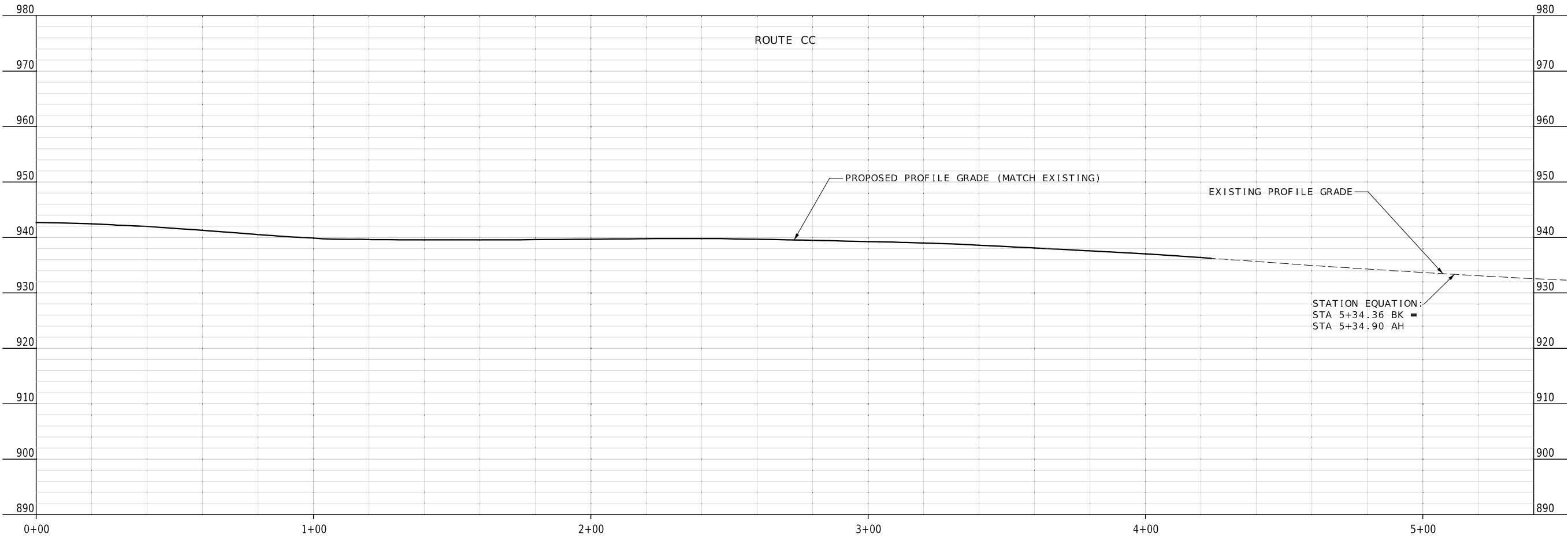


COLLIN J.
WILCOX
NUMBER
PE-2019035614
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 17
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

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



RTE CC PROFILES
SHEET 1 OF 1



DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 18

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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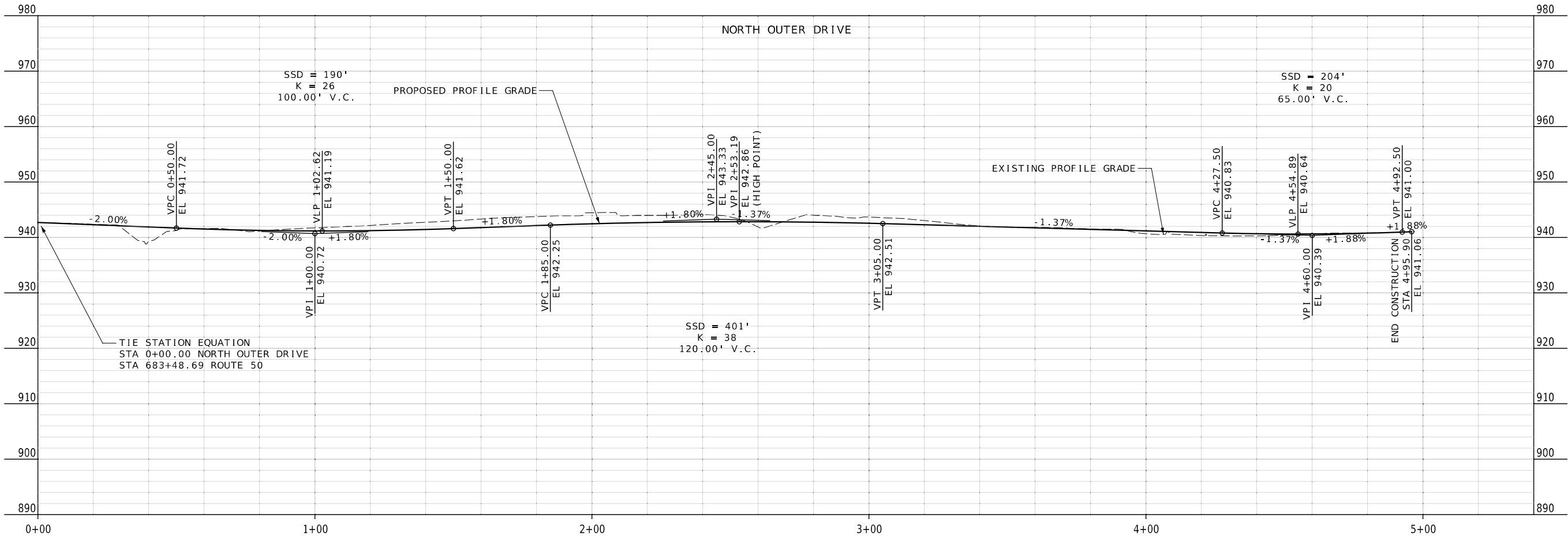
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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



N OUTER DR PROFILES
SHEET 1 OF 1

COLLIN J. WILCOX
NUMBER
PE-2019035614

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE
50

STATE
MO

DISTRICT
CD

SHEET NO.
19

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

MoDOT

LOCHMUELLER
GROUP

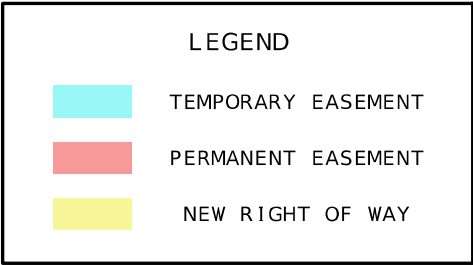
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

\$FILE\$

\$TIME\$

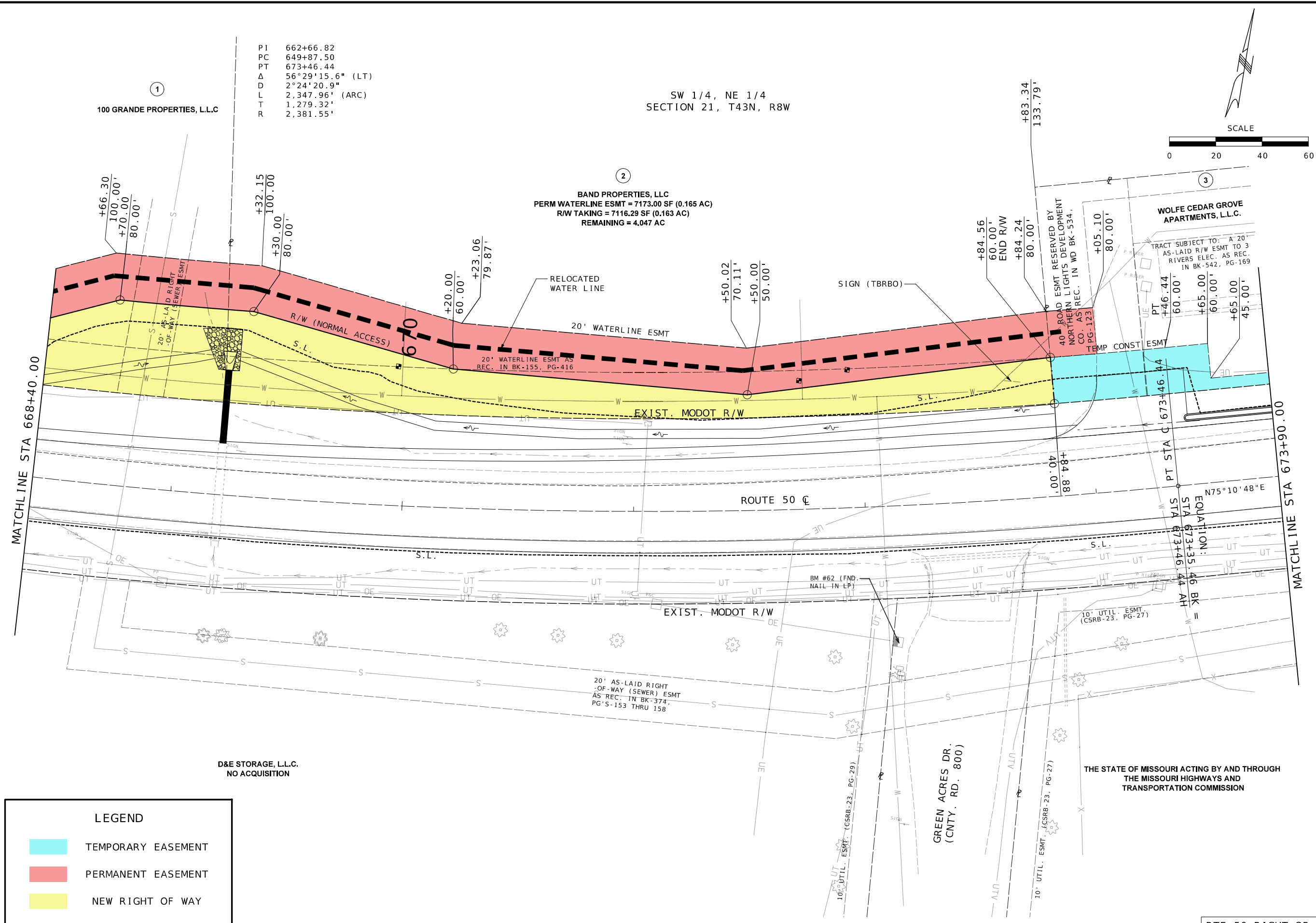
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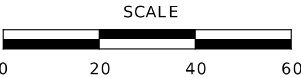
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



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

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DATE PREPARED	
4/8/2024	
ROUTE	STATE
50	MO
DISTRICT	SHEET N
CD	22
COUNTY	
OSAGE	
JOB NO.	
J5P3574	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.



105 WEST CAPITOL
JEFFERSON CITY, MO 65102

LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314 621 3305

[illegible]

LEGEND

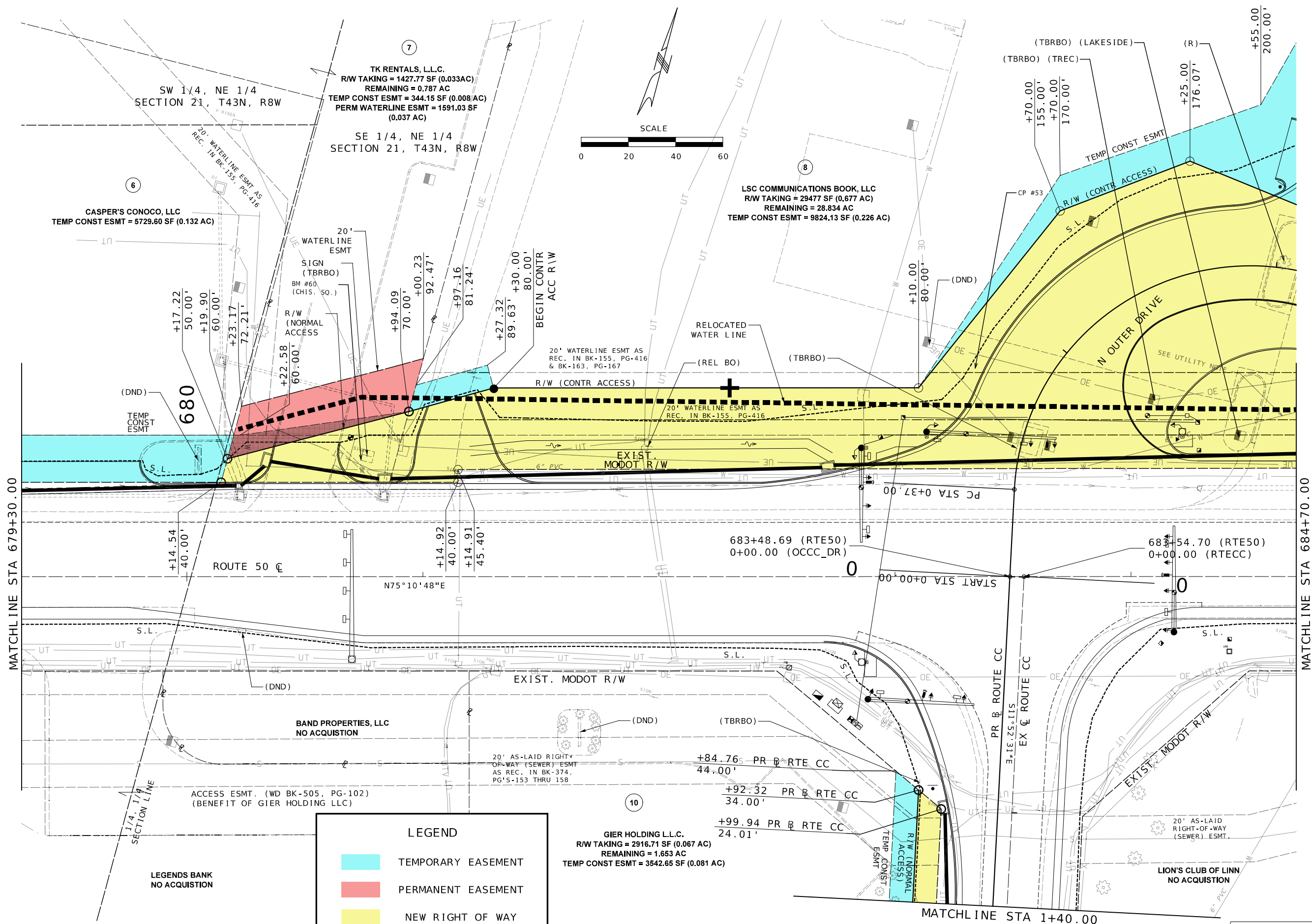
TEMPORARY EASEMENT
PERMANENT EASEMENT
NEW RIGHT OF WAY

THE STATE OF MISSOURI ACTING BY AND
THROUGH THE MISSOURI
HIGHWAYS AND TRANSPORTATION COMMISSION

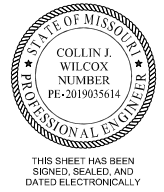
LEGENDS BAN
NO ACQUISITION

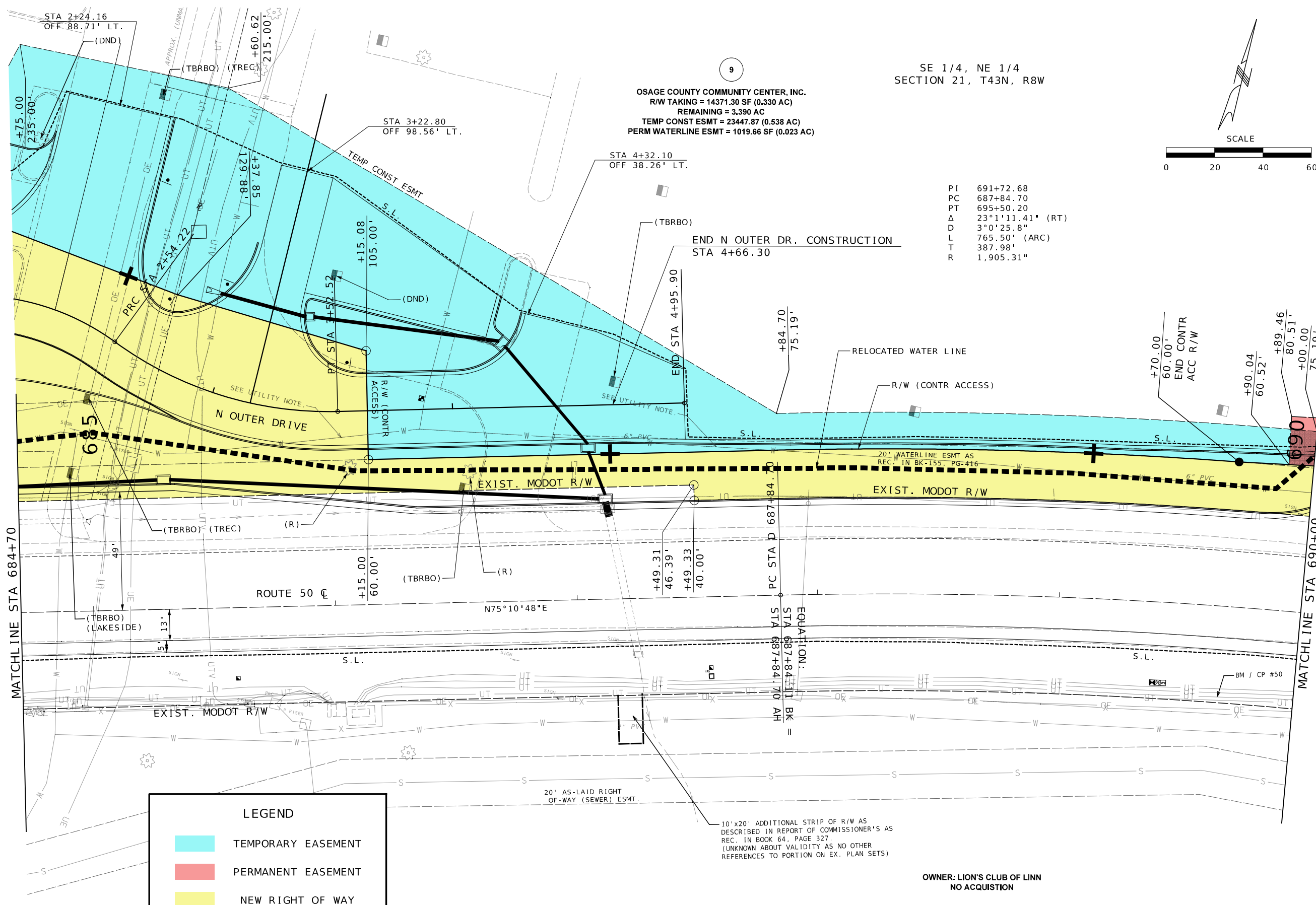
RTE 50 RIGHT OF WAY
PLAN SHEET 3 OF 10

\$FILE\$	\$TIME\$	\$DATE\$
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RTE 50 RIGHT OF WAY
PLAN SHEET 4 OF 10

[illegible]



OSAGE COUNTY COMMUNITY CENTER, INC.
R/W TAKING = 14371.30 SF (0.330 AC)
REMAINING = 3,390 AC
TEMP CONST ESMT = 23447.87 (0.538 AC)
PERM WATERLINE ESMT = 1019.66 SF (0.023 AC)

SE 1/4, NE 1/4
SECTION 21, T43N, R8W

PI	691+72.68
PC	687+84.70
PT	695+50.20
Δ	23°1'11.41" (RT)
D	3°0'25.8"
L	765.50' (ARC)
T	387.98'
R	1,905.31"

END N OUTER DR. CONSTRUCTION
STA 4+66.30

— R/W (CONTR ACCESS)


20' WATERLINE ESMT AS
REC IN BK-155 PG 116

EXIST. MODOT R/W

EQUATION: $Y = 0.0001X + 0.0001$
STA 687+84.11 BK =

OWNER: LION'S CLUB OF LINN
NO ACQUISITION

RTE 50 RIGHT OF WAY
PLAN SHEET 5 OF 10



STATE OF MISSOURI
★ ★
COLLIN J. WILCOX
NUMBER
PE-2019035614
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 24

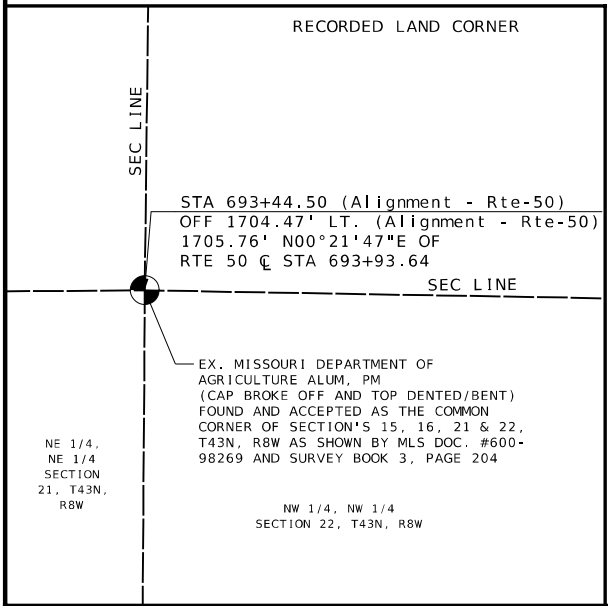
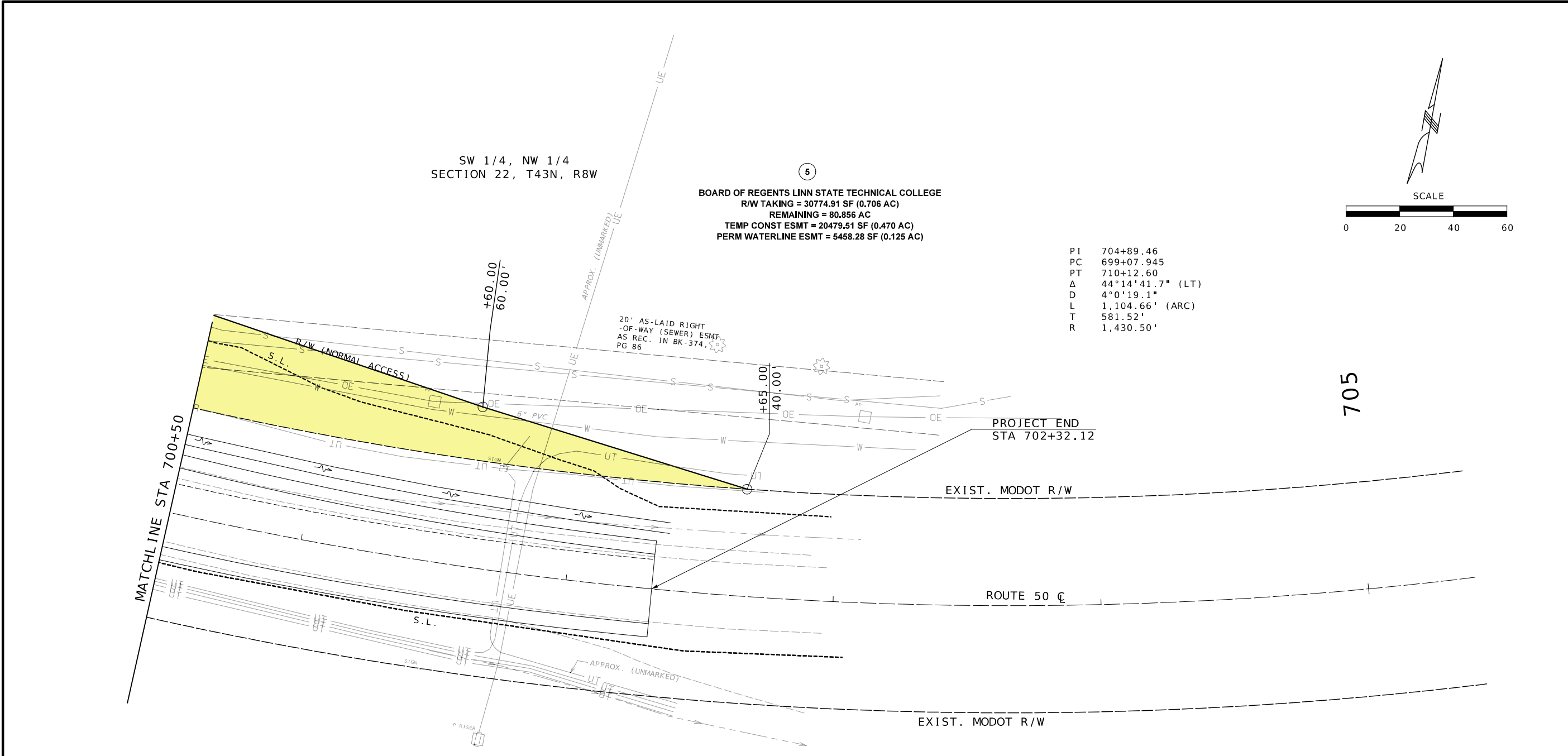
COUNTY
OSAGE
JOB NO.
J5P3574
CONTRACT ID.

PROJECT NO.

BRIDGE NO.[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

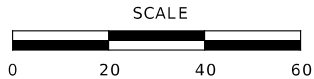
	I-0000-FACR-N-MODDOT I-I-0000-Z7Z-00J0U		
REV.	IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.		
REV.			



BOARD OF REGENTS LINN STATE TECHNICAL COLLEGE
R/W TAKING = 30774.91 SF (0.706 AC)
REMAINING = 80.856 AC
TEMP CONST ESMT = 20479.51 SF (0.470 AC)
PERM WATERLINE ESMT = 5458.28 SF (0.125 AC)

PI 704+89.46
PC 699+07.945
PT 710+12.60
Δ 44°14'41.7" (LT)
D 4°0'19.1"
L 1,104.66' (ARC)
T 581.52'
R 1,430.50'

705



LEGEND

- TEMPORARY EASEMENT
- PERMANENT EASEMENT
- NEW RIGHT OF WAY

RTE 50 RIGHT OF WAY
PLAN SHEET 8 OF 10

DATE PREPARED
4/8/2024

ROUTE 50
DISTRICT CD

STATE MO
SHEET NO. 27

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

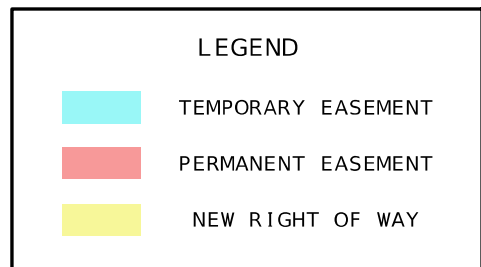
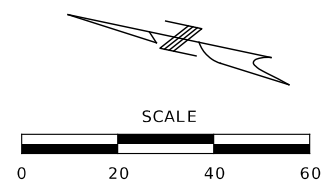
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

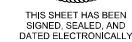
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

OWNER: LION'S CLUB OF LINN
NO ACQUISITION



RTE 50 RIGHT OF WAY
PLAN SHEET 9 OF 10



DATE PREPARED
4/8/2024

ROUTE	STA
50	MO

DISTRICT	SHEET
CD	28

COUNTY
OSAGE

JOB NO.
1503574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
800 ASK MODOT / (1 800 775 6626)

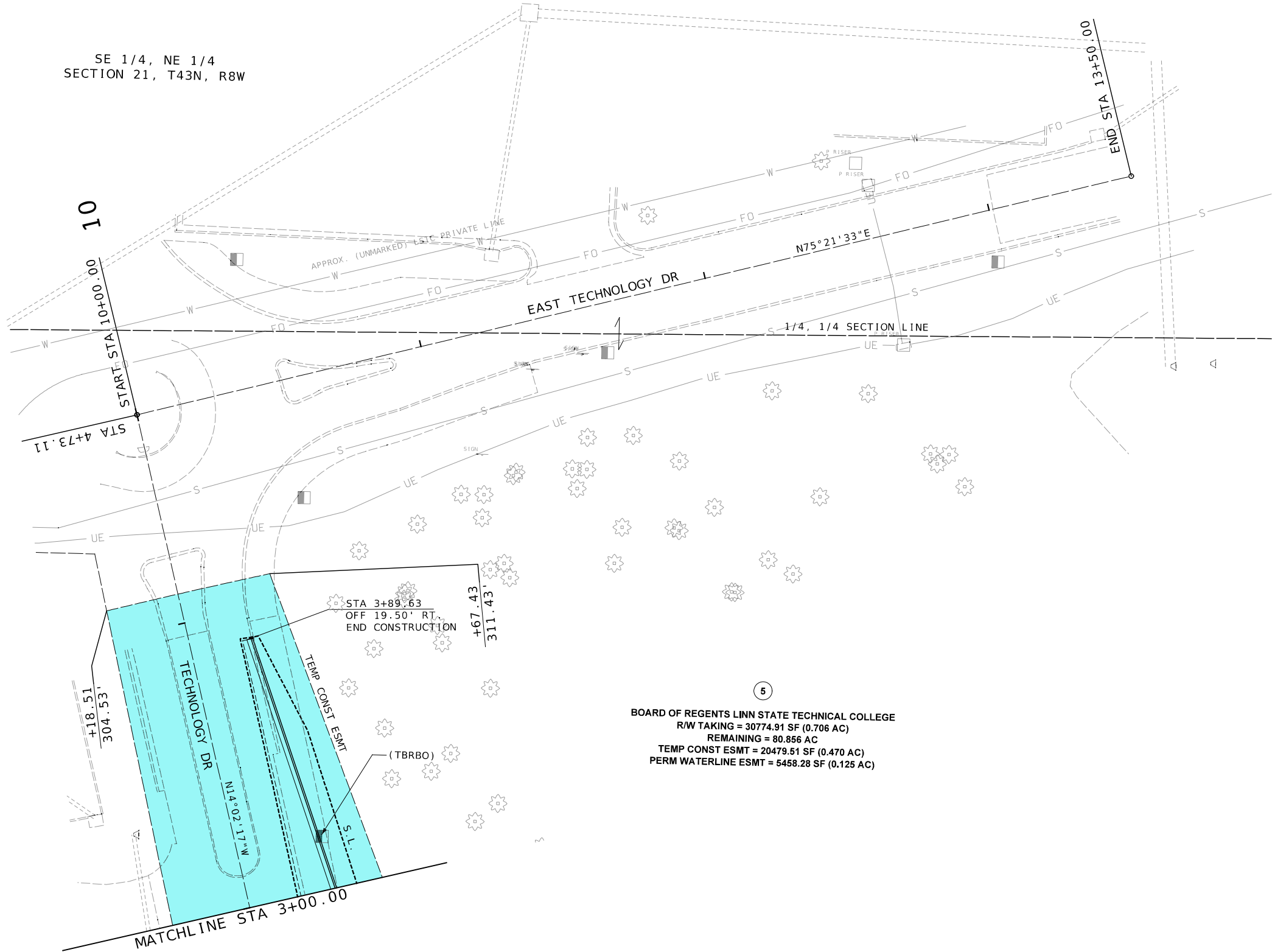


4111 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314 621 3395

[illegible]

REV

SE 1/4, NE 1/4
SECTION 21, T43N, R8W



5
BOARD OF REGENTS LINN STATE TECHNICAL COLLEGE
R/W TAKING = 30774.91 SF (0.706 AC)
REMAINING = 80.856 AC
TEMP CONST ESMT = 20479.51 SF (0.470 AC)
PERM WATERLINE ESMT = 5458.28 SF (0.125 AC)

LEGEND

TEMPORARY EASEMENT

PERMANENT EASEMENT

NEW RIGHT OF WAY

RTE 50 RIGHT OF WAY
PLAN SHEET 10 OF 10

STATE OF MISSOURI
COLLIN J. WILCOX
NUMBER
PE-2019035614
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50
DISTRICT CD

STATE MO
SHEET NO. 29

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

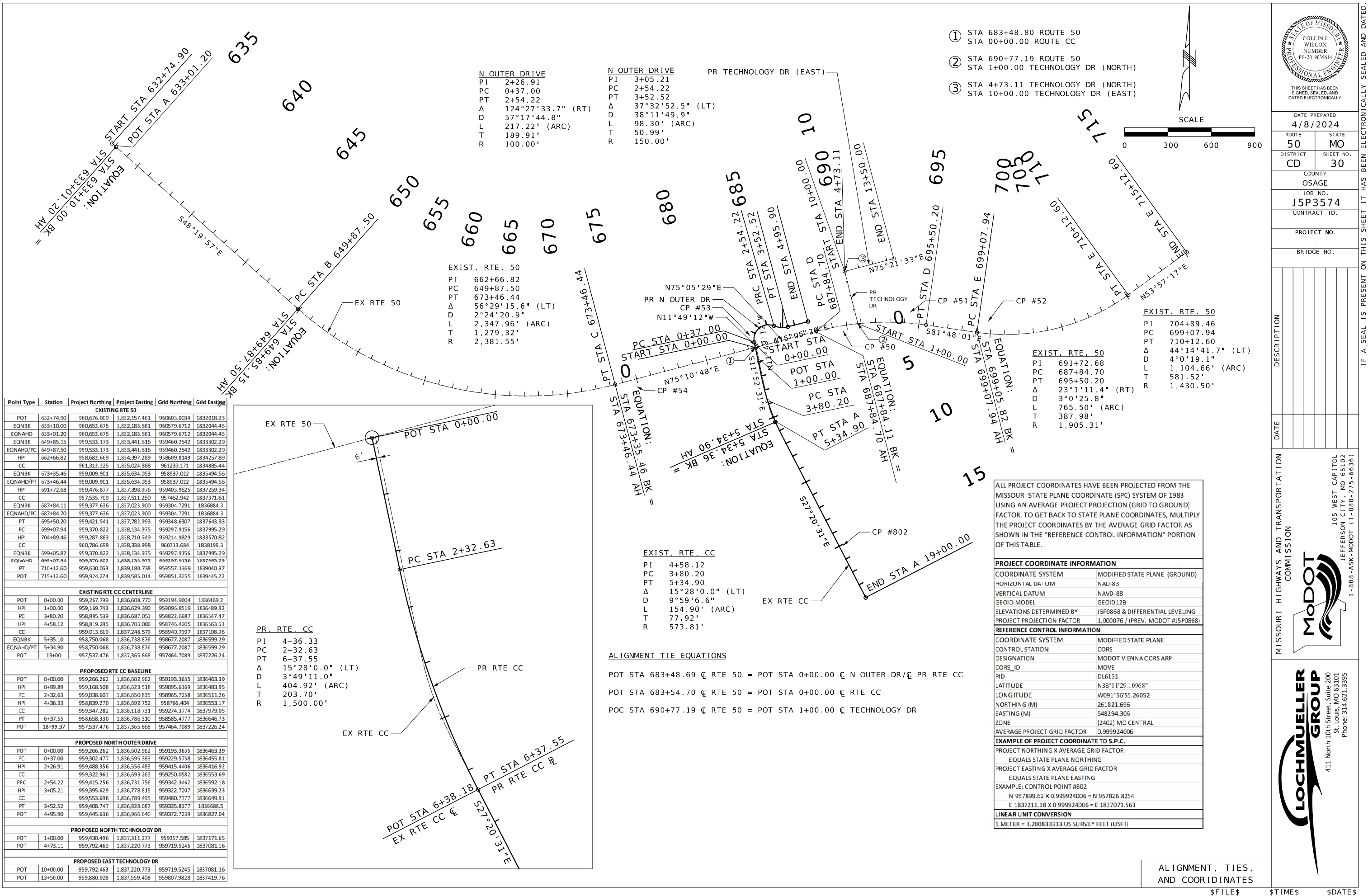
MODOT

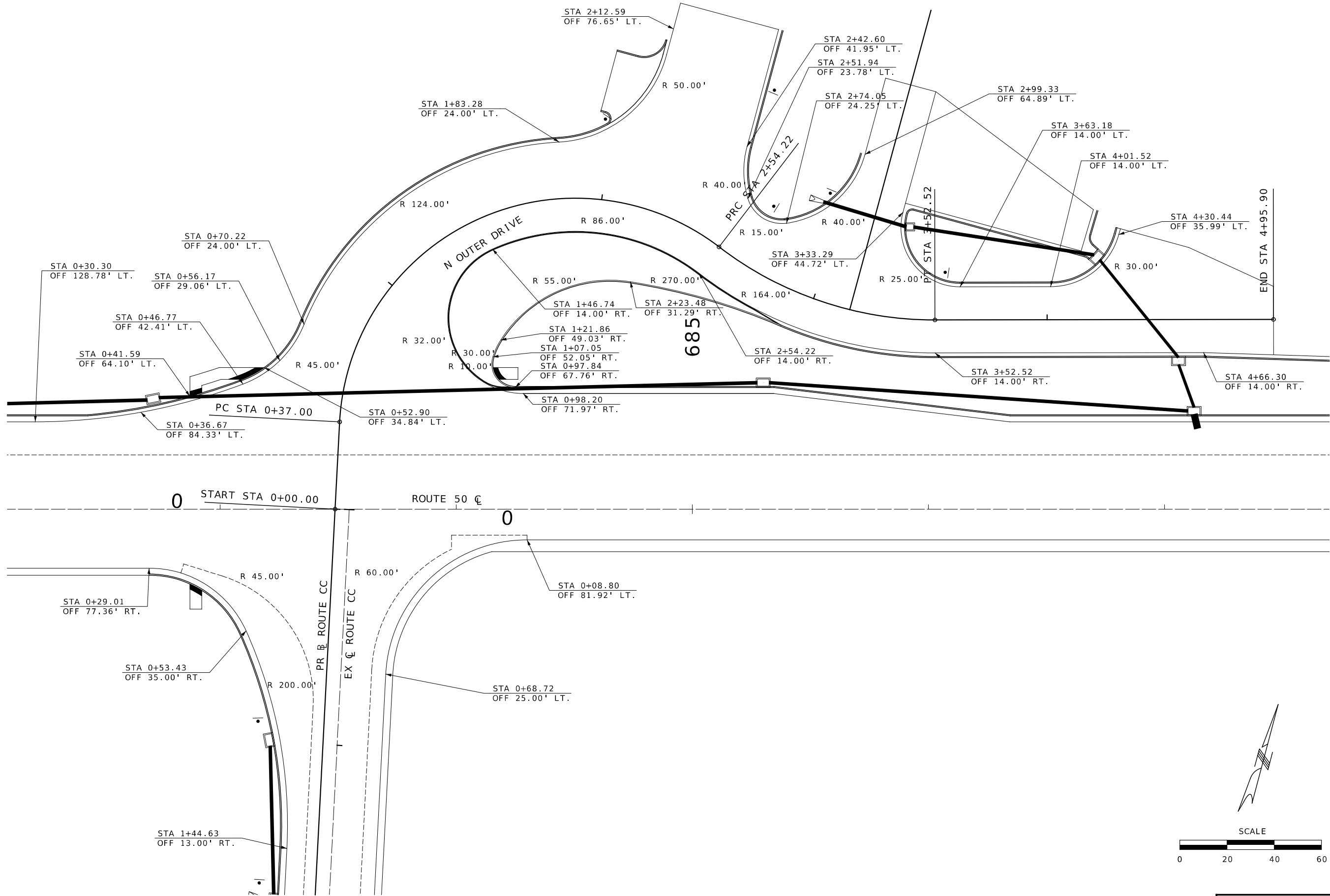
LOCHMUELLER GROUP
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St. Louis, MO 63101
Phone: 314.621.3395

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REV.

\$FILE\$ \$TIME\$ \$DATE\$





THIS SHEET HAS BEEN
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DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 31

COUNTY OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

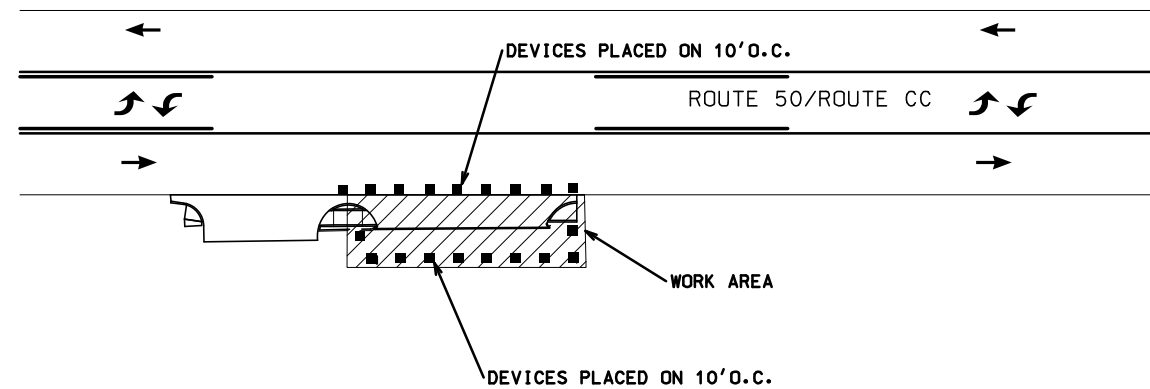
LOCHMUELLER GROUP

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St. Louis, MO 63101
Phone: 314.621.3395

SPECIAL SHEET
1 OF 2

\$FILE\$ \$TIME\$ \$DATE\$

TYPICAL TRAFFIC CONTROL FOR ENTRANCE CONSTRUCTION



TRAFFIC CONTROL LEGEND

- | | |
|---|---------------------------|
|  | SIGN (SINGLE SIDED) |
|  | CHANNELIZERS (TRIMLINE) |
|  | WORK AREA |

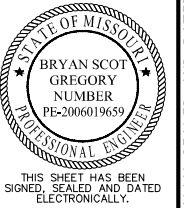
NOTES:

1. IF PROPERTY HAS MULTIPLE ENTRANCES, THE CONTRACTOR MAY CLOSE ONE ENTIRE ENTRANCE.
2. IF PROPERTY HAS ONLY A SINGLE ENTRANCE, THEN THE ENTRANCE SHALL BE CONSTRUCTED HALF AT A TIME, WHERE POSSIBLE. OTHERWISE, THE CONTRACTOR SHALL COORDINATE WITH RESIDENTS IN ADVANCE TO PROVIDE ACCESS TO PROPERTY.
3. THE CONTRACTOR SHALL LIMIT THE WORK ZONE TO MINIMIZE IMPACT ACCESS TO THE BUSINESS.
4. THE CONTRACTOR SHALL NOT PARK EQUIPMENT OR STORE MATERIALS IN THE TEMPORARY EASEMENTS DURING NON-WORKING HOURS.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS AT ALL TIMES TO THE PROPERTY.
6. SEE ALSO TRAFFIC CONTROL FOR SHOULDER WORK WITH TRAVELWAY ENCROACHMENT AS NEEDED.
7. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING ALL EXISTING SIGNING, PAVEMENT MARKINGS, OR SIGNALS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL.
8. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

DISCLAIMER

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NOT TO SCALE



DATE PREPARED
3/1/2024

ROUTE	STATE
50	MO

DISTRICT	SHEET NO.
CD	33

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

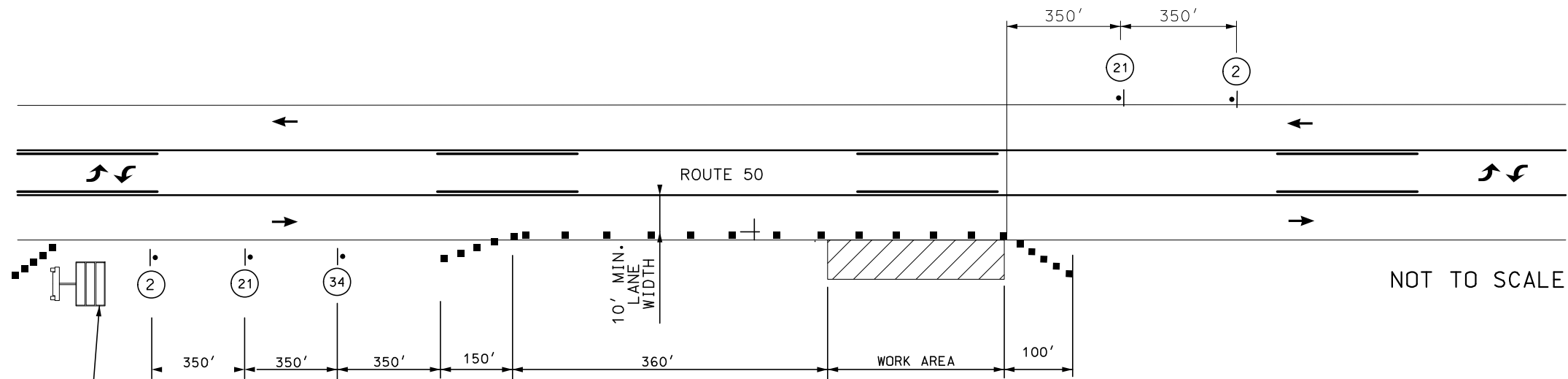


Bartlett & West

1001 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

TRAFFIC CONTROL PLAN
SHEET 1 OF 19

SHOULDER WORK WITH TRAVELWAY ENCROACHMENT



LOCATION OF CMS TO BE APPROVED BY THE ENGINEER. EACH CMS SHALL HAVE 5 CHANNELIZERS IN FRONT OF IT.



W05-1
(34)



W020-1
(2)



W021-5
(21)

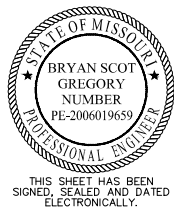
- NOTES:
- SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING ALL EXISTING SIGNING, PAVEMENT MARKINGS, OR SIGNALS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL.
 - NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING OF TCP SIGNS.
 - REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 - LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 - CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN ACCESS TO BUSINESSES DURING CONSTRUCTION. CLOSURE OF SIDE STREETS AND COMMERCIAL ENTRANCES SHALL BE MINIMIZED.
 - CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 - "ROAD WORK AHEAD" SIGN IS NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN LIMITS OF AN ACTIVITY AREA WHERE ANOTHER "ROAD WORK AHEAD" SIGN IS ALREADY USED.
 - PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- CHANGEABLE MESSAGE SIGN

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)		Tapers	Buffer/ Work Areas
40-45	350	500	150	540	360	40	80

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



DATE PREPARED
3/1/2024

ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 34

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

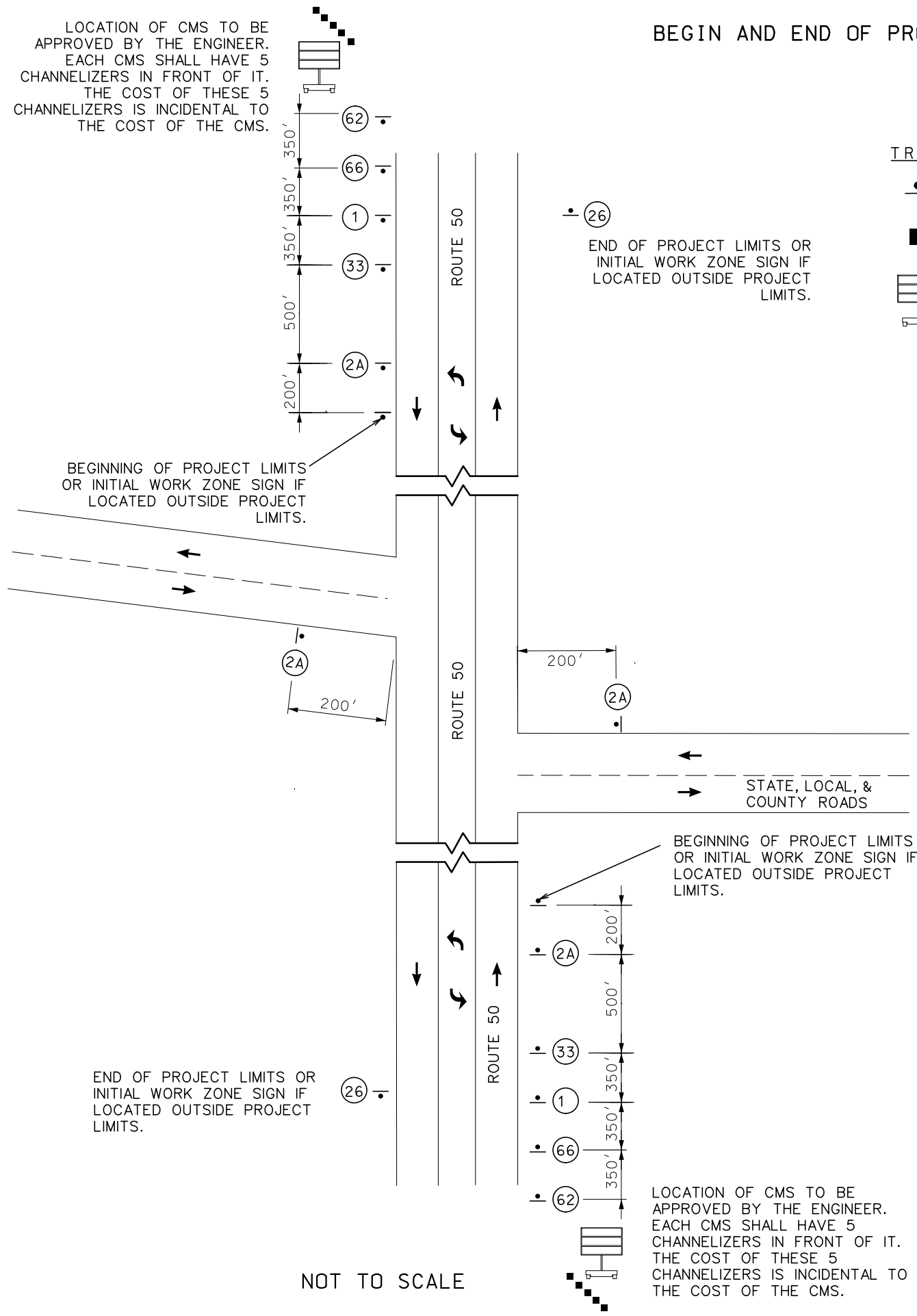
MoDOT

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

Bartlett & West

601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

LOCATION OF CMS TO BE APPROVED BY THE ENGINEER. EACH CMS SHALL HAVE 5 CHANNELIZERS IN FRONT OF IT. THE COST OF THESE 5 CHANNELIZERS IS INCIDENTAL TO THE COST OF THE CMS.



BEGIN AND END OF PROJECT SIGNING

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- CHANGEABLE MESSAGE SIGN

- NOTES:
- SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING ALL EXISTING SIGNING, PAVEMENT MARKINGS, OR SIGNALS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL.
 - NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING OF TCP SIGNS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS OCCUR OR ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL SIGNING.
 - LONG TERM RUMBLE STRIP LOCATIONS TO BE APPROVED BY THE ENGINEER.

NO CENTER LINE

UNEVEN LANES

THESE SIGNS SHALL BE PLACED AS APPROVED BY THE ENGINEER.

Rate Our Work Zone

ROAD WORK NEXT 2 MILES

ROAD WORK AHEAD

WORK ZONE NO PHONE ZONE

Intersection Improvements Winter 2024

END ROAD WORK

NOTES:

SIGN 2A WITH AWRS MUST BE GROUND OR SKID MOUNTED

(AWRS) ADVANCED WARNING RAIL SYSTEM

STATE OF MISSOURI

BRYAN SCOT GREGORY

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

3/1/2024

ROUTE

50

STATE

MO

DISTRICT

CD

SHEET NO.

36

COUNTY

OSAGE

JOB NO.

J5P3574

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)

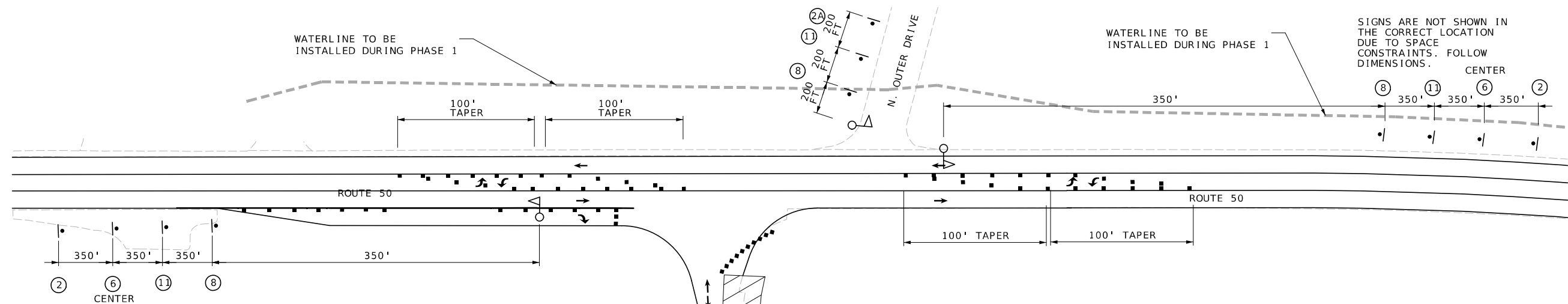
Bartlett West

601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101


PHONE 572-634-3181


CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING


WWW.BARTLETTWEST.COM





TRAFFIC CONTROL LEGEND


- 


SIGN (SINGLE SIDED)
- 

CHANNELIZERS (TRIMLINE)
- 

WORK AREA
- 

DIRECTIONAL INDICATOR
BARRICADE
- 

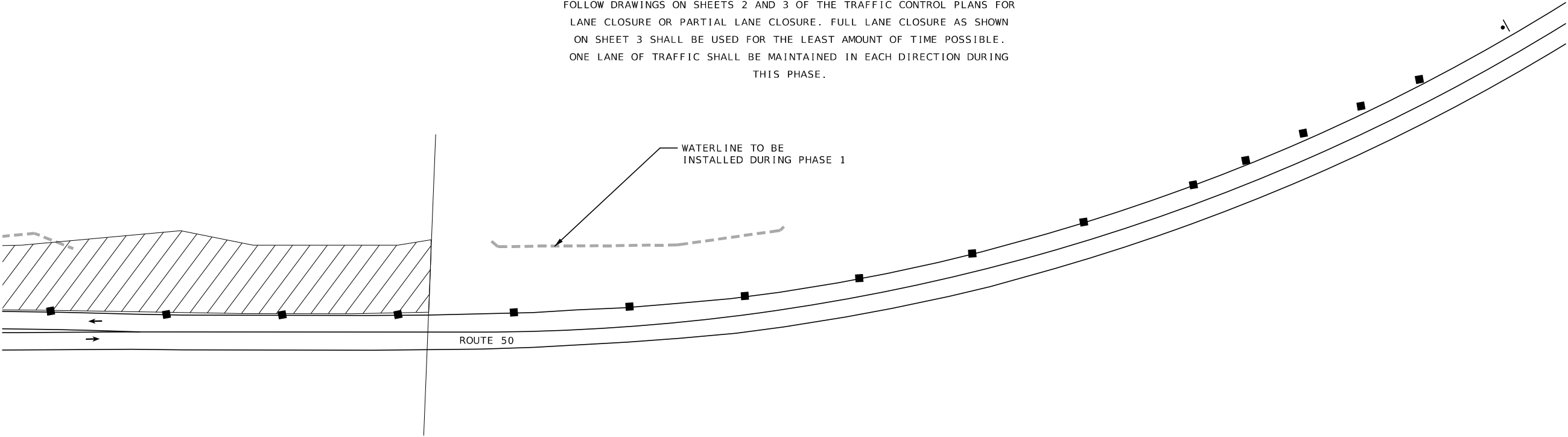
FLASHING ARROW PANEL
- 

CHANGEABLE MESSAGE SIGN
- 

FLAGGER

- NOTES:
1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
3. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
4. LANE WIDTHS SHALL BE A MINIMUM OF 11'.
5. CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
6. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

FOLLOW DRAWINGS ON SHEETS 2 AND 3 OF THE TRAFFIC CONTROL PLANS FOR LANE CLOSURE OR PARTIAL LANE CLOSURE. FULL LANE CLOSURE AS SHOWN ON SHEET 3 SHALL BE USED FOR THE LEAST AMOUNT OF TIME POSSIBLE. ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION DURING THIS PHASE.




SPEED	SIGN SPACING (ft.)	TAPER LENGTH (ft.)		RECOMMENDED	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	150	-	360	40	80

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

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 1C
SHEET 8 OF 19



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2024

ROUTE
50

DISTRICT
CD

STATE
MO

SHEET NO.
40

COUNTY
OSAGE

JOB NO.
J5P3574


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)



601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

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

pw://bartwest-pw.bentley.com:bartwest-pw-01/Documents/Proj/19000/19421/19421.990/MicroStation/J5P3547_Updated/plan sheets/XXX_TTC_J5P3547_P1C-02.dgn 12:09:02 PM 3/1/2024

SPEED	CHANNELIZER SPACING (ft.)
Permanent Posted (mph)	Buffer/ Work Areas
40-45	80

FOLLOW DRAWINGS ON SHEETS 2 OF THE TRAFFIC CONTROL PLANS FOR PARTIAL LANE CLOSURE. ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION DURING THIS PHASE.

- NOTES:
1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 3. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 4. LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 5. CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 6. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

MATCHLINE STA. C 673+90.00

MATCHLINE STA. C 679+30.00

MATCHLINE STA. C 679+30.00

MATCHLINE STA. C 684+70.00

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- ▨ WORK AREA
- ▲ DIRECTIONAL INDICATOR BARRICADE
- ⋯ FLASHING ARROW PANEL
- ☐ CHANGEABLE MESSAGE SIGN
- FLAGGER

ENTRANCE SHALL BE CONSTRUCTED HALF AT A TIME.

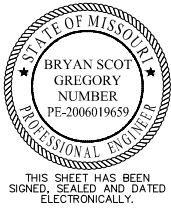
ENTRANCE SHALL BE CONSTRUCTED HALF AT A TIME.

SHOULDER REPLACEMENT

SHOULDER REPLACEMENT

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 2A
SHEET 10 OF 19



DATE PREPARED 3/1/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 42
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

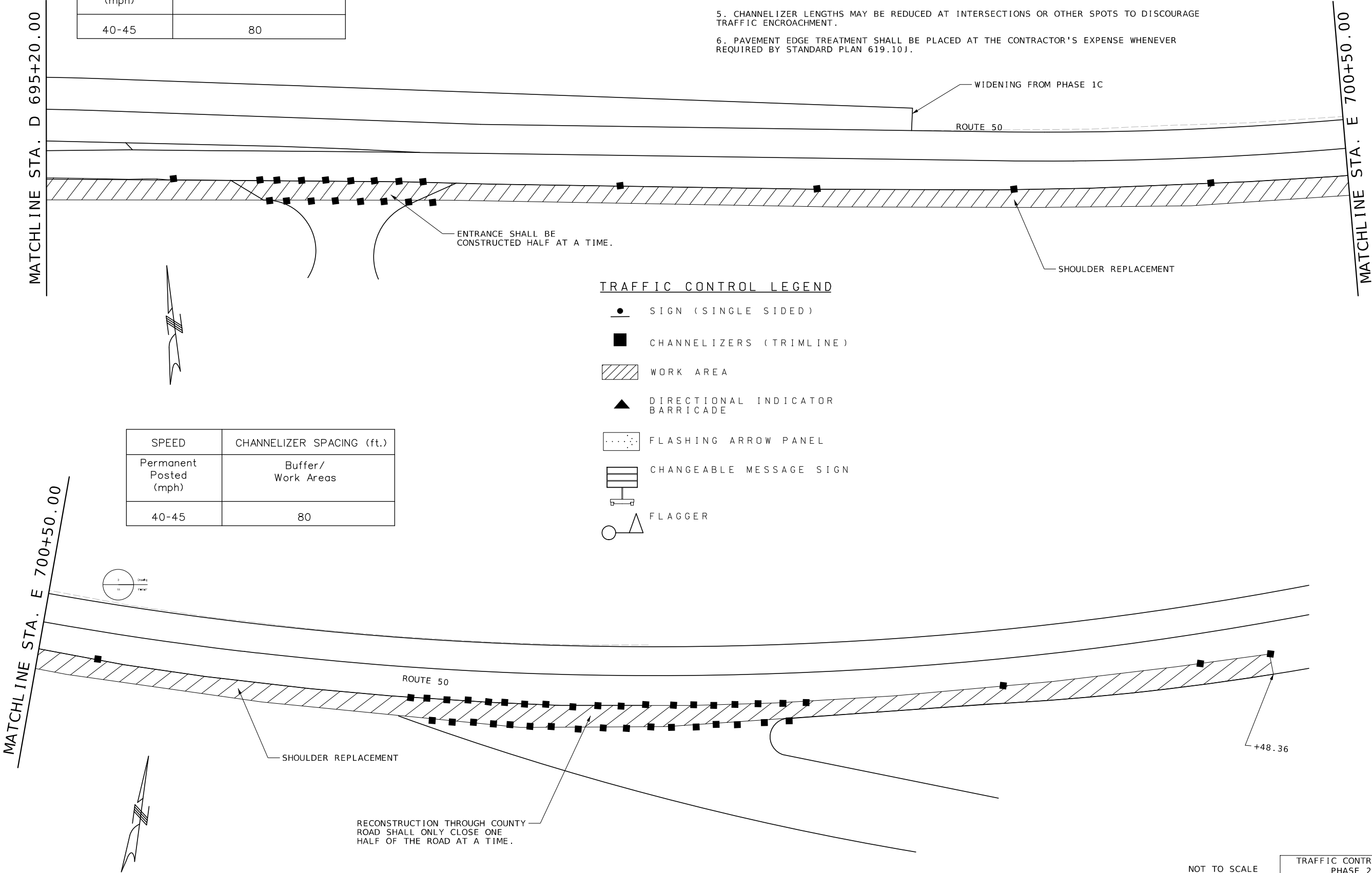
Bartlett & West

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PHONE 572-634-3181
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SPEED	CHANNELIZER SPACING (ft.)
Permanent Posted (mph)	Buffer/ Work Areas
40-45	80

FOLLOW DRAWINGS ON SHEETS 2 OF THE TRAFFIC CONTROL PLANS FOR PARTIAL LANE CLOSURE. ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION DURING THIS PHASE.

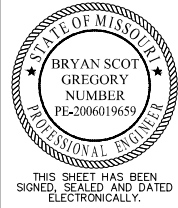
- NOTES:
1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 3. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 4. LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 5. CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 6. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.



SPEED	CHANNELIZER SPACING (ft.)
Permanent Posted (mph)	Buffer/ Work Areas
40-45	80

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- ▨ WORK AREA
- ▲ DIRECTIONAL INDICATOR BARRICADE
- ⋯ FLASHING ARROW PANEL
- ☐ CHANGEABLE MESSAGE SIGN
- FLAGGER



DATE PREPARED 3/1/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 44
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

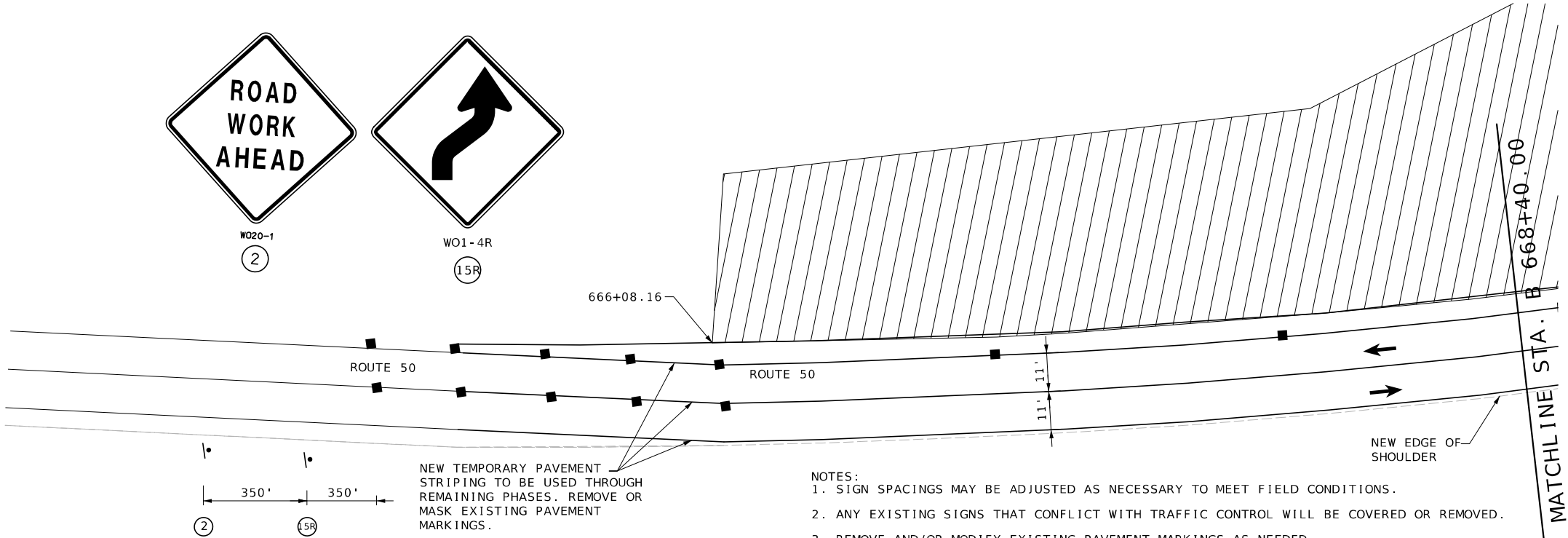
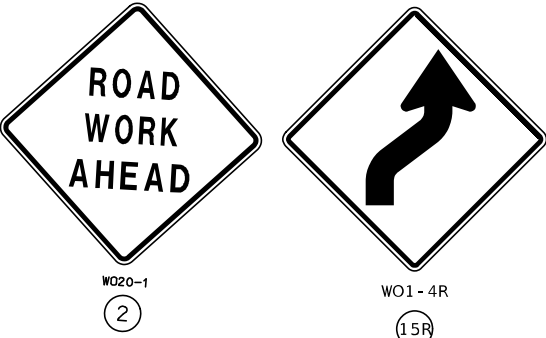
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Bartlett & West

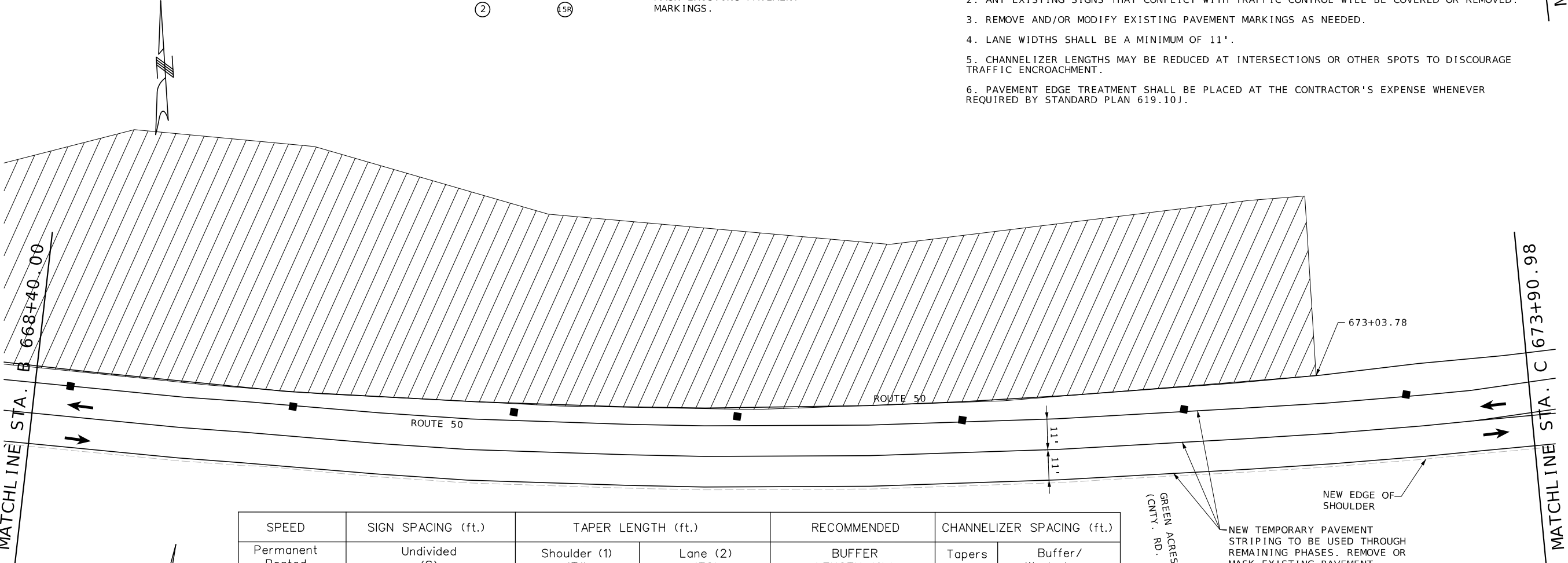
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PHONE 572-634-3181
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WWW.BARTLETTWEST.COM

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE SIGN
- FLAGGER



- NOTES:
- SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 - REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 - LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 - CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 - PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

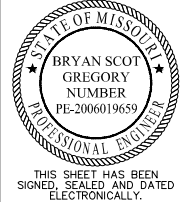


SPEED	SIGN SPACING (ft.)	TAPER LENGTH (ft.)		RECOMMENDED	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	150	360	360	40	80

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

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 2B
SHEET 13 OF 19



DATE PREPARED
3/1/2024
ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 45
COUNTY OSAGE
JOB NO. J5P3574
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

Bartlett & West
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CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
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MATCHLINE STA. C 673+90.98

MATCHLINE STA. C 679+30.98



SPEED	SIGN SPACING (ft.)	TAPER LENGTH (ft.)		RECOMMENDED	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	150	360	360	40	80

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

- NOTES:
- SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 - REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 - LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 - CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 - PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

ROUTE 50

360' TAPER

PROGRESS
LANE

STA 677+69.90
OFF 75.82' LT.

SIGNS ARE NOT SHOWN IN
THE CORRECT LOCATIONS
DUE TO SPACE
CONSTRAINTS. FOLLOW
DIMENSIONS.

NEW TEMPORARY PAVEMENT
STRIPING TO BE USED THROUGH
REMAINING PHASES. REMOVE OR
MASK EXISTING PAVEMENT
MARKINGS.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE SIGN
- FLAGGER

NEW TEMPORARY PAVEMENT
STRIPING TO BE USED THROUGH
REMAINING PHASES. REMOVE OR
MASK EXISTING PAVEMENT
MARKINGS.

NEW TEMPORARY PAVEMENT
STRIPING TO BE USED THROUGH
REMAINING PHASES. REMOVE OR
MASK EXISTING PAVEMENT
MARKINGS.

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 2B
SHEET 14 OF 19



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
3/1/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 46

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

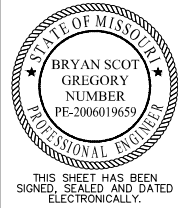
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

MoDOT

Bartlett & West

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PHONE 872-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM



DATE PREPARED
3/1/2024

ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 47

COUNTY OSAGE
JOB NO. J5P3574
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)

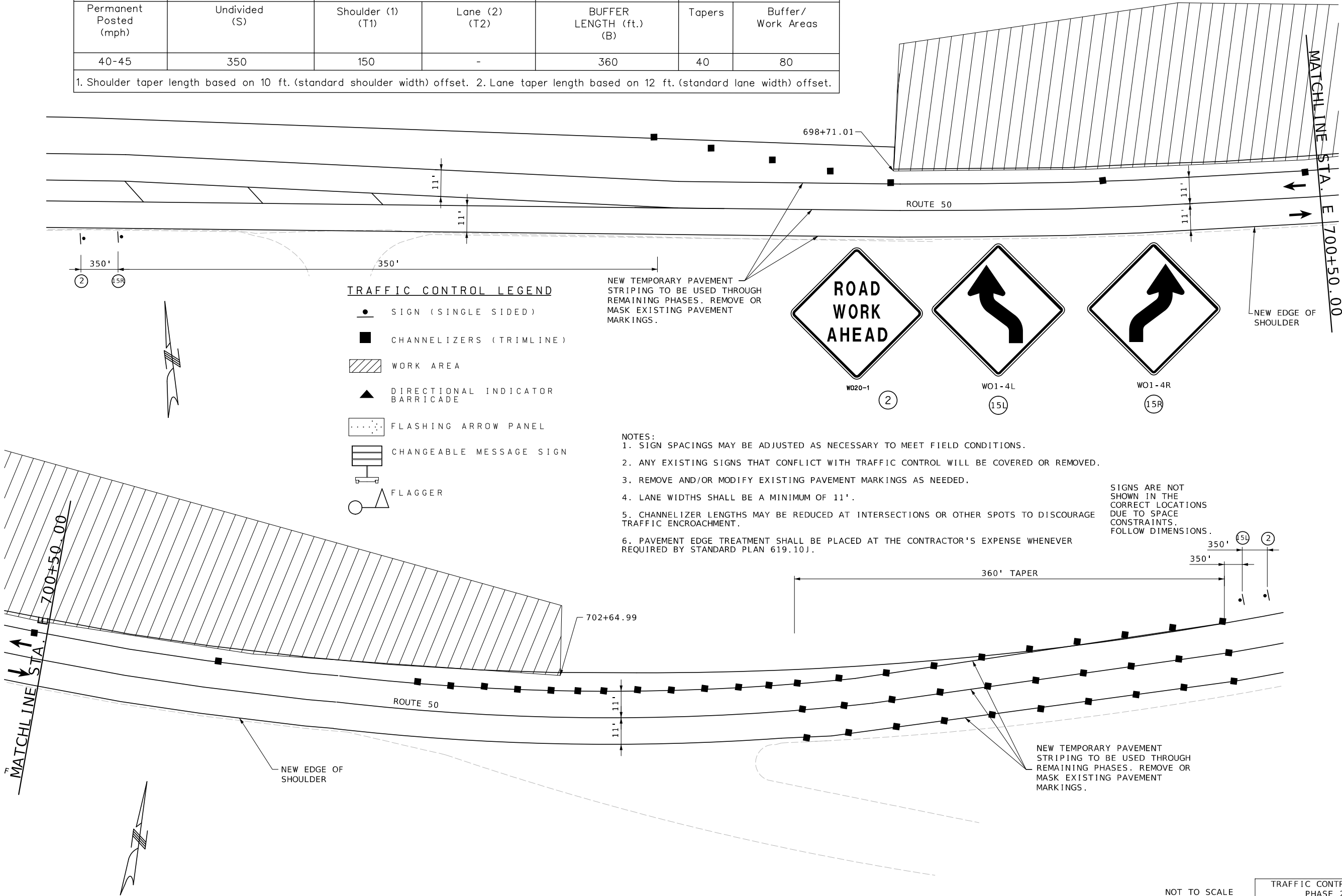
Bartlett & West

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PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

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

SPEED	SIGN SPACING (ft.)	TAPER LENGTH (ft.)		RECOMMENDED	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	150	-	360	40	80

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



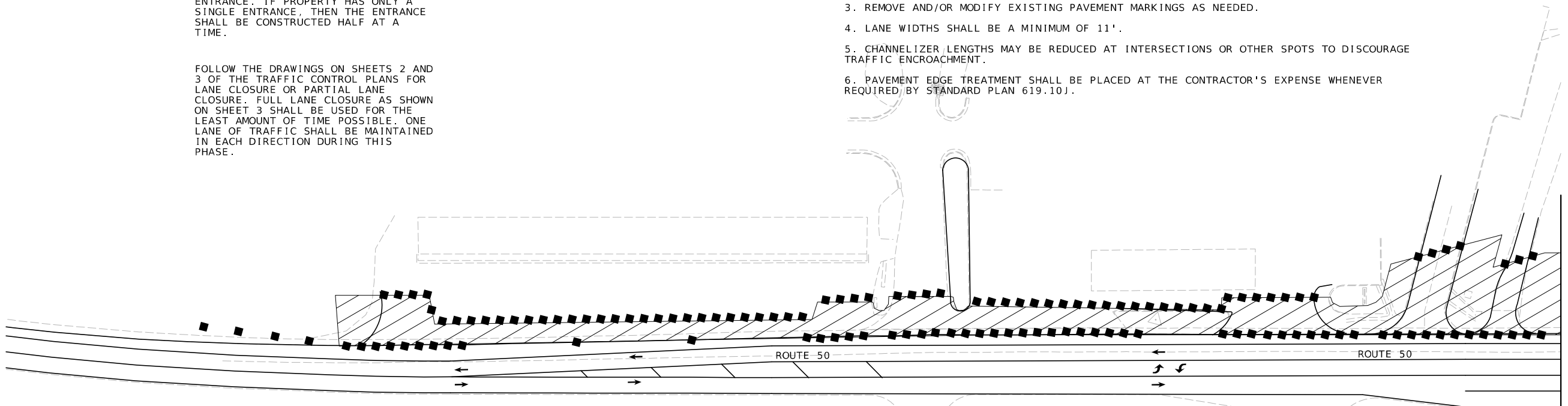
NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 2B
SHEET 15 OF 19

IF PROPERTY HAS MULTIPLE ENTRANCES, THE CONTRACTOR MAY CLOSE ONE ENTIRE ENTRANCE. IF PROPERTY HAS ONLY A SINGLE ENTRANCE, THEN THE ENTRANCE SHALL BE CONSTRUCTED HALF AT A TIME.

FOLLOW THE DRAWINGS ON SHEETS 2 AND 3 OF THE TRAFFIC CONTROL PLANS FOR LANE CLOSURE OR PARTIAL LANE CLOSURE. FULL LANE CLOSURE AS SHOWN ON SHEET 3 SHALL BE USED FOR THE LEAST AMOUNT OF TIME POSSIBLE. ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION DURING THIS PHASE.

- NOTES:
1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 3. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 4. LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 5. CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 6. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE SIGN
- FLAGGER

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	500	150	540	400	40	80

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

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 3A
SHEET 16 OF 19



DATE PREPARED 3/1/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 48
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

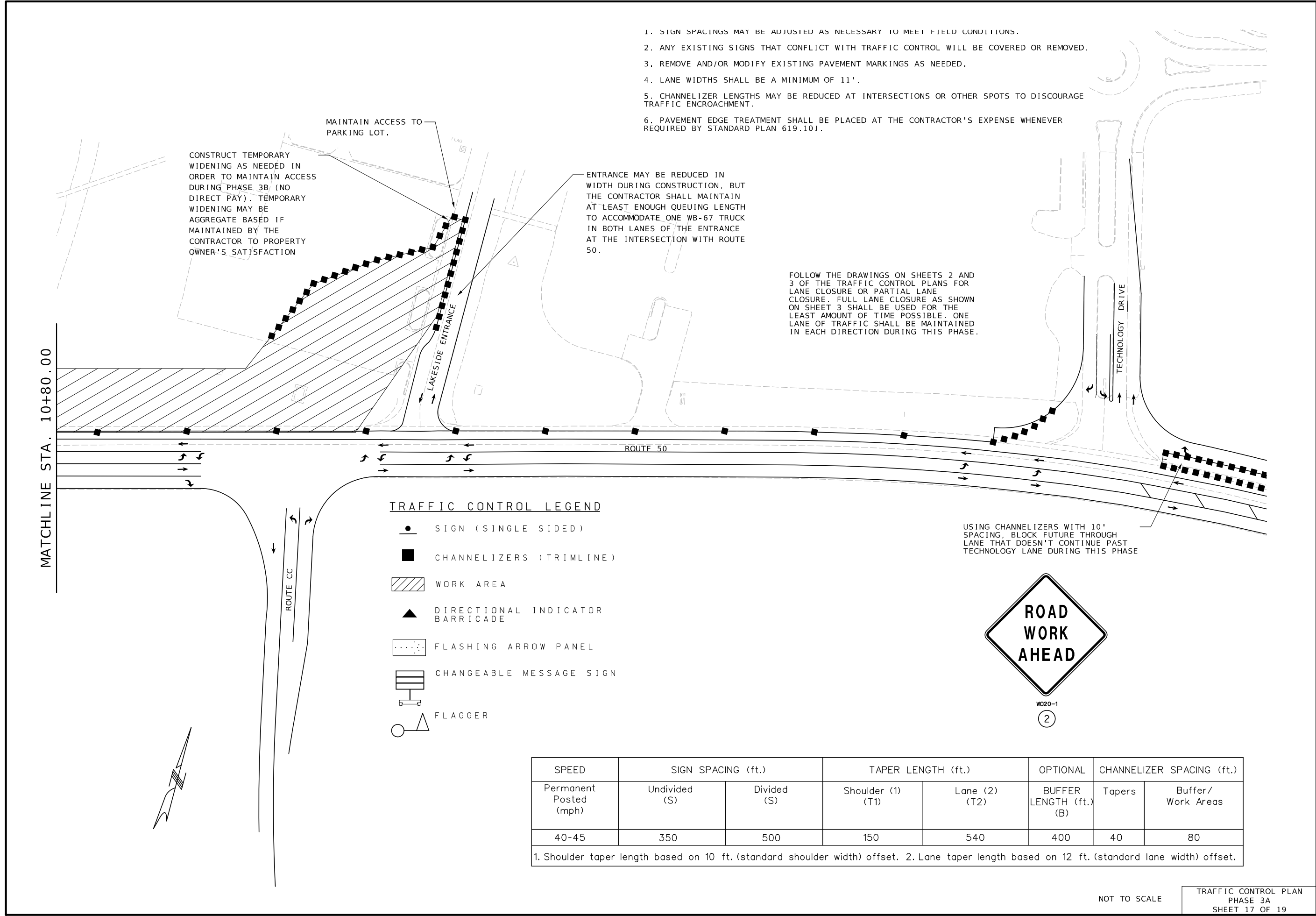
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Bartlett & West

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PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM



STATE OF MISSOURI

BRYAN SCOT GREGORY

NUMBER PE-2006019659

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

3/28/2024

ROUTE

50

STATE

MO

DISTRICT

CD

SHEET NO.

49

COUNTY

OSAGE

JOB NO.

J5P3574

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)

Bartlett & West

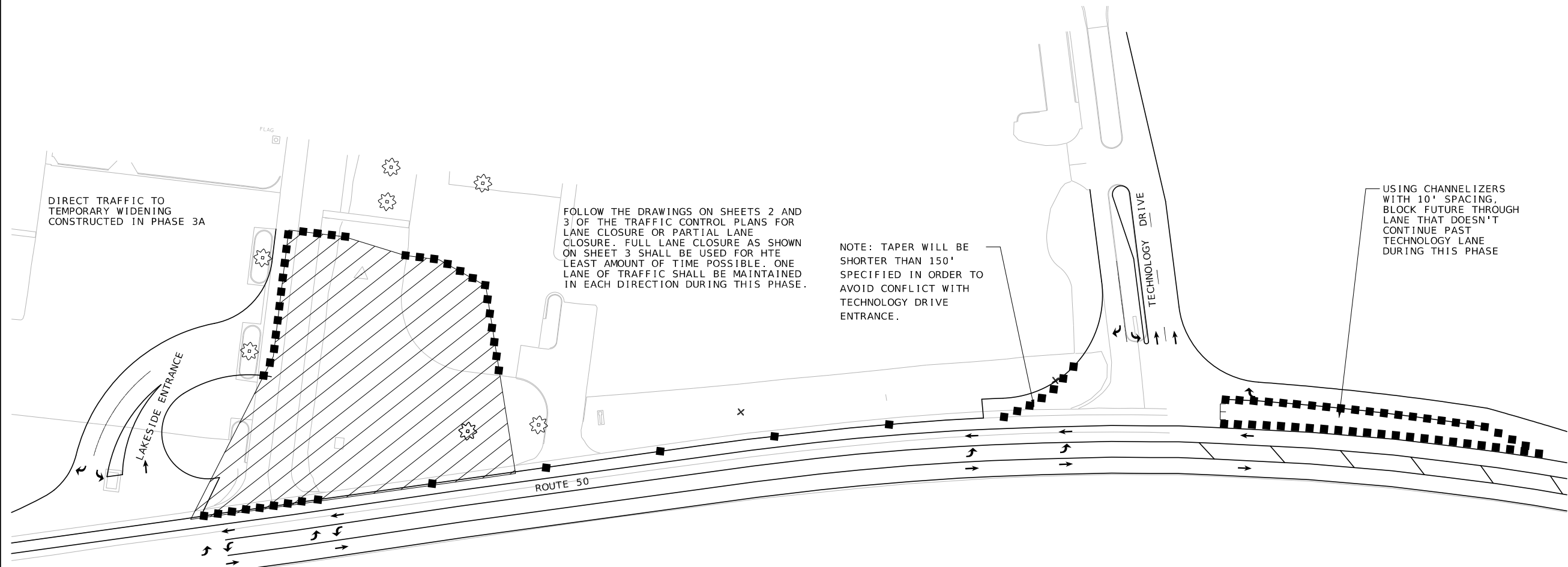
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PHONE 572-634-3181

CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING

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pw://bartwest-pw.bentley.com:bartwest-pw-01/Documents/Proj/19000/19421/19421.990/MicroStation/J5P3547_Updated/plan sheets/XXX_TTC_J5P3547_P3A-02.dgn 3:33:24 PM 3/28/2024



DIRECT TRAFFIC TO
TEMPORARY WIDENING
CONSTRUCTED IN PHASE 3A

FOLLOW THE DRAWINGS ON SHEETS 2 AND
3 OF THE TRAFFIC CONTROL PLANS FOR
LANE CLOSURE OR PARTIAL LANE
CLOSURE. FULL LANE CLOSURE AS SHOWN
ON SHEET 3 SHALL BE USED FOR HTE
LEAST AMOUNT OF TIME POSSIBLE. ONE
LANE OF TRAFFIC SHALL BE MAINTAINED
IN EACH DIRECTION DURING THIS PHASE.

NOTE: TAPER WILL BE
SHORTER THAN 150'
SPECIFIED IN ORDER TO
AVOID CONFLICT WITH
TECHNOLOGY DRIVE
ENTRANCE.

USING CHANNELIZERS
WITH 10' SPACING,
BLOCK FUTURE THROUGH
LANE THAT DOESN'T
CONTINUE PAST
TECHNOLOGY LANE
DURING THIS PHASE

- NOTES:
1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 3. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 4. LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 5. CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 6. PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.

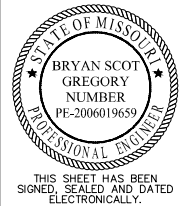


TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- ▨ WORK AREA
- ▲ DIRECTIONAL INDICATOR BARRICADE
- ⋯ FLASHING ARROW PANEL
- ☐ CHANGEABLE MESSAGE SIGN
- FLAGGER

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)		Tapers	Buffer/ Work Areas
40-45	350	500	150	540	400	40	80

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



DATE PREPARED 3/28/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 50
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

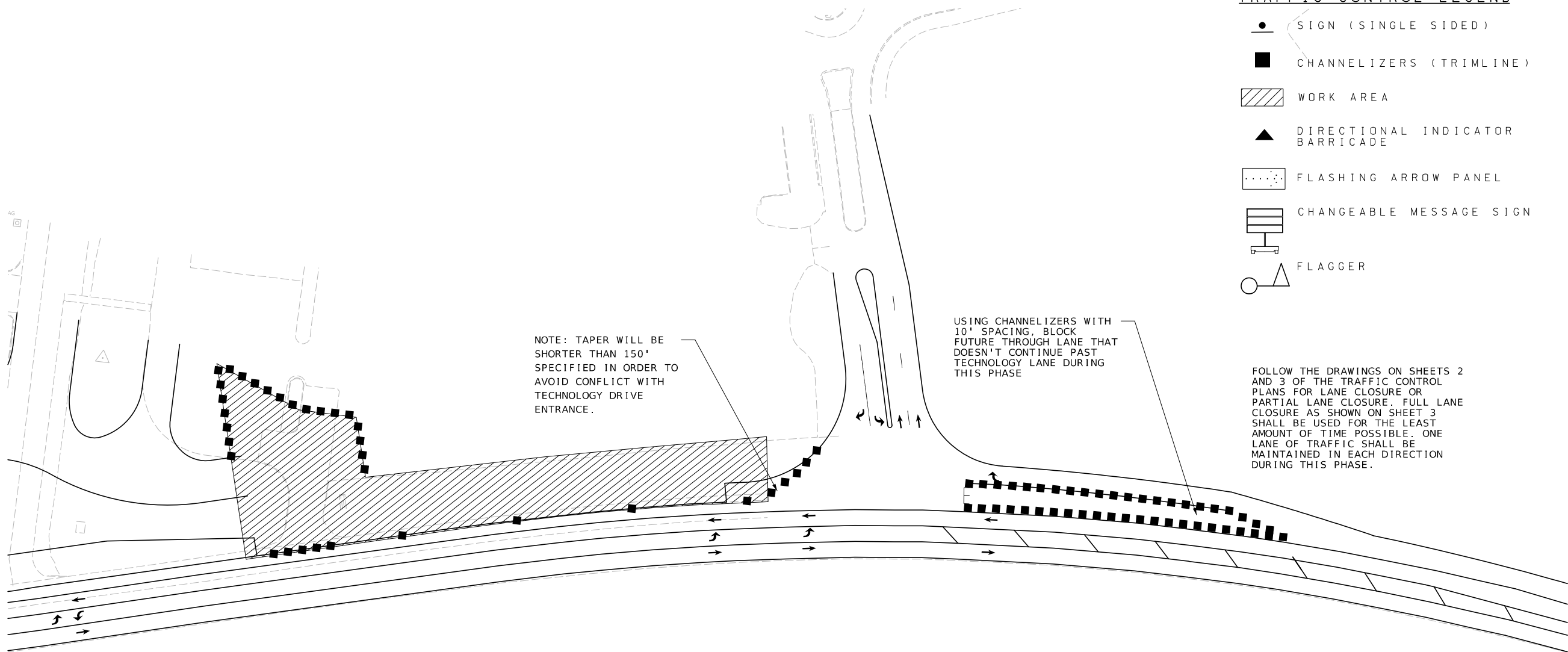
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Bartlett & West

601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

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



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE SIGN
- FLAGGER

NOTE: TAPER WILL BE SHORTER THAN 150' SPECIFIED IN ORDER TO AVOID CONFLICT WITH TECHNOLOGY DRIVE ENTRANCE.

USING CHANNELIZERS WITH 10' SPACING, BLOCK FUTURE THROUGH LANE THAT DOESN'T CONTINUE PAST TECHNOLOGY LANE DURING THIS PHASE

FOLLOW THE DRAWINGS ON SHEETS 2 AND 3 OF THE TRAFFIC CONTROL PLANS FOR LANE CLOSURE OR PARTIAL LANE CLOSURE. FULL LANE CLOSURE AS SHOWN ON SHEET 3 SHALL BE USED FOR THE LEAST AMOUNT OF TIME POSSIBLE. ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION DURING THIS PHASE.

- NOTES:
- SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.
 - REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
 - LANE WIDTHS SHALL BE A MINIMUM OF 11'.
 - CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 - PAVEMENT EDGE TREATMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE WHENEVER REQUIRED BY STANDARD PLAN 619.10J.



SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
40-45	350	500	150	540	400	40	80

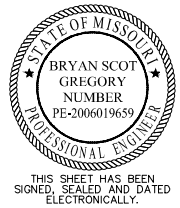
1. Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOT TO SCALE

TRAFFIC CONTROL PLAN
PHASE 3C
SHEET 19 OF 19

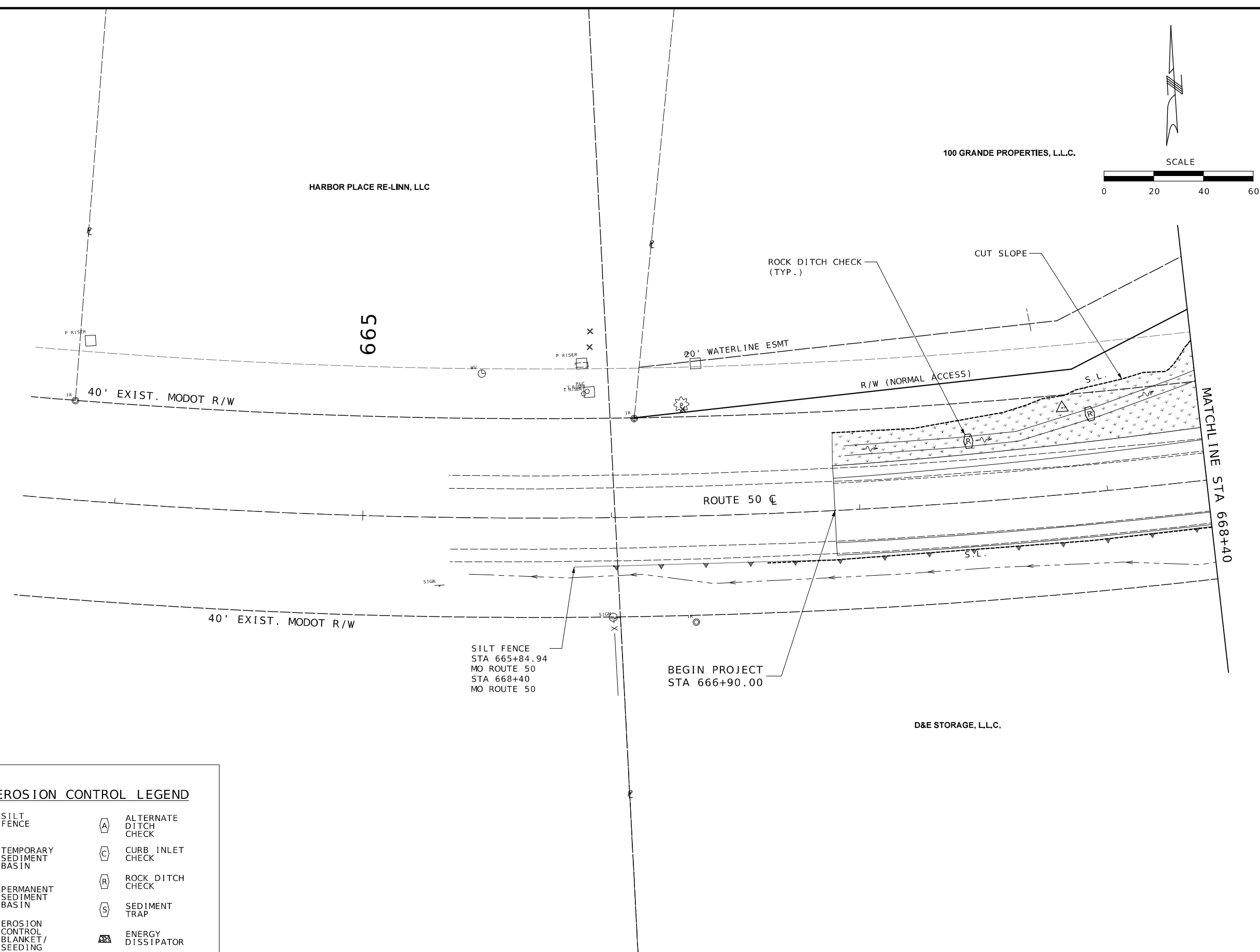
Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 572-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

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




DATE PREPARED 4/4/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 51
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	


DESCRIPTION	DATE




TEMPORARY EROSION CONTROL LEGEND




SILT FENCE




TEMPORARY SEDIMENT BASIN




PERMANENT SEDIMENT BASIN




EROSION CONTROL BLANKET / SEEDING




TURF TYPE TALL FESCUE SODDING




ALTERNATE DITCH CHECK




CURB INLET CHECK



ROCK DITCH CHECK



SEDIMENT TRAP



ENERGY DISSIPATOR

STATE OF MISSOURI

COLLIN J. WILCOX

NUMBER PE-2019035614

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 4/8/2024

ROUTE 50

STATE MO

DISTRICT CD

SHEET NO. 52

COUNTY OSAGE

JOB NO. J5P3574


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)



411 North 10th Street, Suite 200 St. Louis, MO 63101 Phone: 314.621.3395

EROSION CONTROL SHEET 1 OF 10


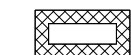

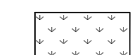
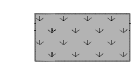





\$FILE\$

\$TIME\$

\$DATE\$

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

TEMPORARY EROSION CONTROL LEGEND

-  SILT FENCE
-  TEMPORARY SEDIMENT BASIN
-  PERMANENT SEDIMENT BASIN
-  EROSION CONTROL BLANKET/SEEDING
-  TURF TYPE TALL FESCUE SODDING
-  ALTERNATE DITCH CHECK
-  CURB INLET CHECK
-  ROCK DITCH CHECK
-  SEDIMENT TRAP
-  ENERGY DISSIPATOR

WOLFE CEDAR GROVE APARTMENTS, L.L.C.

675

TEMP CONST ESMT

EXIST. MODOT R/W

S.L.

ROUTE 50 C

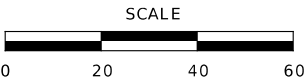
S.L.

EXIST. MODOT R/W

S.L.

THE STATE OF MISSOURI ACTING BY AND
THROUGH THE MISSOURI
HIGHWAYS AND TRANSPORTATION COMMISSION

LEGENDS BANK



THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 54

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

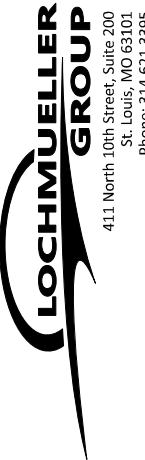
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



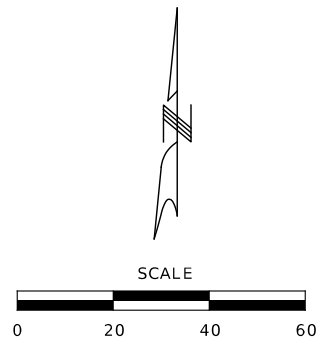
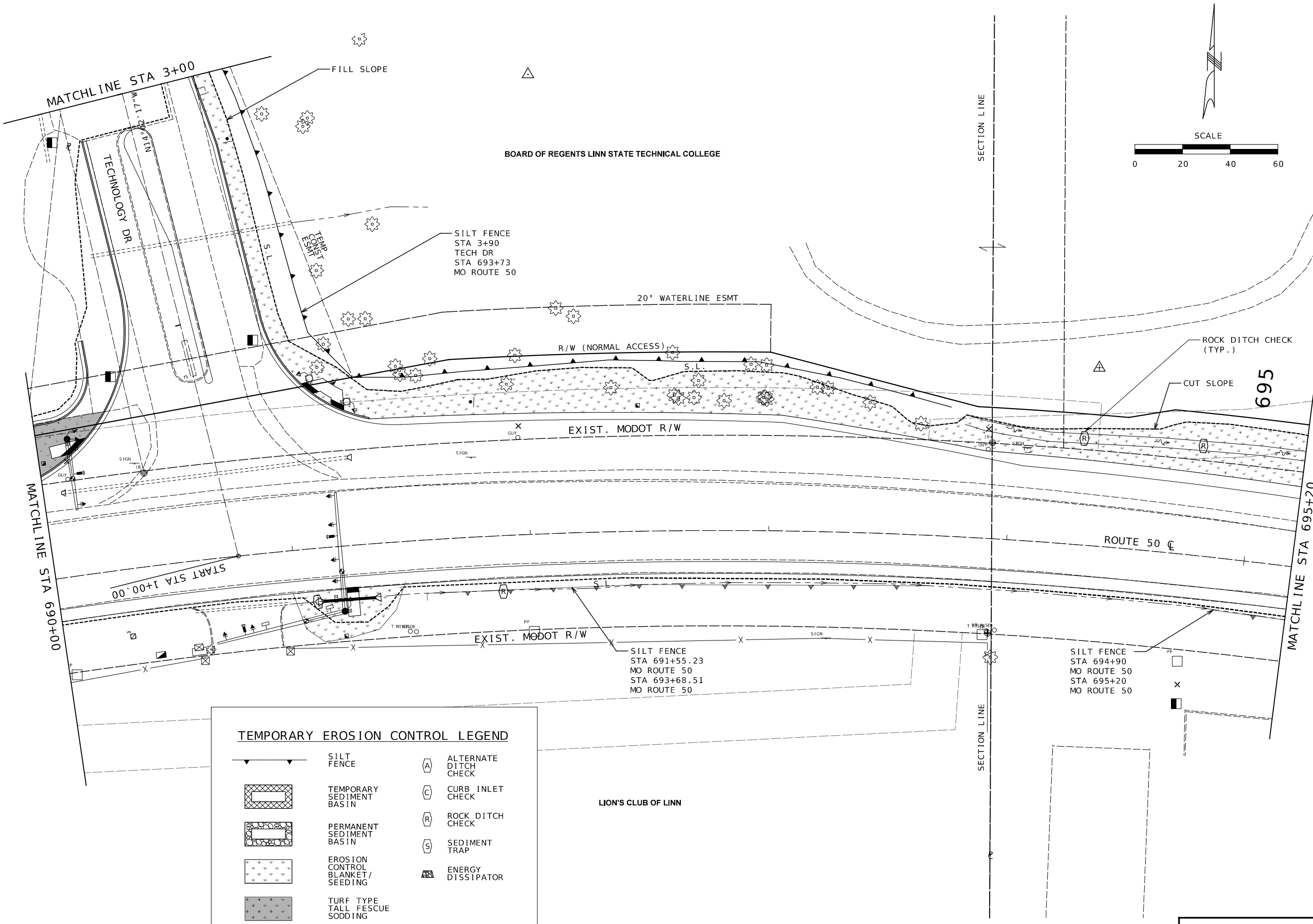
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



EROSION CONTROL
SHEET 3 OF 10

\$FILE\$ \$TIME\$ \$DATE\$

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



TEMPORARY EROSION CONTROL LEGEND

	SILT FENCE		ALTERNATE DITCH CHECK
	TEMPORARY SEDIMENT BASIN		CURB INLET CHECK
	PERMANENT SEDIMENT BASIN		ROCK DITCH CHECK
	EROSION CONTROL BLANKET/SEEDING		SEDIMENT TRAP
	TURF TYPE TALL FESCUE SODDING		ENERGY DISSIPATOR

COLLIN J. WILCOX
NUMBER
PE-2019035614
THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 57
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

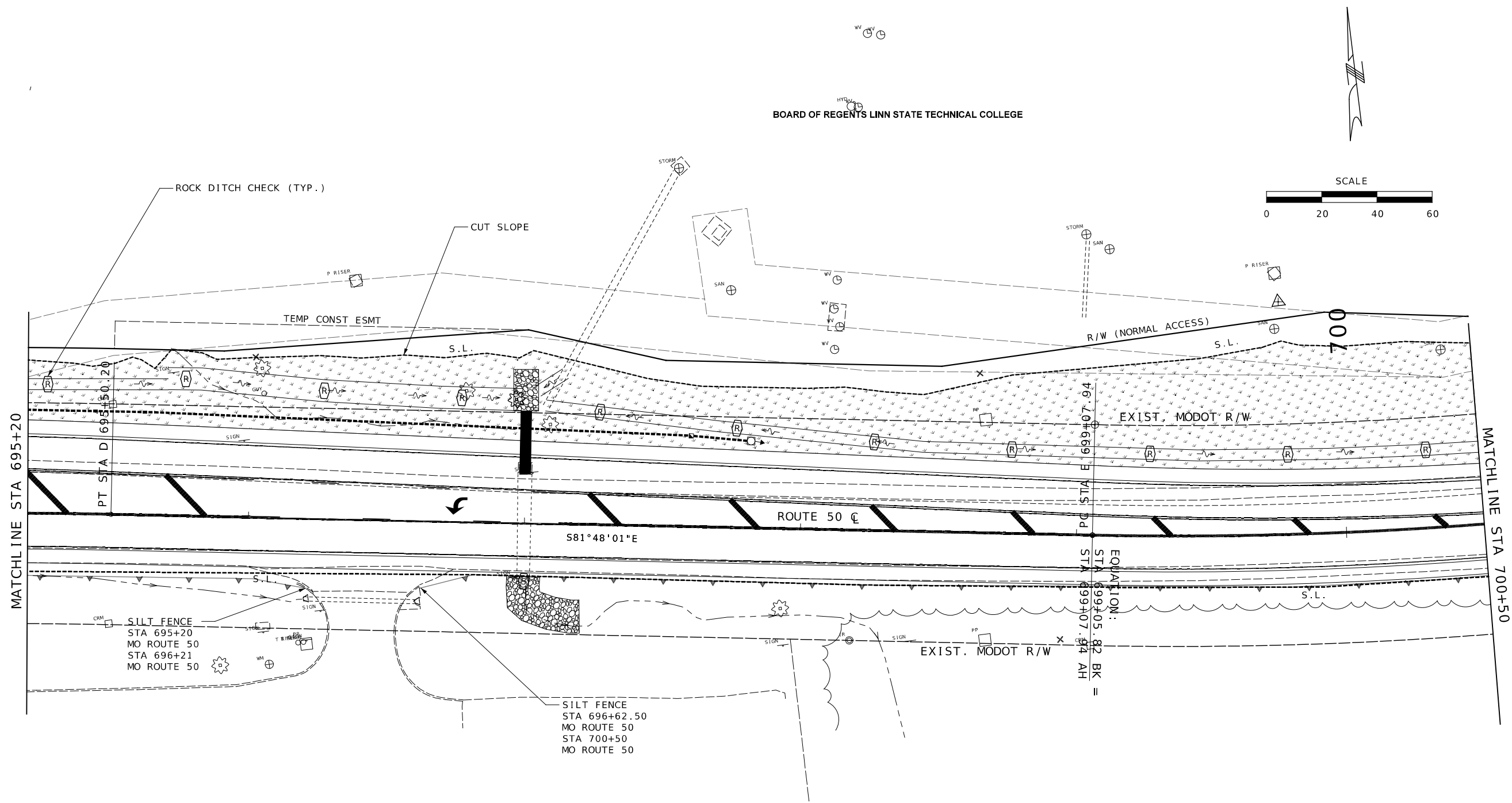
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

EROSION CONTROL SHEET 6 OF 10

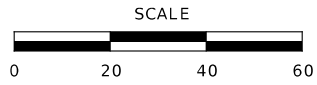
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



MATCHLINE STA 695+20

MATCHLINE STA 700+50

BOARD OF REGENTS LINN STATE TECHNICAL COLLEGE



TEMPORARY EROSION CONTROL LEGEND

- | | | | |
|--|---------------------------------|--|-----------------------|
| | SILT FENCE | | ALTERNATE DITCH CHECK |
| | TEMPORARY SEDIMENT BASIN | | CURB INLET CHECK |
| | PERMANENT SEDIMENT BASIN | | ROCK DITCH CHECK |
| | EROSION CONTROL BLANKET/SEEDING | | SEDIMENT TRAP |
| | TURF TYPE TALL FESCUE SODDING | | ENERGY DISSIPATOR |

BAND PROPERTIES, LLC

REORGANIZED SCHOOL DISTRICT NO. R-II OF OSAGE COUNTY

EROSION CONTROL SHEET 7 OF 10



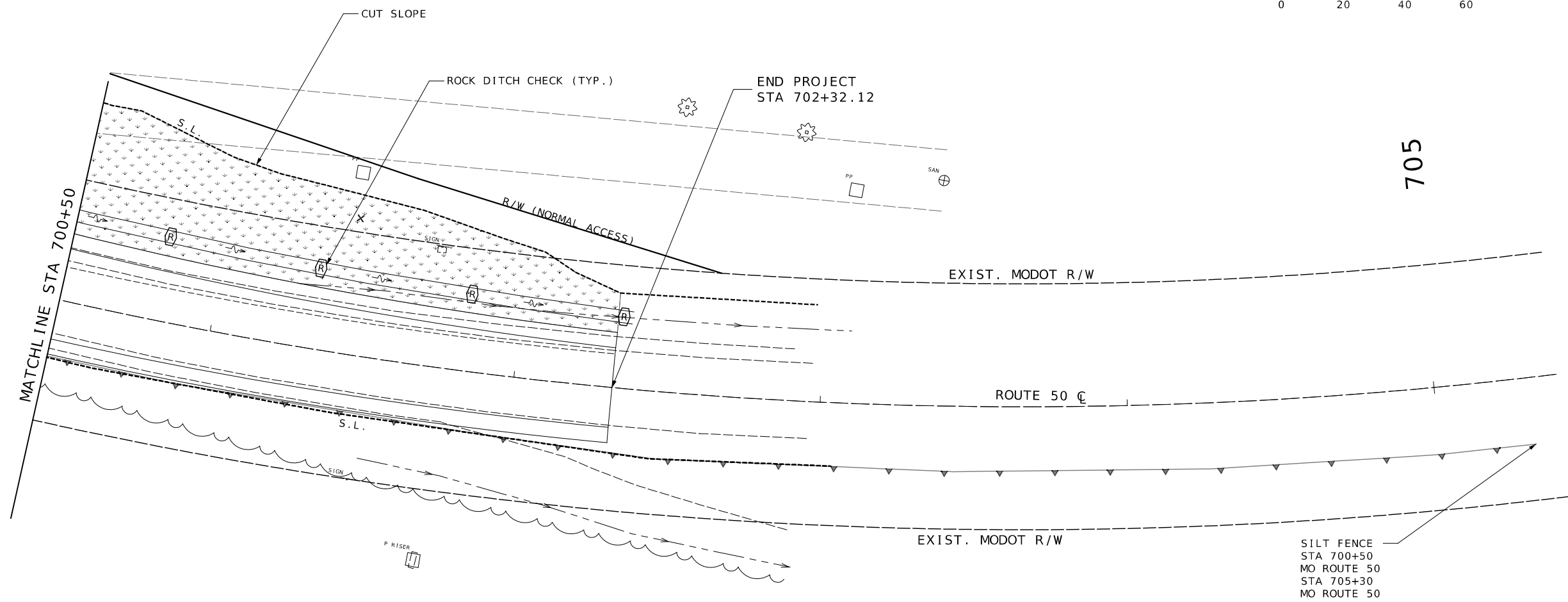
DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 58
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

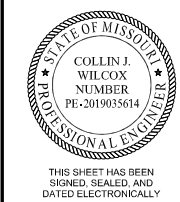
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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



TEMPORARY EROSION CONTROL LEGEND			
	SILT FENCE		ALTERNATE DITCH CHECK
	TEMPORARY SEDIMENT BASIN		CURB INLET CHECK
	PERMANENT SEDIMENT BASIN		ROCK DITCH CHECK
	EROSION CONTROL BLANKET/SEEDING		SEDIMENT TRAP
	TURF TYPE TALL FESCUE SODDING		ENERGY DISSIPATOR



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 59
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MODOT

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

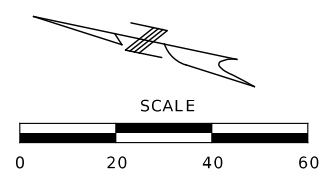
LOCHMUELLER GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

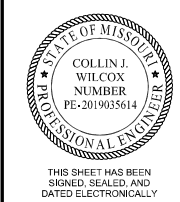
EROSION CONTROL
SHEET 8 OF 10

\$FILE\$ \$TIME\$ \$DATE\$

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



OWNER: LION'S CLUB OF LINN



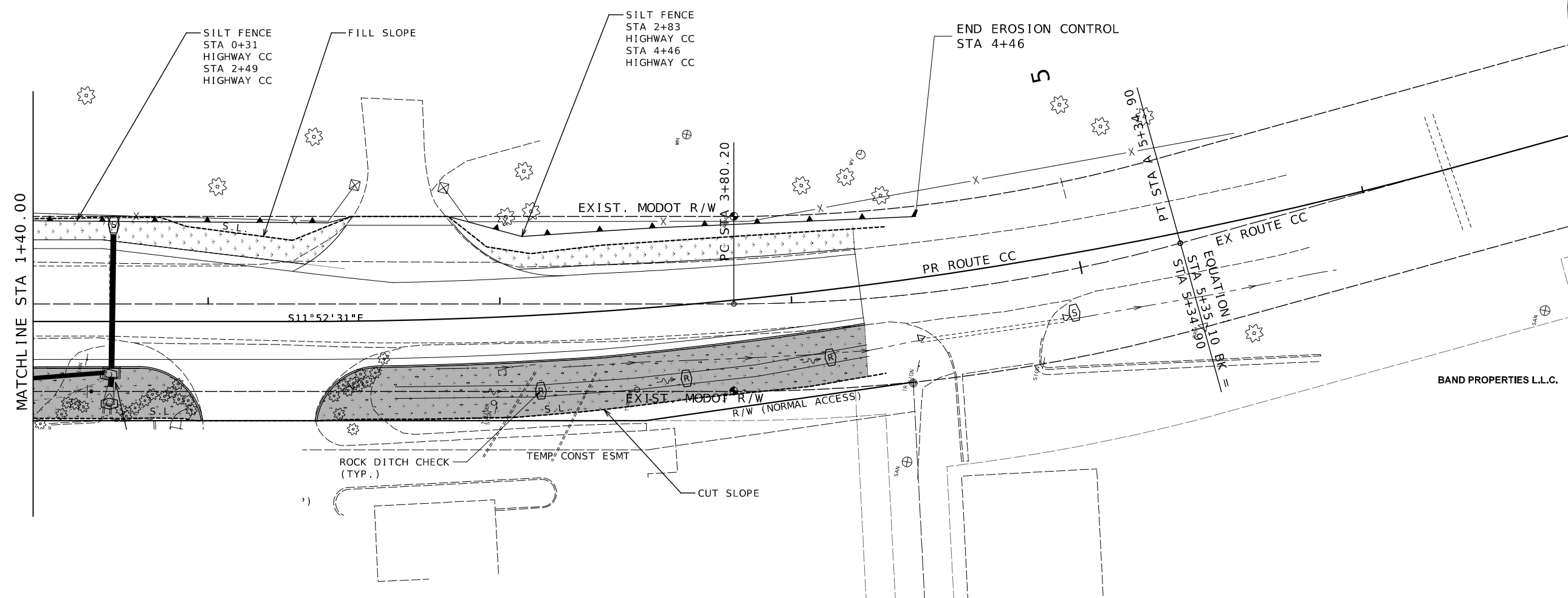
DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 60
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

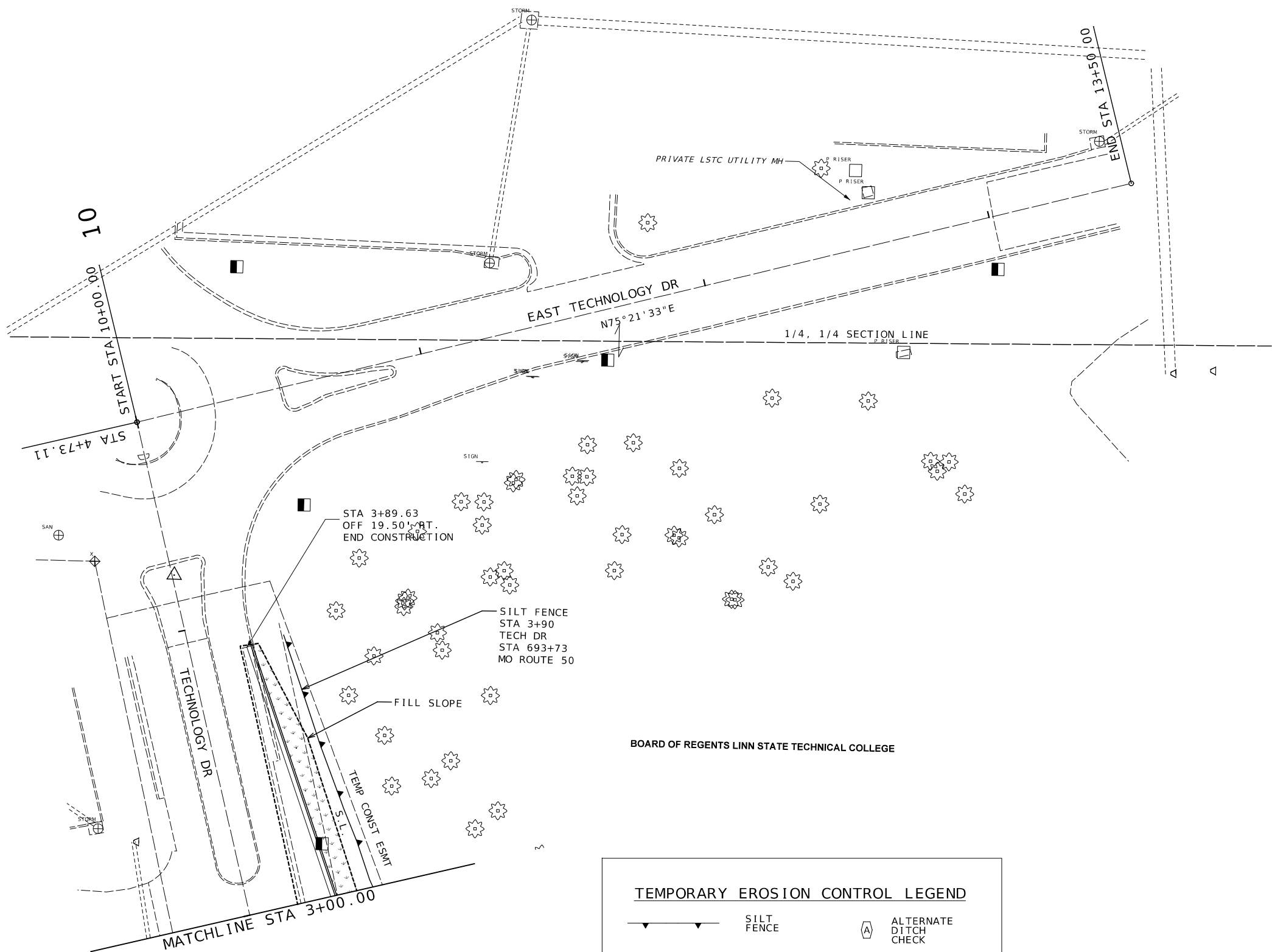


TEMPORARY EROSION CONTROL LEGEND

- | | | | |
|--|---------------------------------|--|-----------------------|
| | SILT FENCE | | ALTERNATE DITCH CHECK |
| | TEMPORARY SEDIMENT BASIN | | CURB INLET CHECK |
| | PERMANENT SEDIMENT BASIN | | ROCK DITCH CHECK |
| | EROSION CONTROL BLANKET/SEEDING | | SEDIMENT TRAP |
| | TURF TYPE TALL FESCUE SODDING | | ENERGY DISSIPATOR |

GIER HOLDING L.L.C.

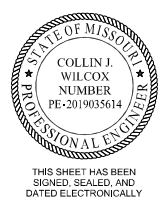
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



TEMPORARY EROSION CONTROL LEGEND

- | | | | |
|--|-----------------------------------|--|-----------------------|
| | SILT FENCE | | ALTERNATE DITCH CHECK |
| | TEMPORARY SEDIMENT BASIN | | CURB INLET CHECK |
| | PERMANENT SEDIMENT BASIN | | ROCK DITCH CHECK |
| | EROSION CONTROL BLANKET / SEEDING | | SEDIMENT TRAP |
| | TURF TYPE TALL FESCUE SODDING | | ENERGY DISSIPATOR |

EROSION CONTROL
SHEET 10 OF 10



DATE PREPARED
4/8/2024
ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 61
COUNTY OSAGE
JOB NO. J5P3574
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

CONTROLLER

CONTROLLER (EXISTING)

JUNCTION BOX

POWER SUPPLY

WOOD POST

SIGNAL HEAD (OPT LIM CONV)

SIGNAL HEAD (OPT LIM)

SIGNAL HEAD (PEDESTRIAN)

SIGNAL HEAD (STANDARD)

ITS PULL BOX TYPE 2 EXISTING

MICROWAVE DETECTION CAMERA

360-DEGREE DETECTION CAMERA

PUSH BUTTON DETECTOR

PREFORMED PULL BOX TYPE 1

PREFORMED PULL BOX TYPE 2

CONCRETE PULL BOX TYPE 1

CONCRETE PULL BOX TYPE 2

ITS PULL BOX TYPE 2

ITS PULL BOX TYPE 5

VIDEO DETECTION ZONE

VIDEO DETECTOR NUMBER

6 X 6 LOOP DETECTOR

6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

CONDUIT MEDIAN

CONDUIT PUSHED

CONDUIT BRIDGE

CONDUIT EXISTING

CONDUIT TRENCHED

SPAN WIRE

MAST ARM - TYPE A BASE

MAST ARM - TYPE C BASE

MAST ARM - TYPE F BASE

0 (207)

0 (36)

0 (0)

A

0 (0)

232 (1178)

23 (170)

155 (7)

976 (260)

153 (107)

B

96 (93)

12 (4)

79 (34)

C

D

US 50

HWY CC

(2025) DHV: A.M. (P.M.)

0 (283)

0 (30)

0 (0)

A

0 (0)

261 (2095)

25 (228)

220 (11)

1921 (284)

172 (118)

B

108 (103)

10 (1)

91 (40)

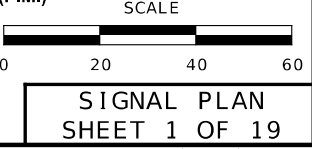
C

D

US 50

HWY CC

(2045) DHV: A.M. (P.M.)



STATE OF MISSOURI
TYSON
WILLIAM
KING
REGISTERED PROFESSIONAL ENGINEER
NUMBER
PE-200800217

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE
50

STATE
MO

DISTRICT
CD

SHEET NO.
62

COUNTY
OSAGE

JOB NO.
J5P3574

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)

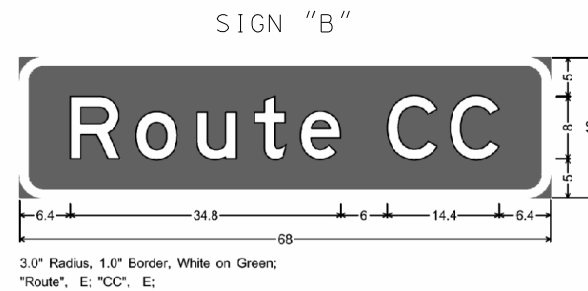
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

\$FILE\$

\$TIME\$

\$DATE\$

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



SIGNS						
	QUANTITY	MUTCD SIGN NUMBER	SIZE	AREA	TOTAL AREA EACH SIGN	SIGNAL MOUNTING HARDWARE
					ITEM NO. 90208.33	ITEM NO. 90208.34
			INCHES	SQ. FT.	SQ. FT.	EA.
(3)	2	STREET NAME SIGN "A"	18 X 68	8.5	17.0	2
(3)	2	STREET NAME SIGN "B"	18 X 68	8.5	17.0	2
	4	R10-27A	30 x 36	7.5	30.0	4
(4)	2	R10-3EL	9 X 15	0.94		2
(4)	2	R10-3ER	9 X 15	0.94		2
				SUBTOTAL	64.0	12.0
				TOTAL	70.0	12.0

	REMARKS	
ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.		
- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.		
- ** SEE STANDARD PLANS 902.10 AND 902.30 FOR CONCRETE REQUIREMENTS ON BASES.		
- (1) SIGNAL AND SIGN SPACING SHOWN IS APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.		
(2) DENOTED SIGNAL POST TO BE USED FOR INSTALLATION OF OVERHEAD LANE DEMARCATION SIGNS WEST OF ROUTE CC. SEE SIGNING SHEETS FOR INFORMATION RELATED TO SIZE, TYPE, AND LOCATION OF EACH PROPOSED OVERHEAD LANE DEMARCATION SIGN.		
(3) SEE CONCEPTUAL SIGN LAYOUT AND SIZING AT THE TOP OF THIS PAGE FOR PROPOSED STREET NAME SIGNS.		
(4) EACH PROPOSED R10-3E SIGN SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE APS UNIT. SIGNS SHALL BE MANUFACTURED TO BE COMPATIBLE WITH APS UNITS. SEE SPECIAL PROVISIONS FOR DETAILED INFORMATION.		
(5) ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE COUNTDOWN.		

LEGEND
T - TOP MOUNT
S - SIDE MOUNT
B - MAST ARM MOUNT

ROUTE 50 AND ROUTE CC INTERSECTION

SIGNAL PLAN
SHEET 2 OF 19

[illegible]

POWER SUPPLY														
LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING*				LIGHTING CONTROL * (ON POWER SUPPLY)		SERVICE POLE			
APPROACH	STATION	OFFSET			CONTROLLER		POWER SUPPLY DISCONNECT		120 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY		
					AUXILIARY BREAKER	AUXILIARY BREAKER	MAIN BREAKER							
							SIGNALS	LIGHTING						
ROUTE 50	682+83.06	61.95' RT	1(5)		15 Amps	40 Amps	100 Amps	100 Amps	1(5)	30 Amps	Cl.	Ft.		
					Amps	Amps	Amps	Amps		Amps	Cl.	Ft.		

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																						
LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED		ON-OFF* SWITCH		COORDINATION INTERFACE *						TIME * CLOCK	NEMA CABINET TYPE *			170 CABINET TYPE *		170 SOFTWARE *	
APPROACH	STATION	OFFSET					TYPE		12C/7C HARDWIRE (1)		TIME BASE	CLOSED LOOP		FIBER		E	EV	DOUBLE	332	336S	BITRAN	WAPITI
							NEMA	170	NEMA	170		I	II									
ROUTE 50	682+74.90	54.67' RT			1(3)(4)												1(4)(6)					

DETECTOR SCHEDULE					
DETECTOR NUMBER	TYPE				
	PUSH BUTTON (7)	INDUCTION LOOP			VIDEO DETECTION (3)(4)
		STANDARD	DELAY/ EXTEND *	CALL UNIT *	
RADAR DETECTION					
P1	1				
P2	1				
P3	1				
P4	1				
TOTAL	4				

		NEMA DETECTOR ASSIGNMENT (2)							
		CARD POSITION							
		1	2	3	4	5	6	7	8
CHANNEL	1			RADAR DETECTION (3)					
	2								

- (1) MODOT “D” PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS. ALL ALARMS AND PRE-EMPTIONS SHALL BE TERMINATED ON THE CABINET BACK PANEL.
- (2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN BELOW THE ASSIGNMENT CHART.
- (3) THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE RADAR DETECTION SYSTEM WITH MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES, PROCESSORS, AND MISCELLANEOUS EQUIPMENT NECESSARY FULLY OPERATIONAL RADAR DETECTION SYSTEM FOR BOTH STOP BAR AND ADVANCED VEHICLE DETECTION. THIS WILL BE A COMPLETE UNIT WITH ALL COSTS INCLUDED. RADAR DETECTION INPUTS INTO CONTROLLER SHALL BE VIA TS/2 PORTS.
- (4) THE CONTRACTOR SHALL PROVIDE AN ETHERNET ENABLED NEMA TS/2 SIGNAL CONTROLLER. CABINET SETUP SHALL BE TS/2 TYPE 1 WITH SDLC CONNECTORS FOR APPLICABLE SIGNAL ELEMENTS. THE SIGNAL CONTROLLER SHALL BE LISTED ON THE CURRENT MODOT APPROVED PRODUCT LIST OR BE AN EQUIVALENT APPROVED BY MODOT DISTRICT STAFF.
- (5) THE CONTRACTOR SHALL PROVIDE AND INSTALL A PAD MOUNTED POWER SUPPLY FOR 120V SIGNAL AND 240V, 4 CIRCUIT LIGHTING CONTROLLER. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL AN UNINTERRUPTIBLE POWER SUPPLY IN THE SIGNAL POWER SUPPLY AND LIGHTING CONTROLLER CABINET. SEE DETAILS INCLUDED IN THESE PLANS AND SPECIAL PROVISIONS FOR FURTHER INFORMATION AND REQUIREMENTS.
- (6) CABINET, CONTROLLER, AND MONITORS SHALL BE CONFIGURED FOR FYA OPERATION AS NOTED.
- (7) EACH PUSH BUTTON SHALL BE CONSIDERED PART OF AN INDIVIDUAL ACCESSIBLE PEDESTRIAN SIGNAL (APS) UNIT. WHERE PUSH BUTTONS ARE SHOWN IN THE PLANS, AN INDIVIDUAL APS UNIT SHALL BE INSTALLED. THE PEDESTRIAN PUSH BUTTONS SHALL BE MOUNTED 42” ABOVE THE PEDESTRIAN PATH, AND WITHIN A 10” SIDE REACH OF ADJACENT LEVEL LANDING AREA. SEE SPECIAL PROVISIONS FOR DETAILED INFORMATION.

NEMA LOAD SWITCH ASSIGNMENTS															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ø1 EBL	Ø2 WB	Ø3 NBL	Ø4 SB	Ø5 WBL	Ø6 EB	Ø7 SBL	Ø8 NB	EB-OLA FYA	NBL-OLB FYA	WBL-OLC FYA	SBL-OLD FYA	2P N. SIDE	4P W. SIDE	N/U	N/U

ROUTE 50 AND ROUTE CC
INTERSECTION

STATE OF MISSOURI

TYSON WILLIAM KING

REGISTERED PROFESSIONAL ENGINEER

NUMBER PE-2008002177

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 4/8/2024

ROUTE 50

DISTRICT CD

STATE MO

SHEET NO. 65

COUNTY OSAGE

JOB NO. J5P3574

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)

LOCHMUELLER GROUP

411 North 10th Street, Suite 200

St. Louis, MO 63101

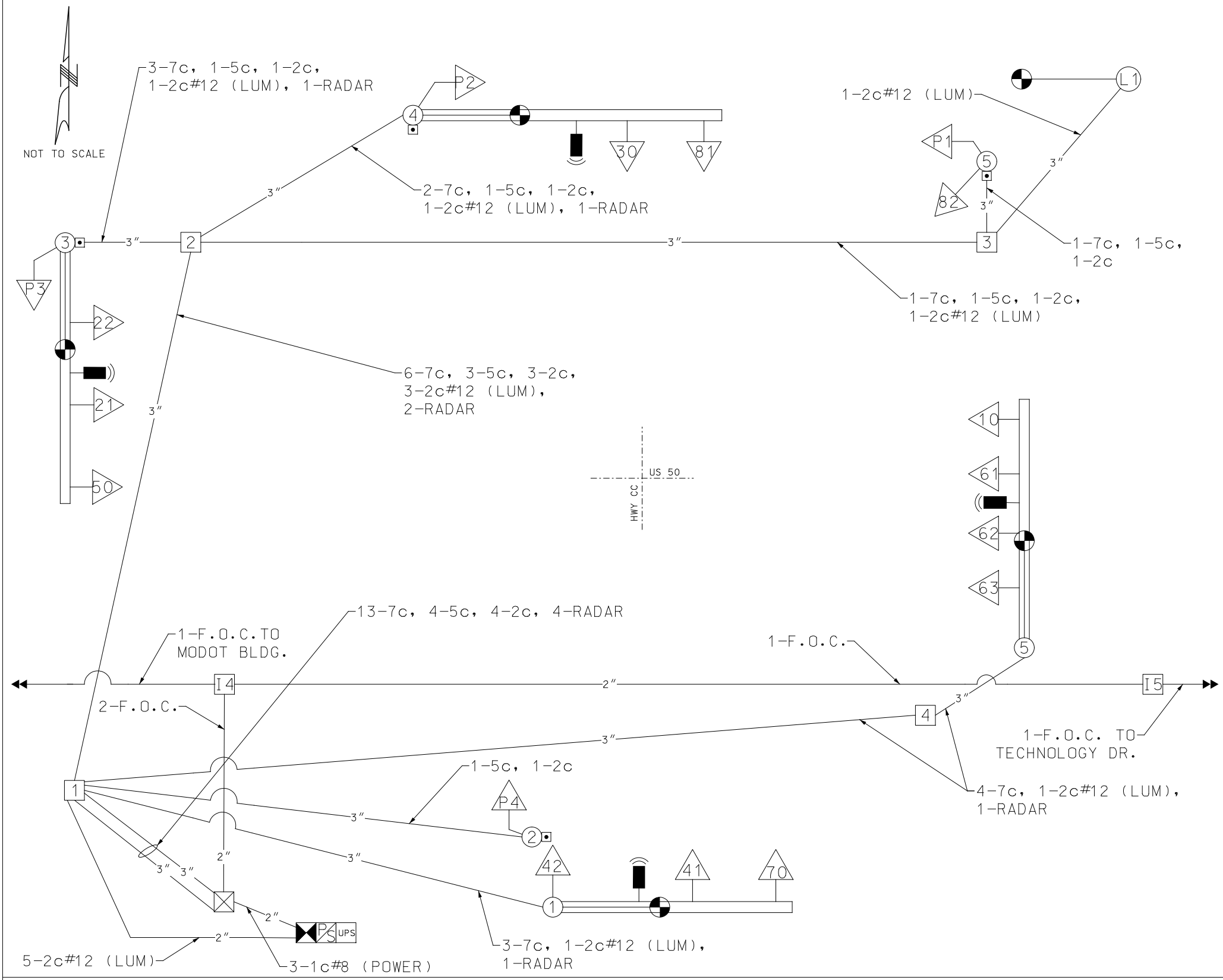
Phone: 314.621.3395

\$FILE\$

\$TIME\$

\$DATE\$

WIRING DIAGRAM



LEGEND

- 3" CONDUIT CONTAINING CABLE WITH SIZE
- CABLE
- X-XC MULTI-CONDUCTOR CABLE #16 AWG (UNLESS OTHERWISE INDICATED)
- C.C. VIDEO DETECTION CAMERA CABLE
- X PULL BOX WITH NUMBER
- X POST WITH NUMBER
- X POST WITH MAST ARM AND LUMINAIRE
- X SIGNAL HEAD WITH NUMBER
- X SIGNAL CONTROLLER
- POWER SOURCE
- LIGHTING CONTROLLER
- PS POWER SUPPLY
- UPS UNINTERRUPTIBLE POWER SUPPLY
- ILLUMINATED STREET SIGN
- PEDESTRIAN PUSH BUTTON
- MICROWAVE DETECTION CAMERA

ROUTE 50 AND ROUTE CC
INTERSECTION

SIGNAL PLAN
SHEET 5 OF 19

STATE OF MISSOURI
TYSON
WILLIAM
KING
REGISTERED PROFESSIONAL ENGINEER
NUMBER
PE-2008002177
THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE
50

DISTRICT
CD

STATE
MO

SHEET NO.
66

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
.

PROJECT NO.
.

BRIDGE NO.
.

DESCRIPTION

DATE

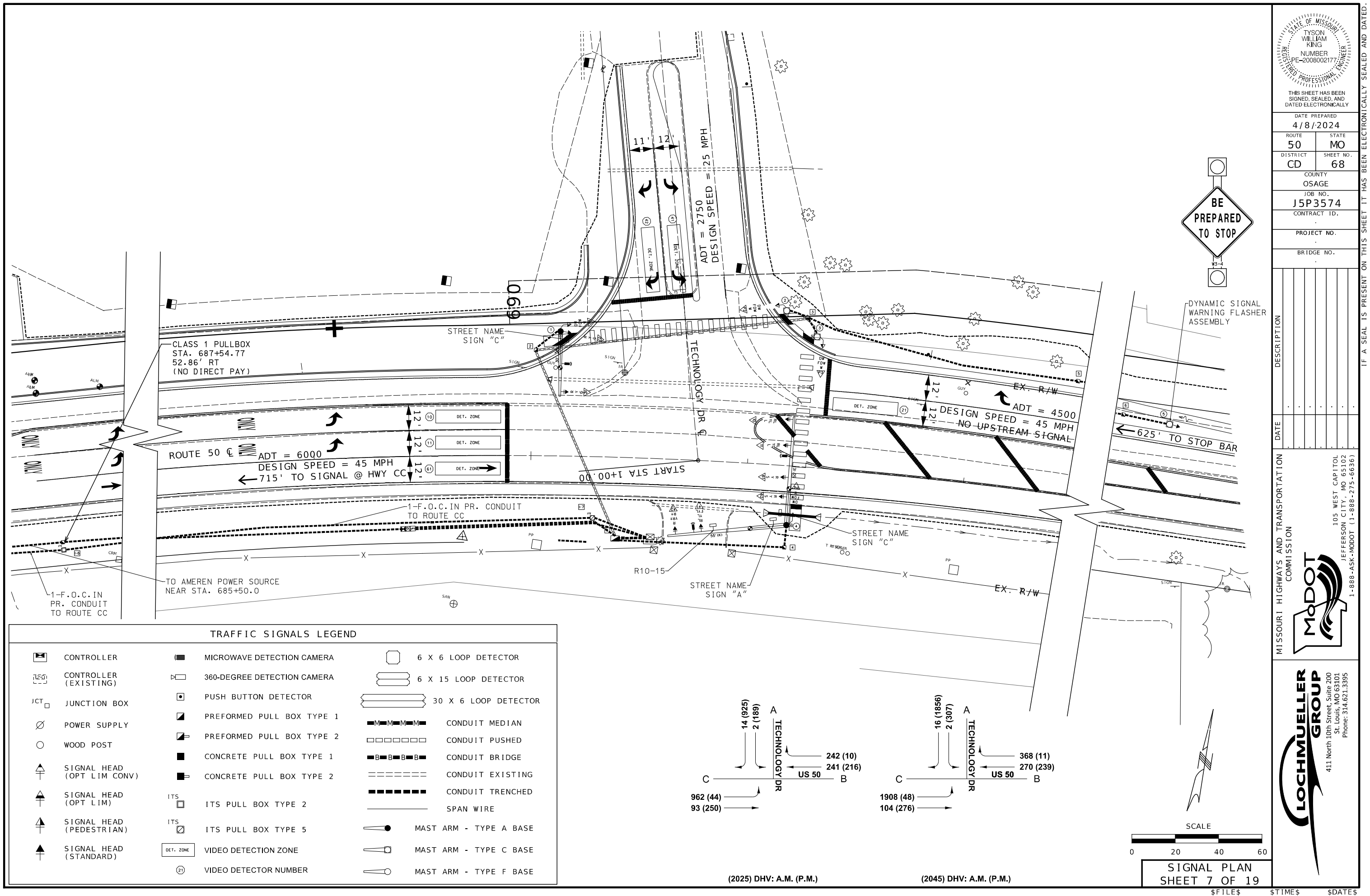
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

LOCHMUELLER
GROUP
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St. Louis, MO 63101
Phone: 314.621.3395

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

\$FILE\$ \$TIME\$ \$DATE\$



Technical drawing of a 'Route 50' road sign. The sign is rectangular with a black background and white text. The dimensions are as follows:

- Overall width: 58
- Overall height: 18
- Text 'Route 50' is centered within a white border.
- Horizontal dimensions from left to right: 6.3, 34.8, 6, 14.6, 6.3.
- Vertical dimensions from top to bottom: 6, 6, 6.

Technology Dr

6.1 70.8 6 13 6.1

102

1/2 1/2 18

[illegible][illegible]

SIGNS						
QUANTITY	MUTCD SIGN NUMBER	SIZE	AREA	TOTAL AREA EACH SIGN	SIGNAL MOUNTING HARDWARE	
		INCHES	SQ. FT.	ITEM NO. 90208.33	ITEM NO. 90208.34	
(2)	1	STREET NAME SIGN "A"	18 X 68	8.50	8.5	1
(2)	2	STREET NAME SIGN "C"	18 X 102	12.75	25.5	2
(3)	1	R10-3FL	9 X 15	0.94		1
(3)	3	R10-3FL	9 X 15	0.94		3
(4)	1	W3-4	48 X 48	16.0	16.0	1
	1	R10-15	30 X 30	6.25	6.3	1
			SUBTOTAL	56.3		9.0
			TOTAL	60.0		9.0

REMARKS

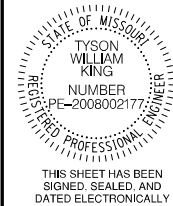
ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- ** SEE STANDARD PLANS 902.10 AND 902.30 FOR CONCRETE REQUIREMENTS ON BASES.
- (1) SIGNAL AND SIGN SPACING SHOWN IS APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.
- (2) SEE CONCEPTUAL SIGN LAYOUT AND SIZING AT THE TOP OF THIS PAGE FOR PROPOSED STREET NAME SIGNS.
- (3) EACH PROPOSED R10-3E SIGN SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE APS UNIT. SIGNS SHALL BE MANUFACTURED TO BE COMPATIBLE WITH APS UNITS. SEE SPECIAL PROVISIONS FOR DETAILED INFORMATION.
- (4) DENOTED SIGN TO BE USED AS PART OF PROPOSED DYNAMIC SIGNAL WARNING FLASHER ASSEMBLY TO BE INSTALLED EAST OF TECHNOLOGY DRIVE. SEE DETAIL SHEET AND SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- (5) ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE COUNTDOWN.

T - TOP MOUNT
S - SIDE MOUNT
B - MAST ARM MOUNT

SIGNAL PLAN
SHEET 8 OF 19

\$FILE\$	\$TIME\$	\$DATE\$
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DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO 69

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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



411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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

POWER SUPPLY												
LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING*				LIGHTING CONTROL * (ON POWER SUPPLY)		SERVICE POLE	
APPROACH	STATION	OFFSET			CONTROLLER		POWER SUPPLY DISCONNECT		120 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY
					AUXILIARY BREAKER	AUXILIARY BREAKER	MAIN BREAKER					
							SIGNALS	LIGHTING				
ROUTE 50	689+42.61	33.38' RT	1(5)		15 Amps	40 Amps	100 Amps	100 Amps	1(5)	30 Amps	Cl.	Ft.
					Amps	Amps	Amps	Amps		Amps	Cl.	Ft.

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																						
LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED		ON-OFF* SWITCH		COORDINATION INTERFACE *						TIME * CLOCK	NEMA CABINET TYPE *			170 CABINET TYPE *		170 SOFTWARE *	
APPROACH	STATION	OFFSET					TYPE		12C/7C HARDWIRE (1)		TIME BASE	CLOSED LOOP		FIBER		E	EV	DOUBLE	332	336S	BITRAN	WAPITI
							NEMA	170	NEMA	170		I	II									
ROUTE 50	690+23.34	37.15' RT			1(3)(4)												1(4)					

DETECTOR SCHEDULE					
DETECTOR NUMBER	TYPE				
	PUSH BUTTON (6)	INDUCTION LOOP			VIDEO DETECTION (3)
		STANDARD	DELAY/ EXTEND *	CALL UNIT *	
RADAR DETECTION					
P1	1				
P2	1				
P3	1				
P4	1				
TOTAL	4				

		NEMA DETECTOR ASSIGNMENT (2)							
		CARD POSITION							
		1	2	3	4	5	6	7	8
C H A N N E L	1			RADAR DETECTION (3)					
	2								

- (1) MODOT “D” PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS. ALL ALARMS AND PRE-EMPTIONS SHALL BE TERMINATED ON THE CABINET BACK PANEL.
- (2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN BELOW THE ASSIGNMENT CHART.
- (3) THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE RADAR DETECTION SYSTEM WITH MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES, PROCESSORS, AND MISCELLANEOUS EQUIPMENT NECESSARY FULLY OPERATIONAL RADAR DETECTION SYSTEM FOR BOTH STOP BAR AND ADVANCED VEHICLE DETECTION. THIS WILL BE A COMPLETE UNIT WITH INCLUDED. RADAR DETECTION INPUTS INTO CONTROLLER SHALL BE VIA TS/2 PORTS.
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- (5) THE CONTRACTOR SHALL PROVIDE AND INSTALL A PAD MOUNTED POWER SUPPLY FOR 120V SIGNAL AND 240V, 4 CIRCUIT LIGHTING CONTROLLER. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL AN UNINTERRUPTIBLE POWER SUPPLY IN THE SIGNAL POWER SUPPLY AND LIGHTING CONTROLLER CABINET. SEE DETAILS INCLUDED IN THESE PLANS AND SPECIAL PROVISIONS FOR FURTHER INFORMATION AND REQUIREMENTS.
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NEMA LOAD SWITCH ASSIGNMENTS															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ø1 EBL	Ø2 WB	N/U	Ø4 SB	N/U	Ø6 EB	N/U	N/U	SBR OLA	N/U	N/U	N/U	2P N. SIDE	4P E. SIDE	N/U	N/U

ROUTE 50 AND TECHNOLOGY DR.
INTERSECTION

SIGNAL PLAN
SHEET 10 OF 19

STATE OF MISSOURI
TYSON KING
REGISTERED PROFESSIONAL ENGINEER
NUMBER
PE-200800217

THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE
50

DISTRICT
CD

STATE
MO

SHEET NO.
71

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
.

PROJECT NO.
.

BRIDGE NO.
.

DESCRIPTION

DATE

ALL COSTS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

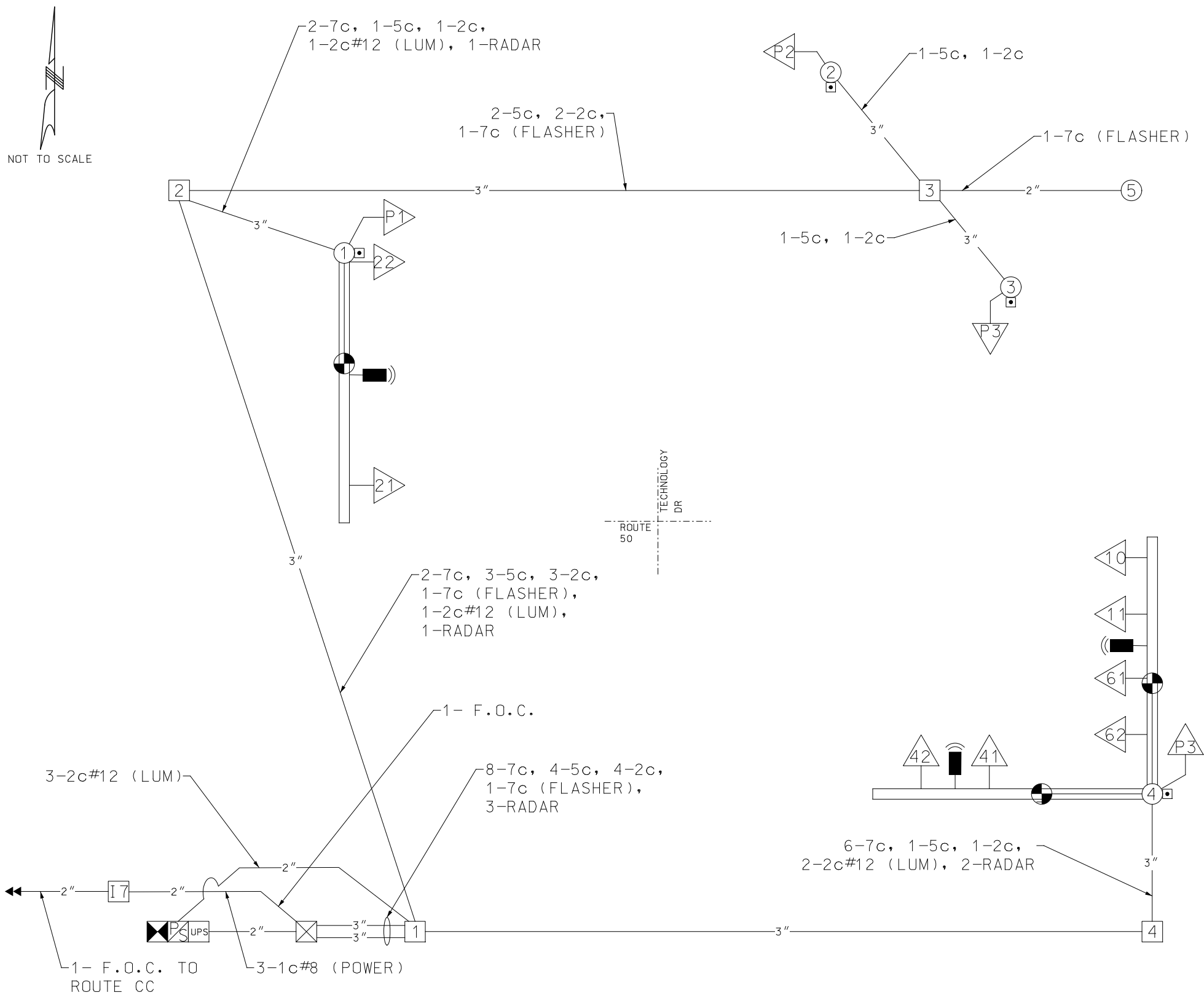
MODOT

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

LOCHMUELLER GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

WIRING DIAGRAM

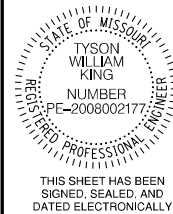


LEGEND

- 3" CONDUIT CONTAINING CABLE WITH SIZE
- CABLE
- X-XC MULTI-CONDUCTOR CABLE #16 AWG (UNLESS OTHERWISE INDICATED)
- C.C. VIDEO DETECTION CAMERA CABLE
- X PULL BOX WITH NUMBER
- X POST WITH NUMBER
- X POST WITH MAST ARM AND LUMINAIRE
- X SIGNAL HEAD WITH NUMBER
- X SIGNAL CONTROLLER
- POWER SOURCE
- LIGHTING CONTROLLER
- PS POWER SUPPLY
- UPS UNINTERRUPTIBLE POWER SUPPLY
- ILLUMINATED STREET SIGN
- PEDESTRIAN PUSH BUTTON
- MICROWAVE DETECTION CAMERA

ROUTE 50 AND TECHNOLOGY DR.
INTERSECTION

SIGNAL PLAN
SHEET 11 OF 19



DATE PREPARED
4/8/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 72

COUNTY OSAGE

JOB NO. J5P3574

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

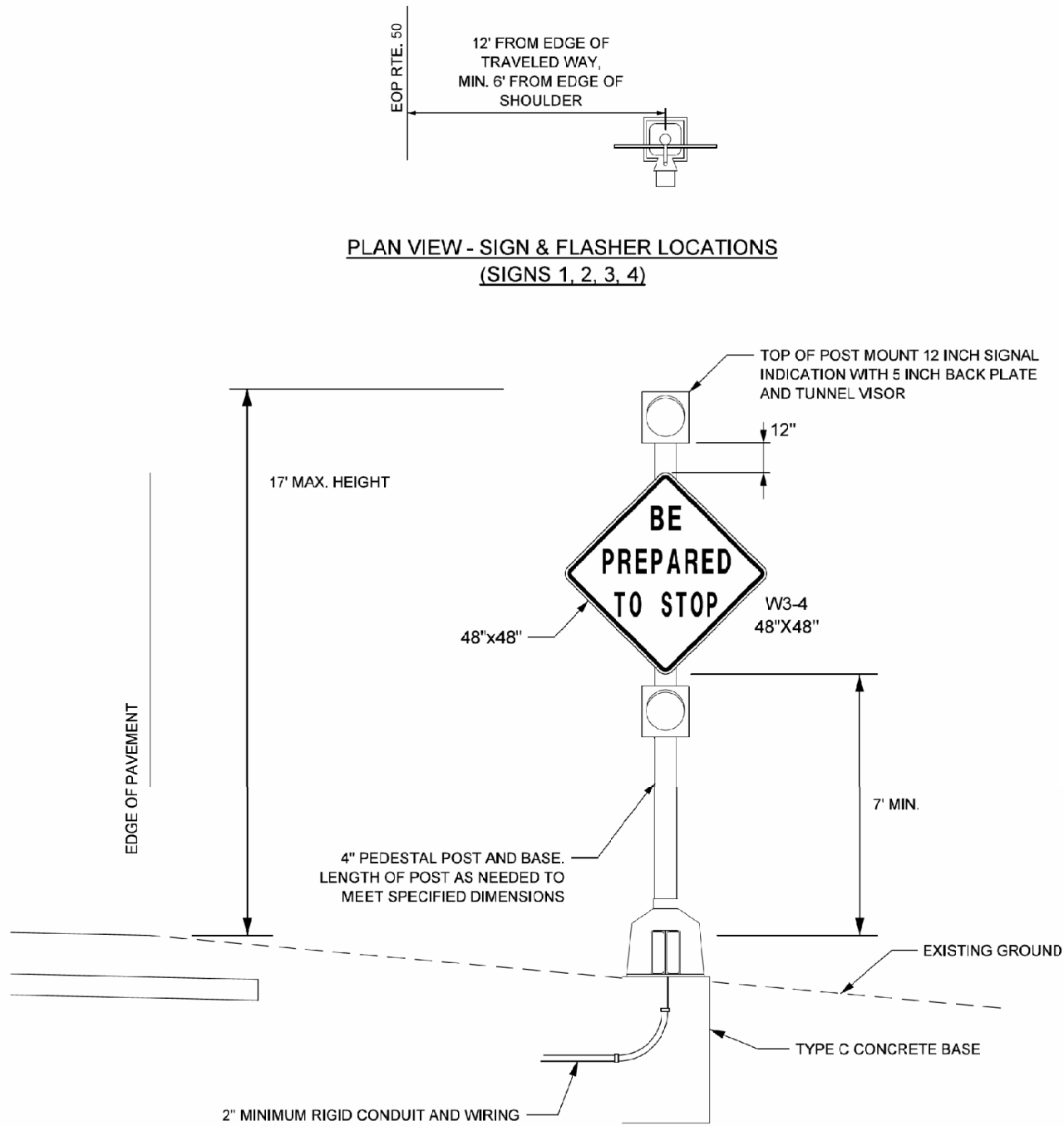
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JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

MODOT

LOCHMUELLER GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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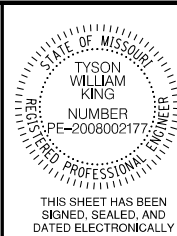


PLAN VIEW - SIGN & FLASHER LOCATIONS
(SIGNS 1, 2, 3, 4)

ADVANCED SIGN AND FLASHER DETAILS

NOTES:

1. THE PROPOSED SIGNAL CABINET INCLUDE ALL NECESSARY HARDWARE AND CONTROLLER PROGRAMMING AS RECOMMENDED BY THE CABINET AND CONTROLLER MANUFACTURER TO ALLOW FOR APPROPRIATE DYNAMIC SIGNAL WARNING FLASHER OPERATION.
2. EACH FLASHER/SIGN ASSEMBLY SHALL BE GROUNDED TO A GROUND ROD IN THE ADJACENT PULLBOX.
3. THE FLASHERS SHALL ACTIVATE DURING THE WESTBOUND GREEN PHASE AT A TIMEFRAME DIRECTED BY THE ENGINEER THROUGH THE YELLOW AND RED INTERVALS, TURNING OFF UPON WESTBOUND RETURN TO GREEN.



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 74
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	

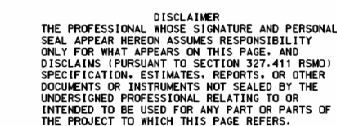
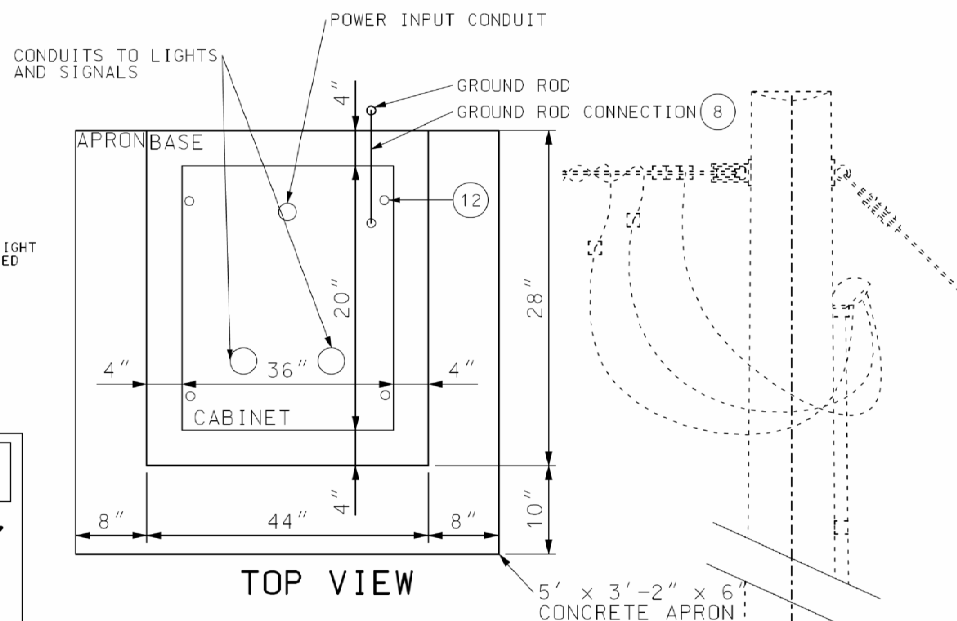
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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1. ALTERNATE CABINET DIMENSIONS WILL BE ALLOWED AS APPROVED BY THE ENGINEER. INTERIOR CABINET VOLUME SHALL BE EQUAL TO OR GREATER THAN THAT SHOWN ON PLANS AND PROPER CLEARANCES SHALL BE PROVIDED FOR ALL EQUIPMENT. CONCRETE BASE DIMENSIONS SHALL BE MODIFIED TO FIT THE CABINET SUPPLIER.
2. PLACEMENT OF ALL ITEMS SHALL BE APPROVED BY THE ENGINEER.
3. SCHEMATIC DIAGRAM SHALL BE MOUNTED ON INSIDE OF CABINET DOOR.
4. THE UTILITY SHALL BE NOTIFIED IN WRITING 30 DAYS PRIOR TO DATE SERVICE WILL BE REQUIRED.
5. ALL CABINET OPENINGS SHALL BE COVERED AND SEALED WITH LIFETIME SILICONE CAULK.
6. MATERIALS REQUIRED EXCLUDING REFERENCE ITEMS NOT SHOWN ON THE DRAWING SHALL BE INCLUDED IN PRICE BID FOR 'PAD MOUNTED POWER SUPPLY AND LIGHTING CONTROLLER WITH UNINTERRUPTIBLE POWER SUPPLY,' CABLE AND CONDUIT FROM POWER SUPPLY ASSEMBLY TO UTILITY COMPANY FACILITIES SHALL BE INCLUDED IN THE BID PRICE.
7. REFER TO PLAN SHEET DETAIL TO DETERMINE IF A UTILITY POLE OR PEDESTAL WILL BE REQUIRED.
8. CABINET SHALL BE MOUNTED WITH A MINIMUM 36" CLEARANCE, FRONT, BACK, AND SIDES.
9. SEE CABINET MANUFACTURER FOR MOUNTING BASE DIMENSIONS AND ANCHOR BOLT LOCATIONS.



LIST OF MATERIALS	
ITEM	DESCRIPTION
1	METER SOCKET, 200 AMP. WITH LEVER TEST BYPASS
2	RIGID STEEL CONDUIT, 2" MIN. TO UTILITY CO. FACILITIES
3	CLASS B CONCRETE, 1.3 cu. yd. (MIN.)
4	NEMA 3R, DUST-TIGHT, WATERTIGHT CABINET
5	GROUND ROD, 3/4" DIA. x 8' MIN. (MIN. 6' IN SOIL)
6	PHOTOELECTRIC SWITCH AND SOCKET, 105/265 V., 1000 WATT
7	2" MIN. SCH 40 PVC CONDUIT (REF.)
8	#2 AWG MIN., 600 V., GROUND CABLE
9	EXOTHERMIC WELD W/RE TO ROD
10	PLIABLE SEALANT
11	LIFETIME SILICONE CAULK
12	ANCHOR BOLTS, 5/8-11 x 18" LONG BOLTS, HOT DIP GALVANIZED, 4 REQUIRE
13	WEATHERPROOF AD-ESIVE LABEL, VINYL LETTERING (OR EQUIVALENT SEE DETAIL.)
14	INSULATED TERMINAL BLOCK
15	2-POLE, 20 AMP, 120V COIL LIGHTING CONTACTOR
16	2-POLE, 650 VOLT LIGHTNING ARRESTER
17	1-POLE, 15 AMP, TYPE B BREAKER TO PHOTOELECTRIC SWITCH
18	MANUAL-AUTO SWITCH
19	INSULATED GROUNDABLE NEUTRAL, 100 AMP
20	2-POLE, TYPE A MAIN BREAKER
21	2-POLE, 15 AMP (MIN.), TYPE A BREAKERS TO LIGHTING CIRCUITS *
22	1-POLE, 15 AMP (MIN.), TYPE A BREAKER TO SIGNALS *
23	#2 AWG MIN., 600 V., POWER CABLE *
24	6" PEDESTAL RISER
25	12V GEL CELL BATTERIES IN SERIES (4 MINIMUM)
26	30A GENERATOR MALE BASE
27	INVERTER (1100VA MINIMUM)
28	1-POLE, 40 AMP, TYPE B UPS BREAKER
29	1-POLE, 15 AMP, TYPE B FAN BREAKER
30	1 1/2" CONDUIT OUT TO SIGNAL CABINET (CAT SE AND CONTROL WIRING)
*	SEE PLANS FOR SIZE

(A) CABINET WITH POWER SUPPLY SHALL BE ALUMINUM OR STAINLESS STEEL. ALL HARDWARE, HINGES, CATCHES, ETC. SHALL BE STAINLESS STEEL. METER SOCKET AND OTHER EQUIPMENT AND MATERIALS SHALL BE U.L. APPROVED AND CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY OR MUNICIPALITY PROVIDING POWER.

(B) IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 INCHES DEEP. CONNECTION TO GROUND ROD SHALL BE CAD WELDED.

(C) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS (120 OR 240 VOLTS). IF LIGHTS ARE TO BE MOUNTED ON SIGNAL POSTS, VOLTAGE MUST BE 120 VOLTS. 240 VOLT LIGHTS ARE NOT TO BE MOUNTED ON OR WIRED THROUGH SIGNAL POSTS, CONDUIT, OR PULL BOXES.

(D) LOCATE PHOTOELECTRIC SWITCH AT CENTER OF WINDOW.

(E) IF FOR REASONS OF VOLTAGE DROP A WIRE SIZE IS SPECIFIED LARGER THAN #2 AWG, A LARGER TERMINAL BLOCK SHALL BE INSTALLED FOR THAT CIRCUIT.

(F) BREAKER SIZING:

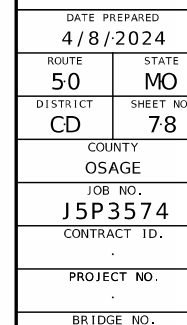
SIZE (AMPS)	240V TOTAL CIRCUIT LOAD (WATTS)	120V TOTAL CIRCUIT LOAD (WATTS)
15	0-2800	0-1390
20	2850-3700	1400-1850
25	3750-4600	1860-2320
30	4650-5500	2330-2780
35	5550-6500	-
40	6550-7400	-

CIRCUIT LOAD INCLUDES LOAD DUE TO LINE LOSS, LAMP, AND BALLAST LOAD.

- (G) ALL CIRCUIT BREAKERS SHALL CONFORM TO SECTION 901.4 OF THE STANDARD SPECIFICATIONS.
- (H) TAPE BATTERY TEMPERATURE SENSOR TO THE SIDE OF EITHER BATTERY #2 OR BATTERY #3. SENSOR SHOULD BE TO THE MIDDLE OF THE BATTERY BANK.
- (I) UTILITY COMPANY SHALL DECIDE IF LIGHTNING ARRESTORS ARE TO BE CONNECTED ON THE LINE SIDE OR THE LOAD SIDE OF THE METER. THE UTILITY COMPANY SHALL ALSO DETERMINE WHERE THE LIGHTNING ARRESTOR SHALL BE MOUNTED.
- (J) INCLUDE ADDITIONAL CONDUITS AS NECESSARY FOR AUXILIARY CIRCUITS.
- (K) SEE CABINET MANUFACTURER FOR MOUNTING BASE DIMENSIONS AND ANCHOR BOLT LOCATIONS.

SPECIAL SHEETS
PAD MOUNTED 120V/240V POWER
SUPPLY & LIGHTING CONTROLLER
W/ UNINTERRUPTIBLE POWER SUPPLY
SHEET 1 OF 3

\$FILE\$	\$TIME\$	\$DATE\$
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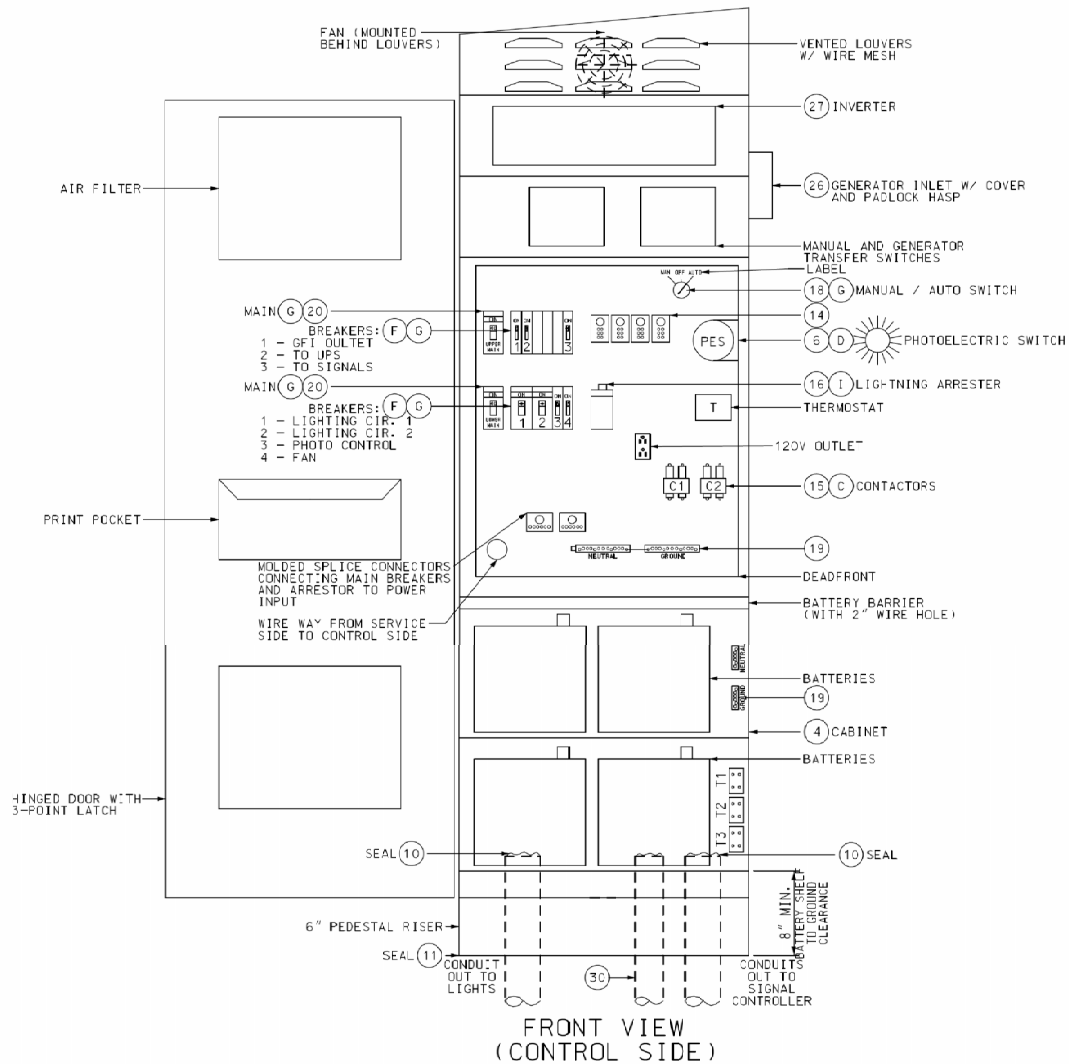
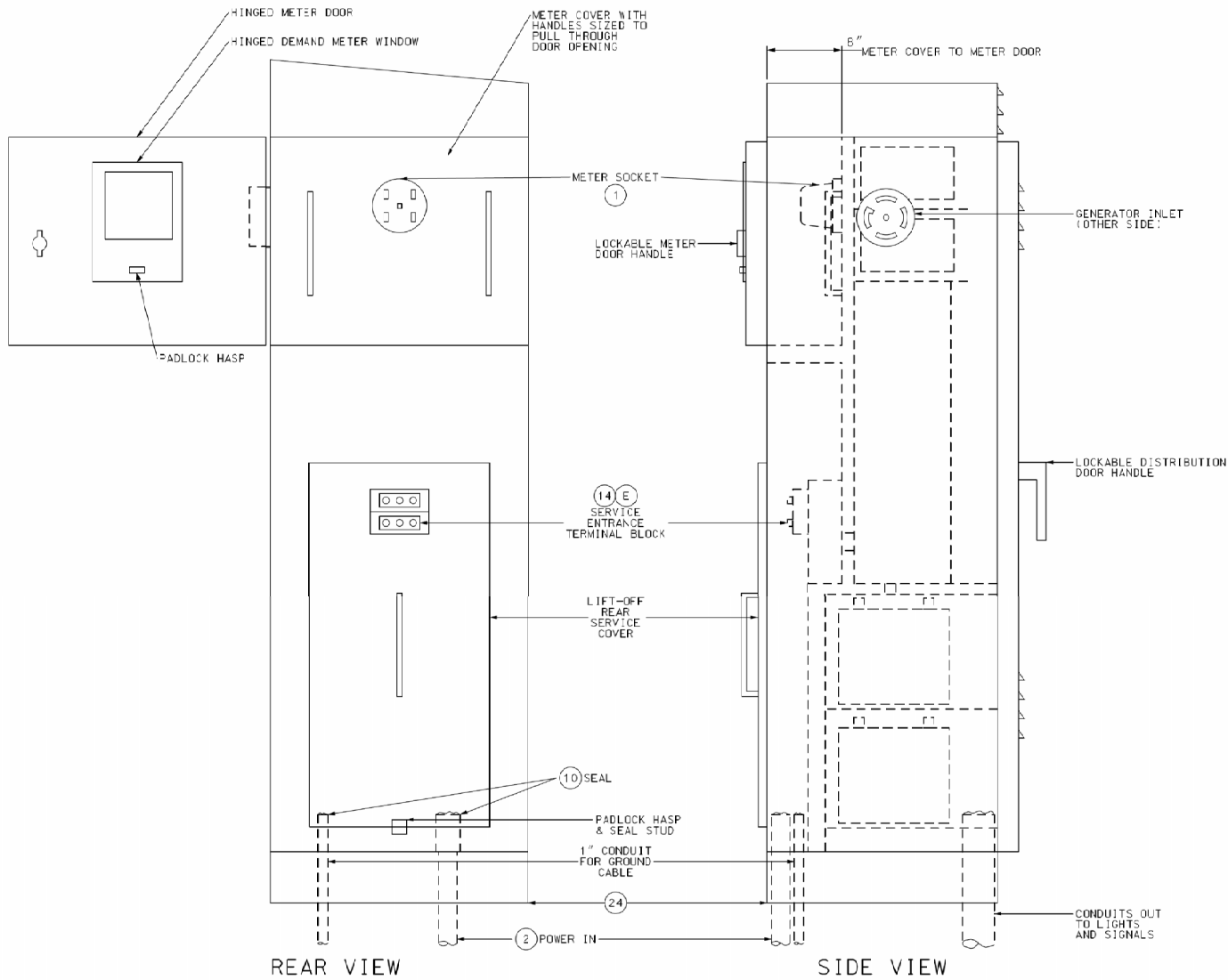


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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

HMUELLER GROUP
4411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

[illegible]



EQUIPMENT LAYOUT

NOT TO SCALE

NOTES

- (A) CABINET WITH POWER SUPPLY SHALL BE ALUMINUM OR STAINLESS STEEL. ALL HARDWARE, HINGES, CATCHES, ETC. SHALL BE STAINLESS STEEL. METER SOCKET AND OTHER EQUIPMENT AND MATERIALS SHALL BE U.L. APPROVED AND CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY OR MUNICIPALITY PROVIDING POWER.
- (B) IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 INCHES DEEP. CONNECTION TO GROUND ROD SHALL BE CADCWELDED.
- (C) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS (120 OR 240 VOLTS). IF LIGHTS ARE TO BE MOUNTED ON SIGNAL POSTS, VOLTAGE MUST BE 120 VOLTS. 240 VOLT LIGHTS ARE NOT TO BE MOUNTED ON OR WIRED THROUGH SIGNAL POSTS, CONDUIT, OR PULL BOXES.
- (D) LOCATE PHOTOELECTRIC SWITCH AT CENTER OF WINDOW.
- (E) IF FOR REASONS OF VOLTAGE DROP A WIRE SIZE IS SPECIFIED LARGER THAN #2 AWG, A LARGER TERMINAL BLOCK SHALL BE INSTALLED FOR THAT CIRCUIT.

(F) BREAKER SIZING:

SIZE (AMPS)	240V TOTAL CIRCUIT LOAD (WATTS)	120V TOTAL CIRCUIT LOAD (WATTS)
15	0-2800	0-1390
20	2850-3700	1400-1850
25	3750-4600	1860-2320
30	4650-5500	2330-2780
35	5550-6500	-
40	6550-7400	-

CIRCUIT LOAD INCLUDES LOAD DUE TO LINE LOSS, LAMP, AND BALLAST LOAD.

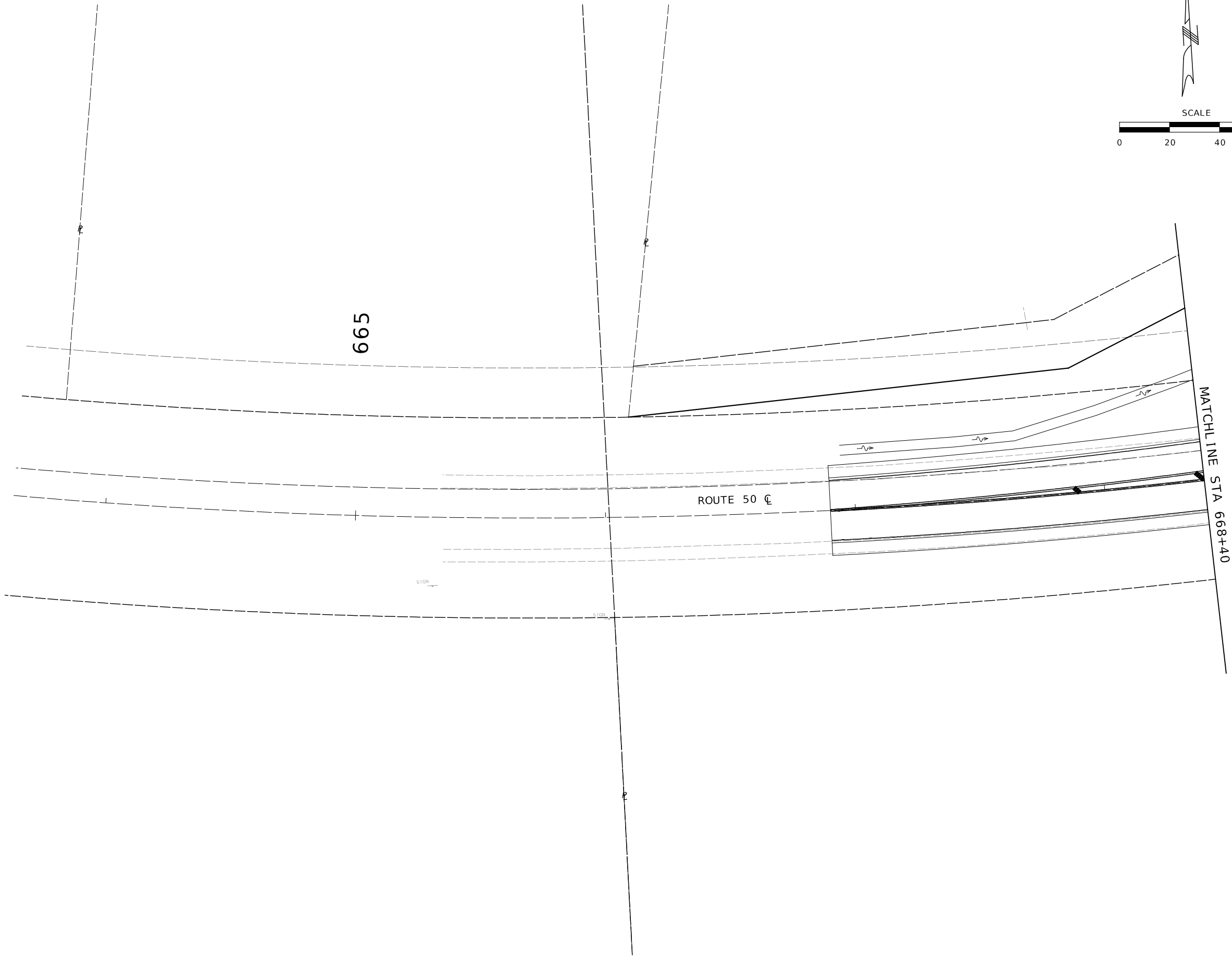
- (G) ALL CIRCUIT BREAKERS SHALL CONFORM TO SECTION 901.4 OF THE STANDARD SPECIFICATIONS.
- (H) TAPE BATTERY TEMPERATURE SENSOR TO THE SIDE OF EITHER BATTERY #2 OR BATTERY #3. SENSOR SHOULD BE TO THE MIDDLE OF THE BATTERY BANK.
- (I) UTILITY COMPANY SHALL DECIDE IF LIGHTNING ARRESTORS ARE TO BE CONNECTED ON THE LINE SIDE OR THE LOAD SIDE OF THE METER. THE UTILITY COMPANY SHALL ALSO DETERMINE WHERE THE LIGHTNING ARRESTOR SHALL BE MOUNTED.
- (J) INCLUDE ADDITIONAL CONDUITS AS NECESSARY FOR AUXILIARY CIRCUITS.
- (K) SEE CABINET MANUFACTURER FOR MOUNTING BASE DIMENSIONS AND ANCHOR BOLT LOCATIONS.

SPECIAL SHEETS
PAD MOUNTED 120V/240V POWER
SUPPLY & LIGHTING CONTROLLER
W/ UNINTERRUPTIBLE POWER SUPPLY
SHEET 2 OF 3

LIST OF MATERIALS	
ITEM	DESCRIPTION
1	METER SOCKET, 200 AMP, WITH LEVER TEST BYPASS
2	RIGID STEEL CONDUIT, 2" MIN. TO UTILITY CO. FACILITIES
3	CLASS B CONCRETE, 1.3 cu. yd. (MIN.)
4	NEMA 3R, DUST-TIGHT, WATERTIGHT CABINET
5	GROUND ROD, 3/4" DIA. x 8' MIN. (MIN. 8' IN SOIL)
6	PHOTOELECTRIC SWITCH AND SOCKET, 105/285 V., 1000 WATT
7	2" MIN. SCH 40 PVC CONDUIT (REF.)
8	#2 AWG MIN., 600 V., GROUND CABLE
9	EXOTHERMIC WELD WIRE TO ROD
10	PLIABLE SEALANT
11	LIFETIME SILICONE CAULK
12	ANCHOR BOLTS, 5/8-11 x 18" LONG BOLTS, HOT DIP GALVANIZED, 4 REQUIRED
13	WEATHERPROOF ADHESIVE LABEL, VINYL RAISED LETTERING (OR EQUIVALENT, SEE DETAIL)
14	INSULATED TERMINAL BLOCK
15	2-POLE, 20 AMP, 120V COIL LIGHTING CONTACTOR
16	2-POLE, 650 VOLT LIGHTNING ARRESTER
17	1-POLE, 15 AMP, TYPE B BREAKER TO PHOTOELECTRIC SWITCH
18	MANUAL-AUTO SWITCH
19	INSULATED GROUNDABLE NEUTRAL, 100 AMP
20	2-POLE, TYPE A MAIN BREAKER
21	2-POLE, 15 AMP (MIN.), TYPE A BREAKERS TO LIGHTING CIRCUITS *
22	1-POLE, 15 AMP (MIN.), TYPE A BREAKER TO SIGNALS *
23	#2 AWG MIN., 600 V., POWER CABLE *
24	6" PEDESTAL RISER
25	12V AGM BATTERIES IN SERIES (4 MINIMUM)

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.

26	30A GENERATOR MALE BASE
27	INVERTER (1100VA MINIMUM)
28	1-POLE, 40 AMP, TYPE B UPS BREAKER
29	1-POLE, 15 AMP, TYPE B FAN BREAKER
30	1 1/2" CONDUIT OUT TO SIGNAL CABINET (CAT 5E AND CONTROL WIRING)
*	SEE PLANS FOR SIZE



SIGNING
SHEET 1 OF 9

\$FILE\$ \$TIME\$ \$DATE\$



THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE	STATE
50	MO
DISTRICT	SHEET NO.
CD	81

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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DESCRIPTION	DATE
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

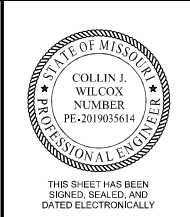
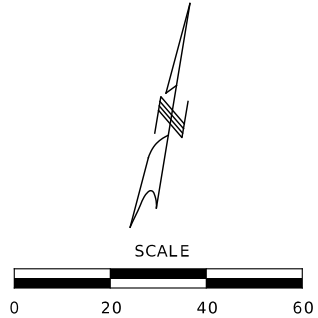
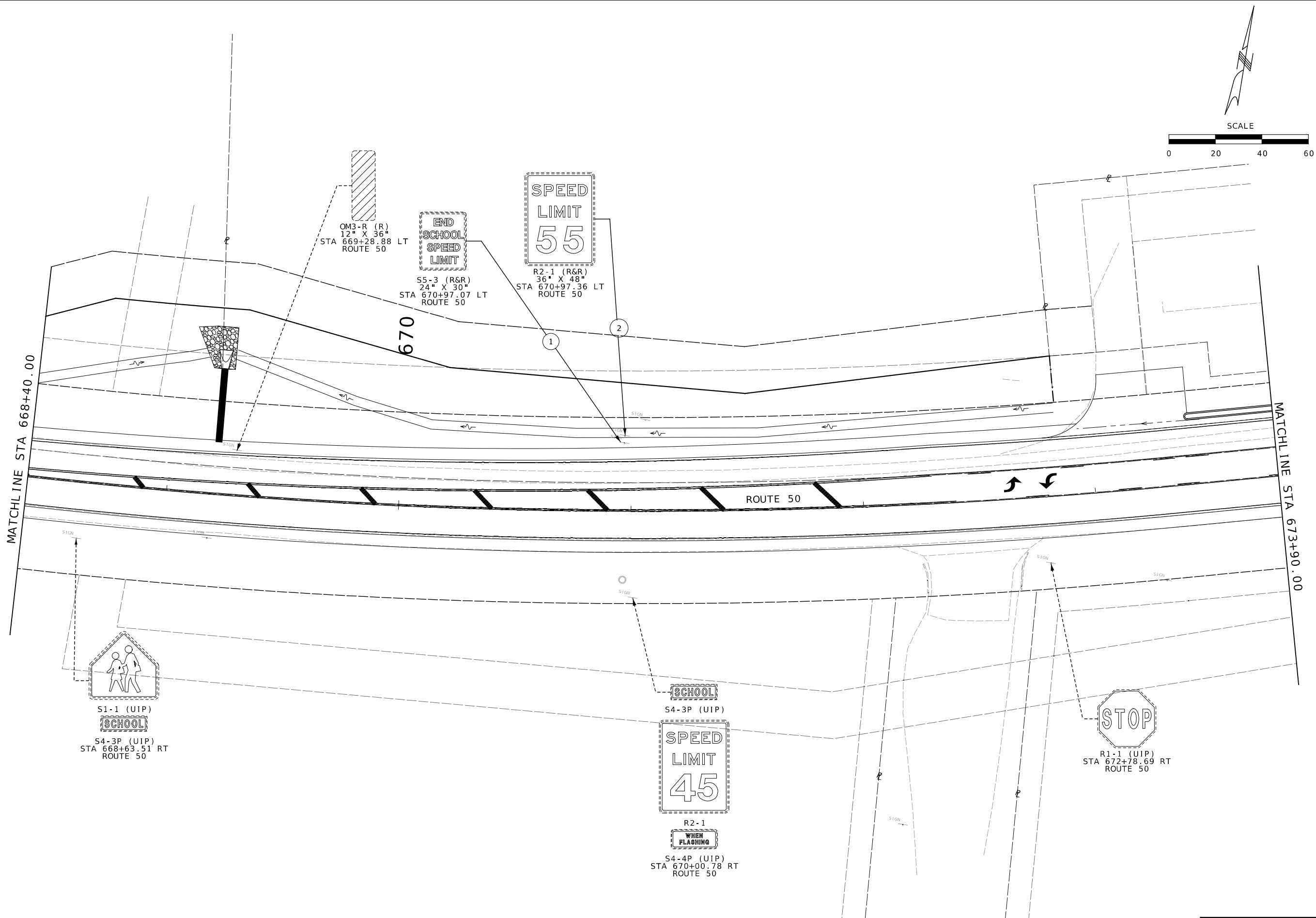


105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)



411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 82
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

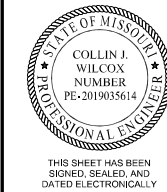
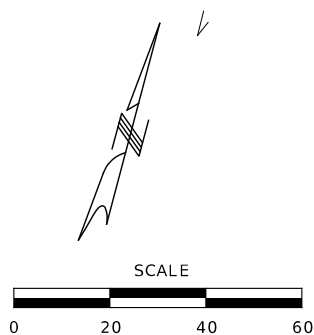
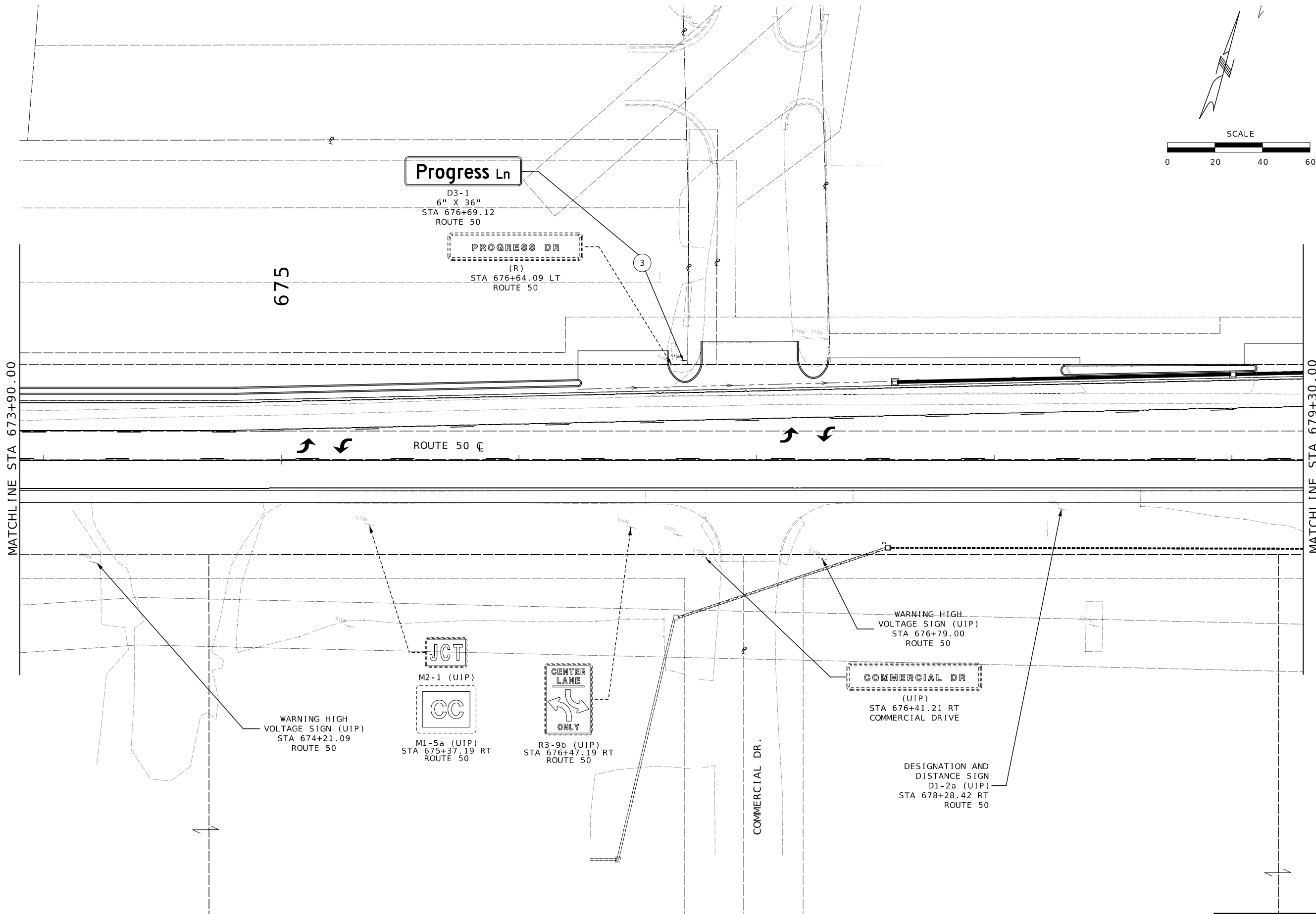
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
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DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 83
COUNTY OSAGE	
JOB NO. J5P3574	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

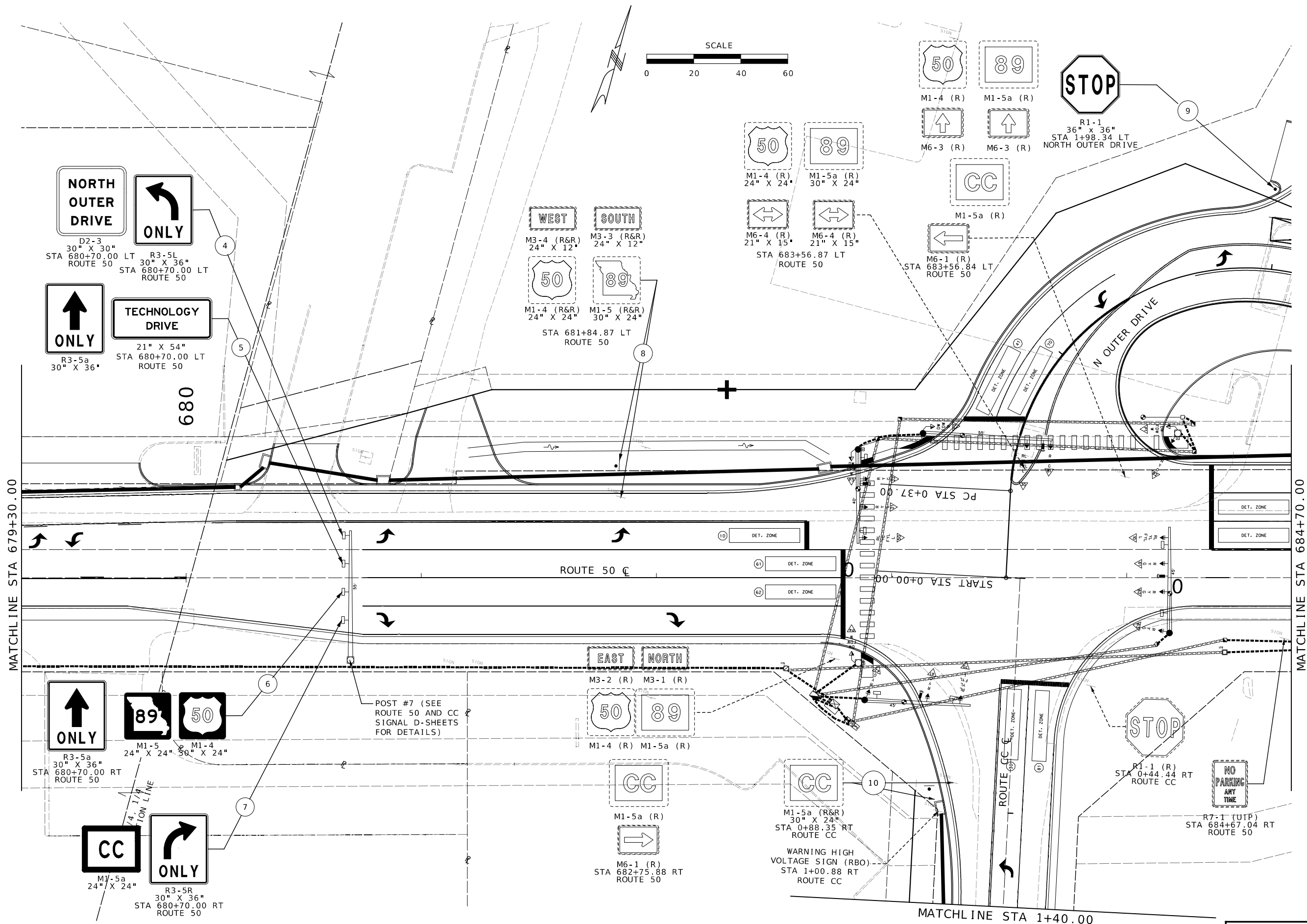
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

SIGNING
SHEET 3 OF 9

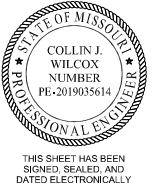
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



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SHEET 4 OF 9

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DATE PREPARED
4/8/2024

ROUTE 5.0	STATE MO
DISTRICT CD	SHEET NO. 8.4

COUNTY
OSAGE

JOB NO.
J5P3574

PROJECT NO.

BRIDGE NO.

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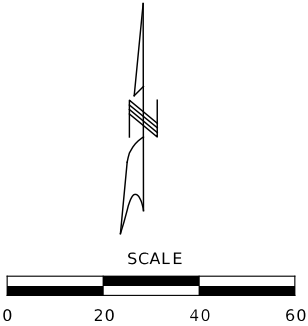
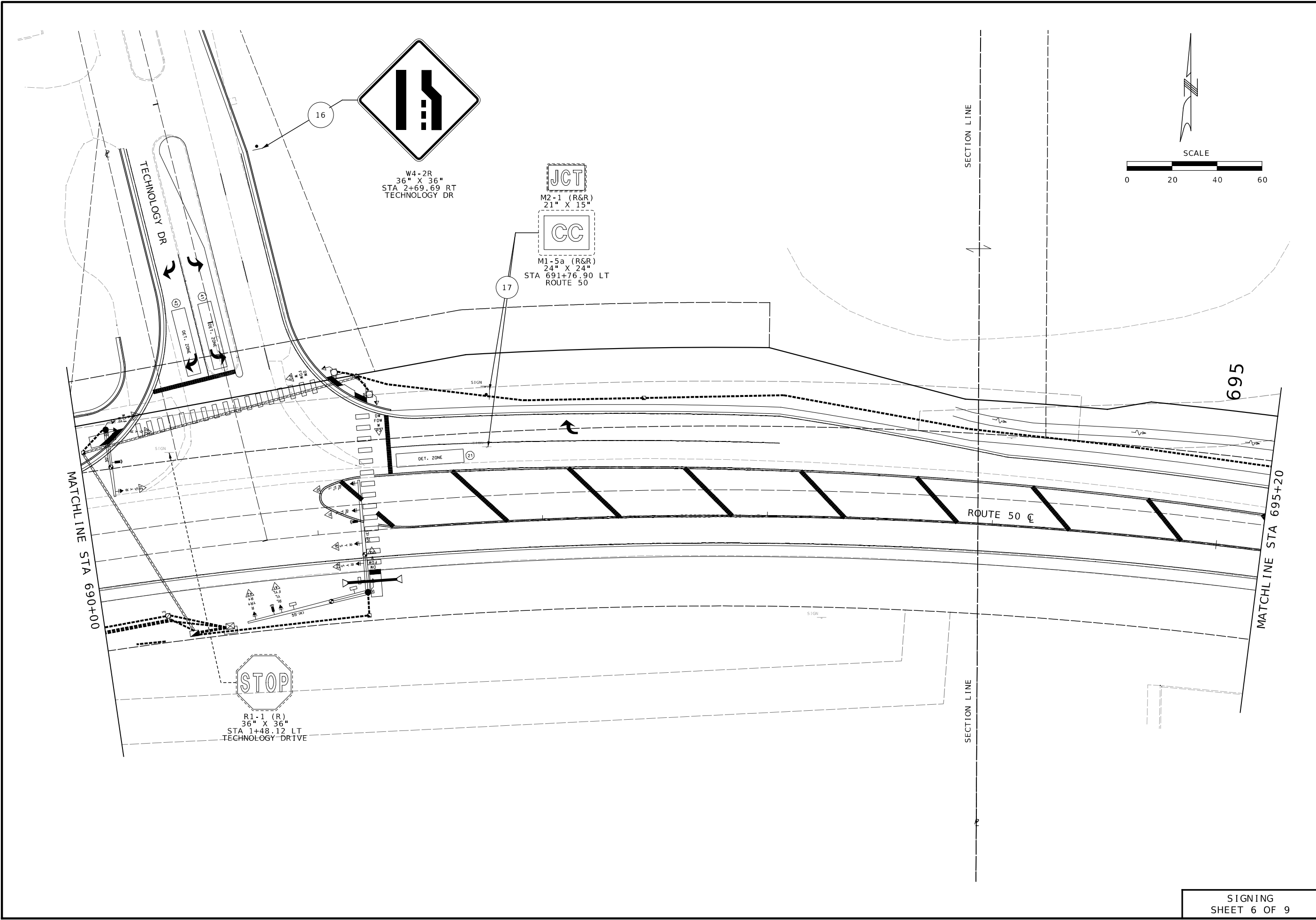
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SIGNING
SHEET 6 OF 9

DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 86

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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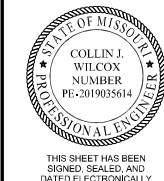
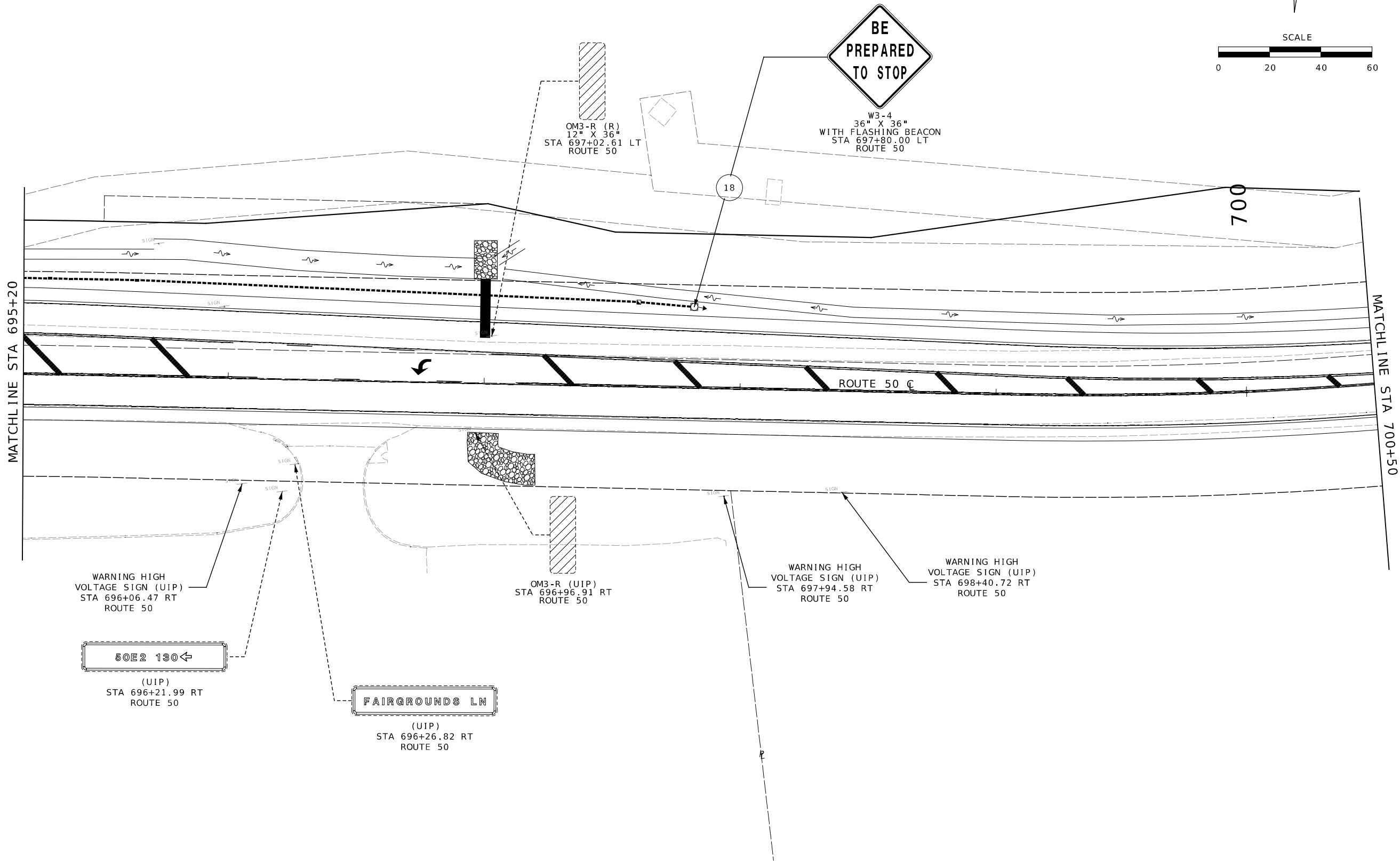
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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



DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 87
COUNTY OSAGE	
JOB NO. J5P3574	
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)

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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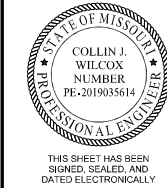
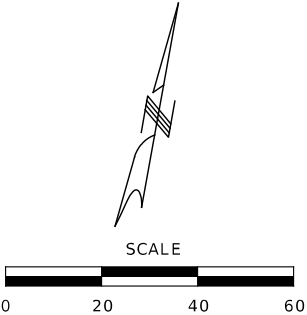
MATCHLINE STA 700+50

WARNING HIGH VOLTAGE
SIGN (UIP)
STA 701+51.26 RT
ROUTE 50

ROUTE 50 C

W3-3
36" X 36"
STA 703+30.00
ROUTE 50

705



DATE PREPARED
4/8/2024

ROUTE 50	STATE MO
DISTRICT CD	SHEET NO. 88

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

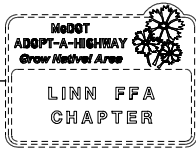
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SHEET 8 OF 9

\$FILE\$ \$TIME\$ \$DATE\$

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

MATCHLINE STA 1+40.00

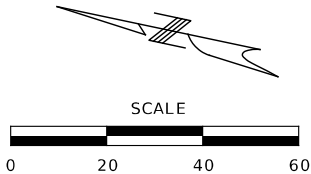
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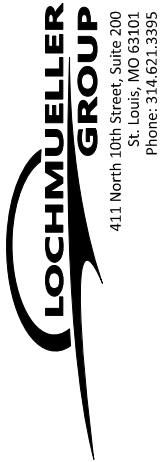
19-1a (R&R)
STA 1+58.58 RT
ROUTE CC

WARNING HIGH VOLTAGE
SIGN (RBO)
STA 2+98.87 RT
ROUTE CC

ROUTE CC



SIGNING
SHEET 9 OF 9



MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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



THIS SHEET HAS BEEN
SIGNED, SEALED, AND
DATED ELECTRONICALLY

DATE PREPARED
4/8/2024

ROUTE	STATE
50	MO
DISTRICT	SHEET NO.
CD	89

COUNTY
OSAGE

JOB NO.
J5P3574

CONTRACT ID.
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PROJECT NO.
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BRIDGE NO.
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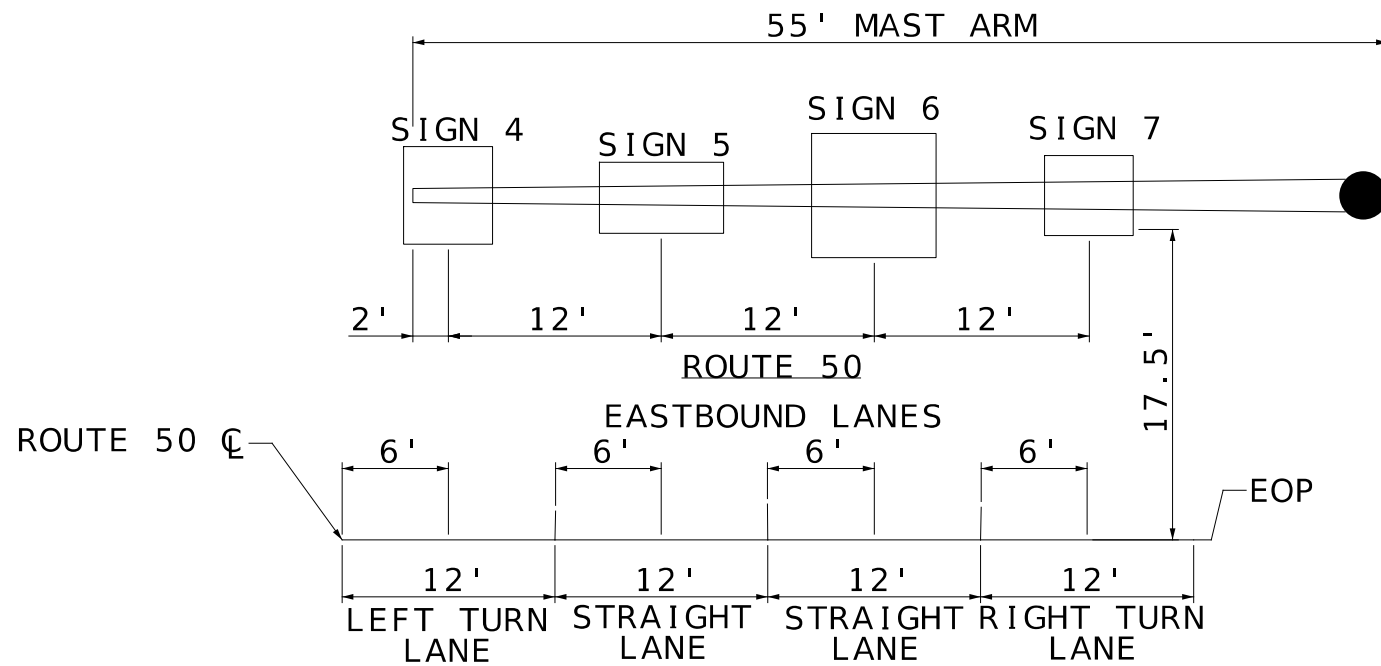
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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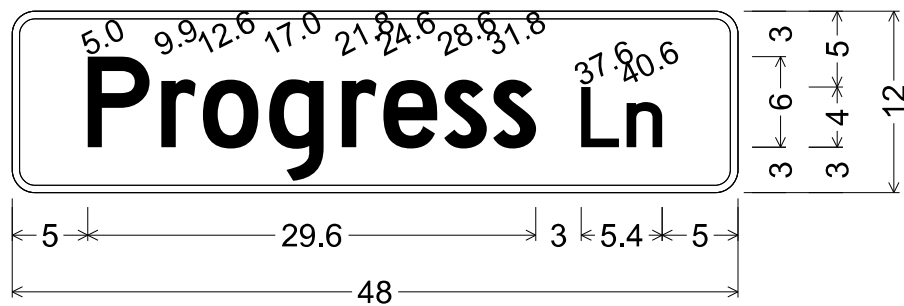
902 SIGNAL SIGNS TABULATED ON D-37A SHEET																																						
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	ITEM NO. 9031010 CY	POST DES NO.	POST NO. 1 LF	POST NO. 2 LF	POST NO. 3 LF	LBS PER FT	ITEM NO. 9031210 LBS	PIPE SIZE IN.	POST NO. 1 LF	POST NO. 2 LF	LBS PER FT	ITEM NO. 9031220 LBS	2" X 1/4" BARS @ 2.55 LBS PER FT NO. EACH	LGTH IN.	TOTAL LF	TOTAL LBS	ITEM NO. 9031250A LF	POST NO. 1 LF	POST NO. 2 LF	TOTAL LF	DRIVEN 12-GA. ITEM NO. 9031271A EA	DRIVEN 7-GA. ITEM NO. 9031273A EA	CONCRETE 7-GA. ITEM NO. 9031274 EA	POST NO. 1 LF	POST NO. 2 LF	TOTAL LF	2.25" INSERT (6 FT) ITEM NO. 9031272A EA	ANCHORS DRIVEN 7-GA. ITEM NO. 9031281A EA	CONCRETE 7-GA. ITEM NO. 9031285 EA	BREAK-AWAY ASSEMBLY ITEM NO. 9031241 EA	REMARKS AND OTHER REQUIRED ITEMS		
1	24"x30"	670+97		ROUTE 50	2																																SIGN RELOCATED TO NEW POST	
2	36"x48"	670+94		ROUTE 50	2																																SIGN RELOCATED TO NEW POSTS	
3	12"x48"	676+64		PROGRESS	3																	10															REPLACE EXISTING SIGN & POST	
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	30"x36"	680+70		ROUTE 50	4																																CANTILEVER OVERHEAD LANE SIGN	
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	30"x24"	681+85		ROUTE 50	4																																SIGN RELOCATED TO NEW POST	
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10	30"x24"	0+89		ROUTE CC	4																																SIGN RELOCATED TO NEW POST	
11	12"x24"	2+61		N OUTER	5																	10															SIGN RELOCATED TO NEW POST	
12	24"x30"	2+56		N OUTER	5																	12.5															NEW SIGN WITH POST	
13	36"x36"	2+84		N OUTER	5																																NEW SIGN WITH POST	
14	24"x30"	3+58		N OUTER	5																	12.5															NEW SIGN WITH POST	
15	30"x66"	688+98		ROUTE 50	5																																NEW SIGN WITH POST	
16	36"x36"	2+70		TECH DR	6																	12															NEW SIGN WITH POST	
17	21"x15"	691+77		ROUTE 50	6																																SIGN RELOCATED TO NEW POST	
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18	36"x36"	697+80		ROUTE 50	7																																	
19	36"x36"	703+30		ROUTE 50	8																																	
20	36"x48"	1+59		ROUTE CC	9																																NEW SIGN WITH POST	
																																						ADOPT-A-HIGHWAY

* ORANGE, YELLOW & YELLOW/GREEN



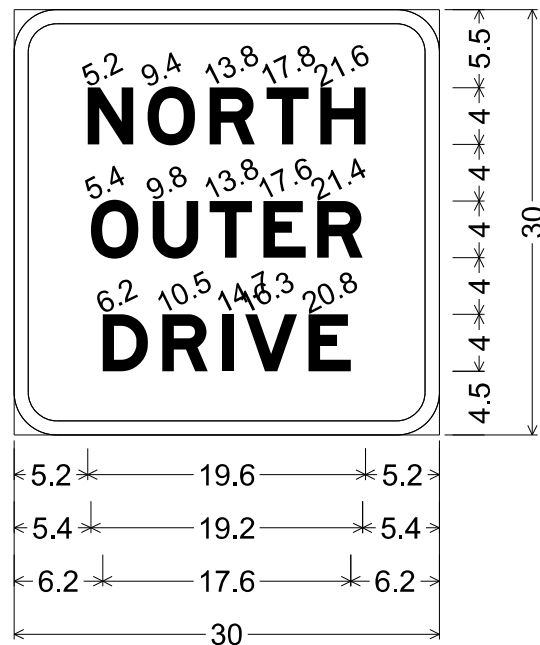
TYPICAL SECTION
SIGNS MOUNTED ON MAST ARM
SIGN LOCATIONS 4, 5, 6, 7

SIGN 3 DETAIL



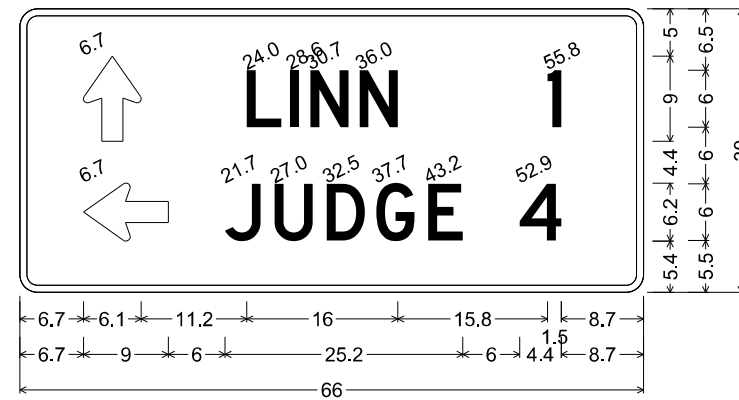
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"Progress", D 2K; "Ln", D 2K;

SIGN 4 DETAIL



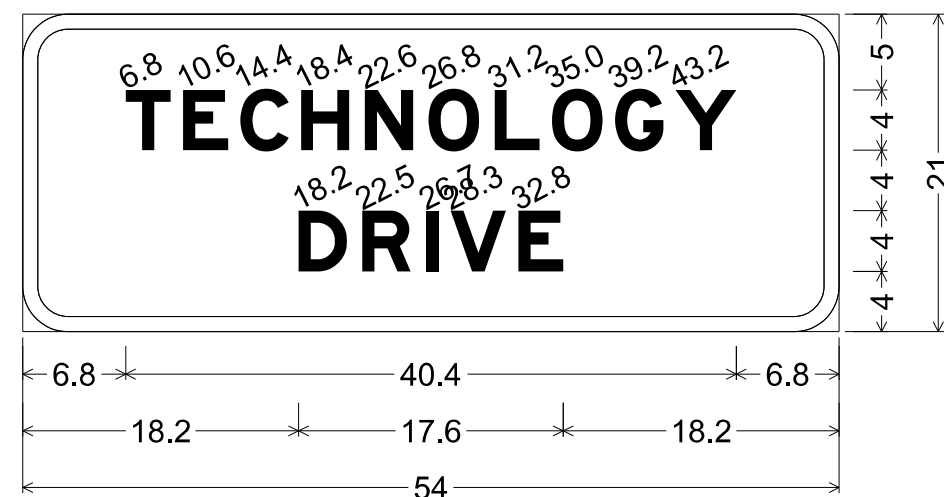
3.0" Radius, 1.0" Border, White on, Green;
"NORTH", E Mod;
"OUTER", E Mod;
"DRIVE", E Mod;

SIGN 15 DETAIL



D1-2a;
1.9" Radius, 0.8" Border, White on, Green;
Standard Arrow Custom 9.0" X 6.1" 90°;
"LINN", D 84% spacing; "1", D 84% spacing;
Standard Arrow Custom 9.0" X 6.1" 180°;
"JUDGE", D 106% spacing; "4", D 106% spacing;

SIGN 5 DETAIL



3.0" Radius, 1.0" Border, White on, Green;
"TECHNOLOGY", E Mod; "DRIVE", E Mod;

SIGN DETAILS



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DATE PREPARED
4/8/2024

ROUTE 50 STATE MO
DISTRICT CD SHEET NO. 92

COUNTY OSAGE

JOB NO.
J5P3574

CONTRACT ID.

PROJECT NO.

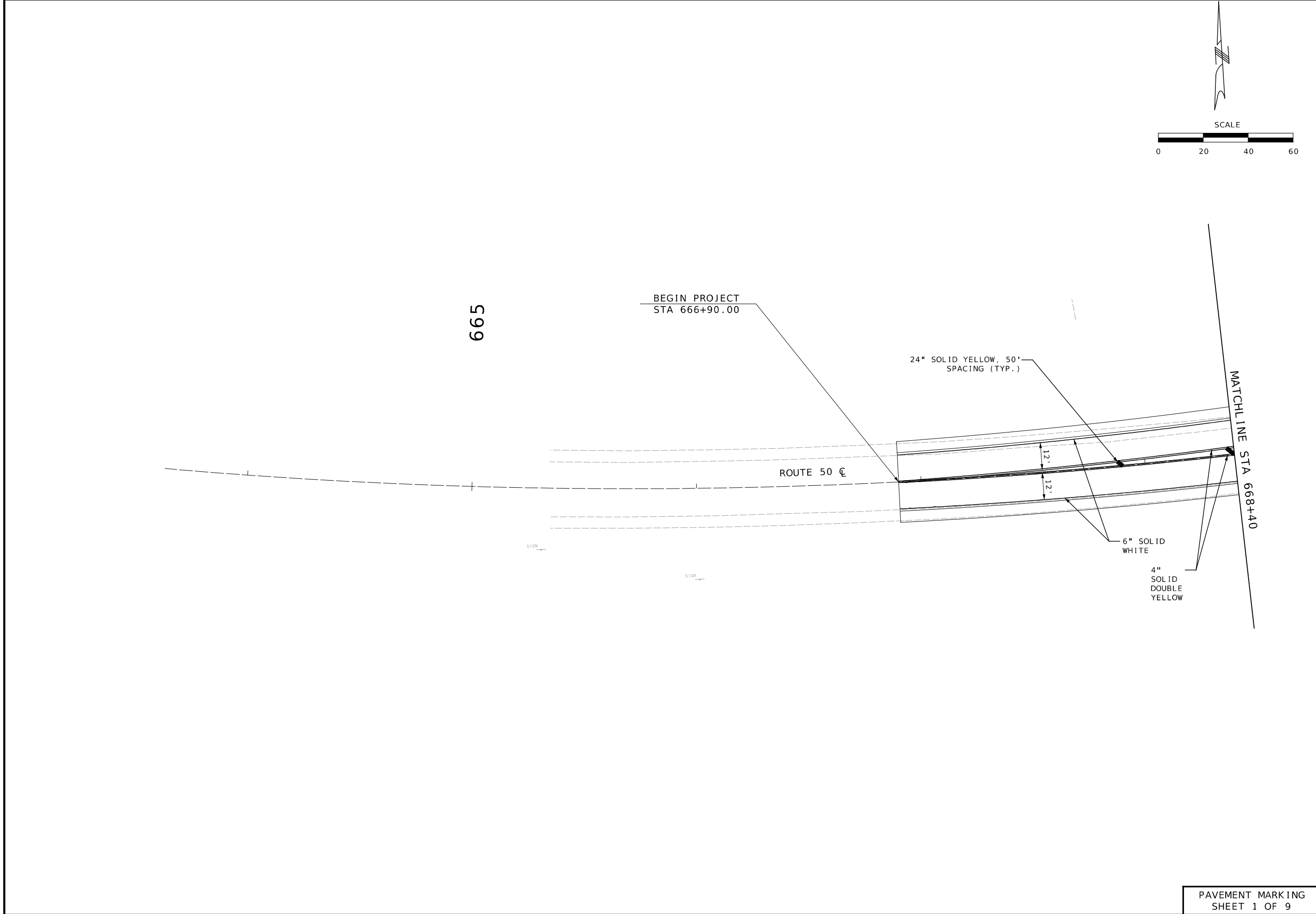
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DESCRIPTION	DATE

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

LOCHMUELLER GROUP
411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

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STATE OF MISSOURI

COLLIN J. WILCOX

NUMBER

PE-2019035614

PROFESSIONAL ENGINEER

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DATE PREPARED

4/8/2024

ROUTE

50

STATE

MO

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SHEET NO.

93

COUNTY

OSAGE

JOB NO.

J5P3574

CONTRACT ID.

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PROJECT NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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PAVEMENT MARKING SHEET 1 OF 9

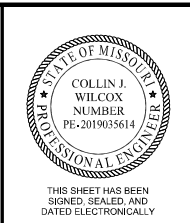
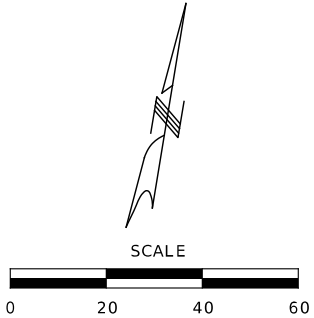
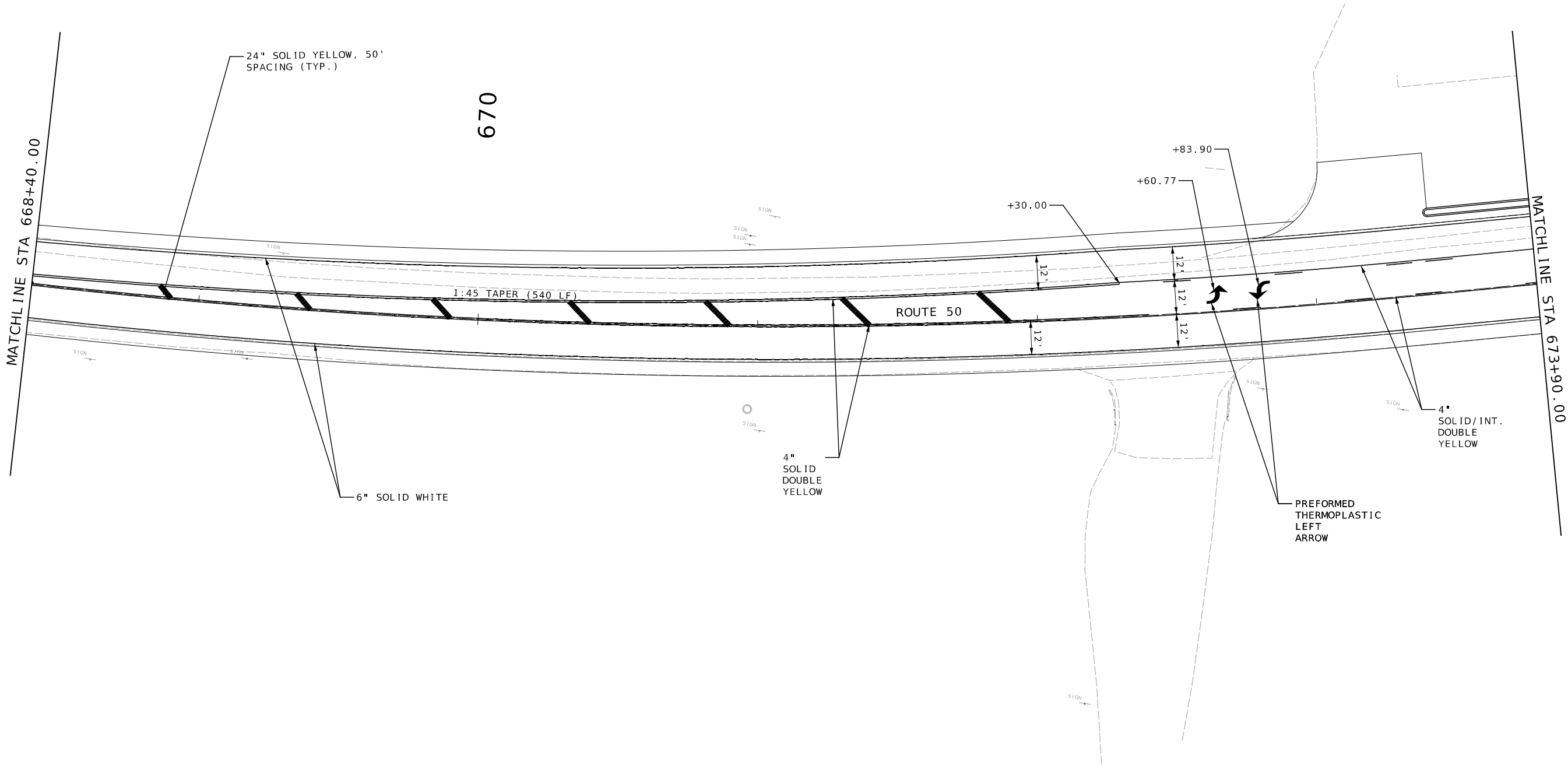
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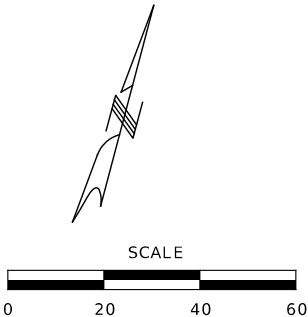
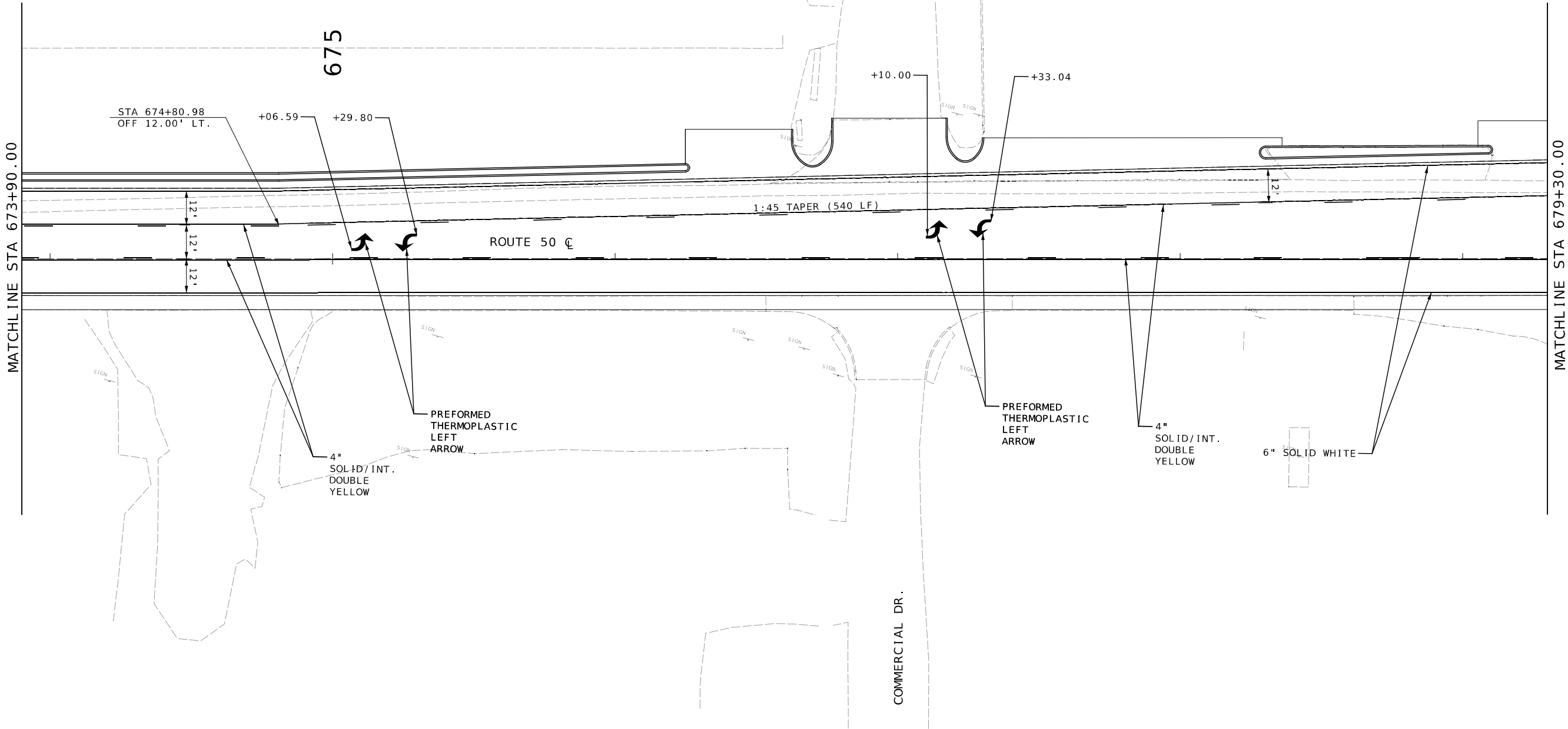


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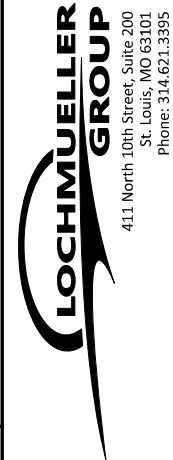
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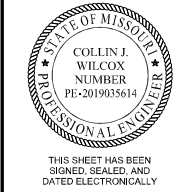


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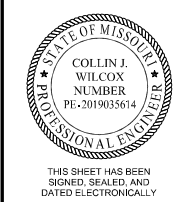
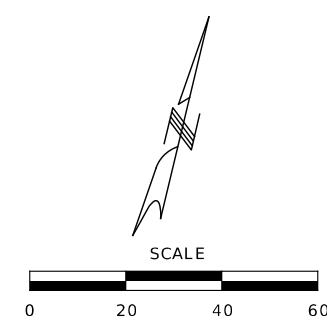
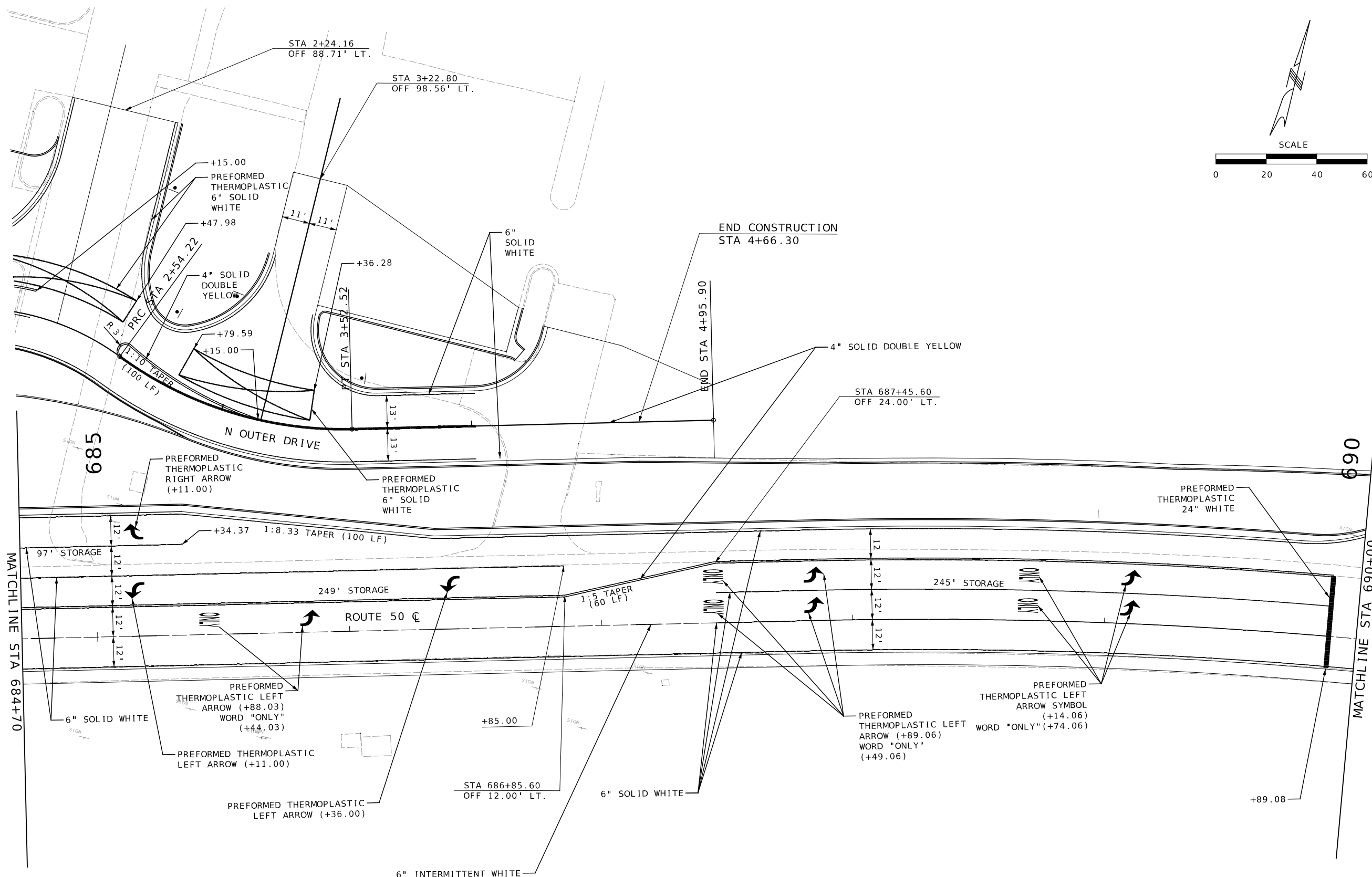


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CD	95
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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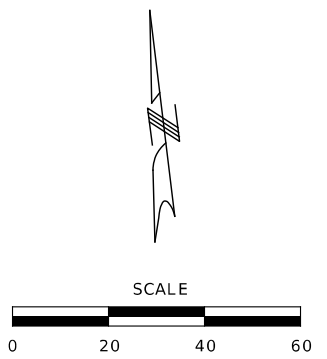
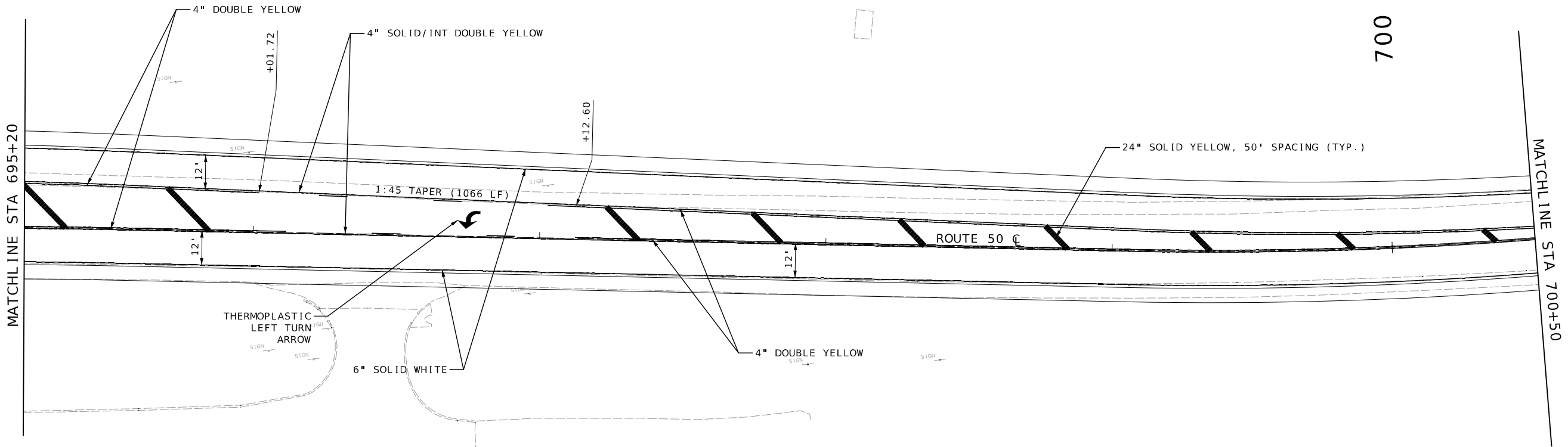
LOCHMUELLER GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

PAVEMENT MARKING
SHEET 5 OF 9

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PAVEMENT MARKING
SHEET 7 OF 9

DATE PREPARED 4/8/2024	
ROUTE 50	STATE MO
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

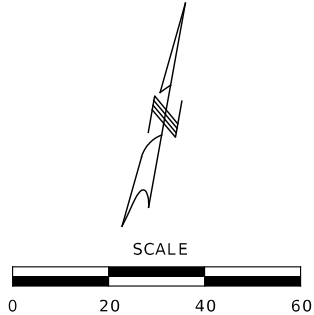
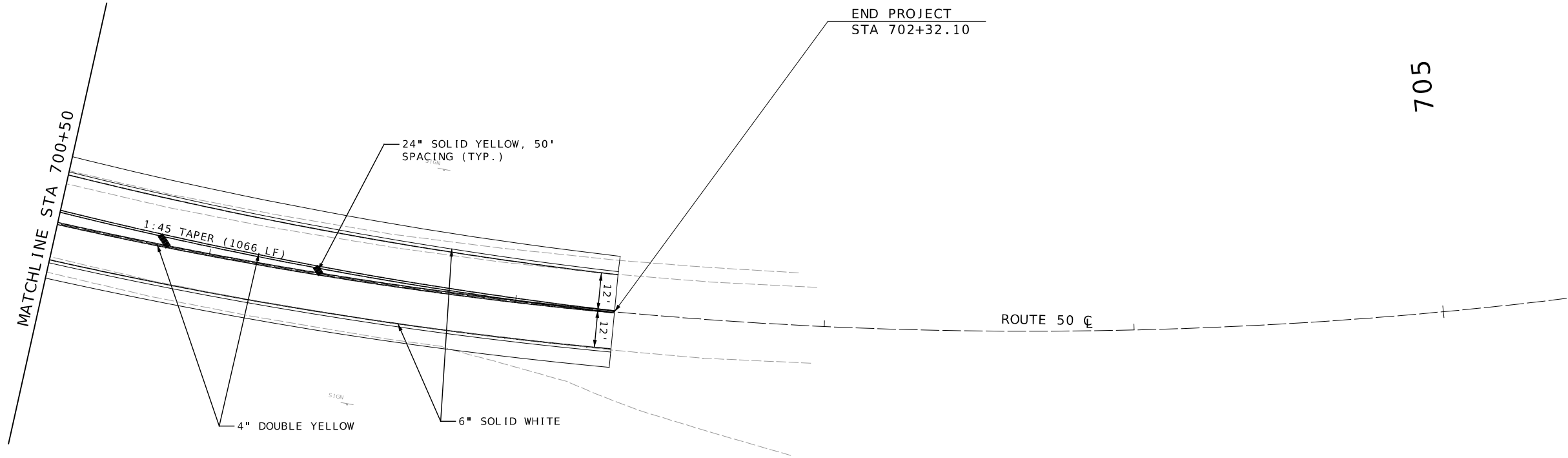
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

411 North 10th Street, Suite 200
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Phone: 314.621.3395

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4/8/2024

ROUTE 50 STATE MO

DISTRICT CD SHEET NO. 100

COUNTY OSAGE

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MISSOURI HIGHWAYS AND TRANSPORTATION
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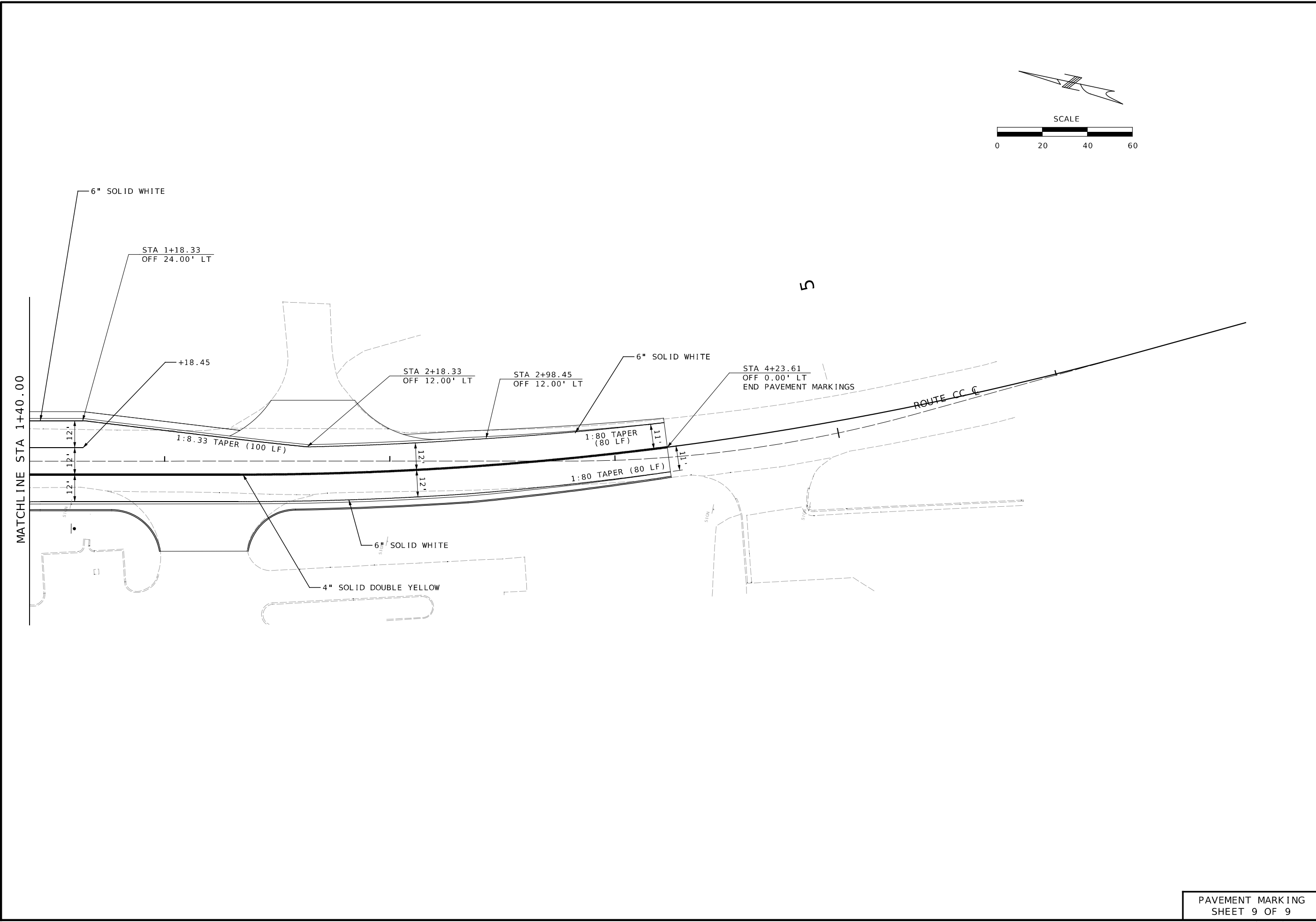


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PAVEMENT MARKING
SHEET 8 OF 9

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STATE OF MISSOURI

COLLIN J. WILCOX

NUMBER

PE-2019035614

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
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DATE PREPARED
4/8/2024

ROUTE
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

MoDOT

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

LOCHMUELLER
GROUP

411 North 10th Street, Suite 200
St. Louis, MO 63101
Phone: 314.621.3395

PAVEMENT MARKING
SHEET 9 OF 9

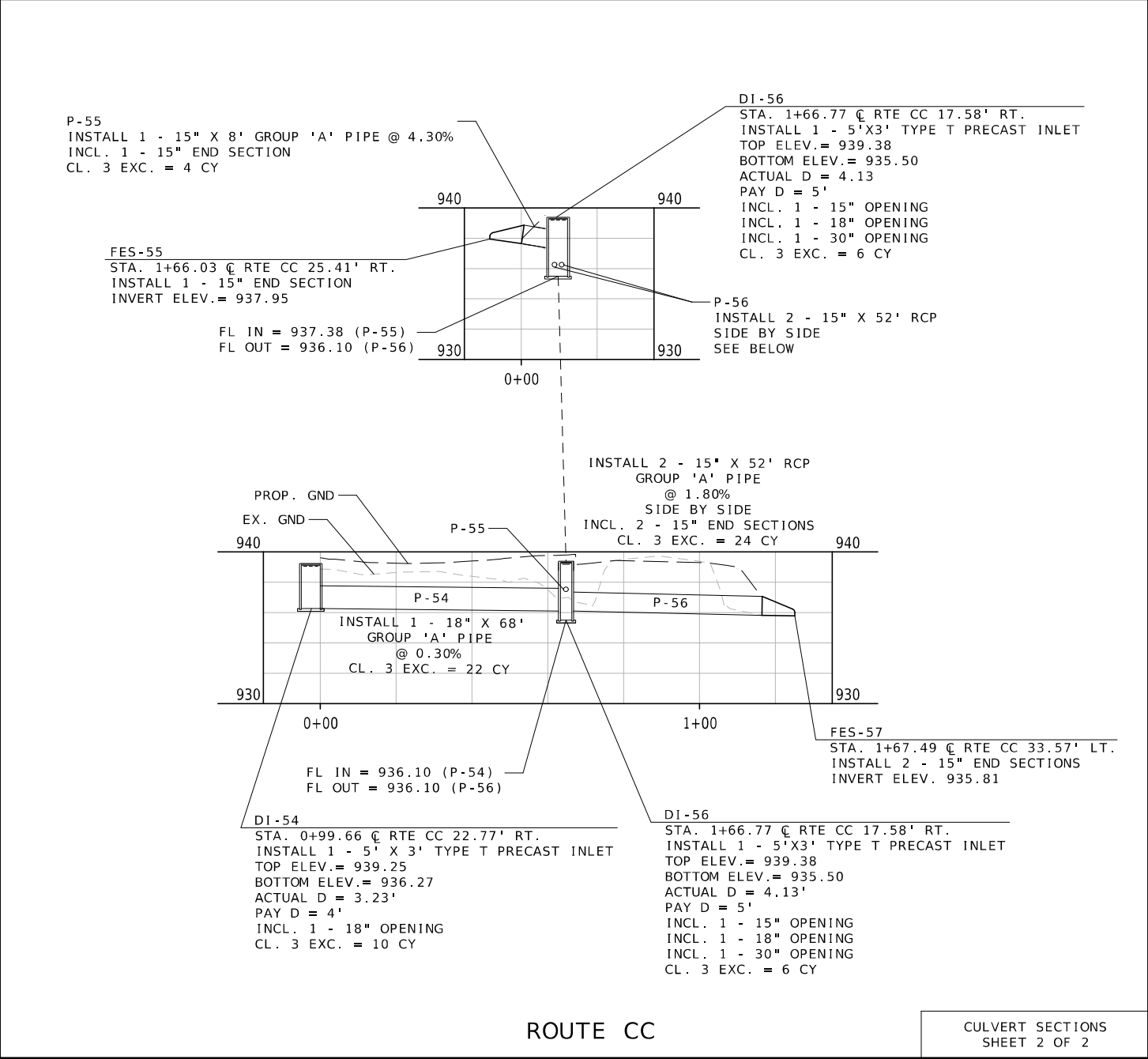
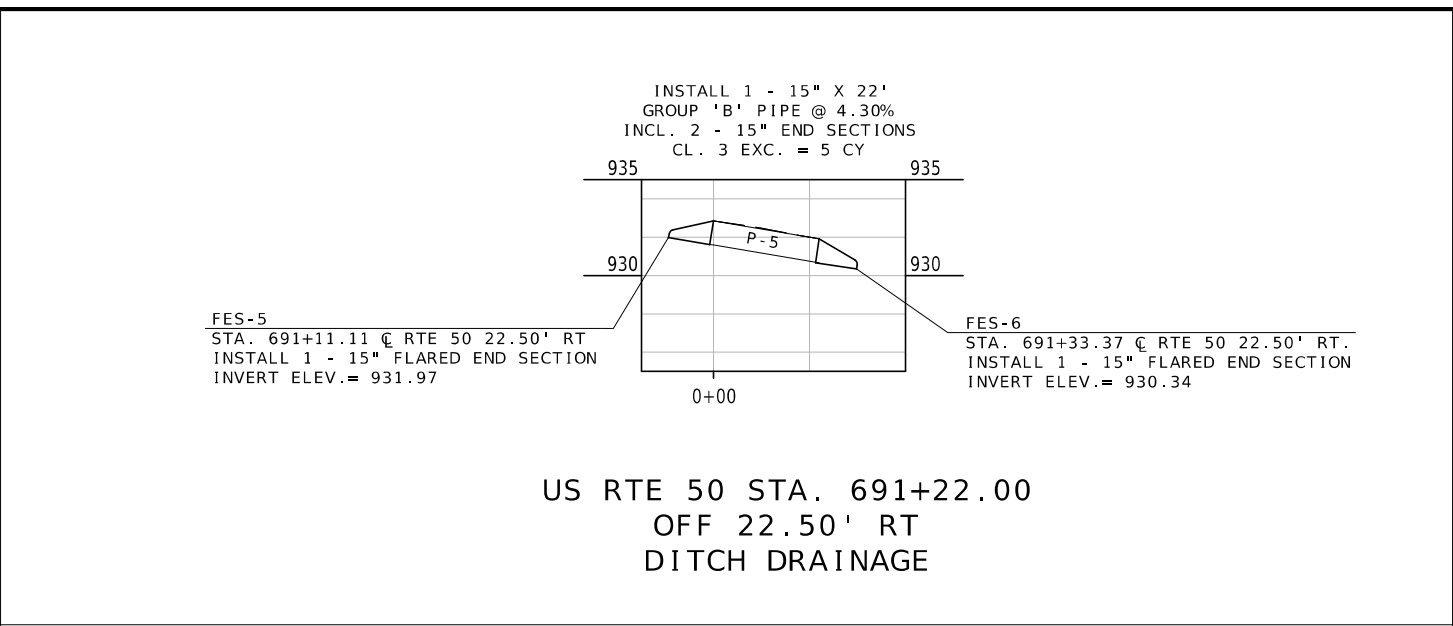
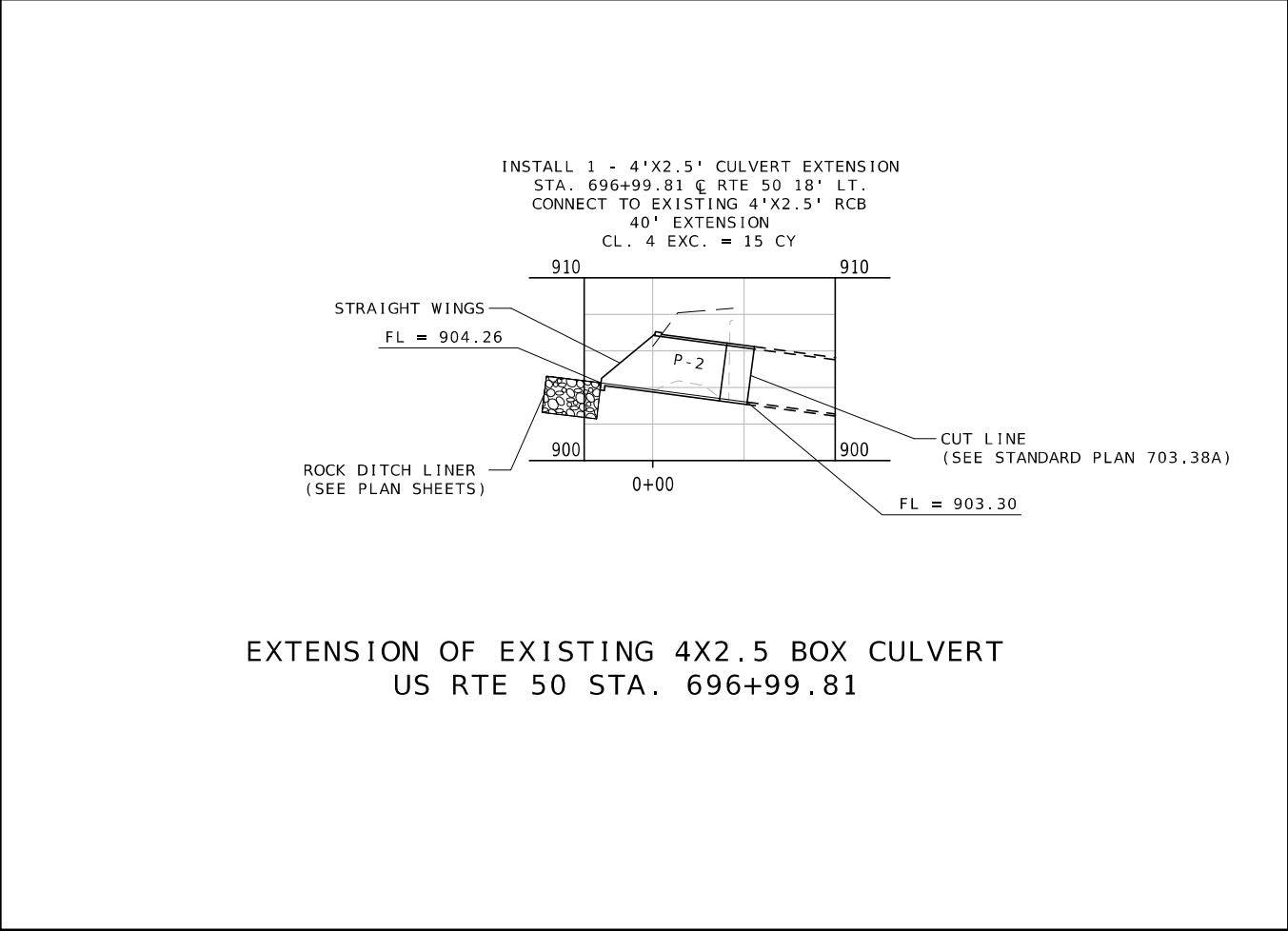
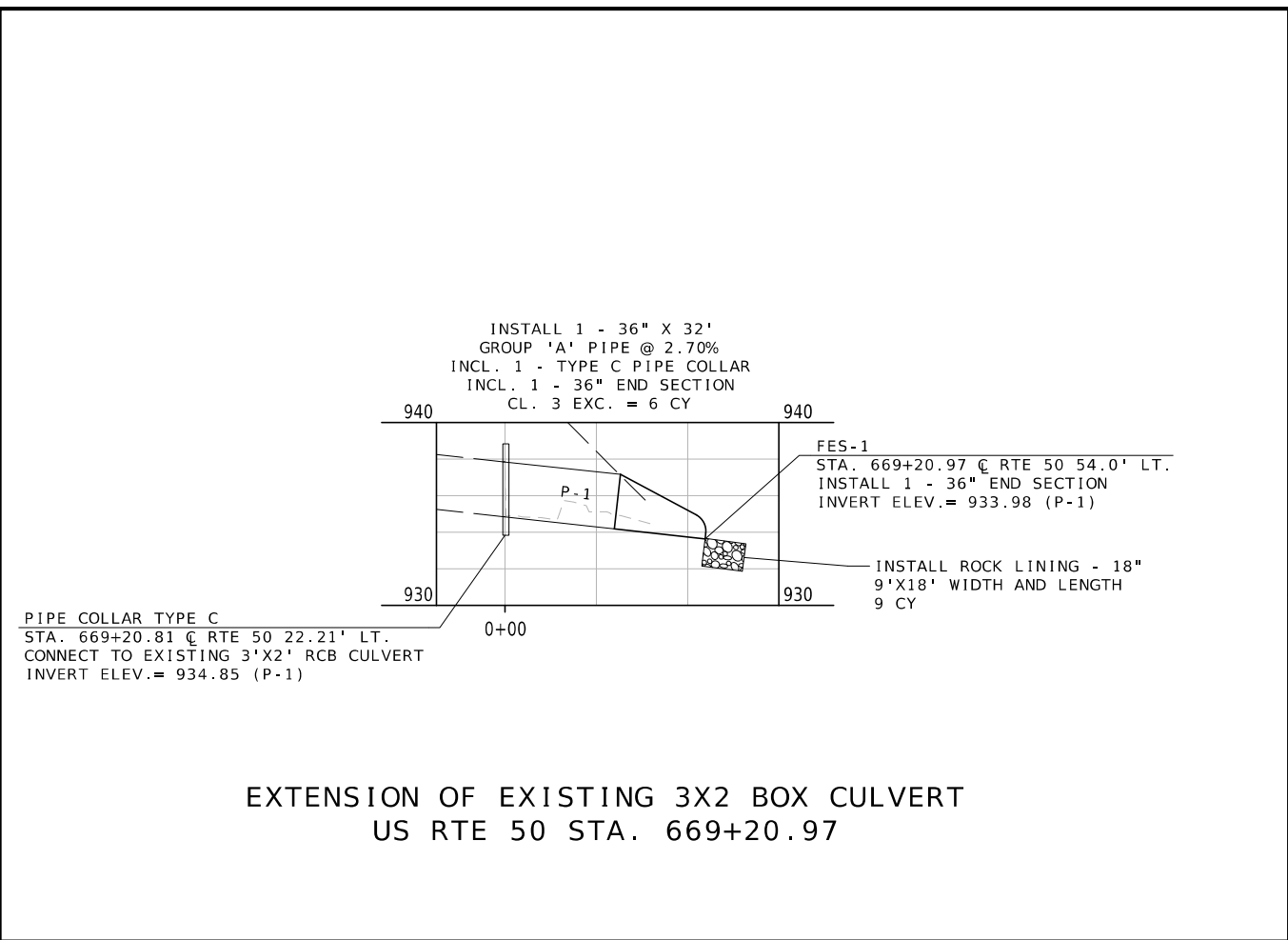
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STATE OF MISSOURI

BRYAN SCOT GREGORY

NUMBER PE-2006019659

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
3/1/2024

ROUTE
50/CC

STATE
MO

DISTRICT
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SHEET NO.
103

COUNTY
OSAGE

JOB NO.
J5P3574

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)

Bartlett & West

601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101

PHONE 872-634-3181

CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING

WWW.BARTLETTWEST.COM

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US Highway 50 Watermain Rerouting

For

Osage County PWSD No.3

Linn, Missouri



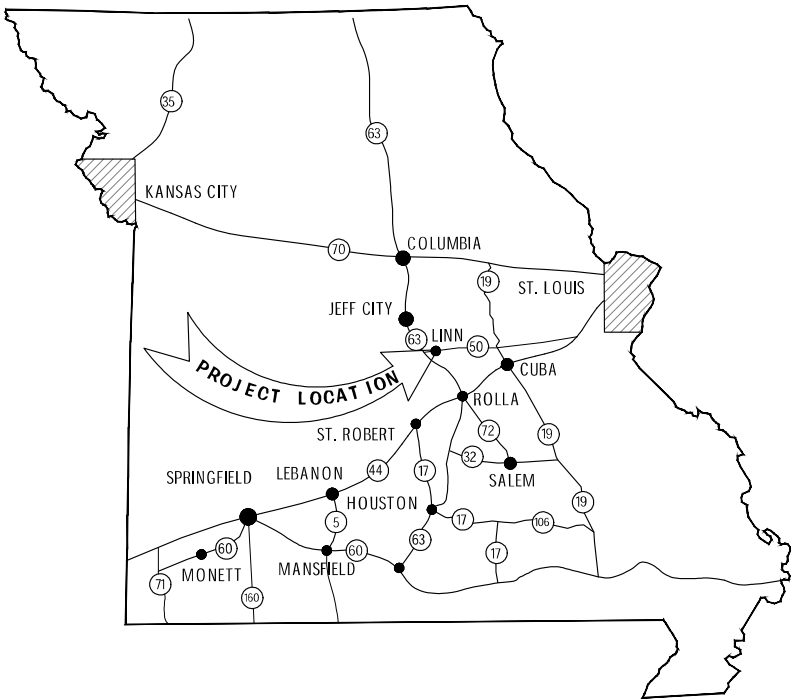
PROJECT SCOPE:

Install approximately 2,529 LF of 6"Ø Potable Water Mains with SDR-21 PVC or Polyethylene Plastic DR-11 piping, with 8 gate valves, 3 air release valves, 7 water main wet tap with 6"Ø gate valve connections, 7 service lateral connections, 3 Roadway Bore Connections, 3 Roadway Open-Cuts, 6 fire hydrants, 1 concrete utility vault and all related components to complete the project detailed within the Contract Documents.



SHEET INDEX

- C-1 Title / Key Sheet
- C-2 Project Construction Notes
- C-3 Water Plan / Profile 1
- C-4 Water Plan / Profile 2
- C-5 Water Plan / Profile 3
- C-6 Water Plan / Profile 4
- C-7 Water Plan / Profile 5
- C-8 Water Plan / Profile 6
- C-9 Water Plan / Profile 7
- C-10 Roadway Boring Plan / Profile
- C-11 Roadway Boring Plan / Profile
- C-12 Standard Water Details
- C-13 Miscellaneous Water Details
- C-14 Concrete Utility Vault
- C-15 Bid Schedule



STATE LOCATION MAP
N.T.S.

OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT NO.3

PRESIDENT: VINCE BOILLOT
VICE PRESIDENT: KEN NIEKAMP
TREASURER: KEN HACKMANN
BOARD MEMBER: TOM KIXMUELLER
BOARD MEMBER: DARRYL GRIFFIN
WATER SYSTEM OPERATOR: SCOTT STROPE (PHONE: 573-690-5903)
CLERK: VIRGINIA KOENIGSFELD
DISTRICT OFFICE PHONE: 573-897-2123



GENERAL STATEMENT
Contractor is required to stay within the existing State 6 foot Utility Right-of-Way Corridor for all waterlines or water main construction unless noted otherwise.

EXISTING UTILITIES GENERAL NOTE:
The locations of underground utilities as shown on the routing plan sheets are based on above ground structures and as located by utilities personnel. Location and size of underground utilities/structures may vary from locations shown. Additional buried utilities/structures may be encountered. Buried utilities/structures shown may not exist. No excavations were made during the progress of this survey to find or verify buried utilities locations.

For further information regarding utilities which serve this area, contact the respective utilities.

SCALE NOTE:
ALL SCALES SHOWN ARE BASED ON 24" x 36" (FULL SIZE) PRINTS. IF PRINTED AT OTHER SIZES, SCALES WILL VARY FROM SHOWN.

CONFLICT/ERRORS/DISCREPANCIES NOTES:
1. THE CONTRACT DOCUMENTS (AGREEMENT, SPECIFICATIONS, DRAWINGS) ARE COMPLEMENTARY. WHAT IS CALLED FOR BY ONE IS AS BINDING AS IF CALLED FOR BY ALL.
2. IN MATTERS OF CONFLICTS, ERRORS AND DISCREPANCIES, THE FOLLOWING ORDER OF PRECEDENCE OF DOCUMENTS SHALL GOVERN: AGREEMENT, SPECIFICATIONS, DRAWINGS.

REVISIONS BY:

Integrity Engineering, Inc.
P.O. Box 700 / 1714 East 10th St.
Rolla, Missouri 65402 / 65401
Phone (573) 341-2100
Fax (573) 341-2111
Email: integrity@integrityeng.com
Website: integrityeng.com
Missouri Certificates of Authority
Engineering: 000460
Surveying: 000368
Architecture: 00935



Project For:
Osage County Public Water Supply District #3
Linn, Missouri

US Highway 50 Watermain Rerouting
Title and Key Sheet



DRAWN BY: MSS
CHECKED BY: TLC
DATE: April, 2024
SCALE: N/A
JOB: Highway 50 near State Tech
FILE: CI-C9_MoDot_P-P.dwg
SHEET C-1 OF 15 SHEETS

OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT NO. 3 CONSTRUCTION NOTES

General Notes:

- It shall be the sole responsibility of the Contractor to contact the necessary utility agencies, obtain the location of their facilities, and locate, protect and restore all existing utilities encountered on this project. The Contractor shall be responsible for restorations and repairs to all public and/or private property at Contractor's expense. The utilities shown on these plans are for general information purposes. No claim of accuracy or inclusiveness is made by Owner or Engineer.
- Existing Water District utilities lack tracer wire, and are located based on estimated locations and limited knowledge of their actual location. These locations may not be accurate, and actual locations in the field by the Contractor (through excavations of other more extensive means), could cause requirements for new water line rerouting and disruption of water line construction activities. Possible construction disruptions and re-routings are part of the construction project, and to be included as part of the Contractor's unit pricing in the bid schedule. No extra payment will be made for these re-routings or disruption of construction activities because of water line locations other than the unit prices in the Contractor's construction contract.
- Contractor shall be responsible for repair and expenses of any damage to existing facilities caused by his construction. All structures, fences, pavement, driveways, and other improvements disturbed by construction activities shall be restored by the Contractor to the original conditions or better. All asphalt and concrete pavements shall be saw cut prior to excavation and minimum surfacing placement shall be 3" asphalt (for asphalt) or 6" concrete (for concrete) or to match existing pavement, whichever is less. Restoration of vegetated or earth surfaces shall require the placement of a minimum of 2" of topsoil, or more if existing has additional depth.
- All grassed areas disturbed as a result of any construction process shall be restored to their original conditions or better.
- Any existing roadway or driveway damaged by excavation or other construction operations shall be restored to its original conditions or better.
- All ditch lines damaged during construction will be reshaped to their original lines and grades.
- The Contractor shall provide access to the work at any time for the Owner, Engineer and State/Federal/Local officials.
- In accordance with local, state and federal statutes, the Contractor will be solely and completely responsible for conditions related to safety at this job site. This responsibility for the safety of persons and property will apply continuously and will not be limited to normal working hours.
- Construction progress observations conducted by the Water District and Engineer are to review the Contractor's compliance with these plans and related specifications. Such observations are not to determine the adequacy of the Contractor's safety procedures, which are solely the Contractor's responsibility. OSHA Safety Training is required with certification cards.
- (Delete)
- Contractor is to coordinate with property & business owners prior to any temporary closing of drives, parking areas, or loss of water service.
- The Contractor is to implement all necessary erosion control methods. Best management practices for erosion control may include but, are not limited to the installation of dikes, silt fences, and the re-establishment of vegetation, Section 02105.
- All water lines constructed in MODOT right-of-way or water line easements are to be constructed within the MODOT utility corridor parallel with the MODOT right-of-way. Property monuments must be protected and replaced, if damaged or destroyed, at Contractor's expense.
- All miscellaneous items, not listed in the proposal, required for construction, shall be incidental to the contract.
- Fittings may be called out on the plans for information only. Unless specifically listed on the bid form as a bid item, all fittings are incidental to the work, and their cost shall be included in the unit cost of the pipe installation.
- Where dimensional information is provided on drawings, it is intended as a guide to the construction, but is not guaranteed accurate for detailed construction of piping and facilities. The Contractor shall field verify all dimensional information before trenching of piping runs and installation of piping. Field verification shall be considered incidental to the construction process and will be included in the unit price of the various bid items.
- Due to the small scale of these aerial maps, valves as shown on maps may be across road from location intended. All valves set at road crossings shall be set close to tees and crosses. Refer to details.
- Contractor to communicate with Engineer, Public Water Supply District #3, and property owners on final placement and direction of flush hydrants, meter pit settings, and gate valves.
- Contractor may, with approval by Owner/Engineer, use fitting combinations other than those shown, provided they result in the same design concept.
- The Contractor shall keep (1) one record copy of all drawings of the project at the construction site annotated (field construction - red line) to show all changes made during the construction progress, reference General Conditions of the Contract, Record Drawings, paragraph 5.2. Contractor shall provide field construction (red line) record (as-built) drawing information on water system, connections, routing and details. Show all appurtenances. All valves and hydrants shall be referenced to at least (2) permanent, fixed, above ground elements with descriptions and lengths clearly shown. Final payment will not be made until this requirement is met satisfactorily, and approved by the Engineer.
- All new meters are planned to include new meter pits, yokes, and piping. Contractor will use existing flow meters and connect into new meter pits configuration.
- Anchor couplings are required between all MJ fittings and valves. Contractor to field fit length. All-thread and PVC nipples will not be allowed.
- Full-circle contact pipe restraints (Ford Uni-Flange 1300 or equal) are required on all connections between PVC Pipe and DIP fittings and valves.
- Meter disconnects and abandonment of existing waterlines shall not be completed until the new waterlines is fully pressure tested, chlorinated, and successful biological testing has been completed on the new waterlines, and this information is provided to the Engineer for approval.
- All water mains and water lines shall have tracer wire. Section 02632 along with 2" wide location "caution" warning tape, 5 mil, blue with black paint, APWA codes, buried 2 foot below the earth surface on all trenches installed new water line piping, these items are included in the unit price cost of new water main and service lateral piping.
- During this project, all excavated trenching operation for installing the new water distribution system and associated components will be backfilled, compacted and maintained. Settlement or displacement of cover material over the areas distributed during and after the trenching operation will be maintained by the Contractor. If settlement or displacement of the fill material occurs, the Contractor shall replace, repair or add additional compacted backfill, at no additional cost to the Owner.
- All gate valves installed as part of this project will have adjusted (risers) in the field to allow for access to shut-off the water lines after the asphalt streets pavement resurfacing and repairs have been completed as specified by SECTION 02511, at no additional cost to the Owner. Gate valve nuts shall be centered in the valve boxes and plumb with the surface.

Special Construction Notes:

- The American Iron and Steel (AIS) requirements are not a part of this project.
- Proof is required on all persons working on the project in each Contract for the 10 hour OSHA safety training. Provide copies of OSHA certification to Integrity Engineering.
- Regarding insurance coverage, umbrella coverage is included and accounted for complying with the required coverage limits.
- Contractors shall limit the removal of trees and other vegetation. Removal of any type of vegetation must be approved by MODOT, PWSO No. 3 and the Engineer. Any vegetation approved for removal will be disposed by the Contractor at the Contractor's expense, reference Technical Specifications Section 02110, Site Preparation.
- All laid water pipe shall be subjected to hydrostatic pressure tests in accordance with Section 02700 - Water Systems, paragraph 1.06, Pressure and leakage tests, page 10 and Water Line Disinfection, paragraph 1.07, pages 11, 12 and 13 of the Technical Specifications. Contractor shall submit the methods of pressure testing and disinfection of the newly laid water mains to the Engineer for approval. Meter Service Connections are specified in Section 02700 - Water Systems, paragraph 1.05, part D, pages 8 and 9.

33. General Provisions for Construction within MODOT Existing State Right-of-way and New 20' wide Water Line Permanent Utility Easement Corridors

- Reference Missouri Standard Specifications for Highway Construction. All utility facilities will be installed and located and all other work performed in accordance with the state regulations, Title 7, Division 10, Chapter 3, Utility and Private Line Location and Relocation and other policies of the Missouri Department of Transportation (MODOT).
- (Delete)
- No potable water structures such as: gate valves, fire or flush hydrants, water meter pits, or other surface structures will be allowed within the existing MODOT Utility right-of-way (R.O.W.) corridor. However, new fire hydrants may be within 2 feet of R.O.W., only with approval of MoDOT, Engineers. In addition, all underground water mains will be buried within six feet (6') of sight distance right-of-way lines at roadway intersections. All existing service laterals that cross under state highway R.O.W. will remain in service and be connected to the new water main.
- Detector tape shall be placed two (2) feet below the earth surface in all open cut mains along with tracer wire.
- The Contractor shall provide all traffic control devices in accordance with the Manual on Uniform Traffic Control Devices (2009) (MUTCD) and requirements by MODOT. These costs shall be included in the unit price for installing the water mains and water lines as part of this project.
- Contractor shall submit a construction plan for the boring operations including a construction schedule and traffic control to the Engineer, MODOT, and PWSO No. 3 for approval.
- Contractor will contact PWSO #3, Engineer and MODOT 48 hrs prior to any lane closure or 14 calendar days prior to the imposition of height, width, and weight restrictions. Lane closure dates may be rescheduled and/or lane closure times may be shifted to off-peak and/or nighttime hours to minimize traffic backups. Schedule multiple tasks in a single work zone if possible. Contractor will provide work construction schedule for MODOT approval.
- The Contractor shall carry commercial general liability insurance and commercial automobile liability insurance from a company authorized to issue insurance in Missouri, and to name the Missouri Highway and Transportation Commission, and MODOT and its employees, as additionally insured not just certificate holders. The amounts will have to cover at a minimum the sovereign immunity limits of just over \$3 million / occur and just under \$500,000 / person for Missouri public entities as calculated by the Missouri Department of Insurance, Financial Institutions and Professional Registration, and published annually in the Missouri Register pursuant to Section 537.610 R.S. Mo. The Contractor is responsible for providing the MODOT Performance Bond as specified in Section 01000, page 16 under paragraph 2.29.

34. State wage rates for all construction activities is required.

35. Missouri DNR PWDP construction permits have been approved.

36. The Contractor is responsible for construction staking of the watermain routing, highway bores, air release valves, ect. for this project.

37. The Contractor will provide the required as-built surveying, AutoCAD drawings, and paper & electronic copies of the project.

38. Contractors are responsible to conduct the required soils, concrete, pressure and associated field tests specified in the Technical Specifications or noted on the plan sheets. All test results shall be provided in a timely manner for approval by the Engineer. All concrete, granular rock and topsoil tickets shall also be submitted to the Engineer for review.

39. Contractor shall connect all new and existing designated water mains, water lines, meters, hydrants, and service lines to the new 6"Ø SDR-21 PVC water mains. Reference Section 02700 of the technical specifications.

40. All new 6" D.I.P gate valves shall have D.I.P. valve boxes with covers recessed flush with top, and marked "WATER".

41. Compacted roadway excavated trenching material will be used as backfill in all traffic roadways, unless otherwise indicated in the Technical Specifications, Plans, or directed by the Engineer. Reference Specification Section 02222, and Plan Sheet C-13, Typical Trench Details.

42. All new water mains and lines require six (6) inches of 1" clean granular bedding material below, above and on the sides of the main in the trench area as shown on the typical trench details, Sheet C-13. No bedding material will be required for the directional boring operations under the proposed length of steel casing. Bedding will be required for the length of RUPVC pipe installed in the project.

43. Horizontal and vertical separation of water mains and sanitary sewer mains by distance is specified in the Technical Specifications, Section 02700-Water Systems, reference paragraph 1.03, subparagraph C, D and E.

44. All trenching excavation (side walls greater than five feet (5') in depth) shall be sloped, shared, sheeted, braced or otherwise supported by means of the sufficient strength to protect the workmen within the trenching operations in accordance with the OSHA, Reference Section 02222 - Excavation, Backfilling and compacting for Utilities, paragraph 3.03(B) - Trench Excavation.

45. Abandonment of In-Place existing water mains, valves, water meter pits, water lines, etc. are shown at various locations in Plan Sheets C-3 to C-9. Reference Technical Specifications, Section 02150 and Standard Detail Sheet C-12. Existing water meters will be reused except in a 2" new water meter pit with new 2" setter and meter serving State Tech. See Plan Sheet C-5 at approximately Station 6+82.8, L85'.

UTILITY EASEMENT CONSTRUCTION NOTES:

- Permanent ROW deeds have been obtained by the Missouri Department of Transportation, MODOT, from private property owners to construct a widened U.S. Highway 50, including rerouting the existing watermain. The Contractor will be required to stay within a thirty (30) foot temporary construction easement centered over the proposed water main routing operations. The routing plans are shown on Plan Sheets No. C-3 thru C-9, of the Contract Documents.
- Clearing and grubbing operations includes; protection and removal of trees and other vegetation along the proposed New Water Main routing and stripping of topsoil as specified in SECTION 02110 - Site Preparation, Technical Specifications. The Contractor shall remain within a thirty (30) foot clearing and grubbing easement during this project, unless directed otherwise by MODOT. Reference Basis of Payment for Bid Item No. 26.
- Contractor shall limit the removal of trees and other vegetation within the thirty proposed (30) foot temporary easement. Removal of any type of vegetation must be approved in advance by MODOT and the Engineer. All vegetation approved for removal shall be disposed off site by the Contractor at his expense.
- Contractor shall cut existing trees (to be removed) five (5) foot above the ground. Remove trees, shrubs and other vegetation, to include removing all stumps and roots by excavation and backfilling the void area with trenching material. All distributed areas will be backfilled, graded, and seeded in accordance with SECTION 02900 of the Technical Specifications.
- Protection and Maintenance of Public and Private Property to include Erosion Control are specified in the Special Conditions, SECTION 01610 and 02105 of the Contract Documents.
- All the required permanent and temporary easements have been obtained for this project.
- All existing water line services fed by existing water mains which are to be abandoned in place, shall be reconnected to the new 6"Ø SDR-21 water main, unless noted otherwise (U.N.O.) in the contract documents. The existing water main will be abandoned as required by MODOT.
- All new water mains and water lines require separation from the existing non-potable pipe lines. Minimum of 10 feet for parallel horizontal and 18 inches for vertical crossings between pipe lines. Reference Section 02700 - Water Systems of the Technical Specifications.

LEGEND			
EXISTING UTILITIES			
	Existing 2" Waterline		Tree
	Existing 4" Waterline		3" Bollard
	Existing 6" Waterline		1/2" I.P.
	Fence		Control Point
	Overhead Electric	NEW UTILITIES	
	Underground Electric		New R/W
	Buried Telephone		New 6" Watermain
	San. Sew. Line(s)		New Water Meter
	Force Main		New Gate Valve
	San. Sew. Manhole		New Fire Hydrant
	Existing Utility Pole		Air Release Valve
	Existing Guy Anchor		
	Telephone Pedestal		
	Existing R/W		



SCALE NOTE:
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For further information regarding utilities which serve this area, contact the respective utilities.

REVISIONS BY:

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Missouri Certificates of Authority
Engineering: 001480
Surveying: 000369
Architecture: 00935



Project For:
Osage County Public Water Supply District #3
Lin, Missouri

US Highway 50 Watermain Rerouting
Project Construction Notes



DRAWN BY:
MSS

CHECKED BY:
TLC

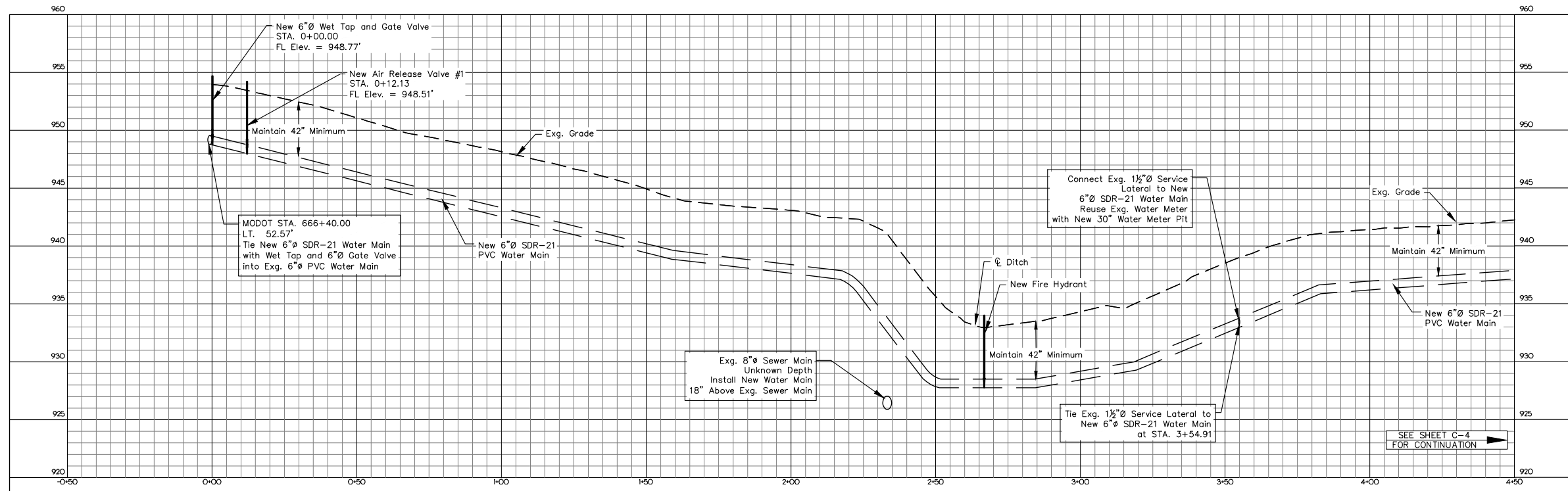
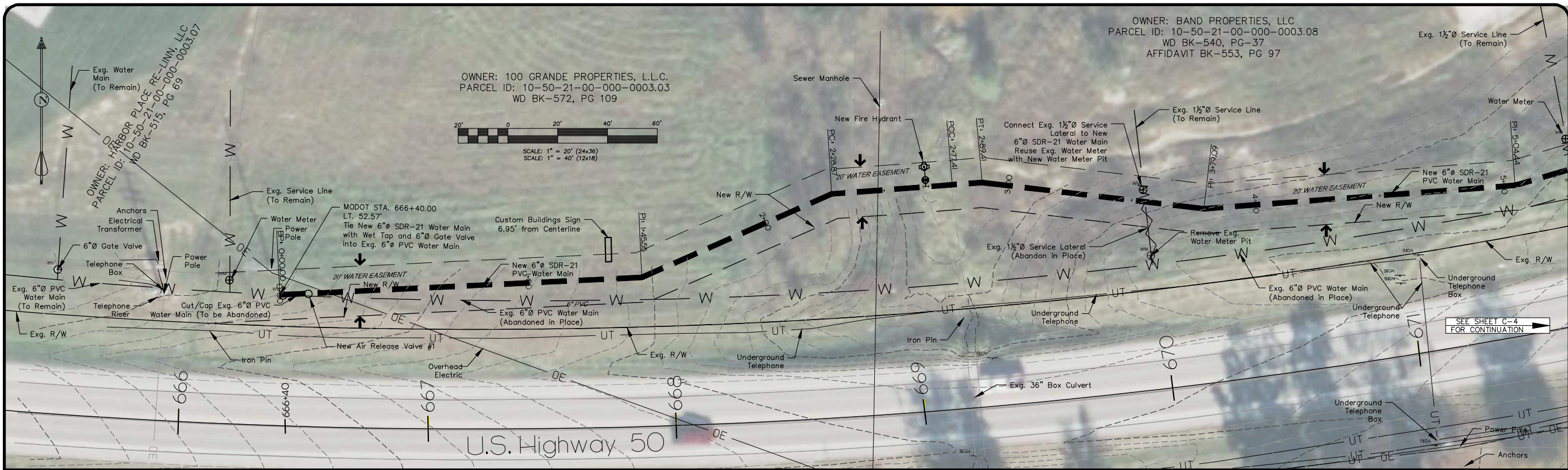
DATE:
April 2024

SCALE:
N/A

JOB:
Highway 50 near State Tech

FILE:
C1-C9_Modot_P-P.dwg

SHEET
C-2
OF 15 SHEETS



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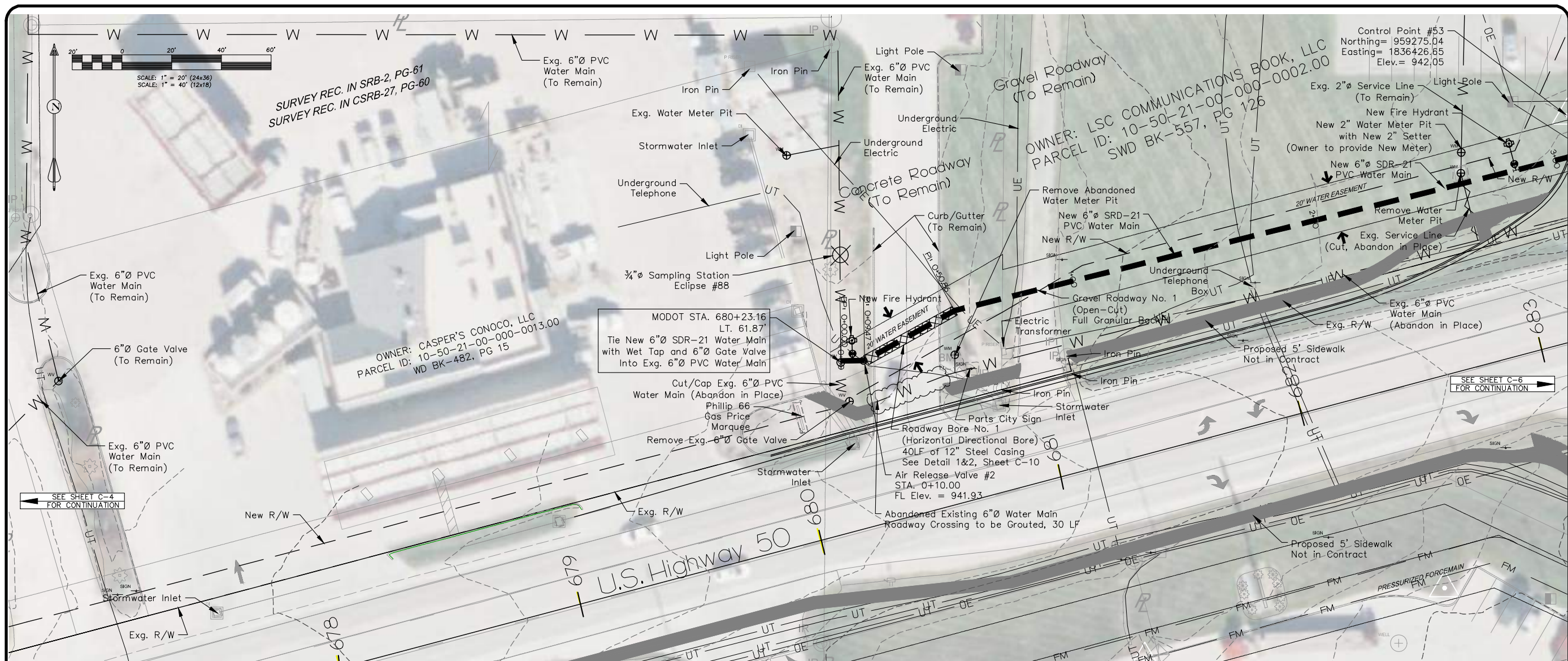
Project For:
Osage County Public Water Supply District #3
Lin, Missouri

U.S. Highway 50 Watermain Rerouting
Water Plan/Profile 1

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DRAWN BY: MSS
CHECKED BY: TLC
DATE: April 2024
SCALE: 1" = 20'
JOB: Highway 50 near State Tech
FILE: C1-C9_Mod01_P-P.dwg
SHEET C-3 OF 15 SHEETS



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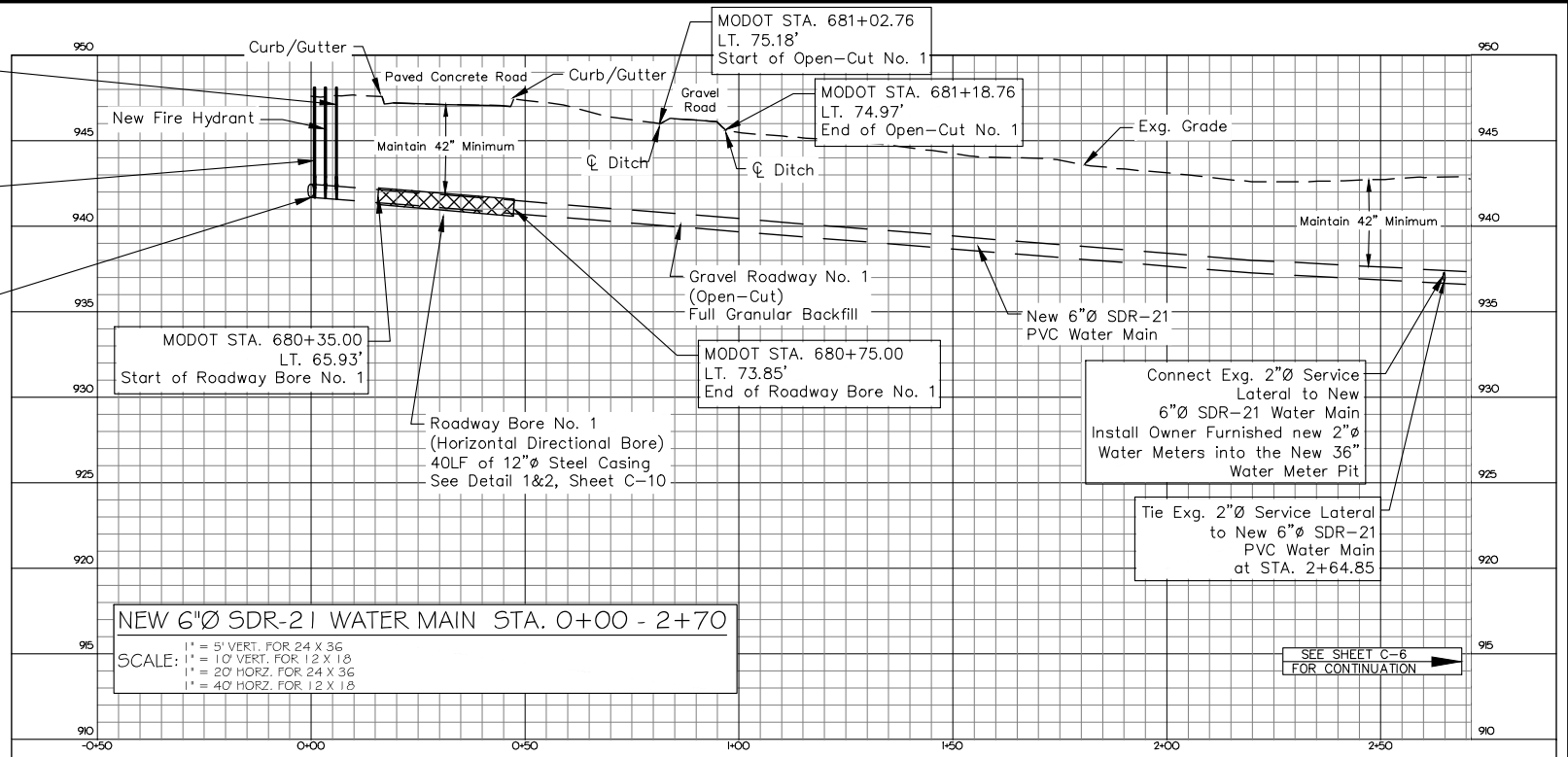
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NOTE: ALL NEW WATER MAINS AND WATER LINES REQUIRE SEPARATION FROM THE EXISTING NON-POTABLE PIPE LINES. MINIMUM OF 10 FEET FOR PARALLEL HORIZONTAL AND 18 INCHES FOR VERTICAL CROSSING BETWEEN PIPE LINES. REFERENCE SECTION 02700-WATER SYSTEMS OF THE TECHNICAL SPECIFICATIONS

NOTE: ALL EXISTING WATER LINE SERVICES FED BY EXISTING WATER MAINS WHICH ARE TO BE ABANDONED IN PLACE, SHALL BE RECONNECTED TO THE NEW 6\"/>

Air Release Valve #2
STA. 0+10.00
FL Elev. = 941.59

New 6\"/>



SCALE NOTE:
ALL SCALES SHOWN ARE BASED ON 24\"/>

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STATE OF MISSOURI
LAND SURVEYING
TERVIS LEE CATES
PE #022268
Tervis Lee Cates - PE, PLS
Missouri PE #022268
Oklahoma PE #24359
Missouri PLS #2008000705

Project For:
Osage County Public Water Supply District #3
Lin, Missouri

US Highway 50 Watermain Rerouting
Water Plan/Profile 3

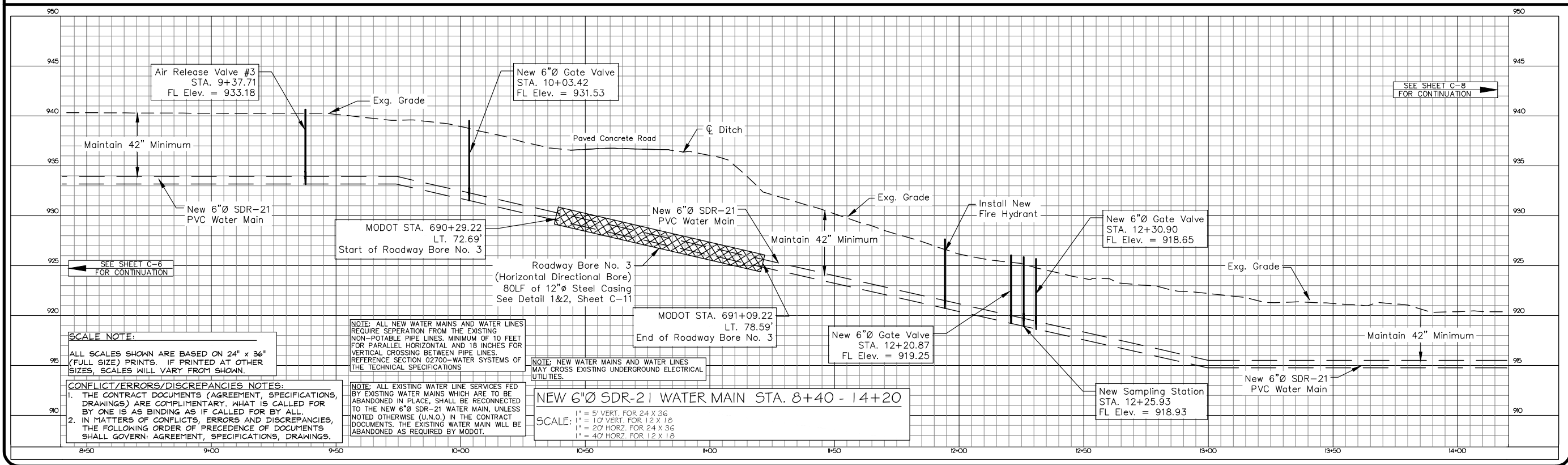
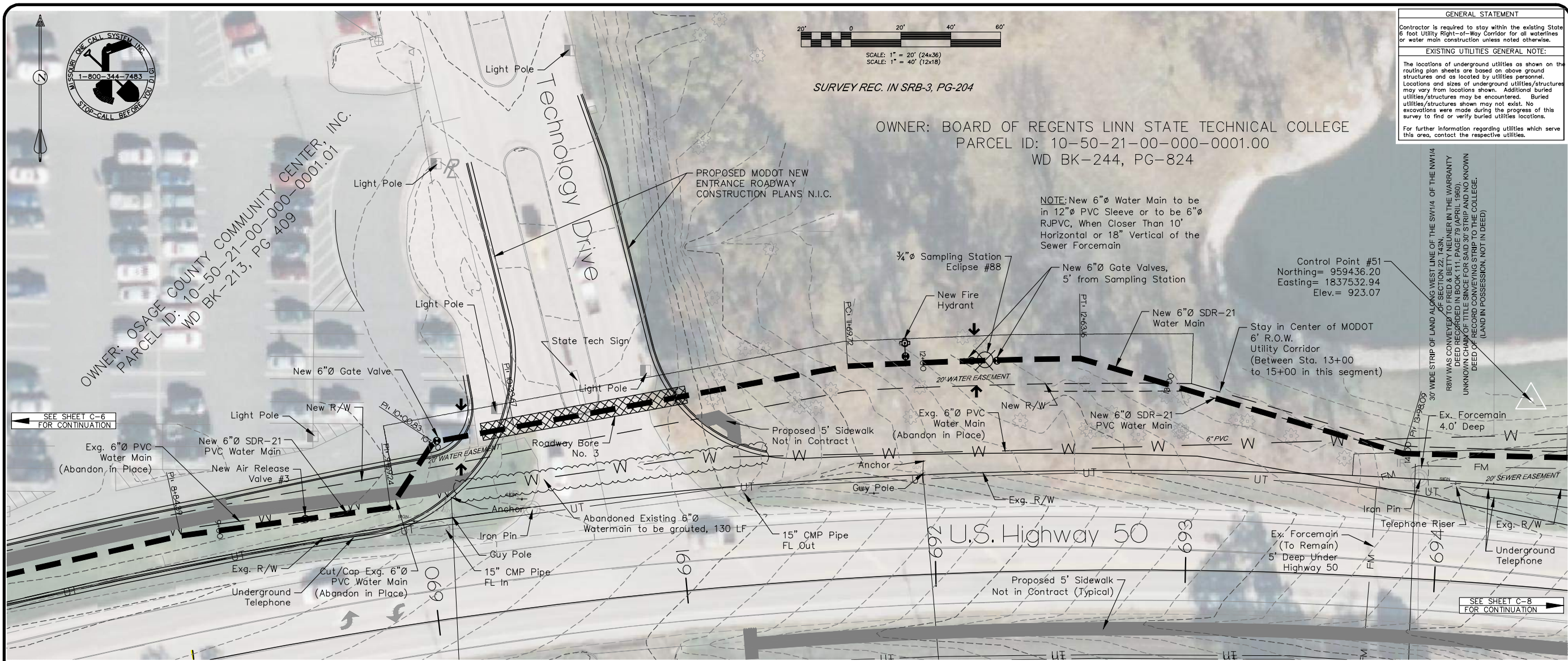
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DRAWN BY:
MSS

CHECKED BY:
TLC

DATE:
April, 2024

SCALE:
1\"/>



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Project For:
Osage County Public Water Supply District #3
Lin, Missouri

US Highway 50 Watermain Rerouting
Water Plan/Profile 5

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TLC

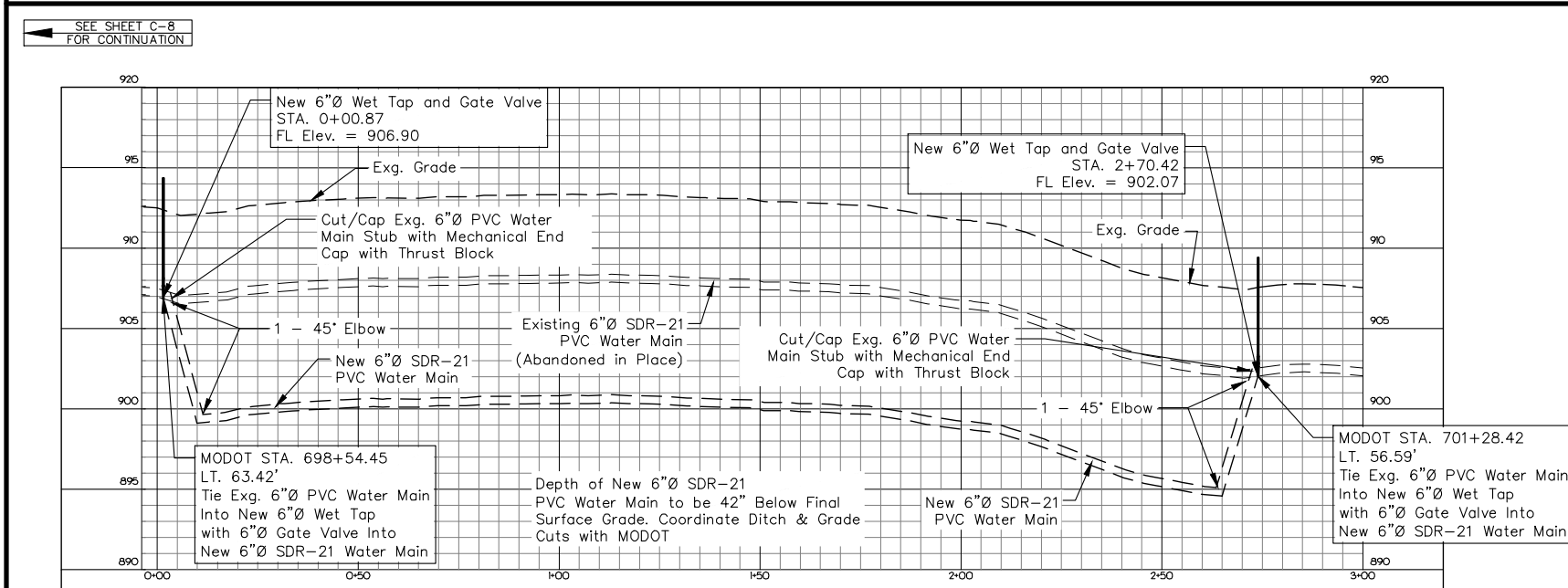
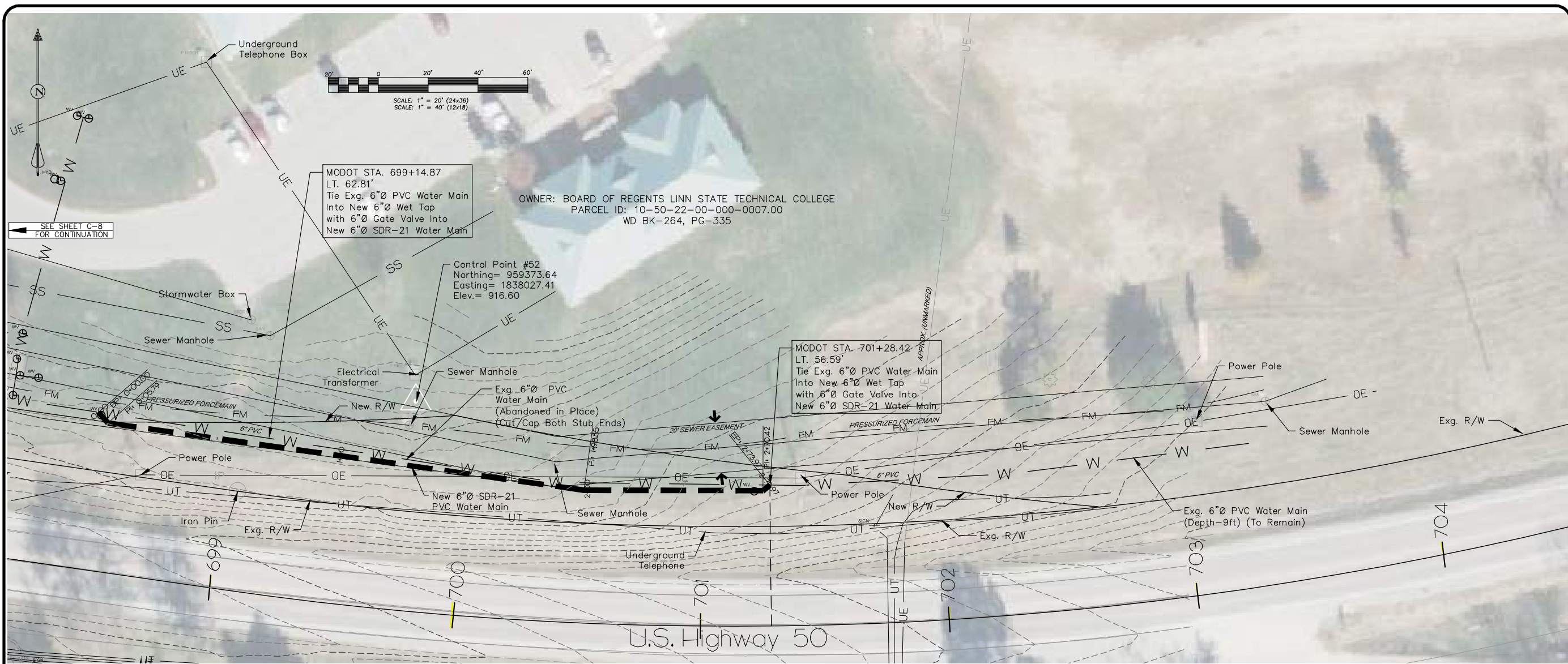
DATE:
April, 2024

SCALE:
1" = 20'

JOB:
Highway 50 near State Tech

FILE:
CI-C9_Modot_P-P.dwg

SHEET
C-7
OF 15 SHEETS



NOTE: ALL NEW WATER MAINS AND WATER LINES WILL CROSS EXISTING UNDERGROUND ELECTRICAL UTILITIES.

NOTE: ALL NEW WATER MAINS AND WATER LINES REQUIRE SEPARATION FROM THE EXISTING NON-POTABLE PIPE LINES. MINIMUM OF 10 FEET FOR PARALLEL HORIZONTAL AND 18 INCHES FOR VERTICAL CROSSING BETWEEN PIPE LINES. REFERENCE SECTION 02700-WATER SYSTEMS OF THE TECHNICAL SPECIFICATIONS

NOTE: ALL EXISTING WATER LINE SERVICES FED BY EXISTING WATER MAINS WHICH ARE TO BE ABANDONED IN PLACE, SHALL BE RECONNECTED TO THE NEW 6" SDR-21 WATER MAIN, UNLESS NOTED OTHERWISE (U.N.O.) IN THE CONTRACT DOCUMENTS. THE EXISTING WATER MAIN WILL BE ABANDONED AS REQUIRED BY MODOT.

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Terris Leo Cates - PE, PLS
Missouri PE #E-02268
Oklahoma PE #24359
Missouri PLS #2008000705

Project For:
Osage County Public Water Supply District #3
Lin, Missouri

US Highway 50 Watermain Rerouting
Water Plan/Profile 7

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MSS

CHECKED BY:

TLC

DATE:

April, 2024

SCALE:

1" = 20'

JOB:

Highway 50 near State Tech

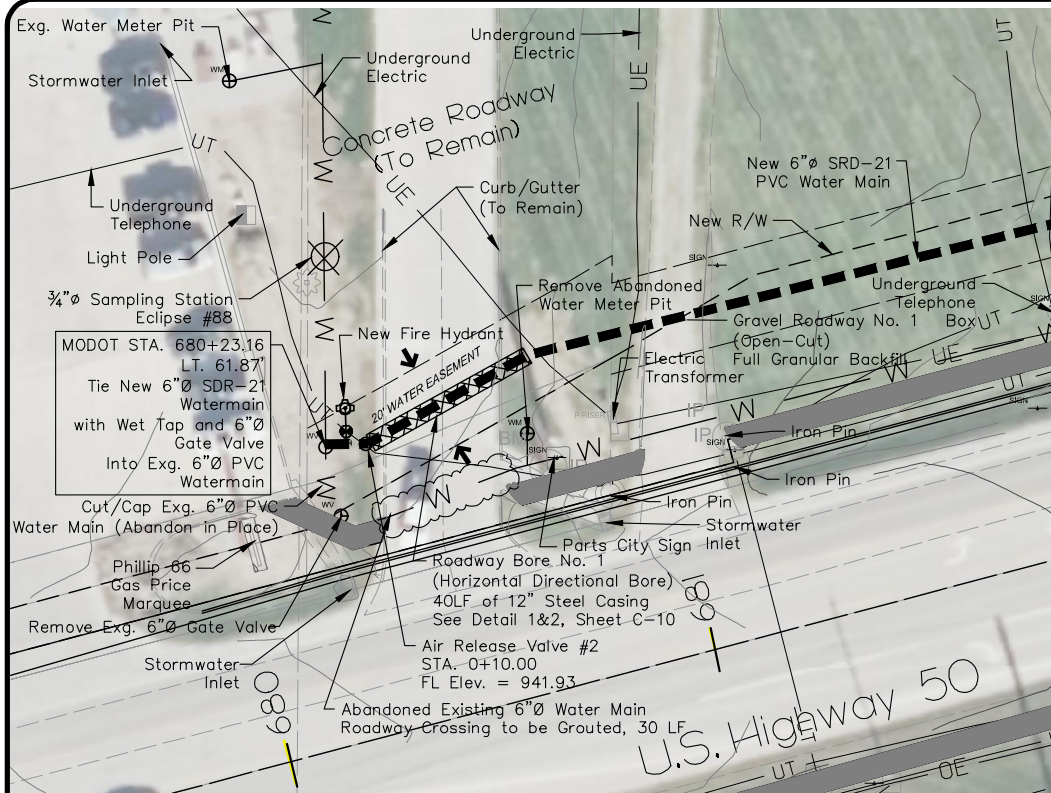
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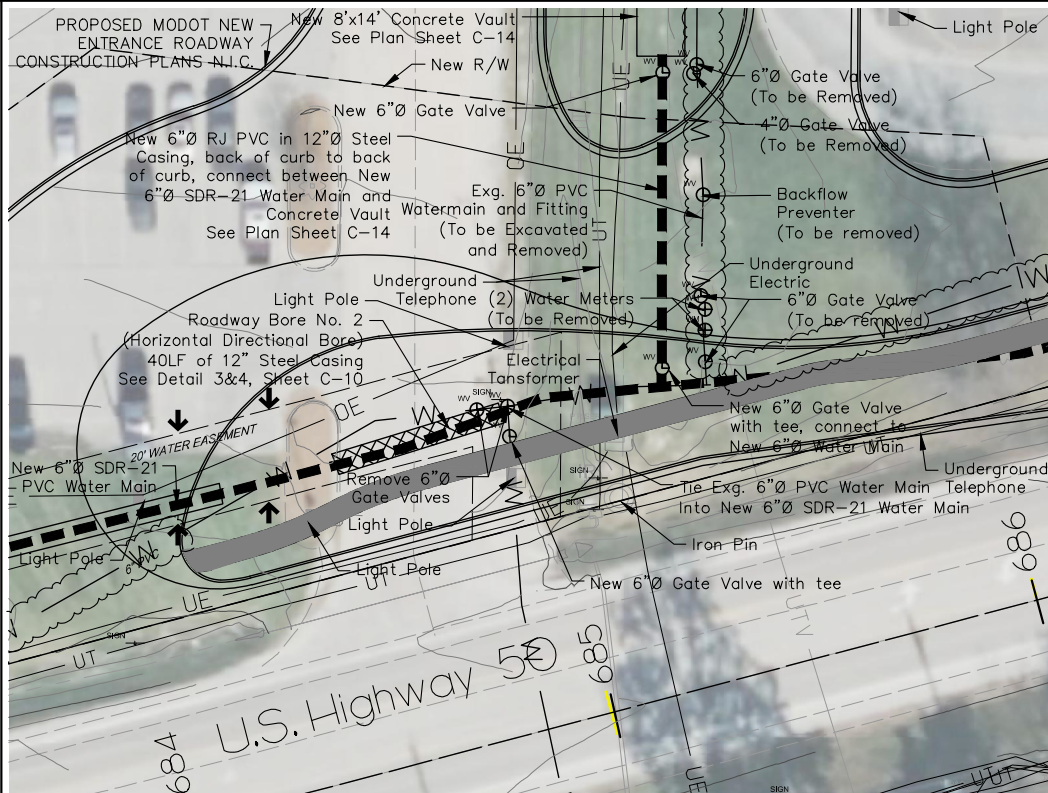
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C-9

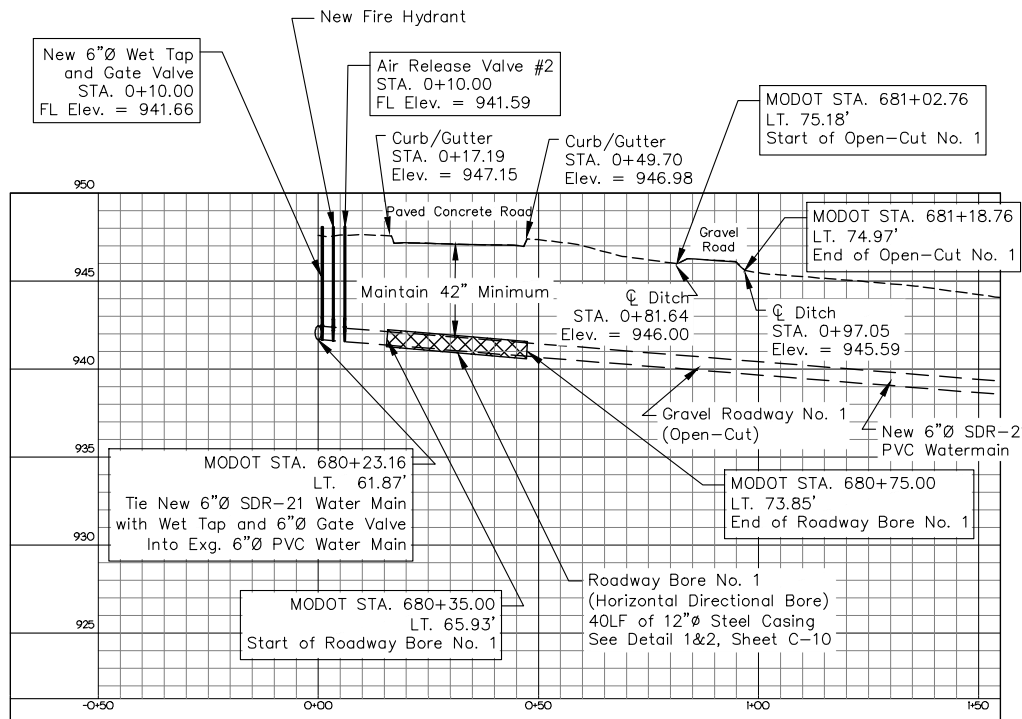
OF 15 SHEETS



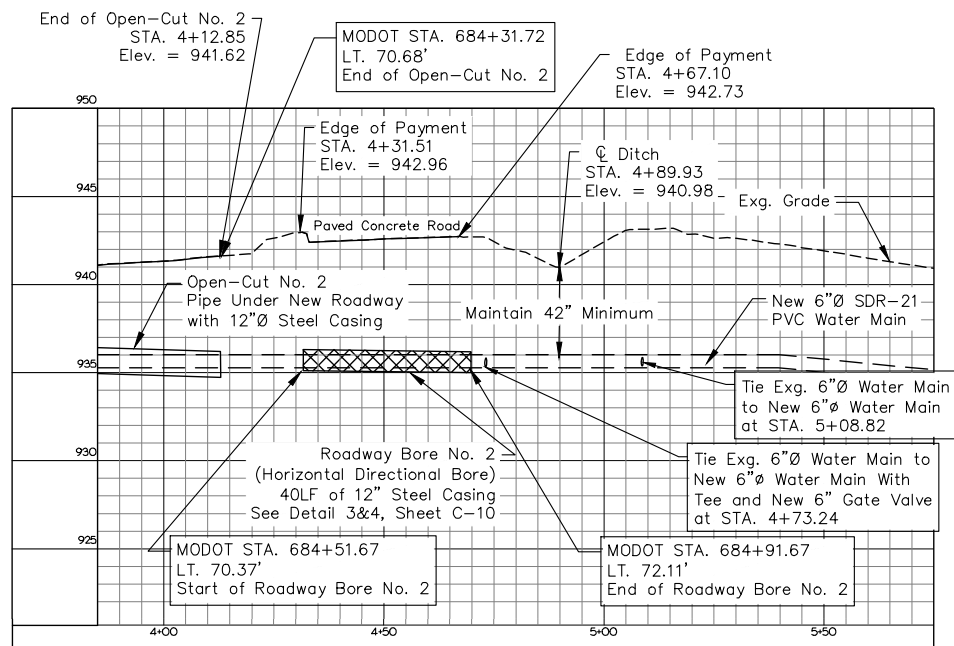
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SCALE: 1" = 20'-0"



3 ROADWAY BORE #2 PLAN SHEET (C - 6)
SCALE: 1" = 20'-0"



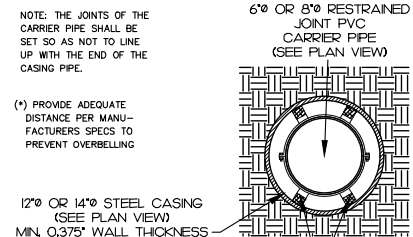
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SCALE: 1" = 20'-0" Horiz. / 1" = 5'-0" Vert.



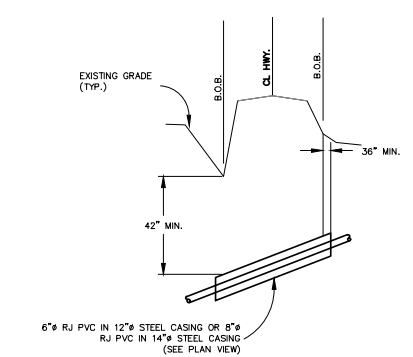
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SCALE: 1" = 20'-0" Horiz. / 1" = 5'-0" Vert.

GENERAL CONSTRUCTION NOTES:

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- CONTRACTOR SHALL COORDINATE LOCATION OF HIGHWAY BORING WITH OWNER, ENGINEER AND STATE OFFICIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING EXACT COORDINATES AND ELEVATIONS FOR BORING OPERATIONS, AND TO STAY WITHIN THE EXISTING STATE 6' UTILITY R.O.W.
- WATER SERVICE LATERALS AND CONNECTS OF OTHER WATERLINES TO NEW WATER MAIN SHALL BE FIELD ADJUSTED AS NEEDED. THE RESIDENCE/COMMERCIAL LATERAL LOCATION SHOULD BE VERIFIED AND COORDINATED WITH THE RESPECTIVE OWNER. THE COORDINATION EFFORT WITH THE OWNER IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE CONSTRUCTION SITE AND FOR READING AND BEING COMPLETELY FAMILIAR WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE HIS OWN CONSTRUCTION STAKING OF RIGHT-OF-WAY CLEARING AND OFFSET HUBS. AS BUILT PIPE INSTALLATION DATA TO INCLUDE GPS COORDINATES AT ALL BEND POINTS, GATE VALVES, HYDRANTS, TIE-INS (TAPS), SERVICE TEES, WATER STORAGE TOWERS, BORINGS AND METER LOCATIONS. DATA SHALL BE PROVIDED AS AN ASCII (TEXT) FILE WITH POINT NUMBERS, NORTHING, EASTING, ELEVATION AND DESCRIPTIONS, IN COMMA DELIMITED FORMAT TO THE FIELD ENGINEER. THIS DATA/INFORMATION WILL BE USED BY THE ENGINEER TO DEVELOP THE FINAL AS-BUILT DOCUMENTS.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND FIELD ENGINEER TO FIELD LOCATE ALL WATER MAIN IMPROVEMENTS AND INFRASTRUCTURE COMPONENTS. IN ADDITION, THE CONTRACTOR SHALL KEEP ONE (1) RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE CONSTRUCTION SITE IN GOOD ORDER AND ANNOTATED TO SHOW ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS SHALL BE AVAILABLE TO THE ENGINEER AND SHALL BE DELIVERED TO HIM UPON COMPLETION OF THE PROJECT TO BE USED TO DEVELOP THE FINAL AS-BUILT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL TRACER WIRE AND LOCATOR TAPE ON ALL WATER MAINS, INSTALLED SERVICE LATERALS AND RELATED WATER LINE COMPONENTS AS SPECIFIED IN SECTION 02633.
- VARIOUS EXISTING WATER MAINS WILL BE ABANDONED IN PLACE AS SHOWN IN THE PLANS, REFERENCE SECTION 02150. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE LINES DURING THE INSTALLATION OF THE NEW WATER MAIN SYSTEM. ANY DAMAGE TO THE EXISTING WATER OR SEWER LINES WILL BE REPAIRED THE SAME DAY, AT THE CONTRACTOR'S EXPENSE.
- VARIOUS DESIGNATED EXISTING FIRE HYDRANTS WILL BE REPLACED WITH THE NEW TYPICAL 6" DIAMETER FIRE HYDRANT, AS SHOWN ON THE PLAN SHEETS.
- ALL EXISTING WATERLINE HIGHWAY BORES TO BE ABANDONED IN PLACE SHALL BE CUT, CAPPED AND FILLED WITH NON-SHRINK GROUT, SECTION 02150.
- ALL WATERLINES INSTALLED IN MODOT R.O.W. ARE REQUIRED TO BE WITHIN THE 6' ARRANGED R.O.W. CORRIDOR AND ALONG THE HIGHWAY AND TRANSITIONING WITH THE SIGHT DISTANCE CHANGES AT INTERSECTIONS.



HIGH DENSITY POLYETHYLENE CASING SPACER:
INSTALLED • 6'-0" O.C. IN CASING PIPE
(SEE SPEC. SECTION 02305)



TYPICAL HIGHWAY WATERMAIN BORE

N.T.S.

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NEW 6" SDR-21 WATER MAIN

SCALE: 1" = 5' VERT. FOR 24 X 36
1" = 10' VERT. FOR 12 X 18
1" = 20' HORIZ. FOR 24 X 36
1" = 40' HORIZ. FOR 12 X 18

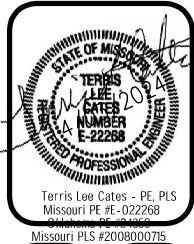
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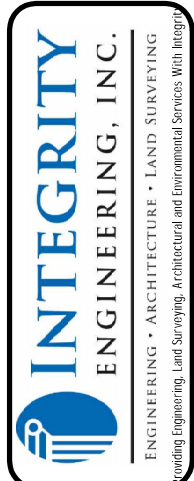
REVISIONS BY:	

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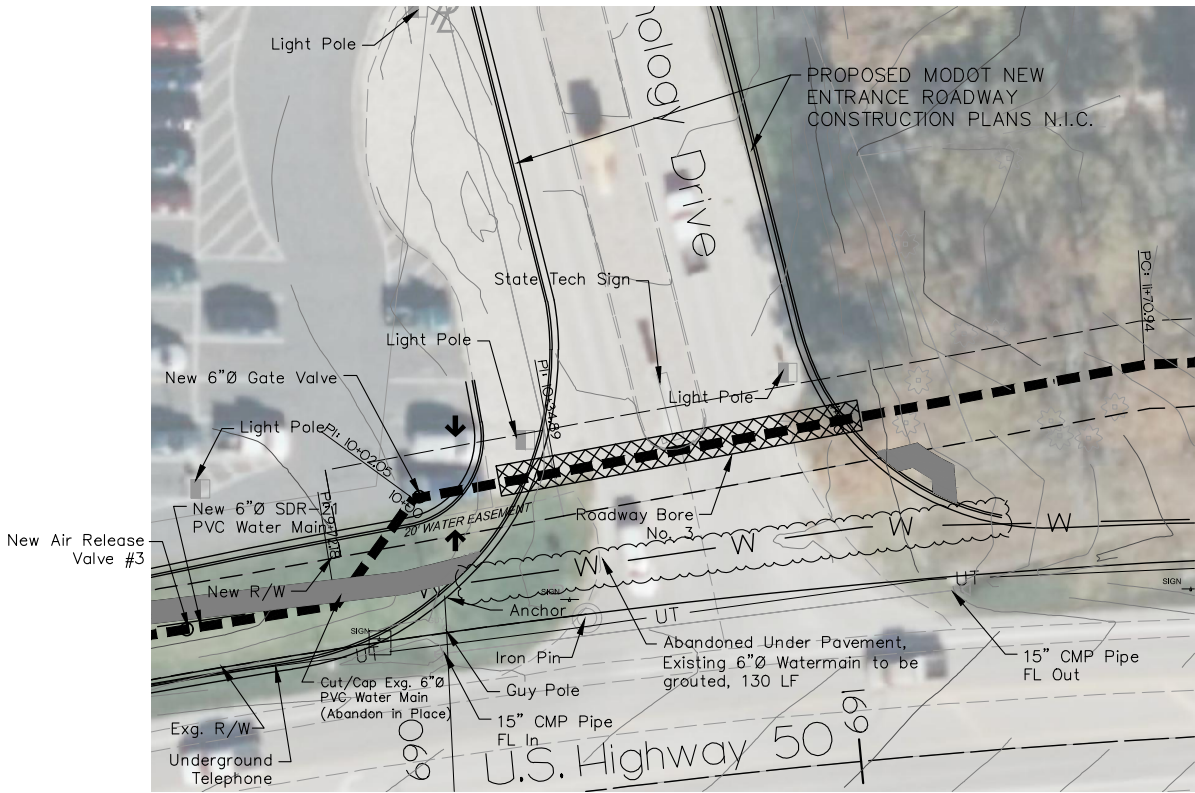


Project For:
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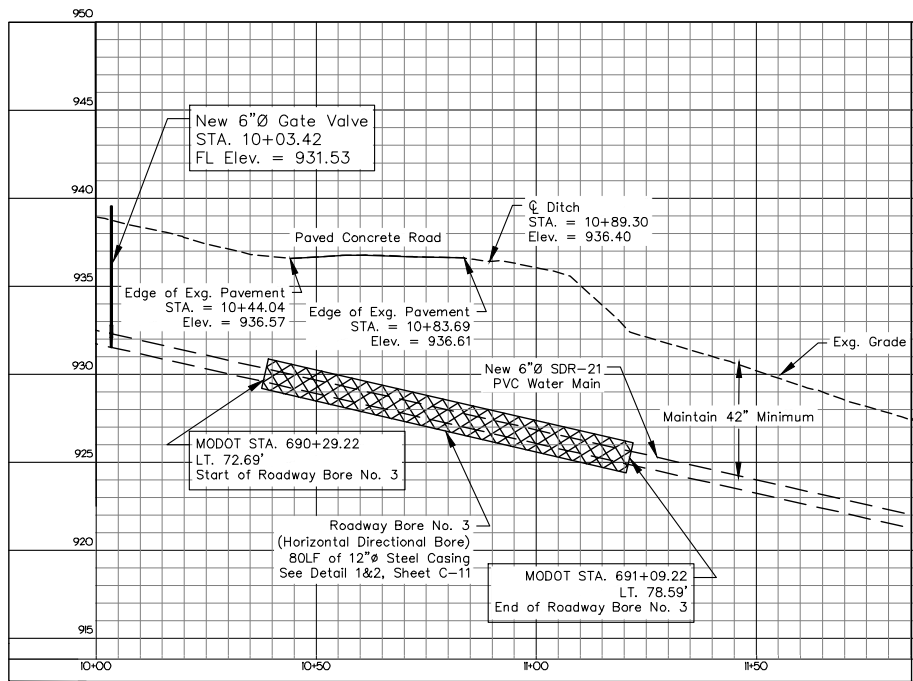
US Highway 50 Watermain Rerouting
Roadway Boring Plan/Profile



DRAWN BY: IVMB
CHECKED BY: TLC
DATE: April, 2024
SCALE: N/A
JOB: Highway 50 near State Tech
FILE: C10-CTL_Modot_RoadBores.dwg
SHEET C-10 OF 15 SHEETS



1 ROADWAY BORE #3 PLAN SHEET (C - 7)
C-11 SCALE: 1" = 20'-0"



2 ROADWAY BORE #3 PROFILE (SHEET C - 7)
C-11 SCALE: 1" = 20'-0" Horiz. / 1" = 5'-0" Vert.



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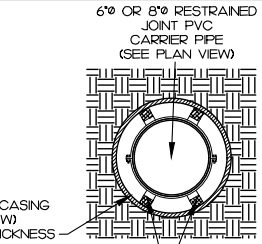
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- WATER SERVICE LATERALS AND CONNECTS OF OTHER WATERLINES TO NEW WATER MAIN SHALL BE FIELD ADJUSTED AS NEEDED. THE RESIDENCE/COMMERCIAL LATERAL LOCATION SHOULD BE VERIFIED AND COORDINATED WITH THE RESPECTIVE OWNER. THE COORDINATION EFFORT WITH THE OWNER IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE CONSTRUCTION SITE AND FOR READING AND BEING COMPLETELY FAMILIAR WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE HIS OWN CONSTRUCTION STAKING OF RIGHT-OF-WAY CLEARING AND OFFSET HUBS. AS BUILT PIPE INSTALLATION DATA TO INCLUDE GPS COORDINATES AT ALL BEND POINTS, GATE VALVES, HYDRANTS, TIE-INS (TAPS), SERVICE TEES, WATER STORAGE TOWERS, BORINGS AND METER LOCATIONS. DATA SHALL BE PROVIDED AS AN ASCII (TEXT) FILE WITH POINT NUMBERS, NORTHING, EASTING, ELEVATION AND DESCRIPTIONS, IN COMMA DELIMITED FORMAT TO THE FIELD ENGINEER. THIS DATA/INFORMATION WILL BE USED BY THE ENGINEER TO DEVELOP THE FINAL AS-BUILT DOCUMENTS.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND FIELD ENGINEER TO FIELD LOCATE ALL WATER MAIN IMPROVEMENTS AND INFRASTRUCTURE COMPONENTS. IN ADDITION, THE CONTRACTOR SHALL KEEP ONE (1) RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE CONSTRUCTION SITE IN GOOD ORDER AND ANNOTATED TO SHOW ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS SHALL BE AVAILABLE TO THE ENGINEER AND SHALL BE DELIVERED TO HIM UPON COMPLETION OF THE PROJECT TO BE USED TO DEVELOP THE FINAL AS-BUILT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL TRACER WIRE AND LOCATOR TAPE ON ALL WATER MAINS. INSTALLED SERVICE LATERALS AND RELATED WATER LINE COMPONENTS AS SPECIFIED IN SECTION 02633.
- VARIOUS EXISTING WATER MAINS WILL BE ABANDONED IN PLACE AS SHOWN IN THE PLANS, REFERENCE SECTION 02150. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE LINES DURING THE INSTALLATION OF THE NEW WATER MAIN SYSTEM. ANY DAMAGE TO THE EXISTING WATER OR SEWER LINES WILL BE REPAIRED THE SAME DAY, AT THE CONTRACTORS EXPENSE.
- VARIOUS DESIGNATED EXISTING FIRE HYDRANTS WILL BE REPLACED WITH THE NEW TYPICAL 6" DIAMETER FIRE HYDRANT, AS SHOWN ON THE PLAN SHEETS.
- ALL EXISTING WATERLINE HIGHWAY BORES TO BE ABANDONED IN PLACE SHALL BE CUT, CAPPED AND FILLED WITH NON-SHRINK GROUT, SECTION 02150.
- ALL WATERLINES INSTALLED IN MODOT R.O.W. ARE REQUIRED TO BE WITHIN THE 6' ARRANGED R.O.W. CORRIDOR AND ALONG THE HIGHWAY AND TRANSITIONING WITH THE SIGHT DISTANCE CHANGES AT INTERSECTIONS.

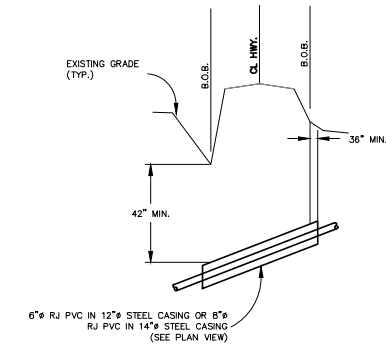
NOTE: THE JOINTS OF THE CARRIER PIPE SHALL BE SET SO AS NOT TO LINE UP WITH THE END OF THE CASING PIPE.

(*) PROVIDE ADEQUATE DISTANCE PER MANUFACTURERS SPECS TO PREVENT OVERBELLING

12"Ø OR 14"Ø STEEL CASING (SEE PLAN VIEW) MIN. 0.375" WALL THICKNESS



HIGH DENSITY POLYETHYLENE CASING SPACER: INSTALLED • 6'-0" O.C. IN CASING PIPE (SEE SPEC. SECTION 02305)



TYPICAL HIGHWAY WATERMAIN BORE

N.T.S.

SCALE NOTE:

ALL SCALES SHOWN ARE BASED ON 24" x 36" (FULL SIZE) PRINTS. IF PRINTED AT OTHER SIZES, SCALES WILL VARY FROM SHOWN.

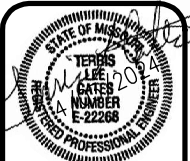
CONFLICT/ERRORS/DISCREPANCIES NOTES:

- THE CONTRACT DOCUMENTS (AGREEMENT, SPECIFICATIONS, DRAWINGS) ARE COMPLEMENTARY. WHAT IS CALLED FOR BY ONE IS AS BINDING AS IF CALLED FOR BY ALL.
- IN MATTERS OF CONFLICTS, ERRORS AND DISCREPANCIES, THE FOLLOWING ORDER OF PRECEDENCE OF DOCUMENTS SHALL GOVERN: AGREEMENT, SPECIFICATIONS, DRAWINGS.



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Terris Lee Cates - PE, PLS
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Oklahoma PE #24359
Missouri PLS #2008000705

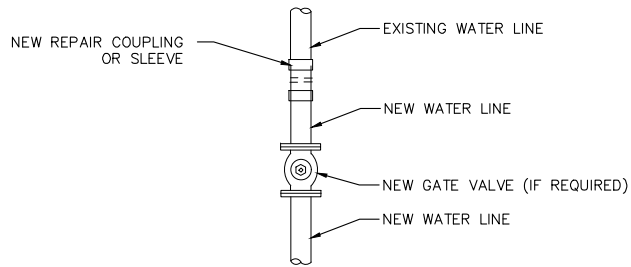
Project For:
Osage County Public Water Supply District #3
Lin, Missouri

US Highway 50 Watermain Rerouting
Roadway Boring Plan/Profile

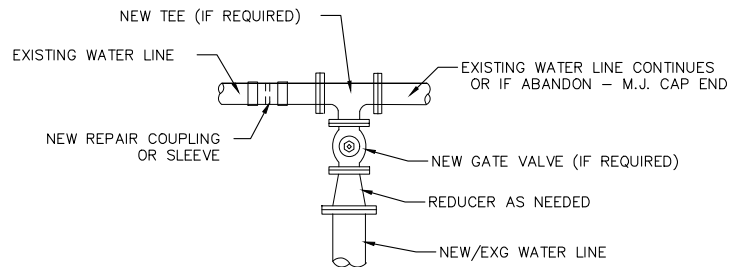


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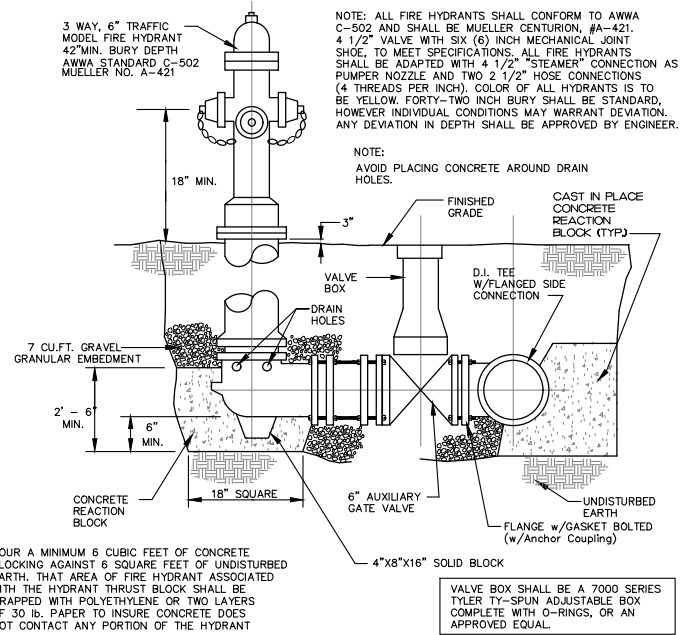
DRAWN BY: IVMB
CHECKED BY: TLC
DATE: April, 2024
SCALE: N/A
JOB: Highway 50 near State Tech
FILE: C10- C11_Modot_RoadBores.dwg
SHEET C - 11 OF 15 SHEETS



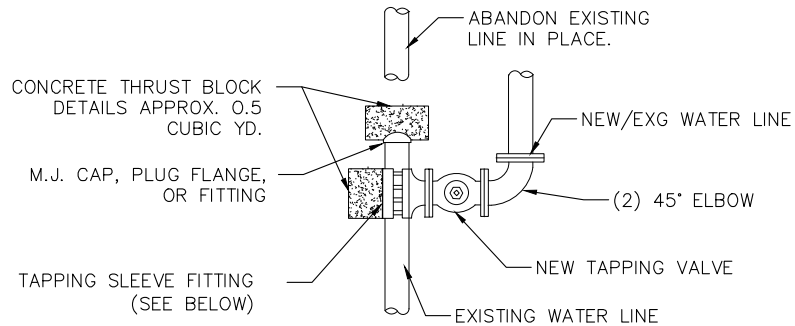
IN-LINE TIE-IN DETAIL 1
NOT TO SCALE



IN-LINE TIE-IN DETAIL 2
NOT TO SCALE



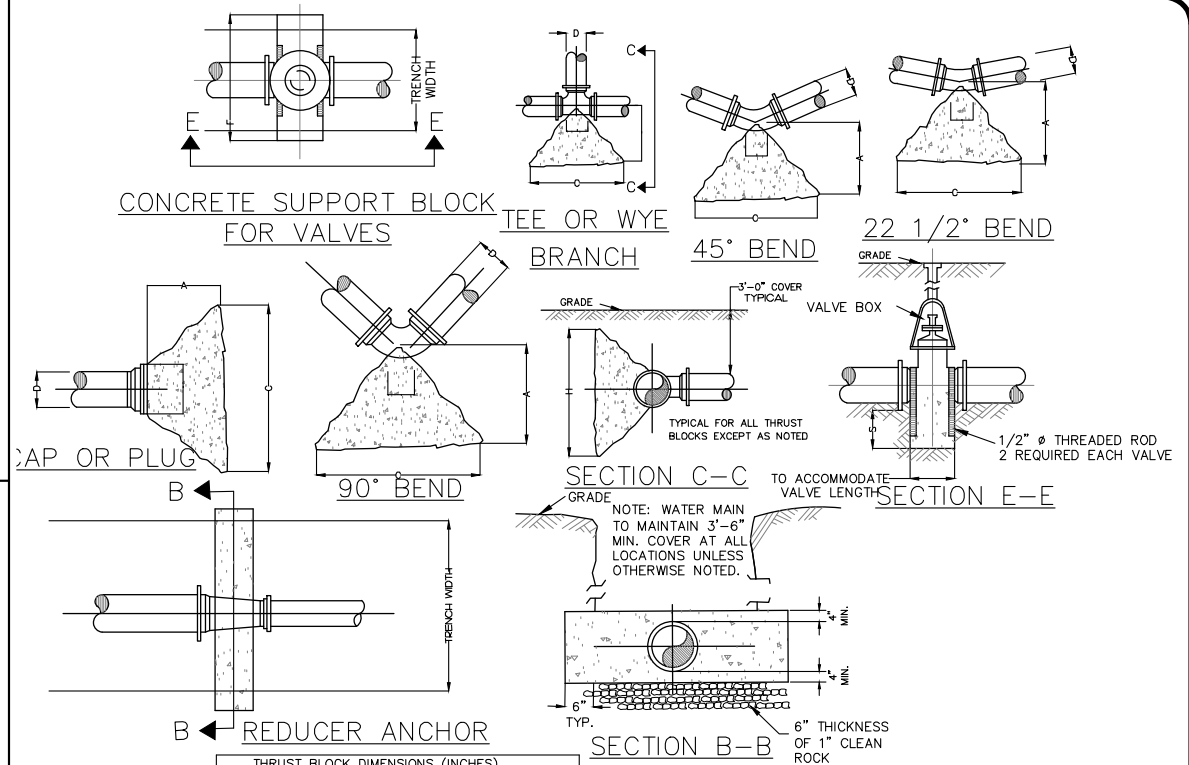
FIRE HYDRANT INSTALLATION DETAIL
NOT TO SCALE



M.J. CAP AND ABANDON W.L. DETAIL 3
NOT TO SCALE

CONSTRUCTION NOTES

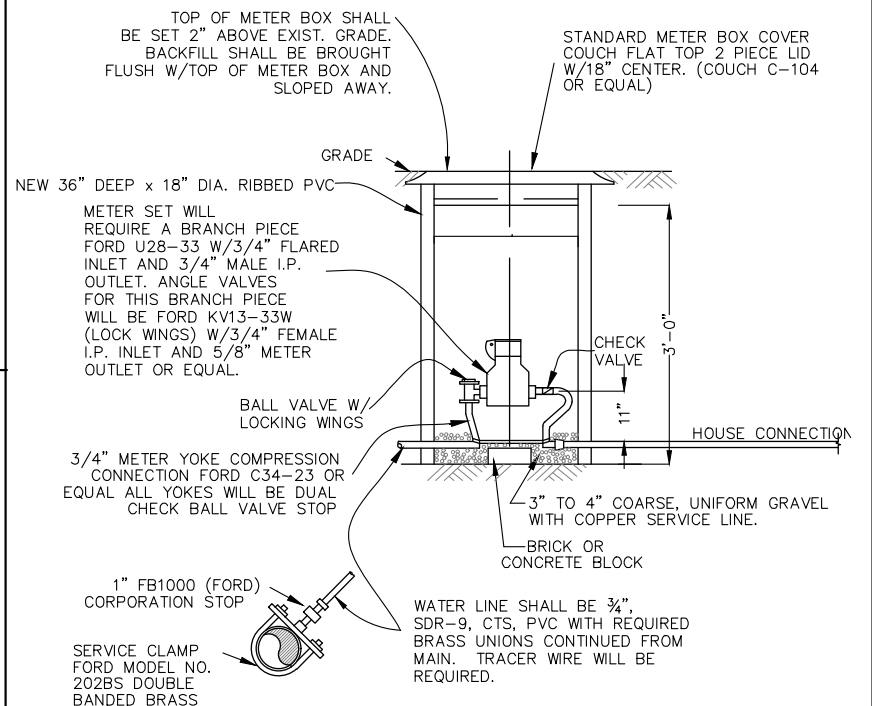
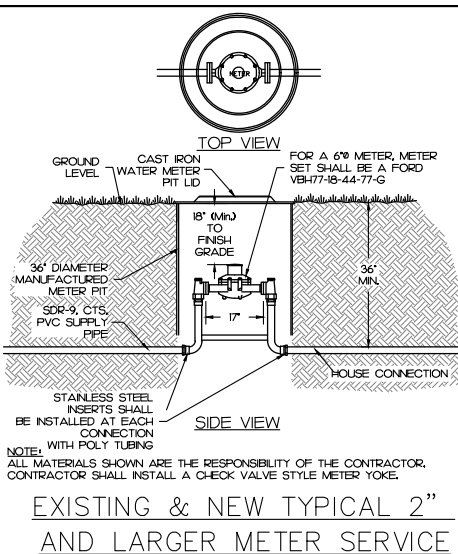
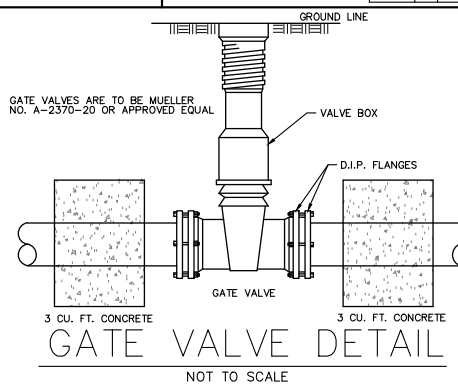
1. ABANDONMENT OF IN-PLACE EXISTING WATER MAINS AND WATER LINES PIPING, REFERENCE TECHNICAL SPECIFICATIONS- SECTION 02150 AND PLAN SHEET 2, SPECIAL CONSTRUCTION NOTE 45.
2. EXISTING PIPING AND PROPOSED LOCATIONS FOR ABANDONMENT OF THE 6" PVC WATER MAINS AND WATERLINE ARE SHOWN IN PLAN SHEETS C-3 THROUGH C-9



THRUST BLOCK DIMENSIONS (INCHES)		PIPE SIZE		TEE-PLUG		TEE BRANCH		90° BEND		45° BEND		22 1/2° BEND		REDUCER		VALVES	
D	A	B	C	H	C	H	C	H	C	H	C	H	C	H	C	H	S
1 1/2	14	4	26	13	30	15	24	12	16	8	16	8	12	36			
2	14	4	26	13	30	15	24	12	16	8	16	8	12	36			
2 1/2	14	4	26	13	30	15	24	12	16	8	16	8	12	36			
3	14	4	26	13	30	15	24	12	16	8	16	8	12	36			
4	14	4	26	13	30	15	24	12	16	8	16	8	12	36			
6	22	6	36	18	44	16	32	16	24	12	24	12	18	48			
8	29	8	50	25	58	29	42	21	30	15	30	15	18	54			
10	37	10	62	31	74	37	55	27	40	20	40	20	24	54			
12	44	12	74	37	88	44	65	33	46	23	46	23	24	90			
14	52	14	86	43	103	52	76	38	54	27	54	27	30	96			
16	58	15	98	49	118	58	86	43	60	30	60	30	36	96			
18	66	16	112	56	134	66	98	49	70	35	70	35	42	96			

THRUST BLOCK DETAILS
NOT TO SCALE

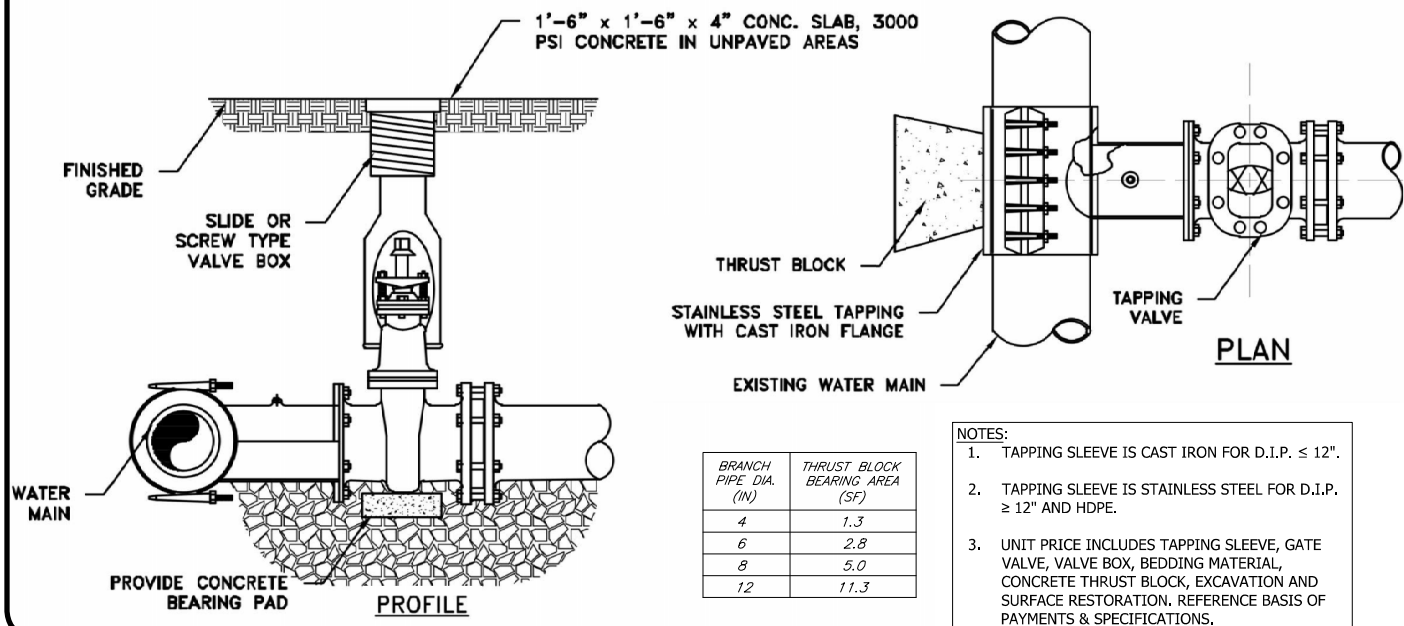
- NOTES:
- 1) ALL THRUST BLOCKS ASSUME 2,000 LB/FT² BEARING PRESSURE SOIL. IF SOIL HAS LOWER BEARING PRESSURE CONSULT ENGINEER FOR SIZING.
 - 2) IF EXACT PIPE DIAMETER YOU ARE USING IS NOT SHOWN, USE NEXT LARGER SIZE.
 - 3) ALL CONCRETE SHALL BE 4,000 PSI 6 BAG MIX.
 - 4) ALL FITTINGS COMING IN CONTACT WITH CONCRETE SHALL BE WRAPPED WITH POLYETHYLENE (OR APPROVED EQUAL) TO INSURE CONCRETE DOES NOT CONTACT ANY PORTION OF THE FITTINGS.
 - 5) ALL 90° BENDS WILL USE (2) 45° D.I.P. BEND SECTIONS AND CONNECTING (DIP) SECTION TO MAKE 90° BEND.



EXISTING & NEW TYPICAL 1'
AND SMALLER METER SERVICE

NOTE: CONTRACTOR SHALL CONNECT TO SERVICE LATERAL FROM OWNERS EXISTING METER VAULT TO NEW WATER MAINS AFTER THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER AND ENGINEER.

TAPPING SLEEVE AND VALVE DETAIL



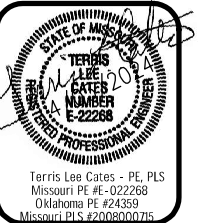
BRANCH PIPE DIA. (IN)	THRUST BLOCK BEARING AREA (SF)
4	1.3
6	2.8
8	5.0
12	11.3

NOTES:

1. TAPPING SLEEVE IS CAST IRON FOR D.I.P. ≤ 12".
2. TAPPING SLEEVE IS STAINLESS STEEL FOR D.I.P. ≥ 12" AND HDPE.
3. UNIT PRICE INCLUDES TAPPING SLEEVE, GATE VALVE, VALVE BOX, BEDDING MATERIAL, CONCRETE THRUST BLOCK, EXCAVATION AND SURFACE RESTORATION. REFERENCE BASIS OF PAYMENTS & SPECIFICATIONS.

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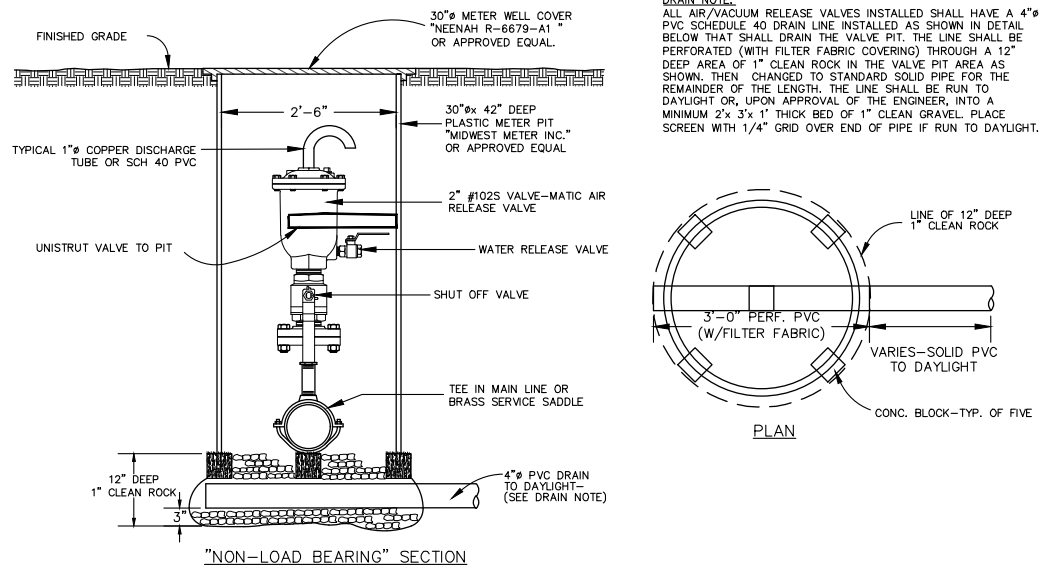
PROJECT FOR: OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3
LINN, MISSOURI
US Highway 50 Watermain Rerouting
STANDARD WATER DETAILS

INTEGRITY ENGINEERING, INC.
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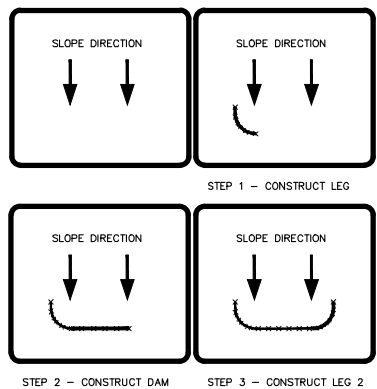
DRAWN BY: IVMB
CHECKED BY: TLC
DATE: April, 2024
SCALE: AS SHOWN
JOB: Highway 50 near State Tech
FILE: C12_Mod02_SidWaterDtls.dwg
SHEET
C-12
OF 15 SHEETS

GENERAL CONSTRUCTION NOTES:

- CONTRACTORS SHALL SUBMIT A PROPOSED PLAN FOR PROVIDING TEMPORARY EROSION CONTROL AS SPECIFIED IN SPECIFICATIONS SECTION 02105, "EROSION CONTROL" DURING PROJECT CONSTRUCTION FOR APPROVAL OF THE ENGINEER.
- TEMPORARY DOMESTIC WATER LINE SYSTEM DIVERSION OR STORAGE AS NEEDED:
 - SCOPE OF WORK: THE WORK COVERED BY THIS SECTION CONSISTS OF PROVIDING ALL TEMPORARY DIVERSION OR PRESSURE TANK STORAGE TO PERFORM ALL OPERATIONS IN CONNECTION WITH MAINTAINING DOMESTIC WATER SERVICE IN THE COMMUNITY DURING CONSTRUCTION. THE PURPOSE IS TO PROVIDE CONTINUOUS WATER SERVICE TO ALL CUSTOMERS. THE CONTRACTOR WILL MAINTAIN RESIDENTIAL WATER FLOW IN ORDER TO PROVIDE RELIABLE SERVICE TO THE USERS OF THE EXISTING WATER SYSTEM AT ALL TIMES. ANY BREAKS OR DAMAGE IN THE EXISTING PWSD #3 WATER SYSTEM WILL BE REPAIRED THE SAME DAY AT NO ADDITIONAL COST TO THE PWSD #3.
 - SUBMITTALS: PRIOR TO IMPLEMENTATION OF ANY TEMPORARY DIVERSION OR STORAGE, THE CONTRACTOR WILL SUBMIT AND RECEIVE ENGINEER'S ACCEPTANCE OF A PLAN. THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A COMPREHENSIVE WRITTEN PLAN FOR APPROVAL AND DESCRIBE THE INTENDED DIVERSION OR STORAGE FOR THE MAINTENANCE OF CONTINUOUS WATER FLOWS DURING CONSTRUCTION. THE PLAN WILL INCLUDE PROPOSED TANKER(S), PUMP(S), DIVERSION PIPING, BACKUP PLAN AND EQUIPMENT, WORK SCHEDULE, AND MONITORING LOG OF THE OPERATION, AND MAINTENANCE OF TRAFFIC PLAN.
 - TRAFFIC CONSIDERATIONS: THE CONTRACTOR SHALL NOT CAUSE UNDUE INTERFERENCE WITH THE USE OF STREETS, PRIVATE DRIVEWAYS, AND ALLEYS. NO ROADWAY CLOSURES WITHOUT APPROVAL OF ENGINEERS AND PWSD #3 OFFICIALS. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC SIGNS.
- A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THE OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REQUIREMENTS SPECIFIED IN THE PLAN AND THE REPORTING PROCESS AT NO ADDITIONAL COST TO THE OWNER.

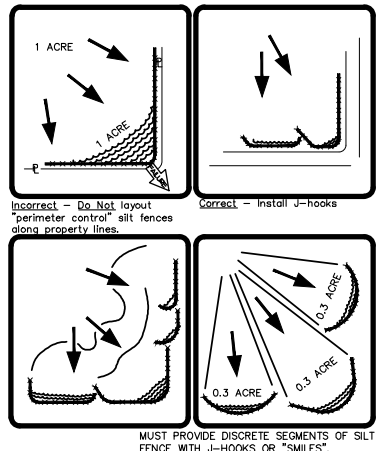


COMBINATION AIR RELEASE VALVE
N.T.S.

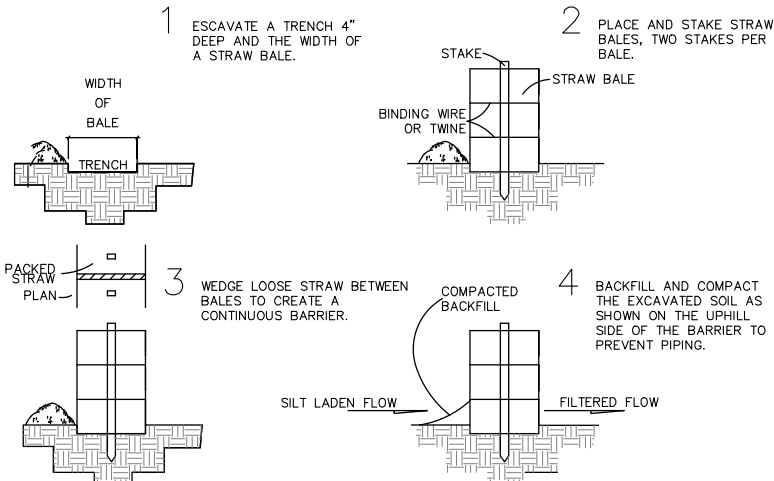


NOTE: MUST INSTALL SILT FENCE WITH J-HOOKS OR 'SMILES'.

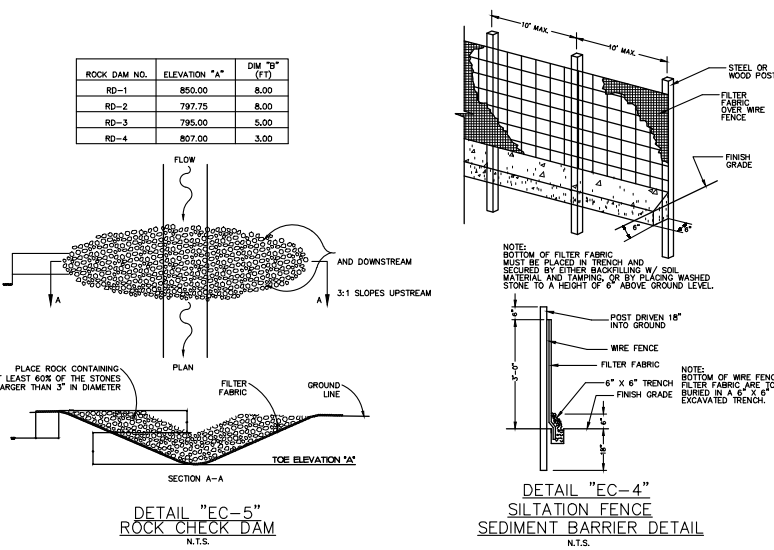
DETAIL "EC-2"
SILT FENCE
TYPICAL PLACEMENT-ONE SLOPE



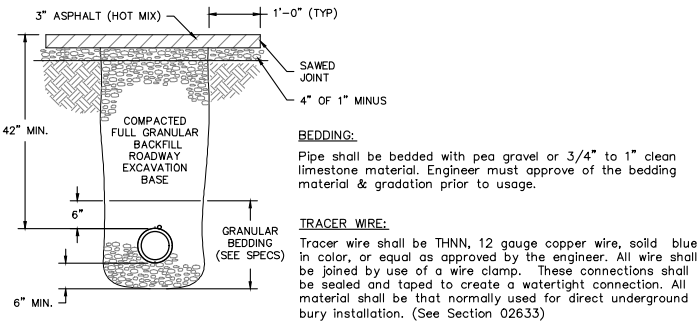
DETAIL "EC-1"
SILT FENCE PLACEMENT
FOR PERIMETER CONTROL



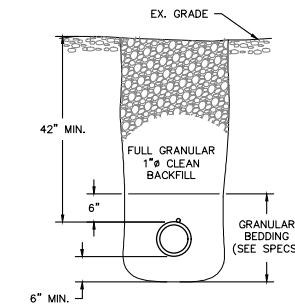
STRAW BALE BARRIERS DETAIL
N.T.S.



DETAIL "EC-5"
ROCK CHECK DAM
N.T.S.

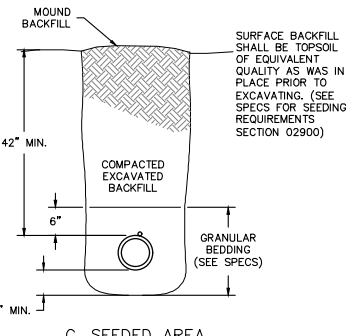


A. BITUMINOUS SURFACED AREA
(EXISTING ASPHALT AND/OR CHIP & SEAL PAVING)



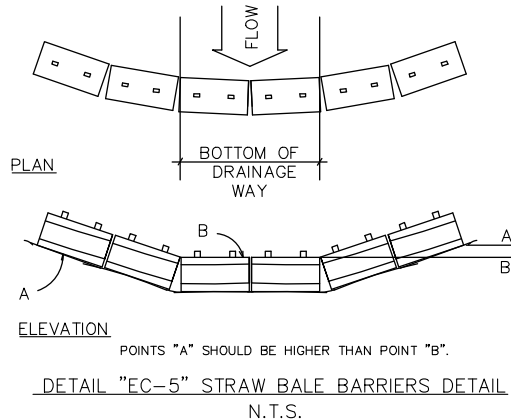
B. GRAVEL SURFACED AREA

NOTE: ASPHALT STREET RESURFACING UNIT PRICE PER LINEAR FOOT BASED UPON SECTION 02511-ASPHALT CONCRETE PAVING AND THE BASIS OF PAYMENT. SUBMIT DETAIL PLANS FOR APPLYING ASPHALT TO THE ENGINEER FOR APPROVAL

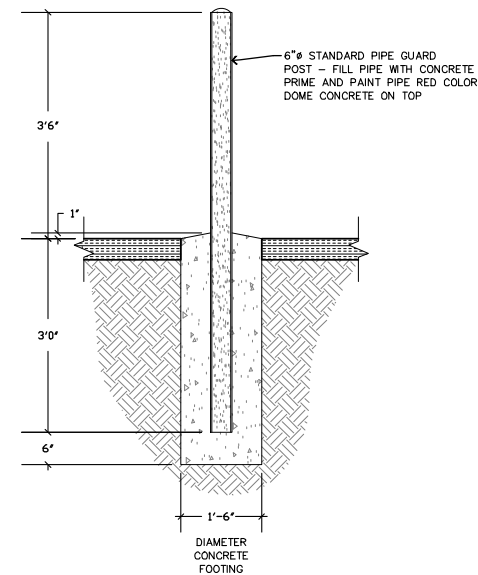


C. SEEDED AREA

TYPICAL TRENCH DETAILS
SCALE: N.T.S.



DETAIL "EC-5" STRAW BALE BARRIERS DETAIL
N.T.S.



PIPE BOLLARD DETAILS
SCALE: N.T.S.

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Surveying: 000369
Architecture: 00935

Terris Lee Cates - PE, PLS
Missouri PE #E-022268
Oklahoma PE #24359
Missouri PLS #2008000705

PROJECT FOR:
OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3
LINN, MISSOURI

US Highway 50 Watermain Rerouting
MISCELLANEOUS WATER DETAILS

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DRAWN BY:

IVMB

CHECKED BY:

TLC

DATE:

April, 2024

SCALE:

AS SHOWN

TOR:

Highway 50 near State Tech

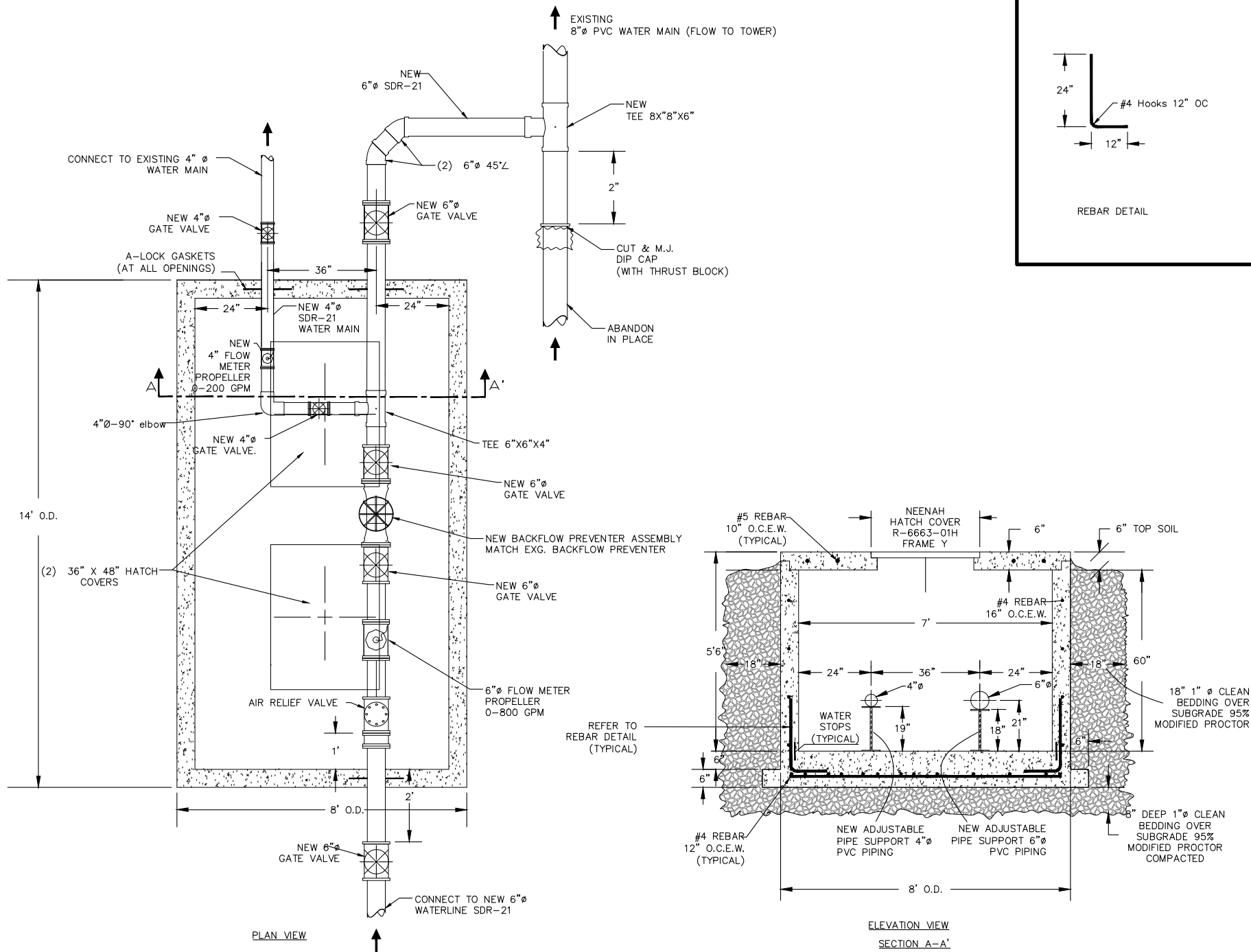
FILE:

CT3_Modot_MiscDtls.dwg

SHEET

C-13

OF 15 SHEETS



GENERAL CONSTRUCTION NOTES:

- The Contractor shall construct a reinforced concrete utility vault structure, 8 foot wide by 14 foot long. The structure shall be poured in place or precast and have a wall thickness of six (6) inches. The structure will be complete with all the required components and equipment in accordance with the Contract Documents.
- The reinforced concrete structure shall be constructed with two (2) NCCUAH R-6663-01H, Frame "Y", Hatch Covers or an approved equal.
- The entire exterior surface of the concrete utility vault shall be waterproof with Kopper Super Suc. Black, Tnemac 450 Heavy Treamecol material, or an approved equivalent, before backfilling.
- A-Lock gaskets are to be installed in the concrete structure at all pipe penetrations. Water stops are required at horizontal and vertical construction joints. Reference Section 03250 and Section 03300, paragraph 2.6 of the Technical Specifications. Provide submittals to the Engineer for approval.
- Provide reinforcement steel shop drawings and submittals indicating steel sizes, spacing, bending and cutting schedules, splices and laps, supporting and spacing devices, and quantities. Coordinate drawings to prevent reinforcing steel from interfering with the placement of embedded items. Reference Section 03300, paragraph 1.3 and 2.3 of the Technical Specifications.
- The reinforced concrete design mixture for the concrete utility vault basin walls, floor and top section will be;
 - Minimum Compressive Strength: 4000 psi at 28 days.
 - Maximum Cementation Material Ratio: 0.40.
 - Slump Limit: 8 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or placsticizing admixture, plus or minus 1 inch.
 - No admixtures containing calcium chloride.
 - Air Content: 5.0 – 8.0%.
 - Aggregate per ASTM C33, maximum aggregate size – 1 inch.
- Contractor shall comply with the specifications in regards to Finishing Formed Surfaces, Floors, Slabs, Protection and Curing, Waterproofing, Surface Repairs, and Defective Work as outlined in Section 03300 of the Technical Specifications.
- Water Leakage Test will be conducted by the Contractor after the concrete utility vault has been constructed in place and before any backfill material has been placed around the structure. The exfiltration test will include the following steps:
 - Plug Pipe and any other opening in the concrete utility vault.
 - No Standing Water shall be allowed in the excavation area around the structure.
 - Fill the Structure to within (6) six inches of the top and allow to set for 24 hour period.
 - The Contractor shall provide at his expense, all necessary piping between the concrete utility vault to be tested and the source of water supply, together with equipment and materials require for the tests.
- The Contractor shall furnish and install all equipment and components identified within the new concrete utility vault as shown below and in the Bid Schedule, Item No. 31 and the Basis of Payment. All these items will be submitted to the Engineer for approval.

NO.	EQUIPMENT PIPING FITTINGS
1	4"Ø Flow Meter Propeller 0–200 GPM
2	6"Ø Flow Meter Propeller 0–800 GPM
3	6"Ø Gate Valve – (2 ea)
4	New Backflow Preventer Assembly (Match Existing Backflow Preventer)
5	Air Relief Valve
6	4"Ø SDR–21 Piping
7	6"Ø SDR–21 Piping
8	6" x 6" x 4" D.I.P. Tee
9	8" x 6" x 6" D.I.P. Tee
10	(2) Neenah Hatch Cover (36" x 48")
11	(1) Connection of Existing 4"Ø Watermain to New 4"Ø Gate Valve
12	4"Ø Adjustable Pipe Supports – (5 ea)
13	6"Ø Adjustable Pipe Supports – (4 ea)
14	4"Ø 90°L elbow

GENERAL CONSTRUCTION NOTES:

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- TEMPORARY DOMESTIC WATER LINE SYSTEM DIVERSION OR STORAGE AS NEEDED:
 - SCOPE OF WORK: THE WORK COVERED BY THIS SECTION CONSISTS OF PROVIDING ALL TEMPORARY DIVERSION OR PRESSURE TANK STORAGE TO PERFORM ALL OPERATIONS IN CONNECTION WITH MAINTAINING DOMESTIC WATER SERVICE IN THE COMMUNITY DURING CONSTRUCTION. THE PURPOSE IS TO PROVIDE CONTINUOUS WATER SERVICE TO ALL CUSTOMERS. THE CONTRACTOR WILL MAINTAIN RESIDENTIAL WATER FLOW IN ORDER TO PROVIDE RELIABLE SERVICE TO THE USERS OF THE EXISTING WATER SYSTEM AT ALL TIMES. ANY BREAKS OR DAMAGE IN THE EXISTING PWS# 3 WATER SYSTEM WILL BE REPAIRED THE SAME DAY AT NO ADDITIONAL COST TO THE PWS# 3.
 - SUBMITTALS: PRIOR TO IMPLEMENTATION OF ANY TEMPORARY DIVERSION OR STORAGE, THE CONTRACTOR WILL SUBMIT AND RECEIVE ENGINEER'S ACCEPTANCE OF A PLAN. THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A COMPREHENSIVE WRITTEN PLAN FOR APPROVAL AND ACCEPTANCE THAT DESCRIBES THE INTENDED DIVERSION OR STORAGE FOR THE MAINTENANCE OF CONTINUOUS WATER FLOWS DURING CONSTRUCTION. THE PLAN WILL INCLUDE PROPOSED TANKER(S), PUMP(S), DIVERSION PIPING, BACKUP PLAN AND EQUIPMENT, WORK SCHEDULE, AND MONITORING LOG OF THE OPERATION, AND MAINTENANCE OF TRAFFIC PLAN.
 - TRAFFIC CONSIDERATIONS: THE CONTRACTOR SHALL NOT CAUSE UNDUE INTERFERENCE WITH THE USE OF STREETS, PRIVATE DRIVEWAYS, AND ALLEYS. NO ROADWAY CLOSURES WITHOUT APPROVAL OF ENGINEERS AND PWS# 3 OFFICIALS. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC SIGNS.
 - A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THE OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REQUIREMENTS SPECIFIED IN THE PLAN AND THE REPORTING PROCESS AT NO ADDITIONAL COST TO THE OWNER.

NOTE: ALL NEW WATER MAINS AND WATER LINES REQUIRE SEPERATION FROM THE EXISTING NON-POTABLE PIPE LINES. MINIMUM OF 10 FEET FOR PARALLEL HORIZONTAL AND 18 INCHES FOR VERTICAL CROSSING BETWEEN PIPE LINES. REFERENCE SECTION 02700-WATER SYSTEMS OF THE TECHNICAL SPECIFICATIONS

NOTE: ALL EXISTING WATER LINE SERVICES FED BY EXISTING WATER MAINS WHICH ARE TO BE ABANDONED IN PLACE, SHALL BE RECONNECTED TO THE NEW 6" SDR-21 WATER MAIN, UNLESS NOTED OTHERWISE (U.N.O.) IN THE CONTRACT DOCUMENTS. THE EXISTING WATER MAIN WILL BE ABANDONED AS REQUIRED BY MODOT.



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PROJECT FOR:
OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3
LINN, MISSOURI

US Highway 50 Watermain Rerouting
CONCRETE UTILITY VAULT



DRAWN BY:
IVMB
CHECKED BY:
TLC
DATE:
April, 2024
SCALE:
N/A
JOB:
Highway 50 near State Tech
FILE:
C14_Modot_ConcUtilityVault.dwg
SHEET
C-14
OF 15 SHEETS

Item	Description	Unit	Est. Qty.
1	Bonding & mobilization expense. This amount shall be limited to no more than 3% of the total Contract amount.	LS	1
2	Install New 6"Ø SDR-21 PVC Water Main piping with trenching, fittings, and bedding material, complete.	LF	2,100
3	Finish grading, top soil, seeding, liming, fertilizing & mulching of new water main trenching, connections & restore all disturbed areas to original conditions or better, complete.	LF	1,359
4	Roadway Bore #1, (45 LF) 6"Ø RJPVC carrier pipe with HDPE spacers, (40 LF) 12"Ø steel casing with end boots, Plan/Profile Sheets C-5 & C-10, complete.	LF	40
5	Roadway Bore #2, (60 LF) 6"Ø RJPVC carrier pipe with HDPE spacers, (40 LF) 12"Ø steel casing with end boots, Plan/Profile Sheets C-6 & C-10, complete.	LF	40
6	Roadway Bore #3, (90 LF) 6"Ø RJPVC carrier pipe with HDPE spacers, (80 LF) 12"Ø steel casing with end boots, Plan/Profile Sheets C-7 & C-11, complete.	LF	80
7	Open-Cut #1, (30 LF) 6"Ø SDR-21 PVC piping with full depth granular backfill, 1"Ø clean, over the existing gravel Roadway, Plan/Profile sheets C-5, complete.	LF	20
8	Open-Cut #2, (100 LF) 6"Ø RJPVC carrier pipe with HDPE spacers, (90 LF) 12"Ø steel casing with end boots, 1"Ø clean full depth granular backfill, Plan/Profile Sheet C-6, complete.	LF	90
9	Open-Cut #3, (40 LF) 6"Ø RJPVC carrier pipe with HDPE spacers, (30 LF) 12"Ø steel casing with end boots, saw-cut concrete pavement, Plan/Profile Sheet C-6, complete.	LF	30
10	Furnish and install two (2) new 3/4"Ø RUPERLE Eclipse No. 88-55 Water Sampling Stations as shown on Plan Sheet C-5 & C-7, complete.	EA	2
11	Abandoned Existing 6"Ø water main at various roadway crossing and fill existing pipe with flowable grout as required by MODOT as shown on Plan Sheet C-5 & C-7, complete.	LF	160
12	Abandoned and remove Existing 6"Ø and 2"Ø water lines at four (4) locations, excavate trench over existing water main, remove and dispose of all existing piping, valves and fittings. Backfill trench with full depth granular 1"Ø clean material, as shown on Plan Sheet C-6 & C-13 complete.	LF	385
13	Install New 6"Ø SDR-21 PVC water main piping, trenching, fittings, and bedding material, at a depth greater than the required minimum forty-two (42) inches in one (1) section as shown on Plan Sheet C-9, complete.	LF	270
14	Connection (Tie) into existing 6"Ø PVC water mains with new 6"Ø SDR-21 PVC water mains, wet tapping sleeve, gate valve and valve box tie-in details on Plan Sheet C-12, complete.	EA	7
15	Furnish, install and connect new 4"Ø Gate Valve between New Water Main and existing 4"Ø water main, Plan Sheet C-4 & C-6, complete.	LS	2
16	Connect New 1 1/2"Ø service lateral to new 6"Ø water main with 1 1/2"Ø saddles, corporation stops, and fittings, Plan Sheet C-3, C-4 & C-12, complete.	EA	5
17	Furnish, install and connect new 1 1/2"Ø PVC, SDR-9, CTS, service lateral piping between new water main and new water meter service lateral, Plan Sheet C-3, C-4 & C-12, complete.	LF	30
18	Furnish and install new 1 1/2"Ø meter service, yoke, meter pit, covers and connect system at designated water meter location, Plan Sheet C-3, C-4 & C-12, complete in place.	EA	3

Item	Description	Unit	Est. Qty.
19	Connect New 2"Ø service lateral to new 6"Ø water main with 2"Ø saddles, corporation stops, and fittings, Plan Sheet C-5, C-6 & C-12, complete.	EA	2
20	Furnish, install and connect new 2"Ø PVC, SDR-9, CTS, service lateral piping between new water main and new water meter service lateral, Plan Sheet C-5 & C-12, complete	EA	40
21	Furnish and install new 2"Ø meter service, yoke, meter pit, covers and connect system at designated water meter location, Plan Sheet C-5, C-6 & C-12, complete in place.	EA	2
22	Furnish, install and connect 2"Ø RJPVC, SDR-17 pipe in 6"Ø steel casing with spacers between new 6"Ø SDR-21 main and proposed new concrete roadway curbs as shown on Plan Sheet C-6, complete.	LF	45
23	Furnish, install and connect 6"Ø RJPVC, SDR-21 pipe in 12"Ø steel casing with spacers between new 6"Ø SDR-21 main and proposed new concrete roadway curbs as shown on Plan Sheet C-6, complete.	LF	50
24	Furnish and install new 6"Ø gate valves & valve box with cover, DIP, on new water mains, Plan Sheet C-6 & C-7, complete.	EA	6
25	Furnish & install 6"Ø DIP mechanical joint tee fittings on new & existing water mains, complete.	EA	9
26	Furnish & install 6"Ø DIP mechanical joint 45º elbow fitting on new water main bend point locations, complete.	EA	8
27	Furnish & install 6"Ø DIP mechanical joint 22-1/2º elbow fittings on new water main bend point locations, as needed, complete.	EA	9
28	Install new fire hydrants with 6"Ø gate valves into new 6"Ø SDR-21 PVC water system, Plan Sheet C-12, complete.	EA	6
29	Furnish and install mechanical joint cap with concrete thrust block at end of existing 6"Ø water main, Plan Sheet C-12, Detail No. 3, complete.	EA	7
30	Furnish and Install combination Air/Vacuum Release Valves with valve pit and marker posts, as shown on Plan Sheet C-13 complete.	EA	3
31	Furnish, construct, install and connect new reinforced concrete utility vault (8' wide x 14' long) as shown on Plan Sheets C-6 and detailed on C-14, to include all piping and equipment inside the vault, complete.	LS	1
32	Remove existing gate valves, water meter pits, valve, (D.I.P.) riser box, backflow preventer and backfill, complete. Return all components removed to PWSD No. 3.	EA	10
33	Clearing, grubbing and disposal for New water distribution system routing, as minimal as possible, but no more than 30 foot wide, complete.	LF	200
34	Furnish and Install 6"Ø Standard pipe guard post around New Fire Hydrant as Shown on Plan Sheet C-4 and Detailed on C-13, complete.	EA	2
35	Traffic control & signage for construction & installation of water mains & accessories, in accordance with MoDOT standards, complete.	LS	1
36	Construction staking, survey layout and staking, complete.	LS	1
37	Potable water system improvements, as-built surveying, CAD, and plans, complete.	LS	1

REVISIONS BY:

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PROJECT FOR:
OSAGE COUNTY PUBLIC WATER SUPPLY DISTRICT #3
LINN, MISSOURI

US Highway 50 Watermain Rerouting
BID SCHEDULE

**INTEGRITY
ENGINEERING, INC.**
ENGINEERING • ARCHITECTURE • LAND SURVEYING
Providing Engineering, Land Surveying, Architectural and Environmental Services With Integrity

DRAWN BY:
IVMB

CHECKED BY:
TLC

DATE:
April, 2024

SCALE:
N/A

JOB:
Highway 50 near Slate Tech

FILE:
CIS_Modot_Bid Schedule.dwg

SHEET
C - 15
OF 15 SHEETS