DESIGN DESIGNATION

A.A.D.T. - 2025 = 11,990A.A.D.T. - 2045 = 17,820

V = 50 M.P.H.

LOCATION OF CASS COUNTY

FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

NO RIGHT OF WAY AQUISITION

CONVENTIONAL SYMBOLS

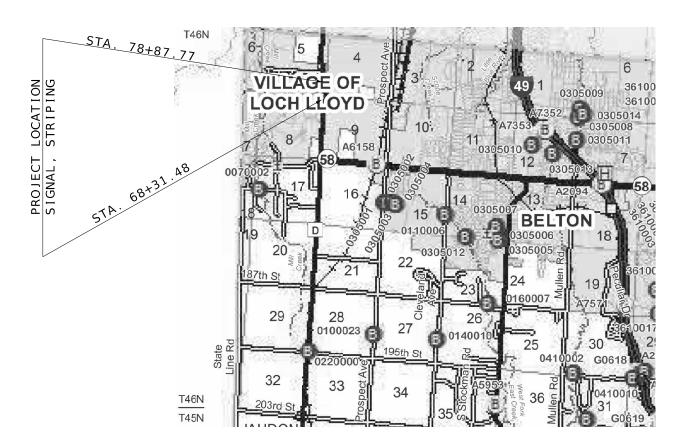
(OJED IN LEANS	• •	
	EXISTING	NEW
BUILDINGS AND STRUCTURES GUARD RAIL GUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER UTILITIES	0000	••••
FIBER OPTICS OVERHEAD CABLE TV UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER GAS WATER	- FO - -OTV - -UTV - - OT - - UT - - OE - - UE - - S - - SS - - G - - W -	-F0- -OTV- -UTV- -OT- -UT- -OE- -VE- -S- -SS- -G- -W
MANHOLE	SAN (HYD)
FIRE HYDRANT	wv C	Ì
WATER VALVE	"`C)
WATER METER	***)
DROP INLET	°'[
DITCH BLOCK	=	⊨
GROUND MOUNTED SIGN	SIGN	-
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL FENCE CHAIN LINK	PED V	-
WOVEN WIRE GATE POST	—— X	
BENCHMARK	™⊗)

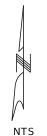
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

CASS COUNTY

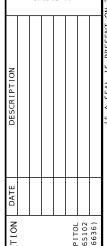




INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (1 SHEET)	2
QUANTITIES (QU) (2 SHEETS)	3
PLAN-PROFILE (PP)	4
COORDINATE POINTS (CP)	5
TRAFFIC CONTROL SHEETS (TC)	6 - 9
SIGNALS (SG)	10-15
PAVEMENT MARKING (PM)	16

SEATED WID DAY	ON SHAFER & BER WILLIAM SHAFER & WILLIAM	ECTRONICALLY SEALED AN
3 / 20		TRON
ROUTE D	STATE MO	ELEC"
STRICT KC	SHEET NO.	BEEN
	NTY .SS	HAS
	NO.)447	11
	CT ID.	SHEET
	CT NO.	LHIS S
BR I DG	E NO.	ı



LENGTH OF PROJECT

BEGINNING OF PROJECT STA. 68+31.48
END OF PROJECT STA. 78+87.77

APPARENT LENGTH 1,056.29 FEET

EQUATIONS AND EXCEPTIONS:

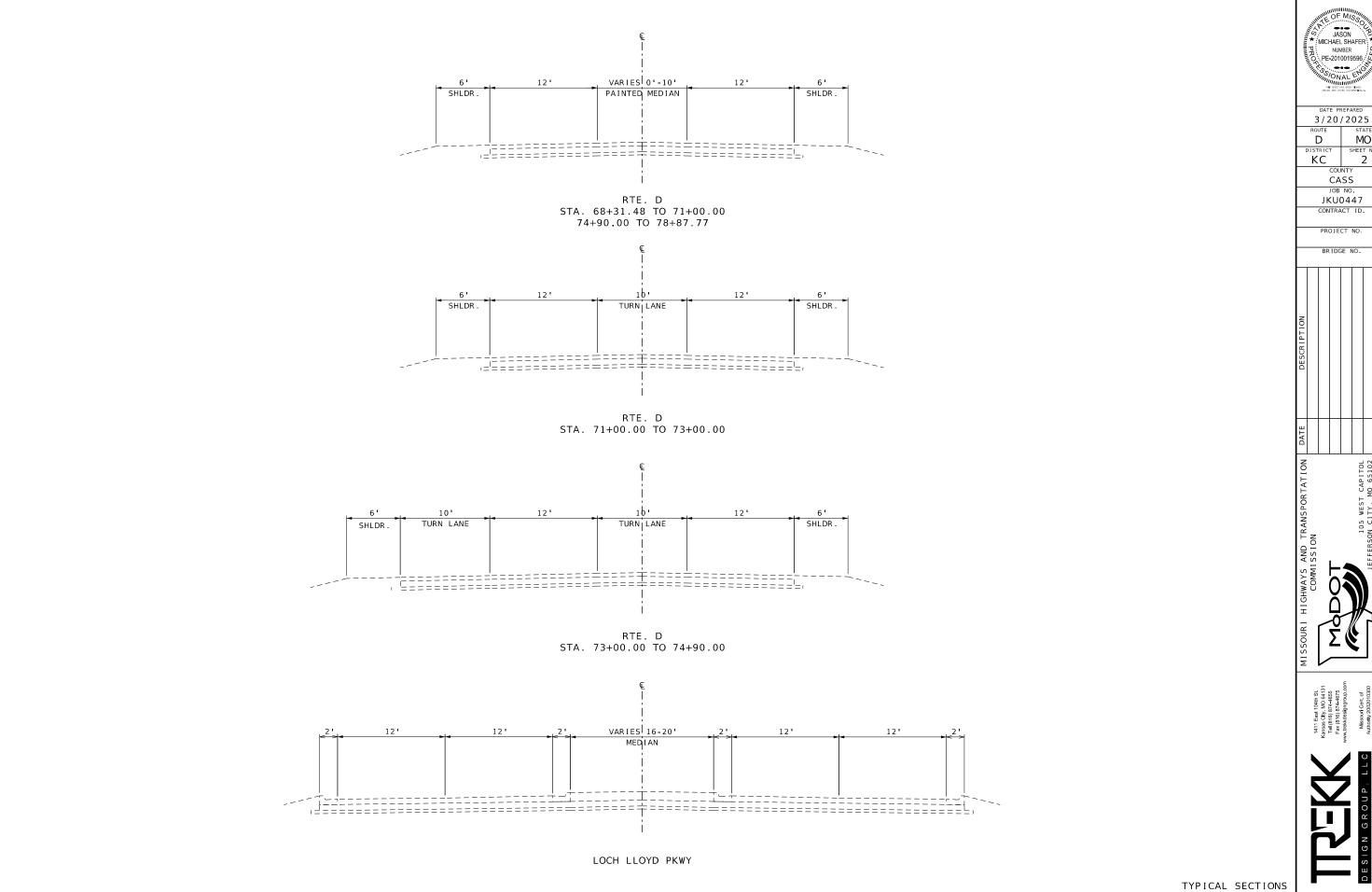


Fax (816) 874-4675 ww.trekkdesigngroup.com Missouri Cert. of Authority 2002010300



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.

NET LENGTH OF PROJECT 1,056.29 FEET STATE LENGTH 0.200 MILES



SHEET 1 OF 1

MO

SHEET NO

MOBILIZATION
1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING 1 LUMP SUM

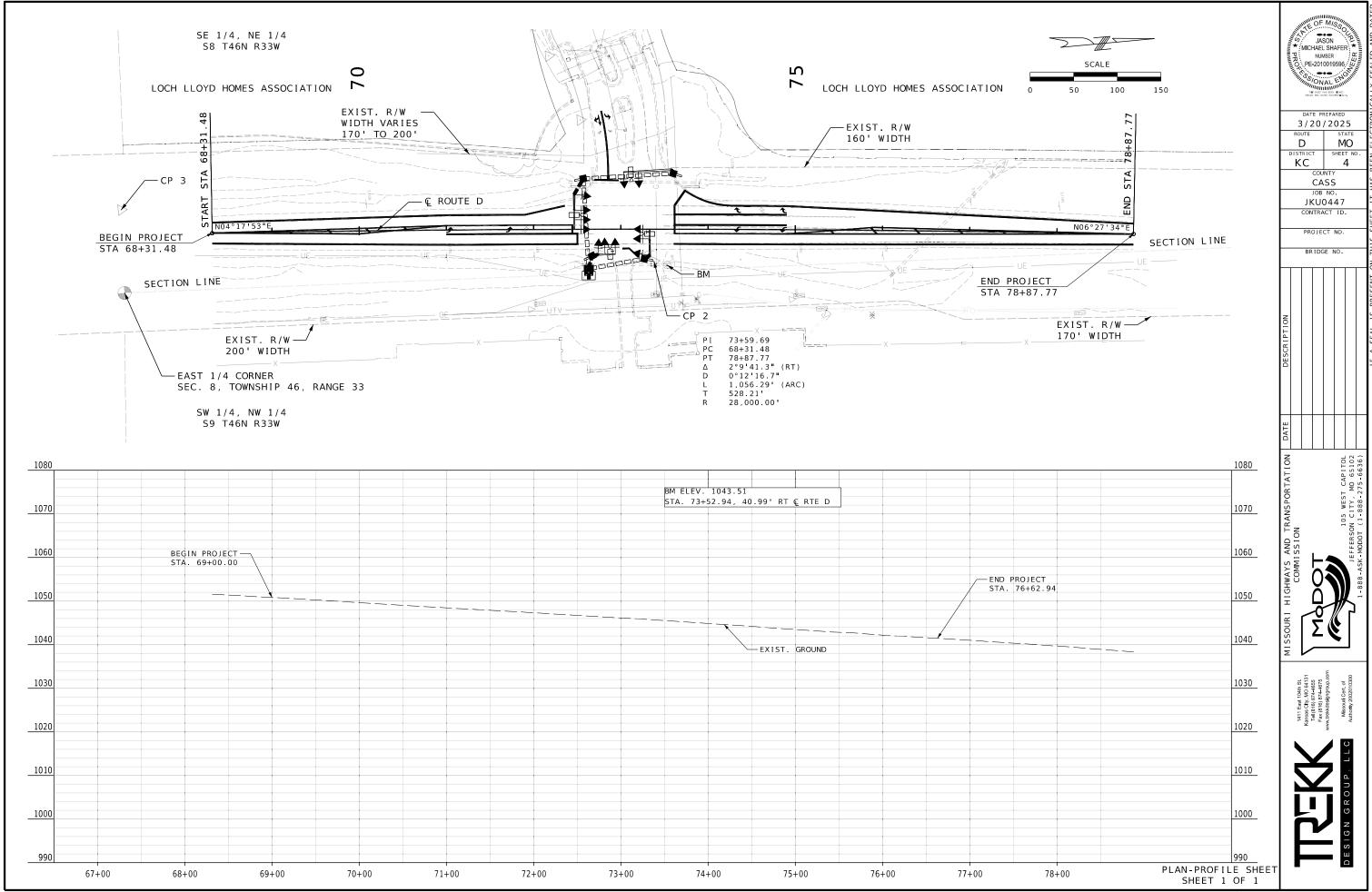
PAVEMENT MARKING													
			6" WHITE HIGH BUILD	4" YELLOW HIGH BUILD		PREFORMED TH	HERMOPLASTIC						
			WATERBORNE PVMT	WATERBORNE PVMT		PAVEMENT MARKING			PAVEMENT				
			MARKING PAINT	MARKING PAINT	24" WHITE	24" YELLOW	LEFT/RIGHT	COMBINATION	MARKING				
WITH TYPE L BEADS		WITH TYPE L BEADS	STOP BAR	HASH MARKS	ARROW	STR/LT/RT	REMOVAL						
LOCATION	STATION	STATION	LF	LF	LF	LF	EA	EA	LF				
ROUTE D	68+31	72+50	977	1364	22	27	2		52				
ROUTE D	73+62	78+88	1307	1850	57	42	4		818				
LOCH LLOYD PKWY			80		28		1	1					
PRIVATE ENTRANCE					15								
		TOTAL	2364	3214	122	69	7	1	870				



		11/1	PHIN E SHEET I	HIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	HIN.	176		
	3	3/2	E PI		02	5		
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	151 K				HEE	т NG 3).	
			CA	SS	5			
		Jk	JOB (UI	04	47			
			DJE		NO.	•		
			IDO					
		вк	IDC	,E 1	WO.			
DESCRIPTION								
DATE								
JRI HIGHWAYS AND TRANSPORTATION	COMMISSION		16DOT		105 WEST CAPITOL	JEFFERSON CITY, MO 65102	1-888-ASK-MODOT (1-888-275-6636)	



TOTAL QTY	TOTAL SIGN				QTY TOT	ALSIGN	N .		EFFECTIVE: 07-01-2024		
SIZE AREA QTY AREA RELOC			1	QTY TOTAL	1	I		I TEM TOTA	I	HIME C	OF M/SSOM
SIGN IN SQ.FT EACH SQ.FT EACH		SIGN IN	. SQ.FT.	EACH SQ.FT.	EACH SQ.	-T.	DESCRIPTION	NUMBER QTY	DESCRIPTION	WILL A	JASON D
WARNING SI		<u> </u>			IDE SIGNS			6122008	IMPACT ATTENUATOR 40 MPH (SAND BARRELS)	_ <u></u> MICHAI	HAEL SHAFER
WO1-1L 48X48 16.00 WO1-1R 48X48 16.00	TURN (SYMBOL LEFT) TURN (SYMBOL RIGHT)		18 12.00 36 12.00				GORE EXIT EXIT OPEN	6122009	IMPACT ATTENUATOR 45 MPH (SAND BARRELS) IMPACT ATTENUATOR 50 MPH (SAND BARRELS)		NUMBER 2010019596
WO1-1K 48X48 16.00	CURVE (SYMBOL LEFT)		36 12.00				EXIT CLOSED	6122010	IMPACT ATTENUATOR 55 MPH (SAND BARRELS)		GI
WO1-2R 48X48 16.00	CURVE (SYMBOL RIGHT)		24 10.00				ROAD WORK NEXT XX MILES	6122014	IMPACT ATTENUATOR 60 MPH (SAND BARRELS)	***************************************	ONAL ENHITH
WO1-3L 48X48 16.00	REVERSE TURN (SYMBOL LEFT)		24 8.00				END ROAD WORK	6122017	IMPACT ATTENUATOR 65 MPH (SAND BARRELS)	SERUED AND	B SHEET HAS BEEN SERVED, O AND DATED ELECTROMODALLY.
WO1-3R 48X48 16.00	REVERSE TURN (SYMBOL RIGHT)	GO20-4 36X1	18 4.50				PILOT CAR FOLLOW ME	6122019	IMPACT ATTENUATOR 70 MPH (SAND BARRELS)	DATE	E PREPARED
WO1-4L 48X48 16.00	REVERSE CURVE (SYMBOL LEFT)	GO20-4a 42X3	30 8.75				PILOT CAR IN USE WAIT & FOLLOW	6122020	REPLACEMENT SAND BARREL		20/2025
WO1-4R 48X48 16.00	REVERSE CURVE (SYMBOL RIGHT)	GO20-4a 18X1					PILOT CAR IN USE WAIT & FOLLOW	6122030	IMPACT ATTENUATOR (RELOCATION)	ROUTE	I
WO1-4bL 48X48 16.00	DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP 36X2		2 12.00		54	WORK ZONE (PLAQUE)	6123001 1	TRUCK MOUNTED ATTENUATOR (TMA)	<u>D</u>	MO
WO1-4bR 48X48 16.00 WO1-4cL 48X48 16.00	DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)		18 3.00				END DETOUR	6161008	ADVANCED WARNING RAIL SYSTEM BUOYS (BOATS KEEP OUT)	KC	T SHEET NO.
WO1-4cL 48X48 16.00 WO1-4cR 48X48 16.00	TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT) TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)		36 12.00 36 12.00				DETOUR (LEFT) DETOUR (RIGHT)	6161012 6161013	BUOYS (NO WAKE)		COUNTY
WO1-6 60X30 12.50	HORIZONTAL ARROW (SYMBOL)		12 4.00				STREET NAME (PLAQUE)	6161014	SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)		CASS
WO1-6a 72X36 18.00	HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)		18 6.00				DETOUR ARROW (LEFT)		CHANNELIZER (TRIM LINE)		JOB NO.
WO1-7 60X30 12.50	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R 48X1					DETOUR ARROW (RIGHT)	6161030	TYPE III MOVEABLE BARRICADE		TRACT ID.
WO1-7a 72X36 18.00	DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)		REGUL	ATORY SIC	iNS	•	6161033	DIRECTION INDICATOR BARRICADE	CONTR	TRACT ID.
WO1-8 18X24 3.00	CHEVRON (SYMBOL)		18 13.25				STOP	6161040 1	FLASHING ARROW PANEL	PROJ	DJECT NO.
WO1-8a 30X36 7.50	CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)		I. 6.93				YIELD	6161047	TYPE III OBJECT MARKER		
WO3-1 48X48 16.00	STOP AHEAD (SYMBOL)		36 9.00				TO ONCOMING TRAFFIC (PLAQUE)	6161055	SEQUENTIAL FLASHING WARNING LIGHT	BRIC	IDGE NO.
WO3-2 48X48 16.00	YIELD AHEAD (SYMBOL)		12 2.50	4 40 00		4/35	ALL WAY (PLAQUE)	6161070	TUBULAR MARKER	 	
WO3-3 48X48 16.00	SIGNAL AHEAD (SYMBOL) 11 BE PREPARED TO STOP		18 12.00 18 16.00			4/25	SPEED LIMIT XX NO RIGHT TURN (SYMBOL)	6161095	RADAR SPEED ADVISORY SYSTEM CHANGEABLE MESSAGE SIGN,	$(\mid \cdot \mid $,
WO3-5 48X48 16.00 2 32.00	SPEED LIMIT AHEAD		18 16.00				NO LEFT TURN (SYMBOL)	6161096	COMMISSION FURNISHED/RETAINED	1	.
WO4-1L 48X48 16.00	MERGE (SYMBOL FROM LEFT)		36 9.00				NO TURNS	<u> </u>	CHANGEABLE MESSAGE SIGN WITHOUT COMM.	$(\mid \cdot \mid $.
WO4-1R 48X48 16.00	MERGE (SYMBOL FROM RIGHT)		18 16.00				NO U-TURN (SYMBOL)	6161098A	INTERFACE - CONTRACTOR FURNISHED/RETAINED	z I	.
WO4-1aL 48X48 16.00	MERGE (LEFT)		30 6.25				LEFT LANE MUST TURN LEFT		CHANGEABLE MESSAGE SIGN WITH COMM.	[Ĕ]	.
WO4-1aR 48X48 16.00	MERGE (RIGHT)		30 6.25				RIGHT LANE MUST TURN RIGHT	6161099	INTERFACE - CONTRACTOR FURNISHED/RETAINED		.
WO5-1 48X48 16.00 1 16.00	43 ROAD/BRIDGE/RAMP NARROWS		18 12.00				DO NOT PASS	6162000A	WORK ZONE TRAFFIC SIGNAL SYSTEM	SCI	.
WO5-3 48X48 16.00	ONE LANE BRIDGE		18 12.00				PASS WITH CARE	6162002	TEMPORARY LONG-TERM RUMBLE STRIPS	閊	.
W05-5 48X48 16.00 W06-1 48X48 16.00	NARROW LANES		18 12.00 18 12.00				KEEP RIGHT (HORIZONTAL ARROW)	61736000	TEMPORARY TRAFFIC BARRIER	1	.
W06-1 48X48 16.00 W06-2 48X48 16.00	DIVIDED HIGHWAY (SYMBOL) DIVIDED HIGHWAY END (SYMBOL)		30 6.25				KEEP LEFT (HORIZONTAL ARROW) DO NOT ENTER	6173600D	CONTRACTOR FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER	1	.
WO6-3 48X48 16.00	TWO WAY TRAFFIC (SYMBOL)		24 6.00				WRONG WAY	6173602B	CONTRACTOR FURNISHED/COMMISSION RETAINED	1	.
WO7-3a 30X24 5.00	NEXT XX MILES (PLAQUE)		18 6.75				ONE WAY ARROW (LEFT)	6174000A	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	+++	+++
WO8-1 48X48 16.00	BUMP		18 6.75				ONE WAY ARROW (RIGHT)	6175010A	RELOCATING TEMPORARY TRAFFIC BARRIER	비비	.
WO8-2 48X48 16.00	DIP	R6-2L 24X3	30 5.00				ONE WAY (LEFT)	1	TEMPORARY TRAFFIC BARRIER	MA	.
WO8-3 48X48 16.00	PAVEMENT ENDS		30 5.00				ONE WAY (RIGHT)	6176000B	COMMISSION FURNISHED/RETAINED		
WO8-4 48X48 16.00	SOFT SHOULDER	R9-9 24X1	12 2.00				SIDEWALK CLOSED	il l	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	S S	TOL 102
WO8-5 48X48 16.00	SLIPPERY WHEN WET (SYMBOL)	-					SIDEWALK CLOSED AHEAD,	6177000B	COMMISSION FURNISHED/RETAINED	E	VP I.
WO8-6 48X48 16.00	TRUCK CROSSING	R9-11L 24X1	18 3.00				(ARROW LEFT) CROSS HERE SIDEWALK CLOSED AHEAD,	6208064A	TEMPORARY RAISED PAVEMENT MARKER	()	CAF
WO8-6c 48X48 16.00 WO8-7 36X36 9.00	TRUCK ENTRANCE LOOSE GRAVEL		18 3.00				(ARROW RIGHT) CROSS HERE	9029400	TEMPORARY TRAFFIC SIGNALS TEMPORARY TRAFFIC SIGNALS AND LIGHTING	<u>o</u>	EST
WO8-7a 36X36 9.00	FRESH OIL / LOOSE GRAVEL		36 6.00				STOP HERE ON RED (45^ ARROW)	3023401	TENION IN THE STOWNES AND ETGITING	NS	05 W CIT
WO8-9 48X48 16.00	LOW SHOULDER		30 10.00				ROAD CLOSED			₹_	N 10
WO8-11 48X48 16.00	UNEVEN LANES						ROAD CLOSED XX MILES AHEAD	1			RSG
WO8-12 48X48 16.00	NO CENTER LINE	R11-3a 60X3					LOCAL TRAFFIC ONLY			ANE SS]	
WO8-15 48X48 16.00	GROOVED PAVEMENT	R11-4 60X3	_				ROAD CLOSED TO THRU TRAFFIC	1		S W	— • " ;
WO8-15P 30X24 5.00	MOTORCYCLE (PLAQUE)	CONST-3A 60X4					FINE SIGN	1		A O A	^\$ 】 [?]
WO8-17L 48X48 16.00	SHOULDER DROP-OFF (SYMBOL LEFT)	CONST-3X 56X1	12 4.67		ANEOUS S	LCNC	SPEEDING/PASSING (PLATE)			₹ ∪	Ž 71 1 ;
WO8-17R 48X48 16.00 WO8-17P 30X24 5.00	SHOULDER DROP-OFF (SYMBOL RIGHT) SHOULDER DROP-OFF (PLAQUE)	CONST-5 48X3	36 12 00		ANEOUS S	I GNS	POINT OF PRESENCE	İ		≌ C	Δ W ·
W10-1 42RND. 9.62	RAILROAD CROSSING	CONST-5 96X4	_				POINT OF PRESENCE	İ		にって	₹/// ``\
WO12-1 24X24 4.00	DOUBLE DOWN ARROW (SYMBOL)	CONST-8 48X3					WORK ZONE NO PHONE ZONE	İ			~ <i>(</i> ()
WO12-2 48X48 16.00	LOW CLEARANCE (SYMBOL)							İ		10S 2	2 (
W012-2x 24X18 3.00	LOW CLEARANCE (PLAQUE)							İ			
WO12-2a 84X24 14.00	OVERHEAD LOW CLEARANCE (FEET AND INCHES)							1	,	Σ	
WO12-4 120X60 50.00	LOW CLEARANCE XX FT XX IN XX MILES AHEAD							ł		1	E
W012-5 120X60 50.00	WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD							ł	,	St 74131	675 675 oup.co of 001
WO13-1 30X30 6.25 WO16-2 30X24 5.00	ADVISORY SPEED (PLAQUE)			+ + +				1	,	104th MO 6	874-4 gngra Cert
WO16-2 30X24 5.00 WO16-3 30X24 5.00 2 10.00	XXX FEET (PLAQUE) 8 X MILE (PLAQUE)			+ + -		-		ł	,	1411 East 104th St. Kansas City, MO 6413 Tel (816) 874-4655	816). (816). (kdesi ssouri
WO20-1 48X48 16.00 4 64.00	2 ROAD/BRIDGE/RAMP WORK AHEAD	1						ł	,	1411 ansas Tel (8	Fax (W.trek Mis Autho
WO20-2 48X48 16.00	DETOUR AHEAD	1						1	,	×	ww
WO20-3 48X48 16.00	ROAD CLOSED AHEAD	616-10.05	-	TOTAL			•		,		4 0
WO20-4 48X48 16.00 2 32.00	7 ONE LANE ROAD AHEAD	CONSTRUCTI	ON SIGN						,		
WO20-5 48X48 16.00	RIGHT/CENTER/LEFT LANE CLOSED AHEAD	616-10.10			TOT						-
WO20-5a 48X48 16.00	2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	RELOCATED	SIGNS		С				,		۵
WO20-6a 48X48 16.00	RIGHT/CENTER/LEFT LANE CLOSED	4							,	کے ا	
WO20-7a 48X48 16.00 2 32.00	8 FLAGGER (SYMBOL)	\dashv							,		ď
WO21-2 36X36 9.00	FRESH OIL 21 SHOULDER WORK / SHOULDER WORK AHEAD	\dashv									ပ
WO21 5 48748 16 00 2 22 00	ZI SHOULDER WORK / SHOULDER WORK AREAD	_									
WO21-5 48X48 16.00 2 32.00 WO22-1 48X48 16.00	BLASTING ZONE AHEAD								•		
WO22-1 48X48 16.00	BLASTING ZONE AHEAD TURN OFF 2-WAY RADIO AND PHONE	_						SI	UMMARY OF QUANTITIES	∖ <u>L</u>	0
	BLASTING ZONE AHEAD TURN OFF 2-WAY RADIO AND PHONE END BLASTING ZONE							S	UMMARY OF QUANTITIES SHEET 2 OF 2	E	DESIG



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

PROJECT COORDINATE INFORMATION								
COORDINATE SYSTEM	MODIFIED S	TATE PLANE	(GROUND)					
HORIZONTAL DATUM	NAD-83							
VERTICAL DATUM	NAVD-88							
GEOID MODEL	GEOID 12B							
ELEVATIONS	GPS & LEVELS							
DETERMINED BY								
PROJECT PROJECTION	FACTOR 1.00010286							
REFERENCE CONTROL INFORMATION								

PROJECT PROJECTIO	1.00010286						
REFERENCE CONTROL INFORMATION							
COORDINATE SYSTEM	1 MISSOURI S	TATE PLANE					
CONTROL STATION	CORS						
DESIGNATION M	MOB4 MODOT BE	ELTON CORS GRP					
CORS_ID M	MOB 4						
P I D	DR8627						
LATITUDE N	N38°48'21.59322"						
LONGITUDE	W094°30'02.59863"						
NORTHING (M) 2	292913.8050						
EASTING (M) 8	349937.3030						
ZONE ((2403) MO WEST						
PROJECT AVERAGE GRID FACTOR 0.99989715							

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR

= STATE PLANE NORTHING

PROJECT EASTING X AVERAGE GRID FACTOR

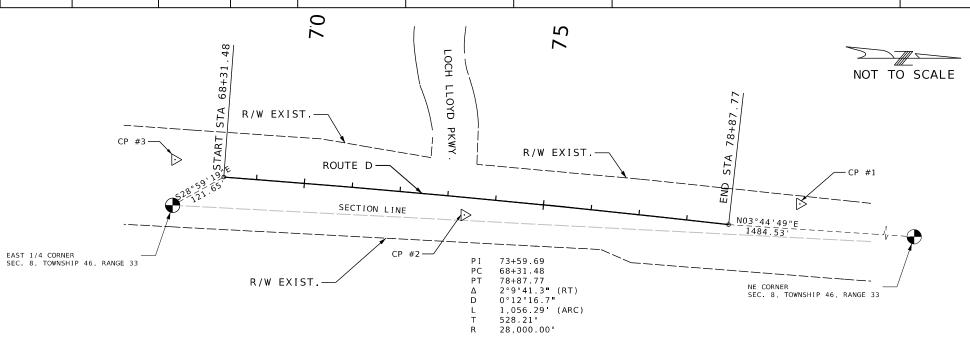
= STATE PLANE EASTING

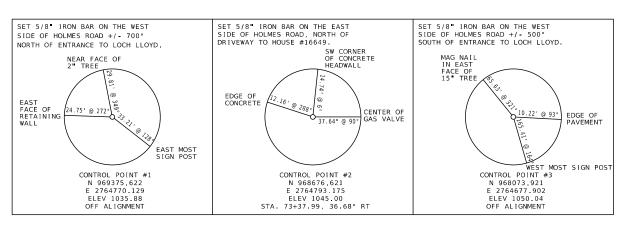
EXAMPLE: CONTROL POINT #1 N 969375.622 X 0.99989715 = N 969275.922 E 2764770.129 X 0.99989715 = E 2764485.772

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

	COORDINATE POINT LISTING											
				MODIFIE	D STATE PLANE (GROUND)						
			OFFSET	NORTHING	EASTING	ELEVATION		GPK				
SHEET NO	STATION	LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID				
PROJECT CO	NTROL POINTS	5										
5	OFF ALIGN.	ROUTE D		969375.622	2764770.129	1,035.88	CP 1 - 5/8" IRON BAR					
5	73+37.99	ROUTE D	36.68' LT	968676.621	2764793.175	1,045.00	CP 2 - 5/8" IRON BAR					
5	OFF ALIGN.	ROUTE D		968073.921	2764677.902	1,050.04	CP 3 - 5/8" IRON BAR					
AL I GNMENTS	5											
5	68+31.48	ROUTE D	0.00'	968175.326	2764714.132		BEGIN ALIGNMENT/PROJECT	PC				
5	73+59.69	ROUTE D	0.00'	968702.047	2764753.718		CURVE PI	PΙ				
5	78+87.77	ROUTE D	0.00'	969226.901	2764813.142		END ALIGNMENT/PROJECT	PT				





COORDINATE POINT SHEET SHEET 1 OF 1



Traffic Control Legend, Sign Spacing, Device Spacing, Channelizing Taper Lengths And Recommended Maximum Speed Reductions

SIGN SP	ACING FOR A	DVANCE SIGN SERIES (1) (2)					
PERMANENT							
POSTED SPEED	UNDIVIDED	DIVIDED					
MPH HIGHWAYS		HIGHWAYS (S)					
0-35	200′	200′					
40-45 350'		500′					
50-55 500'		1000'					
60-70	1000′	SA - 1000' SB - 1500' SC - 2640'					

TAPE	R LENGTHS AI	ND END TREAT	TMENTS FOR	CONCRETE BARRIER						
PERMANENT										
POSTED SPEED	POSTED SPEED MINIMUM LANE TAPER LENGTH (3)									
MPH	10′	11′	12′	END TREATMENT (4)						
<40	160′	168′	176′	BARRIER HEIGHT TRANSITION						
>40	160′	168′	176′	APPROVED CRASH CUSHION						

	TAPER LENGTHS AND SPACING FOR CHANNELIZERS											
PERMANENT				MINIMUM SHOULDER	BUFFER	MAXIMUM CHANNELI.	ZER SPACING					
POSTED SPEED	MINIMUM LAN	NE TAPER LENGT	H (L) (3)	TAPER LENGTH (T1)	LENGTH	THROUGH	THROUGH					
MPH	10′	11 ′	12′	BASED ON 10' SHOULDER	FT	TAPER	WORK AREA					
0-35	205′	225′	245′	70'	250'	35′	40′					
40-45	450′	495′	540'	150′	360'	40′	80′					
50-55	550′	605′	660′	185′	495′	50'	80′					
60-70	700′	770′	840′	235′	730′	60′	120′					

** THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN.

THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS.

THE SC DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS.

(THE "FIRST SIGN" IS THE SIGN IN A THREE-SIGN SERIES THAT IS CLOSEST TO THE TEMPORARY TRAFFIC CONTROL ZONE. THE "THIRD SIGN" IS THE SIGN THAT IS FURTHEST UPSTREAM FROM THE TEMPORARY TRAFFIC CONTROL ZONE)

DETAILS NOTES:

- (1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OF SIGNED CONDITION.
- (2) SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
- (3) TAPER LENGTHS SHOWN INCLUDE LENGTH REQUIRED FOR LANE AND 10' SHOULDER
- (4) CONCRETE BARRIER MAY BE INSTALLED AT 8:1 FLARE RATE FROM THE SHOULDER POINT OF THE LIMITS OF THE CLEAR ZONE WHERE THE SIDE SLOPE IS 6:1 OR FLATTER

TAPER LENGTH (L)

- L = W X S FOR 40 MPH OR MORE
- $L = \frac{WS^2}{60}$ FOR 35 MPH OR LESS
- L = TAPER LENGTH IN FEET
- W = LATERAL SHIFT IN FEET
- S = POSTED SPEED LIMIT, OR
 OFF-PEAK 85TH PERCENTILE
 SPEED PRIOR TO WORK
 STARTING, OR THE ANTICIPATED
 OPERATING SPEED IN MPH

TRAFFIC CONTROL LEGEND

SIGN (SINGLE SIDED)

FLAGGER

CHANGEABLE MESSAGE BOARD

CHANNELIZER

BARRICADE

PROTECTIVE VEHICLE WITH WORK SIGN, FLASHING ARROW PANEL AND REAR-MOUNTED IMPACT ATTENUATOR UNIT.

LEGEND NOTE:

THE PROTECTIVE VEHICLE SIGN SHALL BE MOUNTED AT A RECOMMENDED HEIGHT OF 48 IN. ABOVE THE ROAD SURFACE.

GENERAL NOTES:

- 1. SEE STANDARD PLAN 616.10 FOR DETAILS AND ITEMS NOT SHOWN.
- 2. EXISTING SIGNS SHALL BE COVERED DURING WORKING HOURS ONLY IF IN CONFLICT WITH TRAFFIC CONTROL PLANS.
- NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING OR REMOVING SIGNS.
- 4. CONES ALLOWABLE FOR DAYTIME OPERATIONS ON MINOR ROUTES ONLY.
- 5. LOCATE FLASHING ARROW PANEL AT BEGINNING OF TAPER WHEN FEASIBLE, ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS OR CONES.

EPG TABLE 616.12 RECOMMENDED MAXIMUM SPEED REDUCTIONS ACTIVITY (I.E. WORKERS, EQUIPMENT OR MATERIAL) LOCATION 10 FT. BEYOND EDGE OF TRAVELWAY TO EDGE OF RIGHT OF WAY IN TRAFFIC LANE OR WITHIN 10FT. OF THE TRAFFIC LANE HEAD-TO-HEAD ON MULTILANE RECOMMENDED WORK ZONE SPEED REDUCTION (WHEN APPLICABLE) NO SPEED REDUCTION 10 MPH

SPECIAL CIRCUMSTANCES WITHIN A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY WARRANT A LOWER SPEED LIMIT THAN RECOMMENDED ABOVE. ALL SPEED LIMIT REDUCTIONS GREATER THAN 10 MPH SHALL BE DOCUMENTED, SUBMITTED TO AND APPROVED BY THE DISTRICT WORK ZONE COORDINATOR.



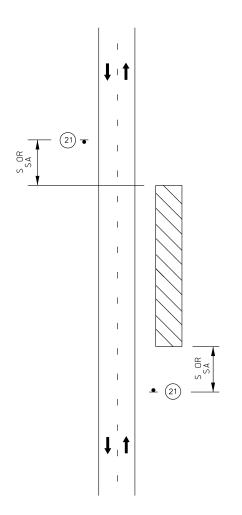
DATE PI	REPARED
3/20	/2025
ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
KC	6
COU	NTY
CA	.SS
JOB	NO.
JKU	0447
CONTRA	CT ID.
PROJE	CT NO.

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	BR	IDG	E M	10.	
DESCRIPTION					
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Kansas Cliv, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
ww.trakkdesigngroup.com
Missourl Cert. of





WORK BEYOND SHOULDER

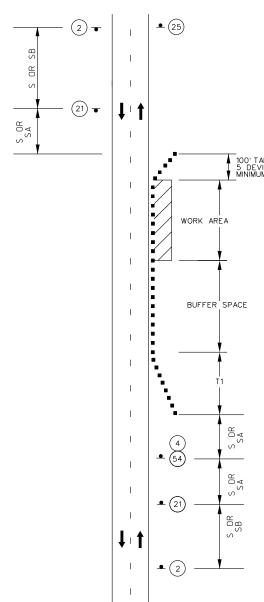
NOTES:

ONLY APPLICABLE WHEN WORK IS WITHIN THE CLEAR ZONE. SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

SEE TRAFFIC CONTROL SHEET 1 FOR WORK ZONE SPEED LIMIT GUIDELINES.

ON MULTI-LANE, DIVIDED HIGHWAYS SIGNS ADVISING OF SHOULDER WORK OR THE CONDITION OF THE SHOULDER SHOULD BE PLACED ONLY ON THE SIDE OF THE AFFECTED SHOULDER.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.



SHOULDER WORK WITH NO TRAVELWAY ENCROACHMENT











SEE TRAFFIC CONTROL SHEET 1 FOR WORK ZONE SPEED LIMIT GUIDELINES.

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

SIGN 2 NOT REQUIRED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER SIGN 2 IS ALREADY USED.

PROVIDE SIGNS ON LEFT AND RIGHT SIDE OF DIVIDED HIGHWAYS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, OSCILLATING, OR STROBE LIGHTS.

WHEN PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED. AT LEAST ONE ADVANCE WARNING SIGN SHALL BE USED. IN ADDITION. CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEMS.REFER TO EPG 616.6.2.2 FLAGS AND ADVANCED WARNING RAIL SYSTEM



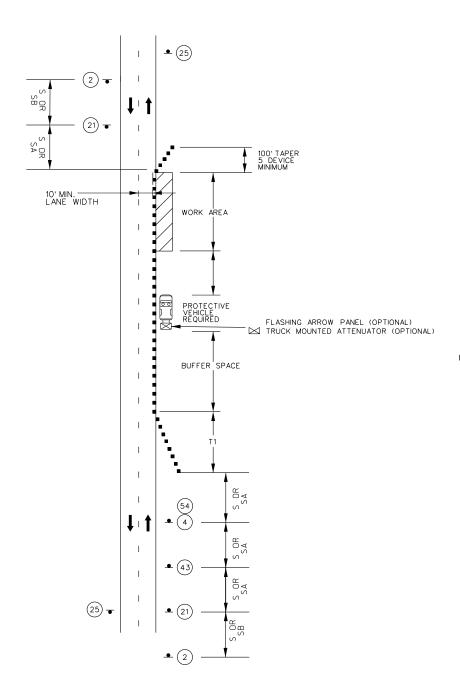
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D MO SHEET NO KC 7 CASS JOB NO

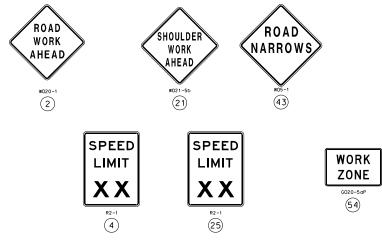
JKU0447 CONTRACT ID. PROJECT NO

BRIDGE NO.





TWO LANE UNDIVIDED
SHOULDER WORK
MINOR TRAVELWAY ENCROACHMENT



NOTES:
SEE TRAFFIC CONTROL SHEET 1 FOR WORKZONE SPEED LIMIT GUIDELINES.

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

SIGN 2 NOT REQUIRED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER SIGN 2 IS ALREADY USED.

A PROTECTIVE VEHICLE SHALL BE USED WHEN WORKERS ARE PRESENT (UNLESS TEMPORARY CONCRETE BARRIER IS USED). IF AVAILABLE. USE A TRUCK/TRAILER MOUNTED ATTENUATOR (TMA). A WORK VEHICLE MAY BE USED AS A PROTECTIVE VEHICLE.

VEHICLE- MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGEND ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S ROTATING LIGHTS OR STROBE LIGHTS.

SHADOW AND WORK VEHICLES SHALL DISPLAY HIGH-DENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEMS, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCED WARNING RAIL SYSTEM

(1). SIGN 43 SHOULD BE USED WHEN THE LANE WIDTHS ARE REDUCED SIGN 44A NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.

A FLARE RATE OF 8:1 FOR THE FLARED CONCRETE BARRIER IS USED FROM THE EDGE OF ROADWAY TO THE LIMITS OF THE CLEAR ZONE WHERE THE SIDE SLOPE IS 6:1 OR FLATTER.

CONCRETE BARREIR WITHIN THE CLEAR ZONE WILL USE AN APPROVED CRASH CUSHION WHEN THE NORMAL SPEED LIMIT IS GREATER THAN 35 MPH.

CONCRETE BARRIER WITHIN THE CLEAR ZONE CAN USE EITHER A BARRIER HEIGHT TRANSITION OR AN APPROVED CRASH CUSHION WHEN THE NORMAL SPEED LIMIT IS LESS THAN OR EQUAL TO 35 MPH.



DATE PI	REPARED
3/20	/2025
ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
KC	8
COU	NTY
CA	SS
JOB	NO.
JKU	0447
CONTRA	CT ID.
PROJE	CT NO.

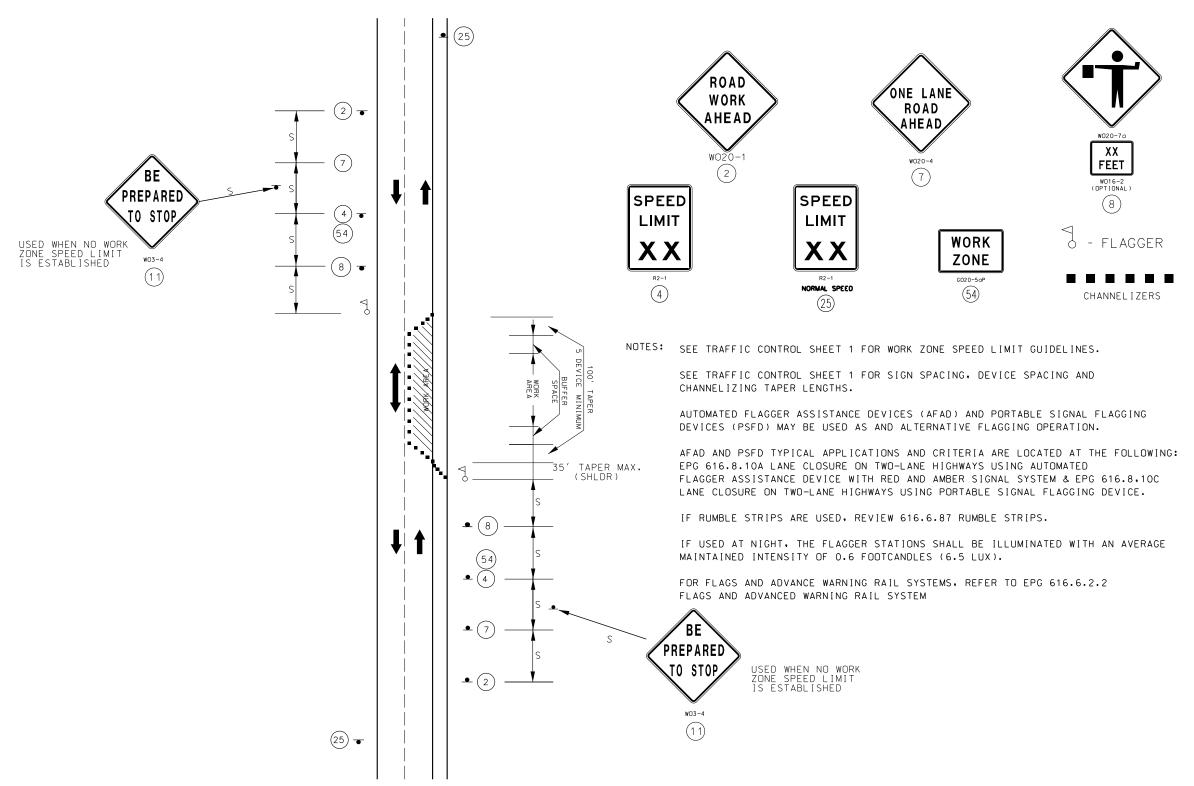
DESCRIPTION				
DATE				



1411 East 104th St. Kansas Cfty, MO 64131 Tel (816) 874-4655 Fax (816) 874-4675



EFFECTIVE: 02-01-2009



LANE CLOSURE ON TWO-LANE ROAD USING FLAGGERS



DATE PI	REPARED
3/20	/2025
ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
KC	9
COU	NTY
CA	.SS
JOB	NO.

JOB NO.
JKU0447
CONTRACT ID.

PROJECT NO.

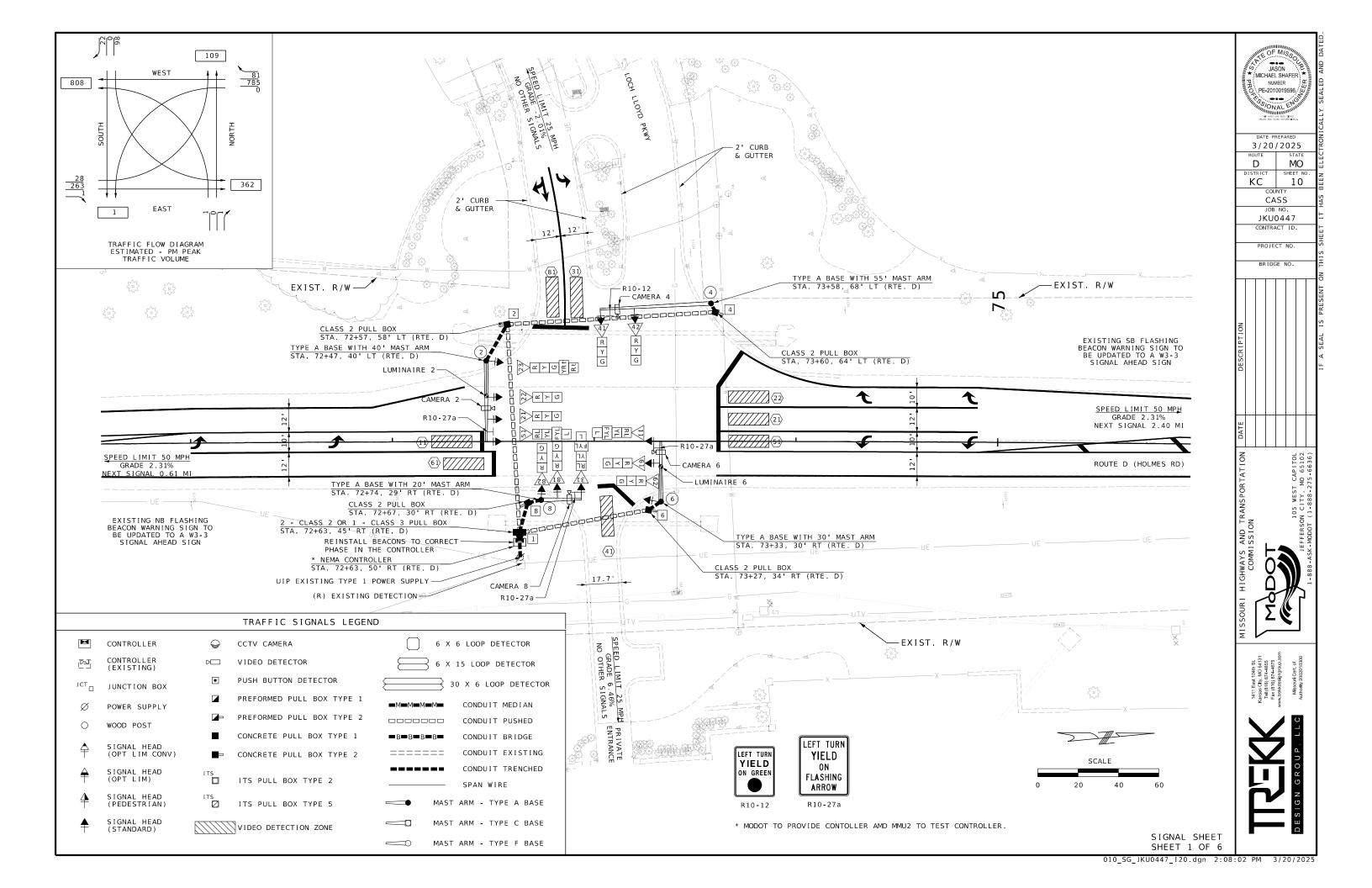
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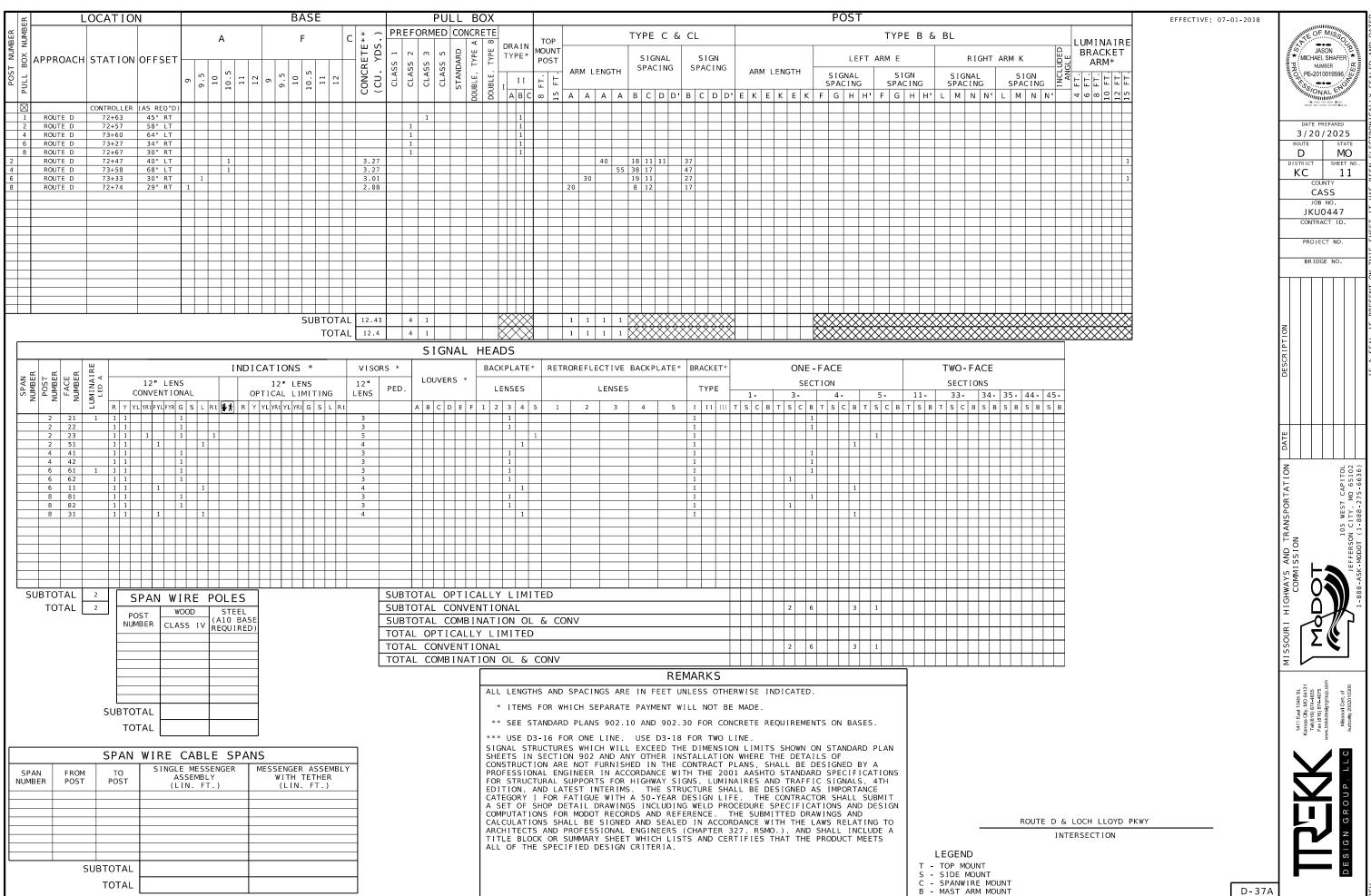
BLIDGE NO.

OURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL

1411 East 104th St. Kansas Clty, MO 64131 Tel (816) 874-4655 Fax (816) 874-4675 ww.trekkdesigngroup.com







EFFECTIVE: 10-01-2015

				OND	UIT	(WIT	H #	14 TI	KACE	CONDUIT (WITH #14 TRACER WIRE)													CABLE						PRO MICH
:OM	TO	CTR TO CTR	LOOP DET.			PUSH 2" 3"			I AN S		TURE	REM	MARKS	FROM	ТО	CTR TO CTR	POW		#16	CONT	ROL 9	#12	L I GH	TING POLE & BRACKET		2c-#14	VIDEO	REMARKS	O PE-2
		DIST.		`												DIST.	1 i 1	1c-4	2c−‡	5c−‡	7c-‡	12c-i	1c-#10	1c-#10	IN DUCT	LEAD IN	₩VIDEO CABLE		DATE 3 / 2
ırce	UPS										UI	IP EXIST.	TYPE 1 PS	UPS	CA	10		78										3×26′	ROUTE
PS A	CA PB1	10		14			-		+		3.	×3″		C A	H 41/4	2 216 216	+				335						310	INCLUDES JUMPER VIDEO DETECTION	D
B1	PB2	103		'	5	101			+++	_	2.8	x J		CA	U 4	216											310	VIDEO DETECTION	— KC
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В4	4P	5												CA	H 21/2						210							INCLUDES JUMPER	JK
B2 B1	2P PB6	21 65		2	4	63								C A	C 2	129 129					162						194	VIDEO DETECTION	CON
B6	6P	8		1	1	63			+	+				CA	2 P	129					102		447						PRO
B1	PB8	15		1										2 P	L 2									135					BR
38	8P	7		1)																								
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B1	PB6	65				63								CA	H 62	78					111								
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														CA	C 8	27											82	VIDEO DETECTION	
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			 																										╛
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	POWER SUPPLY													
LOC	CATION		POWER ASSE	SUPPLY MBLY	CIRCUI	T BREAKE	R TRIP F	RAT I NG*	LIGHTING	CONTROL *	SERVICE POLE			
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING		CONT & SIGNAL LAMPS	DISCO	SUPPLY NNECT REAKER LIGHTING	(ON POWE) 120 VOLT CONTROL	R SUPPLY) MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY		
UIP	EXIST.	TYPE 1	Туре 1		15 Amps	40 Amps	50 Amps	15 Amps	CABINET 1	15 Amps	CI. Ft.			
			Type		15 Amps	Amps	Amps	Amps		Amps	CI. Ft.			

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																				
LOCA	ΓΙΟΝ	SYSTEM MASTER		ACTUATED		: * H	COORDIN	ATION IN	TERFACE *	*				A CABI			ABINET	1			
APPROACH	STATION	STATION OFFSET		D LOOP)	?)		TYPE	12C/7C	12C/7C HARDWIRE (1)		CLOSE	LOOP	FIBER	TIME *		TYPE *	ŧ	TYP	'E *	SOFTW	/ARE *
APPROACH	STATION	STATION OFFSET	NEMA	170	NEMA	170	I I	I MASTER	LOCAL	BASE	NEMA	170	FIBER		Е	EV	DOUBLE	332	3365	BITRAN	WAPITI
ROUTE D	72+63	50' RT			1**											1					

** MODOT WILL PROVIDE CONTROLLER

			NEMA DETECTOR ASSIGNMENT												
				CA	RD PO	OS I T I	ON								
		1	2	3	4	5	6	7	8						
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		SIGN	IAL SIGI	VS	
QUANTITY	MUTCD SIGN NUMBER	SIZE	AREA	SIGN TOTAL AREA	SIGNAL SIGN MOUNTING HARDWARE
Q	NOMBER			ITEM NO. 90208.33	ITEM NO 90208 34
		INCHES	SQ.FT.	SQ.FT.	EA.
	R10-10L	24 X 30	5.0		
	R10-10R	24 X 30	5.0		
	R3-5L	30 X 36	7.5		
	R3-5R	30 X 36	7.5		
	R3-5A	30 X 36	7.5		
	R3-6L	30 X 36	7.5		
	R3-6R	30 X 36	7.5		
	R3-2	24 X 24	4.0		
	R3-1 R3-3	24 X 24 24 X 24	4.0		
	D3-1 ***	VAR. X 18	4.0		
	D3-1B ***	VAR. X 18			
	R10-3E	9 X 15	0.9		
	R10-3E	24 X 30	5.0		
1	R10-11A	24 X 30	5.0	5.0	1
-	R10-12	36 X 24	6.0	7.0	-
3	R10-27A	30 X 36	7.5	22.5	3
2	W3 - 3	36 X 36	9.0	18.0	
			SUBTOTAL	45.5	4
			TOTAL	45.5	4

		DETECTOR S	SCHEDULE			
			TYPE			
DETECTOR NUMBER	APPROACH	PUSH	DUCTION LOOP	(2)	\/IDE0	
		BUTTON	STANDARD	DELAY/ EXTEND *	CALL UNIT *	VIDEO
11	ROUTE D					
61, 62	ROUTE D					1
31	LOCH LLOYD PKWY.					
81, 82	LOCH LLOYD PKWY.					1
51	ROUTE D					
21, 22, 23	ROUTE D					1
41, 42	LOCH LLOYD PKWY.					1
	TOTAL					4****

**** 1 SYSTEM

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = 16 (2)

	NEMA DETECTOR ASSIGNMENT														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ø 1	Ø 2	∅ 3	Ø 4	Ø 5	∅ 6	NOT USED	Ø 8	FYA PHASE 1	FYA PHASE 3	FYA PHASE 5	NOT USED	NOT USED	NOT USED	OL C PHASE 3	NOT USED

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

*** USE D3-1 FOR ONE LINE. USE D3-1B FOR TWO LINE.

(1) MoDOT "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE INTERCONNECT.

(2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN ON THE NEMA DETECTOR ASSIGNMENT CHART.

DATE PREPARED						
3/20/2025						
ROUTE	STATE					
D	MO					
DISTRICT	SHEET NO.					
KC	13					
COUNTY						
CASS						
JOB NO.						
JKU0447						
CONTRACT ID.						
PROJECT NO.						

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BRIDGE NO.							
DESCRIPTION							
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ROUTE D & LOCH LLOYD PKWY.

INTERSECTION

EFFECTIVE: 12-01-2017

