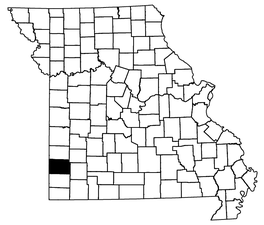
PUBLIC SANITARY SEWER PLANS FOR

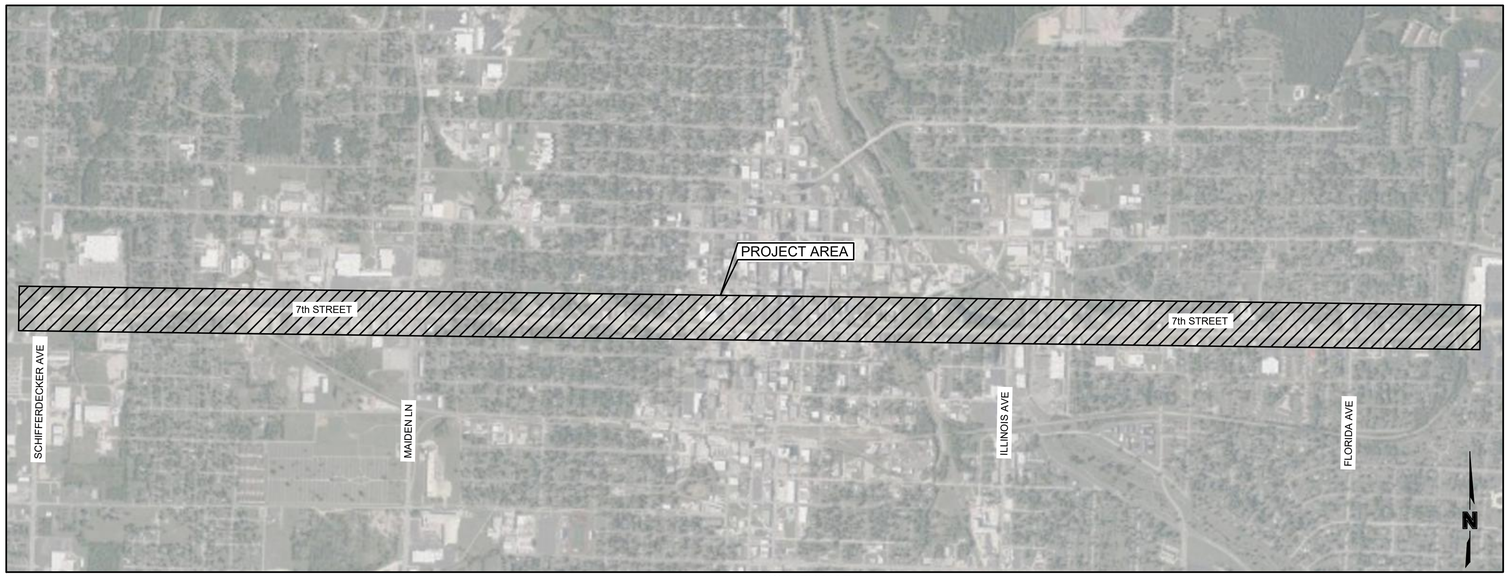
7TH STREET SANITARY SEWER RELOCATION

SECTIONS 01, 02, 03, 04, 09, 10 ,11, & 12, TOWNSHIP 27N, RANGE 33W
CITY OF JOPLIN, MISSOURI
JASPER COUNTY, MISSOURI

MODOT #J7S2185B&F
MODOT #J7S2185C
MODOT #J7S2185D



LOCATION MAP
SHOWING LOCATION OF JASPER COUNTY



VICINITY MAP
SCALE: 1"=1,000'

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UTILITY DISCLAIMER

EXISTING UNDERGROUND UTILITIES AND BURIED STRUCTURES IN THE VICINITY OF THE WORK TO BE PERFORMED HEREIN ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT THAT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE ENGINEER IN THE PREPARATION OF THE DRAWINGS. THERE IS NO GUARANTEE AS TO THE ACCURACY OR THE COMPLETENESS OF SUCH INFORMATION AND ALL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.

DISCLAIMER

CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY OBSERVE CONDITIONS IN THE FIELD THAT APPEAR TO BE UNFORESEEN OR ARE MATERIALLY DIFFERENT THAN SHOWN ON THE PLANS OR WOULD CAUSE THE DESIGN, AS SHOWN ON THE PLANS OR THE SPECIFICATIONS, TO BE IMPRACTICAL OR INAPPROPRIATE BASED ON CUSTOMARY STANDARDS OF THE INDUSTRY. CONTRACTOR SHALL CONSULT WITH THE ENGINEER AND RECEIVE WRITTEN DIRECTION BEFORE MAKING ANY MODIFICATION TO THE PLANS OR SPECIFICATIONS.

ENGINEER DISCLAIMS RESPONSIBILITY FOR ANY ACTIONS TAKEN BY THE CONTRACTOR NOT IN COMPLIANCE WITH THE ABOVE.

MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
www.mo1call.com

THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!

ELECTRIC
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STATE OF MISSOURI
MATTHEW JESSOP
NUMBER PE-2025008811
PROFESSIONAL ENGINEER
11/26/2025

PREPARED & SUBMITTED BY:

OLSSON
702 S. MAIN STREET
JOPLIN, MISSOURI 64801

MATTHEW JESSOP — 11/26/2025
DATE

I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION.

APPROVED BY:

CITY OF JOPLIN, MISSOURI

CITY ENGINEER — DATE

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

COVER SHEET

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

2025

JOPLIN, MISSOURI

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-001

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DATE: Nov 25, 2025 3:20pm USER: kbucker

LEGEND:

CATV	CABLE TV LINE
	CENTER LINE
	CHAIN LINK FENCE
	PROP. SEWER ABANDONMENT/REMOVAL
1000	EXISTING CONTOUR LINE MAJOR
1000	EXISTING CONTOUR LINE MINOR
1000	PROPOSED CONTOUR LINE MAJOR
1000	PROPOSED CONTOUR LINE MINOR
ROW	EXISTING RIGHT OF WAY LINE
ROW	PROPOSED RIGHT OF WAY LINE
	PROPOSED EASEMENT LINE
	EXISTING EASEMENT LINE
X	FENCE LINE
FO	FIBER OPTIC LINE
G	GAS LINE
IRR	IRRIGATION LINE
LOC	LIMITS OF CONSTRUCTION
P-OH	OVERHEAD POWER LINE
	PROPERTY LINE
	SECTION LINE
SS	EXISTING SANITARY SEWER LINE
SS SS	PROPOSED SANITARY SEWER LINE
FM	SANITARY SEWER FORCE MAIN
SD	EXISTING STORM SEWER LINE
SD	PROPOSED STORM SEWER LINE
TEL	TELEPHONE LINE
	TREE MASS
	TREE ROW/BUSHES
P-UG	UNDERGROUND POWER LINE
	WOOD FENCE
X X	WIRE FENCE
W	WATER LINE
	EXHISTING SEWER MANHOLE
	PROPOSED SEWER MANHOLE

ABBREVIATION TABLE:

ADJ.	ADJUST
APPROX.	APPROXIMATE, APPROXIMATELY
BC	BACK OF CURB
B-B	BACK OF CURB TO BACK OF CURB DIMENSION
℄	CENTERLINE
CONST	CONSTRUCTION
CP	CONTROL POINT
DIA, DIAM	DIAMETER
D.N.D.	DO NOT DISTURB
ELEV, EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT.	EASEMENT
EXIST, EX	EXISTING
M.G.	MATCH GRADE
MH	MANHOLE
PROP	PROPOSED
(R)	REMOVAL
ROW, R/W	RIGHT-OF-WAY
TBM	TEMPORARY BENCHMARK
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TP	PAVEMENT
TYP.	TYPICAL
U.I.P	USE IN PLACE

Estimated Quantities

NO.	Pay Items	Unit	Quantity	
			Estimated	As-Built
1	MOBILIZATION	LS	1	
2	CONSTRUCTION STAKING	LS	1	
3	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LS	1	
4	CLEARING AND GRUBBING	LS	1	
5	SEDIMENT AND EROSION CONTROL	LS	1	
6	GPS "AS-BUILT" SURVEY	LS	1	
7	COLOR AUDIO/VIDEO RECORDING PRE AND POST CONSTRUCTION (DVD)	LS	1	
8	CCTV INSPECTION (PRE CONSTRUCTION)	LF	2100	
9	CCTV INSPECTION (POST CONSTRUCTION)	LF	2772	
10	BYPASS PUMPING	LS	1	
11	DEWATERING	LS	1	
12	DEFLECTION TEST (<24 INCH)	LS	1	
13	SEWER LEAK TEST (<24 INCH)	LS	1	
14	MANHOLE TESTING (<24 INCH)	LS	1	
15	CIPP PATCH/POINT REPAIR (8" DIAMETER SEWER)	EA	10	
16	CIPP PATCH/POINT REPAIR (12" DIAMETER SEWER)	EA	1	
17	TRENCH EXCAVATION 0-10'	LF	939	
18	TRENCH EXCAVATION 0-15'	LF	1557	
19	TRENCH EXCAVATION 0-20'	LF	152	
20	8" SEWER PIPE (PVC - SDR-35)	LF	91	
21	8" SEWER PIPE (PVC - SDR-26)	LF	1262	
22	12" SEWER PIPE (PVC - SDR-35)	LF	843	
23	12" SEWER PIPE (PVC - SDR-26)	LF	452	
24	12" SEWER PIPE (DIP - LINED) (PIPE - ONLY)	LF	125	
25	TRENCHLESS CONSTRUCTION (12-INCH CARRIER)	LF	125	
26	20" STEEL ENCASEMENT	LF	115	
27	CONCRETE ENCASEMENT FOR SEWER MAIN	CY	7	
28	CONCRETE COLLAR	EA	2	
29	CONNECT SEWER MAIN TO EXISTING MH	EA	4	
30	ABANDON EXISTING SEWER MAIN (8-INCH)	LF	1816	
31	REMOVE EXISTING SEWER MAIN (8-INCH)	LF	396	
32	ABANDON MANHOLE	EA	16	
33	REMOVE MANHOLE	EA	6	
34	NEW MANHOLE (48" DIAM)	EA	30	
35	OUTSIDE MH DROP CONNECTION (8")	EA	2	
36	4" CLEANOUT	EA	1	
37	SEWER SERVICE CONNECTION	EA	30	
38	SEWER SERVICE LINE	LF	1608	
39	POINT REPAIR	EA	5	
40	REMOVE AND REPLACE CURB AND GUTTER	LF	80	
41	REMOVE AND REPLACE SIDEWALK	SF	238	
42	PAVEMENT CUT AND TEMPORARY REPAIR	SY	1124	
43	PAVEMENT CUT AND PERMANENT REPAIR (ASPHALT)	SY	806	
44	REMOVE AND REPLACE DRIVEWAY (CONCRETE)	SY	30	
45	SOLID SLAB SODDING	SY	1553	

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

LEGEND AND QUANTITIES

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
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DATE: Nov 26, 2025 10:25am USER: stauer

GENERAL NOTES:

1. ALL WORK PRESENTED, IMPLIED, AND/OR COMPLETED AS A PART OF THIS PLAN SET SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE CITY OF JOPLIN UNLESS SPECIFICALLY STATED OTHERWISE. ALL ITEMS AND WORK REFERENCING MODOT STANDARD DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS (APPROVED BY CITY OF JOPLIN) AND ONE (1) COPY OF ALL APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE SITE AT ALL TIMES.
2. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
4. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
5. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST VERSION) THROUGHOUT THE PROJECT IN HIGHWAYS, SIDEWALKS, STREETS AND INTERSECTIONS. ALLEY ENTRANCES SHALL BE BLOCKED WITH BARRICADES WHILE THE ALLEY IS UNDER CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
6. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
7. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
8. THE CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER WITHIN 5 DAYS OF THE NOTICE TO PROCEED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND THE GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
10. NO EQUIPMENT OR MATERIAL SHALL BE DEPOSITED ON PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH ACTS AND SHALL REMOVE THE MATERIAL AND RESTORE THE PROPERTY AT THE EXPENSE OF THE CONTRACTOR. IF THE CONTRACTOR'S OPERATIONS REQUIRE WORK ON OR ACCESS ACROSS PRIVATE PROPERTY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN WRITTEN PERMISSION FROM THE PROPERTY OWNER TO ENTER THE PROPERTY AND TO REPAIR ANY DAMAGE TO PRIVATE PROPERTY CAUSED BY HIS OPERATIONS.
11. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS STATED IN THE CITY NOISE ORDINANCE UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
12. THE CITY OF JOPLIN SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL DEMOLITION AND REMOVAL ITEMS SUCH AS SIGNAGE, POLES, SIGNAL EQUIPMENT, ETC. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS FOR A TIME AND LOCATION TO DELIVER THOSE ITEMS TO THE CITY. CONSTRUCTION DEBRIS SUCH AS BROKEN CONCRETE, EXCESS FILL, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR. MATERIAL SHALL BE COMPLETELY REMOVED FROM THE SITE PRIOR TO ACCEPTANCE OF THE PROJECT. ALL MATERIAL SHALL BE DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
13. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL STORM AND SANITARY MANHOLE RIMS TO MATCH THE PROPOSED FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
15. UNLESS SPECIFICALLY STATED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING METERS, VALVES, VALVE BOXES, BUILDING DRAIN LINES, ETC. TO MATCH FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
16. RIGHT-OF-WAY AND EASEMENTS SHOWN ARE APPROXIMATE, AND DO NOT DEPICT A LEGAL SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF RIGHT-OF-WAY, PROPERTY LINES, AND EASEMENTS AND CONTAINING ACTIVITIES WITHIN THOSE LIMITS.
17. THE CONTRACTOR SHALL PROTECT EXISTING RIGHT-OF-WAY AND SURVEY MONUMENTS. ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI.
18. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A SCHEDULE OF OPERATIONS AT THE BEGINNING OF EACH WEEK. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
19. THE CONTOUR LINES & SPOT ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE OF PAVEMENT, TOP OF SIDEWALKS AND CURBS, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR GRADING LINE ELEVATIONS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS. CLEAN STREETS OF CONSTRUCTION DEBRIS DAILY. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
34. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN IN THE PLANS, NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL OR 1 FOOT VERTICAL IN 2 FEET HORIZONTAL IN GUARDRAIL AREAS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
35. ALL BACK FILL SHALL BE TAMPED. BACK FILL WITHIN THE RIGHT-OF-WAY SHALL BE COMPACTED TO 95% MAX. DENSITY AS PER ASTM-D698 (STANDARD PROCTOR COMPACTION). THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
36. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
37. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO ACTUAL LOCATION OF EXISTING FACILITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
38. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN WITHIN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS OF SUCH STRUCTURES WHEN BROKEN OR OTHERWISE DAMAGED BY CONSTRUCTION ACTIVITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
39. ALL TRENCHING SHALL BE IN ACCORDANCE WITH THE JOPLIN STANDARD SPECIFICATIONS. NO SEPARATE MEASUREMENTS AND PAYMENT WILL BE MADE FOR TRENCH EXCAVATION AND BACKFILL REQUIRED FOR SEWER CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF MATERIAL FROM STORM SEWER TRENCHING. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
45. THE CONTRACTOR SHALL MAINTAIN AND COORDINATE OWNER, TENANT, DELIVERY AND EMERGENCY VEHICULAR AND/OR PEDESTRIAN ACCESS TO ALL RESIDENCES AT ALL TIMES IN ACCORDANCE WITH THE CITY OF JOPLIN, ADA, PROWAG, AND MUTCD REQUIREMENTS, INCLUDING TEMPORARY ACCESS AND SAFETY REQUIREMENTS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
46. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF CONTAMINATED MATERIAL IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS.
47. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE OCCUPATION SAFETY AND HEALTH ADMINISTRATION RULES & REGULATIONS AND OTHER APPLICABLE CITY, STATE, AND FEDERAL CONSTRUCTION SAFETY REQUIREMENTS.
48. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATION NEAR BUILDINGS AND OTHER STRUCTURES AND SHALL PROVIDE NECESSARY SHEETING AND SHORING TO ASSURE PROPER INSTALLATION OF THE SEWERS. ALL COSTS FOR SHEETING AND SHORING SHALL BE INCLUDED IN THE PRICE BID FOR TRENCH EXCAVATION.
49. ALL COSTS FOR ANY DEWATERING SHALL BE CONSIDERED AS INCIDENTAL CONSTRUCTION.
50. ALL WORK NOT CLASSIFIED AS A "PAY ITEM" SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION, THE COST OF WHICH SHALL BE INCLUDED IN THE COST OF OTHER BID.
51. THESE PLANS ARE TO BE CONSTRUCTED AHEAD OF, OR IN CONJUNCTION WITH, THE MODOT 7TH STREET PAVING PLANS (OLSSON, 2025). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE PAVING CONTRACTOR IN ORDER TO FACILITATE CONSTRUCTION PHASING/SEQUENCING TO LIMIT THE IMPACTS TO TRAFFIC AND TRAFFIC CONTROL AS WELL AS LIMIT THE AMOUNT OF SURFACE REPAIR REQUIRED, WHETHER PERMANENT OR TEMPORARY. SHOULD THE CONTRACTOR FOR THESE SEWER PLANS CONSTRUCT PORTIONS OF THE SEWER LINES FAR IN ADVANCE OF THE PAVING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES AND PERMANENT SURFACE REPAIR OF THE STREETS, DRIVEWAYS, SIDEWALKS, AND CURB AND GUTTER MAY BE REQUIRED. THE ALLOWABLE TIME THAT TEMPORARY SURFACE REPAIR CAN BE IN PLACE PRIOR TO THE PAVING WORK IS AT THE DISCRETION OF MODOT, THE CITY OF JOPLIN, AND THE ENGINEER.

CIPP CONSTRUCTION NOTES:

1. CONTRACTOR SHALL INSTALL CIPP PATCH THROUGH EXISTING MANHOLE. CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO ENSURE CIPP IS INSTALLED AS ONE CONTINUOUS PIECE WITHOUT ANY SIGNIFICANT DEFLECTIONS OR WRINKLES THAT WOULD PREVENT THE SMOOTH FLOW OF WASTEWATER OR CAUSE DEBRIS TO HANG UP AND CAUSE OBSTRUCTIONS.
2. AFTER THE INSTALLATION OF THE CIPP PATCH, THE CONTRACTOR SHALL ABANDON THE EXISTING MANHOLE BY REMOVING THE FRAME & COVER AND BACKFILLING THE MH WITH CRUSHED STONE. CONTRACTOR SHALL ENSURE THAT THE CIPP IS NOT DAMAGED AS THE MANHOLE IS BACKFILLED WITH CRUSHED STONE. CONTRACTOR SHALL REPAIR THE PAVEMENT, SIDEWALK, AND/OR CURB AND GUTTER, AS NECESSARY, AFTER THE MANHOLE IS ABANDONED.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE EROSION DURING CONSTRUCTION AND UNTIL THE OWNER ACCEPTS THE WORK AS COMPLETE. THE CONTRACTOR SHALL UTILIZE AND COMPLY WITH ALL REQUIREMENTS OF THE CITY OF JOPLIN'S LAND DISTURBANCE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). ALL EROSION AND SEDIMENT CONTROL PLANS SHALL BE INCORPORATED INTO THE SWPPP. CONTRACTOR SHALL MAINTAIN THE SWPPP THROUGHOUT THE PROJECT AND COMPLETE THE REQUIRED DOCUMENTATION UNTIL THE SITE IS STABILIZED AND ACCEPTED BY THE ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
2. CONSTRUCTION ACCESS TO THE SITE SHALL BE LIMITED TO THE APPROVED TEMPORARY CONSTRUCTION ENTRANCE(S). TEMPORARY CONSTRUCTION ENTRANCE SHALL HAVE SHOT ROCK FOR ITS SURFACE. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
4. CONTRACTOR TO PROTECT ANY STORM INLETS FROM SEDIMENT THAT TAKE STORM WATER FROM THE AREA OF CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
5. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE LOCAL, STATE & FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BERMS, SILT FENCES, OR OTHER MEANS TO PREVENT ERODED MATERIALS FROM REACHING THE PUBLIC RIGHT-OF-WAY AND ADJACENT PROPERTIES. IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE, THE CONTRACTOR SHALL REMOVE ANY DEBRIS, SILT, OR MUD AND RESTORE THE RIGHT-OF-WAY TO ORIGINAL OR BETTER CONDITION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL PROCEDURES SHALL BE IN PLACE PRIOR TO BEGINNING GRADING ACTIVITIES. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SEDIMENT CONTROL BARRIERS DURING CONSTRUCTION OR UNTIL THEY ARE RELEASED FROM THIS RESPONSIBILITY BY THE ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
9. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITE WORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER & ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
10. THE CONTRACTOR IS RESPONSIBLE FOR ATTENDING TO AND CORRECTING UNSUITABLE SOIL CONDITIONS RELATED TO PLOW ZONES, WET SOILS, AND OTHER CONDITIONS.
11. IF THE CONTRACTOR'S OPERATIONS CAUSE AN UNSATISFACTORY SUBGRADE, THE CONTRACTOR SHALL RESTORE THE SUBGRADE TO A SATISFACTORY CONDITION AT THE CONTRACTOR'S EXPENSE.
12. STRIPPINGS ARE TO BE STOCKPILED. FOLLOWING THE COMPLETION OF THE GRADING, THIS TOPSOIL SHALL BE USED AS FILL MATERIAL ON ALL LANDSCAPED AREAS. IF STOCKPILE IS INACTIVE FOR MORE THAN 14 DAYS, STABILIZE OR PROTECT THE PERIMETER AS PER CITY OF JOPLIN "EROSION AND SEDIMENT CONTROL GUIDELINES". THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
13. ALL HERBACEOUS VEGETATION SHALL BE REMOVED FROM WITHIN THE LIMITS OF THE GRADING AND REDISTRIBUTED WITH THE TOPSOIL. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.

SEWER NOTES:

1. CONTRACTOR SHALL MAINTAIN ALL EXISTING SEWER CONVEYANCE DURING CONSTRUCTION. NO PIPES SHALL BE ABANDONED OR FILLED WITH FLOWABLE FILL UNTIL THE NEW SEWER PIPE IS CONSTRUCTED AND CONNECTIONS ARE COMPLETE.
2. ALL ACTIVE SERVICE LINES (PUBLIC OR PRIVATE) THAT ARE CONNECTED TO THE SEWER SYSTEM TO BE REMOVED SHALL BE EXTENDED AND CONNECTED TO THE PROPOSED SEWER SYSTEM. ALL CONNECTIONS TO PROPOSED SYSTEM THAT ARE NOT EXPLICITLY SHOWN AND IDENTIFIED ON THE BID FORM WILL BE CONSIDERED SUBSIDIARY TO THE PROPOSED SEWER PIPE.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PRECAST CONCRETE STRUCTURES AND PIPE FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER. THE SHOP DRAWINGS MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MISSOURI. THE CONTRACTOR MUST RECEIVE APPROVAL OF THE SUBMITTED SHOP DRAWINGS PRIOR TO FABRICATION. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
4. DESIGN PROFESSIONAL SHALL REVIEW SHOP DRAWINGS OR SAMPLES FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ON THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS, AND SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. THE DESIGN PROFESSIONAL'S REVIEW SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS IN WRITING CALLED DESIGN PROFESSIONAL'S ATTENTION TO EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND DESIGN PROFESSIONAL HAS GIVEN WRITTEN APPROVAL OF EACH SUCH VARIATION BY SPECIFIC WRITTEN NOTATION THEREOF INCORPORATED INTO OR ACCOMPANYING THE SHOP DRAWING OR SAMPLE; NOR WILL ANY APPROVAL BY THE DESIGN PROFESSIONAL RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS WITH CONFORMANCE TO CONTRACT DOCUMENTS.
5. BEFORE SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED:
   - A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
   - B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
   - C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
   - D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

   ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY REVIEWED THE SUBMISSION AND CHECKED ALL DATA AND DETAILS. BY CONTRACTOR SIGNATURE, CONTRACTOR CERTIFIES SHOP DRAWING CONFORMANCE AND ACCURACY TO THE CONTRACT DOCUMENTS.
6. ALL UTILITIES REMOVED FROM SERVICE AS PART OF THE PROPOSED SEWER SYSTEM SHALL BE ABANDONED IN ACCORDANCE WITH CITY OF JOPLIN SPECIFICATIONS.
7. ANY MANHOLES NOT SHOWN ON THESE PLANS BUT DISCOVERED DURING THE COURSE OF THE PROJECT ARE TO BE HANDLED WITHIN THE MANOR PRESCRIBED BY THE ENGINEER.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING ALL SANITARY SEWER FLOW AND WATERLINE SERVICE DURING CONSTRUCTION IN A MANNER APPROVED BY THE CITY.
9. COST FOR PRIVATE PLUMBER, IF NEEDED, TO BE INCIDENTAL AND COST TO BE INCLUDED IN OTHER ITEMS.

SURFACE REPAIR GENERAL NOTES:

1. TEMPORARY PAVEMENT REPLACEMENT FOR SURFACE REPAIR THAT HAS NOT ALREADY BEEN IMPROVED PER MODOT 7TH STREET PAVING PLANS (OLSSON, 2025) SHALL CONSIST OF A COMPACTED BASE ROCK LAYER AND A 3-INCH THICK ASPHALTIC CONCRETE SURFACE COURSE. THE BASE ROCK SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AND SHALL BE FREE OF EXCESS MOISTURE, ORGANIC MATERIAL, OR DEBRIS. THE ASPHALT MIX SHALL BE HOT MIX ASPHALT (HMA) OR APPROVED EQUIVALENT, PLACED AND COMPACTED TO PROVIDE A SMOOTH, STABLE, AND SAFE DRIVING SURFACE. ALL TEMPORARY PAVEMENT SHALL BE MAINTAINED IN GOOD CONDITION THROUGHOUT THE DURATION OF THE PROJECT AND SHALL BE REPAIRED PROMPTLY IF DAMAGED OR DETERIORATED.
2. TEMPORARY SIDEWALK REPLACEMENT SHALL CONSIST OF A MINIMUM 3-INCH THICK LAYER OF COMPACTED COLD MIX ASPHALT. THE MATERIAL SHALL BE PLACED TO MATCH THE EXISTING SIDEWALK GRADE AND PROVIDE A SAFE, STABLE, AND ACCESSIBLE WALKING SURFACE FOR PEDESTRIANS. ALL EDGES SHALL BE TAPERED OR BUTTED TO ADJACENT SURFACES TO PREVENT TRIPPING HAZARDS. THE TEMPORARY SIDEWALK SHALL BE MAINTAINED IN GOOD CONDITION THROUGHOUT THE DURATION OF THE PROJECT AND SHALL BE REPAIRED OR REPLACED PROMPTLY IF DAMAGED OR DETERIORATED.

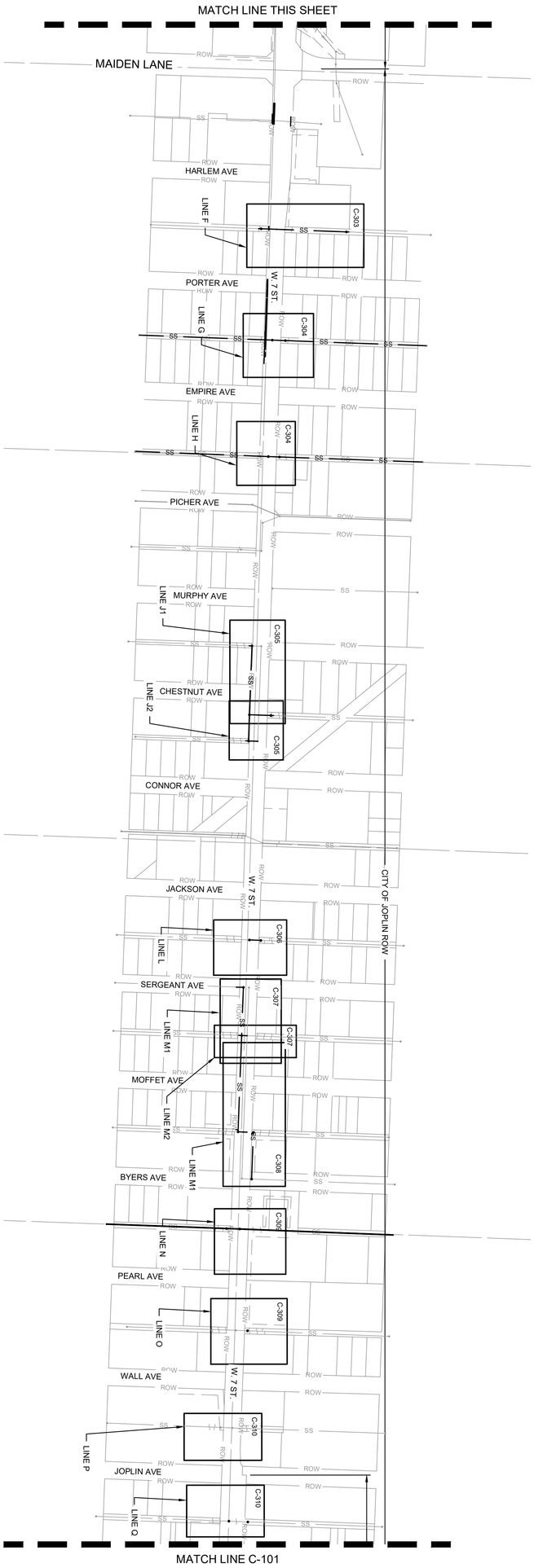
MODOT GENERAL NOTES:

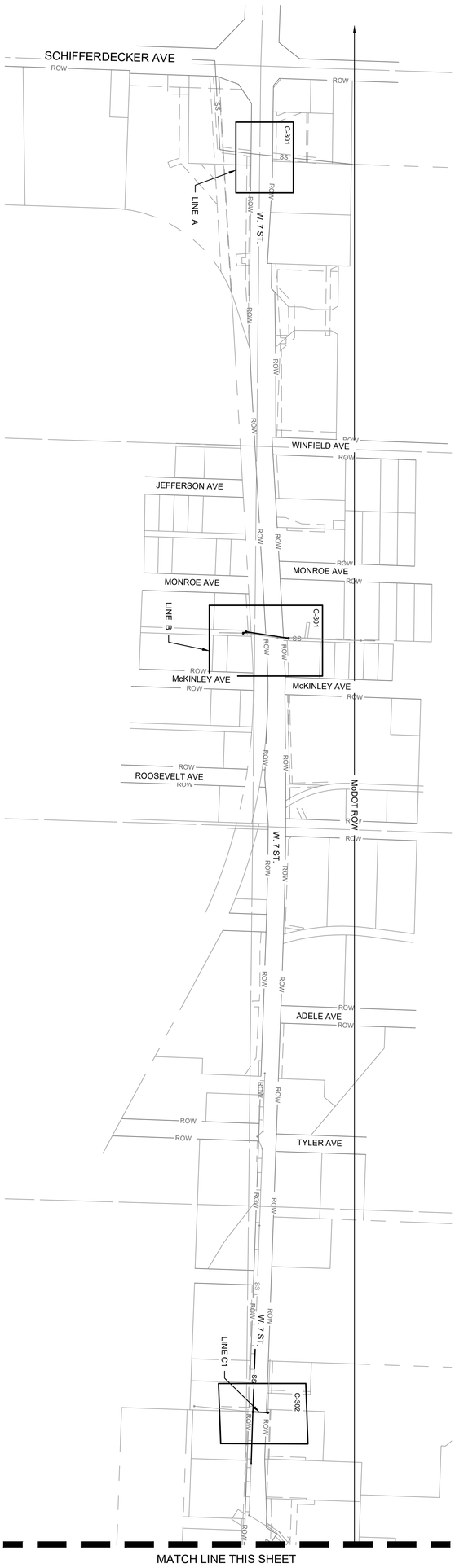
1. ALL TRAFFIC CONTROL SHALL BE IN CONFORMANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. WORK WITHIN EXISTING AND FUTURE MODOT RIGHT-OF-WAY COVERED BY THESE PLANS SHALL CONFORM TO THE LATEST EDITION OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION AND MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. PRIOR TO THE START OF CONSTRUCTION, CONTACT RYAN GREER FOR PERMITTING REQUIREMENTS FOR WORK ON MODOT RIGHT-OF-WAY RYAN.GREER@MODOT.MO.GOV.
4. THE CONTRACTOR SHALL HAVE A SET OF PLANS FILED WITH MAW AND THE CITY OF JOPLIN ON SITE. THE CONTRACTOR SHALL HAVE ON THE PROJECT AT ALL TIMES, AS HIS AGENT, A COMPETENT SUPERINTENDENT CAPABLE OF READING AND THOROUGHLY UNDERSTANDING THE PLANS AND SPECIFICATIONS AND THOROUGHLY EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED WHO SHALL RECEIVE INSTRUCTION FROM THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
5. THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO OLSSON AT THIS TIME. THIS INFORMATION IS PROVIDED BY OLSSON "AS-IS" AND OLSSON 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 OLSSON 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 AND VERIFICATION THROUGH MISSOURI ONE-CALL (1-800.DIG-RITE). THE CONTRACTOR SHALL COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!! CONTACT THE ENGINEER FOR INSTRUCTIONS WHENEVER ANY CONFLICTS ARE DISCOVERED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE RIGHT-OF-WAY AND FOR DAMAGED IMPROVEMENTS SUCH AS CURBS, SIDEWALKS, STREET LIGHT AND TRAFFIC SIGNAL JUNCTION BOXES, TRAFFIC SIGNAL LOOP LEAD INS, SIGNAL POLES, ETC. DAMAGED IMPROVEMENTS SHALL BE REPAIRED IN CONFORMANCE WITH THE LATEST EDITION OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION AND THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
7. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITE WORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER & MODOT.
8. THE CONTRACTOR SHALL RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT AN OFF-SITE FACILITY. CONTRACTOR TO CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF-SITE.
9. FOR TESTING PROCEDURES REFER TO THE LATEST EDITION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
10. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR OF ANY NEW SINKHOLES DISCOVERED DURING CONSTRUCTION.
11. HAND RUB FINISH ON ALL CONCRETE STRUCTURES.
12. ALL DISTURBED AREAS ARE TO BE RE-SEEDED IN ACCORDANCE WITH THE LATEST EDITION OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION AND THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. SITE WORK INSIDE THE PROPERTY LINE LIMITS WILL BE PERFORMED BY THE GENERAL CONTRACTOR UNDER THE BUILDING CONTRACT PROJECT.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY OF HIS OWN PERSONNEL, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC.
14. THE JOB SITE SHALL BE A DRUG FREE WORK PLACE. CONSUMPTION OF ALCOHOLIC BEVERAGES ON THE JOB SITE IS STRICTLY PROHIBITED.
15. MANHOLE COVERS, VALVE BOXES, UTILITY POLES, AND OTHER UTILITY APPURTENANCES SHALL NOT ENCROACH ON SIDEWALKS, CURBS, OR PAVEMENT UNLESS SPECIFIED OTHERWISE. WHERE CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PROCEEDING.
16. CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH ANY OTHER PUBLIC OR PRIVATE PROJECTS WITHIN OR NEAR THE PROJECT LIMITS.
17. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING STREET, CURB AND GUTTER, SIDEWALK AND DRIVEWAYS.
18. THESE PLANS ARE NOT TO BE SCALED FROM, USE ONLY LABELED DISTANCES.
19. CONTRACTOR SHALL NOT PLACE TOP LIFT OF ASPHALT UNTIL ALL GRADING IS COMPLETE AND FINAL GRADE IS ESTABLISHED.

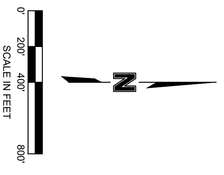
TRENCHLESS CONSTRUCTION GENERAL NOTES:

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE RAILROAD AUTHORITY, STATE DOT, AND ANY OTHER APPLICABLE AGENCIES PRIOR TO CONSTRUCTION.
2. ALL WORK SHALL COMPLY WITH THE LATEST REQUIREMENTS AND SPECIFICATIONS OF THE GENESEE & WYOMING (G&W) RAILROAD, MODOT, CITY OF JOPLIN, OR OTHER RELEVANT AUTHORITIES. THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
3. THE SEWER MAIN SHALL BE INSTALLED USING THE JACK AND BORE METHOD TO AVOID OPEN-CUT EXCAVATION WITHIN THE RAILROAD AND HIGHWAY RIGHT-OF-WAY. NO OPEN-CUT EXCAVATION IS PERMITTED WITHIN THE LIMITS OF THE RAILROAD OR HIGHWAY EASEMENT UNLESS EXPLICITLY APPROVED IN WRITING.
4. CASING PIPE SHALL BE STEEL, MINIMUM DIAMETER AS SHOWN ON THE PLANS, WITH A MINIMUM WALL THICKNESS AS NOTED ON PLANS AND PER GOVERNING AGENCY REQUIREMENTS. CASING PIPE SHALL EXTEND A MINIMUM OF 10 FEET BEYOND THE EDGE OF PAVEMENT OR RAILROAD BALLAST ON BOTH SIDES. CASING PIPE SHALL BE INSTALLED ON GRADE AND LINE AS SHOWN ON THE PLANS.
5. CARRIER PIPE SHALL BE DUCTILE IRON PIPE CL350, RESTRAINED JOINT, AND INSTALLED WITH SPACERS AND END SEALS. NO DIRECT CONTACT BETWEEN THE CARRIER PIPE AND CASING PIPE IS PERMITTED. PIPE SHALL CONFORM TO THE LATEST SPECIFICATIONS BY THE CITY OF JOPLIN.
6. BORE AND RECEIVING PITS SHALL BE LOCATED OUTSIDE THE RAILROAD AND HIGHWAY RIGHT-OF-WAY UNLESS OTHERWISE APPROVED. CONTRACTOR SHALL PROVIDE SHORING AND DEWATERING AS NECESSARY TO MAINTAIN SAFE WORKING CONDITIONS.
7. CONTRACTOR SHALL VERIFY ALL HORIZONTAL AND VERTICAL CONTROL PRIOR TO BORING. ANY DEVIATION FROM THE DESIGNED ALIGNMENT MUST BE APPROVED BY THE ENGINEER.
8. ALL CASING AND CARRIER PIPE INSTALLATIONS SHALL BE SUBJECT TO VIDEO INSPECTION AND PRESSURE TESTING AS REQUIRED. RAILROAD AND HIGHWAY REPRESENTATIVES MAY REQUIRE ON-SITE INSPECTION DURING BORE OPERATIONS.
9. CONTRACTOR SHALL COORDINATE WITH THE RAILROAD AND HIGHWAY AUTHORITIES FOR FLAGGING, TRACK PROTECTION, AND TRAFFIC CONTROL. ALL WORK SHALL COMPLY WITH OSHA TRENCH SAFETY STANDARDS AND APPLICABLE RAILROAD SAFETY PROTOCOLS.

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C-001

drawn by KME
designed by MAJ
project no. 024-03774
date OCTOBER, 2025

SITE PLAN AND KEY MAP I

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI 2025

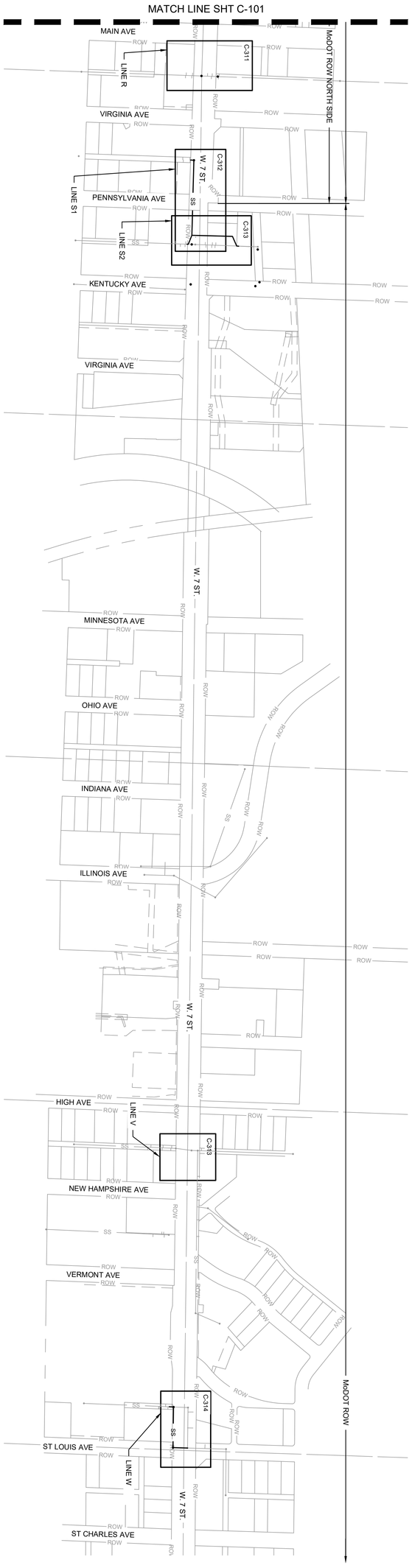
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C-002

drawn by KME
designed by MAJ
project no. 024-03774
date OCTOBER, 2025

SITE PLAN AND KEY MAP II

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

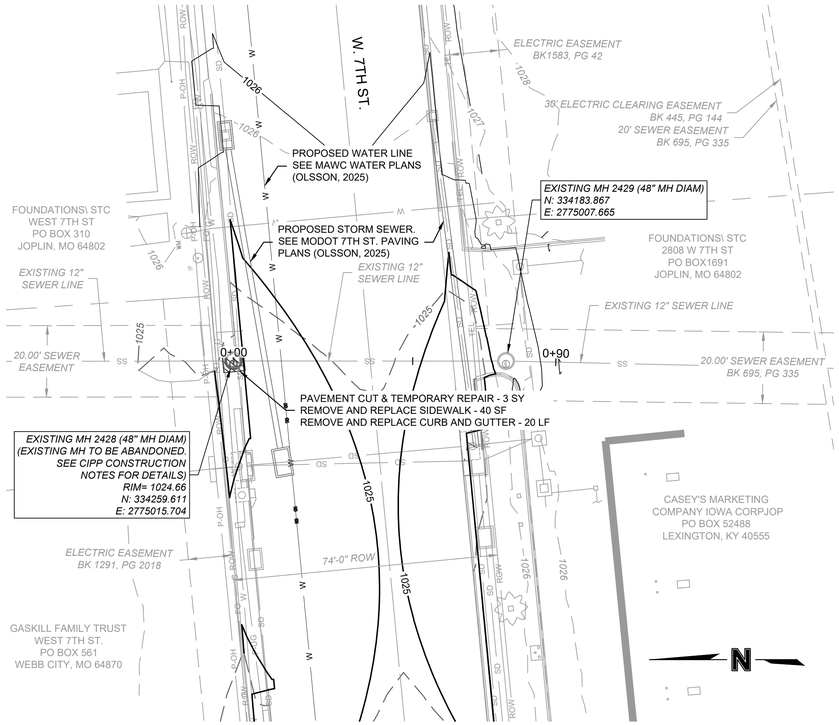
JOPLIN, MISSOURI 2025

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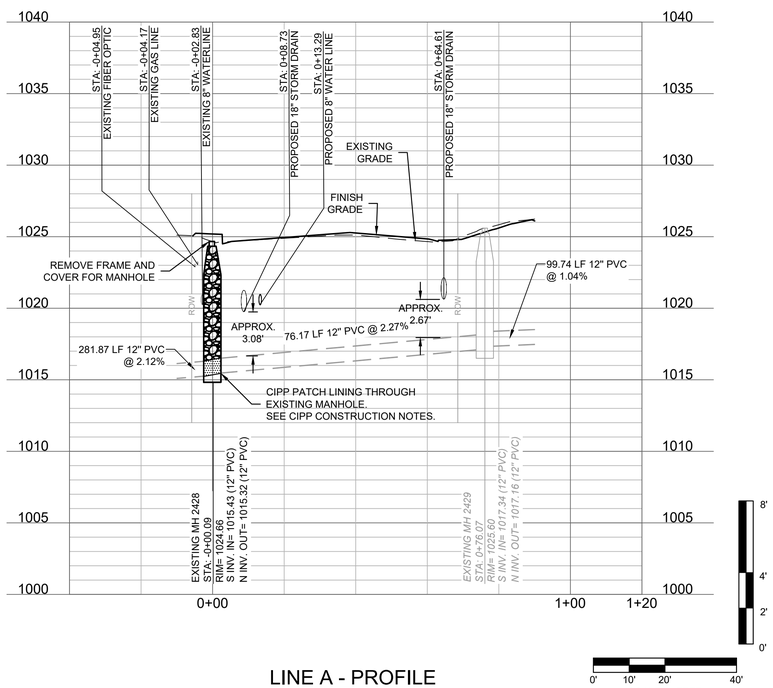
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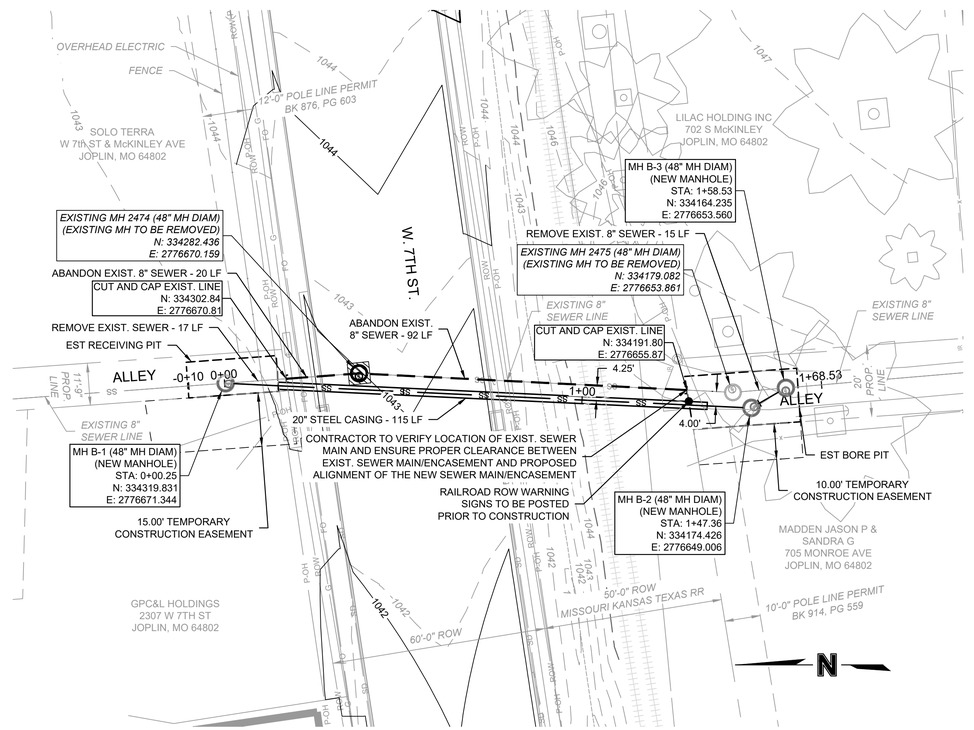
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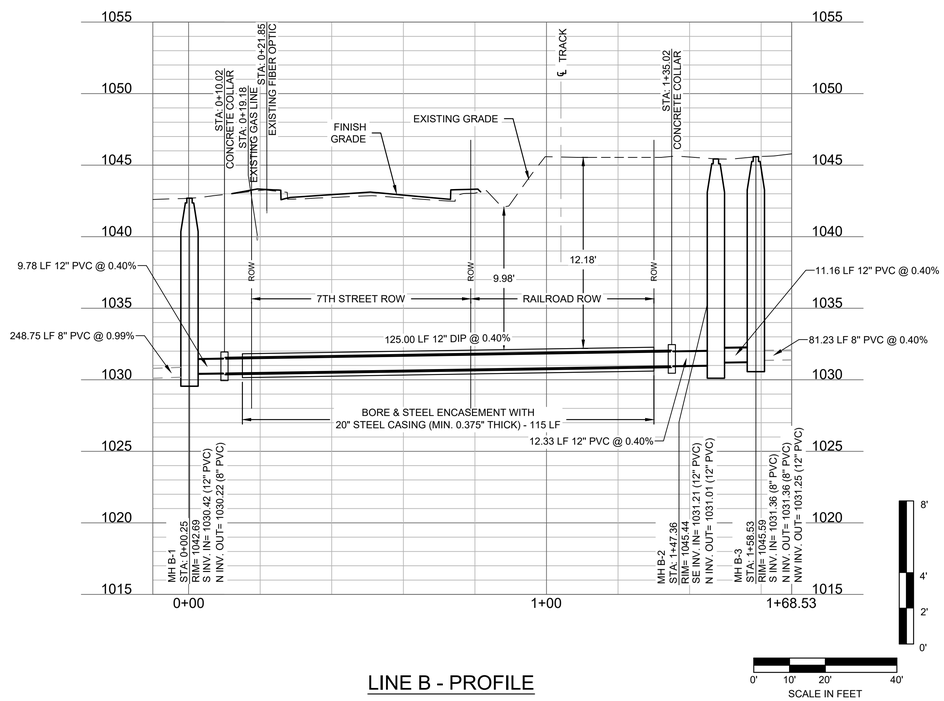
LINE A - PLAN



LINE A - PROFILE



LINE B - PLAN



LINE B - PROFILE

NOTES

1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
2. PROTECT EXISTING UTILITY INFRASTRUCTURE IN PLACE ALONG PROPOSED ALIGNMENT.

CAUTION!
OVERHEAD POWER LINES, SIGNAL LIGHTS, AND UNDERGROUND ELECTRIC, FIBER, COMMUNICATIONS, AND GAS UTILITIES ALONG ALIGNMENT. CONTRACTOR TO USE CAUTION DURING CONSTRUCTION.

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SANITARY SEWER LINE A & LINE B PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

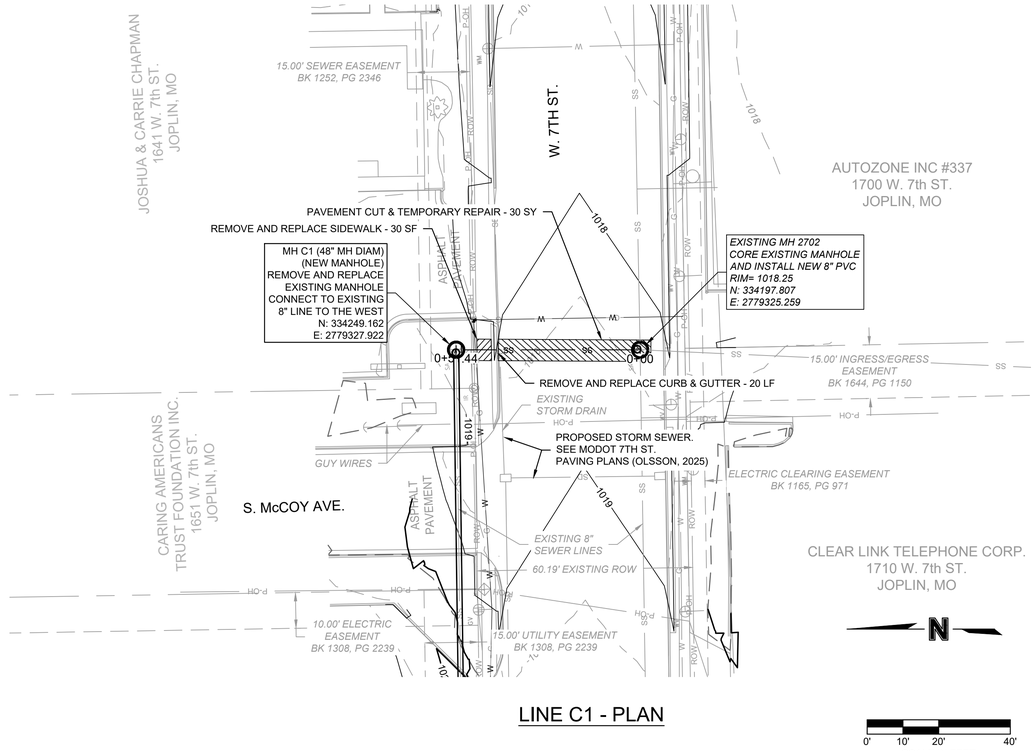
JOPLIN, MISSOURI

2025

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designed by: MAJ
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date: OCTOBER, 2025

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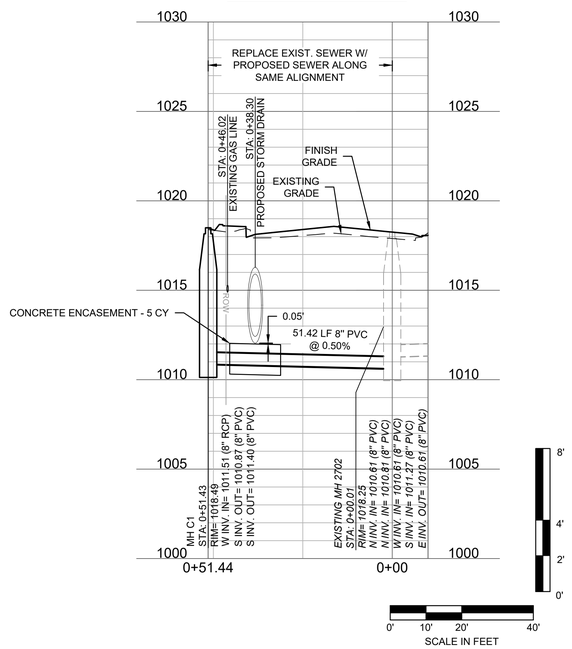


LINE C1 - PLAN

NOTES

1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
2. PROTECT EXISTING UTILITY INFRASTRUCTURE IN PLACE ALONG PROPOSED ALIGNMENT.

CAUTION!
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LINE C1 - PROFILE

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SANITARY SEWER LINE C1 PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

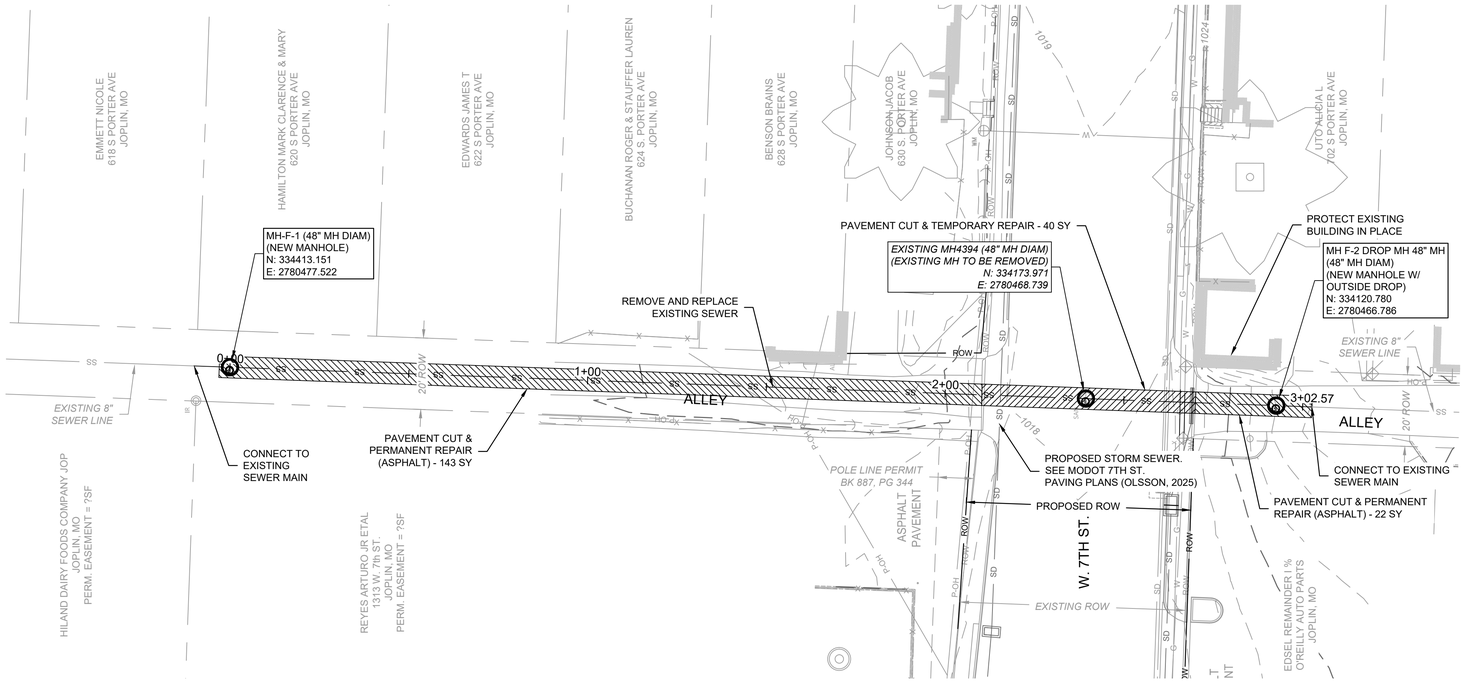
JOPLIN, MISSOURI

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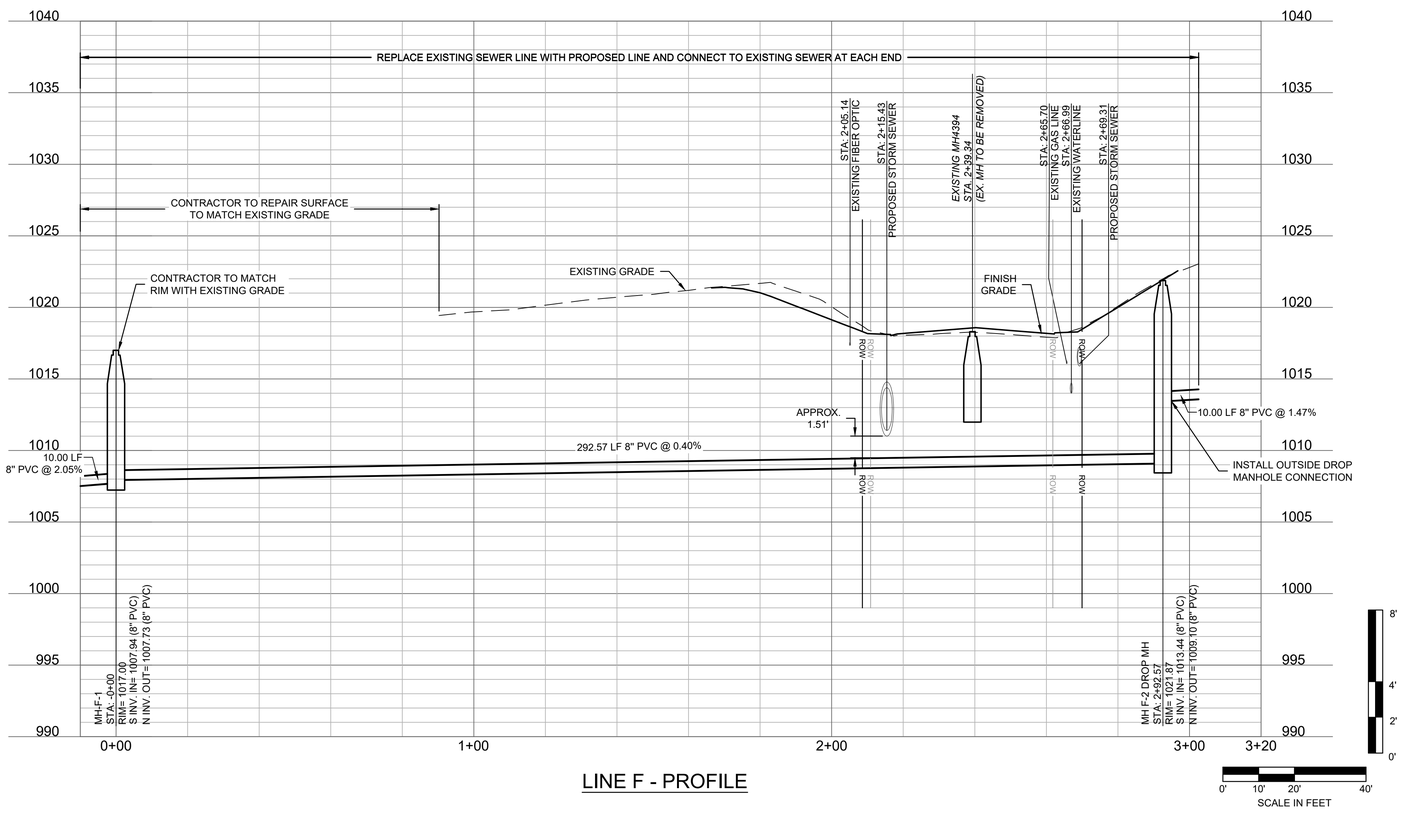
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designed by: MAJ
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LINE F - PLAN



LINE F - PROFILE

NOTES

1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
2. PROTECT EXISTING UTILITY INFRASTRUCTURE IN PLACE ALONG PROPOSED ALIGNMENT.

CAUTION!
OVERHEAD POWER LINES, SIGNAL LIGHTS, AND UNDERGROUND ELECTRIC, FIBER, COMMUNICATIONS, AND GAS UTILITIES ALONG ALIGNMENT. CONTRACTOR TO USE CAUTION DURING CONSTRUCTION.

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SANITARY SEWER LINE F PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

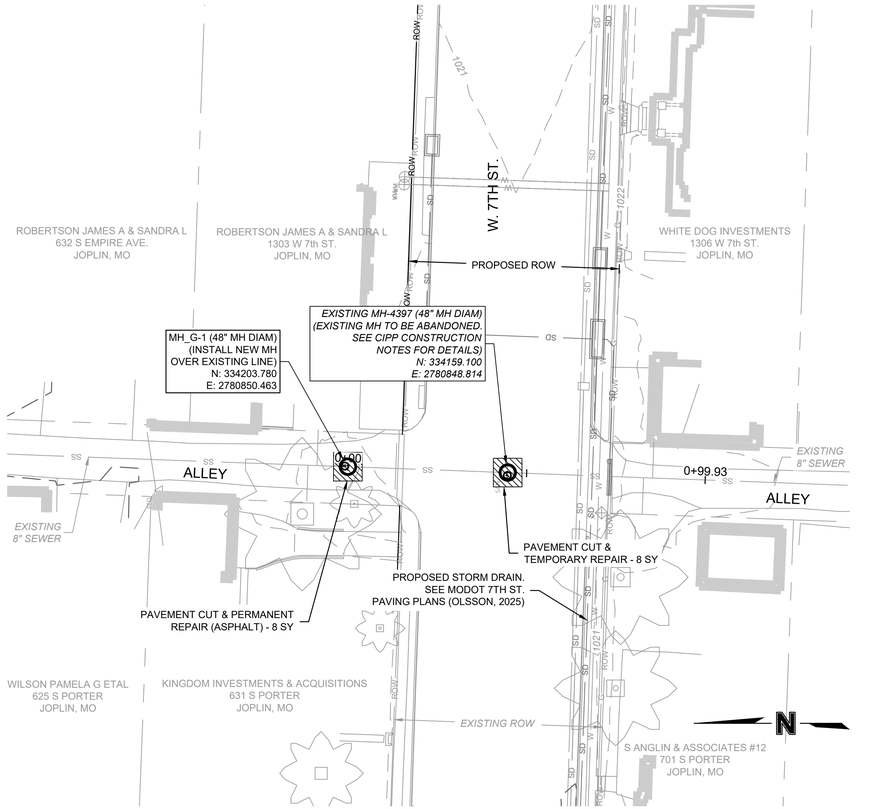
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2025

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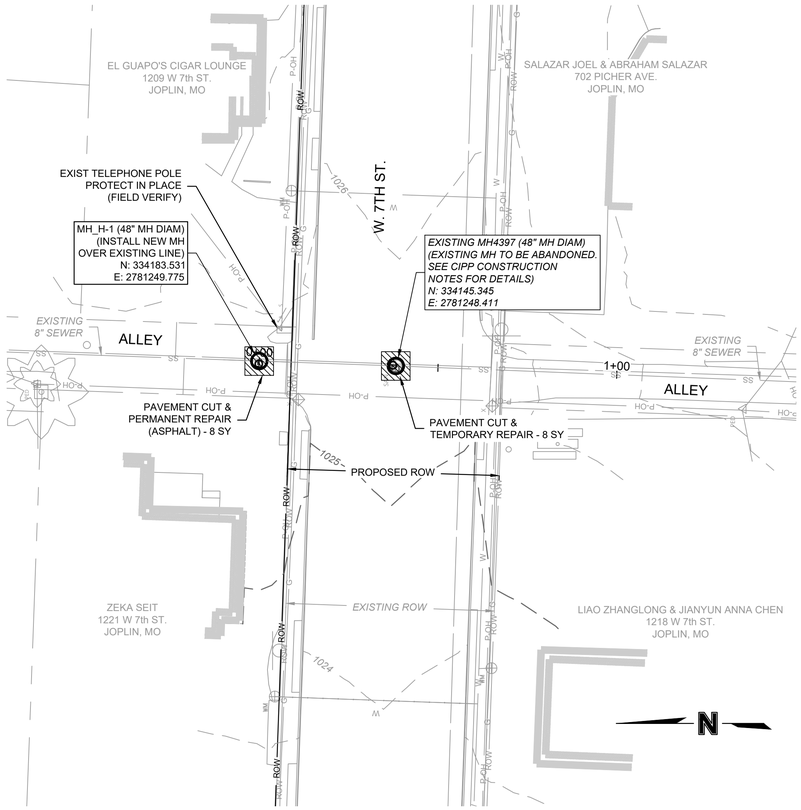
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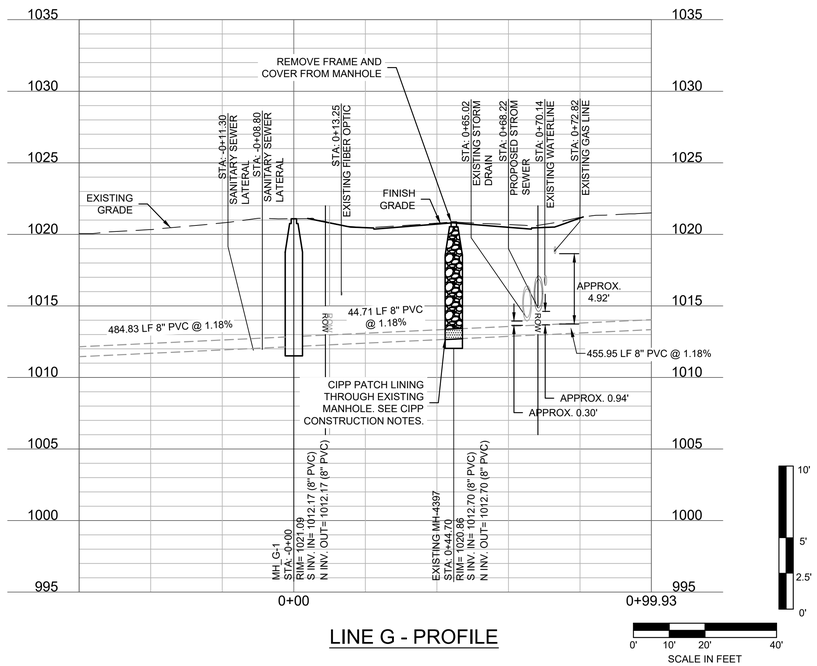
LINE G - PLAN

0' 10' 20' 40'
SCALE IN FEET



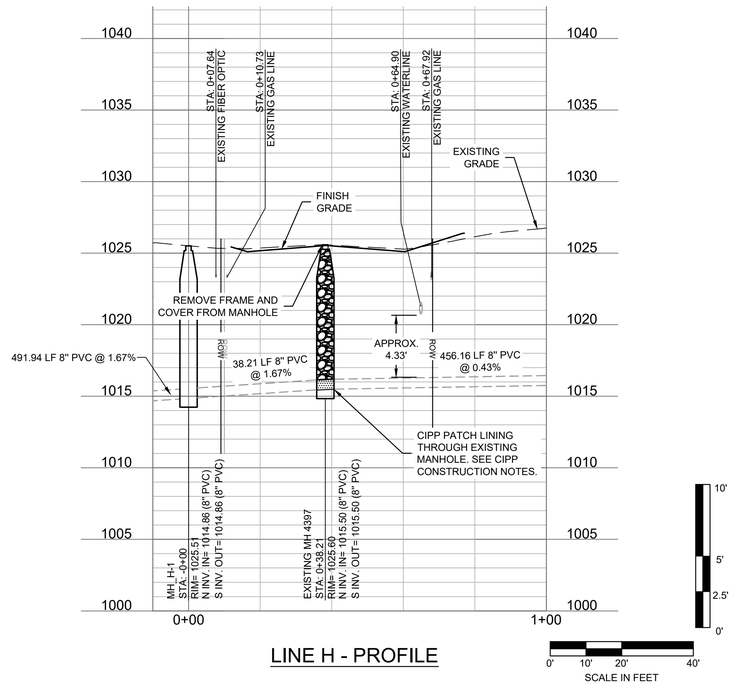
LINE H - PLAN

0' 10' 20' 40'
SCALE IN FEET



LINE G - PROFILE

0' 10' 20' 40'
SCALE IN FEET
10'
5'
2.5'
0'



LINE H - PROFILE

0' 10' 20' 40'
SCALE IN FEET
10'
5'
2.5'
0'

NOTES

1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
2. PROTECT EXISTING UTILITY INFRASTRUCTURE IN PLACE ALONG PROPOSED ALIGNMENT.

CAUTION!
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REVISIONS

SANITARY SEWER LINE G & LINE H PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

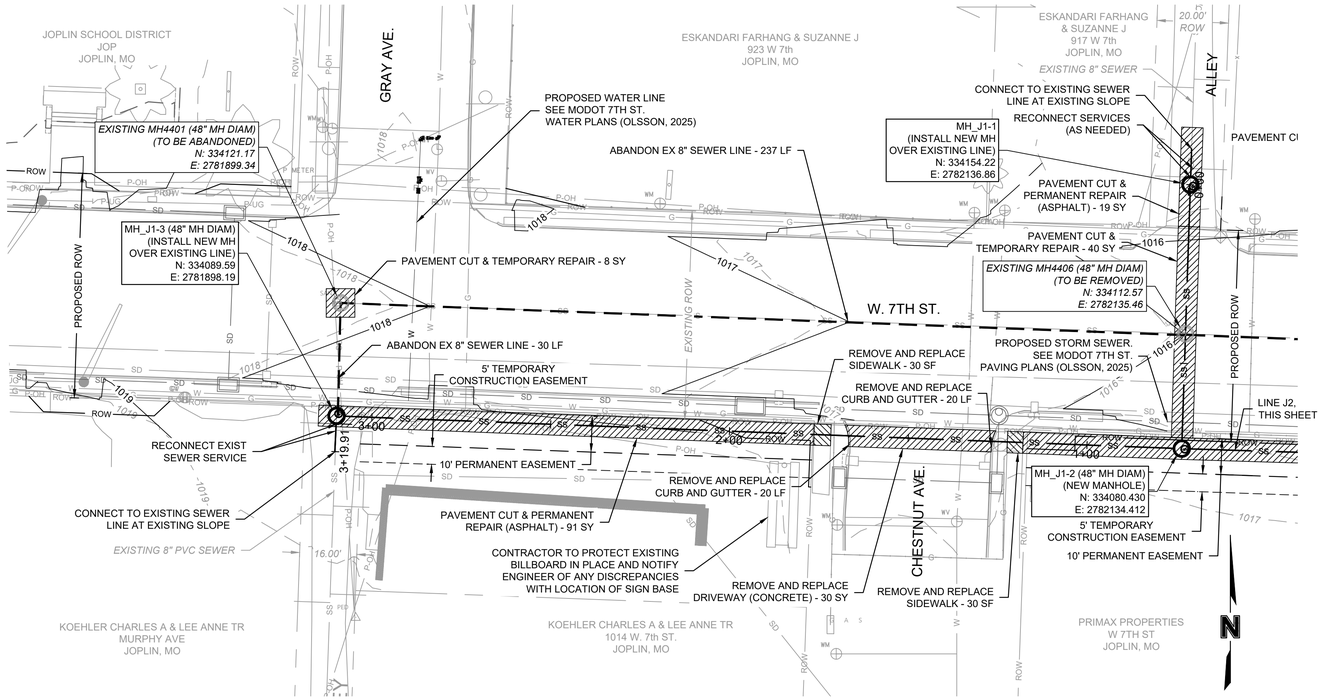
JOPLIN, MISSOURI

2025

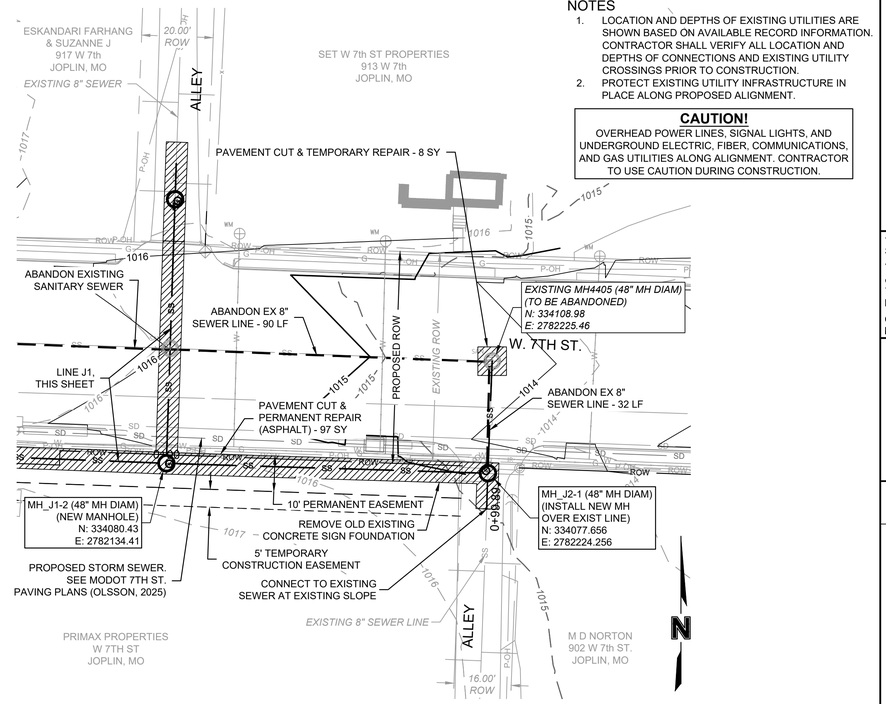
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designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

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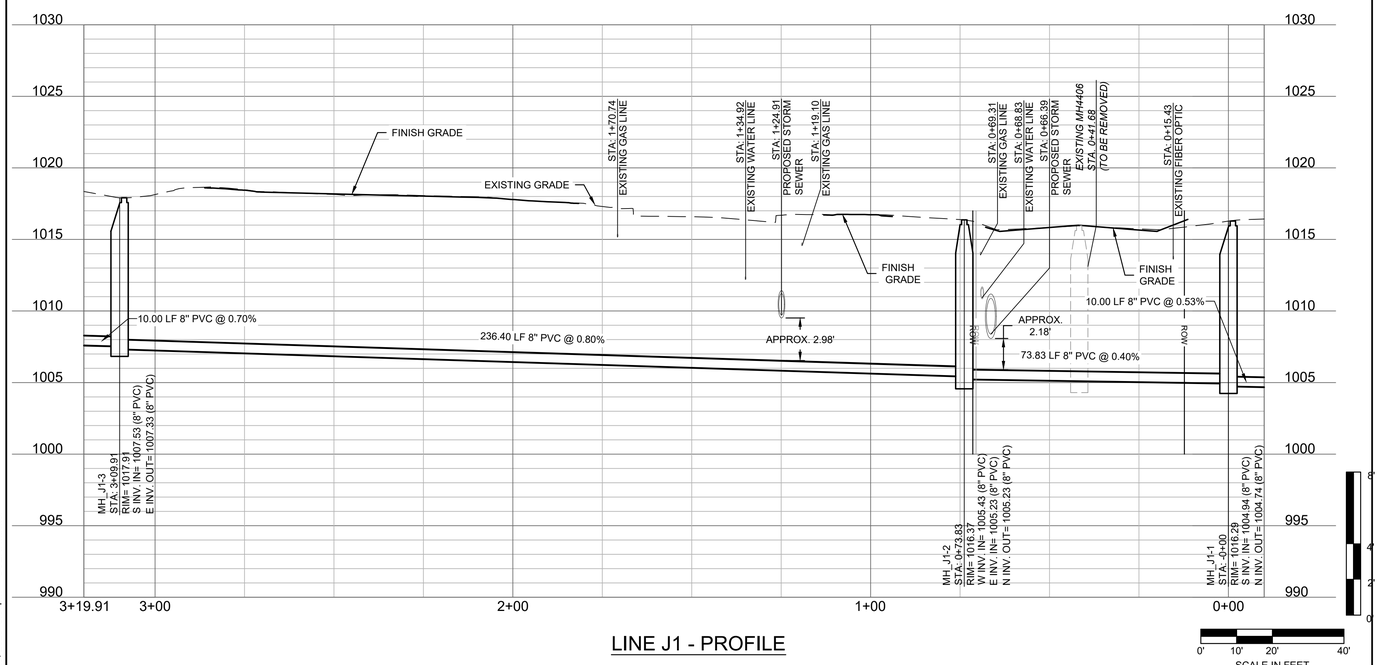
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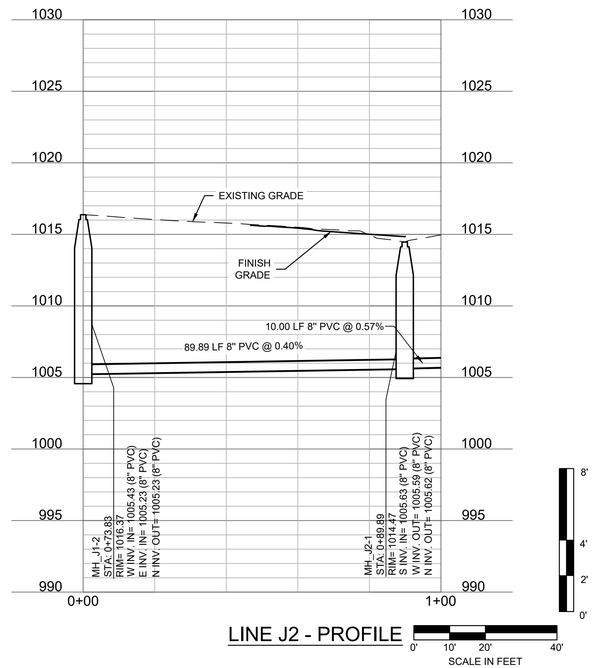
LINE J1 - PLAN



LINE J2 - PLAN



LINE J1 - PROFILE



LINE J2 - PROFILE

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SANITARY SEWER LINE J1 & LINE J2 PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

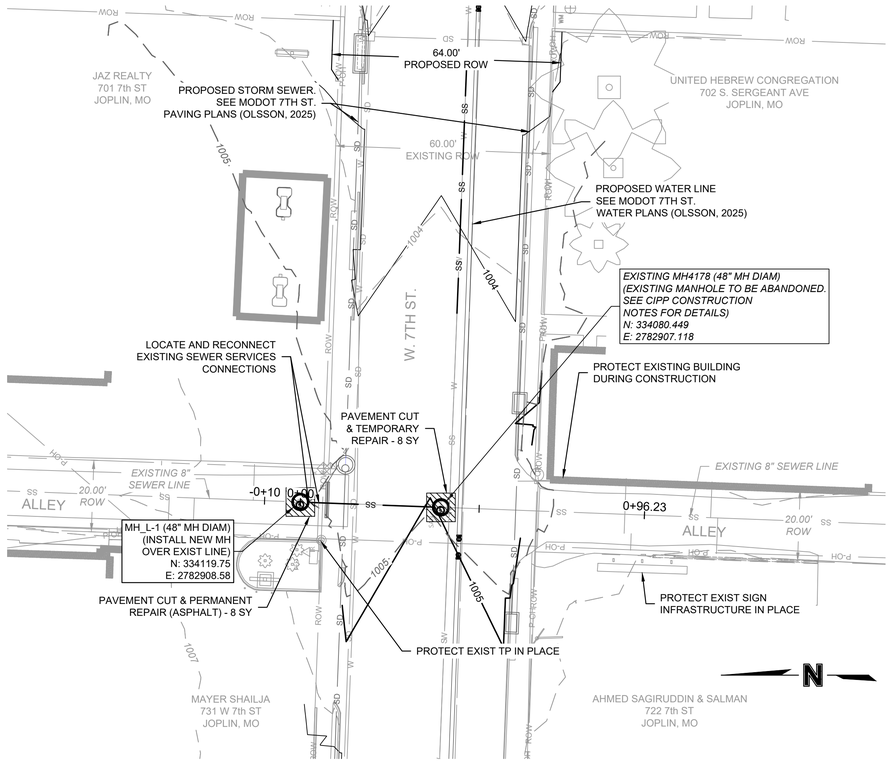
JOPLIN, MISSOURI

2025

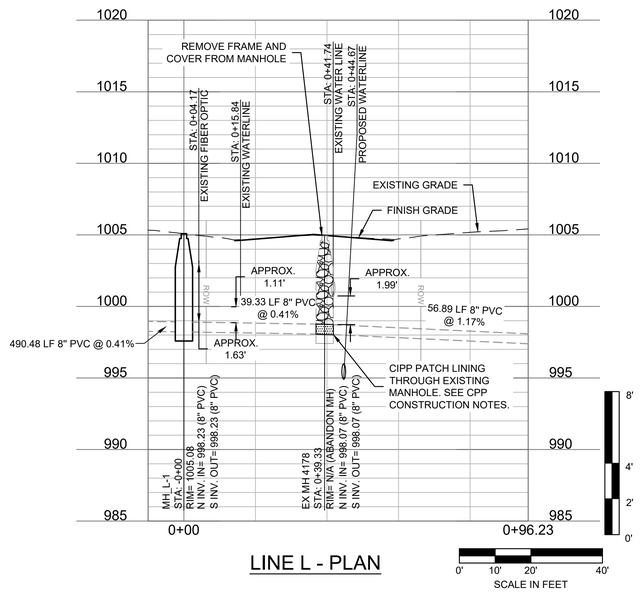
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SHEET
C-305

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LINE L - PLAN



LINE L - PLAN

NOTES

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SANITARY SEWER LINE L PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

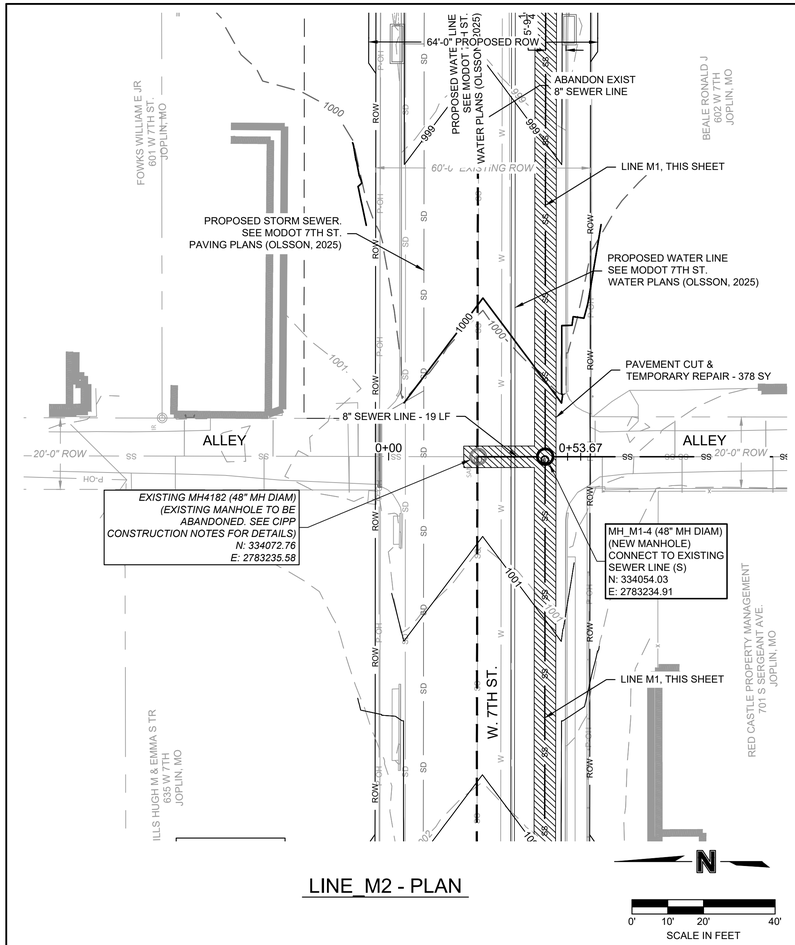
JOPLIN, MISSOURI

2025

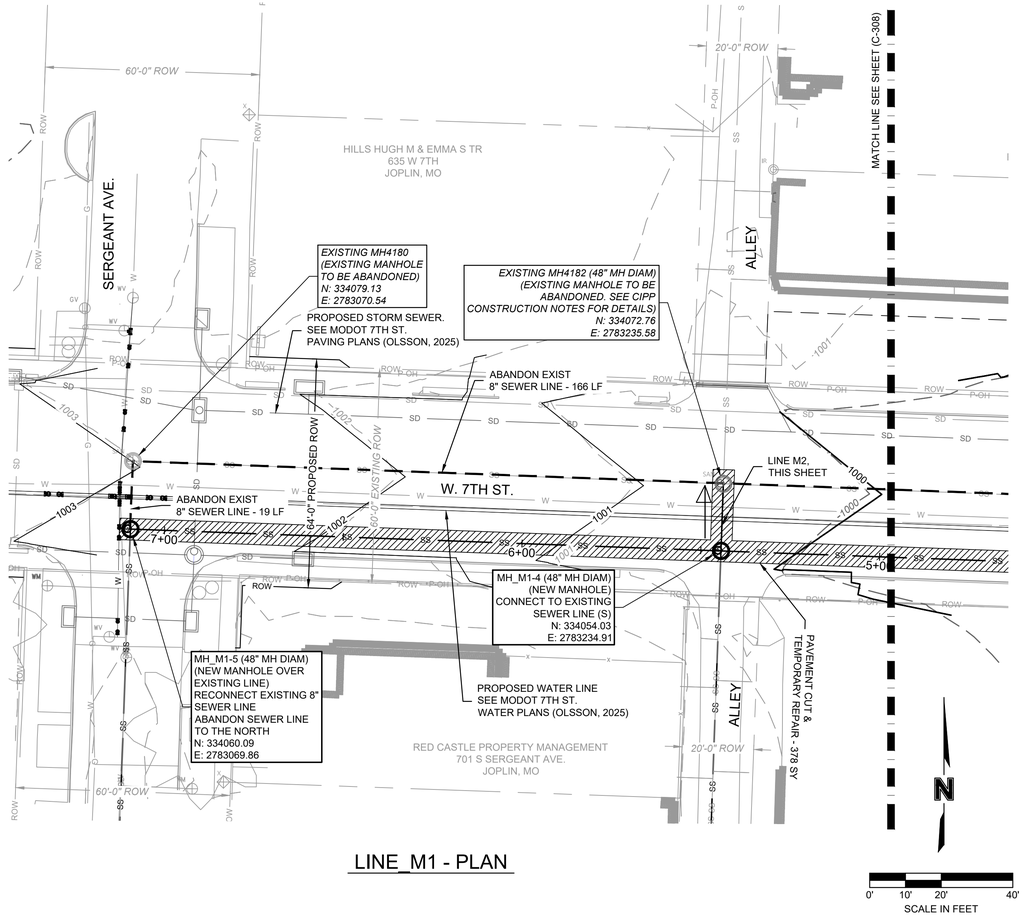
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SHEET
C-306

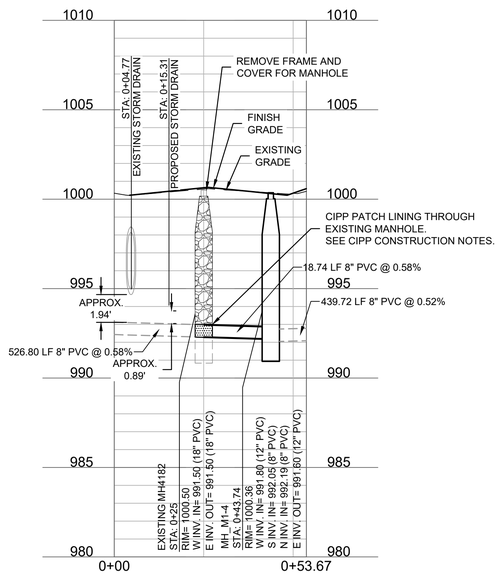
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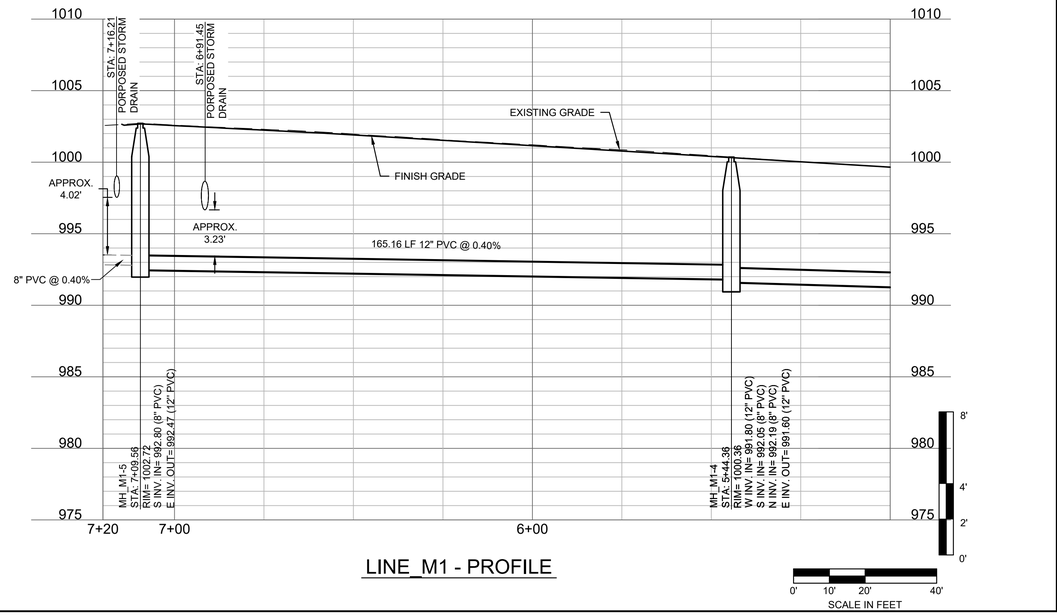
LINE_M2 - PLAN



LINE_M1 - PLAN



LINE_M2 - PROFILE



LINE_M1 - PROFILE

NOTES

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SANITARY SEWER LINE M1 & LINE M2 PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

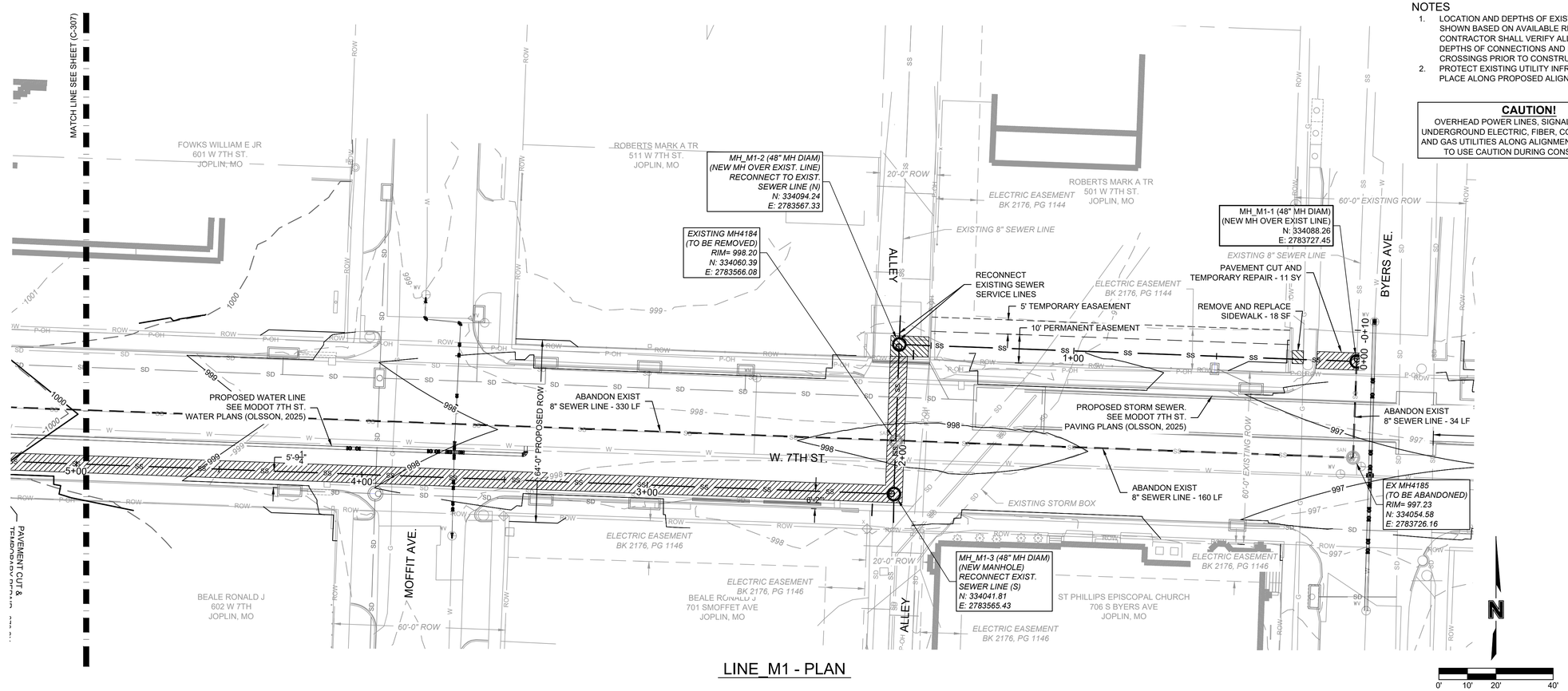
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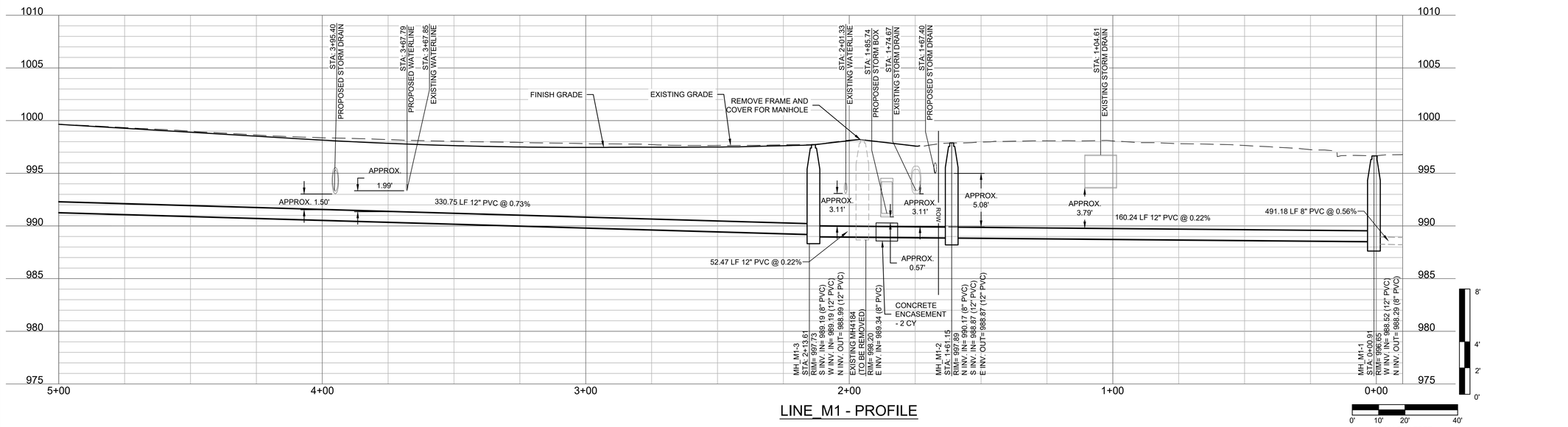
NOTES

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LINE_M1 - PLAN



LINE_M1 - PROFILE

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REVISIONS

SANITARY SEWER LINE M1 PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

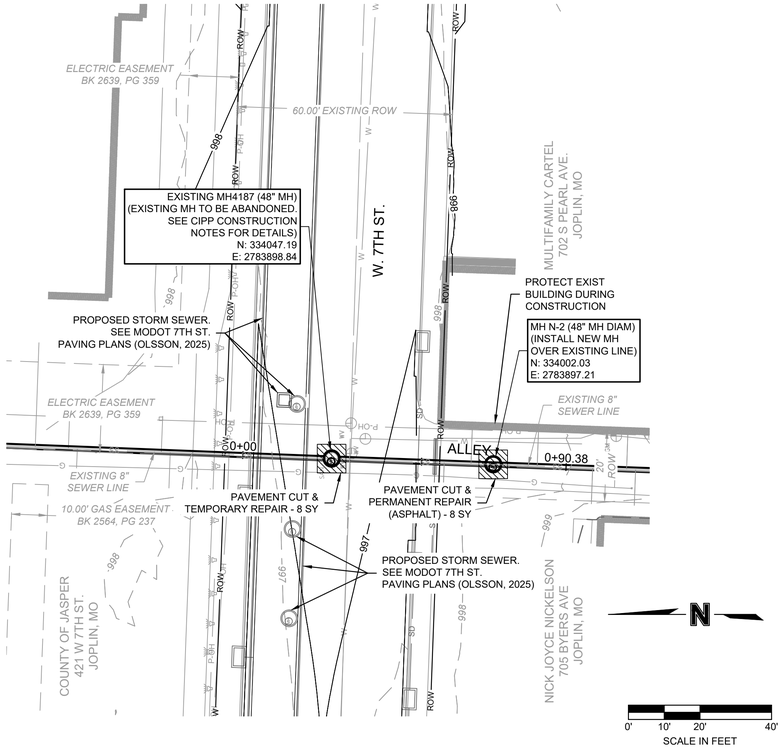
JOPLIN, MISSOURI

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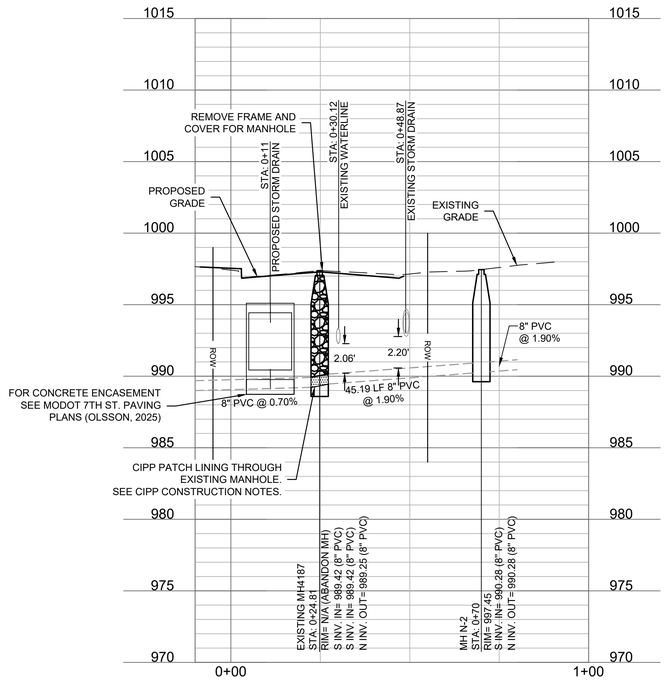
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project no.: 024-03774
date: OCTOBER, 2025

SHEET
C-308

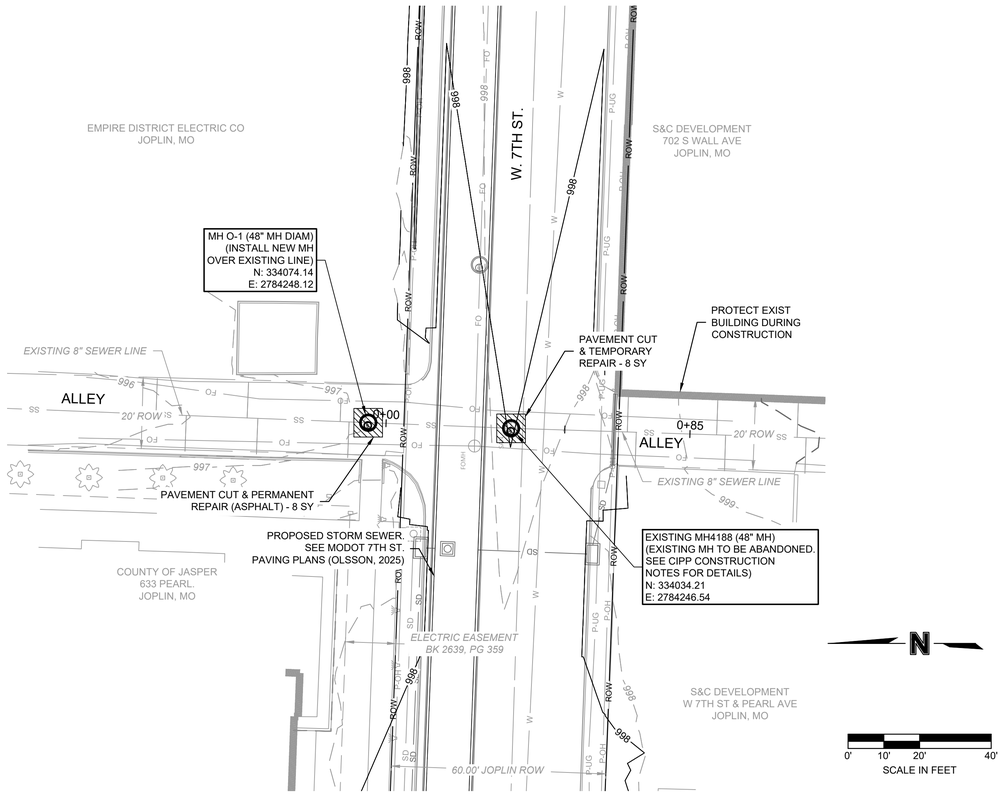
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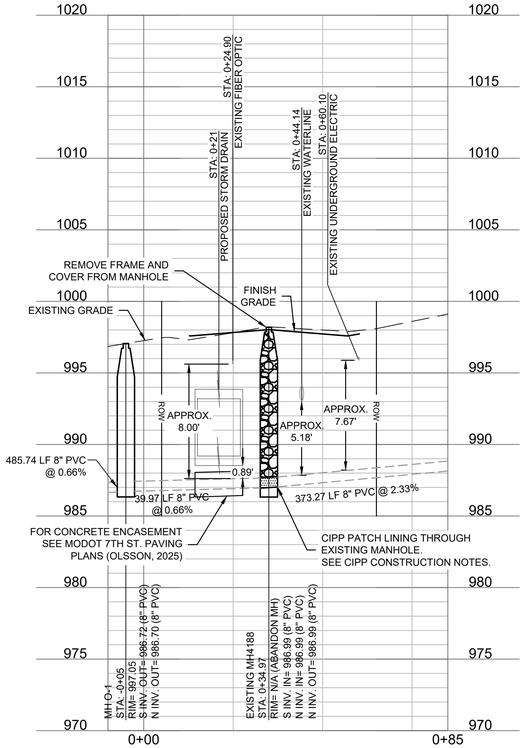
LINE_N PLAN



LINE_N PROFILE



LINE O - PLAN



LINE O - PROFILE

NOTES

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SANITARY SEWER LINE N & LINE O PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

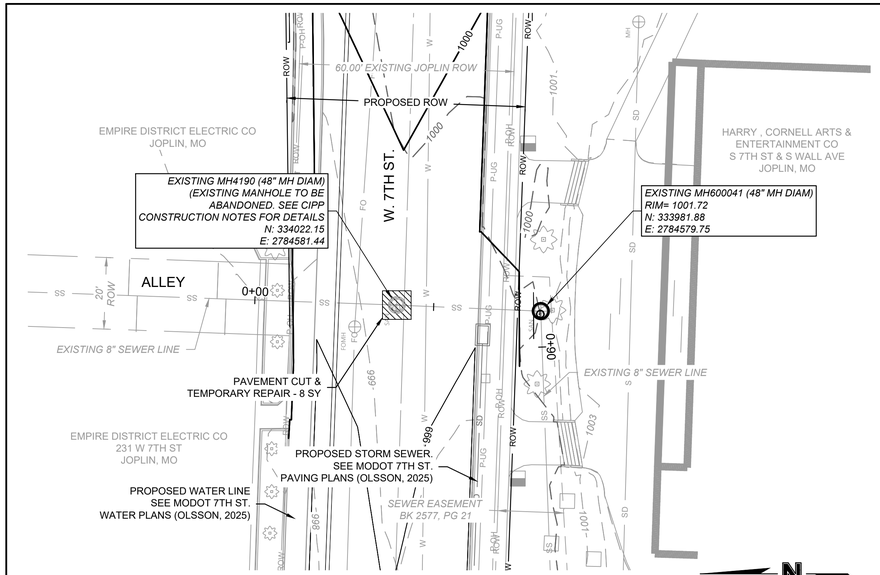
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project no.: 024-03774
date: OCTOBER, 2025

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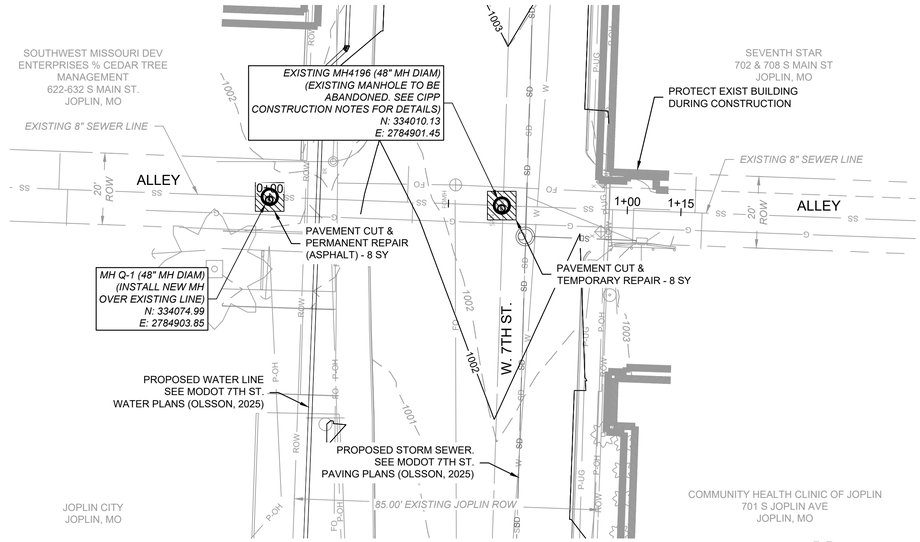
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LINE P - PLAN

SCALE IN FEET



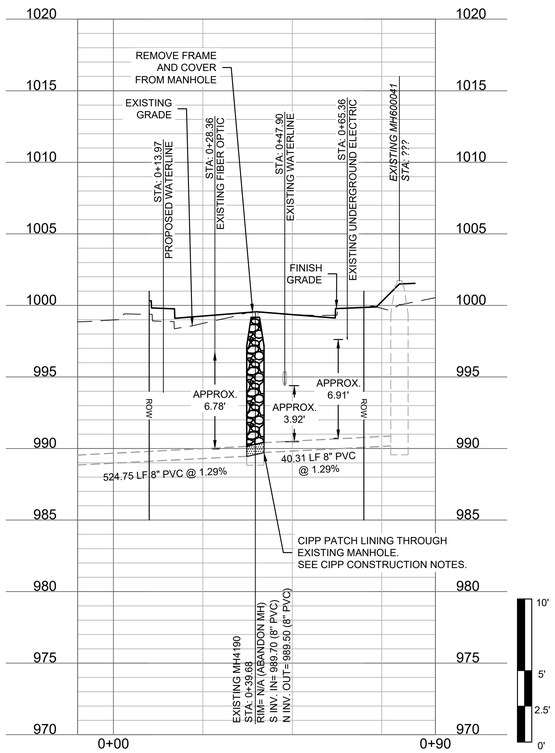
LINE Q - PLAN

SCALE IN FEET

NOTES

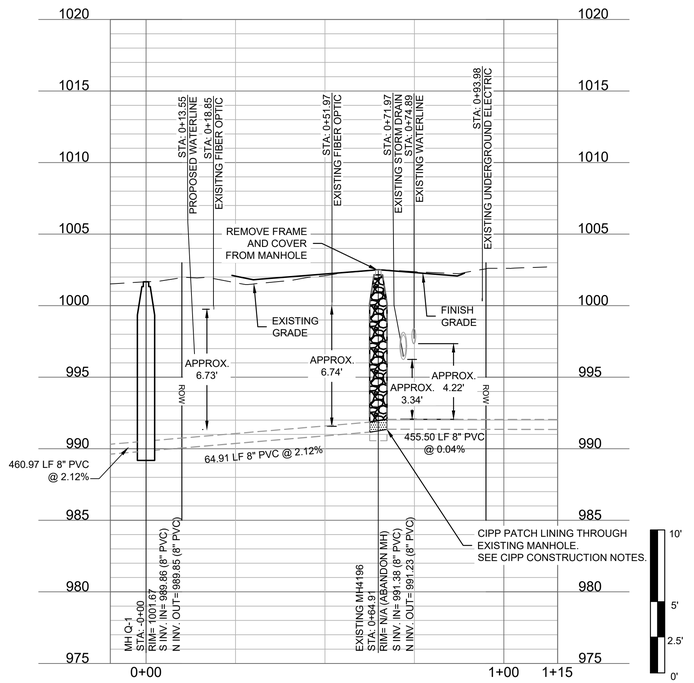
1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
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LINE P - PROFILE

SCALE IN FEET



LINE Q - PROFILE

SCALE IN FEET

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SANITARY SEWER LINE P & LINE Q PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

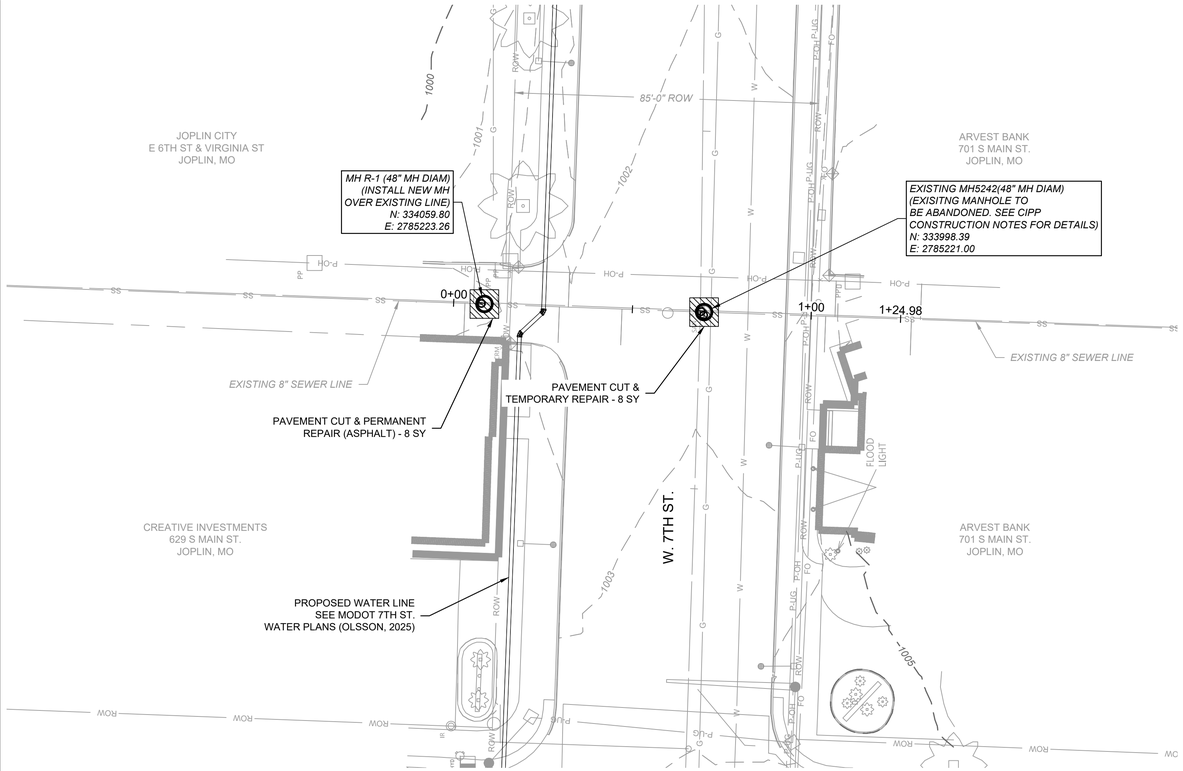
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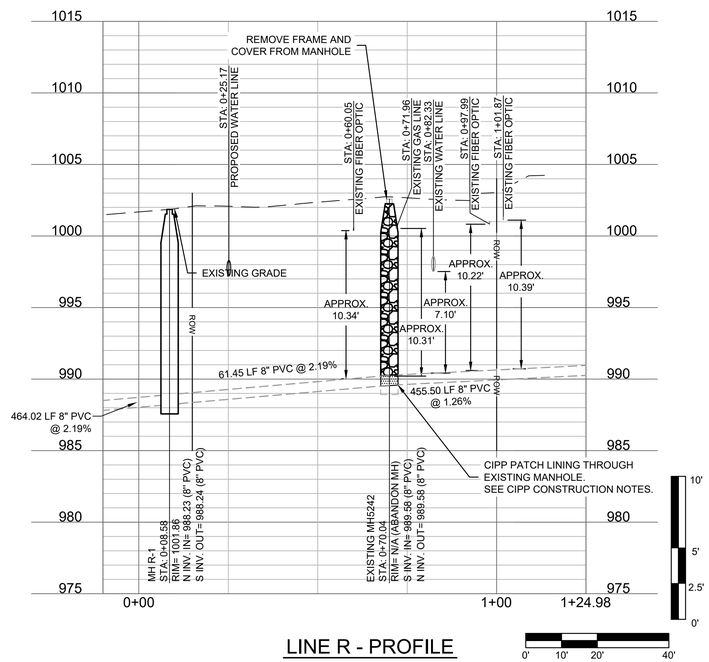
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SHEET
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LINE R - PLAN



LINE R - PROFILE

SCALE IN FEET

NOTES

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SANITARY SEWER LINE R PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

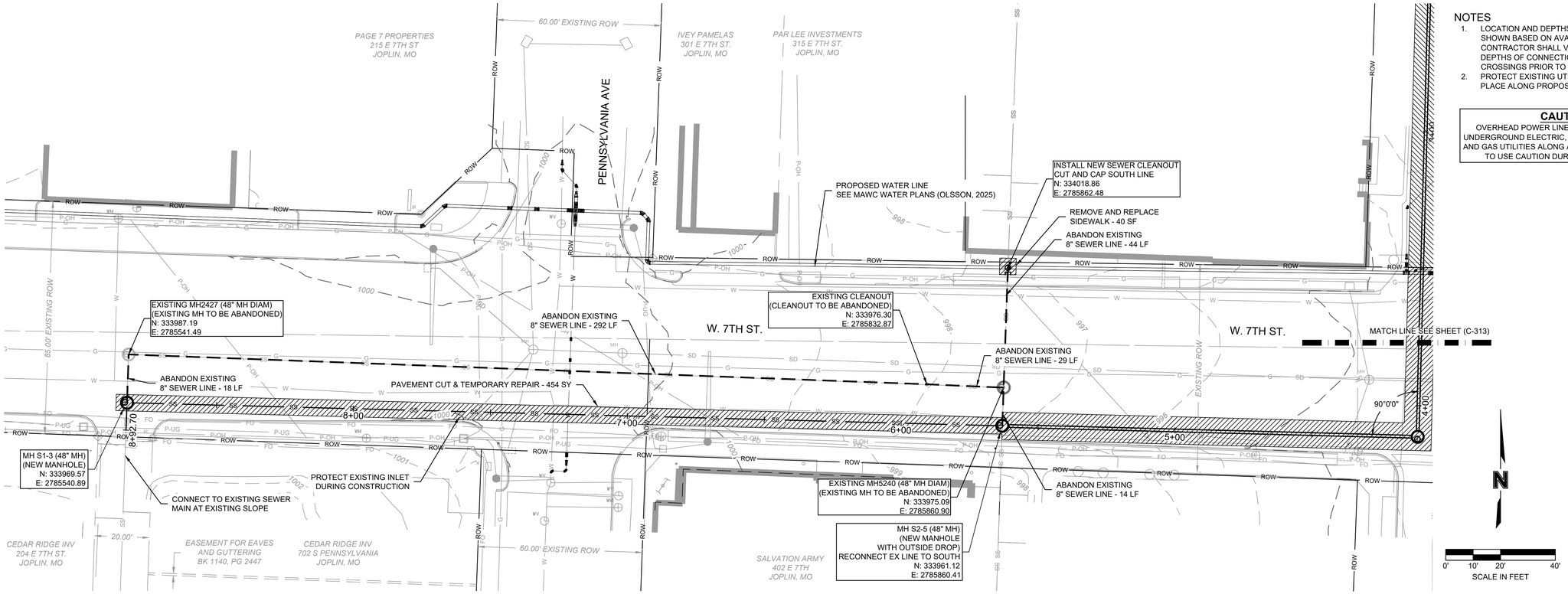
JOPLIN, MISSOURI

2025

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project no.: 024-03774
date: OCTOBER, 2025

SHEET
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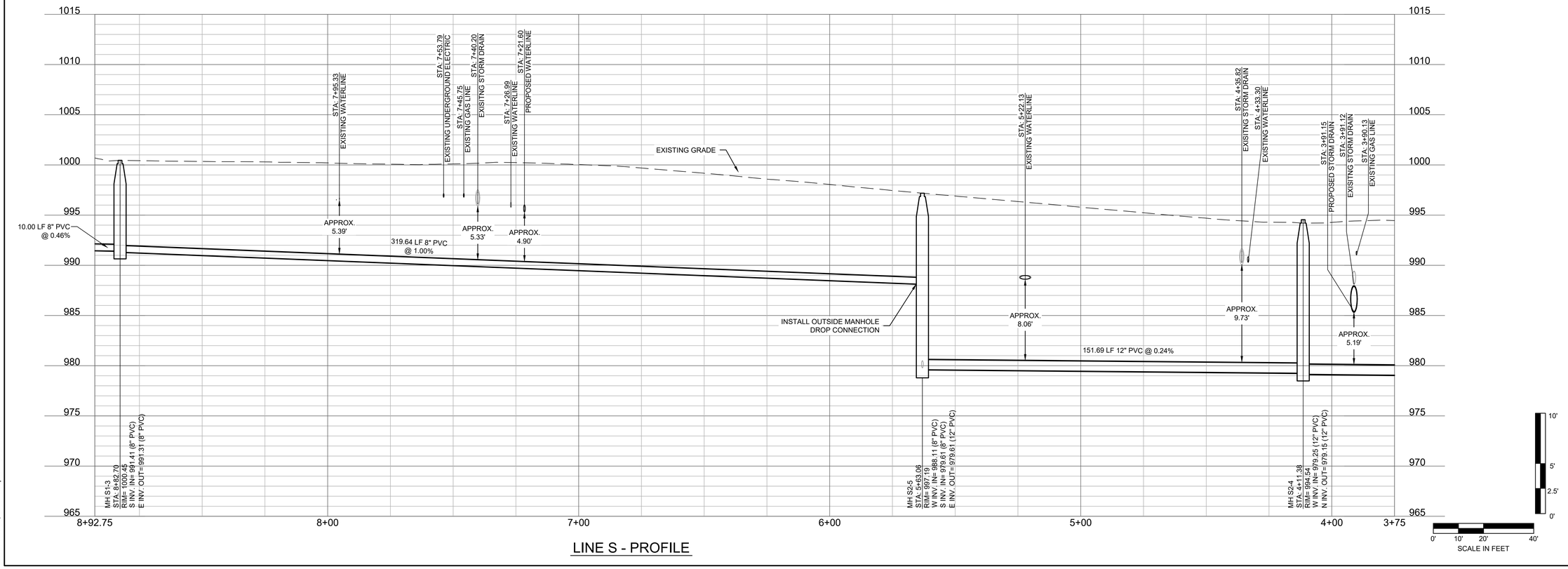


LINE S - PLAN

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LINE S - PROFILE

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SANITARY SEWER LINE S PLAN & PROFILE I

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

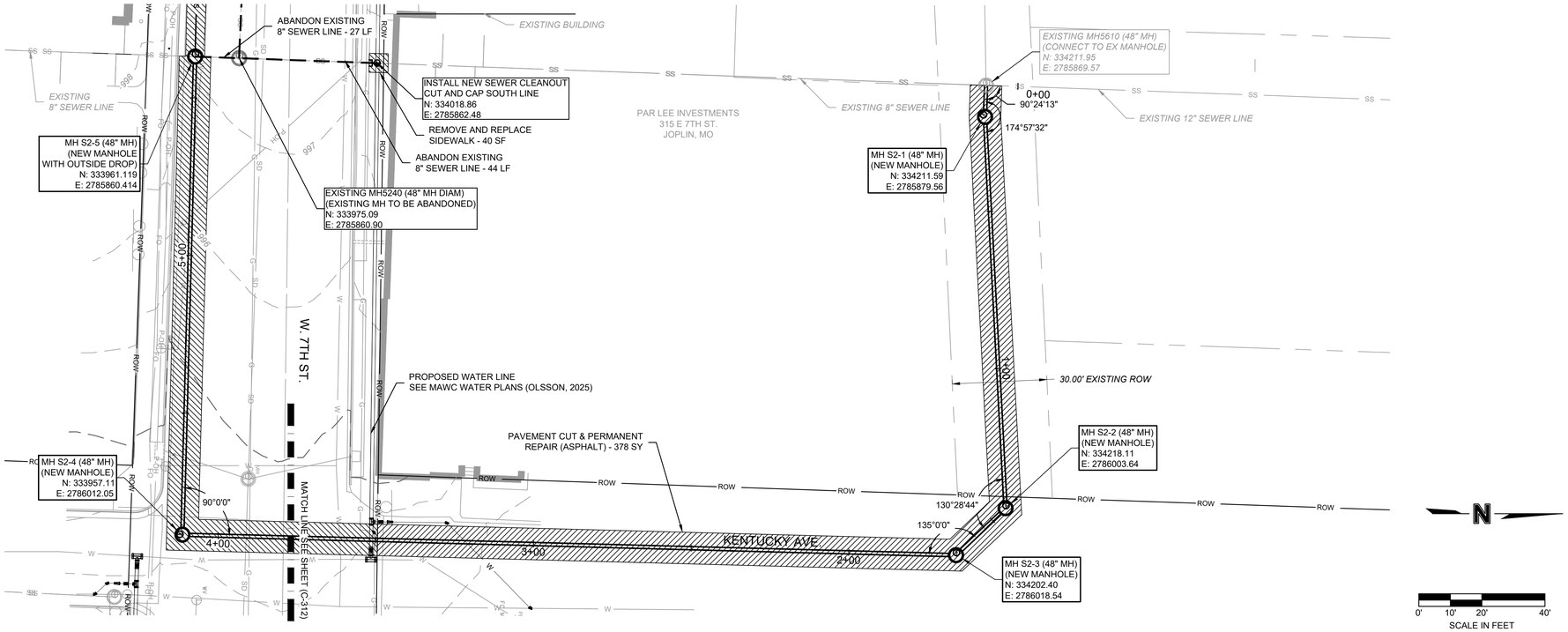
JOPLIN, MISSOURI

2025

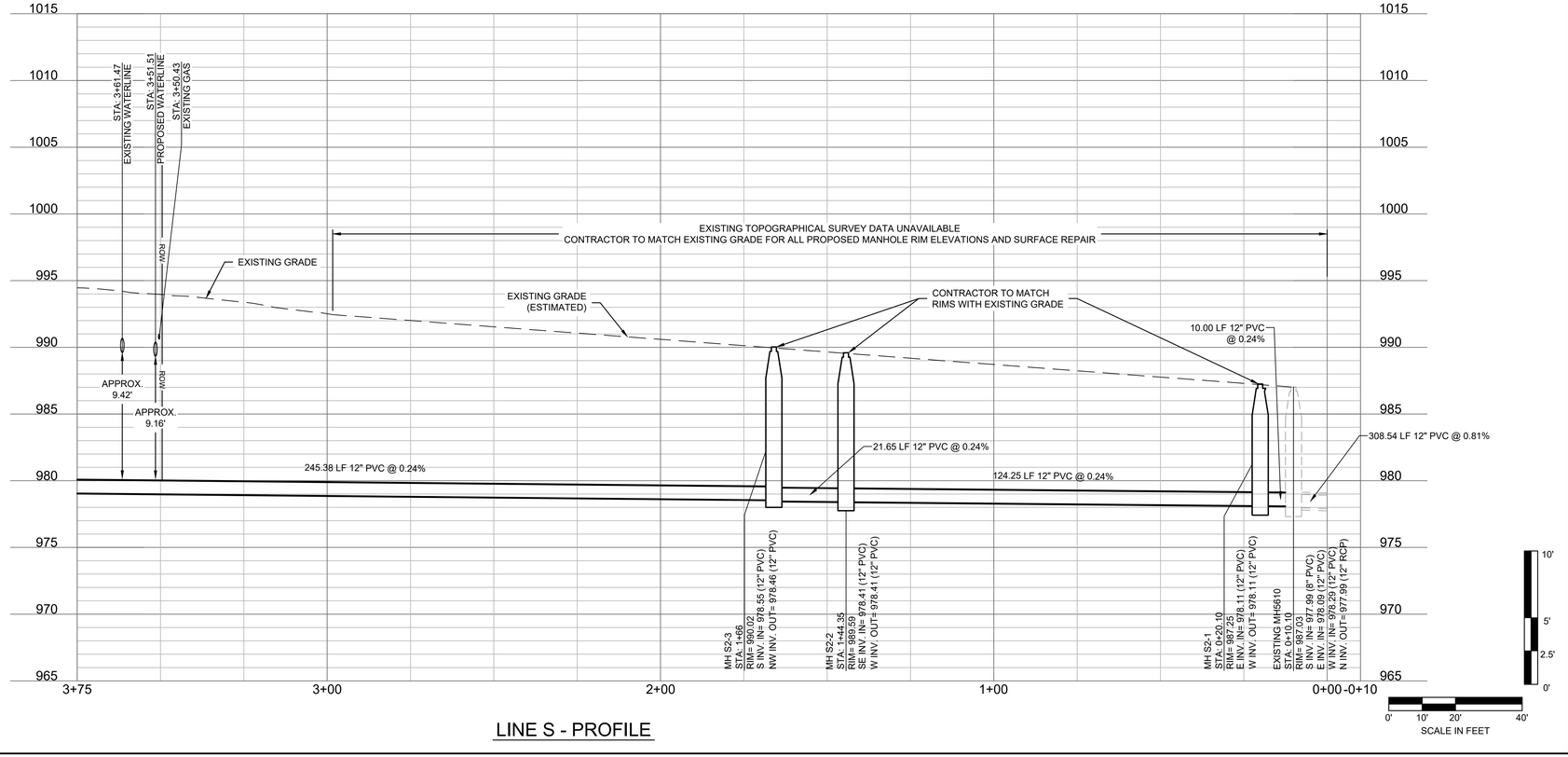
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LINE S - PLAN



LINE S - PROFILE

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SANITARY SEWER LINE S PLAN & PROFILE II

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

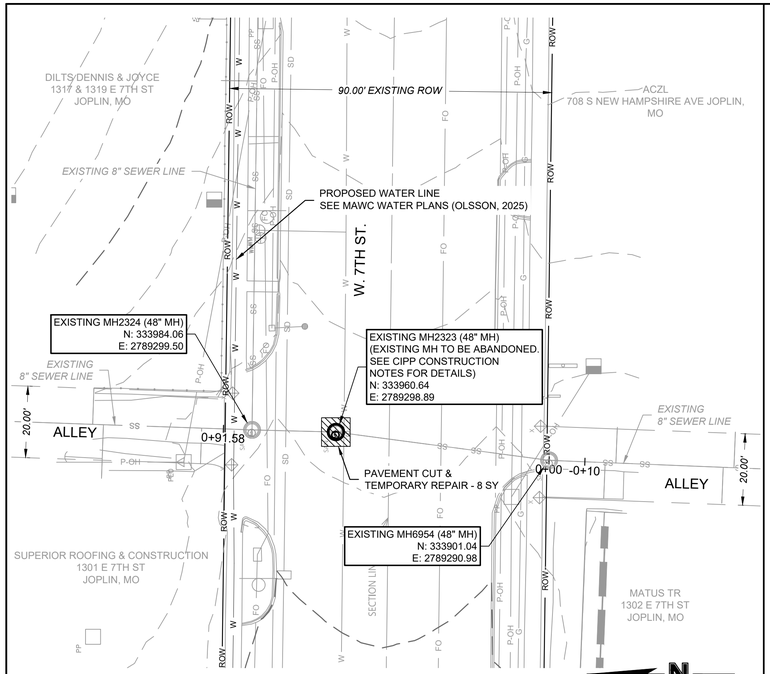
JOPLIN, MISSOURI

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designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

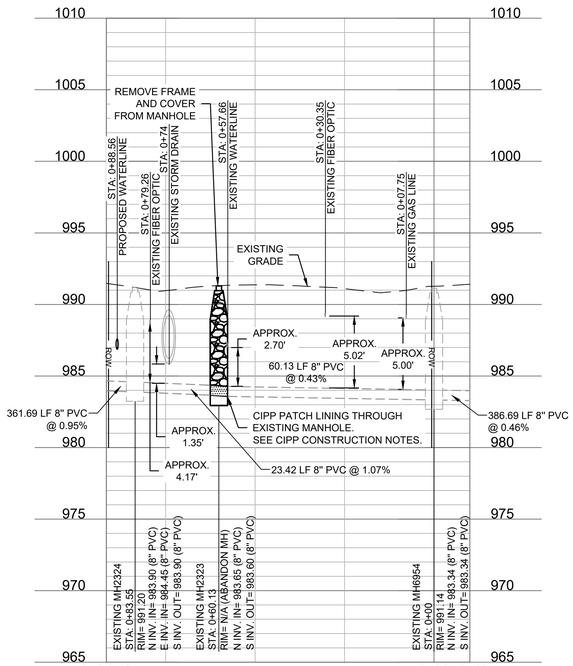
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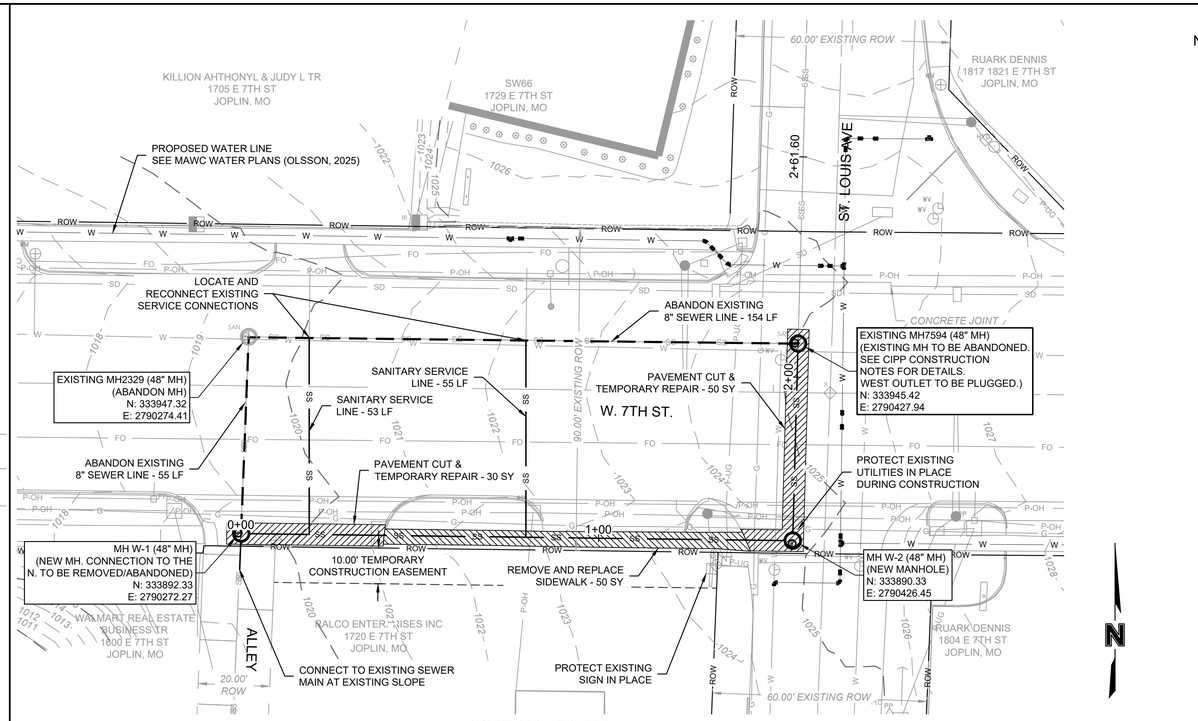
LINE V - PLAN

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SCALE IN FEET



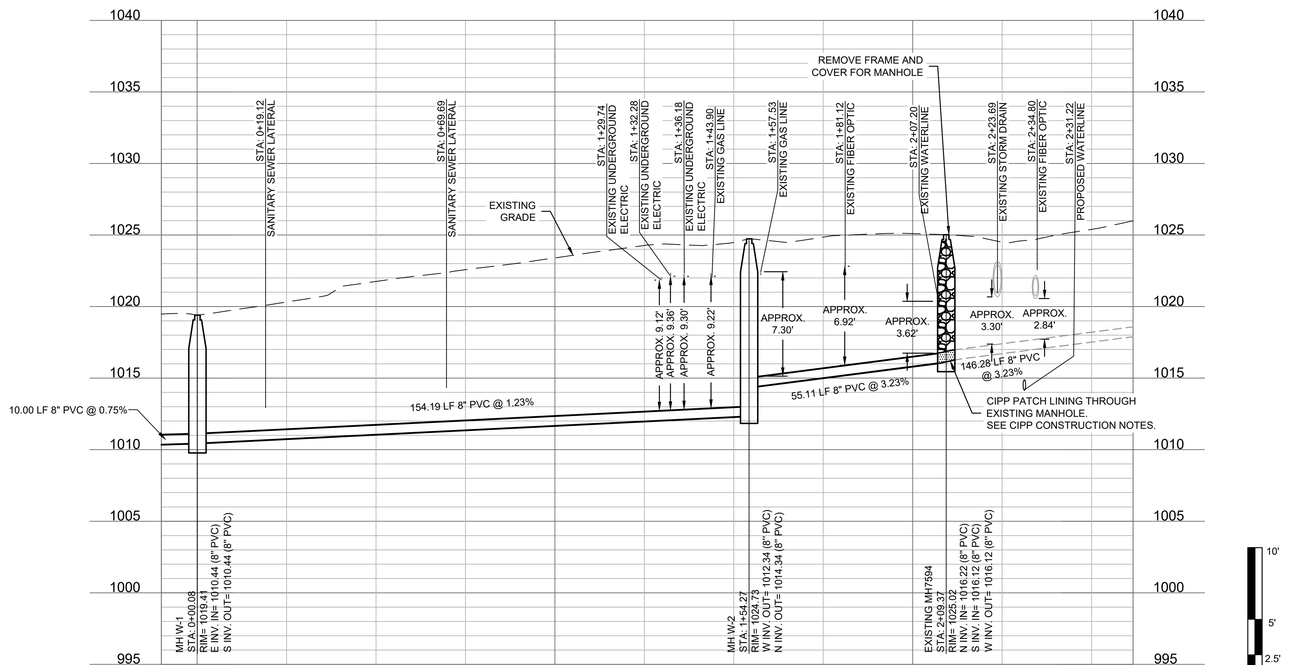
LINE V - PROFILE

0' 10' 20' 40'
SCALE IN FEET



LINE W - PLAN

0' 10' 20' 40'
SCALE IN FEET



LINE W - PROFILE

0' 10' 20' 40'
SCALE IN FEET

NOTES

1. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ALL LOCATION AND DEPTHS OF CONNECTIONS AND EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
2. PROTECT EXISTING UTILITY INFRASTRUCTURE IN PLACE ALONG PROPOSED ALIGNMENT.

CAUTION!
OVERHEAD POWER LINES, SIGNAL LIGHTS, AND UNDERGROUND ELECTRIC, FIBER, COMMUNICATIONS, AND GAS UTILITIES ALONG ALIGNMENT. CONTRACTOR TO USE CAUTION DURING CONSTRUCTION.

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

SANITARY SEWER LINE V & LINE W PLAN & PROFILE

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
C-314

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DATE: Nov 25, 2025 4:10pm USER: ktucker

SPACING AND TAPER LENGTHS FOR WORK ZONE SIGNS, CHANNELIZERS AND CONCRETE BARRIER

SIGN SPACING FOR ADVANCE SIGN SERIES (1)		
PERMANENT POSTED SPEED MPH	UNDIVIDED HIGHWAYS	DIVIDED HIGHWAYS
0-35	200'	200'
40-45	350'	500'
50-55	500'	1000'
60-70	1000'	SA – 1000' SB – 1500' SC – 2640'

TAPER LENGTHS AND END TREATEMENTS FOR CONCRETE BARRIER				
PERMANENT POSTED SPEED	MINIMUM LANE TAPER LENGTH (2)			
MPH	10'	11'	12'	END TREATMENT (3)
<40	160'	168'	176'	BARRIER HEIGHT TRANSITION
>40	160'	168'	176'	APPROVED CRASH CUSHION

TAPER LENGTHS AND SPACING FOR CHANNELIZERS							
PERMANENT POSTED SPEED	MINIMUM LANE TAPER LENGTH			MINIMUM SHOULDER TAPER LENGTH	BUFFER LENGTH	MAXIMUM CHANNELIZER SPACING	
MPH	10'	11'	12'	BASED ON 10' SHOULDER	FT.	THROUGH TAPER	THROUGH WORK AREA
0-35	205'	225'	245'	70'	280'	35'	40'
40-45	450'	495'	540'	150'	400'	40'	80'
50-55	550'	605'	660'	185'	560'	50'	80'
60-70	700'	770'	840'	235'	840'	60'	120'

NOTE:
SEE STANDARD PLAN 616.10 FOR TEMPORARY TRAFFIC CONTROL DEVICES.

NOTES:

(1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER. BEGINNING OF TAPER. OF SIGNED CONDITION MAY BE ADJUSTED BY INCREASING TO ACCOMMODATE FIELD CONDITIONS AND VISIBILITY.

(2) TAPER LENGTHS SHOWN INCLUDE LENGTH REQUIRED FOR LANE AND 10' SHOULDER.

(3) CONCRETE BARRIER MAY BE INSTALLED AT AND 8:1 FLARE RATE FROM THE SHOULDER POINT TO THE LIMITS OF THE CLEAR ZONE WHERE THE SIDE SLOPE IS 6:1 OR FLATTER. CONTRACTOR MY PROVIDE CONCRETE BARRIER AT OWN EXPENSE. INCIDENTAL TO PROJECT.

GENERAL NOTES:

1. AS WITH ALL CONSTRUCTION ACTIVITIES TRAFFIC SITUATIONS ARE SUBJECT TO CHANGE. THE CONTRACTOR SHALL BE AWARE THAT ALL TEMPORARY TRAFFIC CONTROL SHALL CONFORM TO THE STANDARDS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION, SECTION 600 AND SHALL FOLLOW THE GUIDELINES IN THE MODOT "TRAFFIC CONTROL FOR FIELD OPERATIONS MANUAL".
2. TWO (2) PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE SUPPLIED A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF ANY TURNING RESTRICTIONS, LANE CLOSURES, OR DETOURS REQUIRED BY THE TEMPORARY TRAFFIC CONTROL.
3. PLACE A 'ROAD WORK AHEAD' SIGN ON THE APPROACH TO ALL INTERSECTIONS WHERE THE ADVANCE SIGNING FOR THE TEMPORARY TRAFFIC CONTROL EXTENDS PAST THAT INTERSECTION.
4. NOTIFY, MODOT RESIDENT ENGINEER AT 417-621-6525 (MARVIN MORRIS) 48-HOURS IN ADVANCE OF ANY LANE CLOSURE OR ROADWAY CLOSURE.
5. ALL EXISTING SIGNS SHALL BE USED IN PLACE. ADJUSTED AND/OR COVERED AS CONDITIONS REQUIRE.
6. REFER TO MODOT STANDARD PLANS 619.10J. SHEETS 1-3 FOR "PAVEMENT EDGE TREATMENT" DETAILS. THE CONTRACTOR SHALL BE REQUIRED TO FOLLOW THIS STANDARD DURING WORKING AND NON-WORKING HOURS.
7. ALL STATIONING, DISTANCES, AND SPACING OF WORK ZONES DEVICES ARE APPROXIMATE AND MAY BE REVISED AS APPROVED BY ENGINEER.
8. TYPE III MOVEABLE BARRICADES TO BE LOCATED AS APPROVED BY THE ENGINEER TO FIT FIELD CONDITIONS.
9. FIRST ORDER OF WORK ON ALL PHASES SHALL BE PLACEMENT OF ALL WORK ZONE WARNING DEVICES AND SIGNS AS NOTED.
10. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED OR AS APPROVED BY THE ENGINEER.
11. SIGNS LEFT IN PLACE OVERNIGHT MUST BE MOUNTED AT 5' MINIMUM.
12. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
13. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE. NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
14. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
15. NO DIRECT PAYMENT WILL BE MADE FOR RELOCATION OF CHANNELIZERS OR CONSTRUCTION SIGNS.
16. DISTANCE MAY BE ADJUSTED (INCREASED, TYPICALLY) ACCORDING TO FIELD CONDITIONS.
17. REFER TO MODOT STANDARD PLAN. 612.20 FOR SAND FILLED IMPACT ATTENUATORS AND 617.20 FOR TEMPORARY CONCRETE TRAFFIC BARRIER.

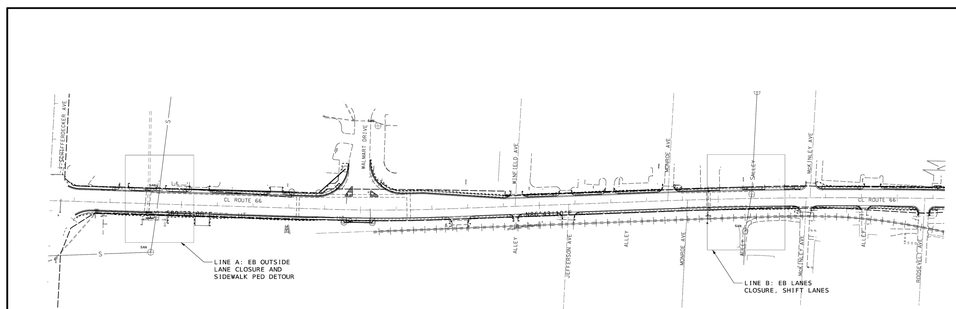
TRAFFIC CONTROL
SHEET 1 OF 11

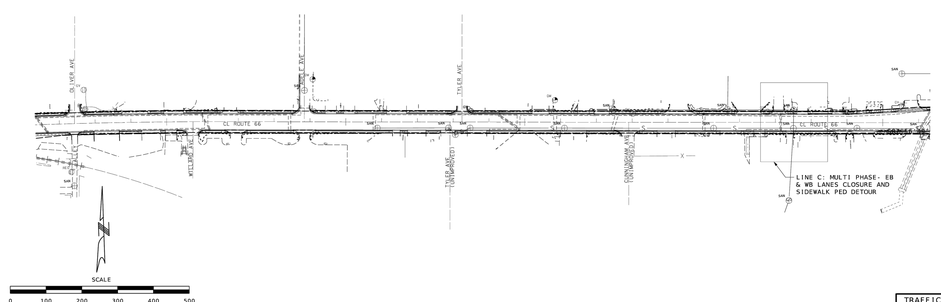
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DISTRICT: | SHEET NO: 01
COUNTY: NEWTON
JOB NO.:
CONTRACT ID.:
PROJECT NO.: 024-03774
BRIDGE NO.:

DESCRIPTION | DATE

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TRAFFIC CONTROL
SHEET 2 OF 11

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DISTRICT: | SHEET NO: 02
COUNTY: NEWTON
JOB NO.:
CONTRACT ID.:
PROJECT NO.: 024-03774
BRIDGE NO.:

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

TRAFFIC CONTROL PLANS I

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
C-400

TRAFFIC CONTROL
SHEET 3 OF 11

$FILES $TIMES $DATES

TRAFFIC CONTROL
SHEET 4 OF 11

$FILES $TIMES $DATES

DATE PREPARED $DATES
ROUTE MO | STATE MO
DISTRICT SHEET NO 03
COUNTY NEWTON
JOB NO.
CONTRACT ID.
PROJECT NO. 024-03774
BRIDGE NO.
DESCRIPTION | DATE

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DATE PREPARED $DATES
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DISTRICT SHEET NO 04
COUNTY NEWTON
JOB NO.
CONTRACT ID.
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BRIDGE NO.
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TRAFFIC CONTROL PLANS II

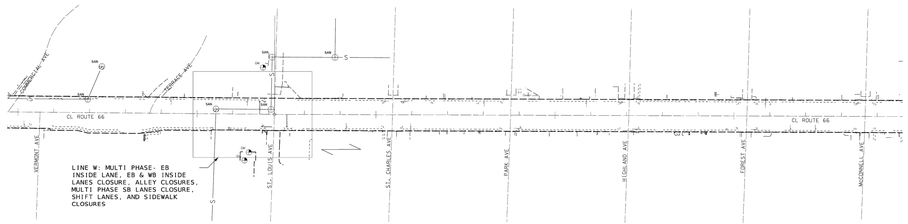
7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

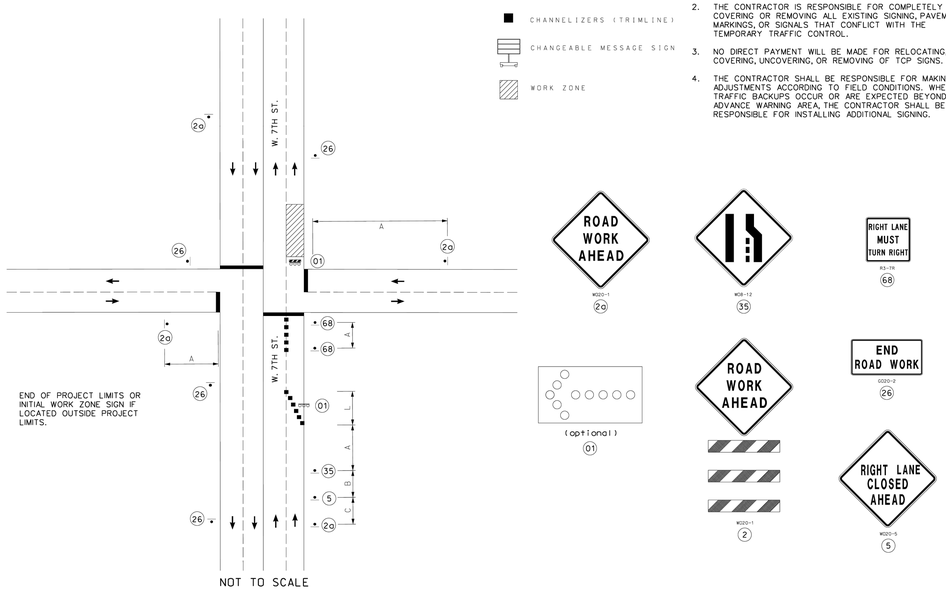
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date: OCTOBER, 2025

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TRAFFIC CONTROL SHEET 5 OF 11

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TRAFFIC CONTROL SHEET 6 OF 11

$FILES $TIMES $DATES

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DATE PREPARED $DATES
ROUTE MO | STATE MO
DISTRICT 05 | SHEET NO.
COUNTY NEWTON
JOB NO.
CONTRACT ID.
PROJECT NO. 024-03774
BRIDGE NO.

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TRAFFIC CONTROL PLANS III

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

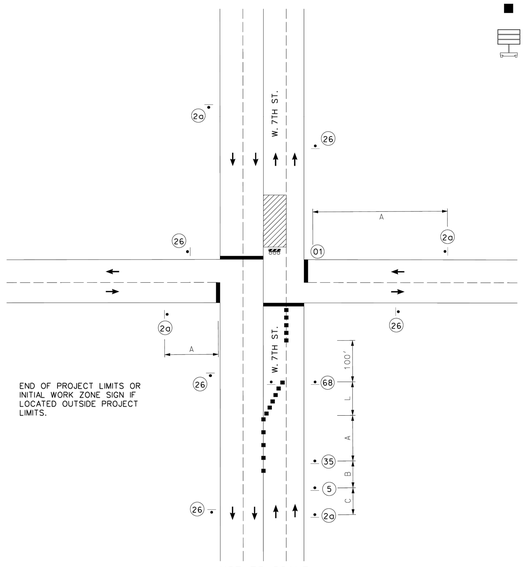
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JOPLIN, MISSOURI

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designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
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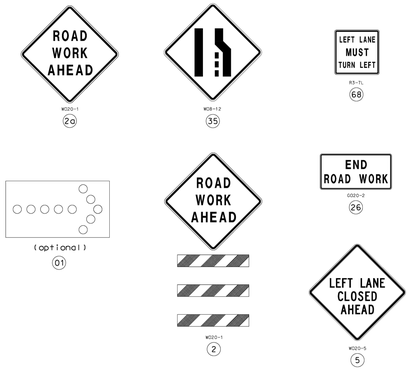
LEFT-HANDED LANE CLOSURE ON THE FAR SIDE OF AN INTERSECTION



TRAFFIC CONTROL LEGEND

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

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



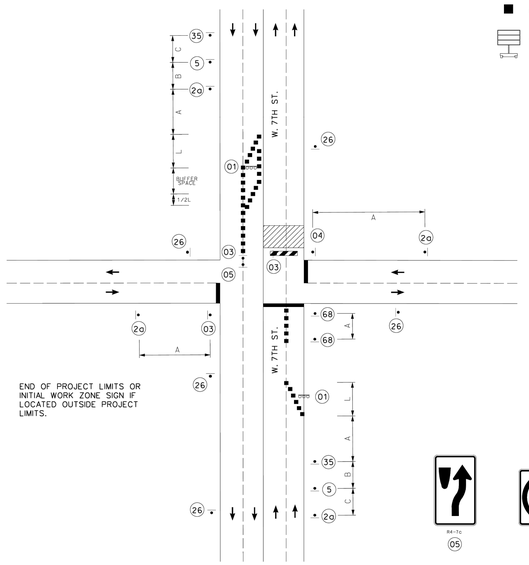
TRAFFIC CONTROL SHEET 7 OF 11

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DATE PREPARED $DATES
ROUTE MO STATE
DISTRICT 07 SHEET NO
COUNTY NEWTON
JOB NO.
CONTRACT ID.
PROJECT NO. 024-03774
BRIDGE NO.
DESCRIPTION
DATE

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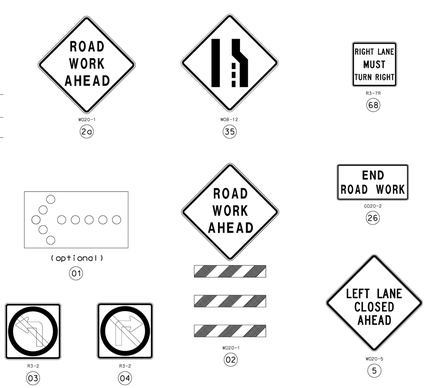
HALF ROAD CLOSURE ON THE FAR SIDE OF AN INTERSECTION



TRAFFIC CONTROL LEGEND

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

NOTES:
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TRAFFIC CONTROL SHEET 8 OF 11

$FILES $TIMES $DATES REV

DATE PREPARED $DATES
ROUTE MO STATE
DISTRICT 08 SHEET NO
COUNTY NEWTON
JOB NO.
CONTRACT ID.
PROJECT NO. 024-03774
BRIDGE NO.
DESCRIPTION
DATE

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TRAFFIC CONTROL PLANS IV

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

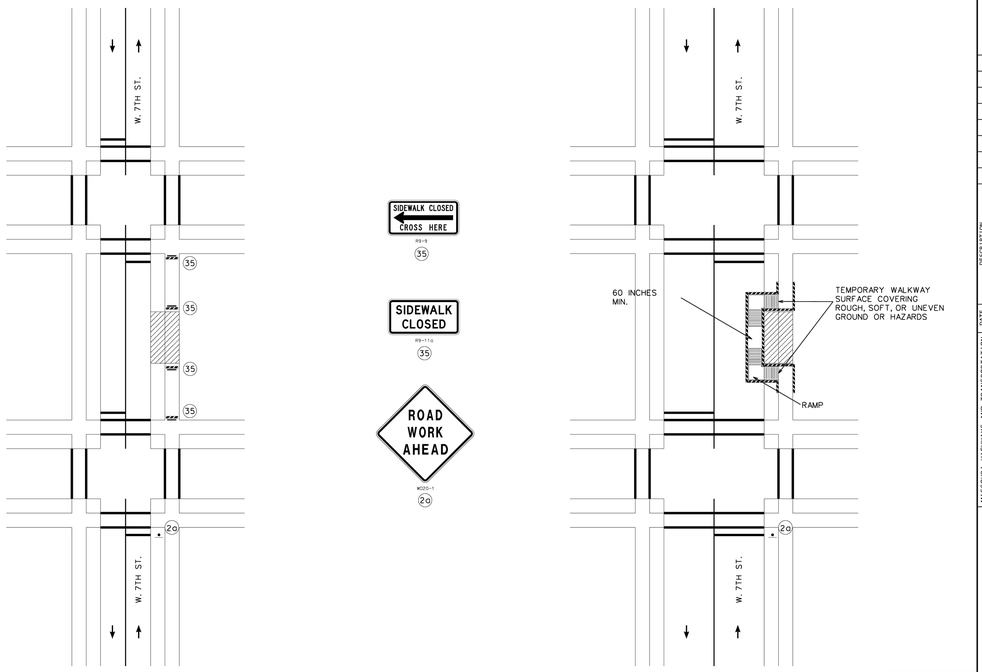
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drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

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SIDEWALK DETOUR OR DIVERSION



TRAFFIC CONTROL
SHEET 9 OF 11

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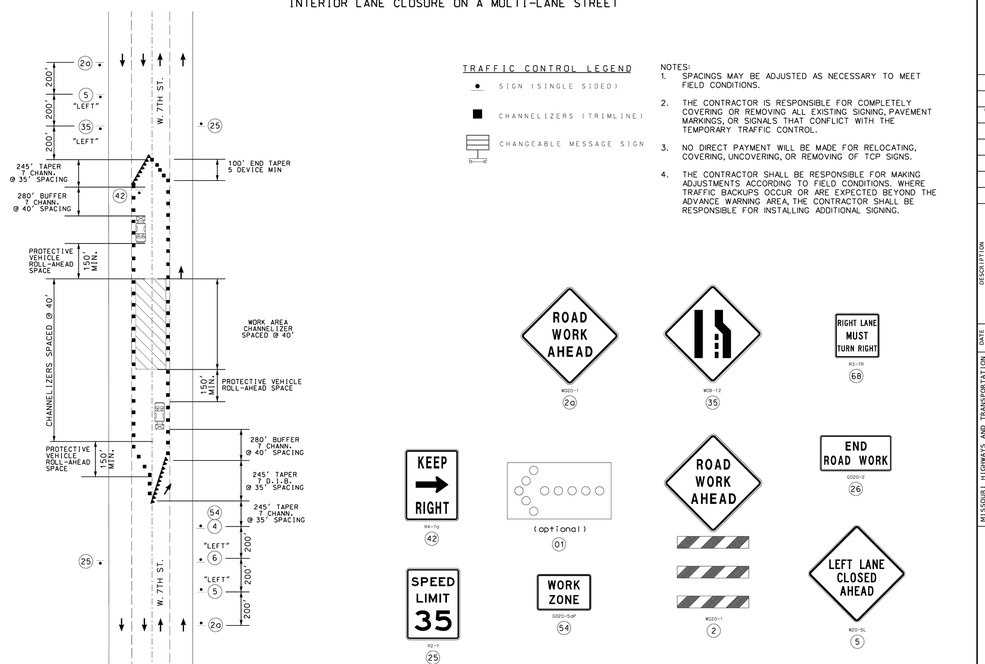
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JOB NO.
CONTRACT ID.
PROJECT NO.
024-03774
BRIDGE NO.

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JEFFERSON CITY, MO 65101
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REV.

INTERIOR LANE CLOSURE ON A MULTI-LANE STREET



NOT TO SCALE

TRAFFIC CONTROL LEGEND

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

NOTES:

1. SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
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4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS OCCUR OR ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL SIGNING.

TRAFFIC CONTROL
SHEET 10 OF 11

$FILES $STIMES $DATES

DATE PREPARED
$DATES
ROUTE | STATE
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DISTRICT | SHEET NO.
10
COUNTY
NEWTON
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024-03774
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TRAFFIC CONTROL PLANS V

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

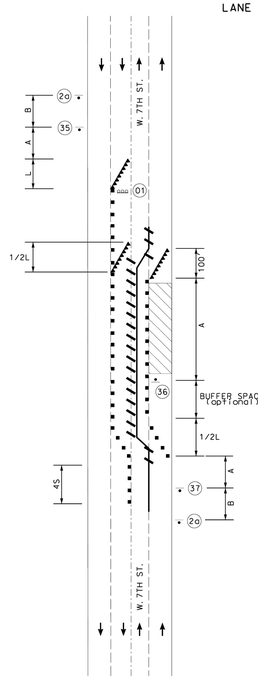
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designed by: MAJ
project no.: 024-03774
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LANE CLOSURE ON A STREET WITH UNEVEN DIRECTIONAL VOLUMES

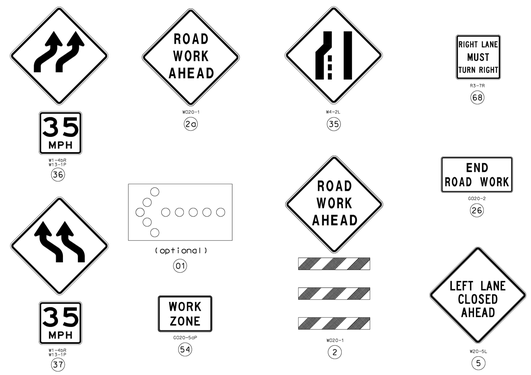


NOT TO SCALE

TRAFFIC CONTROL LEGEND

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

NOTES:
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TRAFFIC CONTROL SHEET 11 OF 11

$FILES $STIMES $SDATES

DATE PREPARED: $DATES
ROUTE: — STATE: MO
DISTRICT: — SHEET NO: 11
COUNTY: NEWTON
JOB NO.:
CONTRACT ID.:
PROJECT NO.: 024-03774
BRIDGE NO.:

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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JEFFERSON CITY, MISSOURI
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TRAFFIC CONTROL PLANS VI

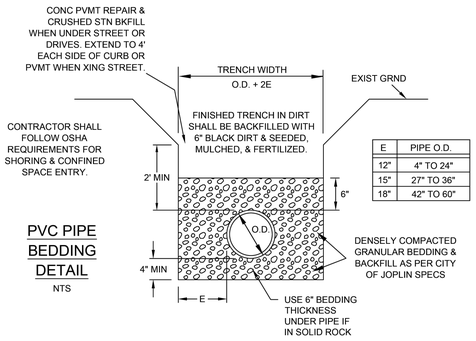
7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
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SHEET
C-405



E	PIPE O.D.
12"	4" TO 24"
15"	27" TO 36"
18"	42" TO 60"

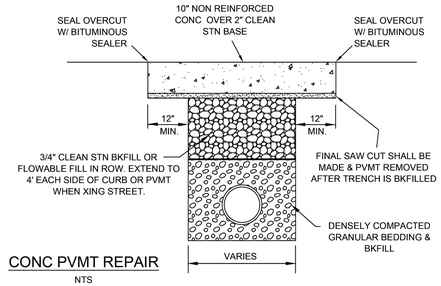
PVC PIPE BEDDING DETAIL

NTS

NOTE:
FOR SANITARY SEWER LATERAL PIPES USE ¾" CLEAN ROCK OR APPROVED EQUIVALENT REQUIRED UNDER THE FULL LENGTH OF THE INSTALLED PIPE.

SAN-01

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 4/2019	PVC PIPE BEDDING DETAIL
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: BEDDET	

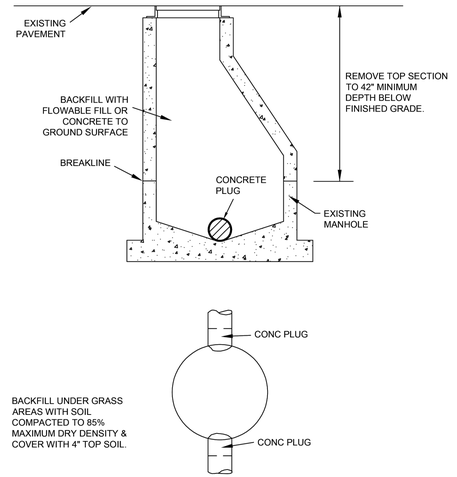


CONC PVMT REPAIR

NTS

SAN-05

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2025	CONC PVMT REPAIR
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: PVMTREPR	

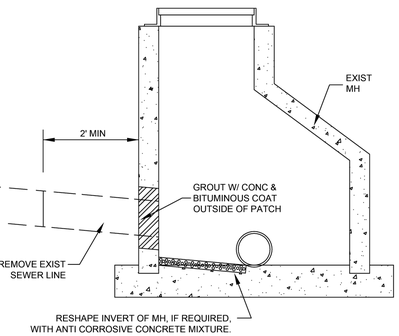


MANHOLE ABANDONMENT

N.T.S.

SAN-07

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	MANHOLE ABANDONMENT
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: MHABANDN	

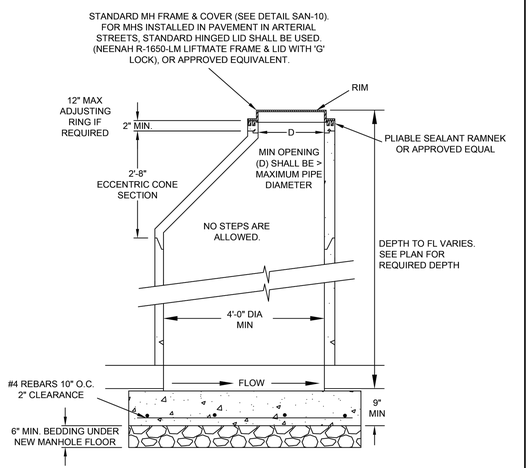


MH PLUG DETAIL

N.T.S.

SAN-08

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	MH PLUG
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: MHPLUG	

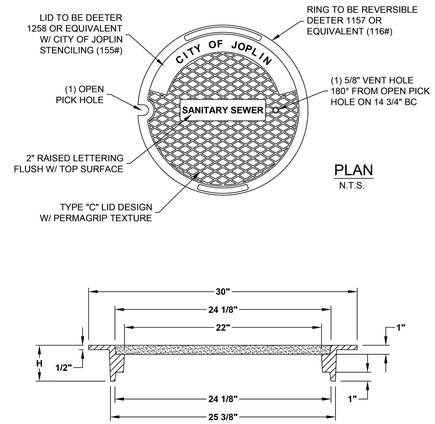


PRECAST MANHOLE DETAIL

N.T.S.

SAN-09

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	PRECAST MH DETAIL
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: MHPRECAST	



PLAN

N.T.S.

SECTION

N.T.S.

NOTES:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. RING IS REVERSIBLE AND CAN BE INSTALLED WITH FLANGE UP OR DOWN.
3. AVAILABLE HEIGHTS (H) ARE 4", 7.5", & 8".

MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B FINISH: NO PAINT

SAN-10

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	STANDARD SAN SEWER MH RING & COVER
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MHLID	

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

CITY OF JOPLIN DETAILS I

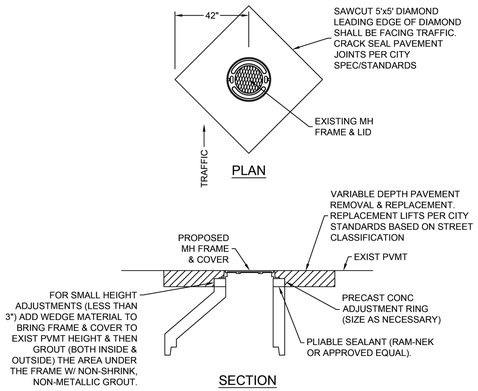
7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI 2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-500

F:\2024\03501-040000\024-03774\40-Design\AutoCAD\Final Plans\Sheets\WWWP_DTL01_02403774.dwg
DATE: Nov 25, 2025 4:12pm USER: ktucker



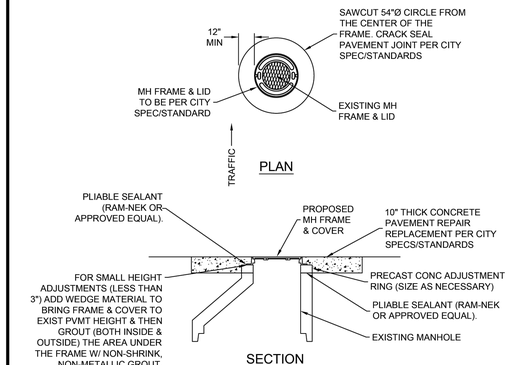
MANHOLE FRAME & COVER REMOVAL & REPLACEMENT USING ASPHALT PAVEMENT
NTS

GENERAL NOTES:
1. CONTRACTOR TO REMOVE THE PAVEMENT WITHIN A MINIMUM 12" OF THE MANHOLE FRAME & LID FULL DEPTH OF THE MANHOLE FRAME. THE INTENT IS TO EXPOSE THE ENTIRE FRAME TO REMOVE IT & ANY ADJUSTMENT RINGS THAT ARE DAMAGED.
2. EXISTING MANHOLES VARY IN DEPTH BASED ON THE STYLE OF LID & FRAME THAT WAS USED PRIOR TO EXISTING CITY STANDARD. SO IF AN ADJUSTING RING IS ALSO NEEDING REPLACED THEN THE PAVEMENT DEPTH REMOVAL WILL BE DEEPER THAN JUST THE MANHOLE FRAME.

METHOD #1

SAN-12

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	MH COVER REMOVAL & REPLACEMENT #1
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MH RIM REPAIR 2.1	



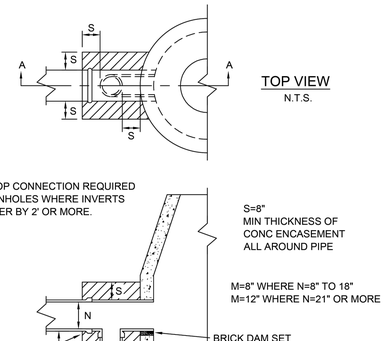
MANHOLE FRAME & COVER REMOVAL & REPLACEMENT USING CONCRETE PAVEMENT
NTS

GENERAL NOTES:
1. CONTRACTOR SHALL SAWCUT & REMOVE EXISTING PAVEMENT, FRAME & COVER, & MANHOLE MATERIAL (BRICK, CONCRETE, ADJUSTMENT RINGS, CONCRETE BLOCK, ETC.) AS NECESSARY TO ESTABLISH A FIRM FOUNDATION FOR INSTALLING NEW PRECAST CONCRETE ADJUSTMENT RING & FRAME & COVER.
2. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO AVOID DROPPING MATERIAL INTO THE EXISTING MANHOLE. ANY MATERIAL THAT FALLS INTO THE MANHOLE SHALL BE REMOVED BY THE CONTRACTOR.
3. ADJUSTMENT RINGS SMALLER THAN 3" AND LARGER THAN 12" SHALL NOT BE ALLOWED.
4. CONCRETE, MANHOLE FRAME, & LID MUST BE FLUSH WITH EXISTING PAVEMENT (WITHIN 1/4" OF FINISH PAVEMENT GRADE).

METHOD #2

SAN-13

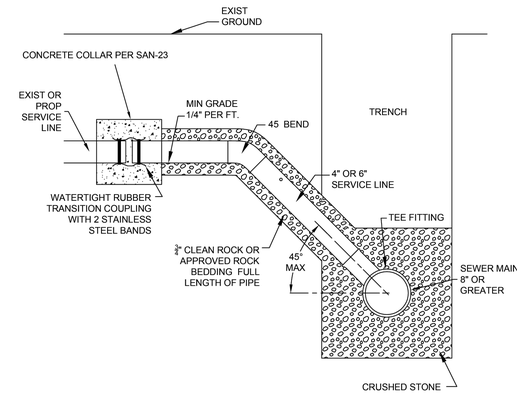
CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	MH COVER REMOVAL & REPLACEMENT #2
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: MH RIM REPAIR 3.1	



OUTSIDE DROP MH CONNECTION
N.T.S.

SAN-14

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	OUTSIDE DROP MH CONNECTION
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: OUTSIDE DROP MH	

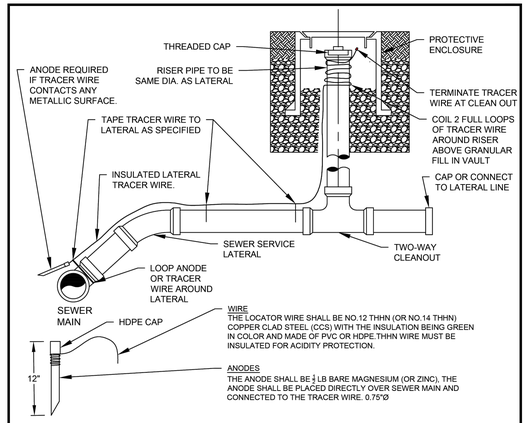


NOTES:
- TRACER WIRE (NOT SHOWN) REQUIRED.
- RUBBER SADDLES ARE NOT ALLOWED.
- NO HOLES FOR NEW CONNECTIONS SHALL BE MADE BY HAMMERING, REGARDLESS OF THE EXISTING SEWER MAIN PIPE MATERIAL.
- ALL HOLES FOR NEW CONNECTIONS TO EXISTING PIPE SHALL BE MADE BY CORING IN THE PRESENCE OF THE CITY'S INSPECTOR. ALTERNATIVELY, A PREFABRICATED PVC WYE OR TEE MAY BE INSTALLED, IN WHICH CASE, THE NEW FITTING SHALL BE AFFIXED TO THE EXISTING SEWER MAIN BY MEANS OF A WATERTIGHT RUBBER COUPLING WITH 2 STAINLESS STEEL BANDS, ALL OF WHICH SHALL BE CONCRETE ENCASED.

SERVICE CONNECTION
N.T.S.

SAN-15

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	SEWER SERVICE CONNECTION
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: SERVCONN	



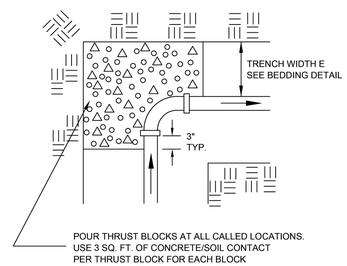
TRACER WIRE NOTES
1. CONDUCTIVE TYPE PIPE LOCATOR/TRACER WIRE SHALL BE INSTALLED ON SEWER LATERALS TO FACILITATE FUTURE ABOVE-GROUND LOCATING ACTIVITIES, PER MISSOURI STATE STATUTE. **2**. THE TRACER WIRE SET OF REQUIREMENTS APPLY UNDER ANY OF THE FOLLOWING CONDITIONS: A) ONLY ON LATERAL PIPES INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY OR A DEDICATED UTILITY EASEMENT; B) ON LATERALS CONNECTING TO SEWER MAINS INSTALLED PRIOR TO 2016, ONLY IF THE EXCAVATION TO REPAIR AN EXISTING LATERAL EXTENDS TO WITHIN 5 FT (HORIZONTALLY) OF THE SEWER MAIN, AS DETERMINED BY SIGHTING BETWEEN MH COVERS; OR, C) ON LATERAL PIPES INSTALLED AS PART OF A SEWER MAIN EXTENSION. **3**. THE WIRE SHALL BE INSTALLED DIRECTLY ON TOP OF THE PIPE AND SECURED TO THE LATERAL BY TAPE AT BASE OF RISER, SEWER MAIN AND EVERY 10'. A STRIP OF DUCT TAPE IS ACCEPTABLE FOR ATTACHMENT. **4**. CAP THE END OF THE WIRE INSIDE THE PROTECTIVE ENCLOSURE WITH A THERMOPLASTIC SHELL CONNECTOR RATED FOR DAMP, UNDERGROUND APPLICATIONS (THE MUDBUG BY IDEAL, OR EQUIVALENT). 5. CONDUCTIVITY TO BE TESTED BEFORE ACCEPTANCE.

ADJUSTMENTS TO EXISTING
CORROSION PROOF WIRE CONNECTORS SHALL BE USED AT SPLICE LOCATIONS. ELECTRICAL TAPE SHALL BE USED AND NO BARE WIRE SHALL BE EXPOSED. CONDUCTIVITY TO BE TESTED BEFORE ACCEPTANCE.

TRACER WIRE DETAIL
NTS

SAN-16

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	TRACER WIRE FOR SERVICE LINES
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: TRACER WIRE	



THRUST BLOCK DETAIL
N.T.S.

SAN-20

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	THRUST BLOCK DETAIL
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: THRUSTBLK	

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REV. NO.	DATE	DESCRIPTION	BY

REVISIONS

CITY OF JOPLIN DETAILS II

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

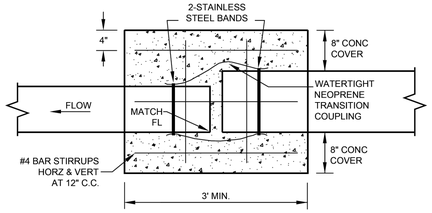
JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
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DATE: Nov 25, 2025 4:12pm USER: ktucker

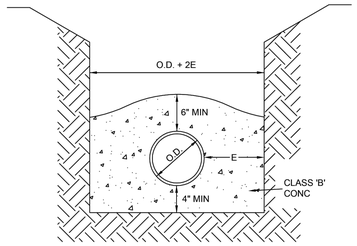


CONC COLLAR

N.T.S.

SAN-23

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	CONCRETE COLLAR
ENGINEERING DIVISION	ENGINEER: JOHNSON	
602 S MAIN ST 64801	FILE: CONCCOLL	



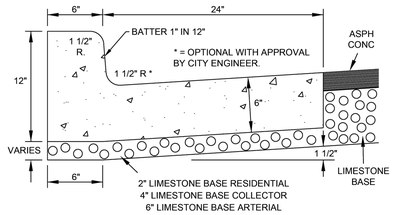
E	PIPE O.D.
12"	4" TO 24"
15"	27" TO 36"
18"	42" TO 60"

CONC ENCASEMENT

N.T.S.

SAN-24

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	SEWER PIPE
ENGINEERING DIVISION	ENGINEER: HERTZBERG	CONC ENCASEMENT
602 S MAIN ST 64801	FILE: ENCASE	



NOTES:
1. CONSTRUCT EXPANSION JOINTS AT THE START & END OF EVERY DRIVEWAY & CURB INLET.
2. CONSTRUCT CONTRACTION JOINTS EVERY 10' MAXIMUM.
3. JOINT MATERIAL TO EXTEND THRU C & G, FRONT TO BACK, & NEATLY TRIMMED TO MATCH CONC SURFACE.
4. FLOAT GROUT TO SURFACE ON EXPOSED SURFACES.
5. ALL POURED CONCRETE SHALL BE CLASS 'B'.

STD UPRIGHT C & G

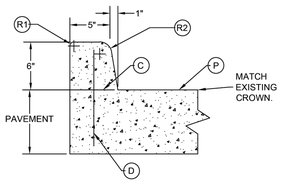
N.T.S.

ST-04

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	STD UPRIGHT
ENGINEERING DIVISION	ENGINEER: HERTZBERG	CURB & GUTTER
602 S MAIN ST 64801	FILE: CURBDET	

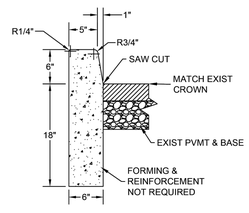
LEGEND:
- (C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.
- (D) #4 TIE BAR AT 24" CENTERS. LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3".
- (P) TOP OF PAVEMENT OR CONCRETE BASE.
- (R1) ROUND TO 1/2" RADIUS. (EXCEPT FOR SAWED JOINTS)
- (R2) ROUND TO 1 1/2" RADIUS.

TYPE A
INTEGRAL CURB
NOT TO SCALE



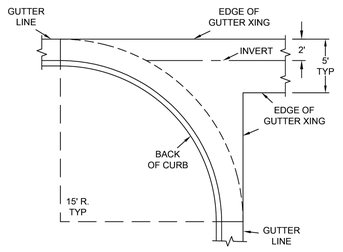
NOTES:
1. ALL POURED CONCRETE SHALL BE REINFORCED CLASS "B".
2. STEEL REINFORCEMENT IN PAVEMENT SLAB IS OPTIONAL.
3. BID PRICE FOR ALL CURB & PAVEMENT SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONSTRUCT CURB & PAVEMENT.

TYPE S
CONCRETE CURB
NOT TO SCALE



ST-05

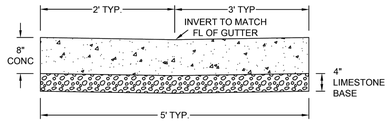
CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	TYPE "A" & TYPE "S" CURB
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: TYPE A & S CURB	



PLAN

N.T.S.

NOTE : USE 1/2" INVERT WITH A 10' GUTTER XING.



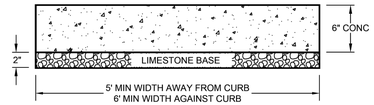
SECTION THRU CL

N.T.S.

NOTES:
1. IF CURB & GUTTER IS EXISTING, PLACE EXPANSION JOINT MATERIAL BETWEEN GUTTER & THE NEW GUTTER XING.
2. IF NO CURB & GUTTER EXISTS, CONSTRUCTION OF CURB, GUTTER, & GUTTER XING SHALL BE MONOLITHIC.

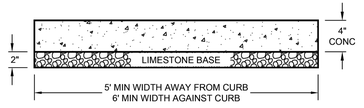
ST-06

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	CONC
ENGINEERING DIVISION	ENGINEER: JOHNSON	GUTTER XING
602 S MAIN ST 64801	FILE: GUTTERXING	



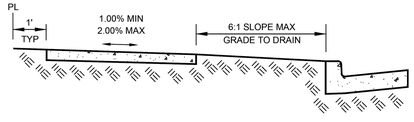
CLASS 'A' CONC
SIDEWALK

NTS



CLASS 'B' CONC
SIDEWALK

NTS



NOTES:
1. CONSTRUCT EXPANSION JOINTS AT THE START & END OF EVERY DRIVEWAY & CURB INLET.
2. CONTRACTION JOINTS SPACED TO MATCH WIDTH OF SIDEWALK.

ST-11

CITY OF JOPLIN, MO	CKD BY: HAGERMAN	PROJECT
PUBLIC WORKS DEPT	DATE: 1/2023	CONC
ENGINEERING DIVISION	ENGINEER: JOHNSON	SIDEWALK DETAILS
602 S MAIN ST 64801	FILE: SIDEWALK	

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

CITY OF JOPLIN DETAILS III

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

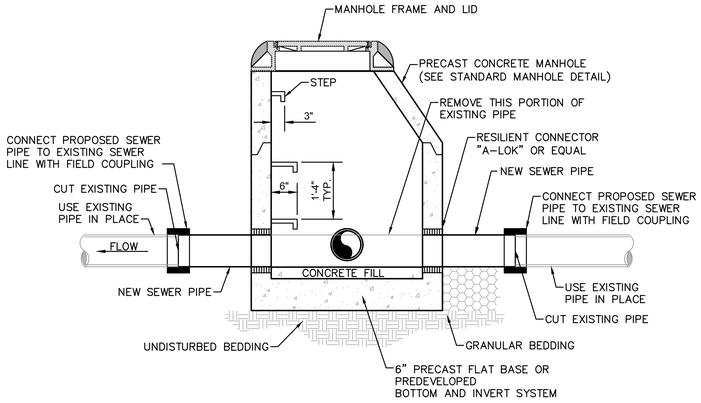
JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

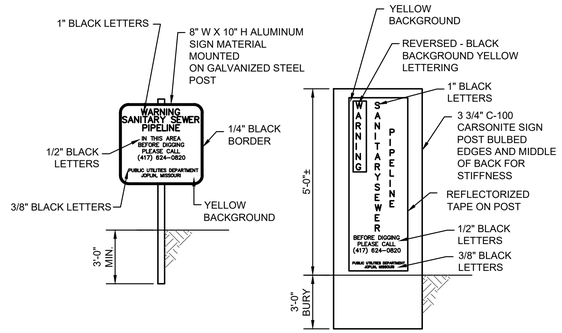
SHEET
G-502

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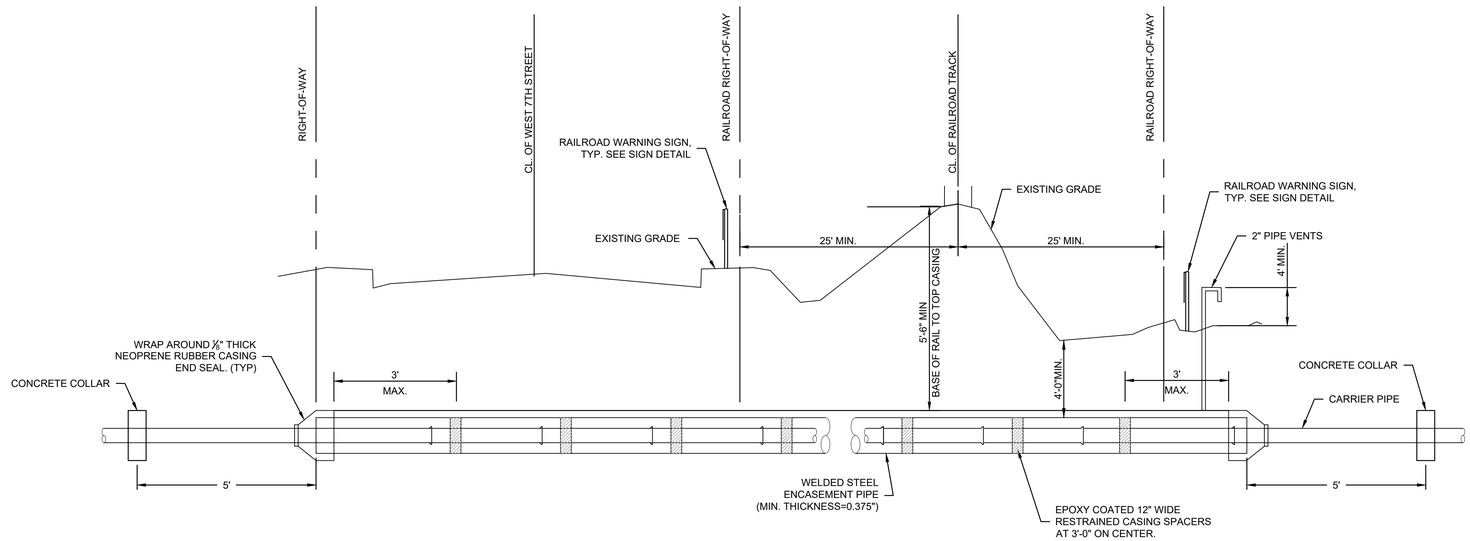
NEW MANHOLE OVER EXISTING LINE DETAIL

Not To Scale



RAILROAD WARNING SIGNS DETAILS

Not To Scale



NOTES:

1. SEAL BOTH ENDS OF CASING PIPE W/ WATERTIGHT NEOPRENE ATTACHED WITH 2" STEEL BANDS.
2. ENDS SHALL BE SEALED TO PREVENT THE ENTRANCE OF FOREIGN MATERIAL, BUT SHALL NOT BE TIGHTLY SEALED.
3. UTILIZE PIPE SPACERS EVERY 3'.
4. CONTRACTOR IS TO INSTALL VENT PIPE AND WARNING SIGNS AS SHOWN.
5. MATERIAL FOR VENT PIPES IS TO BE SCH. 40 STEEL WITH WELDED JOINTS, PRIMED FOR FIELD PAINTING.
6. PAINT FOR VENT PIPES IS TO BE A 4 TO 6 MIL APPLICATION OF EPOXY-POLYAMIDE PAINT EQUAL TO TNEMEC SERIES 66 HI-BUILD EPOXOLINE, SAFETY YELLOW.
7. WARNING SIGNS MAY BE GALVANIZED TUBE "U" OR "C" POSTS WITH RECTANGULAR ALUMINUM SIGNS MEETING ASTM B209 ATTACHED, OR SINGLE UNIT CARSONITE SIGNS.

TYPICAL RAILROAD BORING DETAILS

Not To Scale

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REV. NO.	DATE	DESCRIPTION	BY

CITY OF JOPLIN DETAILS IV

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

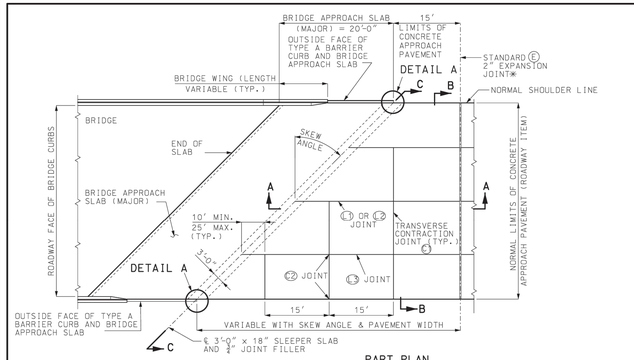
JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

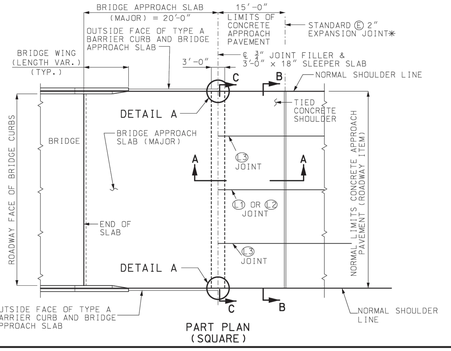
SHEET
G-503

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DATE: Nov 25, 2025 4:12pm USER: ktucker



PART PLAN (SKEWED)

* NOT REQUIRED WHEN ADJACENT PAVEMENT IS ASPHALT.



PART PLAN (SQUARE)

SEE SHEET 2 OF 3 FOR DETAIL A.

FOR SECTIONS A-A. B-B AND C-C. SEE SHEET 3 OF 3.

GENERAL NOTES:

TYPE A CURB IS TO BE CONSTRUCTED WITH CONCRETE APPROACH PAVEMENT ONLY WHEN DRAIN BASINS ARE REQUIRED. TYPE A CURBS WILL BE CONSIDERED AS INCIDENTAL, AND WILL BE INCLUDED IN THE PAYMENT FOR CONCRETE APPROACH PAVEMENT.

FOR SHOULDER PAVING AND DRAIN BASINS AT BRIDGE ENDS. SEE STANDARD PLAN 609.40.

FOR TYPE A BARRIER CURBS. STANDARD 2" EXPANSION JOINTS. AND LONGITUDINAL JOINTS. SEE STANDARD PLANS 502.00 AND 609.00.

FOR BRIDGE APPROACH SLAB. SLEEPER SLAB. AND JOINT FILLER DETAILS. SEE BRIDGE PLANS.

A PREFORMED FIBER EXPANSION JOINT MATERIAL SHALL BE PLACED WITH CONCRETE APPROACH PAVEMENT AND MEET THE REQUIREMENTS OF SECTION 1057 OF THE STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION.

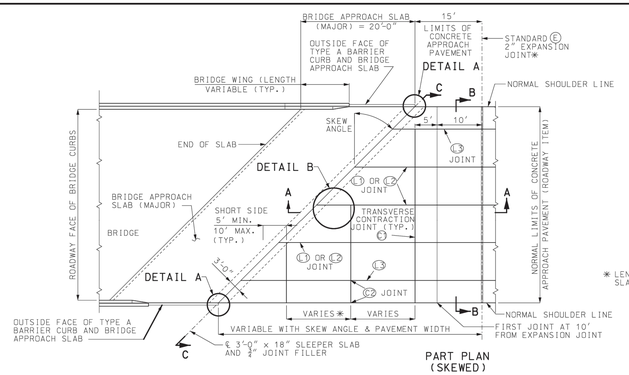
COST OF FURNISHING AND PLACEMENT OF 4" TYPE 5 AGGREGATE BASE AND ½" JOINT FILLER IS INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE APPROACH PAVEMENT.

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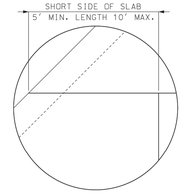
CONCRETE APPROACH PAVEMENT
FOR TWO-LANE PAVEMENTS
(MAJOR ROUTE)

DATE EFFECTIVE:	10/01/2022	504.00L	SHEET NO.
DATE PREPARED:	7/19/2022		1 OF 3



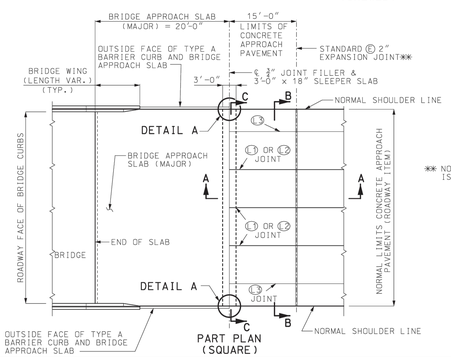
PART PLAN (SKEWED)

NOTE:
SHORT SIDE OF SKEWED SLAB FOR ALL LANES NEXT TO BRIDGE APPROACH SLAB SHALL BE 5' TO 10'.



DETAIL B

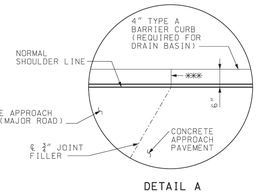
* LENGTH OF RECTANGULAR SLABS BETWEEN SKEWED SLAB AND FIRST 10' SLAB SHALL BE 10' TO 15'.



PART PLAN (SQUARE)

** NOT REQUIRED WHEN ADJACENT PAVEMENT IS ASPHALT.

NOTE:
FOR SECTIONS A-A. B-B AND C-C. SEE SHEET 3 OF 3.



DETAIL A

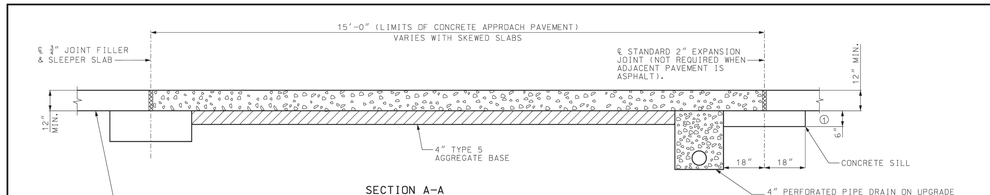
*** USE ¾" JOINT FILLER BETWEEN TYPE A CURBS

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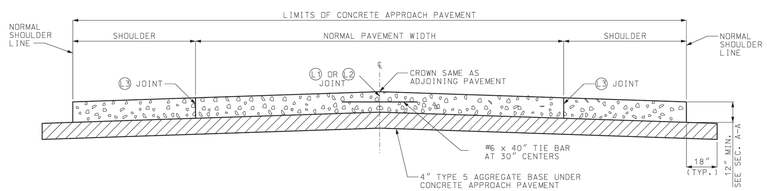
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CONCRETE APPROACH PAVEMENT
FOR MULTI-LANE PAVEMENTS
(MAJOR ROUTE)

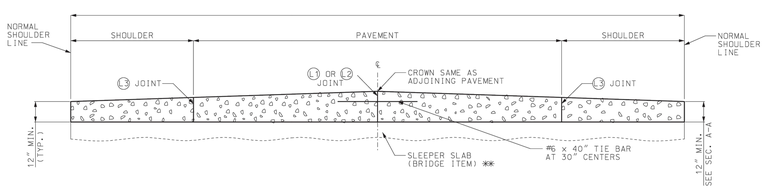
DATE EFFECTIVE:	10/01/2022	504.00L	SHEET NO.
DATE PREPARED:	7/19/2022		2 OF 3



SECTION A-A



SECTION B-B



SECTION C-C

** TOP OF SLEEPER SLAB MAY BE FLAT OR CROWNED. SEE BRIDGE PLANS.

FOR LOCATIONS OF SECTIONS A-A. B-B AND C-C. SEE SHEETS 1 AND 2.

GENERAL NOTES:

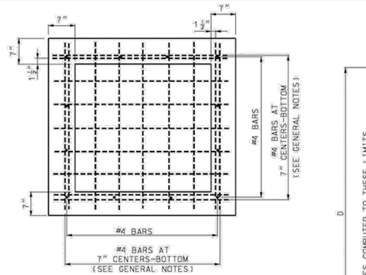
SEE STANDARD DRAWING 605.10 FOR PIPE OUTLET DETAIL FROM SHOULDER POINT TO INSLOPE.

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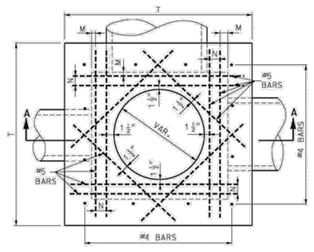
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CONCRETE APPROACH PAVEMENT
(MAJOR ROUTE)

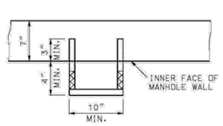
DATE EFFECTIVE:	10/01/2022	504.00L	SHEET NO.
DATE PREPARED:	7/19/2022		3 OF 3



BASE PLAN



PLAN VIEW

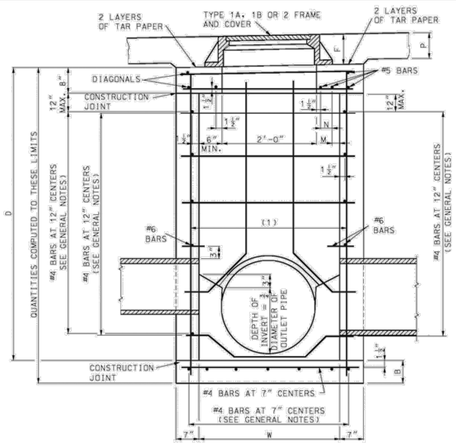


STEP INSTALLATION

STEPS SHALL BE PLACED AT VERTICAL INTERVALS OF 16" MAXIMUM IN ALL MANHOLES HAVING A DEPTH OF MORE THAN 4'-0". STEPS SHALL BEGIN AT AN ELEVATION 6" ABOVE THE TOP OF THE OUTLET PIPE.

STEPS SHALL BE SET LEVEL AND IN VERTICAL ALIGNMENT.

NO DIRECT PAYMENT WILL BE MADE FOR MANHOLE STEPS.



SECTION A-A

MANHOLE FRAME AND COVER IN PAVED AREAS USE TYPE 1. IN UNPAVED AREAS USED TYPE 1A OR 1B. NO CHANGE IN QUANTITIES REQUIRED FOR FRAME AND COVER DETAILS. SEE OTHER DRAWINGS.

(1) 4-#4 FOR 3'-0" OPENING
5-#4 FOR 3'-6" & 4'-0"
6-#4 FOR 4'-6" & 5'-0"

VARIABLE DIMENSIONS					
SIZE OF PIPE	W	T	B	M	N
≤ 24"	3'-0"	4'-2"	7"	VARIABLE	2½"
30"	3'-6"	4'-8"	7"		5½"
36"	4'-0"	5'-2"	7"		8"
42"	4'-6"	5'-8"	8"		5½"*
48"	5'-0"	6'-2"	8"		7"*

* 4-#5 BARS ADDED

NOTES:
MINIMUM "D "SHALL BE THE OUTSIDE DIAMETER OF LARGEST PIPE ENTERING MANHOLE PLUS 16" CARRIED TO THE NEAREST 3".

HORIZONTAL AND VERTICAL BARS HORIZONTAL AND VERTICAL BARS AROUND PIPES.

GENERAL NOTES:

THE MAXIMUM DEPTH OF MANHOLE USING #4 HORIZONTAL BARS AT 12" CENTERS IS 20'.

OVER 20' DEPTH, HORIZONTAL BARS SHALL BE INCREASED TO A #5 BAR AT 10" CENTERS TO A MAXIMUM DEPTH OF 30'.

OVER 30' DEPTH WILL REQUIRE A SPECIAL DESIGN.

BOTTOM STEEL AT MORE THAN 20' DEPTH TO A MAXIMUM DEPTH OF 30' IS INCREASED TO #6 BARS AT 7" CENTERS.

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STATE OF MISSOURI — KEVIN PHILLIPS HANEY — NUMBER PE-2009 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED, AND DATED ELECTRONICALLY

CONCRETE MANHOLES

DATE EFFECTIVE:	02-01-2009	604.30G	SHEET NO.
DATE PREPARED:	8/26/2009		1 OF 2

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REVISIONS

REV. NO.	DESCRIPTION	BY	DATE

MODOT DETAILS I

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI 2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-600

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DATE: Nov 25, 2025 4:14pm USER: ktucker

FOR PIPE OPENINGS								
	PIPE SIZES							
	12"	15"	18"	24"	30"	36"	42"	48"
CUBIC YARDS CONCRETE TO DEDUCT	0.03	0.04	0.06	0.11	0.16	0.23	0.31	0.40
ADDITIONAL STEEL REQUIRED FOR PIPE OPENING								
WIDTH OF WALL REQUIRED FOR PIPE				3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
LENGTH OF #6 BAR REQUIRED				4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
WEIGHT OF BAR LBS.				6.0	6.8	7.5	8.3	9.0

NOTE:
CONCRETE QUANTITIES IN TABLE INCLUDE INVERT. THE QUANTITY OF STEEL FOR 3" OR "D" IS NOT ½ OF THAT FOR 1 FOOT OF "D". NEITHER IS THE QUANTITY FOR 6" OF "D" EQUAL TO ½ THAT FOR 1 FOOT OF "D". SO USE QUANTITY IN 1 FOOT COLUMN FOR FULL FEET AND IN 3" COLUMN FOR FRACTIONAL FEET.

QUANTITIES									
		TO AND INCLUDING 20' DEPTH				20' TO AND INCLUDING 30' DEPTH			
SIZE (W)		D= 3'-3"	D= 4'-3"	ADD OR SUBTRACT FOR EACH		ADD OR SUBTRACT FOR EACH		ADDITIONAL STEEL IN BOTTOM DIFFERENCE IN #4 AND #6 BARS
				1 FT.	3 IN.	1 FT.	3 IN.	
3'-0" X 3'-0"	C	1.62	1.93	0.31	0.08	0.31	0.08	
	S	157.90	176.80	18.60	2.00	20.64	5.16	30.14
3'-0" X 3'-6"	C	1.77	2.11	0.33	0.08	0.33	0.08	
	S	173.80	194.60	20.60	2.30	23.12	5.78	34.85
3'-0" X 4'-0"	C	1.93	2.28	0.35	0.09	0.35	0.09	
	S	187.10	208.60	21.30	2.30	24.27	6.07	39.56
3'-0" X 4'-6"	C	2.16	2.53	0.38	0.09	0.38	0.09	
	S	211.20	234.70	23.30	2.70	26.75	6.69	44.26
3'-0" X 5'-0"	C	2.32	2.71	0.40	0.10	0.40	0.10	
	S	219.60	243.80	24.00	2.70	27.90	6.97	48.97
3'-6" X 3'-6"	C	1.94	2.29	0.35	0.09	0.35	0.09	
	S	192.40	215.10	22.70	2.70	25.60	6.40	40.27
3'-6" X 4'-0"	C	2.10	2.48	0.38	0.09	0.38	0.09	
	S	204.30	227.70	23.40	2.70	26.75	6.69	45.69
3'-6" X 4'-6"	C	2.35	2.75	0.40	0.10	0.40	0.10	
	S	230.00	255.50	25.30	3.00	29.23	7.31	51.11
3'-6" X 5'-0"	C	2.53	2.95	0.42	0.10	0.42	0.10	
	S	240.90	267.10	26.00	3.00	30.38	7.60	56.53
4'-0" X 4'-0"	C	2.28	2.68	0.40	0.10	0.40	0.10	
	S	216.70	240.80	24.10	2.70	27.90	6.97	51.83
4'-0" X 4'-6"	C	2.55	2.97	0.42	0.10	0.42	0.10	
	S	246.40	272.60	26.00	3.00	30.38	7.60	57.96
4'-0" X 5'-0"	C	2.74	3.18	0.44	0.11	0.44	0.11	
	S	255.60	282.50	26.70	3.00	31.53	7.88	64.10
4'-6" X 4'-6"	C	2.75	3.19	0.44	0.11	0.44	0.11	
	S	276.80	304.90	28.00	3.30	32.86	8.22	64.81
4'-6" X 5'-0"	C	2.94	3.41	0.46	0.12	0.46	0.12	
	S	289.40	318.20	28.70	3.30	34.01	8.50	71.66
5'-0" X 5'-0"	C	3.15	3.64	0.48	0.12	0.48	0.12	
	S	299.80	329.30	29.40	3.30	35.16	8.79	79.23

TO AND INCLUDING 20-FOOT DEPTH

NOTE:
TO COMPUTE THE QUANTITIES FOR DEPTHS ("D") NOT SHOWN, REFER TO TABLE FOR THE SIZE OF MANHOLE REQUIRED. SUBTRACT THE "D" VALUE FROM THE TABLE AND THE "D" VALUE FROM THE PLANS. MULTIPLY THE VALUES SHOWN IN THE 1-FOOT COLUMN FROM THE TABLE WITH THE FULL ONE FOOT INCREMENTS FROM THE DIFFERENCE BETWEEN THE "D" FROM THE PLANS AND THE "D" FROM THE TABLE. MULTIPLY THE VALUES SHOWN IN THE 3" COLUMN FROM THE TABLE WITH THE REMAINING FRACTIONAL FOOT VALUES PER 3" INCREMENTS. FOLLOW THIS SAME PROCESS FOR THE STEEL CALCULATIONS. SEE THE EXPAMPLE BELOW:

FOR EXAMPLE: QUANTITIES FOR 3'-0" X 4'-0" MANHOLE WITH 6'-9" "D" HAVING ONE 18", ONE 24" AND ONE 36" PIPE OPENINGS ARE DETERMINED AS FOLLOWS:
"D" REQUIRED = 6'-9"
"D" GIVEN IN TABLE = 4'-3"
"D" ADDITIONAL = 2'-6"

2.76	CONCRETE	STEEL
FROM TABLE FOR 4'-3" "D"	2.28	208.6
ADD (2 X QUANTITIES FOR 1-FOOT)	0.70	42.6
ADD (6" = 2 X 3") (2 X QUANTITIES FOR 3")	0.18	255.8
SUBTOTAL	3.16	255.8
ADJUST QUANTITIES FOR THE PIPE OPENINGS (DEDUCT CONCRETE AND ADD STEEL FOR TWO 3' AND ONE 4' WALL)	-0.40	+19.5
TOTAL	2.76	275.3
USE	2.80	280.0

MORE THAN 20-FOOT TO AND INCLUDING 30-FOOT DEPTH

FIRST, COMPUTE QUANTITIES FOR 20-FOOT DEPTH FROM THE TABLE "TO AND INCLUDING 20-FOOT DEPTHS".

FOR EXAMPLE: QUANTITIES FOR 3'-0" X 4'-0" MANHOLE WITH 20'-0", "D" HAVING ONE 18", ONE 24" AND ONE 36" PIPE OPENINGS ARE DETERMINED AS FOLLOWS:

"D" REQUIRED = 20'-0"
"D" GIVEN IN TABLE = 4'-3"
"D" ADDITIONAL = 15'-9"

	CONCRETE	STEEL
FROM TABLE FOR 4'-3" "D"	2.28	208.6
ADD (15 X QUANTITIES FOR 1-FOOT)	5.25	319.9
ADD (9" = 3 X 3") (3 X QUANTITIES FOR 3")	0.27	6.9
SUBTOTAL	7.80	535.0
ADJUST QUANTITIES FOR THE PIPE OPENINGS (DEDUCT CONCRETE AND ADD STEEL FOR TWO 3' AND ONE 4' WALL)	-0.40	+19.5
TOTAL	7.40	554.5

SECOND, COMPUTE QUANTITIES FOR THE DEPTHS BEYOND 20 FEET TO A MAXIMUM OF 30 FEET, USING THE TABLE "20-FOOT TO AND INCLUDING 30-FOOT DEPTH". AND ADD TO THE QUANTITIES FOR 20-FOOT DEPTH. ALSO, ADD THE DIFFERENCE IN STEEL IN THE BOTTOM DUE TO THE INCREASE IN SIZE OF BARS FROM #4 TO #6 BARS ON 7-INCH CENTERS.

FOR EXAMPLE:
"D" REQUIRED = 30'-0"
"D" COMPUTED = 20'-0"
"D" ADDITIONAL = 10'-0"

	CONCRETE	STEEL
ADD CONCRETE (10 X QUANTITIES FOR 1-FOOT)	3.50	
ADD STEEL (10 X QUANTITIES FOR 1-FOOT)	242.70	
ADD STEEL (ADDITIONAL STEEL IN BOTTOM)		39.56
TOTAL (30-FOOT DEPTH)	10.90	836.76
USE	10.9	840.0

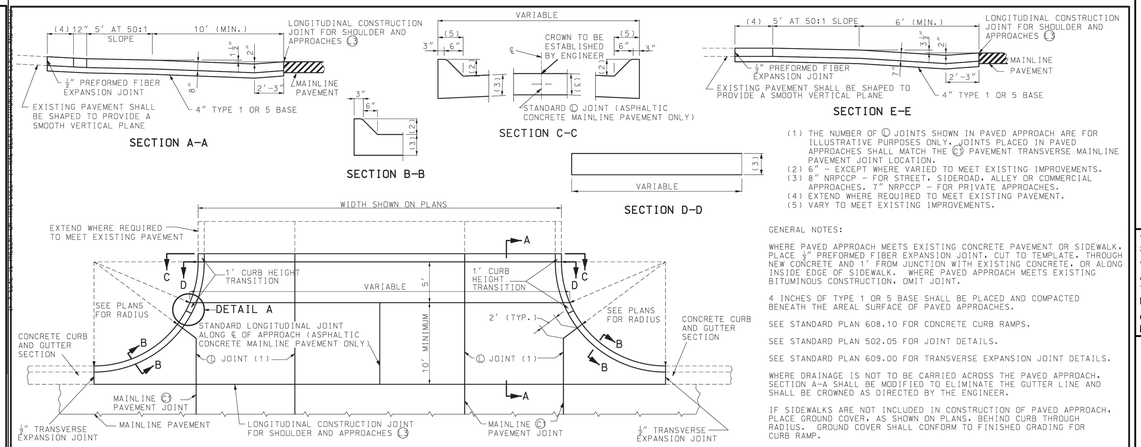
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KATHRYN PHILLIPS HARVEY NUMBER PE-2010021 PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

CONCRETE MANHOLES

DATE EFFECTIVE:	02-01-2009
DATE PREPARED:	8/26/2009

604.30G | SHEET NO. 2 OF 2



(1) THE NUMBER OF (D) JOINTS SHOWN IN PAVED APPROACH ARE FOR ILLUSTRATIVE PURPOSES ONLY. JOINTS PLACED IN PAVED APPROACHES SHALL MATCH THE (C) PAVEMENT TRANSVERSE MAINLINE PAVEMENT JOINT LOCATION.
(2) 6" - EXCEPT WHERE VARIED TO MEET EXISTING IMPROVEMENTS.
(3) 8" NRPCCP - FOR STREET, SIDEROAD, ALLEY OR COMMERCIAL APPROACHES. 7" NRPCCP - FOR PRIVATE APPROACHES.
(4) EXTEND WHERE REQUIRED TO MEET EXISTING PAVEMENT.
(5) VARY TO MEET EXISTING IMPROVEMENTS.

GENERAL NOTES:

WHERE PAVED APPROACH MEETS EXISTING CONCRETE PAVEMENT OR SIDEWALK, PLACE ½" PREFORMED FIBER EXPANSION JOINT. CUT TO TEMPLATE. THROUGH NEW CONCRETE AND 1' FROM JUNCTION WITH EXISTING CONCRETE, OR ALONG INSIDE EDGE OF SIDEWALK. WHERE PAVED APPROACH MEETS EXISTING BITUMINOUS CONSTRUCTION, OMIT JOINT.

4 INCHES OF TYPE 1 OR 5 BASE SHALL BE PLACED AND COMPACTED BENEATH THE AREAL SURFACE OF PAVED APPROACHES.

SEE STANDARD PLAN 608.10 FOR CONCRETE CURB RAMPS.

SEE STANDARD PLAN 502.05 FOR JOINT DETAILS.

(SECTION F-F) ELEVATION OF CENTER OF PAVED APPROACH, AT A POINT 6' FROM EDGE OF NORMAL PAVEMENT SHALL NOT VARY MORE THAN 2" FROM ELEVATION OF MAINLINE PAVEMENT AT CENTERLINE OF PAVED APPROACH.

IF SIDEWALKS ARE NOT INCLUDED IN CONSTRUCTION OR PAVED APPROACH, PLACE GROUND COVER, AS SHOWN ON PLANS. BEHIND CURB THROUGH RADIUS. GROUND COVER SHALL CONFORM TO FINISHED GRADING FOR CURB RAMP.

HAND FINISHING PERMITTED ON PAVED APPROACH.

WHEN SIDEWALKS ARE PRESENT ADJACENT TO THE PAVED APPROACHES OF STREETS, SIDEROADS, ALLEYS OR COMMERCIAL ENTRANCES, THE SIDEWALK GRADE SHALL BE TRANSITIONED TO THE GRADE OF THE APPROACH BY WAY OF AN APPROPRIATE RAMP AS SHOWN ON THE PLANS. SEE 608.10 FOR RAMP DETAILS.

WHEN SIDEWALKS ARE PRESENT ADJACENT TO THE PAVED APPROACHES OF PRIVATE ENTRANCES, THE APPROACH GRADE SHALL BE TRANSITIONED TO THE GRADE OF THE SIDEWALK.

THE APPROACH GRADE THROUGH THE LIMITS OF A SIDEWALK SHALL NOT EXCEED 2%.

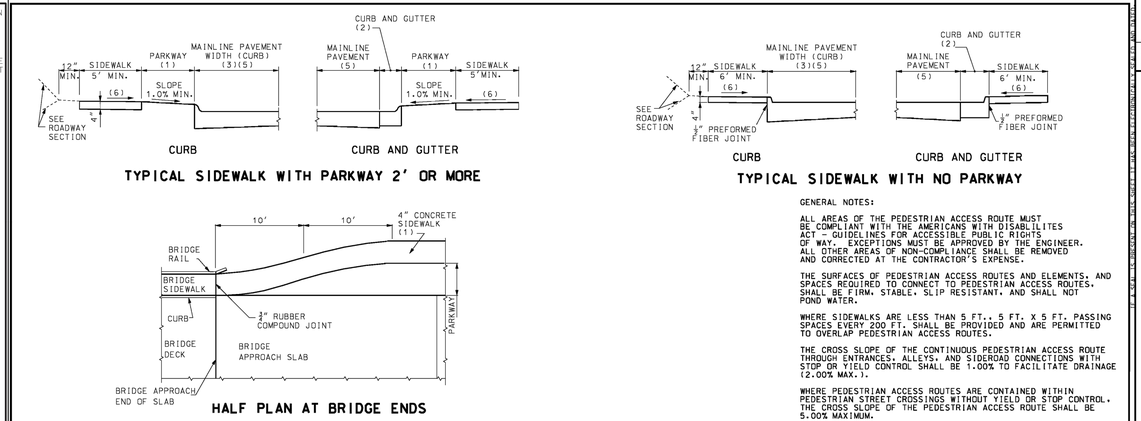
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KENNETH L. VOSS NUMBER PE-2009018741 PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PAVED APPROACHES ADJOINING CURB AND GUTTER SECTIONS

DATE EFFECTIVE:	4/1/2024
DATE PREPARED:	1/10/2024

608.00L | SHEET NO. 1 OF 2



GENERAL NOTES:

ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE AMERICANS WITH DISABILITIES ACT - GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS OF WAY. EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF NON-COMPLIANCE SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

THE SURFACES OF PEDESTRIAN ACCESS ROUTES AND ELEMENTS, AND SPACES REQUIRED TO CONNECT TO PEDESTRIAN ACCESS ROUTES, SHALL BE FIRM, STABLE, SLIP RESISTANT, AND SHALL NOT POND WATER.

WHERE SIDEWALKS ARE LESS THAN 5 FT., 5 FT. X 5 FT. PASSING SPACES EVERY 200 FT. SHALL BE PROVIDED AND ARE PERMITTED TO OVERLAP PEDESTRIAN ACCESS ROUTES.

THE CROSS SLOPE OF THE CONTINUOUS PEDESTRIAN ACCESS ROUTE THROUGH ENTRANCES, ALLEYS, AND SIDEROAD CONNECTIONS WITH STOP OR YIELD CONTROL SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN PEDESTRIAN STREET CROSSINGS WITHOUT YIELD OR STOP CONTROL, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE 5.00% MAXIMUM.

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN MIDBLOCK PEDESTRIAN STREET CROSSINGS, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

STORMWATER INLETS, SIGNS, POSTS, MANHOLE COVERS, PULL BOXES AND OTHER ACCESS LIDS SHOULD BE AVOIDED WITHIN THE SIDEWALK. IF SUCH A LOCATION IS NECESSARY, THE FEATURE MUST MEET ADA STANDARDS.

THE RUNNING GRADE OF A SIDEWALK SHALL NOT EXCEED 5.0% UNLESS IT IS MATCHING THE GRADE OF THE ADJACENT ROADWAY.

PEDESTRIAN ACCESS ROUTE SHALL CONTINUE ACROSS RESIDENTIAL AND COMMERCIAL ENTRANCES, ALLEYS, AND SIDEROAD CONNECTIONS.

(1) SEE PLANS FOR WIDTH
(2) SEE STANDARD 608.00
(3) CURB TO BE MONOLITHIC WITH PCC MAINLINE PAVEMENT. CURB TO BE TYPE S WITH ASPHALT CONCRETE MAINLINE PAVEMENT. SEE STANDARD PLAN 609.00.
(4) MIN. ½" DEPTH JOINT.
(5) SEE TYPICAL PAVEMENT SECTION
(6) SLOPE 1.0% (2.0% MAX.)
(7) SPACING EQUAL TO WIDTH OF WALK

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

ERIC E. SCHROETER NUMBER PE-2012021441 PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

CONCRETE SIDEWALK

DATE EFFECTIVE:	04/01/2015
DATE PREPARED:	2/20/2015

608.10P | SHEET NO. 1 OF 1

olsson
1027 South Main Street
Suite 503
Joplin, Missouri 64801
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REVISIONS

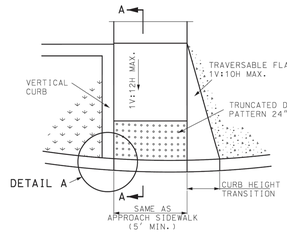
REV. NO.	DESCRIPTION	BY	DATE

MODOT DETAILS II
7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI
JOPLIN, MISSOURI
2025

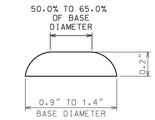
drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET G-601

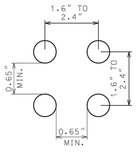
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DATE: Nov 25, 2025 4:14pm USER: ktucker



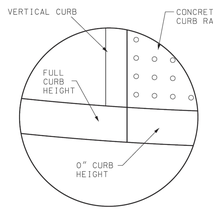
CURB RAMP DETAIL



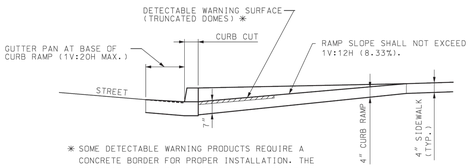
TRUNCATED DOMES CROSS SECTION



TRUNCATED DOMES SPACING



DETAIL A



* SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. THE CONCRETE BORDER SHALL NOT EXCEED 2" PER SIDE.

SECTION A-A

GENERAL NOTES:

ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE AMERICANS WITH DISABILITIES ACT – GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS OF WAY". EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF NON-COMPLIANCE SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

THE SURFACES OF PEDESTRIAN ACCESS ROUTES AND ELEMENTS, AND SPACES REQUIRED TO CONNECT TO PEDESTRIAN ACCESS ROUTES, SHALL BE FIRM, STABLE, SLIP RESISTANT, AND SHALL NOT POND WATER.

SIDEWALK, RAMP AND LANDING CROSS SLOPES SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

THE CROSS SLOPE OF THE CONTINUOUS PEDESTRIAN ACCESS ROUTE THROUGH ENTRANCES, ALLEYS, AND SIDE ROAD CONNECTIONS WITH STOP OR YIELD CONTROL SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN PEDESTRIAN STREET CROSSINGS WITHOUT YIELD OR STOP CONTROL, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE 5.00% MAXIMUM.

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN MIDBLOCK PEDESTRIAN STREET CROSSINGS, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

30"x 48" CLEAR SPACE SHALL BE PROVIDED CENTERED ON THE PEDESTRIAN PUSH BUTTON.

BEYOND THE BOTTOM GRADE BREAK OF A CURB RAMP, A CLEAR SPACE 4'MINIMUM BY 4'MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.

SIDE FLARES OF CURB RAMPS, IN THE PATH OF PEDESTRIAN TRAVEL (TRAVERSABLE), SHALL NOT EXCEED A SLOPE OF 1V:10H. SIDE FLARES OUTSIDE THE PEDESTRIAN PATH (NONTRAVERSABLE) MAY BE VERTICAL.

TRANSITION FROM SIDEWALK OR CURB RAMP TO GUTTER TO ROADWAY SHALL BE FLUSH.

DETECTABLE WARNING SURFACES (TRUNCATED DOMES) SHALL BE PREFORMED AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. STAMPED CONCRETE WILL NOT BE ACCEPTED.

THE DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. TRUNCATED DOMES SHALL SPAN THE FULL WIDTH OF THE RAMP OR LANDING 24" DEEP.

DETECTABLE WARNING SURFACES SHALL BE ALIGNED PERPENDICULAR OR RADIAL TO THE BREAK BETWEEN THE RAMP, LANDING OR BLENDED TRANSITION, AND THE STREET.

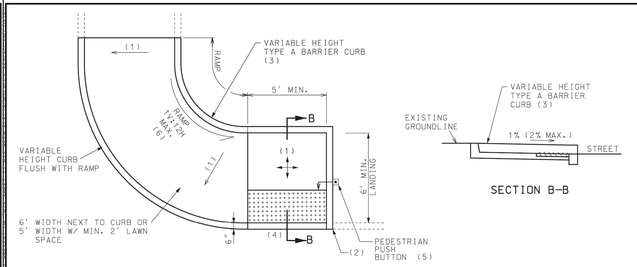
WHERE THE BOTTOM GRADE BREAK OF A CURB RAMP IS LESS THAN 5' FROM THE BACK OF CURB, DETECTABLE WARNINGS SHALL BE LOCATED ON THE RAMP SURFACE AT THE BACK OF THE CURB. WHERE THE GRADE BREAK IS GREATER THAN 5' FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE LOWER LANDING.

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JEFFERSON CITY, MO 65102
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STATE OF MISSOURI — TRAVIS S. KOESTNER — NUMBER PE-2009043 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

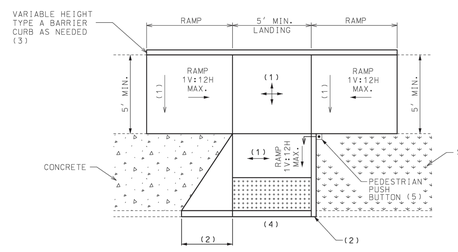
CURB RAMPS

DATE EFFECTIVE: 01/01/2023	608.50A	SHEET NO. 1 of 4
DATE PREPARED: 10/6/2022		

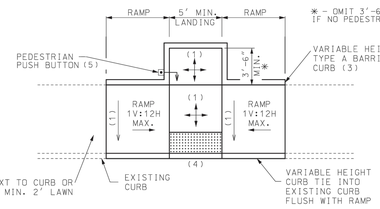


TYPE 1 PARALLEL

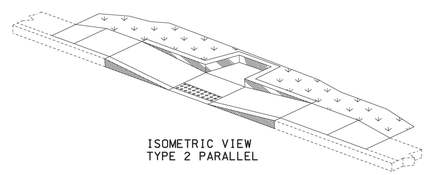
SECTION B-B



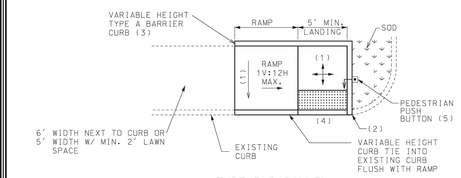
COMPOUND PERPENDICULAR



TYPE 2 PARALLEL



ISOMETRIC VIEW
TYPE 2 PARALLEL



TYPE 3 PARALLEL

GENERAL NOTES:

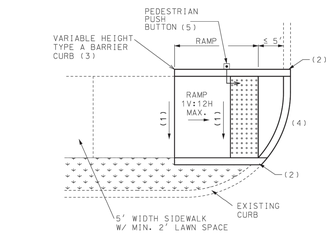
(1) 1.0% (2.0% MAX.) CROSS SLOPE OR ROAD GRADE EXCEPTION.
(2) VARIABLE HEIGHT VERTICAL CURB. IF TRAVERSABLE USE A MAXIMUM 1V:10H FLARE MEASURED PARALLEL TO THE CURB LINE.
(3) HEIGHT VARIES TO MEET EXISTING GROUND.
(4) THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF CURB RAMP RUNS, BLENDED TRANSITIONS, AND TURNING SPACES SHALL BE 5% MAXIMUM.
(5) THE FACE OF PEDESTRIAN PUSH BUTTONS SHALL BE OFFSET 0" FOR FRONT APPROACH AND 10" MAX. FOR SIDE APPROACH TO THE CURB FACE.
(6) ENSURE THAT THE INSIDE EDGE OF CURVED RAMPS MAINTAIN AN 8.33% (1V:12H) MAXIMUM SLOPE.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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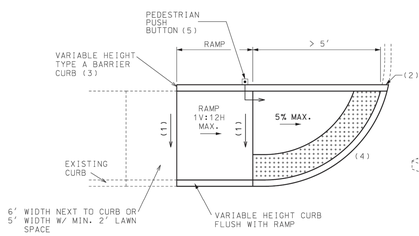
STATE OF MISSOURI — TRAVIS S. KOESTNER — NUMBER PE-2009043 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

CURB RAMPS

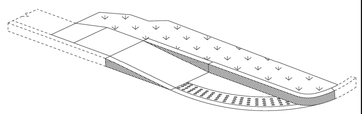
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DATE PREPARED: 10/6/2022		



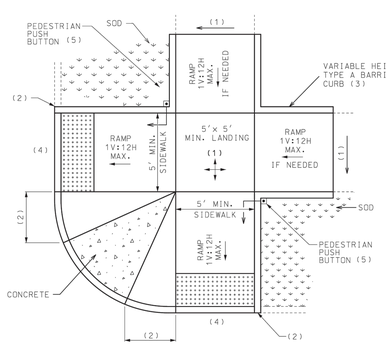
SMALL RADIUS PERPENDICULAR



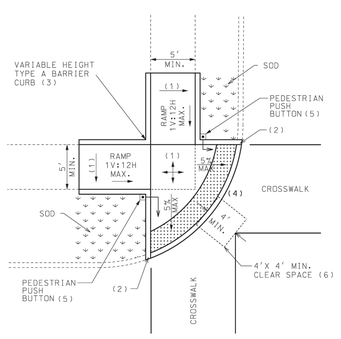
LARGE RADIUS PERPENDICULAR



ISOMETRIC VIEW
LARGE RADIUS PERPENDICULAR



DUAL PERPENDICULAR



BLENDED TRANSITION

GENERAL NOTES:

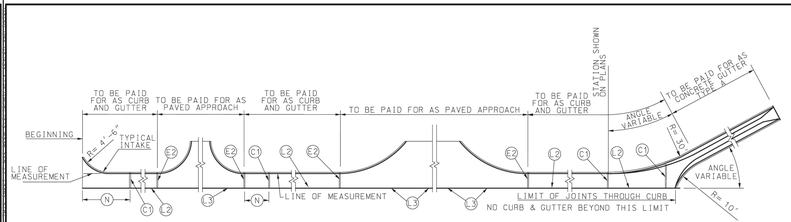
(1) 1.0% MINIMUM, 2.0% MAXIMUM CROSS SLOPE.
(2) VARIABLE HEIGHT VERTICAL CURB. IF TRAVERSABLE USE A MAX. 1V:10H FLARE MEASURED PARALLEL TO THE CURB LINE.
(3) HEIGHT VARIES TO MEET EXISTING GROUND.
(4) THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF CURB RAMP RUNS, BLENDED TRANSITIONS, AND TURNING SPACES SHALL BE 5% MAXIMUM.
(5) THE FACE OF PEDESTRIAN PUSH BUTTONS SHALL BE OFFSET 0" FOR FRONT APPROACH AND 10" MAX. FOR SIDE APPROACH TO THE CURB FACE.
(6) BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE 4'X 4' MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.

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

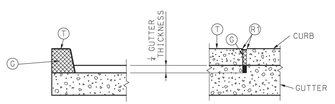
STATE OF MISSOURI — TRAVIS S. KOESTNER — NUMBER PE-2009043 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

CURB RAMPS

DATE EFFECTIVE: 01/01/2023	608.50A	SHEET NO. 3 of 4
DATE PREPARED: 10/6/2022		



PLAN OF MEASUREMENT OF CURB & GUTTER AND JOINT PLAN



C1 JOINT



E1 JOINT



E2 JOINT

LEGEND

(E1) ½" MAXIMUM WIDTH TRANSVERSE CONTRACTION JOINT (PREFORMED OR SAWED).
(E) 2" TRANSVERSE EXPANSION JOINT (PREFORMED OR SAWED).
(E2) ½" TRANSVERSE EXPANSION JOINT (PREFORMED OR SAWED).
(F) FILLER FOR JOINTS – HOT POURED.
(G) PREFORMED JOINT FILLER MATERIAL.
(L) LONGITUDINAL JOINT WITH TIE BARS.
(L1) LONGITUDINAL JOINT WITHOUT TIE BARS.
(N) NOT LESS THAN 10' OR MORE THAN 30'.
(T) TOP OF CURB.
(R1) ROUND TO ¼" RADIUS (EXCEPT FOR SAWED JOINTS).

GENERAL NOTES:

A MINIMUM 4" TYPE 1 OR 5 AGGREGATE BASE SHALL BE PLACED BENEATH ALL CURB AND GUTTER SECTIONS AND INCLUDED WITHIN THE MAINLINE BASE PAY LIMITS.

WHEN CURBS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, CURB HEIGHT SHALL BE 4 INCH BARRIER CURB, AS SHOWN ON STANDARD PLAN 606.00.

CURB, GUTTER AND CURB AND CUTTER CONSTRUCTED ALONG AND ATTACHED TO CONCRETE PAVEMENT OR BASE SHALL HAVE:

1. JOINT (C1) ONE-QUARTER DEPTH OF CURB AND GUTTER THICKNESS AS A CONTINUATION OF EACH CONTRACTION JOINT IN THE BASE OR PAVEMENT.
2. JOINT (E1) AS CONTINUATION OF 2" EXPANSION JOINT (E) IN THE CONCRETE BASE OR PAVEMENT SHALL EXTEND AND CONTINUE THROUGH THE CURB, CUTTER AND CURB AND GUTTER.
3. JOINT (E2) THROUGH CURB AND CURB AND CUTTER AT THE BEGINNING AND END OF EACH PAVED APPROACH.

CURB, CURB AND GUTTER AND GUTTER CONSTRUCTED APART OR SEPARATED FROM CONCRETE BASE OR PAVEMENT OR AS A FORM FOR ASPHALTIC CONCRETE PAVEMENT SHALL HAVE A JOINT (E2) ENTIRELY THROUGH THE CURB, CURB AND GUTTER AND GUTTER, AT THE BEGINNING AND END OF EACH "PAVED APPROACH" AND A JOINT (C1) TO ¼ DEPTH OF CURB AND GUTTER THICKNESS AT INTERVALS OF 30 FEET BETWEEN APPROACHES.

JOINTS (E) AND (E2) THROUGH CURB SHALL BE FILLED WITH PREFORMED FILLER MATERIAL AND SEALED WITH HOT POURED FILLER FOR JOINTS.

JOINT (E1) IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH HOT FILLER MATERIAL.

JOINT (E2) IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH FILLER OR FILLED WITH HOT POURED FILLER.

PREFORMED FILLER MATERIAL SHALL BE PLACED TO PROVIDE 1" HOT POURED FILLER FOR JOINTS.

THE BARRIER CLASS CURBS MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6 FEET OR LESS. THE (E2) WILL BE REQUIRED.

WHERE A SIDEWALK INTERSECTS A CURB, THE SIDEWALK SHALL BE RAMPED NO STEEPER THAN 12:1 SLOPE TO PROVIDED ACCESS FOR WHEELCHAIR ACROSS APPROACHES.

PRECAST TYPE A AND B GUTTER ARE ONLY ALLOWED WHEN CONSTRUCTABILITY ISSUES MAKE CAST IN PLACE NOT PRACTICAL. PRECAST IS ONLY ALLOWED WITH THE APPROVAL OF THE ENGINEER. WHEN ALLOWED BY THE ENGINEER, TYPES A AND B GUTTER MAY BE PRECAST TO CONFORM TO THE DIMENSIONS SHOWN. THE PRECASTER SHALL SUBMIT SHOP DRAWINGS INDICATING THE SECTION LENGTH, SECTION CONNECTION, AND PROPOSED JOINT SEALING SYSTEM. WHEN PRECAST SECTIONS CANNOT CONFORM TO ANY VERTICAL OR HORIZONTAL CURVE THEN CAST IN PLACE IS THE ONLY OPTION. A COMBINATION OF CAST IN PLACE AND PRECAST GUTTER MAY BE PERMITTED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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STATE OF MISSOURI — KENNETH L. VOSS — NUMBER PE-2009018 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

CONCRETE CURB, CURB AND GUTTER, AND GUTTER

DATE EFFECTIVE: 1/1/2025	609.00R	SHEET NO. 1 OF 2
DATE PREPARED: 10/4/2024		

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Missouri COA #001592

REV. NO.	DATE	DESCRIPTION	BY
		REVISIONS	

MODOT DETAILS III

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

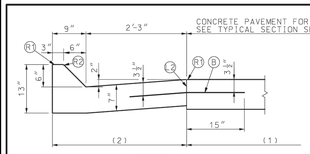
JOPLIN, MISSOURI

2025

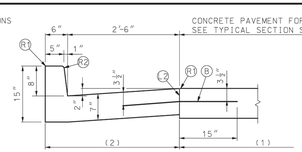
drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-602

F:\2024\03501-04000\024-03774\40-Design\AutoCAD\Final Plans\Sheets\WWWP_DTL02_02403774.dwg
DATE: Nov 25, 2025 4:14pm USER: ktucker

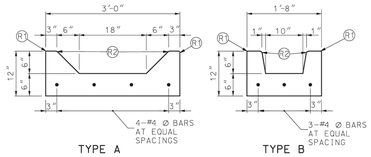


TYPE A
(MOUNTABLE)



TYPE B
(BARRIER)

CURB & GUTTER

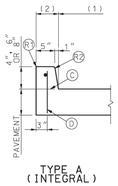


TYPE A

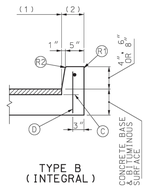
TYPE B

GUTTERS

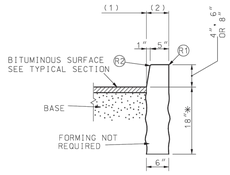
SEE STANDARD PLAN 607.11 FOR MODIFIED TYPE A AND B GUTTERS



TYPE A
(INTEGRAL)



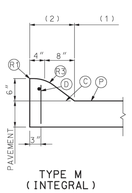
TYPE B
(INTEGRAL)



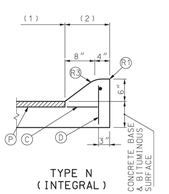
TYPE S
(SEPARATED)

✳ DEPTH MAY BE REDUCED IF KEYED 6" IN ROCK

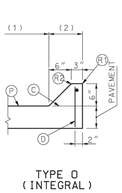
BARRIER CURBS



TYPE M
(INTEGRAL)

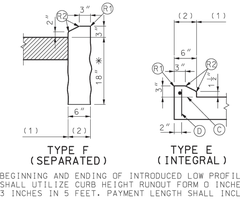


TYPE N
(INTEGRAL)



TYPE O
(INTEGRAL)

MOUNTABLE CURBS



TYPE F
(SEPARATED)

TYPE E
(INTEGRAL)

BEGINNING AND ENDING OF INTRODUCED LOW PROFILE CURB SHALL UTILIZE CURB HEIGHT RUNOUT FORM D INCHES TO 3 INCHES IN 5 FEET. PAYMENT LENGTH SHALL INCLUDE TAPERS.

✳ DEPTH MAY BE REDUCED IF KEYED 6" IN ROCK.

LOW PROFILE CURB

LEGEND

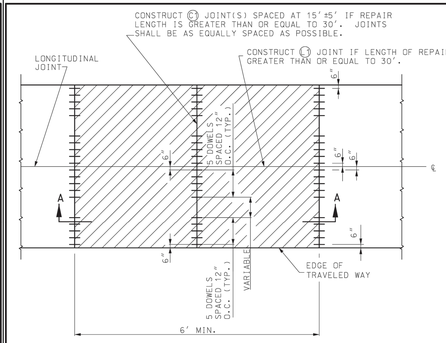
- (B) TIE BARS – 30" X #5 Ø AT 30" CTRS.
- (C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER LONGITUDINAL AND TIE BARS MUST BE USED.
- (D) #3 OR #4 Ø EPOXY COATED LONGITUDINAL AND TIE BARS. LONGITUDINAL BAR GAPPED 4" AT JOINTS AND ANY SPLICES LAPPED 8". TIE BARS AT 24" CENTERS AND LENGTH EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB MINUS 3". MINIMUM 1" COVER OVER ALL BARS.
- (L) LONGITUDINAL JOINT WITH TIE BARS.
- (P) TOP OF PAVEMENT OR CONCRETE BASE.
- (R1) ROUND TO ½" RADIUS (EXCEPT FOR SAWED JOINTS).
- (R2) ROUND TO ¾" RADIUS.
- (R3) CONSTRUCT TO 9" RADIUS.
- (1) PAY LIMIT FOR PAVEMENT
- (2) PAY LIMIT FOR CURB. OR CURB & GUTTER.

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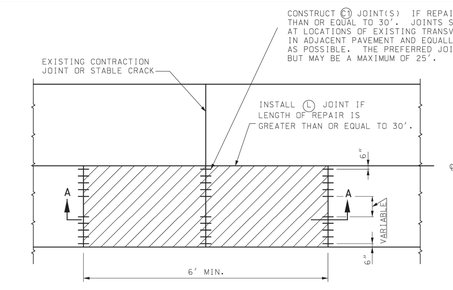
STATE OF MISSOURI · KENNETH L. VOSS · NUMBER PE-2009018747 · PROFESSIONAL ENGINEER
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CONCRETE CURB, CURB AND GUTTER, AND GUTTER

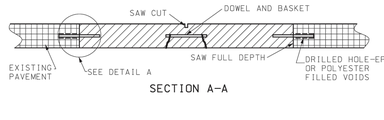
DATE EFFECTIVE:	1/1/2025	609.00R	SHEET NO. 2 OF 2
DATE PREPARED:	10/4/2024		



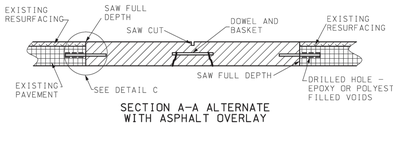
TWO OR MORE LANES



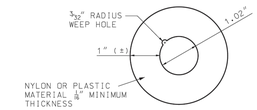
ONE LANE



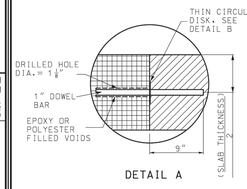
SECTION A–A



SECTION A–A ALTERNATE
WITH ASPHALT OVERLAY

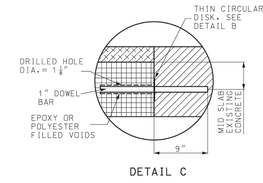


DETAIL B
THIN CIRCULAR DISK



DETAIL A

1. SMOOTH EPOXY COATED DOWELS SHALL BE USED IN ALL FULL DEPTH PAVEMENT REPAIR TRANSVERSE JOINTS.
2. THE ANCHORING MATERIAL (EPOXY OR POLYESTER) SHALL BE PLACED TO THE BACK OF THE PREDRILLED HOLE BEFORE INSERTING THE DOWEL BAR.
3. THE DOWEL IS INSERTED INTO THE HOLE WITH A TWISTING MOTION SO THAT THE MATERIAL IN THE BACK OF THE HOLE IS FORCED UP AND AROUND THE BAR.
4. EXPOSED END OF DOWEL SHALL BE COATED WITH A THIN UNIFORM COAT OF GRAPHITE GREASE. DOWEL BASKET ASSEMBLIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD PLAN 502.10. IN LIEU OF GRAPHITE GREASE, THE DOWEL BAR BASKET SUPPLIER MAY PROVIDE COMPLETED BASKET UNITS PRE-DIPPED IN AN APPROVED BONDBREAKER.
5. REPAIR ONLY ONE LANE AT A TIME.



DETAIL C

NON-REINFORCED AND REINFORCED PORTLAND CEMENT CONCRETE

GENERAL NOTES:

ALL SAW CUTS SHALL BE MADE WITH A DIAMOND SAW EXCEPT THE CENTER RELIEF CUT.

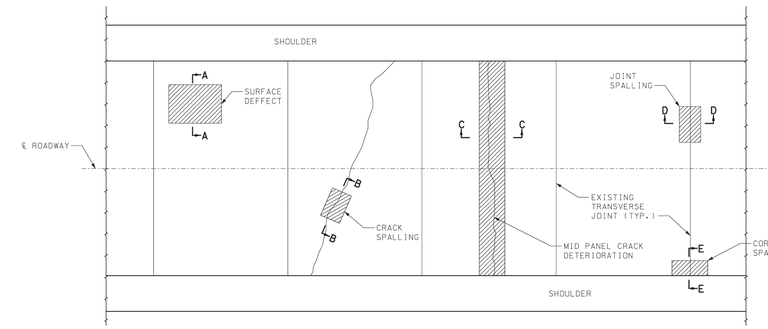
FOR DETAILS OF TYPE (C), (L) AND (L1) JOINTS. SEE STANDARD PLAN 502.05.

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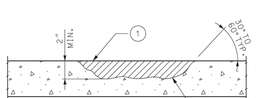
PAVEMENT REPAIR
FULL DEPTH

DATE EFFECTIVE:	01/01/2020	613.00T	SHEET NO. 1 OF 4
DATE PREPARED:	10/17/2019		

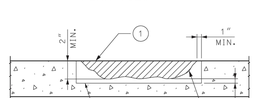


PLAN VIEW

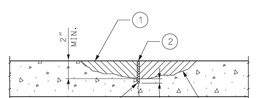
1. REMOVE ALL CONCRETE, TO LIMITS SHOWN, TO MAX. OF ½ THE PAVEMENT DEPTH OR TOP OF DOWELS BY MILLING.
2. PLACE COMPRESSIBLE INSERT IN JOINT OR CRACK. INSERT SHALL BE THICKNESS OF JOINT OR CRACK WIDTH, BUT NOT LESS THAN ¼".
3. CHIP VERTICAL REPAIR EDGES AT APPROXIMATE 1:1 SLOPE.
4. PLACE ¼" MIN. COMPRESSIBLE INSERT ADJACENT TO LONGITUDINAL LANE OR SHOULDER JOINT.
5. EXPOSED SURFACE SHALL BE CLEANED BY SANDBLASTING OR SHOTBLASTING.
6. EXPOSED SURFACE OF DOWEL BARS SHALL BE COATED WITH AN APPROVED BONDBREAKER.



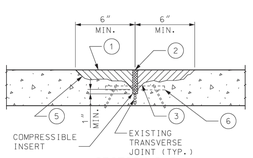
SECTION A–A



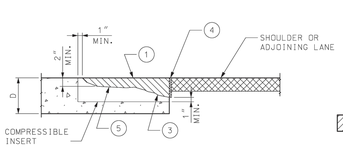
SECTION B–B



SECTION C–C



SECTION D–D



SECTION E–E

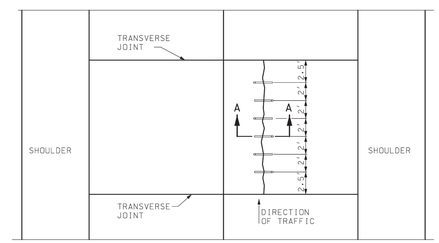
AREA TO BE REMOVED

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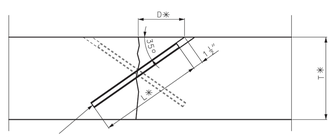
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PAVEMENT REPAIR
PARTIAL DEPTH
CLASS A

DATE EFFECTIVE:	01/01/2020	613.00T	SHEET NO. 2 OF 4
DATE PREPARED:	10/17/2019		



CROSS STITCHING PLAN



✳ SEE TABLE

T	SLAB THICKNESS (IN)	8	9	10	11	12
D	DISTANCE TO HOLE (IN)	5½	6⅓	7¼	8⅓	8⅓
L	LENGTH OF BAR (IN)	8½	11	12⅓	14	16

SECTION A–A

GENERAL NOTES:

AT EACH REPAIR LOCATION, HOLES SHALL BE DRILLED AT 35° ANGLES TO THE PAVEMENT SURFACE, PERPENDICULAR TO THE CRACK. THE DRILL BIT DIAMETER SHALL NOT EXCEED 1¼".

DRILLING SHALL ALTERNATE BACK AND FORTH ON EITHER SIDE OF THE LONGITUDINAL JOINT FROM HOLE TO HOLE.

DRILLED HOLES SHALL NOT PENETRATE THROUGH THE SLAB BOTTOM.

DRILLED HOLES SHALL BE CLEANED OF LOOSE DEBRIS AND DUST. EPOXY OR POLYESTER BONDING AGENTS FOR DOWELS, MEETING THE MATERIAL REQUIREMENTS OF SECTION 1039, SHALL BE INJECTED OR POURED INTO EACH HOLE. A CROSS-STITCH BAR SHALL BE INSERTED IN EACH HOLE SUCH THAT THE EPOXY MATERIAL IS EVENLY DISTRIBUTED AROUND THE BAR AND EXTRUDING FROM THE SURFACE OPENING. EACH BAR SHALL BE INSERTED FAR ENOUGH TO ALLOW 1½" OF COVER AS SHOWN IN THE PROFILE DETAIL.

THE SURFACE SHALL HAVE ALL EXCESS EPOXY REMOVED AND HAVE A FLUSH FINISH.

GENERAL NOTES:

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PAVEMENT REPAIR
CROSS STITCHING

DATE EFFECTIVE:	01/01/2020	613.00T	SHEET NO. 3 OF 4
DATE PREPARED:	10/17/2019		

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

MODOT DETAILS IV

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

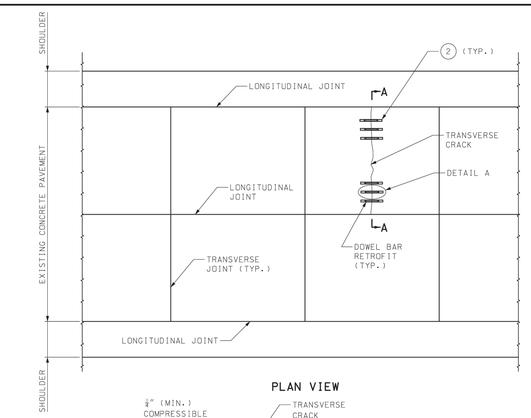
JOPLIN, MISSOURI

2025

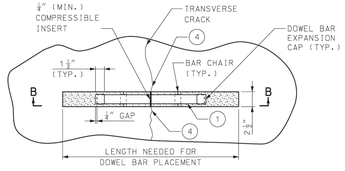
drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-603

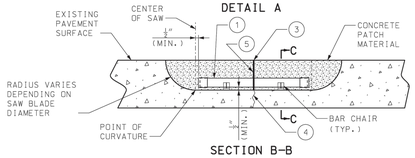
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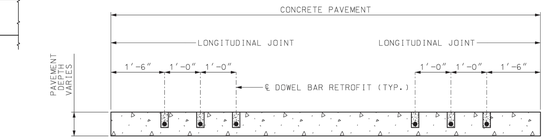
PLAN VIEW



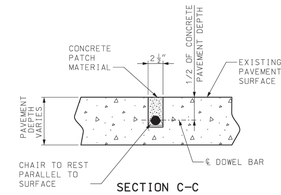
DETAIL A



SECTION B-B



SECTION A-A



SECTION C-C

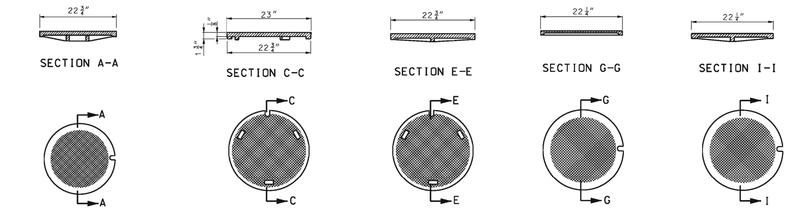
1. 1½" DIAMETER DOWEL BAR X 18" LENGTH.
2. DOWEL BAR SLOTS SHALL BE PARALLEL TO ROADWAY.
3. TOP OF COMPRESSIBLE INSERT SHALL BE FLUSH WITH PAVEMENT SURFACE.
4. CRACK PERIMETER IN SLOT SHALL BE SEALED WITH SILICONE.
5. COMPRESSIBLE INSERT SHALL BE PLACED AT MIDDLE OF DOWEL BAR.

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STATE OF MISSOURI — MARK S. KOESTNER — NUMBER PE-2009 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY

PAVEMENT REPAIR
DOWEL BAR RETROFIT

DATE EFFECTIVE:	01/01/2020	613.00T	SHEET NO. 4 OF 4
DATE PREPARED:	10/17/2019		



GENERAL NOTES:

TYPE 1A:
WHEN "P" (PAVEMENT THICKNESS) IS 8" USE MANHOLE FRAME WITH 9" HEIGHT (F) APPROXIMATE WEIGHT OF FRAME AND COVER. 540 LBS.. CLASS 35 CASTING.

TYPE 1B:
WHEN "P" (PAVEMENT THICKNESS) IS 9" OR 10". USE MANHOLE FRAME WITH 10" HEIGHT (F) APPROXIMATE WEIGHT OF FRAME AND COVER. 570 LBS.. CLASS 35 CASTING.

TYPE1C:
TYPE 1C MANHOLE FRAME AND COVER WILL BE ACCEPTED AS AN ALTERNATE TO TYPE 1A OR TYPE 1B. APPROXIMATE WEIGHT OF FRAME AND COVER. 290 LBS..

FOR "P" GREATER THAN 10" ADJUSTING RINGS COMBINED WITH MANHOLE FRAMES WITH "F" EQUAL TO 9" OR 10" SHALL BE USED TO MATCH THE PAVEMENT THICKNESS.

THE PRICE BID FOR MANHOLE FRAME AND COVER SHALL INCLUDE THE NUMBER OF ADJUSTING RINGS REQUIRED TO MATCH PAVEMENT THICKNESS.

WHEN SPECIFIED, USE A LOCK TYPE FRAME AND COVER WITH A MINIMUM OF 3 LOCK BLOCKS AND BOLTS.

MANHOLE ADJUSTING RINGS SHALL BE SECURED TO EITHER THE FRAME OR PAVEMENT TO PREVENT MOVEMENT UNDER TRAFFIC.

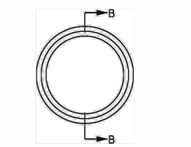
A CHECKERED DESIGN TOP SHALL BE FURNISHED.

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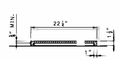
MANHOLE FRAMES AND COVERS

DATE EFFECTIVE:	03/01/1996	614.30E	SHEET NO. 1 OF 2
DATE PREPARED:	8/21/2009		





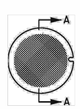





ELEVATION

ADJUSTING RING
SOLID OR ADJUSTABLE

INSTALLATION DETAILS



APPROXIMATE WEIGHT OF FRAME AND COVER 150 LBS.

ALTERNATE
TYPE 4 COVER

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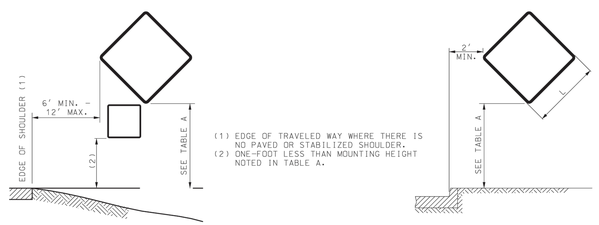
MANHOLE FRAMES AND COVERS

DATE EFFECTIVE:	03/01/1996	614.30E	SHEET NO. 2 OF 2
DATE PREPARED:	8/21/2009		

TABLE A
WORK ZONE SIGN MOUNTING REQUIREMENTS

TYPE	SIGN SUPPORT	SIGN SUBSTRATE	MINIMUM MOUNTING HEIGHT(3)	USAGE LIMITATIONS	COMMENTS
POST	PERFORATED SQUARE STEEL TUBE U-CHANNEL WOOD	RIGID	5' RURAL UNDIVIDED HIGHWAYS 7' RURAL DIVIDED HIGHWAYS 7' URBAN HIGHWAYS	NONE	POSTS SHALL BE FREE OF ANY BRACING AND EXTEND NO FURTHER ABOVE THE SIGN EXCEPT AS NEEDED FOR WARNING LIGHT ATTACHMENT. FOR DETAILS OF POST INSTALLATION DETAILS SEE SHEET NO. 2 OF 9. GALVANIZATION OF POSTS WILL NOT BE REQUIRED.
TYPE 1 PORTABLE	SKID FOLD-UP STAND	RIGID	5' RURAL UNDIVIDED HIGHWAYS 7' RURAL DIVIDED HIGHWAYS 7' URBAN HIGHWAYS	PERMITTED ONLY WHERE POST MOUNTING IS NOT FEASIBLE.	SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 OR MASH 2016 TL-3 AND MAY BE PLACED ADJACENT TO OR WITHIN THE ROADWAY PROVIDED A MINIMUM LATERAL CLEARANCE OF 3 FEET. MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF DESIGNATED TRAVELED WAY. IS MAINTAINED.
TYPE 2 PORTABLE	EASEL FOLD-UP STAND SELF-DRIVING POST TYPE III MOVABLE BARRICADE SKID	FLEXIBLE RIGID	12"(4)	PERMITTED FOR PROGRESSIVE WORK SUCH AS ASPHALT OVERLAYS. PERMITTED FOR STATIONARY WORK EXPECTED TO BE COMPLETED IN 3 DAYS OR LESS. PERMITTED FOR INTERMEDIATE/DIS-CONTINUOUS STATIONARY WORK THAT MAY EXCEED 3 DAYS IN TOTALITY, AS APPROVED BY THE ENGINEER.(5) WHERE SIGNS ARE OBSCURED BY OTHER OBJECTS (I.E., TRAFFIC CONTROL DEVICES, PARKED VEHICLES, BARRIERS, VEGETATION, ETC.) OR INSTALLED ON MULTI-LANE UNDIVIDED FACILITIES OR MULTILANE DIVIDED FACILITIES WITH 3 OR MORE LANES IN ONE DIRECTION, MOUNTING HEIGHTS SHALL BE AS SPECIFIED FOR POST-MOUNTED SIGNS.	SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 OR MASH 2016 TL-3 AND MAY BE PLACED ADJACENT TO OR WITHIN THE ROADWAY PROVIDED A MINIMUM LATERAL CLEARANCE OF 3 FEET. MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF DESIGNATED TRAVELED WAY. IS MAINTAINED.
BARRIER	CONCRETE TRAFFIC BARRIER GUARDRAIL	FLEXIBLE RIGID	5' RURAL UNDIVIDED HIGHWAYS 7' RURAL DIVIDED HIGHWAYS 7' URBAN HIGHWAYS	PERMITTED ONLY WHERE LONGITUDINAL BARRIER IS PRESENT.	SYSTEMS SHALL PROVIDE POSITIVE CON-NECTION TO THE BARRIER AND MINIMIZE POTENTIAL FOR VEHICLE SNAGGING.
VEHICLE	PAVEMENT MARKING EQUIPMENT PILOT CAR PROTECTIVE VEHICLE	FLEXIBLE RIGID	48" (6)	PERMITTED ONLY IN PILOT CAR OR MOVING OPERATIONS.	

(3) MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT.
(4) MOUNTING HEIGHTS FOR REGULATORY AND GUIDE SIGNS SHALL BE AS SPECIFIED FOR POST-MOUNTED SIGNS.
(5) SIGNS MOUNTED ON TYPE III BARRICADES. GORE EXIT SIGN. AND SIGNS FOR CROSSWALK/ SIDEWALK CLOSURES MAY BE LEFT IN PLACE FOR MORE THAN 3 DAYS.
(6) DEVIATIONS AS APPROVED BY THE ENGINEER.



HEIGHT AND LATERAL LOCATIONS FOR POST AND PORTABLE SIGN MOUNTING

GENERAL NOTES:

LONGITUDINAL SPACING OF SIGNS SHOWN IN THE PLANS ARE PREFERRED MINIMUMS. BUT MAY BE ADJUSTED TO MEET EXISTING FIELD CONDITIONS WITH APPROVAL FROM THE ENGINEER.

SIGNS SHALL NOT BE MOUNTED IN OR ON CHANNELIZERS.

ALL POSTS AND SIGNS SHALL BE INSTALLED AND MAINTAINED IN A PLUMB POSITION.

CONSTRUCTION SIGNS SHALL NOT BE LOCATED ON SIDEWALKS, BICYCLE LANES, OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC.

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STATE OF MISSOURI — MARK A. CRUMBO — NUMBER PE-2007018940 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY

TEMPORARY TRAFFIC CONTROL DEVICES
SIGN MOUNTING REQUIREMENTS

DATE EFFECTIVE:	7/1/2025	616.10BF	SHEET NO. 1 OF 9
DATE PREPARED:	3/11/2025		

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REV. NO.	DATE	DESCRIPTION	BY
		REVISIONS	

MODOT DETAILS V

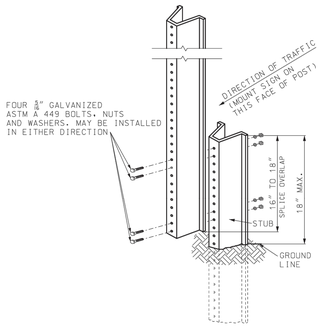
7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI 2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-604

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DATE: Nov 25, 2025 4:14pm USER: ktucker



USE OF SPLICE IS OPTIONAL.

SPLICE OVERLAP SHALL BE POSITIONED ENTIRELY BETWEEN GROUND LINE AND 18" ABOVE GROUND LINE.

ONLY ONE SPLICE WILL BE ALLOWED PER POST.

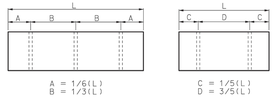
U-CHANNEL POST DETAIL

POST TYPE

SIGN AREA (SQ.FT.)	U-CHANNEL	WOOD	PERFORATED SQUARE STEEL TUBING
≤ 10	1 – 3.0 LB./FT.*	1 – 4" X 4"*	1 – 2" 12 GA.*
> 10 ≤ 16	2 – 3.0 LB./FT.	2 – 4" X 4" 1 – 4" X 6"*	2 – 2" 12 GA. 1 – 2½" 12 GA.
> 16 ≤ 24	2 – 3.0 LB./FT.	2 – 4" X 6"	3 – 2" 12 GA.**
> 24 ≤ 32	3 – 3.0 LB./FT.	2 – 4" X 6"	N/A
> 30 ≤ 50	N/A	2 – 6" X 6"	N/A

* SIGNS GREATER THAN 4 FEET IN WIDTH, EXCEPT DIAMOND SHAPE SIGNS, REQUIRE TWO POSTS.

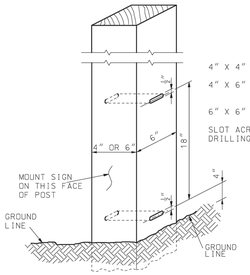
** REQUIRES SLIP BASE PER MANUFACTURER'S RECOMMENDATION.



A = 1/6(L)
B = 1/3(L)

C = 1/5(L)
D = 3/5(L)

POST SPACING



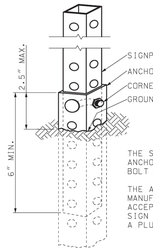
4" X 4" WOOD POST – NO SLOTS OR HOLES REQUIRED

4" X 6" WOOD POST – 1⅛" X ⅜" SLOT ON 6" SIDE OR 1⅛" DIA. HOLE ON 6" SIDE

6" X 6" WOOD POST – 2" X ⅜" SLOT OR 2" DIA. HOLE

SLOT ACROSS NEUTRAL AXIS FORMED BY SUCCESSIVE DRILLING WITH ½" BIT.

WOOD POST DETAIL



THE SIGN POST MAY BE ATTACHED TO THE ANCHOR WITH A CORNER BOLT OR STRAIGHT BOLT PER MANUFACTURER'S SPECIFICATION.

THE ANCHOR SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS TO ACCEPT THE POST SIZE SPECIFIED. THE SIGN ASSEMBLY SHALL BE MAINTAINED IN A PLUMB POSITION.

PERFORATED SQUARE STEEL TUBE POST DETAIL

GENERAL NOTES:

ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.

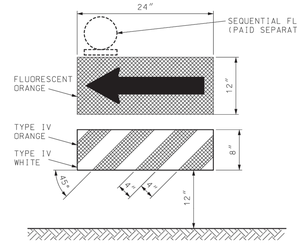
SIGN INSTALLATION DETAILS SHOWN SHALL APPLY TO ALL POSTS IN A MULTI-POST INSTALLATION.

AT THE ENGINEERS DISCRETION A FLUORESCENT PAINT SHALL BE APPLIED HEAVILY TO BOTH SIDES OF U-CHANNEL POST STUB FOR A LENGTH OF AT LEAST 6 INCHES BELOW THE TOP OF THE STUB.

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TEMPORARY
TRAFFIC CONTROL DEVICES
POST INSTALLATION DETAILS

DATE EFFECTIVE:	7/1/2025	616.10BF	SHEET NO. 2 OF 9
DATE PREPARED:	3/11/2025		



DIRECTION INDICATOR BARRICADE

VERTICAL DIMENSIONS DO NOT INCLUDE PROJECTIONS DESIGNED FOR EASE OF HANDLING.

DIRECTION INDICATOR BARRICADES SHALL NOT BE USED IN SHIFTING TAPERS UNLESS SHOWN ON THE PLANS.

THE PANELS SHALL BE SECURELY ATTACHED TO A SUPPORT THAT IS PORTABLE, CAPABLE OF REMAINING UPRIGHT AND ENTIRELY FREE STANDING.

GENERAL NOTES:

WHITE, ORANGE, AND FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.

BALLAST FOR TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUFACTURERS' RECOMMENDATION FOR FIELD CONDITIONS WHEN APPLICABLE.

SEQUENTIAL FLASHING WARNING LIGHTS SHALL BE IN ACCORDANCE WITH SEC 1063.5.

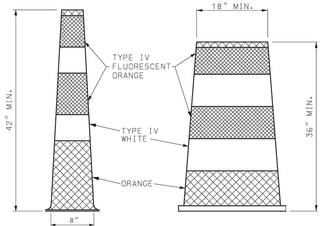
UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE DRUM-LIKE CHANNELIZERS IN LIEU OF TRIM-LINE CHANNELIZERS TO PROVIDE LONGITUDINAL CHANNELIZATION WITHIN THE ACTIVITY AREA WHERE NO RAMPS, INTERSECTIONS OR LIMITED LATERAL CLEARANCE EXISTS.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE DIRECTION INDICATOR BARRICADES IN LIEU OF TRIM-LINE CHANNELIZERS IN MERGING TAPERS.

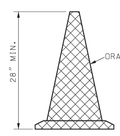
UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE VERTICAL PANELS IN LIEU OF TRIM-LINE CHANNELIZERS TO PROVIDE LONGITUDINAL CHANNELIZATION WITHIN THE ACTIVITY AREA.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE CONES IN LIEU OF TRIM-LINE CHANNELIZERS DURING DAYTIME OPERATIONS ON MINOR ROUTES.

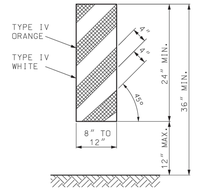
PANEL AND RAIL MARKINGS FOR TRAFFIC DELINEATION SHALL SLOPE DOWNWARD TOWARD THE INTENDED DIRECTION OF TRAVEL. ILLUSTRATIONS SHOWN ARE FOR INSTANCES WHERE TRAFFIC MOVES TO THE LEFT. REVERSE CONFIGURATIONS SHALL BE USED FOR TRAFFIC MOVEMENTS TO THE RIGHT. MARKINGS SHALL ONLY BE APPLIED TO THE FRONT OF EACH RAIL OR PANEL, OR MAY BE APPLIED TO BOTH THE FRONT AND BACK PROVIDING THE MARKING ON THE BACK DOES NOT CONFLICT WITH INTENDED OPPOSING TRAFFIC MOVEMENT.



TRIM-LINE DRUM-LIKE



CONE



VERTICAL PANEL

STRIPES ON TRIM-LINE CHANNELIZERS SHALL BE 6" TO 8". STRIPES ON DRUM-LIKE CHANNELIZERS SHALL BE 4" TO 6".

WHITE AND FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.3.

CONES SHALL MAINTAIN THEIR SHAPE UPON EXPOSURE TO NORMAL WORK CONDITIONS.

CONES SHALL BE USED DURING DAYLIGHT HOURS ONLY.

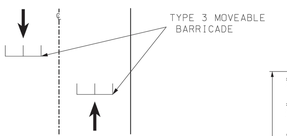
VERTICAL PANELS SHALL BE SECURELY ATTACHED TO A SUPPORT THAT IS PORTABLE, CAPABLE OF REMAINING UPRIGHT AND ENTIRELY FREE STANDING.

CHANNELIZERS

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

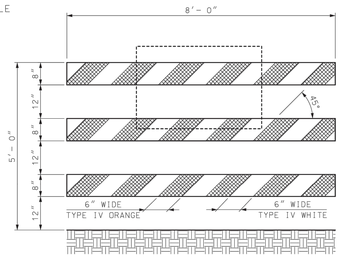
TEMPORARY
TRAFFIC CONTROL DEVICES
CHANNELIZERS AND DIRECTION INDICATOR BARRICADE

DATE EFFECTIVE:	7/1/2025	616.10BF	SHEET NO. 3 OF 9
DATE PREPARED:	3/11/2025		

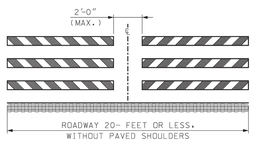


RETROREFLECTIVE MARKING ON TYPE 3 BARRICADES SHALL BE ON BOTH SIDES OF EACH RAIL AND DIRECT TRAFFIC MOVEMENT APPROPRIATELY TO ALLOW VEHICLES TO PASS THROUGH

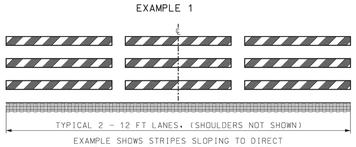
SOFT CLOSURE
PLAN VIEW



EXAMPLE 1

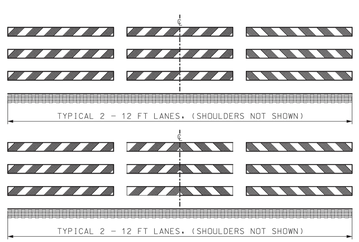


EXAMPLE 2

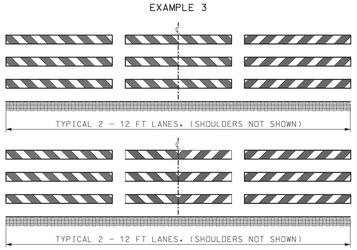


EXAMPLE SHOWS STRIPES SLOPING TO DIRECT VEHICULAR MOVEMENT TOWARD THE LEFT

EXAMPLE 3



EXAMPLE 4



EXAMPLE 5

GENERAL NOTES:

TYPE 3 MOVABLE BARRICADES SHALL BE ENTIRELY FREE STANDING AND PORTABLE. MARKING SHALL ONLY BE APPLIED TO THE FRONT OF EACH RAIL OR MAY BE APPLIED TO BOTH THE FRONT AND THE BACK OF EACH RAIL PROVIDED THE MARKING ON THE BACK DOES NOT CONFLICT WITH INTENDED OPPOSING TRAFFIC MOVEMENT.

WHITE AND ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.4.

EXAMPLE 1 – ONE TYPE 3 MOVABLE BARRICADE WILL BE REQUIRED TO COMPLETELY CLOSE EACH 8' OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

SIGNS SHALL BE LIGHT WEIGHT (ROLL-UP OR PLASTIC) AND SHOULD NOT OBSCURE MORE THAN 50 PERCENT OF THE TOP 2 RAILS OR 33 PERCENT OF ALL THREE RAILS.

IF SIGNS CANNOT MEET THE ABOVE REQUIREMENTS, THEY SHALL BE MOUNTED ON SEPARATE CRASHWORTHY DEVICES AT HEIGHTS SPECIFIED FOR POST MOUNTED SIGNS. LOCATED IN TABLE A ON SHEET 1. THE BARRICADE SHALL BE LOCATED IN FRONT OF THE SIGNS WITH 7 TO 10 FEET SEPARATING THE DEVICES.

EXAMPLE 2 – FOR PAVED ROADWAYS WITH A WIDTH OF 20-FEET OR LESS AND WITHOUT PAVED SHOULDERS. TWO BARRICADES ARE ACCEPTABLE.

EXAMPLE 3 – WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY. STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN.

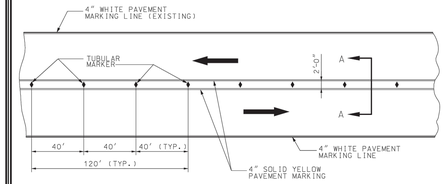
EXAMPLE 4 – WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED. STRIPES SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES.

EXAMPLE 5 – WHERE NO TURNS ARE INTENDED. STRIPES POSITIONED TO SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

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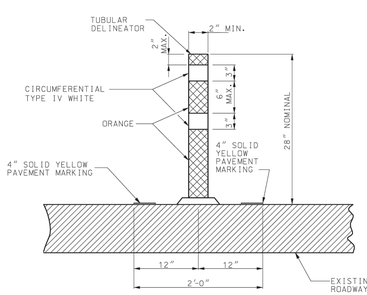
TEMPORARY
TRAFFIC CONTROL DEVICES
TYPE 3 MOVABLE BARRICADE

DATE EFFECTIVE:	7/1/2025	616.10BF	SHEET NO. 4 OF 9
DATE PREPARED:	3/11/2025		



TWO LANE / TWO WAY TRAFFIC DELINEATION PLAN FOR DIVIDED HIGHWAY

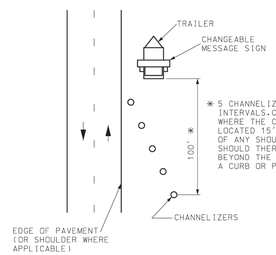
IF RAISED PAVEMENT MARKERS ARE PRESENT, THE LENSES SHALL BE REMOVED OR COVERED TO THE SATISFACTION OF THE ENGINEER.

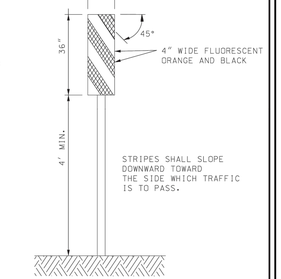


SECTION A–A
TUBULAR DELINEATOR DETAIL

AN ADHESIVE, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SHALL BE USED TO APPLY THE TUBULAR DELINEATOR TO THE ROADWAY SURFACE. THE ADHESIVE SHALL PERMIT EASY REMOVAL OF THE TUBULAR DELINEATOR WITHOUT DAMAGE TO THE ROADWAY SURFACE.

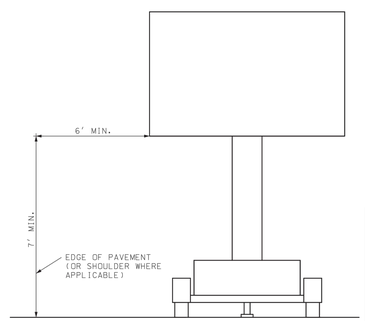
REFLECTIVE SHEETING APPLIED TO TUBULAR DELINEATORS SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.5.





TYPE 3 OBJECT MARKERS

FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.



CHANGEABLE MESSAGE SIGN

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

TEMPORARY
TRAFFIC CONTROL DEVICES

DATE EFFECTIVE:	7/1/2025	616.10BF	SHEET NO. 5 OF 9
DATE PREPARED:	3/11/2025		

olsson
1027 South Main Street
Suite 503
Joplin, Missouri 64801
olsson.com
TEL 417.781.0643
FAX 417.781.4714
Olsson - Engineering
Missouri COA #001592

REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

MODOT DETAILS VI

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

2025

JOPLIN, MISSOURI

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-605

F:\2024\03501-04000\024-03774\40-Design\AutoCAD\Final Plans\Sheets\WWWP_DTL03_02403774.dwg
DATE: Nov 25, 2025 4:15pm USER: ktucker

SIGN	SIZE (IN.)	AREA (SQ. FT.)	SHEETING	COLOR SYM. LEG. BRD.	COLOR BACK-GROUND	DESIGNATION (6)	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TURN (SYMBOL LEFT)
W01-1R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TURN (SYMBOL RIGHT)
W01-2L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	CURVE (SYMBOL LEFT)
W01-2R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	CURVE (SYMBOL RIGHT)
W01-3L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE TURN (SYMBOL LEFT)
W01-3R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE TURN (SYMBOL RIGHT)
W01-4L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE CURVE (SYMBOL LEFT)
W01-4R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE CURVE (SYMBOL RIGHT)
W01-4bL	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT) (2)
W01-4bR	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT) (2)
W01-4cL	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT) (2)
W01-4cR	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT) (2)
W01-6	60X30	12.50	ASTM 9 OR 11	BK	FL. OR	SHF	HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00	ASTM 9 OR 11	BK	FL. OR	SHF	HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE) (1)
W01-7	60X30	12.50	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)(1)
W01-8	18X24	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	CHEVRON (SYMBOL)
W01-8a	30X36	7.50	ASTM 9 OR 11	BK	FL. OR	SHF	CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	STOP AHEAD (SYMBOL)
W03-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BE PREPARED TO STOP
W03-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SPEED LIMIT AHEAD
W04-1L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (SYMBOL FROM RIGHT)
W04-1qL	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (LEFT) (3)
W04-1qR	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (RIGHT) (3)
W05-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD/BRIDGE/RAMP NARROWS (4)
W05-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ONE LANE BRIDGE
W05-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	NARROW LANES (3)
W06-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BUMP
W08-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIP
W08-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	PAVEMENT ENDS
W08-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SOFT SHOULDER
W08-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRUCK CROSSING
W08-6c	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRUCK ENTRANCE (3)
W08-7a	36X36	9.00	ASTM 9 OR 11	BK	FL. OR	SHF	FRESH OIL / LOOSE GRAVEL (3)
W08-9	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW SHOULDER
W08-11	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	UNEVEN LANES
W08-12	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	NO CENTER LINE
W08-15	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	GROOVED PAVEMENT
W08-15P	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	MOTORCYCLE (PLAQUE)
W08-17L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP-OFF (SYMBOL LEFT)
W08-17R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP-OFF (SYMBOL RIGHT)
W08-17P	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP-OFF (PLAQUE)
W10-1	42 RND.	9.62	ASTM 9 OR 11	BK	FL. YL	SHF	RAILROAD CROSSING
W012-1	24X24	4.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE (PLAQUE) (3)
W012-2q	84X24	14.00	ASTM 9 OR 11	BK	FL. OR	SHF	OVERHEAD LOW CLEARANCE (FEET AND INCHES) (3)
W012-4	120X60	50.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE XX FT XX IN XX MILES AHEAD (3)
W012-5	120X60	50.00	ASTM 9 OR 11	BK	FL. OR	SHF	WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD (3)
W013-1	30X30	6.25	ASTM 9 OR 11	BK	FL. OR	SHF	ADVISORY SPEED (PLAQUE)
W016-2P	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	XXX FEET (PLAQUE)
W016-3P	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	X MILE (PLAQUE)
W020-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD/BRIDGE/RAMP WORK AHEAD (4)
W020-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR AHEAD
W020-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD CLOSED AHEAD
W020-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ONE LANE ROAD AHEAD
W020-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/CENTER/LEFT LANE CLOSED AHEAD (4)

(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(2) REFER TO THE LATEST EDITION OF MUTCD PART VI BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA FOR SIGN DEPICTION. ARROW, BORDERS AND SPACING SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(3) ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.

(6) SHF AND SH DESIGNATIONS. REFER TO STD. 903.02 SHEET 1 OF 8.

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA, UNLESS SPECIFIED OTHERWISE.

SIGN DIMENSIONS SHOWN ARE MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE IF CONTRACTORS USE LARGER SIGNS.

NO ADDITIONAL PAYMENT WILL BE MADE FOR PLATES.

ALL PLAQUES SHALL HAVE A BORDER. PLATES SHALL NOT HAVE A BORDER.

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

STATE OF MISSOURI · MARK T. CRAWFORD · NUMBER PE-2003018845 · PROFESSIONAL ENGINEER · MARK T. CRAWFORD, CIVIL · MO-PE-2003018845

TEMPORARY
TRAFFIC CONTROL DEVICES
WARNING SIGNS

DATE EFFECTIVE: 7/1/2025
DATE PREPARED: 3/11/2025
616.10BF
SHEET NO. 6 OF 9

SIGN	SIZE (IN.)	AREA (SQ. FT.)	SHEETING	COLOR SYM. LEG. BRD.	COLOR BACK-GROUND	DESIGNATION (6)	DESCRIPTION
WARNING SIGNS CONT.							
W020-5a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD (4)
W020-6a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/CENTER/LEFT LANE CLOSED (3)(4)
W020-7	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	FLAGGER (SYMBOL)
W021-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER WORK / SHOULDER WORK AHEAD (3)
W021-5a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/LEFT SHOULDER CLOSED (4)
W021-5b	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/LEFT SHOULDER CLOSED AHEAD (4)
W022-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BLASTING ZONE AHEAD
W022-2	42X36	10.50	ASTM 9 OR 11	BK	FL. OR	SHF	TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50	ASTM 9 OR 11	BK	FL. OR	SHF	END BLASTING ZONE
G022-1	15X21	2.19	ASTM 9 OR 11	BK	FL. OR	SHF	WET PAINT (ARROW PIVOTS) (3)
GUIDE SIGNS							
E05-1	36X48	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	GORE EXIT (3)
E05-2	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	EXIT OPEN
E05-2a	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	EXIT CLOSED
G020-1	60X24	10.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD WORK NEXT XX MILES
G020-2	48X24	8.00	ASTM 9 OR 11	BK	FL. OR	SHF	END ROAD WORK
G020-4	36X18	4.50	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR FOLLOW ME - REAR VEHICLE MOUNT SIGN
G020-4a	42X30	8.75	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR IN USE WAIT & FOLLOW - STATE ROUTE SIGN
G020-4a	18X12	1.50	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR IN USE WAIT & FOLLOW - NON-STATE ROUTE SIGN
G020-5aP	36X24	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	WORK ZONE (PLAQUE) (3)(5)
M04-8a	24X18	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	END DETOUR
M04-9L	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (LEFT)
M04-9R	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (RIGHT)
M04-9P	48X12	4.00	ASTM 9 OR 11	BK	FL. OR	SHF	STREET NAME (PLAQUE)
M04-10L	48X18	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR ARROW (LEFT)
M04-10R	48X18	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR ARROW (RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25	ASTM 4	WH	RD	SH	STOP
R1-2	48 TRI.	6.93	ASTM 4	RD	WH	SH	YIELD
R1-2aP	36X36	9.00	ASTM 4	BK	WH	SH	TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50	ASTM 4	WH	RD	SH	ALL WAY (PLAQUE)
R2-1	36X48	12.00	ASTM 4	BK	WH	SH	SPEED LIMIT XX
R3-1	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00	ASTM 4	BK	WH	SH	NO TURNS
R3-4	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO U-TURN (SYMBOL)
R3-7L	30X30	6.25	ASTM 4	BK	WH	SH	LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25	ASTM 4	BK	WH	SH	RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00	ASTM 4	BK	WH	SH	DO NOT PASS
R4-2	36X48	12.00	ASTM 4	BK	WH	SH	PASS WITH CARE
R4-7a	36X48	12.00	ASTM 4	BK	WH	SH	KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00	ASTM 4	BK	WH	SH	KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25	ASTM 4	RD	WH	SH	DO NOT ENTER
R5-1a	36X24	6.00	ASTM 4	WH	RD	SH	WRONG WAY
R6-1L	54X18	6.75	ASTM 4	BK	WH	SH	ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75	ASTM 4	BK	WH	SH	ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00	ASTM 4	BK	WH	SH	ONE WAY (LEFT)
R6-2R	24X30	5.00	ASTM 4	BK	WH	SH	ONE WAY (RIGHT)
R9-9	24X12	2.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED
R9-11L	24X18	3.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED AHEAD (LEFT ARROW) CROSS HERE
R9-11R	24X18	3.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED AHEAD (RIGHT ARROW) CROSS HERE
R10-6	24X36	6.00	ASTM 4	BK	WH	SH	STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	ASTM 4	BK	WH	SH	ROAD CLOSED
R11-3a	60X30	12.50	ASTM 4	BK	WH	SH	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	ASTM 4	BK	WH	SH	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00	ASTM 4	BK	WH/FL.OR	SH	FINE SIGN (3)
CONST-3X	56X12	4.67	ASTM 4	BK	WH	SH	SPEEDING/PASSING (PLATE) (3)
MISCELLANEOUS SIGNS							
CONST-5	48X36	12.00	ASTM 4	WH	BL	SH	POINT OF PRESENCE
CONST-5	96X48	32.00	ASTM 4	WH	BL	SH	POINT OF PRESENCE
CONST-8	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	WORK ZONE NO PHONE ZONE

(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

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(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.

(6) SHF AND SH DESIGNATIONS. REFER TO STD. 903.02 SHEET 1 OF 8.

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA, UNLESS SPECIFIED OTHERWISE.

SIGN DIMENSIONS SHOWN ARE MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE IF CONTRACTORS USE LARGER SIGNS.

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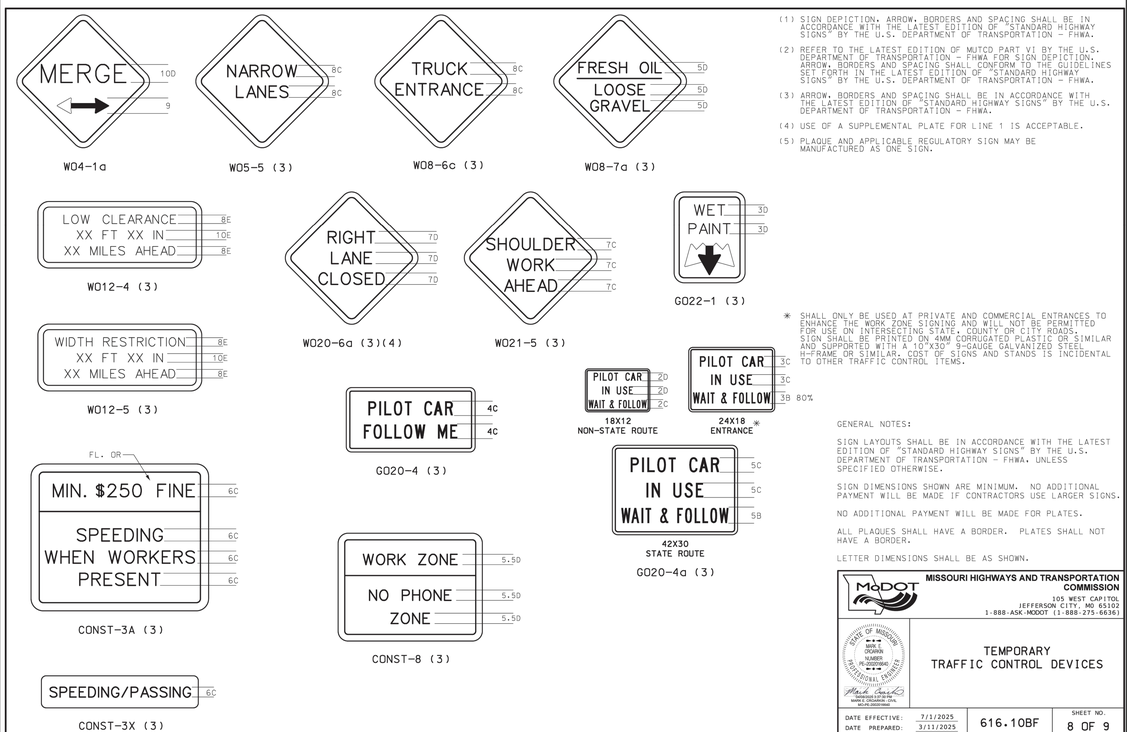
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI · MARK T. CRAWFORD · NUMBER PE-2003018845 · PROFESSIONAL ENGINEER · MARK T. CRAWFORD, CIVIL · MO-PE-2003018845

TEMPORARY
TRAFFIC CONTROL DEVICES
WARNING, GUIDE
AND REGULATORY SIGNS

DATE EFFECTIVE: 7/1/2025
DATE PREPARED: 3/11/2025
616.10BF
SHEET NO. 7 OF 9



(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(2) REFER TO THE LATEST EDITION OF MUTCD PART VI BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA FOR SIGN DEPICTION. ARROW, BORDERS AND SPACING SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(3) ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.

* SHALL ONLY BE USED AT PRIVATE AND COMMERCIAL ENTRANCES TO ENHANCE THE WORK ZONE SIGNING AND WILL NOT BE PERMITTED FOR USE ON INTERSECTING STATE, COUNTY OR CITY ROADS. SIGN SHALL BE PRINTED ON 4MM CORRUGATED PLASTIC OR SIMILAR AND SUPPORTED WITH A 10"X30" 9-GAUGE GALVANIZED STEEL H-FRAME OR SIMILAR. COST OF SIGNS AND STANDS IS INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA, UNLESS SPECIFIED OTHERWISE.

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ALL PLAQUES SHALL HAVE A BORDER. PLATES SHALL NOT HAVE A BORDER.

LETTER DIMENSIONS SHALL BE AS SHOWN.

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

STATE OF MISSOURI · MARK T. CRAWFORD · NUMBER PE-2003018845 · PROFESSIONAL ENGINEER · MARK T. CRAWFORD, CIVIL · MO-PE-2003018845

TEMPORARY
TRAFFIC CONTROL DEVICES

DATE EFFECTIVE: 7/1/2025
DATE PREPARED: 3/11/2025
616.10BF
SHEET NO. 8 OF 9

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Joplin, Missouri 64801
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Missouri COA #001592

REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

MODOT DETAILS VII

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

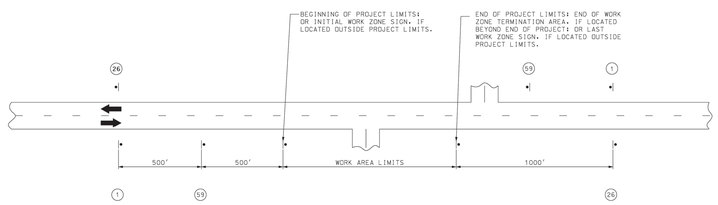
2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-606

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DATE: Nov 25, 2025 4:15pm USER: ktucker

NOT TO SCALE



NOTES:

SIGN (1) AND (26) ARE ONLY USED ON PROJECT LENGTHS 2 MILES OR GREATER.

PROVIDE SIGNS IN EACH DIRECTION ON TWO-WAY HIGHWAY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.



THIS TEMPORARY TRAFFIC CONTROL IS FOR USE ON THE FOLLOWING PAVEMENT TREATMENT PROJECTS AND IS NOT INTENDED FOR USE WHEN ADDITIONAL CONSTRUCTION ITEMS SUCH AS SHOULDER WIDENING, PIPE REPLACEMENT OR EXTENSIONS, GUARDRAIL CONSTRUCTION OR REPAIR, AND/OR SIGN INSTALLATIONS ARE PART OF THE PROJECT:

- ASPHALTIC RESURFACING (SECTIONS 401 AND 402)
- SEAL COAT
- SCRUB SEAL/SAND SEAL

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

STATE OF MISSOURI — MARK E. CRUMMEL — NUMBER PE-2022018640 — PROFESSIONAL ENGINEER

Mark Crumm
REGISTERED ELECTRONICALLY BY MARK E. CRUMMEL, CIVIL
MO-PE-2022018640
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TEMPORARY TRAFFIC CONTROL PLANS

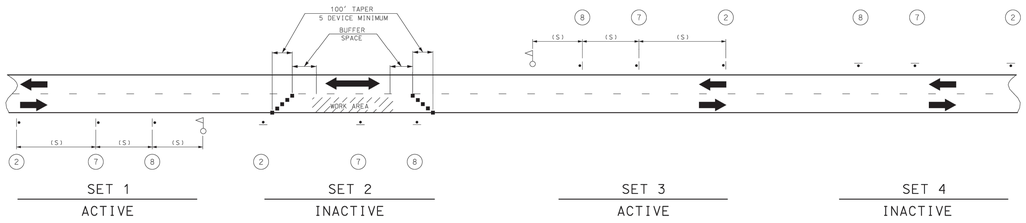
PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

DATE EFFECTIVE:	7/1/2025	616.20E	SHEET NO. 1 OF 5
DATE PREPARED:	3/11/2025		

NOT TO SCALE



SIGN 53, "PILOT CAR FOLLOW ME" SHALL BE THE CONTRACTOR'S RESPONSIBILITY WHEN IN USE DURING OPERATION.



NOTES:

THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL. THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

SIGN SETS 1 AND 3 ARE ACTIVE AND (I.E., SIGNS FACE ONCOMING TRAFFIC) SIGN SETS 2 AND 4 ARE INACTIVE (I.E., SIGNS DO NOT FACE EITHER DIRECTION OF TRAFFIC) WHEN THE RESURFACING OPERATION IS LOCATED BETWEEN SIGN SETS 1 AND 3.

WHEN SIGN SETS 2 AND 4 ARE ACTIVE, SIGN SETS 1 AND 3 BECOME INACTIVE AND ARE ADVANCED TO BECOME SETS 2 AND 4 WITH SIGN LEGENDS TURNED AWAY FROM BOTH DIRECTIONS OF TRAFFIC. WHEN THE RESURFACING OPERATION ADVANCES TO BETWEEN SIGN SETS 2 AND 4, SIGN SETS 2 AND 4 BECOME ACTIVE (I.E., NEW SIGN SETS 1 AND 3) AND SIGN SETS 1 AND 3 ADVANCED IN THE DIRECTION OF THE OPERATION (I.E., NEW SIGN SETS 2 AND 4).

■ – CHANNELIZERS

◁○ – FLAGGER

SPEED	SIGN SPACING (FT) (1)	BUFFER SPACE
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	LENGTH (FT)
0–35	200	250
40–45	350	360
50–55	500	495
60–70	1000	730

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

SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

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

STATE OF MISSOURI — MARK E. CRUMMEL — NUMBER PE-2022018640 — PROFESSIONAL ENGINEER

Mark Crumm
REGISTERED ELECTRONICALLY BY MARK E. CRUMMEL, CIVIL
MO-PE-2022018640
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TEMPORARY TRAFFIC CONTROL PLANS

PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

DATE EFFECTIVE:	7/1/2025	616.20E	SHEET NO. 2 OF 5
DATE PREPARED:	3/11/2025		

SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	BUFFER/ WORK AREA (TTP.)
0–35	200	40
40–45	350	80
50–55	500	80
60–70	1000	120

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

SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

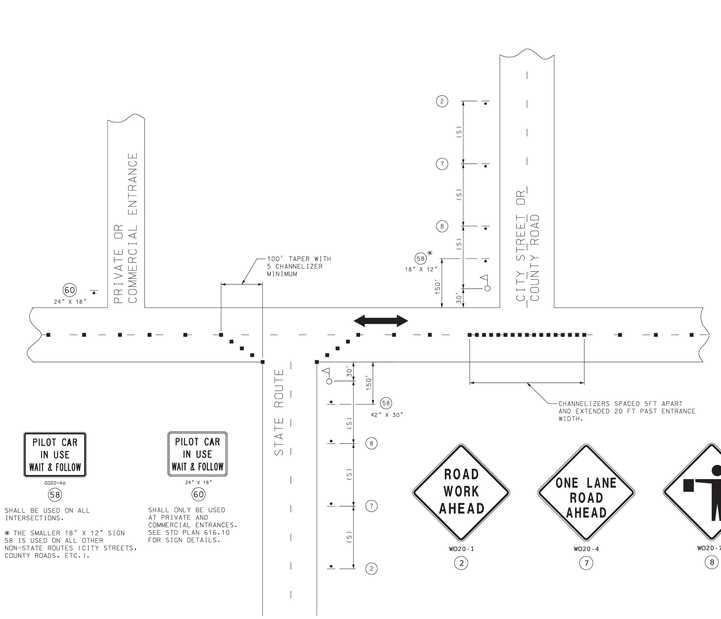
NOTES:
WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE.

ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

■ – CHANNELIZERS (AS SPECIFIED)

◁○ – FLAGGER

NOT TO SCALE



SIDE ROADS ENTERING WORK ZONES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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STATE OF MISSOURI — MARK E. CRUMMEL — NUMBER PE-2022018640 — PROFESSIONAL ENGINEER

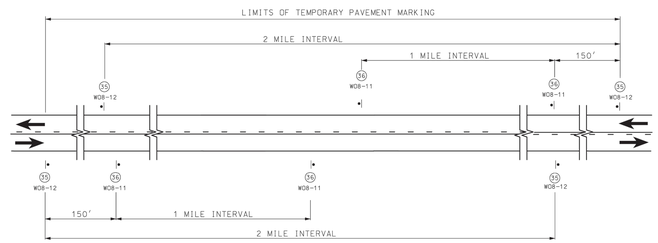
Mark Crumm
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MO-PE-2022018640
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TEMPORARY TRAFFIC CONTROL PLANS

PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

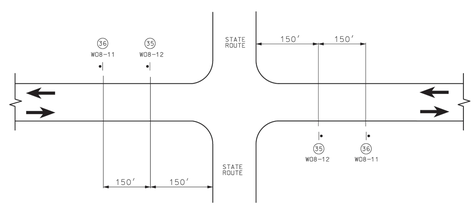
DATE EFFECTIVE:	7/1/2025	616.20E	SHEET NO. 3 OF 5
DATE PREPARED:	3/11/2025		

NOT TO SCALE



SIGN SPACING AND TEMPORARY STRIPING FOR MAINLINE





SIGN SPACING AT STATE ROUTE INTERSECTIONS SHOWING TEMPORARY STRIPING FOR MAINLINE

NOTES:

SIGN (35) AND TEMPORARY RAISED PAVEMENT MARKING (SEE STANDARD PLAN 620.10) INSTALLED WHERE CENTERLINE STRIPING HAS BEEN COVERED OR REMOVED, SIGNS ARE TO REMAIN IN PLACE UNTIL THE PERMANENT CENTERLINE PAVEMENT MARKINGS ARE IN PLACE. SIGNS SHALL BE COVERED OR REMOVED WHEN PAVEMENT CENTERLINE MARKING HAS BEEN INSTALLED.

SIGN (35) IS PLACED AT APPROXIMATELY TWO-MILE INTERVALS AND AT STATE ROUTE JUNCTIONS. WHEN THE INSTALLATION AT A JUNCTION IS WITHIN ONE-EIGHTH MILE OF THE NORMAL MAINLINE SIGN (35), THE LATTER MAY BE ELIMINATED.

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

SEE STANDARD PLAN 620.10 FOR ALL TEMPORARY PAVEMENT MARKING.

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STATE OF MISSOURI — MARK E. CRUMMEL — NUMBER PE-2022018640 — PROFESSIONAL ENGINEER

Mark Crumm
REGISTERED ELECTRONICALLY BY MARK E. CRUMMEL, CIVIL
MO-PE-2022018640
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TEMPORARY TRAFFIC CONTROL PLANS

PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

DATE EFFECTIVE:	7/1/2025	616.20E	SHEET NO. 4 OF 5
DATE PREPARED:	3/11/2025		

olsson

1027 South Main Street
Suite 503
Joplin, Missouri 64801

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Olsson - Engineering
Missouri COA #001592

REV. NO.	DATE	DESCRIPTION	BY
		REVISIONS	

MODOT DETAILS VIII

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

2025

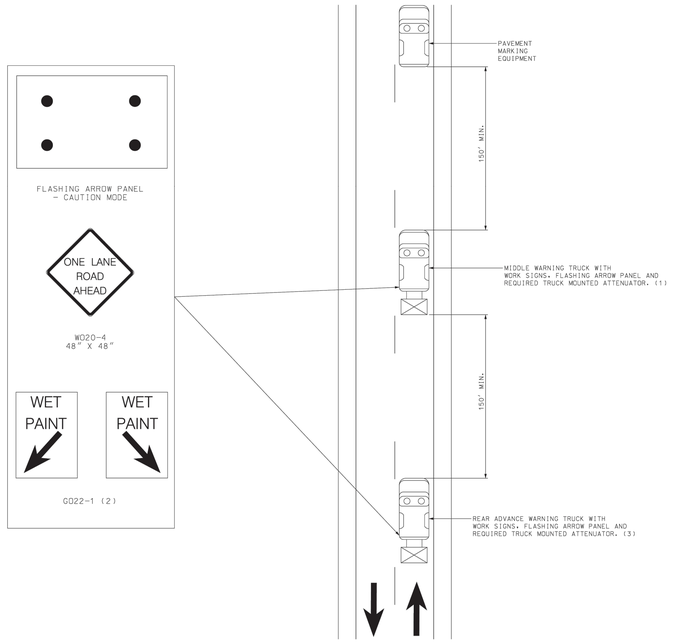
JOPLIN, MISSOURI

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
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NOT TO SCALE



CENTERLINE/EDGELINE STRIPING ON TWO-LANE HIGHWAYS

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCK EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

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

FLASHING ARROW PANELS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD IS MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3) REAR ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE, OR SPACING SHOWN.

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STATE OF MISSOURI — SRC T. SCHROETER — NUMBER PE-2009019940 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY

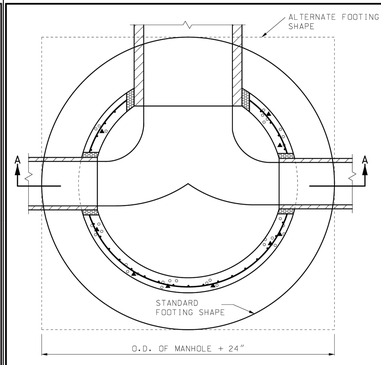
TEMPORARY TRAFFIC CONTROL PLANS

PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

DATE EFFECTIVE: 7/1/2025
DATE PREPARED: 3/31/2025

616.20E

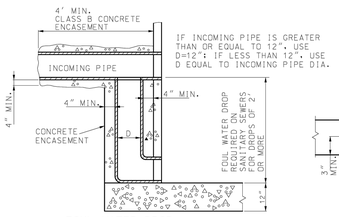
SHEET NO. 5 OF 5



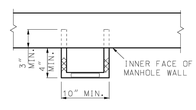
PLAN OF FOOTING

BASE SECTION DIMENSIONS*	
SIZE OF PIPE	MIN. DIA.
24" OR SMALLER	48"
30" - 36"	60"
42" - 48"	72"

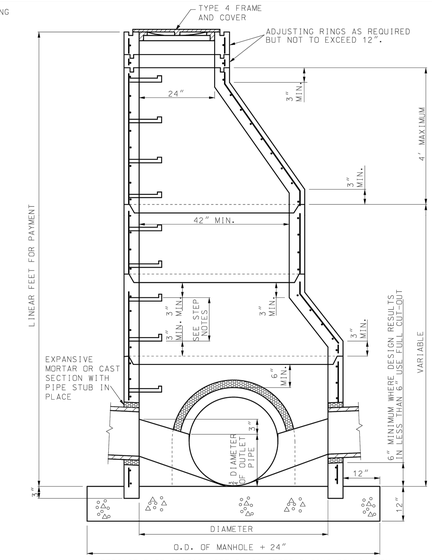
* RISER SECTIONS SHALL NOT BE LESS THAN 42" DIAMETER.



FOUL WATER DROP



STEP INSTALLATION



SECTION A-A

STEPS SHALL BE PLACED AT VERTICAL INTERVALS OF 16" MAXIMUM IN ALL MANHOLES HAVING A DEPTH OF MORE THAN 4'. STEPS SHALL BEGIN AT AN ELEVATION 6" ABOVE THE TOP OF THE OUTLET PIPE.

STEPS SHALL BE LEVEL AND IN VERTICAL ALIGNMENT.

NO DIRECT PAYMENT WILL BE MADE FOR MANHOLE STEPS.

GENERAL NOTES:

THE CONTRACTOR WILL BE PERMITTED TO CAST IN PLACE THE MANHOLES. IN ACCORDANCE WITH THE CONCRETE MANHOLE STANDARD.

IF THE CONTRACTOR ELECTS TO CAST IN PLACE THE MANHOLES, PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR PRECAST MANHOLES.

THE CONFIGURATION DETAILS SHOWN ARE DESCRIPTIVE ONLY AND MAY BE VARIED TO CONFORM WITH AN ESTABLISHED MANUFACTURING PROCEDURE.

FORMED OR CUT OUT OPENINGS SHALL BE PROVIDED WHERE PIPE INLETS AND OUTLETS ARE SHOWN ON THE PLANS.

THE TOP OF THE INLET SHALL NOT BE SET BELOW THE TOP OF THE OUTLET PIPE.

REINFORCEMENT SHALL BE CUT AT PIPE OPENINGS.

NO DIRECT PAYMENT WILL BE MADE FOR CUTTING PIPE, NOR FOR CUTTING AND BENDING REINFORCING STEEL.

WHERE THE WIDTH OF THE BASE SECTION IS GREATER THAN 42" AN ECCENTRIC TAPER SECTION MAY BE USED TO ALLOW THE USE OF 42" RISER SECTIONS.

THE LOWER TRANSITION SECTION AS SHOWN ON SECTION A-A IS OPTIONAL.

FOUL WATER DROPS ARE REQUIRED WHEN SPECIFIED IN THE PLANS. NO DIRECT PAYMENT WILL BE MADE FOR THE FOUL WATER DROP OR ITS ENCASEMENT.

SEE STANDARD PLAN 614.30 FOR MANHOLE FRAMES AND COVERS.

WHERE PIPES DO NOT ENTER OR EXIT RADIALLY, USE NEXT LARGER SIZE MANHOLE. CLASS 3 EXCAVATION WILL BE PAID WITHIN VERTICAL LIMITS 18" OUTSIDE OF THE OUTER WALLS OF THE BASE SECTION ON THE MANHOLE. CLASS 3 EXCAVATION WILL NOT BE PAID FOR OUTSIDE THE FOOTING LIMITS.

ALL PIPE CONNECTED WITH A MANHOLE WILL BE MEASURED AND PAID FOR TO THE INSIDE WALL OF THE MANHOLE.

CIRCUMFERENTIAL REINFORCEMENT SIZE AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS TO A MAXIMUM DEPTH OF 20 FEET. OVER 20 FOOT DEPTH CIRCUMFERENTIAL REINFORCEMENT IS INCREASED TO 0.24 SQUARE INCHES STEEL REQUIRED PER LINEAR FOOT, TO A MAXIMUM DEPTH OF 30 FEET.

FOR PIPE CONNECTIONS, A RUBBER GASKET IN ACCORDANCE WITH ASTM RUBBER GASKET SPECIFICATIONS C-443 OR C-923 AND CAST INTEGRALLY IN MANHOLE MAY BE USED AS AN ALTERNATE TO EXPANSIVE MORTAR.

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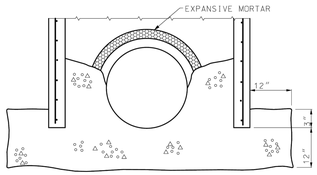
STATE OF MISSOURI — ERIC T. SCHROETER — NUMBER PE-2009019940 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY

PRECAST MANHOLES

DATE EFFECTIVE: 07/01/2016
DATE PREPARED: 5/13/2016

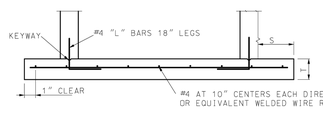
731.00U

SHEET NO. 1 OF 2



ALTERNATE FOOTING

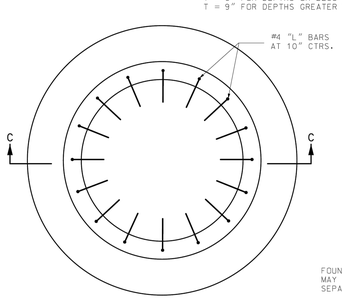
PRECAST BASE SECTION SET ON CONCRETE BLOCKS FOUNDATION SLAB AND INVERT POURED MONOLITHIC.



SECTION C-C

S = 0 FOR DEPTHS LESS THAN OR EQUAL TO 6':
S = 9" FOR DEPTHS GREATER THAN 6'.

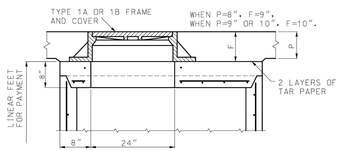
T = 6" FOR DEPTHS OR LESS THAN OR EQUAL TO 6':
T = 9" FOR DEPTHS GREATER THAN 6'.



PRECAST FOUNDATION SLAB

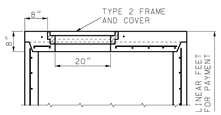
FOUNDATION SLAB AND BASE SECTION MAY BE POURED MONOLITHIC OR SEPARATELY WITH A KEYWAY.

INVERT SHALL BE POURED AFTER PLACEMENT OF MANHOLE.

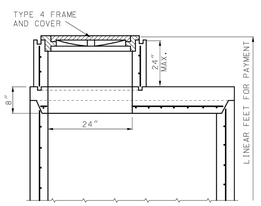


FLAT SLAB MANHOLE TOP (PAVED AREA)

SECTION B-B

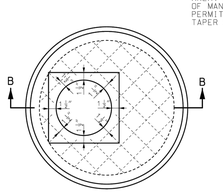


ALTERNATE SECTION B-B



ALTERNATE MANHOLE TOP

ALTERNATE FLAT SLAB MANHOLE TOP (UNPAVED AREA) USED WHERE DEPTH OF MANHOLE WILL NOT PERMIT USE OF CONE AND TAPER SECTIONS.



PLAN OF FLAT SLAB MANHOLE TOP

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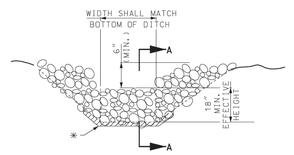
PRECAST MANHOLES

DATE EFFECTIVE: 07/01/2016
DATE PREPARED: 5/13/2016

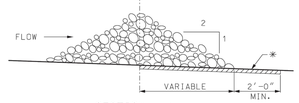
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SHEET NO. 2 OF 2

ROCK DITCH CHECK



END VIEW



SECTION A-A

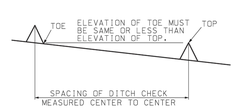
* GEOTEXTILE LINING MAY BE INSTALLED AS REQUIRED BY THE ENGINEER.

NOTE:

ROCK DITCH CHECK IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.

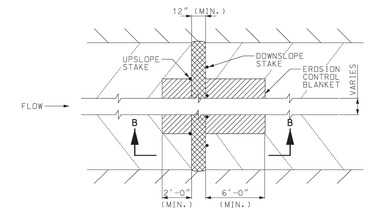
EXAMPLE DITCH CHECK SPACING FOR STANDARD HEIGHTS (FT.)

DITCH % SLOPE %	SPACING FOR 9" EFF. HEIGHT	SPACING FOR 18" EFF. HEIGHT
0.5	150	300
1.0	75	150
1.5	50	100
2.0	37	75
2.5	30	60
3.0	25	50
3.5	21	43
4.0	19	38
4.5	16	33
5.0	15	30
5.5	13	27
6.0	12	25
6.5	11	23
7.0	10	21
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8.0	9	19
8.5	9	18
9.0	8	17
9.5	8	16
10.0	7	15

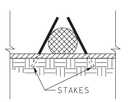


MINIMUM DITCH CHECK SPACING

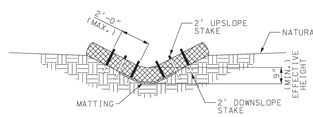
ALTERNATE DITCH CHECK



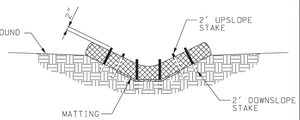
PLAN VIEW



SECTION B-B



TYPICAL SECTION VEE DITCH



TYPICAL SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER LOG/SOCK.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL LOG/SOCK TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND LOG/SOCK AND SCOUR DITCH SLOPES OR AS DIRECTED BY ENGINEER.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE LOG/SOCK TO BOTTOM OF DITCH.

EROSION CONTROL BLANKET SHALL BE ANCHORED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES:

OTHER PROPRIETARY DITCH CHECKS MAY BE SUBSTITUTED IN ACCORDANCE WITH SEC 806 OR AS DIRECTED BY THE ENGINEER.

INSTALLATION OF PROPRIETARY DITCH CHECKS SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

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STATE OF MISSOURI — TRAVIS D. KOSTNER — NUMBER PE-2012 — PROFESSIONAL ENGINEER — THIS SHEET WAS SIGNED, SEALED AND DATED ELECTRONICALLY

TEMPORARY EROSION CONTROL MEASURES

TEMPORARY DITCH CHECKS

DATE EFFECTIVE: 01/01/2023
DATE PREPARED: 10/11/2022

806.10K

SHEET NO. 1 OF 6

olsson

1027 South Main Street
Suite 503
Joplin, Missouri 64801

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TEL 417.781.0643
FAX 417.781.4714

Olsson - Engineering
Missouri COA #001592

REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

MODOT DETAILS IX

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

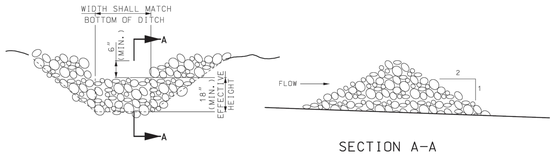
JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

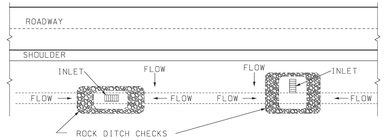
SHEET G-608

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DATE: Nov 25, 2025 4:16pm USER: ktucker



END VIEW

SECTION A–A



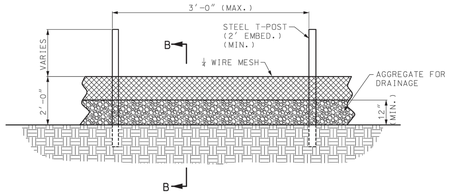
DROP INLET CHECK

SEE SHEET 1 OF 6 FOR DETAILS OF ROCK DITCH CHECK.

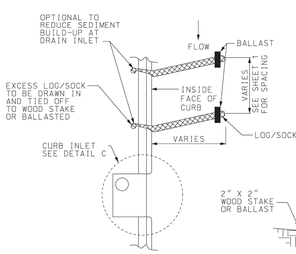
NOTE:

SEDIMENT TRAP

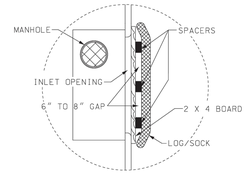
SEDIMENT TRAP IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.



ELEVATION DETAIL



PLAN



DETAIL C



SECTION

CURB INLET PROTECTION

NOTES:

ROCK/MESH SEDIMENT CONTROL FENCE MAY BE NECESSARY, AS DETERMINED BY THE ENGINEER. IN ISOLATED AREAS WHERE PERIMETER SILT FENCE IS DEEMED INSUFFICIENT TO WITHSTAND SHEET FLOW, WHEN REQUIRED, IT WILL BE PAID PER LINEAR FOOT AS ROCK DITCH CHECK.

AGGREGATE FOR DRAINAGE SHALL BE IN ACCORDANCE WITH SEC 1009, GRADE 4 OR GRADE 5.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH ¼ INCH MESH OPENINGS.

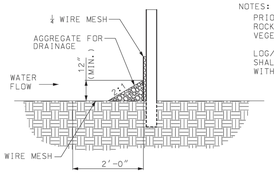
INSTALL 5 FT. T-POST WITH A 2 FOOT EMBEDMENT DEPTH (MIN.).

ATTACH HARDWARE CLOTH TO POST WITH WIRE STAPLE OR OTHER ACCEPTABLE METHODS.

SPACE POST A MAXIMUM OF 3 FT.

FOR INSTALLATION BETWEEN SECTIONS OF SILT FENCE, EXTEND AGGREGATE FOR DRAINAGE A MINIMUM OF 12 INCHES ON EACH SIDE OF SPECIAL SEDIMENT CONTROL FENCE SECTION.

ROCK/MESH SEDIMENT CONTROL FENCE MAY BE USED IN LIEU OF ROCK DITCH CHECK TO SURROUND AN INLET, AT NO ADDITIONAL COST TO THE COMMISSION.



SECTION B–B

NOTES:

PRIOR TO PLACEMENT ALL DEBRIS, ROCK, LARGE CLODS AND WOOD VEGETATION SHALL BE CLEARED.

LOG/SOCK PLACED ON PAVEMENT SHALL BE WEIGHTED DOWN WITH GRAVEL/SAND BALLAST.

GENERAL NOTES:

OTHER PROPRIETARY INLET PROTECTION MAY BE SUBSTITUTED IN ACCORDANCE WITH SEC 806 OR AS DIRECTED BY THE ENGINEER.

FOR SEDIMENT CONTROL SPACING SEE SHEET 1 OF 6.

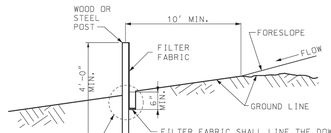
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JEFFERSON CITY, MO 65102
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STATE OF MISSOURI — TRAVIS S. KOESTNER — NUMBER PE-2009 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES

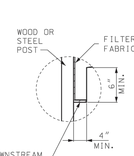
DATE EFFECTIVE:	01/01/2023	806.10K	SHEET NO.
DATE PREPARED:	10/11/2022		2 OF 6

ROCK/MESH SEDIMENT CONTROL FENCE

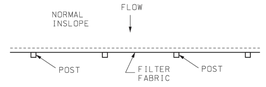


DETAIL A

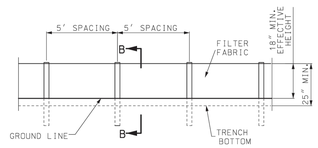
TYPICAL B–B



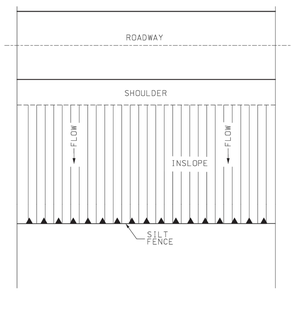
DETAIL A



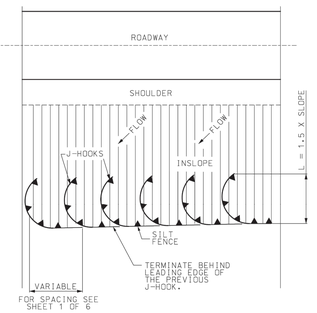
PLAN VIEW



ELEVATION DETAIL
FABRIC SILT FENCE



PERIMETER SILT FENCE
FOR TRANSVERSE FLOW



PERIMETER SILT FENCE
FOR ANGULAR FLOW

GENERAL NOTES:

USE SILT FENCE FOR FILL HEIGHTS GREATER OR EQUAL TO 10 FEET. ON ALL FILLS GREATER THAN 10 FEET HIGH, MID-SLOPE RUNS OF SILT FENCE SHOULD BE CONSIDERED.

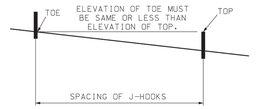
FOR FABRIC SILT FENCE:

MINIMUM LONGITUDINAL SPLICE OVERLAP SHALL BE 2' WITH A POST AT EACH END.

SECURE FABRIC TO POSTS.

INSTEAD OF SILT FENCE ACROSS DRAINAGE DITCHES AND DRAINS, DITCH CHECKS SHALL BE USED AS SHOWN ON PLANS OR AS DIRECTED BY ENGINEER.

AT CULVERTS, PLACE SEDIMENT BARRIERS OVER THE TOP OF THE CULVERTS (NOT IN THE STREAM CHANNEL).



MINIMUM J-HOOK SPACING

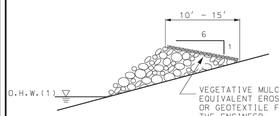
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI — TRAVIS S. KOESTNER — NUMBER PE-2009 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES

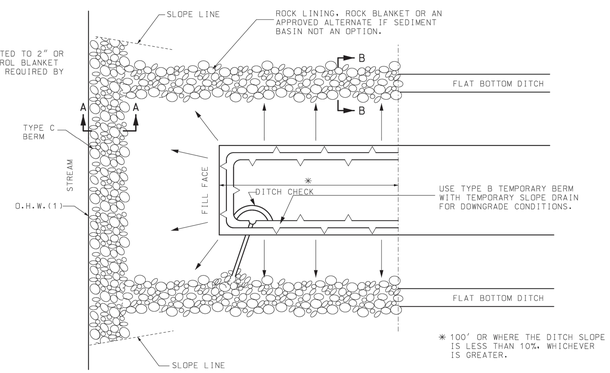
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DATE EFFECTIVE:	01/01/2023	806.10K	SHEET NO.
DATE PREPARED:	10/11/2022		5 OF 6



SECTION A–A
TYPE C BERM

(1) TYPE C BERM SHALL BE PLACED ABOVE THE ORDINARY HIGH WATER (O.H.W.) OR AT AN ELEVATION AS DIRECTED BY THE ENGINEER.



PLAN VIEW



SECTION B–B

GENERAL NOTES:

TYPE C BERM SHALL BE BUILT TO HANDLE SIGNIFICANT RUN-OFF EVENTS AND SHALL BE INSTALLED PRIOR TO SOIL DISTURBANCE OR PLACEMENT OF FILL IN THE DRAINAGE AREA OF THE BERM.

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TEMPORARY EROSION CONTROL MEASURES

BRIDGES AND BOX CULVERTS AT STREAM CROSSINGS

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REVISIONS

REV. NO.	DATE	DESCRIPTION	BY

MODOT DETAILS X

7TH STREET SANITARY SEWER RELOCATION
CITY OF JOPLIN, MISSOURI

JOPLIN, MISSOURI

2025

drawn by: KMT
designed by: MAJ
project no.: 024-03774
date: OCTOBER, 2025

SHEET
G-609

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DATE: Nov 25, 2025 4:16pm USER: ktucker