

DESIGN DESIGNATION

A.A.D.T. - 2026 = 12393
A.A.D.T. - 2046 = 16559
D.H.V. = 7.52%
T = 33.94%
V = 70 M.P.H.
D (N/S) = 50.4% / 49.6%
FUNCTIONAL CLASSIFICATION - INTERSTATE

NO NEW RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

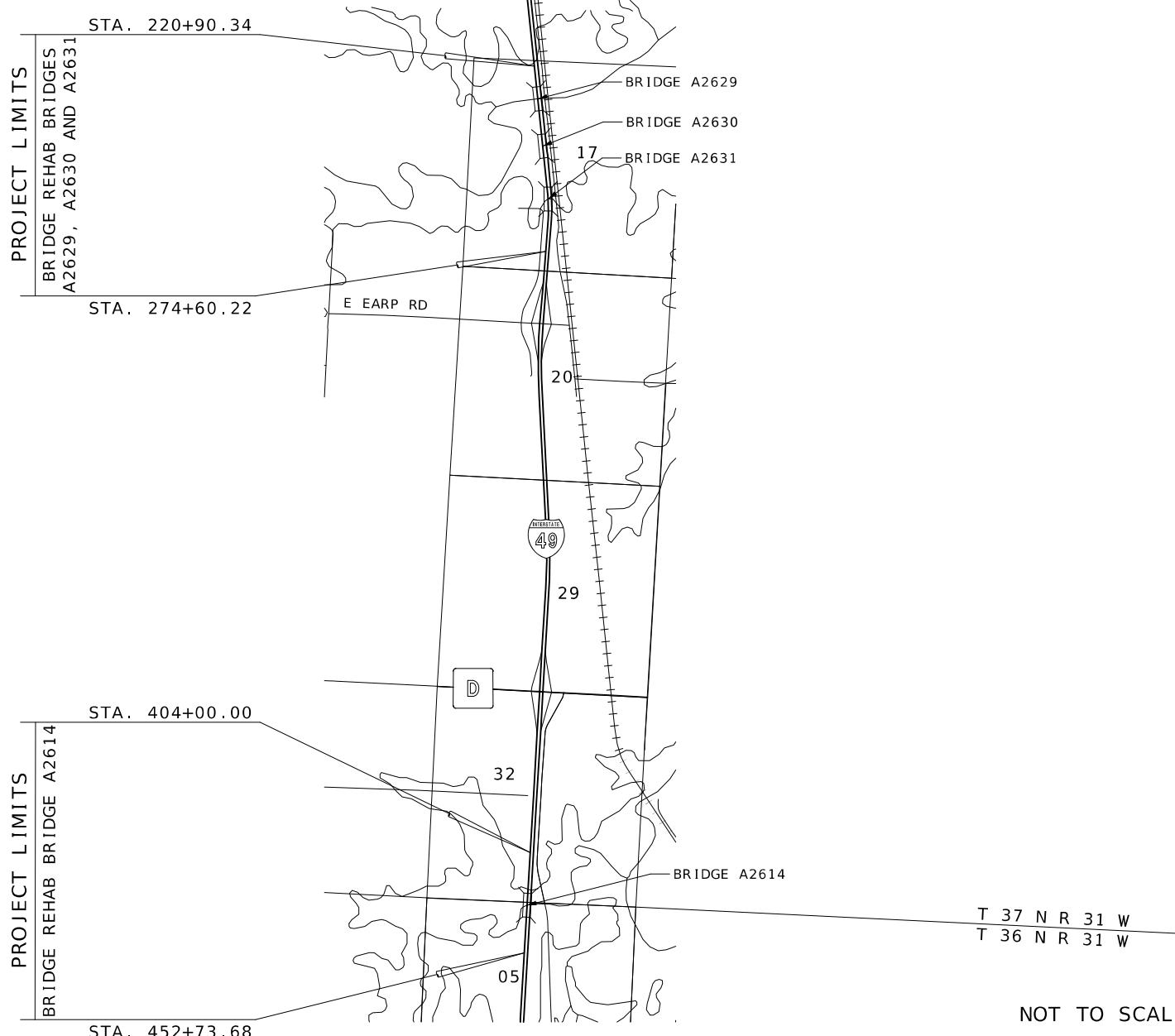
	EXISTING	NEW
BUILDINGS AND STRUCTURES	□	■
GUARD RAIL	○○○○	●●●●
GUARD CABLE	○○○○	●●●●
CONCRETE RIGHT-OF-WAY MARKER	↑↑↑↑	↑↑↑↑
STEEL RIGHT-OF-WAY MARKER	▽▽▽▽	▽▽▽▽
LOCATION SURVEY MARKER	○	○
UTILITIES		
FIBER OPTICS	- FO -	- FO -
OVERHEAD CABLE TV	- OTV -	- OTV -
UNDERGROUND CABLE TV	- UTV -	- UTV -
OVERHEAD TELEPHONE	- OT -	- OT -
UNDERGROUND TELEPHONE	- UT -	- UT -
OVERHEAD POWER	- OE -	- OE -
UNDERGROUND POWER	- UE -	- UE -
SANITARY SEWER	- S -	- S -
STORM SEWER	- SS -	- SS -
GAS	- G -	- G -
WATER	- W -	- W -
MANHOLE	SAN	HYD
FIRE HYDRANT	HYD	WV
WATER VALVE	WV	WM
WATER METER	WM	SI
DROP INLET	SI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE	■	□
TELEPHONE PEDESTAL	□	△
FENCE	— V —	— X —
CHAIN LINK	— V —	— X —
WOVEN WIRE	— V —	— X —
GATE POST	— V —	— X —
BENCHMARK	BM	⊗

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED STATE HIGHWAY**



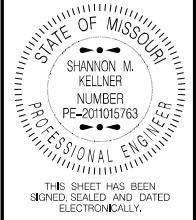
VERNON COUNTY



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

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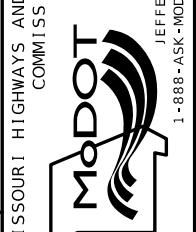
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ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 1
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE
DESCRIPTION

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



LENGTH OF PROJECT

I-49
BEGINNING OF PROJECT STA 220+90.34
END OF PROJECT STA 274+60.22

APPARENT LENGTH 5369.88 FEET

I-49
BEGINNING OF PROJECT STA 404+00.00
END OF PROJECT STA 452+73.68

APPARENT LENGTH 4873.68 FEET

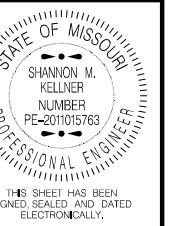
EQUATIONS AND EXCEPTIONS: NONE

TOTAL CORRECTIONS 0.0 FEET

NET LENGTH OF PROJECT 10243.56 FEET

STATE LENGTH 1.940 MILES

FOR INFORMATION ONLY
ESTIMATED DISTURBED ACRES 4 ACRES



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
12/1/2025

ROUTE I-49 STATE MO

DISTRICT SW SHEET NO. 2

COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

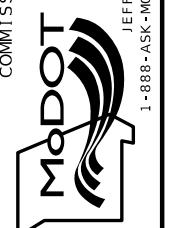
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

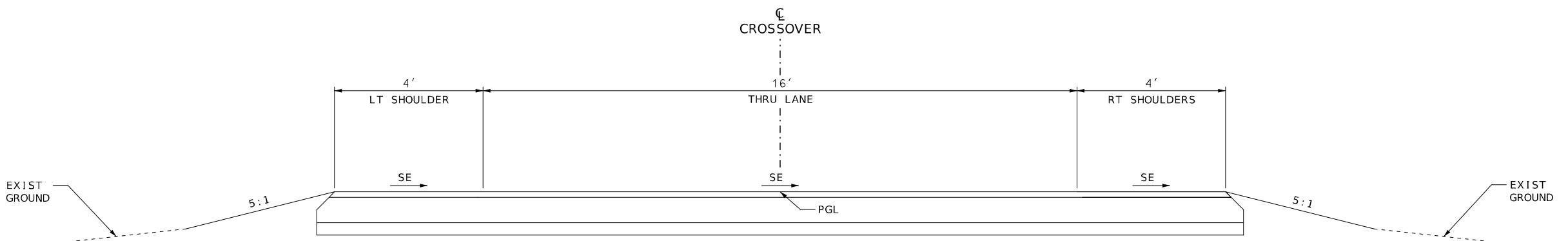
105 WEST CAPITOL JEFFERSON CITY, MO 65102

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



ASPHALT OPTION	
TYPE	CONVERSION FACTOR
2" BP-1 (PG64-22)	1.960 TONS/CY
7" BIT BASE (PG64-22)	1.970 TONS/CY
4" TYPE 5 AGG BASE	

CONCRETE OPTION	
8" PCCP (15' JOINT SPACING W/ 1 1/4" DOWELS)	
4" TYPE 5 AGG BASE	



PROPOSED TYPICAL SECTION
I-49

CROSSOVER_1

STA 10+00.00 - STA 17+53.70

CROSSOVER_2

STA 20+00.00 - STA 29+24.06

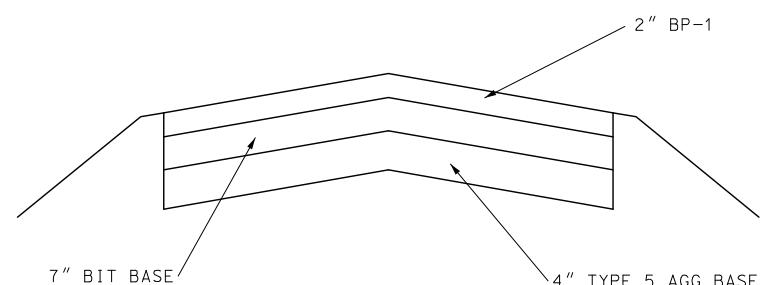
CROSSOVER_3

STA 30+00.00 - STA 37+53.70

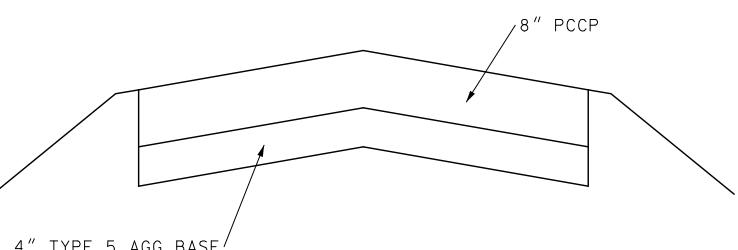
CROSSOVER_4

STA 40+00.00 - STA 47+53.70

ASPHALT OPTION

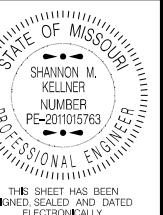


CONCRETE OPTION



NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 1

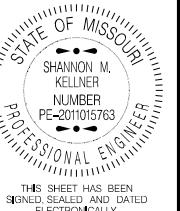


DATE PREPARED
12/1/2025
ROUTE STATE
I-49 MO
DISTRICT SHEET NO.
SW 3
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

REMOVAL OF IMPROVEMENTS																	
STA	STA	LOCATION		DESCRIPTION				REMARKS									
220+90.34	228+39.53	LT & RT OF EXIST_I-49_MED-1 CL				MEDIAN CROSSOVER-1 PAVEMENT - 1064.14 SY		REMOVE CROSSOVER-1 PAVEMENT									
265+41.36	274+60.22	LT & RT OF EXIST_I-49_MED-1 CL				MEDIAN CROSSOVER-2 PAVEMENT - 1282.27 SY		REMOVE CROSSOVER-2 PAVEMENT									
404+00.00	411+49.19	RT OF EXIST_I-49_NB CL				MEDIAN CROSSOVER-3 PAVEMENT - 997.93 SY		REMOVE CROSSOVER-3 PAVEMENT									
445+24.49	452+73.68	RT OF EXIST_I-49_NB CL				MEDIAN CROSSOVER-4 PAVEMENT - 1031.10 SY		REMOVE CROSSOVER-4 PAVEMENT									
236+18.87	236+56.37	EXIST_I-49_MED-1 CL, LT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2629 APPROACH									
236+05.82	236+43.32	EXIST_I-49_MED-1 CL, RT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2629 APPROACH									
248+32.59	248+70.09	EXIST_I-49_MED-1 CL, LT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2630 APPROACH									
248+22.54	248+60.04	EXIST_I-49_MED-1 CL, RT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2630 APPROACH									
257+59.40	257+96.90	EXIST_I-49_MED-1 CL, LT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2631 APPROACH									
257+61.83	257+99.33	EXIST_I-49_MED-1 CL, RT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2631 APPROACH									
431+83.21	432+20.71	EXIST_I-49_NB CL, LT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2614 APPROACH									
431+81.67	432+19.17	EXIST_I-49_NB CL, RT OF SB I-49				BRIDGE APPROACH GUARDRAIL TRANSITION SECTION		A2614 APPROACH									
236+58.05	237+69.47	RT OF EXIST_I-49_MED-1 CL				REMANENTS OF PREVIOUS DECK REPAIR ON SPILL FILL SLOPE		REMOVE									
1 LUMP SUM																	
NOTE: EXISTING SHOULDER PAVEMENT REMOVALS FOR THE CONSTRUCTION OF THE MEDIAN CROSSES IS PAID FOR WITH UNCLASSIFIED EXCAVATION.																	

EARTHWORK										
STA	STA	LOCATION	APPROX EARTHWORK			UNCLASSIFIED EXCAVATION (CY)	COMPACTING EMBANKMENT (CY)	EMBANKMENT IN PLACE (CY)	COMPACTING IN CUT (STA)	REMARKS
			CUT (CY)	FILL (CY)	UNSUITABLE (CY)					
CROSSOVER-1										
10+00.00	17+53.70	LT & RT OF CROSSOVER-1 CL	181.05	281.55	42.26	181.1	114.7	166.9	6.74	CROSSOVER-1
CROSSOVER-2										
20+00.00	29+24.06	LT & RT OF CROSSOVER-2 CL	356.68	302.33	52.55	356.7	251.3	51.0	9.24	CROSSOVER-2
CROSSOVER-3										
30+00.00	37+53.70	LT & RT OF CROSSOVER-3 CL	322.65	83.04	43.52	322.7	83.0		7.54	CROSSOVER-3
CROSSOVER-4										
40+00.00	47+53.70	LT & RT OF CROSSOVER-4 CL	162.67	625.18	43.36	162.7	246.3	378.9	6.74	CROSSOVER-4
			TOTAL		1023	695	597	30.3		
NOTE: EXISTING SHOULDER PAVEMENT REMOVAL PAID FOR WITH UNCLASSIFIED EXCAVATION. UNSUITABLE MATERIAL CONSISTS OF REMOVED EXISTING SHOULDER PAVEMENT. THIS MATERIAL SHALL BE HAULED AWAY BY THE CONTRACTOR AT NO DIRECT PAY.										

LINEAR GRADING						
STA	STA	LOCATION	LENGTH	LINEAR GRADING CLASS 2 (STA)	REMARKS	
220+90.34	228+39.53	LT & RT OF EXIST_I-49_MED-1 CL	749.19	7.49	REMOVE CROSSOVER-1 EARTHWORK & REGRADE MEDIAN DITCH	
265+41.36	274+60.22	LT & RT OF EXIST_I-49_MED-1 CL	918.86	9.19	REMOVE CROSSOVER-2 EARTHWORK & REGRADE MEDIAN DITCH	
404+00.00	411+49.19	RT OF EXIST_I-49_NB CL	749.19	7.49	REMOVE CROSSOVER-3 EARTHWORK & REGRADE MEDIAN DITCH	
445+24.49	452+73.68	RT OF EXIST_I-49_NB CL	749.19	7.49	REMOVE CROSSOVER-4 EARTHWORK & REGRADE MEDIAN DITCH	
			TOTAL		31.7	



MGS GUARDRAIL					
STA	STA	ALIGNMENT	LOCATION	MGS BRIDGE APPROACH TRANSITION	REMARKS
236+18.87	236+56.37	EXIST_I-49_MED-1	I-49 SB, LT	1	A2629 APPROACH
236+05.82	236+43.32	EXIST_I-49_MED-1	I-49 SB, RT	1	A2629 APPROACH
248+32.59	248+70.09	EXIST_I-49_MED-1	I-49 SB, LT	1	A2630 APPROACH
248+22.54	248+60.04	EXIST_I-49_MED-1	I-49 SB, RT	1	A2630 APPROACH
257+59.40	257+96.90	EXIST_I-49_MED-1	I-49 SB, LT	1	A2631 APPROACH
257+61.83	257+99.33	EXIST_I-49_MED-1	I-49 SB, RT	1	A2631 APPROACH
431+83.21	432+20.71	EXIST_I-49_NB	I-49 SB, LT	1	A2614 APPROACH
431+81.67	432+19.17	EXIST_I-49_NB	I-49 SB, RT	1	A2614 APPROACH
TOTAL				8	

DATE PREPARED
12/1/2015
ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 3
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

CONTRACTOR FURNISHED SURVEYING & STAKING	
1 LUMP SUM	

MOBILIZATION	
1 LUMP SUM	

ADDITIONAL MOBILIZATION FOR SEEDING	
	4 EACH

PERMANENT PAVEMENT MARKING						
STA / LOG MILE	STA / LOG MILE	LOCATION	LENGTH (FT)	6" INTERMITTENT WHITE CLASS 2 PAINT 25-MIL TYPE L BEADS (FT)	6" SOLID YELLOW CLASS 2 PAINT 25-MIL TYPE L BEADS (FT)	REMARKS
201+75.34	220+90.34	RT OF EXIST_I-49_MED-1 CL	1915.00	478.8		I-49 SB CENTERLINE
220+90.34	223+77.90	RT OF EXIST_I-49_MED-1 CL	287.56		287.6	I-49 SB YELLOW EDGELINE
220+90.34	225+56.64	LT OF EXIST_I-49_MED-1 CL	466.30	116.6		I-49 NB CENTERLINE
225+56.64	269+19.09	LT OF EXIST_I-49_MED-1 CL	4362.45	1090.6	4362.5	I-49 NB CENTERLINE & YELLOW EDGELINE
269+19.09	297+51.71	LT OF EXIST_I-49_MED-1 CL	2832.62	708.2		I-49 NB CENTERLINE
112.338	112.111	CL & RT OF EXIST_I-49_NB CL	1198.56	299.6		I-49 NB CENTERLINE (I-49 NB LOG MILES)
271+28.55	271+93.21	RT OF EXIST_I-49_MED-1 CL	64.66		64.7	I-49 SB YELLOW EDGELINE
271+93.21	274+60.22	RT OF EXIST_I-49_MED-1 CL	267.01	66.8	267.0	I-49 SB CENTERLINE & YELLOW EDGELINE
73.225	73.322	RT OF EXIST_I-49_NB CL	512.16	128.0		I-49 SB CENTERLINE
386+77.04	414+94.36	RT OF EXIST_I-49_MED-2 CL	2817.32	704.3		I-49 SB CENTERLINE
404+00.00	406+88.25	RT OF EXIST_I-49_NB CL	288.25		288.3	I-49 SB YELLOW EDGELINE
404+00.00	408+49.88	CL EXIST_I-49_NB	449.88	112.5		I-49 NB CENTERLINE
408+49.88	448+20.72	CL & RT OF EXIST_I-49_NB CL	3970.84	992.7	3970.8	I-49 NB CENTERLINE & YELLOW EDGELINE
448+20.72	461+25.30	CL & RT OF EXIST_I-49_NB CL	1304.58	326.1		I-49 NB CENTERLINE
109.031	108.915	RT OF EXIST_I-49_NB CL	612.48	153.1		I-49 NB CENTERLINE
449+84.51	450+46.23	RT OF EXIST_I-49_NB CL	61.72		61.7	I-49 SB YELLOW EDGELINE
450+46.23	452+73.68	RT OF EXIST_I-49_NB CL	227.45	56.9	227.4	I-49 SB CENTERLINE & YELLOW EDGELINE
TOTAL			5234		9530	

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

FLOWABLE BACKFILL			
STA	LOCATION	FLOWABLE BACKFILL (CY)	REMARKS
432+33.00	RT OF EXIST_I-49_NB CL	5	FILL VOID UNDER BR A2614 END BENT 1 W/ FLOWABLE BACKFILL
434+76.29	RT OF EXIST_I-49_NB CL	5	FILL VOID UNDER BR A2614 END BENT 4 W/ FLOWABLE BACKFILL
TOTAL		10	



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ROUTE I-49 STATE MO

DISTRICT SW SHEET NO. 3

COUNTY VERNON

JOB NO. JSR0274

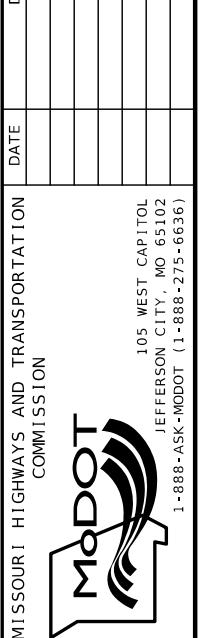
CONTRACT ID.

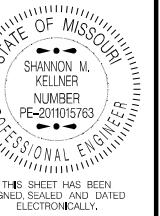
PROJECT NO.

BRIDGE NO.

PAVEMENT MARKING REMOVAL					
STA / LOG MILE	STA / LOG MILE	LOCATION	LENGTH (FT)	PAVEMENT MARKING REMOVAL (LF)	REMARKS
201+75.34	220+90.34	RT OF EXIST_I-49_MED-1 CL	1915.00	478.8	REMOVE EXIST I-49 SB CENTERLINE
220+90.34	228+39.53	LT OF EXIST_I-49_MED-1 CL	749.19	187.3	REMOVE EXIST I-49 NB CENTERLINE
228+39.53	265+41.36	LT OF EXIST_I-49_MED-1 CL	3701.83	4627.3	REMOVE EXIST I-49 NB CENTERLINE & YELLOW EDGELINE
265+41.36	297+51.71	LT OF EXIST_I-49_MED-1 CL	3210.35	802.6	REMOVE EXIST I-49 NB CENTERLINE
112.338	112.110	CL EXIST_I-49_NB	1203.84	301.0	REMOVE EXIST I-49 NB CENTERLINE (I-49 NB LOG MILES)
271+93.21	274+60.22	RT OF EXIST_I-49_MED-1 CL	267.01	66.8	REMOVE EXIST I-49 SB CENTERLINE
73.225	73.322	RT OF EXIST_I-49_SB CL	512.16	128.0	REMOVE EXIST I-49 SB CENTERLINE
386+77.04	414+94.36	RT OF EXIST_I-49_MED-2 CL	2817.32	704.3	REMOVE EXIST I-49 SB CENTERLINE
404+00.00	411+49.19	CL EXIST_I-49_NB	749.19	187.3	REMOVE EXIST I-49 NB CENTERLINE
411+49.19	445+24.49	CL & RT OF EXIST_I-49_NB CL	3375.30	4219.1	REMOVE EXIST I-49 NB CENTERLINE & YELLOW EDGELINE
445+24.49	461+25.30	CL EXIST_I-49_NB	1600.81	400.2	REMOVE EXIST I-49 NB CENTERLINE
109.031	108.915	CL EXIST_I-49_NB	612.48	153.1	REMOVE EXIST I-49 NB CENTERLINE (I-49 NB LOG MILES)
450+46.23	452+73.68	RT OF EXIST_I-49_NB CL	227.45	56.9	REMOVE EXIST I-49 SB CENTERLINE
			TOTAL	12313	

TEMPORARY PAVEMENT MARKING						
STA / LOG MILE	STA / LOG MILE	LOCATION	LENGTH (FT)	4" WHITE TEMPORARY REMOVABLE MARKING TAPE (FT)	4" YELLOW TEMPORARY REMOVABLE MARKING TAPE (FT)	REMARKS
204+10.34	220+90.34	RT OF EXIST_I-49_MED-1 CL	1680.00	1680.0		TRAFFIC CONTROL PVMT MARKING - 4" WHITE
219+90.34	228+39.53	LT OF EXIST_I-49_MED-1 CL	849.19		849.2	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW
10+00.00	17+53.70	LT & RT OF CROSSOVER-1 CL	753.70	1507.4	1507.4	TRAFFIC CONTROL PVMT MARKING - 8" WHITE & 8" YELLOW
228+39.53	265+41.36	LT OF EXIST_I-49_MED-1 CL	3701.83	3701.8	7403.7	TRAFFIC CONTROL PVMT MARKING - 4" WHITE & 4" DOUBLE YELLOW
20+00.00	29+24.06	LT & RT OF CROSSOVER-2 CL	924.06	1848.1	1848.1	TRAFFIC CONTROL PVMT MARKING - 8" WHITE & 8" YELLOW
265+41.36	297+51.71	LT OF EXIST_I-49_MED-1 CL	3210.35		3210.4	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW
112.338	112.154	CL & RT OF EXIST_I-49_NB CL	971.52		971.5	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW (I-49 NB LOG MILES)
73.269	73.322	RT OF EXIST_I-49_SB CL	279.84	279.8		TRAFFIC CONTROL PVMT MARKING - 4" WHITE (I-49 SB LOG MILES)
386+77.04	414+94.36	RT OF EXIST_I-49_MED-2 CL	2817.32	2817.3		TRAFFIC CONTROL PVMT MARKING - 4" WHITE
413+94.40	414+94.36	LT OF EXIST_I-49_MED-2 CL	99.96		100.0	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW
404+00.00	411+49.19	CL EXIST_I-49_NB	749.19		749.2	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW
30+00.00	37+53.70	LT & RT OF CROSSOVER-3 CL	753.7	1507.4	1507.4	TRAFFIC CONTROL PVMT MARKING - 8" WHITE & 8" YELLOW
411+49.19	445+24.49	CL & RT OF EXIST_I-49_NB CL	3375.3	3375.3	6750.6	TRAFFIC CONTROL PVMT MARKING - 4" WHITE & 4" DOUBLE YELLOW
40+00.00	47+53.70	LT & RT OF CROSSOVER-4 CL	753.7	1507.4	1507.4	TRAFFIC CONTROL PVMT MARKING - 8" WHITE & 8" YELLOW
445+24.49	461+25.30	CL & RT OF EXIST_I-49_NB CL	1600.81		1600.8	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW
109.031	108.960	RT OF EXIST_I-49_NB CL	374.88		374.9	TRAFFIC CONTROL PVMT MARKING - 4" YELLOW (I-49 NB LOG MILES)
			TOTAL	18225	28381	





DATE PREPARED
12/1/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 3
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SEEDING

STA	STA	LOCATION	LENGTH (FT)	WIDTH (FT)	SEEDING COOL SEASON MIX (ACRES)	MULCHING (ACRES)	REMARKS
220+90.34	228+39.53	LT & RT OF EXIST_I-49_MED-1 CL	749.19	52	0.89	0.89	SEEDING AFTER REMOVAL OF CROSSOVER-1
265+41.36	274+60.22	LT & RT OF EXIST_I-49_MED-1 CL	918.86	52	1.10	1.10	SEEDING AFTER REMOVAL OF CROSSOVER-2
404+00.00	411+49.19	RT OF EXIST_I-49_NB CL	749.19	52	0.89	0.89	SEEDING AFTER REMOVAL OF CROSSOVER-3
445+24.49	452+73.68	RT OF EXIST_I-49_NB CL	749.19	52	0.89	0.89	SEEDING AFTER REMOVAL OF CROSSOVER-4
				TOTAL	3.8	3.8	

NOTE:

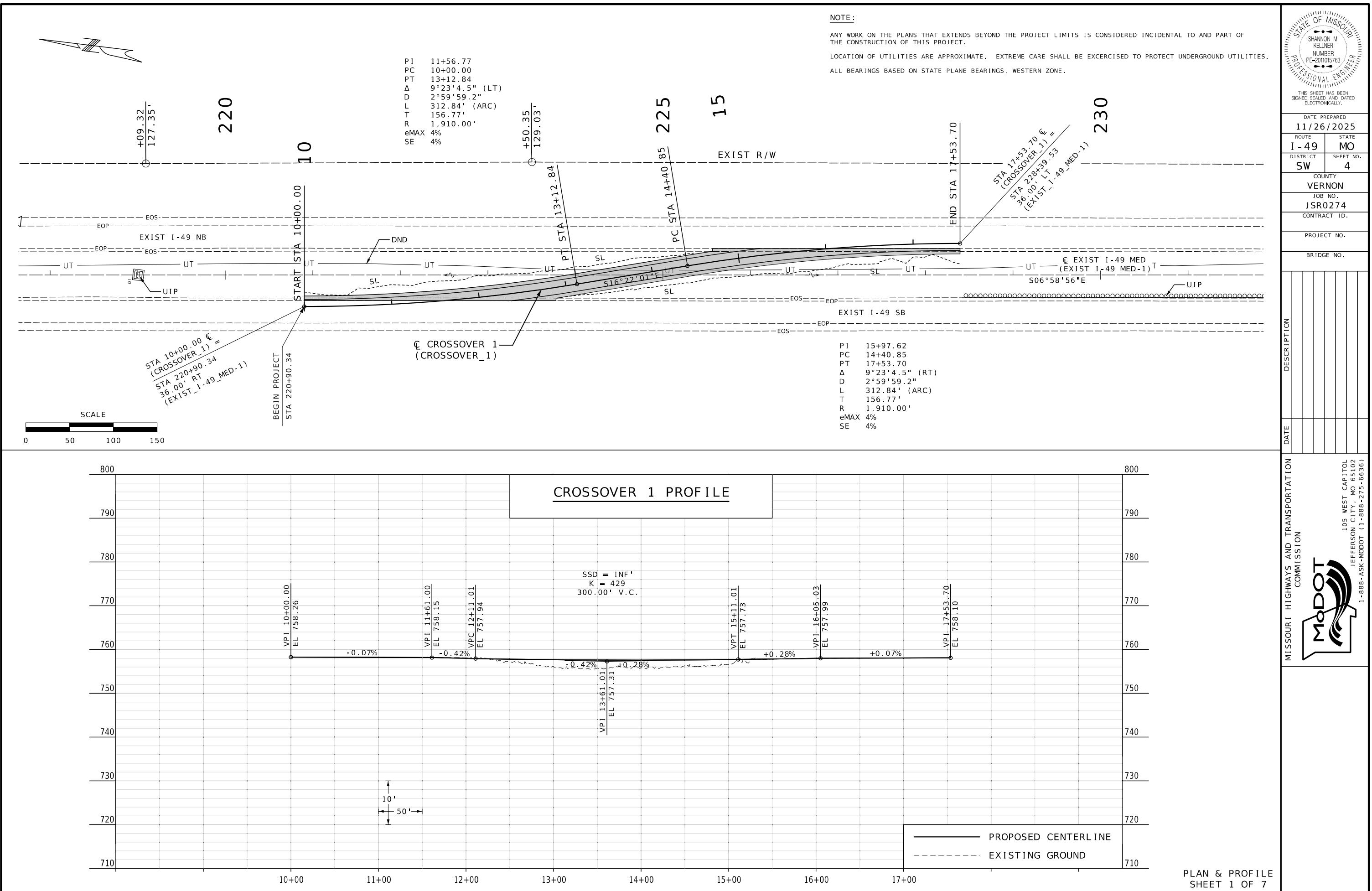
PLAN QUANTITY WILL BE PAID UNLESS OVERRUN IS AUTHORIZED.

TEMPORARY EROSION CONTROL

STA	STA	LOCATION	ROCK DITCH CHECK (LF)	SEDIMENT REMOVAL (CY)	TEMPORARY SEEDING (ACRES)	MULCHING (ACRES)	REMARKS
INITIAL STAGE							
219+40.00	222+40.00	LT & RT OF EXIST_I-49_MED-1 CL	54	3			CROSSOVER 1
227+10.00	231+60.00	LT & RT OF EXIST_I-49_MED-1 CL	67	4			CROSSOVER 1
220+90.34	228+39.53	LT & RT OF EXIST_I-49_MED-1 CL			0.89	0.89	CROSSOVER 1
265+30.00	268+30.00	LT & RT OF EXIST_I-49_MED-1 CL	38	3			CROSSOVER 2
272+20.00	276+70.00	LT & RT OF EXIST_I-49_MED-1 CL	44	4			CROSSOVER 2
265+41.36	274+60.22	LT & RT OF EXIST_I-49_MED-1 CL			1.10	1.10	CROSSOVER 2
404+40.00	407+00.00	RT OF EXIST_I-49_NB CL	40	4			CROSSOVER 3
410+20.00	417+70.00	RT OF EXIST_I-49_NB CL	138	5			CROSSOVER 3
404+00.00	411+49.19	RT OF EXIST_I-49_NB CL			0.89	0.89	CROSSOVER 3
444+10.00	446+35.00	RT OF EXIST_I-49_NB CL	80	4			CROSSOVER 4
450+65.00	452+90.00	RT OF EXIST_I-49_NB CL	61	4			CROSSOVER 4
445+24.49	452+73.68	RT OF EXIST_I-49_NB CL			0.89	0.89	CROSSOVER 4
FINAL STAGE							
224+00.00	225+50.00	LT & RT OF EXIST_I-49_MED-1 CL	55	2			POST CROSSOVER 1
269+60.00	270+90.00	LT & RT OF EXIST_I-49_MED-1 CL	42	2			POST CROSSOVER 2
407+20.00	408+70.00	RT OF EXIST_I-49_NB CL	48	2			POST CROSSOVER 3
447+10.00	450+10.00	RT OF EXIST_I-49_NB CL	100	5			POST CROSSOVER 4
			TOTAL	767	42	3.8	3.8

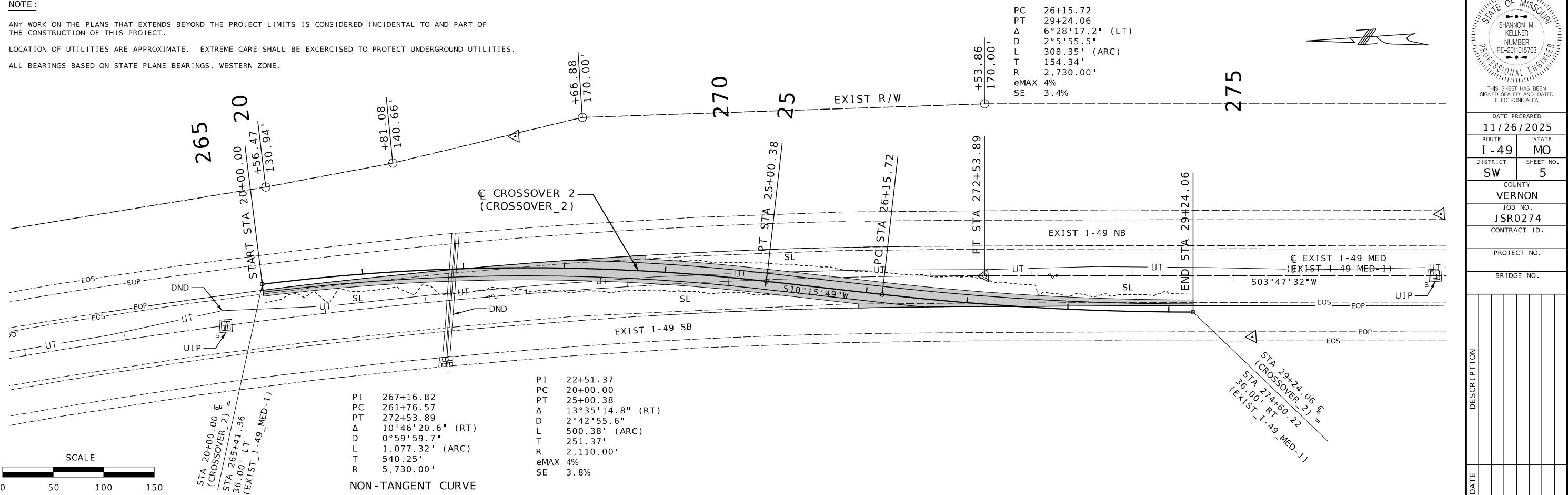
SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION	SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION	ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2025		
																				DESCRIPTION		
WARNING SIGNS																						
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)	E05-1	36X48	12.00									6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)	E05-2	48X36	12.00									6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)	E05-2a	48X36	12.00									6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)	GO20-1	60X24	10.00	4	40.00							6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)	GO20-2	48X24	8.00	4	32.00							6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)	GO20-4	36X18	4.50									6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
WO1-4L	48X48	16.00	4	64.00				REVERSE CURVE (SYMBOL LEFT)	GO20-4a	42X30	8.75									6122019	10	IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
WO1-4R	48X48	16.00	4	64.00				REVERSE CURVE (SYMBOL RIGHT)	GO20-4a	18X12	1.50									6122020	10	REPLACEMENT SAND BARREL
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00	44	264.00							6122040		WORK ZONE CRASH CUSHION (NARROW)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00									6122041		WORK ZONE CRASH CUSHION (RELOCATION)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.00									6123001	1	TRUCK MOUNTED ATTENUATOR (TMA)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-9R	48X36	12.00									6161012		BUOYS (BOATS KEEP OUT)
WO1-6	60X30	12.50	8	100.00				HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00									6161013		BUOYS (NO WAKE)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00								6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)	
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00								6161020		CHANNELIZER (DRUM-LIKE)	
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)										6161022		CHANNELIZER (CONE)		
REGULATORY SIGNS																						
WO1-8	18X24	3.00						CHEVRON (SYMBOL)	R1-1	48X48	13.25									6161025	175	CHANNELIZER (TRIM-LINE)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.	6.93	2	13.86							6161026		CHANNELIZER (VERTICAL PANEL)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00									6161030	24	TYPE 3 MOVEABLE BARRICADE
WO3-2	48X48	16.00	2	32.00				YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50									6161033	72	DIRECTION INDICATOR BARRICADE
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00	20	240.00							6161040	4	FLASHING ARROW PANEL
WO3-4	48X48	16.00						BE PREPARED TO STOP	R3-1	48X48	16.00									6161047		TYPE 3 OBJECT MARKER
WO3-5	48X48	16.00						SPEED LIMIT AHEAD	R3-2	48X48	16.00									6161055	72	SEQUENTIAL FLASHING WARNING LIGHT
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00									6161070	253	TUBULAR MARKER
WO4-1R	48X48	16.00	2	32.00				MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00									6161095		RADAR SPEED ADVISORY SYSTEM
WO4-1aL	48X48	16.00	2	32.00				MERGE (LEFT)	R3-7L	30X30	6.25									6161096		CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED/RETAINED
WO4-1aR	48X48	16.00	2	32.00				MERGE (RIGHT)	R3-7R	30X30	6.25									6162000A		CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
WO5-1	48X48	16.00	4	64.00				ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00	28	336.00							6161098A	2	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
WO5-3	48X48	16.00						ONE LANE BRIDGE	R4-2	36X48	12.00	4	48.00							6161099		TEMP. TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
WO5-5	48X48	16.00						NARROW LANES	R4-7a	36X48	12.00									6162000A		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.00									6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25	4	25.00							6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
WO6-3	48X48	16.00	10	160.00				TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00									6173700B		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION
WO7-3a	30X24	5.00	8	40.00				NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75									6173706		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
WO8-1	48X48	16.00						BUMP	R6-1R	54X18	6.75									6174000A		RELOCATING TEMPORARY TRAFFIC BARRIER
WO8-2	48X48	16.00						DIP	R6-2L	24X30	5.00									6175010A		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
WO8-3	48X48	16.00						PAVEMENT ENDS	R6-2R	24X30	5.00									6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
WO8-4	48X48	16.00						SOFT SHOULDER	R9-9	24X12	2.00									6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)	R9-11L	24X18	3.00									6175020A		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
WO8-6	48X48	16.00						TRUCK CROSSING	R9-11R	24X18	3.00									6208064A	132	TEMPORARY RAISED PAVEMENT MARKER
WO8-6c	48X48	16.00						TRUCK ENTRANCE	R10-6	24X36	6.00									9029400		TEMPORARY TRAFFIC SIGNALS
WO8-7	36X36	9.00						LOOSE GRAVEL	R11-2	48X30	10.00	2	20.00							9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL	R11-3a	60X30	12.50											
WO8-9	48X48	16.00						LOW SHOULDER	R11-4	60X30	12.50											
WO8-11	48X48	16.00						UNEVEN LANES	CONST-3													

SUMMARY OF QUANTITIES
SHEET 6 OF 6



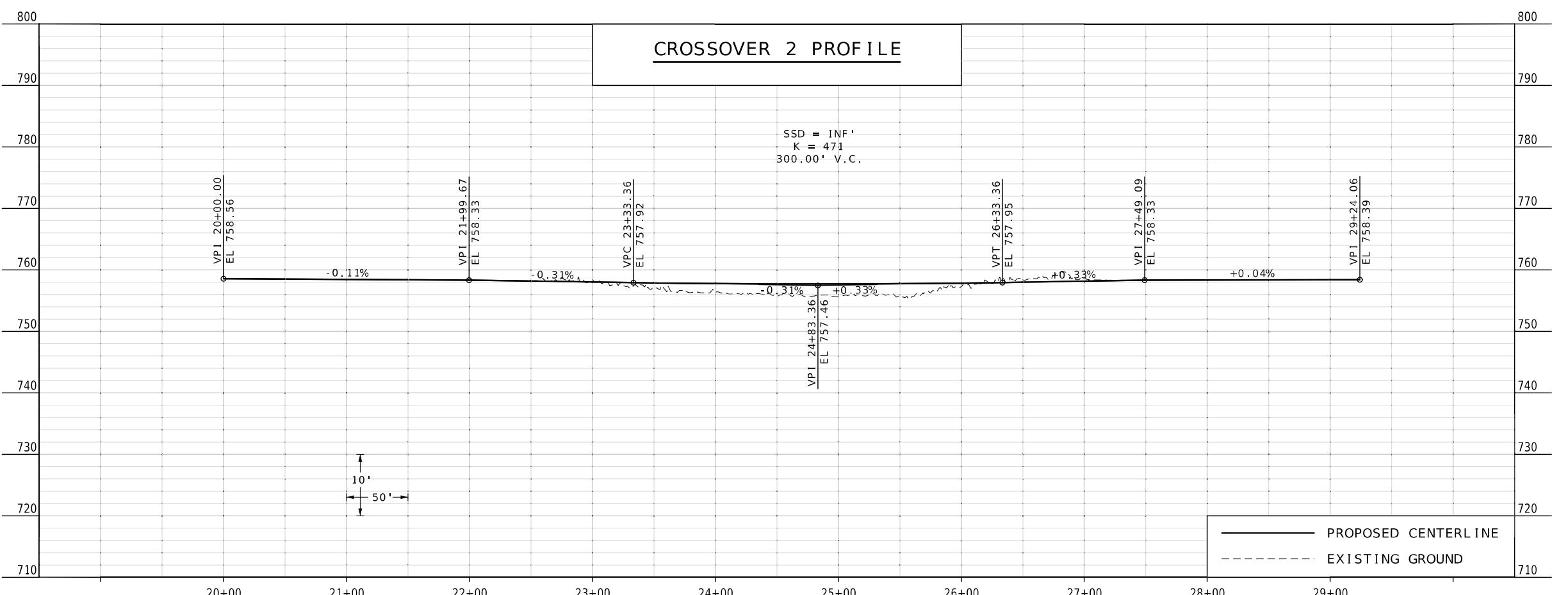
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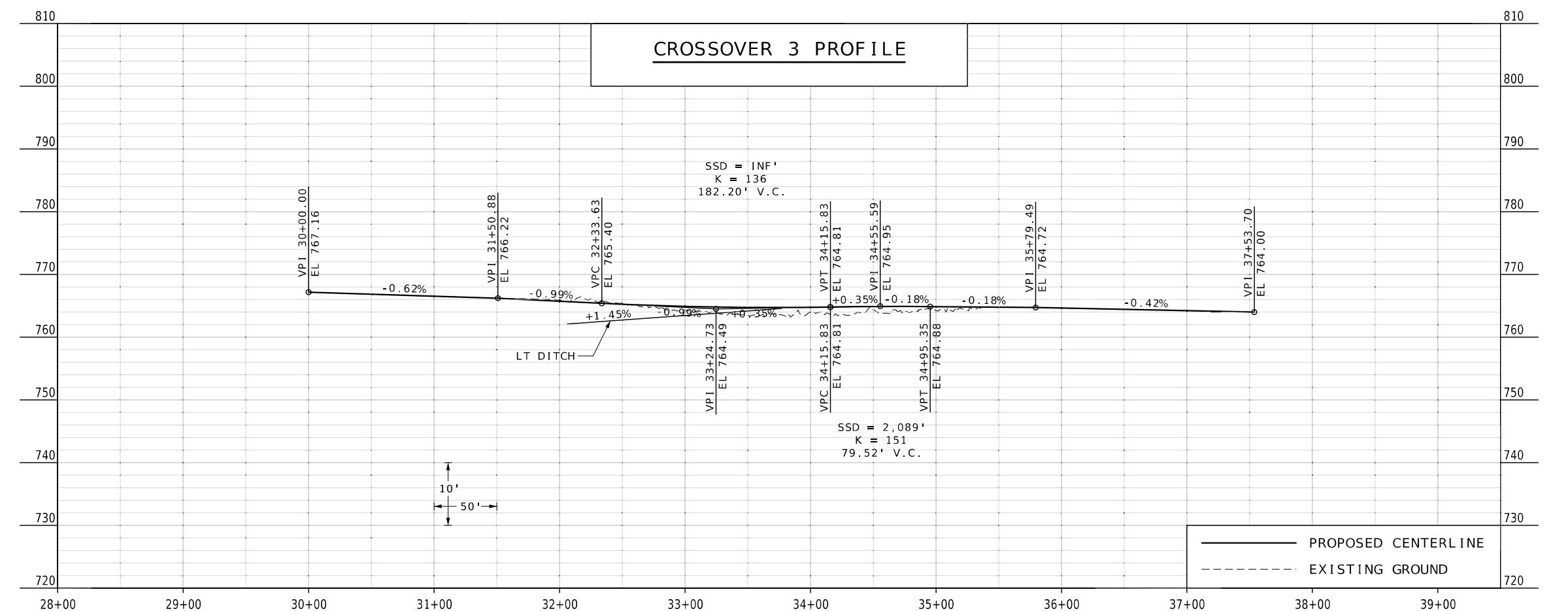
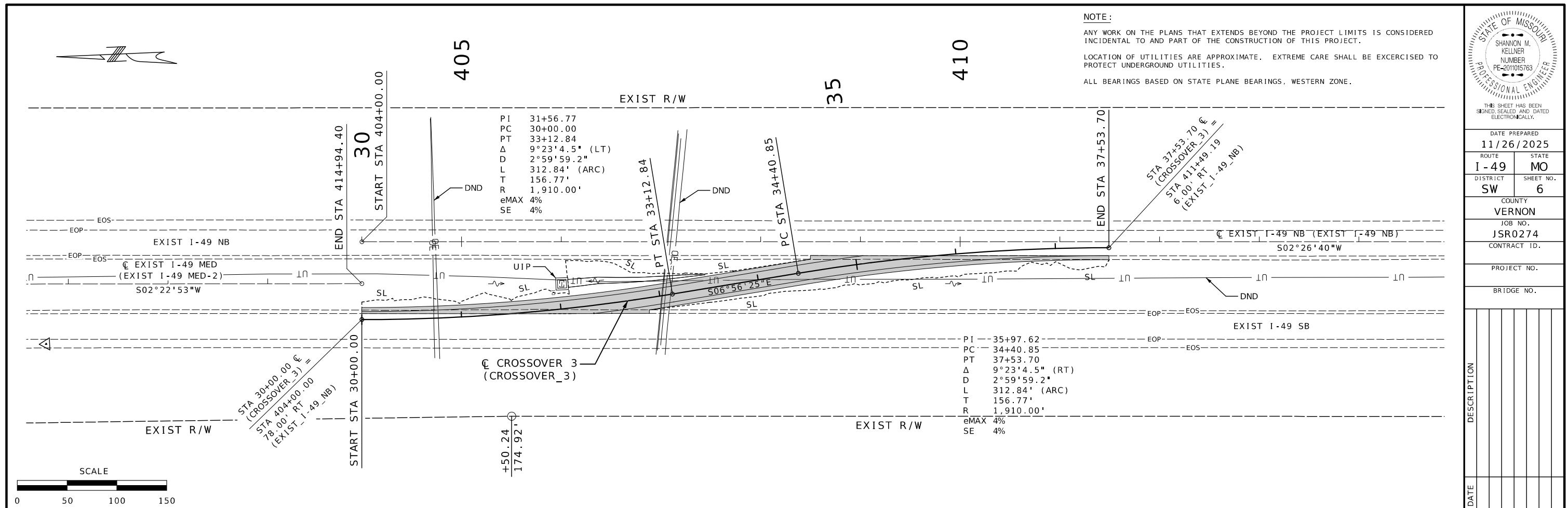
ANY WORK ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND PART OF THE CONSTRUCTION OF THIS PROJECT.
LOCATION OF UTILITIES ARE APPROXIMATE. EXTREME CARE SHALL BE EXERCISED TO PROTECT UNDERGROUND UTILITIES.
ALL BEARINGS BASED ON STATE PLANE BEARINGS, WESTERN ZONE.

DATE PREPARED
11/26/2025

ROUTE	STATE
I-49	MO
DISTRICT	SHEET NO.
SW	5
COUNTY	
VERNON	
JOB NO.	JSR0274
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE



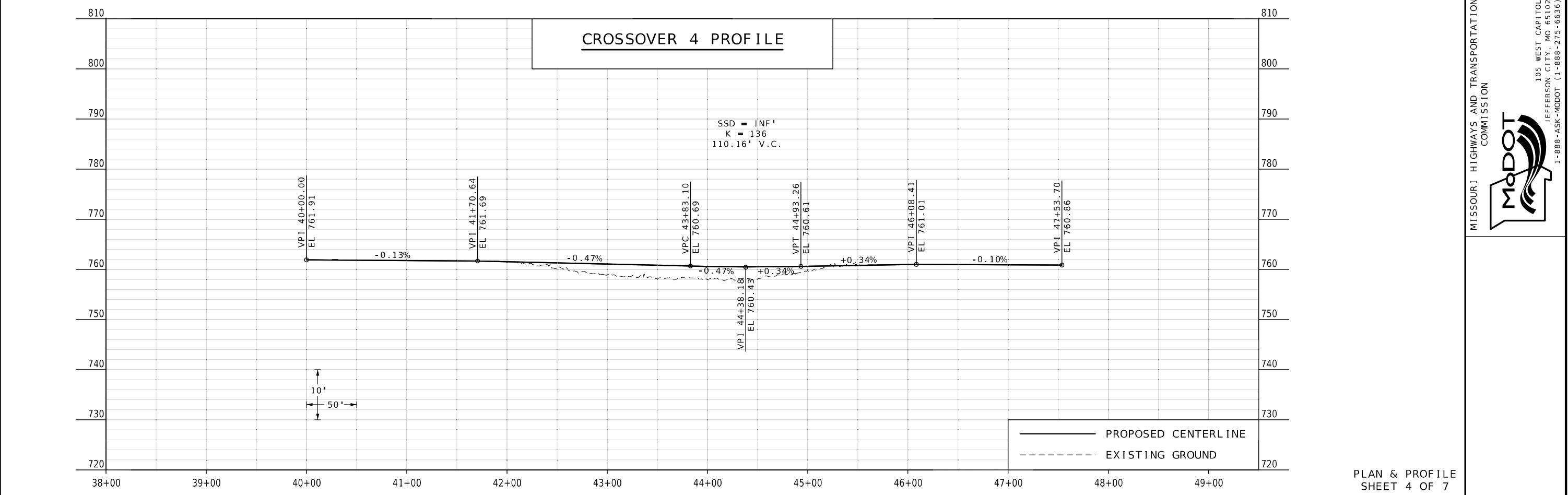
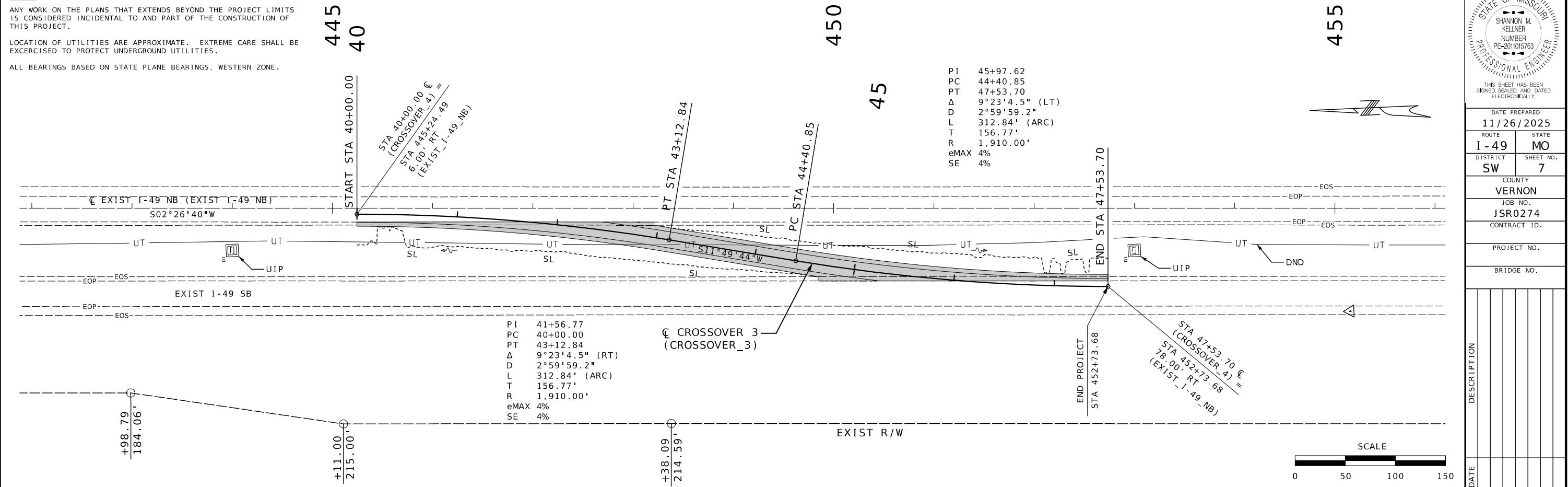


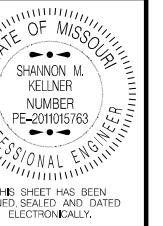
LAN & PROFILE
SHEET 3 OF 7

NOTE:
ANY WORK ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS
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ALL BEARINGS BASED ON STATE PLANE BEARINGS, WESTERN ZONE.





NOTE:

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ALL BEARINGS BASED ON STATE PLANE BEARINGS, WESTERN ZONE.

(1) INSTALL TYPE 2 ROCK BLANKET AROUND BR A2629 INTERMEDIATE BENT 5 FOOTINGS.

DATE PREPARED
12/1/2025
ROUTE STATE
I-49 MO
DISTRICT SHEET NO.
SW 8
COUNTY
VERNON
JOB NO.
JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

MATCHLINE STA. 247+00.00

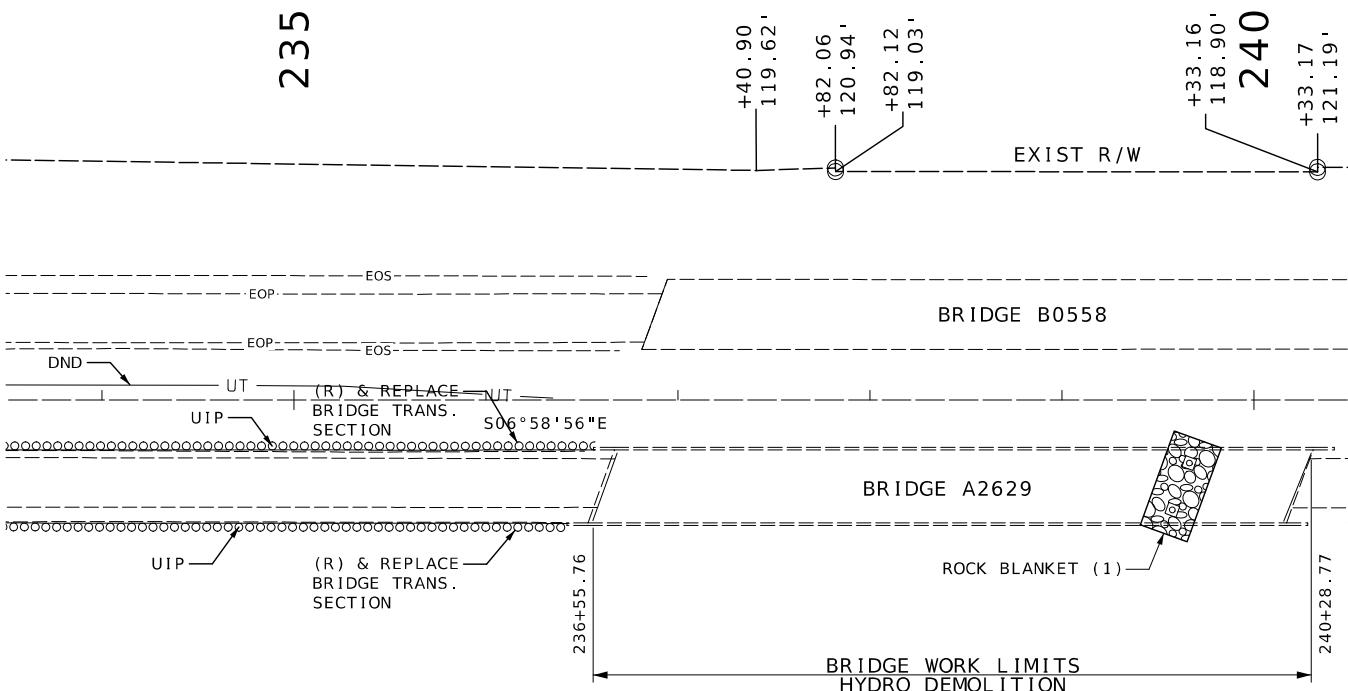
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



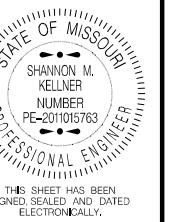
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

235

245



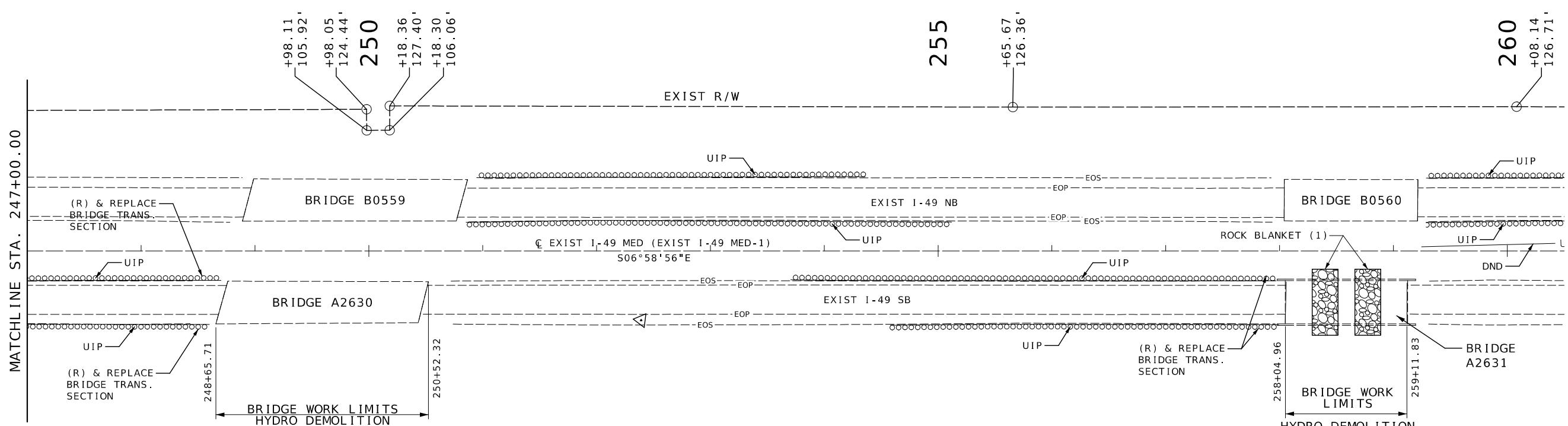
SCALE
0 50 100 150



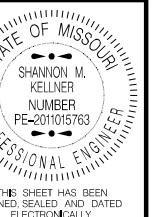
THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
12/1/2025

ROUTE STATE
I-49 MO
DISTRICT SHEET NO.
SW 9
COUNTY
VERNON
JOB NO.
JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.



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



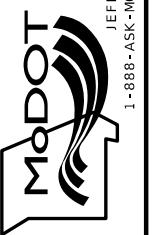
THE SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
12/1/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 10
COUNTY VERNON
JOB NO. JSR0274
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)



NOTE:

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LOCATION OF UTILITIES ARE APPROXIMATE. EXTREME CARE SHALL BE
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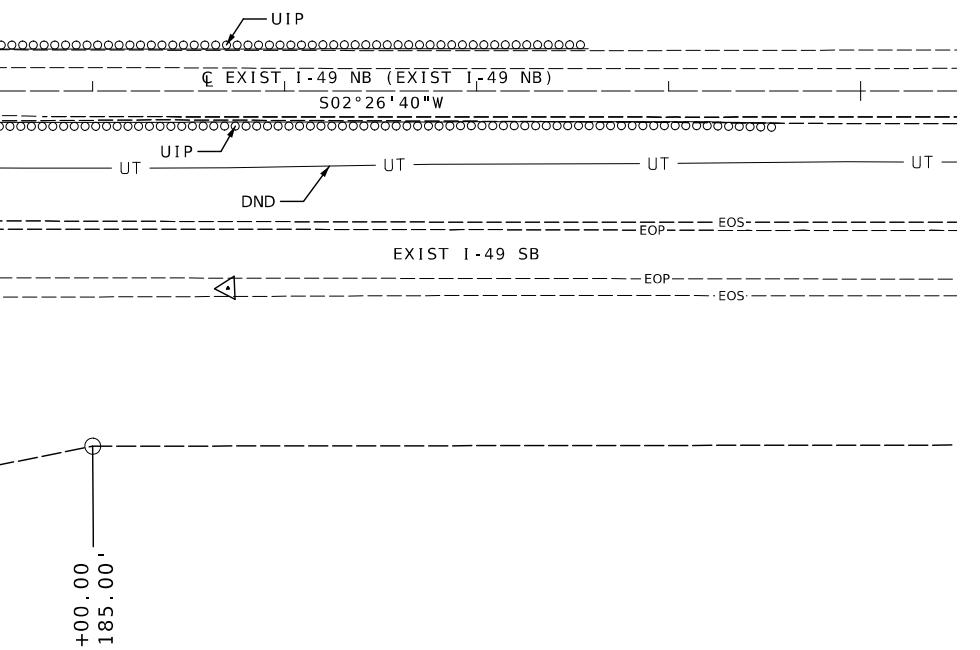
ALL BEARINGS BASED ON STATE PLANE BEARINGS, WESTERN ZONE.

(1) FILL VOIDS UNDER BR A2614 END BENTS 1 AND 4 WITH
FLOWABLE BACKFILL.

440

+00.00
350.00'

435



EXIST R/W

430

+00.00
350.00'

+99.77
204.81

SCALE

0 50 100 150

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES MULTIPLY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MODIFIED STATE PLANE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID 12B
ELEVATIONS DETERMINED BY	GPS
PROJECT PROJECTION FACTOR	1.00008000

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	EXISTING PROJECT CONTROL
DESIGNATION	MODOT NEVADA CORS ARP
CORS_ID	MONE
PID	DM4686
LATITUDE	37° 51' 56.71973"
LONGITUDE	94° 20' 58.36888"
NORTHING (M)	188561.0030
EASTING (M)	863237.9430
ZONE	WESTERN
PROJECT AVERAGE GRID FACTOR	0.99992001

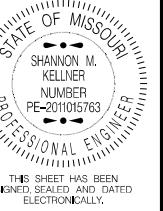
EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #1
N 667761.47 X 0.99992001 = N 667708.06
E 2826358.33 X 0.99992001 = E 2826132.25

LINEAR UNIT CONVERSION

1 METER = 3.28083333 US SURVEY FEET (USFT)



DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 11

COUNTY VERNON
JOB NO. JSR0274
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)



COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	
PROJECT CONTROL POINTS							
N/A	215+48.93	RT OF CL EXIST_I-49_MED-1	60.03	667,761.47	2,826,358.33	758.23	CONTROL POINT
4	217+63.20	LT OF CL EXIST_I-49_MED-1	61.5	667,563.56	2,826,505.00	757.98	CONTROL POINT
8	246+52.73	LT OF CL EXIST_I-49_MED-1	60.96	664,695.39	2,826,855.73	757.67	CONTROL POINT
9	252+39.21	RT OF CL EXIST_I-49_MED-1	60.73	664,098.47	2,826,806.23	757.74	CONTROL POINT
5	268+01.15	LT OF CL EXIST_I-49_MED-1	156.17	662,554.55	2,827,178.52	750.64	CONTROL POINT
5	275+19.08	RT OF CL EXIST_I-49_MED-1	60.42	661,839.50	2,826,932.39	758.04	CONTROL POINT
5	277+05.47	LT OF CL EXIST_I-49_MED-1	61.08	661,645.49	2,827,041.30	758.18	CONTROL POINT
N/A	409+39.49	LT OF CL EXIST_I-49_MED-2	59.6	648,432.52	2,826,973.00	767.81	CONTROL POINT
6	411+77.69	RT OF CL EXIST_I-49_MED-2	60.14	648,199.50	2,826,843.46	767.91	CONTROL POINT
N/A	421+71.25	LT OF CL EXIST_I-49_NB	93.14	646,105.17	2,826,949.87	758.66	CONTROL POINT
N/A	426+92.69	LT OF CL EXIST_I-49_NB	17.58	645,587.43	2,826,852.14	763.04	CONTROL POINT
10	436+70.43	RT OF CL EXIST_I-49_NB	102.64	644,615.70	2,826,690.33	762.58	CONTROL POINT
7	455+15.51	RT OF CL EXIST_I-49_NB	102.62	642,772.30	2,826,611.66	760.67	CONTROL POINT
N/A	459+59.29	LT OF CL EXIST_I-49_NB	18.03	642,323.79	2,826,713.27	761.59	CONTROL POINT

CONTINUE ON COORDINATE POINT SHEET 2 OF 2



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO

DISTRICT SW SHEET NO. 12

COUNTY VERNON

JOB NO. JSR0274

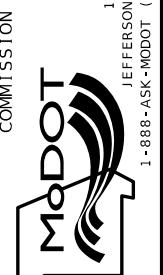
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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

COORDINATE POINT LISTING							
SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	
ALIGNMENT: EXIST_I-49_MED-1							
N/A	76+01.30	EXIST_I-49_MED-1	0	681,665.08	2,827,095.60		POT - BEGIN EXIST_I-49_MED-1
N/A	91+81.58	EXIST_I-49_MED-1	0	680,117.08	2,826,777.81		PC - CURVE EXIST_I-49_MED-1
N/A	96+67.94	EXIST_I-49_MED-1	0	679,640.76	2,826,679.49		PI - ($\Delta = 9^\circ 42' 11.5''$ LT) CURVE EXIST_I-49_MED-1
N/A	LT OF EXIST_I-49_MED-1		5730	678,958.75	2,832,389.51		CC - CURVE EXIST_I-49_MED-1
N/A	101+51.97	EXIST_I-49_MED-1	0	679,154.69	2,826,662.86		PT - CURVE EXIST_I-49_MED-1
N/A	201+92.60	EXIST_I-49_MED-1	0	669,119.86	2,826,321.74		PC - CURVE EXIST_I-49_MED-1
N/A	206+39.44	EXIST_I-49_MED-1	0	668,673.26	2,826,306.89		PI - ($\Delta = 8^\circ 55' 5.5''$ LT) CURVE EXIST_I-49_MED-1
N/A	LT OF EXIST_I-49_MED-1		5730	668,929.42	2,832,048.57		CC - CURVE EXIST_I-49_MED-1
N/A	210+84.48	EXIST_I-49_MED-1	0	668,229.76	2,826,361.45		PT - CURVE EXIST_I-49_MED-1
N/A	261+76.57	EXIST_I-49_MED-1	0	663,175.44	2,826,980.46		PC - CURVE EXIST_I-49_MED-1
5	267+16.82	EXIST_I-49_MED-1	0	662,639.18	2,827,046.03		PI - ($\Delta = 10^\circ 46' 20.6''$ RT) CURVE EXIST_I-49_MED-1
N/A	RT OF EXIST_I-49_MED-1		5730	662,479.96	2,821,292.82		CC - CURVE EXIST_I-49_MED-1
5	272+53.89	EXIST_I-49_MED-1	0	662,100.12	2,827,010.22		PT - CURVE EXIST_I-49_MED-1
N/A	297+51.71	EXIST_I-49_MED-1	0	659,607.77	2,826,845.02		POT - END EXIST_I-49_MED-1
ALIGNMENT: EXIST_I-49_MED-2							
N/A	386+77.04	EXIST_I-49_MED-2	0	650,695.50	2,827,007.46		POT - BEGIN EXIST_I-49_MED-2
N/A	414+94.40	EXIST_I-49_MED-2	0	647,880.57	2,826,890.39		POT - END EXIST_I-49_MED-2
ALIGNMENT: EXIST_I-49_NB							
N/A	404+00.00	EXIST_I-49_NB	0	647,878.78	2,826,932.36		POT - BEGIN EXIST_I-49_NB
N/A	461+25.30	EXIST_I-49_NB	0	642,158.69	2,826,688.18		POT - END EXIST_I-49_NB
ALIGNMENT: CROSSOVER_1							
4	10+00.00	CROSSOVER_1	0	667,226.99	2,826,447.99		PC - BEGIN / CURVE CROSSOVER_1
4	11+56.77	CROSSOVER_1	0	667,071.38	2,826,467.05		PI - ($\Delta = 9^\circ 23' 4.5''$ LT) CURVE CROSSOVER_1
N/A	LT OF CROSSOVER_1		1910	667,459.17	2,828,343.83		CC - CURVE CROSSOVER_1
4	13+12.84	CROSSOVER_1	0	666,920.96	2,826,511.23		PT - CURVE CROSSOVER_1
4	14+40.85	CROSSOVER_1	0	666,798.14	2,826,547.30		PC - CURVE CROSSOVER_1
4	15+97.62	CROSSOVER_1	0	666,647.72	2,826,591.47		PI - ($\Delta = 9^\circ 23' 4.5''$ RT) CURVE CROSSOVER_1
N/A	RT OF CROSSOVER_1		1910	666,259.92	2,824,714.70		CC - CURVE CROSSOVER_1
4	17+53.70	CROSSOVER_1	0	666,492.11	2,826,610.53		PT - CURVE CROSSOVER_1
ALIGNMENT: CROSSOVER_2							
5	20+00.00	CROSSOVER_2	0	662,814.27	2,827,049.12		PC - BEGIN / CURVE CROSSOVER_2
5	22+51.37	CROSSOVER_2	0	662,563.32	2,827,063.70		PI - ($\Delta = 13^\circ 35' 14.9''$ RT) CURVE CROSSOVER_2
N/A	RT OF CROSSOVER_2		2110	662,691.93	2,824,942.67		CC - CURVE CROSSOVER_2
5	25+00.38	CROSSOVER_2	0	662,315.98	2,827,018.91		PT - CURVE CROSSOVER_2
5	26+15.72	CROSSOVER_2	0	662,202.49	2,826,998.36		PC - CURVE CROSSOVER_2
5	27+70.05	CROSSOVER_2	0	662,050.62	2,826,970.86		PI - ($\Delta = 6^\circ 28' 17.2''$ LT) CURVE CROSSOVER_2
N/A	LT OF CROSSOVER_2		2730	661,716.06	2,829,684.67		CC - CURVE CROSSOVER_2
5	29+24.06	CROSSOVER_2	0	661,896.62	2,826,960.65		PT - CURVE CROSSOVER_2
ALIGNMENT: CROSSOVER_3							
6	30+00.00	CROSSOVER_3	0	647,882.11	2,826,854.43		PC - BEGIN / CURVE CROSSOVER_3
6	31+56.77	CROSSOVER_3	0	647,725.48	2,826,847.74		PI - ($\Delta = 9^\circ 23' 4.5''$ LT) CURVE CROSSOVER_3
N/A	LT OF CROSSOVER_3		1910	647,800.65	2,828,762.69		CC - CURVE CROSSOVER_3
6	33+12.84	CROSSOVER_3	0	647,569.86	2,826,866.68		PT - CURVE CROSSOVER_3
6	34+40.85	CROSSOVER_3	0	647,442.78	2,826,882.15		PC - CURVE CROSSOVER_3
6	35+97.62	CROSSOVER_3	0	647,287.16	2,826,901.10		PI - ($\Delta = 9^\circ 23' 4.5''$ RT) CURVE CROSSOVER_3
N/A	RT OF CROSSOVER_3		1910	647,211.99	2,824,986.15		CC - CURVE CROSSOVER_3
6	37+53.70	CROSSOVER_3	0	647,130.53	2,826,894.41		PT - CURVE CROSSOVER_3
ALIGNMENT: CROSSOVER_4							
7	40+00.00	CROSSOVER_4	0	643,758.30	2,826,750.46		PC - BEGIN / CURVE CROSSOVER_4
7	41+56.77	CROSSOVER_4	0	643,601.67	2,826,743.77		PI - ($\Delta = 9^\circ 23' 4.5''$ RT) CURVE CROSSOVER_4
N/A	RT OF CROSSOVER_4		1910	643,839.76	2,824,842.19		CC - CURVE CROSSOVER_4
7	43+12.84	CROSSOVER_4	0	643,448.23	2,826,711.63		PT - CURVE CROSSOVER_4
7	44+40.85	CROSSOVER_4	0	643,322.94	2,826,685.39		PC - CURVE CROSSOVER_4
7	45+97.62	CROSSOVER_4	0	643,169.50	2,826,653.25		PI - ($\Delta = 9^\circ 23' 4.5''$ LT) CURVE CROSSOVER_4
N/A	LT OF CROSSOVER_4		1910	642,931.41	2,828,554.83		CC - CURVE CROSSOVER_4
7	47+53.70	CROSSOVER_4	0	643,012.87	2,826,646.57		PT - CURVE CROSSOVER_4

NOTE:

(1) LEAVE IN PLACE 4 FEET OF CROSSOVER PAVEMENT ADJACENT TO I-49 EOP FOR I-49 INSIDE SHOULDER.
SAW CUT AT NO DIRECT PAY TO ACHIEVE CLEAN EDGE OF SHOULDER DURING REMOVAL.

CROSSOVER-1 REMOVAL

SCALE

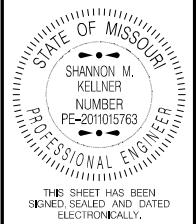
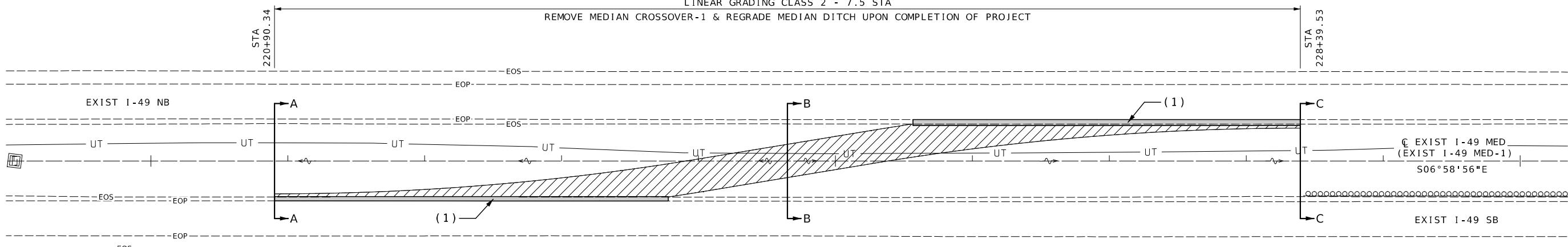
0 40 80 120

220

225

230

EXIST R/W

LINEAR GRADING CLASS 2 - 7.5 STA
REMOVE MEDIAN CROSSOVER-1 & REGRADE MEDIAN DITCH UPON COMPLETION OF PROJECT

DATE PREPARED
11/26/2025
ROUTE
I-49
DISTRICT
SW
SHEET NO.
13
COUNTY
VERNON
JOB NO.
JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

NOTE:

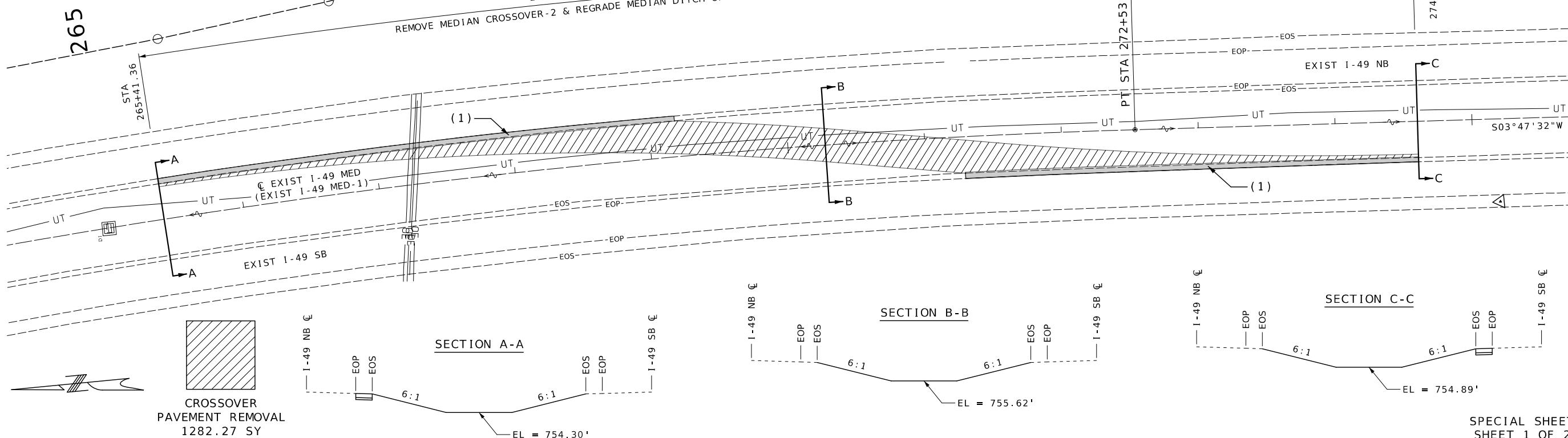
(1) LEAVE IN PLACE 4 FEET OF CROSSOVER PAVEMENT ADJACENT TO I-49 EOP FOR I-49 INSIDE SHOULDER. SAW CUT AT NO DIRECT PAY TO ACHIEVE CLEAN EDGE OF SHOULDER DURING REMOVAL.

CROSSOVER-2 REMOVAL

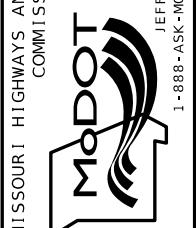
SCALE
0 40 80 120

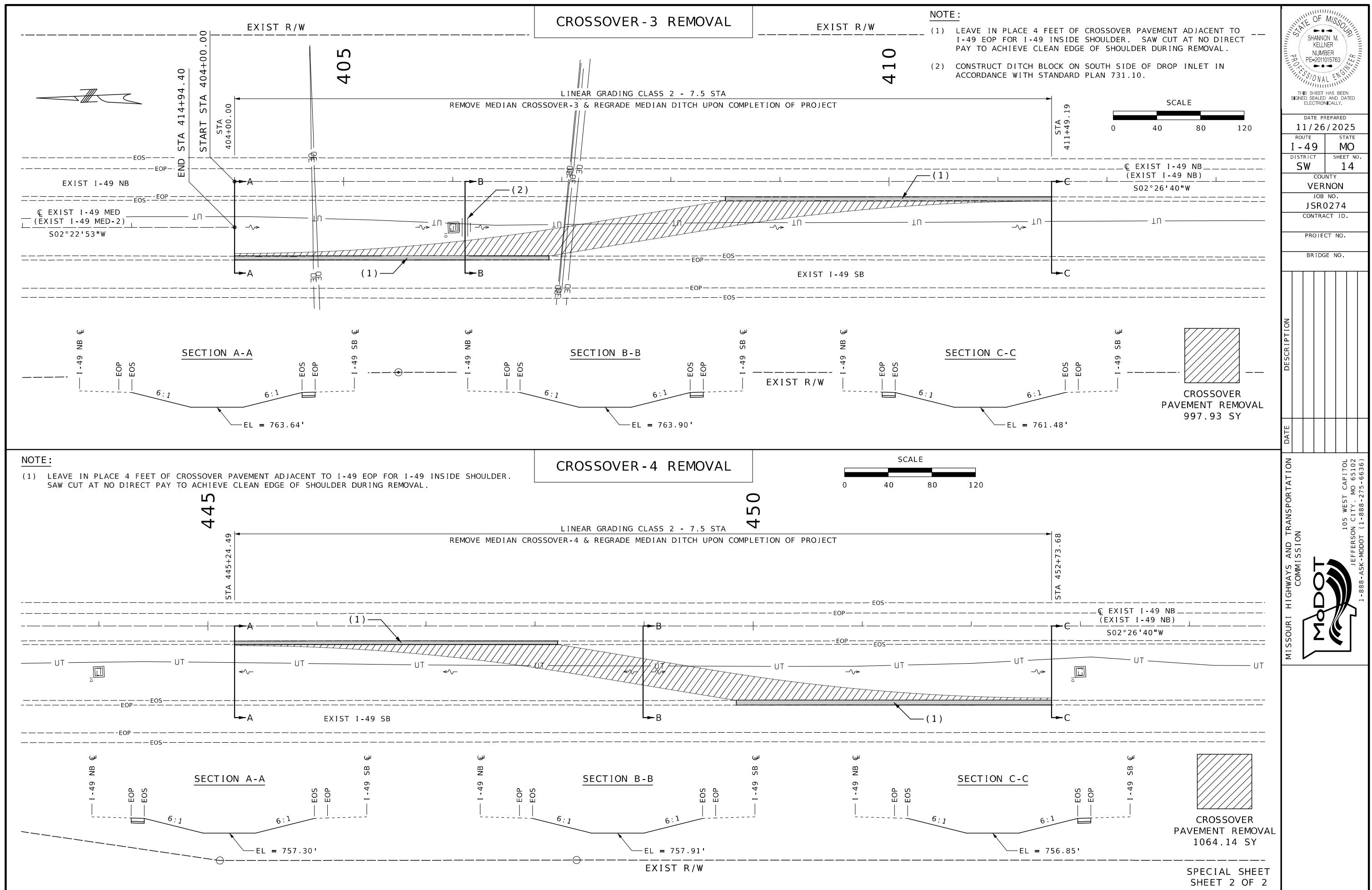
27

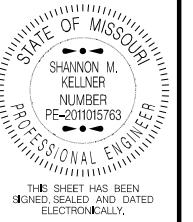
270

LINEAR GRADING CLASS 2 - 9.2 STA
REMOVE MEDIAN CROSSOVER-2 & REGRADE MEDIAN DITCH UPON COMPLETION OF PROJECT

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

SPECIAL SHEET
SHEET 1 OF 2





DATE PREPARED
11/26/2025
ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 15
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

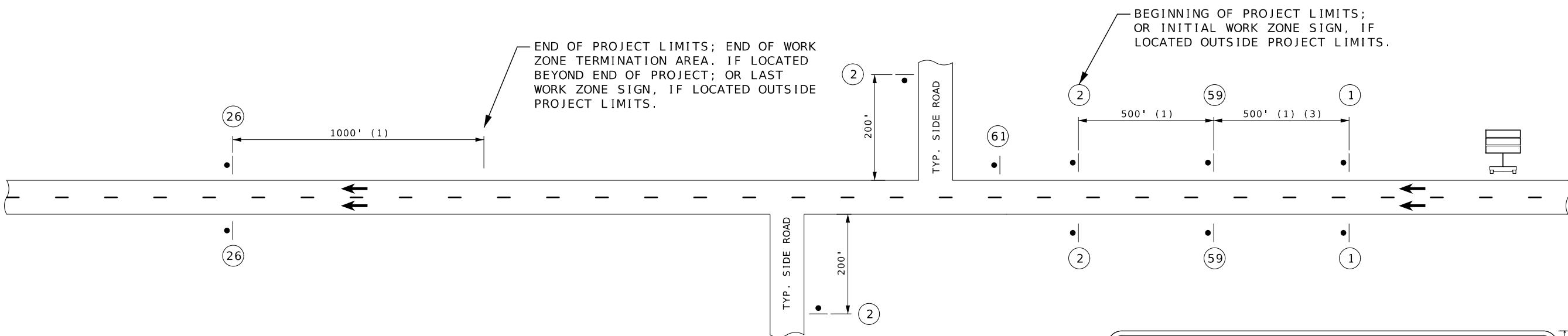
DESCRIPTION	DATE



105 WEST CAPITOL
JEFFERSON CITY, MO 65102

GENERAL NOTES:

1. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
2. TEMPORARY SIGNING SHOWN IS FOR WORK ON ONE SIDE OF THE ROAD. FOR WORK ON THE OTHER SIDE, REVERSE ORDER OF THE SIGNS AND CHANNELIZERS.
3. SIGNING SHOWN SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
5. REFER TO STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
7. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
8. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS, OR FLASHING ARROW PANEL.
9. ALL SIGNS SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING PROPER TRAFFIC CONTROL SETUPS THROUGHOUT CONSTRUCTION AS DESCRIBED IN THESE PLANS OR AS APPROVED BY THE ENGINEER.
11. WHERE MINIMUM LANE WIDTHS CANNOT BE ACHIEVED ON THE SIDE STREETS, THE CONTRACTOR SHALL CLOSE HALF OF THE APPROACH AND POSITION A FLAGGER AT EACH END OF THE WORK AREA. LOCATION TO BE DETERMINED BY THE ENGINEER. ADVANCE FLAGGER SIGNING SHALL BE INSTALLED AS OUTLINED IN THE MUTCD.
12. THE CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS TO ALL BUSINESSES AND STREETS. NO STREET OR ENTRANCE SHALL BE COMPLETELY BLOCKED.
13. SPACING & DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD & APPROVED BY THE ENGINEER.
14. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
15. ADJUST ADVANCE WARNING SIGN SPACING TO AVOID SIGN PLACEMENT WITHIN THE LIMITS OF THE RAILROAD RIGHT OF WAY.



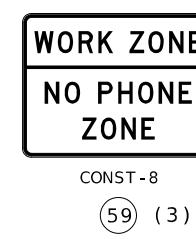
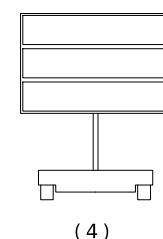
**TYPICAL BEGINNING AND END OF PROJECT
(DIVIDED HIGHWAY)**



(26)



(2)



CONST-8
(4)

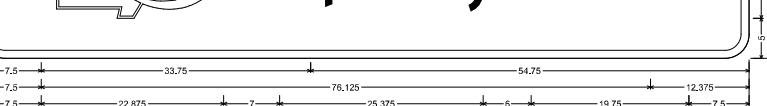


GO20-1
(1)

**Bridge
Improvements**
Spring 2026



Spring 2026



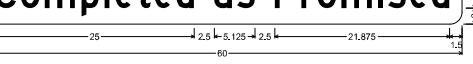
CONST-5 SH-FLAT SHEET:
3,000" Radius, 1,000" Border, White on Blue:
"Bridge", "Improvements", "Spring 2026", "D":
Table of letter and object refs

B	r	l	d	g	30.125	e	36.750				
7.500	15.375	20.250	23.825	32.625	38.500	45.250	51.875	61.375	68.000	t	79.250
I	m	p	r	o	v	e	m	n	88.000	t	79.250
7.500	11.500	21.625	28.125	32.625	38.500	45.250	51.875	61.375	74.375	t	79.250
F	s	p	43.000	47.875	51.625	54.500	59.500	68.750	74.000	79.250	64.500
7.500	37.375	43.000	47.875	51.625	54.500	59.500	68.750	74.000	79.250	64.500	

CONST-5-96

(61) (2)

Completed as Promised

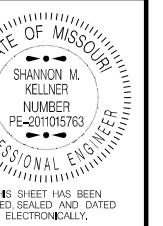


CONST-5P-60 SH-FLAT SHEET FLUORESCENT:
1,500" Radius, 1,000" Border, Yellow:
"Completed as Promised", "Black", "D":
Table of letter and object refs

C	o	m	p	l	e	t	21.500	d	24.250	29.000	s	31.875
1.500	4.875	7.875	12.375	15.375	16.625	19.375	21.500	24.250	29.000	31.875		
P	r	l	m	o	v	e	n	t	6	53.500	d	56.250
96.625	39.875	41.875	44.875	49.500	50.750	53.500	56.250	60.000	64.750	68.500		

NOT TO SCALE

TRAFFIC CONTROL
SHEET 1 OF 9



THIS SHEET HAS BEEN
SIGNED, SEALED, AND DATED
ELECTRONICALLY.

DATE PREPARED
11/16/2025

ROUTE
I-49
DISTRICT
SW
COUNTY
VERNON
JOB NO.
JSR0274
CONTRACT ID.
PROJECT NO.

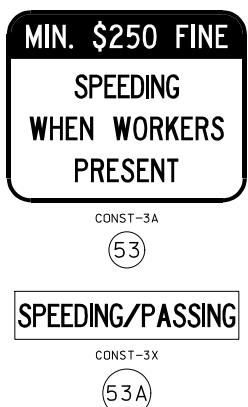
BRIDGE NO.

DESCRIPTION
DATE

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



BRIDGE
OR
RAMP



CONST-3A

53



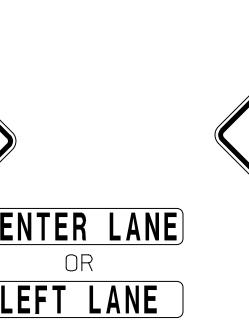
G020-5aP

54



W020-5

5



CENTER LANE
OR

LEFT LANE



CENTER
OR
LEFT



R2-1

4



R4-2

46A



R2-1

25

TRAFFIC CONTROL LEGEND

• SIGN (SINGLE SIDED)

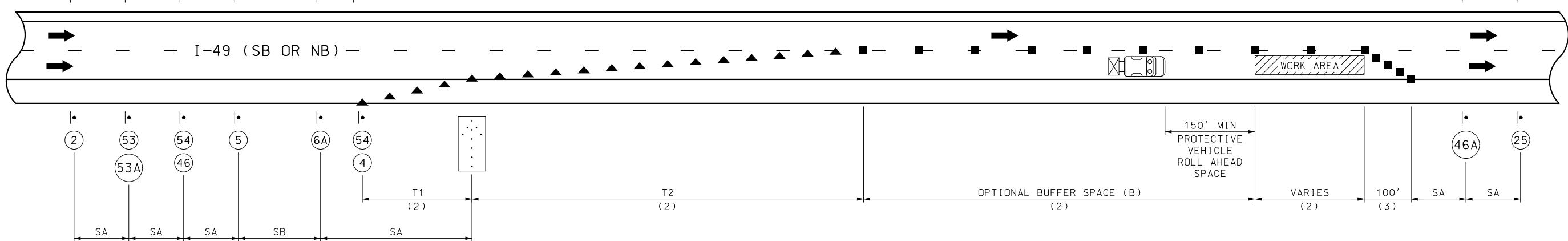
■ CHANNELIZER

▲ DIRECTIONAL INDICATOR
BARRICADE (DIB) W/
SEQUENTIAL FLASHING
WARNING LIGHTS

..... FLASHING ARROW PANEL (FAP)

PROTECTIVE VEHICLE
W/ TMA & FAP

TYPICAL LANE CLOSURE ON A DIVIDED HIGHWAY



NOTE:

ALL LOCATIONS, DISTANCES, AND SPACING OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING SIGNING OR PAVEMENT MARKING THAT CONFLICTS WITH THE TRAFFIC CONTROL SHALL BE COMPLETELY COVERED OR REMOVED AT NO DIRECT PAY.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES. NO DIRECT PAY.

NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS OR FLASHING ARROW PANEL.

REDUCED SPEED LIMIT SIGNING SHALL BE REMOVED, COVERED OR TURNED FROM TRAFFIC WHEN CONDITIONS REQUIRING THE REDUCED SPEED NO LONGER EXIST.

SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT $\frac{1}{2}$ MILE.

SEE STANDARD PLAN 616.10 FOR ADDITIONAL DETAILS.

SIGN QUANTITIES INCLUDE ADEQUATE TRAFFIC CONTROL ITEMS FOR TWO SETUPS OF ANY OPERATION AT ONCE.

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION.

(2) SEE TABLE FOR CHANNELIZER SPACING AND TAPER AND BUFFER LENGTHS.

(3) 5 CHANNELIZER MINIMUM

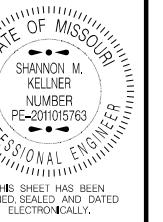
SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)		BUFFER LENGTH (FT) (B)	TAPER LENGTH, FT	
		PERMANENT POSTED (MPH)	DIVIDED HIGHWAYS (S)		TAPERS	BUFFER/ WORK AREAS
0-35	200	35	200	280	70	245
40-45	500	40	500	400	150	540
50-55	1000	50	1000	560	185	660
60-70	SA - 1000 SB - 1500 SC - 2640	60	120	840	235	840

¹ BASED ON 10' SHOULDER WIDTH

² BASED ON 12' LANE WIDTH

NOT TO SCALE

TRAFFIC CONTROL
SHEET 2 OF 9



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED

11/26/2025

ROUTE

I-49

STATE

MO

DISTRICT

SW

SHEET NO.

17

COUNTY

VERNON

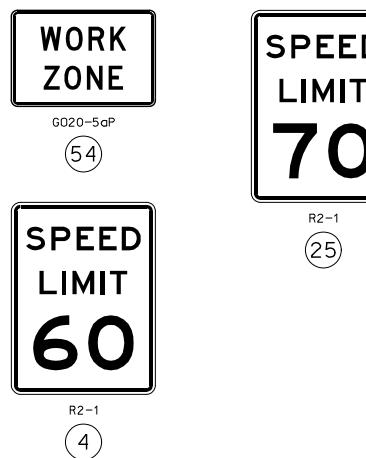
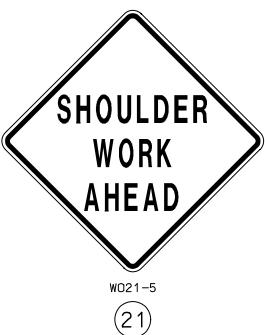
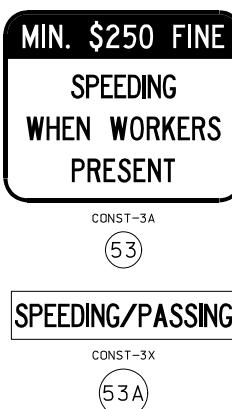
JOB NO.

JSR0274

CONTRACT ID.

PROJECT NO.

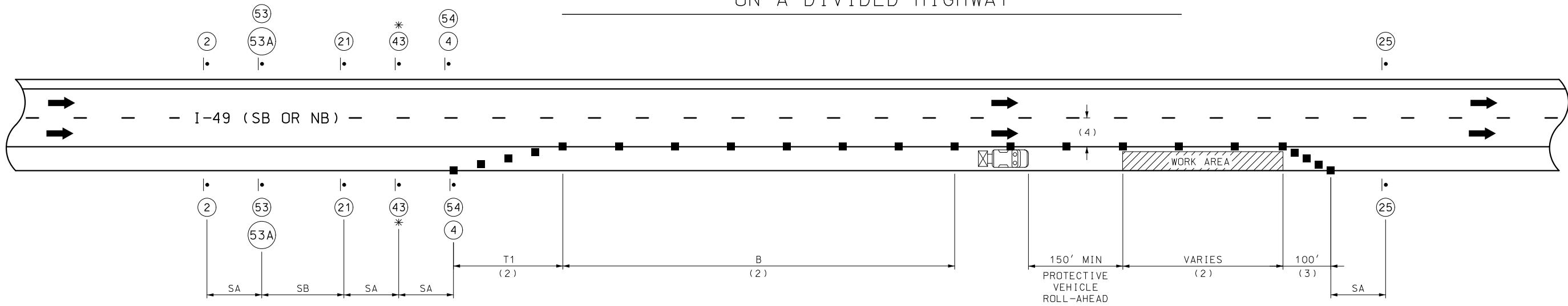
BRIDGE NO.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- ▲ DIRECTIONAL INDICATOR
BARRICADE (DIB)
- ... FLASHING ARROW PANEL
- PROTECTIVE VEHICLE
W/ TMA & FAP

TYPICAL SHOULDER WORK WITH MINOR ENCROACHMENT ON A DIVIDED HIGHWAY



NOTE:

ALL LOCATIONS, DISTANCES, AND SPACING OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING SIGNING OR PAVEMENT MARKING THAT CONFLICTS WITH THE TRAFFIC CONTROL SHALL BE COMPLETELY COVERED OR REMOVED AT NO DIRECT PAY.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES. NO DIRECT PAY.

NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS OR FLASHING ARROW PANEL.

REDUCED SPEED LIMIT SIGNING SHALL BE REMOVED, COVERED OR TURNED FROM TRAFFIC WHEN CONDITIONS REQUIRING THE REDUCED SPEED NO LONGER EXIST.

SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT $\frac{1}{2}$ MILE.

SEE STANDARD PLAN 616.10 FOR ADDITIONAL DETAILS.

SIGN QUANTITIES INCLUDE ADEQUATE TRAFFIC CONTROL ITEMS FOR TWO SETUPS OF ANY OPERATION AT ONCE.

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION.

(2) SEE TABLE FOR CHANNELIZER SPACING AND TAPER AND BUFFER LENGTHS.

(3) 5 CHANNELIZER MINIMUM

(4) 10' MINIMUM

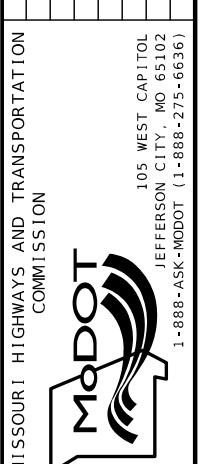
SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)		OPTION BUFFER LENGTH (FT) (B)	TAPER LENGTH, FT	
		TAPERS	BUFFER/ WORK AREAS		SHOULDER ¹ (T1)	LANE ² (T2)
0-35	200	35	40	280	70	245
40-45	500	40	80	400	150	540
50-55	1000	50	80	560	185	660
60-70	SA - 1000 SB - 1500 SC - 2640	60	120	840	235	840

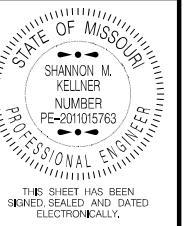
¹ BASED ON 10' SHOULDER WIDTH

² BASED ON 12' LANE WIDTH

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 9





THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

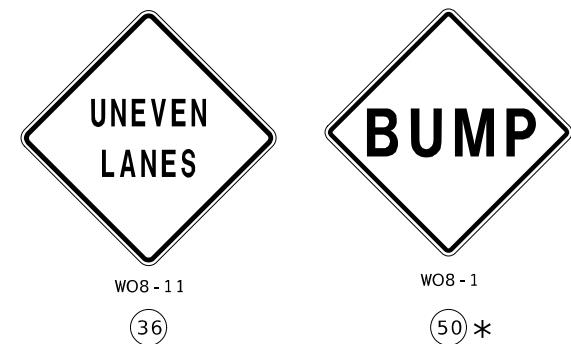
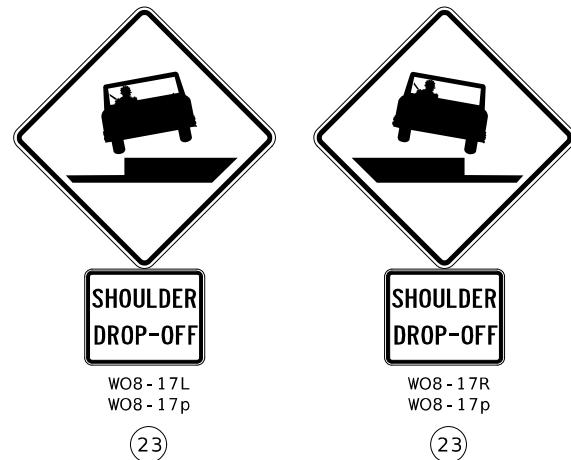
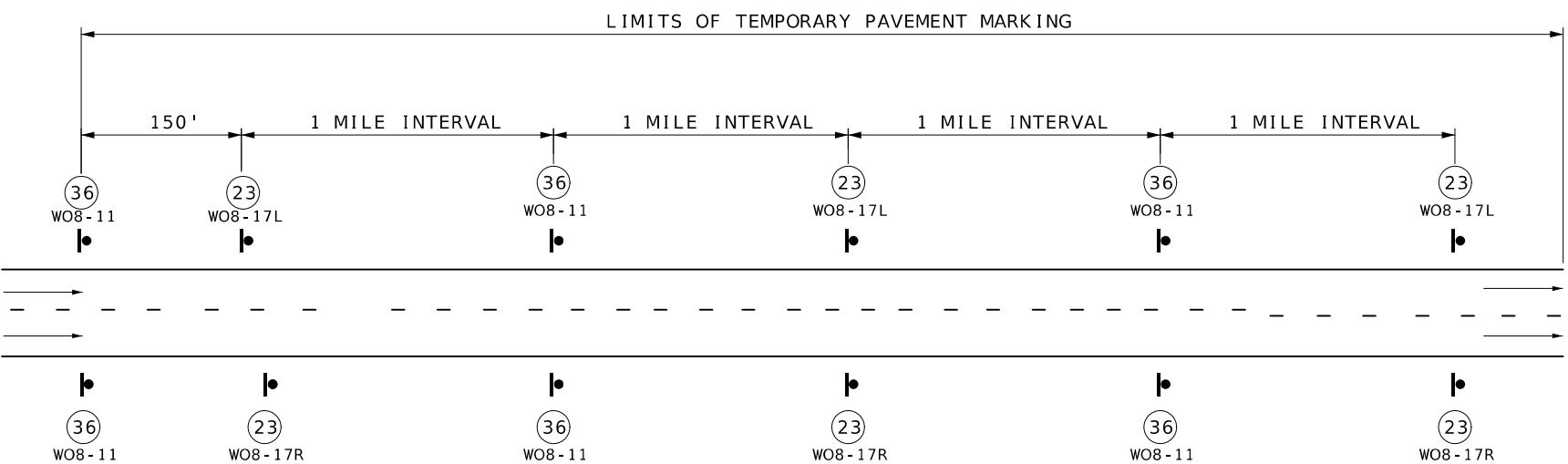
DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 18
COUNTY VERNON
JOB NO. JSR0274
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)



SIGN SPACING FOR DIVIDED OR MULTI-LANE HIGHWAY

(DETAIL SHOWN IS BASED ON A PROJECT MEETING CONDITIONS OF UNEVEN LANES AND SHOULDER DROP-OFF.)
WHEN BOTH UNEVEN LANES AND SHOULDER DROP-OFF SIGNS ARE USED, BOTH SIGNS SHALL STAY IN PLACE UNTIL BOTH CONDITIONS NO LONGER EXISTS.
WHEN ONLY ONE CONDITION EXISTS (UNEVEN LANES OR SHOULDER DROP-OFF), SIGN SPACING SHALL BE AT 1 MILE INTERVALS

(36)

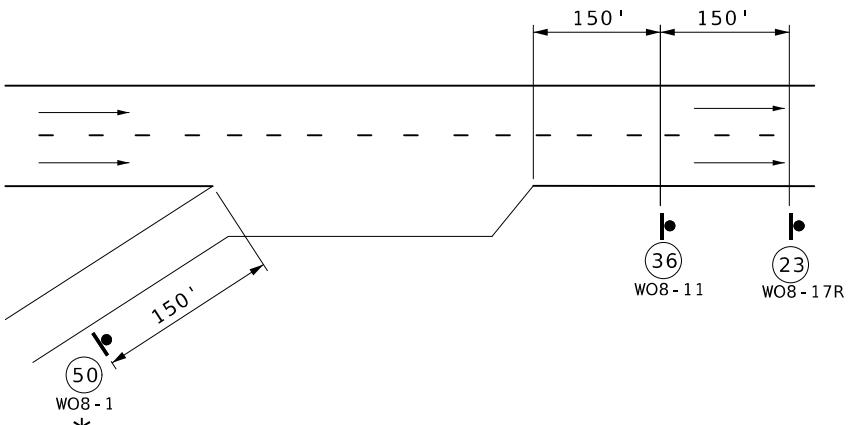
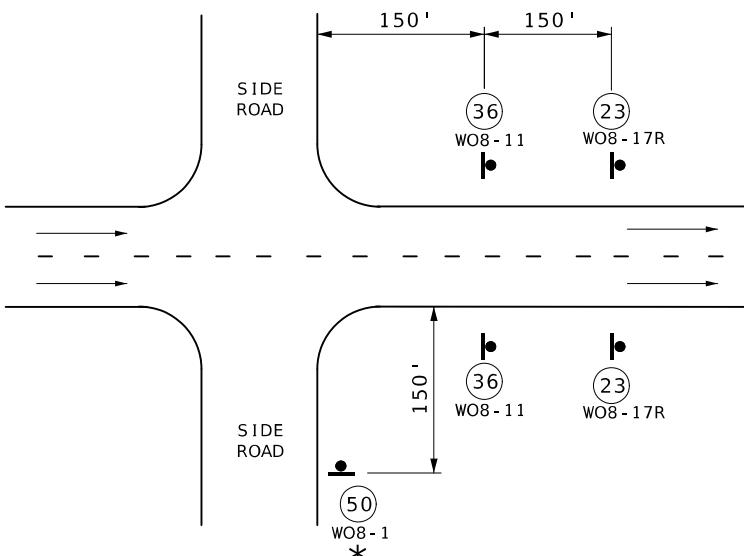
(50)*

GENERAL NOTES:

ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE
WITH STANDARD PLANS 616.10 AND 903.03.

WHEN SHOULDER DROP-OFF SIGNS ARE IN PLACE FOR GREATER
THAN THREE DAYS, THE SHOULDER DROP-OFF PLAQUE SHOULD
BE USED IN ADDITION WITH THE SHOULDER DROP-OFF SIGN.

FOR BRIDGE EXCEPTIONS AND COLDMILLED AREAS, LOCATION
OF SIGN (50) TO BE APPROVED BY THE ENGINEER. UNLESS
REQUIRED BY STANDARD PLAN 619.10, SIGN (50) AT
CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD
SPECIFICATION 622.2.4.



SIGN SPACING AT SIDE ROAD INTERSECTIONS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10.
UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S
EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

SIGN SPACING AT RAMPS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10.
UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S
EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 4 OF 9

STATE OF MISSOURI
SHANNON M.
KELLNER
NUMBER
PE-2011015763
THIS SHEET HAS BEEN
SIGNED, SEALED, AND DATED
ELECTRONICALLY.

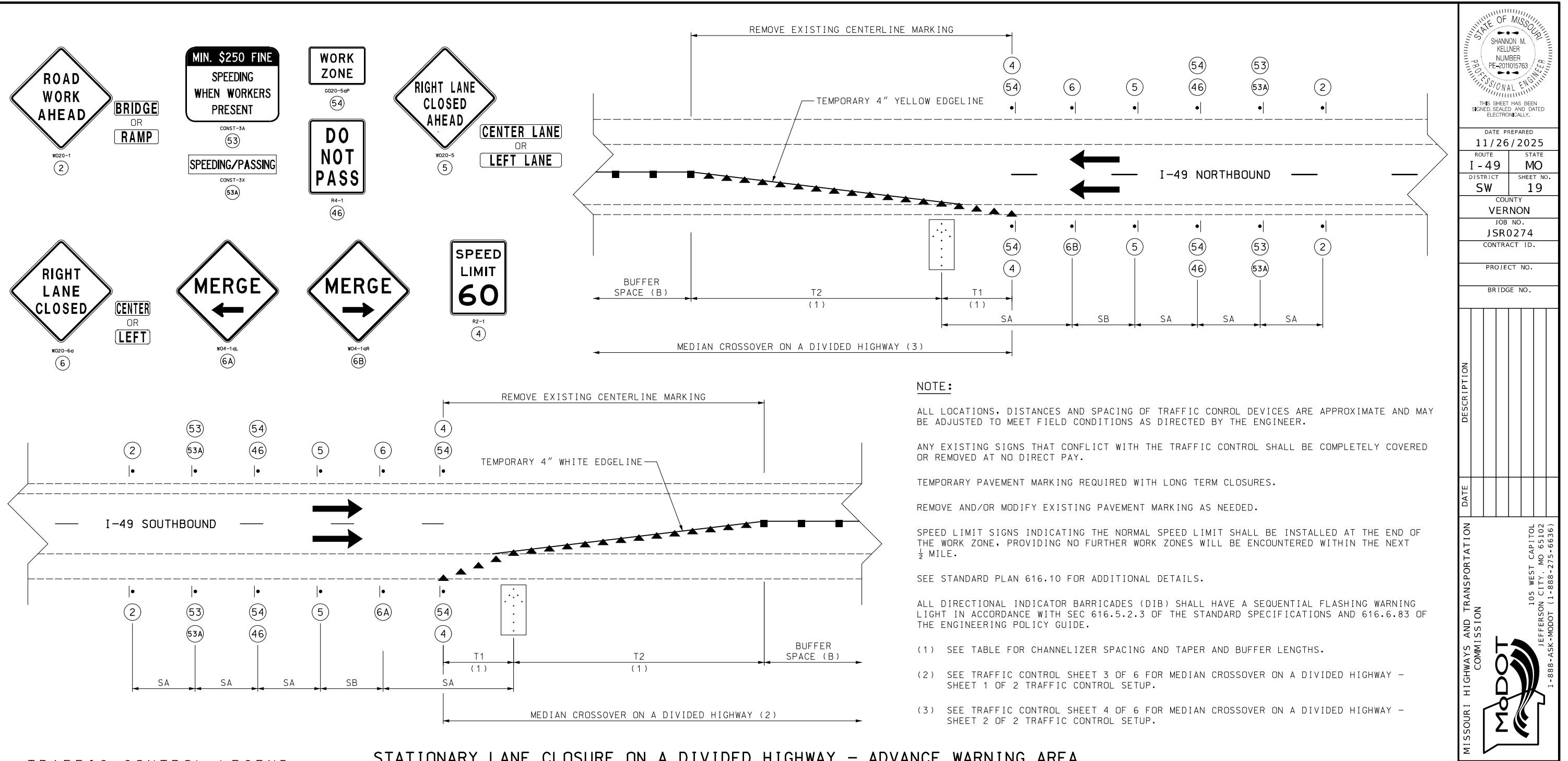
DATE PREPARED
11/26/2025

ROUTE
I-49
STATE
MO
DISTRICT
SW
SHEET NO.
19
COUNTY
VERNON

JOB NO.
JSR0274
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)



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- ▲ DIRECTIONAL INDICATOR BARRICADE (DIB) W/ SEQUENTIAL FLASHING WARNING LIGHT
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE BOARD

STATIONARY LANE CLOSURE ON A DIVIDED HIGHWAY - ADVANCE WARNING AREA

SPEED PERMANENT POSTED (MPH)	SIGN SPACING (FT) (1) DIVIDED HIGHWAYS (S)	TAPER LENGTH (FT)		BUFFER LENGTH (FT) (B)	CHANNELIZER SPACING (FT)	
		SHOULDER ¹ (T1) (FT)	LANE ² (T2) (FT)		TAPERS	BUFFER/ WORK AREAS
0-35	200	70	245	280	35	40
40-45	500	150	540	400	40	80
50-55	1000	185	660	560	50	80
60-70	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

¹BASED ON 10' SHOULDER WIDTH

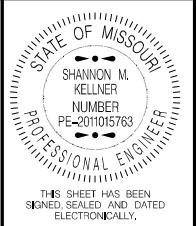
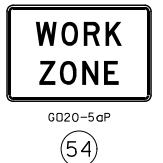
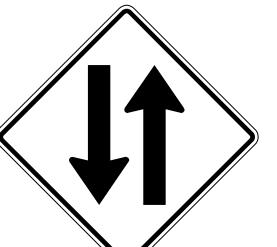
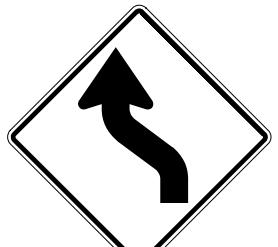
²BASED ON 12' LANE WIDTH

NOT TO SCALE

TRAFFIC CONTROL
SHEET 5 OF 9

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- CHANNELIZER
- ▲ DIRECTIONAL INDICATOR BARRICADE (DIB) W/ SEQUENTIAL FLASHING WARNING LIGHT
- ◆ TUBULAR MARKER
- TEMPORARY RAISED PAVEMENT MARKER
- E TYPE 3 MOVEABLE BARRICADE WITH TYPE B WARNING LIGHTS
- FLASHING ARROW PANEL
- CHANGEABLE MESSAGE BOARD



DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO

DISTRICT SW SHEET NO. 20

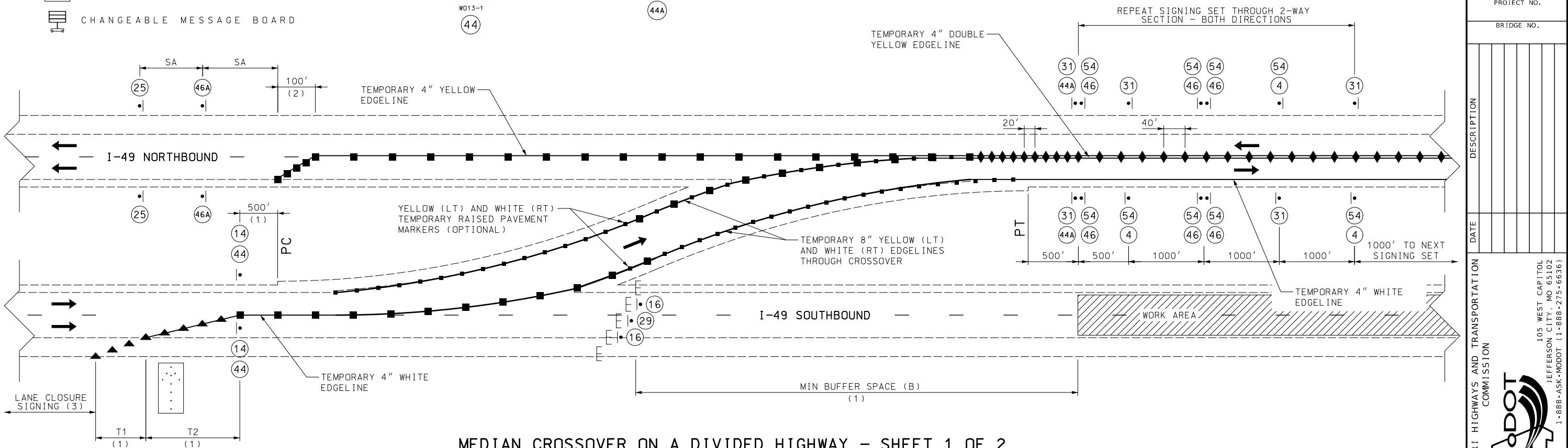
COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID.

PROJECT NO.

BRIDGE NO.



NOTE:

ALL LOCATIONS, DISTANCES AND SPACING OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SHALL BE COMPLETELY COVERED OR REMOVED AT NO DIRECT PAY.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDING NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT $\frac{1}{2}$ MILE.

SEE STANDARD PLAN 616.10 FOR ADDITIONAL DETAILS.

ALL DIRECTIONAL INDICATOR BARRICADES (DIB) SHALL HAVE A SEQUENTIAL FLASHING WARNING LIGHT IN ACCORDANCE WITH SEC 616.5.2.3 OF THE STANDARD SPECIFICATIONS AND 616.6.83 OF THE ENGINEERING POLICY GUIDE.

(1) SEE TABLE FOR CHANNELIZER SPACING AND TAPER AND BUFFER LENGTHS.

(2) 5 CHANNELIZER MINIMUM

(3) SEE TRAFFIC CONTROL SHEET 2 OF 6 FOR ADVANCE LANE CLOSURE SIGNING TRAFFIC CONTROL SETUP.

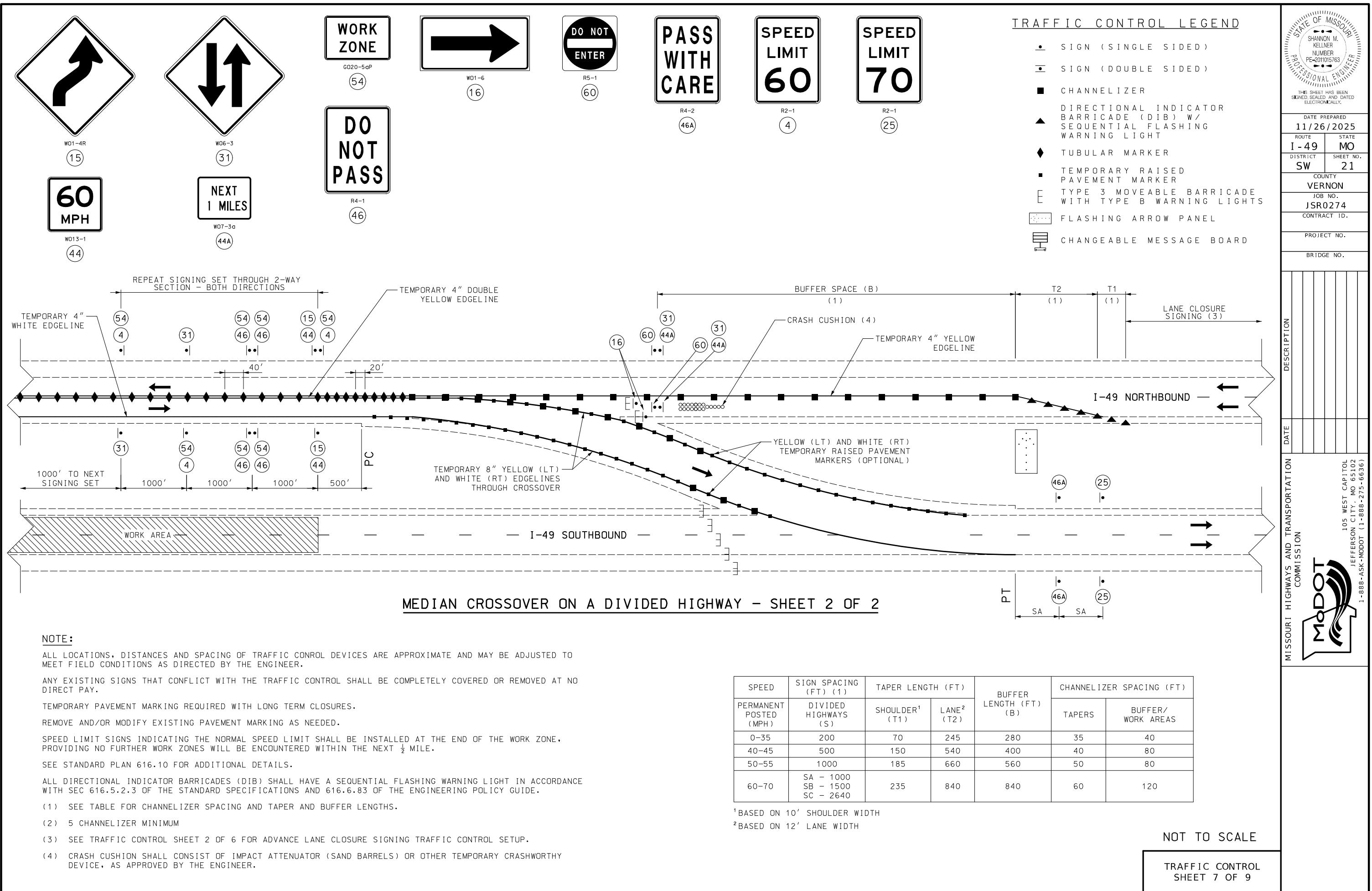
SPEED	SIGN SPACING (FT) (1)	TAPER LENGTH (FT)		BUFFER LENGTH (FT) (B)	CHANNELIZER SPACING (FT)			
		PERMANENT POSTED (MPH)	DIVIDED HIGHWAYS (S)		SHOULDER ¹ (T1)	LANE ² (T2)	TAPERS	BUFFER/ WORK AREAS
0-35	200	70	245	280	35	40		
40-45	500	150	540	400	40	80		
50-55	1000	185	660	560	50	80		
60-70	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120		

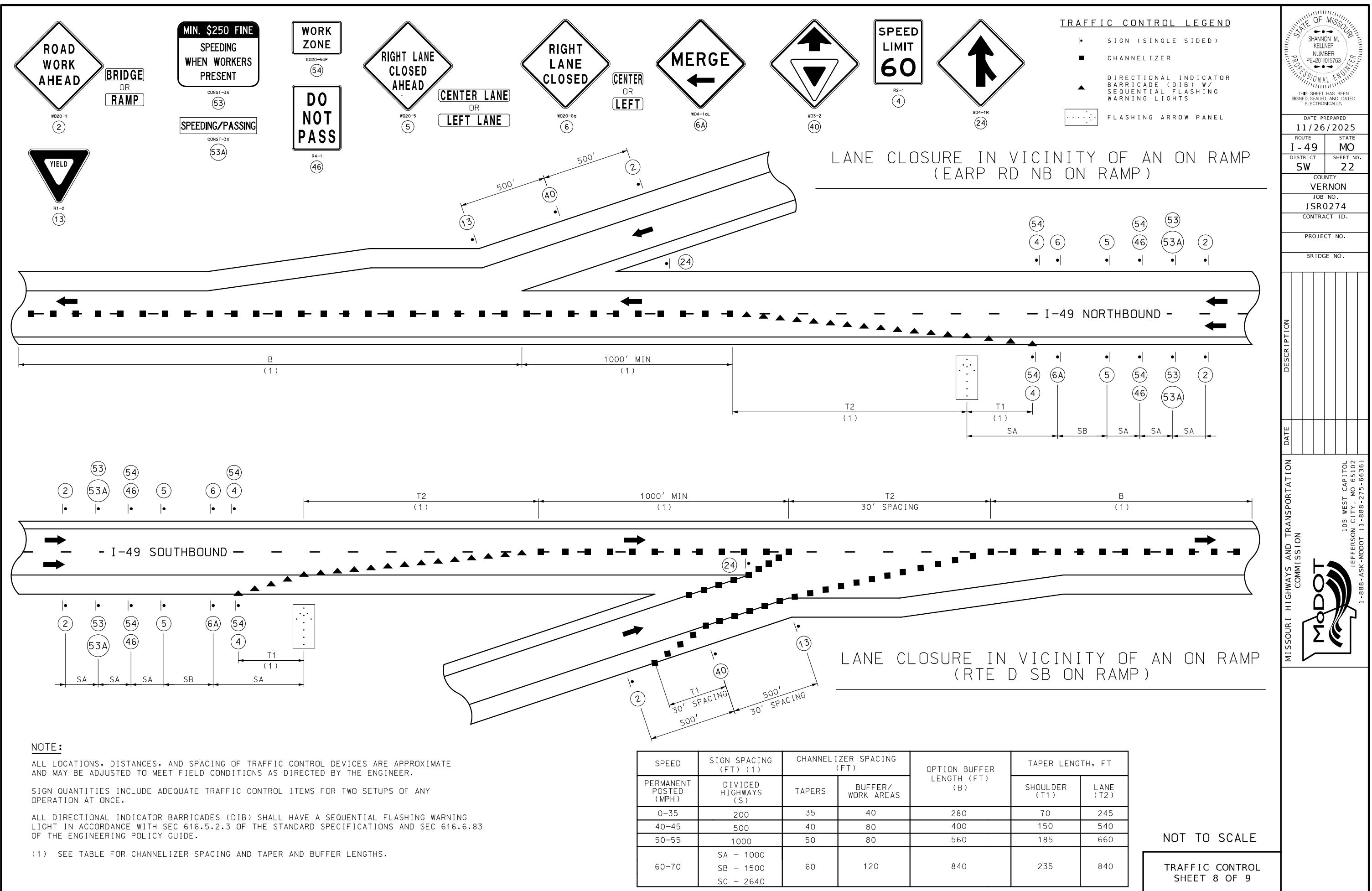
¹ BASED ON 10' SHOULDER WIDTH

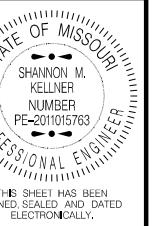
² BASED ON 12' LANE WIDTH

NOT TO SCALE

TRAFFIC CONTROL SHEET 6 OF 9







DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 24

COUNTY VERNON

JOB NO. JSR0274
CONTRACT ID.

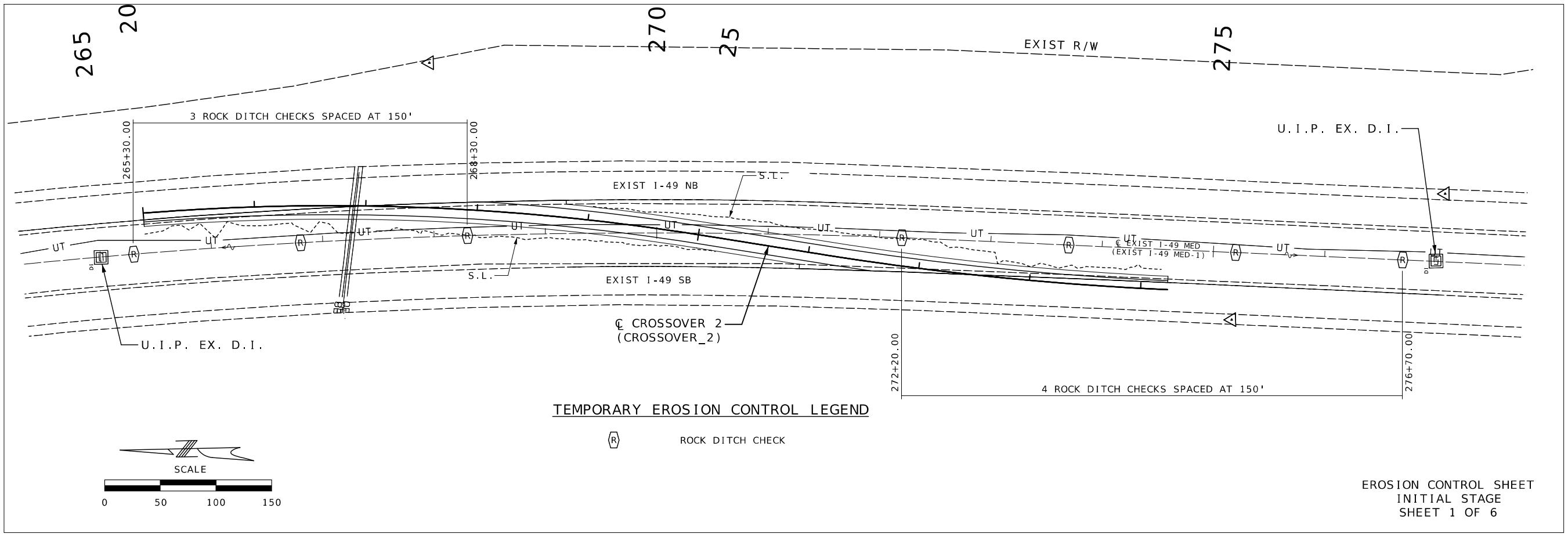
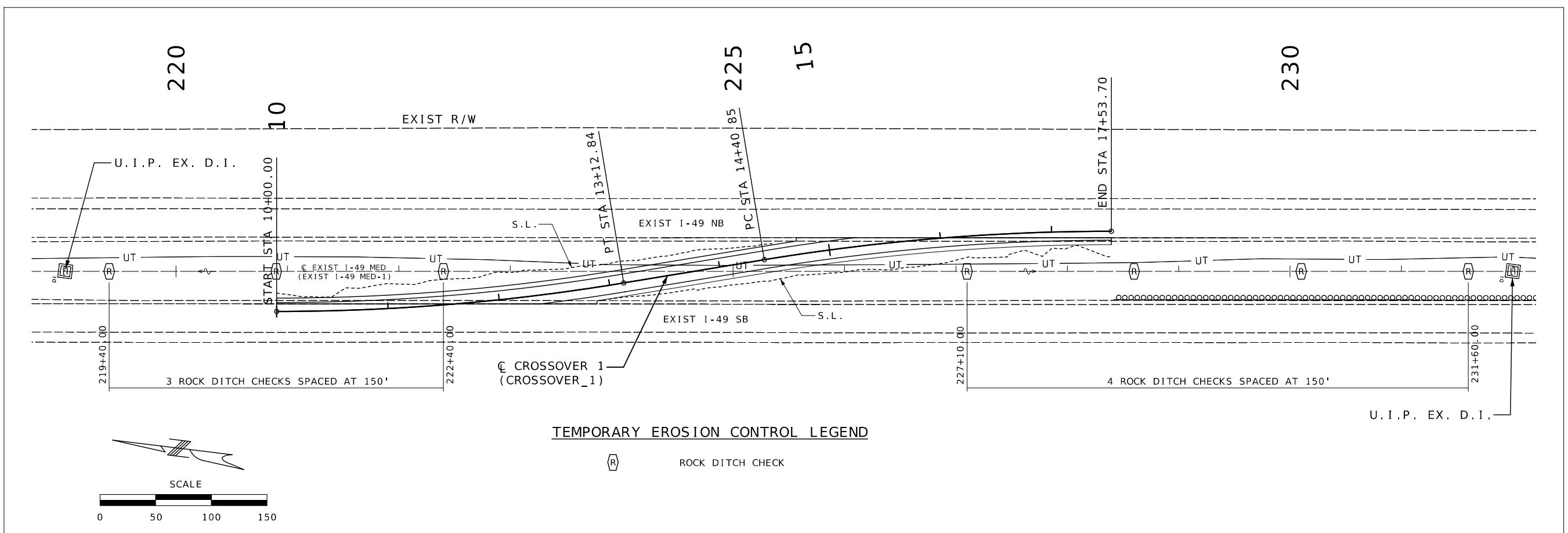
PROJECT NO.

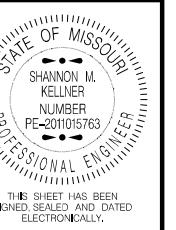
BRIDGE NO.

DESCRIPTION

DATE

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





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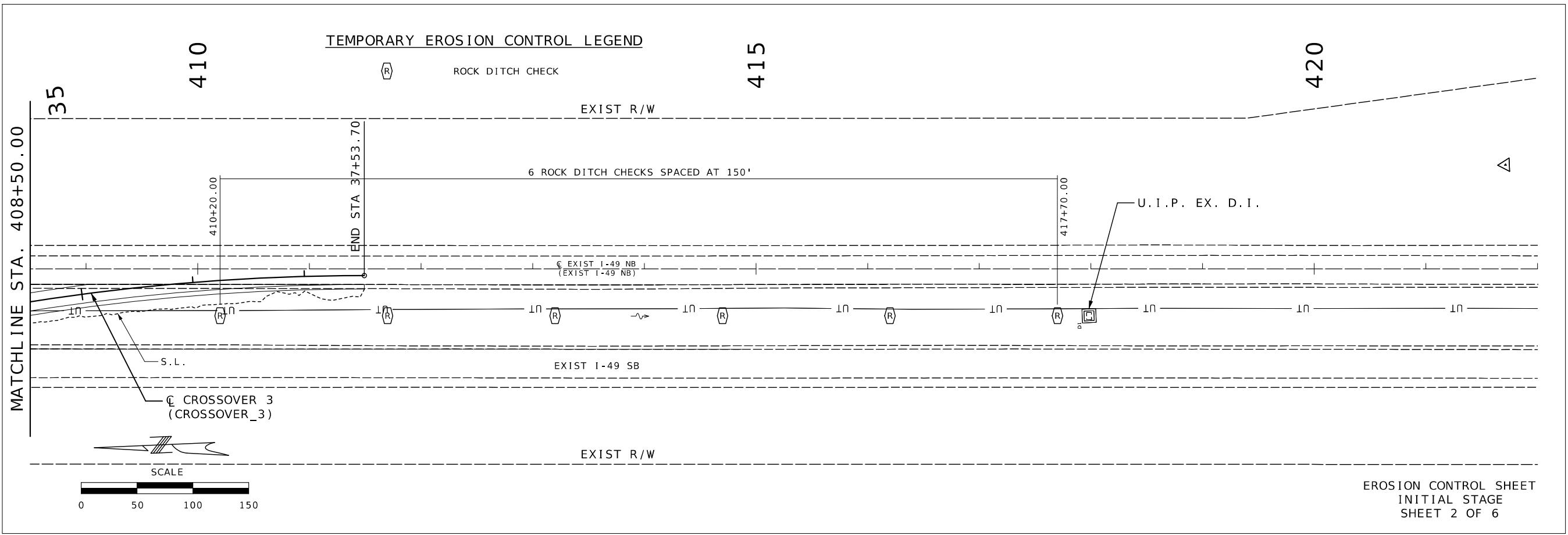
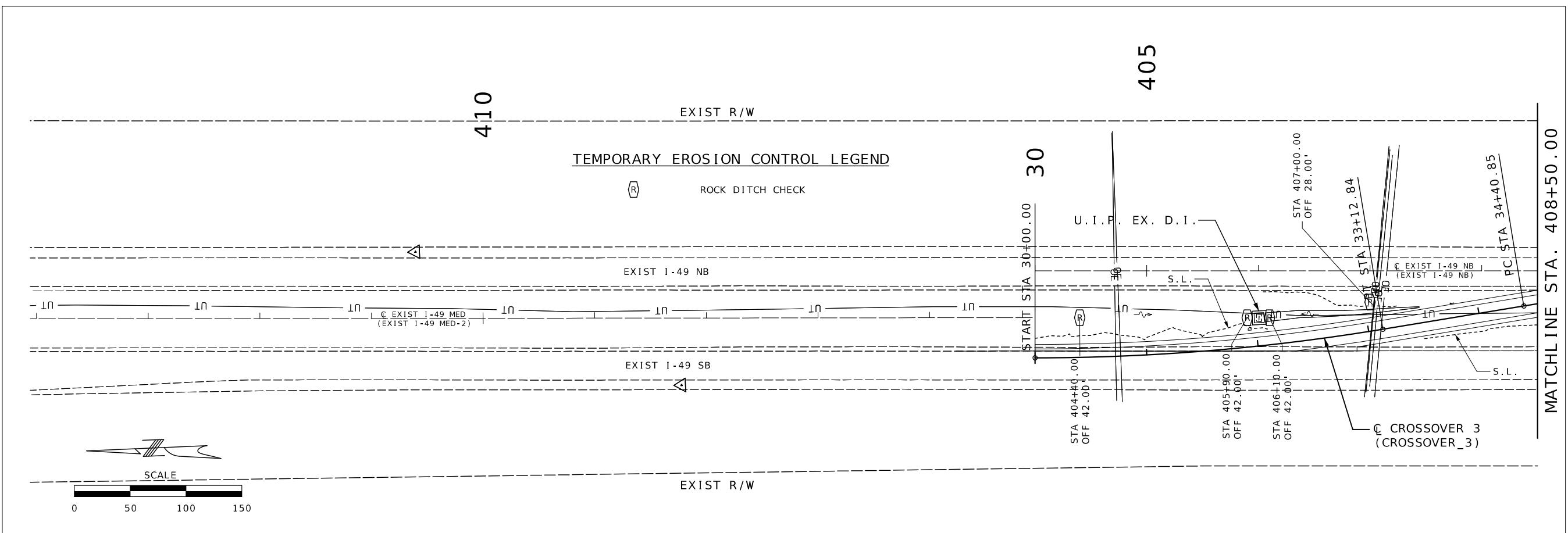
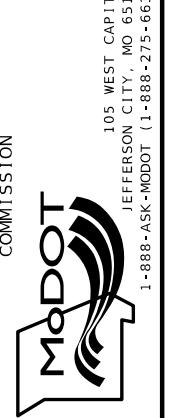
DATE PREPARED
11/26/2025

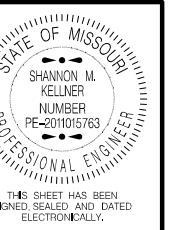
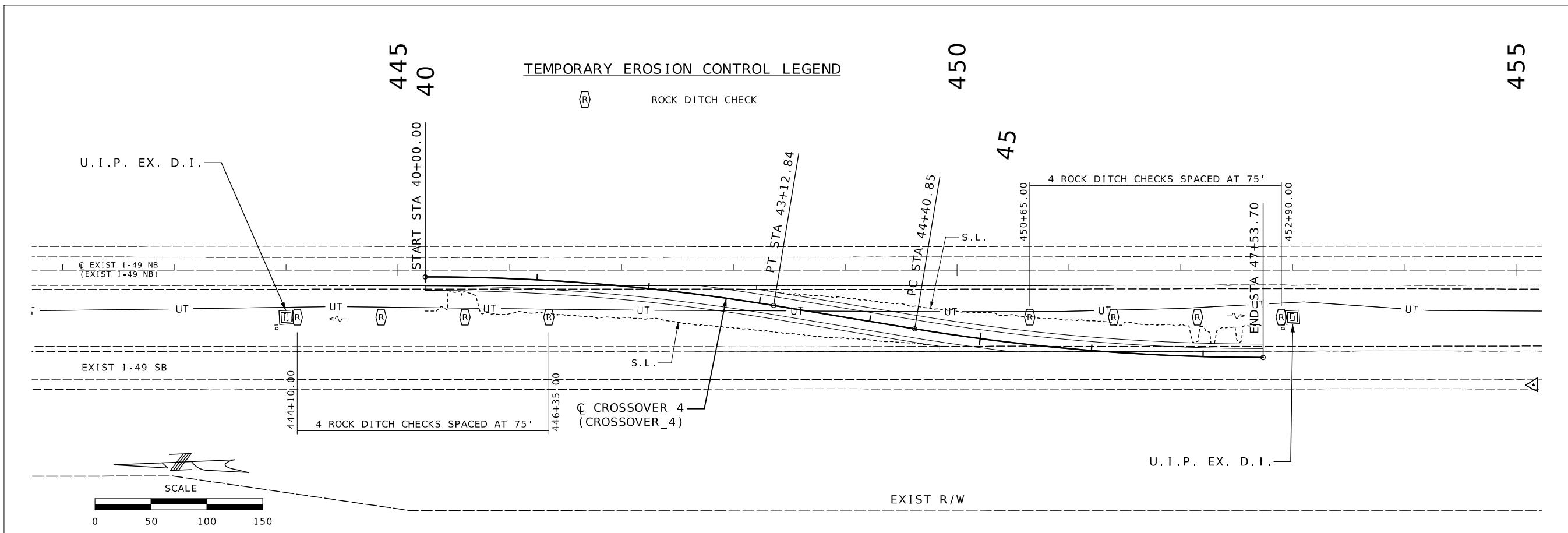
ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 25
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION





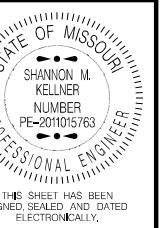
DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 26
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE





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ELECTRONICALLY.

DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT NO. SW SHEET NO. 27

COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DESCRIPTION

DATE

NOTES:

1. PREVIOUSLY INSTALLED DITCH CHECKS TO REMAIN IN PLACE

SCALE

0 50 100 150

EXIST R/W

220

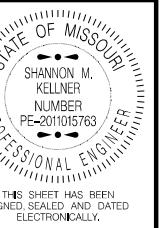
EXIST I-49 NB

EXIST I-49 MED

(EXIST I-49 MED-1)

EXIST I-49 SB

UT



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SIGNED, SEALED AND DATED
ELECTRONICALLY.

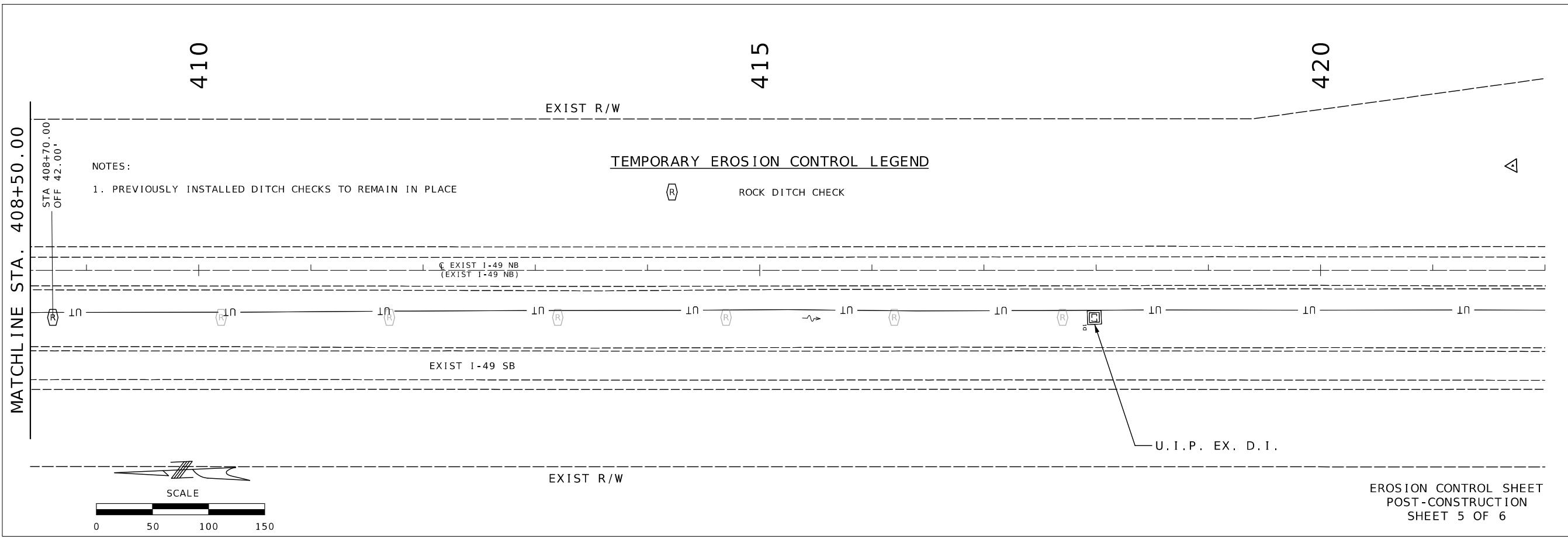
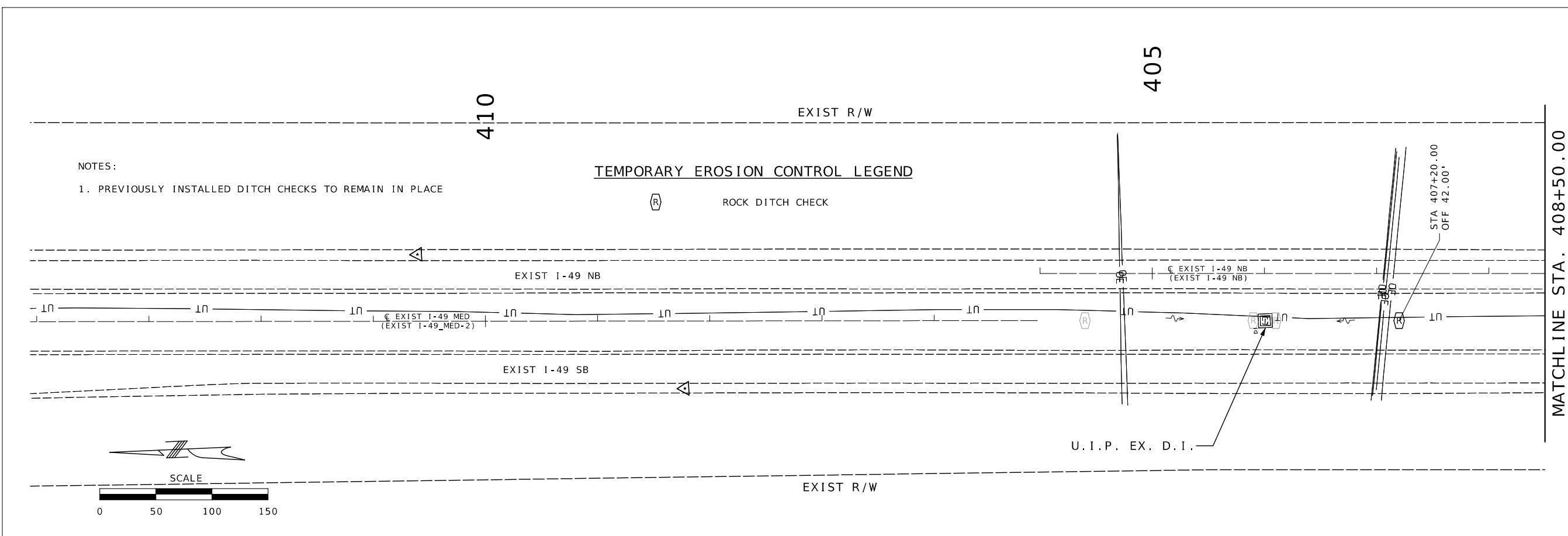
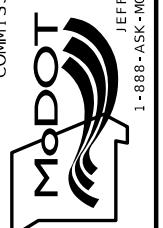
DATE PREPARED
11/26/2025

ROUTE I-49 STATE MO
DISTRICT SW SHEET NO. 28
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-277-6636)





DATE PREPARED
11/26/2025

ROUTE STATE
I-49 MO

DISTRICT SHEET NO.
SW 29

COUNTY
VERNON

JOB NO.
JSR0274

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION



455

EROSION CONTROL SHEET
POST-CONSTRUCTION
SHEET 6 OF 6

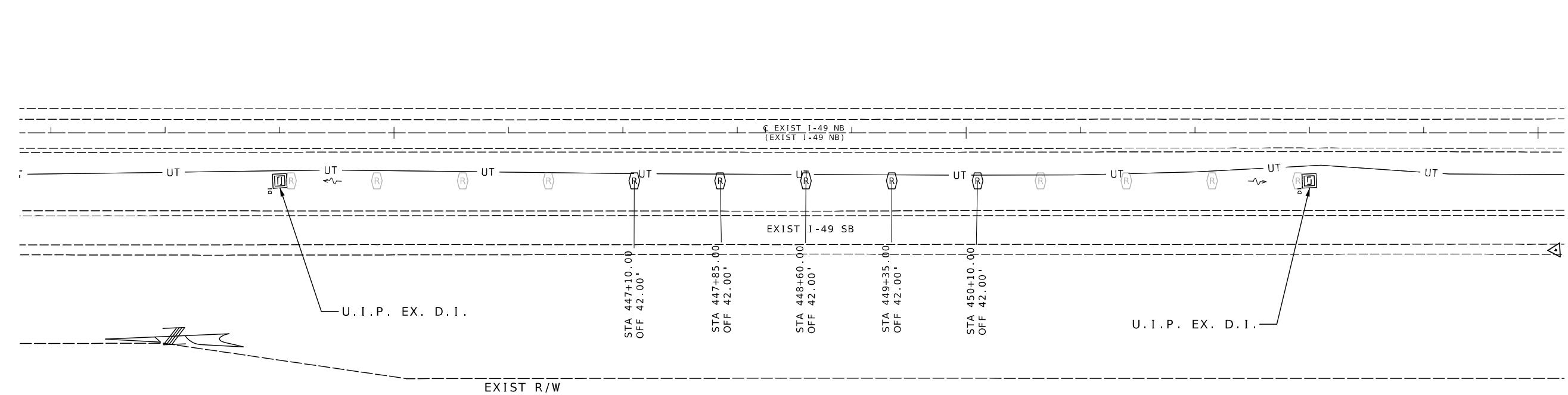
NOTES:

1. PREVIOUSLY INSTALLED DITCH CHECKS TO REMAIN IN PLACE

450

TEMPORARY EROSION CONTROL LEGEND

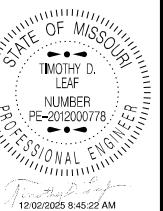
(R) ROCK DITCH CHECK



445

U.I.P. AND REHABILITATE EXISTING (75'-90'-75') CONTINUOUS COMPOSITE PLATE GIRDER SPANS (SKEW: SQUARE)

SEC/SUR 5 TWP 36N RGE 31W

12/2/2025
TIMOTHY D. LEAF - CIVIL
MO-PE-2012000778

DATE PREPARED

12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 1

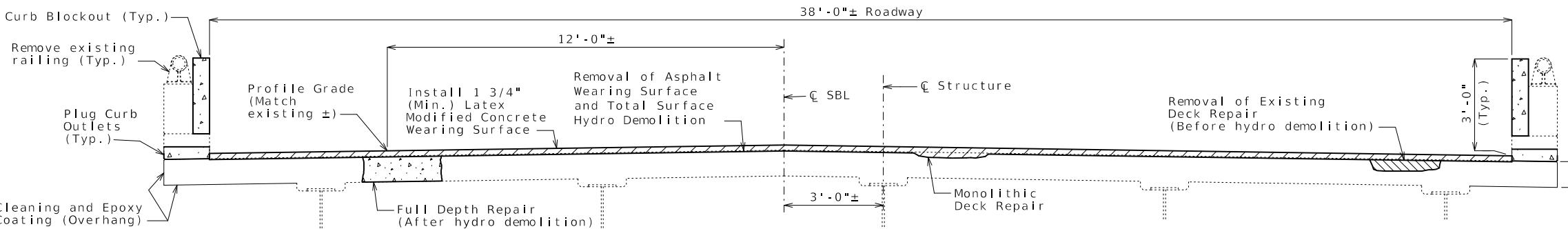
COUNTY VERNON

JOB NO. JSR0274

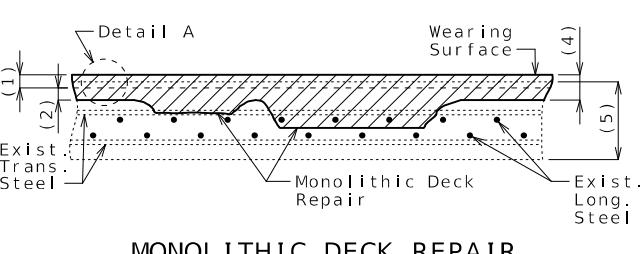
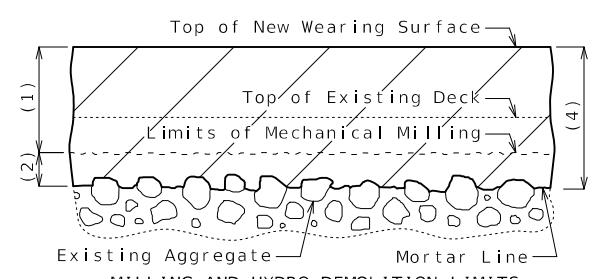
CONTRACT ID.

PROJECT NO.

BRIDGE NO. A26141



TYPICAL SECTION THRU EXISTING DECK

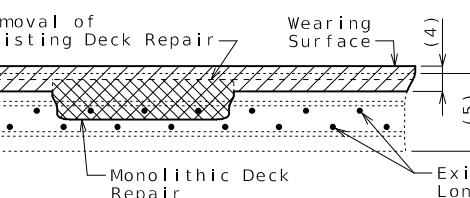
MONOLITHIC DECK REPAIR
REQUIRING INCIDENTAL FORMING

DETAIL A

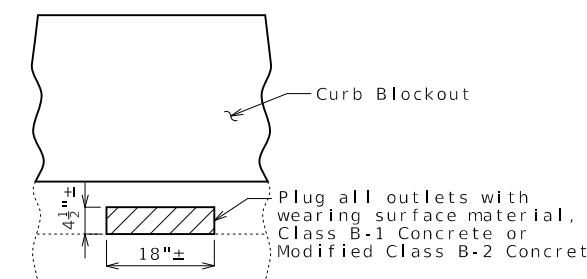
Notes:

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Plugging Existing Curb Outlets.

Estimated material required to fill all curb outlets is 1.8 cubic yards (for information only).

MONOLITHIC DECK REPAIR
REQUIRING FULL DEPTH REPAIR

- (1) Removal of existing 3/4"± chip seal wearing surface plus 1/2" of existing deck
- (2) 1/2" minimum total surface hydro demolition of sound concrete, measured to mortar line
- (3) 1" vertical side shall be established outside the deteriorated area.
- (4) 1 3/4" minimum latex modified concrete wearing surface
- (5) Original depth of deck

PART ELEVATION SHOWING
PLUGGING OF CURB OUTLETS

New 1 3/4" Latex Modified Concrete Wearing Surface not shown for clarity.

Estimated Quantities

Item	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot 23
Total Surface Hydro Demolition	sq. yard 996
Removal of Asphalt Wearing Surface	sq. foot 8960
Removal of Existing Deck Repair	sq. foot 400
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot 82
Remove and Replace Barrier	linear foot 21
Bridge Approach Slab (Major)	sq. yard 171
Supplementary Wearing Surface Material	cu. yard 28
Latex Modified Concrete Wearing Surface	sq. yard 996
Diamond Grinding	sq. yard 996
Class B-2 Concrete	cu. yard 40.5
Curb Blockout	linear foot 535
Full Depth Repair	sq. foot 700
Cleaning and Epoxy Coating	sq. foot 1546
Reinforcing Steel (Epoxy Coated)	pound 2090
Cored Slab Drains	each 60
Plugging Existing Curb Outlets	each 62
Vertical Drain at End Bents	each 2

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

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

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 5

Design Loading:

HS20-44 (1965 and New Construction)

Design Unit Stresses:

Class B-1 Concrete (Curb Blockout) $f'c = 4,000$ psi
Class B-2 Concrete (Full Depth Repair) $f'c = 4,000$ psi
Reinforcing Steel (ASTM A615 Grade 60) $fy = 60,000$ psi

Miscellaneous:

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

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

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

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

Traffic Handling:

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

REPAIRS TO BRIDGE: ROUTE I-49 SB
OVER DOUGLAS BRANCH

ROUTE I-49 SB FROM ROUTE D TO ROUTE M
ABOUT 1.0 MILE SOUTH OF ROUTE D
BEGINNING STATION 432+33.00± (MATCH EXISTING)



MISSOURI HIGHWAYS AND TRANSPORTATION

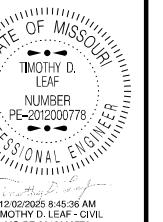
COMMISSION

MODOT

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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



12/2/2025 8:45:36 AM

TIMOTHY D. LEAF - CIVIL

MO-PE-201200078

DATE PREPARED

12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A26141

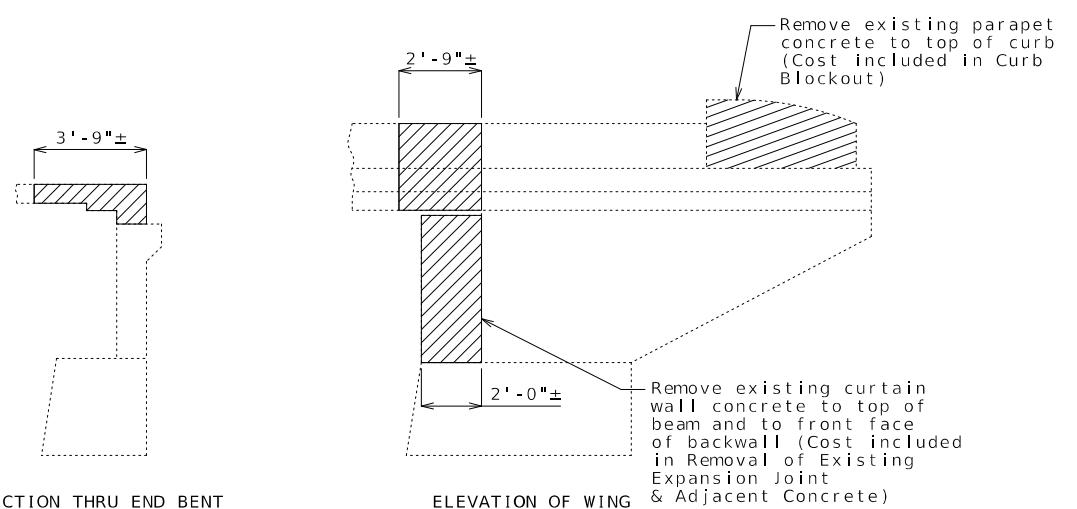
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

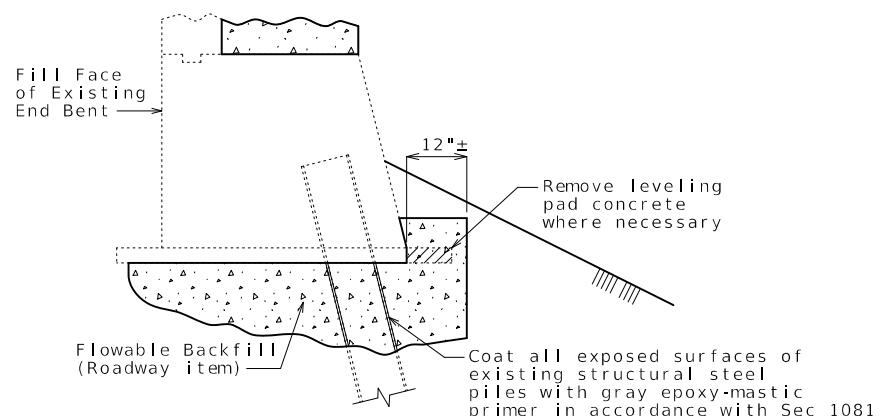
105 WEST CAPITOL JEFFERSON CITY, MO 65102

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



DETAILS OF CONCRETE REMOVAL
AT END BENT NO. 1

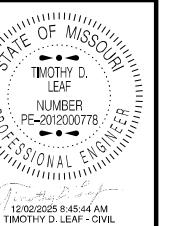
Note:
Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for plain bars and 30 diameters for deformed bars, unless otherwise noted.



PART SECTION SHOWING
FLOWABLE BACKFILL AT
EXPOSED PILES AT
END BENTS NO. 1 & 4

Note: Coating of exposed surfaces of existing piles will be considered completely covered by the contract unit price for Flowable Backfill (Roadway item).

REHAB DETAILS



12/02/2025 8:45:44 AM
TIMOTHY D. LEAF - CIVIL
MO-TE-201200778

DATE PREPARED
12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 3

COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A26141

SECTION NEAR END BENT

End Bent No. 1 shown, End Bent No. 4 similar.

Existing bearings and steel end diaphragms not shown for clarity (leave in place).

Resin anchors, barrier, and flowable backfill not shown for clarity.

DATE

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

MODOT

12' ±

6' ±

2' - 0" ±

3/4" Jt. Filler

7-#4-H104

16 1/2"

4"

12" 12"

2' - 4" ±

2' - 2"

6 Spa. @ 12"

2' 6"

6 Spa. @ 12"

2' 6"

6 Spa. @ 12"

2' 2"

2' 4" ±

30 3/4" Ø Resin Anchors System B (Spa. as Shown) (Bend in field)

12" 12"

2' 2"

3' - 4 1/2" ±

8' - 6" ±

8' - 6" ±

8' - 6" ±

3' - 4 1/2" ±

40' - 9" ±

12' ±

6" ±

2' - 9" ±

3' - 9" ±

4"

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H101 (Top)

16 1/2"

12" ±

6" ±

2' - 9" ±

3' - 9" ±

4"

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H102 (Fill face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H103 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H104 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H105 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H100 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H101 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H102 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H103 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H104 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H105 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H100 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H101 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H102 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H103 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H104 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H105 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H100 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H101 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H102 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H103 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H104 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H105 (Front face)

16 1/2"

12" ±

6" ±

2' - 0" ±

4. #6-H100 (Front face)

16 1/2"

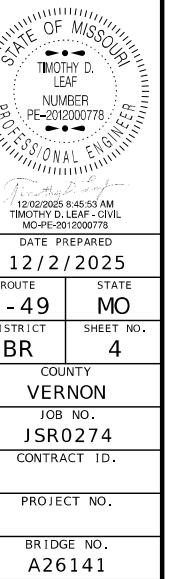
12" ±

6" ±

2' - 0" ±

4. #6-H101 (Front face)

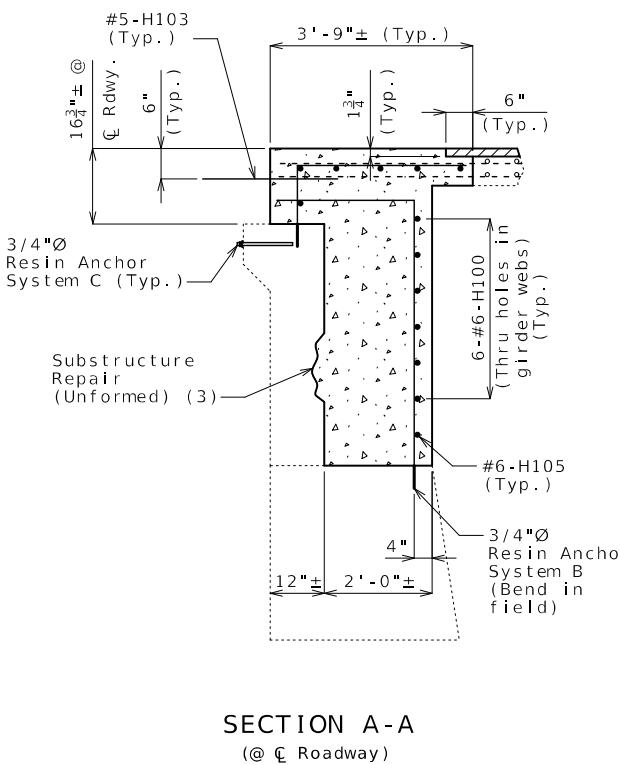
16 1/2"



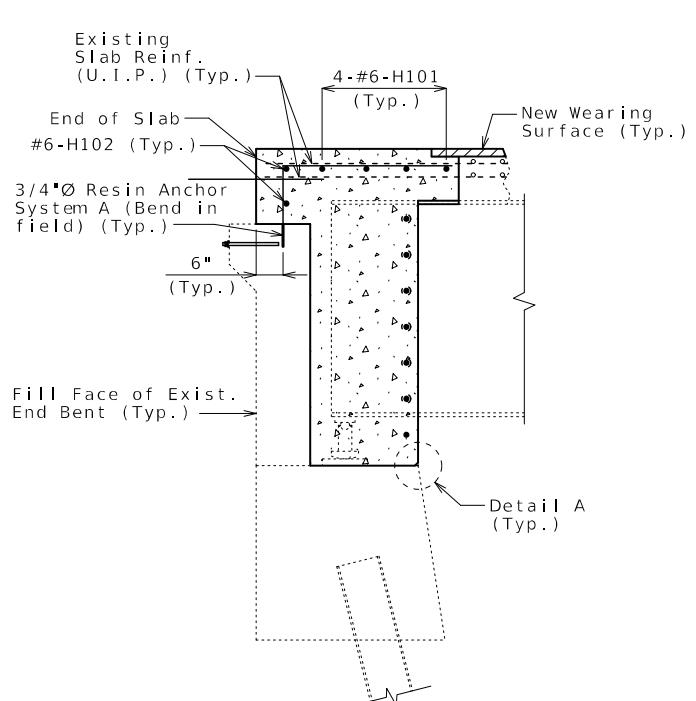
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I-49	MO
DISTRICT	SHEET NO.
BR	4
COUNTY	
VERNON	
JOB NO.	JSR0274
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A26141

SECTION	DESCRIPTION

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

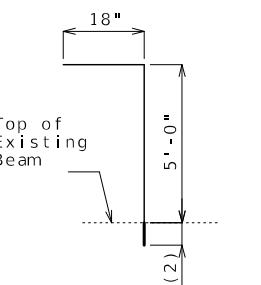
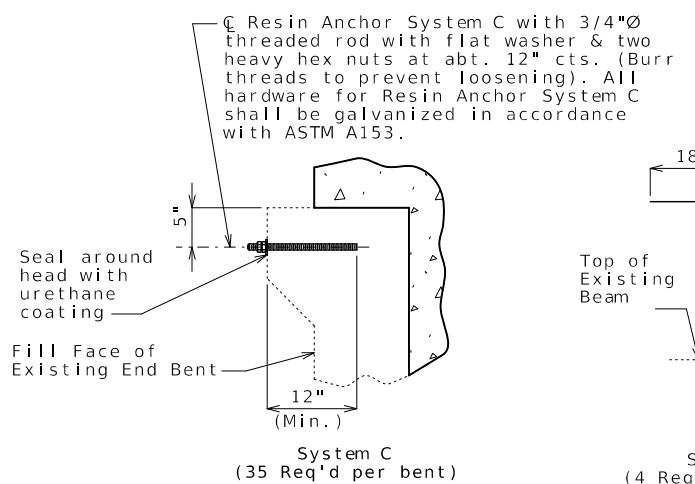
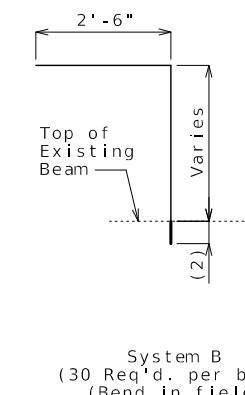
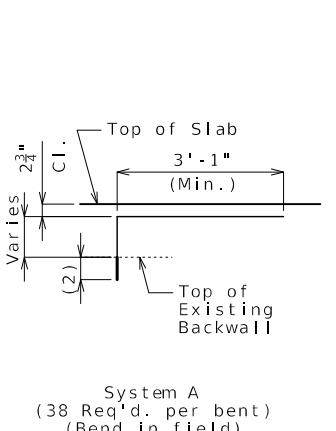


SECTION A-A
(@ @ Roadway)



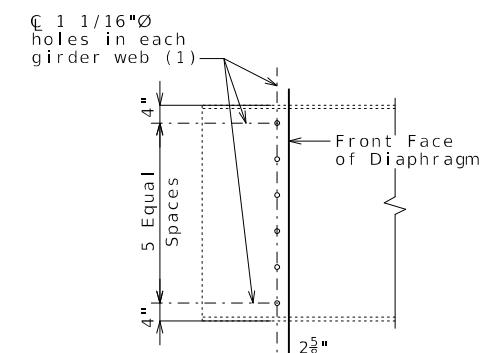
SECTION B-B

(3) Cost of substructure repair on backwall of End Bent No. 1, poured monolithically with concrete diaphragm, will be considered completely covered by the contract unit price for Class B-2 Concrete. (Estimated 10 square feet)



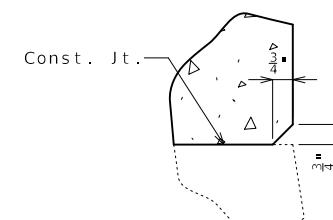
DETAILS OF RESIN ANCHOR SYSTEMS

(2) Manufacturer's recommended embedment length (5 inches minimum)



DETAIL OF WEB HOLES
AT END BENTS

(1) Cost of field drilling holes in existing plate girder webs will be considered completely covered by the contract unit price for Reinforcing Steel (Epoxy Coated).



DETAIL A

Notes:

Work this sheet with Sheet No. 3.

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

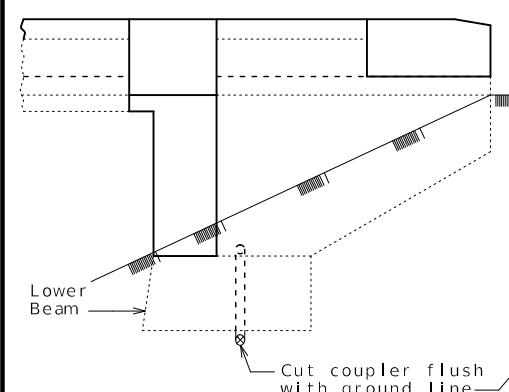
Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Class B-2 Concrete.

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

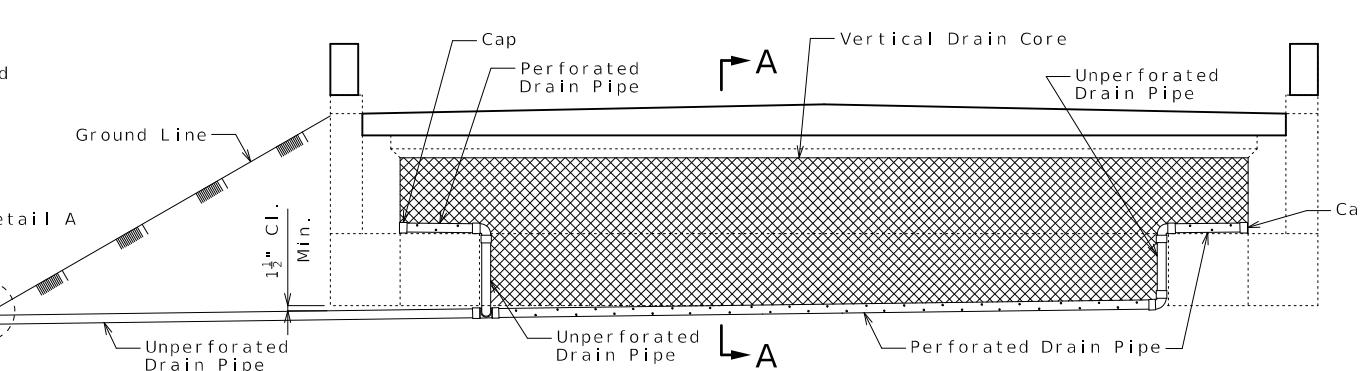
An epoxy coated #6 Grade 60 reinforcing bar shall be substituted for the 3/4"Ø threaded rods for Resin Anchors System A, B and D.

For details of flowable backfill at exposed piles, see Sheet No. 2.

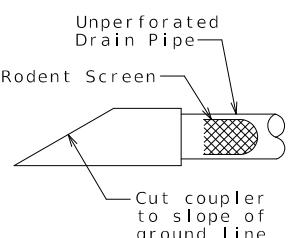
For details of barrier replacement, see Sheet No. 8.



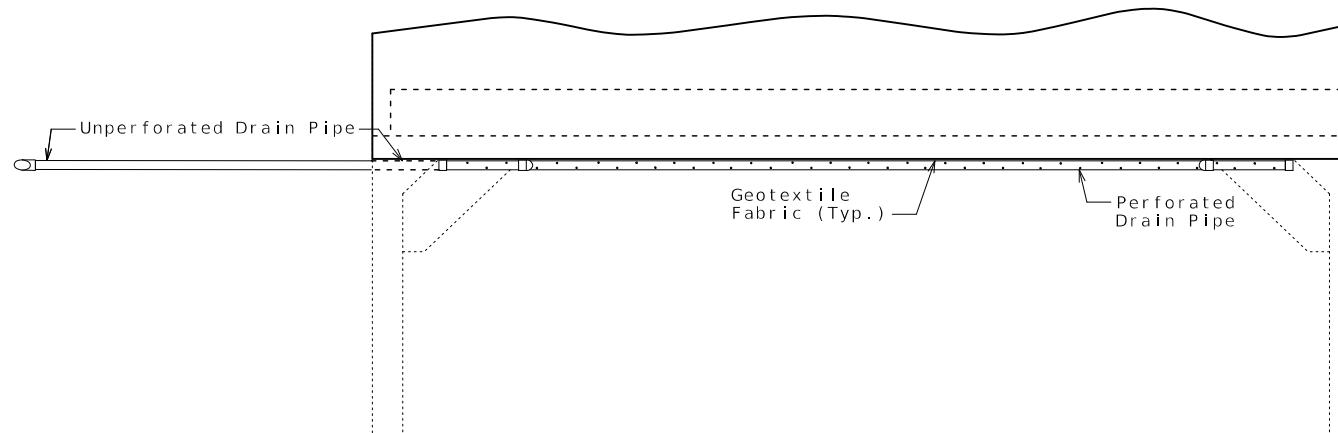
ELEVATION OF WING



ELEVATION OF END BENT

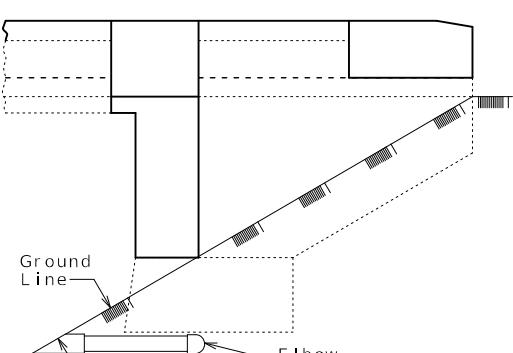


DETAIL A

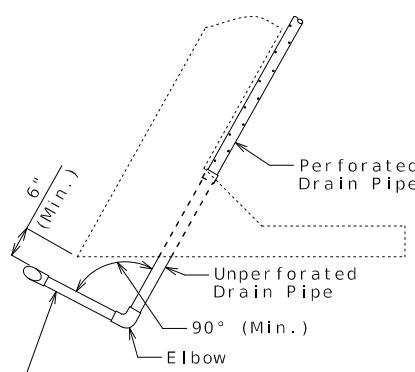


PLAN OF END BENT

(Existing approach notch not shown for clarity.)



ELEVATION OF WING

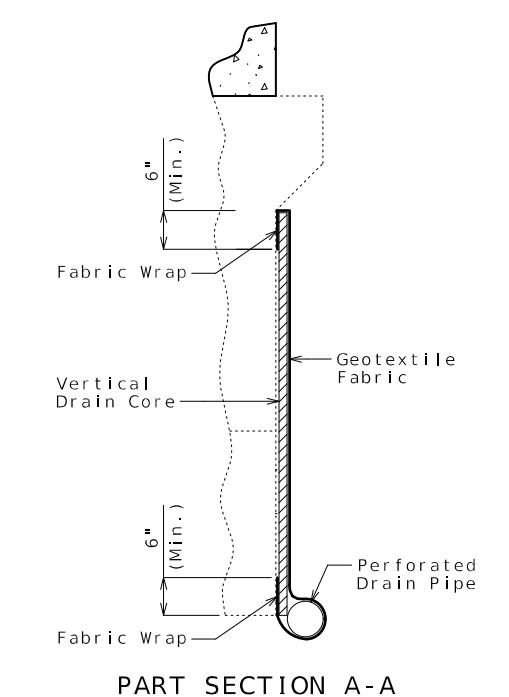


PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)

VERTICAL DRAIN AT END BENTS



PART SECTION A-A

STATE OF MISSOURI	
PROFESSIONAL ENGINEER	
TIMOTHY D. LEAF	
NUMBER PE-2012000778	
12/02/2025 8:45:02 AM	
TIMOTHY D. LEAF - CIVIL	
MO-PE-2012000778	
DATE PREPARED	
12/2/2025	
ROUTE	STATE
I-49	MO
DISTRICT	COUNTY
BR	VERNON
SHEET NO.	
5	
JOB NO.	
JSR0274	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A26141	
DESCRIPTION	DATE

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

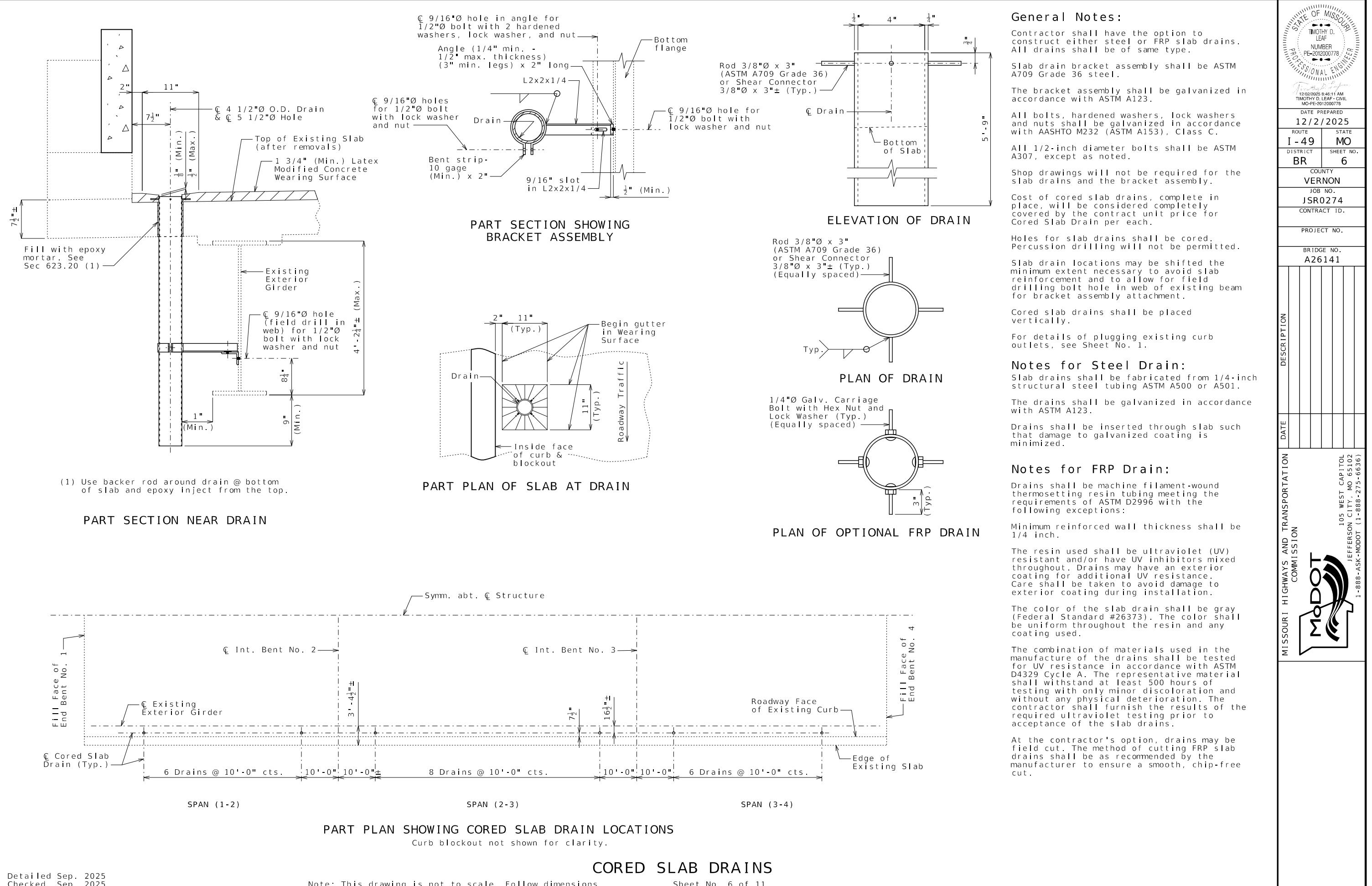
General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

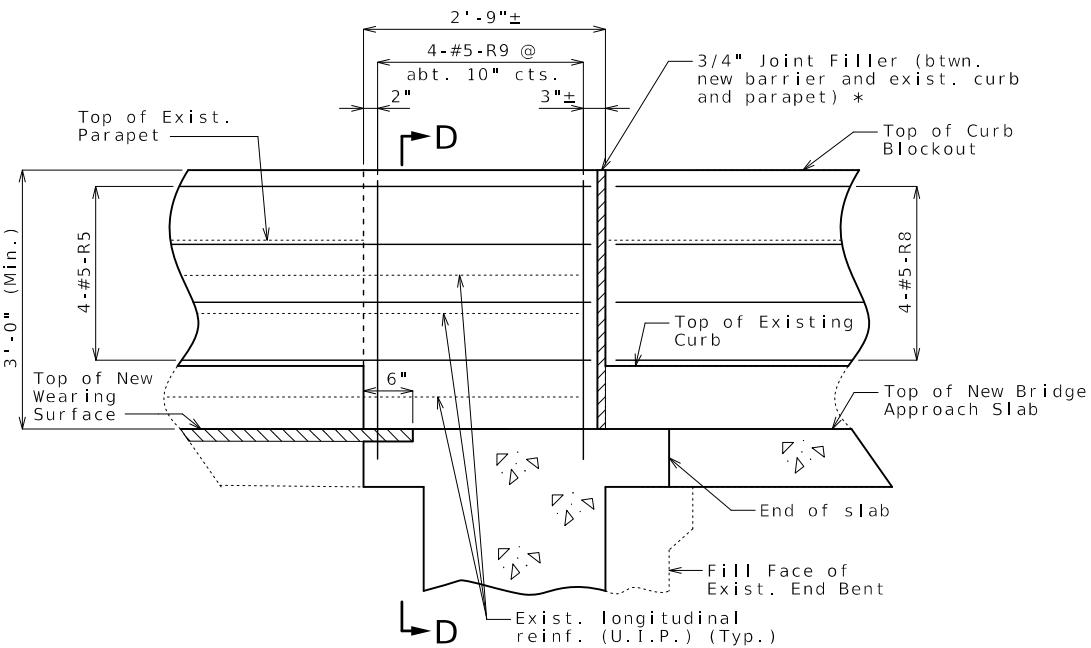
Perforated pipe shall be placed at fill face side at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.



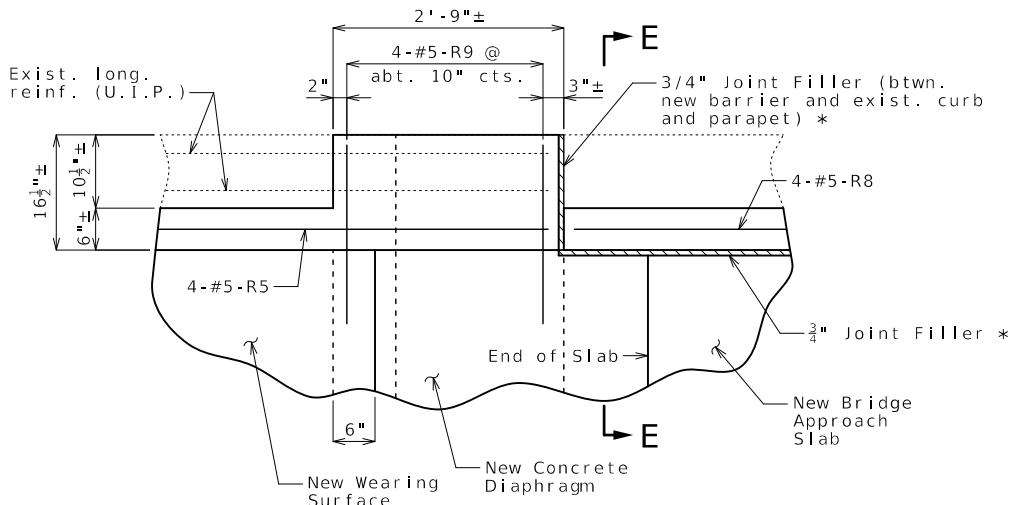
STATE OF MISSOURI
PROFESSIONAL ENGINEER
12/02/2025 8:46:31 AM
TIMOTHY D. LEAF - CIVIL
PE-2012000778

DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 8
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26141

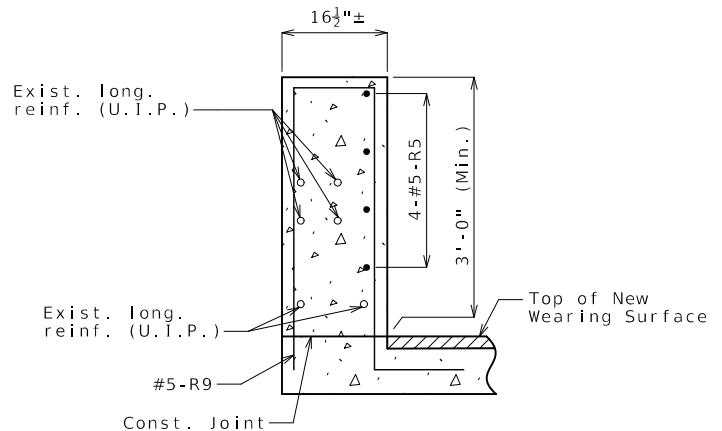
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105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



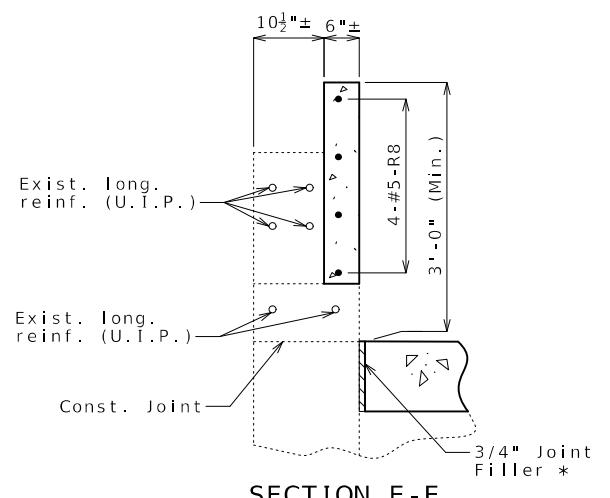
PART ELEVATION



PART PLAN



SECTION D-D



SECTION E-E

Notes:

Payment for all concrete and reinforcement for barrier replacement at End Bents, complete in place, will be considered completely covered by the contract unit price for Remove and Replace Barrier.

Ends of existing longitudinal reinforcement in curb and parapet may be trimmed as necessary to maintain 1 1/2" clearance to end of curb blockout.

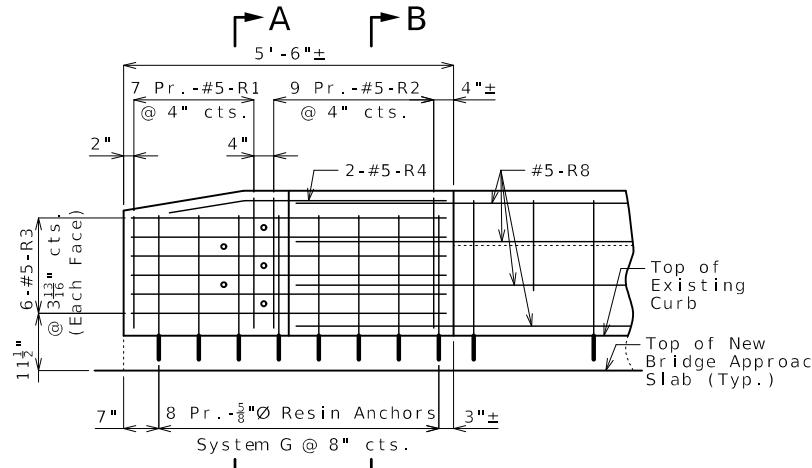
* Seal joint with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

BARRIER REPLACEMENT AT END BENTS

(Left curb at End Bent No. 4 shown)

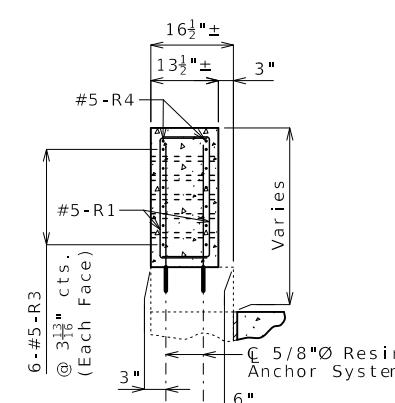
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 11

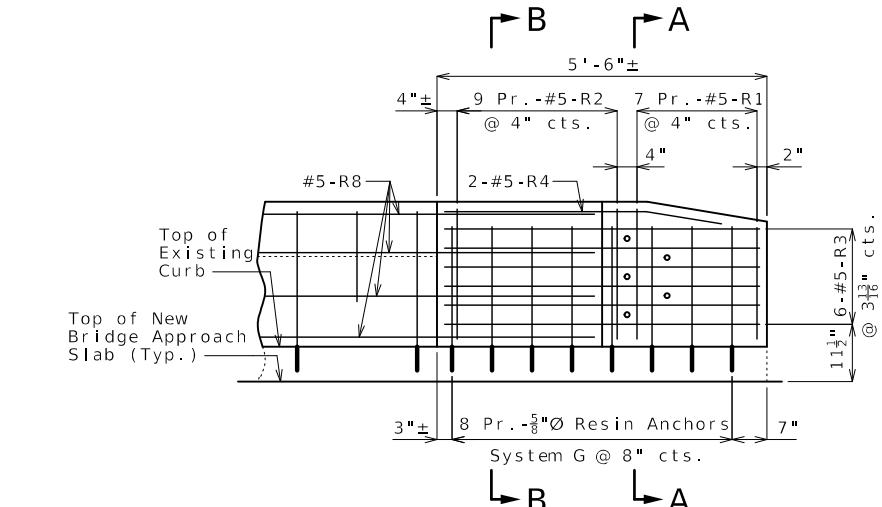


ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 4 similar)

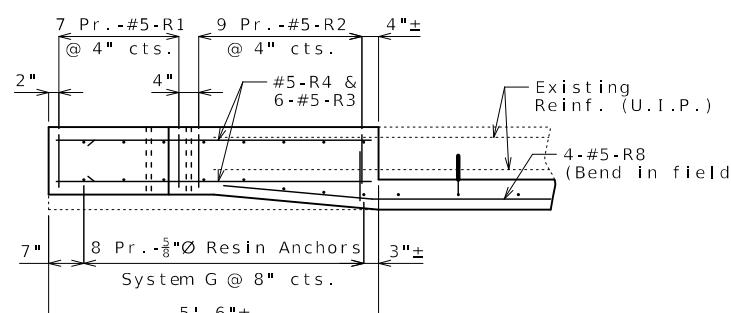


SECTION A-A



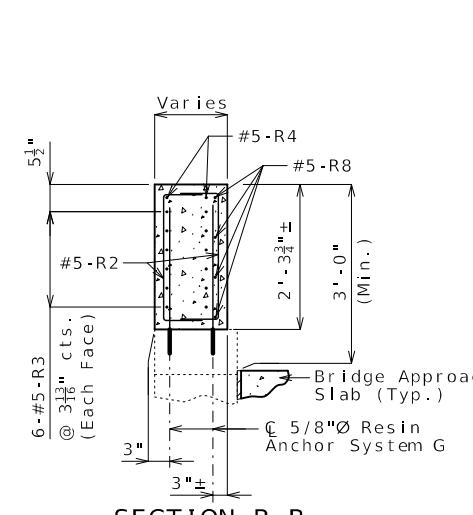
ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 1 similar)

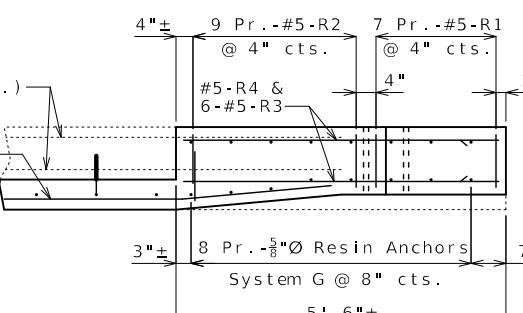


PLAN SHOWING REINFORCEMENT

LEFT END POST AT END BENT NO. 1

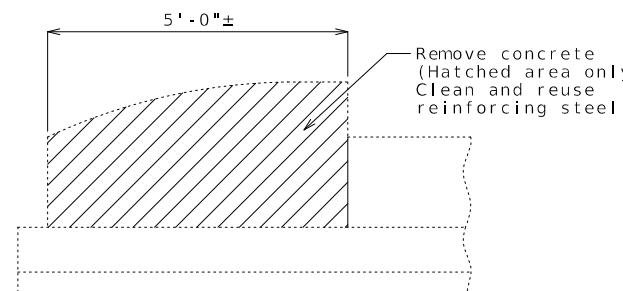


SECTION B-B



PLAN SHOWING REINFORCEMENT

LEFT END POST AT END BENT NO. 4



PART ELEVATION SHOWING END POST CONCRETE REMOVAL

Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.

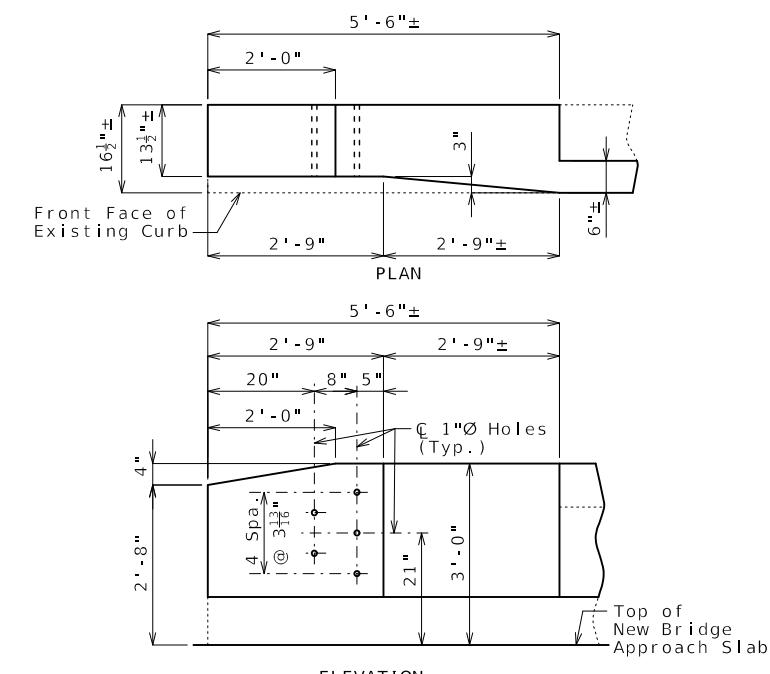
Notes:

Work this sheet with Sheets No. 7 & 8.

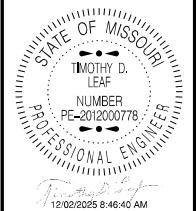
For details of resin anchors, see Sheet No. 7.

For details of Bridge Approach Slab, see Sheet No. 10.

Resin anchors shall be shifted or bent in field to clear one-inch diameter holes by at least 1/2 inch.



DETAILS OF END POST AND GUARD RAIL ATTACHMENT

DATE PREPARED
12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 9

COUNTY VERNON

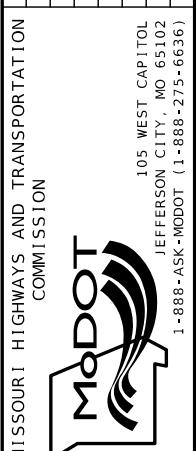
JOB NO. JSR0274

CONTRACT ID.

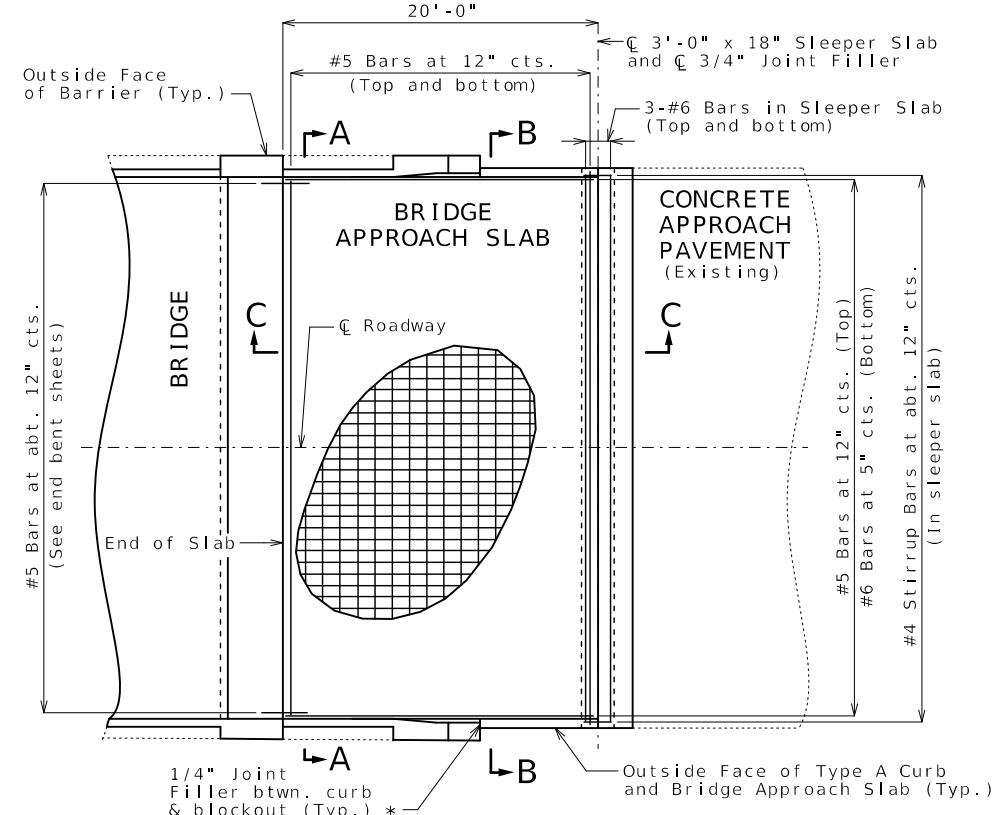
PROJECT NO.

BRIDGE NO. A26141

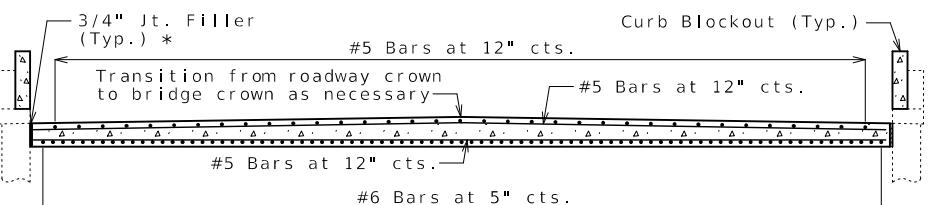
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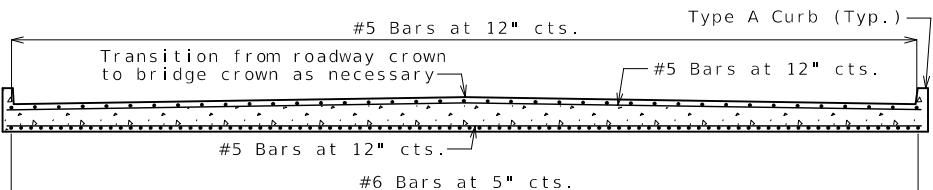
CURB BLOCKOUT AT END BENTS



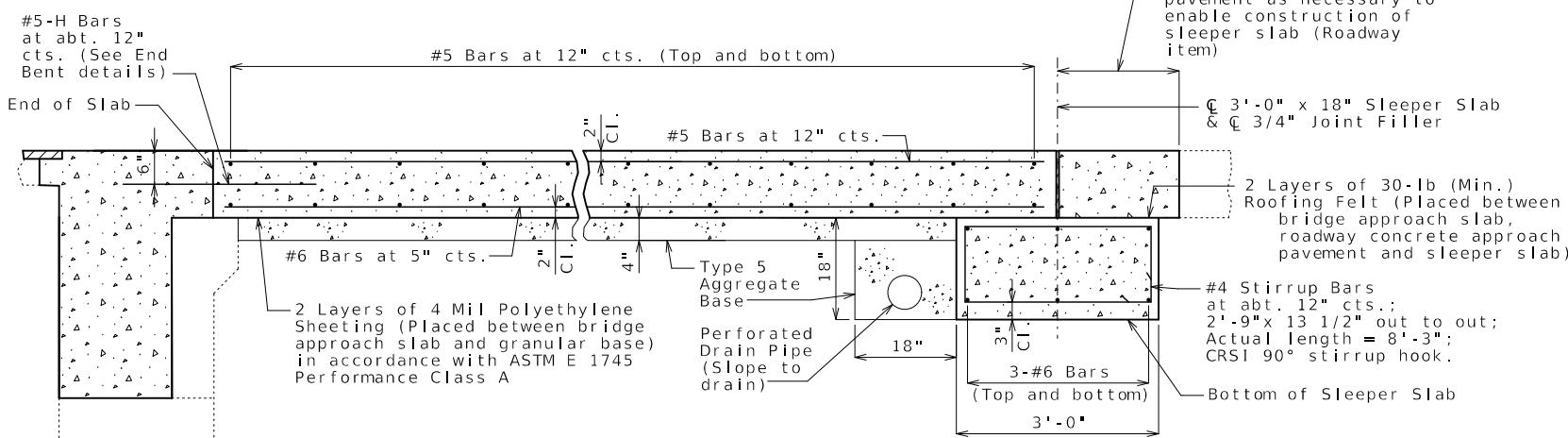
PART PLAN SHOWING REINFORCEMENT



SECTION A-A



SECTION B-B



SECTION C-C

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 ($f/c = 4.000$ psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with $fy = 60,000$ psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 24 inches for #5 bars and 40 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

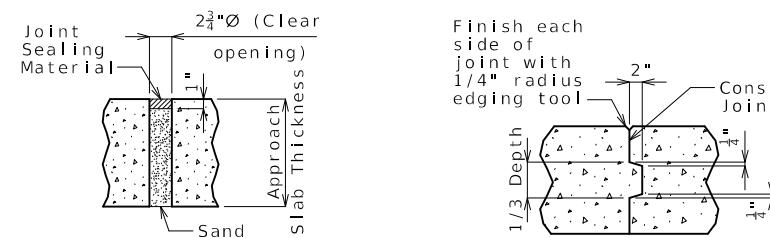
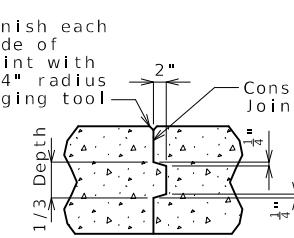
Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

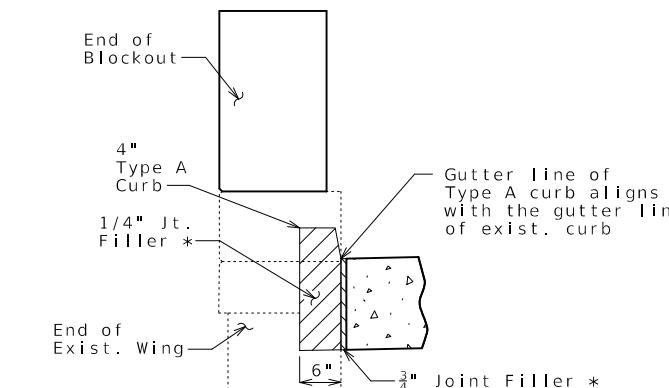
See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

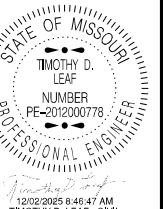
* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

UNDERSEAL ACCESS HOLE DETAIL
(If required)

CONSTRUCTION JOINT DETAIL



SECTION BETWEEN CURBS



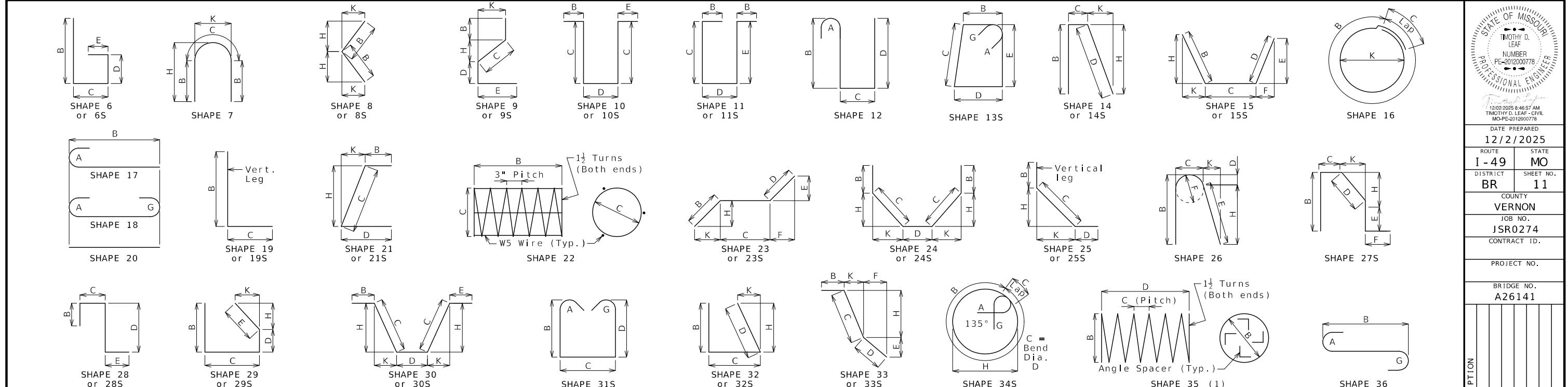
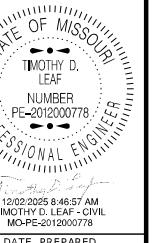
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12/2/2025

ROUTE I-49 STATE MO
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COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26141

DESCRIPTION DATE

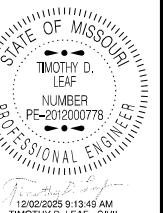
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



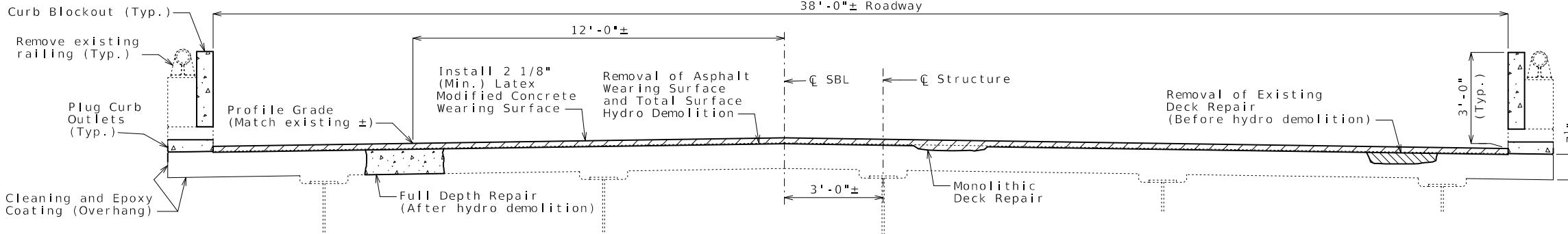
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Finished Bend Diameters D and Hook Dimensions																DESCRIPTION <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																																																																																																																																																																																																																																																																				
BENDING DIAGRAMS																																																																																																																																																																																																																																																																																				
<p>Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.</p> <p>All bars shall be ASTM A615 Grade 60.</p> <p>Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.</p> <p>SH = Required shape, see bending diagrams.</p> <p>V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.</p>																																																																																																																																																																																																																																																																																				
Reinforcing Steel Totals (Pounds) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Substructure</th> <th colspan="2">Superstructure</th> <th colspan="2">Entire Bridge</th> </tr> <tr> <th>Size</th> <th>Plain</th> <th>Epoxy</th> <th>Slab</th> <th>Barrier</th> <th>Form</th> <th>Plain</th> <th>Epoxy</th> </tr> </thead> <tbody> <tr> <td>By Size</td> <td>5</td> <td>0</td> <td>0</td> <td>193</td> <td>3,118</td> <td>0</td> <td>0</td> <td>3,311</td> </tr> <tr> <td>By Type</td> <td>6</td> <td>0</td> <td>0</td> <td>1,896</td> <td>0</td> <td>0</td> <td>0</td> <td>1,896</td> </tr> <tr> <td></td> <td>0</td> <td>0</td> <td>2,089</td> <td>3,118</td> <td>0</td> <td>0</td> <td>0</td> <td>5,207</td> </tr> </tbody> </table>																	Substructure		Superstructure		Entire Bridge		Size	Plain	Epoxy	Slab	Barrier	Form	Plain	Epoxy	By Size	5	0	0	193	3,118	0	0	3,311	By Type	6	0	0	1,896	0	0	0	1,896		0	0	2,089	3,118	0	0	0	5,207																																																																																																																																																																																																																											
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<p>All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.</p>																																																																																																																																																																																																																																																																																				
Bill of Reinforcing Steel <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">No.</th> <th rowspan="2">Size/ Mark</th> <th rowspan="2">Location</th> <th rowspan="2">Codes</th> <th colspan="7">Dimensions</th> <th rowspan="2">Nom. Length ft. in.</th> <th rowspan="2">Actual Length ft. in.</th> <th rowspan="2">Weight lb</th> </tr> <tr> <th>B ft. in.</th> <th>C ft. in.</th> <th>D ft. in.</th> <th>E ft. in.</th> <th>F ft. in.</th> <th>H ft. in.</th> <th>K ft. in.</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>6 H100</td> <td>End Bents 1 & 4</td> <td>E 20</td> <td>44 4.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>44 4</td> <td>44 4</td> <td>799</td> </tr> <tr> <td>8</td> <td>6 H101</td> <td>DIAPHRAGM</td> <td>E 20</td> <td>40 6.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>40 6</td> <td>40 6</td> <td>487</td> </tr> <tr> <td>4</td> <td>6 H102</td> <td>DIAPHRAGM</td> <td>E 20</td> <td>37 7.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>37 7</td> <td>37 7</td> <td>226</td> </tr> <tr> <td>74</td> <td>5 H103</td> <td>DIAPHRAGM</td> <td>E 20</td> <td>2 6.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2 6</td> <td>2 6</td> <td>193</td> </tr> <tr> <td>28</td> <td>6 H104</td> <td>DIAPHRAGM</td> <td>E 10S</td> <td>2 6.00</td> <td>18.50</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>6 7</td> <td>6 3</td> <td>263</td> </tr> <tr> <td>2</td> <td>6 H105</td> <td>DIAPHRAGM</td> <td>E 20</td> <td>40 3.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>40 3</td> <td>40 3</td> <td>121</td> </tr> <tr> <td></td> <td></td> <td>Curb Blockout</td> <td></td> </tr> <tr> <td>56</td> <td>5 R1</td> <td>BLOCKOUT</td> <td>E 10S</td> <td>8</td> <td>9.50</td> <td>19.75</td> <td></td> <td></td> <td></td> <td></td> <td>3 3</td> <td>3 0</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Incr. = 0.625"</td> <td></td> <td></td> <td>9.50</td> <td>23.75</td> <td></td> <td></td> <td></td> <td></td> <td>3 7</td> <td>3 4</td> <td>185</td> </tr> <tr> <td>72</td> <td>5 R2</td> <td>BLOCKOUT</td> <td>E 10S</td> <td></td> <td>9.50</td> <td>23.75</td> <td></td> <td></td> <td></td> <td></td> <td>3 7</td> <td>3 4</td> <td>250</td> </tr> <tr> <td>48</td> <td>5 R3</td> <td>BLOCKOUT</td> <td>E 20</td> <td>5 3.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5 3</td> <td>5 3</td> <td>263</td> </tr> <tr> <td>8</td> <td>5 R4</td> <td>BLOCKOUT</td> <td>E 23S</td> <td>16.25</td> <td>3 4.00</td> <td></td> <td></td> <td></td> <td></td> <td>2.75</td> <td>16.00</td> <td>4 8</td> <td>4 7</td> <td>38</td> </tr> <tr> <td>32</td> <td>5 R5</td> <td>BLOCKOUT</td> <td>E 20</td> <td>33 3.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>33 3</td> <td>33 3</td> <td>1,110</td> </tr> <tr> <td>32</td> <td>5 R6</td> <td>BLOCKOUT</td> <td>E 20</td> <td>11 9.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>11 9</td> <td>11 9</td> <td>392</td> </tr> <tr> <td>16</td> <td>5 R7</td> <td>BLOCKOUT</td> <td>E 20</td> <td>34 5.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>34 5</td> <td>34 5</td> <td>574</td> </tr> <tr> <td>16</td> <td>5 R8</td> <td>BLOCKOUT</td> <td>E 20</td> <td>10 0.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10 0</td> <td>10 0</td> <td>167</td> </tr> <tr> <td>16</td> <td>5 R9</td> <td>BLOCKOUT</td> <td>E 10S</td> <td>3 4.00</td> <td>11.50</td> <td>12.00</td> <td></td> <td></td> <td></td> <td></td> <td>8 8</td> <td>8 4</td> <td>139</td> </tr> </tbody> </table>																No.	Size/ Mark	Location	Codes	Dimensions							Nom. Length ft. in.	Actual Length ft. in.	Weight lb	B ft. in.	C ft. in.	D ft. in.	E ft. in.	F ft. in.	H ft. in.	K ft. in.	12	6 H100	End Bents 1 & 4	E 20	44 4.00							44 4	44 4	799	8	6 H101	DIAPHRAGM	E 20	40 6.00							40 6	40 6	487	4	6 H102	DIAPHRAGM	E 20	37 7.00							37 7	37 7	226	74	5 H103	DIAPHRAGM	E 20	2 6.00							2 6	2 6	193	28	6 H104	DIAPHRAGM	E 10S	2 6.00	18.50						6 7	6 3	263	2	6 H105	DIAPHRAGM	E 20	40 3.00							40 3	40 3	121			Curb Blockout													56	5 R1	BLOCKOUT	E 10S	8	9.50	19.75					3 3	3 0				Incr. = 0.625"			9.50	23.75					3 7	3 4	185	72	5 R2	BLOCKOUT	E 10S		9.50	23.75					3 7	3 4	250	48	5 R3	BLOCKOUT	E 20	5 3.00							5 3	5 3	263	8	5 R4	BLOCKOUT	E 23S	16.25	3 4.00					2.75	16.00	4 8	4 7	38	32	5 R5	BLOCKOUT	E 20	33 3.00							33 3	33 3	1,110	32	5 R6	BLOCKOUT	E 20	11 9.00							11 9	11 9	392	16	5 R7	BLOCKOUT	E 20	34 5.00							34 5	34 5	574	16	5 R8	BLOCKOUT	E 20	10 0.00							10 0	10 0	167	16	5 R9	BLOCKOUT	E 10S	3 4.00	11.50	12.00					8 8	8 4	139
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U.I.P. AND REHABILITATE EXISTING (60'-75'-90'-75'-60') CONTINUOUS COMPOSITE PLATE GIRDER SPANS (SKEW: 20° LA)

SEC/SUR 17 TWP 37N RGE 31W

DATE PREPARED
12/2/2025ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 1
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.BRIDGE NO.
A26291

DESCRIPTION

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

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:
HS20-44 (1965 and New Construction)

Design Unit Stresses:
Class B-1 Concrete (Curb Blockout) $f'c = 4,000$ psi
Class B-2 Concrete (Superstructure & Full Depth Repair) $f'c = 4,000$ psi
Reinforcing Steel (ASTM A615 Grade 60) $fy = 60,000$ psi
Structural Carbon Steel (ASTM A709 Grade 36) $fy = 36,000$ psi

Fabricated Steel Connections:
Field connections shall be made with 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16-inch diameter holes, except as noted.

Neoprene Pads:
Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

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

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

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

Structural Steel Protective Coatings:
Protective Coating: System G in accordance with Sec 1081.

Protective Coating Limits: The surface of all existing structural steel within a distance of not less than 10 feet from the end of beam at End Bents No. 1 & 6 shall be recoated. Within these limits, items to be recoated shall include beams, diaphragms, stiffeners, bearings, and miscellaneous structural steel items.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Recoating of Structural Steel (System G) with inorganic zinc primer. The cost of surface preparation will be considered completely covered by the contract unit price per sq. foot for Surface Preparation for Recoating Structural Steel.

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per sq. foot for Field Application of Inorganic Zinc Primer.

Field Coat(s): The color of the field coat(s) shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract unit price per sq. foot for Intermediate Field Coat (System G). The cost of the finish field coat will be considered completely covered by the contract unit price per sq. foot for Finish Field Coat (System G).

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

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

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

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

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

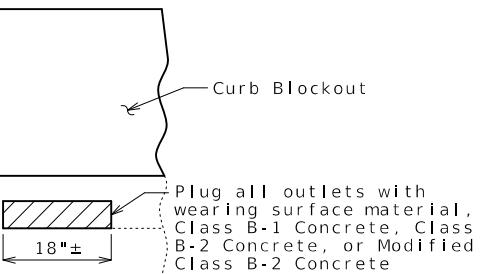
Detailed Sep. 2025
Checked Oct. 2025

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

Estimated Quantities	
Item	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot 34
Total Surface Hydro Demolition	sq. yard 1496
Removal of Asphalt Wearing Surface	sq. foot 13,466
Removal of Existing Deck Repair	sq. foot 300
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot 87
Removal of Existing Bearings and Anchor Bolts	each 10
** Removal of End Diaphragms and Bearing Stiffeners	each 4
Remove and Replace Barrier	linear foot 19
Bridge Approach Slab (Major)	sq. yard 171
* Supplementary Wearing Surface Material	cu. yard 20
Latex Modified Concrete Wearing Surface	sq. yard 1501
Diamond Grinding	sq. yard 1501
Class B-2 Concrete	cu. yard 10.7
Curb Blockout	linear foot 771
Substructure Repair (Formed)	sq. foot 30
Full Depth Repair	sq. foot 100
Cleaning and Epoxy Coating	sq. foot 2540
Reinforcing Steel (Epoxy Coated)	pound 780
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum 1
Fabricated Structural Carbon Steel (Misc.)	pound 2000
Surface Preparation for Recoating Structural Steel	sq. foot 1100
Field Application of Inorganic Zinc Primer	sq. foot 1100
Intermediate Field Coat (System G)	sq. foot 200
Finish Field Coat (System G)	sq. foot 200
Miscellaneous Weld Repairs	lump sum 1
Plugging Existing Curb Outlets	each 88
Cored Slab Drains	each 60
Vertical Drain at End Bents	each 2
Laminated Neoprene Bearing Pad Assembly	each 10
Strip Seal Expansion Joint System	linear foot 81

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

** For locations of bearing stiffeners to be removed and replaced, see Sheet No. 8.



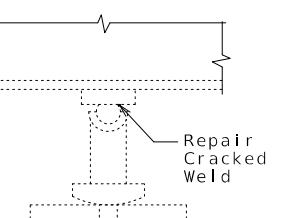
PART ELEVATION SHOWING PLUGGING OF CURB OUTLETS

New 2 1/8" Latex Modified Concrete Wearing Surface not shown for clarity.

Notes:

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Plugging Existing Curb Outlets.

Estimated material required to fill all curb outlets is 2.8 cubic yards (for information only).

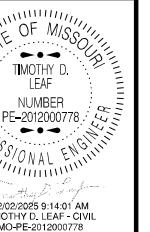


PART ELEVATION SHOWING WELD REPAIR AT BEARING NO. 4 AT INTERMEDIATE BENT NO. 2

Cost of performing weld repairs will be considered completely covered by the contract lump sum price for Miscellaneous Weld Repairs.

REPAIRS TO BRIDGE: ROUTE I-49 SB OVER LITTLE OSAGE RIVER

ROUTE I-49 SB FROM ROUTE TT TO ROUTE D
ABOUT 3.1 MILES SOUTH OF ROUTE TT
BEGINNING STATION 236+61.10± (MATCH EXISTING)



12/2/2025 9:14:01 AM
TIMOTHY D. LEAF - CIVIL
MO-PE-201200078

DATE PREPARED
12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID. A26291

PROJECT NO.

BRIDGE NO.

VERNON

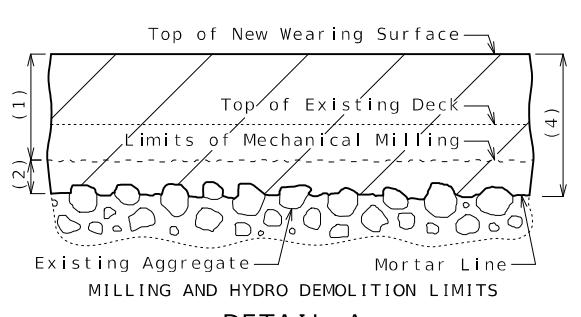
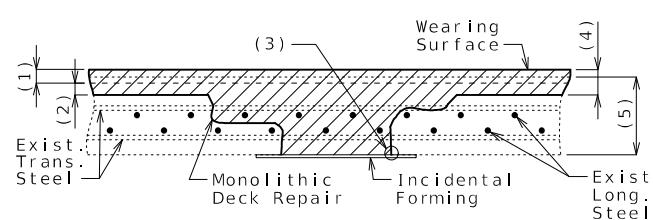
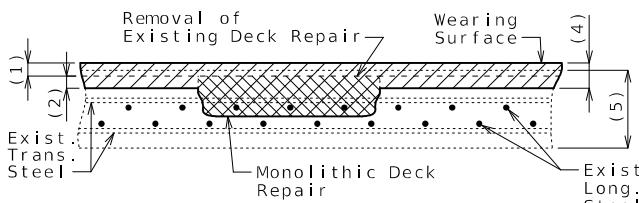
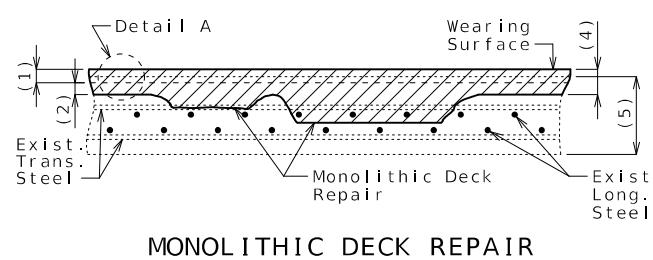
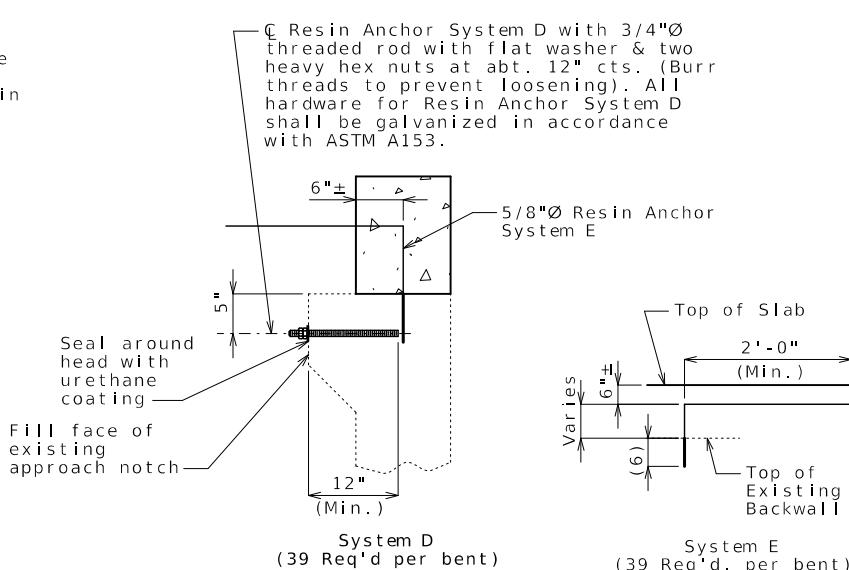
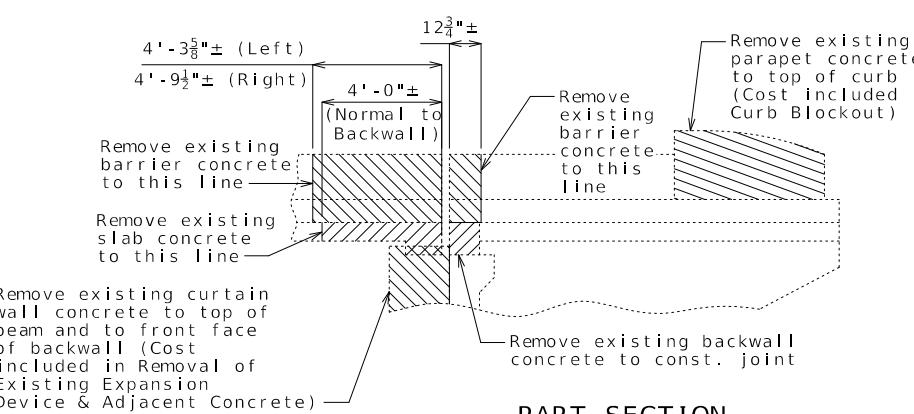
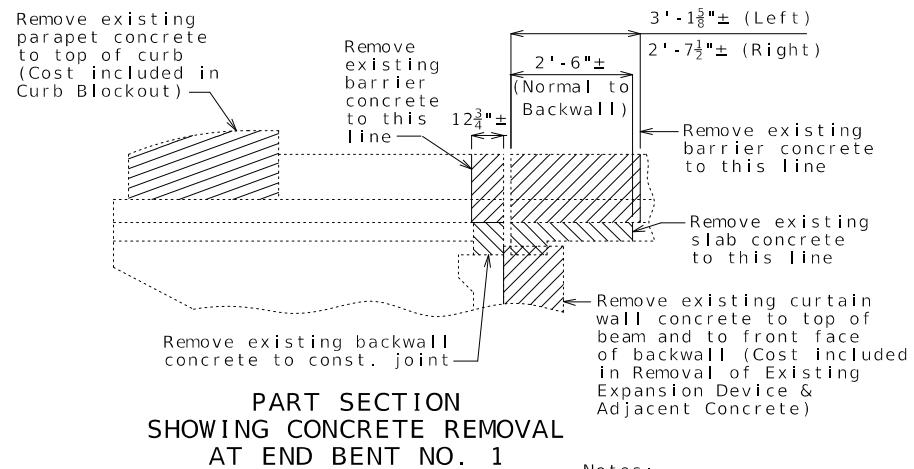
105 WEST CAPITOL
JEFFERSON CITY, MO 65102

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

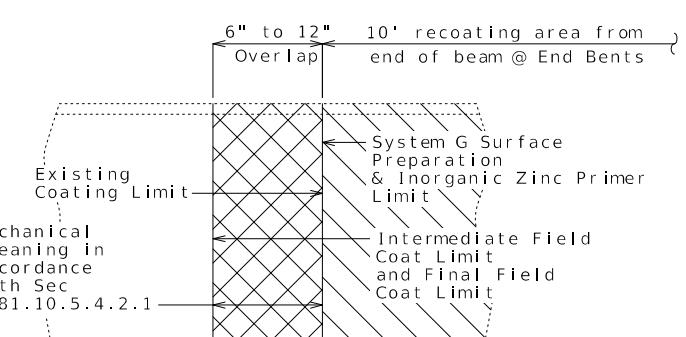
MODOT

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



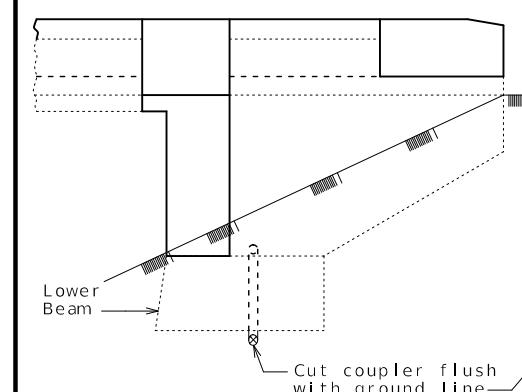
- (1) Removal of existing 1 1/8"± chip seal wearing surface plus 1/2" of existing deck
- (2) 1/2" minimum total surface hydro demolition of sound concrete, measured to mortar line
- (3) 1" vertical side shall be established outside the deteriorated area.
- (4) 2 1/8" minimum latex modified concrete wearing surface
- (5) Original depth of deck

TYPICAL SECTION THRU INTERMEDIATE BENT NO. 4 SHOWING SUBSTRUCTURE REPAIR

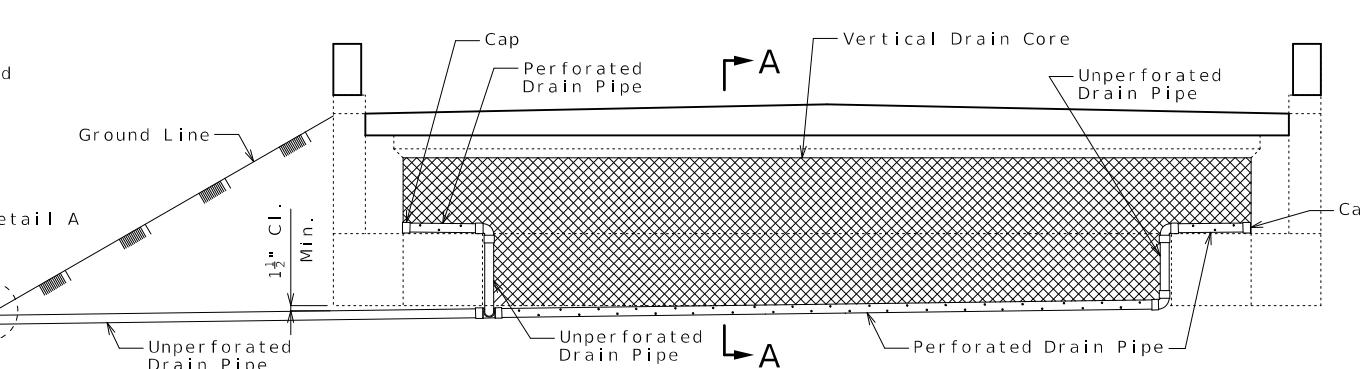


Limits of Paint Overlap: System G shall overlap the existing coating between 6 inches and 12 inches in order to achieve maximum coverage at the paint limit of each complete system near the expansion and contraction areas. The final field coating shall be masked to provide crisp, straight lines and to prevent overspray beyond the overlap required.

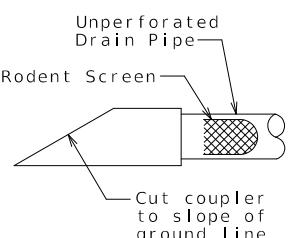
REHAB DETAILS



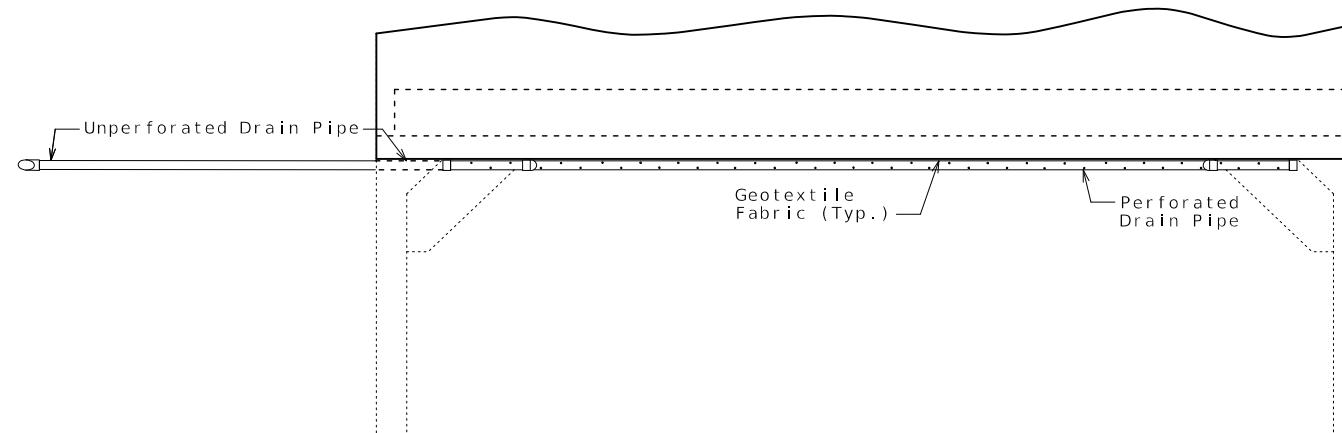
ELEVATION OF WING



ELEVATION OF END BENT

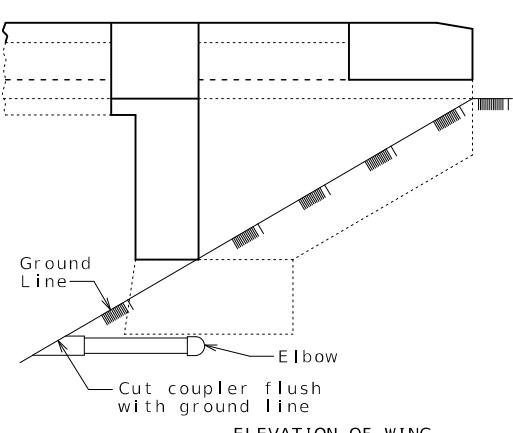


DETAIL A

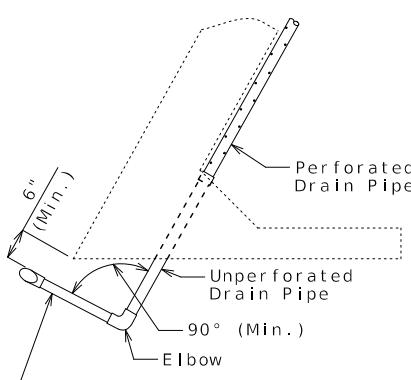


PLAN OF END BENT

(Existing approach notch not shown for clarity.)



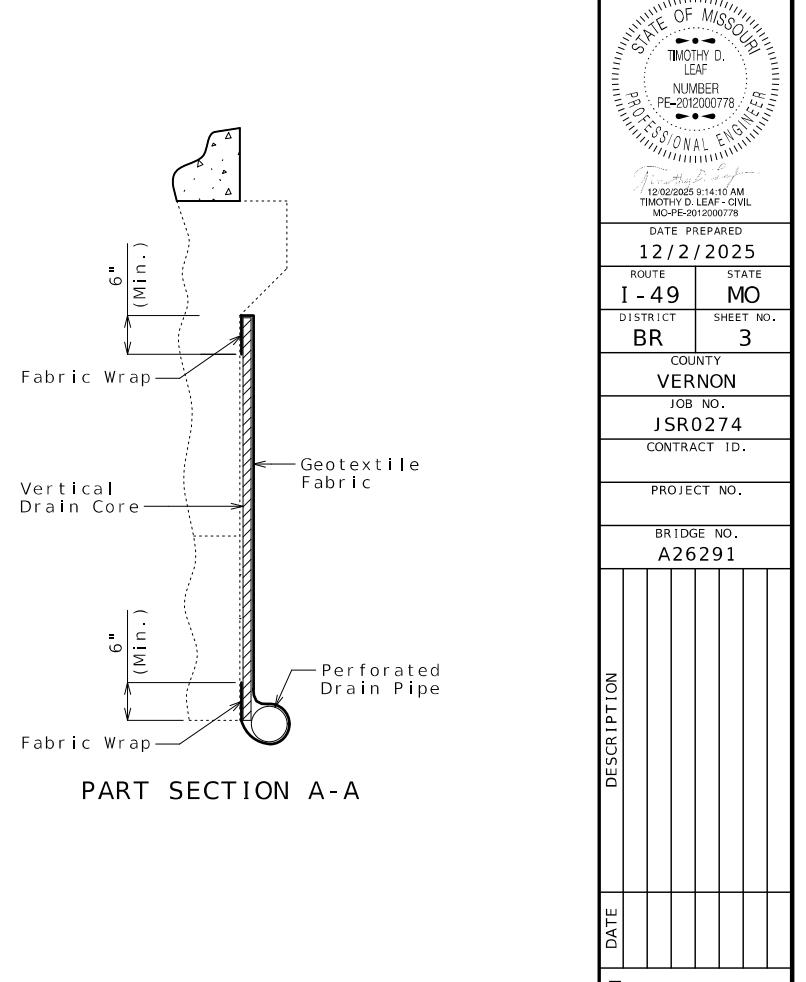
ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)



PART SECTION A-A

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

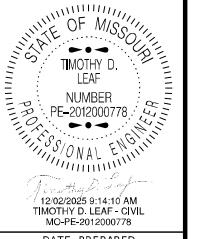
General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

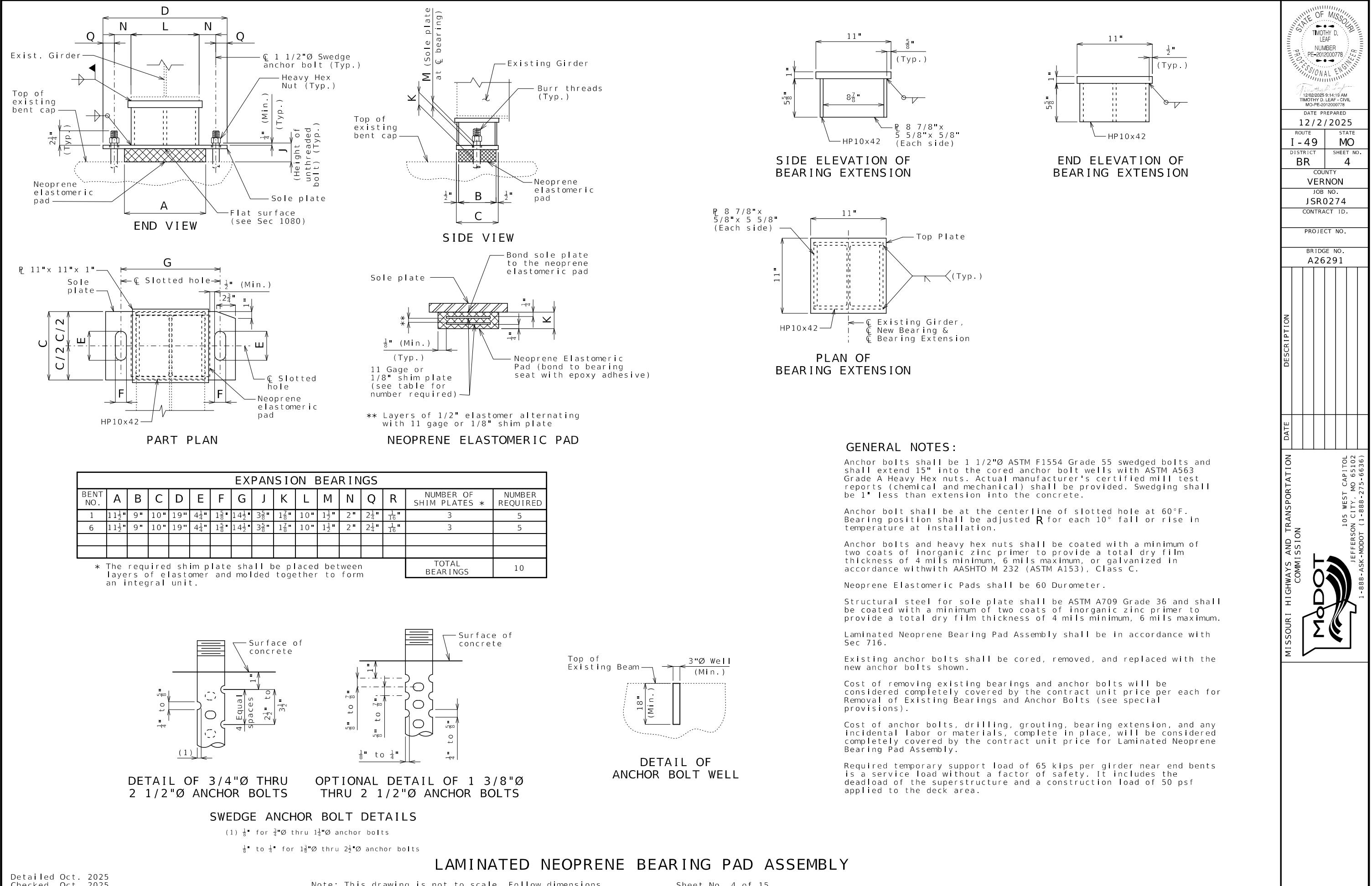
Perforated pipe shall be placed at fill face side at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

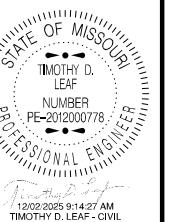


DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 3
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26291

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



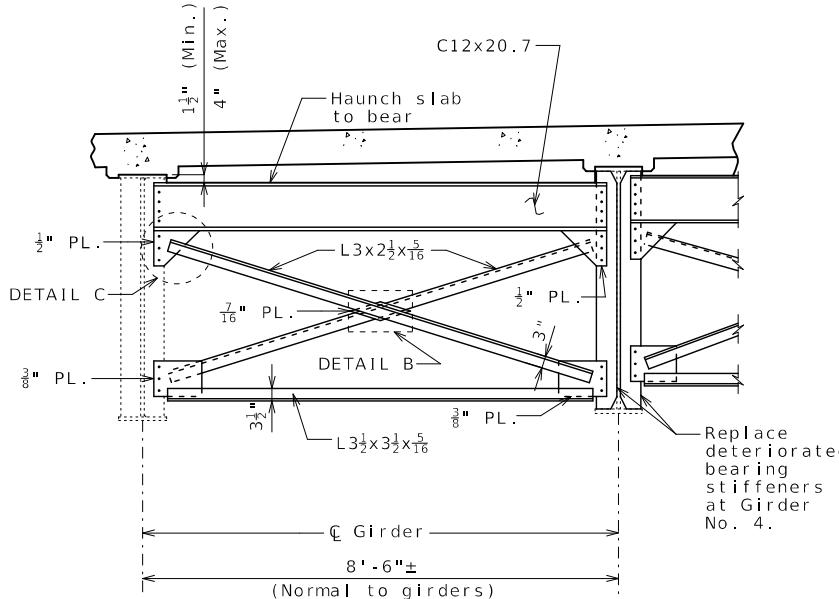
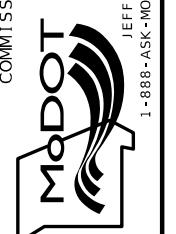




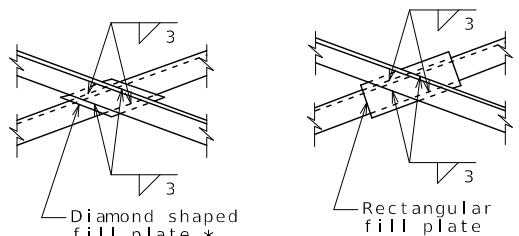
DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 5
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26291

DESCRIPTION	DATE

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



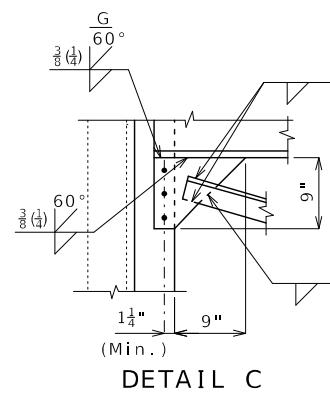
TYPICAL PART SECTION SHOWING
NEW END DIAPHRAGMS AT END BENT NO. 1



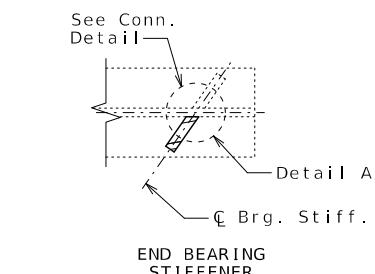
DETAIL B

OPTIONAL
DETAIL B

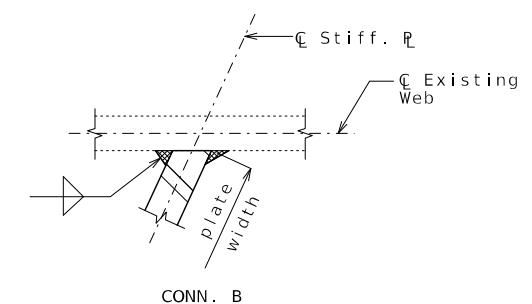
* At the contractor's option, rectangular fill plates may be used in lieu of diamond fill plates as shown in Optional Detail B.



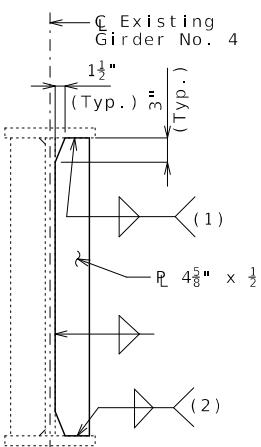
DETAIL C



TYPICAL LOCATION DETAIL

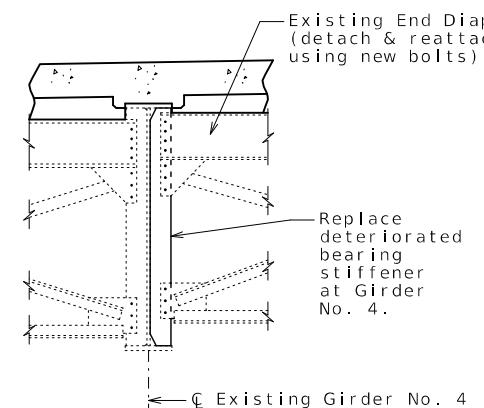


CONNECTION DETAIL

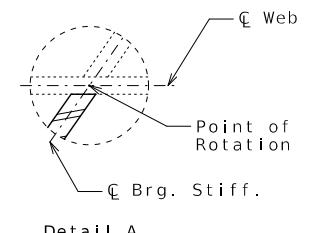


DETAIL OF NEW
BEARING STIFFENER
(Bolt holes not shown for clarity.)

- (1) Tight fit
- (2) Grind or mill to bear.



PART SECTION SHOWING
BEARING STIFFENER REPLACEMENT
AT END BENT NO. 6



Detail A

Notes:

Remove existing end diaphragms in all bays at End Bent No. 1. Remove existing deteriorated connection plate (bearing stiffener) at Girder No. 4. Grind smooth remnants of plate and weldment.

Detach existing end diaphragm at End Bent No. 6, Girder No. 4. Remove existing deteriorated connection plate (bearing stiffener). Grind smooth remnants of plate and weldment.

The cost of removing existing end diaphragms and bearing stiffeners, and removal of weld metal with the process of grinding will be considered completely covered by the contract unit price for Removal of End Diaphragm and Bearing Stiffeners (see special provisions).

The cost of furnishing and installing new end diaphragms and bearing stiffeners at End Bent No 1, complete in place, will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

The cost of furnishing and installing new bearing stiffener plate(s) at Girder No. 4 at End Bents No. 1 & 6, complete in place, will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

Structural steel for diaphragms shall be ASTM A709, Grade 36. Bolts shall be ASTM A325, Type 1.

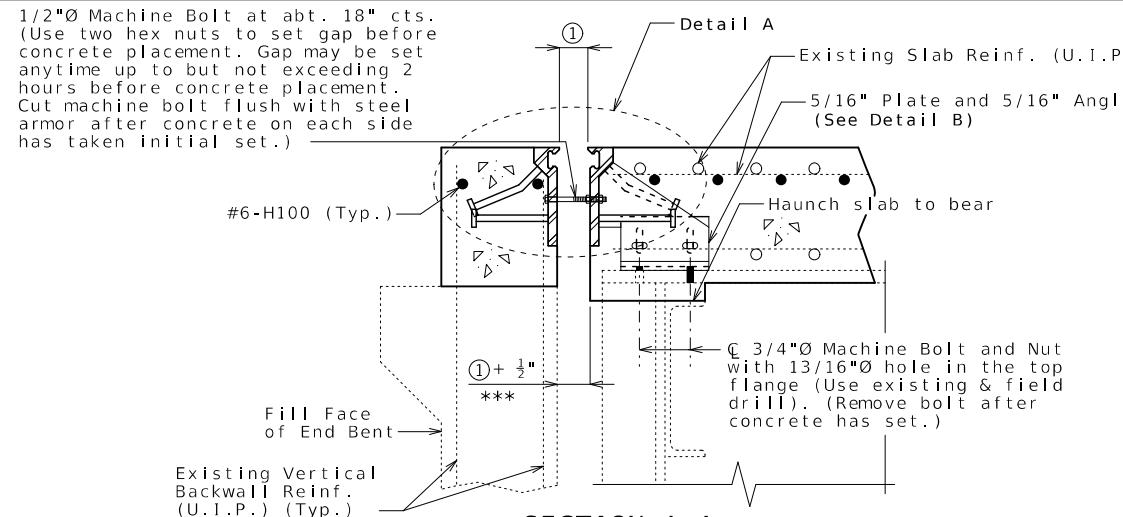
Contact surfaces shall be in accordance with Sec 1081 for surface preparation.

With approval of the Engineer, the contractor may field drill holes to facilitate construction.

STEEL END DIAPHRAGMS AT END BENTS

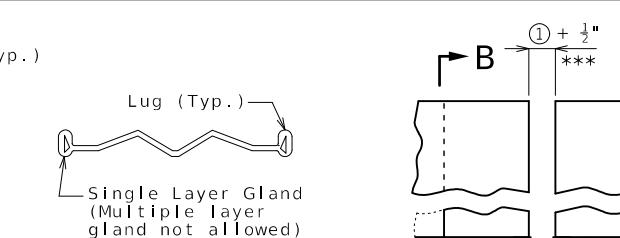
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 15

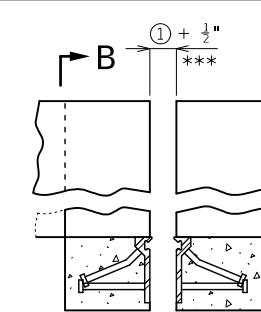


SECTION A-A

Strip seal gland not shown for clarity.

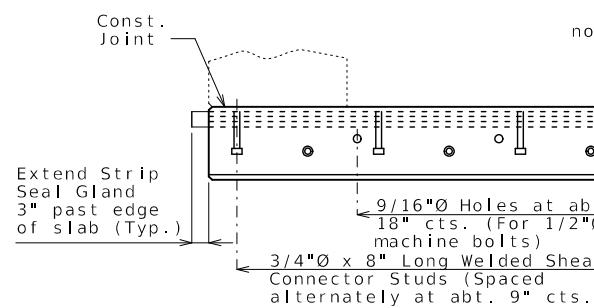


DETAIL OF GLAND

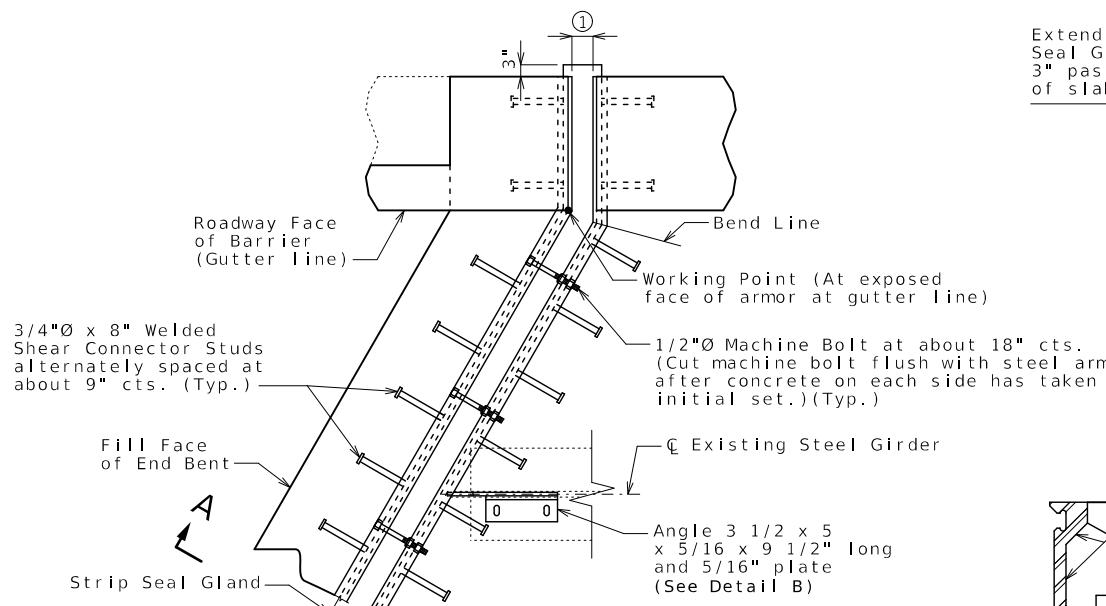


PART ELEVATION OF BARRIER

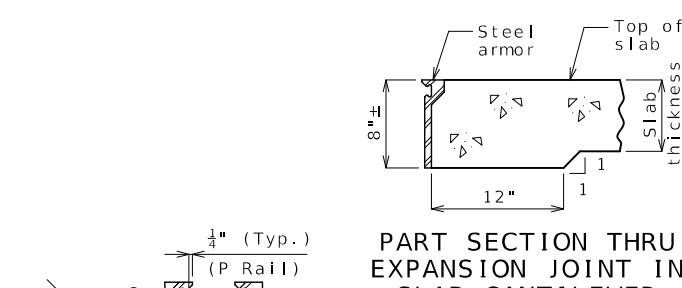
Strip seal gland not shown for clarity.



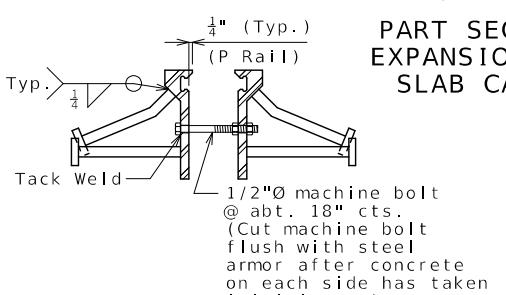
PART SECTION B-B



PART PLAN



PART SECTION THRU EXPANSION JOINT IN SLAB CANTILEVER



DETAIL A

(P Rail shown, R Rail similar)

Detailed Oct. 2025
Checked Oct. 2025

STRIP SEAL EXPANSION JOINT SYSTEM AT END BENTS NO. 1 & 6

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

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum, or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MODOT Construction personnel will indicate the strip seal expansion joint system installed.

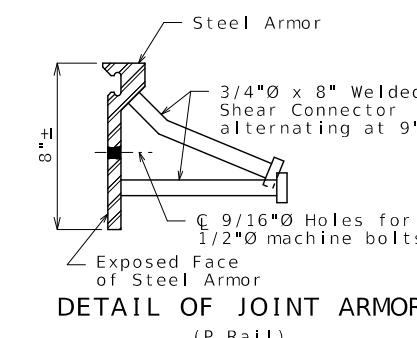
Steel armor may also be referred to as extrusion or rail.

The terms P and R rail are used for identification only, and are not endorsements for any particular manufacturer.

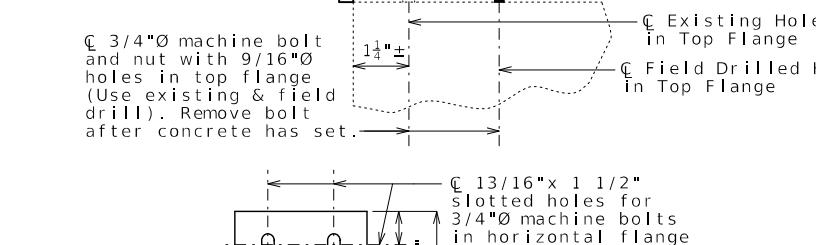
For details of replacement slab at expansion device, see Sheet No. 7.

For details of replacement of barrier at expansion device, see Sheet No. 13.

*** Because of variation in armor dimensions, the concrete opening will vary if the optional R rail is used. Dimensions shown are based on the P rail option.



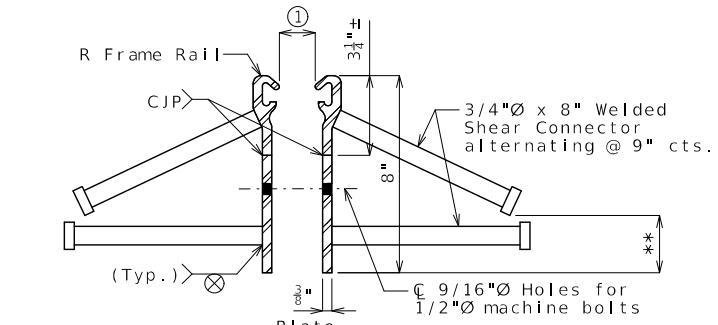
DETAIL OF JOINT ARMOR (P Rail)



DETAIL B

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	Allowed Installation Gap @ Air/Surface Temperature ②					③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	
D S Brown	Strip seal L2-400	2 9/16"	2 9/16"	2 7/16"	2 1/4"	2 1/16"	1 15/16"	<input type="checkbox"/>
D S Brown	Strip seal L2-500	2 9/16"	2 9/16"	2 7/16"	2 1/4"	2 1/16"	1 15/16"	<input type="checkbox"/>
Watson Bowman Acme (Wabo)	Strip seal SE-400	2 9/16"	2 9/16"	2 7/16"	2 1/4"	2 1/16"	1 15/16"	<input type="checkbox"/>



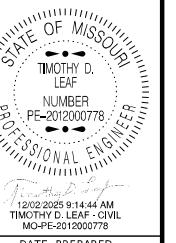
** Bend stud in shop if necessary to maintain 1" min. from bottom of vertical plate.

OPTIONAL R RAIL DETAIL

STATE OF MISSOURI
PROFESSIONAL ENGINEER
TIMOTHY D. LEAF
PE-2012000778
DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 6
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO. A26291

DESCRIPTION DATE

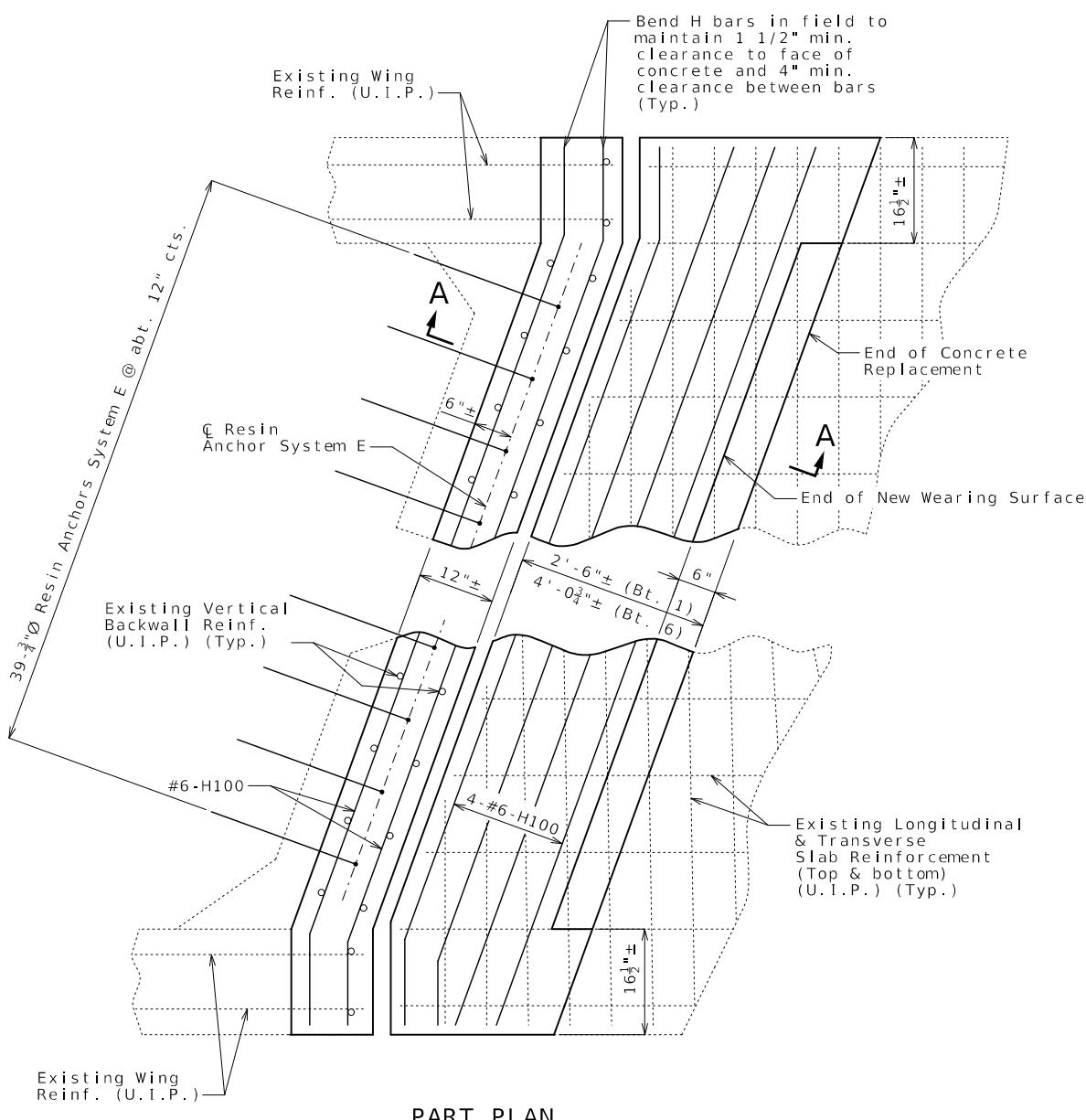
105 WEST CAPITOL
JEFFERSON CITY, MO 65102



DATE PREPARED
12/2/2025

ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 7
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26291

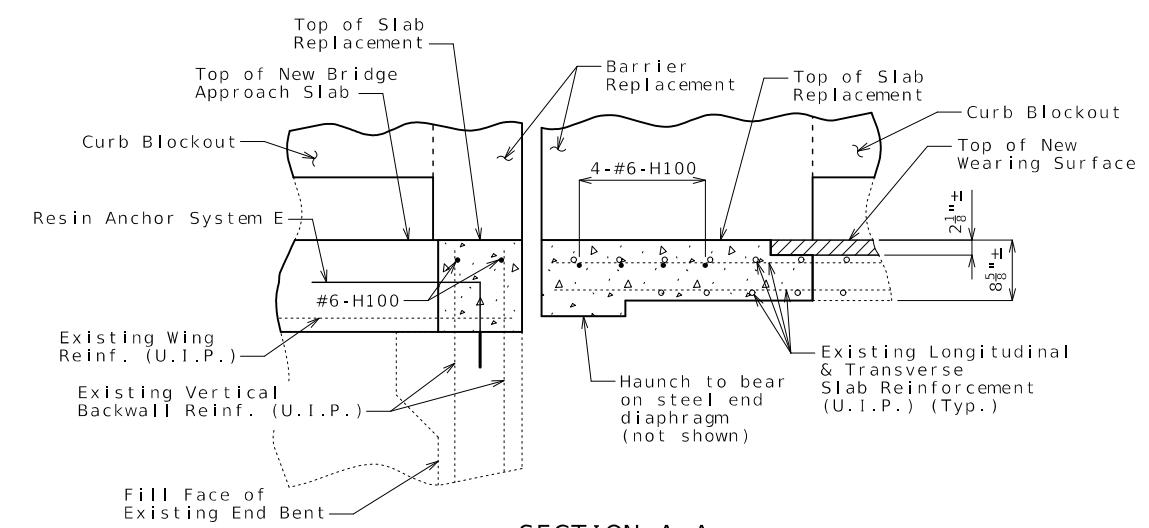
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION MODOT 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	



PART PLAN

End Bent No. 1 shown, End Bent No. 6 similar, except as shown.

New strip seal expansion device, barrier, new wearing surface, and bridge approach slab not shown for clarity.



SECTION A-A

New strip seal expansion device not shown for clarity.

Notes:

For details of strip seal expansion device, see Sheet No. 6.

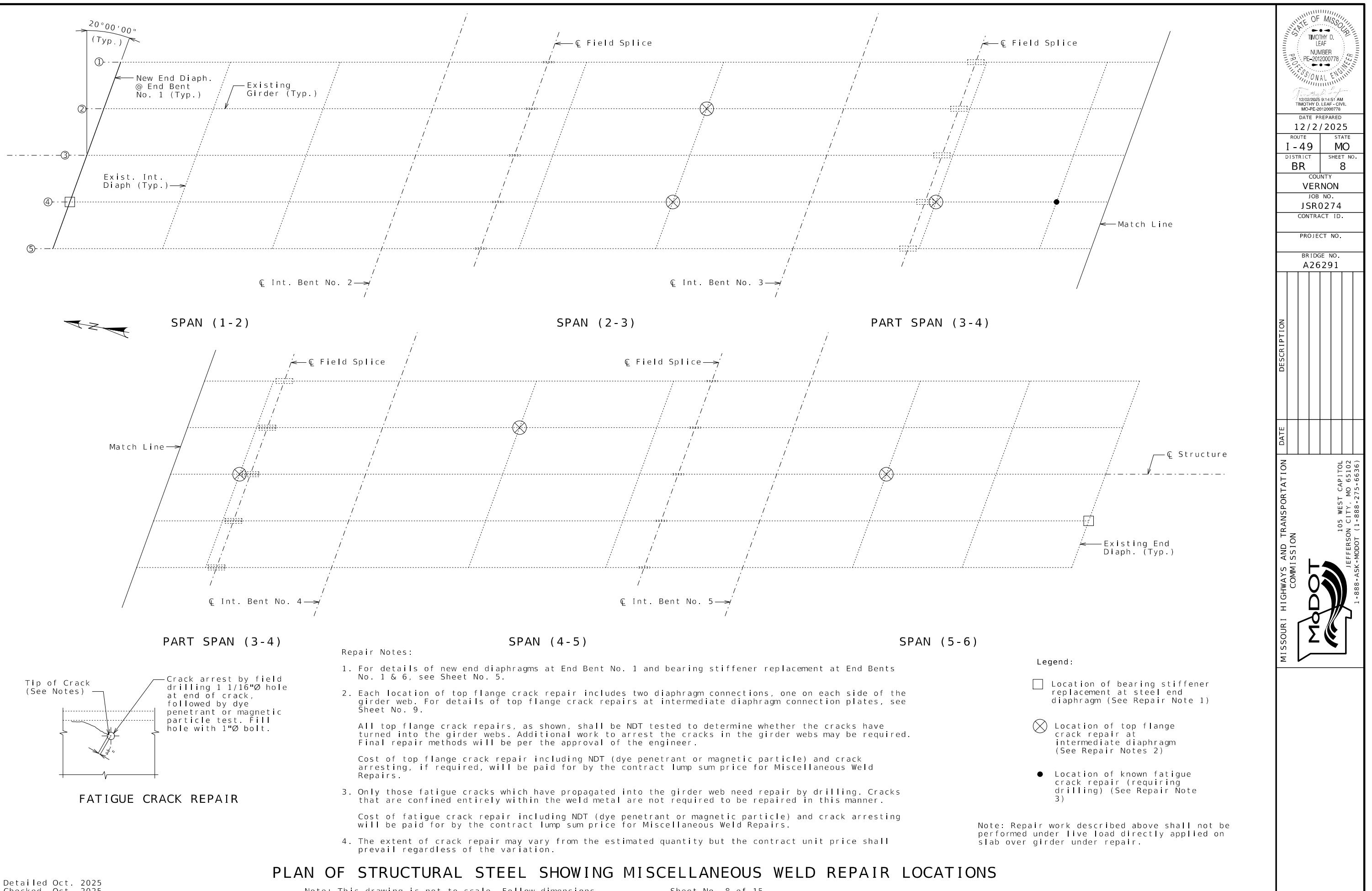
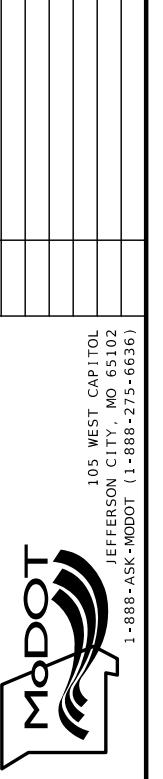
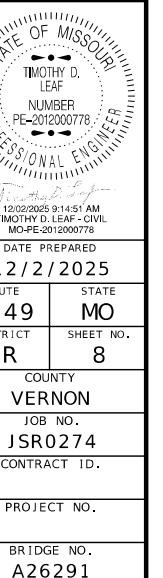
For details of barrier replacement, see Sheet No. 12.

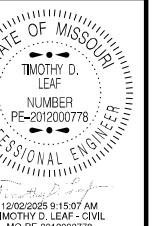
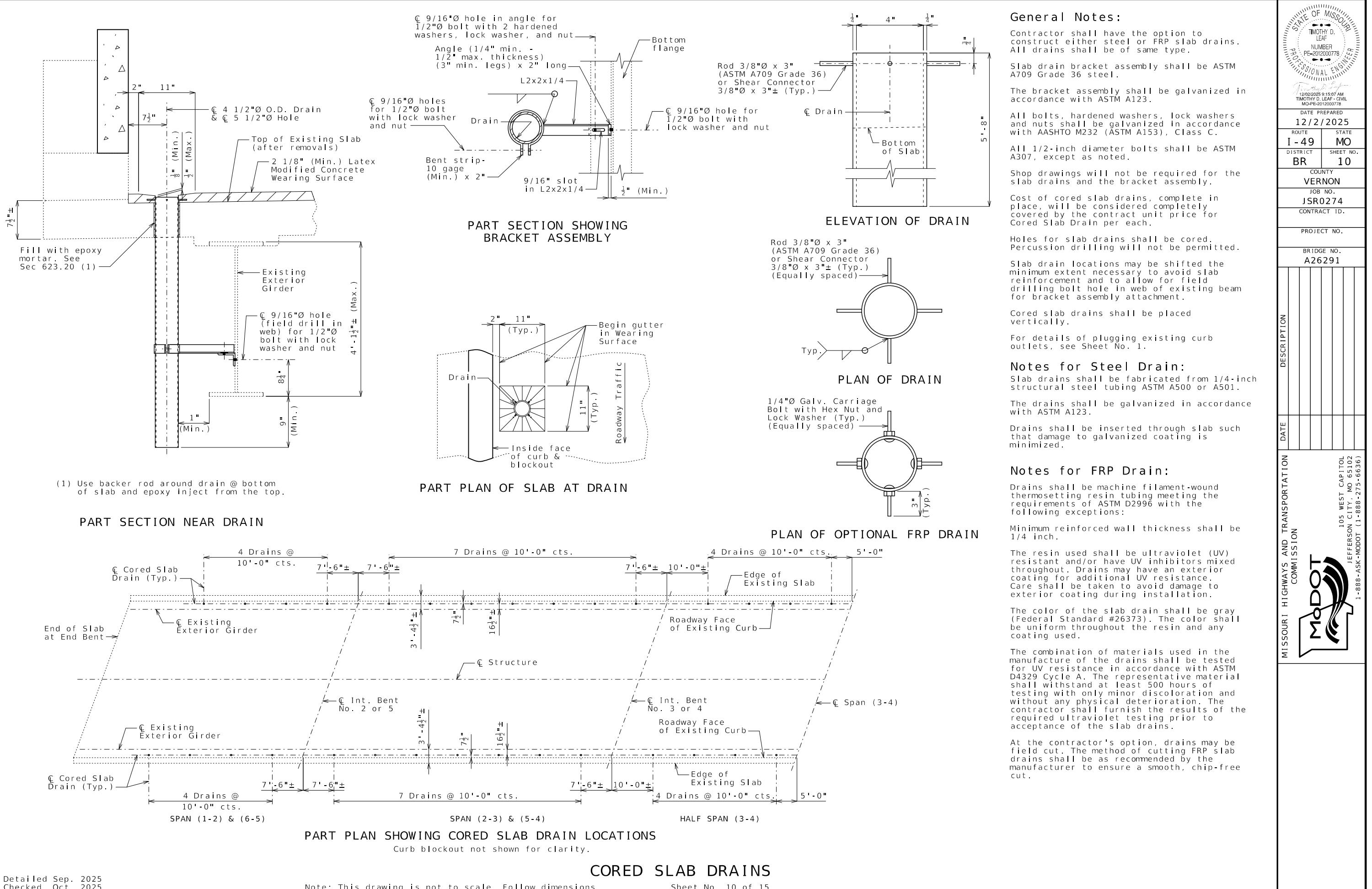
For details of Resin Anchor System E, see Sheet No. 2.

SLAB REPLACEMENT AT EXPANSION DEVICE

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

Sheet No. 7 of 15

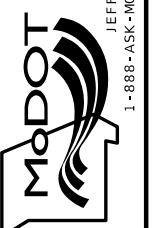


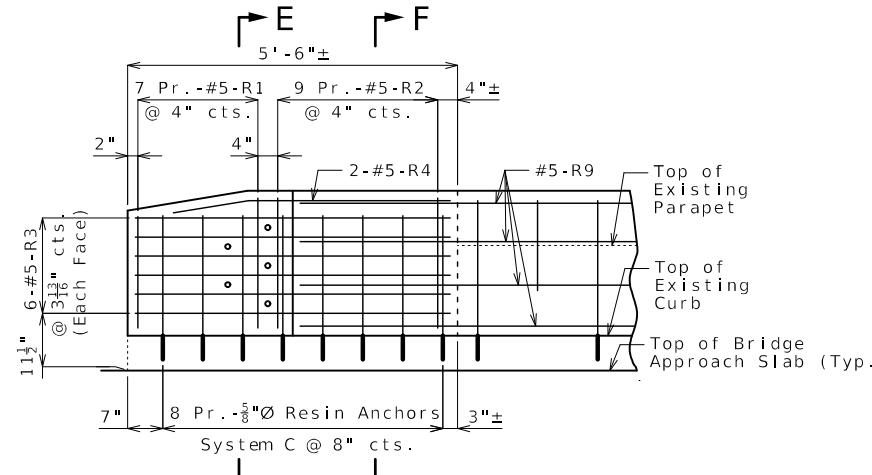


DATE PREPARED
12/2/2025
ROUTE I-49
DISTRICT BR
SHEET NO. 10
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26291

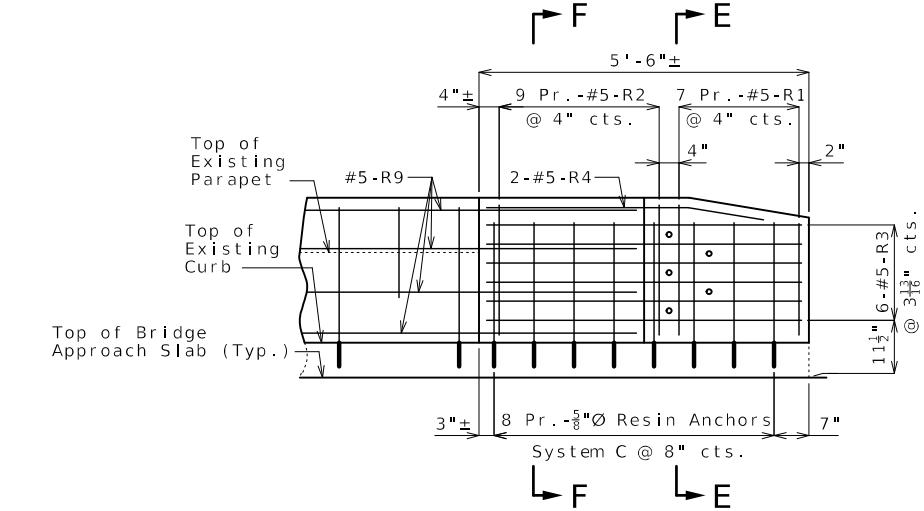
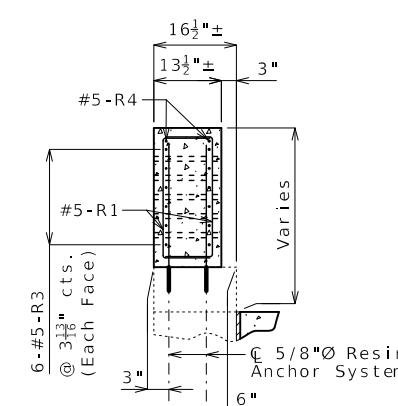
DESCRIPTION
DATE

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

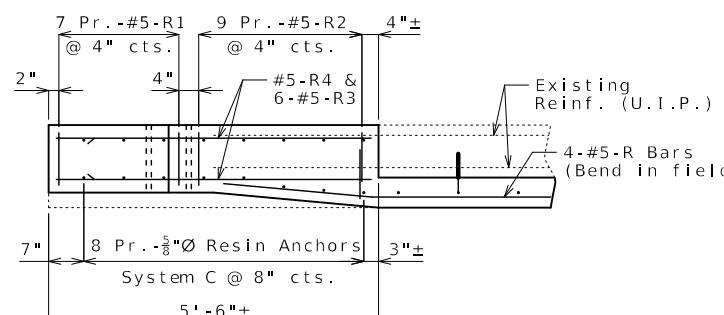




ELEVATION SHOWING REINFORCEMENT



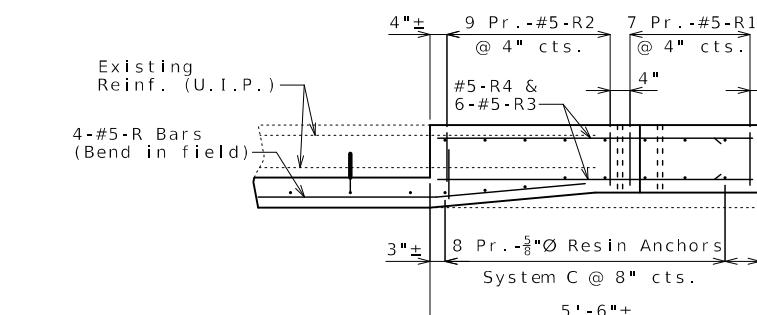
ELEVATION SHOWING REINFORCEMENT



LEFT END POST AT END BENT NO. 1

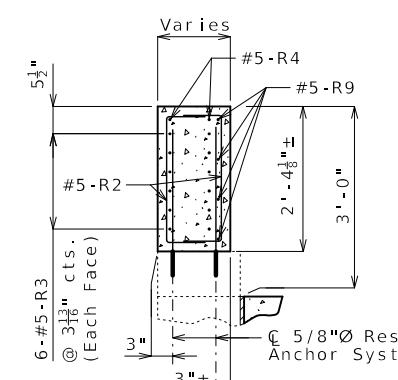
(Right End Post at End Bent No. 6 similar)

SECTION E-E

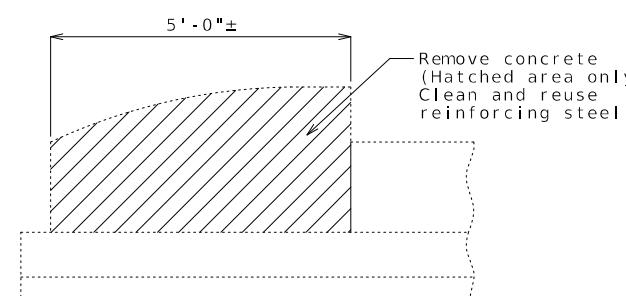


LEFT END POST AT END BENT NO. 6

(Right End Post at End Bent No. 1 similar)



SECTION F-F



PART ELEVATION SHOWING END POST CONCRETE REMOVAL

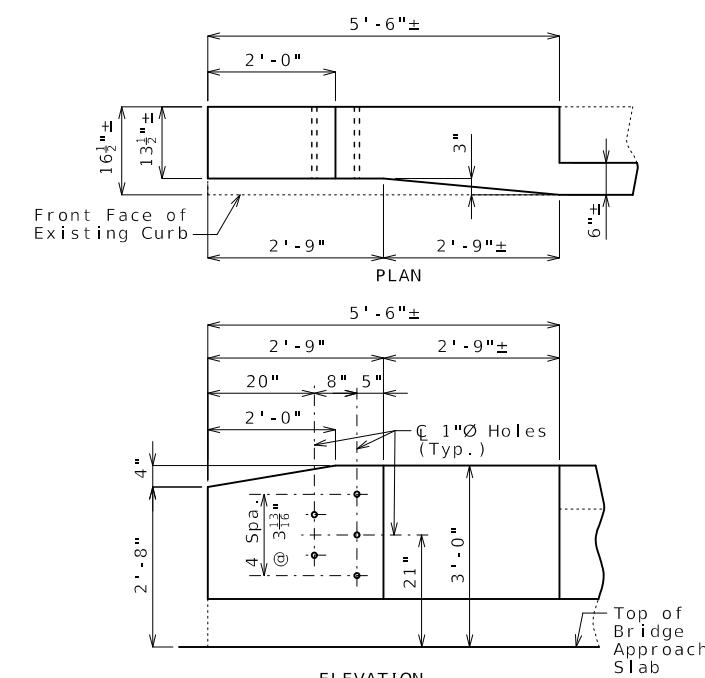
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.

Notes:

Work this sheet with Sheets No. 11 & 12.

For details of resin anchors, see Sheet No. 11.

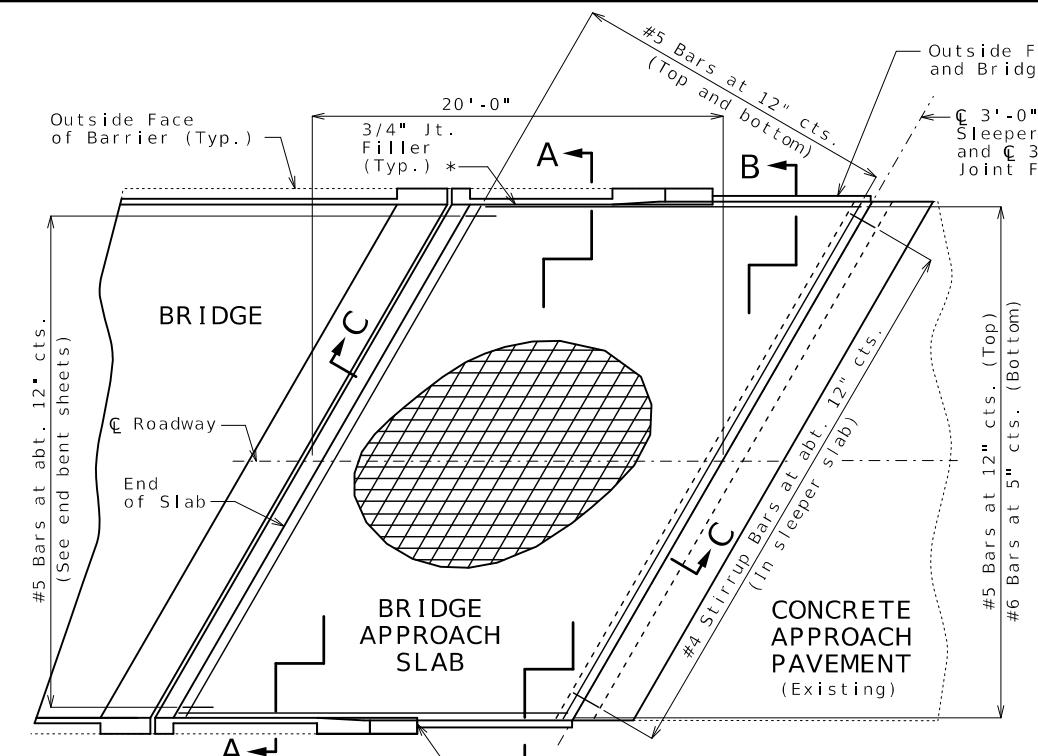
Resin anchors shall be shifted or bent in field to clear one-inch diameter holes by at least 1/2 inch.



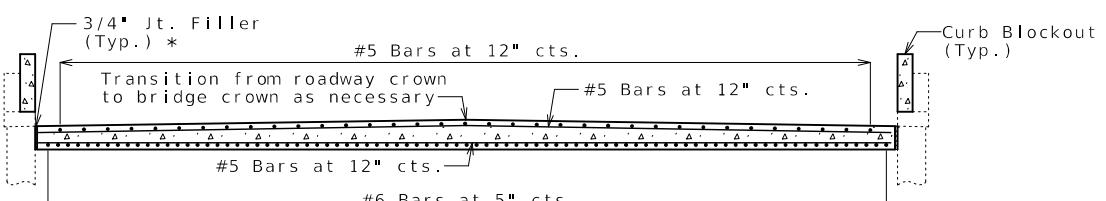
DETAILS OF END POST AND GUARD RAIL ATTACHMENT

STATE OF MISSOURI
PROFESSIONAL ENGINEER
TIMOTHY D. LEAF
NUMBER: PE-2012000778
12/02/2025 9:15:31 AM
TIMOTHY D. LEAF - CIVIL
MC-PE-5012012000778
DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 13
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26291

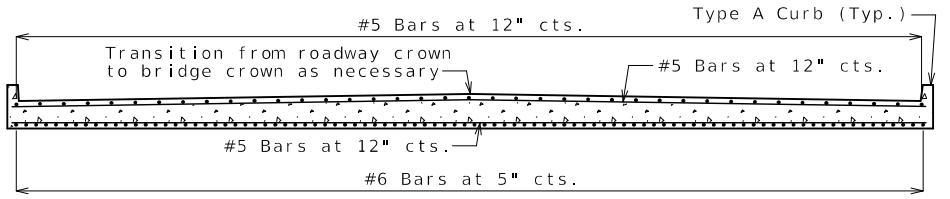
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MODOT 105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PART PLAN SHOWING REINFORCEMENT

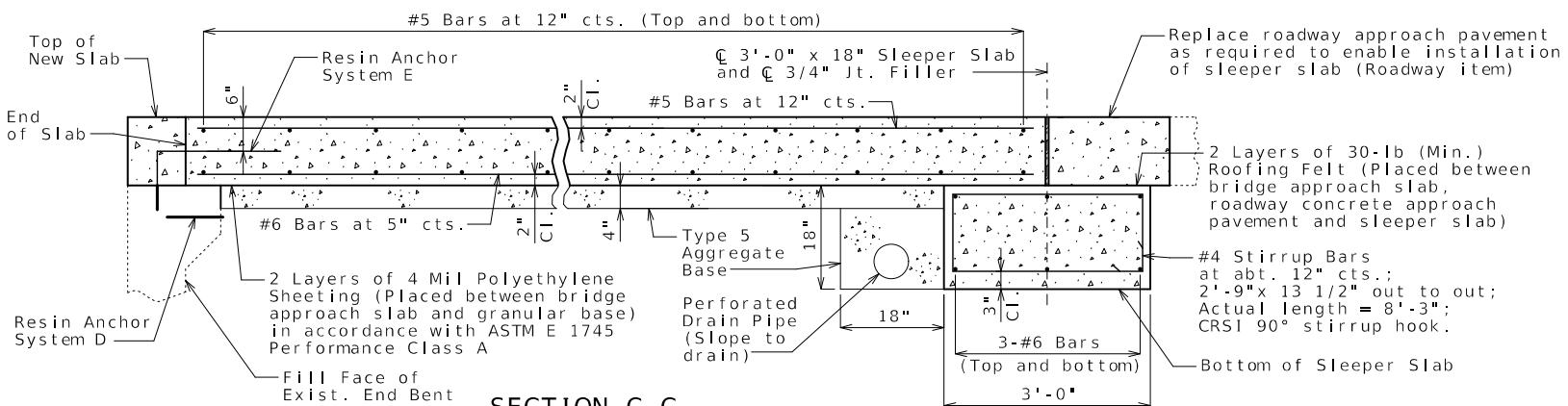


SECTION A-A



SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



Note: For details of Resin Anchors System D & E, see Sheet No. 2.

BRIDGE APPROACH SLAB (MAJOR)

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 24 inches for #5 bars and 40 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

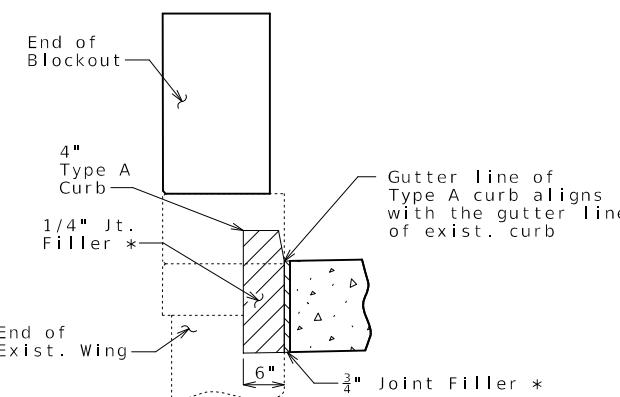
Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

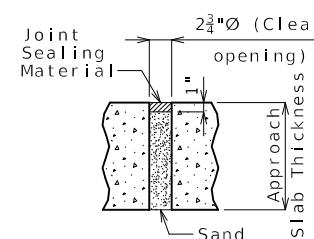
See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

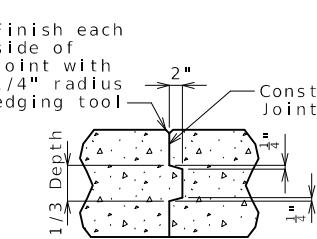


SECTION BETWEEN CURB AND BARRIER

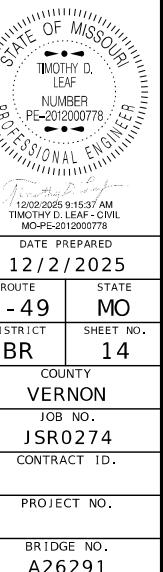


UNDERSEAL ACCESS HOLE DETAIL

(If required)

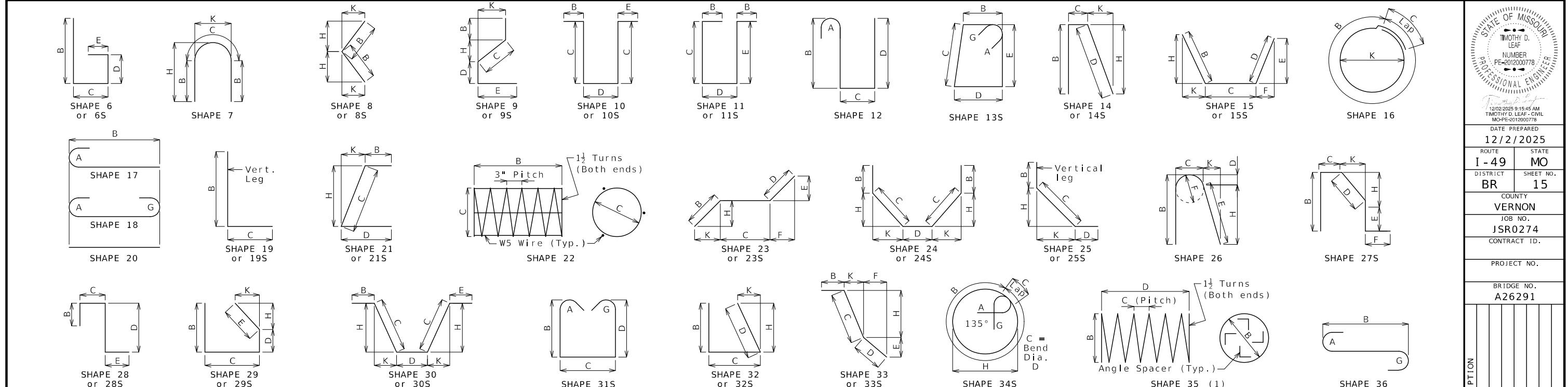
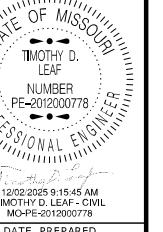


CONSTRUCTION JOINT DETAIL



ROUTE	STATE
I-49	MO
DISTRICT	14
COUNTY	VERNON
JOB NO.	JSR0274
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A26291

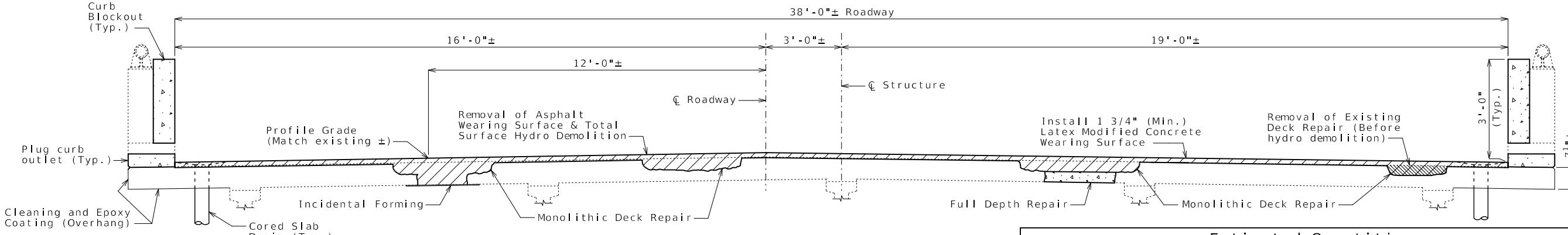
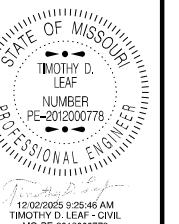


																 STATE OF MISSOURI PROFESSIONAL ENGINEER TIMOTHY D. LEAF NUMBER PE-2012000778 12/02/2025 9:15:45 AM TIMOTHY D. LEAF - CIVIL MO-PE-2012000778 DATE PREPARED 12/2/2025 ROUTE I-49 STATE MO DISTRICT BR SHEET NO. 15 COUNTY VERNON JOB NO. JSR0274 CONTRACT ID. 15 PROJECT NO. BRIDGE NO. A26291																																	
Finished Bend Diameters D and Hook Dimensions																																																	
BENDING DIAGRAMS																<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Reinforcing Steel Totals (Pounds)</th> </tr> <tr> <th rowspan="2" style="text-align: center; width: 15%;">Size</th> <th colspan="2" style="text-align: center;">Substructure</th> <th colspan="2" style="text-align: center;">Superstructure</th> <th colspan="2" style="text-align: center;">Entire Bridge</th> </tr> <tr> <th style="text-align: center;">Plain</th> <th style="text-align: center;">Epoxy</th> <th style="text-align: center;">Slip Form</th> <th style="text-align: center;">Plain</th> <th style="text-align: center;">Epoxy</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">By Size</td> <td style="text-align: center;">5</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">4,126</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">4,126</td> </tr> <tr> <td style="text-align: center;">By Type</td> <td style="text-align: center;">6</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">777</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">777</td> <td></td> </tr> </tbody> </table>		Reinforcing Steel Totals (Pounds)		Size	Substructure		Superstructure		Entire Bridge		Plain	Epoxy	Slip Form	Plain	Epoxy	By Size	5	0	0	0	4,126	0	0	4,126	By Type	6	0	0	777	0	0	777	
Reinforcing Steel Totals (Pounds)																																																	
Size	Substructure		Superstructure		Entire Bridge																																												
	Plain	Epoxy	Slip Form	Plain	Epoxy																																												
By Size	5	0	0	0	4,126	0	0	4,126																																									
By Type	6	0	0	777	0	0	777																																										
Bill of Reinforcing Steel																																																	
No.	Size/ Mark	Location	Codes	Dimensions	Nom. Length	Actual Length	Weight																																										
12	6 H100	Slab	E 20	B C ft in. 43 1.00	D ft in. E ft in. F ft in. H ft in. K ft in.	43 1	43 1	777																																									
56	5 R1	Curb Blockout	E 10S 8	9.50	19.75	3 3 3																																											
72	5 R2	BLOCKOUT	E 10S	9.50	23.75	3 7 3 4	185																																										
48	5 R3	BLOCKOUT	E 20	5 3.00	9.50	23.75	5 3 5 3	263																																									
8	5 R4	BLOCKOUT	E 23S	16.25	3 4.00	2.75	16.00	4 8 4 7	38																																								
16	5 R5	BLOCKOUT	E 20	50 1.00			50 1 50 1	836																																									
64	5 R6	BLOCKOUT	E 20	10 0.00			10 0 10 0	668																																									
16	5 R7	BLOCKOUT	E 20	54 3.00			54 3 54 3	905																																									
16	5 R8	BLOCKOUT	E 20	36 2.00			36 2 36 2	604																																									
16	5 R9	BLOCKOUT	E 20	9 0.00			9 0 9 0	150																																									
19	5 R10	BLOCKOUT	E 10S	3 4.00	11.50	12.00	8 8 8 4	165																																									
8	5 R11	BLOCKOUT	E 10S	3 4.00	11.50		7 8 7 5	62																																									

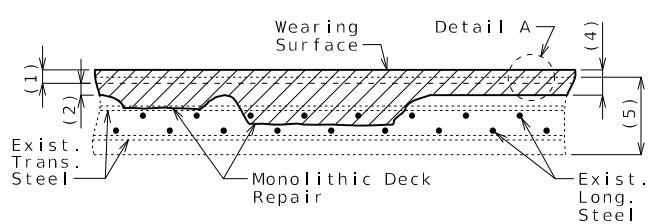
| **BILL OF REINFORCING STEEL** | | | | | | | | | | | | | | | |
| Note: This drawing is not to scale. Follow dimensions. Sheet No. 15 of 15 | | | | | | | | | | | | | | | |


U.I.P. AND REHABILITATE EXISTING (5 @ 35')
PRESTRESSED CONCRETE I-GIRDER SPANS (SKEW: 15° L.A.)

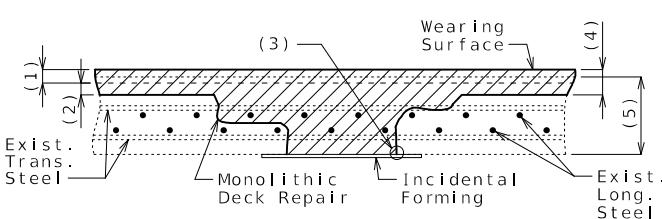
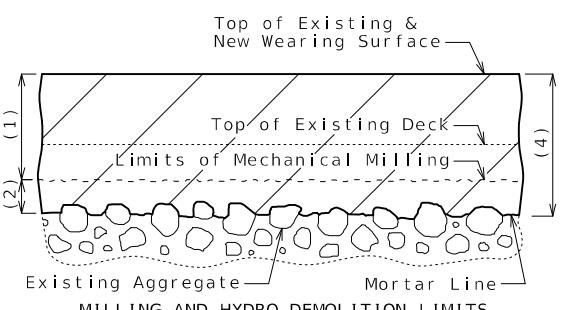
SEC/SUR 17 TWP 37 RGE 31W



TYPICAL SECTION THRU EXISTING DECK



MONOLITHIC DECK REPAIR

MONOLITHIC DECK REPAIR
REQUIRING INCIDENTAL FORMING

DETAIL A

Notes:

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Plugging Existing Curb Outlets.

Estimated material required to fill all curb outlets is 0.8 cubic yards (for information only).

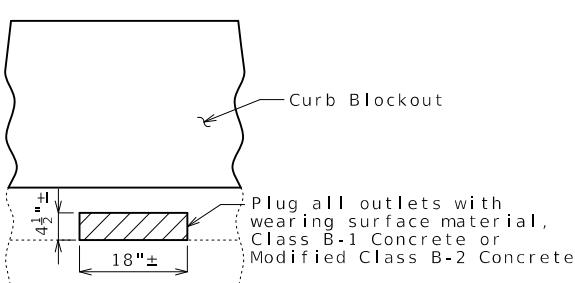
General Notes (Continued):

Concrete Protective Coatings:

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

Traffic Handling:

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

PART ELEVATION SHOWING
PLUGGING OF CURB OUTLETS

**REPAIRS TO BRIDGE: ROUTE I-49 SB
OVER LITTLE OSAGE OVERFLOW NO. 1**

ROUTE I-49 SB FROM ROUTE TT TO ROUTE D
ABOUT 3.3 MILES SOUTH OF ROUTE TT
BEGINNING STATION 248+72.00± (MATCH EXISTING)

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



Estimated Quantities	
Item	Total
Total Surface Hydro Demolition	750 sq. yard
Removal of Asphalt Wearing Surface	6748 sq. foot
Removal of Existing Deck Repair	125 sq. foot
Bridge Approach Slab (Major)	172 sq. yard
Supplementary Wearing Surface Material	12 cu. yard
Latex Modified Concrete Wearing Surface	750 sq. yard
Diamond Grinding	750 sq. yard
Curb Blockout	386 linear foot
Substructure Repair (Formed)	50 sq. foot
Full Depth Repair	100 sq. foot
Epoxy Pressure Injecting	6 linear foot
Cleaning and Epoxy Coating	1194 sq. foot
Pile Encasement	20 each
Protective Coating - Concrete Bents and Piers (Epoxy)	1 lump sum
Surface Preparation for Applying Epoxy - Mastic Primer	1 lump sum
Gray Epoxy-Mastic Primer	1 lump sum
Plugging Existing Curb Outlets	42 each
Cored Slab Drains	26 each
Vertical Drain at End Bents	2 each

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

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:
HS20-44 (1965 and New Construction)

Design Unit Stresses:
Class B Concrete (Pile Encasement) $f'_c = 3,000$ psi
Class B-1 Concrete (Curb Blockout) $f'_c = 4,000$ psi
Class B-2 Concrete (Full Depth Repair) $f'_c = 4,000$ psi
Reinforcing Steel (ASTM A615 Grade 60) $f_y = 60,000$ psi

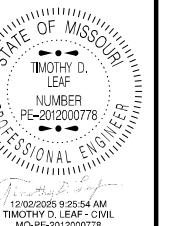
Miscellaneous:
Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (Roadway item).

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

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

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

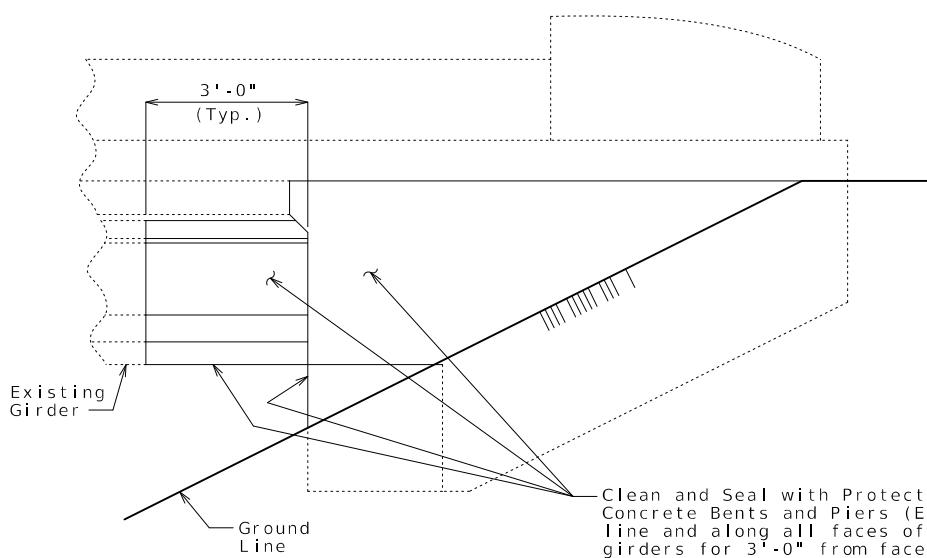
Asbestos (Friability Category II NF) has been detected in the insulation compound between the top of the existing concrete parapet and the base of the existing handrail posts. The contractor has the option to remove the handrail and posts or leave in place. Should the contractor elect to remove the handrail and posts, the contractor will be required to use a licensed abatement contractor during the removal. No direct payment will be made for removal of the handrail and posts, or for asbestos abatement. The described work will be considered completely covered by the contract unit price for other items in the contract.



DATE PREPARED
12/2/2025
ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 2
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A26301

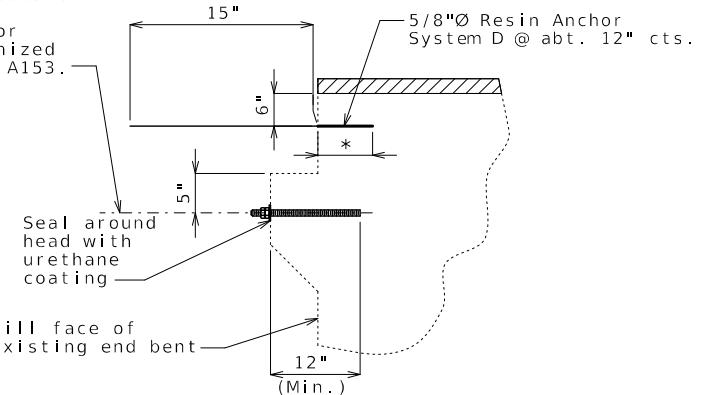
DESCRIPTION	DATE

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



ELEVATION OF END BENTS NO. 1 & 6
SHOWING PROTECTIVE COATING

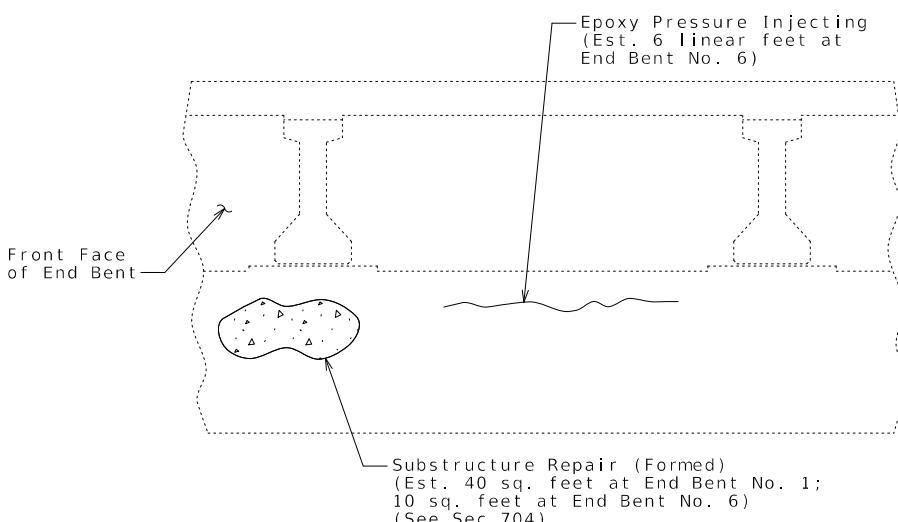
Resin Anchor System E with 3/4"Ø threaded rod with flat washer & two heavy hex nuts at abt. 12" cts. (Burr threads to prevent loosening). All hardware for Resin Anchor System E shall be galvanized in accordance with ASTM A153.



PART SECTION THRU END BENTS
NO. 1 & 6 SHOWING RESIN
ANCHORS SYSTEM D & E

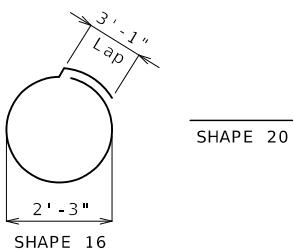
* Manufacturer's recommended embedment length (5 inches minimum)

For resin anchor notes, see Sheet No. 6.



PART ELEVATION OF END BENTS
NO. 1 & 6 SHOWING REPAIRS

BILL OF REINFORCING STEEL - EACH PILE				
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM
Varies	4 P1	10'-0"	16	
8	5 V1	Varies	20	



Notes:

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.

All bars shall be epoxy coated.

Notes:

All concrete for pile encasement shall be Class B ($f'c = 3000$ psi).

The reinforcing steel shall be epoxy coated Grade 60 with $f_y = 60,000$ psi.

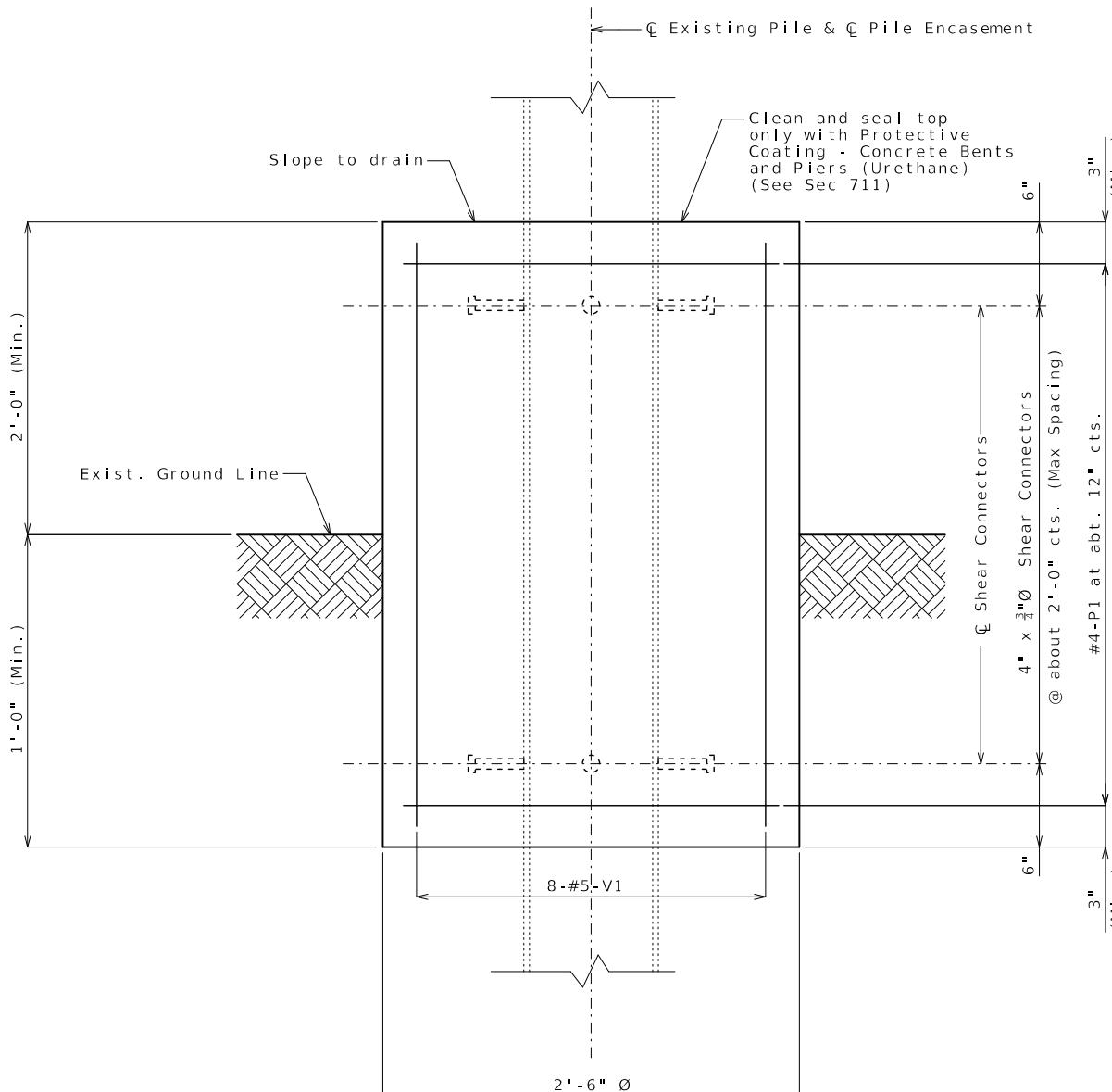
Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

All exposed surfaces of the existing structural steel piles and sway bracing shall be recoated with one 6-mil thickness of gray epoxy-mastic primer applied over an SSPC-SP3 surface preparation in accordance with Sec 1081 before concrete is poured. The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the gray epoxy-mastic primer will be considered completely covered by the contract lump sum price for Gray Epoxy-Mastic Primer.

Cost of all concrete, reinforcement, shear connectors, surface preparation, coatings, excavation, dewatering and any other incidental material or labor to complete pile encasement, complete in place, will be considered completely covered by the contract unit price for Pile Encasement.

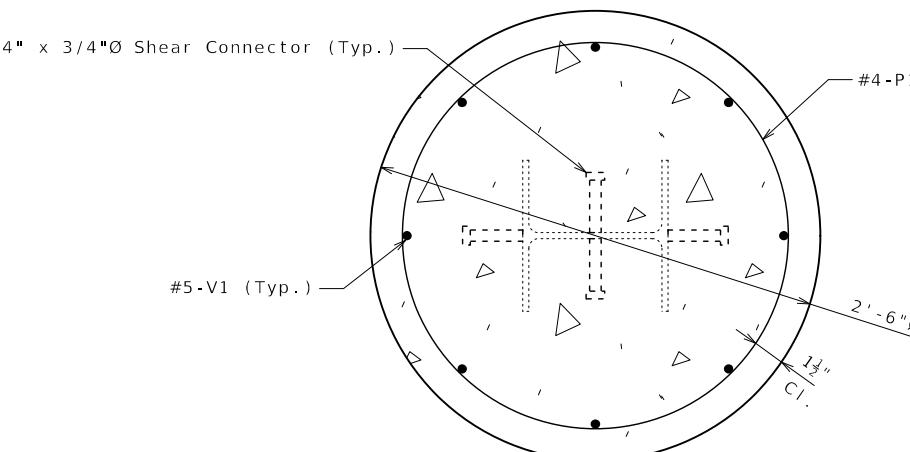
A FRP pile jacketing system may be used in lieu of pile encasement at the contractor's option. No additional payment will be made for this substitution. See special provisions.

Shear connectors shall be in accordance with Sec 712, 1037 and 1080.



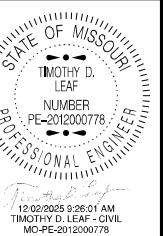
PART ELEVATION SHOWING PILE ENCASEMENT

Note: Existing sway bracing not shown for clarity. Shift reinforcing steel in the field to clear existing sway bracing.



SECTION SHOWING PILE ENCASEMENT

PILE ENCASEMENT AT INTERMEDIATE BENTS NO. 2, 3, 4 & 5



DATE PREPARED

12/2/2025

ROUTE I-49

STATE MO

DISTRICT BR

SHEET NO. 3

COUNTY VERNON

JOB NO. JSR0274

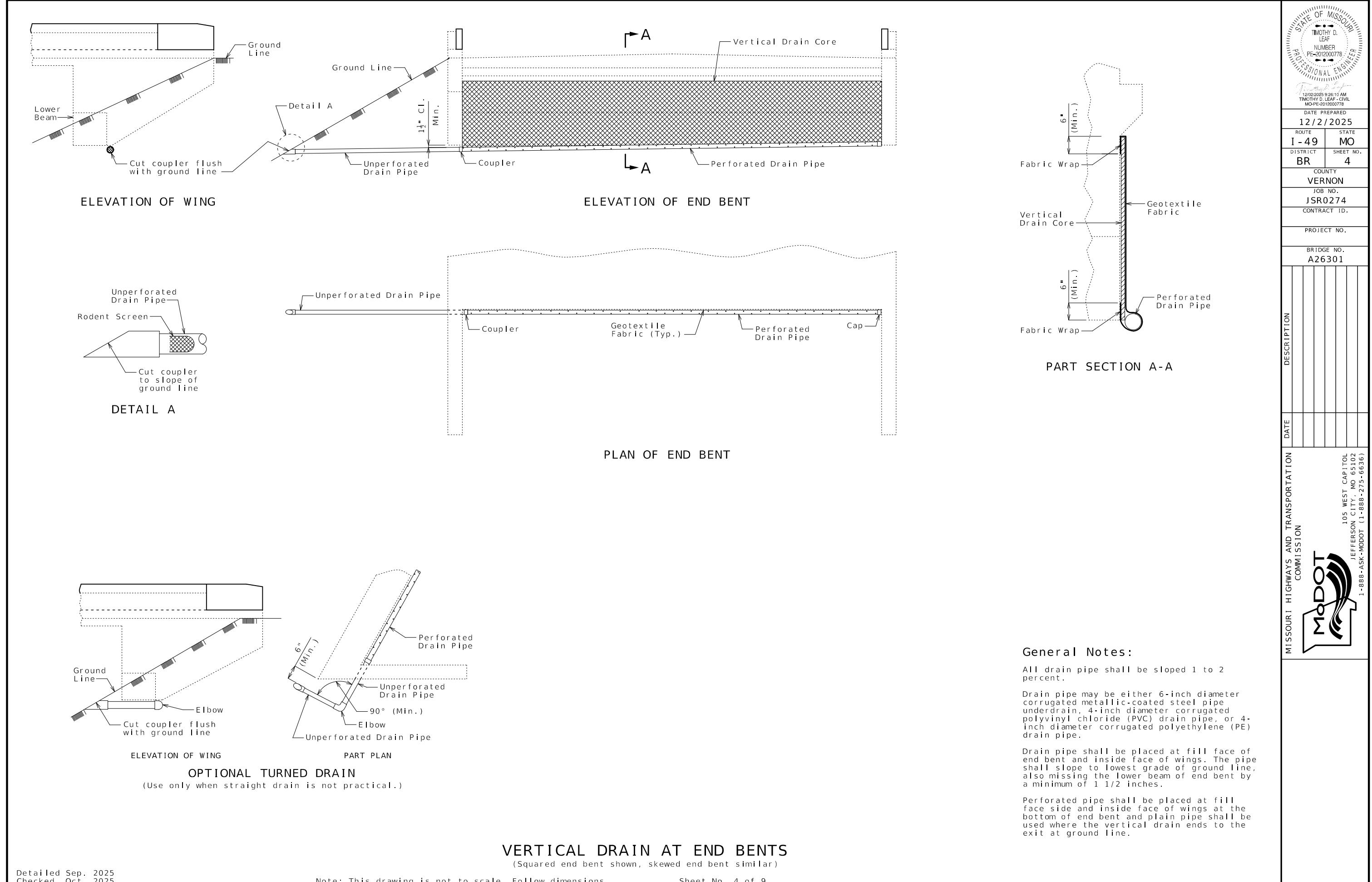
CONTRACT ID.

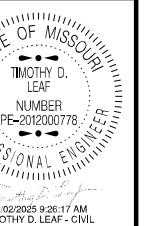
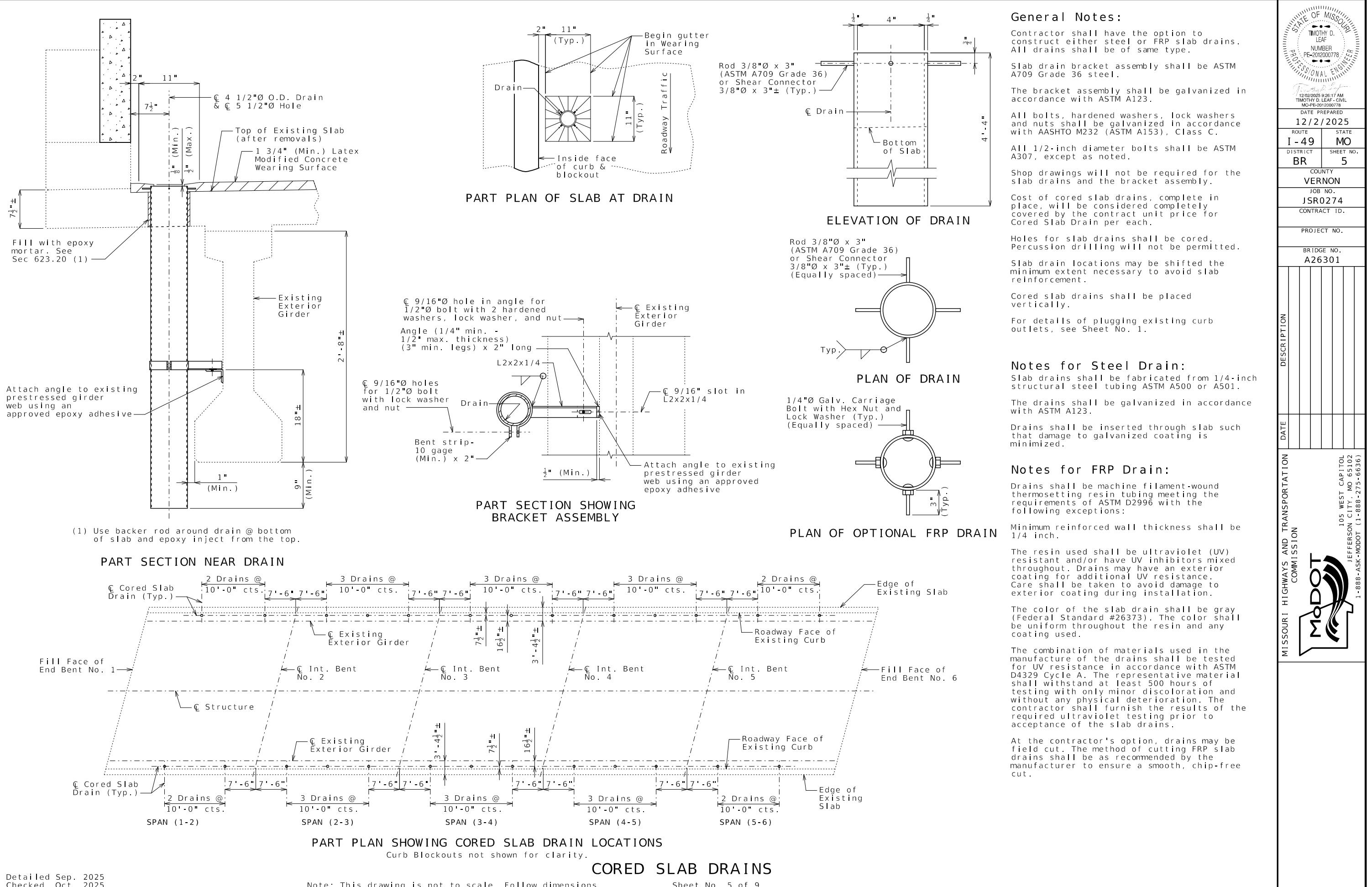
PROJECT NO.

BRIDGE NO. A26301

MISSOURI HIGHWAYS AND TRANSPORTATION	DATE	DESCRIPTION





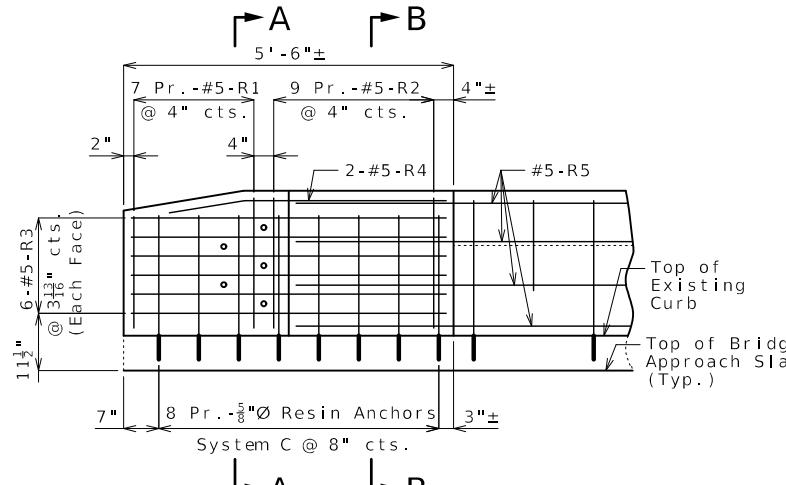
DATE PREPARED
12/2/2025ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 5COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.

PROJECT NO. BRIDGE NO. A26301

DESCRIPTION DATE

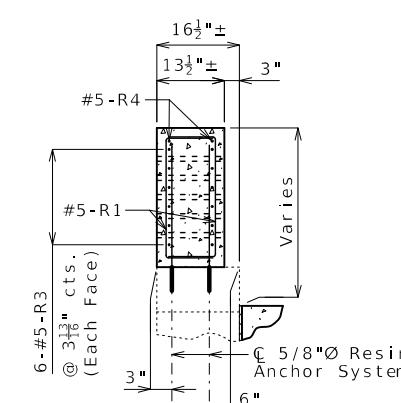
DESCRIPTION DATE

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

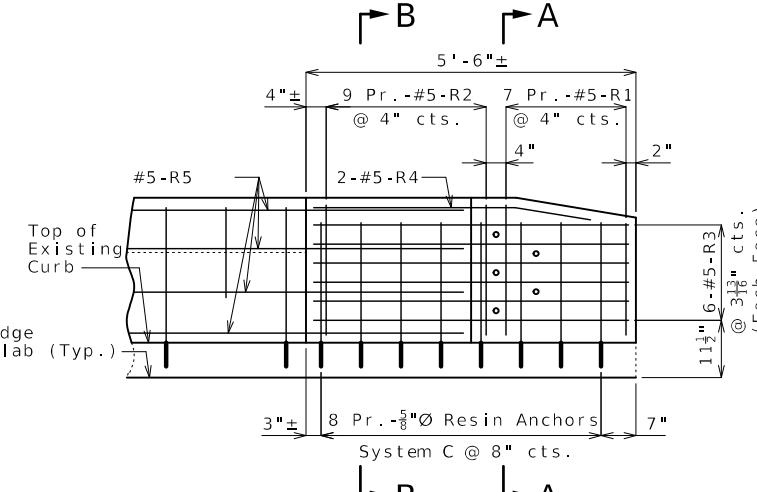


ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 6 similar)

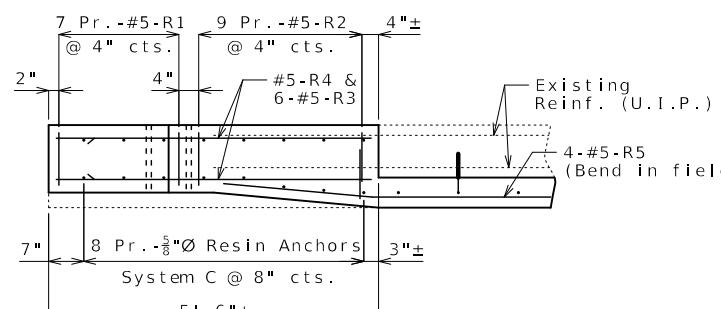


SECTION A-A

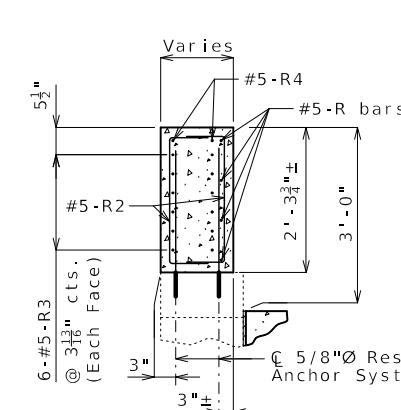


ELEVATION SHOWING REINFORCEMENT

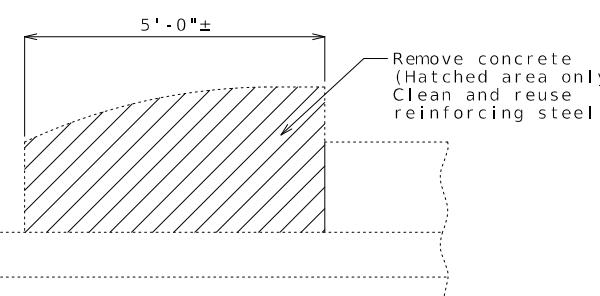
(Right End Post at End Bent No. 1 similar)



LEFT END POST AT END BENT NO. 1



SECTION B-B



PART ELEVATION SHOWING END POST CONCRETE REMOVAL

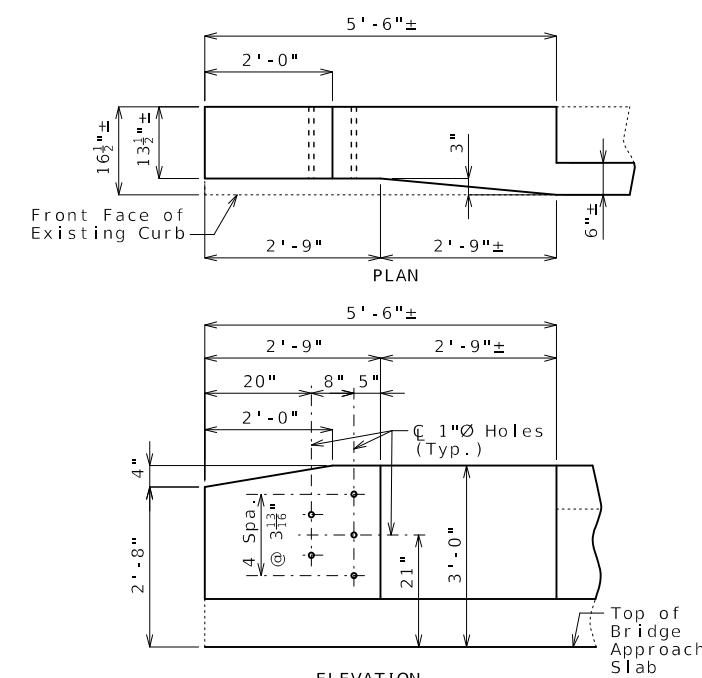
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.

Notes:

Work this sheet with Sheet No. 6.

For details of resin anchors, see Sheet No. 6.

Resin anchors shall be shifted or bent in field to clear one-inch diameter holes by at least 1/2 inch.



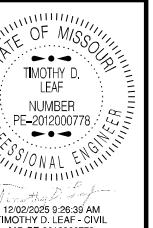
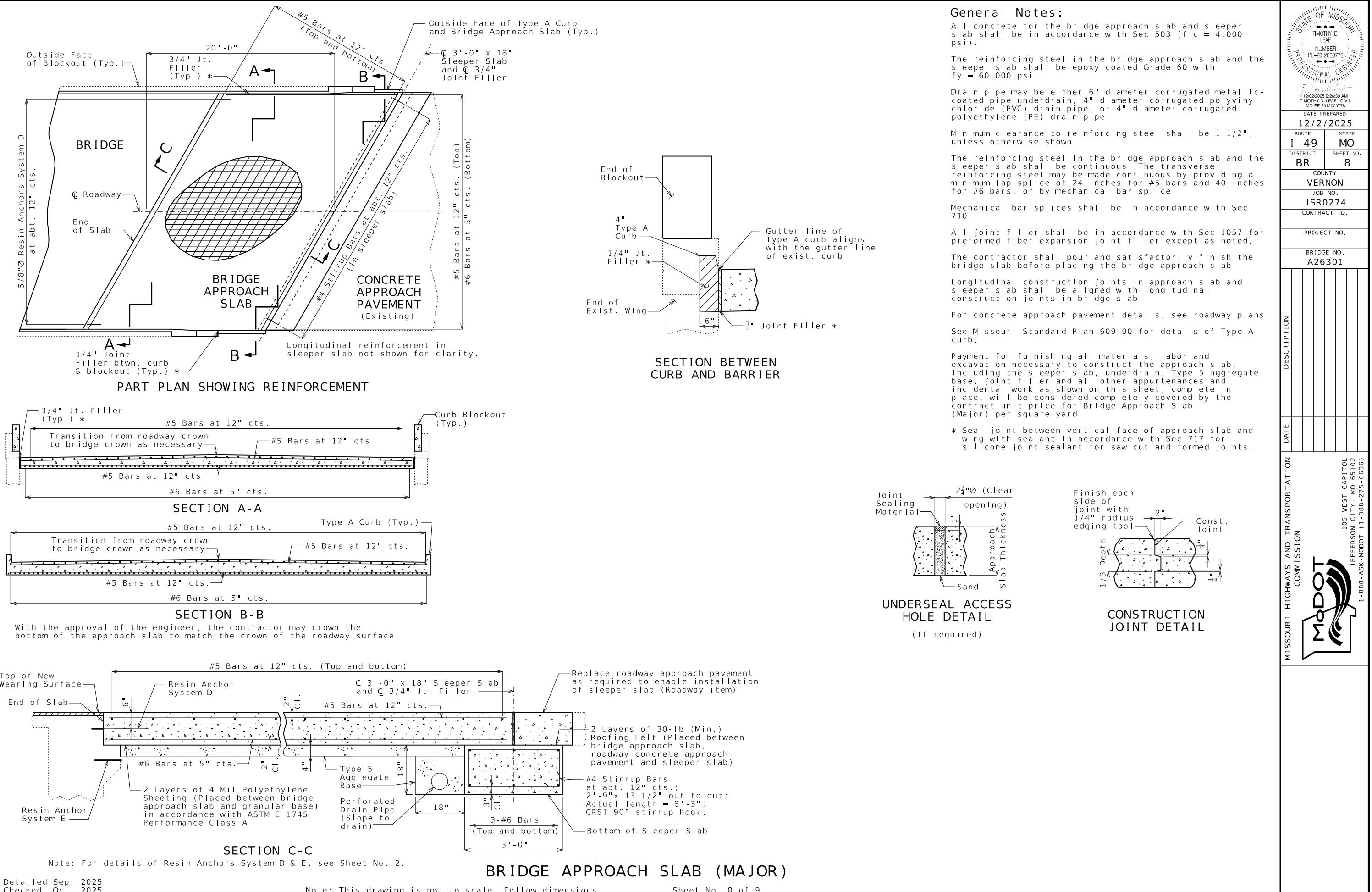
DETAILS OF END POST AND GUARD RAIL ATTACHMENT

DATE PREPARED
12/2/2025ROUTE
I-49STATE
MODISTRICT
BRSHEET NO.
7COUNTY
VERNONJOB NO.
JSR0274CONTRACT ID.
A26301PROJECT NO.
A26301BRIDGE NO.
A26301

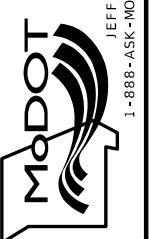
DESCRIPTION	DATE

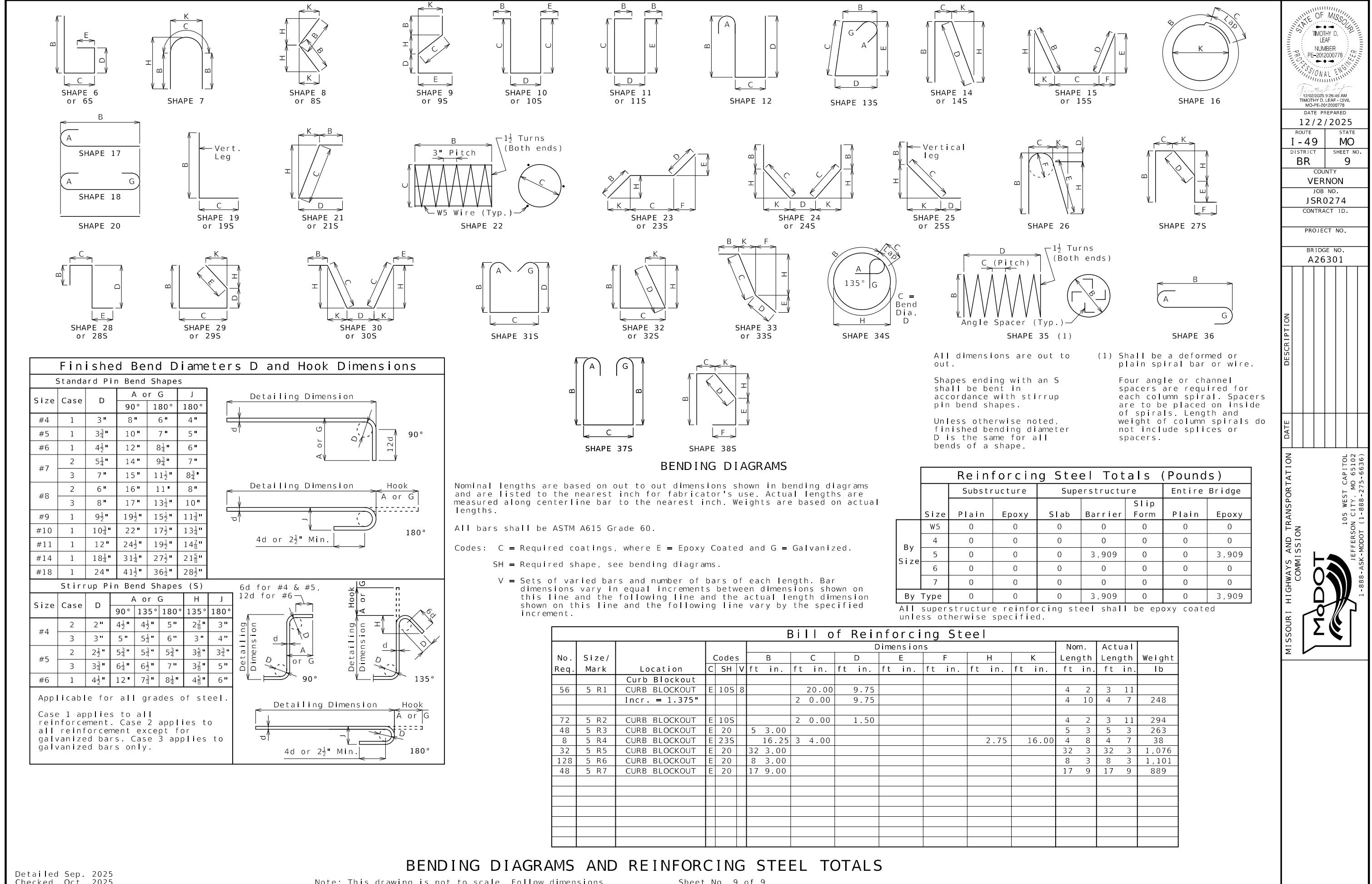


CURB BLOCKOUT AT END BENTS



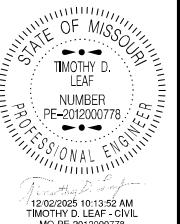
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



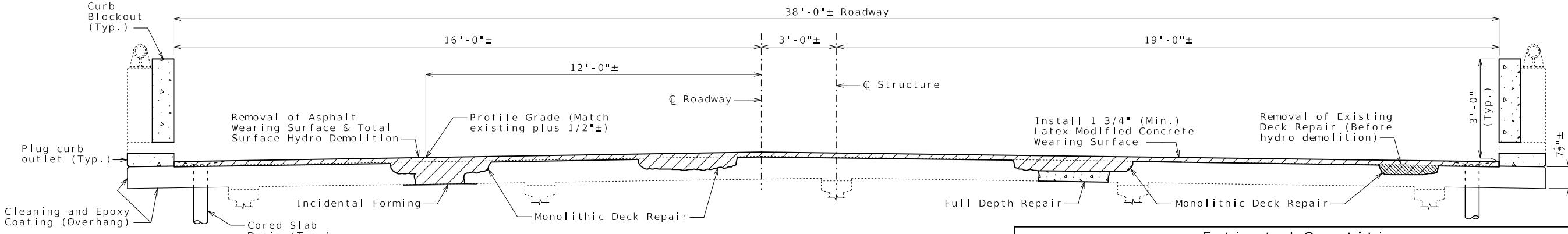


U.I.P. AND REHABILITATE EXISTING (35'- 35'- 35') PRESTRESSED CONCRETE I-GIRDER SPANS (SKEW: SQUARE)

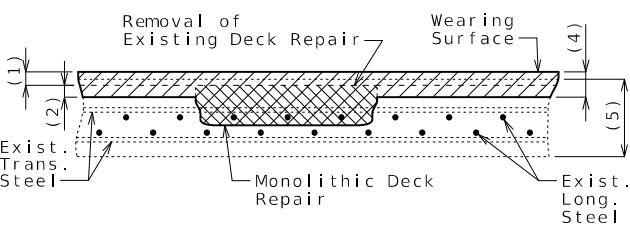
SEC/SUR 17 TWP 37 RGE 31W

DATE PREPARED
12/2/2025ROUTE I-49 STATE MO
DISTRICT BR SHEET NO. 1
COUNTY VERNON
JOB NO. JSR0274
CONTRACT ID.
PROJECT NO.BRIDGE NO.
A26312

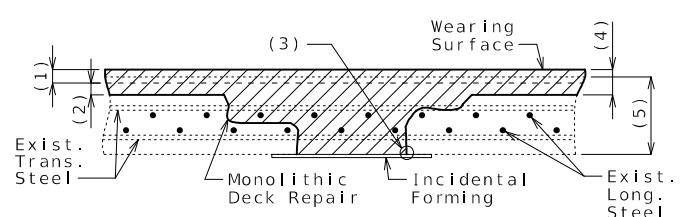
DESCRIPTION DATE

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

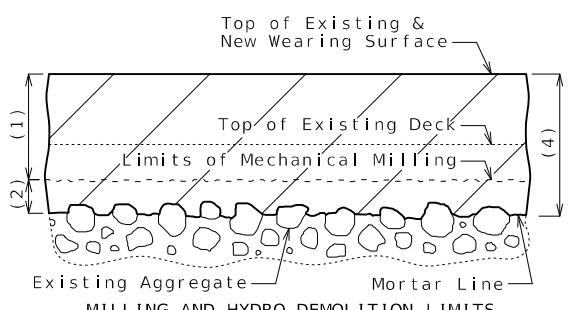
TYPICAL SECTION THRU EXISTING DECK



MONOLITHIC DECK REPAIR



MONOLITHIC DECK REPAIR REQUIRING INCIDENTAL FORMING



DETAIL A

Notes:

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Plugging Existing Curb Outlets.

Estimated material required to fill all curb outlets is 0.6 cubic yards (for information only).

General Notes (continued):

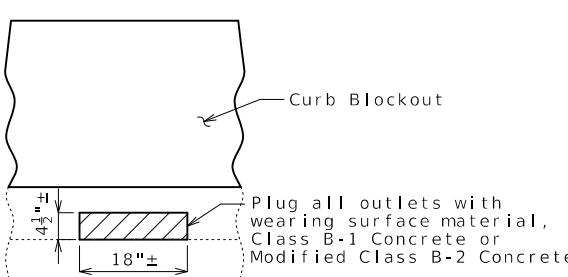
Concrete Protective Coatings:

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

Traffic Handling:

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

PART ELEVATION SHOWING PLUGGING OF CURB OUTLETS



REPAIRS TO BRIDGE: ROUTE I-49 SB OVER LITTLE OSAGE OVERFLOW NO. 2

ROUTE I-49 SB FROM ROUTE TT TO ROUTE D
ABOUT 3.5 MILES SOUTH OF ROUTE TT
BEGINNING STATION 258+05.00± (MATCH EXISTING)

Estimated Quantities	
Item	Total
Total Surface Hydro Demolition	454 sq. yard
Removal of Asphalt Wearing Surface	4085 sq. foot
Removal of Existing Deck Repair	525 sq. foot
Bridge Approach Slab (Major)	171 sq. yard
Supplementary Wearing Surface Material	25 cu. yard
Latex Modified Concrete Wearing Surface	454 sq. yard
Diamond Grinding	454 sq. yard
Curb Blockout	245 linear foot
Substructure Repair (Formed)	30 sq. foot
Full Depth Repair	300 sq. foot
Cleaning and Epoxy Coating	723 sq. foot
Protective Coating - Concrete Bents and Piers (Epoxy)	1 lump sum
Cored Slab Drains	14 each
Plugging Existing Curb Outlets	22 each
Vertical Drain at End Bents	2 each

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

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 5

Design Loading:

HS20-44 (1965 and New Construction)

Design Unit Stresses:

Class B-1 Concrete (Curb Blockout) $f'c = 4,000$ psi
Class B-2 Concrete (Full Depth Repair) $f'c = 4,000$ psi
Reinforcing Steel (ASTM A615 Grade 60) $fy = 60,000$ psi

Miscellaneous:

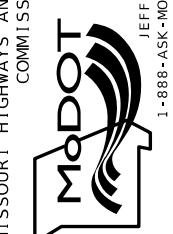
Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (Roadway item).

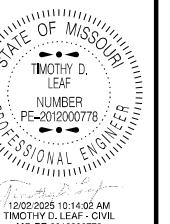
All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

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

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

Asbestos (Friability Category II NF) has been detected in the insulation compound between the top of the existing concrete parapet and the base of the existing handrail posts. The contractor has the option to remove the handrail and posts or leave in place. Should the contractor elect to remove the handrail and posts, the contractor will be required to use a licensed abatement contractor during the removal. No direct payment will be made for removal of the handrail and posts, or for asbestos abatement. The described work will be considered completely covered by the contract unit price for other items in the contract.





12/02/2025 10:14:02 AM
TIMOTHY D. LEAF - CIVIL
MO-PE-2012000778

DATE PREPARED
12/2/2025

ROUTE
I-49

STATE
MO

DISTRICT
BR

SHEET NO.
2

COUNTY
VERNON

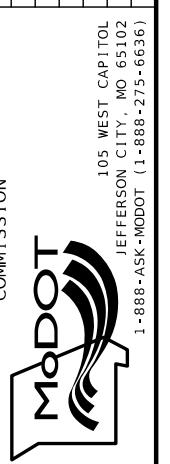
JOB NO.
JSR0274

CONTRACT ID.

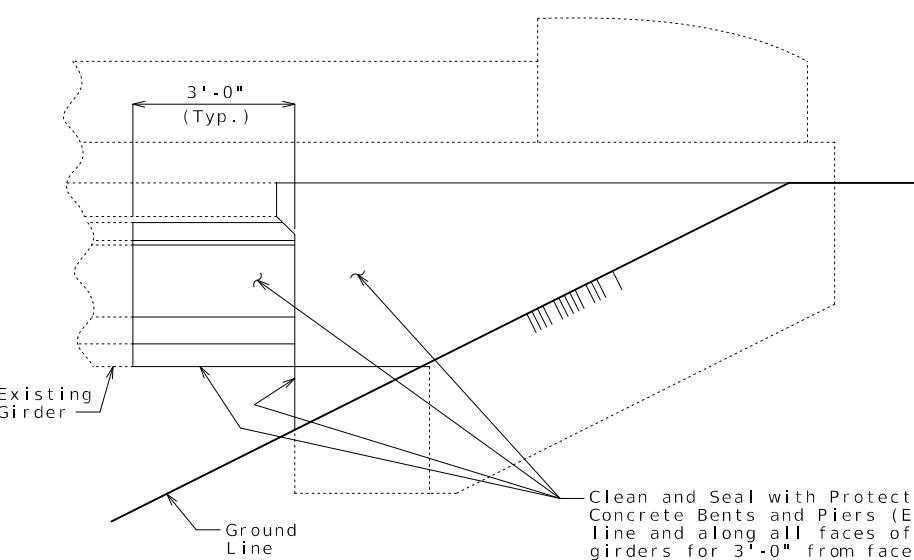
PROJECT NO.

BRIDGE NO.
A26312

DESCRIPTION	DATE

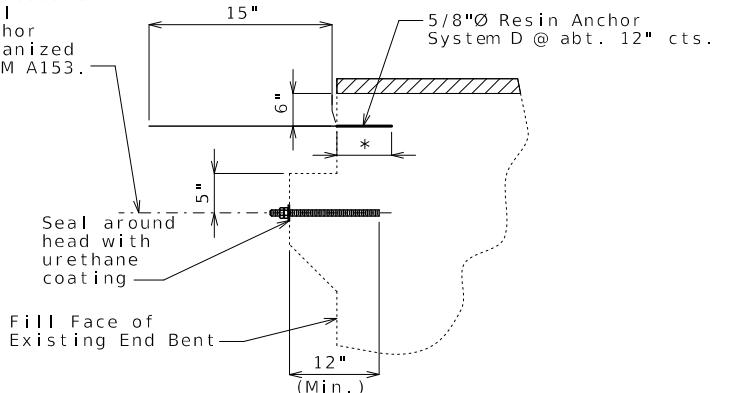


MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



ELEVATION OF END BENTS NO. 1 & 4
SHOWING PROTECTIVE COATING

Resin Anchor System E with
3/4"Ø threaded rod with flat
washer & two heavy hex nuts at
abt. 12" cts. (Burr threads to
prevent loosening). All
hardware for Resin Anchor
System E shall be galvanized
in accordance with ASTM A153.

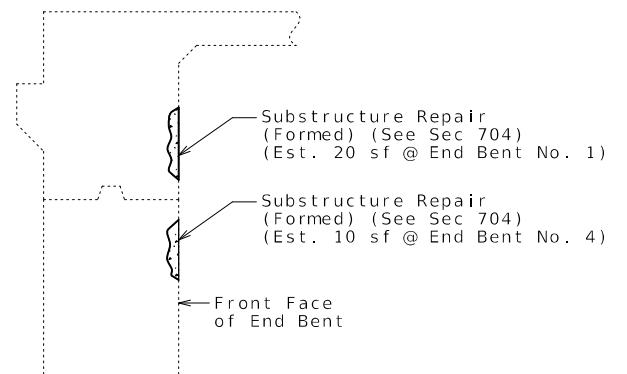


PART SECTION THRU END BENTS
NO. 1 & 4 SHOWING RESIN
ANCHORS SYSTEM D & E

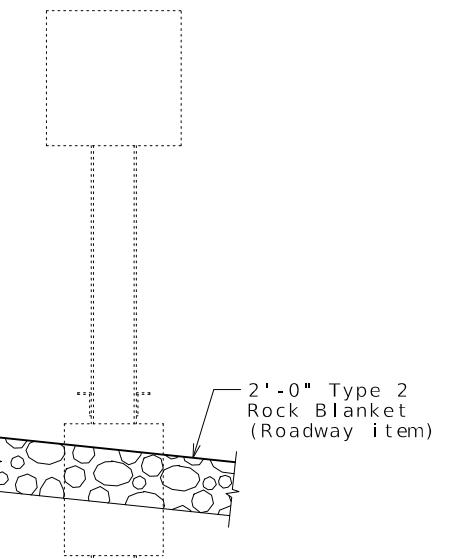
* Manufacturer's recommended embedment
length (5" minimum)

For resin anchor notes, see Sheet No. 5.

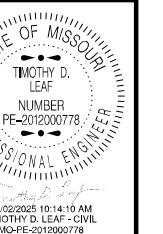
Cost of installing Resin Anchors System D & E,
complete in place, will be considered completely
covered under the contract unit price for Bridge
Approach Slab (Major).



TYPICAL SECTION THRU END BENTS
NO. 1 & 4 SHOWING SUBSTRUCTURE REPAIR



PART SECTION SHOWING
ROCK BLANKET AROUND
PILES AT INTERMEDIATE
BENTS NO. 2 & 3



12/2/2025 10:14:10 AM
TIMOTHY D. LEAF - CIVIL
MO-PE-2012000778

DATE PREPARED
12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 3

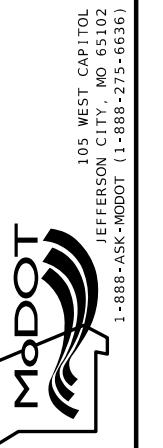
COUNTY VERNON

JOB NO. JSR0274
CONTRACT ID.

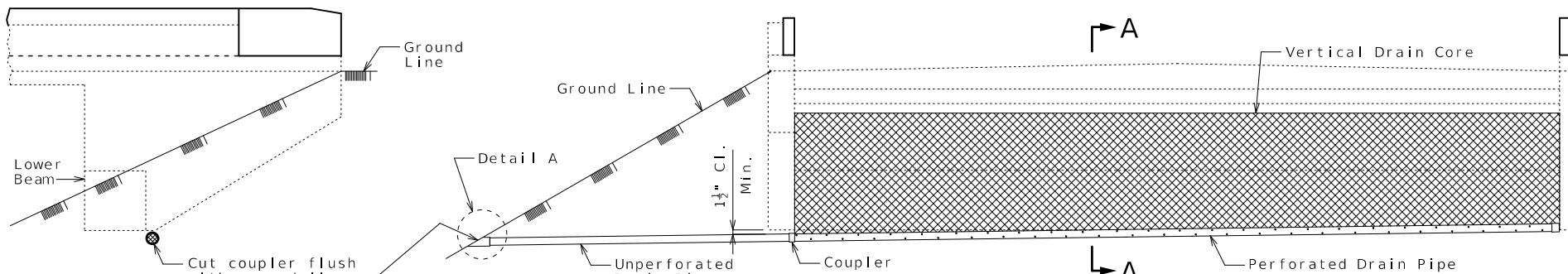
PROJECT NO.

BRIDGE NO. A26312

DESCRIPTION	DATE

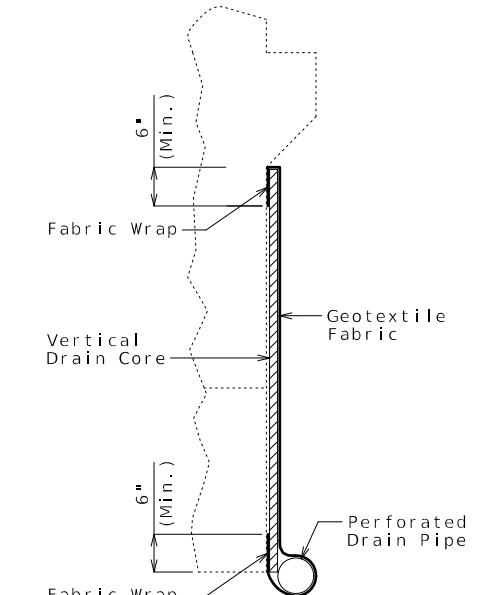


MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

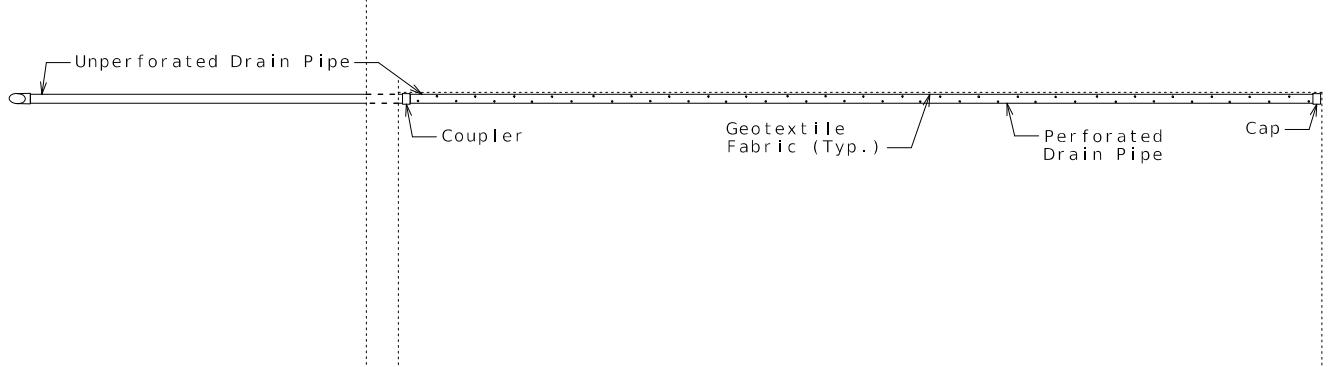


ELEVATION OF WING

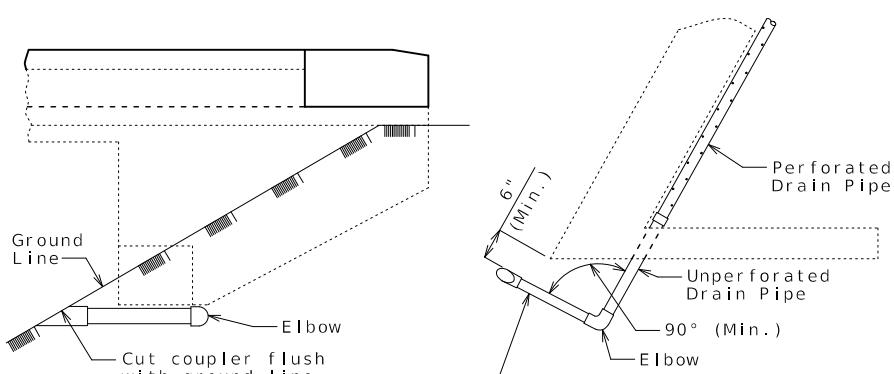
ELEVATION OF END BENT



PART SECTION A-A



PLAN OF END BENT



ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

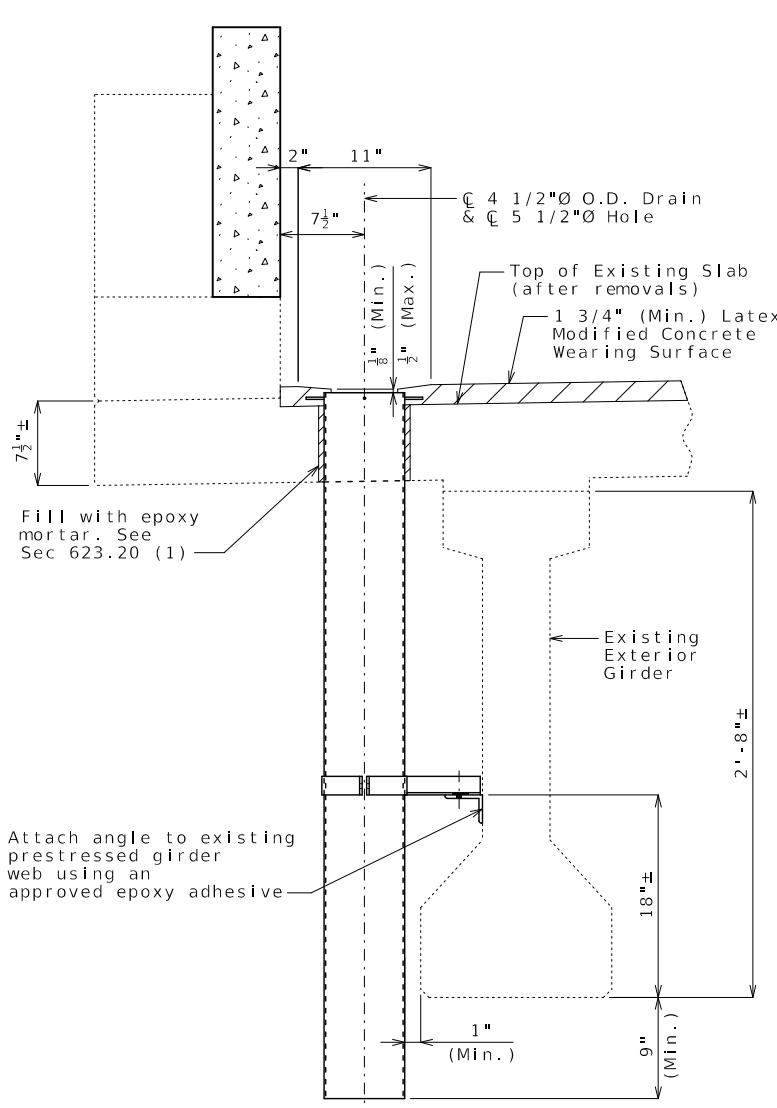
Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

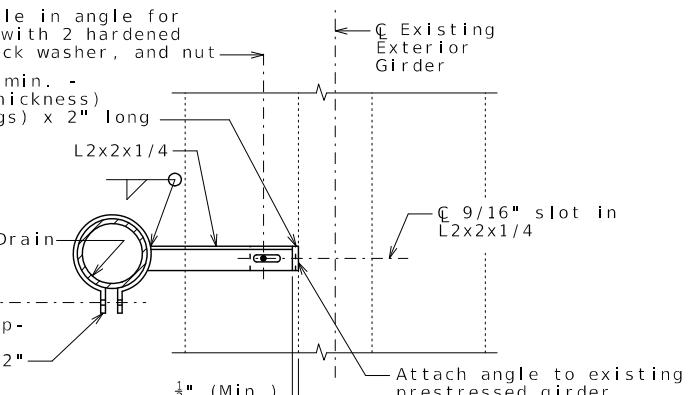
VERTICAL DRAIN AT END BENTS

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

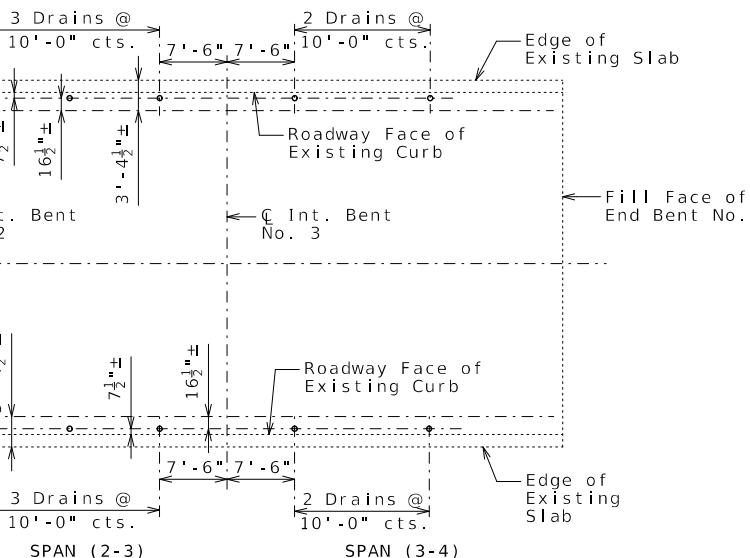
Sheet No. 3 of 8



PART PLAN OF SLAB AT DRAIN



PART SECTION SHOWING BRACKET ASSEMBLY



PART PLAN SHOWING CORED SLAB DRAIN LOCATIONS

Curb Blockouts not shown for clarity.

General Notes:

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

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

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

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with AASHTO M232 (ASTM A153), Class C.

All 1 1/2-inch diameter bolts shall be ASTM A307, except as noted.

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

Cost of cored slab drains, complete in place, will be considered completely covered by the contract unit price for Cored Slab Drain per each.

Holes for slab drains shall be cored. Percussion drilling will not be permitted.

Slab drain locations may be shifted the minimum extent necessary to avoid slab reinforcement.

Cored slab drains shall be placed vertically.

For details of plugging existing curb outlets, see Sheet No. 1.

Notes for Steel Drain:

Slab drains shall be fabricated from 1/4-inch structural steel tubing ASTM A500 or A501.

The drains shall be galvanized in accordance with ASTM A123.

Drains shall be inserted through slab such that damage to galvanized coating is minimized.

Notes for FRP Drain:

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

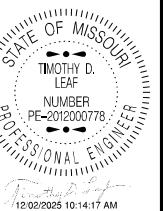
Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance. Care shall be taken to avoid damage to exterior coating during installation.

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

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

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



DATE PREPARED

12/2/2025

ROUTE I-49 STATE MO

DISTRICT BR SHEET NO. 4

COUNTY VERNON

JOB NO. JSR0274

CONTRACT ID. A26312

PROJECT NO.

BRIDGE NO. A26312

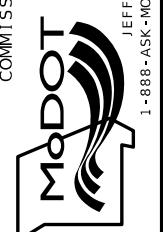
DESCRIPTION

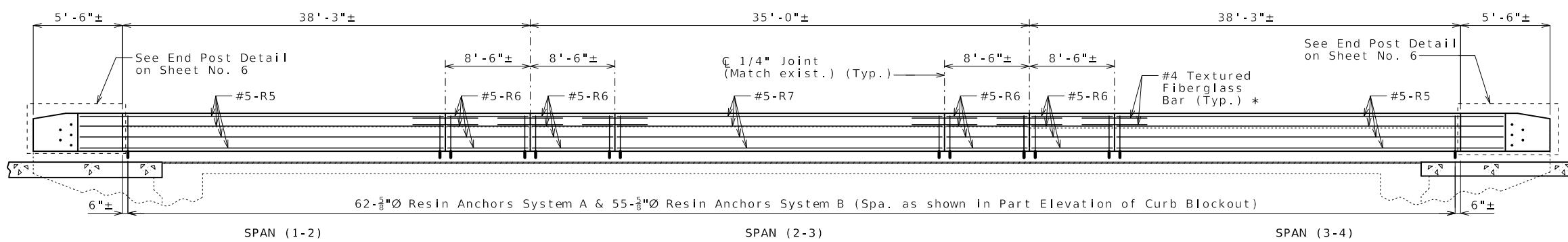
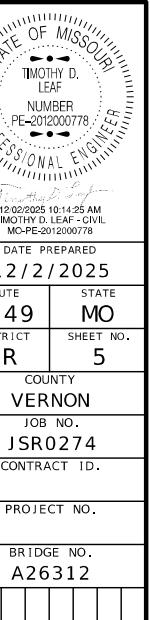
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

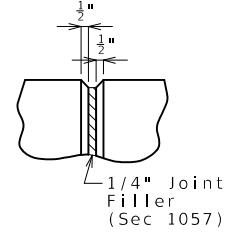
1-888-ASK-MODOT (1-888-275-6636)



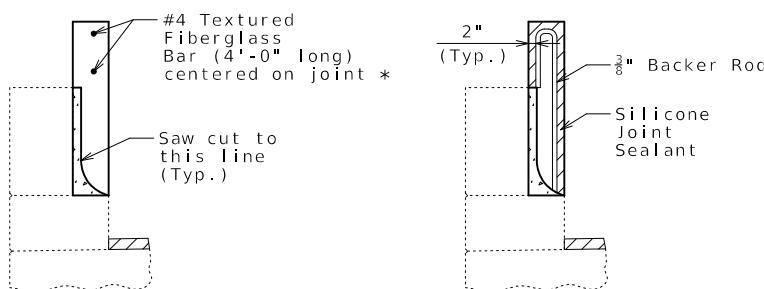


ELEVATION OF LEFT CURB BLOCKOUT
(Right curb blockout similar)

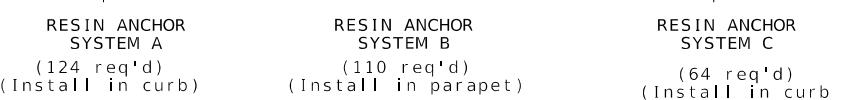
Longitudinal dimensions are along grade and are taken at top outside edge of parapet.



PART ELEVATION AT FORMED JOINT

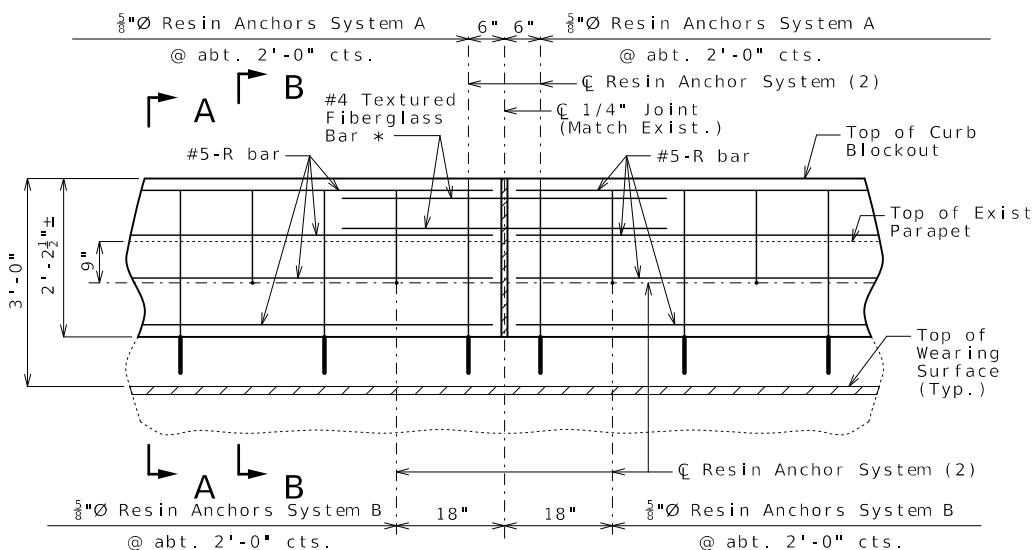


SECTION THRU SAW CUT JOINT



(1) Use manufacturer's embedment length (5" minimum embedment).

DETAILS OF RESIN ANCHORS



PART ELEVATION OF CURB BLOCKOUT

Notes:

* Slip-formed option only.

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

Bridge rail not shown for clarity.

Concrete in curb blockout shall be Class B-1.

Measurement of curb blockout is to the nearest linear foot, measured at the top outside edge of parapet. (Match existing curb and parapet)

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

Payment for concrete, reinforcement, resin anchor systems and any other work incidental to the curb blockout, complete in place, will be considered completely covered by the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be considered completely covered by the contract unit price for Curb Blockout.

All curb blockout reinforcement shall be epoxy coated.

(2) Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

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

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

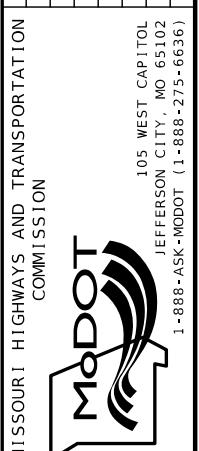
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

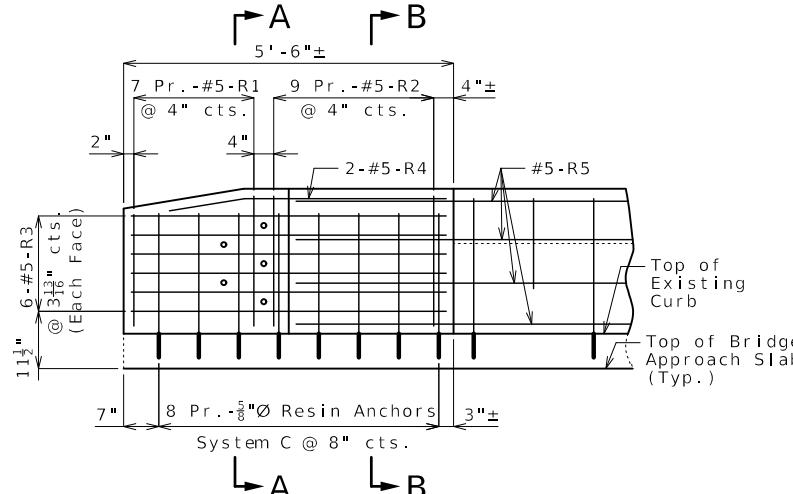
The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5 inches.

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

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

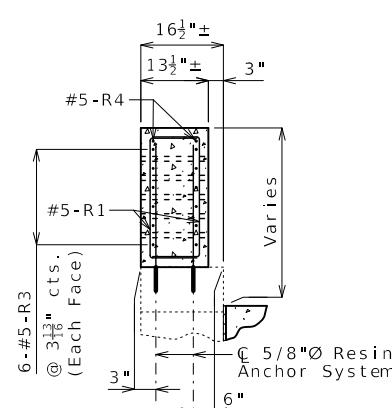
Work this sheet with Sheet No. 6.



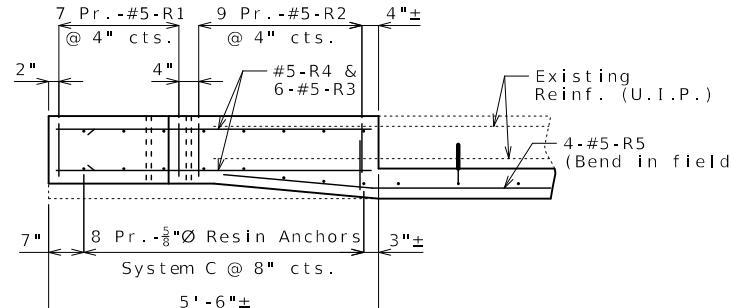


ELEVATION SHOWING REINFORCEMENT

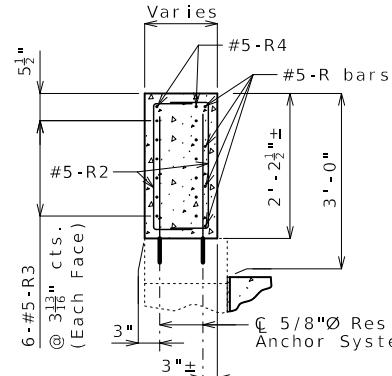
(Right End Post at End Bent No. 4 similar)



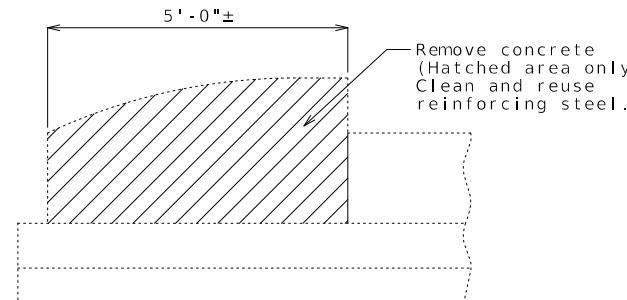
SECTION A-A



LEFT END POST AT END BENT NO 1

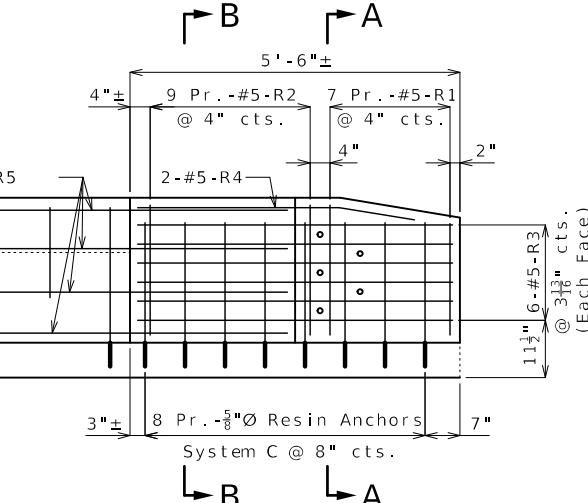


SECTION B-F



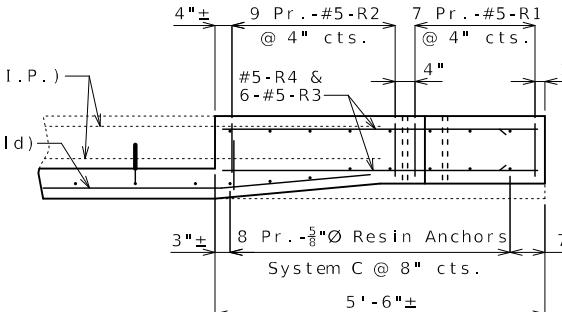
PART ELEVATION SHOWING END POST
CONCRETE REMOVAL

Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout



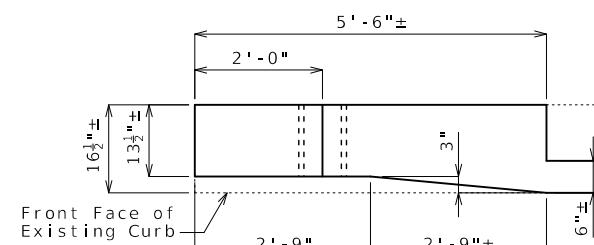
ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 1 similar)

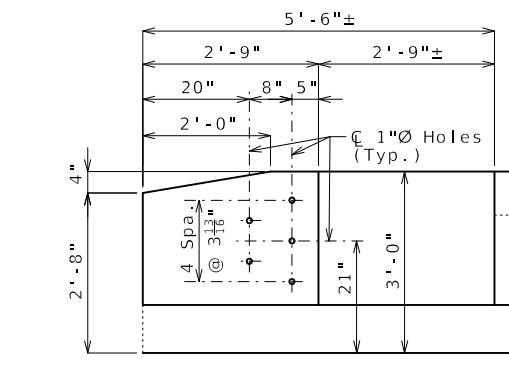


PLAN SHOWING REINFORCEMENT

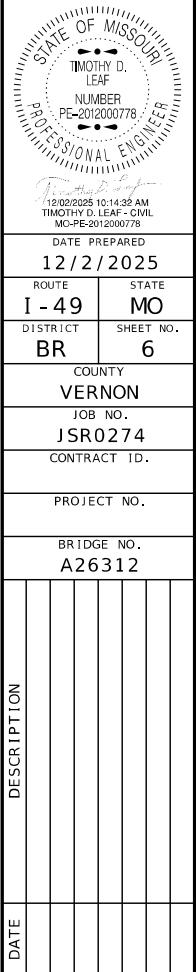
LEFT END POST AT END BENT NO. 4

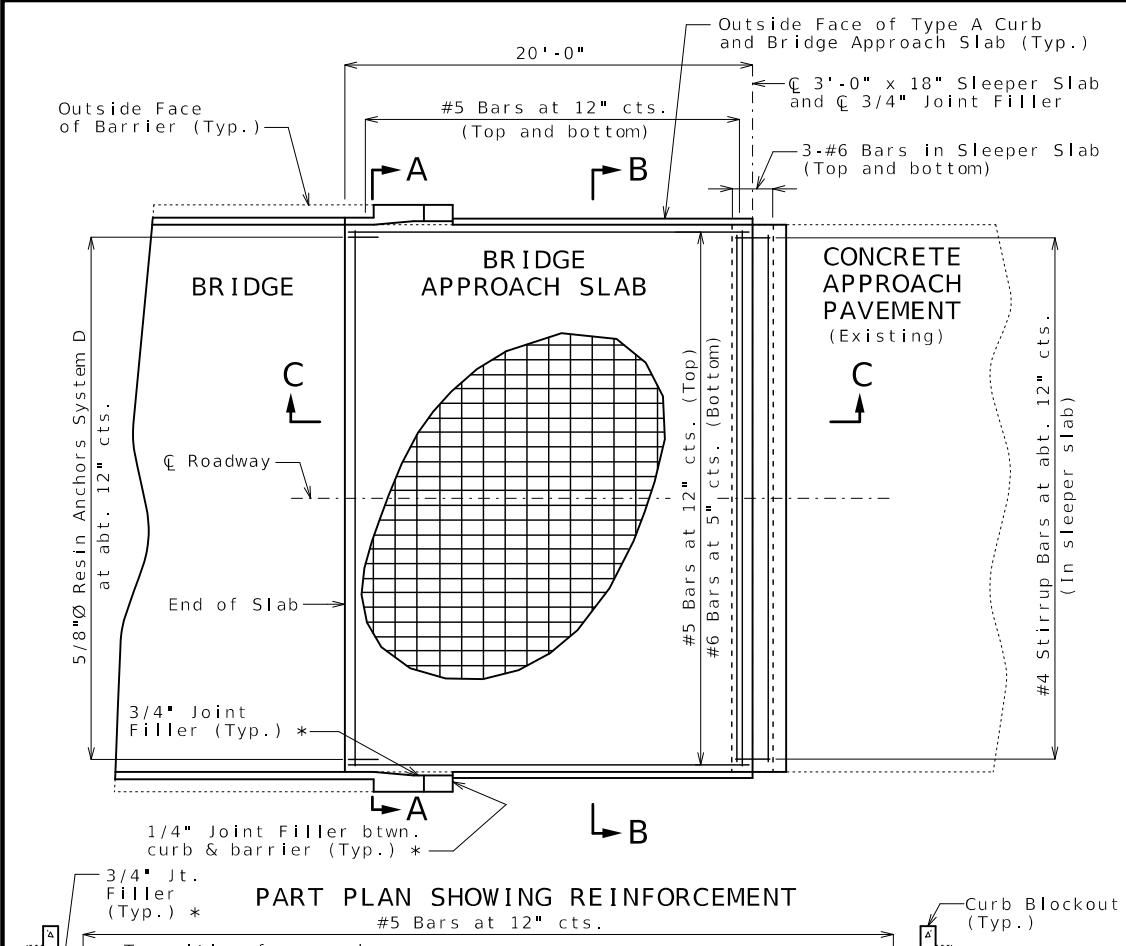


Front Face of

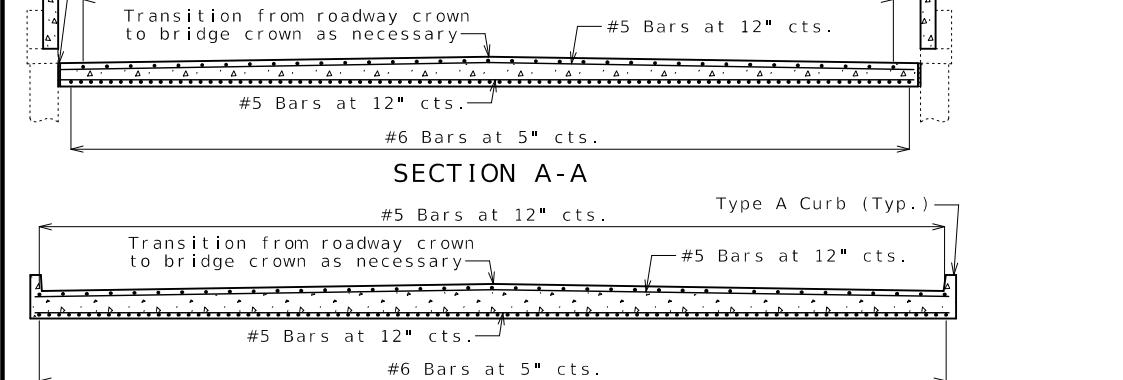


DETAILS OF END POST AND
GUARD RAIL ATTACHMENT

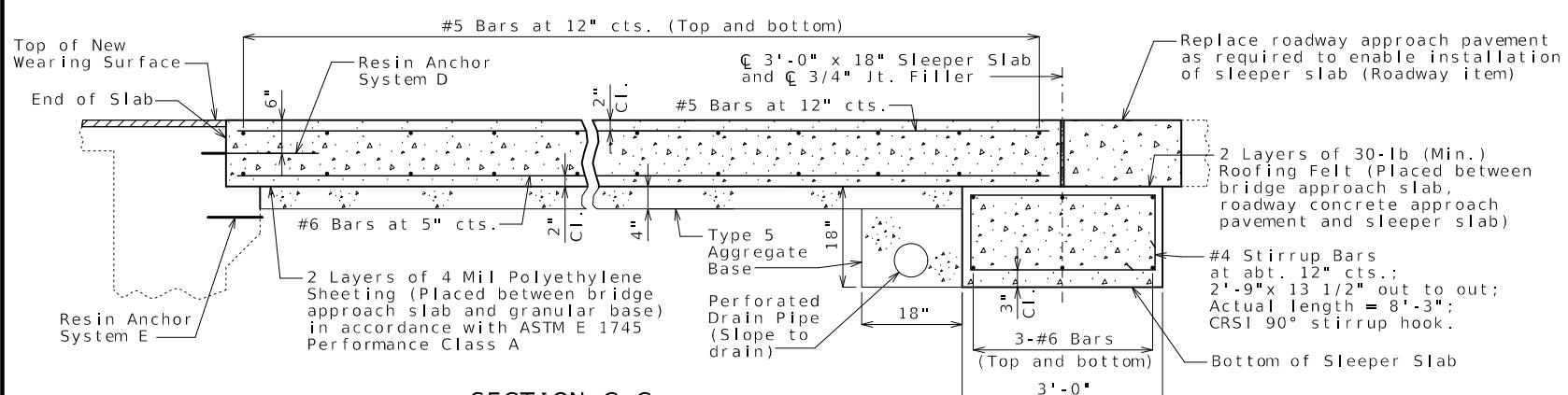




PART PLAN SHOWING REINFORCEMENT



With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION C-C

Note: For details of Resin Anchors System D & E, see Sheet No. 2.

BRIDGE APPROACH SLAB (MAJOR)

Detailed Sep. 2025
Checked Oct. 2025

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

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 ($f'c = 4,000$ psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with $fy = 60,000$ psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 24 inches for #5 bars and 40 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

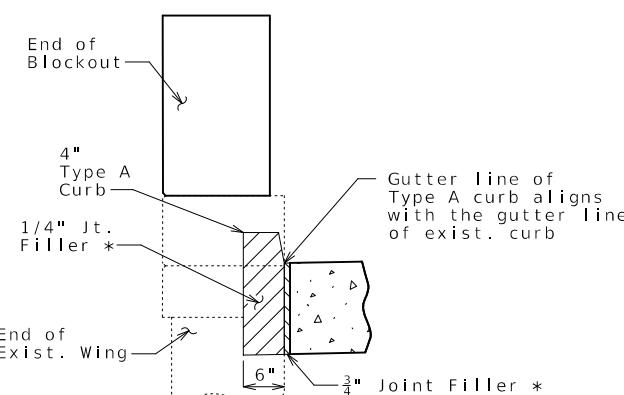
Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

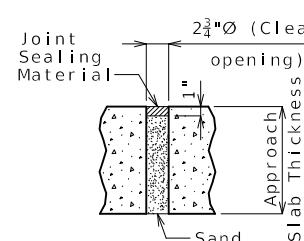
See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

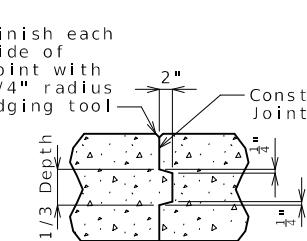


SECTION BETWEEN CURB AND BARRIER



UNDERSEAL ACCESS HOLE DETAIL

(If required)



CONSTRUCTION JOINT DETAIL



DATE PREPARED
12/2/2025

ROUTE
I-49
DISTRICT
BR
COUNTY
VERNON
JOB NO.
JSR0274
CONTRACT ID.
PROJECT NO.
BRIDGE NO.
A26312

DESCRIPTION	DATE

