LEGEND

T	EXISTING TELEPHONE
TEL. MH	EXISTING TELEPHONE MANHOLE
TCB	EXISTING TELEPHONE CONTROL BOX
CABLE PED.	EXISTING CABLE PEDESTAL
GM	EXISTING GAS METER
GV	EXISTING GAS VALVE
GR	EXISTING GAS RISER
GAS MH	EXISTING GAS MANHOLE
2"G	EXISTING GAS LINE
EX. 8" SS	EXISTING SEWER LINE
SSMH	EXISTING SS MANHOLE
	EXISTING MANHOLE REMOVAL
WWAD	EXISTING WWAD
WV	EXISTING WATER VALVE
ICV	EXISTING IRRIGATION CONTROL VALVE
FH	EXISTING FIRE HYDRANT
WM	EXISTING WATER METER
	EXISTING WATER TEE
	EXISTING WATER REDUCER
	EXISTING WATER BEND
SH	EXISTING SPRINKLER HEAD
8" W	EXISTING WATER
SDMH	EXISTING STORM MANHOLE
24" RCP	EXISTING STORM LINE
CHAIN LINK FENCE	CHAIN LINK FENCE
WIRE FENCE	WIRE FENCE
FENCE OTHER	FENCE OTHER
WOOD FENCE	WOOD FENCE
ELEC. PED. E	EXISTING ELECTRICAL PEDESTAL
FO	EXISTING FIBER OPTIC LINE
	EXISTING EASEMENT LINE

EM	EXISTING ELECTRIC METER
PP	EXISTING POWER POLE
GUY	EXISTING GUY WIRE
ELEC MH	EXISTING ELECTRIC MANHOLE
LP	EXISTING LIGHT POLE
FL	EXISTING LIGHT (FLOOD, YARD ETC.)
E	EXISTING UNDERGROUND ELECTRIC CABLE
OE	EXISTING OVERHEAD ELECTRIC WIRE
	ASPHALT
	CONCRETE PATTERN
SIGN	STREET SIGN
MB	MAILBOX
½" PIPE	IRON ROD/PIPE FOUND
BUSH / 8" PECAN	TREE OR BUSH
BM	BENCHMARK
CP	CONTROL POINT
SSMH	PROPOSED NEW MANHOLE
SSMH	REMOVE AND REPLACE MANHOLE
WWAD	PROPOSED WWAD
8"	PROPOSED SEWER LINE
	ROW LINE
P/L	PROPERTY LINE
	PROPOSED ENCASEMENT
	ASPHALT PAVEMENT REMOVAL & REPLACEMENT
	CONCRETE PAVEMENT REMOVAL & REPLACEMENT
	GRAVEL PAVEMENT REMOVAL & REPLACEMENT
	ABANDONMENT OF EXISTING SEWER
	CONCRETE SIDEWALK REMOVAL & REPLACEMENT
	LIMITS OF FLOOD ZONE BOUNDARY

Engineer's Statement - Current City of Tulsa Standard Specifications and Standard Details and Asset Management Guidelines govern. All other construction and materials shall be in accordance with the 2019 Oklahoma Standard Specifications for Highway Construction.

UTILITY COORDINATION INFORMATION INSIDE OF RIGHT OF WAY		
COMPANY	CONTACT	OFFICE
City of Tulsa	Tony Glenn	918-596-9245
AEP/PSO	Emergency	888-216-3523
ONG	Emergency	800-664-5463
AT&T	Emergency	800-288-2020
Cox	Customer Service	918-806-6000
Verizon	Customer Service	888-294-6804
Windstream	Customer Service	800-347-1991
MTTA	Customer Service	918-830-0024

UTILITY COORDINATION INFORMATION TULSA ENGINEERING SERVICES DEPARTMENT	
WATER DESIGN	918-596-9580
WASTEWATER DESIGN	918-596-9564
TRANSPORTATION DESIGN	918-596-9636
TRAFFIC ENGINEERING DESIGN	918-596-9741
STORMWATER DESIGN	918-596-9498

SURVEY DATUM:
HORIZONTAL - OKLAHOMA STATE PLANE COORDINATE (NAD 1983)
VERTICAL - (NAVD 1988)

PREPARED BY

rjngroup
CONSULTING ENGINEERS
4500 S. GARNETT ROAD, SUITE 110
TULSA, OKLAHOMA 74146
(918) 627-9737

CERTIFICATE OF AUTHORIZATION NO. CA1979, EXP. 6/30/2027

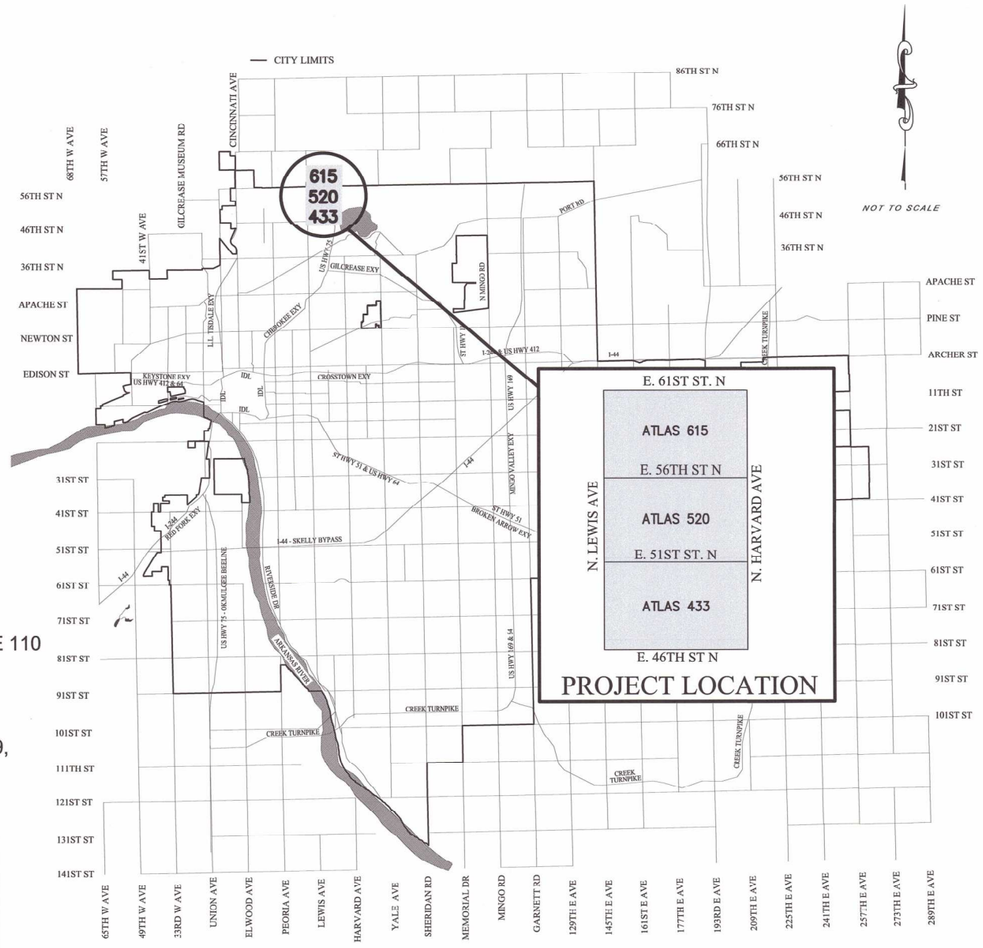
OKIE 811 Know what's below 811 before you dig.

CONSTRUCTION PLANS FOR

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

TMUA PROJECT NO. ES 2025-07

WATER AND SEWER DEPARTMENT CITY OF TULSA, OKLAHOMA



NOT TO SCALE

INDEX OF DRAWINGS

CITY OF TULSA STANDARD DETAILS

102	PROJECT SIGN
305	BEDDING DETAIL FLEXIBLE PIPE
354	FRAME AND LID FOR 4' I.D. AND LARGER SANITARY MANHOLE
360	FRAME AND LID AND MANHOLES
361	IN-LINE TEES FOR SERVICE CONNECTIONS
362	RISER DETAIL
367	WATER TABLE CRADLE
369	ELEVATED FRP MH DETAILS
402	COVER, FRAME & FRAME SEAL
407	BENCH AND INVERT REHABILITATION
415	CLAY DAM

OKLAHOMA DOT STANDARD DETAILS

CITY OF TULSA

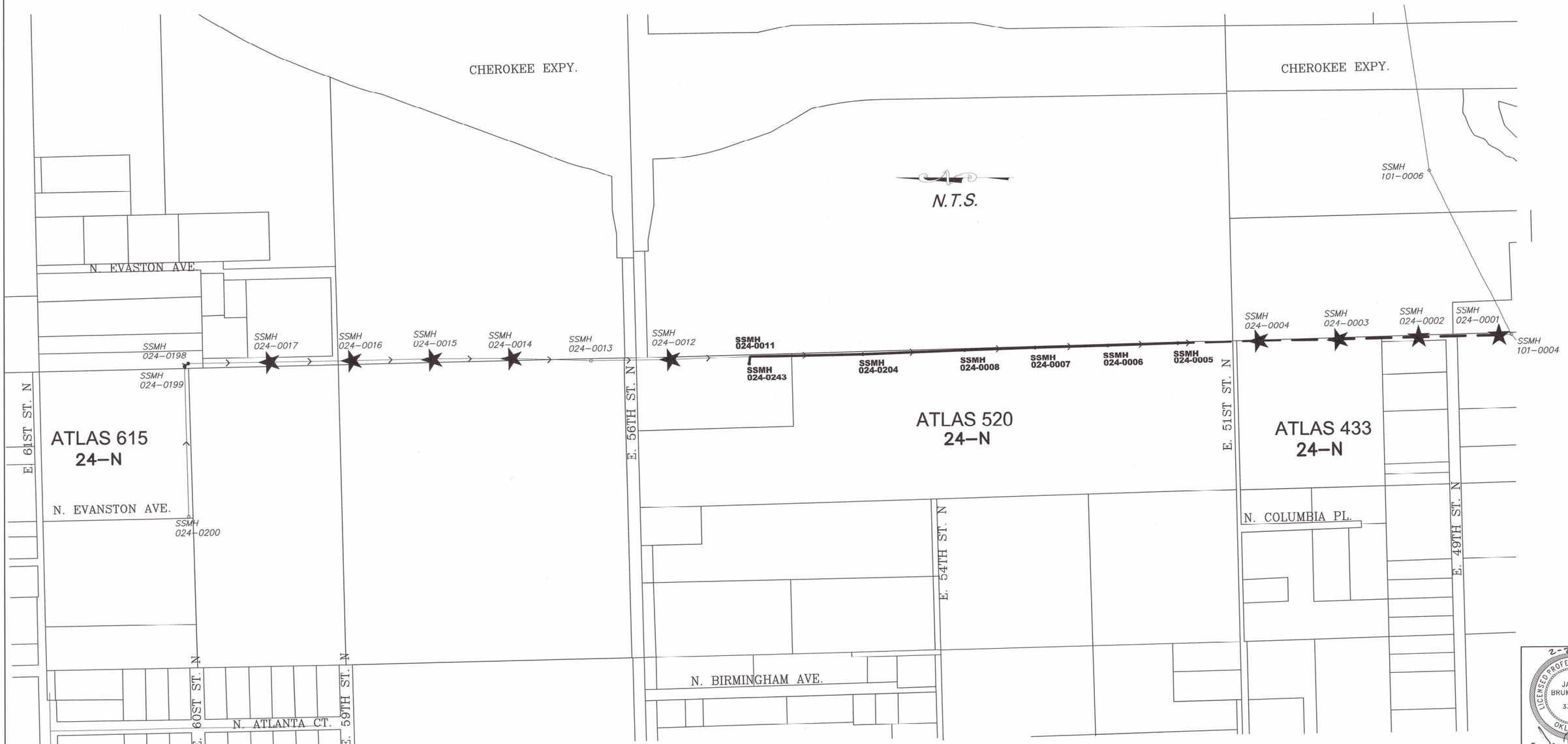
APPROVED BY

WATER AND SEWER DIRECTOR — DATE 3-10-2026

LICENSED PROFESSIONAL ENGINEER — JACOB BRUMBAUGH — 33769 — OKLAHOMA

JACOB BRUMBAUGH, P.E.
RJN GROUP, INC. — DATE 2-27-2026

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1 - TMUA PROJECT ES 2025-07



LEGEND

MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★ 024–0006

EXISTING SEWER ----→----○

MAINTENANCE AREA ID 94–N

MAINTENANCE AREA BOUNDARY

OPEN CUT ———

CIPP — — —

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

LOCATION MAP

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA	DRAWN	RLP	02/2026
	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY		
HORIZONTAL: NA	PROJ. MGR.	DV	3/26
	LEAD ENGR.		3/26
VERTICAL NA	FIELD MGR.		3/26
	FILE:	DRAWING:	

APPROVED:

DESIGN MANAGER

DATE: February 2026

ATLAS PAGE NO: 433,520,615

SHEET 2 OF 25 SHEETS

GENERAL NOTES

1. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS, BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORK SITE SAFETY, MANHOLE VENTILATION, WORK EQUIPMENT, FIRST AID, HYGIENE, AND OTHER RELATED TOPICS. THE CONTRACTOR SHALL BE EXPECTED TO PERFORM THE WORK IN A MANNER THAT BEST PROTECTS THE SAFETY OF WORKERS, INSPECTORS, BYSTANDERS, AND OTHERS WHO MAY BE IN THE VICINITY OF THE PROJECT. FAILURE TO PERFORM THE WORK AND MAINTAIN THE SITE IN A SAFE MANNER, IN THE OPINION OF THE ENGINEER OR OWNER, SHALL BE SUFFICIENT CAUSE TO STOP ALL WORK UNTIL SAFETY PROBLEMS ARE CORRECTED.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF TULSA ENGINEERING STANDARDS AND SPECIFICATIONS, IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF THIS CONTRACT, AND IN ACCORDANCE WITH ODOT STANDARDS.
3. THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF THE CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
4. THE CONTRACTOR SHALL, IN COOPERATION WITH THE CITY, DEVELOP AND SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN (TCP), TO THE CITY OF TULSA PUBLIC WORKS, FIELD ENGINEERING. THIS TCP SHALL DETAIL SUCH MEASURES AS MAY BE REQUIRED TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE A COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROL SYSTEM DURING THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL FLAGMEN, BARRICADES, SIGNS, SIGNALS, OR OTHER DEVICES AS MAY BE REQUIRED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION, PERMITTING, AND EXECUTION OF A STORMWATER POLLUTION PREVENTION PLAN (SWP3). THE CONTRACTOR SHALL PROVIDE ALL DOCUMENTATION REQUIRED OF SWP3 FOR REVIEW AND APPROVAL OF THE PLAN BY FEDERAL, STATE, AND LOCAL AUTHORITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, THE NOTICE OF INTENT AND THE NOTICE OF TERMINATION.
6. THE CONTRACTOR SHALL PROVIDE TEMPORARY ORANGE SAFETY FENCING AROUND ALL EXCAVATION, INCLUDING TRENCHES, PITS, VAULTS, ETC. TO MAINTAIN SECURITY AND SAFETY FOR ANIMALS, CHILDREN OR ANY BYSTANDER. THE COST OF ORANGE SAFETY FENCING SHALL BE INCLUDED IN OTHER PAY ITEMS.
7. PRIOR TO EXCAVATING, THE CONTRACTOR IS RESPONSIBLE FOR BRACING OR SUPPORTING ANY POWER OR UTILITY POLE OR GUY WIRE WITHIN 5 FEET OF EXCAVATION TO THE SATISFACTION OF THE OWNER AND THE UTILITY COMPANY, AT NO ADDITIONAL COST TO THE OWNER.
8. ALL EXCAVATED MATERIAL REMOVED DURING TRENCHING OR EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. PRIOR TO TRENCHING AND EXCAVATION, THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE TO THE ENGINEER FOR REVIEW. STOCKPILING EXCAVATED MATERIALS IN STREET OR ALLEY RIGHT-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE ENGINEER. MAINTENANCE OF STOCKPILE SITE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST MAINTAIN STOCKPILE SITES IN A SAFE, POLLUTION FREE CONDITION THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA REGULATORY FLOODPLAIN.
9. BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
10. THE CONTRACTOR SHALL PROVIDE A DETAILED ACCESS PLAN FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS, CONSTRUCTION ACTIVITIES, AND PERMITS THAT MAY BE NEEDED FOR THE IMPLEMENTATION OF THIS PLAN.
11. CONTRACTOR MUST NOTIFY THE HOMEOWNER A MINIMUM OF 48 HOURS (SPECIFICATION 400) PRIOR TO BEGINNING ANY REHAB WORK OR CONSTRUCTION ON HOMEOWNER'S PROPERTY.
12. IN ALL AREAS WHERE EXCAVATION WILL OCCUR, CONTRACTOR SHALL VIDEO ALL CONCRETE PAVEMENT, BUILDINGS, FOUNDATIONS, LANDSCAPING, LAWNS AND TREES PRIOR TO CONSTRUCTION AND SUBMIT TO THE ENGINEER FOR PROJECT RECORDS.
13. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ANY EXISTING STORAGE SHEDS, LOCATED WITHIN THE CONSTRUCTION AREA, THAT ARE DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE CITY OF TULSA OR THE HOMEOWNER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATION OF ALL EXISTING SANITARY SEWER SERVICE LATERALS IN THE PROJECT AREA. IF ENCOUNTERED OR DAMAGED DURING CONSTRUCTION, EXISTING SERVICE LATERALS SHALL BE REMOVED AND REPLACED USING PIPE OF THE SAME SIZE AND MATERIAL AS THE EXISTING SEWER AT THE CONTRACTORS EXPENSE.
15. CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES. HOWEVER, IF DAMAGE OCCURS TO TREES LOCATED WITHIN AN EASEMENT CONTRACTOR SHALL NOT BE RESPONSIBLE.
16. ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEAT LINES AS INDICATED IN THE SPECIFICATIONS AND STANDARD DETAILS. SAW CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE FULL DEPTH OF THE EXISTING PAVEMENT. SAW CUTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.
17. ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING, NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
19. IF ANY BRICK SANITARY MANHOLES/STRUCTURES ASSOCIATED WITH THE IDENTIFIED SEWER LINES ARE FOUND, THE CITY SHALL BE NOTIFIED BEFORE WORK COMMENCES FOR AN EVALUATION OF REHABILITATION. REHABILITATION OF ANY BRICK SANITARY MANHOLES/STRUCTURES SHALL BE BY COMPLETED MANHOLE/STRUCTURE REPLACEMENT OR BY METHODS DESCRIBED IN SPECIFICATION 418.
20. ALL SANITARY SEWER AND STORM SEWER MANHOLE CASTING AND LIDS THAT ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW ONES, AND THE OLD CASTINGS AND LIDS SHALL BE DELIVERED TO THE SEWER BASE AT 9319 E. 42nd STREET N. AND PLACED IN THE METAL RECYCLE BIN IN THE STOCKROOM AREA 918-669-6130, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
21. ALL SANITARY SEWER MANHOLES LOCATED IN THE FLOODPLAIN SHALL BE BUILT IN ACCORDANCE WITH THE FLOODPLAIN MANHOLE SPECIFICATION WITH PADDLE - LOCK LID.
22. THE CONTRACTOR SHALL SUBMIT A TRENCH EXCAVATION PLAN, SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF OKLAHOMA, FOR ALL LOCATIONS WHERE TRENCH OR SHAFT EXCAVATION EXCEEDS 20 FEET DEEP.
23. IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE BYPASS PUMPING DURING SANITARY SEWER CONSTRUCTION. CONTRACTOR SHALL SUBMIT A SEWER BYPASS PLAN PRIOR TO CONSTRUCTION.
24. CONTRACTOR SHALL MAINTAIN SEWER FLOW AT ALL TIMES DURING BYPASS PUMPING OPERATIONS. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. LIQUID LEVELS SHALL NOT BE ALLOWED TO OVER FLOW OR BACK-UP INTO ANY CUSTOMER'S DWELLING OR BUSINESS.
25. THE COST OF BYPASS PUMPING INCLUDING THE PUMPS, LINES, LABOR AND ANY OTHER ASSOCIATED ITEMS REQUIRED TO MAINTAIN BYPASS PUMPING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. NO ADDITIONAL PAYMENT WILL BE MADE FOR BYPASS PUMPING. CONTRACTOR IS REQUIRED TO SUBMIT WRITTEN BYPASS PUMPING NOTIFICATION FORM TO SEWER OPERATIONS AND MAINTENANCE AT LEAST ONE WEEK PRIOR TO BYPASS PUMPING. SEE SPECIAL PROVISIONS.
26. ALL MANHOLES, PIPE SIZES AND LENGTH, DEFECTS, SURFACE TYPES AND THEIR LOCATIONS SHOWN IN THE PLANS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING THE WORK.

MANHOLE REHABILITATION NOTES

1. REPLACEMENT MANHOLES SHALL HAVE FLOW LINE AND RIM ELEVATIONS SET TO MATCH THOSE OF EXISTING MANHOLES UNLESS OTHERWISE NOTED BY THE ENGINEER. FRAMES AND COVERS SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.
2. CONTRACTOR SHALL ENSURE THAT ALL MANHOLE FRAME AND COVER CASTINGS HAVE MACHINED SEATING SURFACES WITH A TIGHT FIT AND COMPLY WITH THE OTHER PROVISIONS OF THE MATERIALS SPECIFICATION.
3. ACTIVE LEAKING JOINTS OR OTHER DEFECTS OBSERVED BY THE CONTRACTOR, BUT NOT SCHEDULED FOR REHABILITATION, SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY UPON DETECTION.
4. IN AREAS OF MANHOLE REPAIRS, CONTRACTOR SHALL PLACES SPOILS ON PLASTIC SHEETS, PLYWOOD OR OTHER SUITABLE GROUND PROTECTION.
5. THE MANHOLE DEPTHS SHOWN ON THE PLANS ARE FROM SURVEY. HOWEVER, ACCURATE FIELD MEASUREMENTS SHALL BE UTILIZED FOR ANY MANHOLE REPLACEMENT OR REHABILITATION.
6. ALL NEW, WALL REHABILITATION, AND REPLACEMENT MANHOLES SHALL NOT HAVE STEPS INSTALLED. MANHOLE WALL REHABILITATION TYPE Gg AND Gs REPAIRS, SHALL HAVE STEPS REMOVED AND ARE CONSIDERED INCIDENTAL TO WALL REHABILITATION PAY ITEMS.
7. CONTRACTOR SHALL BE REQUIRED TO VACUUM TEST ALL NEW MANHOLE INSTALLATIONS AND EXISTING MANHOLES WHERE COMPLETE REHABILITATION IS PERFORMED, IN ACCORDANCE WITH THE CITY OF TULSA ENGINEERING STANDARDS AND SPECIFICATIONS.
8. ALL FRAMES AND COVERS FOR NEW MAHHOLES INSTALLED ON THE PROJECT SHALL HAVE A MINIMUM CLEAR OPENING OF 30-INCHES REGARDLESS OF MANHOLE SIZE. NEW MANHOLE FRAMES AND COVERS INSTALLED ON EXISTING MANHOLES MAY HAVE CLEAR OPENING LESS THAN 30-INCHES WITH ENGINEER APPROVAL.

PIPELINE REHABILITATION NOTES

1. POST REHABILITATION TELEVISION INSPECTION OF LINES INSTALLED BY TRENCHLESS METHODS SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE COST OF OTHER PAY ITEMS.
2. POINT REPAIR LOCATIONS ARE APPROXIMATE AND SHALL BE DETERMINED BY THE CONTRACTOR'S PRE-TELEVISION INSPECTION.
3. QUANTITIES SHOWN IN THE SUMMARY TABLE ARE AN ESTIMATE OF QUANTITIES FOR THE WORK SHOWN AND DO NOT REFLECT FINAL WORK ITEM QUANTITIES NECESSARY TO REHABILITATE PIPELINE SEGMENTS.
4. POINT REPAIR(S) SHALL BE PERFORMED USING LIKE PIPE ACCORDING TO CITY OF TULSA CONSTRUCTION SPECIFICATION SECTION 412.2.1. (I.E. EXISTING VCP WILL BE REPAIRED USING VCP, EXISTING PVC WILL BE REPAIRED USING PVC, AND EXISTING DIP WILL BE REPAIRED USING DIP). IF AN OBSTRUCTION IS ENCOUNTERED DURING CLEANING AND TELEVISION INSPECTION PRIOR TO OR DURING THE INSERTION OF THE NEW LINE THROUGH THE HOST PIPE, THE CONTRACTOR HAS THE OPTION OF USING VCP OR PVC TO REPAIR THE HOST PIPE AT THE LOCATION OF THE OBSTRUCTION. IN ALL CASES, CONCRETE PIPE SHALL BE REPLACED WITH PVC.
5. PIPELINE REHABILITATION PLANS ARE FOR REFERENCE ONLY AND DO NOT DEPICT ALL OF THE EXISTING UTILITIES.
6. PIPE EMBEDMENT WILL BE AS SHOWN IN CITY OF TULSA STANDARD DETAILS EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS.
7. CONTRACTOR SHALL SUPPLY WITH HIS MONTHLY PAY REQUEST, A LIST SHOWING ALL SEWER LINES REPAIRED, THE ADDRESS OF ANY SERVICE LINES THAT ARE RECONNECTED, AND THE FOOTAGE OF THE RECONNECTION FROM THE NEAREST DOWNSTREAM MANHOLE.
8. THE TERM "PIPE BURSTING" THAT IS USED THROUGHOUT THE CONSTRUCTION DRAWINGS IS INTENDED TO INCLUDE OTHER SIMILAR TRENCHLESS PIPE REPLACEMENT METHODS, SUCH AS PIPE REAMING AND PIPE CRUSHING. IT DOES NOT INCLUDE SLIPLINING OR INSTALLATION OF CURED-IN-PLACE PIPE.

TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL DEVICES, CONSTRUCTION SIGNAGE, BARRICADING, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST REVISED EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN (TCP).
2. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTIFICATION FOR ANY AND ALL STREET / LANE CLOSURES, MODIFICATION, OR CHANGES TO THE TRAFFIC CONTROL MEASURES TO:

POLICE	918-596-9222
FIRE	918-596-9977
COT TRAFFIC	918-596-9744
EMSA	918-596-3043
MTTA	918-585-1195

3. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AREA AT ALL TIMES. LOCAL TRAFFIC TO ALL PUBLIC AND PRIVATE STREETS SHALL BE ACCESSIBLE FROM ANY DETOURS DURING THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
4. ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THEIR PERIMETER FOR SAFETY OF PEDESTRIANS AND VEHICLES. NO BARRICADES SHALL BE PLACED UNTIL ALL ADVANCED SIGNING IS IN PLACE.
5. ALL CHANNELING DEVICES, TYPE III BARRICADES, ETC., SHALL BE WEIGHTED DOWN WITH A NON-HAZARDOUS MATERIAL WHEN NECESSARY OR WHEN DIRECTED BY THE CITY OR THE ENGINEER.
6. ALL ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TYPE "A" WARNING LIGHTS.
7. ALL TYPE III BARRICADES SHALL BE FURNISHED WITH A MINIMUM OF TWO (2) TYPE "A" WARNING LIGHTS.
8. ALL CHANNELING DEVICES SHALL BE PROVIDED WITH TYPE "C" WARNING LIGHTS.
10. IF WARNING LIGHTS TO BE USED ON TRAFFIC CONTROL DEVICES, TYPE "A" LIGHTS SHALL ONLY BE USED ON DEVICES WARNING OF UNEXPECTED HAZARDS, AND SHALL NOT BE USED FOR DELINEATION OF THE TRAVELED WAY. ONLY TYPE "C" WARNING LIGHTS SHALL BE USED FOR DELINEATION OF THE TRAVELED WA, AND TYPE "C" LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.
11. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.

UTILITIES

1. THE LOCATIONS OF THE UTILITY LINES, AS SHOWN ON THESE DRAWINGS, ARE BASED ON ATLAS INFORMATION, UTILITY COMPANY COMMENTS, AND OBSERVED FEATURES. NEITHER THE CITY NOR THE ENGINEER ASSUMES OR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA. SERVICE LINES FROM THE MAIN UTILITY LINES TO ANY BUILDING OR FACILITY MAY NOT BE SHOWN. CONTRACTOR SHALL OBTAIN THE LOCATION OF THESE FROM THE UTILITY COMPANY AND SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES TO THESE LINES OR ANY OTHER LINES OR UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.
2. THE CONTRACTOR SHALL GIVE NOTIFICATION CENTER OF THE OKLAHOMA ONE-CALL SYSTEM, INC., A MINIMUM OF TWO (2) WORKING DAYS AND A MAXIMUM OF TEN (10) WORKING DAYS PRIOR TO BEGINNING WORK IN ANY AREA. PHONE: 1-800-522-6543.
3. CONTRACTOR SHALL BRACE UTILITY POLES AND GUY WIRES WITHIN 5 FEET OF AN EXCAVATION. CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE PUBLIC SERVICE OF OKLAHOMA/AMERICAN ELECTRIC POWER (PSO/AEP) A MINIMUM OF THREE (3) WEEKS PRIOR TO ANY REQUIRED BRACING, REMOVAL, OR RELOCATION OF EXISTING UTILITY POLES.
4. CONTRACTOR SHALL MEET MINIMUM CLEARANCE REQUIREMENTS SET BY PUBLIC SERVICE COMPANY OF OKLAHOMA(PSO).

PLAN & PROFILE SHEET NOTES

1. CONTRACTOR MUST FIELD VERIFY ALL DEPTHS, DISTANCE ANGLES, AND GRADES OF EXISTING SANITARY SEWER PRIOR TO START OF CONSTRUCTION. (NO SEPARATE PAY ITEM).
2. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, SUPPORTING, AND PROTECTING THE INTEGRITY OF UNDERGROUND UTILITIES AND POWER POLES DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING OR THE INSTALLATION OF SHEETING OR SHORING TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL.
4. IF DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, STRUCTURES, ETC. TO ITS ORIGINAL OR BETTER CONDITION. NO SEPARATE PAY ITEM IF LOCATED OUTSIDE OF STANDARD CONSTRUCTION PAY LIMITS.
5. TRENCH EXCAVATION PROTECTION SHALL BE ACCOMPLISHED AS REQUIRED BY THE PROVISIONS OF PART 1926. SUBPART P-EXCAVATION, TRENCHING, AND SHORING OF THE OCCUPATIONAL SAFETY AND HEALTH'S STANDARDS AND INTERPRETATIONS.
6. CONTRACTOR SHALL VERIFY AND REINSTATE ALL ACTIVE SERVICE CONNECTIONS.
7. CONTRACTOR SHALL REPLACE ALL SERVICES TO WITHIN 2' OF THE EASEMENT LINE OR RIGHT-OF-WAY LINE.
8. DISTANCE FROM DOWNSTREAM MANHOLE TO SERVICE CONNECTION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION.
9. CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
10. WHEN REHABILITATING OR REPLACING MANHOLES, CONTRACTOR SHALL MATCH GRADE OF EXISTING OR FINISHED CONDITIONS.
11. FOR ABANDONMENT, REMOVE TOP 3 VF OF EXISTING MANHOLE/LAMPHOLE AND FILL EXISTING SANITARY SEWER AND MANHOLE/LAMPHOLE WITH CELLULAR CONCRETE. ABANDONMENT SHALL BE PERFORMED AFTER CONSTRUCTION OF ALL NEW SEWER MAINS.
12. CONTRACTOR SHALL TELEVISE ANY SANITARY SEWER LINES CALLED OUT FOR ABANDONMENT TO DETERMINE LOCATION OF ACTIVE SERVICES. ANY ACTIVE SERVICES ON AN ABANDONED LINE SHALL BE RECONNECTED TO AN EXISTING OR PROPOSED SEWER MAIN IN THE IMMEDIATE VICINITY. ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THERE IS NO SEWER MAIN IN THE VICINITY TO CONNECT THE SERVICE.
13. CONTRACTOR SHALL COMPLETE THE INSTALLATION OF FINAL STABILIZATION MEASURES WITHIN 14 DAYS OF PROJECT COMPLETION. COMPLETE THE INSTALLATION OF THE FINAL STABILIZATION MEASURES WITH IN 7 DAYS OF PROJECT COMPLETION FOR PROJECT GREATER THAN 40 ACRES, DISCHARGE TO AN APPROVED RECEIVING CHANNEL OR ARE WITHIN ONE (1) MILE OF AN IMPAIRED/TMDL WATERBODY.
14. CONSTRUCTION VEHICLE WASH WATERS ARE NOT TO BE DISCHARGED INTO CITY OF TULSA WATERS OR WATERS OF THE STATE.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

GENERAL CONSTRUCTION NOTES

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA	DRAWN	RLP	03/2026	APPROVED:
	DESIGNED	JWB	03/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: FEBRUARY 2026
ATLAS PAGE NO: NA				SHEET 3 OF 25 SHEETS

PAY ITEM NOTES

TRAFFIC CONTROL

1. CONTRACTOR TO PROVIDE BUSINESS ACCESS SIGNS AT ALL BUSINESS ACCESS POINTS. ALL COST TO BE INCIDENTAL TO OTHER BID ITEMS.

2. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE GENERAL AND TRAFFIC CONTROL NOTES ON THE GENERAL NOTES SHEET.

3. ALL REFLECTORIZED SHEETING USED ON SIGN AND BARRICADES SHALL BE A CUBIC PRISMATIC TYPE AND SHALL MEET ASTM D-4956-01, TYPE IX. SHEETING ON DRUMS SHALL BE TYPE III SHEETING MEETING ASTM D-4956-04.

4. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THIS ITEM SHALL BE PAID PER CALENDAR DAYS FOR ALL NECESSARY TRAFFIC CONTROL. PAYMENT IS NOT GUARANTEED FOR FULL AMOUNT OF CALENDAR DAYS LISTED. PAYMENT FOR TRAFFIC CONTROL WILL BE BASED ON ACTUAL CALENDAR DAYS THAT TRAFFIC CONTROL ITEMS AND/OR DEVICES ARE USED.

SWPPP

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

EXCAVATION AND BACKFILL

6. THE CONTRACTOR SHALL INCLUDE THE COST OF RELOCATING UTILITY POLE ANCHORS, AND ANY BRACING OF POLES THAT MAY BE REQUIRED BY THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE APPROPRIATE UTILITY COMPANY. ALL WORK ASSOCIATED WITH THE MAINTENANCE OF OTHER UTILITIES, FACILITIES, AND LINES IS CONSIDERED AS WORK INCIDENTAL TO EXCAVATION AND BACKFILL, UNCLASSIFIED AND AS SUCH, WILL NOT BE MEASURED FOR SEPARATE PAYMENT.

7. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING OR THE INSTALLATION OF SHEETING OR SHORING TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL.

8. WATER TABLE CRADLE SHALL BE INSTALLED WHERE TRENCH CONDITIONS WARRANT ITS USE AS DIRECTED BY THE ENGINEER.

9. THE COST OF INSTALLING CLAY DAMS SHALL BE CONSIDERED INCIDENTAL. CLAY SHALL HAVE A MINIMUM PLASTICITY INDEX OF 30. NO ADDITIONAL PAYMENT SHALL BE MADE.

10. PIPE SHALL BE BEDDED IN ACCORDANCE WITH BEDDING DETAILS AS SHOWN ON MISCELLANEOUS DETAILS SHEET AND AS CALLED OUT ON THE PLAN AND PROFILE SHEETS. THE COST FOR THE MATERIALS ASSOCIATED WITH THE SPECIFIED BEDDING ARE CONSIDERED INCIDENTAL. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ADDITIONAL EXCAVATION AND BACKFILL DUE TO THE REQUIRED BEDDING DETAILS.

SODDING & SEEDING

11. THE PAYMENT OF THE UNIT BID PRICE FOR SOLID SLAB SODDING SHALL INCLUDE ALL COSTS FOR PLACEMENT OF THE TOPSOIL AND SOD, FERTILIZATION, AND PERIODIC WATERING. FERTILIZATION SHALL BE ACCOMPLISHED USING 10-20-10 FERTILIZER APPLIED AT A RATE OF 1.5 POUNDS PER SQUARE YARD. WATERING SHALL BE AS NEEDED AND SHALL CONTINUE UNTIL THE VEGETATION IS FULLY ESTABLISHED OR THE PROJECT HAS BEEN ACCEPTED BY THE OWNER.

12. WATERING AND FERTILIZATION FOR HYDROMULCH SEEDING SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATION PART 325. PAYMENT FOR SOD REPLACEMENT OR HYDROMULCH SEEDING WILL BE MADE AT THE UNIT PRICE PER SQUARE YARD AND SHALL INCLUDE ALL NECESSARY TOP SOIL REPLACEMENT, FERTILIZATION, WATERING AND MAINTENANCE. NO SEPARATE ADDITIONAL PAYMENT SHALL BE MADE FOR SODDING AND SEEDING OUTSIDE OF PAY LIMIT. MAXIMUM PAY LIMIT FOR SEEDING AND SODDING SHALL BE 10-FEET EACH SIDE OF TRENCH. DEVELOPED LOTS SHALL BE SOD AND UNDEVELOPED LOT MAY BE HYDRMULCH SEEDED.

MANHOLES

13. MANHOLES WILL BE MEASURED FOR PAYMENT USING THE CITY OF TULSA'S STANDARD PAY ITEMS. NO STEPS SHALL BE INSTALLED IN ANY MANHOLES IN THIS PROJECT.

14. NO TRANSITIONS BETWEEN PIPE TYPES OR SIZES MAY BE MADE EXCEPT AT A STRUCTURE. IF A TRANSITION IS REQUIRED AT A LOCATION OTHER THAN ONE SCHEDULED FOR THE INSTALLATION OF A MANHOLE, THE CONTRACTOR WILL INSTALL AN ADDITIONAL MANHOLE AT HIS COST.

15. MANHOLES SHALL BE ELEVATED OR FLUSH TO GROUND ELEVATION AND INCLUDE BOLLARDS AT SELECT MANHOLE SITES AS SHOWN CITY OF TULSA STANDARD DETAIL 369. ALL ELEVATED MANHOLES SHALL BE CONSTRUCTED WITH CONCRETE PADS, PRECAST CONCRETE FLAT TOPS AND WALL SECTIONS, AND PIPE BOLLARDS AS SHOWN ON THE STANDARD DETAIL. THE COST OF THE CONCRETE PADS, PRECAST CONCRETE FLAT TOPS AND WALL SECTIONS, PIPE BOLLARDS, AND ALL OTHER ITEMS RELATED TO THE DETAIL SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE MANHOLE.

16. FRAMES AND COVERS FOR ALL MANHOLES SHALL BE 3200 SERIES COMPOSITE UTILITY ACCESS COVER WITH QUARTER TURN PADDLE LOCKS AS MANUFACTURED BY EJ OR ENGINEER APPROVED EQUAL. MANHOLE GRADE ADJUSTMENTS SHALL BE CRETEX PRO-RINGS OR ENGINEER APPROVED EQUAL.

17. CLOSED-BOTTOM FIBERGLASS MANHOLES, AS MANUFACTURED BY L.F. MANUFACTURING, INC., OR ENGINEER APPROVED EQUIVALENT, SHALL BE INSTALLED. MANHOLES SHALL BE SUITABLE FOR HS-20 LOADING. AN ANTI-FLOATATION RING WITH AN EXTENDED, REINFORCED CONCRETE BASE SHALL ALSO BE REQUIRED. EXTENDED BASES SHALL BE A MINIMUM OF 12 INCHES THICK WITH A MINIMUM DIAMETER OF 24 INCHES GREATER THAN MANHOLE OUTSIDE DIAMETER OR PER MANUFACTURER'S RECOMMENDATION. A PRE-CONSTRUCTION SUBMITTAL, COMPLETE WITH BUOYANCY CALCULATIONS, TO ENGINEER SHALL BE REQUIRED. SEE TECHNICAL SPECIFICATIONS AND DETAIL ON FRP MANHOLE AND TEE BASE DETAILS SHEET FOR ADDITIONAL REQUIREMENTS. CLOSED-BOTTOM FIBERGLASS MANHOLES WILL BE ALLOWED FOR INSTALLATION WHEN USING PVC OR FRP PIPE.

18. TEE BASE MANHOLES, AS MANUFACTURED BY HOBAS PIPE USA, INC., OR THOMPSON PIPE GROUP, INC., OR ENGINEER APPROVED EQUIVALENT, SHALL BE INSTALLED.TEE BASE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D-3753. THE TEE BASE SHALL BE SN-72 FRP. THE RISER SECTION OF THE TEE BASE MANHOLE SHALL BE SN-46 FRP. ALL CONCRETE WORK ASSOCIATED WITH THE INSTALLATION OF THE TEE BASE MANHOLE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE MANHOLE. TEE BASE MANHOLES WILL ONLY BE ALLOWED FOR INSTALLATION WHEN USING FRP PIPE.

19. FIBERGLASS LINERS, AS MANUFACTURED BY L.F. MANUFACTURING, INC. OR ENGINEER APPROVED EQUIVALENT, SHALL BE INSTALLED. MANHOLE LINERS SHALL BE SUITABLE FOR HS-20 LOADING. SEE TECHNICAL SPECIFICATIONS AND BEDDING AND FRP MANHOLE LINER DETAILS SHEET. REMOVAL OF TOP OF EXISTING MANHOLE, GROUTING ANNULAR SPACE, NEW MANHOLE FRAME AND COVER, AND GRADE ADJUSTMENT RINGS SHALL BE INCIDENTAL AND NO ADDITIONAL PAYMENT WILL BE MADE.

PIPE

20. FOR 24-INCH DIAMETER SEWER PIPE, THE CONTRACTOR MAY UTILIZE EITHER PS 75 F679 PVC, OR SN 72 FIBER GLASS REINFORCED PIPE (FRP) UNLESS OTHERWISE NOTED IN THE DRAWINGS. FOR 8-INCH DIAMETER SEWER PIPE, SDR 26 ASTM D3034 PVC MUST BE USED.

21. UNIT PRICE QUANTITY FOR INSTALLATION OF PIPE SHALL INCLUDE ALL NECESSARY LABOR, EQUIPMENT, MATERIAL, AND CONFORM TO THE PIPE EMBEDMENT DETAILS SHOWN ON THE MISCELLANEOUS DETAILS SHEET. UTILITY CROSSING SUPPORTS FOR PIPE INSTALLATION SHALL BE INCLUSIVE WITH THE UNIT PRICE FOR PIPE INSTALLATION.

22. NUMBER OF SERVICE CONNECTIONS ARE APPROXIMATE, CONTRACTOR TO VERIFY WITH THE USE OF PRE-TELEVISION INSPECTION PER SPECIFICATION 415.

23. WHEN CONNECTING PVC SERVICE LATERALS TO ANY PIPE OTHER THAN PVC, ROMAC STYLE 501 COUPLINGS OR ENGINEER APPROVED EQUAL SHALL BE USED. PVC COUPLINGS SHALL BE USED WHEN CONNECTING PVC PIPE. FLEXIBLE COUPLINGS SHALL NOT BE PERMITTED.

24. CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER QUANTITY CALCULATED BASED ON EXISTING MANHOLE LOCATIONS. CONTRACTOR SHALL USE VIDEO TO CONFIRM LOCATIONS AND DETERMINE POSITIONS OF SERVICE CONNECTIONS. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR VIDEO INSPECTION. NO ADDITIONAL PAYMENT SHALL BE MADE.

25. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE BYPASS PUMPING IF NECESSARY. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. THE COST OF THE BYPASS INCLUDING THE PUMPS, LINES, LABOR AND OTHER MISCELLANEOUS ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE AND/OR MANHOLE INSTALLATION. NO ADDITIONAL PAYMENT WILL BE MADE.

26. RESTORATION WILL NOT BE PAID FOR TRENCHLESS CONSTRUCTION. RESTORATION WILL BE PAID FOR OPEN CUT CONSTRUCTION METHODS.

27. POST REHABILITATION TELEVISION INSPECTION OF ALL LINES INSTALLED SHALL BE PERFORMED BY THE CONTRACTOR. THE COST OF POST REHABILITATION TELEVISION INSPECTION WILL NOT BE PAID FOR SEPARATELY.

PAY ITEM	SPEC NO.	DESCRIPTION	PAY ITEM NOTE NOS.	UNIT	TOTAL
		BASE BID			
1	331	WATER TABLE CRADLE FOR 24-INCH DIAMETER PIPE	9	LF	300
2	334	CONSTRUCTION AS-BUILTS		LS	1
3	335	CONTRACTOR'S QUALITY CONTROL		LS	1
4	400	MOBILIZATION		EA	1
5	400	PHOTOGRAPHIC DOCUMENTATION		EA	1
6	402	SOD REPLACEMENT	11,12	SY	4,300
7	402	FENCE REMOVAL & REPLACEMENT		LF	10
8	402	GRAVEL PAVEMENT REMOVAL & REPLACEMENT		SY	5
9	405, SP-2	8-INCH DIAMETER OPEN CUT REPLACEMENT, SDR 26 ASTM D3034 PVC	6,7,9,10,20,21,25,26,27	LF	29
10	405, SP-1,2,8	24-INCH DIAMETER OPEN CUT REPLACEMENT, PS 75 ASTM D3034 PVC OR SN 72 FRP	6,7,9,10,20,21,25,26,27	LF	1,893
11	405	SERVICE RECONNECTIONS	22,23,24	EA	1
12	405	SERVICE LINE REPLACEMENT	22,23,24	LF	20
13	416, SP-3,4,6,7	COMPLETE MANHOLE REPLACEMENT STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE (0-6 FOOT	13,14,15,16,17,18	EA	5
14	416, SP-3,4,6,7	EXTRA DEPTH OVER 6-FOOT FOR STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE	13,14,15,16,17,18	VF	21.5
15	416, SP-5,6,7	INSTALL 54-INCH DIAMETER FRP MANHOLE LINER (0-6 FOOT DEPTH)	15,19	EA	9
16	416, SP-5,6,7	EXTRA DEPTH OVER 6-FOOT FOR FRP MANHOLE LINER	15,19	VF	26.2
17	417	COMPLETE LAMPHOLE REPLACEMENT 8-INCH DIAMETER PVC		EA	1
18	419	MANHOLE REHABILITATION COVER, BENCH AND INVERT REHABILITATION (TYPE Gh REPAIR)		EA	1
19	421	MANHOLE REHABILITATION EPOXY COATING, (TYPE Gs REPAIR)		SF	1,150.0
20	ODOT 220	SWPPP DOCUMENTATION AND MANAGEMENT	5	LS	1
21	ODOT 880 (J)	CONSTRUCTION TRAFFIC CONTROL	1,2,3,4	CD	365
22	SP-9	OWNERS ALLOWANCE		ALLOW	100,000
		ADDITIVE ALTERNATE NO.1			
23	410, SP-12	27-INCH DIAMETER CURED-IN-PLACE-PIPE COMPLETE IN PLACE	25,26,27	LF	1,480
24	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	21,22,24,27	LF	1,480

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

PAY QUANTITIES & NOTES

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL NA

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY		
PROJ. MGR.	BV	3/26
LEAD ENGR.		3/26
FIELD MGR.		3/26

APPROVED:
DESIGN MANAGER
DATE: February 2026
FILE: DRAWING:
ATLAS PAGE NO: NA
SHEET 4 OF 25 SHEETS

PAY QUANTITIES

ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	UNIT	TOTAL	SHEET NO. 14	15	16	17	18	19	24	25
		BASE BID										
1	331	WATER TABLE CRADLE FOR 24-INCH DIAMETER PIPE	LF	300								
2	334	CONSTRUCTION AS-BUILTS	LS	1								
3	335	CONTRACTOR'S QUALITY CONTROL	LS	1								
4	400	MOBILIZATION	EA	1								
5	400	PHOTOGRAPHIC DOCUMENTATION	EA	1								
6	402	SOD REPLACEMENT	SY	4,300	889	889	889	889	651	64		
7	402	FENCE REMOVAL & REPLACEMENT	LF	10						10		
8	402	GRAVEL PAVEMENT REMOVAL & REPLACEMENT	SY	5						5		
9	405, SP-2	8-INCH DIAMETER OPEN CUT REPLACEMENT, SDR 26 ASTM D3034 PVC	LF	29						29		
10	405, SP-1,2,8	24-INCH DIAMETER OPEN CUT REPLACEMENT, PS 75 ASTM D3034 PVC OR SN 72 FRP	LF	1,893	400	400	400	400	293			
11	405	SERVICE RECONNECTIONS	EA	1						1		
12	405	SERVICE LINE REPLACEMENT	LF	20						20		
13	416, SP-3,4,6,7	COMPLETE MANHOLE REPLACEMENT STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE (0-6 FOOT DEPTH)	EA	5	1	1	1	1	1			
14	416, SP-3,4,6,7	EXTRA DEPTH OVER 6-FOOT FOR STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE	VF	21.5	3.9	4.7	4.0	2.4	6.5			
15	416, SP-5,6,7	INSTALL 54-INCH DIAMETER FRP MANHOLE LINER (0-6 FOOT DEPTH)	EA	9							4	5
16	416, SP-5,6,7	EXTRA DEPTH OVER 6-FOOT FOR FRP MANHOLE LINER	VF	26.2							7.9	18.3
17	417	COMPLETE LAMPHOLE REPLACEMENT 8-INCH DIAMETER PVC	EA	1						1		
18	419	MANHOLE REHABILITATION COVER, BENCH AND INVERT REHABILITATION (TYPE Gh REPAIR)	EA	1								1
19	421	MANHOLE REHABILITATION EPOXY COATING, (TYPE Gs REPAIR)	SF	1,150.0							1,150.0	
20	ODOT 220	SWPPP DOCUMENTATION AND MANAGEMENT	LS	1								
21	ODOT 880 (J)	CONSTRUCTION TRAFFIC CONTROL	CD	365								
22	SP-9	OWNERS ALLOWANCE	ALLOW	100,000								
		ADDITIVE ALTNERATE NO. 1										
23	410, SP-12	27-INCH DIAMETER CURED-IN-PLACE-PIPE COMPLETE IN PLACE	LF	1,480							1,480	
24	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	LF	1,480							1,480	

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

PAY ITEM SUMMARY

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL NA
FILE:
ATLAS PAGE NO: NA

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY		
PROJ. MGR.	DV	3/26
LEAD ENGR.	JR	3/26
FIELD MGR.		3/26
DRAWING:		

APPROVED:
DESIGN MANAGER
DATE: February 2026
SHEET 5 OF 25 SHEETS

MANHOLE WORK ITEM TABLE

ITEM NO.	COT BASIN NO.	PLAN MH ID	COT ATLAS PAGE	MANHOLE DEPTH (FT)	REMOVE EXISTING MANHOLE (NO SEPARATE PAYMENT)	COMPLETE MANHOLE REPLACEMENT STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE (0-6 FOOT DEPTH)	EXTRA DEPTH OVER 6-FOOT FOR STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE	INSTALL 54-INCH DIAMETER FRP MANHOLE LINER (0-6 FOOT DEPTH)	EXTRA DEPTH OVER 6-FOOT FOR FRP MANHOLE LINER	COMPLETE LAMPHOLE REPLACEMENT 8-INCH DIAMETER PVC	MANHOLE REHABILITATION BENCH AND INVERT REHABILITATION (TYPE Gh REPAIR)	MANHOLE REHABILITATION EPOXY COATING, (TYPE Gs REPAIR)	PLAN SHEET NO.
					333	416, SP-3,4,6,7	416, SP-3,4,6,7	416, SP-5,6,7	416, SP-5,6,7	417	419	421	
					EA	EA	VF	EA	VF	EA	EA	SF	
1	24-N	024-0005	520	9.9		1	3.9						14
2	24-N	024-0006	520	20.4	1								14
3	24-N	024-0007	520	10.7		1	4.7						15
4	24-N	024-0008	520	10.0		1	4.0						16
5	24-N	024-0204	520	8.4		1	2.4						17
6	24-N	024-0011	520	12.5		1	6.5						18
7	24-N	024-0243	520	10.5						1			19
8	101-N	101-0004	433	18.5								1150.0	24
9	24-N	024-0001	433	9.0				1	3.0				24
10	24-N	024-0002	433	7.0				1	1.0				24
11	24-N	024-0003	433	8.1				1	2.1				24
12	24-N	024-0004	433	7.8				1	1.8				24
13	24-N	024-0012	520	11.1				1	5.1		1		25
14	24-N	024-0014	615	9.7				1	3.7				25
15	24-N	024-0015	615	9.2				1	3.2				25
16	24-N	024-0016	615	8.7				1	2.7				25
17	24-N	024-0017	615	9.6				1	3.6				25

PIPE WORK ITEM TABLE

ITEM NO.	LINE ID	COT BASIN NO.	PLAN DSMH ID	PLAN DSMH DEPTH (FT)	PLAN USMH ID	PLAN USMH DEPTH (FT)	COT ATLAS PAGE	SURVEY LENGTH (FT)	PROP. DIA. (IN)	PROPOSED PIPE MATERIAL	PROPOSED CONSTRUCTION METHOD	COT SPEC NO.	PLAN SHEET NO.
BASE BID													
1	A	24-N	024-0005	9.9	024-0007	10.7	520	628	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	405, SP-1,2,8	14,15
2	A	24-N	024-0007	10.7	024-0008	10.0	520	314	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	405, SP-1,2,8	15,16
3	A	24-N	024-0008	10.0	024-0204	8.4	520	475	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	405, SP-1,2,8	16,17
4	A	24-N	024-0204	8.4	024-0011	12.5	520	476	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	405, SP-1,2,8	17,18
5	B	24-N	024-0011	12.5	024-0243	10.5	520	29	8	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-2	19
ADDITIVE ALTERNATE NO.1													
6	CIPP01	24-N	101-0004	18.5	024-0001	9.0	433	58	27	CURED-IN-PLACE-PIPE	CURED-IN-PLACE-PIPE	410, SP-12	24
7	CIPP02	24-N	024-0001	9.0	024-0002	7.0	433	355	27	CURED-IN-PLACE-PIPE	CURED-IN-PLACE-PIPE	410, SP-12	24
8	CIPP03	24-N	024-0002	7.0	024-0003	8.1	433	354	27	CURED-IN-PLACE-PIPE	CURED-IN-PLACE-PIPE	410, SP-12	24
9	CIPP04	24-N	024-0003	8.1	024-0004	7.8	433	354	27	CURED-IN-PLACE-PIPE	CURED-IN-PLACE-PIPE	410, SP-12	24
10	CIPP05	24-N	024-0004	7.8	024-0005	9.9	433	359	27	CURED-IN-PLACE-PIPE	CURED-IN-PLACE-PIPE	410, SP-12	24

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

MANHOLE & PIPE WORK ITEM TABLES

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL NA
FILE:
ATLAS PAGE NO: NA

DRAWN	RLP	02/2026	APPROVED:
DESIGNED	JWB	02/2026	
SURVEY			
PROJ. MGR.	BV	3/26	
LEAD ENGR.		2/23/26	
FIELD MGR.		3/26	DESIGN MANAGER
DRAWING:			DATE: February 2026

SHEET 6 OF 25 SHEETS

UNPLATTED
SEC. 8, T.20N., R.13E.
SE/4 SE/4 NE/4 SW/4
BARRON, WILLIAM JOEL JR & DYNISHA D. BARRON-SHEPPARD
2742 E. 49th ST.

20' SEWER EASEMENT TO TULSA COUNTY UTILITY SERVICES AUTHORITY, BOOK 3286, PAGE 129

SSMH 101-0004

EX. 27" SS

SSMH 024-0001

EX. 27" SS

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW/4 SE/4
CITY OF TULSA

10' RIGHT OF WAY AGREEMENT TO OKLAHOMA NATURAL GAS COMPANY BOOK 6367, PAGE 2588

UNPLATTED
SEC. 8, T.20N., R.13E.
E/2 NE/4 SE/4 NE/4 SW/4
LESS & EXCEPT S.50' AND E.25' FOR ROADWAY
CITY OF TULSA

DIRECT MAIN LINE EXCESS CAPACITY SANITARY SEWER CONNECTION EASEMENT (BLANKET)
E/2 NE/4 SE/4 NE/4 SW/4
BOOK 4171, PAGE 2013

25' EASEMENT TO TULSA COUNTY, BOOK 2312, PAGE 431

SSMH 024-0002

EX. 27" SS

MATCH LINE

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW/4 SE/4
CERVANTES, RUBEN & ARILENE JOANA
3030 E. 51st ST.

0 10' 20' 40'
SCALE: 1"= 20'

MATCH LINE

20' SEWER EASEMENT TO TULSA COUNTY UTILITY SERVICES AUTHORITY, BOOK 3286, PAGE 130

EX. 27" SS

SSMH 024-0003

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW/4 SE/4
CERVANTES, RUBEN & ARILENE JOANA
3030 E. 51st ST.

EX. 27" SS

SSMH 024-0004

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW/4 SE/4
CERVANTES, RUBEN & ARILENE JOANA
3030 E. 51st ST.

MATCH LINE

MATCH LINE

EAST 51ST STREET NORTH

20' SEWER EASEMENT TO TULSA COUNTY UTILITY SERVICES AUTHORITY, BOOK 3286, PAGE 130

EX. 27" SS

MATCH LINE

LEGEND

EXISTING MANHOLE
EXISTING SANITARY SEWER
PROPOSED CIPP
PROPERTY LINE
RIGHT-OF-WAY
EXISTING EASEMENT

OKLAHOMA
PROFESSIONAL ENGINEER
JAMES DANIEL REED
P.L.S. 1744
STATE OF OKLAHOMA

DATE: 2.27.2026

RIGHT OF WAY MAP 1

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

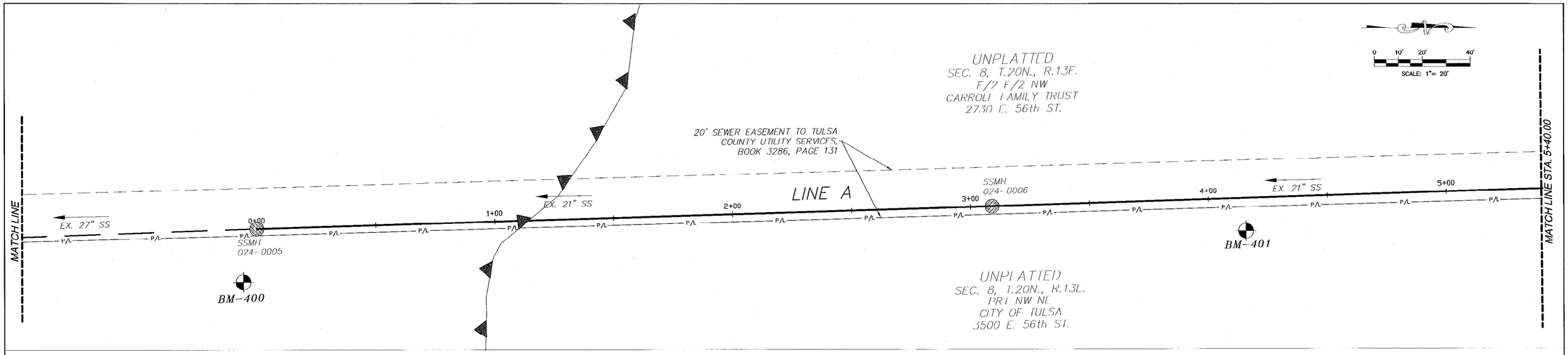
PLAN SCALE:	DRAWN	RLP	02/2026
1" = 20'	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: NA	PROJ. MGR.		3/26
	LEAD ENGR.		3/26
VERTICAL NA	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

APPROVED:

DESIGN MANAGER

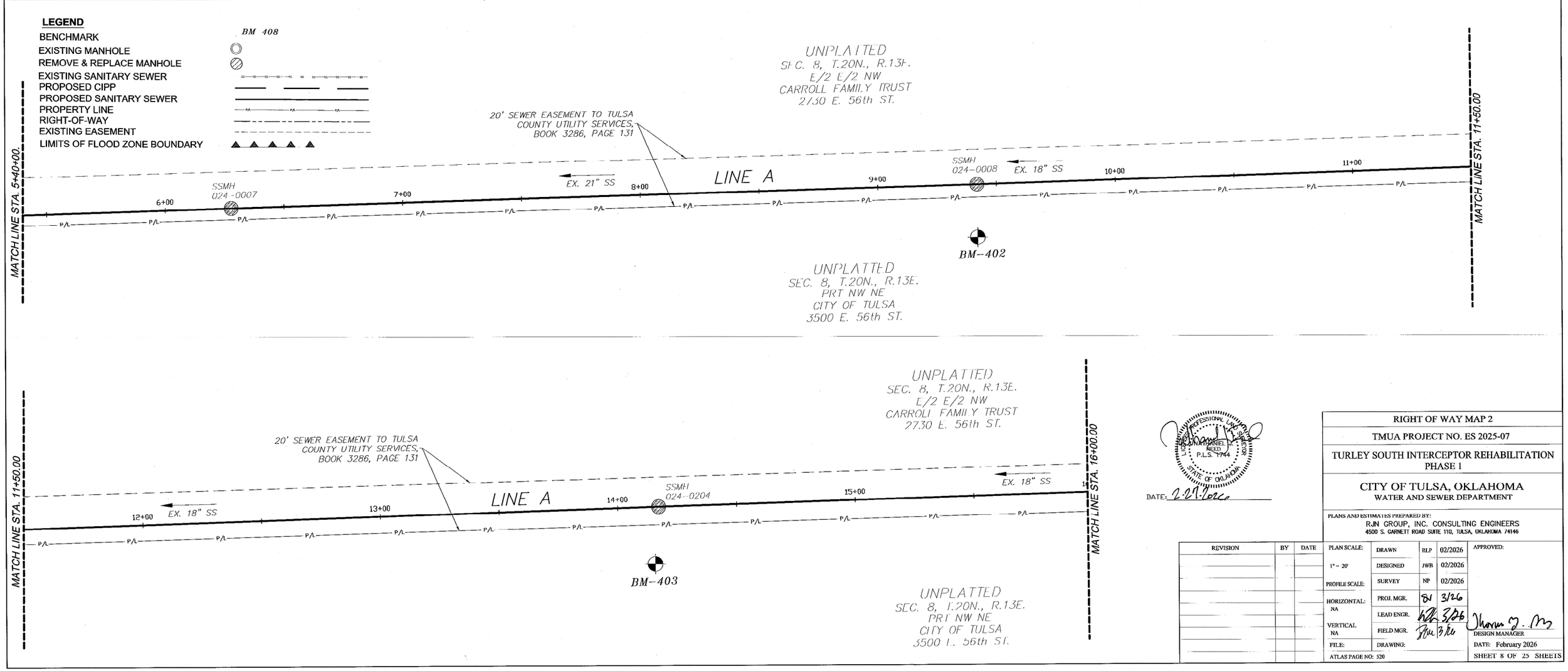
DATE: February 2026

SHEET 7 OF 25 SHEETS



LEGEND

- BENCHMARK — BM 408
- EXISTING MANHOLE
- REMOVE & REPLACE MANHOLE
- EXISTING SANITARY SEWER
- PROPOSED CIPP
- PROPOSED SANITARY SEWER
- PROPERTY LINE
- RIGHT-OF-WAY
- EXISTING EASEMENT
- LIMITS OF FLOOD ZONE BOUNDARY



PROFESSIONAL LAND SURVEYOR — JOHN MICHAEL REED — P.L.S. 1744 — STATE OF OKLAHOMA

DATE: 2-27-2026

REVISION	BY	DATE

PLAN SCALE: 1" = 20'	DRAWN	RLP	02/2026
	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: NA	PROJ. MGR.	BV	3/26
	LEAD ENGR.		3/26
VERTICAL NA	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

APPROVED:

DESIGN MANAGER

DATE: February 2026

SHEET 8 OF 25 SHEETS

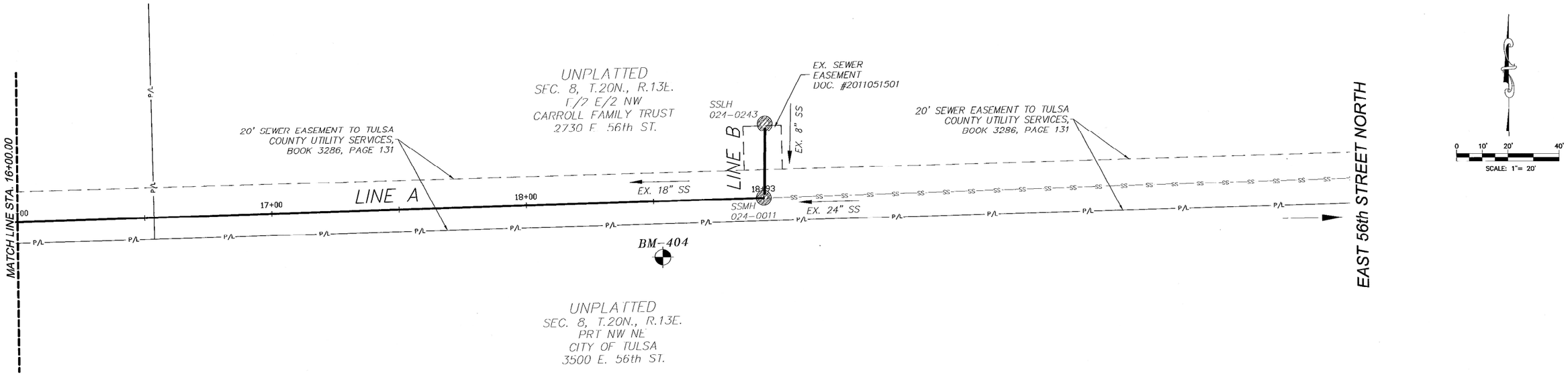
RIGHT OF WAY MAP 2

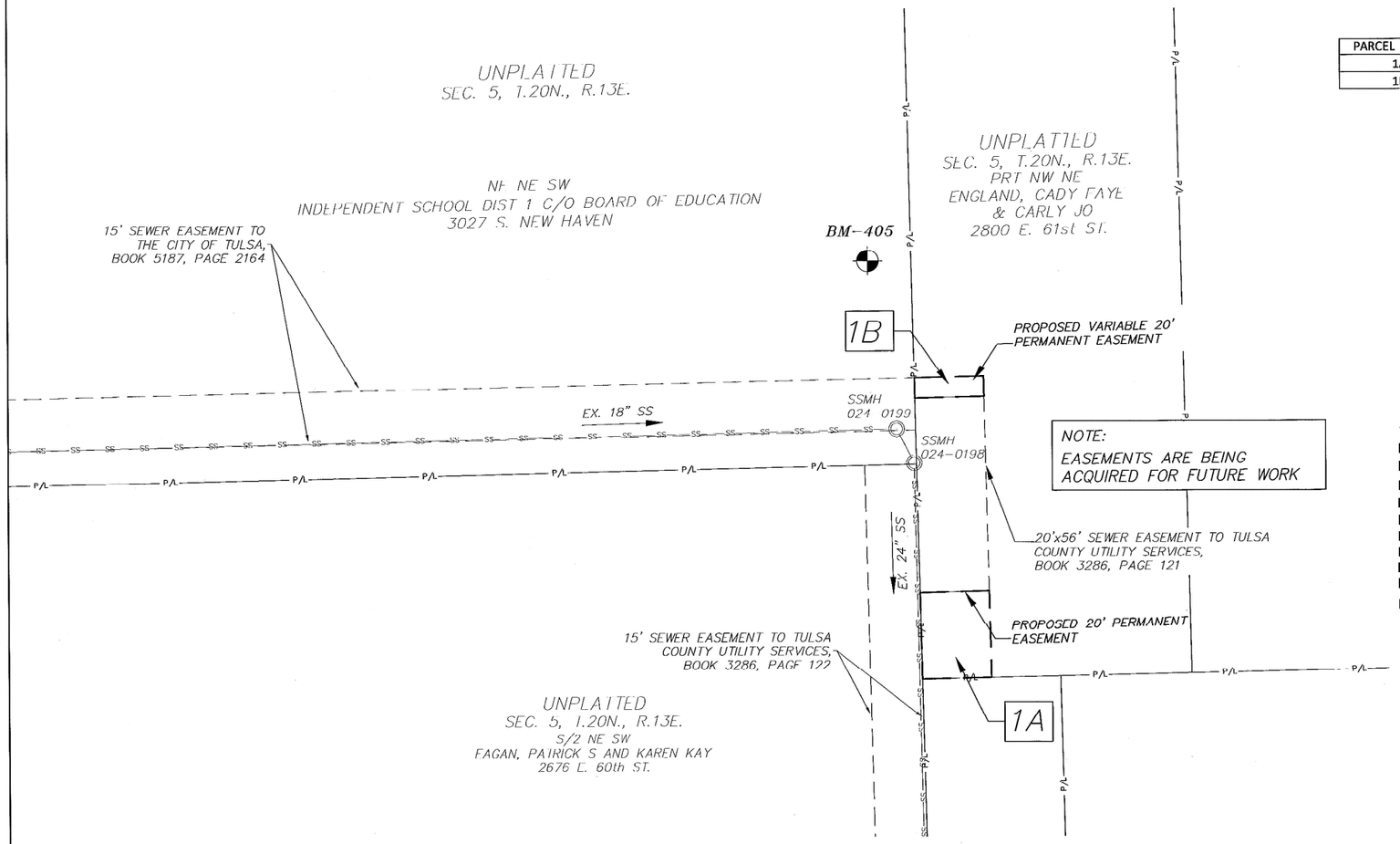
TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146





PERMANENT EASEMENT DESCRIPTIONS

PARCEL	OWNER	DESCRIPTION	PERMANENT EASEMENT
1A	ENGLAND, CADY FAYE & CARLY JO	PART OF THE NW/4 SE/4 SEC. 5, T.20N., R.13E.	0.0115
1B	ENGLAND, CADY FAYE & CARLY JO	PART OF THE NW/4 SE/4 SEC. 5, T.20N., R.13E.	0.0027

PROPERTY/EASEMENT CORNER LOCATION

PARCEL ID	POINT	NORTHING	EASTING	DIRECTION	DISTANCE
1A	BEGIN	457939.84	2573156.35	N 88°49'20" E	20.00'
		457940.25	2573176.35	S 01°18'25" E	25.00'
		457915.25	2573176.92	S 88°49'20" W	20.00'
		457914.84	2573156.92	N 01°18'25" W	25.00'
1A	END	457939.84	2573156.35		
1B	BEGIN	458001.73	2573154.94	N 88°46'08" E	20.00'
		458002.16	2573174.94	S 01°18'25" E	5.93'
		457996.23	2573175.07	S 88°49'20" W	20.00'
		457995.82	2573155.08	N 01°18'25" W	5.91'
1B	END	458001.73	2573154.94		

LEGEND

- BENCHMARK — BM 408
- EXISTING MANHOLE
- REMOVE & REPLACE MANHOLE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- PROPERTY LINE
- RIGHT-OF-WAY
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EASEMENT DESCRIPTION — 1A

OKLAHOMA PROFESSIONAL LAND SURVEYOR — NATHANIEL REED P.L.S. 1744 — STATE OF OKLAHOMA

DATE: 2-27-2026

REVISION	BY	DATE

RIGHT OF WAY MAP 3

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE I

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

PLAN SCALE: 1" = 20'	DRAWN	RLP	02/2026	APPROVED:
	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY	NP	02/2026	
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	DESIGN MANAGER
VERTICAL NA	FIELD MGR.		3/26	
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 520				SHEET 9 OF 25 SHEETS

SURVEY CONTROL				
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
400	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	453604.53	2573287.61	603.09
401	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	454025.80	2573266.29	611.92
402	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	454551.84	2573258.34	609.02
403	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	455025.23	2573244.52	613.09
404	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	455462.89	2573228.73	623.53
405	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	458035.45	2573141.58	622.83
406	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	458001.94	2572490.66	636.24
500	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	455958.17	2573175.27	622.76
501	BENCH MARK (3/8" IRON PIN SET w/CAP (NP)	455958.97	2573243.65	620.97
50000	3/" IRON PIN FOUND	457607.94	2571615.75	617.47
50001	IRON PIN FOUND w/CAP (BGA)	457606.84	2571555.94	618.07
50002	3/" IRON PIN FOUND	457407.33	2571559.39	621.72
50003	3" PIPE FOUND	457908.10	2571610.19	613.12
50004	1/2" IRON PIN FOUND	457706.83	2571554.18	614.67
50005	MAG NAIL FOUND	458581.36	2570501.34	612.62

HORIZONTAL DATUM: OKLAHOMA STATE PLANE COORDINATE SYSTEM, NORTH ZONE 3501, NAD 83 (1993)
VERTICAL DATUM: NAVD 1988
SCALE FACTOR: 0.99991581

649.199
BENCH MARKS: 5/8" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "67", SET S.W. OF THE INTERSECTION OF 56TH ST. N. AND N. UTICA AVE.

NOTE:

1. CONTROL POINTS ARE SHOWN ON PLAN AND PROFILE SHEETS.
2. BENCHMARKS ARE SHOWN, OR DESCRIBED, ON PLAN AND PROFILE SHEETS.

PROPOSED MANHOLES LINES A & B								
MH ID #	STATION	MANHOLE TYPE	FRAME & COVER	ELEVATED / FLUSH	BOLLARDS	N	E	RIM ELEVATION
024-0005	0+00.00	STANDARD FRP OR TEE BASE	30" COMPOSITE	ELEVATED	YES	453610.17	2573265.34	603.63
024-0007	6+27.79	STANDARD FRP OR TEE BASE	30" COMPOSITE	ELEVATED	YES	454237.65	2573245.69	609.49
024-0008	9+41.78	STANDARD FRP OR TEE BASE	30" COMPOSITE	ELEVATED	YES	454551.49	2573236.16	611.34
024-0204	14+17.18	STANDARD FRP OR TEE BASE	30" COMPOSITE	ELEVATED	YES	455026.64	2573220.53	614.99
024-0011	18+93.96	STANDARD FRP OR TEE BASE	30" COMPOSITE	ELEVATED	YES	455502.59	2573205.55	624.32
024-0243	0+29.07	PVC LAMPHOLE	LAMPHOLE	FLUSH	NO	455503.02	2573176.48	623.99

NOTES:

1. MANHOLE NUMBERS AND COORDINATES ARE SHOWN ON PLAN AND PROFILE SHEETS.
2. MANHOLE FRAMES AND COVERS SHALL BE OF COMPOSITE MATERIAL AND SHALL INCLUDE ALL REQUIRED MARKINGS AS SHOWN IN CITY OF TULSA'S STANDARD DETAIL NO. 354.
3. ALL TEE BASE MANHOLES SHALL BE CONSTRUCTED AS PER TEE BASE MANHOLE DETAILS AS SHOWN ON SHEET 21.
4. ALL FRP MANHOLES SHALL BE CONSTRUCTED AS PER FRP MANHOLE DETAILS AS SHOWN ON SHEET 21.
5. ALL PROPOSED MANHOLE FRAMES AND COVERS SHALL BE 3200 SERIES COMPOSITE UTILITY ACCESS COVER WITH QUARTER TURN PADDLE LOCKS AS MANUFACTURED BY EJ OR ENGINEER APPROVED EQUAL.
6. ALL REHABILITATION MANHOLES WITH FRP LINER SHALL BE ELEVATED AND BOLLARDS INSTALLED.

PROPOSED FRP LINER MANHOLES								
MH ID #	STATION	MANHOLE TYPE	FRAME & COVER	ELEVATED / FLUSH	BOLLARDS	N	E	RIM ELEVATION
MH 024-0001	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	452189.04	2573301.14	600.10
MH 024-0002	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	452543.73	2573294.41	599.00
MH 024-0003	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	452897.34	2573285.42	600.70
MH 024-0004	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	453250.78	2573277.81	600.90
MH 024-0012	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	455852.65	2573194.42	623.70
MH 024-0014	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	456552.04	2573181.76	623.80
MH 024-0015	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	456902.84	2573175.24	624.00
MH 024-0016	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	457251.99	2573169.20	624.00
MH 024-0017	NA	FRP LINER	30" COMPOSITE	ELEVATED	YES	457612.61	2573162.47	625.70

LICENSED PROFESSIONAL ENGINEER — JONATHANE J. REED — P.E.S. 1744 — STATE OF OKLAHOMA

DATE: 2-27-2026

SURVEY DATA SHEET

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: 1" = 100'
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL: NA
FILE:
ATLAS PAGE NO: 520

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY	NP	02/2026
PROJ. MGR.	SV	3/26
LEAD ENGR.		3/26
FIELD MGR.		3/26
DRAWING:		

APPROVED:
DESIGN MANAGER
DATE: February 2026
SHEET 10 OF 25 SHEETS

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: APPROXIMATELY 1,480 LF OF CIPP FROM E. 49TH ST. N. TO E. 51ST ST. N. & APPROXIMATELY 1,893 LF OF 18-INCH & 21" SANITARY SEWER INTERCEPTOR MAIN REPLACEMENT BETWEEN E. 56ST ST. N. AND E. 51ST ST. N.

PROJECT DESCRIPTION: REPLACEMENT OF SANITARY SEWER INTERCEPTOR.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. PLACE TEMPORARY SEDIMENT CONTROL DEVICES AT DRAINAGE LOCATIONS PRIOR TO STRUCTURE MODIFICATION AND CLEARING OPERATIONS.
2. PERFORM CLEARING OPERATIONS AND REMOVALS, PRESERVING ANY VEGETATION NOT IMPEDING CONSTRUCTION. PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED TO PREVENT EROSION.
3. AS PERMANENT VEGETATION IS ESTABLISHED (70% COVER) TEMPORARY SEDIMENT DEVICES MAY BE REMOVED.
4. AS CONDITIONS WARRANT, THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, MAY MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIC PRACTICE OR CONTROLS TO IMPROVE EFFECTIVENESS.

NOTE: THIS SHOULD INCLUDE MAJOR ACTIVITIES REQUIRED TO CONSTRUCT THE PROJECT AND EROSION CONTROL ITEMS.

SOIL TYPE: REPLACE WITH SOIL TYPE

TOTAL AREA OF THE CONSTRUCTION SITE:

ESTIMATED AREA TO BE DISTURBED: 0.9 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE:

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°23'03"N - 95°94'23"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: FLAT ROCK CREEK

SENSITIVE WATERS OR WATERSHEDS: YES [ ] NO [X]

303(d) IMPAIRED WATERS: YES [X] NO [ ]

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL: YES [ ] NO [ ]

LAKE THUNDERBIRD TMDL: [ ] NO [ ]

MS4 ENTITY YES [X] NO [ ]

IF YES, LOCATION: CITY OF TULSA

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- _____ TEMPORARY SEEDING
- __X__ PERMANENT SODDING, SPRIGGING OR SEEDING
- _____ VEGETATIVE MULCHING
- _____ SOIL RETENTION BLANKET
- _____ PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- __X__ STABILIZED CONSTRUCTION EXIT
- __X__ TEMPORARY SILT FENCE
- _____ TEMPORARY SILT DIKES
- __X__ TEMPORARY FIBER LOG
- _____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- _____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- __X__ ROCK FILTER DAMS
- _____ TEMPORARY SLOPE DRAIN
- _____ PAVED DITCH W/ DITCH LINER PROTECTION
- _____ TEMPORARY DIVERSION CHANNELS
- _____ TEMPORARY SEDIMENT BASINS
- _____ TEMPORARY SEDIMENT TRAPS
- _____ TEMPORARY SEDIMENT FILTERS
- __X__ TEMPORARY SEDIMENT REMOVAL
- __X__ RIP RAP
- _____ INLET SEDIMENT FILTER
- _____ TEMPORARY BRUSH SEDIMENT BARRIERS
- _____ SANDBAG BERMS
- __X__ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- __X__ HAUL ROADS DAMPENED FOR DUST CONTROL
- __X__ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- _____ EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

SILT SHALL BE REMOVED FROM TEMPORARY EROSION CONTROL DEVICES WHEN HALF FULL. COST TO BE INCLUDED IN THE PRICE BID FOR EROSION CONTROL DEVICE. INLETS, JUNCTION BOXES, AND PIPES TO BE CLEANED AT END OF CONSTRUCTION ACTIVITIES BEFORE FINAL ACCEPTANCE OF PROJECT. COST TO BE INCLUDED IN THE PRICE BID FOR EROSION CONTROL DEVICE.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
- 221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, NOVEMBER 1, 2023.

ADDITIONAL PERMITS REQUIRED FROM OKLAHOMA WATER RESOURCES BOARD

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STORM WATER MANAGEMENT PLAN

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

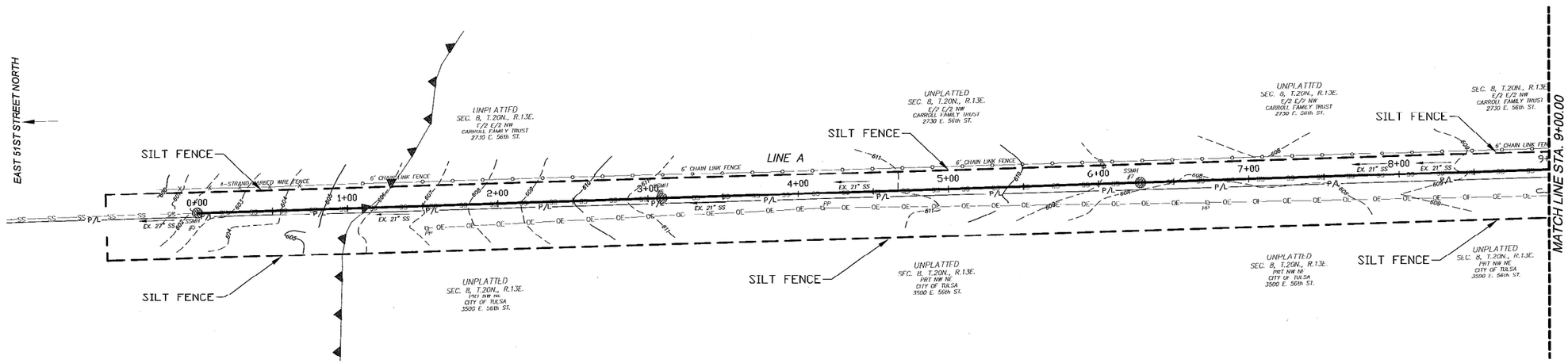
PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

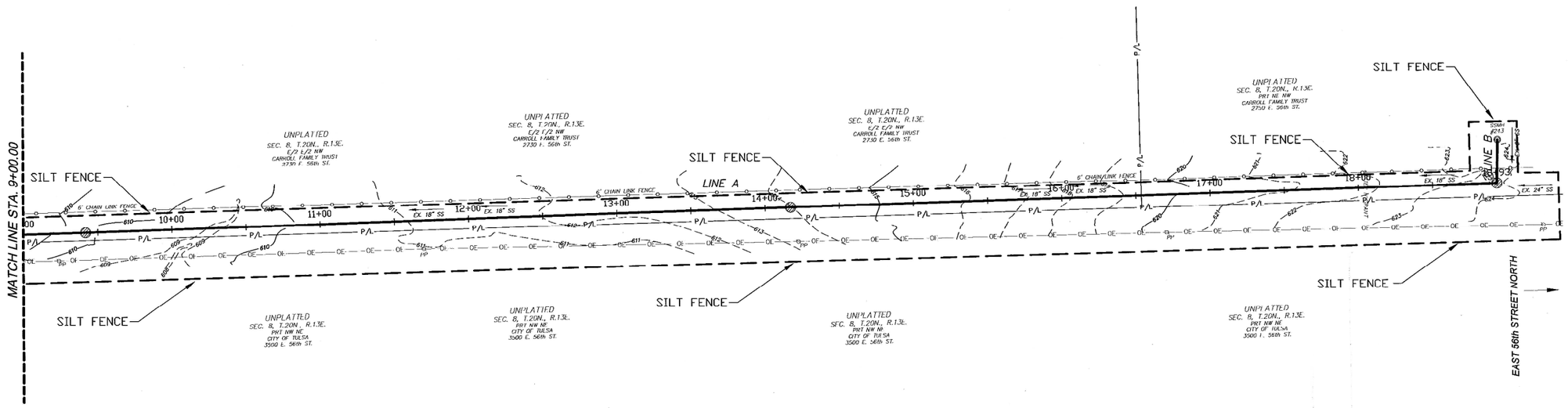
REVISION	BY	DATE

PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL NA

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY		
PROJ. MGR.		3/26
LEAD ENGR.		3/26
FIELD MGR.		3/26

APPROVED:
DESIGN MANAGER
DATE: February 2026
FILE: DRAWING:
ATLAS PAGE NO: NA
SHEET 11 OF 25 SHEETS





0 20' 40 80'

SCALE: 1"=40'

LEGEND

- SILT FENCE
- TEMPORARY ROCK FILTER DAM
- EX. SEWER LINE
- EX. RIGHT-OF-WAY LINE
- EX. LOT LINE
- PROP. SEWER LINE
- LIMITS OF FLOOD ZONE BOUNDARY

NOTE: STABILIZED CONSTRUCTION ENTRANCE REQUIRED FOR PROJECT SITE ACCESS FROM E. 56TH STREET N.

2-27-26

LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

REVISION	BY	DATE

EROSION CONTROL PLAN

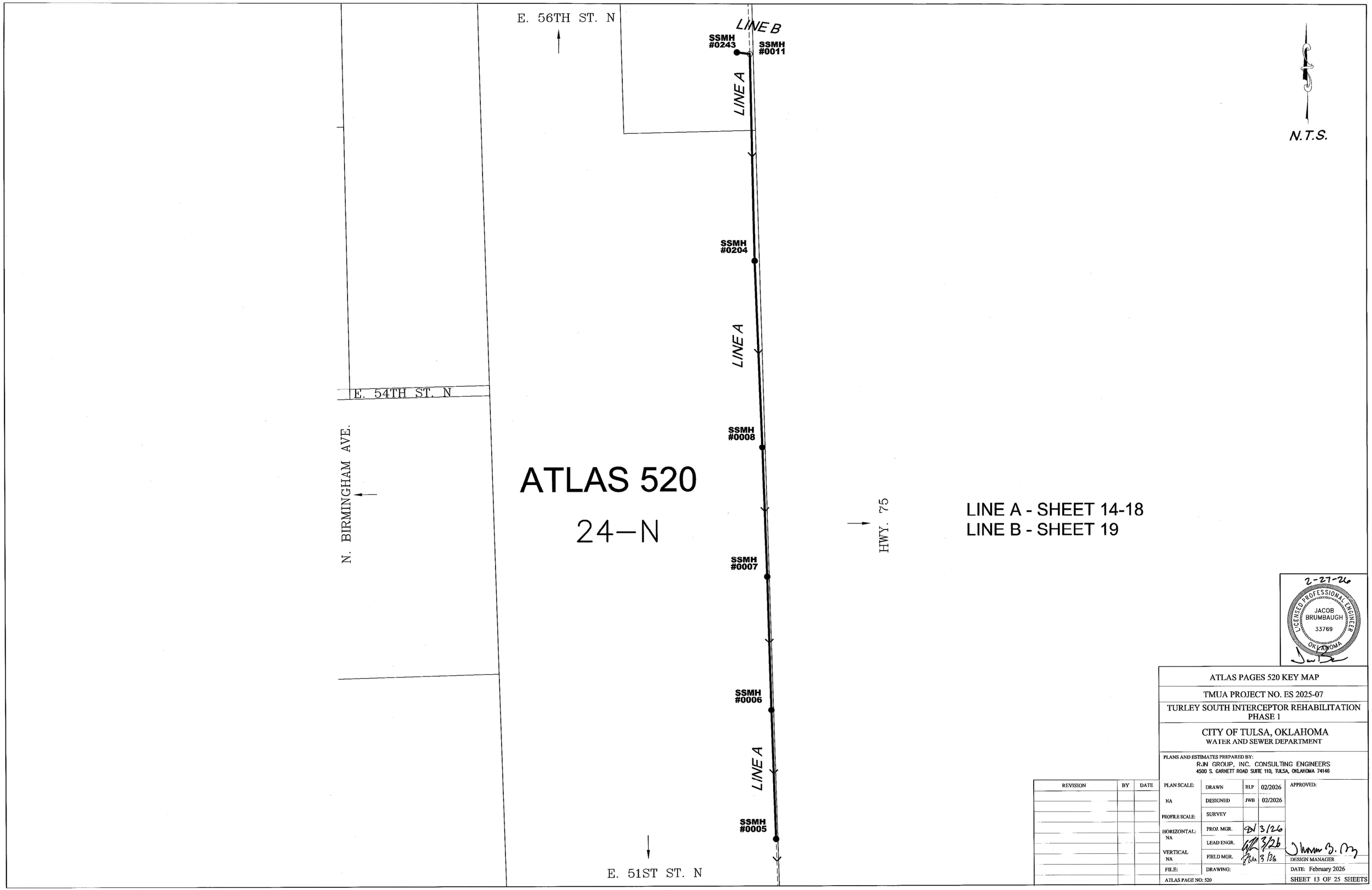
TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

PLAN SCALE: 1" = 40'	DRAWN	RLP	02/2026	APPROVED:
	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY	NP	02/2026	
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 520				SHEET 12 OF 25 SHEETS



ATLAS 520

24–N

LINE A - SHEET 14-18
LINE B - SHEET 19

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

ATLAS PAGES 520 KEY MAP

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RLP	02/2026	APPROVED:
NA	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 520				SHEET 13 OF 25 SHEETS

CONSTRUCT 400 LF OF 24-INCH SEWER PIPE BY OPEN CUT

STA. 0+00.00 ~ 24-INCH SS
REMOVE & REPLACE
EX. MH 024-0005 W/
STD. 6-FOOT DIA. MH
OR TEE BASE MH
N=453610.17
E=2573265.34

UNPLATTED
SEC. 8, T.20N., R.13E.
E/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

STA. 3+09.08 ~ 24-INCH SS
REMOVE EX. MH 024-0006
(NO SEPARATE PAYMENT)
N=453919.11
E=2573255.96

4-STRAND BARBED WIRE FENCE
EX. 20' SEWER EASEMENT
6' CHAIN LINK FENCE
WATER HYDRANT
BORE #1
SSMH #6
LINE A 24-INCH
EX. 27" SS
SSMH #5
EX. 21" SS
BM-400
MATCH LINE STA. 4+00

PRIOR TO CONSTRUCTION CONTACT THE CITY OF TULSA AT 918-596-9234 TO RELOCATE THE PERMANENT FLOW METER TL-35A. SEE NOTES ON THIS SHEET.

CONTRACTOR SHALL BRACE POWER POLE DURING CONSTRUCTION (NO SEPARATE PAYMENT)

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

WARNING!!! OVERHEAD ELECTRIC USE CAUTION!!!

BENCHMARKS:

BM-400
IRON PIN SET 5-FEET SOUTH AND 21-FEET EAST OF EX. MH 024-0005

N=453604.53
E=2573287.61
EL=603.09

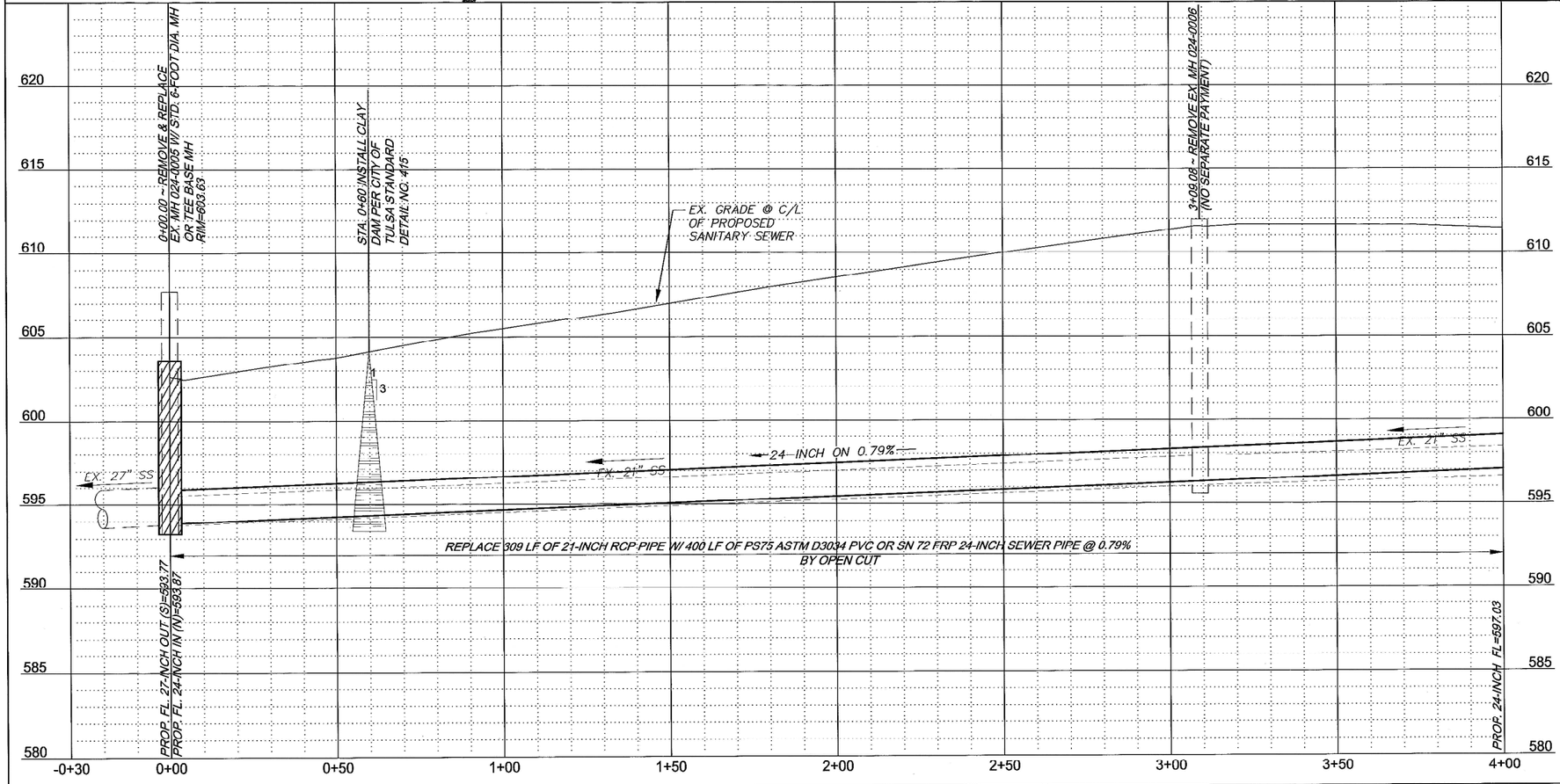
LEGEND

LIMITS OF FLOOD ZONE BOUNDARY

0 10' 20' 40'
SCALE: 1"= 20'

OKIE811 Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



NOTE:

1. PERMANENT FLOW METER TL-35A IS LOCATED IN MANHOLE 024-0005 AND HAS AN AVERAGE FLOW OF APPROXIMATELY 0.36 MGD AND PEAK FLOW OF APPROXIMATELY 3.85 MGD DURING RAIN EVENTS.
2. THE CONTRACTOR SHALL HAVE PUMPING CAPACITY TO HANDLE APPROXIMATELY 5.5 MGD OF FLOW.
3. THE CITY OF TULSA SHALL BE CONTACTED A MINIMUM OF 3 WEEKS PRIOR TO CONSTRUCTION FOR THE RELOCATION OF THE EXISTING FLOW METER.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STA. 0+00 TO STA. 4+00 PLAN & PROFILE LINE A

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RLP	02/2026
1" = 20'	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: 1" = 20'	PROJ. MGR.	BV	3/26
VERTICAL 1" = 4'	LEAD ENGR		3/26
	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

APPROVED:
DESIGN MANAGER
DATE: February 2026
SHEET 14 OF 25 SHEETS

CONSTRUCT 400 LF OF 24-INCH SEWER PIPE BY OPEN CUT

UNPLATTED
SEC. 8, T.20N., R.13E.
E/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

STA. 6+27.79 ~ 24-INCH SS
REMOVE & REPLACE
EX. MH 024-0007 W/
STD. 6-FOOT DIA. MH
OR TEE BASE MH
N=454237.65
E=2573245.69

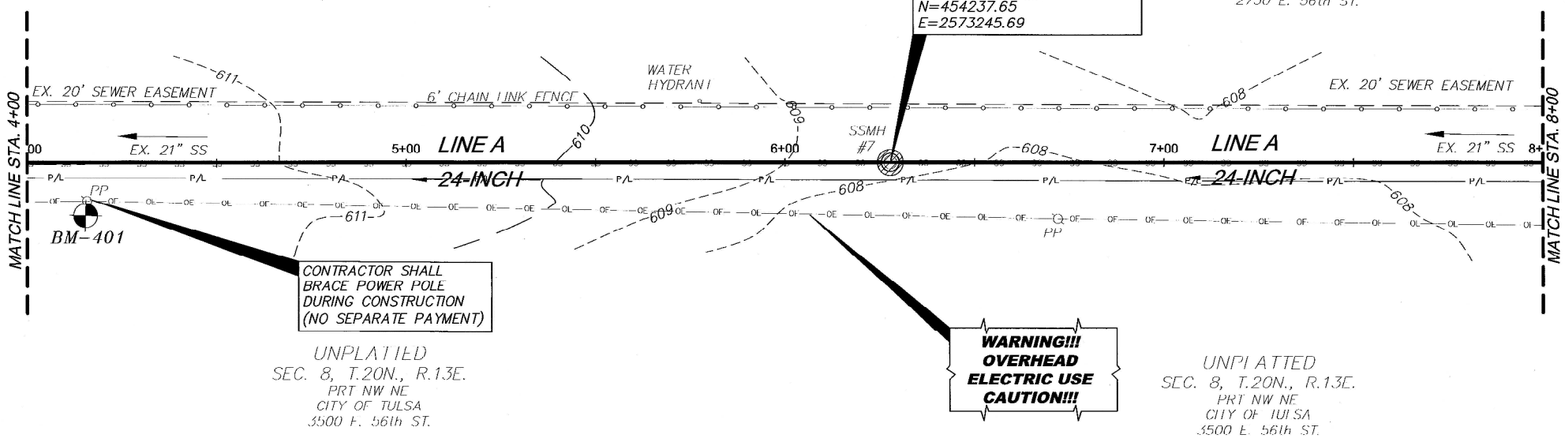
UNPLATTED
SEC. 8, T.20N., R.13E.
E/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

BENCHMARKS:

BM-401
IRON PIN SET 213-FEET SOUTH AND 14-FEET EAST OF EX. MH 024-0007

N=454025.80
E=2573266.29
EL=611.92

0 10' 20' 40'
SCALE: 1"= 20'

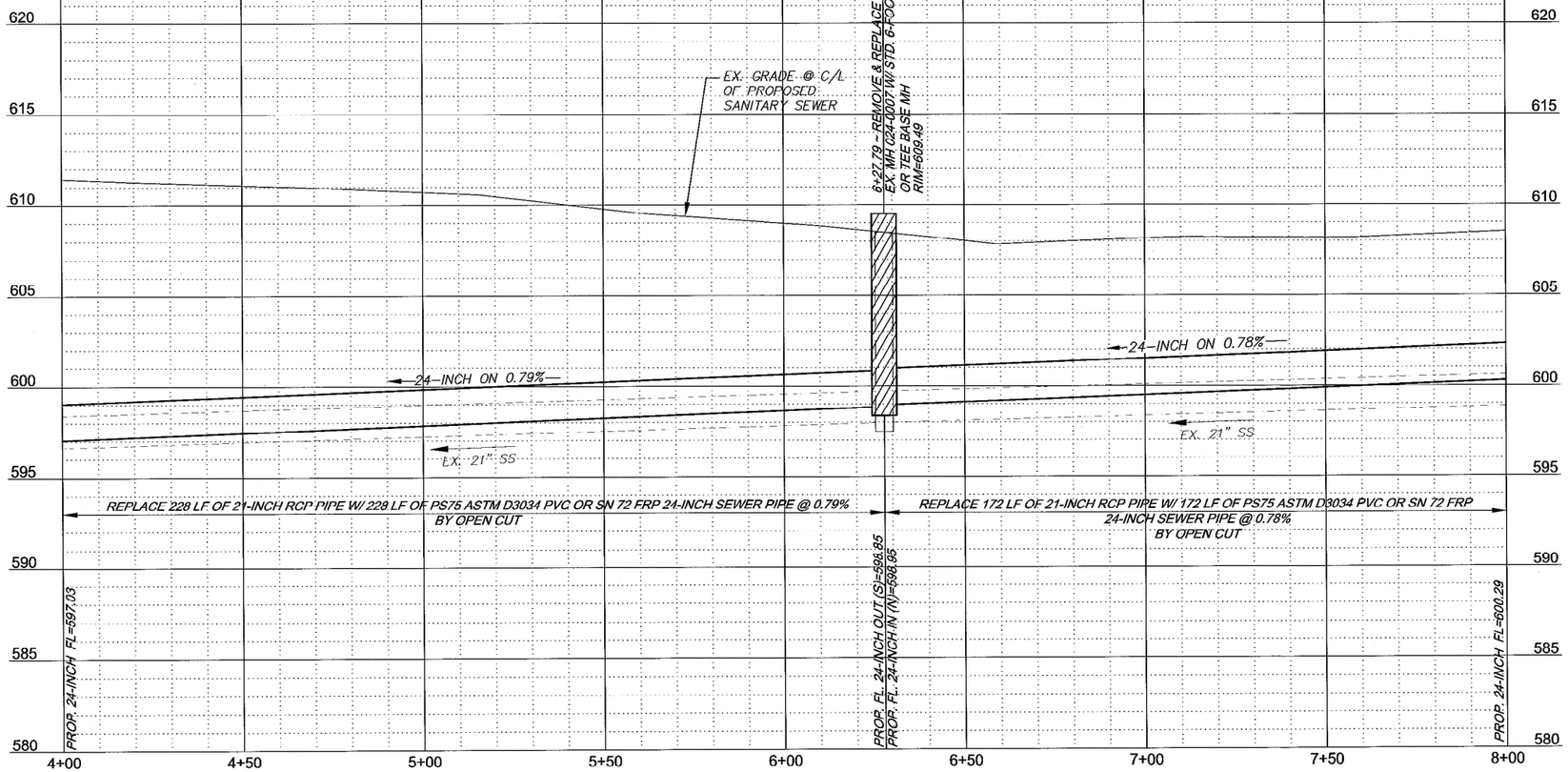


UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

OKIE811 Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STA. 4+00 TO STA. 8+00 PLAN & PROFILE LINE A

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: 1" = 20'
PROFILE SCALE:
HORIZONTAL: 1" = 20'
VERTICAL 1" = 4'
FILE:
ATLAS PAGE NO: 520

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY	NP	02/2026
PROJ. MGR.		3/26
LEAD ENGR.		3/26
FIELD MGR.		3/26
DRAWING:		

APPROVED:

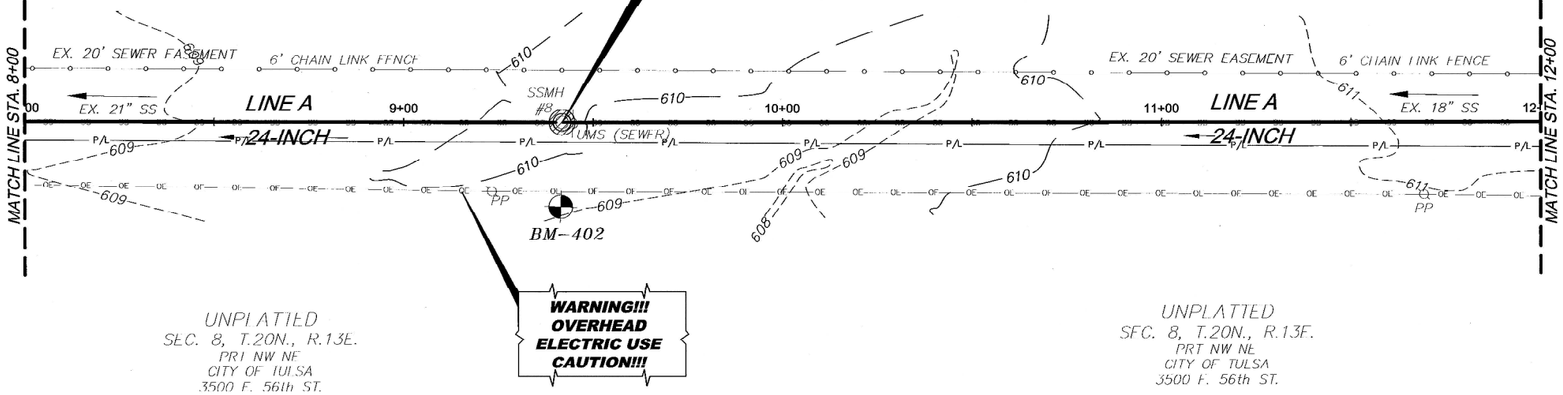
DESIGN MANAGER
DATE: February 2026
SHEET 15 OF 25 SHEETS

CONSTRUCT 400 LF OF 24-INCH SEWER PIPE BY OPEN CUT

STA. 9+41.78 ~ 24-INCH SS
REMOVE & REPLACE
EX. MH 024-0008 W/
STD. 6-FOOT DIA. MH
OR TEE BASE MH
N=454551.49
E=2573236.16

SEC. 8, T.20N., R.13E.
E/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

SEC. 8, T.20N., R.13E.
E/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.



UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

BENCHMARKS:

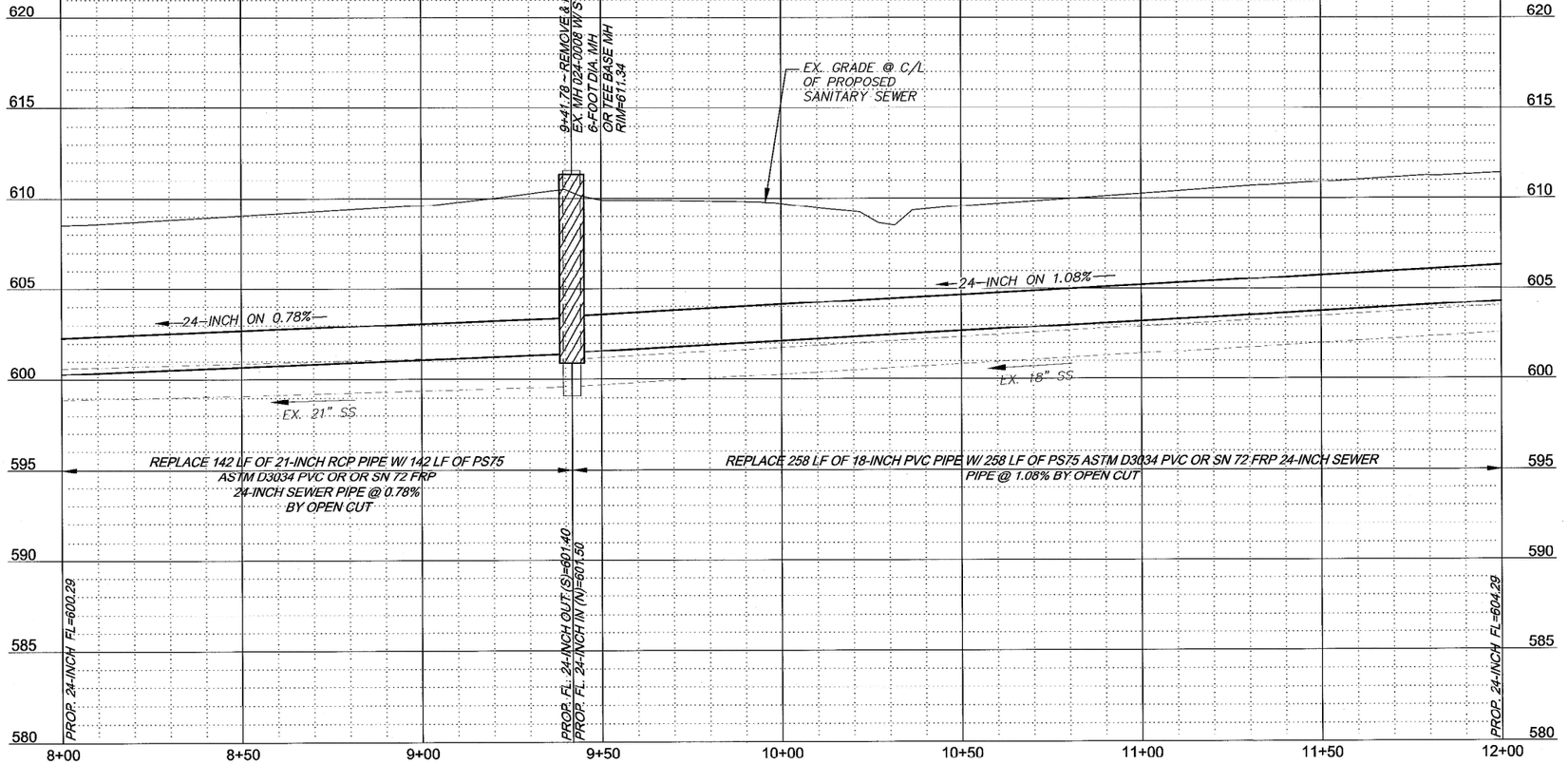
BM-402
IRON PIN SET 1-FOOT SOUTH AND 22-FEET EAST OF EX. MH 024-0008

N=454551.84
E=2573258.34
EL=609.02

0 10' 20' 40'
SCALE: 1"= 20'

OKIE 811
know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543



2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STA. 8+00 TO STA. 12+00 PLAN & PROFILE LINE A

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RLP	02/2026
1" = 20'	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: 1" = 20'	PROJ. MGR.		3/26
	LEAD ENGR.		3/26
VERTICAL 1" = 4'	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

APPROVED:
DESIGN MANAGER
DATE: February 2026

SHEET 16 OF 25 SHEETS

CONSTRUCT 400 LF OF 24-INCH SEWER PIPE BY OPEN CUT

UNPLATTED
SEC. 8, T.20N., R.13E.
F/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

STA. 14+17.18 ~ 24-INCH SS
REMOVE & REPLACE
EX. MH 024-0204 W/
STD. 6-FOOT DIA. MH
OR TEE BASE MH
N=455026.64
E=2573220.53

UNPLATTED
SEC. 8, T.20N., R.13E.
F/2 E/2 NW
CARROLL FAMILY TRUST
2730 E. 56th ST.

MATCH LINE STA.12+00

6' CHAIN LINK FENCE
EX. 20' SEWER EASEMENT
EX. 18" SS
LINE A
24-INCH
SSMH #204
4-STRAND BARBED WIRE
PP
BM-403
6' CHAIN LINK FENCE
EX. 20' SEWER EASEMENT
EX. 18" SS
LINE A
24-INCH

MATCH LINE STA. 16+00

WARNING!!! OVERHEAD ELECTRIC USE CAUTION!!!

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NL
CITY OF TULSA
3500 E. 56th ST.

UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NW NE
CITY OF TULSA
3500 E. 56th ST.

BENCHMARKS:

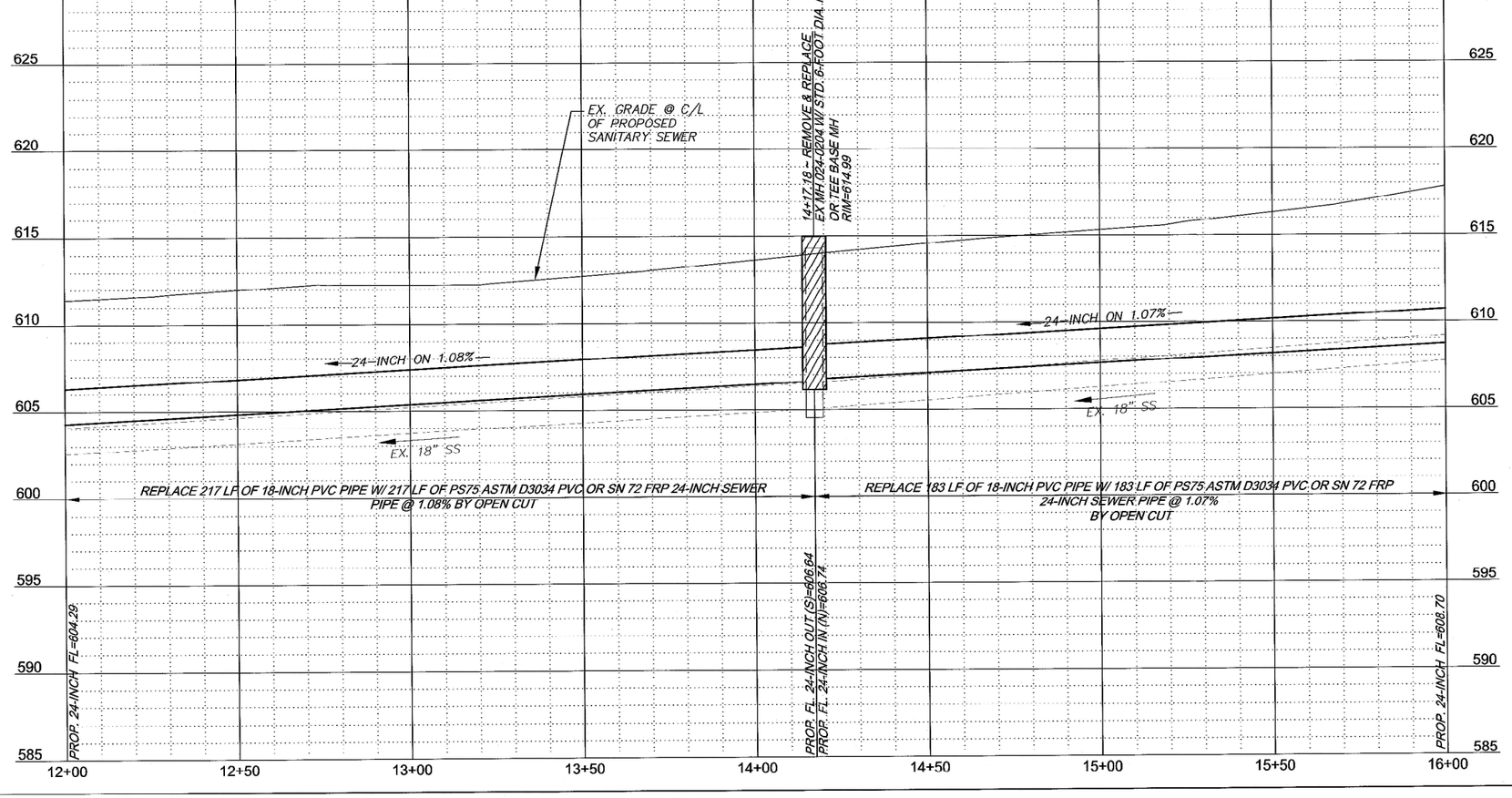
BM-403
IRON PIN SET 1-FEET SOUTH AND 22-FEET EAST OF EX. MH 024-0204

N=455025.23
E=2573244.52
EL=613.09

0 10' 20' 40'
SCALE: 1"= 20'

OKIE811
Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STA. 12+00 TO STA. 16+00 PLAN & PROFILE LINE A

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

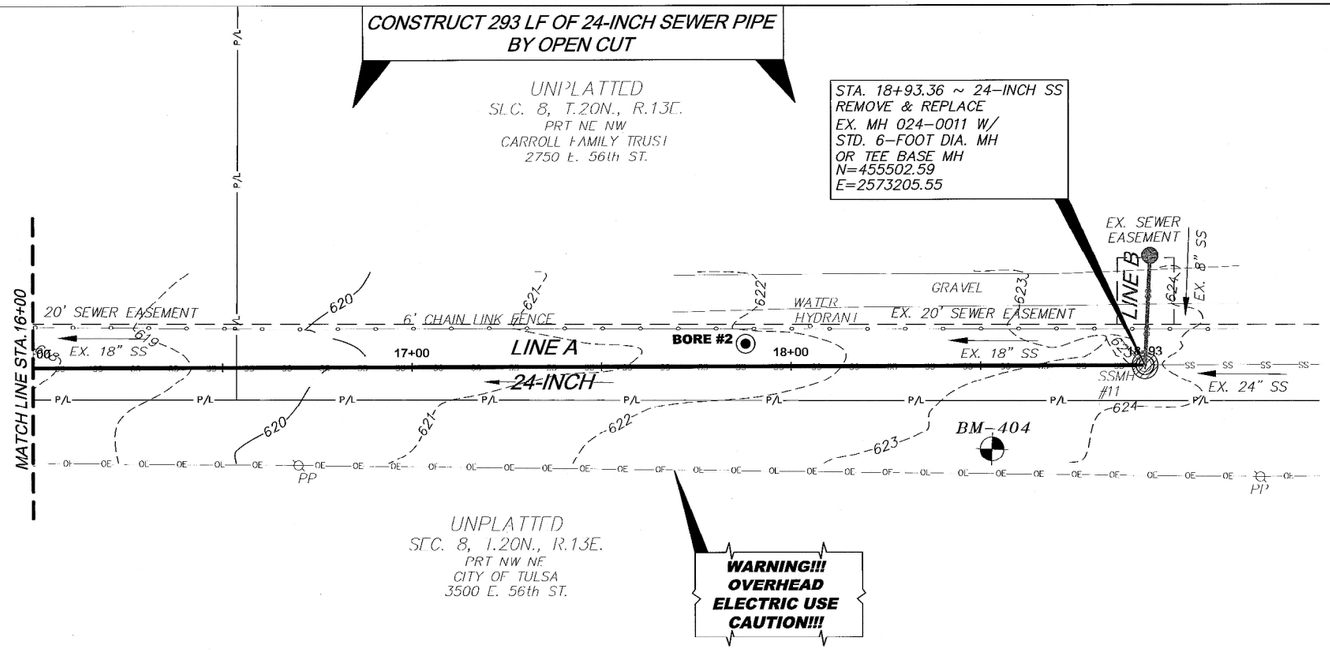
PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: 1" = 20'	DRAWN	RLP	02/2026
	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: 1" = 20'	PROJ. MGR.	BV	3/26
	LEAD ENGR.	KT	3/26
VERTICAL 1" = 4'	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

APPROVED:

DESIGN MANAGER
DATE: February 2026
SHEET 17 OF 25 SHEETS



BENCHMARKS:

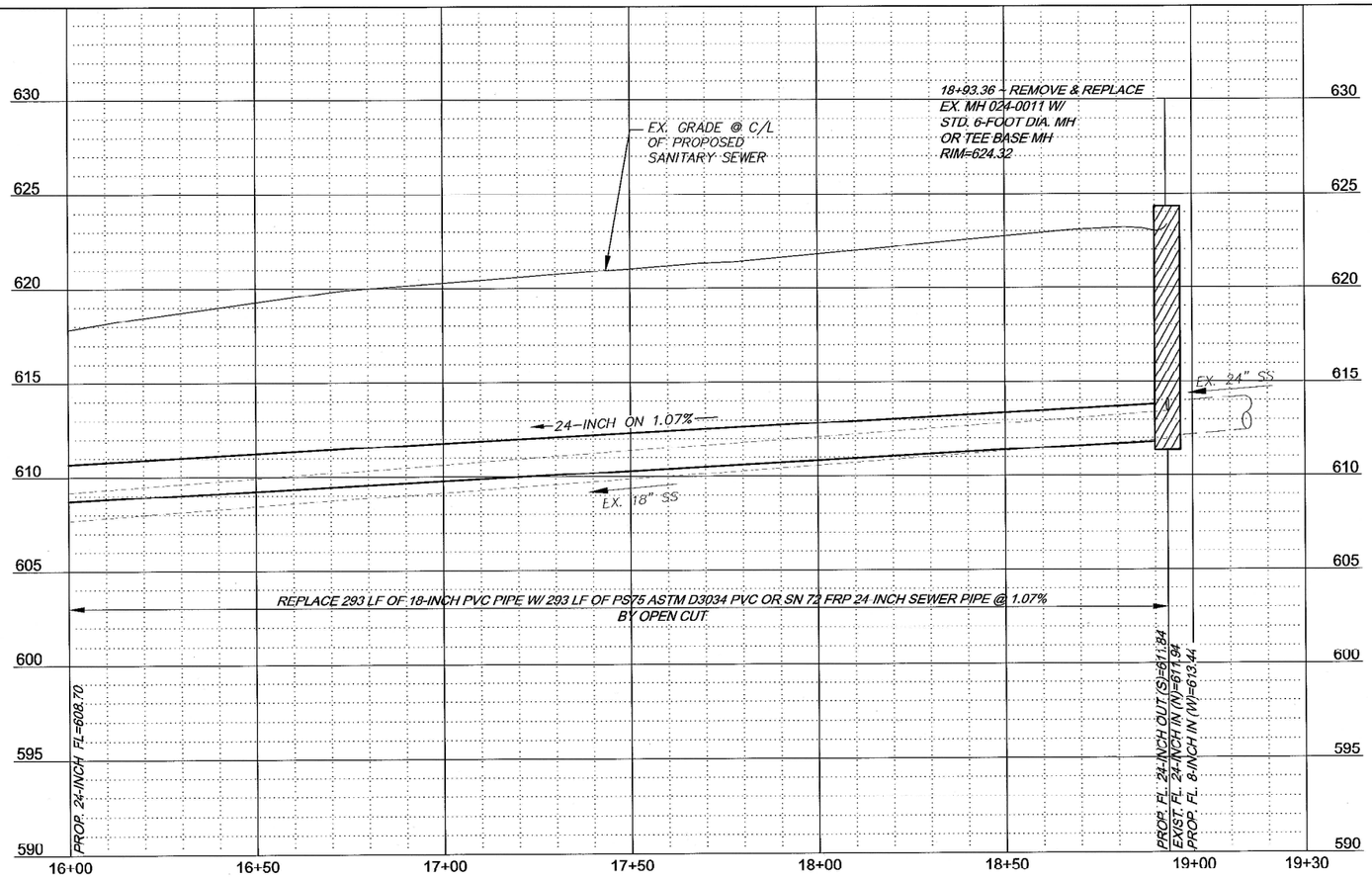
BM-404
IRON PIN SET 40-FEET SOUTH AND 22-FEET EAST OF EX. MH 024-0011

N=455462.89
E=2573228.73
EL=623.53

0 10' 20' 40'
SCALE: 1"= 20'

OKIE811 Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



2-27-24
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

STA. 16+00 TO STA. 18+93 PLAN & PROFILE LINE A

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RLP	02/2026
1" = 20'	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: 1" = 20'	PROJ. MGR.		3/26
	LEAD ENGR.		3/26
VERTICAL 1" = 4'	FIELD MGR.		3/26
FILE:	DRAWING:		
ATLAS PAGE NO: 520			

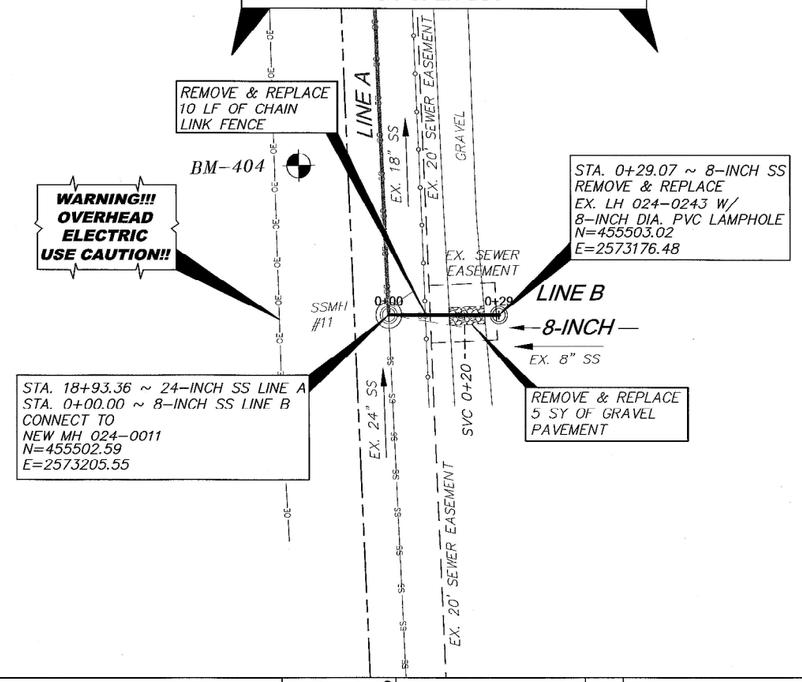
APPROVED:

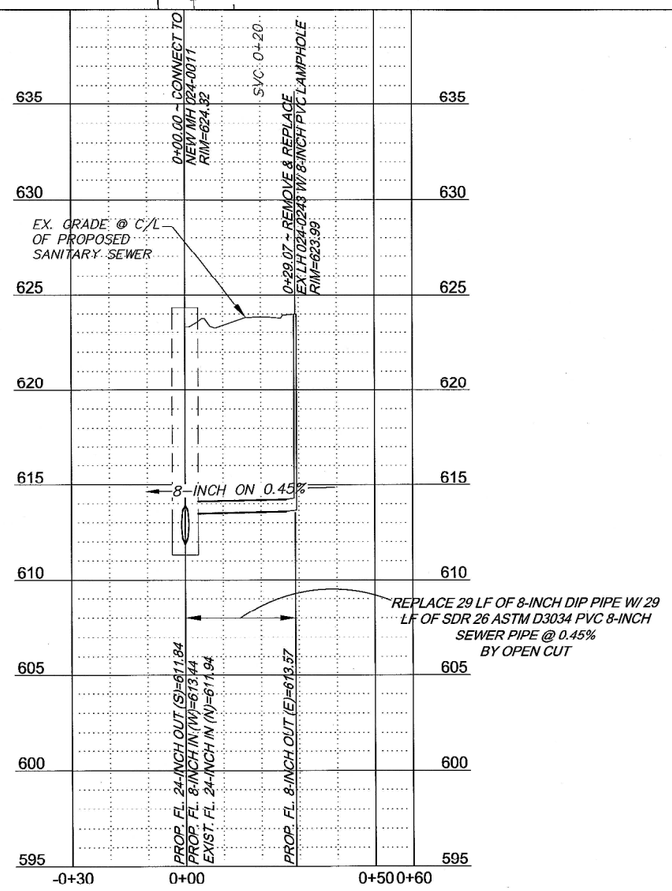
DESIGN MANAGER

DATE: February 2026

SHEET 18 OF 25 SHEETS

CONSTRUCT 29 LF OF 8-INCH SEWER PIPE BY OPEN CUT



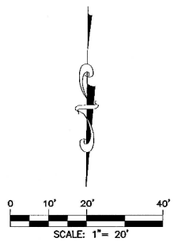


UNPLATTED
SEC. 8, T.20N., R.13E.
PRT NE NW
CARROLL FAMILY TRUST
2750 E. 56th ST.

BENCHMARKS:

BM-404
IRON PIN SET 40-FEET SOUTH AND 22-FEET EAST OF EX. MH 024-0011

N=455462.89
E=2573228.73
EL=623.53



LEGEND

GRAVEL PAVEMENT REMOVAL & REPLACEMENT

OKIE811 Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

PLAN & PROFILE LINE B

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RLP	02/2026
1" = 20'	DESIGNED	JWB	02/2026
PROFILE SCALE:	SURVEY	NP	02/2026
HORIZONTAL: 1" = 20'	PROJ. MGR.	BW	3/26
VERTICAL 1" = 4'	LEAD ENGR.	BW	3/26
	FIELD MGR.		3/26
FILE:	DRAWING:		

APPROVED:

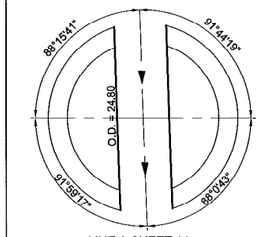
DESIGN MANAGER

DATE: February 2026

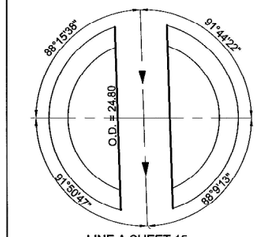
ATLAS PAGE NO: 615

SHEET 19 OF 25 SHEETS

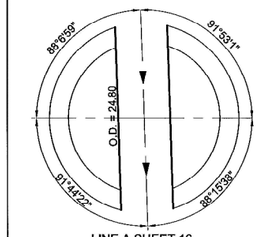
NEW & REPLACEMENT MANHOLES LINE A



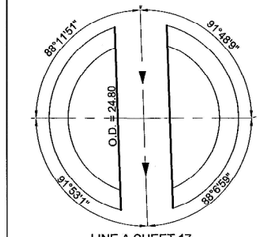
LINE A SHEET 14
MANHOLE 024-0005 DIA. = 6.0



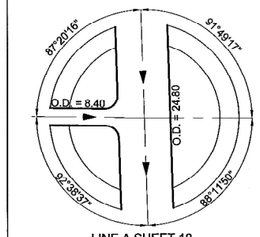
LINE A SHEET 15
MANHOLE 024-0007 DIA. = 6.0



LINE A SHEET 16
MANHOLE 024-0008 DIA. = 6.0'

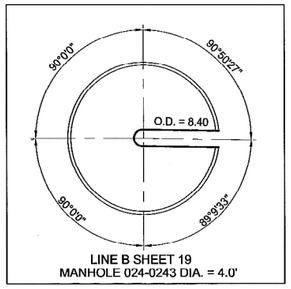


LINE A SHEET 17
MANHOLE 024-0204 DIA. = 6.0'



LINE A SHEET 18
MANHOLE 024-0011 DIA. = 6.0'

REPLACEMENT LAMPHOLE LINE B



LINE B SHEET 19
MANHOLE 024-0243 DIA. = 4.0'

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

MANHOLE LAYOUT

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

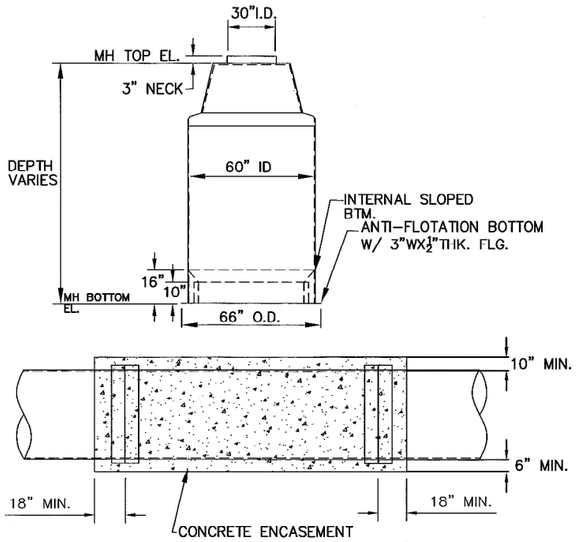
PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

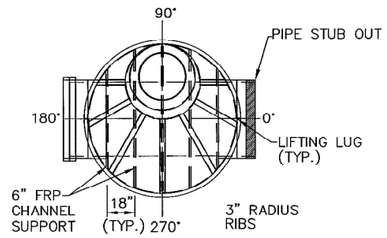
PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL NA
FILE:
ATLAS PAGE NO:

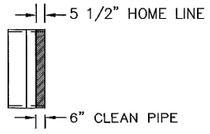
DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY		
PROJ. MGR.	SV	3/26
LEAD ENGR.	AK	3/26
FIELD MGR.	DM	3/26
DRAWING:		

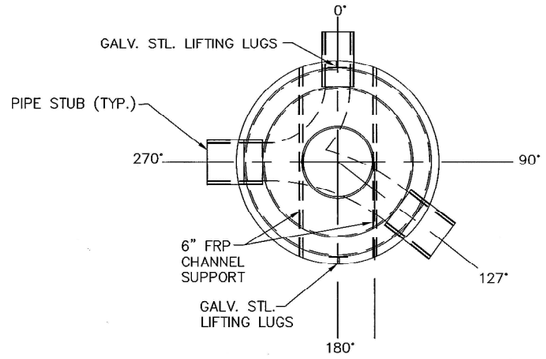
APPROVED:
DESIGN MANAGER
DATE: February 2026
SHEET 20 OF 25 SHEETS

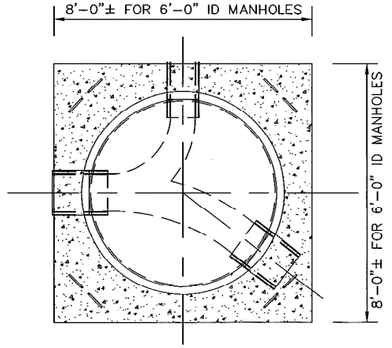


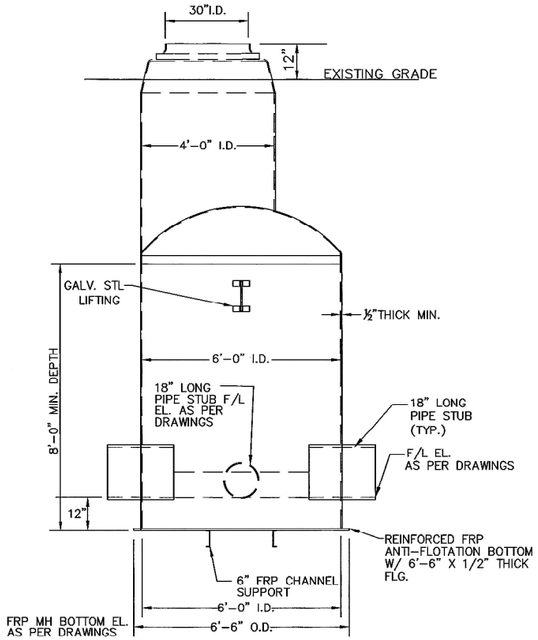
FRP TEE AND FRP MANHOLE RISER (SEPARATE)
N.T.S.

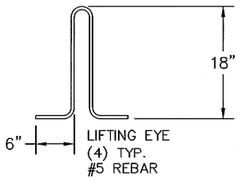


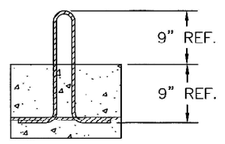






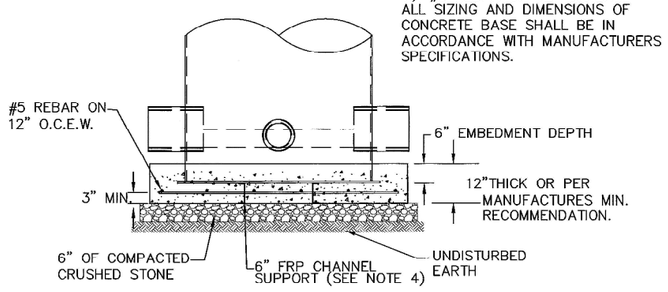


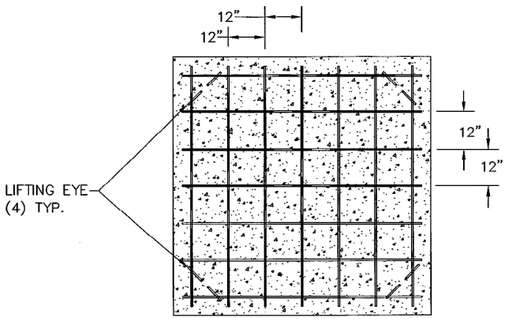




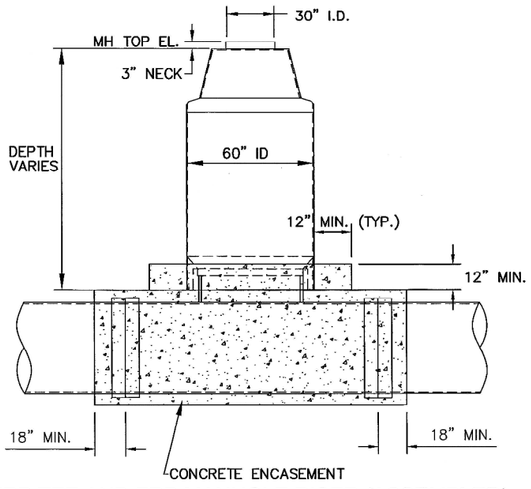
ROTATE LIFTING EYE AS NEEDED TO AVOID CONFLICT

CONCRETE BASE:
MIN. 12" THICK X 12" FROM OUTSIDE WALL OF FRP MANHOLE. MIN. 4,000 PSI CONCRETE SLAB W/ #5 REBAR ON 12" O.C.E.W. ALL SIZING AND DIMENSIONS OF CONCRETE BASE SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.





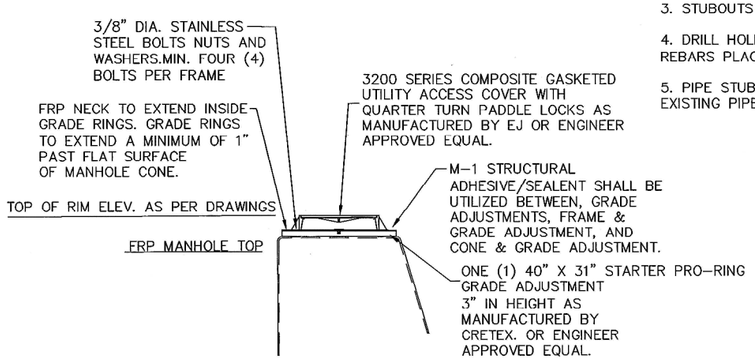
VIEW A-A



FRP TEE AND FRP MANHOLE RISER (ASSEMBLED)
N.T.S.

NOTES FOR TEE BASE STYLE MANHOLES:

1. MANHOLES SHALL BE DESIGNED, FABRICATED, INSPECTED, TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3753 CURRENT EDITION.
2. MANHOLE RISER SHALL BE INSTALLED BY INSERTING INTO WET CONCRETE. REFER TO TECHNICAL SPECIFICATIONS AND MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
3. THE MINIMUM WIDTH OF CONCRETE ENCASEMENT SHALL BE THE WIDTH OF THE PIPE PLUS 2' ON BOTH SIDES OF PIPE.
4. CONCRETE ENCASEMENT SHALL BE INSTALLED WITH 4,000 PSI CONCRETE.



NOTES FOR BENCH & INVERT STYLE MANHOLES:

1. MANHOLES SHALL BE DESIGNED, FABRICATED, INSPECTED, TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3753 CURRENT EDITION.
2. MANHOLE SHALL CONTAIN FRP BENCH AND INVERT UP TO MIN. 3/4 PIPE DIAMETER.
3. STUBOUTS SHALL HAVE 9" MIN. CLEAN PROJECTION.
4. DRILL HOLES IN FRP CHANNEL SUPPORTS TO ACCOMMODATE #5 REBARS PLACED 12" O.C. PERPENDICULAR TO THE FRP CHANNEL.
5. PIPE STUB OUT MATERIAL SHALL MATCH SELECTED PROPOSED OR EXISTING PIPE MATERIAL.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

FRP AND TEE BASE MANHOLE DETAILS

TMUA PROJECT NO. ES 2025-07

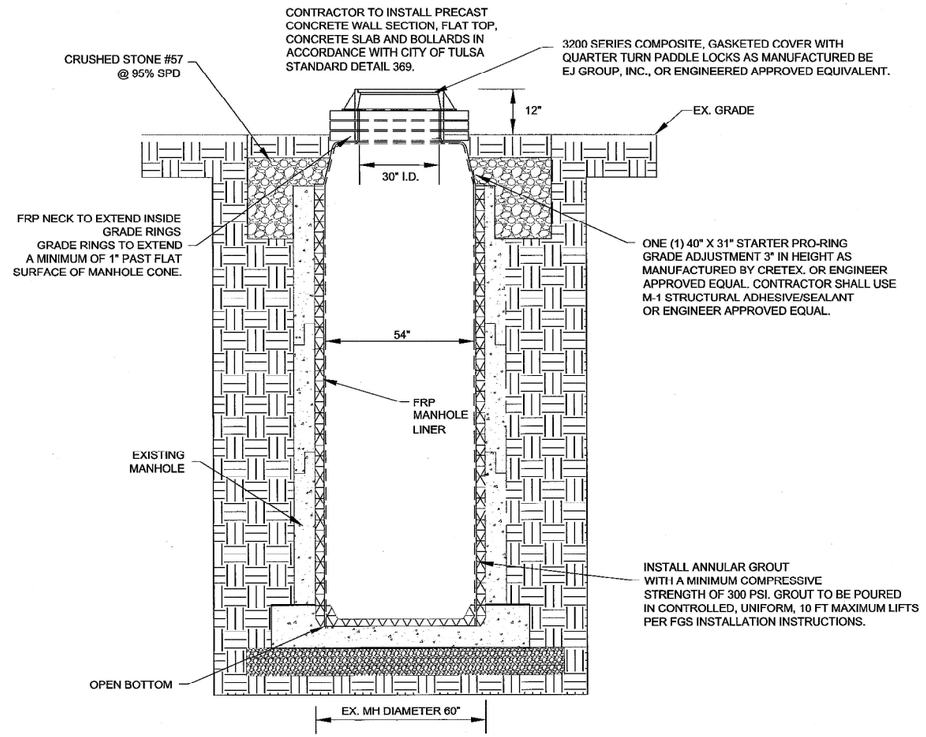
TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

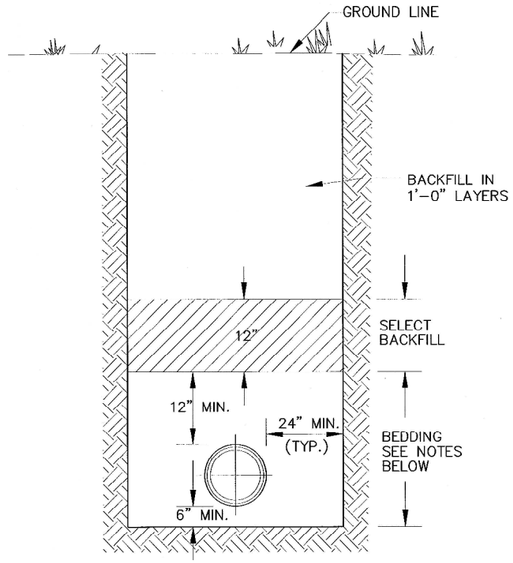
PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA	DRAWN	RLP	02/2026	APPROVED:
	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO:				SHEET 21 OF 25 SHEETS



54-INCH - ID FRP MANHOLE LINER



TRENCH CROSS-SECTION

1. BEDDING SHALL BE A CLEAN CRUSHED STONE, ¼" TO 1", (GRAD. #57). THE CRUSHED STONE SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12" IN THICKNESS, AND THEN COMPACTED TO A MINIMUM OF 70% RELATIVE DENSITY PER ASTM D4253. COMPACTION SHALL BE FIELD TESTED BY AN INDEPENDENT LABORATORY TO ENSURE 70% RELATIVE DENSITY.
2. COMPACTION TEST LOCATIONS WILL BE DETERMINED BY THE CITY AND AT LEAST TWO (2) TESTS ON RANDOM LIFTS SHALL BE CARRIED OUT FOR EACH 1000 LINEAR FEET OF PIPE AS A MINIMUM.
3. IF ANY COMPACTION TEST RESULTS ARE UNSATISFACTORY, THE CONTRACTOR SHALL RE-EXCAVATE AND RE-COMPACT THE BACKFILL AT ITS EXPENSE UNTIL THE DESIRED COMPACTION IS OBTAINED.
4. FOR PAVED AREAS, SEE STANDARD DETAIL AND SPECIFICATIONS FOR PAVEMENT REMOVAL AND PLACEMENT.
5. SELECT BACKFILL SHALL BE NATIVE SOIL WITH ROCKS LESS THAN 3-INCHES IN DIAMETER.
6. IN LIEU OF PLACING FLOWABLE FILL IN MULTIPLE LIFTS, CONTRACTOR MAY UTILIZE ANCHORS PRIOR TO POURING FLOWABLE FILL IN ONE (1) LIFT OR FILL PIPE WITH WATER TO AVOID PIPE BUOYANCY. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT PROPOSED ANTI-BUOYANCY PLAN TO OWNER AND ENGINEER FOR APPROVAL.

PVC & FRP PIPE BEDDING DETAIL

N.T.S.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

BEDDING AND FRP MANHOLE LINER DETAILS

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

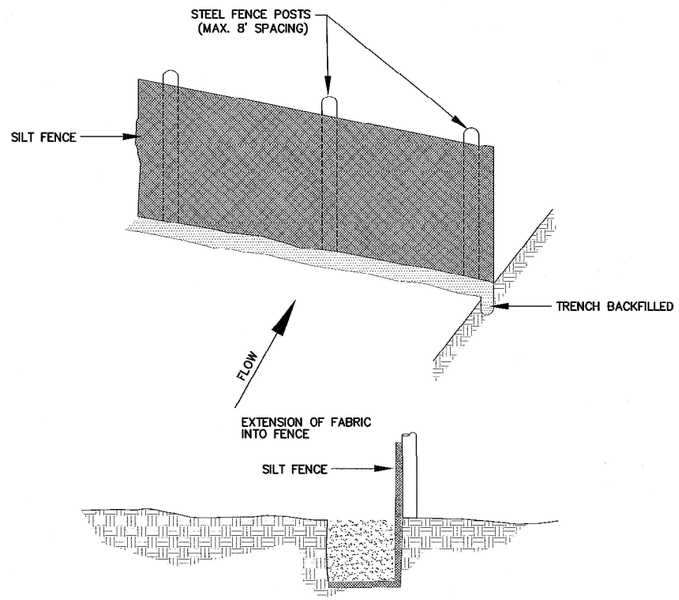
PLAN SCALE: NA
PROFILE SCALE:
HORIZONTAL: NA
VERTICAL: NA
FILE:
ATLAS PAGE NO:

DRAWN	RLP	02/2026
DESIGNED	JWB	02/2026
SURVEY		
PROJ. MGR.		3/26
LEAD ENGR.		3/26
FIELD MGR.		3/26
DRAWING:		

APPROVED:
DESIGN MANAGER
DATE: February 2026
SHEET 22 OF 25 SHEETS

SILT FENCE*

NTS.



NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 3–4 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE TRENCH 4" AND BACKFILLED.

4. SILT FENCE SHOULD BE SECURELY TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.

5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW DRAINAGE.

7. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE, IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO.7 ABOVE.

* DRAINAGE AREA LESS THAN TWO (2) ACRES.

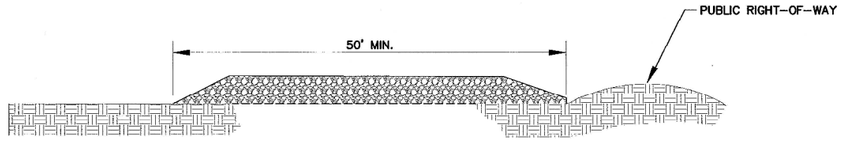
STANDARD SYMBOL $\vdash \frac{SF}{L=} \dashv$

REFERENCE:
CHAPTER 1000: CITY OF TULSA MANAGEMENT CRITERIA MANUAL.

STANDARD OBTAINED FROM: USDA–SCS, MD. STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDEMENT CONTROL IN DEVELOPING AREAS.

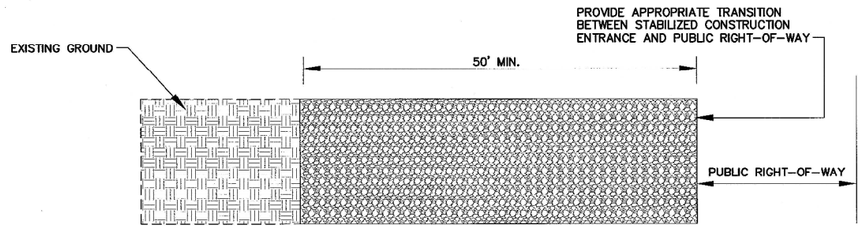
STABILIZED CONSTRUCTION ENTRANCE

NTS.



PROFILE

NTS.



PLAN VIEW

NTS.

NOTES:

1. STONE SIZE AASHTO DESIGNATION M43, SIZE NO. 2 (2–1/2" TO 1–1/2"). USE CRUSHED STONE.

2. LENGTH – AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.

3. THICKNESS – NOT LESS THAN EIGHT (8) INCHES.

4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.

5. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE OF PUBLIC RIGHT–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING A STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SANDBAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.

6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT–OF–WAYS MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

CITY OF TULSA STANDARD 126
STANDARD SILT FENCE, AND CONSTRUCTION ENTRANCE

REVISION	BY	DATE

EROSION CONTROL DETAILS

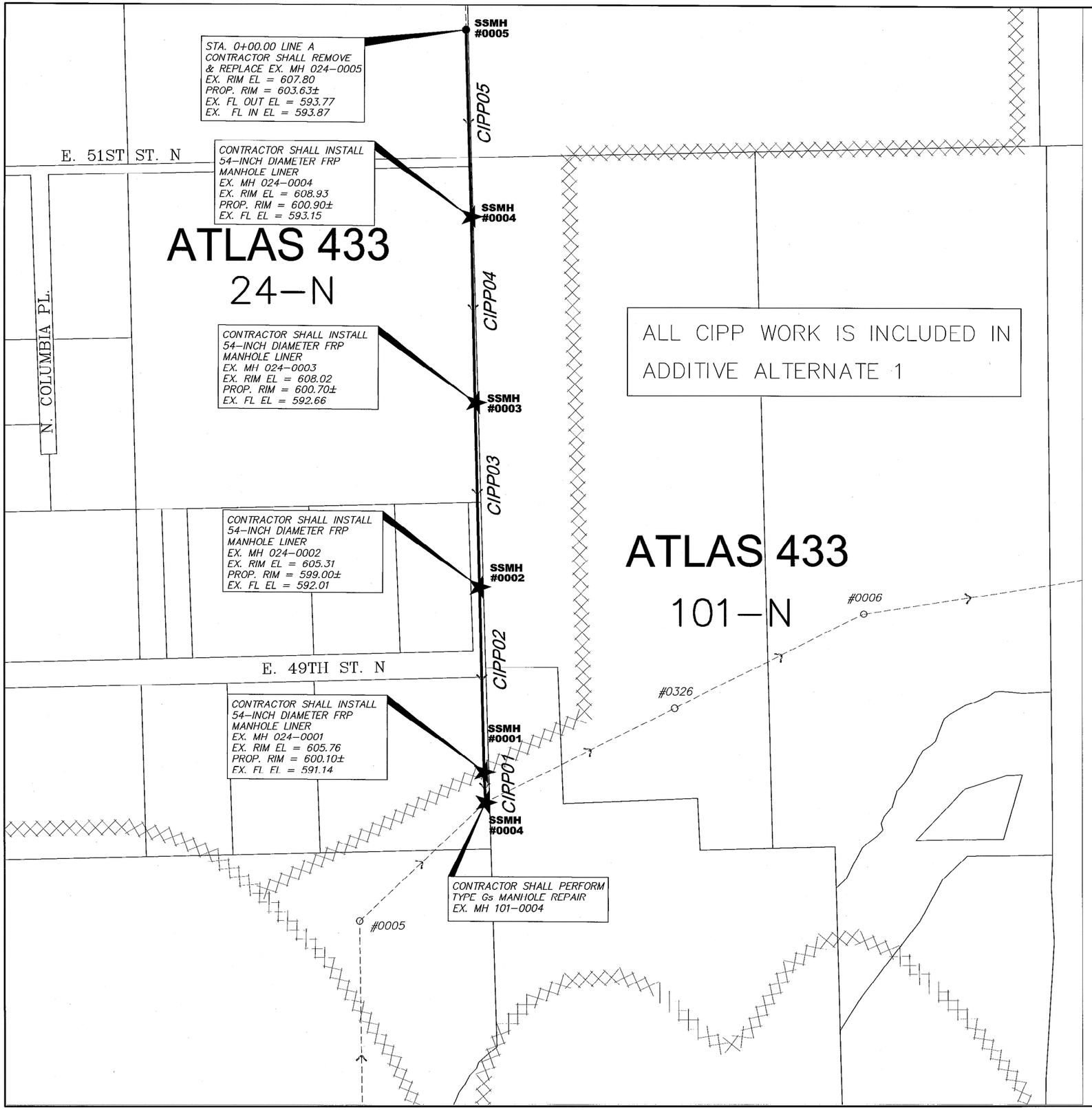
TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

PLAN SCALE:	DRAWN	RLP	02/2026	APPROVED:
NA	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 615				SHEET 23 OF 25 SHEETS



LEGEND

MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★

CIPP REHAB ———

EXISTING SEWER #0006 →○

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY XXXXX

N.T.S.

OKIE811 Know what's below 811 before you dig.

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.
9. ALL REHABILITATION MANHOLES WITH FRP LINER SHALL BE ELEVATED AND BOLLARDS INSTALLED PER CITY OF TULSA STANDARD DETAIL 369.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

ATLAS PAGE 433
CIPP & MANHOLE REHABILITATION KEY MAP

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA	DRAWN	RLP	02/2026	APPROVED:
	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.	BV	3/26	
	LEAD ENGR.	KK	3/26	
VERTICAL NA	FIELD MGR.	[illegible]	3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 433				SHEET 24 OF 25 SHEETS

N.T.S.

N. EVASTON AVE.

E. 56ST ST. N

ATLAS 520
24–N

NOTE:

ALL REHABILITATION MANHOLES WITH FRP LINER SHALL BE ELEVATED AND BOLLARDS INSTALLED PER CITY OF TULSA STANDARD DETAIL 369.

#0198

#0199

#0200

#0013

SSMH #0017

CONTRACTOR SHALL INSTALL 54–INCH DIAMETER FRP MANHOLE LINER
EX. MH 024–0017
EX. RIM EL = 624.72
PROP. RIM = 625.70±
EX. FL EL = 616.12

SSMH #0016

CONTRACTOR SHALL INSTALL 54–INCH DIAMETER FRP MANHOLE LINER
EX. MH 024–0016
EX. RIM EL = 623.17
PROP. RIM = 624.20±
EX. FL EL = 615.56

SSMH #0015

CONTRACTOR SHALL INSTALL 54–INCH DIAMETER FRP MANHOLE LINER
EX. MH 024–0015
EX. RIM EL = 623.02
PROP. RIM = 624.00±
EX. FL EL = 614.86

SSMH #0014

CONTRACTOR SHALL INSTALL 54–INCH DIAMETER FRP MANHOLE LINER
EX. MH 024–0014
EX. RIM EL = 622.83
PROP. RIM = 623.80±
EX. FL EL = 614.11

SSMH #0012

CONTRACTOR SHALL INSTALL 54–INCH DIAMETER FRP MANHOLE LINER & PERFORM TYPE Gh MANHOLE REPAIR
EX. MH 024–0012
EX. RIM EL = 622.67
PROP. RIM = 623.70±
EX. FL EL = 612.69

ATLAS 615
24–N

LEGEND

- MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★
- EXISTING SEWER #0006
- MAINTENANCE AREA ID 94–N
- MAINTENANCE AREA BOUNDARY

OKIE811 Know what's below 811 before you dig.

2-27-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

ATLAS PAGES 520 & 615
MANHOLE REHABILITATION KEY MAP

TMUA PROJECT NO. ES 2025-07

TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE 1

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE

PLAN SCALE: NA	DRAWN	RLP	02/2026	APPROVED:
	DESIGNED	JWB	02/2026	
PROFILE SCALE:	SURVEY			
HORIZONTAL: NA	PROJ. MGR.		3/26	
	LEAD ENGR.		3/26	
VERTICAL NA	FIELD MGR.		3/26	DESIGN MANAGER
FILE:	DRAWING:			DATE: February 2026
ATLAS PAGE NO: 520,615				SHEET 25 OF 25 SHEETS