#### DESIGN DESIGNATION

> T = 30% V = 70 M.P.H.

FUNCTIONAL CLASSIFICATION- INTERSTATE

ROUTE D

A.A.D.T. - 2024 = 9,463 D.H.V. = 9%

V = 55 M.P.H.

KEY MAP LOCATION OF FRANKLIN COUNTY

FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

#### NO R/W REQUIRED

## CONVENTIONAL SYMBOLS

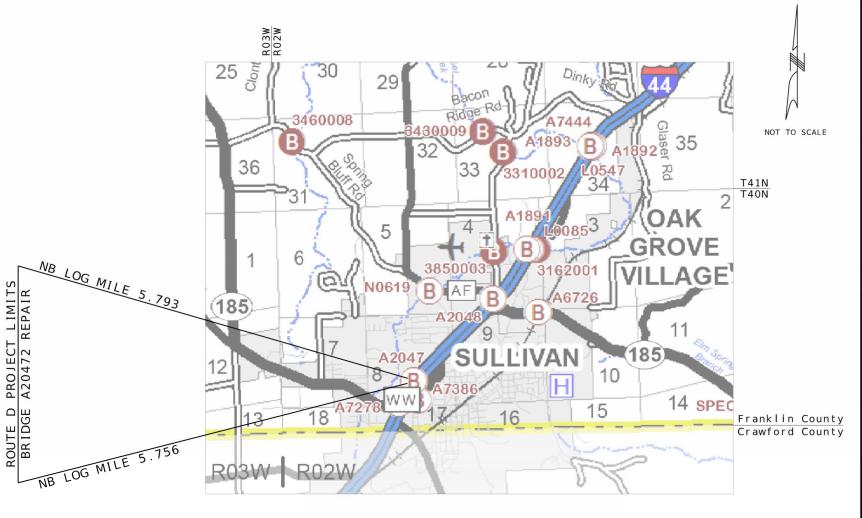
(USED IN PLANS) EXISTING NEW BUILDINGS AND STRUCTURES ニュニコ GUARD RAIL 0000 • • • • GUARD CABLE 0000 •••• CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER UTILITIES FIBER OPTICS OVERHEAD CABLE TV -FO--**OTV**--⊎⊺∀--VTO-UNDERGROUND CABLE TV -UTV-- **OT** -OVERHEAD TELEPHONE OT-- UT -- OE -—UT— —OE— —UE— UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER — S — – SS – — G — —<u>S</u> SANITARY SEWER STORM SEWER <del>-</del>G-SAN HYD MANHOLE FIRE HYDRANT WATER VALVE WATER METER DROP INLET DITCH BLOCK = GROUND MOUNTED SIGN LIGHT POLE H-FRAME POWER POLE TELEPHONE PEDESTAL FENCE CHAIN LINK WOVEN WIRE GATE POST BENCHMARK

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

# MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

## PLANS FOR PROPOSED STATE HIGHWAY FRANKLIN COUNTY

TOWNSHIP 40N, RANGE 02W, SECTION 08



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

#### INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTION	2
QUANTITIES (QU) (3 SHEETS)	3
TRAFFIC CONTROL SHEETS (TC)	4-10
PAVEMENT MARKING (PM)	11
BRIDGE DRAWINGS (B)	
A20472	1 - 5

BRIAN D. KIERATH JR. NUMBER PP. 203008624  THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY								CTECNICALLY SEALED AND DATED
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		CON	TRA	CT	ID			TUBET
		PRO	OJE	СТ	NO.			10 01
		BR	IDC	E N	NO.			LT NO
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								PDECENIT
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#### LENGTH OF PROJECT

BEGINNING OF PROJECT LOG MILE 5.756
END OF PROJECT LOG MILE 5.793

APPARENT LENGTH 196.83 FEET

EQUATIONS AND EXCEPTIONS:





GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00005

PE-2023008624

TOTAL CORRECTIONS 0.00 FEET
NET LENGTH OF PROJECT 196.83 FEET
STATE LENGTH 0.037 MILES

FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES

BRIAN KIERATH
PROFESIONAL
O ACRES ENGINEER

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 324.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED

8 / 8 / 2025

ROUTE STATE

D MO

DISTRICT SHEET NO

SL 2

FRANKLIN

JOB NO.

JSLM0087

CONTRACT ID.

PROJECT NO.

DESCRIPTION

5 WEST CAPITOL

COMMISSION

100

105 WEST

1.888-ASK-MODOT (1-888-27)

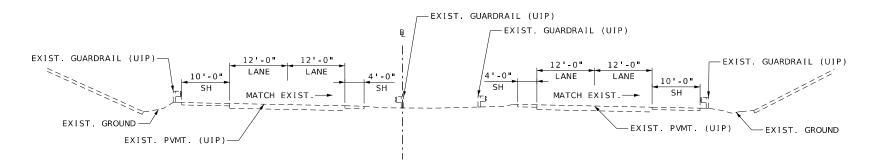
**GBA** 

16305 SWINGLEY RIDGE RE ST. 300 CHESTERFIELD, MO 63017 314.231.0100 GBAteam.com

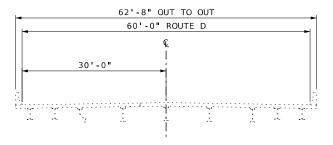
GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00005

BRIAN KIERATH PROFESIONAL ENGINEER PE-2023008624

WB I-44 EB I-44



EXIST. TYPICAL SECTION I-44



EXIST. TYPICAL SECTION ROUTE D
BRIDGE A20472
BEGINNING OF PROJECT LOG MILE 5.756
END OF PROJECT LOG MILE 5.793

MOBILIZATION						
TOTAL 1 LUMP SUM						

CONTRACTOR	FURNISHED	SURVEYING	AND	STAKING
TOTA	,L	1	LUMP	SUM

BRIAN D.

\* KIERATH IR.

NUMBER
PE-2023008624

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED

8/8/2025

ROUTE STATE

D MO

DISTRICT SHEET NO

SL 3

FRANKLIN JOB NO.

JOB NO.
JSLM0087
CONTRACT ID.

PROJECT NO.

DATE DESCRIPTION

COMMISSION

COMMISSION

1000

105 WEST CA

GBA

16305 SWINGLEY RIDGE RD ST. 300 CHESTERFIELD, MO 63017 314.231.0100 GBAteam.com

GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00005

BRIAN KIERATH PROFESSIONAL ENGINEER PE-2023008624

	REMOVAL OF IMPROVEMENTS		
ROADWAY	ITEM	QUANTITY	UNIT
RTE D BRIDGE	CHANNELIZER (TRIM LINE)	20	EΑ
RTE D BRIDGE	TYPE III MOVEABLE BARRICADE	5	EΑ
	PROJECT TOTAL	1 LUM	P SUM

NOTE: REMOVAL OF TEMPORARY TRAFFIC CONTROL DEVICES IS FOR COMISSION AND THIRD PARTY INSTALLED DEVICES ESTABLISHED ON THE PROJECT SITE PRIOR TO THE BEGINNING OF THE PROJECT. ALL QUANTITIES SHOWN IN THIS TABLE ARE APPROXIMATE. COSTS SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 202-20.10 "REMOVAL OF IMPROVEMENTS" (LUMP SUM). SEE JOB SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

PERMANENT PAVEMENT MARKING									
				RNE PAVEMENT MARKING BEADS	PREFORMED THERMOPLASTIC PAVEMENT MARKING				
LOCATION	FROM	ТО	6" WHITE	4" YELLOW	LEFT				
			SOLID	DOUBLE SOLID	ARROW				
			(LF)	(LF)	(EA)				
RTE. D	BRIDGE O	VER I-44	1,084	716	4				
PROJECT TOTAL			1.084	716	4				
BID ITEM T	OTAL		1.084	716	4				

	PAVEMENT MARKING REMOVAL										
	PAVEMENT MARKI	NG REMOVAL	PAVEMENT MARKING REMOVAL (SYMBOLS)								
	TEMPORARY PAVEMENT MARKING*	PERMANENT PAVEMENT MARKING	PERMANENT PAVEMENT MARKING								
	(LF)	(LF)	(EA)								
PROJECT TOTAL	406	700	2								
BID ITEM TOTAL	1.	2									

\*\*REMOVAL OF TEMPORARY PAVEMENT MARKING QUANTITY SHOWN IS FOR COMMISSION-INSTALLED TEMPORARY PAVEMENT MARKING ESTABLISHED ON THE PROJECT SITE PRIOR TO BEGINNING OF THE PROJECT. ALL QUANTITIES SHOWN IN THIS TABLE ARE APPROXIMATE.

CHRISTOPHER NOVOSEL NUMBER 1870/NALUS

SIGNED, SEALED, AND DATED ELECTRONICALLY.

8/8/2025

ROUTE STATE

D MO

DISTRICT SHEET NO

SL 3

FRANKLIN
JOB NO.
JSLM0087
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE DESCRIPTION

COMMISSION

COMMISSION

105 WEST CAPITALIA

GBA

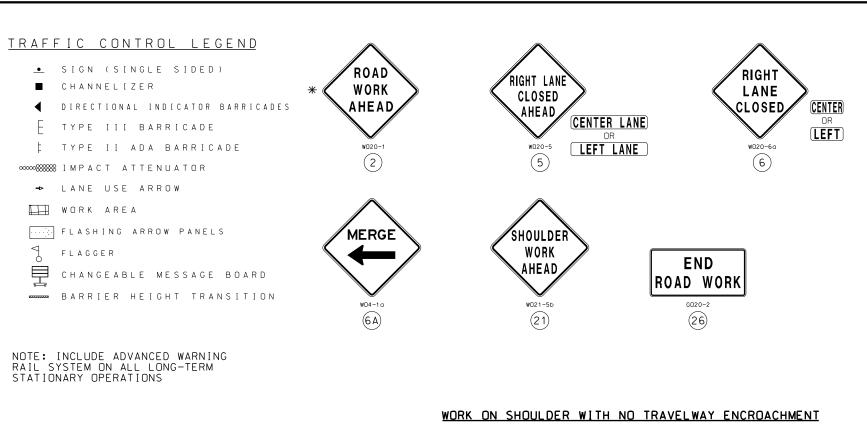
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GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00009

SUMMARY OF QUANTITIES SHEET 2 OF 3

CHRISTOPHER NOVOSEL PROFESSIONAL ENGINEER PE-2018024421

				ΙτοταιΙ	QTY TOTAL							OTY	TOTAL		II		EFFECTIVE: 07-01-2025	
SIGN	C 1 7 E	 : AREA	$\left  \right _{OTV}$		RELOCIRELOCISIGN		SIGN	C 1 7 E	ADE	,   <sub>OTV</sub>	TOTAL	,	RELOC SIGN		∥ ITEM	TOTAL	ETTECTIVE. 07-01-2025	TE OF MISSO
3 I GIV	IN.	SQ.FT				DECCRIPTION	J I GIV	IN	1		1	. EACH	l l	DECCRIPTION			DESCRIPTION	CHRISTOPHER
	IIV.	JSQ.FI	LACH			DESCRIPTION		IN.	JSQ.F	I. EACH				DESCRIPTION	NUMBER	R QTY		* NOVOSEL
<b>N1</b> 11	40V40	16.00	n I	WARN	ING SIGNS	TURN (CVMPOL LEET)	505 1	26740	12.0	0	GU !	IDE SIC	<u>کاات</u>	CORE EVIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)	NUMBER PE-2018024421
01 - 1L		16.00				TURN (SYMBOL LEFT)	E05-1		12.0					GORE EXIT	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)	SSIONAL ENGIN
01 - 1R		16.00	_			TURN (SYMBOL RIGHT)	E05-2		12.0					EXIT OPEN	6122010		IMPACT ATTENUATOR SE MPH (SAND BARRELS)	MAL DES
01 - 2L		16.00				CURVE (SYMBOL LEFT)	E05-2a		12.0					EXIT CLOSED	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)	THIS SHEET HAS BEEN
01 - 2R		16.00				CURVE (SYMBOL RIGHT)	GO20 - 1	60X24						ROAD WORK NEXT XX MILES	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)	SIGNED, SEALED, AND DATE ELECTRONICALLY.
01 - 3L		16.00				REVERSE TURN (SYMBOL LEFT)	GO20 - 2		8.00					END ROAD WORK	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)	ELECTRONICALLT.
1 - 3R		16.00	_			REVERSE TURN (SYMBOL RIGHT)	GO20 - 4	36X18						PILOT CAR FOLLOW ME	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)	DATE PREPARED
1-4L		16.00	_			REVERSE CURVE (SYMBOL LEFT)								PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL	8/8/202
1 - 4R	48X48	16.00	0 2	32.00	15	REVERSE CURVE (SYMBOL RIGHT)	GO20 - 4a	18X12	1.50	)				PILOT CAR IN USE WAIT & FOLLOW	6122030		IMPACT ATTENUATOR (RELOCATION)	ROUTE STA
1 - 4bL	48X48	16.00	0			DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00	3	18.00		54	WORK ZONE (PLAQUE)	6122040		WORK ZONE CRASH CUSHION (NARROW)	D   M
1 - 4bR	48X48	16.00	0			DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00	) 2	6.00		52	END DETOUR	6122041		WORK ZONE CRASH CUSHION (RELOCATION)	DISTRICT SHEET
1-4cL	48X48	16.00	0			TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.0	0				DETOUR (LEFT)	6123001		TRUCK MOUNTED ATTENUATOR (TMA)	SL   3
1-4cR	48X48	16.00	0			TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4 - 9R	48X36	12.0	0				DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)	COUNTY
1 - 6	60X30	12.50	0 1	12.50	16	HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00	)				STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)	FRANKLI
1-6a	72X36	18.00	0			HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4 - 10L	48X18	6.00	)				DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)	JOB NO.
1 - 7	60X30	12.50	0			DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4 - 10R							DETOUR ARROW (RIGHT)	6161020		CHANNELIZER (DRUM-LIKE)	JSLM008
1 - 7a		18.00				DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)			1		REGUL	ATORY	SIGNS		6161022		CHANNELIZER (CONE)	CONTRACT ID.
1 - 8		3.00	_			CHEVRON (SYMBOL)	R1-1	48X48	13.2		IVEGGE	1		STOP	6161025		CHANNELIZER (TRIM-LINE)	PROJECT NO.
-8a		7.50				CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.						YIELD	6161026		CHANNELIZER (VERTICAL PANEL)	PROJECT NO.
- 0 a - 1		3 16 00	_			STOP AHEAD (SYMBOL)	R1-2 R1-2a		9.00					TO ONCOMING TRAFFIC (PLAQUE)	6161026		TYPE 3 MOVEABLE BARRICADE	BRIDGE NO.
- 2		3 16.00				YIELD AHEAD (SYMBOL)	R1-2a R1-3P					+ +		ALL WAY (PLAQUE)	1		DIRECTION INDICATOR BARRICADE	SKIDGE NO.
		_	_						2.50		26 00		35	, , ,	6161033			
- 3		16.00				SIGNAL AHEAD (SYMBOL)	R2-1		12.0		36.00			SPEED LIMIT XX	6161040	2	FLASHING ARROW PANEL	
- 4		16.00	_	30.55		BE PREPARED TO STOP	R3-1		16.0		32.00		56	NO RIGHT TURN (SYMBOL)	6161047	1	TYPE 3 OBJECT MARKER	
<del>-</del> 5		16.00		32.00	4	SPEED LIMIT AHEAD	R3-2		16.0		64.00		55	NO LEFT TURN (SYMBOL)	6161055		SEQUENTIAL FLASHING WARNING LIGHT	
· 1 L		16.00	_			MERGE (SYMBOL FROM LEFT)	R3-3		9.00					NO TURNS	6161070		TUBULAR MARKER	
1R		16.00				MERGE (SYMBOL FROM RIGHT)	R3-4		16.0					NO U-TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM	8
-1aL		16.00	_			MERGE (LEFT)	R3-7L		6.25					LEFT LANE MUST TURN LEFT			CHANGEABLE MESSAGE SIGN,	Ĕ
-1aR		16.00	_	16.00	6A	MERGE (RIGHT)	R3-7R		6.25					RIGHT LANE MUST TURN RIGHT	6161096		COMMISSION FURNISHED/RETAINED	#
- 1	48X48	16.00	0			ROAD/BRIDGE/RAMP NARROWS	R4-1		12.0					DO NOT PASS	1		CHANGEABLE MESSAGE SIGN WITHOUT COMM.	S
- 3	48X48	16.00	0			ONE LANE BRIDGE	R4-2	36X48	12.0	0				PASS WITH CARE	6161098	Α	INTERFACE, CONTRACTOR FURNISHED/RETAINED	비
- 5	48X48	16.00	0			NARROW LANES	R4-7a	36X48	12.0	0				KEEP RIGHT (HORIZONTAL ARROW)		2*	CHANGEABLE MESSAGE SIGN WITH COMM.	
- 1	48X48	16.00	0			DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.0	0				KEEP LEFT (HORIZONTAL ARROW)	6161099	2	INTERFACE, CONTRACTOR FURNISHED/RETAINED	
- 2	48X48	16.00	0			DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25	5				DO NOT ENTER	6162000	A	WORK ZONE TRAFFIC SIGNAL SYSTEM	
- 3	48X48	16.00	0			TWO WAY TRAFFIC (SYMBOL)	R5-1a		6.00					WRONG WAY	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS	
' - 3a		5.00				NEXT XX MILES (PLAQUE)	R6-1L		6.75					ONE WAY ARROW (LEFT)			TEMPORARY TRAFFIC BARRIER,	++++
3 - 1		3 16.00	_			BUMP	R6-1R		6.75					ONE WAY ARROW (RIGHT)	6173600	Ы	CONTRACTOR FURNISHED/RETAINED	ا ا ا ا ا ا
3 - 2		16.00	_			DIP	R6-2L	24X30						ONE WAY (LEFT)	10173000		TEMP. TRAFFIC BARRIER ANCHORED,	[   ]
		_	_				R6-2R							· · · · · · · · · · · · · · · · · · ·	6173700	D		~
3 - 3		16.00				PAVEMENT ENDS			5.00					ONE WAY (RIGHT)	6173700	В	CONTRACTOR FURNISHED/RETAINED	
3 - 4		16.00	_			SOFT SHOULDER	R9-9	24X12	2.00	J				SIDEWALK CLOSED	1		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION	AT I ON
3 - 5		16.00	_			SLIPPERY WHEN WET (SYMBOL)	l							SIDEWALK CLOSED AHEAD,	6173706		CONTRACTOR FURNISHED/RETAINED	Ē
3 - 6		16.00	_			TRUCK CROSSING	R9-11L	24X18	3.00	)				(ARROW LEFT) CROSS HERE			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION,	<b>∀</b> ⊥
3-6c		16.00	_			TRUCK ENTRANCE	l							SIDEWALK CLOSED AHEAD,	6174000		CONTRACTOR FURNISHED/RETAINED	OR ST
3 - 7	36X36	9.00				LOOSE GRAVEL	R9-11R	24X18	3.00	כ				(ARROW RIGHT) CROSS HERE	6175010	Α	RELOCATING TEMPORARY TRAFFIC BARRIER	Q N
3-7a		9.00				FRESH OIL / LOOSE GRAVEL	R10-6	24X36	6.00	)				STOP HERE ON RED (45^ ARROW)	6175011		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED	AN 5
- 9	48X48	16.00	0			LOW SHOULDER	R11-2	48X30	10.0	0 7	70.00		29	ROAD CLOSED	6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS	£ 2
- 11	48X48	16.00	0			UNEVEN LANES	l							ROAD CLOSED XX MILES AHEAD	6175020	A	RELOCATING TEMP. TRAFFIC BARRIER HEIGHT	. 0
3 - 12	48X48	16.00	0			NO CENTER LINE	R11-3a	60X30	12.5	0				LOCAL TRAFFIC ONLY	6208064	Α	TEMPORARY RAISED PAVEMENT MARKER	SS.
- 15	48X48	16.00	0			GROOVED PAVEMENT	R11-4	60X30	12.5	0				ROAD CLOSED TO THRU TRAFFIC	9029400		TEMPORARY TRAFFIC SIGNALS	
-15P	30X24	5.00				MOTORCYCLE (PLAQUE)	CONST-3A	60X48	20.0	0				FINE SIGN	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING	× 5 5 5
-17L	48X48	16.00	0			SHOULDER DROP-OFF (SYMBOL LEFT)	CONST-3X	56X12	4.6	7				SPEEDING/PASSING (PLATE)				₹8 () <b>47</b>
		16.00	_			SHOULDER DROP-OFF (SYMBOL RIGHT)				M	ISCELL	LANEOUS	SIGNS		*	DAD=	LUMP COM TRAFFIC CONTROL	₹ X
-17P	30X24	5.00				SHOULDER DROP-OFF (PLAQUE)	CONST-5	48X36	12.0					POINT OF PRESENCE	1 <sup>™NOT</sup>	PART OF	LUMP SUM TRAFFIC CONTROL	፱ <b>᠘ </b>
- 1		9.62				RAILROAD CROSSING	CONST-5							POINT OF PRESENCE	1			- 0
2-1		4 00	_			DOUBLE DOWN ARROW (SYMBOL)				0 7	94.00			WORK ZONE NO PHONE ZONE	1			4 [ <b>4 1</b>
2-2		16.00				LOW CLEARANCE (SYMBOL)	SP - 58			0 3			5.8	RTE D CLOSED AHEAD FOLLOW DETOUR	1			0 1 <b>2 6</b>
		3 00				LOW CLEARANCE (PLAQUE)	SP - 58			0 1	+			RTE D CLOSED AHEAD FOLLOW DETOUR	1			Si — —
		14 00				OVERHEAD LOW CLEARANCE (FEET AND INCHES)		2 37.10	+ 0						1			Σ
2-4		0 50.00				LOW CLEARANCE XX FT XX IN XX MILES AHEAD	SPECIAL	VARIES	5 29 7	0 30	1.158 3	1	57A_C	DETOUR SIGN ASSEMBLY	1		ŀ	
12-5		0 50.00				WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	J. 201AL			- 33	1,150.5		3/7.3		1			
3-1		_	2	12 50		ADVISORY SPEED (PLAQUE)			+			+ +	+		†			
		5.00		12.30	+4	XXX FEET (PLAQUE)			+			+ +			1			
6-2		5.00							+			+ +			1			16305 SWINGLEY RII
6-3		_		90 00		X MILE (PLAQUE)			+		1	+ +			1			ST. 300
0-1		16.00		80.00		ROAD/BRIDGE/RAMP WORK AHEAD			+			-			1			CHESTERFIELD, MO 314.231.0100
0-2		16.00		32.00		DETOUR AHEAD	C16 16				TOT				J			GBAteam.com
) - 3		16.00		64.00		ROAD CLOSED AHEAD	616-10				TOTAL	⊣						
) - 4		16.00				ONE LANE ROAD AHEAD	CONSTRU		N SIC	JNS	1,936			MAINTENANCE OF (		ON-OWNED		GEORGE BUTLES ASSOCIATES, IN
0 - 5		_	0 2	32.00	5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD	616-10						TOTAL	6169901 1 L.S. TRAFFIC CONTROL				PRO. ENGINEER 00
0-5a	48X48	16.00	0			2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	RELOCA	TED S	I GNS					6169901 1 L.S. LUMP SUM TEMPORA	ARY TRAFI	IC CONT	ROL	ARCHITECT 0002 PRO. LAND SURVEYOR
20-6a	48X48	16.00	0 1	16.00	6	RIGHT/CENTER/LEFT LANE CLOSED								MONITORING, ADJUSTING, AND MA	A I NITA I NI I A			LAND SURVETOR
20-7a	48X48	16.00	0			FLAGGER (SYMBOL)								COMMISSION-OWNED TRAFFIC CONT			_	
21-2		9.00				FRESH OIL								BE PAID FOR AT THE CONTRACT U	JNIT PRIC	E FOR		
21-5		16.00				SHOULDER WORK / SHOULDER WORK AHEAD								ITEM 616-99.01 MAINTENANCE OF			ED	
		16.00				BLASTING ZONE AHEAD								TRAFFIC CONTROL DEVICES, PER	LUMP SUM	1.		
22 - 1		10.50				TURN OFF 2-WAY RADIO AND PHONE								TEMPORARY TRAFFIC CONTROL DEV				
	42X3h					END BLASTING ZONE								NOTED ABOVE, WILL BE PAID FOR UNIT PRICE FOR ITEM 616-99.01			I	
2-2		10 50	וט											EDILE FUR LIEW DID-99 UI	י בטויור אל			
2 - 2 2 - 3	42X36	10.50 2.19				WET PAINT (ARROW PIVOTS)								TEMPORARY TRAFFIC CONTROL SE		)R	SUMMARY OF QUANTITIES SHEET 3 OF 3	CHRISTOPHER NO



CHANNELIZING DEVICE SPACING 1									
POSTED SPEED PRIOR TO	MAX. CHANNELIZER SPACING THROUGH	MAX. CHANNELIZER SPACING THROUGH							
CONSTRUCTION, MPH (P)	TAPER (X)	WORK AREA (Y)							
O TO 35	35 <sup>′2</sup>	40 <sup>′2</sup>							
40 TO 45	40′²	80 <i>'</i> 2							
50 TO 55	50′³	80′³							
60 TO 70	60 ′³	120′³							
	POSTED SPEED PRIOR TO CONSTRUCTION, MPH (P) 0 TO 35 40 TO 45 50 TO 55	POSTED SPEED MAX. CHANNELIZER SPACING THROUGH TAPER (X)  0 TO 35 35'2  40 TO 45 40'2  50 TO 55 50'3							

- (1) CHANNELIZER SPACING MAY BE REDUCED TO DISCOURAGE TRAFFIC ENCROACHMENT.
- (2) SPACING REDUCED  $\frac{1}{2}$  AT INTERSECTIONS. (3) SPACING MAY BE REDUCED TO  $\frac{1}{2}$  AT INTERSECTIONS.

#### TAPER LENGTHS

L = W x P FOR 40 MPH OR MORE

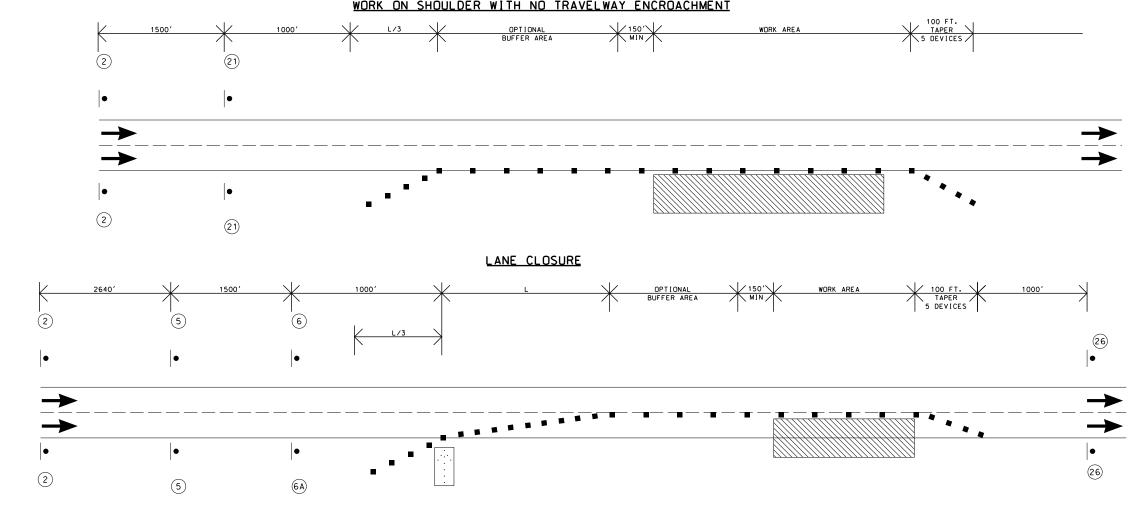
 $L = \frac{WP^2}{60}$  FOR 35 MPH OR LESS

L= TAPER LENGTH IN FEET

W= LATERAL SHIFT IN FEET

P= POSTED SPEED PRIOR TO CONSTRUCTION

BUFFER SPACE						
POSTED SPEED PRIOR TO CONSTRUCTION, MPH (P)	RECOMMENDED LENGTH OF LONGITUDINAL BUFFER					
O TO 35	280 FT					
40 TO 45	400 FT					
50 TO 55	560 FT					
60 TO 70	840 FT					



TEMPORARY TRAFFIC CONTROL

CHRISTOPHER NOVOSEL PROFESSIONAL ENGINEER PE-2018024421

16305 SWINGLEY RIDGE RD ST. 300 CHESTERFIELD, MO 63017 314.231.0100 GBAteam.com

GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00009

SIGNED, SEALED, AND DATED ELECTRONICALLY.

DATE PREPARED

8/8/2025

FRANKLIN

JSLM0087

CONTRACT ID

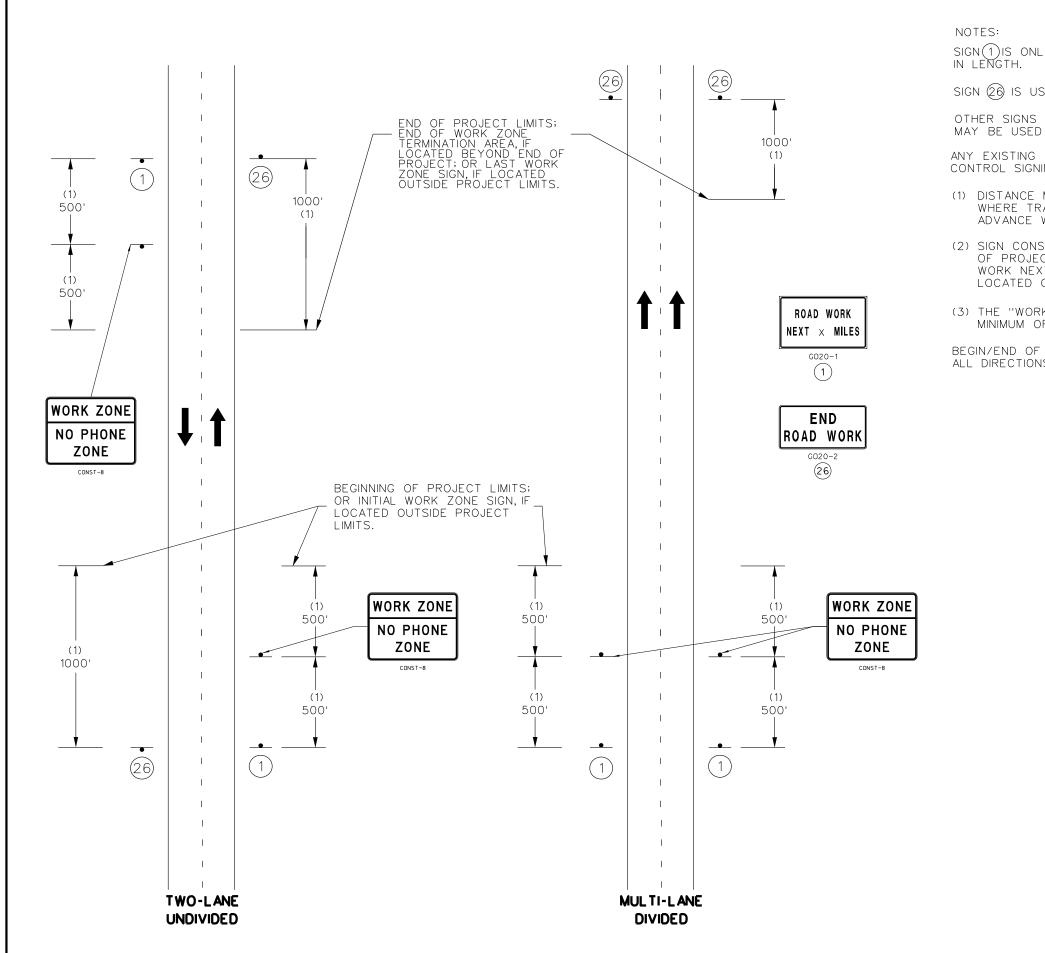
PROJECT NO.

BRIDGE NO

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SIGN () IS ONLY REQUIRED ON PROJECTS OF 2 MILES OR GREATER IN LENGTH.

SIGN 26 IS USED ON ALL PROJECTS WHERE SIGN 1 IS USED.

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

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

- (1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.
- (2) SIGN CONST-7-72 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT XX MILES SIGN. IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.
- (3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

BEGIN/END OF PROJECT SIGNING SHALL BE INSTALLED FOR ALL DIRECTIONS OF ROUTE D AND 1-44.



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

8/8/2025
ROUTE STATE
D MO

SL 5 FRANKLIN

JSLM0087 CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE DESCRIPTION

COMMISSION

COMMISSION

MODOT

105 WEST CA

LEFFERSON CITY, MO

1-888-ASK-MODOT (1-888-275-

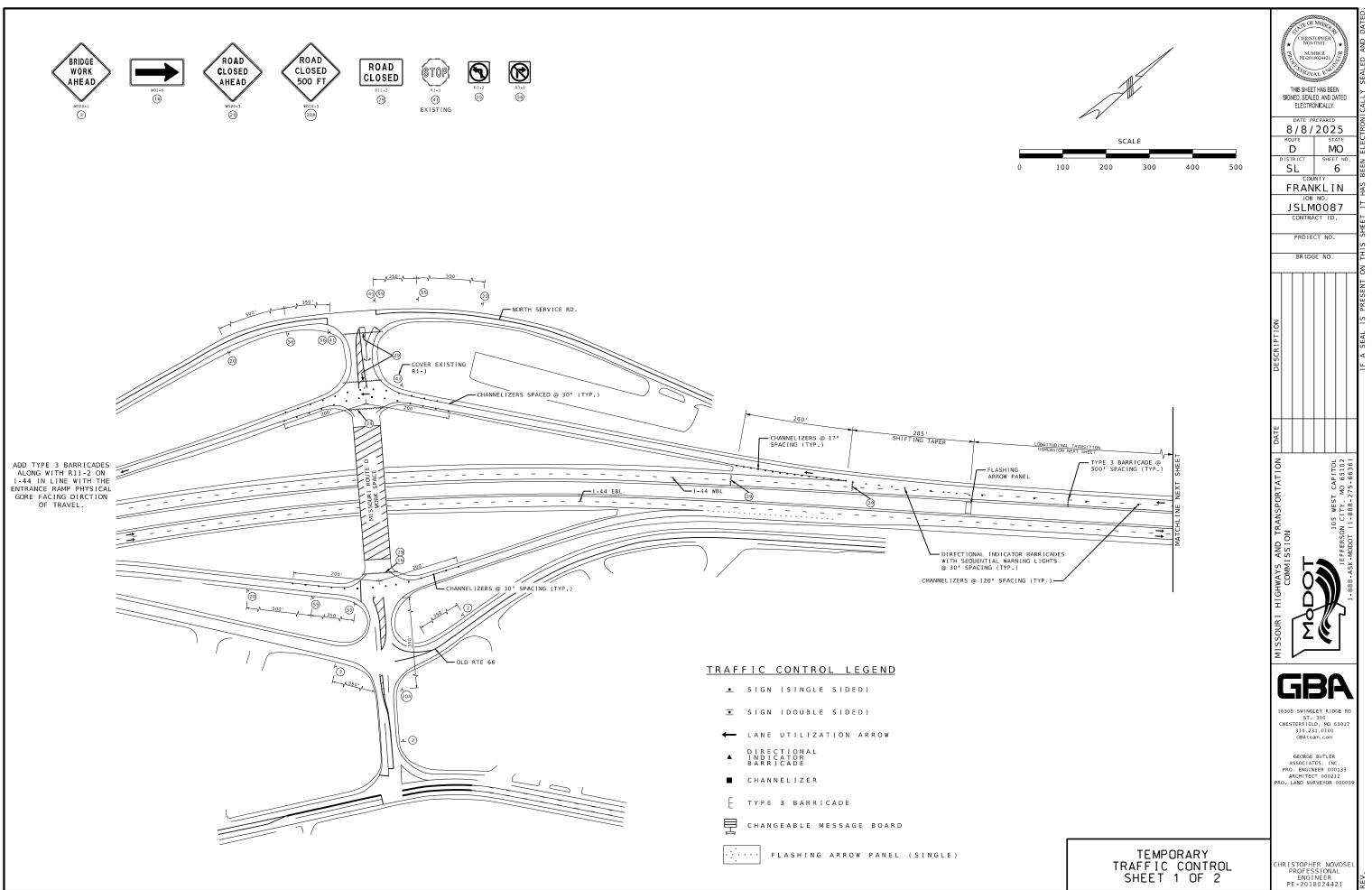
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ARCHITECT 000212
PRO. LAND SURVEYOR 00005

CHRISTOPHER NOVOSEL
PROFESSIONAL
ENGINEER
PE-2018024421

TEMPORARY TRAFFIC CONTROL BEGIN/END OF PROJECT SIGNING





2



2











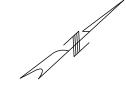


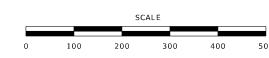


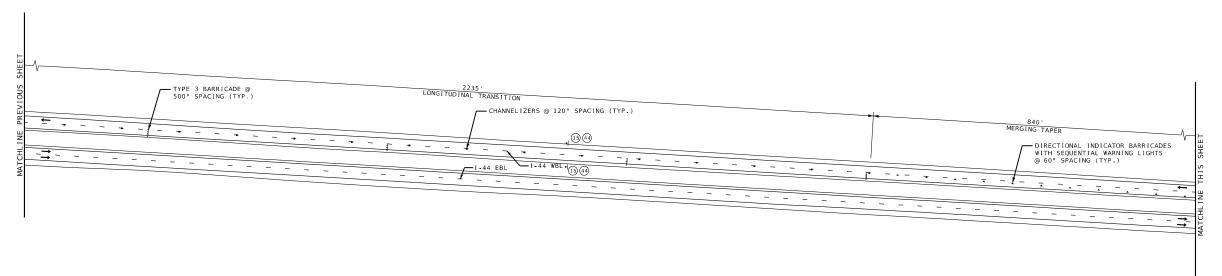


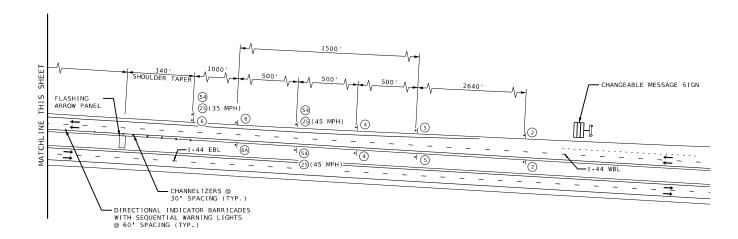












#### TRAFFIC CONTROL LEGEND

- <u>•</u> SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- ← LANE UTILIZATION ARROW
- DIRECTIONAL INDICATOR
- CHANNELIZER
- F TYPE 3 BARRICADE

CHANGEABLE MESSAGE BOARD

FLASHING ARROW PANEL (SINGLE)

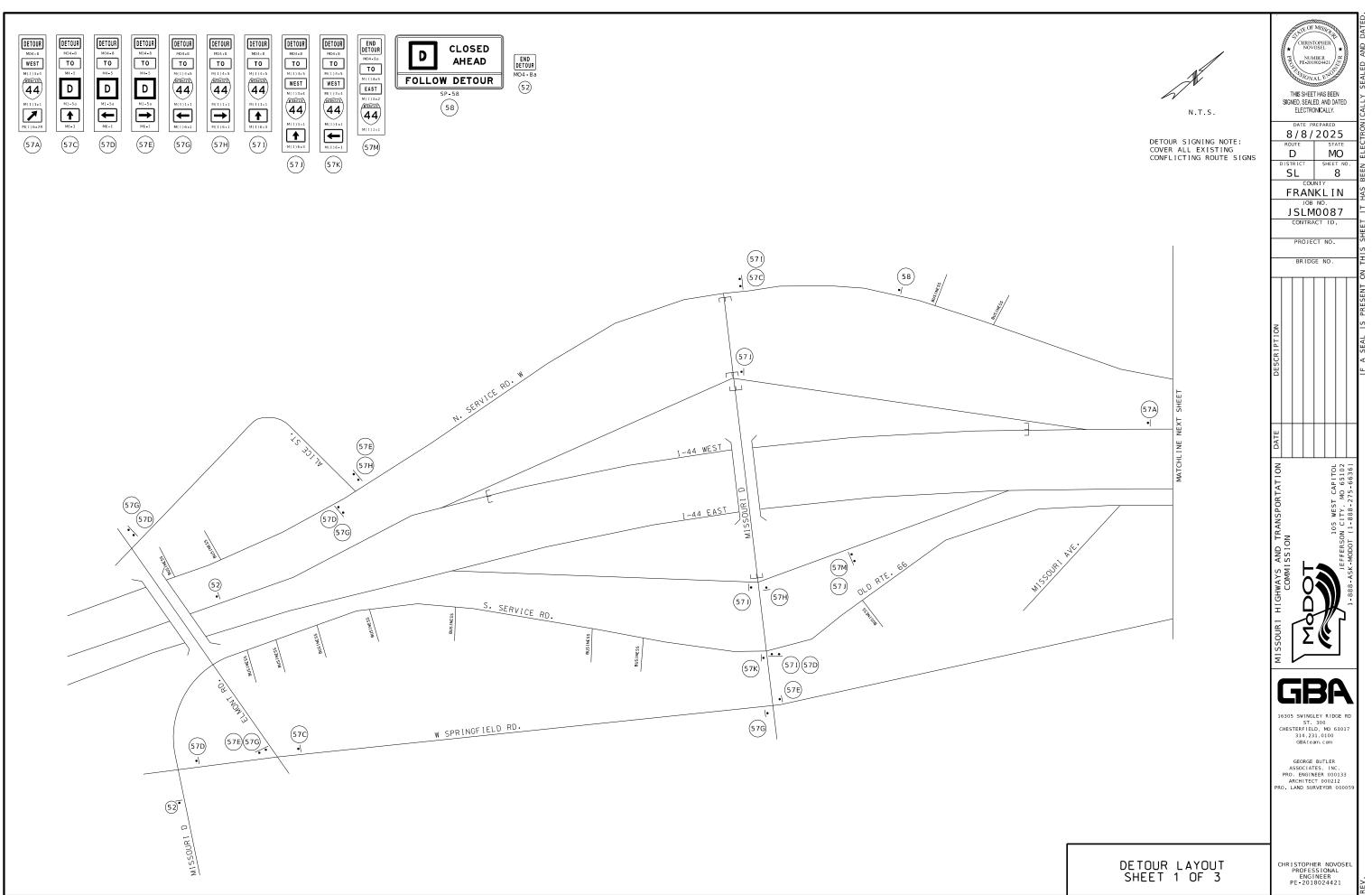
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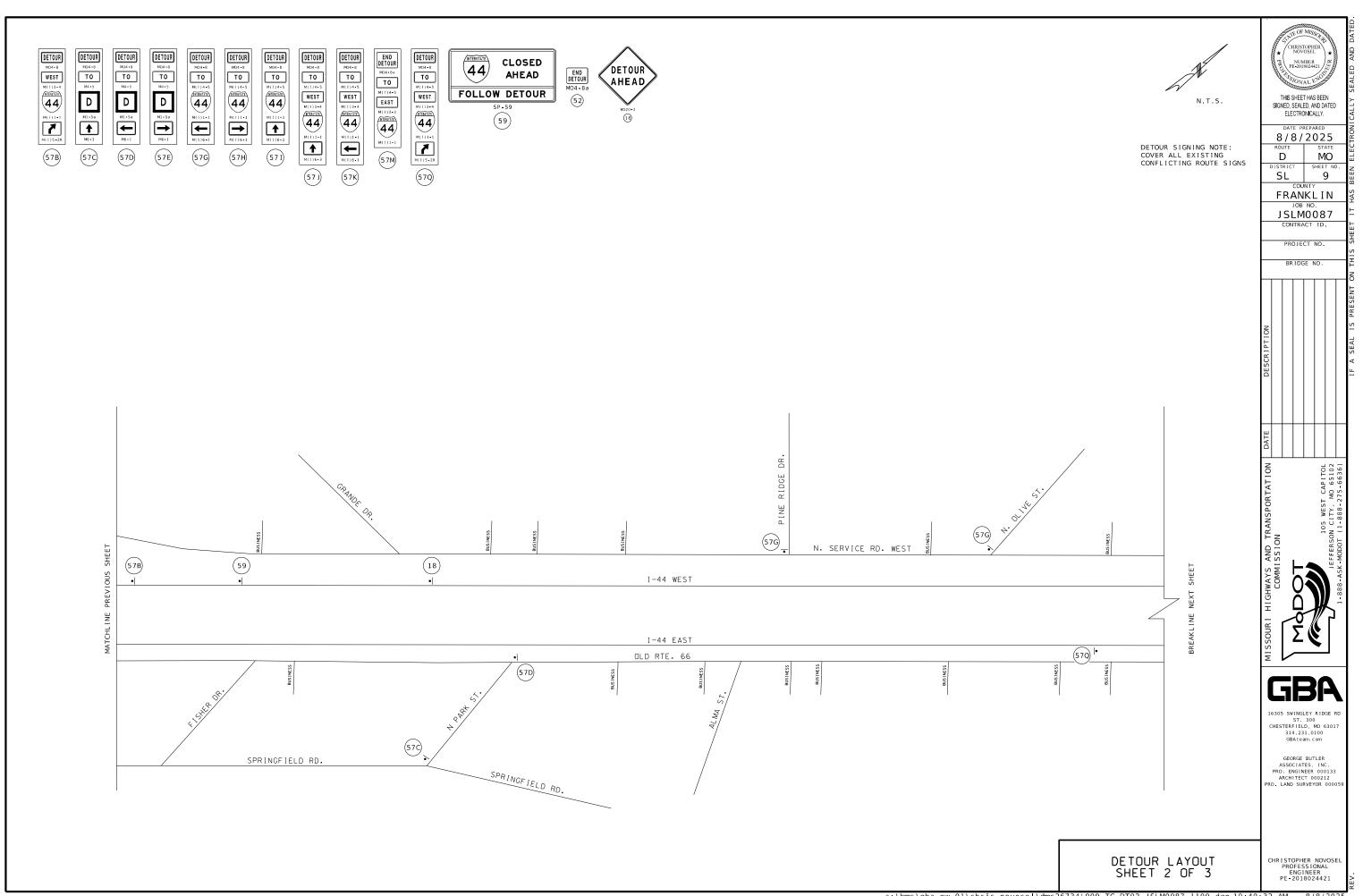
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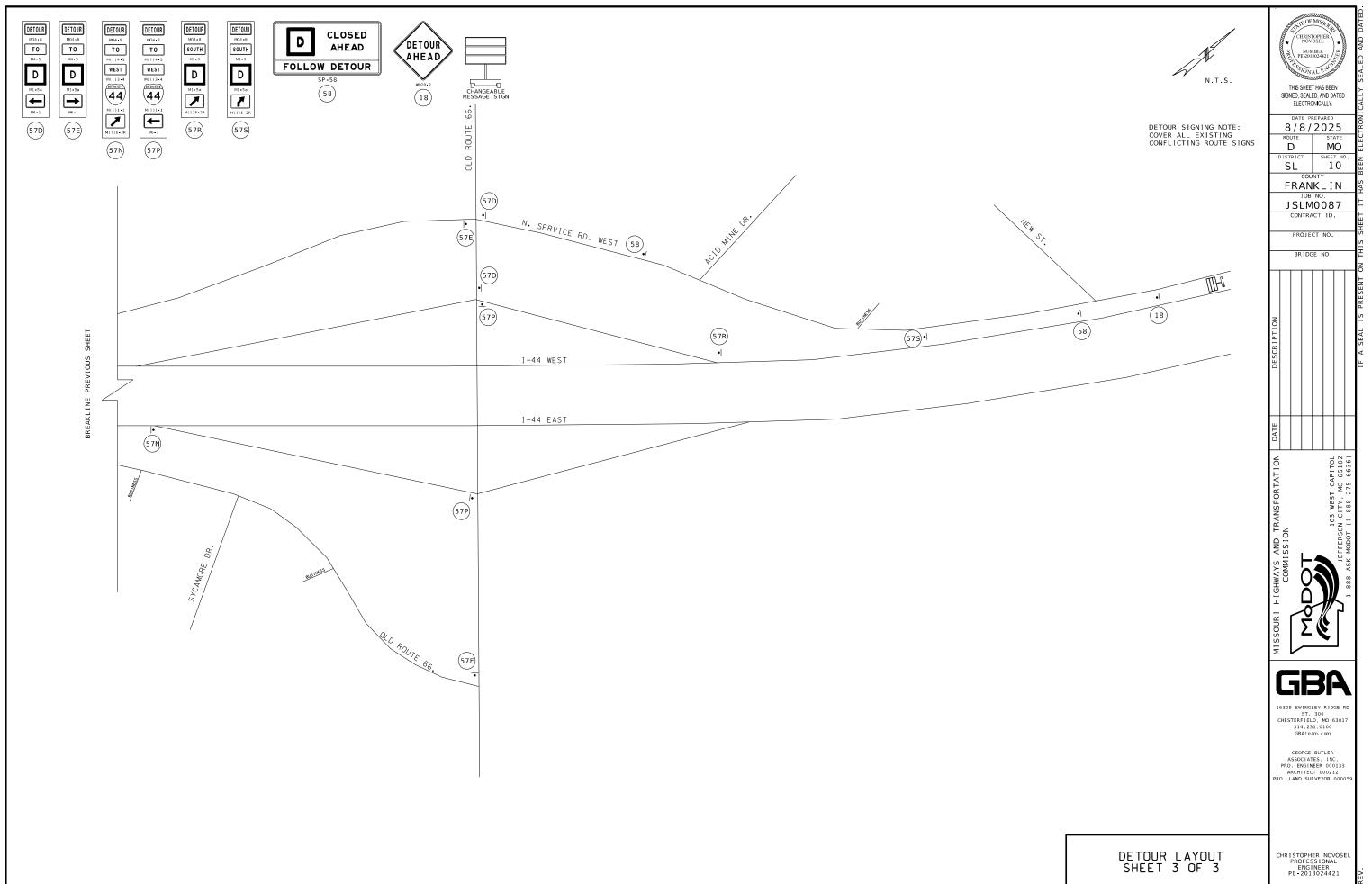
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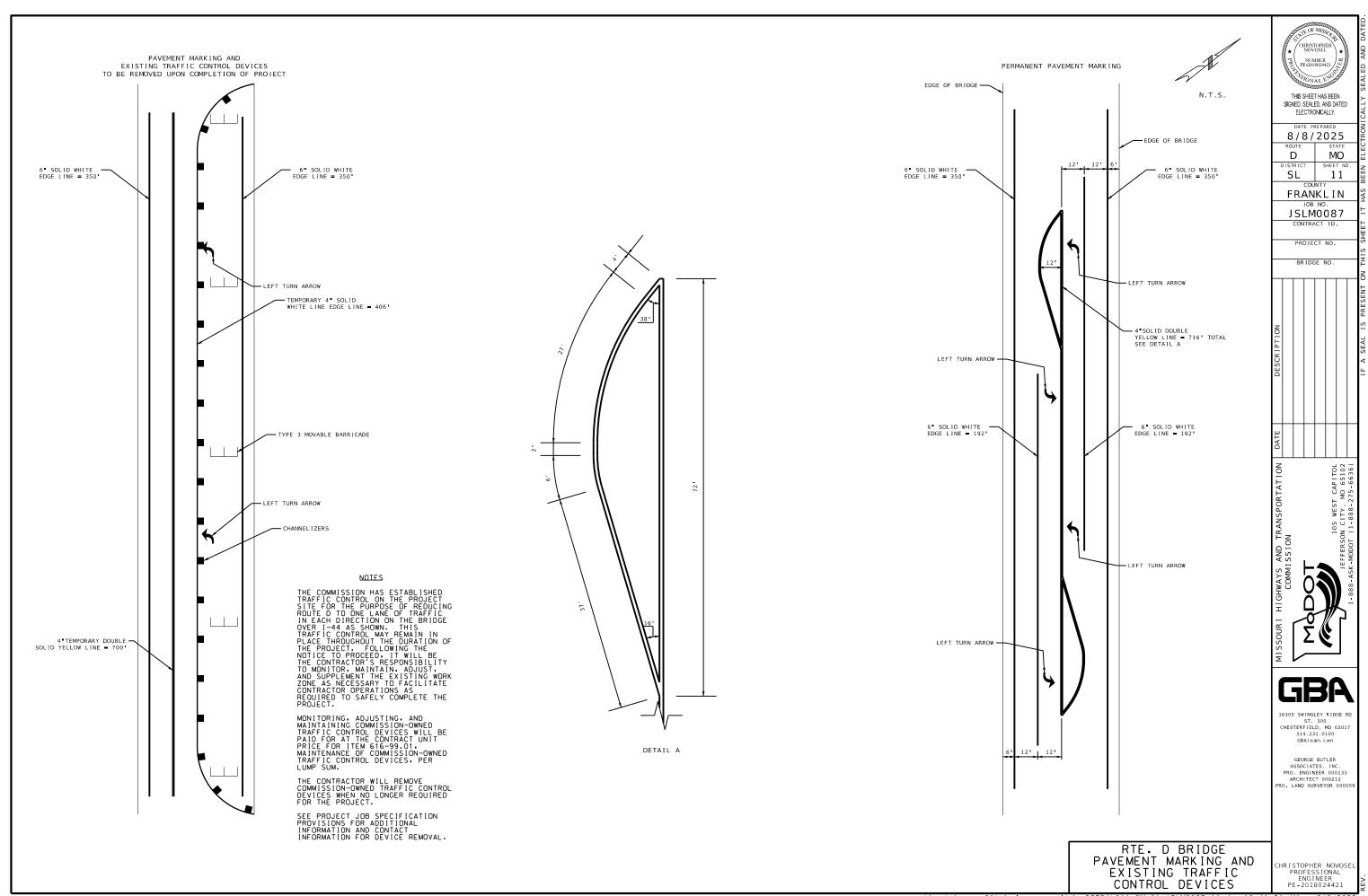
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PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 00009

CHRISTOPHER NOVOSEL PROFESSIONAL ENGINEER PE-2018024421





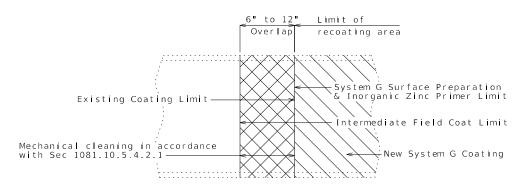




Sheet No. 1 of 5

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

Estimated Quantities							
I t em							
Removal of Diaphragm	each	2					
Fabricated Structural Carbon Steel (Misc.)	pound	710					
Surface Preparation for Recoating Structural Steel	lump sum	1					
Field Application of Inorganic Zinc Primer	lump sum	1					
Intermediate Field Coat (System G)	lump sum	1					
Heat Straightening of Existing Steel Beam	lump sum	1					
Grind Surface Deformities	lump sum	1					
Crack Repairs	each	6					
Bolt Replacement	each	52					



#### PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP

(Vertical or horizontal paint limit. Horizontal limit shown)

#### GENERAL NOTES:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Seismic Performance Category = A

Design Loading:

HS20-44 & HL-93 (Existing) Earth 120 lb/cf Equivalent Fluid Pressure 45 lb/cf Fatigue Stress - Case II

Design Unit Stresses:

Structural Carbon Steel (ASTM A709 Grade 50) fy = 50,000 psi

Fabricated Steel Connections:

Field connections shall be made with 3/4" diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16" diameter holes, except as noted.

Traffic Handling:

Traffic to be maintained on structure during the day and closed to traffic at night during construction operations. See roadway plans for traffic control.

Lane closures on I-44 and Route D shall be in accordance with traffic control plans.

Recoating Existing Steel:

Existing Beam No. 3 within Span (2-3) over WB I-44 shall be recoated over the length of damage and where paint was removed during the heat straightening process.

Protective Coating: System G in accordance with Sec 1081.

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 lump sum price for Surface Preparation for Recoating Structural Steel.

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

Field Coat: The color of the field coat shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract lump sum price for Intermediate Field Coat (System G).

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. The intermediate field coating shall be masked to provide crisp, straight lines and to prevent overspray beyond the overlap required.

#### Coating New Steel:

Protective Coating: System G in accordance with Sec 1081.

Prime Coat: The cost of the inorganic zinc prime coat will be considered completely covered by the contract unit price for the Fabricated Structural Carbon Steel (Misc.).

Field Coat: The color of the field coat shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract lump sum for Intermediate Field Coat (System G).

At the option of the contractor, the intermediate field coat may be applied in the shop. The contractor shall exercise extreme care during all phases of loading, hauling, handling, and erection to minimize damage and shall be fully responsible for all repairs and cleaning of the coating system as required by the engineer.

#### Miscellaneous:

High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

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

The contractor shall verify all dimensions in field before ordering new material.

Fabricated structural steel shall be ASTM A709 Grade 50, except as noted.

All existing dimensions shown were taken from existing plans, or limited field measurements.

The contractor shall complete a non-destructive test (NDT) on the existing connection plate welds at Beams No. 2, 3 & 4 as shown on Sheet No. 1. Cost of NDT will be considered completely covered by the contract unit price for Heat Straightening of Existing Steel Beam. The cost of repairs will be considered completely covered by the contract unit price for Crack Repairs.

The contractor shall visually inspect Beam No. 3 within the heat straightening limits for cracks. The cost of this work will be considered completely covered by the contract lump sum price for Heat Straightening of Existing Steel Beam. The cost of repairs will be considered completely covered by the contact unit price for Crack Repairs.

The contractor shall heat straighten the damaged portions of Beam No. 3. The cost of this work will be considered completely covered by the contract lump sum price for Heat Straightening of Existing Steel Beam. See Special Provisions.

The contractor shall grind smooth surface deformities related to the damage including the bottom flange tear. The cost of this work will be considered completely covered by the contract lump sum price for Grind Surface Deformities. See Special Provisions. Additional deformities shall be repaired by grinding only as identified by and directed by the Engineer.

The cost of removing existing diaphragms, connection plates, and removal of weld metal with the process of grinding will be considered completely covered by the contract unit price for Removal of Diaphragm. See Special Provisions.

The cost of furnishing and installing cover plates for tear repair, new diaphragms, bolts and connection angles will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

The cost of all labor, materials, testing, equipment and any other incidental work necessary to complete crack repairs of existing connection plate welds or any other beam crack repair will be considered completely covered by the contract unit price for Crack Repairs. See Special Provisions.

IGHWAYS AND TRANSPORTATION DATE

COMMISSION

LOS WEST CAPITOL

BELIDGE NO.

VACABLE NO.

SEFFERSON CITY, MO 655102

1.888.ASK-MODOT (1.888.275-6636)

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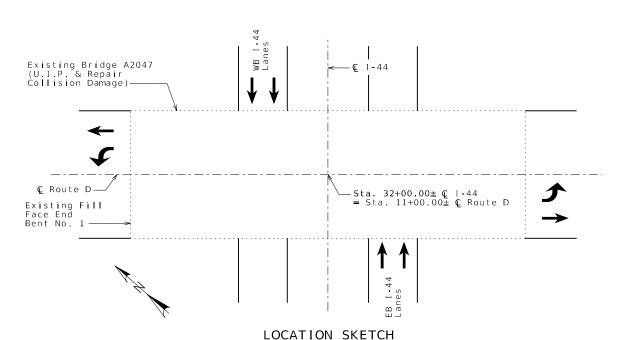
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MACKENZY M. MOORE PROFESIONAL ENGINEER PE-2024032177



GENERAL NOTES AND SUMMARY OF ESTIMATED QUANTITIES

62'-8"± Out to Out 60'-0"± Roadway

30'-0"± 30'-0"± -Crown of Slab € Route Dand Profile Grade  $\leq \frac{\frac{3}{16}$ "/ft.  $\pm$ Collison Damaged Beam over WB Ĭ-44 (Span 2-3) 14"± -ÇExist Beam (Typ)

PHASES OF WORK

3'-0"±

Prior to Heat Straightening:

1. Complete surface preparation of existing steel that will be subjected to heat straighting or Non-Destructive Testing (NDT) within the limits shown on the plans as directed by the engineer.

9 ' - 0 "<u>+</u>

- 2. Remove the intermediate diaphragms and connection plates as indicated on the Plan of Structural Steel, see Sheet No. 1.
- 3. Visually Inspect Beam No. 3 within limits of heat straightening for cracks. The existing diaphragm connection plates and welds being used-in-place (four locations shown on Sheet No. 1) shall be visually inspected and welds magnetic particle tested for cracks. If cracks are identified, repair cracks as directed by the Englisher.
- 4. Grind smooth gouges and other deformities.
- 5. In regions to be heat straightened, grind smooth toes of beam to connection

Heat Straightening:

- 1. Heat straighten Beam No. 3 over WB I-44 in Span (2-3) for the approximate lengths provided on Sheet No. 4, and covering the length of the collision damage. Beam No. 3 shall be heat straightened to remove web and bottom flange twisting. See Special Provisions.
- 2. Both existing NB lanes on Route D shall remain closed until all bridge repairs are completed. See roadway plans for traffic control.
- Heat straightening through a splice location is required. Please consult your heat straightening subcontractor as you prepare your bid.

Post Heat Straightening:

- 1. Complete the tear repair and install new cover plates for bottom flange of Beam No. 3.
- 2. Install new connection plates and diaphragms.
- 3. Remove and replace web and bottom flange splice bolts at the splice location shown on Sheet No. 1. Care shall be taken to remove and replace splice bolts one at a time to avoid removing too many bolts at one time.
- 4. Recoat Beam No. 3 over the length of damage and where paint was removed during collision/heat straightening process with System G (Gray). Also, recoat areas of Beams No. 2 & 4 where paint was removed for NDT testing with System G
- 5. Paint new diaphragms and connection plates with System G (Gray).

#### TYPICAL SECTION

\* Approximate beam sweep at point of impact over WB I-44, Span (2-3) approximately 19'-6 5/8" East of Bent No. 2.

9'-0"±

9'-0<u>"</u>±

Beam distortions shown were field measured at point of initial impact. Web and flange collision damage distortions vary along Beam No. 3.

Beam No. 3 Span (2-3) over WB I-44 shall be heat straightened to remove web and bottom flange twisting. Cost will be considered completely covered by the contract lump sum price for Heat Straightening of Existing Steel Beam. See Special Provisions.

Limits of collision damage shown based on visual assessment. Field verify locations and limits of collision damage requiring repairs.

# THIS SHEET HAS BEEN

SIGNED, SEALED, AND DATED ELECTRONICALLY.

DATE PREPARE 8/8/2025 D MO BR

> FRANKLIN JSLM0087 CONTRACT ID

PROJECT NO.

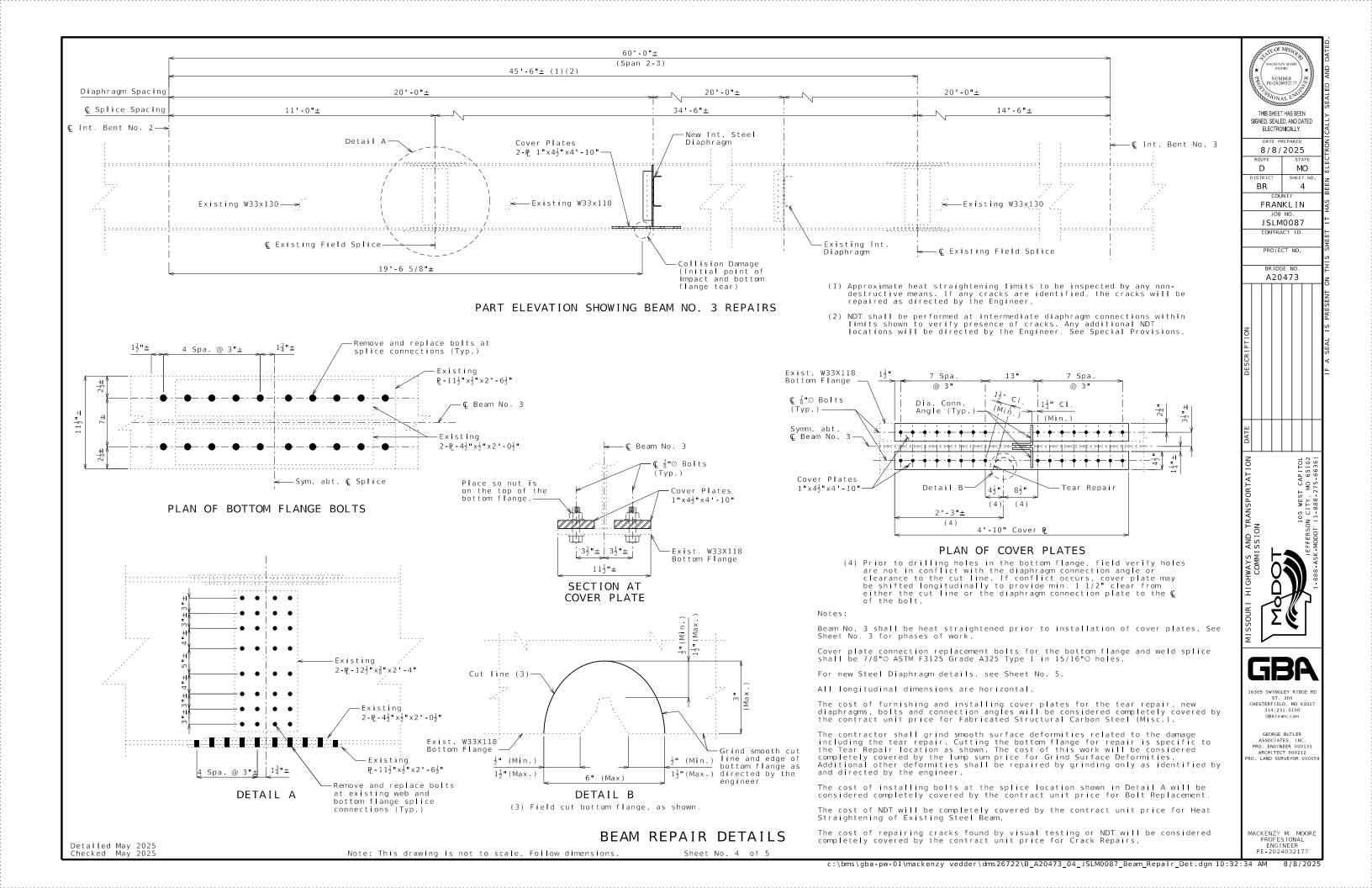
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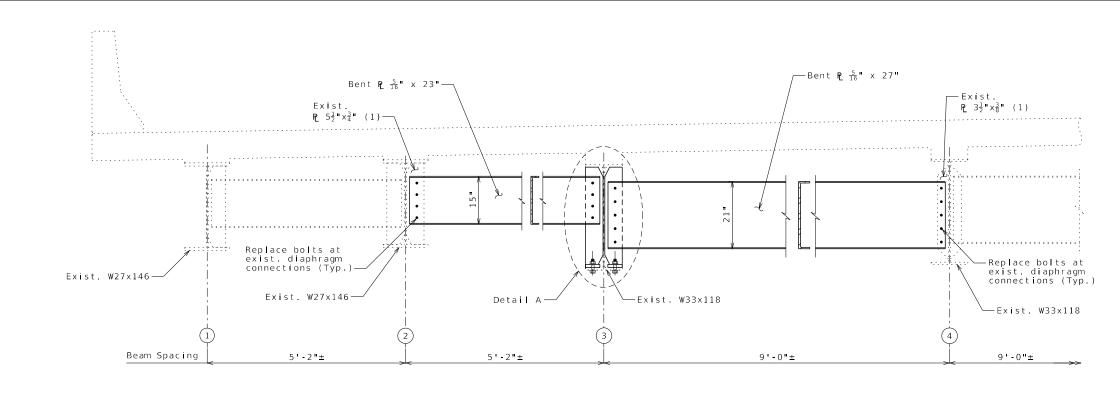
ST. 300 CHESTERFIELD, MO 63017 314.231.0100 GBAteam.com

GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 0000

MACKENZY M. MOORE PROFESIONAL ENGINEER PE-2024032177

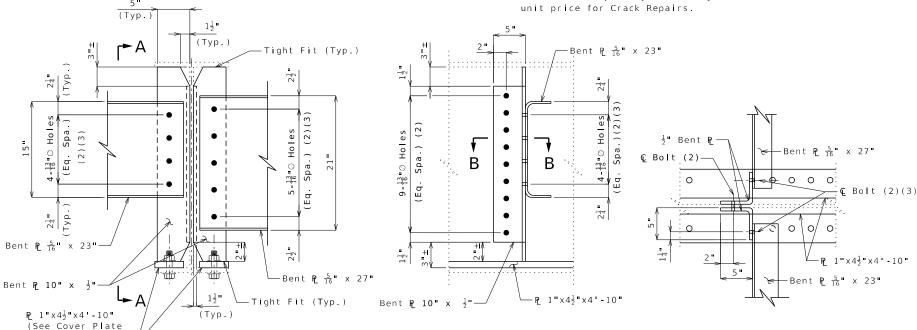
## TYPICAL SECTION SHOWING COLLISION DAMAGE





#### PART SECTION AT INTERMEDIATE DIAPHRAGM

(1) Re-use existing diaphragm connection plate and bolt holes. Perform non-destructive testing (NDT) of existing connection plate welds. Cost of NDT will be considered completely covered by the contract unit price for Heat Straightening of Existing Steel Beam. Cost of repairs will be considered completely covered by the contract unit price for Crack Repairs.



SECTION B-B

(Other side of Beam No. 3 web similar)

(2) Field-drilled holes in connection plate

SECTION A-A

(3) Shop-drilled holes in diaphragm

Notes:

See Sheet No. 3 for phases of work.

Remove existing diaphragms and their connection plates to Beam No. 3 per the locations shown on Sheet No. 1. Grind smooth remnants of plates and weldment.

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.

At the contractor's option, holes in the diaphragm plate may be made 3/16" larger than the nominal diameter of the bolt. A hardened washer shall be used under the bolt head and nut when this option is used. Holes in the diaphragm connection plate shall be standard size.

The cost of removing existing diaphragms, connection plates, and removal of weld metal with the process of grinding will be considered completely covered by the contract unit price for Removal of Diaphragm. See Special Provisions.

The cost of furnishing and installing cover plates, new diaphragms, bolts, and connection angles will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

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

Contractor may field drill holes with the approval of the Engineer to facilitate construction.

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INTERMEDIATE DIAPHRAGM REPLACEMENT DETAILS

Details on Sheet

DETAIL A

No. 4)