

# LEGEND

— T —	EXISTING TELEPHONE	□ EM	EXISTING ELECTRIC METER
□ TEL MH	EXISTING TELEPHONE MANHOLE	∅ PP	EXISTING POWER POLE
□ ICB	EXISTING TELEPHONE CONTROL BOX	→ GUY	EXISTING GUY WIRE
□ CABLE PED.	EXISTING CABLE PEDESTAL	□ ELEC MH	EXISTING ELECTRIC MANHOLE
□ GM	EXISTING GAS METER	∅ LP	EXISTING LIGHT POLE
∅ GV	EXISTING GAS VALVE	∅ FL	EXISTING LIGHT (FLOOD, YARD ETC.)
∅ GR	EXISTING GAS RISER	— E —	EXISTING UNDERGROUND ELECTRIC CABLE
□ GAS MH	EXISTING GAS MANHOLE	— OE —	EXISTING OVERHEAD ELECTRIC WIRE
— 2" G —	EXISTING GAS LINE	— ASP —	ASPHALT
— EX. 8" SS —	EXISTING SEWER LINE	— CON —	CONCRETE PATTERN
∅ SSMH	EXISTING SS MANHOLE	SIGN	STREET SIGN
⊗	EXISTING MANHOLE REMOVAL	□ MB	MAILBOX
∅ WWAD	EXISTING WWAD	• 1/2" PIPE	IRON ROD/PIPE FOUND
T WV	EXISTING WATER VALVE	BUSH	TREE OR BUSH
∅ ICV	EXISTING IRRIGATION CONTROL VALVE	8" PECAN	
FH ∅	EXISTING FIRE HYDRANT	BM	BENCHMARK
□ WM	EXISTING WATER METER	△ CP	CONTROL POINT
∅	EXISTING WATER TEE	● SSMH	PROPOSED NEW MANHOLE
∅	EXISTING WATER REDUCER	⊗ SSMH	REMOVE AND REPLACE MANHOLE
∅	EXISTING WATER BEND	∅ WWAD	PROPOSED WWAD
∅ SH	EXISTING SPRINKLER HEAD	— 8" W —	PROPOSED SEWER LINE
— 8" W —	EXISTING WATER	— 8" WATER —	PROPOSED WATER LINE
∅ SDMH	EXISTING STORM MANHOLE	— ENC —	PROPOSED ENCASEMENT
— 24" RCP —	EXISTING STORM LINE	T	PROPOSED WATER VALVE
CHAIN LINK FENCE	CHAIN LINK FENCE	∅	PROPOSED WATER TEE
WIRE FENCE	WIRE FENCE	∅	PROPOSED WATER REDUCER
FENCE OTHER	FENCE OTHER	— ROW —	ROW LINE
WOOD FENCE	WOOD FENCE	— P.A. —	PROPERTY LINE
ELEC. PED. □	EXISTING ELECTRICAL PEDESTAL	— LIMITS —	LIMITS OF PAVEMENT/ DRIVEWAY REPAIR
— FO —	EXISTING FIBER OPTIC LINE	— CL. —	CENTER LINE CREEK
— 519 —	EXISTING CONTOUR MINOR	— BRUSH —	BRUSH LINE
— 520 —	EXISTING CONTOUR MAJOR		

# CONSTRUCTION PLANS FOR SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3 TMUA PROJECT NO. ES 2022-09

## WATER AND SEWER DEPARTMENT CITY OF TULSA, OKLAHOMA

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

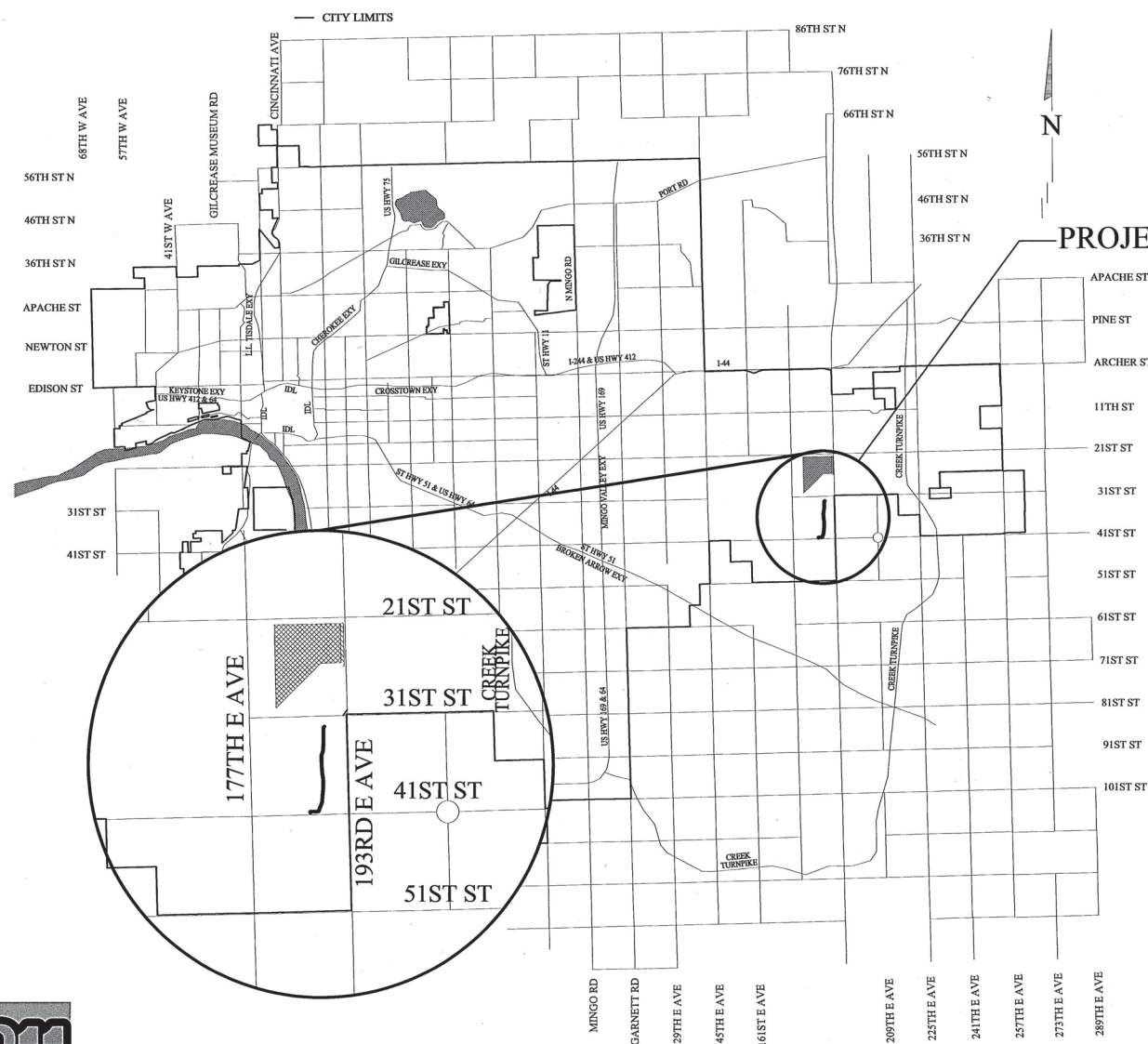
CERTIFICATE OF  
AUTHORIZATION NO. CA1979,  
EXP. 6/30/2027

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	
TULSA ENGINEERING SERVICES DEPARTMENT	
WATER DESIGN	596-9566
WASTEWATER DESIGN	596-9564
TRANSPORTATION DESIGN	596-9636
TRAFFIC ENGINEERING DESIGN	596-9741
STORMWATER DESIGN	596-9498
COT UTILITY COORDINATION	596-9245
OKLAHOMA NATURAL GAS CO.	831-8215
COX COMMUNICATIONS	286-4716
AEP/PSO	250-6257
AT&T	596-4237
MTTA	830-0024



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



APPROVED BY

WATER AND SEWER DIRECTOR

6-11-2026

DATE



JACOB BRUMBAUGH, P.E.

RJN GROUP, INC.

6-5-26

DATE

E. 31ST ST.

193RD E AVE.



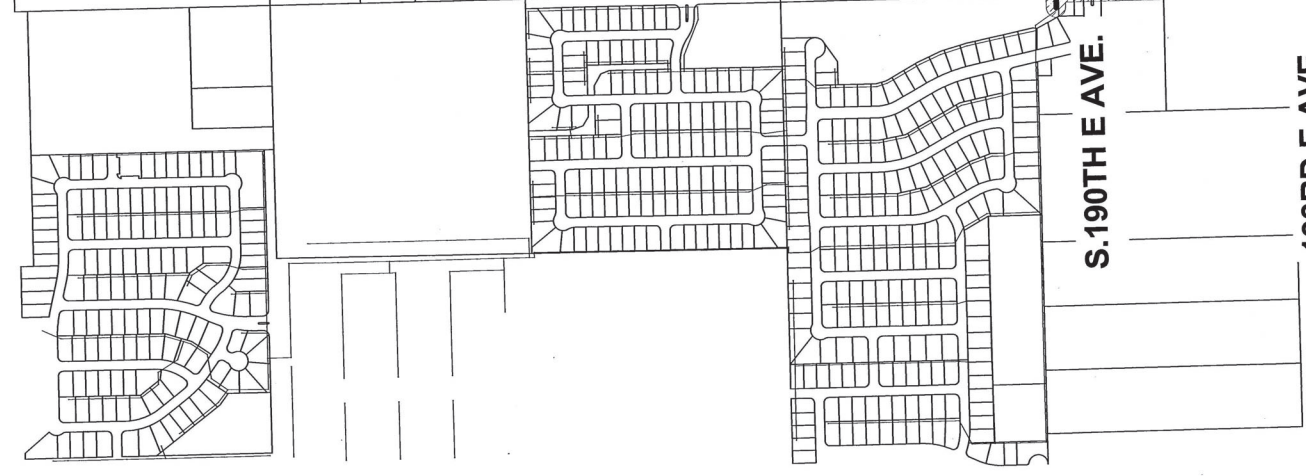
PROJECT LOCATION

S. LYNN LANE RD.

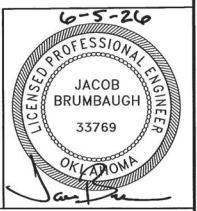
E. 41ST ST.

S. 190TH E AVE.

193RD E AVE.



E. 51ST ST.



LOCATION MAP

TMUA PROJECT NUMBER ES 2022-09

SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3

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	06/2026	APPROVED:
			NA	DESIGNED	JWB	06/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	<i>RLP 6/26</i>		<i>Thomas D. M.</i> DESIGN MANAGER
			VERTICAL	FIELD MGR.	<i>RLP 6/26</i>		
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: NA				SHEET 2 OF 38 SHEETS



PAY ITEM NOTES

RIGHT-OF-WAY CLEARING AND RESTORATION

- 1. RIGHT-OF-WAY CLEARING WILL BE PAID FOR AT THE UNIT BID PRICE, ON A SQUARE YARD BASIS, FOR OPEN CUT CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR TRENCHLESS CONSTRUCTION.
2. ANY ITEMS REMOVED AS PART OF THIS PROJECT SHALL BE RESTORED TO EQUAL OR BETTER CONDITION. PAYMENT WILL BE INCLUDED IN THE BID PRICE FOR RIGHT-OF-WAY CLEARING AND RESTORATION.
3. THE COST OF ANY TEMPORARY FENCING FOR LIVESTOCK OR PETS IS PART OF AND INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORATION.
4. ALL COSTS ASSOCIATED WITH THE REMOVALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR RIGHT-OF-WAY CLEARING AND RESTORATION. THIS INCLUDES, BUT IS NOT LIMITED TO, STRUCTURES, TREES, BUSHES, FENCES, AND OTHER ITEMS AS MAY BE ENCOUNTERED.
5. UNLESS NOTED FOR SALVAGE, ALL ITEMS REMOVED SHALL BE REMOVED AS PART OF THE UNIT PRICE BID FOR RIGHT-OF-WAY CLEARING AND RESTORATION. ITEMS SCHEDULED FOR SALVAGE SHALL BE RETURNED TO A SITE DESIGNATED BY THE CITY. CASTING AND LIDS ON ALL SANITARY AND STORM SEWERS SHALL BE REPLACED WITH NEW ONES AND THE OLD LIDS AND CASTINGS SHALL BE RETURNED TO THE SEWER BASE AT 9319 E. 42nd STREET NORTH AND PLACED IN THE METAL RECYCLE BINS IN THE STOCKROOM AREA, PHONE: (918) 669-6130, BETWEEN THE HOURS OF 7:30 A.M. AND 3:00 P.M., MONDAY THROUGH FRIDAY. MATERIALS NOT SALVAGED SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE CITY AND THE ENGINEER AT NO COST TO THE PROJECT.
6. AS PART OF THE UNIT BID PRICE FOR RIGHT-OF-WAY CLEARING AND RESTORATION, THE CONTRACTOR SHALL REPAIR OR REPLACE, ANY PRIVATE UTILITIES DISTURBED. THIS INCLUDES, BUT IS NOT LIMITED TO, IRRIGATION, YARD LIGHTING, EITHER GAS OR ELECTRIC, AND PET CONFINEMENT SYSTEMS. NO ADDITIONAL COMPENSATION WILL BE MADE FOR THIS WORK.

TRAFFIC CONTROL

- 7. CONTRACTOR TO PROVIDE BUSINESS ACCESS SIGNS AT ALL BUSINESS ACCESS POINTS. ALL COST TO BE INCIDENTAL TO OTHER BID ITEMS.
8. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE GENERAL AND TRAFFIC CONTROL NOTES ON THE GENERAL NOTES SHEET.
9. 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.
10. 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

- 11. 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, IMPLEMENTING ALL REQUIREMENTS SET BY THE USACE PERMIT, 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

- 12. 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.
13. 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 TO EXCAVATION AND BACKFILL UNCLASSIFIED.
14. WATER TABLE CRADLE SHALL BE INSTALLED WHERE TRENCH CONDITIONS WARRANT ITS USE AS DIRECTED BY THE ENGINEER.
15. THE COST OF INSTALLING CLAY DAMS SHALL BE CONSIDERED INCIDENTAL TO UNCLASSIFIED EXCAVATION AND BACKFILL. CLAY SHALL HAVE A MINIMUM PLASTICITY INDEX OF 30. NO ADDITIONAL PAYMENT SHALL BE MADE.
16. 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 TO UNCLASSIFIED EXCAVATION AND BACKFILL. THE PAY LIMITS ARE IN ACCORDANCE WITH CITY OF TULSA STANDARD DETAIL NO. 305. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ADDITIONAL EXCAVATION AND BACKFILL DUE TO THE REQUIRED BEDDING DETAILS.

SODDING & SEEDING

- 17. 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.

- 18. 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 STANDARD TRENCH WIDTH PLUS 2 FEET EACH SIDE OF TRENCH. DEVELOPED LOTS SHALL BE SOD AND UNDEVELOPED LOT MAY BE HYDRMULCH SEEDED.

PAVEMENT

- 19. PAVEMENT REMOVAL AND REPLACEMENT FOR WATER, SANITARY, AND STORMWATER MAIN INSTALLATIONS - THIS PAY ITEM SUPERSEDES CITY OF TULSA STANDARD SPECIFICATION SECTION 329.6 AND 402.17, WITH RESPECT TO SAW CUTTING AND DOWELS, AND INCLUDES THE FOLLOWING (THESE ITEMS SHALL NOT BE PAID SEPARATELY):
A. SAW CUTTING
B. DOWELS
C. DISPOSAL OF BROKEN PAVEMENT
D. TEMPORARY SURFACE
E. ASSOCIATED EXCAVATION
F. PREPARATION OF SUBGRADE
G. FORMS OR REINFORCING
H. REMOVAL OR REPLACEMENT OF GRAVEL
I. ADDITIONAL SAW CUTTING OR REPLACEMENT OF PAVEMENT DAMAGED BY THE CONTRACTOR
J. JOINT SEALER, TACK COATS, OR EDGE SEALING

THIS PAY ITEM DOES NOT INCLUDE THE FOLLOWING WHICH WILL BE PAID SEPARATELY IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, DETAILS, AND DRAWINGS:

CURB AND GUTTER

- 20. ALL TRENCHES LOCATED UNDER STREET PAVEMENT AND AREAS UNDER FULL CONCRETE PANEL REPLACEMENT SHALL BE FILLED WITH GRANULAR MATERIAL MEETING THE GRADATION REQUIREMENTS FOR TYPE "A" AGGREGATE BASE, PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. PRIME COAT, PAVEMENT STRIPING, AND SUBGRADE PREPARATION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE REMOVAL AND REPLACEMENT OF THE ITEM. NO SEPARATE PAYMENT SHALL BE MADE.

MANHOLES

- 21. MANHOLES WILL BE MEASURED FOR PAYMENT USING THE CITY OF TULSA'S STANDARD PAY ITEMS.
22. 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.
23. MANHOLES SHALL BE ELEVATED OR FLUSH TO GROUND ELEVATION AND INCLUDE BOLLARDS AT SELECT MANHOLE SITES AS SHOWN ON THE SURVEY DATA SHEET. ALL ELEVATED MANHOLES SHALL BE CONSTRUCTED WITH CONCRETE PADS, PRECAST CONCRETE FLAT TOPS AND WALL SECTIONS, AND PIPE BOLLARDS AS SHOWN ON THE ELEVATED MANHOLE DETAIL SHEET. 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.
24. 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.
25. 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 BEDDING DETAILS SHEET FOR ADDITIONAL REQUIREMENTS. CLOSED-BOTTOM FIBERGLASS MANHOLES WILL BE ALLOWED FOR INSTALLATION WHEN USING PVC OR FRP PIPE.
26. 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.

PIPE

- 27. FOR 18-INCH AND 24-INCH DIAMETER SEWER PIPE, THE CONTRACTOR MAY UTILIZE EITHER PS 75 ASTM D3034 PVC, OR SN 72 FIBER GLASS REINFORCED PIPE (FRP) UNLESS OTHERWISE NOTED IN THE DRAWINGS.
28. 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.

- 29. ALL PIPE INSTALLED IN STEEL CASINGS SHALL HAVE RESTRAINED JOINTS. FOR SANITARY SEWER, SDR 26 ASTM D3034 PVC SHALL BE RESTRAINED BY UTILIZING FORD 1390-P RESTRAINT HARNESS OR ENGINEER APPROVED EQUIVALENT. SN 72 FRP SHALL BE RESTRAINED BY UTILIZING FRP RESTRAINED JOINT COUPLINGS MANUFACTURED BY THE FRP PIPE MANUFACTURER. THE COST OF THE RESTRAINED SYSTEM SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE IN THE STEEL CASING. NO ADDITIONAL PAYMENT SHALL BE MADE.

CONSTRUCTION STAKING

- 30. UNIT PRICE QUANTITY FOR CONTRACTOR CONSTRUCTION STAKING INCLUDES ALL SURVEY WORK NECESSARY FOR CONSTRUCTION OF ALL SPECIFIED LINEAR FEET OF SANITARY SEWER PIPE AND MANHOLE INSTALLATION.

SEQUENTIAL RESTORATION

- 31. THIS RESTORATION SHALL INCLUDE, BUT IS NOT LIMITED TO, SUCH ITEMS AS SODDING, REPLACEMENT OF SIDEWALKS, FENCES, DRIVEWAYS, AND STREET PAVEMENT, GROUTING OF SEWER SCHEDULED TO BE ABANDONED, AND ANY OTHER ITEMS SPECIFICALLY SHOWN ON THE PLANS.
32. ANY RESTORATION WORK DAMAGED OR DESTROYED BY THE CONTRACTOR'S SUBSEQUENT WORK SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR SEQUENTIAL RESTORATION. CONTRACTOR SHALL CONTACT PUBLIC SERVICE COMPANY OF OKLAHOMA (PSO) A MINIMUM 3 WEEKS PRIOR TO BRACING AND/OR RELOCATING ANY UTILITY POLES.

ACCESS ROAD

- 33. GRAVEL ACCESS ROAD TRAIL LENGTH SHALL INCLUDE ALL COSTS ASSOCIATED WITH GRADING FOR ACCESS ROAD.
34. GRAVEL ACCESS ROAD SHALL BE CONSTRUCTED PER DETAIL FOUND ON MISCELLANEOUS DETAILS SHEET.
35. THE COST OF EXCAVATION, BACKFILL, GRADING, AND COMPACTED NO. 57 STONE SHALL BE INCLUDED IN UNIT PRICE FOR INSTALLATION OF POLYPROPYLENE PIPE. NO SEPARATE PAYMENT SHALL BE MADE.
36. ALL EXCAVATION, BACKFILL, COUPLERS, LABOR, AND MATERIALS SHALL BE INCLUDED IN UNIT PRICE FOR INSTALLATION OF CULVERT END TREATMENTS. NO SEPARATE PAYMENT SHALL BE MADE.
37. IF ADDITIONAL STORM PIPE CROSSINGS UNDER THE ACCESS ROAD ARE DEEMED NECESSARY, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
38. THE GRAVEL ACCESS ROAD SHALL NOT BE CONSTRUCTED UNTIL THE CLOMR IS APPROVED. THE CONTRACTOR SHALL BE NOTIFIED BY OWNER WHEN THEY CAN PROCEED WITH THE CONSTRUCTION OF THE GRAVEL ACCESS ROAD.

STEEL CASING

- 39. ALL STEEL CASING INSTALLED SHALL HAVE A MINIMUM WALL THICKNESS OF 1/2-INCH AND BE IN ACCORDANCE WITH AWWA C200.

STONE CREEK FARMS LIFT STATION DEMOLITION AND ABANDONMENT

- 40. PAYMENT FOR DEMOLISHING AND ABANDONING THE STONE CREEK FARMS LIFT STATION SHALL INCLUDE THE REMOVAL OF ASPHALT, SLIDE GATE, FENCE, CONTROL BUILDING AND ITS FOUNDATION, TOP 10 FEET OF WASH BASIN AND WET WELL AND FILLING REMAINING STRUCTURES WITH CELLULAR CONCRETE OR FLOWABLE FILL, AND ALL REQUIRED AND NECESSARY WORK TO COMPLETE THE DEMOLITION AND ABANDONMENT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ITEMS OF WORK NOT EXPLICITLY STATED IN THE PLAN SET THAT ARE ASSOCIATED WITH THE DEMOLITION AND ABANDONMENT.
41. THE EXISTING GENERATOR, PUMPS, ELECTRICAL CONTROLS, AND ARVS FOR THE STONE CREEK FARMS LIFT STATION AND FORCE MAIN SHALL BE REMOVED AND DELIVERED TO CITY OF TULSA SEWER OPERATION AND MAINTENANCE PRIOR TO COMMENCING DEMOLITION. NO ADDITIONAL PAYMENT SHALL BE MADE.

- 42. MANHOLES SHALL HAVE THE TOP 3 FEET REMOVED. MANHOLES AND SANITARY SEWERS SHALL BE FILLED WITH CELLULAR CONCRETE OR FLOWABLE FILL.
43. ABANDONMENT SHALL BE PERFORMED AFTER CONSTRUCTION OF ALL NEW SANITARY SEWER MAINS.

EARTHWORK

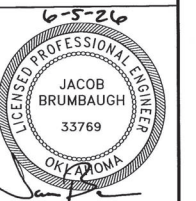
- 44. UNIT PRICE QUANTITY FOR EARTHWORK INCLUDES ALL NECESSARY LABOR, EQUIPMENT, MATERIAL, AND CONFORM TO REQUIREMENTS AS SPECIFIED ON THE DRAWINGS FOR DRAINING AND FILLING IN THE EXISTING PONDS. APPROXIMATELY 9,500 CY OF FILL IS ESTIMATED HOWEVER, BOTTOM ELEVATIONS OF BOTH PONDS HAVE NOT BEEN CONFIRMED DURING DESIGN.

ADDITIVE ALTERNATE

- 45. PAY ITEMS 33 THROUGH 38 ARE FOR AN ACCESS ROAD ALONG THE SANITARY SEWER. THE CITY OF TULSA WILL AWARD THE PROJECT BASED OFF THE BASE BID AND WILL AWARD THE ADDITIVE ALTERNATE IF BUDGET ALLOWS.

CONTINUED NEXT SHEET

Table with columns: REVISION, BY, DATE, PLAN SCALE, DRAWN, RLP, DATE, APPROVED. Includes project details: TMUA PROJECT NUMBER ES 2022-09, SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3, CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT, R.J.N GROUP, INC. CONSULTING ENGINEERS, 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146, and SHEET 4 OF 38 SHEETS.



ESTIMATED CONSTRUCTION QUANTITIES

WATER LINE

- 46. TESTING AND CHLORINATION OF WATER MAINS SHALL BE PERFORMED BY THE CITY OF TULSA. TESTING, CHLORINATION, AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH SECTION 109.3 OF THE GENERAL SPECIFICATIONS.
  - A. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY PLUGS WITH ADEQUATE BLOCKING OR RESTRAINTS, PLUS CORPORATION STOPS, AS DIRECTED BY CITY TESTING PERSONNEL. THEN ONCE TESTING, CHLORINATION AND FLUSHING BY CITY PERSONNEL IS COMPLETED, REMOVE TEMPORARY BLOCKING AND TIE INTO EXISTING SYSTEM, USING FITTINGS SWABBED INTERNALLY WITH 2% BLEACH SOLUTION.
  - B. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAIN SHALL BE PERFORMED BY CITY PERSONNEL ON MAINS WHICH ARE PHYSICALLY DISCONNECTED FROM THE EXISTING WATER SYSTEM. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAINS SHALL NOT BE PERFORMED AGAINST VALVES WHICH ARE PHYSICALLY CONNECTED TO EXISTING SYSTEM.
  - C. ALL COSTS FOR TEMPORARY PLUGS, BLOCKING, RESTRAINING, CORPORATION STOPS, TUBING, THREADED CONNECTIONS, BLEACH AND OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.
- 47. BURIED BOLTS, HARNESS LUGS, AND COUPLINGS SHALL BE GIVEN TWO COATS OF KOPPER'S BITUMASTIC 300-M (DRY MIL THICKNESS OF 16 MILS) OR EQUAL. COST TO BE INCLUDED IN UNIT PRICE BID FOR PIPE AND FITTINGS.
- 48. ALL COSTS FOR COMPONENTS NECESSARY TO RESTRAIN JOINTS FOR PIPE AND FITTINGS DESIGNATED RESTRAINED JOINT ("RJ") SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS.
  - A. RESTRAINED JOINT SYSTEMS: US PIPE TRIFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, AMERICAN FLEXRING, EBAA MEGALUG, STAR STARGRIP, SMITH-BLAIR CAMLOCK. CLOW TUFGRIP OR EQUAL SHALL BE USED ON THIS PROJECT.
- 49. ALL CUT ENDS AND WHERE SALVAGED FITTINGS HAVE BEEN REMOVED FROM ABANDONED WATER LINES LEFT IN PLACE, SHALL BE PLUGGED WITH 24 INCHES OF CONCRETE INSIDE THE PIPE. COST OF CONCRETE PLUGGING TO BE INCLUDED IN UNIT PRICE BID FOR PIPE. NO ADDITIONAL PAYMENT SHALL BE MADE.
- 50. ALL LABOR, MATERIALS, AND EQUIPMENT TO CONNECT PROPOSED WATER MAINS TO EXISTING WATER MAINS ARE INCLUDED IN COST OF SLEEVES/ADAPTERS.
- 51. PRESSURE TESTING AND CHLORINATION OF WATER MAINS SHALL NOT BE PERFORMED UNTIL THE CITY INSPECTOR HAS RECEIVED REQUIRED CONSTRUCTION AS-BUILT RECORDS.
- 52. ALL HYDRANTS, VALVES, AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE SALVAGED AND DELIVERED TO THE SOUTH YARD AT 2317 S JACKSON AVE. PAYMENT TO BE MADE UNDER RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

BASE BID					
PAY ITEM	SPEC NO.	DESCRIPTION	PAY ITEM NOTE NOS.	UNIT	QTY
1	102	PROJECT SIGN (CITY OF TULSA)		EA	2
2	301, SP-8	RIGHT-OF-WAY CLEARING AND RESTORING	1,2,3,4,5,6,31,32	SY	33,120
3	302	UNCLASSIFIED EXCAVATION AND BACKFILL	12,13,14,15,16	CY	16,250
4	303	MOBILIZATION		EA	1
5	304	CONTRACTOR CONSTRUCTION STAKING	30	EA	1
6	309	8-INCH DIAMETER CLASS 51 DIP (RJ) BY OPEN CUT	46,47,48,49,50,51,52	LF	15
7	309	12-INCH DIAMETER CLASS 51 DIP BY OPEN CUT	46,47,48,49,50,51,52	LF	199
8	309	12-INCH DIAMETER CLASS 51 DIP (RJ) BY OPEN CUT	46,47,48,49,50,51,52	LF	229
9	309	12-INCH DIAMETER CLASS 51 DIP (RJ) IN 24-INCH DIAMETER STEEL CASING	46,47,48,49,50,51,52	LF	175
10	312	8-INCH DIAMETER DIP 22.5 DEGREE BEND (RJ)	47,48	EA	2
11	312	12-INCH DIAMETER DIP 22.5 DEGREE BEND (RJ)	47,48	EA	4
12	312	12-INCH X 12-INCH X 6-INCH DIP TEE FITTING (RJ)	47,48	EA	1
13	312	12-INCH X 12-INCH X 8-INCH DIP TEE FITTING (RJ)	47,48	EA	1
14	313, SP-1,2,7	18-INCH DIAMETER PS 75 ASTM D3034 PVC OR SN 72 FRP SEWER BY OPEN CUT	27,28	LF	1,543
15	313, SP-1,2,7	18-INCH DIAMETER PS 75 ASTM D3034 OR SN 72 FRP (RJ) SEWER IN 36-INCH DIAMETER STEEL CASING	27,28,29,39	LF	110
16	313, SP-1,2,7	24-INCH DIAMETER PS 75 ASTM D3034 PVC OR SN 72 FRP SEWER BY OPEN CUT	27,28	LF	4,307
17	314, SP-3,4,5,6	CONSTRUCT STANDARD 5-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (0-6 FEET)	21,22,23,24,25,26	EA	3
18	314, SP-3,4,5,6	EXTRA DEPTH OVER 6 FEET FOR STANDARD 5-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE	21,22,23,24,25,26	VF	31.3
19	314, SP-3,4,5,6	CONSTRUCT STANDARD 6-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (0-6 FEET)	21,22,23,24,25,26	EA	10
20	314, SP-3,4,5,6	EXTRA DEPTH OVER 6 FEET FOR STANDARD 6-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE	21,22,23,24,25,26	VF	142.9
21	314, SP-3,4,5,6	CONSTRUCT STANDARD 6-FOOT DIAMETER DROP MANHOLE OR TEE BASE MANHOLE (0-6 FEET)	21,22,23,24,25,26	EA	2
22	314, SP-3,4,5,6	EXTRA DEPTH OVER 6 FEET FOR STANDARD 6-FOOT DIAMETER DROP MANHOLE OR TEE BASE MANHOLE	21,22,23,24,25,26	VF	34.7
23	315	CONNECT TO EXISTING MANHOLE		EA	2
24	315	CONNECT TO EXISTING WATERLINE		EA	3
25	317	8-INCH DIAMETER GATE VALVE (RJ)	47,48	EA	1
26	317	12-INCH DIAMETER GATE VALVE (RJ)	47,48	EA	2
27	319	INSTALL FLOWABLE FILL		CY	20
28	322	24-INCH DIAMETER STEEL CASING INSTALLED BY BORE AND JACK	39,48	LF	175
29	322	36-INCH DIAMETER STEEL CASING INSTALLED BY BORE AND JACK	29,39	LF	110
30	325	HYDROMULCH SEEDING	17,18	SY	5,500
31	327	SAFETY FENCE		LF	400
32	329	REMOVE AND REPLACE CONCRETE SIDEWALK	19	SY	187
33	329	REMOVE AND REPLACE ASPHALT DRIVEWAY	19	SY	36
34	329	REMOVE AND REPLACE ASPHALT PAVEMENT	20	SY	374
35	331	WATER TABLE CRADLE FOR 18-INCH DIAMETER PIPE	14	LF	250
36	331	WATER TABLE CRADLE FOR 24-INCH DIAMETER PIPE	14	LF	500
37	333	CUT AND PLUG EX. SANITARY SEWER		EA	2
38	333	ABANDON EXISTING 12-INCH SANITARY SEWER FORCE MAIN	41,42,43	LF	5,717
39	333	ABANDON EXISTING SANITARY SEWER ARV MANHOLES	41,42,43	EA	3
40	333, SP-15	STONE CREEK FARMS LIFT STATION DEMOLITION AND ABANDONMENT	40,41	LS	1
41	334	CONSTRUCTION AS-BUILTS		LS	1
42	335	ACCEPTANCE SAMPLING/TESTING REQUIREMENTS		LS	1
43	418	REPLACEMENT OF COVER, FRAME, FRAME SEAL - TYPE A REPAIR		EA	1
44	SP-13	STEEL FRAME GATE		EA	8
45	ODOT 202 (H)	EARTHWORK	44	LS	1
46	ODOT 220, SP-17	SWPPP DOCUMENTATION AND MANAGEMENT	11	LS	1
47	ODOT 880 (J)	CONSTRUCTION TRAFFIC CONTROL	7,8,9,10	CD	365
48	SPECIAL	OWNERS ALLOWANCE		ALLOW	100,000

ADDITIVE ALTERNATE NO. 1					
PAY ITEM	SPEC NO.	DESCRIPTION	PAY ITEM NOTE NOS.	UNIT	QTY
49	ODOT 209	MACHINE GRADING FOR GRAVEL ACCESS ROAD	33,34,35,36,37,38,45	LF	5,510
50	ODOT 213	GRADED ROCK (SIZE #1)	33,34,35,36,37,38,45	CY	1,910
51	ODOT 213	CRUSHED STONE (SIZE #7)	33,34,35,36,37,38,45	CY	890
52	ODOT 712, SP-14	CLASS IV GEOTEXTILE	33,34,35,36,37,38,45	SY	9,800
53	ODOT 613 (EE), SP-12	18-INCH DIAMETER CORRUGATED POLYPROPYLENE STORM PIPE	33,34,35,36,37,38,45	LF	300
54	ODOT 613 (M), SP-12	CULVERT END TREATMENT SINGLE PIPE	33,34,35,36,37,38,45	EA	4
55	ODOT 613 (M), SP-12	CULVERT END TREATMENT DOUBLE PIPE	33,34,35,36,37,38,45	EA	12
56	SP-16	CABLE REINFORCED CONCRETE BLOCK MAT	33,34,35,36,37,38,45	SY	306



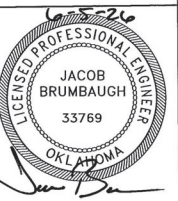
ESTIMATED CONSTRUCTION QUANTITIES  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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

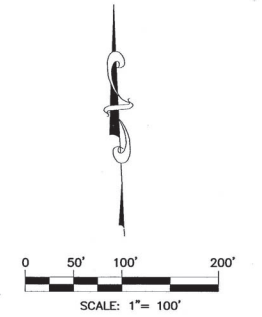
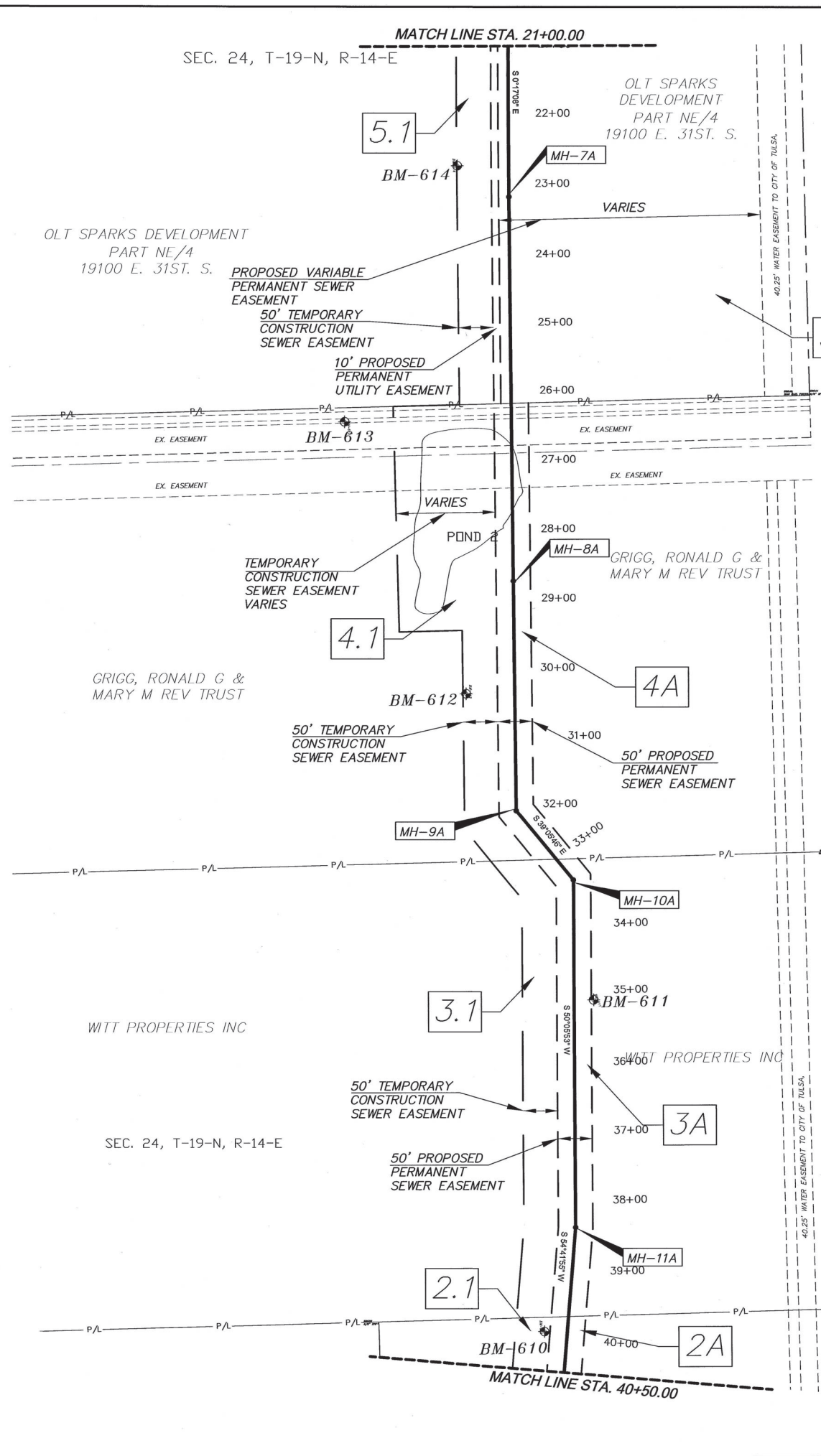
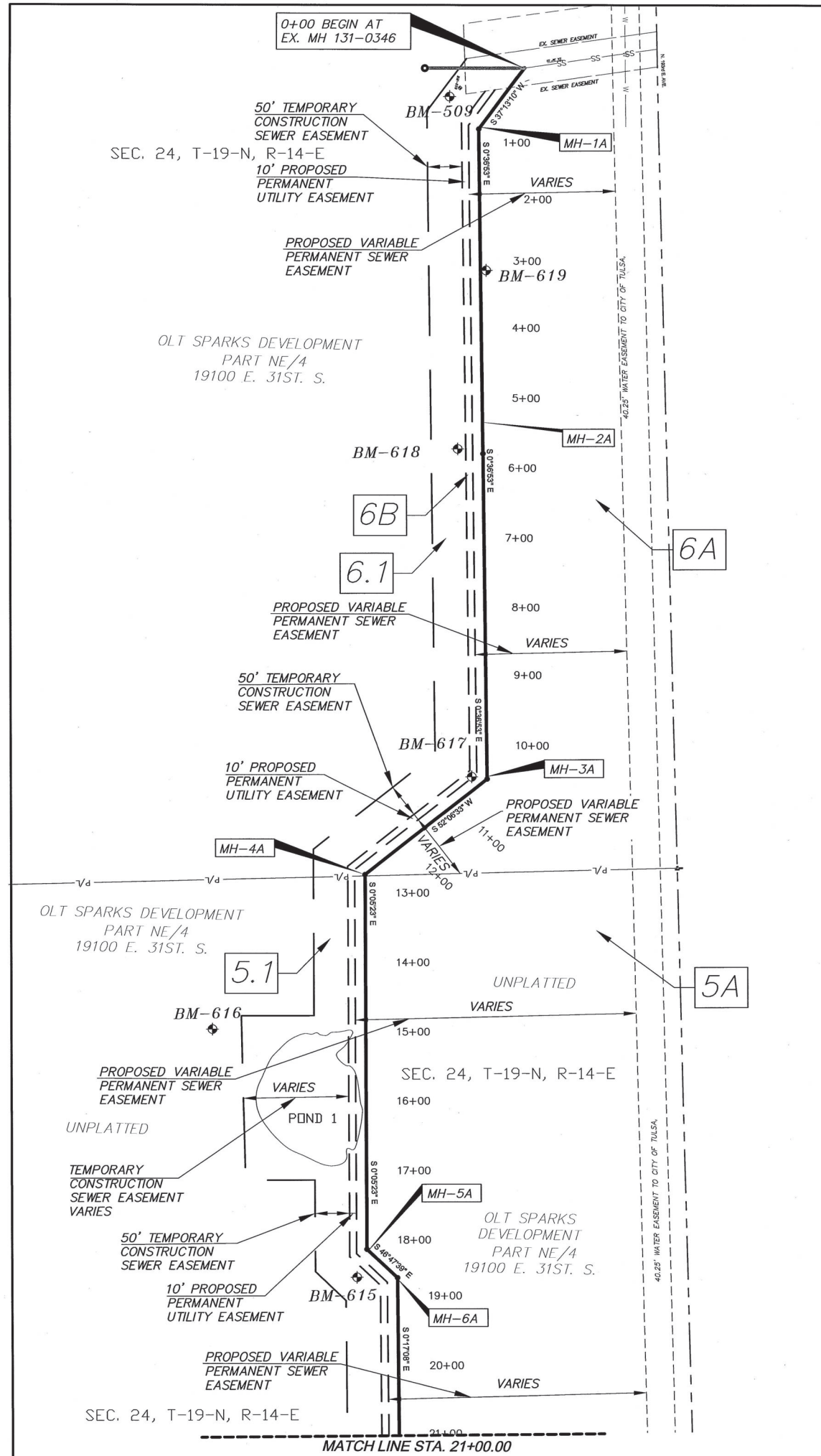
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			NA	DESIGNED	JWB	06/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: NA				SHEET 5 OF 38 SHEETS

MANHOLE WORK ITEM TABLE															
ITEM NO.	COT BASIN NO.	PLAN MH ID	COT ATLAS PAGE	MANHOLE DEPTH (FT)	CONSTRUCT STANDARD 5-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (EA)	FEET FOR STANDARD 5-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (VF)	CONSTRUCT STANDARD 6-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (EA)	FEET FOR STANDARD 6-FOOT DIAMETER MANHOLE OR TEE BASE MANHOLE (VF)	CONSTRUCT STANDARD 6-FOOT DIAMETER DROP MANHOLE OR TEE BASE MANHOLE (EA)	EXTRA DEPTH OVER 6 FEET FOR STANDARD 6-FOOT DIAMETER DROP MANHOLE OR TEE BASE MANHOLE (VF)	CONNECT TO EXISTING MANHOLE (EA)	CUT AND PLUG EXISTING SEWER (EA)	ABANDON EXISTING ARV MANHOLE (EA)	REPLACEMENT OF FRAME AND COVER - TYPE A REPAIR (EA)	PLAN SHEET NO.
					314, SP-3,4,5,6	314, SP-3,4,5,6	314, SP-3,4,5,6	314, SP-3,4,5,6	COT SPEC NO.	315	333	333	418		
1	131-BC	131-0346	546	24.8							1				13
2	142-BC	MH-1A	546	26.5			1	20.5							13
3	142-BC	MH-2A	546	20.8			1	14.8							14
4	142-BC	MH-3A	546	24.4			1	18.4							15
5	142-BC	MH-4A	546	27.0					1	21.0					16
6	142-BC	MH-5A	546	21.2			1	15.2							17
7	142-BC	MH-6A	546	19.7			1	13.7							17
8	142-BC	MH-7A	546	19.7					1	13.7					18
9	142-BC	MH-8A	546	20.1			1	14.1							20
10	Undefined-BC	MH-9A	547	19.3			1	13.3							21
11	Undefined-BC	MH-10A	547	18.3			1	12.3							21
12	Undefined-BC	MH-11A	547	17.3			1	11.3							22
13	Undefined-BC	MH-12A	547	15.3			1	9.3							23
14	Undefined-BC	MH-13A	547	14.9		1		8.9							24
15	Undefined-BC	MH-14A	547,548	15.9	1			9.9							26
16	Undefined-BC	MH-15A	547,548	18.5	1			12.5							28
17	Undefined-BC	EX. JUNCTION BOX	548	19.0							1	1			28
18	130-BA	SSV-27	548	-									1		33
19	130-BA	SSV-28	548	-									1		34
20	130-BA	SSV-29	549	-									1		35
21	130-BA	130-0059	549	17.1								1		1	35

SANITARY SEWER PIPE WORK ITEM TABLE										
ITEM NO.	COT BASIN NO.	PLAN DSMH ID	PLAN USMH ID	COT ATLAS PAGE	SURVEY LENGTH (FT)	PROP. DIA. (IN)	PROPOSED PIPE MATERIAL	PROPOSED CONSTRUCTION METHOD	COT SPEC NO.	PLAN SHEET NO.
1	131-BC/142-BC	131-0346	MH-1A	546	109	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	13
2	142-BC	MH-1A	MH-2A	546	470	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	13/14
3	142-BC	MH-2A	MH-3A	546	469	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	14/15
4	142-BC	MH-3A	MH-4A	546	225	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	15/16
5	142-BC	MH-4A	MH-5A	546	540	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	16/17
6	142-BC	MH-5A	MH-6A	546	61	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	17
7	142-BC	MH-6A	MH-7A	546	444	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	17/18
8	142-BC	MH-7A	MH-8A	546	556	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	18/19/20
9	142-BC	MH-8A	MH-9A	546/547	333	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	20/21
10	142-BC/Undefined-BC	MH-9A	MH-10A	547	130	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	21
11	Undefined-BC	MH-10A	MH-11A	547	502	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	21/22
12	Undefined-BC	MH-11A	MH-12A	547	468	24	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	22/23
13	Undefined-BC	MH-12A	MH-13A	547	467	18	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	23/24
14	Undefined-BC	MH-13A	MH-14A	547/548	610	18	PS 75 ASTM D3034 PVC OR SN 72 FRP (RJ) W/ 36-INCH DIA. STEEL CASING	OPEN CUT & BORE AND JACK	313, 322, SP-1,2,7	24/25/26
15	Undefined-BC	MH-14A	MH-15A	547/548	502	18	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	26/27/28
16	Undefined-BC	MH-15A	EX. JUNCTION BOX	547/548	74	18	PS 75 ASTM D3034 PVC OR SN 72 FRP	OPEN CUT	313, SP-1,2,7	28
17	130-BA	STONE CREEK FARMS VALVE VAULT	SSV-27	548	14	-	-	ABANDONMENT	333	33
18	130-BA	SSV-27	SSV-28	548	2,231	-	-	ABANDONMENT	333	33/34
19	130-BA	SSV-28	SSV-29	548/549	2,513	-	-	ABANDONMENT	333	34/35
20	130-BA	SSV-29	130-0059	549	959	-	-	ABANDONMENT	333	35
WATER PIPE WORK ITEM TABLE										
21	-	-	-	547/548	603	12	CLASS 51 DIP W/ 24-INCH DIA. STEEL CASING	OPEN CUT & BORE AND JACK	309,322	30/31
22	-	-	-	547/548	15	8	CLASS 51 DIP	OPEN CUT	309	30



WORK ITEM TABLES						
TMUA PROJECT NUMBER ES 2022-09						
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3						
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	06/2026	APPROVED:
		NA	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 6 OF 38 SHEETS
		PROFILE SCALE:	SURVEY			
		HORIZONTAL:	PROJ. MGR.			
		VERTICAL:	LEAD ENGR.	RJN 6/26		
		FILE:	FIELD MGR.	Pam 6/24		
		ATLAS PAGE NO: NA	DRAWING:			

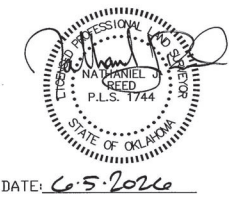


**LEGEND**

BENCHMARK	BM 408
CONTROL POINT	△CP 408
EXISTING MANHOLE	○
PROPOSED MANHOLE	●
EXISTING SANITARY SEWER	—SS—SS—SS—
PROPOSED SANITARY SEWER	—P/L—
PROPERTY LINE	—P/L—
RIGHT-OF-WAY	—
EXISTING EASEMENT	—
PROPOSED EASEMENT	—
TEMPORARY CONSTRUCTION EASEMENT	—


EASEMENT DESCRIPTION

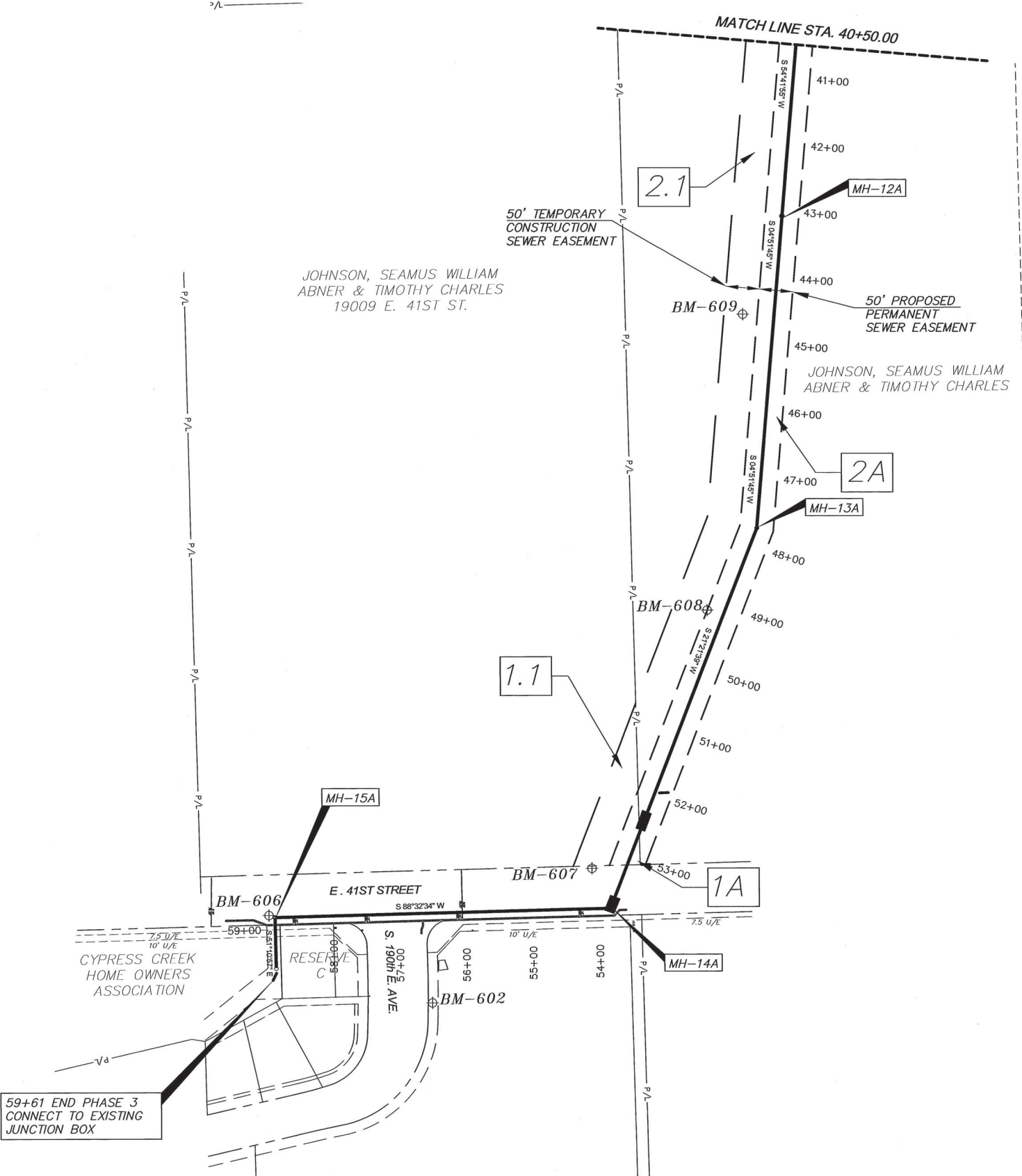
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**RIGHT-OF-WAY MAP**  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

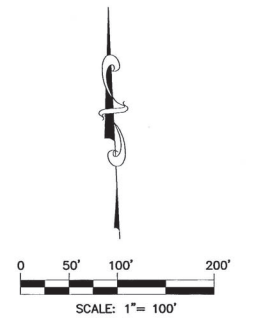
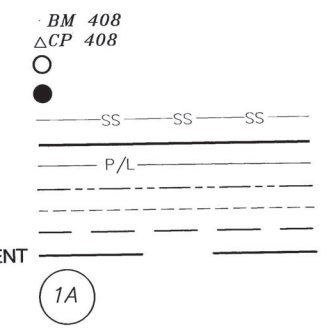
PLANS AND ESTIMATES PREPARED BY:  
 R/JN GROUP, INC. CONSULTING ENGINEERS  
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 100'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	WJ 6/26		
			FILE:	FIELD MGR.	WJ 6/26		
				DRAWING:			
			ATLAS PAGE NO: 547				SHEET 7 OF 38 SHEETS



**LEGEND**

- BENCHMARK
  - CONTROL POINT
  - EXISTING MANHOLE
  - PROPOSED MANHOLE
  - EXISTING SANITARY SEWER
  - PROPOSED SANITARY SEWER
  - PROPERTY LINE
  - RIGHT-OF-WAY
  - EXISTING EASEMENT
  - PROPOSED EASEMENT
  - TEMPORARY CONSTRUCTION EASEMENT
- EASEMENT DESCRIPTION



DATE: 6-5-2026

RIGHT-OF-WAY MAP  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 100'	DESIGNED	JWB	06/2026	
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	JK	6/26	 DESIGN MANAGER
			VERTICAL:	FIELD MGR.	Jan	6/26	
			NA				DATE: June 2026
			FILE:	DRAWING:			
			ATLAS PAGE NO: NA				SHEET 8 OF 38 SHEETS

SURVEY CONTROL				
NODE ID	DESCRIPTION	NORTHING	EASTING	ELEVATION
91	ALUMINUM CAP FOUND	409791.7980	2629621.6320	674.50
509	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	4144759.79	2629243.89	662.88
600	3/8" IRON PIN SET W/CAP (NATIVE PLAINS)	411932.7767	2629699.5667	665.29
601	MAG NAIL SET	411937.8903	2629705.7644	664.96
602	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	409469.3555	2628674.6128	679.01
603	MAG NAIL SET	409475.7734	2628654.3405	678.08
606	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	409599.9350	2628430.1360	677.56
607	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	409668.8970	2628914.3640	672.74
608	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	410053.1070	2629088.8420	669.37
609	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	410494.8400	2629143.9030	666.33
610	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	410956.6590	2629197.1900	665.85
611	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	411435.8540	2629270.5420	665.12
612	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	411879.5410	2629086.9690	667.00
613	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	412273.1090	2628911.8820	669.02
614	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	412643.5530	2629076.0730	664.97
615	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	413043.3170	2629089.3180	662.78
616	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	413401.9900	2628880.7900	667.12
617	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	413765.6980	2629258.3630	663.82
618	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	414238.5840	2629239.5670	658.11
619	BENCH MARK (3/8" IPSC - NATIVE PLAINS)	414496.5210	2629281.6020	658.15
50033	IPFC (#1283)	409586.5028	2628446.6719	677.80
50058	3/8" IPF	409588.3214	2628526.5876	678.64
50120	IPFC	409304.0057	2628336.2465	680.48
50537	IPFC	412244.1741	2626948.6715	681.82
50538	IPFC (WHITE)	410922.8791	2626979.9015	678.46
50539	3/8" IPF	410968.8545	2628955.6910	667.12
50540	MAG NAIL FOUND	412310.8476	2629585.2462	664.31
50541	3/8" IPF	412310.1729	2629585.9888	664.30
50542	MAG NAIL FOUND WWASHER	410987.8857	2629615.8714	668.19

HORIZONTAL DATUM: OKLAHOMA STATE PLANE COORDINATE SYSTEM, NORTH ZONE 3501, NAD 83 (1993)  
 VERTICAL DATUM: NAVD 1988  
 SCALE FACTOR: 0.99991581  
 639.00  
 BENCH MARKS: 5/8" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "XXX", SET  
 193 RD E. AVE. NAVD 1988

**NOTE:**

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

PROPOSED MANHOLES									
MH ID #	STATION	MANHOLE TYPE	FRAME & COVER	DROP	ELEVATED / FLUSH	BOLLARDS	N	E	RIM ELEVATION
MH-1A	1+09.31	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	414701.24	2629271.24	663.00
MH-2A	5+79.03	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	414231.55	2629276.23	658.93
MH-3A	10+48.13	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	413762.47	2629280.80	664.08
MH-4A	12+73.33	STANDARD FRP OR TEE BASE	30" COMPOSITE	8"	ELEVATED	YES	413624.16	2629103.08	667.50
MH-5A	18+13.43	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	413084.06	2629103.93	663.56
MH-6A	18+74.06	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	413042.56	2629148.12	662.35
MH-7A	23+18.06	STANDARD FRP OR TEE BASE	30" COMPOSITE	8"	ELEVATED	YES	412598.56	2629150.83	663.82
MH-8A	28+74.06	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	412042.58	2629155.93	666.10
MH-9A	32+06.91	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	411709.75	2629159.09	666.54
MH-10A	33+36.79	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	411609.54	2629241.72	666.03
MH-11A	38+39.40	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	411106.94	2629243.01	666.76
MH-12A	43+06.81	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	410641.21	2629203.39	666.35
MH-13A	47+74.26	STANDARD FRP OR TEE BASE	30" COMPOSITE		ELEVATED	YES	410175.43	2629163.76	668.28
MH-14A	53+82.74	STANDARD FRP OR TEE BASE	30" COMPOSITE		FLUSH	NO	409608.93	2628941.67	671.87
MH-15A	58+85.30	STANDARD FRP OR TEE BASE	30" COMPOSITE		FLUSH	NO	409596.88	2628439.26	677.68

**NOTES:**

- MANHOLE NUMBERS AND COORDINATES ARE SHOWN ON PLAN AND PROFILE SHEETS.
- 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.
- ALL TEE BASE MANHOLES SHALL BE CONSTRUCTED AS PER TEE BASE MANHOLE DETAILS AS SHOWN ON SHEET 37.
- ALL FRP MANHOLES SHALL BE CONSTRUCTED AS PER FRP MANHOLE DETAILS AS SHOWN ON SHEET 37.
- 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.
- ALL ELEVATED MANHOLES SHALL BE CONSTRUCTED AS PER CITY OF TULSA STANDARD DETAIL NO. 369.

PROPERTY/EASEMENT CORNER LOCATION					
PARCEL ID	POINT	NORTHING	EASTING	DIRECTION	DISTANCE
1A	BEGIN	409673.15	2628940.47	S 88°37'06" W	54.22'
		409671.84	2628886.27	N 21°21'39" E	260.74'
		409914.67	2628981.24	S 01°18'44" E	129.71'
		409784.99	2628984.21	S 21°21'39" W	120.09'
1A	END	409673.15	2628940.47		
1.1	BEGIN	409674.26	2628986.75	S 88°37'06" W	46.29'
		409673.15	2628940.47	N 21°21'39" E	120.09'
		409784.99	2628984.21	S 01°18'44" E	110.75'
1.1	END	409674.26	2628986.75		
2A	BEGIN	409784.99	2628984.21	N 01°18'44" W	129.71'
		409914.67	2628981.24	N 21°21'39" E	298.46'
		410192.63	2629089.96	N 04°51'45" E	786.69'
		410976.48	2629156.64	N 88°35'24" E	50.30'
		410977.72	2629206.93	S 04°51'45" W	799.43'
		410181.17	2629139.16	S 21°21'39" W	425.40'
2A	END	409784.99	2628984.21		
2.1	BEGIN	409674.26	2628986.75	N 01°18'44" W	110.75'
		409784.99	2628984.21	N 21°21'39" E	425.40'
		410181.17	2629139.16	N 04°51'45" E	799.43'
		410977.72	2629206.93	N 88°35'24" E	50.30'
		410978.96	2629257.21	S 04°51'45" W	812.18'
		410169.70	2629188.37	S 21°21'39" W	498.59'
		409705.36	2629006.76	S 05°54'15" W	5.73'
		409699.66	2629006.17	S 04°25'32" E	24.96'
		409674.78	2629008.10	S 88°37'06" W	21.35'
2.1	END	409674.26	2628986.75		
3A	BEGIN	410977.72	2629206.93	S 88°35'24" W	50.30'
		410976.48	2629156.64	N 04°51'45" E	134.19'
		411110.19	2629168.01	N 88°35'24" E	470.14'
		411580.33	2629168.82	N 39°05'46" W	73.14'
		411637.09	2629122.69	N 88°34'34" E	63.17'
		411638.66	2629185.84	S 39°05'46" E	52.34'
		411598.04	2629218.85	S 00°05'53" W	490.02'
		411108.02	2629218.01	S 04°51'45" W	130.77'
3A	END	410977.72	2629206.93		
3.1	BEGIN	410978.96	2629257.21	S 88°35'24" W	50.30'
		410977.72	2629206.93	N 04°51'45" E	130.77'
		411108.02	2629218.01	N 00°05'53" E	490.02'
		411598.04	2629218.85	N 39°05'46" W	52.34'
		411638.66	2629185.84	N 88°34'34" E	63.17'
		411640.23	2629248.99	S 39°05'46" E	31.54'
		411615.76	2629268.88	S 00°05'53" W	509.90'
		411105.86	2629268.01	S 04°51'45" W	127.36'
3.1	END	410978.96	2629257.21		
4A	BEGIN	412299.94	2629178.48	S 00°32'41" E	581.14'
		411718.83	2629184.01	S 39°30'26" E	101.88'
		411640.23	2629248.82	S 88°34'34" W	63.52'
		411638.65	2629185.31	N 39°30'26" W	80.38'
		411700.67	2629134.18	N 00°32'41" W	598.05'
		412298.69	2629128.49	N 88°33'43" E	50.01'
4A	END	412299.94	2629178.48		
4.1	BEGIN	412298.69	2629128.49	S 00°32'41" E	598.05'
		411700.67	2629134.18	S 39°30'26" E	80.38'
		411638.65	2629185.31	S 88°34'34" W	63.52'
		411637.07	2629121.81	N 39°30'26" W	58.89'
		411682.51	2629084.35	N 00°32'41" W	288.66'
		411971.15	2629081.60	S 88°34'33" W	91.17'
		411968.88	2628990.46	N 01°25'27" W	326.24'
		412295.02	2628982.35	N 88°33'43" E	146.18'
4.1	END	412298.69	2629128.49		

PROPERTY/EASEMENT CORNER LOCATION					
PARCEL ID	POINT	NORTHING	EASTING	DIRECTION	DISTANCE
5A	BEGIN	412308.55	2629521.20	S 88°33'43" W	382.71'
		412298.94	2629138.61	N 00°31'57" W	299.52'
		412598.45	2629135.83	N 00°20'59" W	437.59'
		413036.03	2629133.16	N 46°47'39" W	60.67'
		413077.56	2629088.94	N 00°05'23" W	544.39'
		413621.95	2629088.09	N 88°41'55" E	403.33'
		413631.11	2629491.32	S 01°17'40" E	1322.91'
5A	END	412308.55	2629521.20		
5B	BEGIN	412298.94	2629138.61	S 88°33'43" W	10.13'
		412298.69	2629128.49	N 00°32'41" W	367.49'
		412666.16	2629125.00	N 00°17'08" W	365.33'
		413031.69	2629123.17	N 46°47'39" W	60.68'
		413073.23	2629078.94	N 00°05'23" W	548.50'
		413621.73	2629078.09	N 88°41'55" E	10.00'
		413621.95	2629088.09	S 00°05'23" E	544.39'
		413077.56	2629088.94	S 46°47'39" E	60.67'
		413036.03	2629133.16	S 00°20'59" E	437.59'
		412598.45	2629135.83	S 00°31'57" E	299.52'
5B	END	412298.94	2629138.61		
5.1	BEGIN	412298.69	2629128.49	S 88°33'43" W	50.01'
		412297.43	2629128.50	N 00°32'41" W	368.38'
		412665.80	2629075.00	N 00°17'08" W	344.16'
		413009.95	2629073.28	N 46°47'39" W	60.78'
		413051.57	2629028.98	N 00°05'23" W	132.91'
		413184.48	2629028.77	S 89°55'28" W	100.57'
		413184.34	2628928.20	N 01°18'05" W	236.87'
		413421.16	2628922.82	N 89°54'37" E	105.58'
		413421.32	2629028.40	N 00°05'23" W	199.27'
		413620.59	2629028.09	N 88°41'55" E	50.01'
		413621.73	2629078.09	S 00°05'23" E	548.50'
		413073.23	2629078.94	S 46°47'39" E	60.68'
		413031.69	2629123.17	S 00°17'08" E	365.53'
		412666.16	2629125.00	S 00°32'41" E	367.49'
5.1	END	412298.69	2629128.49		
6A	BEGIN	414780.84	2629465.33	S 01°17'40" E	1150.02'
		413631.11	2629491.32	S 88°41'55" W	403.33'
		413621.95	2629088.09	N 00°05'23" W	9.53'
		413631.49	2629088.07	N 52°06'33" E	225.12'
		413769.75	2629265.73	N 00°33'10" W	461.68'
		414231.40	2629261.28	N 00°36'45" W	475.01'
		414706.38	2629256.20	N 37°15'42" E	63.67'
		414757.06	2629294.75	N 82°03'41" E	172.24'
6A	END	414780.84	2629465.33		
6B	BEGIN	414757.06	2629294.75	S 37°15'42" W	63.67'
		414706.38	2629256.20	S 00°36'45" E	475.01'
		414231.40	2629261.28	S 00°33'10" E	461.68'
		413769.75	2629265.73	S 52°06'33" W	225.12'
		413631.49	2629088.07	S 00°05'23" E	9.53'
		413621.95	2629088.09	S 88°41'55" W	10.00'
		413621.73	2629078.09	N 00°05'23" W	14.65'
		413636.37	2629078.06	N 52°	

# STORM WATER MANAGEMENT PLAN

## SITE DESCRIPTION

PROJECT LIMITS: SANITARY SEWER INTERCEPTOR MAIN CONSTRUCTION FROM 31ST STREET SOUTH ALONG SPUNKY CREEK JUST WEST OF S 193RD E. AVE. TO EAST 41ST STREET.

PROJECT DESCRIPTION: CONSTRUCTION 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: PRIMARILY CLAY, SHALE & LIMESTONE

TOTAL AREA OF THE CONSTRUCTION SITE: \_\_\_\_\_

ESTIMATED AREA TO BE DISTURBED: 15 ACRES

OFFSITE AREA TO BE DISTURBED: \_\_\_\_\_  
(FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.5 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.5 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: \_\_\_\_\_

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°06'45"N - 95°45'43"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: SPUNKY CREEK

SENSITIVE WATERS OR WATERSHEDS: YES  NO

303(d) IMPAIRED WATERS: YES  NO

IF YES, LIST IMPAIRMENT: MACROINVERTEBRATE & TOTAL DISSOLVED SOLIDS

LOCATED IN A TMDL: YES  NO

LAKE THUNDERBIRD TMDL:  YES  NO

MS4 ENTITY YES  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
- 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:

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

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- 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.

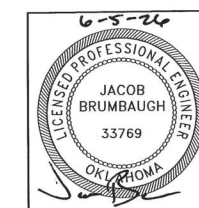
THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 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.

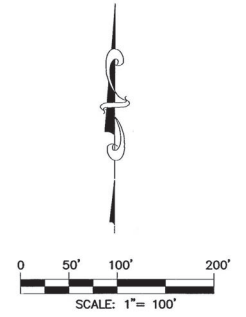
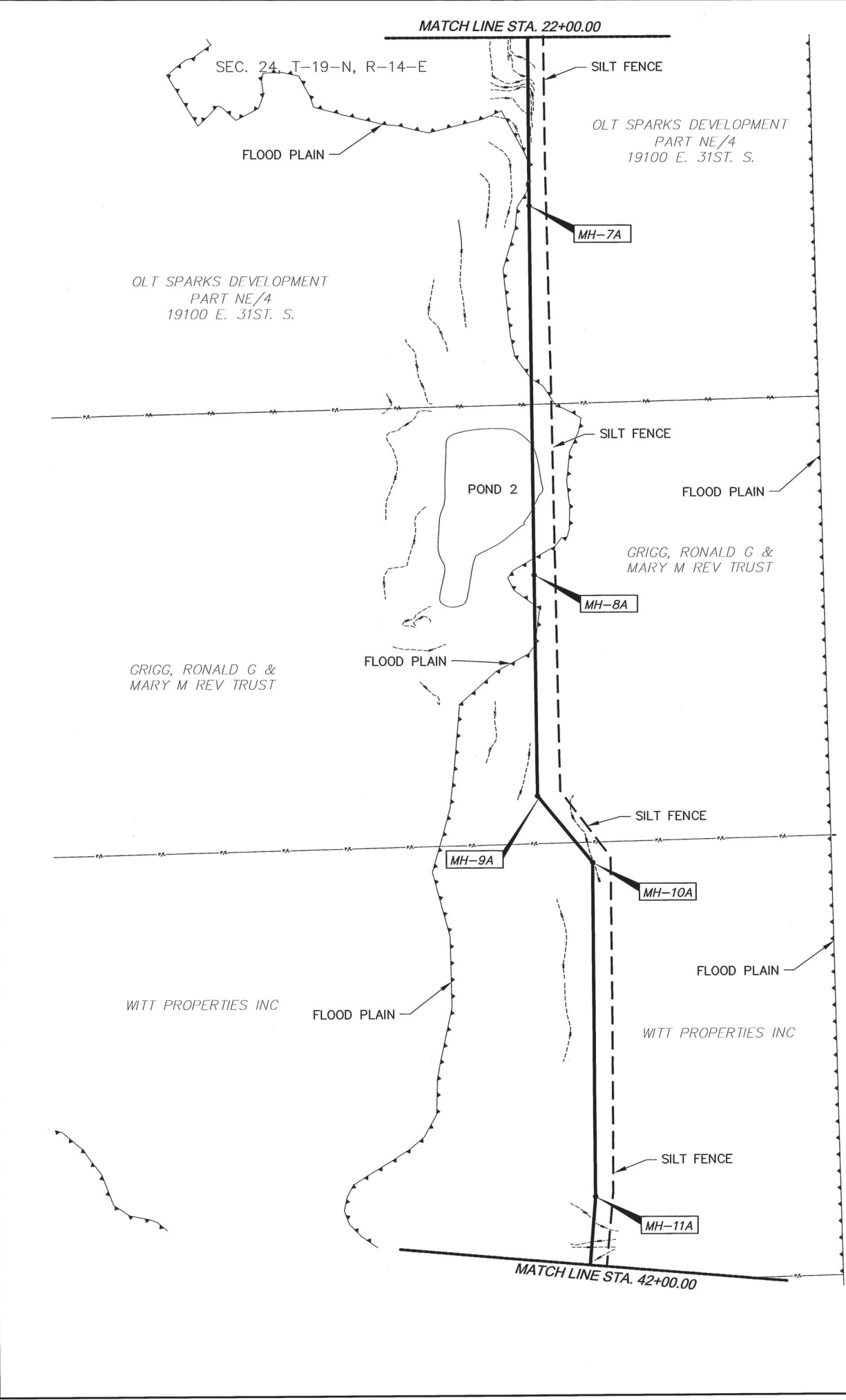
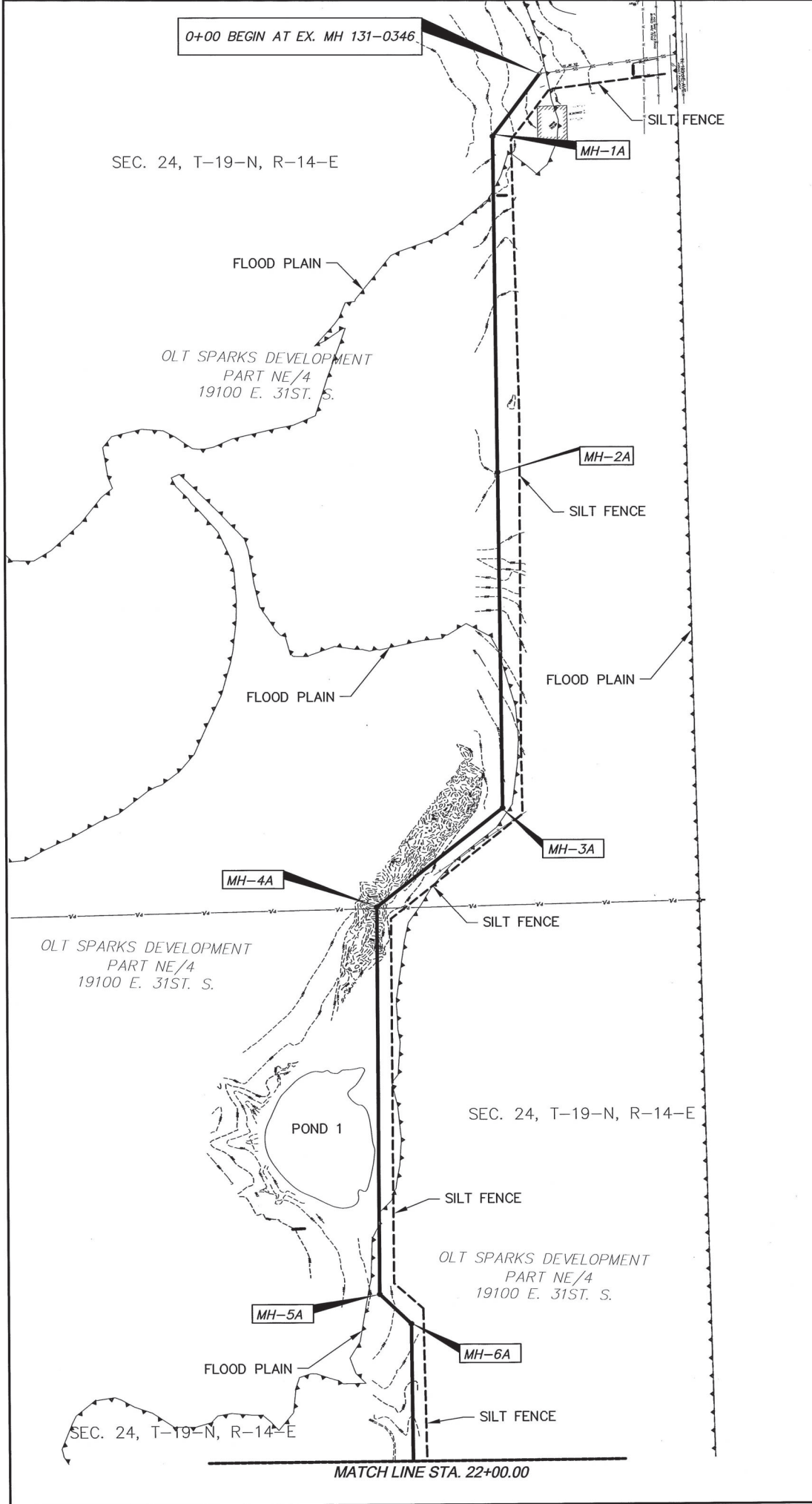
ADDITIONAL PERMITS REQUIRED FROM OKLAHOMA WATER RESOURCES BOARD



REVISION	BY	DATE	PLAN SCALE:	DRAWN	RIP	06/2026	APPROVED:
			NA	DESIGNED	JWB	06/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	<i>JK</i>	6/26	
			VERTICAL:	FIELD MGR.	<i>Ben Cole</i>		
			NA				
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: NA				SHEET 10 OF 38 SHEETS

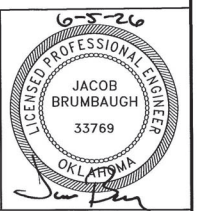
STORM WATER MANAGEMENT PLAN  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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



- 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. 31ST STREET, E. 41ST STREET AND/OR S. 193RD E. AVE.**



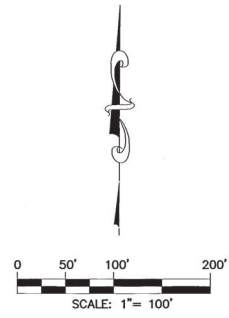
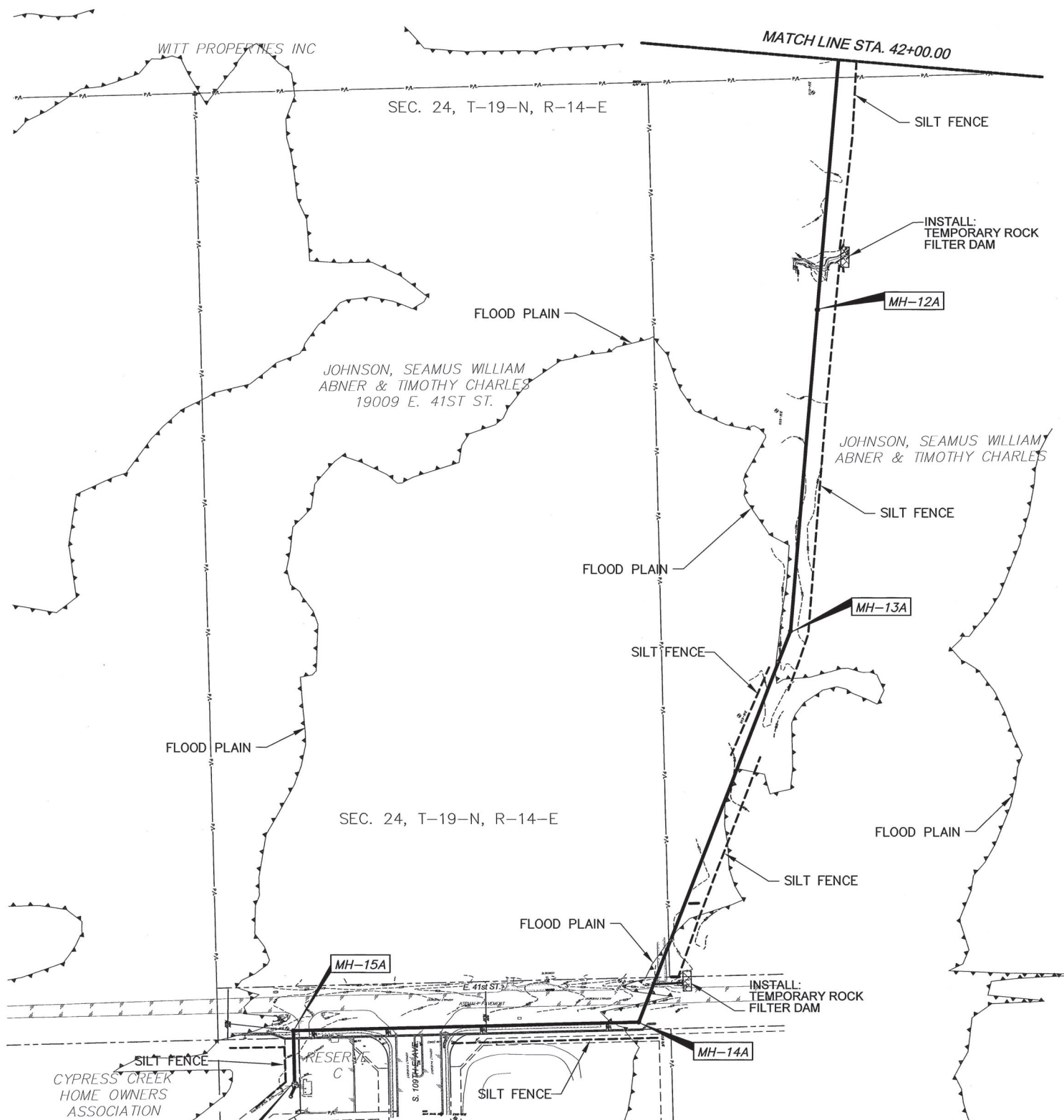
**EROSION CONTROL PLAN**  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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	06/2026	APPROVED:
1" = 100'	DESIGNED	JWB	06/2026	 DESIGN MANAGER
PROFILE SCALE:	SURVEY			
HORIZONTAL:	PROJ. MGR.			
NA	LEAD ENGR.	AK 6/26		
VERTICAL:	FIELD MGR.	RJB 6/26		DATE: June 2026
NA	DRAWING:			SHEET 11 OF 38 SHEETS
FILE:				ATLAS PAGE NO: 547

T:\TULSA\PROJECTS\10-2823-02 SPUNKY CREEK MS-SOUTH PHASE 3\CADD\DRAWINGS\11-12 EROSION CONTROL.DWG  
 2:00:55 PM 06/20/26



- 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. 31ST STREET, E. 41ST STREET AND/OR S. 193RD E. AVE.**

59+61 END PHASE 3 CONNECT TO EXISTING JUNCTION BOX

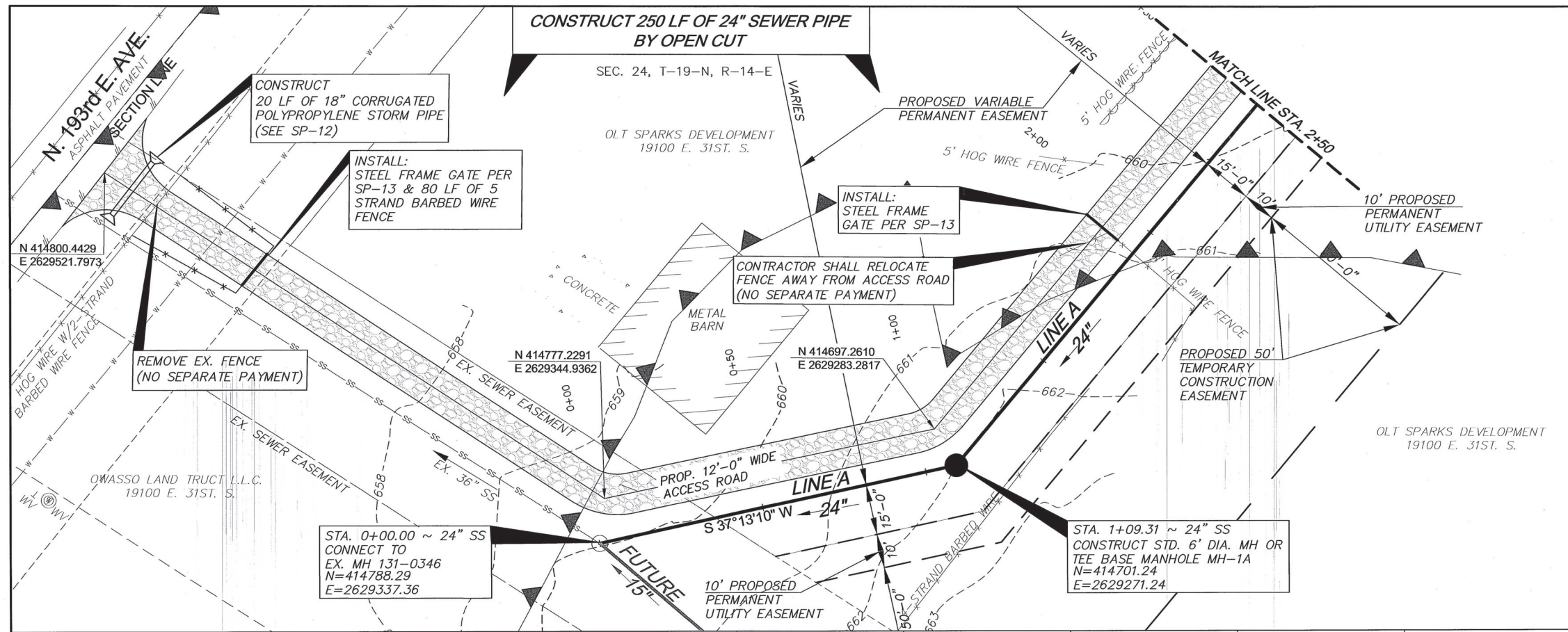


EROSION CONTROL PLAN  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

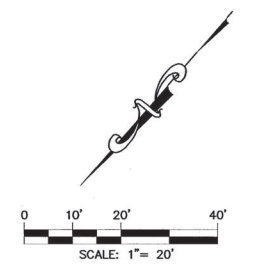
PLANS AND ESTIMATES PREPARED BY:  
 RJN GROUP, INC. CONSULTING ENGINEERS  
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			NA	DESIGNED	JWB	06/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	RZ	6/26	
			VERTICAL:	FIELD MGR.	Ben	6/26	
			NA				
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: 547,548				SHEET 12 OF 38 SHEETS

TULSA, OKLAHOMA, JUNE 2026  
 2:41:15 PM  
 EROSION CONTROL PLAN



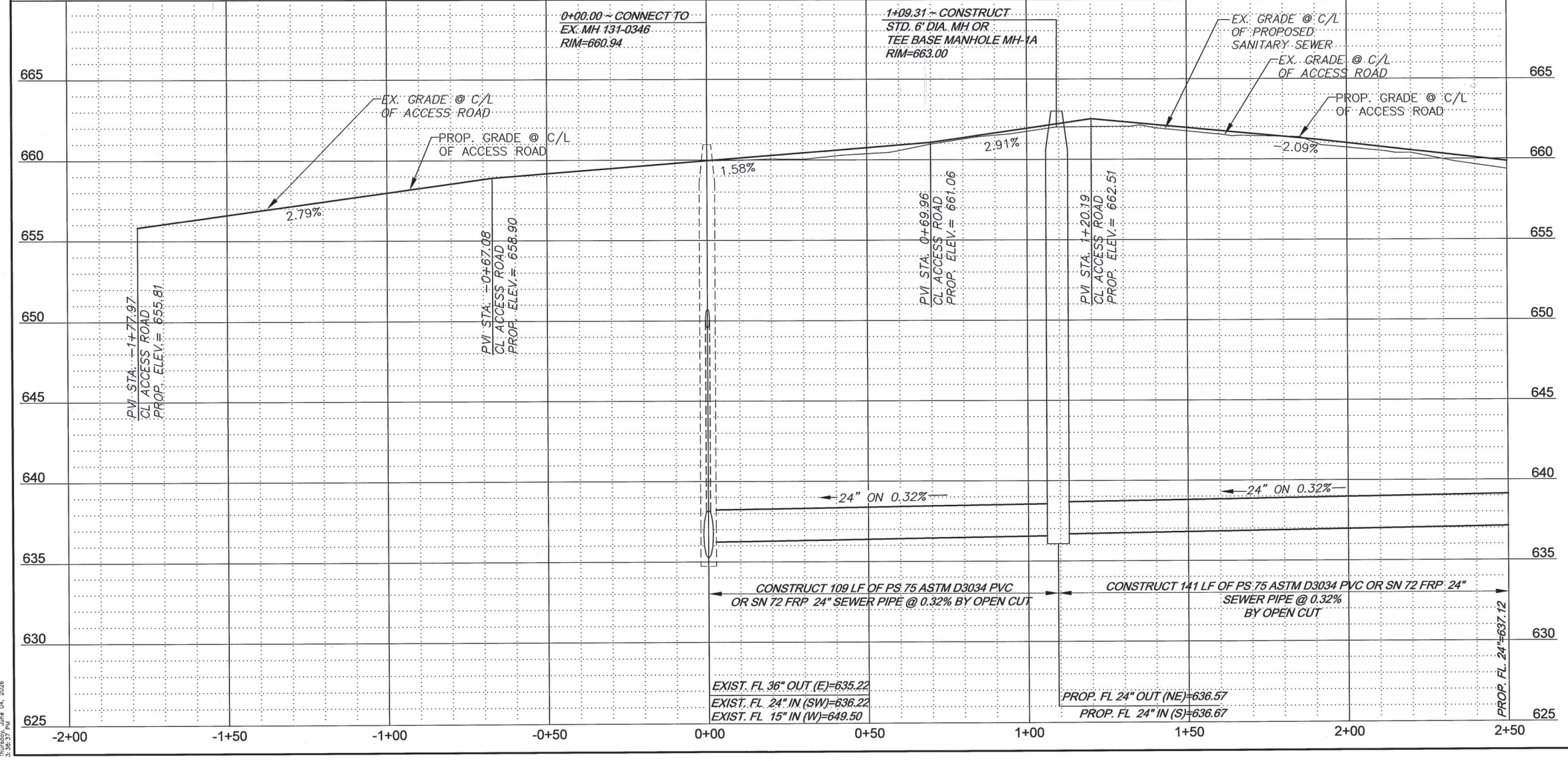
**BENCHMARKS:**  
 BM-509  
 IRON PIN SET 94' WEST AND 28' SOUTH OF  
 EX. MH 131-0346  
 N=414759.79 (NOT SHOWN)  
 E=2629243.89  
 EL=662.88



**LEGEND**  
 ▲▲ LIMITS OF FLOOD ZONE BOUNDARY  
 [Pattern] PROPOSED ACCESS ROAD



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



- NOTE:**
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
  2. CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
  3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
  4. OBSTRUCTIONS AFFECTED BY THE CONSTRUCTION OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO FENCES, RETAINING WALLS, PATIOS, OUT BUILDINGS, LANDSCAPING, ETC. SHALL BE RECONSTRUCTED OR REPLACED AND SHALL BE INCIDENTAL COST TO PAY ITEM NO. 2, RIGHT-OF-WAY CLEARING AND RESTORATION, AND PER CITY OF TULSA STANDARD SPECIFICATION, NO. 301.
  5. NO TREES SHALL BE REPLANTED WITHIN PERMANENT SEWER EASEMENT.
  6. THE CONTRACTOR SHALL REMOVE TREES WITHIN THE TEMPORARY AND PERMANENT EASEMENTS AS NECESSARY TO FACILITATE CONSTRUCTION AND SHALL ALSO REMOVE ANY TREES THAT ARE DETERMINED TO BE UNLIKELY TO SURVIVE DUE TO CONSTRUCTION IMPACTS. TREE REPLACEMENT OR REPLANTING WITHIN THE EASEMENT AREAS WILL NOT BE REQUIRED. NO SEPARATE PAYMENT WILL BE MADE.
  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.

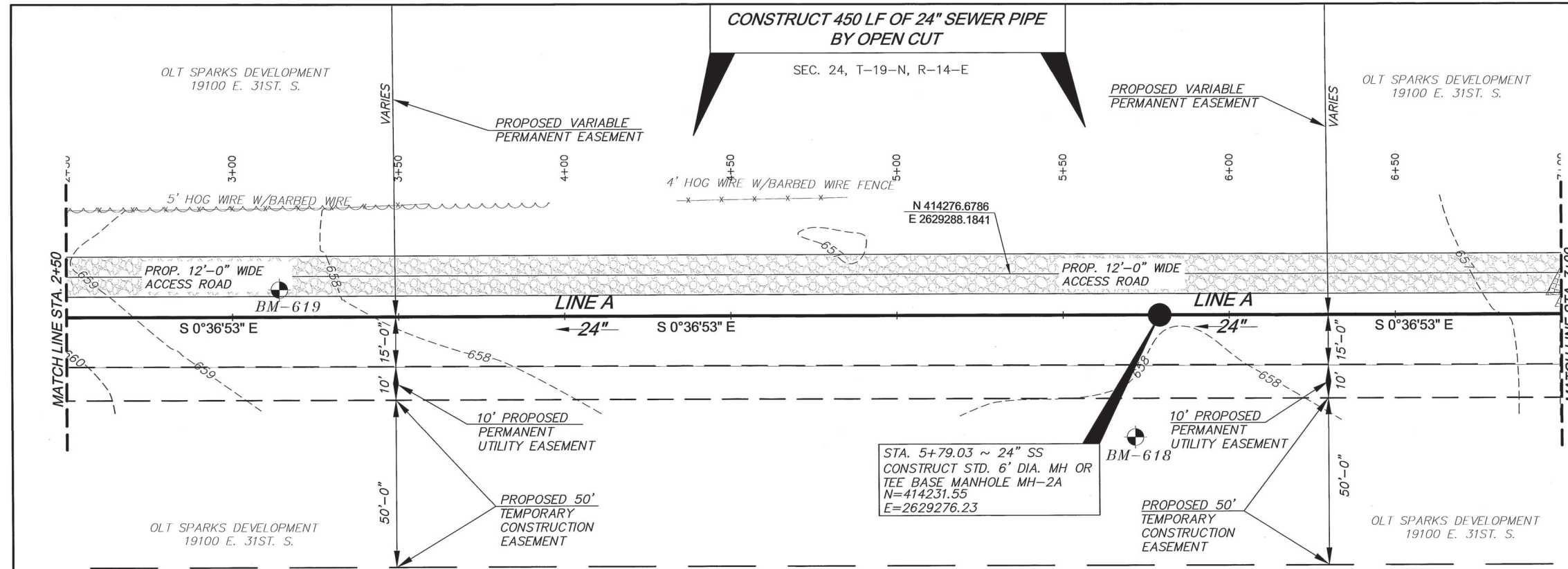


LINE A STA. 0+00 TO STA. 2+50  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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	06/2026	APPROVED:
			1"=20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 13 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.	JK 6/26		
			VERTICAL:	FIELD MGR.	Bru 6/26		
			1"=4'	FILE:			
			DRAWING:				
			ATLAS PAGE NO: 546				

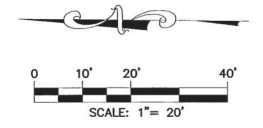
TULSA PROJECTS 2022-2023-02 SPUNKY CREEK MB-SOUTH PHASE 3 (CAD/DRAINING) (13-28) LINE A.DWG  
 3:38:57 PM



**BENCHMARKS:**

BM-619  
IRON PIN SET 220' NORTH AND 8' EAST OF MH-2A  
N=414496.52  
E=2629281.60  
EL=658.15

BM-618  
IRON PIN SET 39' SOUTH AND 37' WEST OF MH-2A  
N=414238.58  
E=2629239.57  
EL=658.11



**LEGEND**

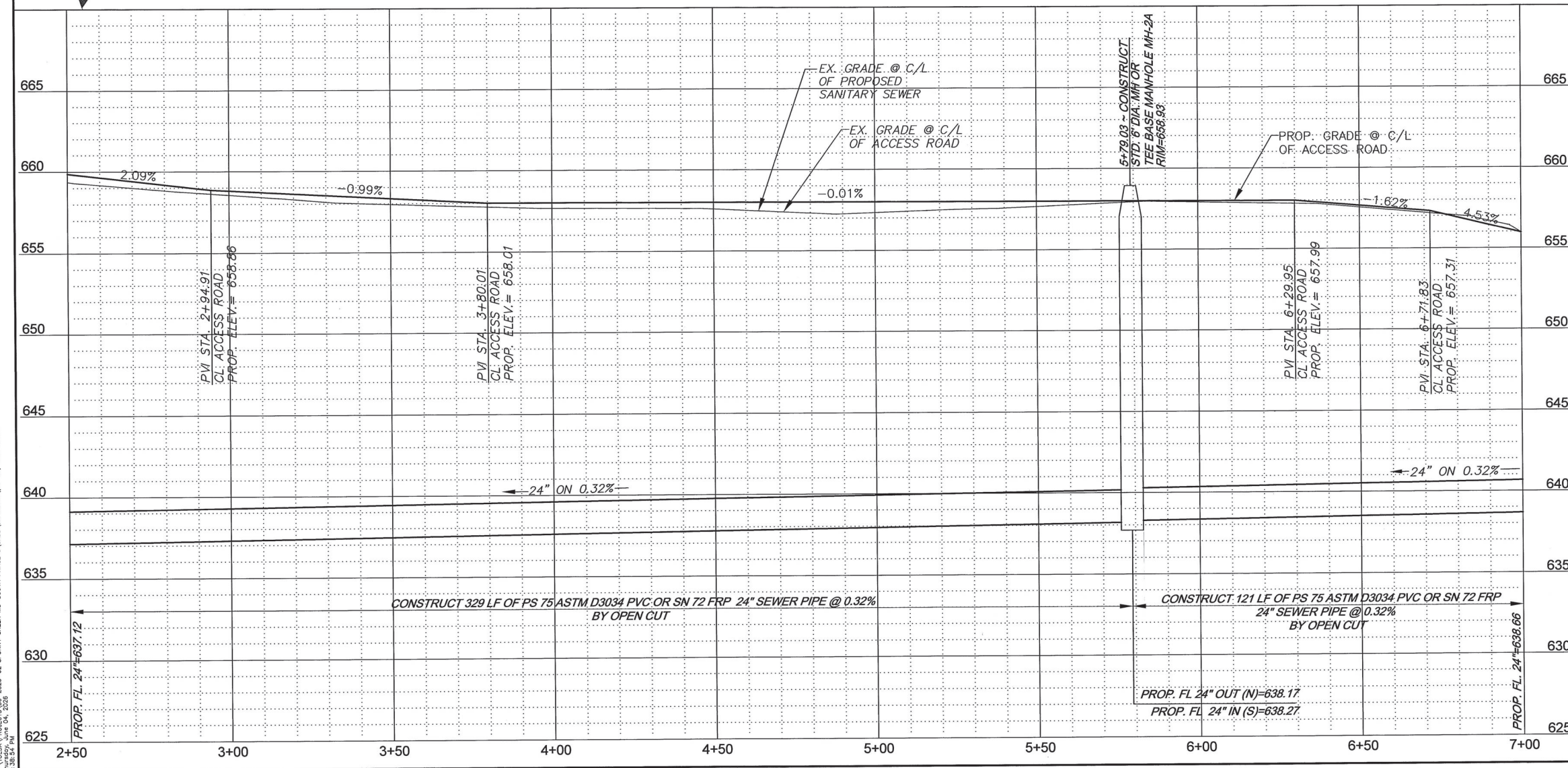
▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY

▨ PROPOSED ACCESS ROAD

THIS PORTION OF THE PROJECT LIES ENTIRELY WITHIN THE FLOOD PLAIN

**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 AT OKIE AT 1-800-522-6543



- NOTE:**
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  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.



LINE A STA. 2+50 TO STA. 7+00

TMUA PROJECT NUMBER ES 2022-09

SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3

CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1"=20'	DESIGNED	JWB	06/2026	 THOMAS D. M. DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1"=4'				
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: 546				SHEET 14 OF 38 SHEETS

T:\TULSA\PROJECTS\2022-09-2023-02 SPUNKY CREEK MAIN STEM SOUTH PHASE 3\CADD\DRAWINGS\14-28) LINE A.DWG  
Thursday, June 04, 2026 2:38:54 PM

INSTALL 68 SY OF CABLE REINFORCED CONCRETE BLOCK MAT FOR CREEK CROSSING SEE DETAILS SHEET 38

OLT SPARKS DEVELOPMENT  
19100 E. 31ST. S.

CONSTRUCT 450 LF OF 24" SEWER PIPE BY OPEN CUT

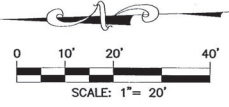
SEC. 24, T-19-N, R-14-E

STA. 10+48.13 ~ 24" SS  
CONSTRUCT STD. 6' DIA. MH OR TEE BASE MANHOLE MH-3A  
N=413762.47  
E=2629280.80

BENCHMARKS:

BM-617  
IRON PIN SET 85' SOUTH AND 24' WEST OF MH-3A

N=413765.70  
E=2629258.36  
EL=663.82

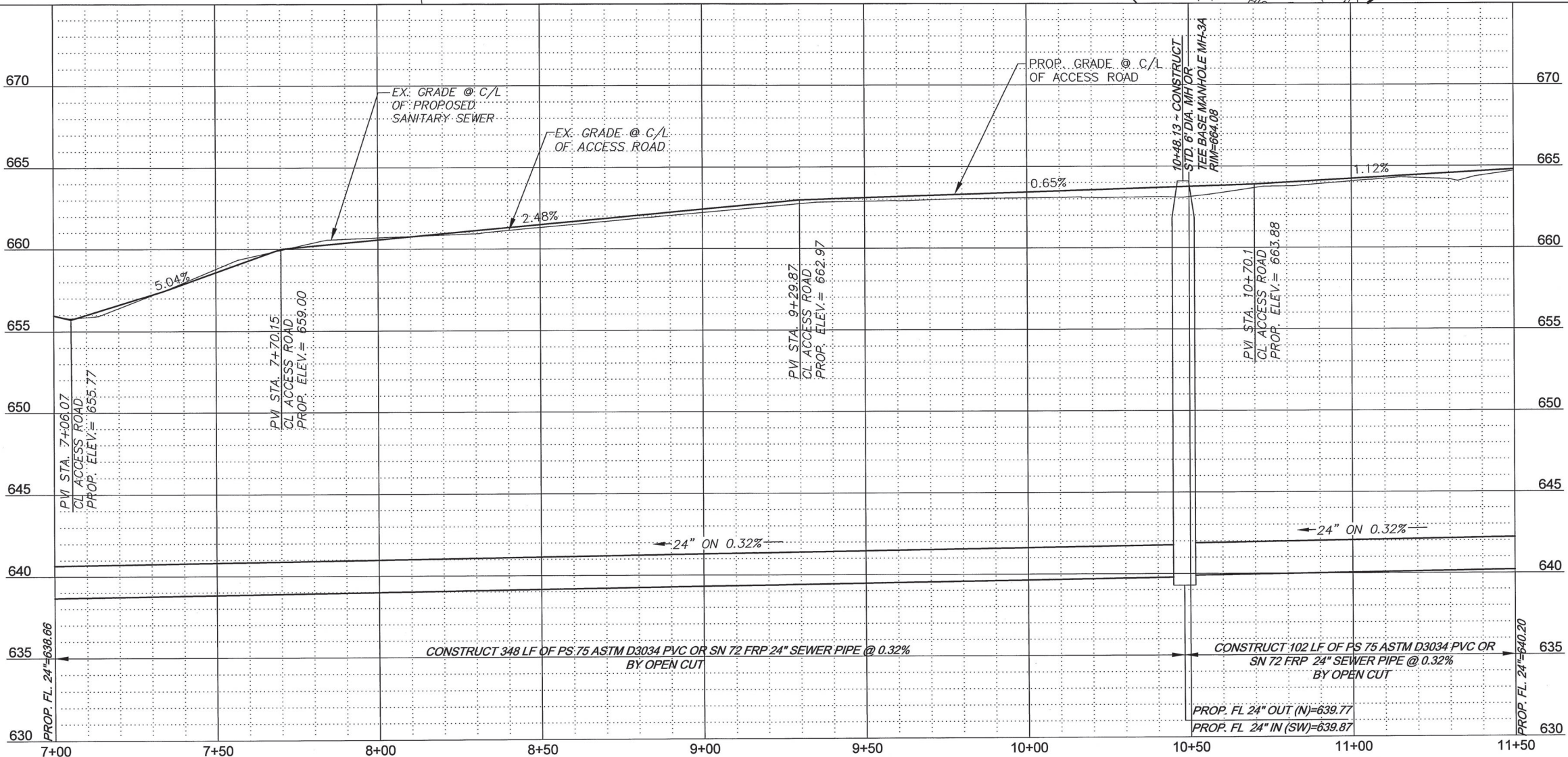
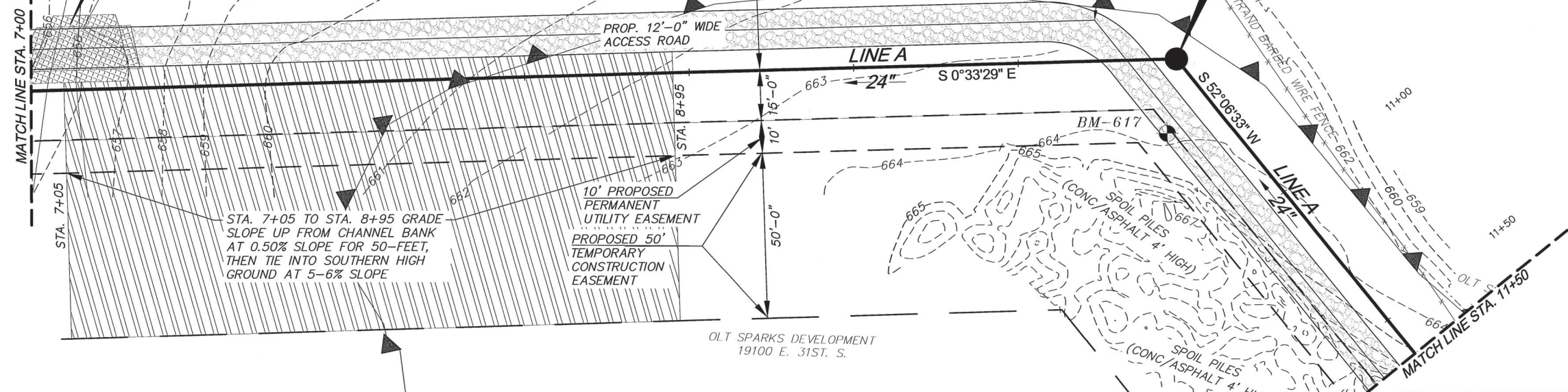


LEGEND

- LIMITS OF FLOOD ZONE BOUNDARY
- PROPOSED ACCESS ROAD
- GRADE TO CREEK CHANNEL



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



NOTE:

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7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.



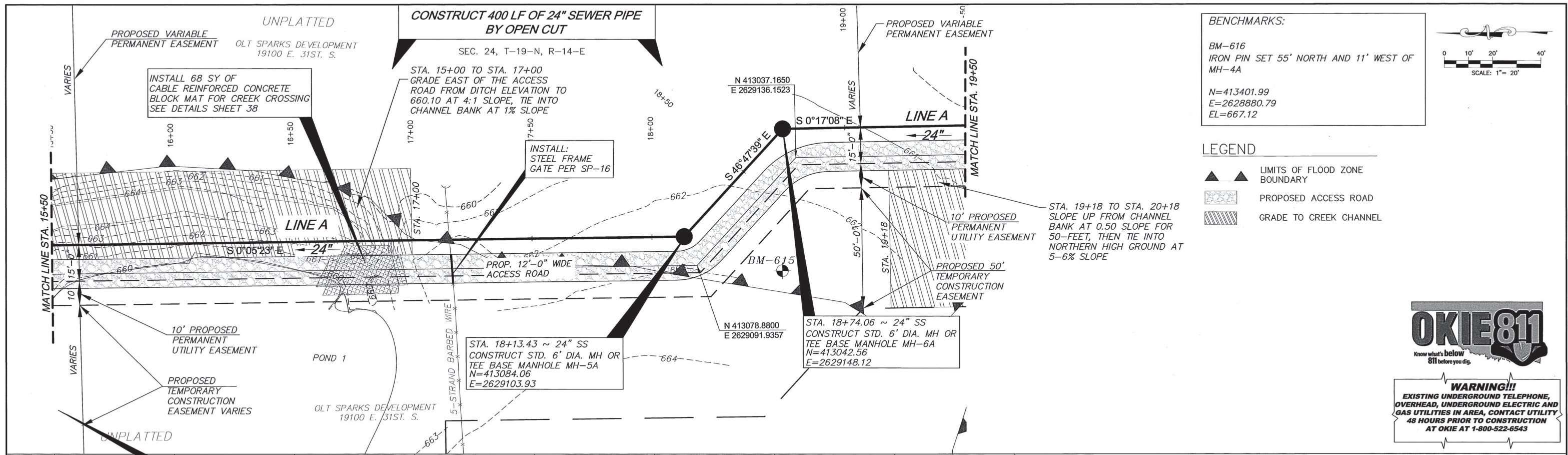
LINE A STA. 7+00 TO STA. 11+50  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 15 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL	FIELD MGR.			
			1" = 4'				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 546				

TULSA COUNTY DISTRICT 30-2853-02 SPUNKY CREEK MS-SOUTH PHASE 3 (CAD) DRAWINGS (1-3-20) LINE A (20) 2:38:11 PM

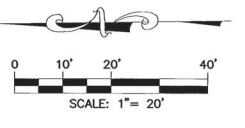




**BENCHMARKS:**

BM-616  
IRON PIN SET 55' NORTH AND 11' WEST OF MH-4A

N=413401.99  
E=2628880.79  
EL=667.12

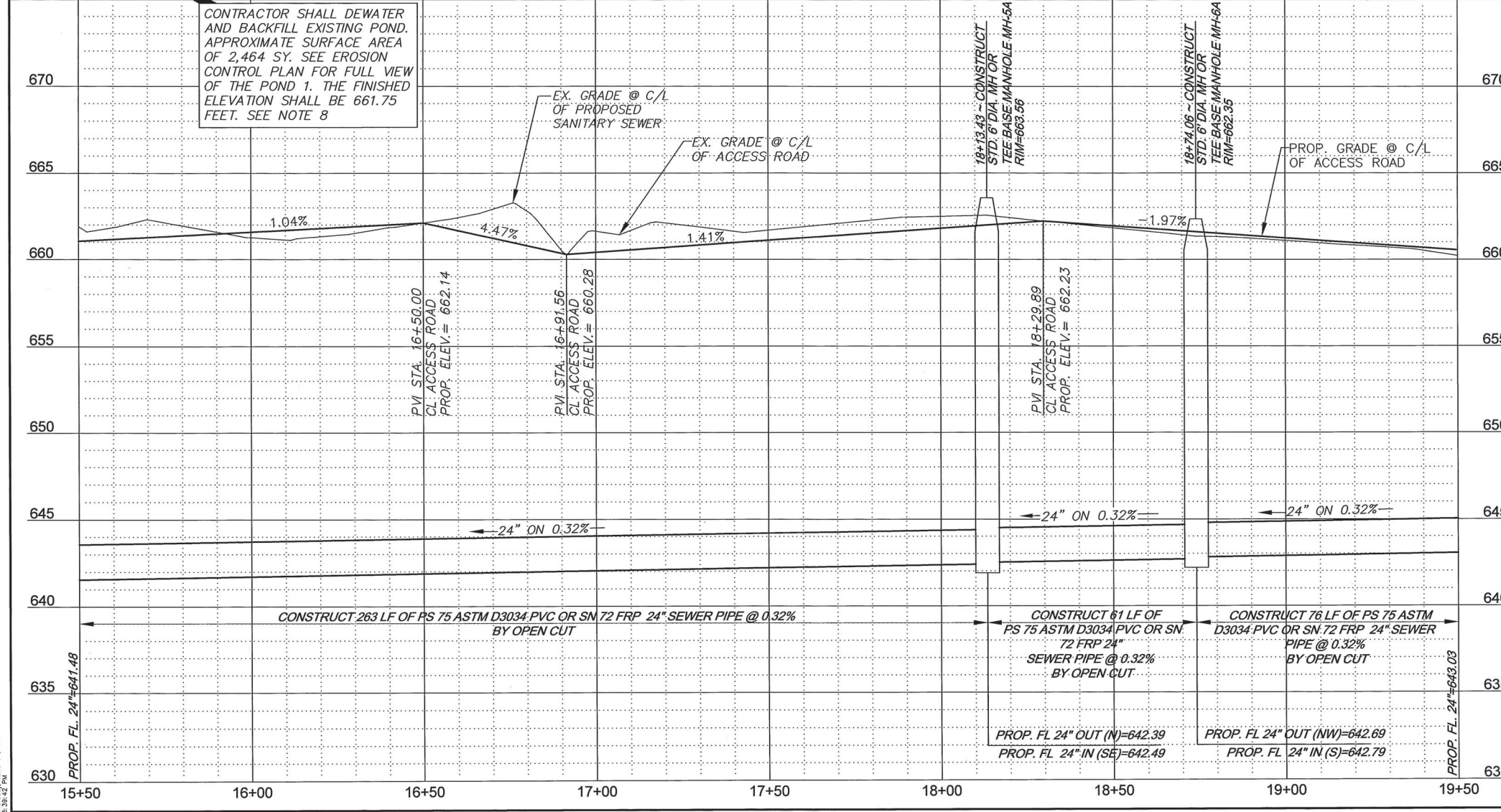


**LEGEND**

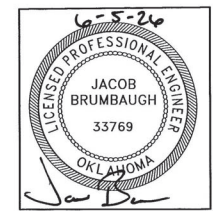
- ▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY
- ▨ PROPOSED ACCESS ROAD
- ▨ GRADE TO CREEK CHANNEL



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




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  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.
  8. POND FILL SHALL CONSIST OF CLEAN COMMON EARTH FILL SUCH AS CLAYEY SAND OR SANDY CLAY, FREE OF ORGANIC MATERIAL, TOPSOIL, DEBRIS, TRASH, AND OTHER UNSUITABLE MATERIALS. FILL MATERIAL SHALL CONTAIN NO OVERSIZED ROCK, DEFINED AS ROCK LARGER THAN 3 INCHES IN MAXIMUM DIMENSION, AND SHALL BE SUITABLE FOR UNIFORM PLACEMENT AND COMPACTION. FILL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 12 INCHES (LOOSE THICKNESS) AND COMPACTED TO A MINIMUM OF 90 PERCENT OF STANDARD PROCTOR DENSITY TO MINIMIZE POST-CONSTRUCTION SETTLEMENT. THE UPPER 12 INCHES OF FILL SHALL CONSIST OF APPROVED TOPSOIL TO SUPPORT GRASS ESTABLISHMENT AND VEGETATIVE GROWTH.



LINE A STA. 15+50 TO STA. 19+50  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.		6/26	
			VERTICAL	FIELD MGR.		6/26	
			1" = 4'				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 546				SHEET 17 OF 38 SHEETS

T:\TULSA\PROJECTS\2022-06-15-2026\SPUNKY CREEK MS-SOUTH PHASE 3\CADD\DRAWINGS\15-38) LINE A.DWG  
Thursday, June 04, 2026 2:38:52 PM

**CONSTRUCT 400 LF OF 24" SEWER PIPE BY OPEN CUT**

SEC. 24, T-19-N, R-14-E

UNPLATTED

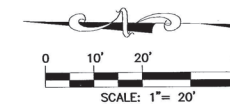
OLT SPARKS DEVELOPMENT  
19100 E. 31ST. S.

STA. 23+18.06 ~ 24" SS  
CONSTRUCT STD. 6' DIA. MH OR  
TEE BASE MANHOLE DROP MH-7A  
N=412598.56  
E=2629150.83

BENCHMARKS:

BM-615  
IRON PIN SET 2' NORTH AND 58' WEST OF  
MH-6A

N=413043.32  
E=2629089.32  
EL=662.78

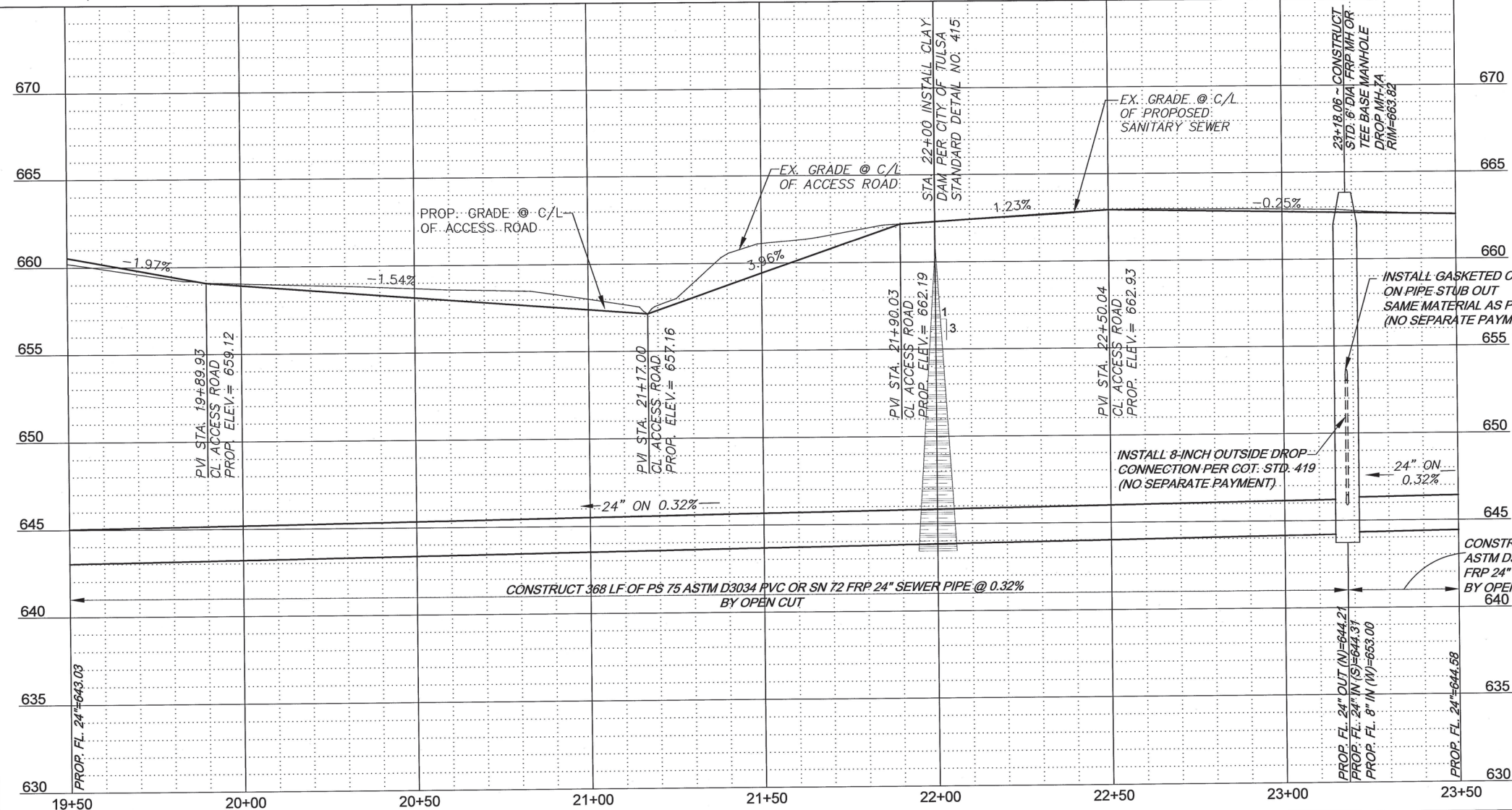
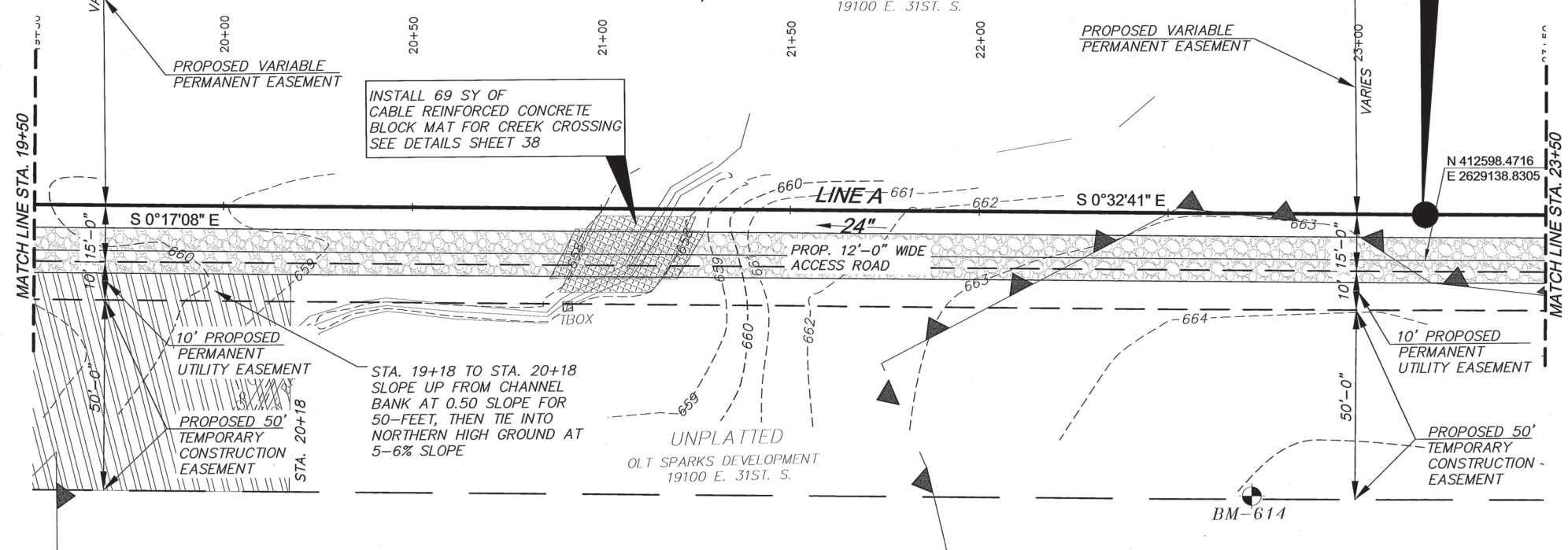


LEGEND

- LIMITS OF FLOOD ZONE BOUNDARY
- PROPOSED ACCESS ROAD
- GRADE TO CREEK CHANNEL

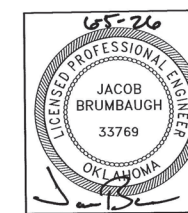


**WARNING!!!**  
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GAS UTILITIES IN AREA, CONTACT UTILITY  
48 HOURS PRIOR TO CONSTRUCTION  
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LINE A STA. 19+50 TO STA. 23+50  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3  
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	06/2026	APPROVED:
			1"=20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL: 1"=20'	PROJ. MGR.			
			VERTICAL: 1"=4'	LEAD ENGR.			
			FILE:	FIELD MGR.			
			DRAWING:				
			ATLAS PAGE NO: 546				

TULSA PROJECTS 00-2022-09 SPUNKY CREEK MS-SOUTH PHASE 3 (CADD) DRAWINGS (13-28) LINE A.DWG  
 PLOT: June 05, 2026  
 10:27:10 AM

CONSTRUCT 400 LF OF 24" SEWER PIPE BY OPEN CUT

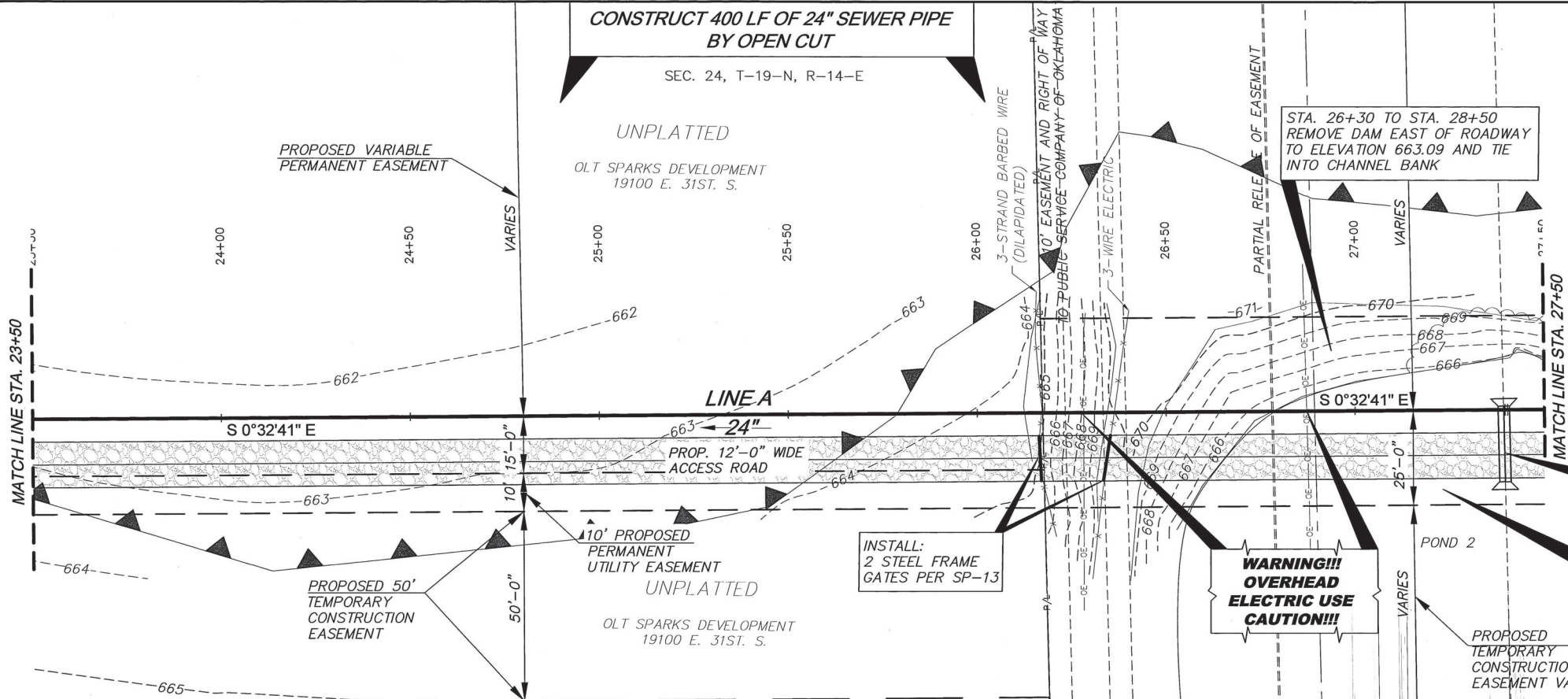
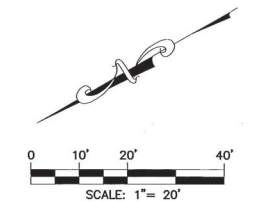
SEC. 24, T-19-N, R-14-E

UNPLATTED

OLT SPARKS DEVELOPMENT  
19100 E. 31ST. S.

**BENCHMARKS:**  
BM-614  
IRON PIN SET 221' SOUTH AND 74' WEST OF MH-7A  
N=412643.55  
E=2629076.07  
EL=664.97

**LEGEND**  
▲▲ LIMITS OF FLOOD ZONE BOUNDARY  
▨ PROPOSED ACCESS ROAD

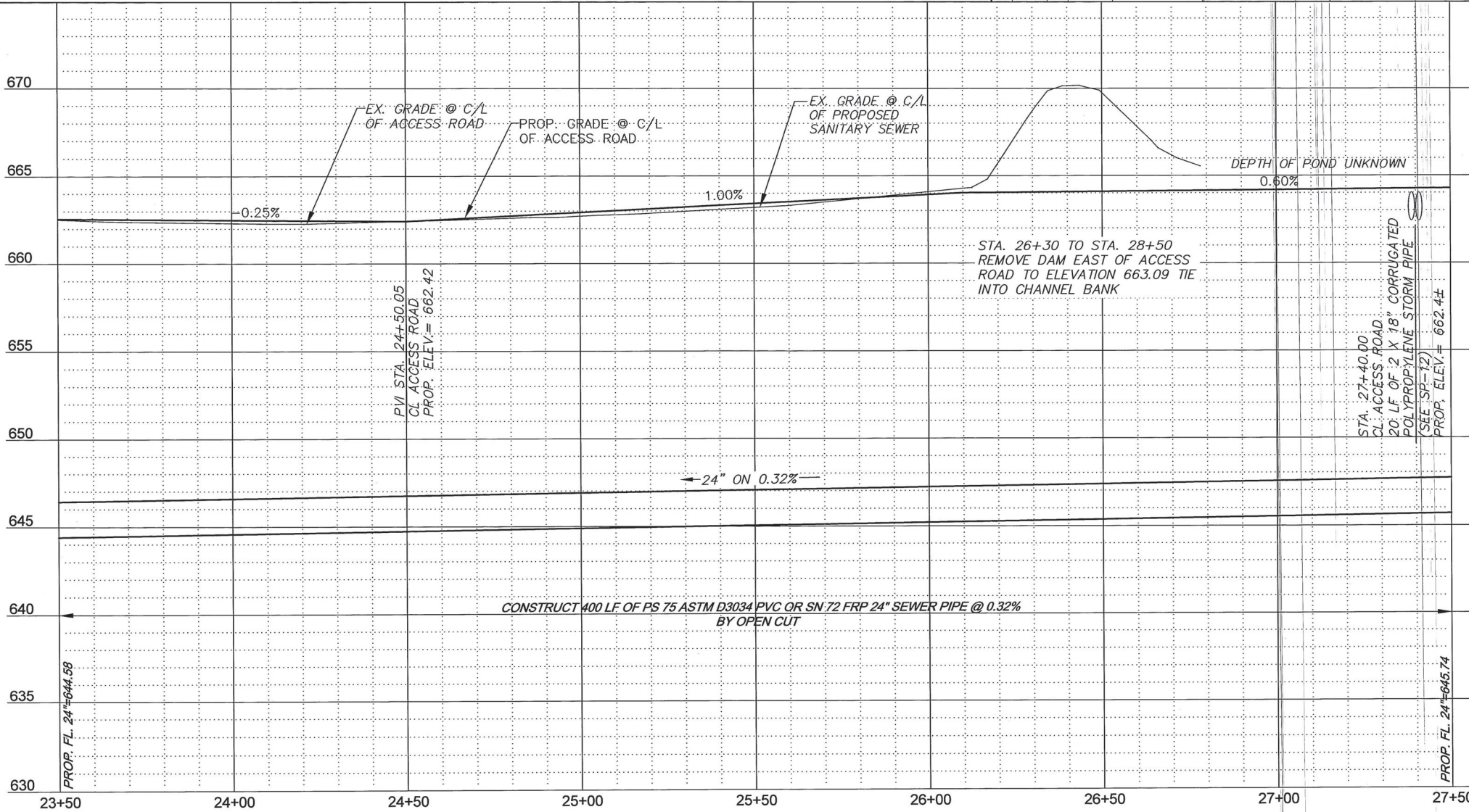


STA. 27+40.00 INSTALL:  
20 LF OF 2 X 18" CORRUGATED  
POLYPROPYLENE STORM PIPE  
(SEE SP-12)

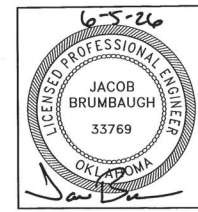
CONTRACTOR SHALL DEWATER  
AND BACKFILL EXISTING POND.  
APPROXIMATE SURFACE AREA  
OF 2,980 SY. SEE EROSION  
CONTROL PLAN FOR FULL VIEW  
OF THE POND 2. THE FINISHED  
ELEVATION SHALL BE 663.09  
FEET. SEE NOTE 8

**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  
AT OKIE AT 1-800-522-6543



- NOTE:**
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
  2. CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
  3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
  4. OBSTRUCTIONS AFFECTED BY THE CONSTRUCTION OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO FENCES, RETAINING WALLS, PATIOS, OUT BUILDINGS, LANDSCAPING, ETC. SHALL BE RECONSTRUCTED OR REPLACED AND SHALL BE INCIDENTAL COST TO PAY ITEM NO. 2, RIGHT-OF-WAY CLEARING AND RESTORATION, AND PER CITY OF TULSA STANDARD SPECIFICATION, NO. 301.
  5. NO TREES SHALL BE REPLANTED WITHIN PERMANENT SEWER EASEMENT.
  6. THE CONTRACTOR SHALL REMOVE TREES WITHIN THE TEMPORARY AND PERMANENT EASEMENTS AS NECESSARY TO FACILITATE CONSTRUCTION AND SHALL ALSO REMOVE ANY TREES THAT ARE DETERMINED TO BE UNLIKELY TO SURVIVE DUE TO CONSTRUCTION IMPACTS. TREE REPLACEMENT OR REPLANTING WITHIN THE EASEMENT AREAS WILL NOT BE REQUIRED. NO SEPARATE PAYMENT WILL BE MADE.
  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.
  8. POND FILL SHALL CONSIST OF CLEAN COMMON EARTH FILL SUCH AS CLAYEY SAND OR SANDY CLAY, FREE OF ORGANIC MATERIAL, TOPSOIL, DEBRIS, TRASH, AND OTHER UNSUITABLE MATERIALS. FILL MATERIAL SHALL CONTAIN NO OVERSIZED ROCK, DEFINED AS ROCK LARGER THAN 3 INCHES IN MAXIMUM DIMENSION, AND SHALL BE SUITABLE FOR UNIFORM PLACEMENT AND COMPACTION. FILL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 12 INCHES (LOOSE THICKNESS) AND COMPACTED TO A MINIMUM OF 90 PERCENT OF STANDARD PROCTOR DENSITY TO MINIMIZE POST-CONSTRUCTION SETTLEMENT. THE UPPER 12 INCHES OF FILL SHALL CONSIST OF APPROVED TOPSOIL TO SUPPORT GRASS ESTABLISHMENT AND VEGETATIVE GROWTH.



LINE A STA. 23+50 TO STA. 27+50  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 19 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			FILE:	FIELD MGR.			
			ATLAS PAGE NO: 546	DRAWING:			

T:\TULSA\PROJECTS\30-2823-02 SPUNKY CREEK MS-SOURI PHASE 3\CADD\DRAWINGS\13-38) LINE A.DWG  
11:26:20 AM 05/20/26

**CONSTRUCT 400 LF OF 24" SEWER PIPE BY OPEN CUT**

SEC. 24, T-19-N, R-14-E

UNPLATTED

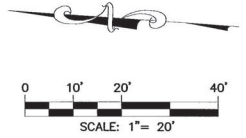
GRIGG, RONALD G & MARY M REV TRUST

**BENCHMARKS:**

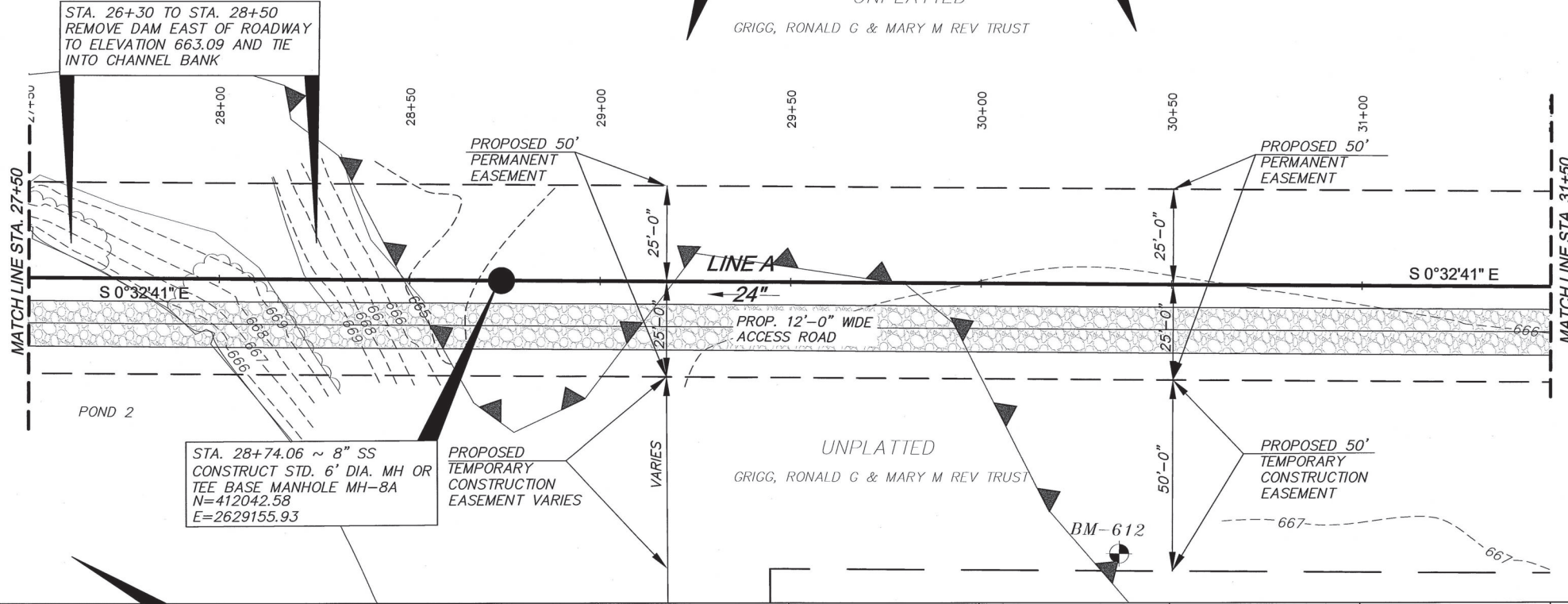
BM-613  
IRON PIN SET 51' SOUTH AND 37' WEST OF MH-8A  
  
N=412273.11  
E=2628911.88  
EL=669.02

**LEGEND**

- LIMITS OF FLOOD ZONE BOUNDARY
- PROPOSED ACCESS ROAD

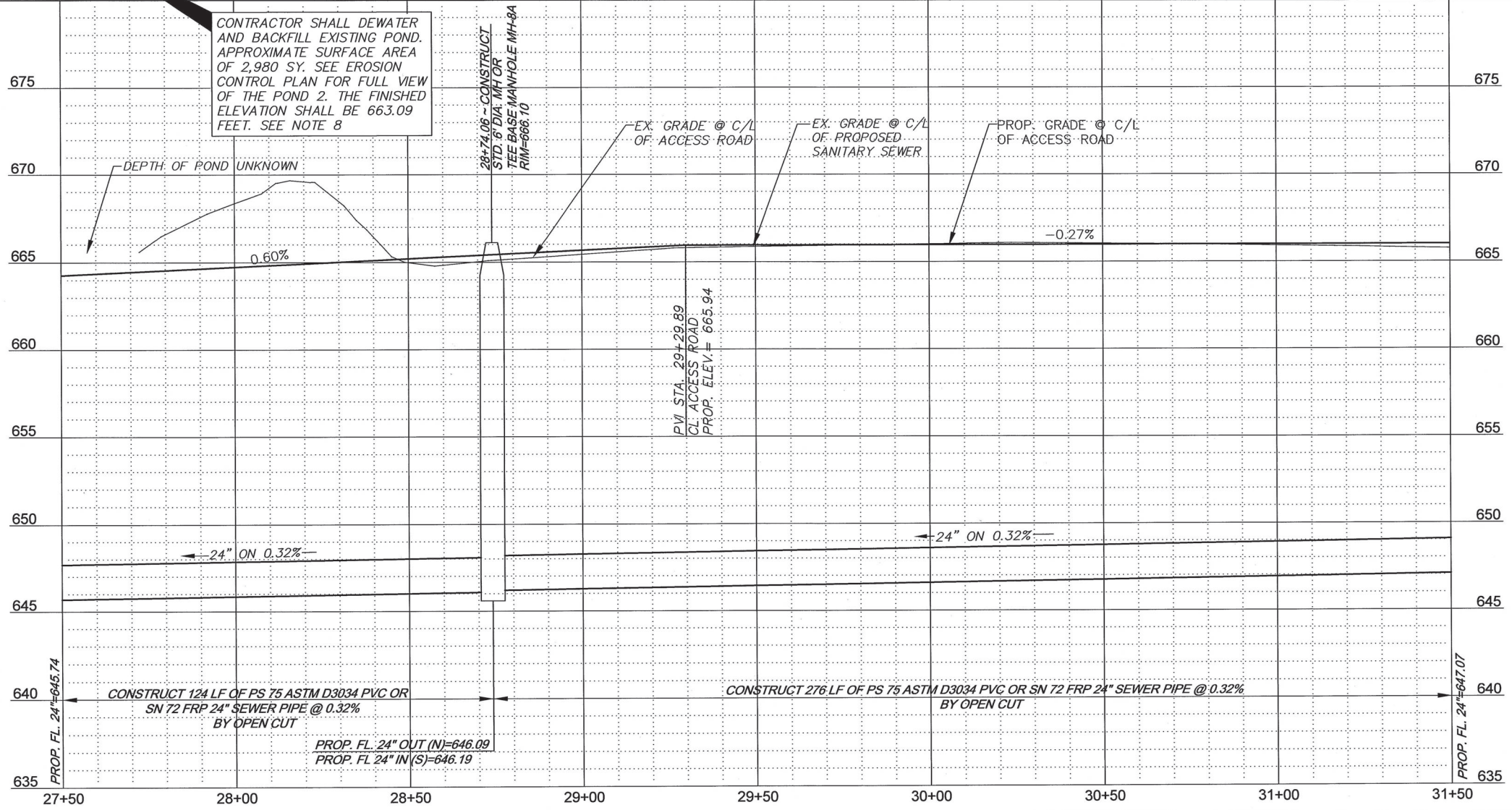


**WARNING!!!**  
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA. CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION AT OKIE AT 1-800-522-6543



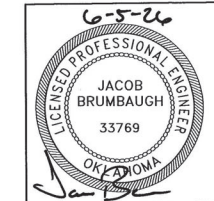
STA. 28+74.06 ~ 8" SS CONSTRUCT STD. 6' DIA. MH OR TEE BASE MANHOLE MH-8A  
N=412042.58  
E=2629155.93

CONTRACTOR SHALL DEWATER AND BACKFILL EXISTING POND. APPROXIMATE SURFACE AREA OF 2,980 SY. SEE EROSION CONTROL PLAN FOR FULL VIEW OF THE POND 2. THE FINISHED ELEVATION SHALL BE 663.09 FEET. SEE NOTE 8



**NOTE:**

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3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
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7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.
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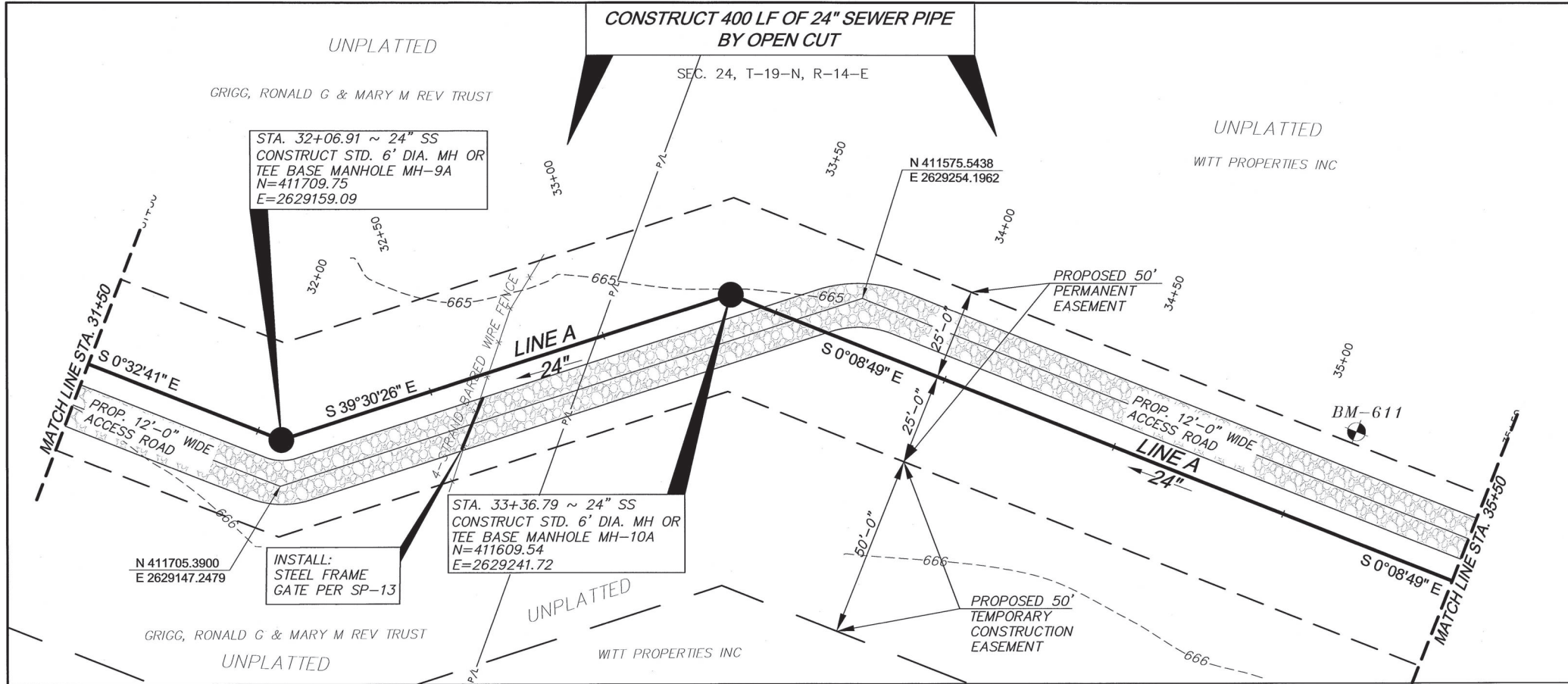


LINE A STA. 27+50 TO STA. 31+50  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 20 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4'				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 546,547				

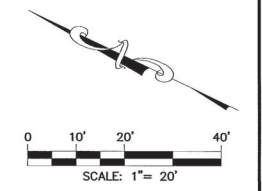
T:\TULSA\WORK\2022\30-2823-02 SPUNKY CREEK MB-SOUTH PHASE 3\CADD\DRAWINGS\1(1-29) LINE A.DWG  
 3:27:28 PM



**BENCHMARKS:**

BM-611  
IRON PIN SET 171' SOUTH AND 27' EAST OF MH-10A

N=411435.85  
E=2629270.54  
EL=665.12



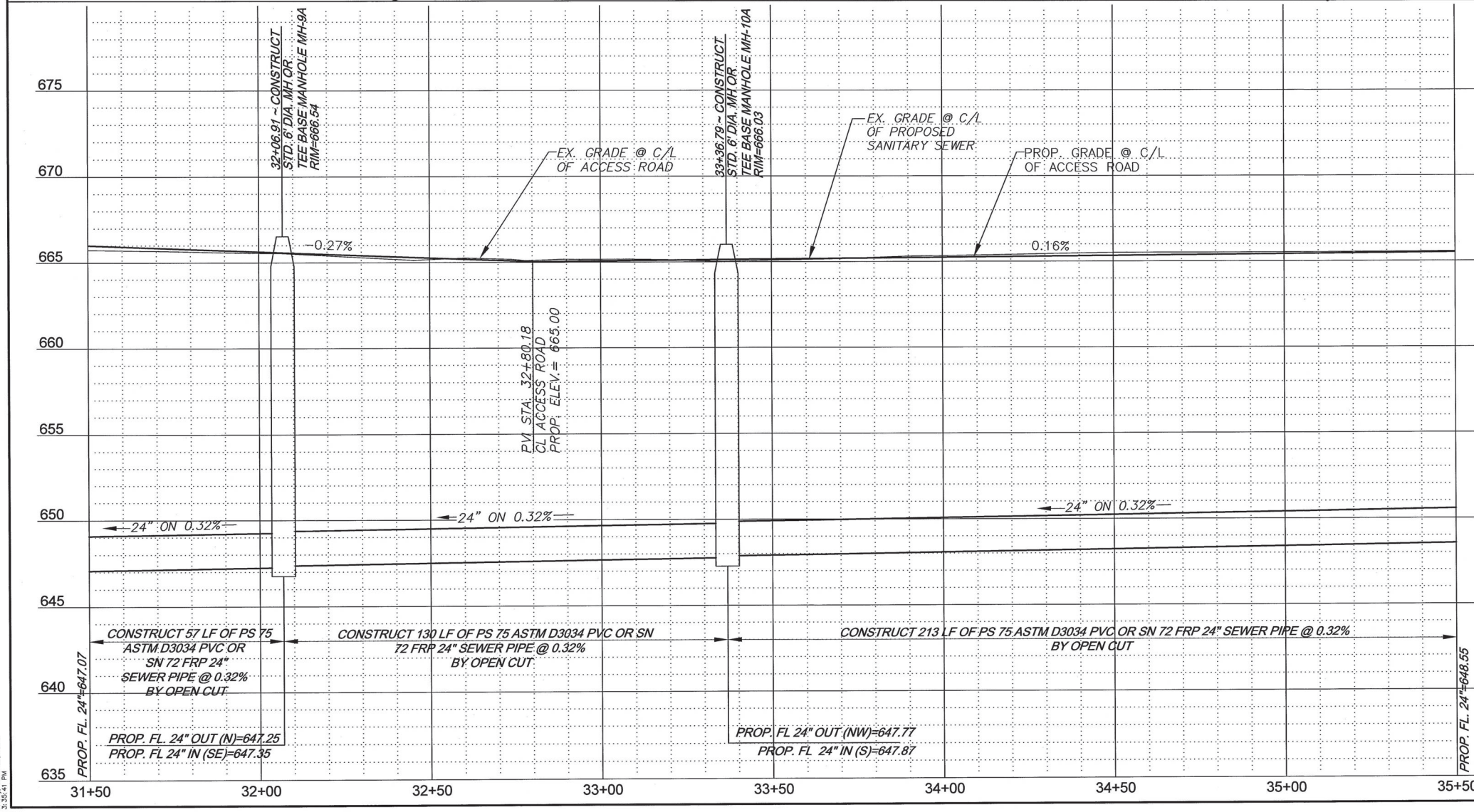
**LEGEND**

▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY

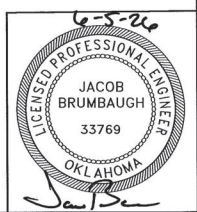
▨ PROPOSED ACCESS ROAD



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



- NOTE:**
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
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  3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
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  5. NO TREES SHALL BE REPLANTED WITHIN PERMANENT SEWER EASEMENT.
  6. THE CONTRACTOR SHALL REMOVE TREES WITHIN THE TEMPORARY AND PERMANENT EASEMENTS AS NECESSARY TO FACILITATE CONSTRUCTION AND SHALL ALSO REMOVE ANY TREES THAT ARE DETERMINED TO BE UNLIKELY TO SURVIVE DUE TO CONSTRUCTION IMPACTS. TREE REPLACEMENT OR REPLANTING WITHIN THE EASEMENT AREAS WILL NOT BE REQUIRED. NO SEPARATE PAYMENT WILL BE MADE.
  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.



LINE A STA. 31+50 TO STA. 35+50

TMUA PROJECT NUMBER ES 2022-09

SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3

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

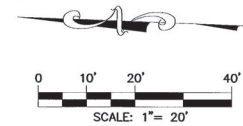
REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 21 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	RJK	6/26	
			VERTICAL:	FIELD MGR.	RJK	6/26	
			1" = 4'	FILE:			
				DRAWING:			
			ATLAS PAGE NO: 547				

TULSA, OKLAHOMA 74103-2833-02 SPUNKY CREEK MAIN STEM SOUTH PHASE 3 (CADD) DRAWINGS (13-28) LINE A.DWG  
 3:52:41 PM

CONSTRUCT 450 LF OF 24" SEWER PIPE BY OPEN CUT

UNPLATTED  
SEC. 24, T-19-N, R-14-E  
WITT PROPERTIES INC

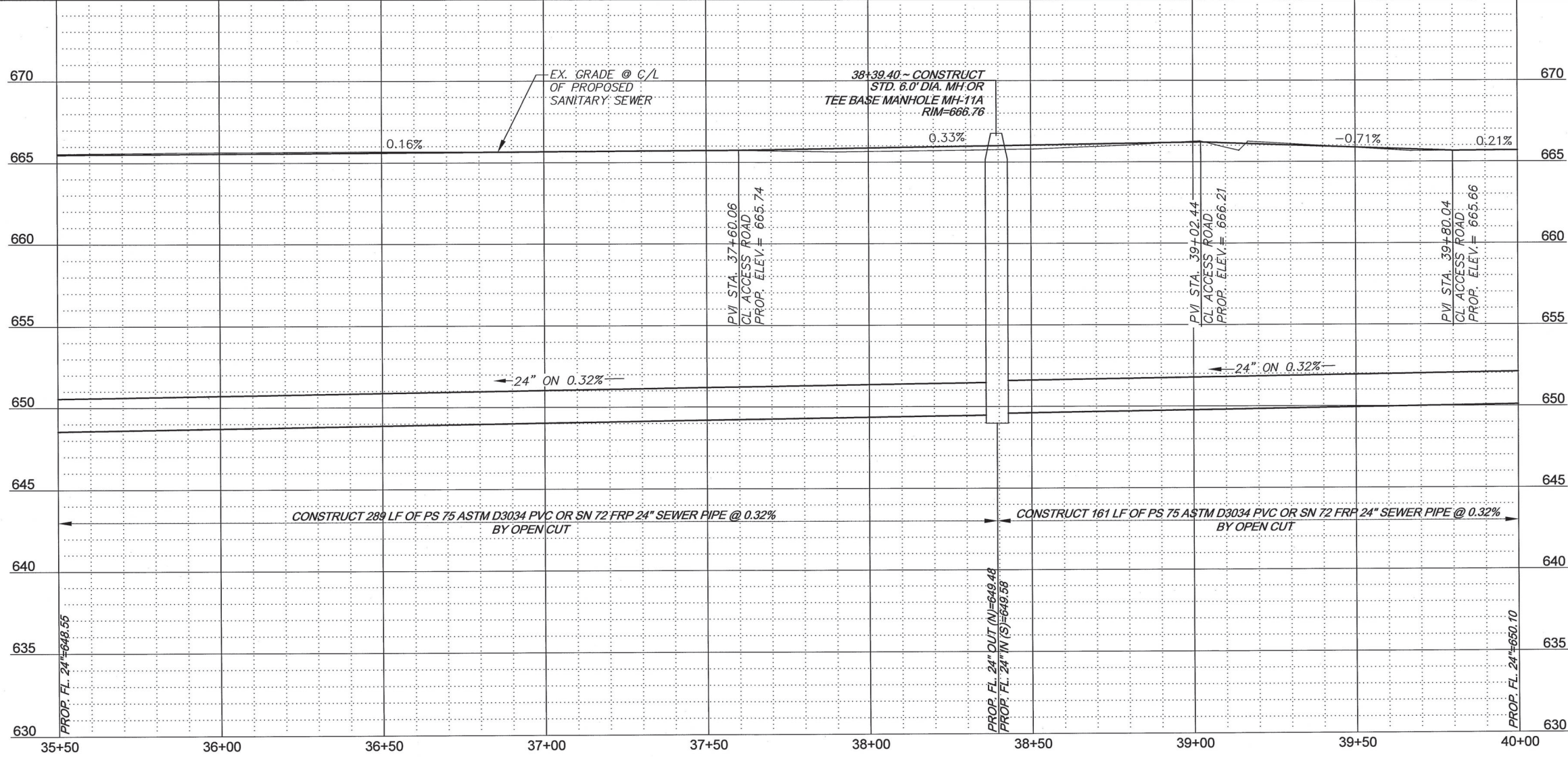
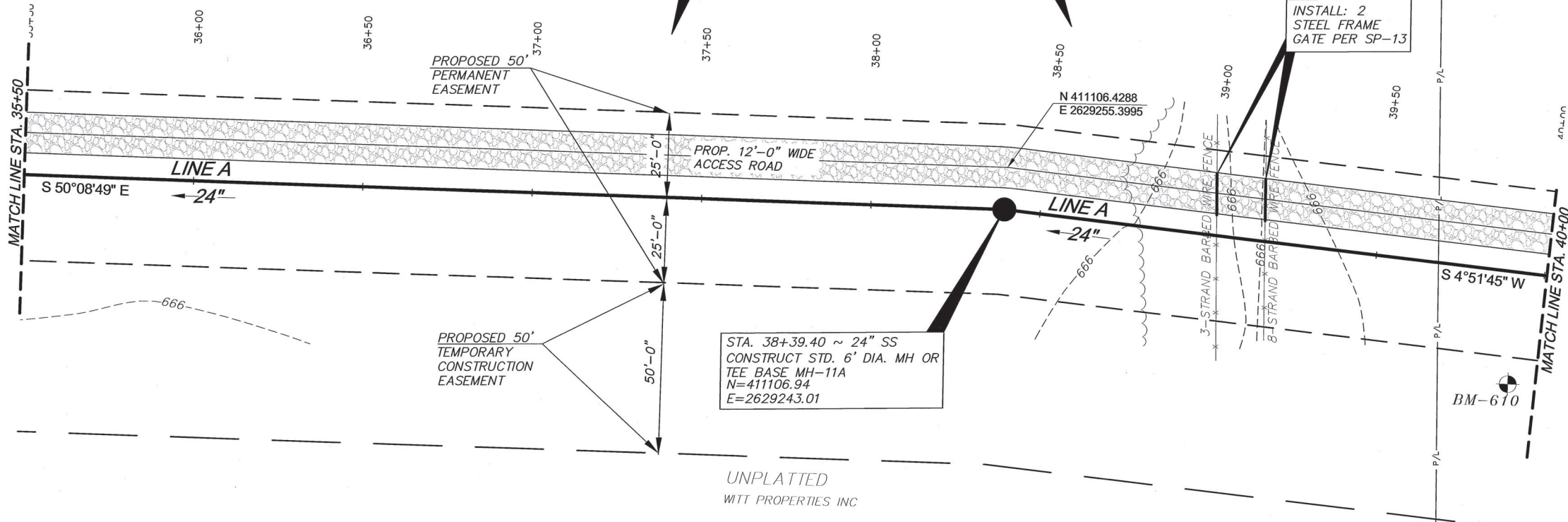
**BENCHMARKS:**  
BM-610  
IRON PIN SET 151' SOUTH AND 46' WEST OF MH-11A  
N=410956.66  
E=2629197.19  
EL=665.85



**LEGEND**  
▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY  
▨ PROPOSED ACCESS ROAD



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



- NOTE:**
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
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  7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.



LINE A STA. 35+50 TO STA. 40+00  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 22 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	WZ	6/26	
			VERTICAL:	FIELD MGR.	RJM	6/26	
			1" = 4'	FILE:	DRAWING:		
			ATLAS PAGE NO: 547				

TULSA PROJECT: 33-2833-02 SPUNKY CREEK MAIN SOUTH PHASE 3/CADD/DRAWINGS(15-28) LINE A.DWG  
P:\TULSA\PROJECTS\33-2833-02 SPUNKY CREEK MAIN SOUTH PHASE 3\CADD\DRAWINGS(15-28) LINE A.DWG  
3:08:16 PM 6/26/2026

CONSTRUCT 307 LF OF 24" & 93 LF 18" OF SEWER PIPE BY OPEN CUT

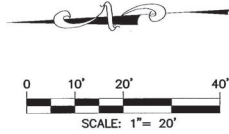
SEC. 24, T-19-N, R-14-E

UNPLATTED

JOHNSON, SEAMUS WILLIAM  
ABNER & TIMOTHY CHARLES

BENCHMARKS:

BM-610  
IRON PIN SET 151' SOUTH AND 46' WEST OF MH-11A  
(SEE PREVIOUS SHEET)  
N=410956.66  
E=2629197.19  
EL=665.85

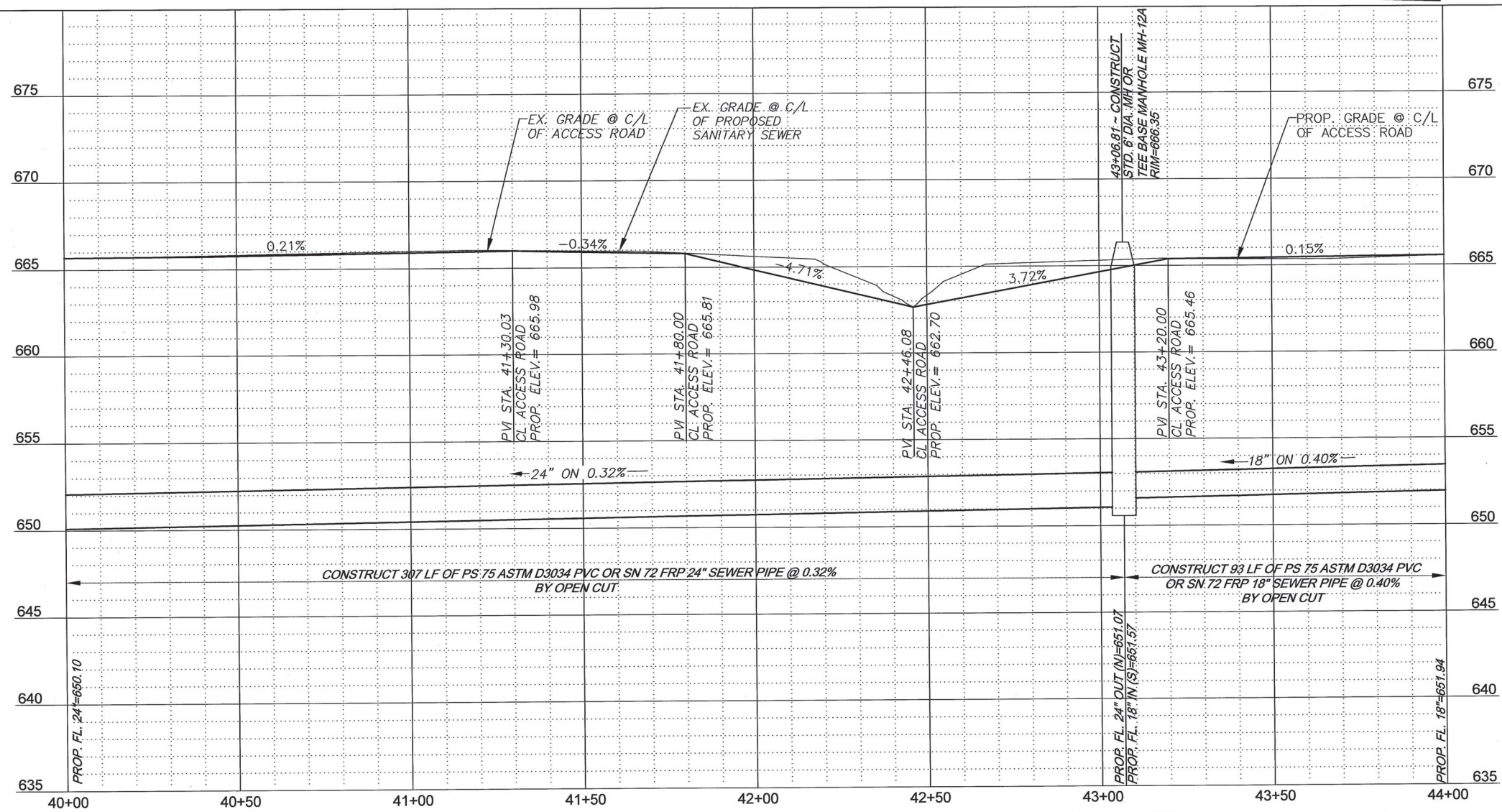
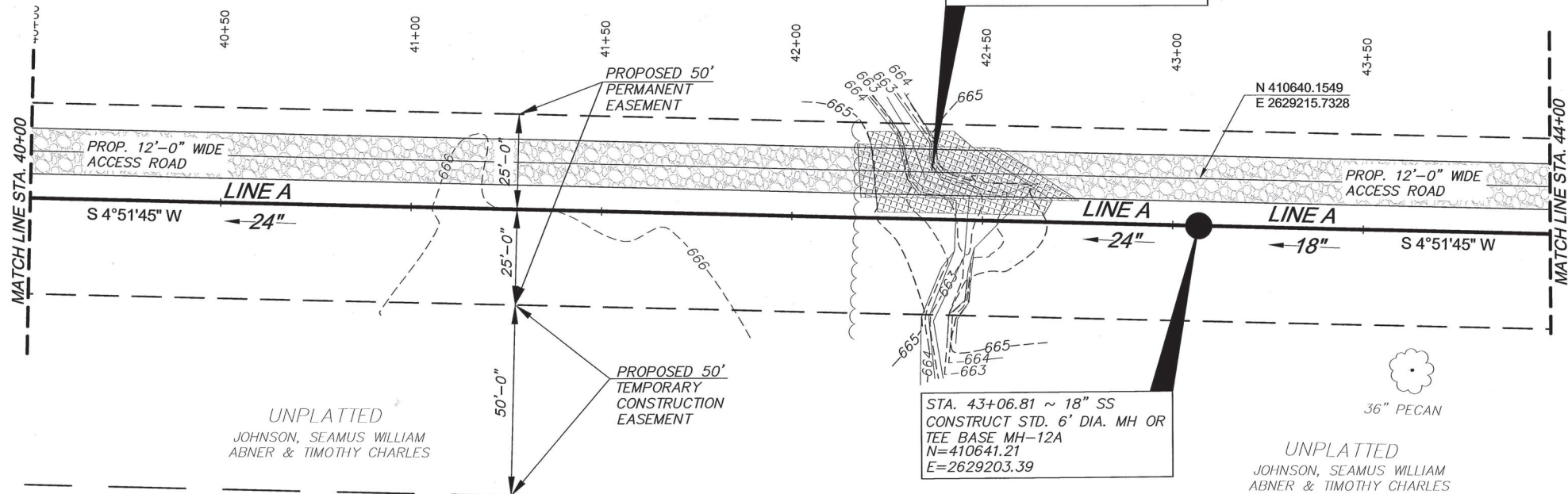


LEGEND

PROPOSED ACCESS ROAD

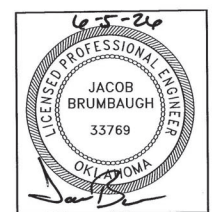


**WARNING!!!**  
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION AT OKIE AT 1-800-522-6543



NOTE:

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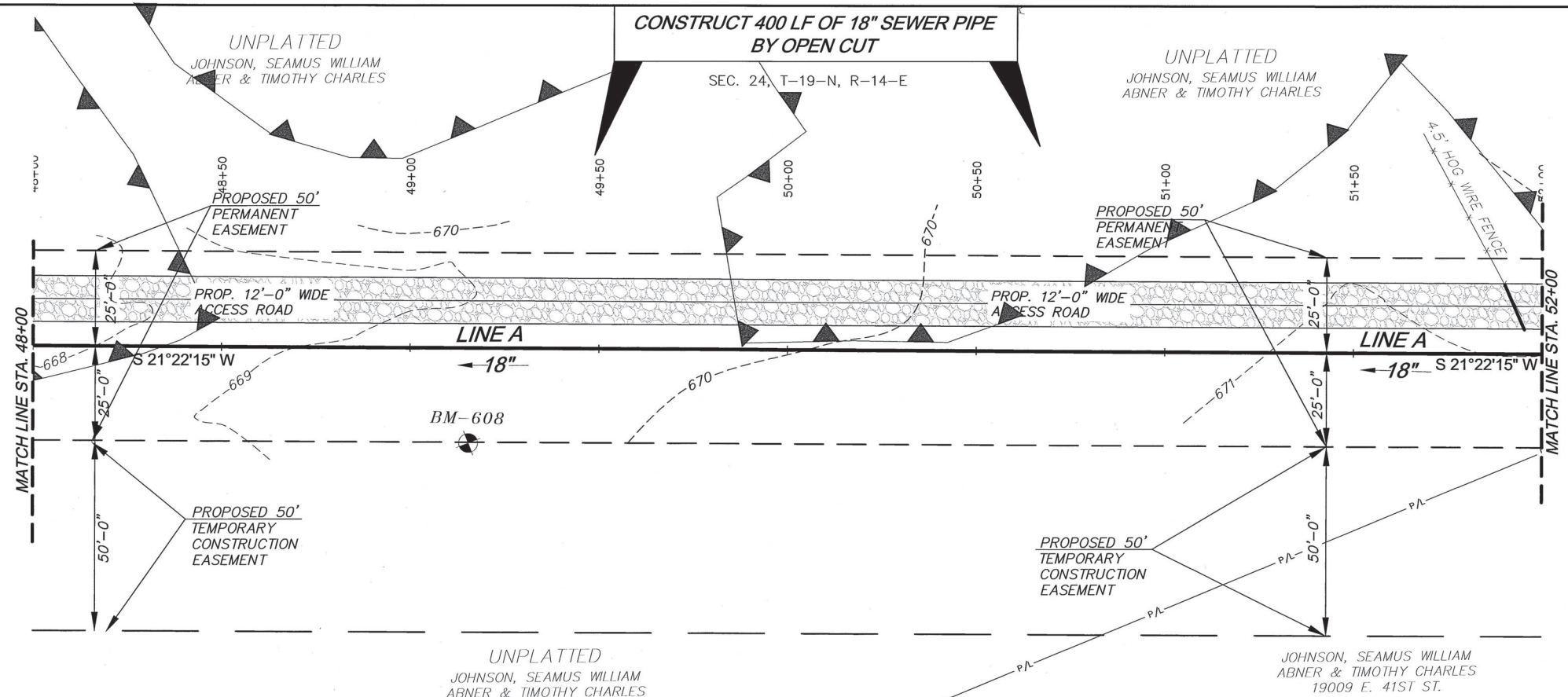
LINE A STA. 40+00 TO STA. 44+00  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT

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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 SEAMUS J. JOHNSON DESIGN MANAGER DATE: June 2026
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL: 1" = 20'	PROJ. MGR.			
			VERTICAL: 1" = 4'	LEAD ENGR.	JWB	06/26	
			FILE:	FIELD MGR.	JWB	6/26	
				DRAWING:			
			ATLAS PAGE NO: 547				SHEET 23 OF 38 SHEETS

TULSA PROJECTS 30-2823-02 SPUNKY CREEK MAIN STEM SOUTH PHASE 3/CADD DRAWINGS (13-28) LINE A.DWG  
3/15/24  
3/15/24





**BENCHMARKS:**

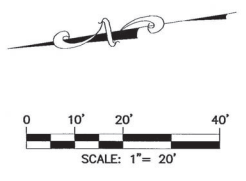
BM-608  
IRON PIN SET 123' SOUTH AND 75' WEST OF MH-13A

N=410053.11  
E=2629088.84  
EL=669.37

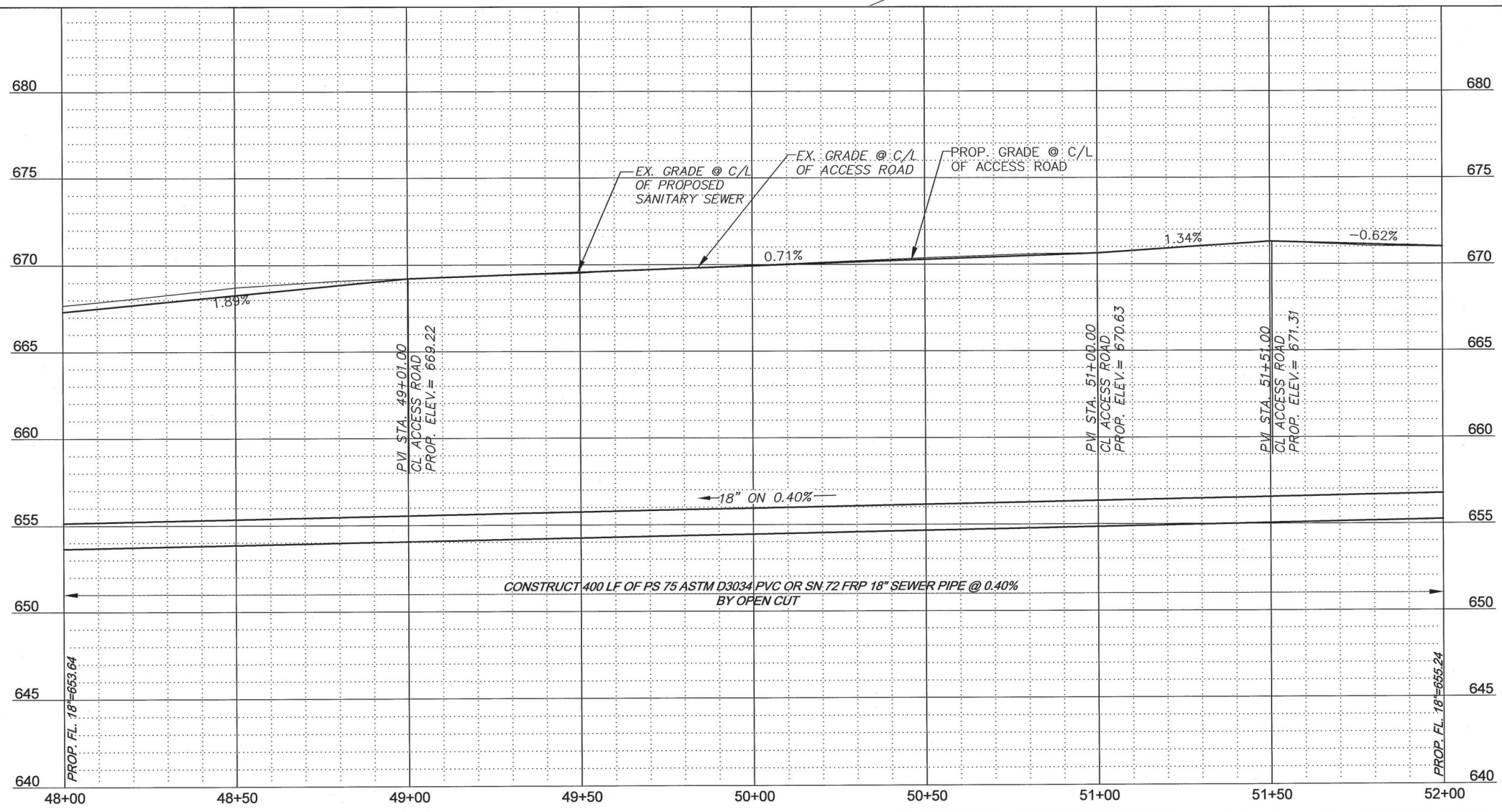
**LEGEND**

▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY

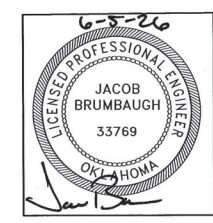
▨ PROPOSED ACCESS ROAD



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



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LINE A STA. 48+00 TO STA. 52+00

TMUA PROJECT NUMBER ES 2022-09

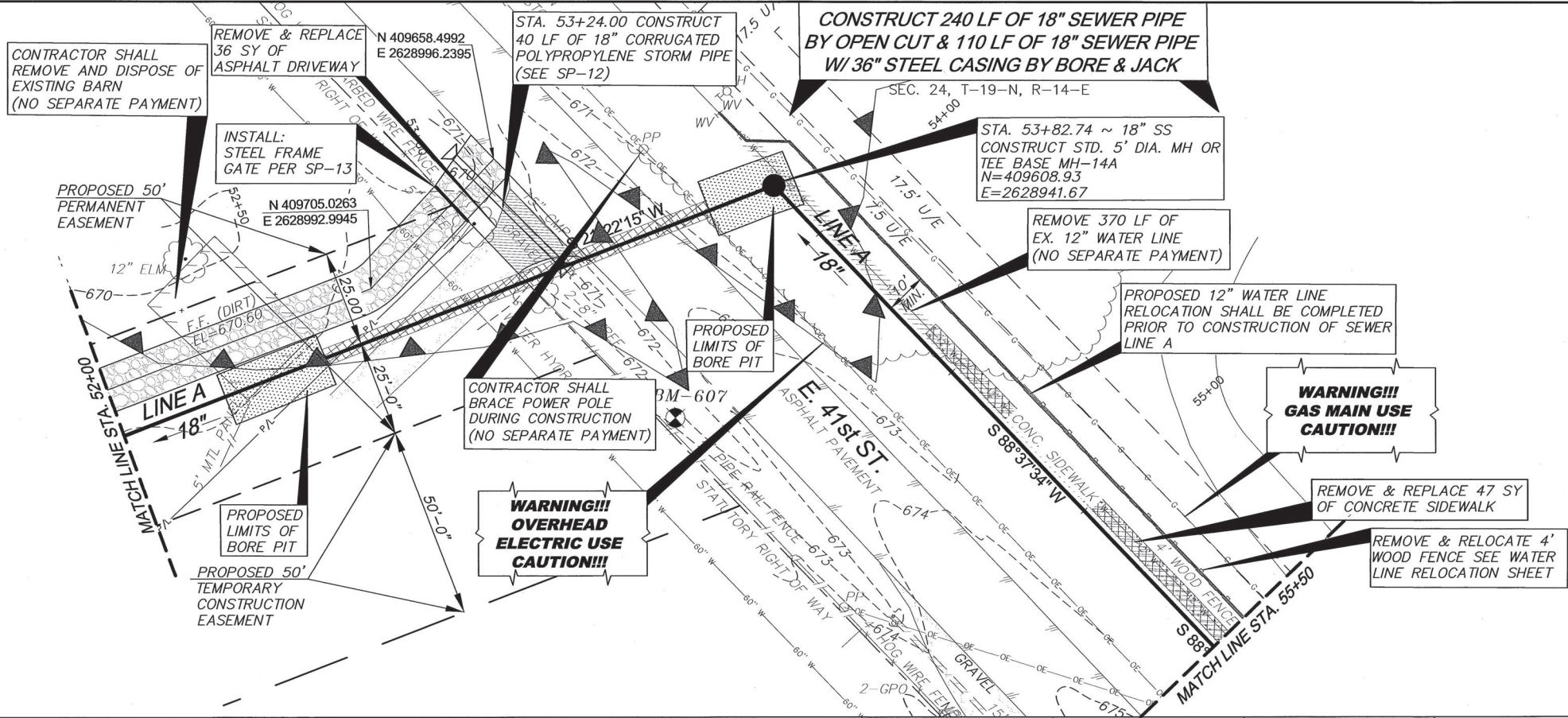
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3

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

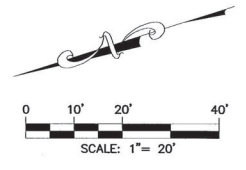
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 25 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL: 1" = 20'	PROJ. MGR.			
			VERTICAL 1" = 4'	LEAD ENGR.	6/26	6/26	
			FILE:	FIELD MGR.			
			DRAWING:				
			ATLAS PAGE NO: 547				

T:\TULSA\PROJECTS\2022-2023-02 SPUNKY CREEK MB-SOUTH PHASE 3\CADD\DRAWINGS\13-28) LINE A.DWG  
 3:41:43 PM  
 6/26/2026

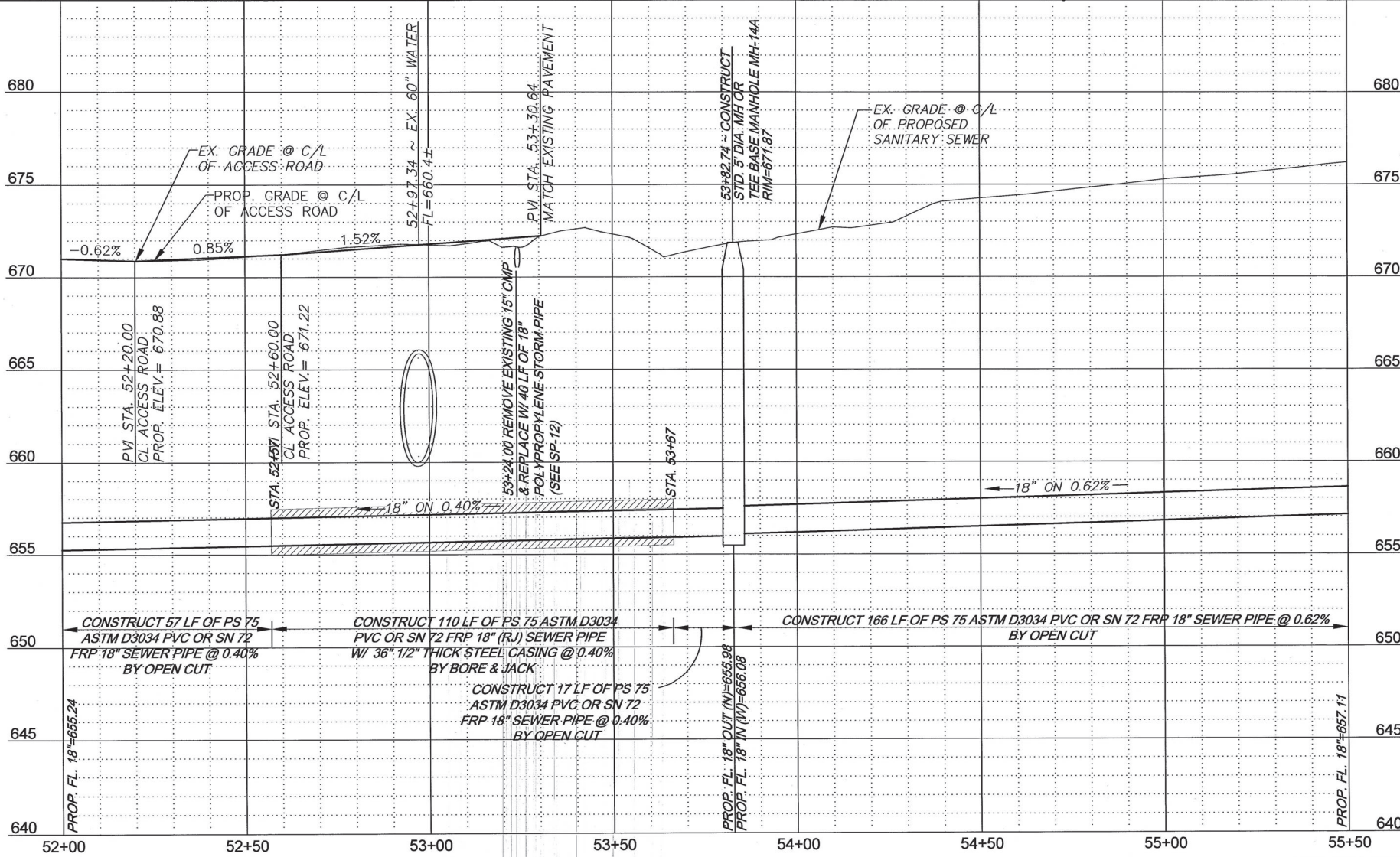


**BENCHMARKS:**  
 BM-607  
 IRON PIN SET 61' WEST AND 28' NORTH OF MH-14A  
 N=409668.90  
 E=2628914.36  
 EL=672.74

- LEGEND**
- ▲▲ LIMITS OF FLOOD ZONE BOUNDARY
  - ▨ PROPOSED ACCESS ROAD
  - ▩ REMOVE & REPLACE CONCRETE SIDEWALK
  - ▧ REMOVAL OF EXISTING 12" WATER
  - ▨ ASPHALT PAVEMENT REMOVAL & REPLACEMENT



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



- NOTE:**
- THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
  - CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
  - THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
  - OBSTRUCTIONS AFFECTED BY THE CONSTRUCTION OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO FENCES, RETAINING WALLS, PATIOS, OUT BUILDINGS, LANDSCAPING, ETC. SHALL BE RECONSTRUCTED OR REPLACED AND SHALL BE INCIDENTAL COST TO PAY ITEM NO. 2, RIGHT-OF-WAY CLEARING AND RESTORATION, AND PER CITY OF TULSA STANDARD SPECIFICATION, NO. 301.
  - NO TREES SHALL BE REPLANTED WITHIN PERMANENT SEWER EASEMENT.
  - THE CONTRACTOR SHALL REMOVE TREES WITHIN THE TEMPORARY AND PERMANENT EASEMENTS AS NECESSARY TO FACILITATE CONSTRUCTION AND SHALL ALSO REMOVE ANY TREES THAT ARE DETERMINED TO BE UNLIKELY TO SURVIVE DUE TO CONSTRUCTION IMPACTS. TREE REPLACEMENT OR REPLANTING WITHIN THE EASEMENT AREAS WILL NOT BE REQUIRED. NO SEPARATE PAYMENT WILL BE MADE.
  - SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.
  - CITY OF TULSA UTILITY LOCATES SUPERVISOR, GORDON BEUTLER II, SHALL BE NOTIFIED A MINIMUM OF 72-HOURS IN ADVANCE OF CONSTRUCTION CROSSING THE 60-INCH WATER LINE. THE CONTRACTOR SHALL CALL 918-519-8826 AND EMAIL GBEUTLER@CITYOFTULSA.ORG TO NOTIFY. CONSTRUCTION CROSSING CAN NOT PROCEED UNLESS CITY OF TULSA PERSONNEL IS ON SITE. CONTRACTOR IS STILL REQUIRED TO SUBMIT A CALL OKIE SERVICE TICKET IN ADDITION TO CONTACTING CITY OF TULSA PERSONNEL. CROSSING OF WATER LINE SHALL OCCUR BETWEEN THE MONTHS OF OCTOBER THROUGH MAY.



LINE A STA. 52+00 TO STA. 55+50  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 26 OF 38 SHEETS
			PROFILE SCALE: <td>SURVEY</td> <td>NP</td> <td>06/2026</td>	SURVEY	NP	06/2026	
			HORIZONTAL: <td>PROJ. MGR.</td> <td></td> <td></td>	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL <td>FIELD MGR.</td> <td></td> <td></td> <td></td>	FIELD MGR.			
			1" = 4'				
			FILE: <td>DRAWING:</td> <td></td> <td></td> <td></td>	DRAWING:			
			ATLAS PAGE NO: 547				

TULSA COUNTY, OKLAHOMA, 2025-02-28, 2:23:02, SPUNKY CREEK, MAIN STEM SOUTH PHASE 3, CAD/DRAWINGS(15-28) LINE A.DWG, 3:42:00 PM, 06/2026

CYPRESS CRE  
CYPRESS HOME OWNERS ASSOCIATION  
SEC. 24, T-19-N, R-14-E  
CONSTRUCT 200 LF OF 18" SEWER PIPE BY OPEN CUT

PROPOSED 12" WATER LINE RELOCATION SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF SEWER LINE A

REMOVE & REPLACE 49 SY OF CONCRETE SIDEWALK

S. 190th E. AVE.  
ASPHALT PAVEMENT

MATCH LINE STA. 55+50

MATCH LINE STA. 57+50

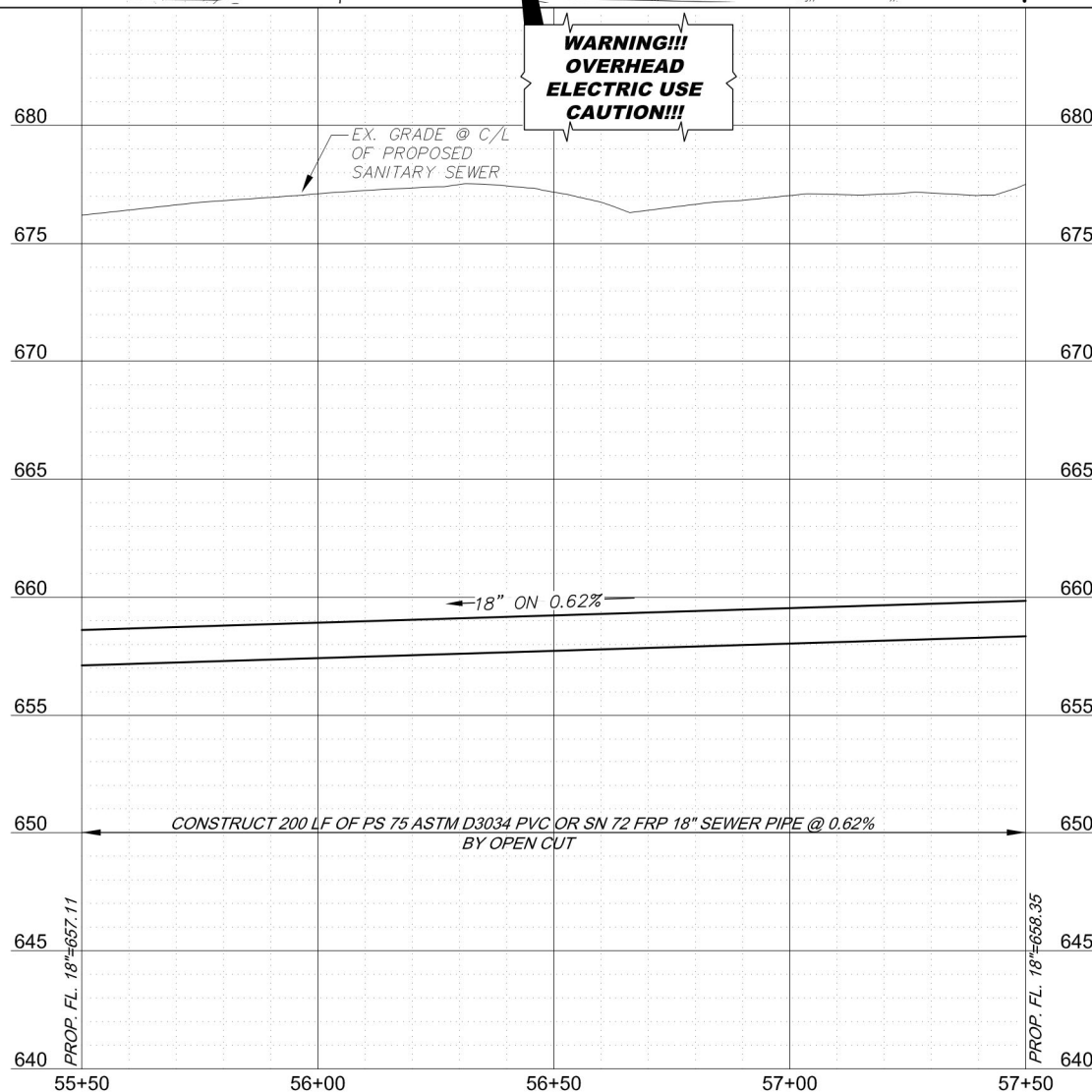
CONTRACTOR SHALL SUPPORT POWER SUPPLY BOX DURING CONSTRUCTION OF SEWER LINE. CONTRACTOR SHALL CONTACT CITY OF TULSA UTILITY COORDINATION AT 918-596-9245 PRIOR TO SUPPORTING POWER SUPPLY BOX (NO SEPARATE PAYMENT)

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

REMOVE & REPLACE 374 SY OF ASPHALT PAVEMENT

E. 41st ST.  
ASPHALT PAVEMENT

**WARNING!!!  
OVERHEAD  
ELECTRIC USE  
CAUTION!!!**



**BENCHMARKS:**

BM-607  
IRON PIN SET 61' WEST AND 28' NORTH OF MH-14A  
(SEE PREVIOUS SHEET)  
N=409668.90  
E=2628914.36  
EL=672.74

**LEGEND**

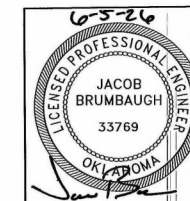
- ▲▲ LIMITS OF FLOOD ZONE BOUNDARY
- ▨ ASPHALT PAVEMENT REMOVAL & REPLACEMENT
- ▩ REMOVE & REPLACE CONCRETE SIDEWALK
- ▧ REMOVAL OF EXISTING 12" WATER



**WARNING!!!**  
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION AT OKIE AT 1-800-522-8543

**NOTE:**

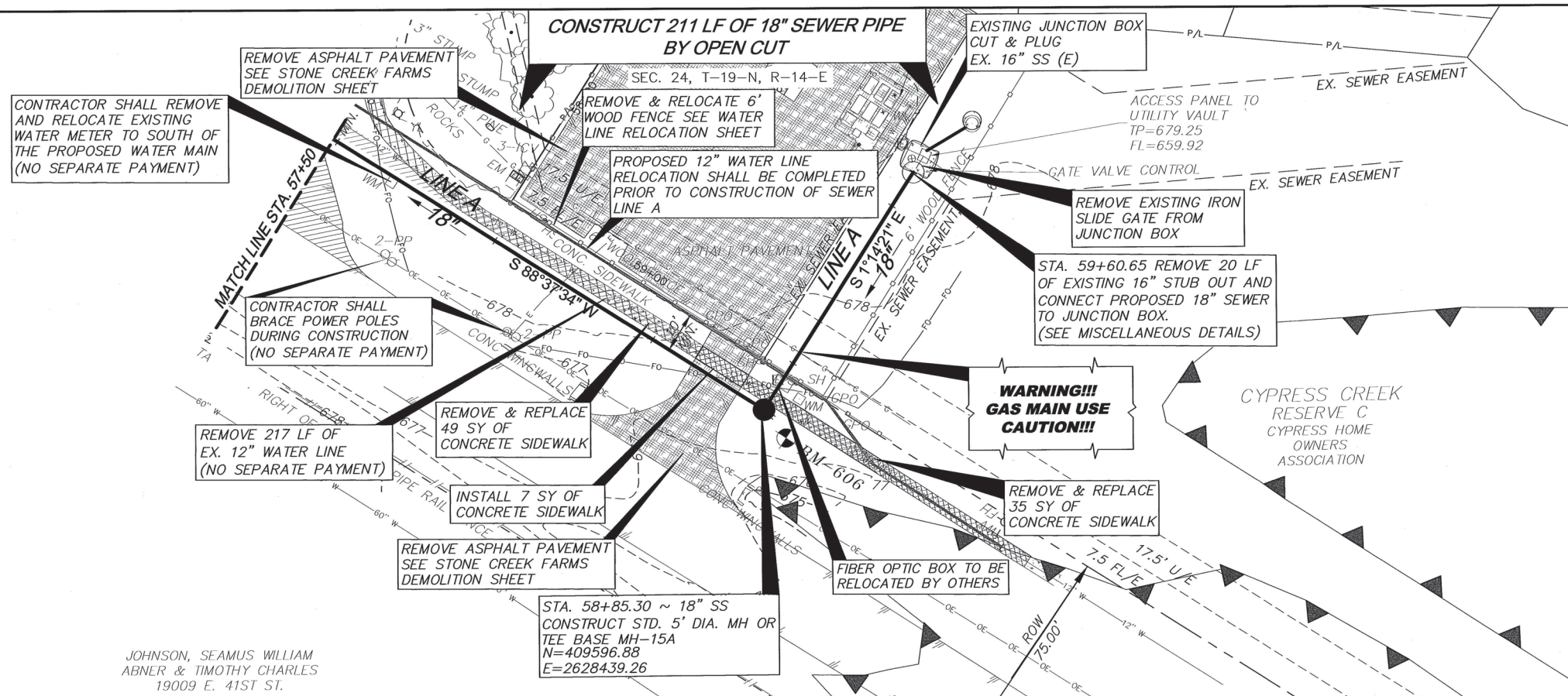
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
  2. CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
  3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS OVERNIGHT IN FLOOD PLAIN.
  4. OBSTRUCTIONS AFFECTED BY THE CONSTRUCTION OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO FENCES, RETAINING WALLS, PATIOS, OUT BUILDINGS, LANDSCAPING, ETC. SHALL BE RECONSTRUCTED OR REPLACED AND SHALL BE INCIDENTAL COST TO PAY ITEM NO. 2, RIGHT-OF-WAY CLEARING AND RESTORATION, AND PER CITY OF TULSA STANDARD SPECIFICATION, NO. 301.
  5. NO TREES SHALL BE REPLANTED WITHIN PERMANENT SEWER EASEMENT.
  6. THE CONTRACTOR SHALL REMOVE TREES WITHIN THE TEMPORARY AND PERMANENT EASEMENTS
- AS NECESSARY TO FACILITATE CONSTRUCTION AND SHALL ALSO REMOVE ANY TREES THAT ARE DETERMINED TO BE UNLIKELY TO SURVIVE DUE TO CONSTRUCTION IMPACTS. TREE REPLACEMENT OR REPLANTING WITHIN THE EASEMENT
- AREAS WILL NOT BE REQUIRED. NO SEPARATE PAYMENT WILL BE MADE.
7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.



LINE A STA. 55+50 TO STA. 57+50
TMUA PROJECT NUMBER ES 2022-09
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3
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	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL: 1" = 20'	PROJ. MGR.			
			VERTICAL: 1" = 4'	LEAD ENGR.	az 6/26		
			FILE:	FIELD MGR.	JWB 6/26		
				DRAWING:			
			ATLAS PAGE NO: 547,548				SHEET 27 OF 38 SHEETS

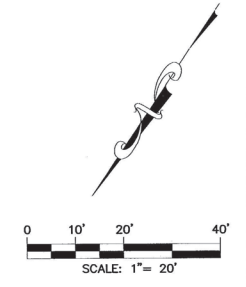
TULSA PROJECTS 30-2822-02 SPUNKY CREEK MS-SOUTH PHASE 3 (13-28) LINE ADJG  
 05/05/2024



**BENCHMARKS:**  
 BM-606  
 IRON PIN SET 10' WEST AND 2' NORTH OF MH-15A  
 N=409599.94  
 E=2628430.14  
 EL=677.56

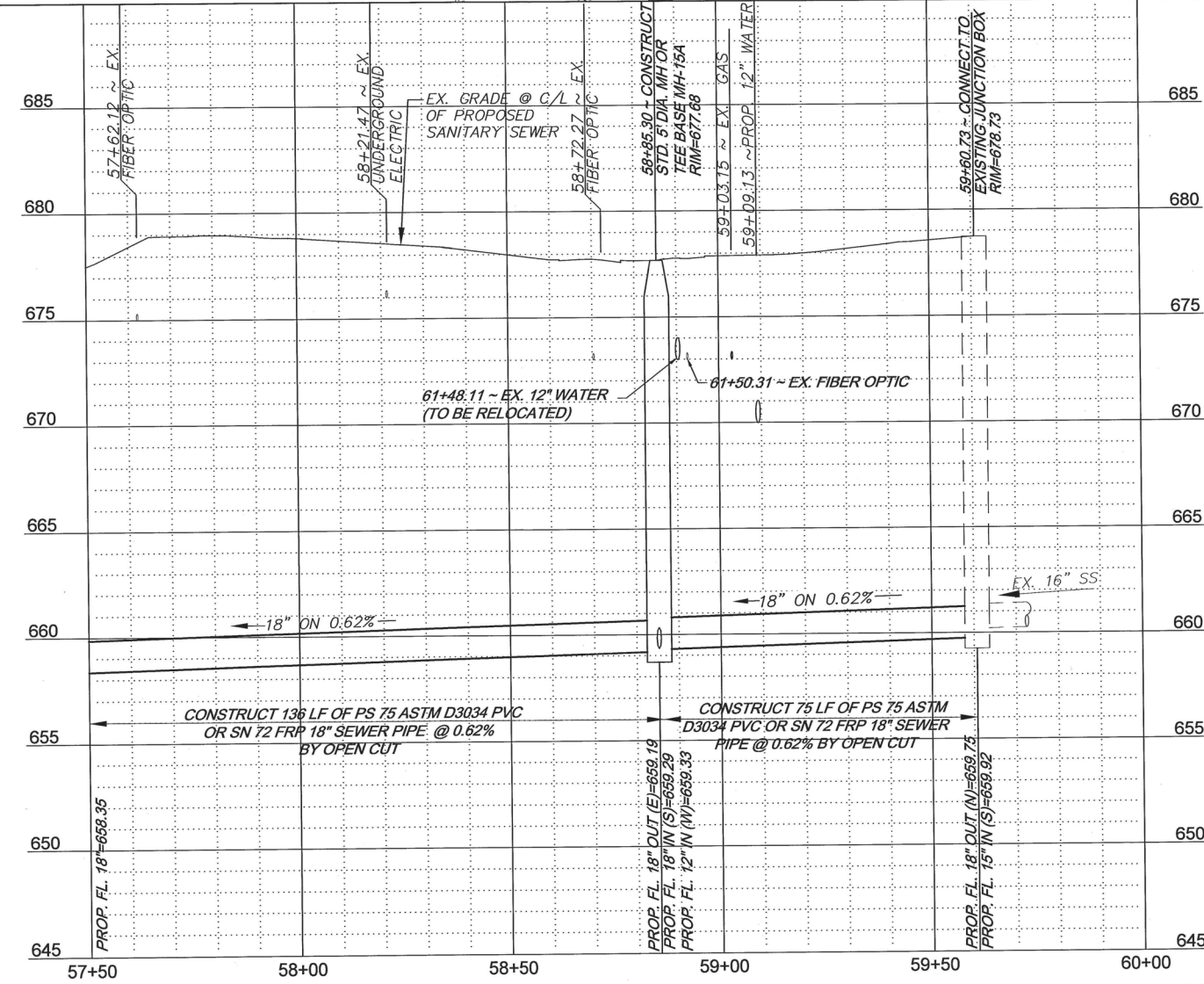
**LEGEND**

- ▲▲ LIMITS OF FLOOD ZONE BOUNDARY
- ▨ ASPHALT PAVEMENT REMOVAL & REPLACEMENT
- ▩ ASPHALT PAVEMENT REMOVAL
- ▤ CONCRETE SIDEWALK REMOVAL & REPLACEMENT
- ▧ REMOVAL OF EXISTING 12" WATER

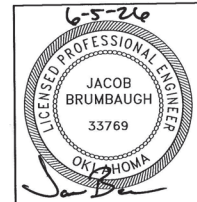


**WARNING!!!**  
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION AT OKIE AT 1-800-522-6543

JOHNSON, SEAMUS WILLIAM  
 ABNER & TIMOTHY CHARLES  
 19009 E. 41ST ST.



- NOTE:**
1. THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING, AND/OR PROVIDE THE INSTALLATION OF SHEETING OR SHORING, TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL TO EXCAVATION AND BACKFILL UNCLASSIFIED
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7. SEE SURVEY DATA SHEET FOR MANHOLE REQUIREMENTS.

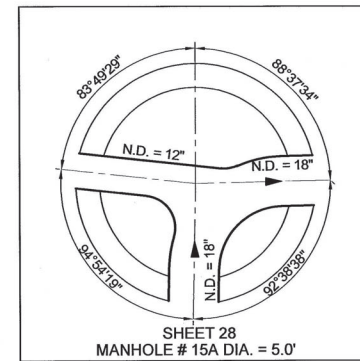
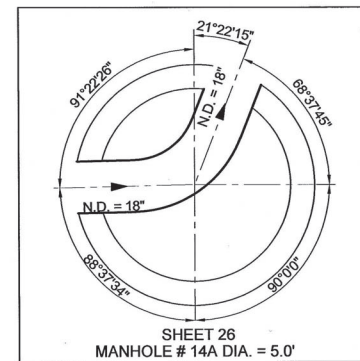
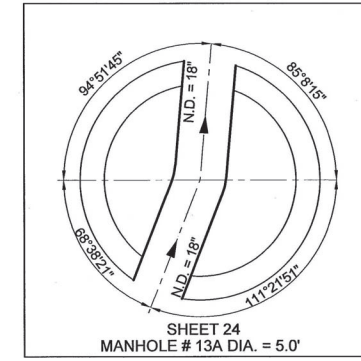
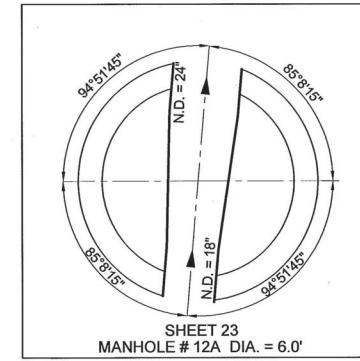
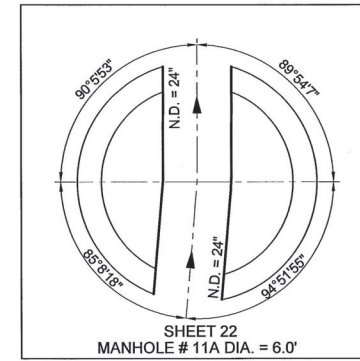
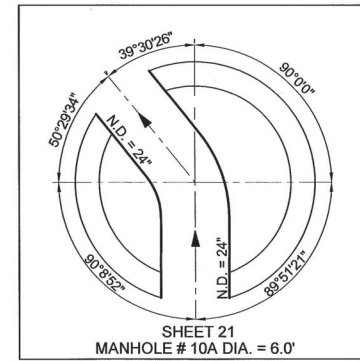
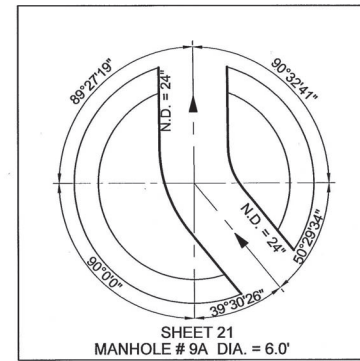
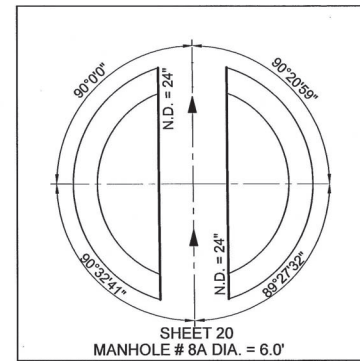
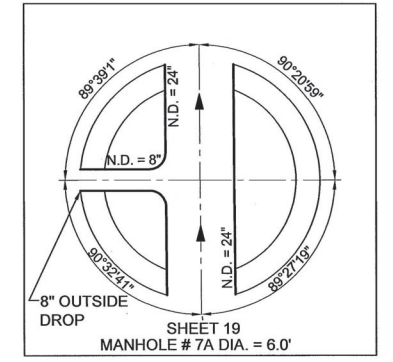
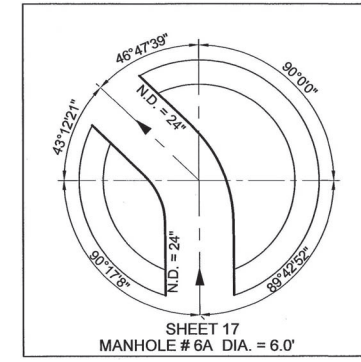
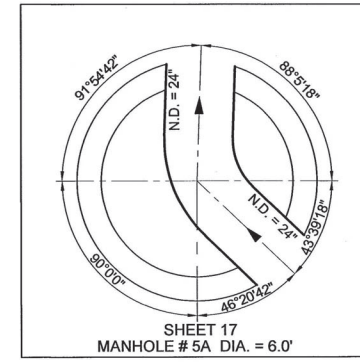
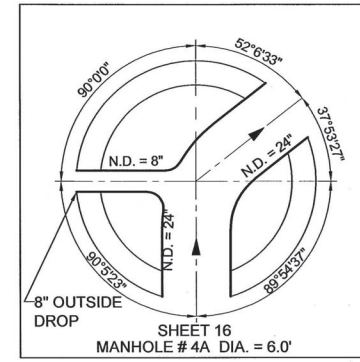
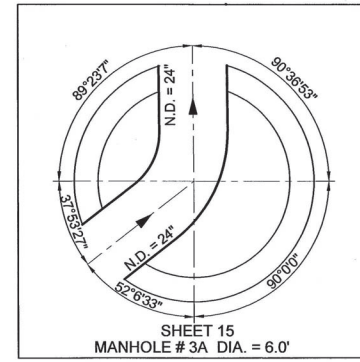
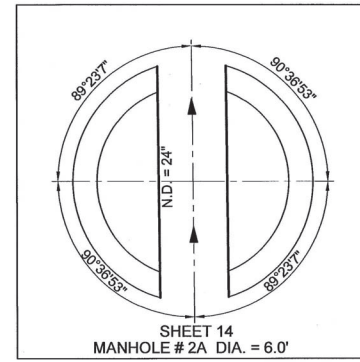
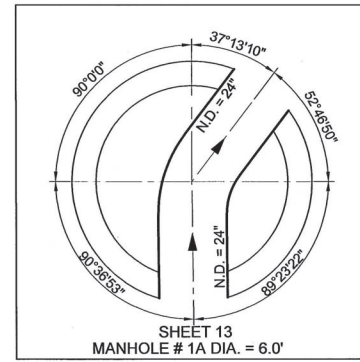


LINE A STA. 57+50 TO STA. 59+61  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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

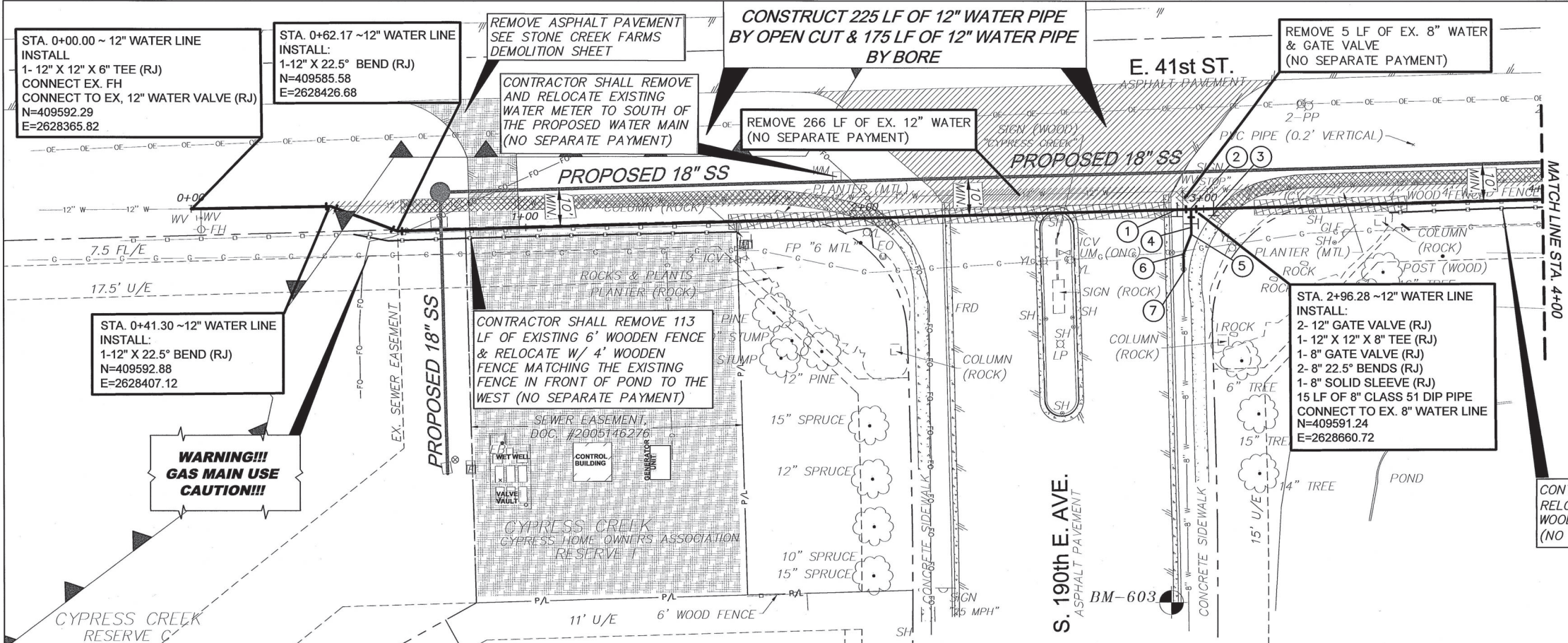
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1"=20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1"=4'				
			FILE:	DRAWING:			DATE: June 2026
			ATLAS PAGE NO: 547,548				SHEET 28 OF 38 SHEETS

PROPOSED MANHOLES LINE A



MANHOLE LAYOUTS	
TMUA PROJECT NUMBER ES 2022-09	
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3	
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 06/2026
DESIGNED	JWB 06/2026
PROFILE SCALE:	SURVEY
HORIZONTAL:	PROJ. MGR.
NA	LEAD ENGR. <i>02/6/26</i>
VERTICAL:	FIELD MGR. <i>02/6/26</i>
NA	
FILE:	DRAWING:
ATLAS PAGE NO: NA	DATE: June 2026
	SHEET 29 OF 38 SHEETS

F:\TULSA\PROJECTS\2022-2023-02 SPUNKY CREEK MS-SOUTH PHASE 3\CADD\DRAWINGS\29 MANHOLE LAYOUTING  
 3:22:38 PM



**OKIE811**  
Know what's below 811 before you dig.

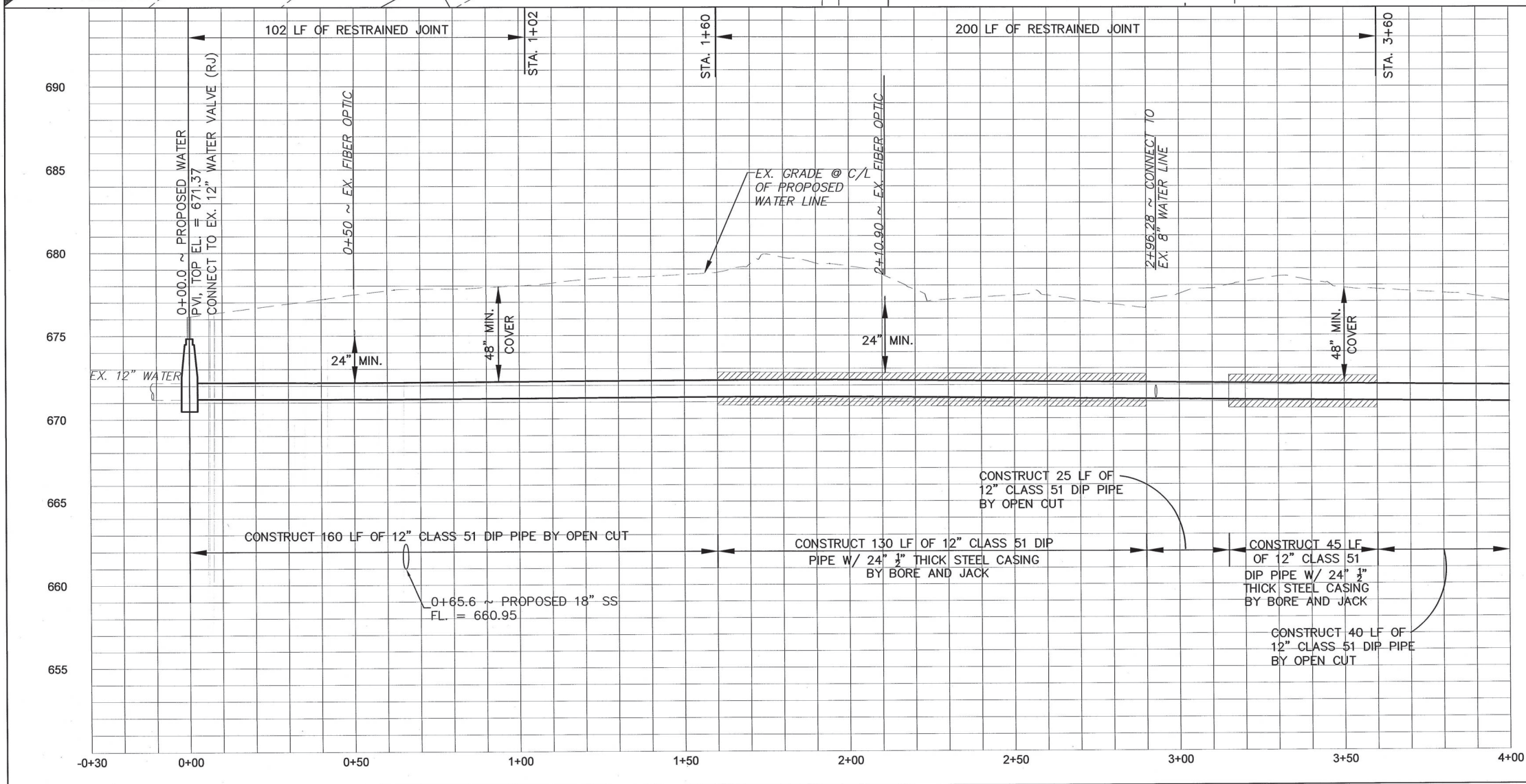
**LEGEND:**

- ▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY
- ▨ ASPHALT PAVEMENT REMOVAL & REPLACEMENT
- ▩ ASPHALT PAVEMENT REMOVAL
- ▧ REMOVE & REPLACE CONCRETE SIDEWALK
- ▨ REMOVE OF EXISTING 12" WATER

**BENCHMARKS:**

BM-603  
MAG NAIL SET AT INTERSECTION OF E. 41ST STREET AND S 190TH E AVE. 153' SOUTH EAST SIDE OF NORTH BOUND LANE  
N=409475.77  
E=2628654.34  
EL=678.08

**SCALE:** 1" = 20'



POINT NO.	NORTHING	EASTING
1	N 409591.01	E 2628656.13
2	N 409591.24	E 2628660.72
3	N 409591.40	E 2628667.40
4	N 409586.94	E 2628660.76
5	N 409583.83	E 2628660.76
6	N 409578.08	E 2628658.44
7	N 409572.89	E 2628658.49

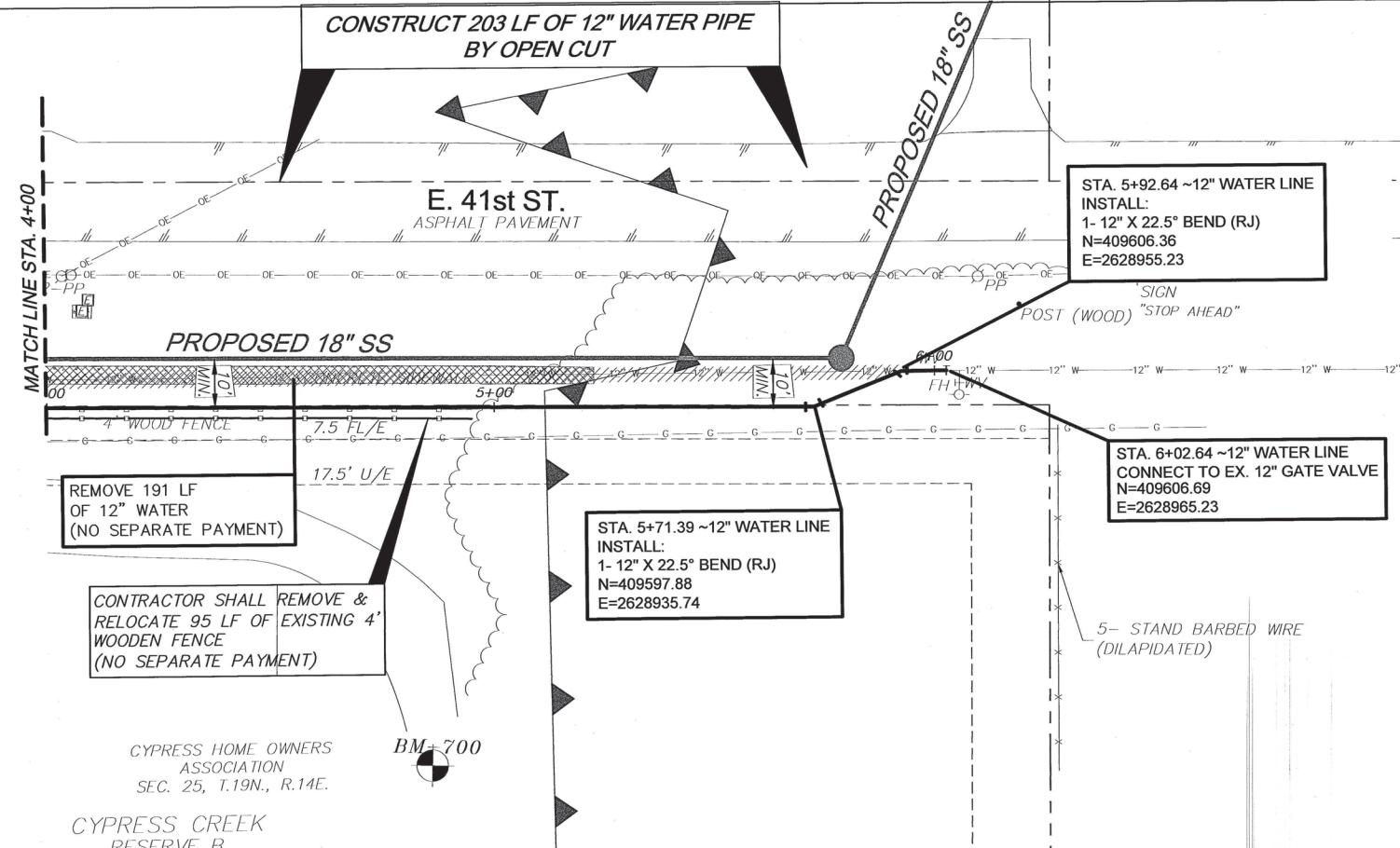
  

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 20"	DESIGNED	JWB	06/2026	
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20"	LEAD ENGR.	6/26/26		
			VERTICAL:	FIELD MGR.	Jan 6/26		
			1" = 4"	FILE:			
			DRAWING:				
			ATLAS PAGE NO: 547,548				DATE: June 2026
							SHEET 30 OF 38 SHEETS



WATER LINE STA. 0+00 TO STA. 4+00  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR  
 MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

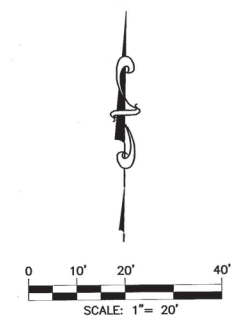
PLANS AND ESTIMATES PREPARED BY:  
 R/JN GROUP, INC. CONSULTING ENGINEERS  
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146



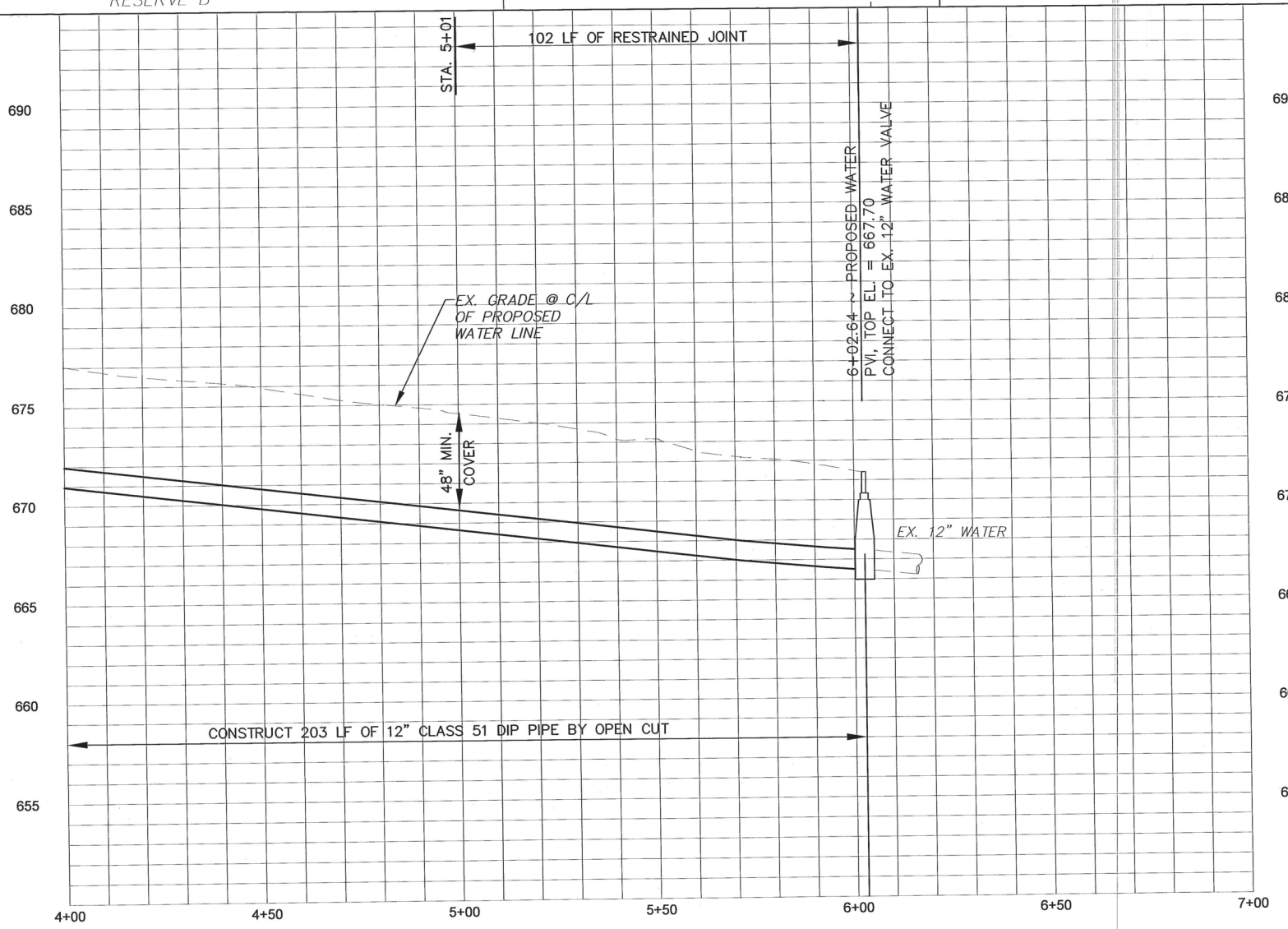
**BENCHMARKS:**

BM-700  
IRON PIN SET EAST SIDE OF POND DAM  
85' SOUTH AND 37' WEST OF END OF SIDEWALK

N=409516.10  
E=2628852.28  
EL=679.91



- LEGEND**
- ▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY
  - ▨ REMOVE & REPLACE CONCRETE SIDEWALK
  - ▨ REMOVE OF EXISTING 12" WATER



**WATER LINE STA. 4+00 TO STA. 6+02.64**

**TMUA PROJECT NUMBER ES 2022-09**

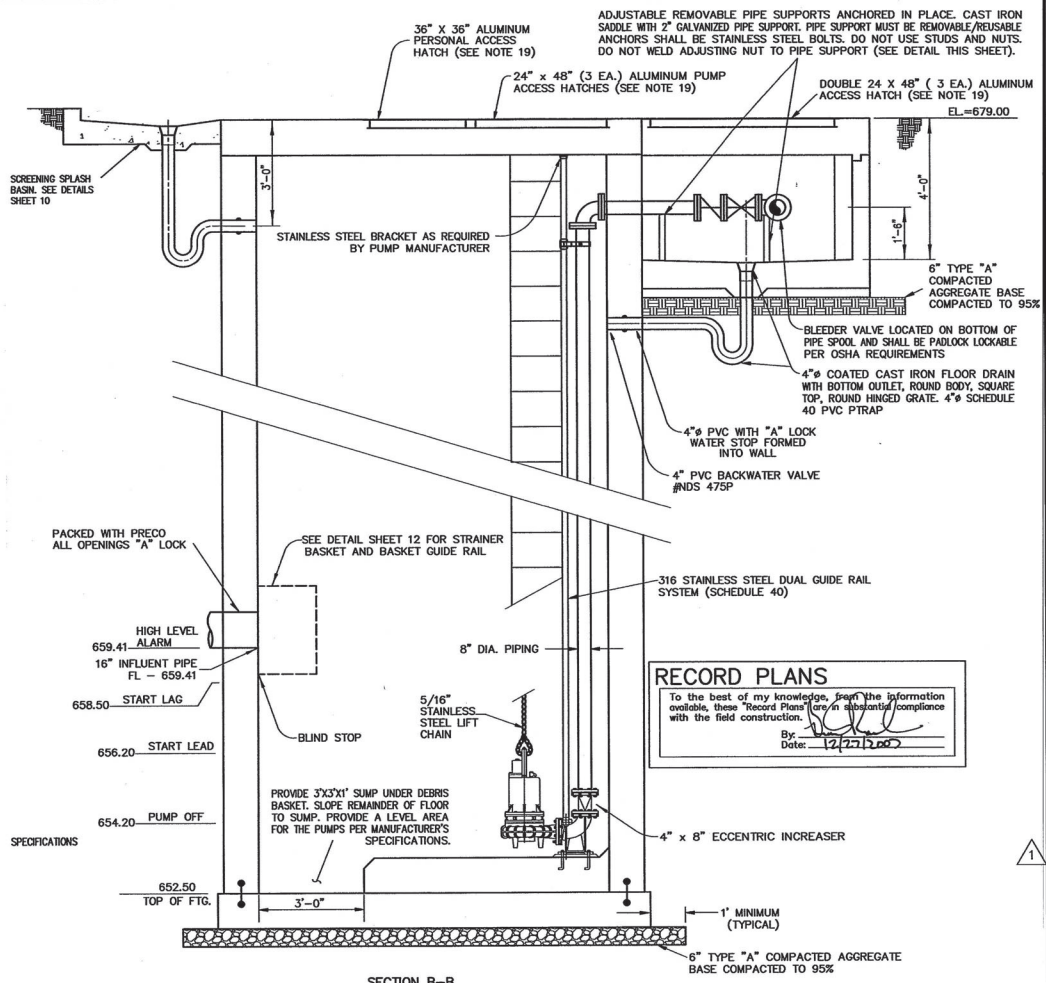
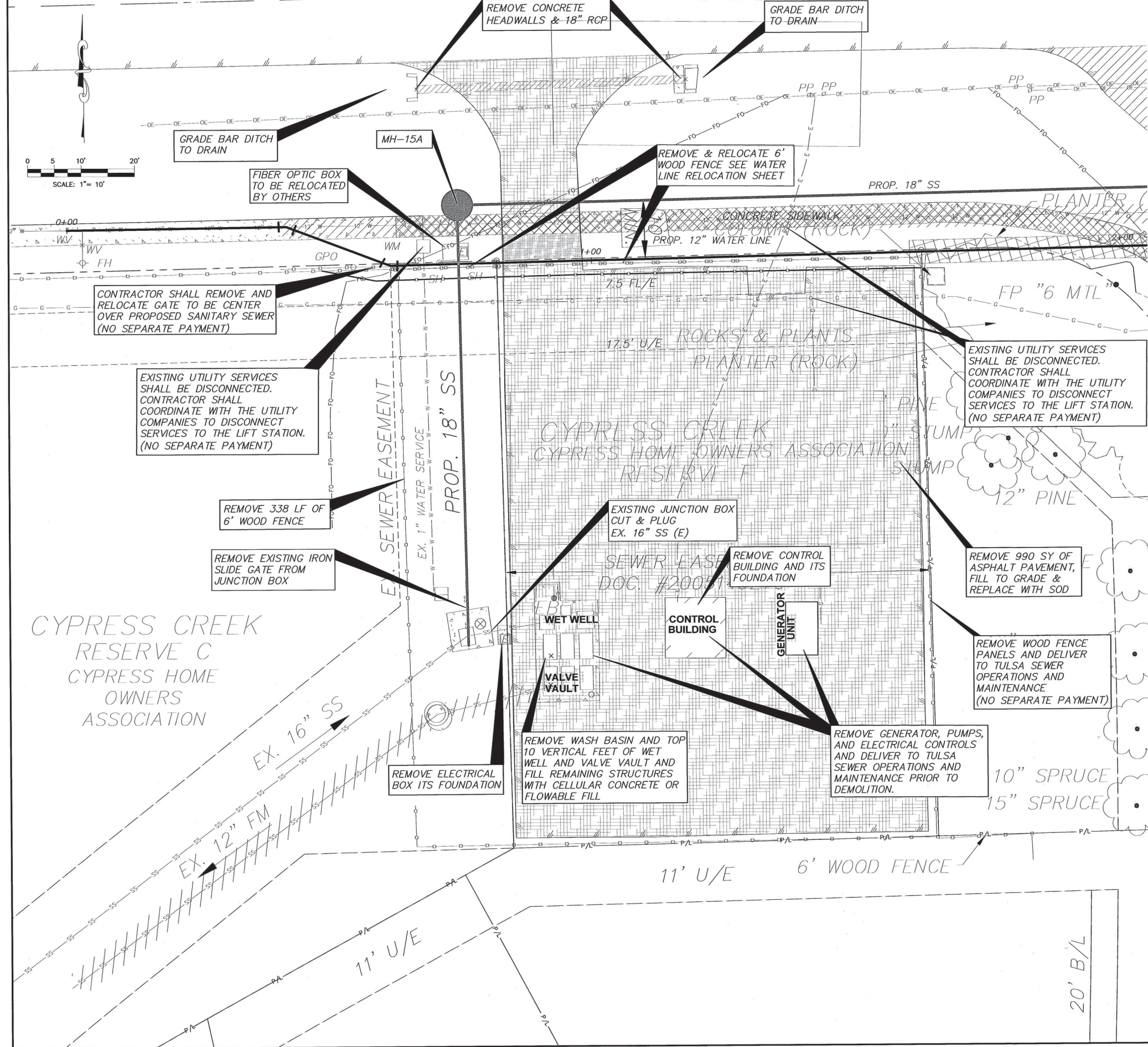
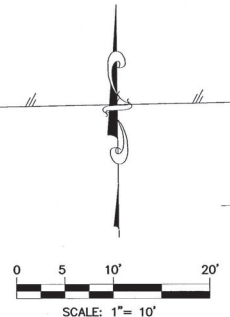
**SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3**

**CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT**

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 31 OF 38 SHEETS
			PROFILE SCALE:	SURVEY	NP	06/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	<i>WLB</i>	6/26	
			VERTICAL:	FIELD MGR.	<i>Jan</i>	6/26	
			1" = 4'	FILE:	DRAWING:		
			ATLAS PAGE NO: 547,548				

E. 41st ST.



PROFILE VIEW OF EXISTING STONE CREEK LIFT STATION  
N.T.S.

- NOTE:
1. THE DEMOLITION AND ABANDONMENT OF THE STONE CREEK LIFT STATION WILL COMMENCE ONCE THE GRAVITY SANITARY SEWER INTERCEPTOR HAS BEEN INSTALLED AND CONNECTED TO EXISTING JUNCTION BOX.

- LEGEND
- ▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY
  - ▨ ASPHALT PAVEMENT REMOVAL & REPLACEMENT
  - ▩ ASPHALT PAVEMENT REMOVAL
  - CONCRETE SIDEWALK REMOVAL & REPLACEMENT
  - ▤ INSTALL CONCRETE SIDEWALK
  - ▧ REMOVAL OF EXISTING 12" WATER



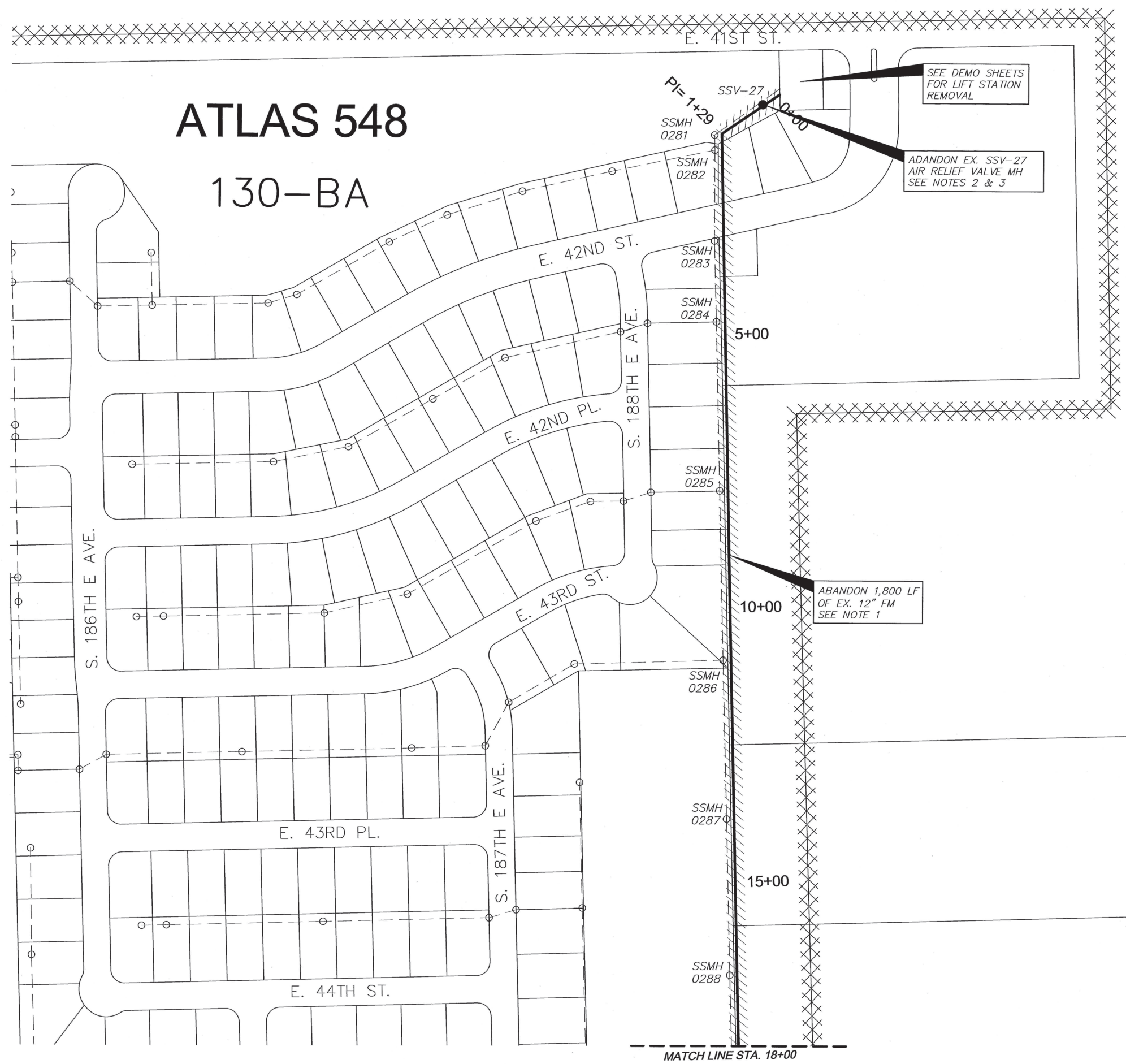
STONE CREEK FARMS LIFT STATION  
DEMOLITION PLAN  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

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	06/2026	APPROVED:
			NA	DESIGNED	JWB	06/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	06/2026	
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			VERTICAL:	LEAD ENGR.	6/26/26		
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			ATLAS PAGE NO: NA	DRAWING:			DATE: June 2026

# ATLAS 548

## 130-BA



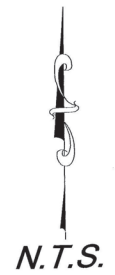
SEE DEMO SHEETS FOR LIFT STATION REMOVAL

ADANDON EX. SSV-27 AIR RELIEF VALVE MH SEE NOTES 2 & 3

ABANDON 1,800 LF OF EX. 12" FM SEE NOTE 1

### LEGEND

- EXISTING FORCE MAIN
- EXISTING GRAVITY SEWER
- AIR RELIEF VALVE
- ABANDONMENT OF EXISTING 12" PVC FORCE MAIN
- MAINTENANCE AREA BOUNDARY
- 94-N** MAINTENANCE AREA ID
- SANITARY SEWER MANHOLE



### NOTES:

1. FILL 12" FORCE MAIN WITH CELLULAR CONCRETE OR FLOWABLE FILL.
2. ARV SHALL BE REMOVED AND DELIVERED TO THE CITY OF TULSA'S SOUTH YARD. PERSONNEL CAN BE CONTACTED AT 918-596-9401. (NO SEPARATE PAYMENT)
3. REMOVE TOP 3 FEET OFF EXISTING MANHOLES AND FILL REMAINING MANHOLE WITH CELLULAR CONCRETE OR FLOWABLE FILL.

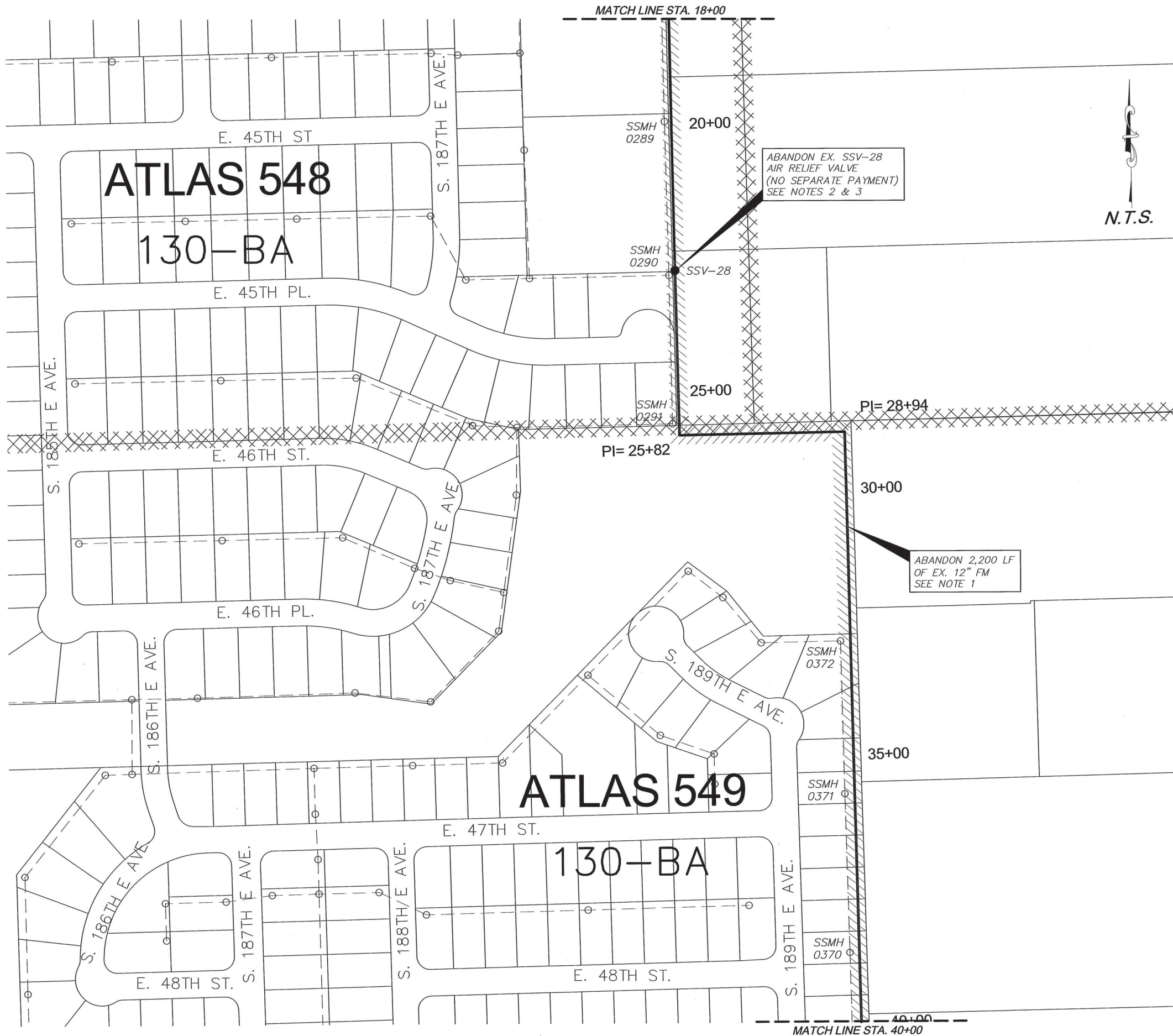


ABANDONMENT PLAN  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

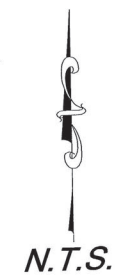
PLANS AND ESTIMATES PREPARED BY:  
 R/JN GROUP, INC. CONSULTING ENGINEERS  
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
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ATLAS PAGE NO: 548							SHEET 33 OF 38 SHEETS

TULSA PROJECTS 20-2823-02 SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3 (33-35) ABANDONMENT PLAN/DWG  
 3/4/2022 PWT



- LEGEND**
- EXISTING FORCE MAIN
  - EXISTING GRAVITY SEWER
  - SSV-10 AIR RELIEF VALVE
  - ABANDONMENT OF EXISTING 12" PVC FORCE MAIN
  - MAINTENANCE AREA BOUNDARY
  - 94-N** MAINTENANCE AREA ID
  - SSMH 0150 SANITARY SEWER MANHOLE

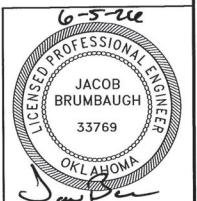


**NOTES:**

1. FILL 12" FORCE MAIN WITH CELLULAR CONCRETE OR FLOWABLE FILL.
2. ARV SHALL BE REMOVED AND DELIVERED TO THE CITY OF TULSA'S SOUTH YARD. PERSONNEL CAN BE CONTACTED AT 918-596-9401. (NO SEPARATE PAYMENT)
3. REMOVE TOP 3 FEET OFF EXISTING MANHOLES AND FILL REMAINING MANHOLE WITH CELLULAR CONCRETE OR FLOWABLE FILL.

ABANDON EX. SSV-28 AIR RELIEF VALVE (NO SEPARATE PAYMENT) SEE NOTES 2 & 3

ABANDON 2,200 LF OF EX. 12" FM SEE NOTE 1

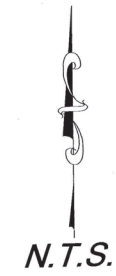
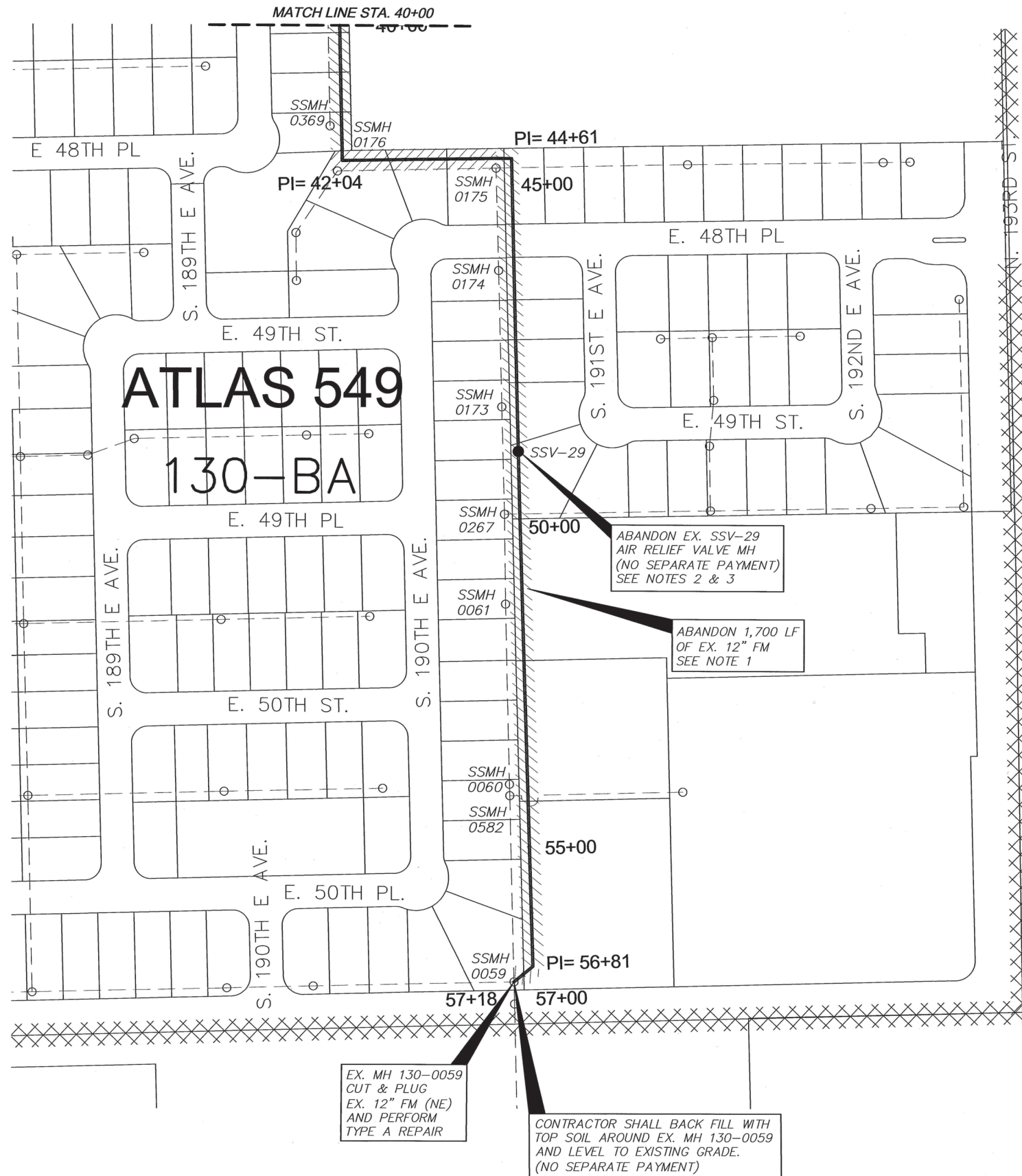


ABANDONMENT PLAN  
 TMUA PROJECT NUMBER ES 2022-09  
 SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3  
 CITY OF TULSA, OKLAHOMA  
 WATER AND SEWER DEPARTMENT

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	06/2026	APPROVED:
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			ATLAS PAGE NO: 548,549				SHEET 34 OF 38 SHEETS

TULSA PROJECT NO. 2022-09 SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3 (33-35) ABANDONMENT PLAN (34-35)

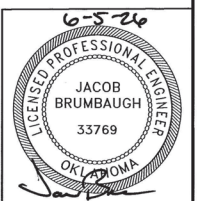


- LEGEND**
- EXISTING FORCE MAIN
  - - - EXISTING GRAVITY SEWER
  - SSV-10 AIR RELIEF VALVE
  - //// ABANDONMENT OF EXISTING 12" PVC FORCE MAIN
  - XXXX MAINTENANCE AREA BOUNDARY
  - 94-N MAINTENANCE AREA ID
  - SSMH 0150 SANITARY SEWER MANHOLE

- NOTES:**
- FILL 12" FORCE MAIN WITH CELLULAR CONCRETE OR FLOWABLE FILL.
  - ARV SHALL BE REMOVED AND DELIVERED TO THE CITY OF TULSA'S SOUTH YARD. PERSONNEL CAN BE CONTACTED AT 918-596-9401. (NO SEPARATE PAYMENT)
  - REMOVE TOP 3 FEET OFF EXISTING MANHOLES AND FILL REMAINING MANHOLE WITH CELLULAR CONCRETE OR FLOWABLE FILL.

EX. MH 130-0059  
CUT & PLUG  
EX. 12" FM (NE)  
AND PERFORM  
TYPE A REPAIR

CONTRACTOR SHALL BACK FILL WITH  
TOP SOIL AROUND EX. MH 130-0059  
AND LEVEL TO EXISTING GRADE.  
(NO SEPARATE PAYMENT)

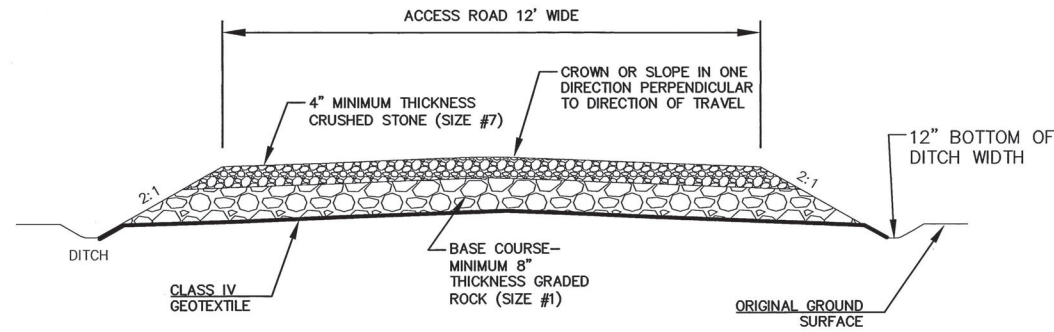


ABANDONMENT PLAN  
TMUA PROJECT NUMBER ES 2022-09  
SPUNKY CREEK INTERCEPTOR  
MAIN STEM SOUTH PHASE 3  
CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

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

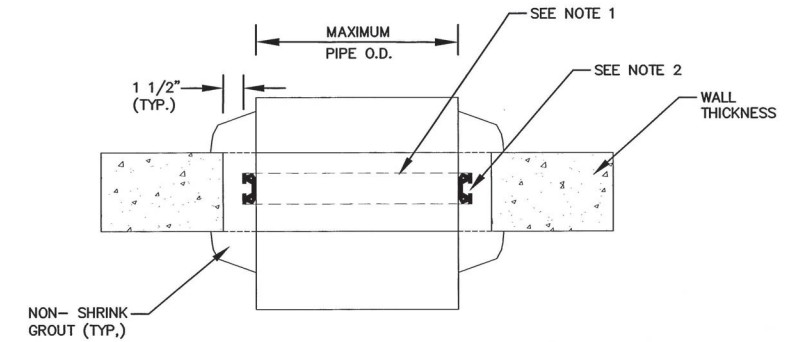
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			PROFILE SCALE:	SURVEY			
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			NA	LEAD ENGR.	6/26		
			VERTICAL:	FIELD MGR.	6/26		
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			FILE:	DRAWING:			DATE: June 2026

T:\TULSA PROJECTS\30-823-02 SPUNKY CREEK MS-SOUTH PHASE 3\000 DRAWINGS\03-13 ABANDONMENT PLAN\DWG 94-N.dwg 04/2026



**ACCESS ROAD CROSS-SECTION**

N.T.S.



MAXIMUM PIPE ALLOWANCE

MANHOLE DIA. & WALL THK.	PIPE SIZE	MAX. PIPE O.D.
36 X 4.0	4	5.50
36 X 4.0	6	7.00
36 X 4.0	8	9.50
36 X 4.0	10	12.00
36 X 4.0	12	14.00
42 X 4.5	15	18.00
48 X 5.0	18	22.00
60 X 6.0	24	28.50
72 X 7.0	30	36.00
84 X 8.0	36	41.50
96 X 9.0	42	48.00
108 X 9.0	48	55.00
144 X 12	60	67.50

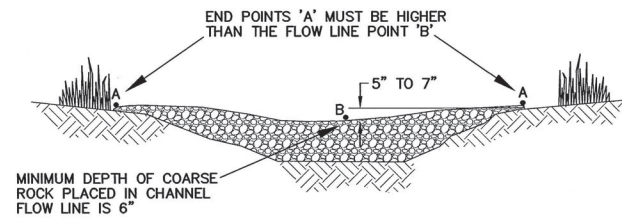
IN FLAT WALL STRUCTURES  
PIPE O.D. IS UNLIMITED

NOTE:

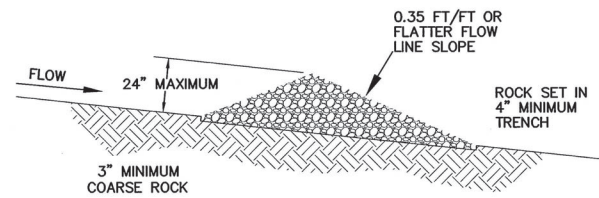
- GASKET AND CLAMP HAS TO BE STRAIGHT AND PERPENDICULAR TO PIPE
- ONE OR TWO STAINLESS STEEL TAKE DOWN CLAMPS REQUIRED AND TIGHTENED TO 60 IN. LBS. OVER PIPE.

**WATER STOP GASKET DETAIL FOR CONNECTION TO JUNCTION BOX**

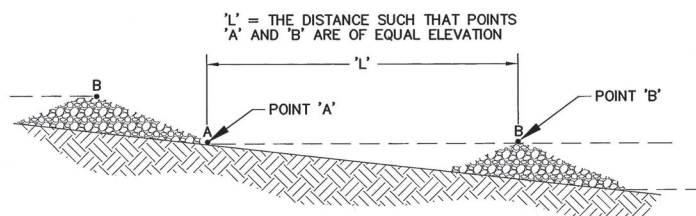
N.T.S.



VIEW LOOKING UPSTREAM

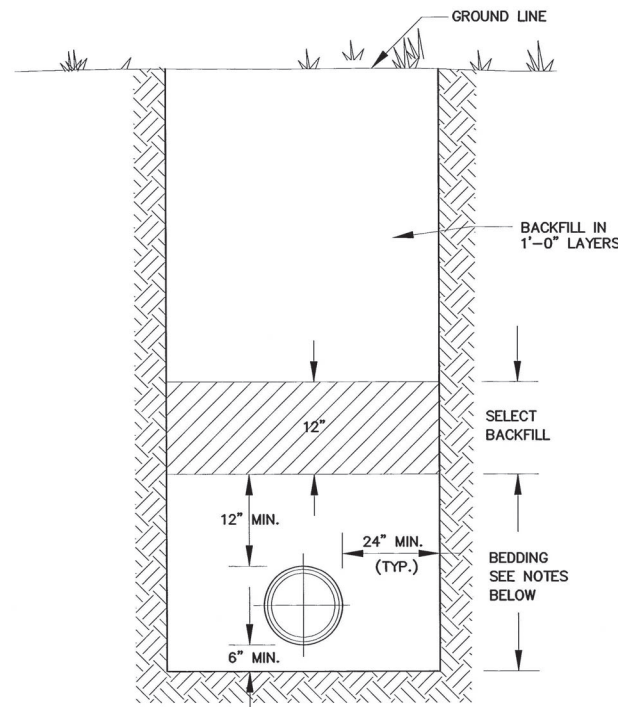


SIDE VIEW



SPACING BETWEEN FILTER DAMS

D-50 OF ROCK (IN)	DOWN STREAM FLOWLINE SLOPE OF STRUCTURE FT/FT					
	0.35	0.30	0.25	0.20	0.15	0.10
3	0.6	0.7	0.8	1	1.3	1.9
6	1.2	1.4	1.6	2	2.6	4



TRENCH CROSS-SECTION

NOTE:

- BEDDING SHALL BE A CLEAN CRUSHED STONE, 3/4" 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.
- 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.
- 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.
- FOR PAVED AREAS, SEE CITY OF TULSA STANDARD DETAIL AND SPECIFICATIONS FOR PAVEMENT REMOVAL AND PLACEMENT.
- SELECT BACKFILL SHALL BE NATIVE SOIL WITH ROCKS LESS THAN 3"-INCHES IN DIAMETER.

**PVC & FRP PIPE BEDDING DETAIL**

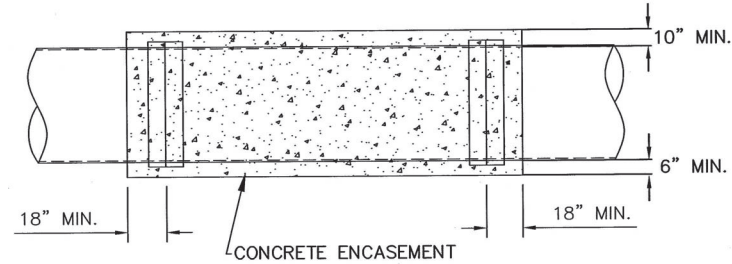
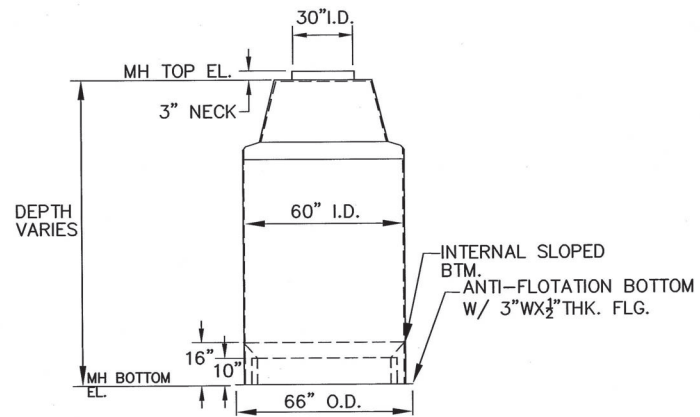
N.T.S.

**TEMPORARY ROCK FILTER DAM DETAIL**

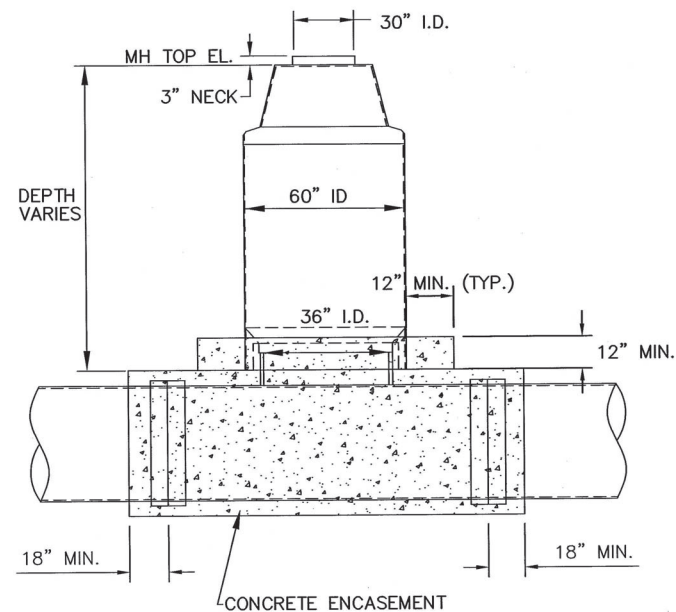
N.T.S.



MISCELLANEOUS DETAILS					
TMUA PROJECT NUMBER ES 2022-09					
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3					
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY: R.J.N GROUP, INC. CONSULTING ENGINEERS 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146					
REVISION	BY	DATE	PLAN SCALE:	DRAWN	APPROVED:
			NA	RLP 06/2026	 DESIGN MANAGER DATE: June 2026 SHEET 36 OF 38 SHEETS
			PROFILE SCALE:	JWB 06/2026	
			HORIZONTAL:	PROJ. MGR. *	
			VERTICAL:	LEAD ENGR. 6/7/26	
			FILE:	FIELD MGR. 6/26	
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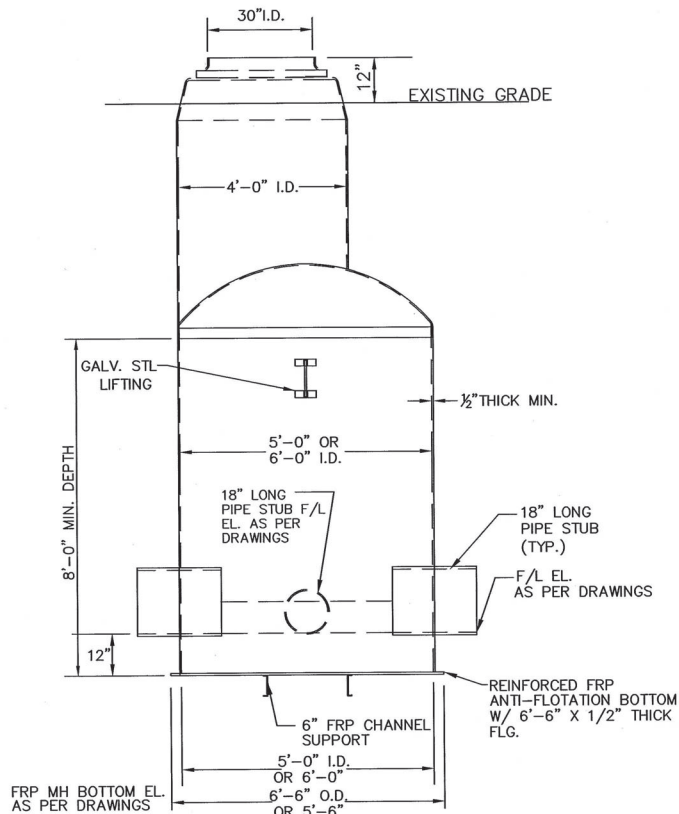
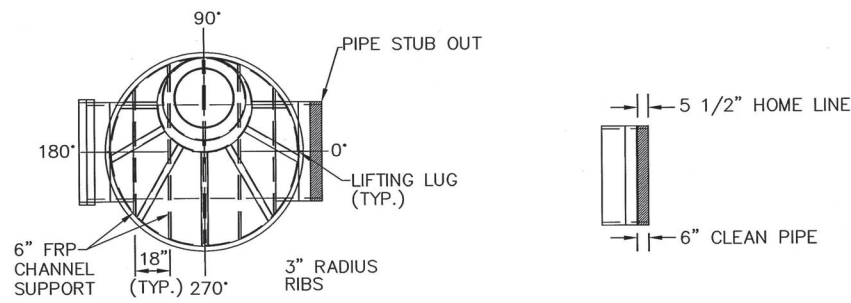
**FRP TEE AND FRP MANHOLE RISER (SEPARATE)**  
N.T.S.



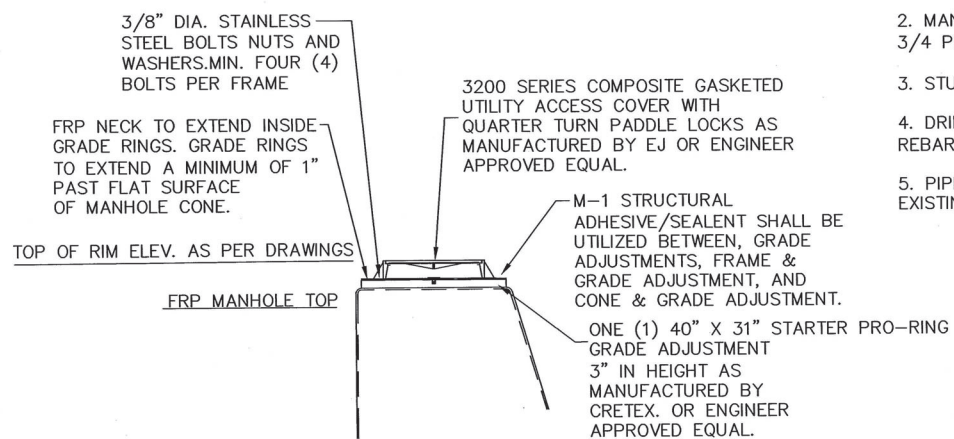
**FRP TEE AND FRP MANHOLE RISER (ASSEMBLED)**  
N.T.S.

**NOTES FOR TEE BASE STYLE MANHOLES:**

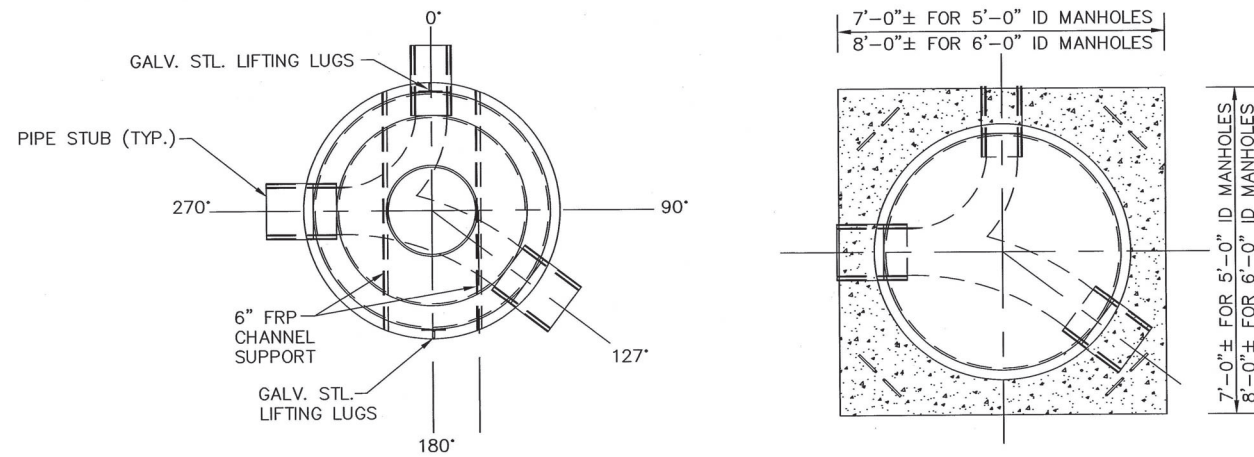
1. MANHOLES SHALL BE DESIGNED, FABRICATED, INSPECTED, TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3753 CURRENT EDITION.
2. MANHOLE RISER SHALL BE INSTALLED BY INSERTING INTO WET CONCRETE. REFER TO TECHNICAL SPECIFICATIONS AND MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
3. THE MINIMUM WIDTH OF CONCRETE ENCASEMENT SHALL BE THE WIDTH OF THE PIPE PLUS 2' ON BOTH SIDES OF PIPE.
4. CONCRETE ENCASEMENT SHALL BE INSTALLED WITH 5,000 PSI CONCRETE.



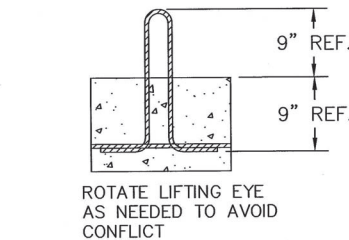
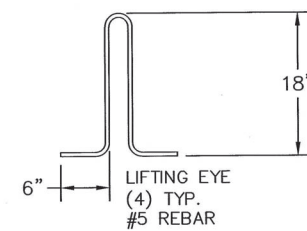
**5'-0" & 6'-0" ID FRP MANHOLE DETAIL**  
N.T.S.



**FRP GRADE RING DETAIL**

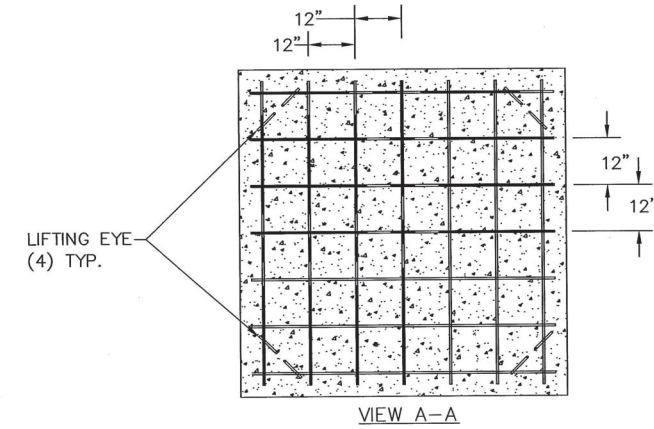
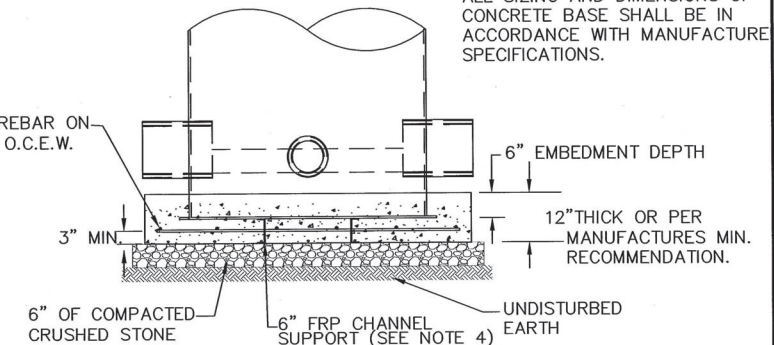


**5'-0" OR 6'-0" ID FRP MANHOLE PLAN DETAIL**  
N.T.S.



**FRP LIFTING EYE DETAIL**  
N.T.S.

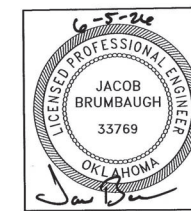
CONCRETE BASE:  
MIN. 12" THICK X 12" FROM  
OUTSIDE WALL OF FRP MANHOLE.  
MIN. 5,000 PSI CONCRETE SLAB  
W/ #5 REBAR ON 12" O.C.E.W.  
ALL SIZING AND DIMENSIONS OF  
CONCRETE BASE SHALL BE IN  
ACCORDANCE WITH MANUFACTURE  
SPECIFICATIONS.



**FRP MANHOLE CONCRETE  
CONCRETE BASE DETAIL**

**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.

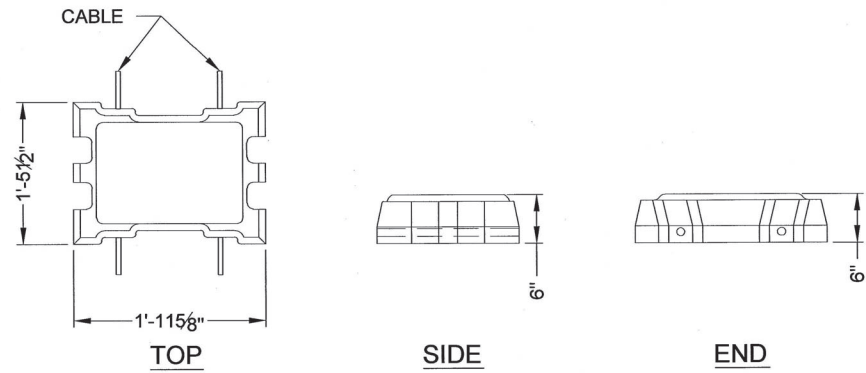
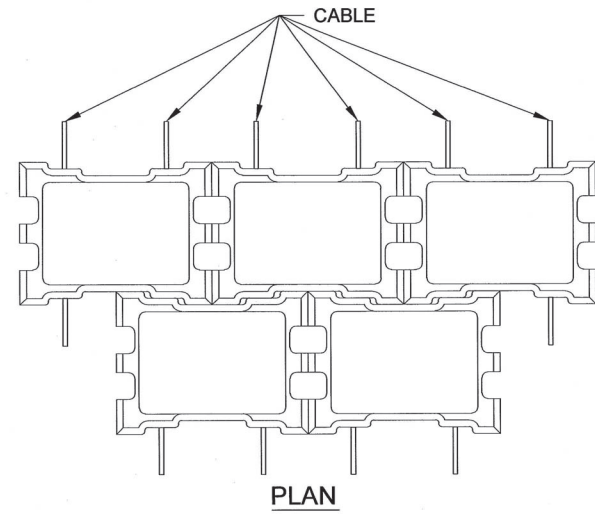


**FRP MANHOLE AND TEE BASE DETAILS**

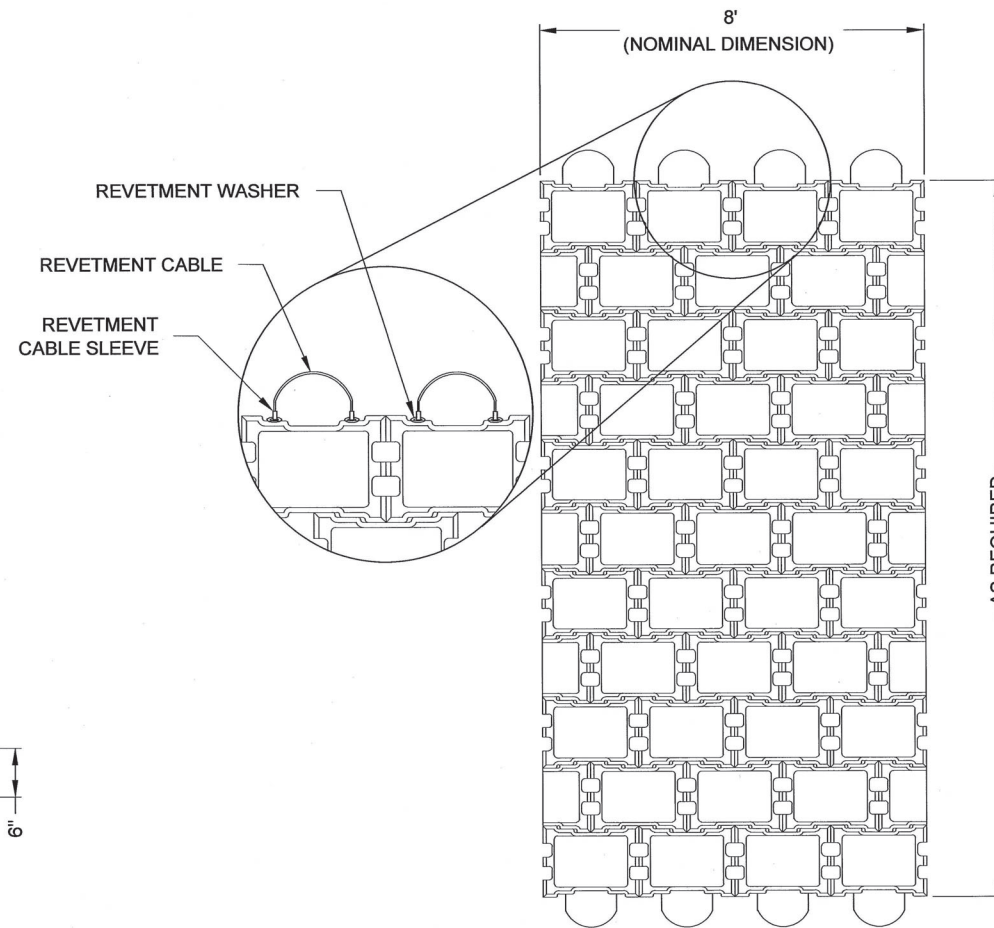
TMUA PROJECT NUMBER ES 2022-09  
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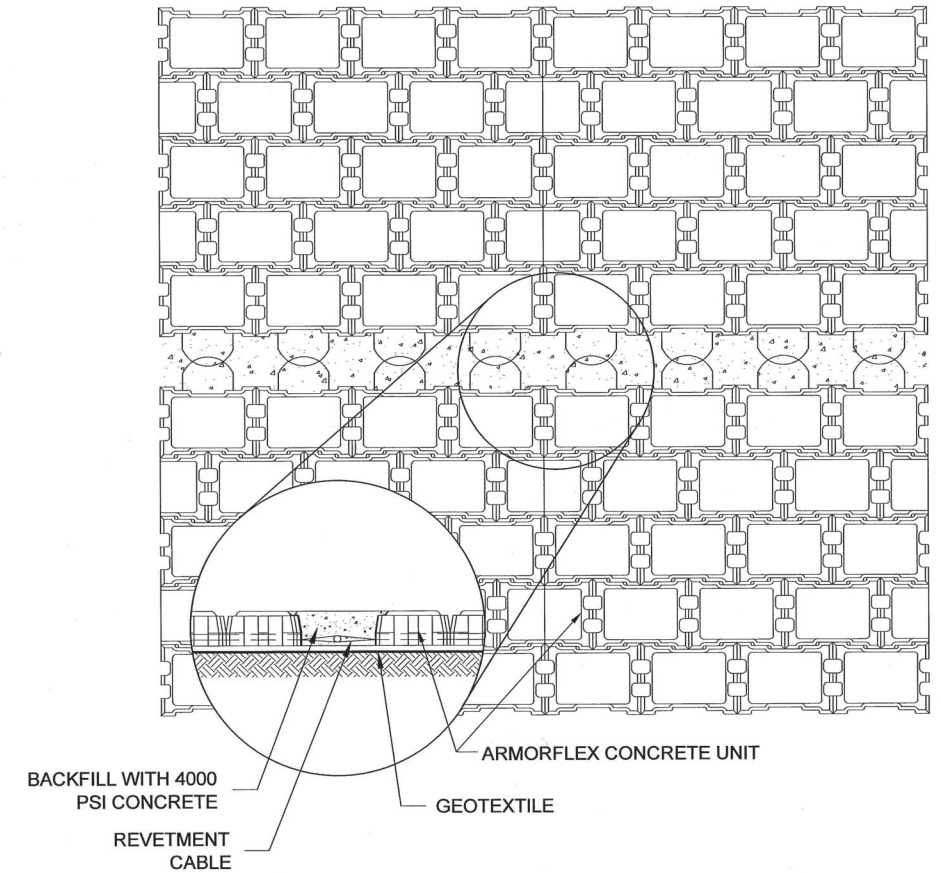
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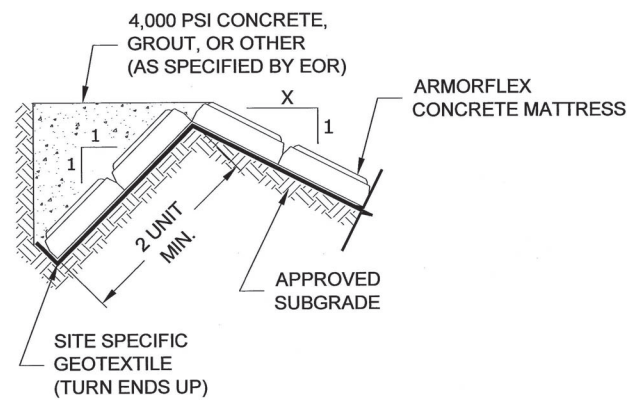
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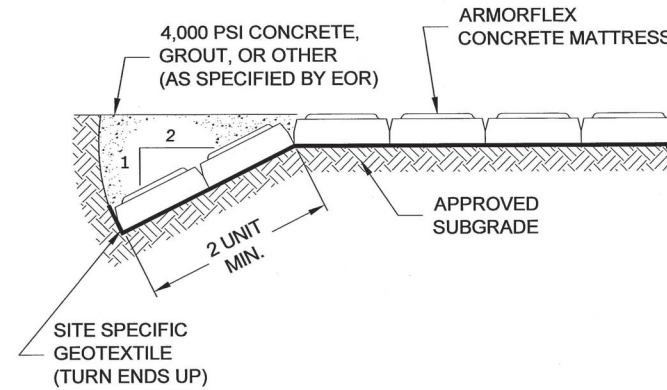
TYP. 55L MAT 2  
N.T.S.



TYP. MAT TO MAT 4  
N.T.S.



TOP TERMINATION  
N.T.S.



FLANK TERMINATION  
N.T.S.



CABLE - REINFORCED CONCRETE BLOCK MAT DETAILS						
TMUA PROJECT NUMBER ES 2022-09						
SPUNKY CREEK INTERCEPTOR MAIN STEM SOUTH PHASE 3						
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						
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			VERTICAL:	FIELD MGR.	6/26	DESIGN MANAGER
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			ATLAS PAGE NO: NA			SHEET 38 OF 38 SHEETS