

LEGEND

ATLAS SHEET NUMBER	177
ATLAS SHEET BOUNDARY	
MANHOLE CALLOUT	MANHOLE NUMBER 233 8.3
	MANHOLE DEPTH (SEE NOTE 6 MANHOLE REHAB., PAGE 3)
MAINTENANCE BOUNDARY	
MAINTENANCE DISTRICT	80-N
WOOD FENCE	WD
CHAIN LINK FENCE	CL
OVERHEAD UTILITIES	OVH
POWER POLE	PP
APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN	
STORM SEWER LINE AND INLET	SD
CURED IN PLACE PIPE	CIPP
MANHOLE/LAMPHOLE REPLACEMENT	
TOPSIDE MANHOLE/LAMPHOLE REPAIR	
INTERIOR MANHOLE REPAIR	
MANHOLE BUBBLE	MANHOLE # 78 12.5
	MANHOLE DEPTH (per atlas)
POINT REPAIR	X
OBSTRUCTION REMOVAL	★
LINE REPLACEMENT	
OPEN CUT OR TRENCHLESS	
SLIPLINE / CIPP	



UTILITY COORDINATION INFORMATION

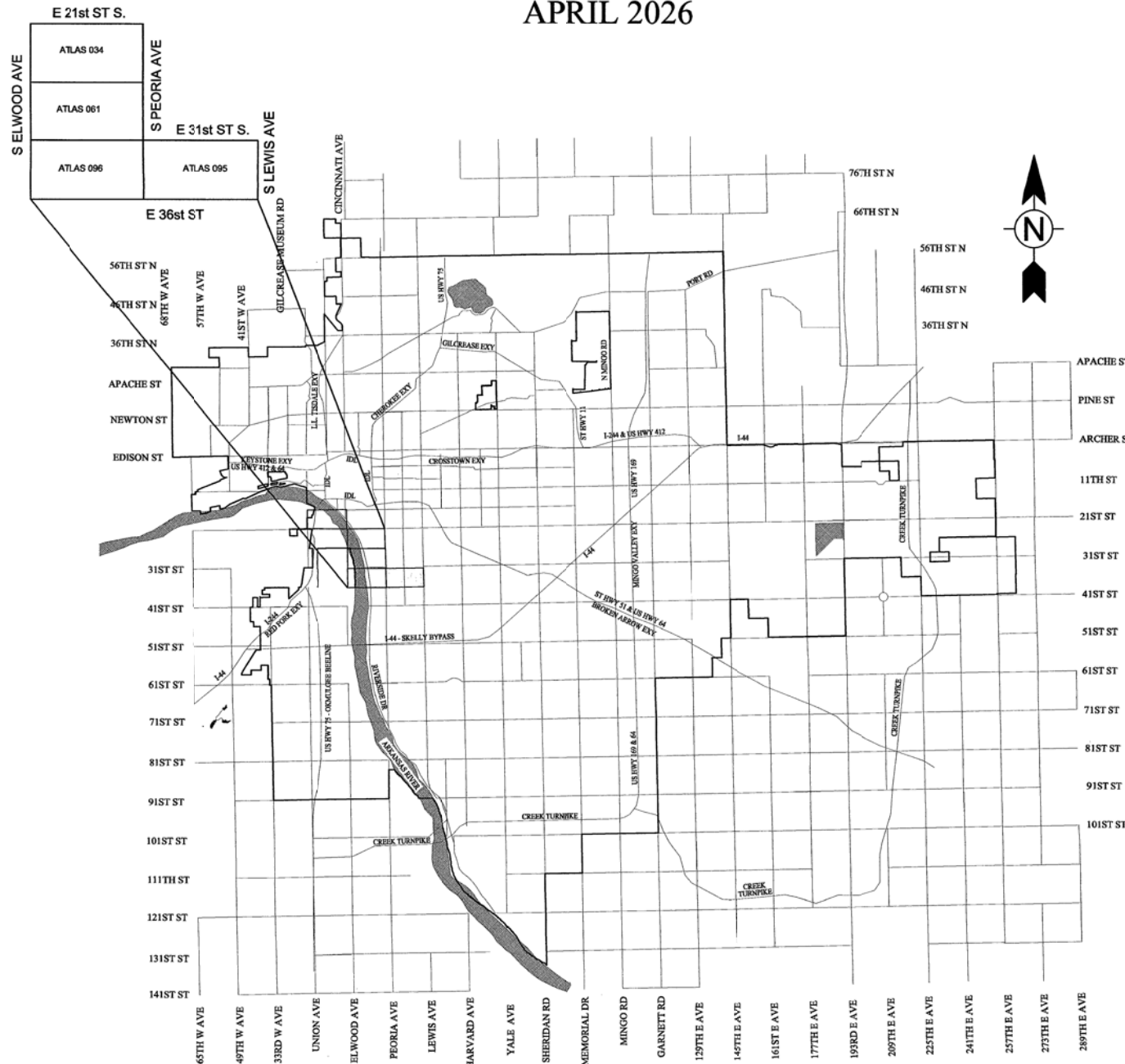
TULSA ENGINEERING SERVICES DEPARTMENT	
WATER DESIGN	596-9666
WASTEWATER DESIGN	596-9664
TRANSPORTATION DESIGN	596-9636
TRAFFIC ENGINEERING DESIGN	596-9741
STORMWATER DESIGN	596-9498
COT UTILITY COORDINATION	596-9649
OKLAHOMA NATURAL GAS CO.	831-8215
COX COMMUNICATIONS	286-4716
AEP/PSO	250-6257
AT&T	596-4237
MTTA	830-0024

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

CONSTRUCTION PLANS FOR CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6

TMUA PROJECT NO. ES 2024-04 (2)
WATER AND SEWER DEPARTMENT
CITY OF TULSA, OKLAHOMA

APRIL 2026



SHEET LIST TABLE

SHT NO.	TITLE	SHT NO.	TITLE
1	TITLE SHEET	27	ATLAS 95
2	PAY QUANTITIES AND PAY ITEM NOTES	28	ATLAS 95 - MANHOLE SCHEDULE
3	ADD ALT. PAY QUANTITIES AND PAY ITEM NOTES	29	ATLAS 96
4-5	GENERAL NOTES	30	ATLAS 96 - MANHOLE SCHEDULE
6	PROJECT LOCATION MAP	31	ATLAS 95 - ADD ALTERNATE 1
7	STORMWATER MANAGEMENT PLAN	32	ATLAS 95 - LINE SCHEDULE - ADD ALTERNATE 1
8	ATLAS 34	33-36	ATLAS 95 - ADD ALTERNATE 1 - DETAILS 1-4
9	ATLAS 34 - LINE SCHEDULE	37	ATLAS 60 - ADD ALTERNATE 2
10	ATLAS 34 - MANHOLE SCHEDULE	38	ATLAS 60 - LINE SCHEDULE - ADD ALTERNATE 2
11-19	ATLAS 34 - DETAILS 1-9	39	ATLAS 95 - ADD ALTERNATE 2
20	ATLAS 61	40	ATLAS 95 - LINE SCHEDULE - ADD ALTERNATE 2
21	ATLAS 61 - LINE SCHEDULE	41-42	ATLAS 95 - ADD ALTERNATE 2 - DETAILS 1,2
22	ATLAS 61 - MANHOLE SCHEDULE	43	ATLAS 96 - ADD ALTERNATE 3
23-26	ATLAS 61 - DETAILS 1-4	44	ATLAS 96 - LINE and MH SCHED - ADD ALTERNATE 3
		45-49	ATLAS 96 - ADD ALTERNATE 3 - DETAILS 1-5

CITY OF TULSA STANDARD DETAILS

- 305 - BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE
- 353 - STANDARD DETAIL FRAME AND LID FOR 4 MANHOLE
- 354 - STANDARD DETAIL FRAME AND LID FOR 5 AND LARGER MANHOLE
- 358 - STANDARD DETAIL PRE-CAST SANITARY SEWER MANHOLE
- 360 - STANDARD DETAIL FRAME AND LID FOR LAMPHOLES
- 361 - STANDARD DETAIL IN-LINE TEES FOR SERVICE CONNECTION
- 362 - RISER DETAIL
- 363 - RISER DETAIL WITH SLOPED TRENCH
- 401 - MANHOLE GRADE ADJUSTMENT
- 401A - CONCRETE COLLAR FOR PARTIAL MANHOLE REPLACEMENT
- 402 - COVER, FRAME, AND FRAME SEAL REPAIR
- 403 - SPECIAL DETAIL FOR INTERIOR COATING SYSTEM
- 404 - STEP REMOVAL
- 405 - RUBBER SEAL AT MANHOLE
- 407 - BENCH AND INVERT REHABILITATION
- 408 - EXCAVATION AND RESTORATION AT GRADE AND ABOVE GRADE CONSTRUCTION
- 409 - CONCRETE MANHOLE COLLAR
- 410 - CORBEL (CONE) REPLACEMENT
- 411 - CHEMICAL PRESSURE GROUTING PRECAST MANHOLE
- 412 - CHEMICAL PRESSURE GROUTING BRICK MANHOLE
- 413 - PATCH HOLE AND PLUG LIFT HOLE
- 414 - MANHOLE ADJUSTMENT RING
- 713 - STANDARD DETAIL FOR PAVEMENT REMOVAL AND REPLACEMENT
- 714 - STANDARD DETAIL FOR PAVEMENT CUTS

CITY OF TULSA SPECIFICATIONS

- 400 - GENERAL PROVISION
- 401 - SITE PREPARATION
- 402 - RESTORATION
- 403 - BACKFILL
- 404 - REMOVAL, SALVAGE, AND ABANDONMENT OF EXISTING UTILITIES
- 405 - PIPELINE AND INSTALLATION
- 406 - PIPE REAMING
- 407 - PIPE CRUSHING
- 408 - PIPE BURSTING
- 409 - SLIPLINING
- 410 - CURED-IN-PLACE-PIPE
- 415 - CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER
- 416 - COMPLETE MANHOLE REPLACEMENT
- 418 - REPLACEMENT OF MANHOLE FRAME AND COVER, FRAME SEAL, CHIMNEY, AND GRADE ADJUSTMENT
- 419 - PATCHING, REPAIRS, AND PLUGGING LIFT HOLES
- 420 - MANHOLE STEP REMOVAL AND REPLACEMENT
- 421 - INTERIOR MANHOLE REHABILITATION - CORBEL (CONE) AND WALL REHABILITATION, BENCH AND INVERT AND PIPE SEAL REHABILITATION, EPOXY COATING
- 422 - MANHOLE TESTING OF NEW AND REHABILITATED MANHOLES
- 423 - OBSTRUCTION REMOVAL



APPROVED BY:

DIRECTOR, WATER AND SEWER DEPT.

DATE

RYAN L. MITTASCH, P.E. NO. 21102
PROJECT MANAGER, TETRA TECH

DATE



TETRA TECH

7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

CA NO. 2388 (EXP. 6-30-2027)



PAY ITEM NOTES

1. QUANTITIES UNDER THE "EXTRA" COLUMN HEADING ARE NOT ASSOCIATED WITH ANY SPECIFIC REPAIR SHOWN ON THE PLANS AND WILL ONLY BE USED TO COMPENSATE THE CONTRACTOR FOR ADDITIONAL COSTS INCURRED DUE TO CHANGED FIELD CONDITIONS.
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3. PER SECTION 402.17.2 PAYMENT FOR "SIDEWALK AND DRIVEWAY REMOVAL AND REPLACEMENT" AND "PAVEMENT REMOVAL AND REPLACEMENT" SHALL BE PAID FOR IN SQUARE YARDS. THE PAY QUANTITY SHALL BE COMPUTED AS THE LENGTH ALONG THE CENTERLINE OF THE PIPE BEING REPLACED MULTIPLIED BY THE STANDARD PAY WIDTH. (SEE STANDARD NO. 713)
4. QUANTITY INCLUDES REQUIRED SURFACE RESTORATION FOR PLACING SERVICE LINES IN STREET R/W. NO ADDITIONAL PAYMENT WILL BE MADE FOR SURFACE RESTORATION ASSOCIATED WITH THE SERVICE LINE REPLACEMENTS.
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6. MANHOLES WITH INTERIOR EPOXY COATINGS SHALL NOT RECEIVE STEPS. NEW MANHOLES SHALL NOT HAVE STEPS.
7. THE CONTRACTOR SHALL REMOVE ALL DEBRIS OR FOREIGN MATERIALS FROM THE MANHOLE, CORBEL, WALL, BENCH, STEPS AND INVERT. DEBRIS SHALL BE KEPT FROM ENTERING THE SEWER LINES. CONTRACTOR SHALL AT NO EXTRA COST TO OWNER, REPLACE ANY PORTION OF THE EXISTING MANHOLE WHICH IS DAMAGED DURING CLEANING.
8. STEP REMOVAL AND REPLACEMENT (TYPE I REPAIR) WHEN SPECIFIED, SHALL BE PAID FOR ON A PER MANHOLE BASIS AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE.
9. TRAFFIC CONTROL SHALL BE PERFORMED 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.
10. EXTERNAL SERVICE CONNECTIONS SHALL BE REPLACED AT LEAST ONE FOOT BEYOND THE UPPER BEND. IF CUSTOMER SIDE OF SERVICE LINE IS IN POOR CONDITION, THE CONTRACTOR SHALL MAKE TEMPORARY CONNECTION AND NOTIFY QUALITY ASSURANCE FOR CUSTOMER REPAIR. CONTACT BREN SUMMERLIN AT (918) 591-4393.
11. CONTRACTOR SHALL COMPLETE A SERVICE REPORT FORM FOR EACH SERVICE RECONNECTED. THIS FORM IS PROVIDED IN THE SPECIAL PROVISIONS AND SHALL BE COMPLETED AND SUBMITTED WITH EACH MONTHLY PAY REQUEST.
12. OBSTRUCTION REMOVALS MUST BE APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. ALL NECESSARY MATERIAL, LABOR, BACKFILLING, SURFACE RESTORATION, TESTING, AND INCIDENTALS SHALL BE INCLUDED. NO ADDITIONAL PAYMENT WILL BE MADE.
13. POST REHABILITATION CCTV SHALL BE INCLUDED IN THE COST OF THE REHABILITATION PAY ITEM, WITH THE EXCEPTION OF OPEN CUT, WHICH WILL BE DONE BY SEWER OPERATION MAINTENANCE. NO SEPARATE PAYMENT SHALL BE MADE.
14. FLOWABLE FILL MAY BE PERMISSIBLE WHEN NORMAL COMPACTION METHODS ARE NOT FEASIBLE, WITH ENGINEERS APPROVAL ONLY. NO MORE THAN 0.6 CY PER FOOT OF EXCAVATED DEPTH WILL BE PERMITTED.
15. WHERE PVC SEWER PIPE IS USED, THE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM D-3034 LATEST REVISION, UNLESS OTHERWISE SPECIFIED. THE STANDARD DIMENSIONS RATIO OF PVC PIPE SHALL NOT EXCEED 26. REFER TO SECTIONS 405,406,407 AND 408 FOR THE REQUIREMENTS OF PIPE MATERIALS OTHER THAN PVC.
16. THE CONTRACTOR SHALL INSTALL A SEALED FRAME AND COVER WHEN PERFORMING MANHOLE REPAIR TYPES "A" AND "C", WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN BOUNDARY, AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. (SEE SPECIFICATION SECTION 426)
17. MANHOLES REQUIRING FULL REPLACEMENT OR TYPE Fc - PRECAST CORBEL SECTION, SHALL BE CONSTRUCTED WITH NO STEPS AND TO INCORPORATE, AND INCLUDE A 30" FRAME AND COVER REGARDLESS OF THE MANHOLE DIAMETER, NO ADDITIONAL PAYMENT WILL BE MADE. SEE CITY OF TULSA STANDARD DETAIL 354.
18. ALL MANHOLES DESIGNATED FOR FULL REPLACEMENT OR TYPE "Fc" REHABILITATION AND ARE WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN WILL REQUIRE THE INSTALLATION OF AN "EJ 3200 SERIES FRAME & COVER". SEE SPECIAL PROVISION 3 AND COT STD 359.
19. THIS ITEM TO BE USED AS APPROVED BY THE ENGINEER FOR SEGMENTS WHICH MAY REQUIRE NEW SERVICE LINES DUE TO OBSTRUCTIONS/OBSTACLES FORCING THE RE-ROUTING OF EXISTING SERVICE LINES; REPLACEMENT OF EXISTING SERVICE LINES IN POOR CONDITION, OR CONSTRUCTED OF UNSATISFACTORY MATERIAL; OR REPLACEMENT OF SERVICE LINES SHOWING EXCESSIVE AMOUNTS OF INFLOW OR INFILTRATION. SERVICE LINE REPLACEMENT SHALL ONLY BE PERFORMED ON LINES AUTHORIZED BY THE ENGINEER AND SHALL BE LOCATED WITHIN THE STREET ROW OR SEWER EASEMENT AND NOT ON PRIVATE PROPERTY. NO ADDITIONAL PAYMENT WILL BE MADE FOR SURFACE RESTORATION.
20. SPECIFICATION 334.2.M ONLY APPLIES TO SEGMENTS WHERE OPEN CUT REPLACEMENT OCCURS. ALSO "SPOT ELEVATIONS ON THE MAIN SEWER LINE..." CAN EITHER BE SURVEYED ELEVATIONS OR MEASURE DOWNS RELATIVE TO FINISHED GRADE.
21. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID FOR EACH COMPLETE MANHOLE DROP PIPING ASSEMBLY REGARDLESS OF DEPTH OR DIAMETER OF THE ASSOCIATED MANHOLE. THIS ITEM SHALL INCLUDE ALL COST FOR EXCAVATION, BACKFILL, DEWATERING, BY PASS PUMPING, GROUT, SEALS, FITTINGS, MANHOLE MODIFICATIONS, AND ALL LABOR AND OTHER MATERIALS FOR A COMPLETE INSTALLATION PER CITY STANDARDS.
22. SERVICE RECONNECT COVERS BOTH THE RECONNECTION OF 4" AND 6" SERVICES.
23. SERVICE LINE COVERS BOTH THE INSTALLATION OF 4" AND 6" LINES.
24. CONTRACTOR SHALL VERIFY REQUIRED DEPTHS, ANGLES, AND CONNECTING LINE DIAMETERS PRIOR TO ORDERING REPLACEMENT MANHOLE COMPONENTS.
25. PAVEMENT REMOVAL AND REPLACEMENT FOR WATER, SANITARY, AND STORMWATER MAIN INSTALLATIONS - WITH RESPECT TO SAWCUTTING AND DOWELS, AND INCLUDES THE FOLLOWING, (THESE ITEMS SHALL NOT BE PAID SEPARATELY): SAW CUTTING, DOWELS, DISPOSAL OF BROKEN PAVEMENT, TEMPORARY SURFACES, ASSOCIATED EXCAVATION, PREPARATION OF SUBGRADE, FORMS OR REINFORCING, REMOVAL OR REPLACEMENT OF GRAVEL, ADDITIONAL SAW CUTTING OR REPLACEMENT OF PAVEMENT DAMAGED BY THE CONTRACTOR, JOINT SEALER, TACK COATS, OR EDGE SEALING. THIS PAYMENT ITEM DOES NOT INCLUDE THE FOLLOWING WHICH SHALL BE PAID SEPARATELY IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, DETAILS AND DRAWINGS: CURB AND GUTTER.
26. BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8 INCH MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
27. 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 THE STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE LUMP SUM BID FOR THIS ITEM.
28. ASPHALT PAVEMENT INSTALLED IN NON-ARTERIAL STREETS SHALL BE PG 64-22 WHILE ARTERIAL STREETS SHALL BE PG 70-28 OK-INSOLUBLE. ALL ASPHALT MIX DESIGNS SHALL BE PAID BY ASPHALT REMOVAL AND REPLACEMENT PAY ITEM. (NO SEPARATE PAYMENT).

ESTIMATED CONSTRUCTION QUANTITIES

Summary of Pipeline Improvements Schedule									
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet				Total
					34	61	Extra		
1	8 Inch Point Repair	COT 412	(EA)	13,15	7	8			15
2	Additional Footage (8 Inch Point Repair)	COT 412	(LF)	1,13,15				10	10
3	8 Inch Slipline SDR 21	COT 409	(LF)	13,15	917				917
4	8 Inch Cured-In-Place-Pipe	COT 410	(LF)	13	2,479				2,479
5	8 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	13,15	1,036	301			1,337
6	8 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15,20	131	623			754
7	10 Inch Point Repair	COT 412	(EA)	1,13,15				1	1
8	Additional Footage (10 Inch Point Repair)	COT 412	(LF)	1,13,15				10	10
9	10 Inch Slipline SDR 21	COT 409	(LF)	1,13,15				50	50
10	10 Inch Cured-In-Place-Pipe	COT 410	(LF)	1,13				50	50
11	10 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	13,15		306			306
12	10 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15,20	447	261			708
13	12 Inch Point Repair	COT 412	(EA)	1,13,15				1	1
14	Additional Footage (12 Inch Point Repair)	COT 412	(LF)	1,13,15				10	10
15	12 Inch Cured-In-Place-Pipe	COT 410	(LF)	13	554				554
16	Obstruction Removal	COT 423	(EA)	1,12,15				1	1
17	External Drop Replacement	SPECIAL PROVISION 6	(EA)	21	1	1			2
18	Flowable Fill	COT 202	(CY)	1				25	25
19	Pavement Removal and Replacement - Asphalt	COT 402	(SY)	1,3,25,26,28				25	25
20	Pavement Removal and Replacement - Concrete	COT 402	(SY)	3,25,26	311	4			315
21	Pavement Removal and Replacement - Concrete Driveway, Sidewalk	COT 402	(SY)	3,13		32			32
22	Curb and Gutter Removal and Replacement	COT 402	(ILF)		160	10			170
23	Sodding	COT 402	(SY)	5	153	1825			1,983
24	Service Reconections	COT 405,408,409,410	(EA)	10,11,22	122	44			166
25	PVC Service, Schedule 40	COT 405,408,409,410	(LF)	4,10,11,19,23	610	220			830
26	Video Pre-Inspection	COT 415	(LF)	13	6,200	2,640			8,840

Summary of Manhole Rehabilitation Schedule											
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet						TOTAL
					34	61	95	96	Extra		
27	Replace Cover, Frame and Frame Seal	COT 418 (Type A)	(EA)	16	15	9	7	9			44
28	Replace Frame Seal	COT 418 (Type B)	(EA)		2	1		2			5
29	Replace Cover, Frame and Frame Seal, and Chimney	COT 418 (Type C)	(EA)	16	3	1		3			7
30	Replace Frame Seal and Chimney	COT 418 (Type D)	(EA)		4		3	2			9
31	Partial Manhole Replacement - Precast Corbel Section	COT 418 (Type Fc)	(EA)	17,18	1		1				2
32	Interior Manhole Wall Rehabilitation	COT 421 (Type Gg)	(SF)		327	52					379
33	Bench and Invert Rehabilitation	COT 419 (Type Gh)	(EA)	1					1		1
34	Grout and Coat Pipe Seal	COT 421 (Type Gk)	(EA)		13	3	6	13			35
35	Plug Lift Holes , Plug Holes	COT 419 (Type Go)	(EA)	1					1		1
36	Seal Precast Joints	COT 421 (Type Gp)	(EA)		5	1		1			7
37	Patch Lift Hole/ Patch Hole	COT 419 (Type Gr)	(EA)		2	1	1	1			5
38	Epoxy Coating	COT 421 (Type Gs)	(SF)	1,6					100		100
39	Manhole Step Removal and Replacement	COT 420 (Type I)	(EA)	6,8	2						2
40	Manhole Replacement (4 Ft ID)	COT 416	(EA)	17,18,24	1	8	1	4			14
41	Manhole (4 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	24		21	6	9			36
42	Manhole Replacement (5 Ft ID)	COT 416	(EA)	1,17,18,24					1		1
43	Manhole (5 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	1,24					5		5
44	Lamphole Replacement	COT 417	(EA)		1			1			2
45	Lamphole Replace Frame and Cover	COT 417	(EA)					1			1
46	Sealed Lid	COT 426	(EA)	16,18	2	11	2	8			23
47	Clean Manhole	SPECIAL PROVISION 4	(EA)	1,7					1		1

Summary of General Contract Quantities											
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet						TOTAL
					34	61	95	96	Extra		
48	Construction Traffic Control	ODOT 880	(CD)	9							400
49	Mobilization	COT 400.7.4	(EA)								1
50	Photographic Documentation	COT 400.7.4	(EA)								1
51	Construction Owner Allowance	SPECIAL PROVISION 2	(EA)								50,000
52	Construction As-Builts	COT 334	(LS)								1
53	Contractor's Quality Control	COT 335	(LS)								1
54	SWPPP Documentation and Management	ODOT SPEC 220	(LS)	27							1



PAY QUANTITIES AND PAY ITEM NOTES									
TMUA PROJECT NO. ES 2024-04 (2)									
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6									
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT									
PLANS AND ESTIMATES PREPARED BY:									
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909									
REVISION		BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:	
					DESIGNED	TI	04/2026		
					SURVEY	TI	04/2026		
				PROFILE SCALE:	PROJ. MGR.	05/26			
				HORIZONTAL	LEAD ENGR.	05/26			
				VERTICAL	FIELD MGR.	05/26			
				FILE:	DRAWING:			DATE: APRIL 2026	
				ATLAS PAGE NO.:	014, 033, 060			SHEET 2 OF 49 SHEETS	

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16. THE CONTRACTOR SHALL INSTALL A SEALED FRAME AND COVER WHEN PERFORMING MANHOLE REPAIR TYPES "A" AND "C", WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN BOUNDARY, AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. (SEE SPECIFICATION SECTION 426)
17. MANHOLES REQUIRING FULL REPLACEMENT OR TYPE Fc - PRECAST CORBEL SECTION, SHALL BE CONSTRUCTED WITH NO STEPS AND TO INCORPORATE, AND INCLUDE A 30" FRAME AND COVER REGARDLESS OF THE MANHOLE DIAMETER, NO ADDITIONAL PAYMENT WILL BE MADE. SEE CITY OF TULSA STANDARD DETAIL 354.
18. ALL MANHOLES DESIGNATED FOR FULL REPLACEMENT OR TYPE "Fc" REHABILITATION AND ARE WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN WILL REQUIRE THE INSTALLATION OF AN "EJ 3200 SERIES FRAME & COVER". SEE SPECIAL PROVISION 3 AND COT STD 359.
19. THIS ITEM TO BE USED AS APPROVED BY THE ENGINEER FOR SEGMENTS WHICH MAY REQUIRE NEW SERVICE LINES DUE TO OBSTRUCTIONS/OBSTACLES FORCING THE RE-ROUTING OF EXISTING SERVICE LINES; REPLACEMENT OF EXISTING SERVICE LINES IN POOR CONDITION, OR CONSTRUCTED OF UNSATISFACTORY MATERIAL; OR REPLACEMENT OF SERVICE LINES SHOWING EXCESSIVE AMOUNTS OF INFLOW OR INFILTRATION. SERVICE LINE REPLACEMENT SHALL ONLY BE PERFORMED ON LINES AUTHORIZED BY THE ENGINEER AND SHALL BE LOCATED WITHIN THE STREET ROW OR SEWER EASEMENT AND NOT ON PRIVATE PROPERTY. NO ADDITIONAL PAYMENT WILL BE MADE FOR SURFACE RESTORATION.
20. SPECIFICATION 334.2.M ONLY APPLIES TO SEGMENTS WHERE OPEN CUT REPLACEMENT OCCURS. ALSO "SPOT ELEVATIONS ON THE MAIN SEWER LINE..." CAN EITHER BE SURVEYED ELEVATIONS OR MEASURE DOWNS RELATIVE TO FINISHED GRADE.
21. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID FOR EACH COMPLETE MANHOLE DROP PIPING ASSEMBLY REGARDLESS OF DEPTH OR DIAMETER OF THE ASSOCIATED MANHOLE. THIS ITEM SHALL INCLUDE ALL COST FOR EXCAVATION, BACKFILL, DEWATERING, BY PASS PUMPING, GROUT, SEALS, FITTINGS, MANHOLE MODIFICATIONS, AND ALL LABOR AND OTHER MATERIALS FOR A COMPLETE INSTALLATION PER CITY STANDARDS.
22. SERVICE RECONNECT COVERS BOTH THE RECONNECTION OF 4" AND 6" SERVICES.
23. SERVICE LINE COVERS BOTH THE INSTALLATION OF 4" AND 6" LINES.
24. CONTRACTOR SHALL VERIFY REQUIRED DEPTHS, ANGLES, AND CONNECTING LINE DIAMETERS PRIOR TO ORDERING REPLACEMENT MANHOLE COMPONENTS.
25. PAVEMENT REMOVAL AND REPLACEMENT FOR WATER, SANITARY, AND STORMWATER MAIN INSTALLATIONS - WITH RESPECT TO SAWCUTTING AND DOWELS, AND INCLUDES THE FOLLOWING, (THESE ITEMS SHALL NOT BE PAID SEPARATELY): SAW CUTTING, DOWELS, DISPOSAL OF BROKEN PAVEMENT, TEMPORARY SURFACES, ASSOCIATED EXCAVATION, PREPARATION OF SUBGRADE, FORMS OR REINFORCING, REMOVAL OR REPLACEMENT OF GRAVEL, ADDITIONAL SAW CUTTING OR REPLACEMENT OF PAVEMENT DAMAGED BY THE CONTRACTOR, JOINT SEALER, TACK COATS, OR EDGE SEALING. THIS PAYMENT ITEM DOES NOT INCLUDE THE FOLLOWING WHICH SHALL BE PAID SEPARATELY IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, DETAILS AND DRAWINGS: CURB AND GUTTER.
26. BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8 INCH MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
27. 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 THE STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE LUMP SUM BID FOR THIS ITEM.
28. ASPHALT PAVEMENT INSTALLED IN NON-ARTERIAL STREETS SHALL BE PG 64-22 WHILE ARTERIAL STREETS SHALL BE PG 70-28 OK-INSOLUBLE. ALL ASPHALT MIX DESIGNS SHALL BE PAID BY ASPHALT REMOVAL AND REPLACEMENT PAY ITEM. (NO SEPARATE PAYMENT).

ESTIMATED CONSTRUCTION QUANTITIES - ADD ALTERNATE 1

Add Alternate No. 1

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet		
					95	Extra	Total
55	8 Inch Point Repair	COT 412	(EA)	13,15	3		3
56	8 Inch Slipline SDR 21	COT 409	(LF)	13,15	166		166
57	8 Inch Cured-In-Place-Pipe	COT 410	(LF)	13,15	772		772
58	8 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13	784		784
59	8 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15	137		137
60	15 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13	167		167
61	Sodding	COT 402	(SY)	5	305		305
62	Service Reconnections	COT 405,408,409,410	(EA)	10,11,22	50		50
63	PVC Service, Schedule 40	COT 405,408,409,410	(LF)	4,10,11,19,23	250		250
64	Video Pre-Inspection	COT 415	(LF)	13	2293		2,293

ESTIMATED CONSTRUCTION QUANTITIES - ADD ALTERNATE 2

Add Alternate No. 2

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet		
					60	95	Total
65	8 Inch Point Repair	COT 412	(EA)	13, 15		4	4
66	Additional Footage (8 Inch Point Repair)	COT 412	(LF)	1,13, 15		10	10
67	8 Inch Slipline SDR 21	COT 409	(LF)	13, 15		728	728
68	8 Inch Cured-In-Place-Pipe	COT 410	(LF)	13	178	335	513
69	8 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15		566	566
70	18 Inch Cured-In-Place-Pipe	COT 410	(LF)	13		281	281
71	Pavement Removal and Replacement - Concrete	COT 402	(SY)	3		16	16
72	Sodding	COT 402	(SY)	5		1187	1187
73	Service Reconnections	COT 405,408,409,410	(EA)	10,11,22	1	50	51
74	PVC Service, Schedule 40	COT 405,408,409,410	(LF)	4,10,11,19,23	5	250	255
75	Video Pre-Inspection	COT 415	(LF)	13	178	2776	2954

ESTIMATED CONSTRUCTION QUANTITIES - ADD ALTERNATE 3

Add Alternate No. 3

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet		
					96	Extra	Total
76	8 Inch Point Repair	COT 412	(EA)	13,15	12		12
77	10 Inch Point Repair	COT 412	(EA)	13,15	1		1
78	8 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13,15	232		232
79	8 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15	1089		1089
80	24 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13,15	50		50
81	Pavement Removal and Replacement - Asphalt	COT 402	(SY)	3	48		48
82	Pavement Removal and Replacement - Concrete	COT 402	(SY)	3	157		157
83	Pavement Removal and Replacement - Concrete Driveway, Sidewalk	COT 402	(SY)	13	105		105
84	Curb and Gutter Removal and Replacement	COT 402	(LF)		699		699
85	Sodding	COT 402	(SY)	5	1364		1364
86	Service Reconnections	COT 405,408,409,410	(EA)	10,11,22	38		38
87	PVC Service, Schedule 40	COT 405,408,409,410	(LF)	4,10,11,19,23	190		190
88	Video Pre-Inspection	COT 415	(LF)	13	3715		3715



ADD ALT. PAY QUANTITIES AND PAY ITEM NOTES			
TMUA PROJECT NO. ES 2024-04 (2)			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	
REVISION	BY	DATE	APPROVED:
			DESIGNED: TI 04/2026
			SURVEY: TI 04/2026
			PROJ. MGR. JH 5/1/24
			LEAD ENGR. JH 5/26
			FIELD MGR. JH 5/26
			DATE: APRIL 2026
			SHEET 3 OF 49 SHEETS

GENERAL NOTES

- THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS, BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORK SITE SAFETY, MANHOLE VENTILATION, WORK EQUIPMENT, FIRST AID, HYGIENE, AND OTHER RELATED TOPICS. THE CONTRACTOR SHALL BE EXPECTED TO PERFORM THE WORK IN A MANNER THAT BEST PROTECTS THE SAFETY OF WORKERS, INSPECTORS, BYSTANDERS, AND OTHERS WHO MAY BE IN THE VICINITY OF THE PROJECT. FAILURE TO PERFORM THE WORK AND MAINTAIN THE SITE IN A SAFE MANNER, IN THE OPINION OF THE ENGINEER OR OWNER, SHALL BE SUFFICIENT CAUSE TO STOP ALL WORK UNTIL SAFETY PROBLEMS ARE CORRECTED.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF TULSA ENGINEERING STANDARDS AND SPECIFICATIONS, IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF THIS CONTRACT, AND IN ACCORDANCE WITH ODOT STANDARDS.
- THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF THE CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL, IN COOPERATION WITH THE CITY, DEVELOP AND SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN (TCP), TO THE CITY OF TULSA PUBLIC WORKS, FIELD ENGINEERING. THIS TCP SHALL DETAIL SUCH MEASURES AS MAY BE REQUIRED TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE A COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROL SYSTEM DURING THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL FLAGMEN, BARRICADES, SIGNS, SIGNALS, OR OTHER DEVICES AS MAY BE REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION, PERMITTING, AND EXECUTION OF A STORMWATER POLLUTION PREVENTION PLAN (SWP3). THE CONTRACTOR SHALL PROVIDE ALL DOCUMENTATION REQUIRED OF SWP3 FOR REVIEW AND APPROVAL OF THE PLAN BY FEDERAL, STATE, AND LOCAL AUTHORITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, THE NOTICE OF INTENT AND THE NOTICE OF TERMINATION.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY ORANGE SAFETY FENCING AROUND ALL EXCAVATION, INCLUDING TRENCHES, PITS, VAULTS, ETC. TO MAINTAIN SECURITY AND SAFETY FOR ANIMALS, CHILDREN OR ANY BYSTANDER. THE COST OF ORANGE SAFETY FENCING SHALL BE INCLUDED IN OTHER PAY ITEMS.
- PRIOR TO EXCAVATING, THE CONTRACTOR IS RESPONSIBLE FOR BRACING OR SUPPORTING ANY POWER OR UTILITY POLE OR GUY WIRE WITHIN 5 FEET OF EXCAVATION TO THE SATISFACTION OF THE OWNER AND THE UTILITY COMPANY, AT NO ADDITIONAL COST TO THE OWNER.
- ALL EXCAVATED MATERIAL REMOVED DURING TRENCHING OR EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. PRIOR TO TRENCHING AND EXCAVATION, THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE TO THE ENGINEER FOR REVIEW. STOCKPILING EXCAVATED MATERIALS IN STREET OR ALLEY RIGHT-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE ENGINEER. MAINTENANCE OF STOCKPILE SITE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST MAINTAIN STOCKPILE SITES IN A SAFE, POLLUTION FREE CONDITION THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA REGULATORY FLOODPLAIN.
- BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
- THE CONTRACTOR SHALL PROVIDE A DETAILED ACCESS PLAN FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS, CONSTRUCTION ACTIVITIES, AND PERMITS THAT MAY BE NEEDED FOR THE IMPLEMENTATION OF THIS PLAN.
- CONTRACTOR MUST NOTIFY THE HOMEOWNER A MINIMUM OF 48 HOURS (SPECIFICATION 400) PRIOR TO BEGINNING ANY REHAB WORK OR CONSTRUCTION ON HOMEOWNER'S PROPERTY.

- IN ALL AREAS WHERE EXCAVATION WILL OCCUR, CONTRACTOR SHALL VIDEO ALL CONCRETE PAVEMENT, BUILDINGS, FOUNDATIONS, LANDSCAPING, LAWNS AND TREES PRIOR TO CONSTRUCTION AND SUBMIT TO THE ENGINEER FOR PROJECT RECORDS.
- CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ANY EXISTING STORAGE SHEDS, LOCATED WITHIN THE CONSTRUCTION AREA, THAT ARE DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE CITY OF TULSA OR THE HOMEOWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATION OF ALL EXISTING SANITARY SEWER SERVICE LATERALS IN THE PROJECT AREA. IF ENCOUNTERED OR DAMAGED DURING CONSTRUCTION, EXISTING SERVICE LATERALS SHALL BE REMOVED AND REPLACED USING PIPE OF THE SAME SIZE AND MATERIAL AS THE EXISTING SEWER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES. HOWEVER, IF DAMAGE OCCURS TO TREES LOCATED WITHIN AN EASEMENT CONTRACTOR SHALL NOT BE RESPONSIBLE.
- ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEAT LINES AS INDICATED IN THE SPECIFICATIONS AND STANDARD DETAILS. SAW CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE FULL DEPTH OF THE EXISTING PAVEMENT. SAW CUTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.
- ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING, NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
- IF ANY BRICK SANITARY MANHOLES/STRUCTURES ASSOCIATED WITH THE IDENTIFIED SEWER LINES ARE FOUND, THE CITY SHALL BE NOTIFIED BEFORE WORK COMMENCES FOR AN EVALUATION OF REHABILITATION. REHABILITATION OF ANY BRICK SANITARY MANHOLES/STRUCTURES SHALL BE BY COMPLETED MANHOLE/STRUCTURE REPLACEMENT OR BY METHODS DESCRIBED IN SPECIFICATION 418.
- ALL SANITARY SEWER AND STORM SEWER MANHOLE CASTING AND LIDS THAT ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW ONES, AND THE OLD CASTINGS AND LIDS SHALL BE DELIVERED TO THE SEWER BASE AT 9319 E. 42nd STREET N. AND PLACED IN THE METAL RECYCLE BIN IN THE STOCKROOM AREA 918-669-6130, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
- ALL SANITARY SEWER MANHOLES LOCATED IN THE FLOODPLAIN SHALL BE BUILT IN ACCORDANCE WITH THE FLOODPLAIN MANHOLE SPECIFICATION WITH PADDLE - LOCK LID.
- THE CONTRACTOR SHALL SUBMIT A TRENCH EXCAVATION PLAN, SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF OKLAHOMA, FOR ALL LOCATIONS WHERE TRENCH OR SHAFT EXCAVATION EXCEEDS 20 FEET DEEP.
- IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE BYPASS PUMPING DURING SANITARY SEWER CONSTRUCTION. CONTRACTOR SHALL SUBMIT A SEWER BYPASS PLAN PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN SEWER FLOW AT ALL TIMES DURING BYPASS PUMPING OPERATIONS. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. LIQUID LEVELS SHALL NOT BE ALLOWED TO OVERFLOW OR BACK-UP INTO ANY CUSTOMER'S DWELLING OR BUSINESS.
- THE COST OF BYPASS PUMPING INCLUDING THE PUMPS, LINES, LABOR AND ANY OTHER ASSOCIATED ITEMS REQUIRED TO MAINTAIN BYPASS PUMPING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. NO ADDITIONAL PAYMENT WILL BE MADE FOR BYPASS PUMPING. CONTRACTOR IS REQUIRED TO SUBMIT WRITTEN BYPASS PUMPING NOTIFICATION FORM TO SEWER OPERATIONS AND MAINTENANCE AT LEAST ONE WEEK PRIOR TO BYPASS PUMPING. SEE SPECIAL PROVISIONS.
- ALL MANHOLES, PIPE SIZES AND LENGTH, DEFECTS, SURFACE TYPES AND THEIR LOCATIONS SHOWN IN THE PLANS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING THE WORK.
- TO CONTROL EROSION AND SEDIMENTS FROM STORMWATER RUNOFF, FINAL STABILIZATION OF DISTURBED AREAS AND SLOPES SHALL BE ACHIEVED BY ESTABLISHING PERMANENT VEGETATIVE COVER OR INSTALLING APPROVED PERMANENT SURFACE MATERIALS OR STRUCTURES. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 DAYS OF PROJECT COMPLETION. FOR PROJECTS EXCEEDING 40 ACRES OR LOCATED WITHIN ONE (1) MILE OF AN IMPAIRED/TMDL WATERBODY, THE CONTRACTOR SHALL COMPLETE FINAL SOIL STABILIZATION MEASURES WITHIN 7 DAYS OF PROJECT COMPLETION.
- ALL WORK SHALL BE CONDUCTED IN A MANNER THAT COMPLIES WITH THE CITY'S MUNICIPAL STORMWATER DISCHARGE PERMIT (MS4), POLLUTION ORDINANCE, AND STORMWATER MANAGEMENT PROGRAM (SMWP). CONTRACTORS WILL PREVENT THE DISCHARGE OF POLLUTANTS INTO THE CITY'S STORM SEWER SYSTEM OR WATERS OF THE STATE TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION VEHICLE WASH WATERS ARE NOT TO BE DISCHARGED INTO CITY OF TULSA WATERS OR WATERS OF THE STATE.

MANHOLE REHABILITATION NOTES

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

PIPELINE REHABILITATION NOTES

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



REVISION				BY	DATE

PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
	DESIGNED	TI	04/2026	
	SURVEY	TI	04/2026	
PROFILE SCALE:	PROJ. MGR.		5/11	
HORIZONTAL	LEAD ENGR.		5/11	
VERTICAL	FIELD MGR.		6/16	
FILE:	DRAWING:			DATE: APRIL 2026
ATLAS PAGE NO.:				SHEET 4 OF 49 SHEETS

GENERAL NOTES	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK	
SPECIFIC REMEDIATION PLAN, CONTRACT 6	
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
	TETRA TECH 7845 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909

TRAFFIC CONTROL

- ## UTILITIES

- ### PLAN & PROFILE SHEET NOTES

-



	REVISION	BY	DATE	PLAN SCALE:	DRAWN	T1	04/2026	APPROVED:
					DESIGNED	T1	04/2026	
					SURVEY	T1	04/2026	
				PROFILE SCALE: HORIZONTAL	PROJ. MGR.	BV	5/16	
				VERTICAL	LEAD ENGR.	KZ	5/16	
					FIELD MGR.	JTC	5/16	
				FILE:	DRAWING:	----	DATE: APRIL 2023	Thomas B. Orr DESIGN MANAGER
				ATLAS PAGE NO.:			SHEET 5 OF 49 SHEET	

SEE ATLAS 14
21st ST

SEE ATLAS 35
S. Elwood Ave.

S. Peoria Ave.
SEE ATLAS 33

SEE ATLAS 61
26th PL

LEGEND

- MANHOLE/LAMPPOLE REPLACEMENT
- TOPSIDE MANHOLE/LAMPPOLE REPAIR
- INTERIOR MANHOLE REPAIR

APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN

MANHOLE BUBBLE

-
- △
-

- POINT REPAIR
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP

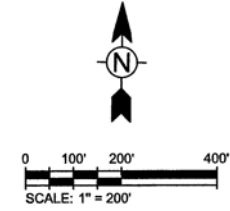
- X
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COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.

MANHOLE #
MANHOLE DEPTH (per atlas)



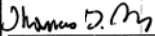
CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 34			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
TETRA TECH			
7845 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.249.3909			
REVISION		BY	DATE
1" = 200'			
PROFILE SCALE: HORIZONTAL		PROJ. MGR.	5/1/26
VERTICAL		LEAD ENGR.	5/1/26
FILE:		FIELD MGR.	5/1/26
ATLAS PAGE NO.: 34		DATE:	APRIL 2026
		DESIGN MANAGER	5/1/26
		SHEET 8 OF 49 SHEETS	

ATLAS 34- LINE REHAB SCHEDULE

[illegible]

ATLAS 34 - LINE SCHEDULE				
TMUA PROJECT NO. ES 2024-04 (2)				
CROW CREEK				
SPECIFIC REMEDIATION PLAN, CONTRACT 6				
CITY OF TULSA, OKLAHOMA				
WATER AND SEWER DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY:				
		TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909		
DATE	PLAN SCALE:	DRAWN	TI	04/20/26
		DESIGNED	TI	04/20/26
		SURVEY	TI	04/20/26
PROFILE SCALE:		PROJ. MGR.	GJ	5/16
HORIZONTAL		LEAD ENGR.	WZ	5/16
VERTICAL		FIELD MGR.	JW	5/16
FILE:	DRAWING:	APPROVED:  SHANNON D. MY DESIGN MANAGER		
ATLAS PAGE NO.:	34	DATE:	APRIL 2026	
		SHEET 9 OF 49 SHEETS		

ATLAS 34- MANHOLE REHAB SCHEDULE

Atlas	Basin	MH	Diameter (Ft)	Depth (Ft) (Rim to Invert)	Grade to Rim	Drop Manhole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fc (EA)	TYPE Gg (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Go (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. (VF)	DROP MANHOLE REPLACEMENT 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. DROP (VF)	MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. (VF)	DROP MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. DROP (VF)	LAMPHOLE REPLACEMENT (EA)	REPLACE LAMPHOLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)	
34	34	034-0606	4	10.10	0	No	2210 S Main St	Concrete Pavement			1																						
34	44	044-0005	4	9.12	0.38	No	2720 Riverside Dr	Grass/Dirt	1									1														1	1
34	44	044-0028	4	10.8	0	No	2347 Riverside Dr	Concrete Pavement				1																					
34	44	044-0031	4	9.76	1.75	Yes	39 E 24th St S	Grass/Dirt		1																							
34	44	044-0033	4	9.55	0.26	No	87 E 24th St S	Grass/Dirt				1																					
34	44	044-0034	4	14.69	0	No	25 E 25th St	Grass/Dirt	1										1														
34	44	044-0035	4	15.76	0	Yes	2424 S Boston Ave	Grass/Dirt						197.9																			
34	44	044-0036	0.667	6.01	0	No	95 E 24th St S	Grass/Dirt													1												
34	44	044-0038	4	15.3	0	No	130 E 24th St	Grass/Dirt	1																								
34	44	044-0040	4	8.1	0	No	125 E 24th St	Grass/Dirt	1							1																	
34	44	044-0041	4	9.28	0	No	125 E 24th St	Grass/Dirt	1							1																	
34	44	044-0043	4	6.30	0	No	2 Woodward Blvd	Grass/Dirt	1							1																	
34	44	044-0044	4	8.32	0.48	No	135 E 24th St	Grass/Dirt		1						1																	
34	44	044-0045	4	8.48	0.24	No	2509 S Boston Pl	Grass/Dirt	1																								
34	44	044-0046	4	11.75	0	No	33 E 26th St	Grass/Dirt	1																								
34	44	044-0049	4	13.88	0.20	No	2504 S Boston Pl	Grass/Dirt	1																								
34	44	044-0050	4	8.6	0	No	23 E 26th Pl	Grass/Dirt	1																								
34	44	044-0051	4	10.96	0	No	116 E 26th St	Grass/Dirt	1																								
34	44	044-0052	4	15.3	0	Yes	130 E 26th St	Grass/Dirt	1							1																	
34	44	044-0053	4	12.5	1.1	No	133 E 26th Pl	Grass/Dirt								1																	
34	44	044-0054	4	11.85	0	No	32 E 26th Pl	Grass/Dirt					1																				
34	44	044-0055	4	8.32	0	No	116 E 26th Pl	Grass/Dirt	1										1														
34	44	044-0056	4	6.7	-0.15	No	116 E 26th Pl	Grass/Dirt	1																								
34	44	044-0057	4	14.18	0	No	135 E 26th Ct	Grass/Dirt	1							1																	
34	44	044-0058	4	6.50	0	No	2641 S Boston Pl	Grass/Dirt	1							1																	
34	44	044-0059	4	7.9	0	No	2609 S Boston Pl	Grass/Dirt	1																								
34	44	044-0066	4	6.2	0	No	2651 S Boston Pl	Grass/Dirt								1																	
34	44	044-0068	4	4.86	0.32	No	2663 S Boston Pl	Grass/Dirt	1							1																	
34	44	044-0071	4	11.18	0	No	2526 S Cincinnati Ave	Grass/Dirt								1																	
34	44	044-0075	0.667	11.42	0	No	2614 S Cincinnati Ave	Grass/Dirt																									
34	44	044-0176	4	11.92	0	No	2405 S Peoria Ave	Concrete Collar				1																					
34	44	044-0499	4	10.25	0	No	15 E 26th St	Grass/Dirt						128.7				1															
34	44	044-0565	4	11.37	0	No	2642 S Boston Ave	Grass/Dirt				1				1		1															
34	44	044-0566	4	10.47	0	No	2642 S Boston Ave	Grass/Dirt			1							1															
34	44	044-0629	4	12.3	0.99	No	2550 S Cincinnati Ave	Grass/Dirt			1																						1
34	44	044-0675	4	9.95	0	No	4 E 26th St	Grass/Dirt	1																								

REHABILITATION METHODS

- TYPE A

REPLACEMENT OF MANHOLE COVER, FRAME AND FRAME SEAL (418)
- TYPE B

REPLACEMENT OF MANHOLE FRAME SEAL (418)
- TYPE C

REPLACEMENT OF MANHOLE COVER, FRAME, FRAME SEAL AND CHIMNEY (418)
- TYPE D

REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY (418)
- TYPE Fc

PRECAST CORBEL SECTION (418)
- TYPE Gg

INTERIOR MANHOLE WALL REHABILITATION (421)
- TYPE Gh

BENCH AND INVERT REHABILITATION (419)
- TYPE Gk

PIPE SEAL REHABILITATION (421)
- TYPE Go

PLUG LIFT HOLES, PLUG HOLES (419)

- TYPE Gp

SEAL PRE--CAST JOINTS (421)
- TYPE Gr

PATCH HOLE (419)
- TYPE Gs

EPOXY COATING (421)
- TYPE L

REPLACEMENT OF MANHOLE STEPS -- AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER--MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)
- TYPE I

CLEAN MANHOLE (Special)
- MANHOLE REPLACEMENT

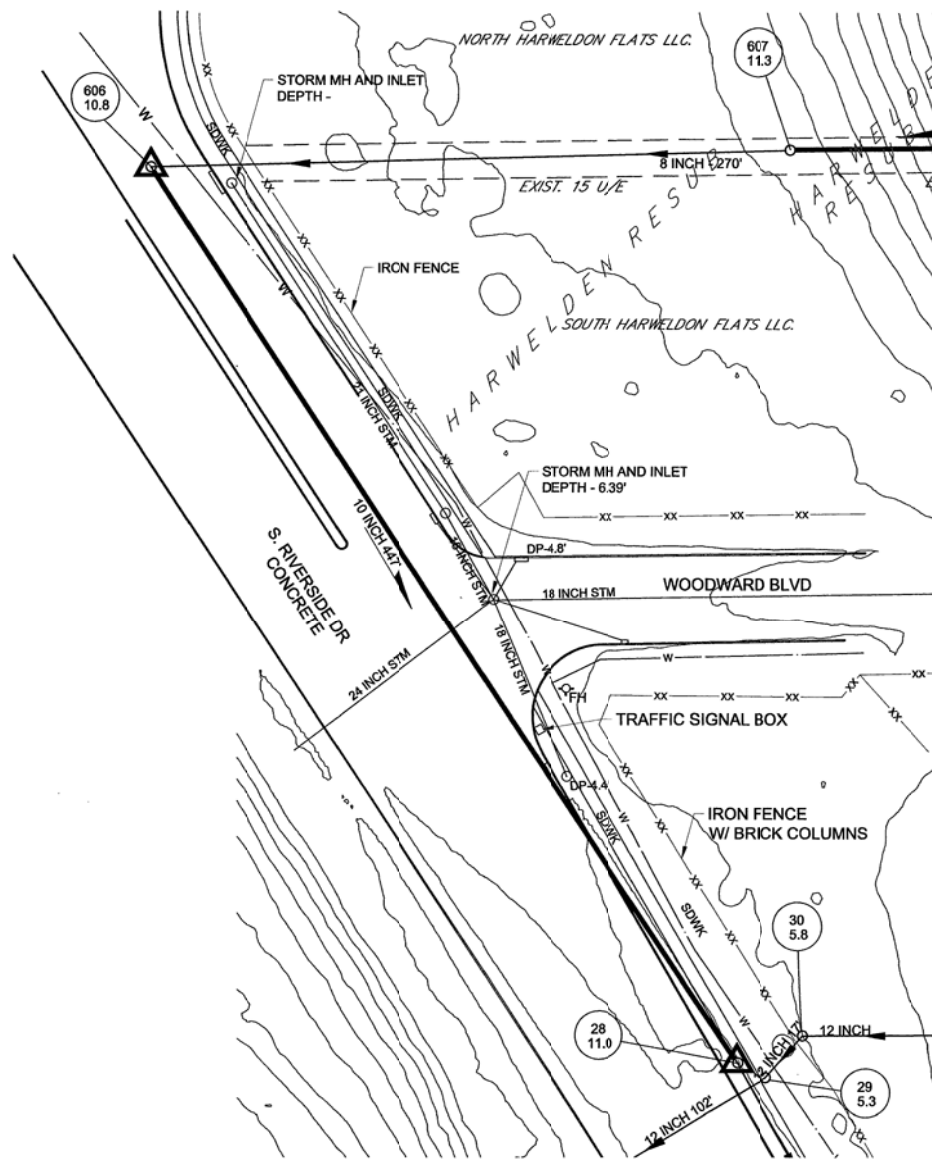
COMPLETE MANHOLE REPLACEMENT (416)
- MANHOLE REPLACEMENT

ADDITIONAL FOOTAGE (416)
- LAMPHOLE REPLACEMENT

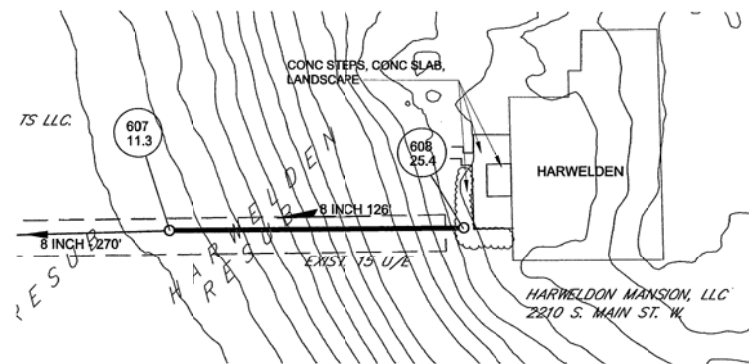
LAMPHOLE REPLACEMENT (417)



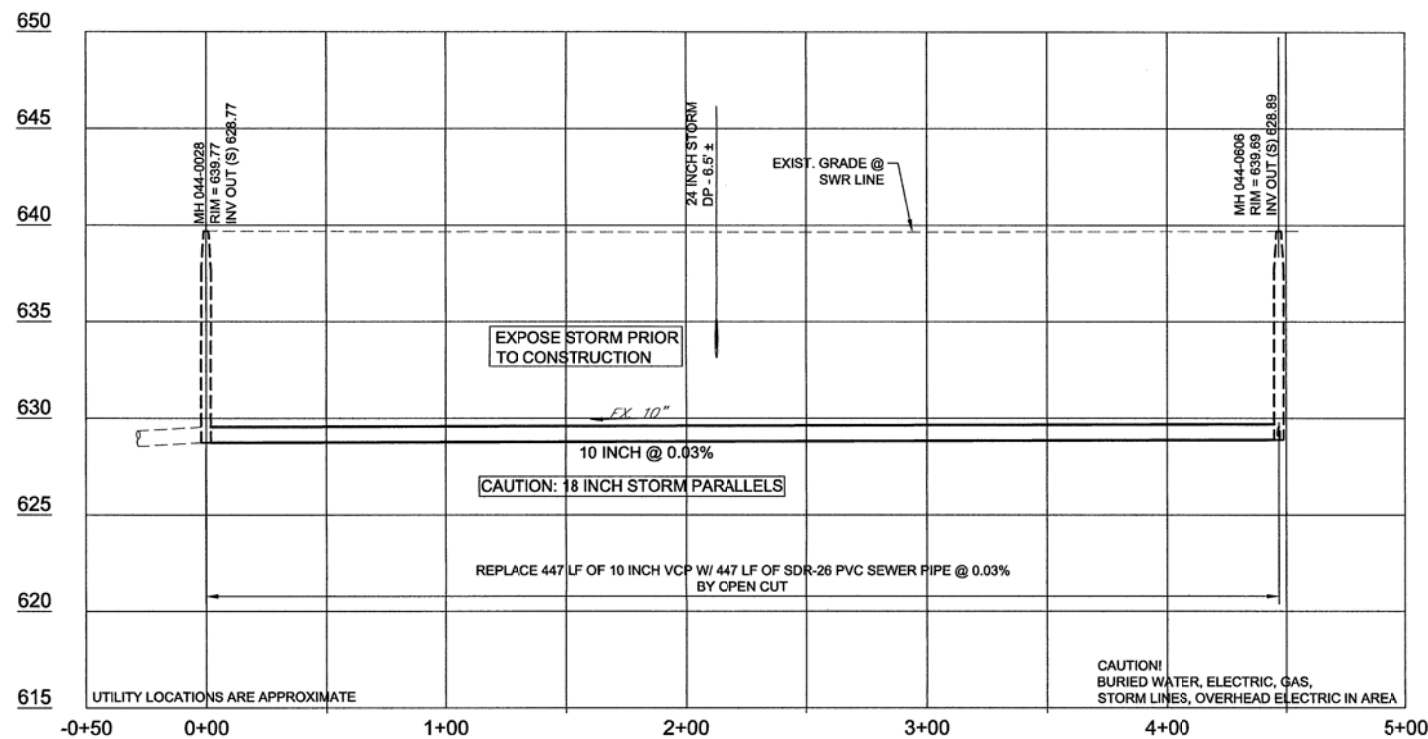
ATLAS 34 - MANHOLE SCHEDULE	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK	
SPECIFIC REMEDIATION PLAN, CONTRACT 6	
CITY OF TULSA, OKLAHOMA	
WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909	
REVISION	BY DATE
PLAN SCALE:	DRAWN T1 04/2026
	DESIGNED T1 04/2026
	SURVEY T1 04/2026
PROFILE SCALE:	PROJ. MGR. <i>BM</i> 5/1/26
HORIZONTAL	LEAD ENGR. <i>BM</i> 5/1/26
VERTICAL	FIELD MGR. <i>BM</i> 5/1/26
FILE:	DRAWING: <i>BM</i> 5/1/26
ATLAS PAGE NO.: 34	
APPROVED: <i>Shamus B. Mc</i> DESIGN MANAGER DATE: APRIL 2026 SHEET 10 OF 49 SHEETS	



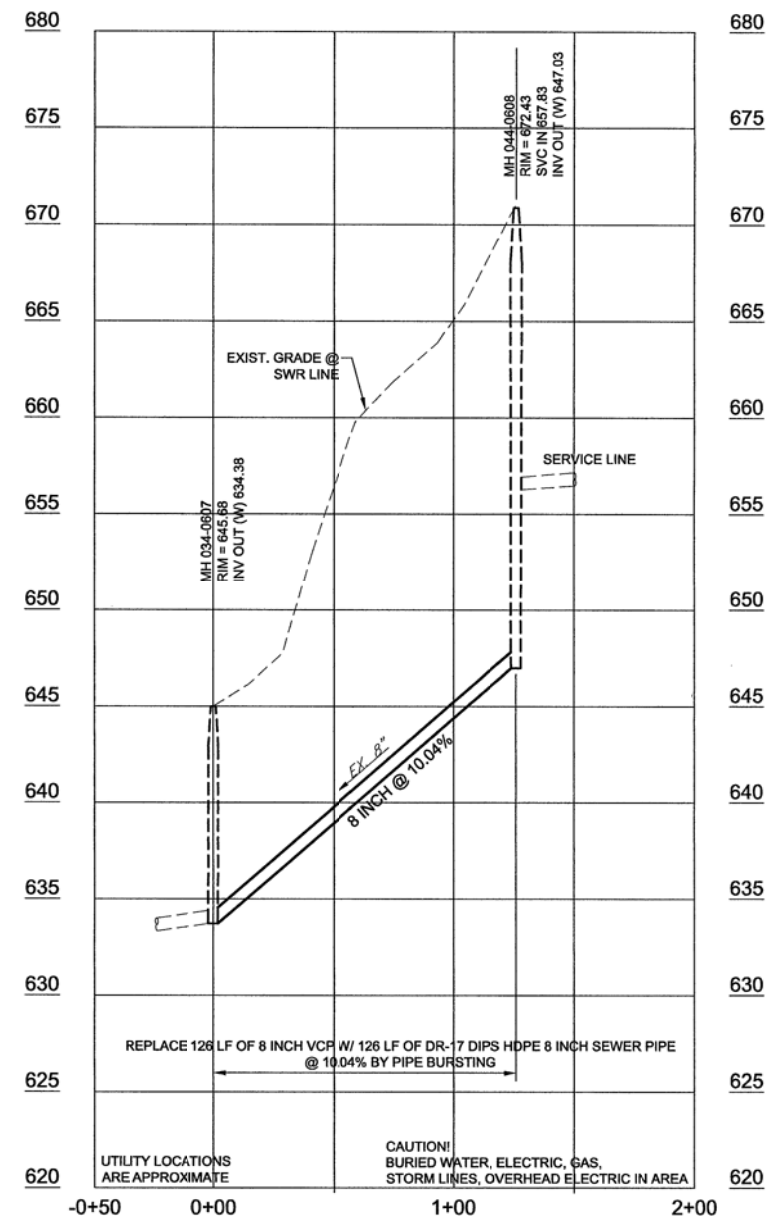
034-0606 - 034-0028
OPEN CUT



044-0608 - 044-0607
PIPE BURST



044-0606 - 044-0028
OPEN CUT



044-0608 - 044-0607
PIPE BURST

POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

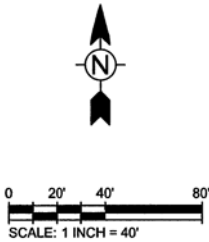
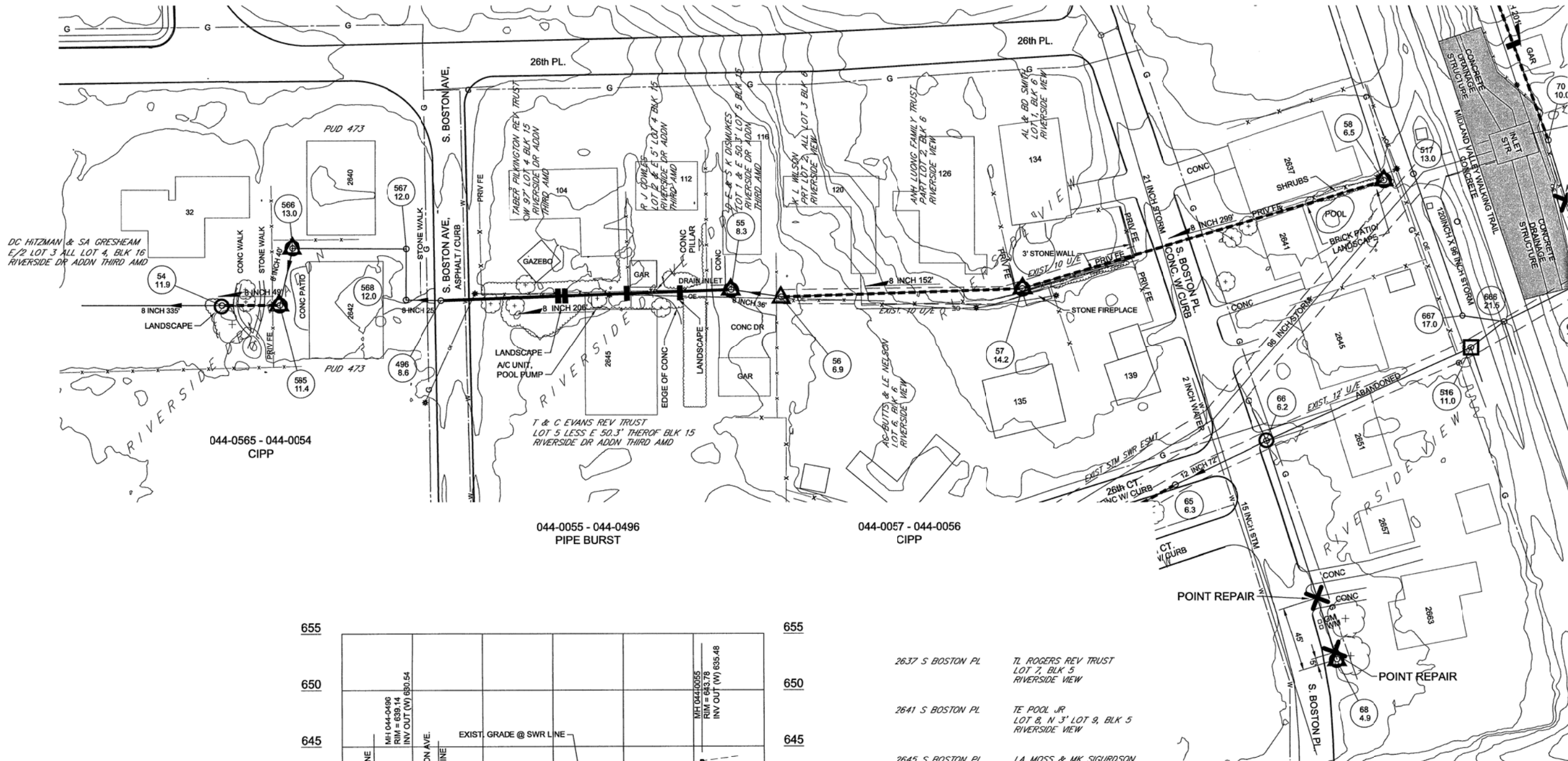
NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



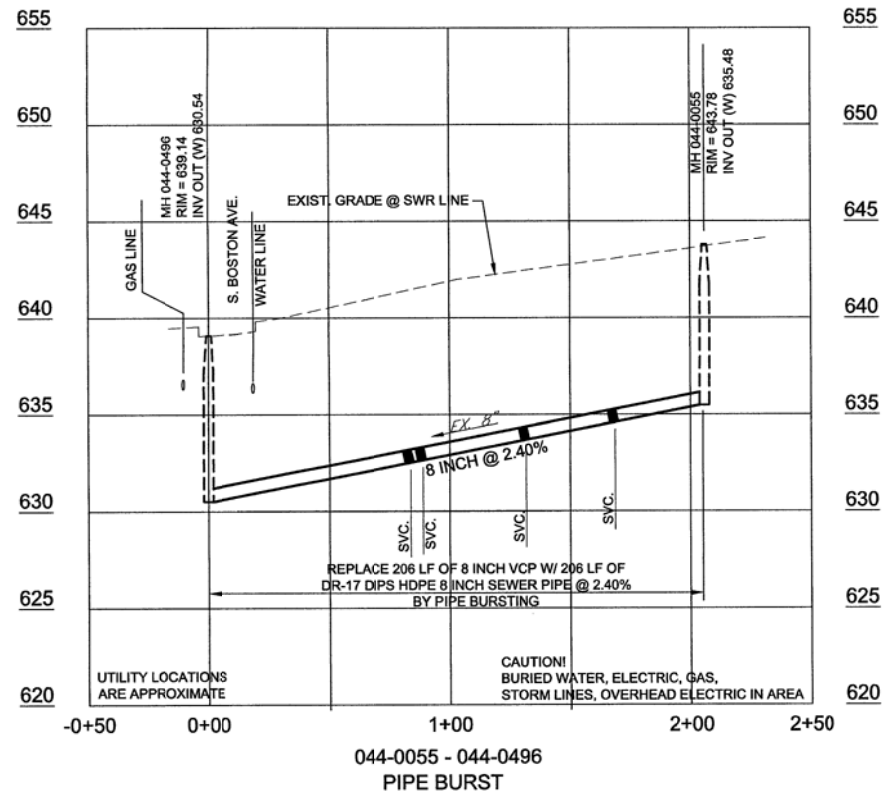
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				SURVEY	T1	04/2020	FIELD MGR.	7/16/26		
				FILE:			DRAWING:			
				ATLAS PAGE NO.:		34	DATE:		APRIL 2026	
									SHEET 11 OF 49 SHEETS	

ATLAS 34 - DETAILS 1
TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



044-0058 - 044-0057
CIPP

044-0068 - 044-0066
POINT REPAIR



- 2637 S BOSTON PL TL ROGERS REV TRUST LOT 7, BLK 5 RIVERSIDE VIEW
- 2641 S BOSTON PL TE POOL JR LOT 8, N 3' LOT 9, BLK 5 RIVERSIDE VIEW
- 2645 S BOSTON PL LA MOSS & MK SIGURDSON S 62' LOT 9 N 10' LOT 10, BLK 5 RIVERSIDE VIEW
- 2651 S BOSTON PL DF DAVIES S 55' LOT 10 N 12' LOT 11, BLK 5 RIVERSIDE VIEW
- 139 E 26th CT DL TIEU & WS DOWN LOT 14 BLK 6 RIVERSIDE VIEW
- 135 E 26th CT J & K OMEILIA TRUST LOT 5, BLK 6 RIVERSIDE VIEW

- POINT REPAIR
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP

APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 34 - DETAILS 4

TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

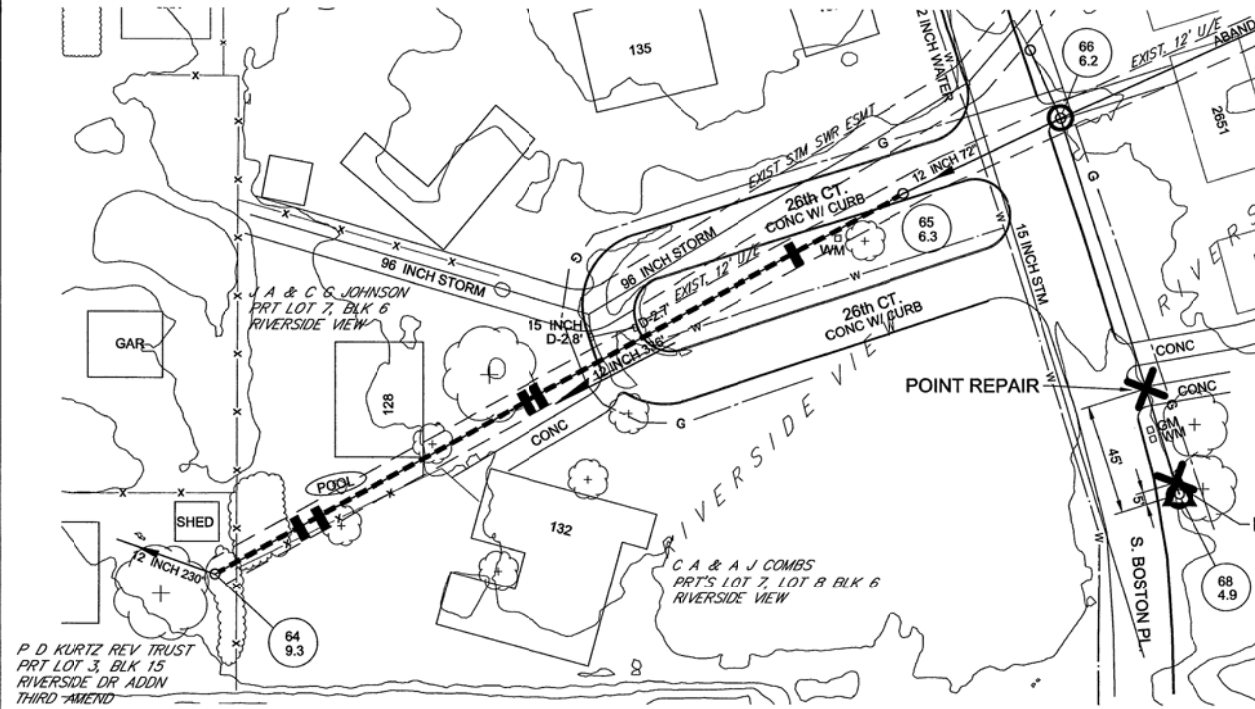
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

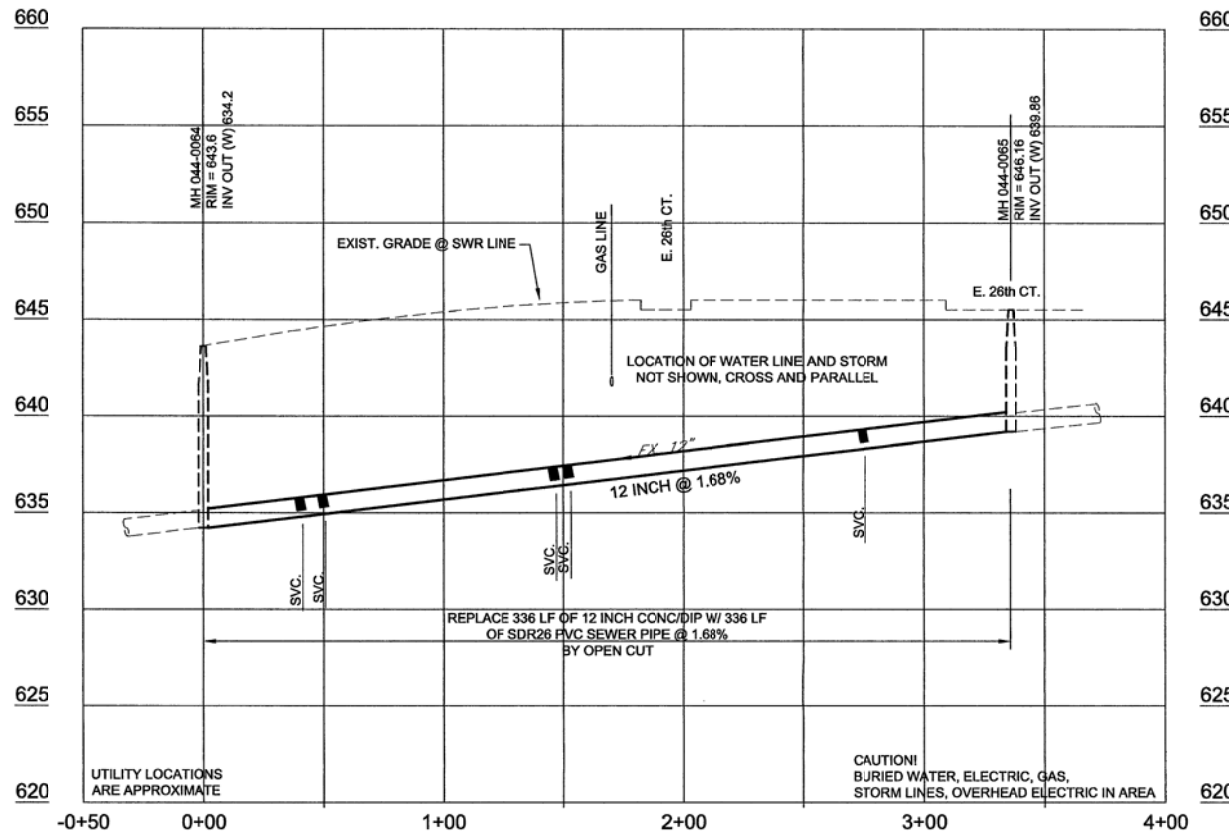
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				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	8/1	5/26	
			HORIZONTAL	LEAD ENGR.	5/26		
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			1" = 5'				
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	34			

DESIGN MANAGER
DATE: APRIL 2026
SHEET 14 OF 49 SHEETS



044-0065 - 044-0064
CIPP

044-0068 - 044-0067
POINT REPAIR

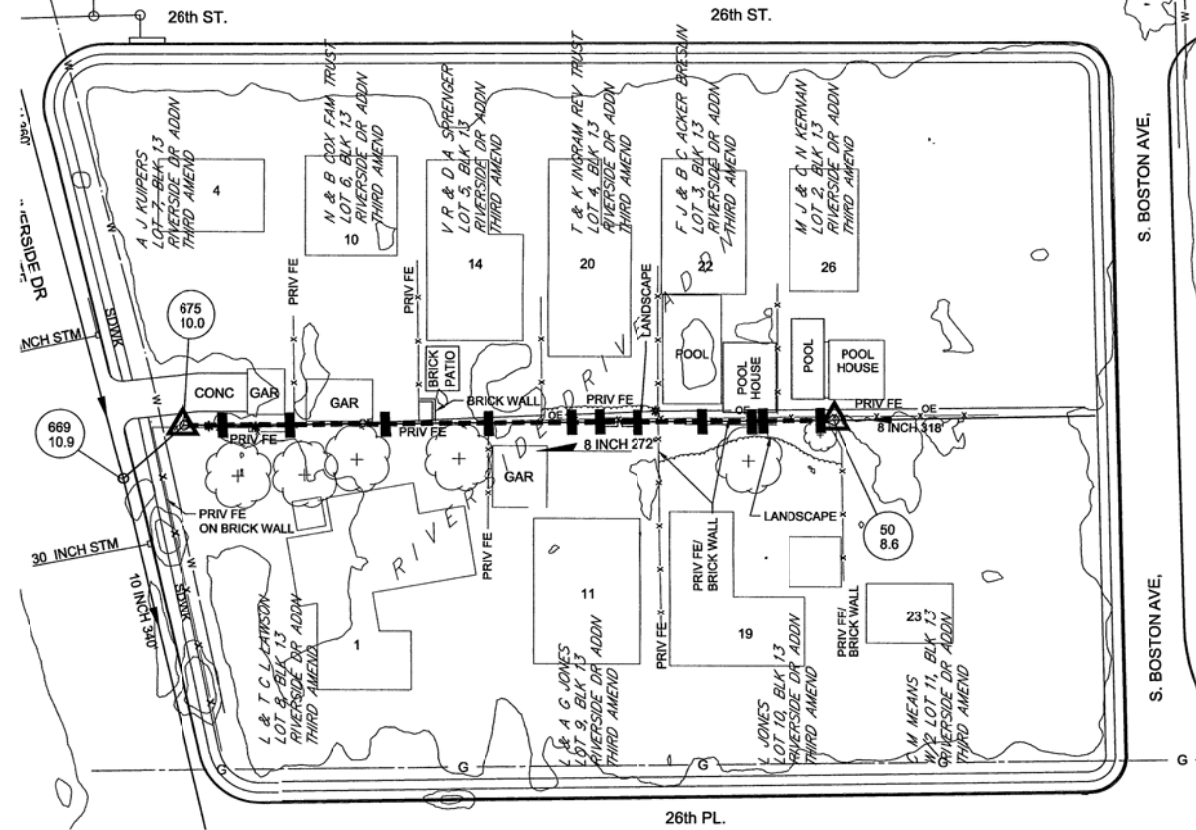


044-0065 - 044-0064
CIPP

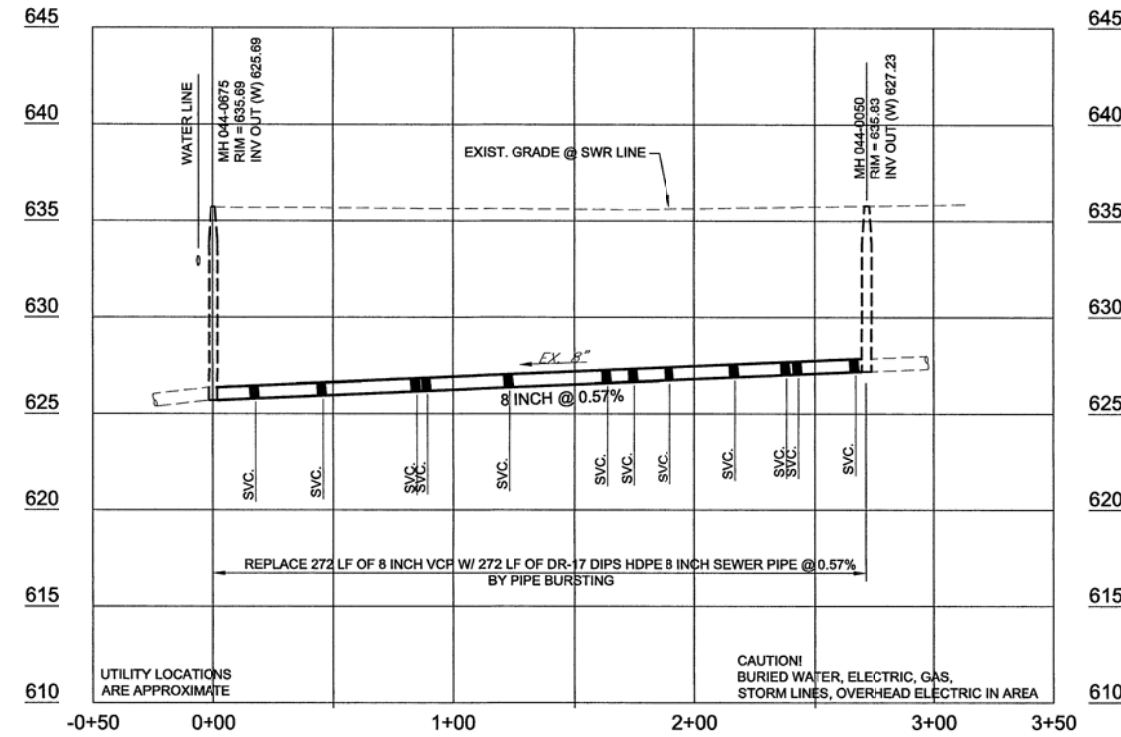
POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP



044-0050 - 044-0075
CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

0 20' 40' 80'
SCALE: 1 INCH = 40'

044-0050 - 044-0075
CIPP

SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 34 - DETAILS 5

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

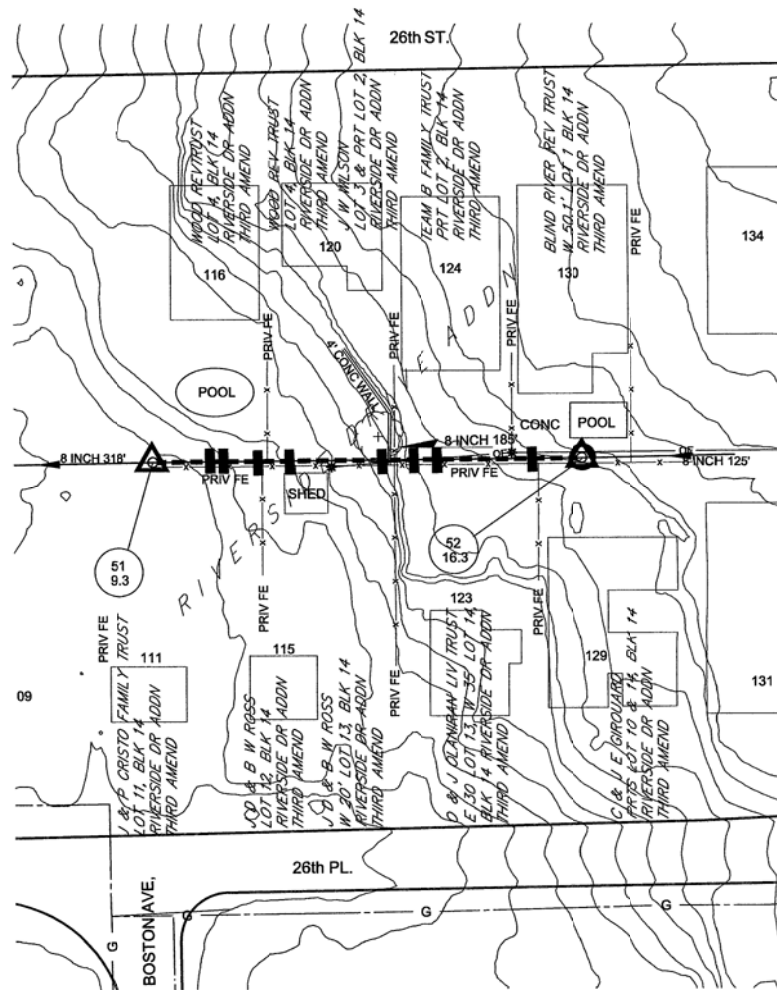
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

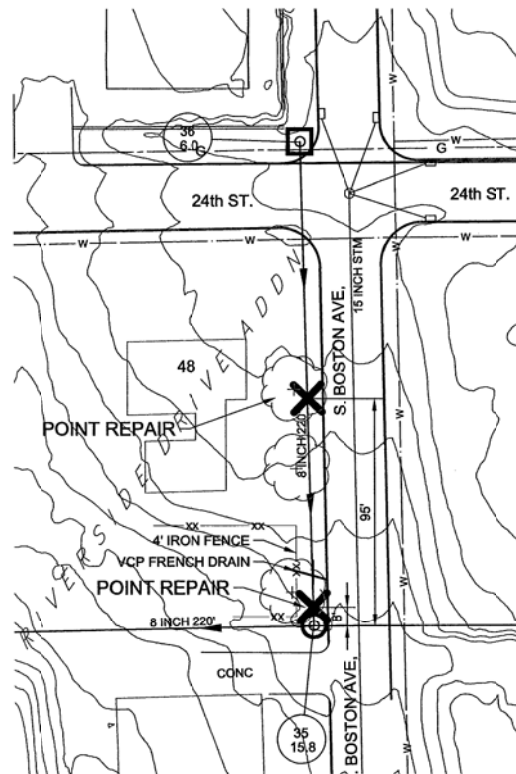
TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



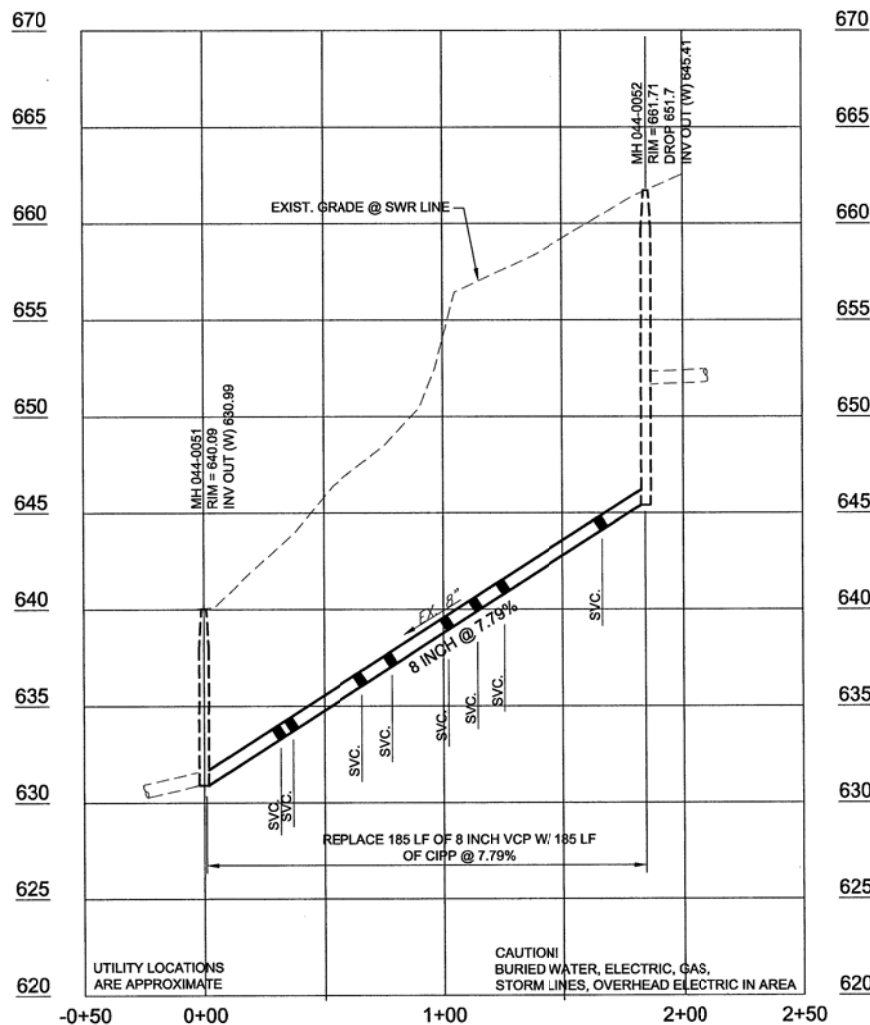
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			FILE:	DRAWING:			DATE: APRIL 2024
			ATLAS PAGE NO.:	34			SHEET 15 OF 49 SHEETS



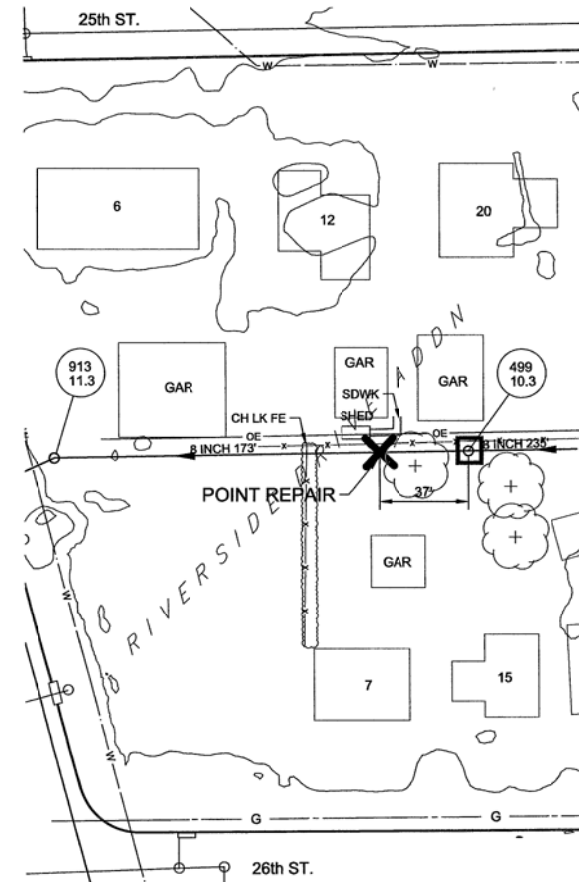
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CIPP



044-0036 - 044-0035
POINT REPAIR

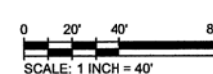


044-0052 - 044-0051
CIPP



044-0499 - 044-0913
POINT REPAIR

- POINT REPAIR
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 34 - DETAILS 6

TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

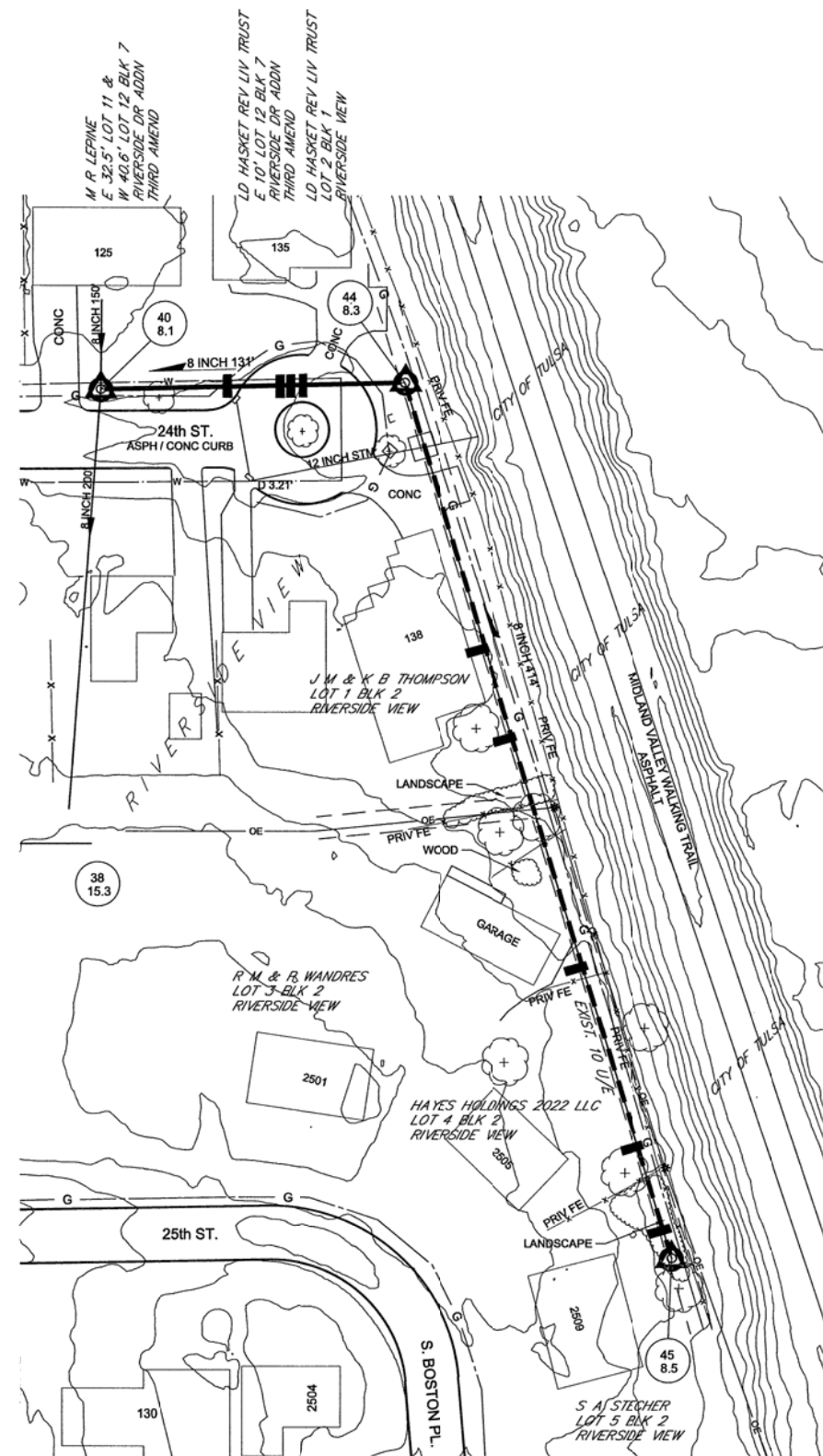
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:



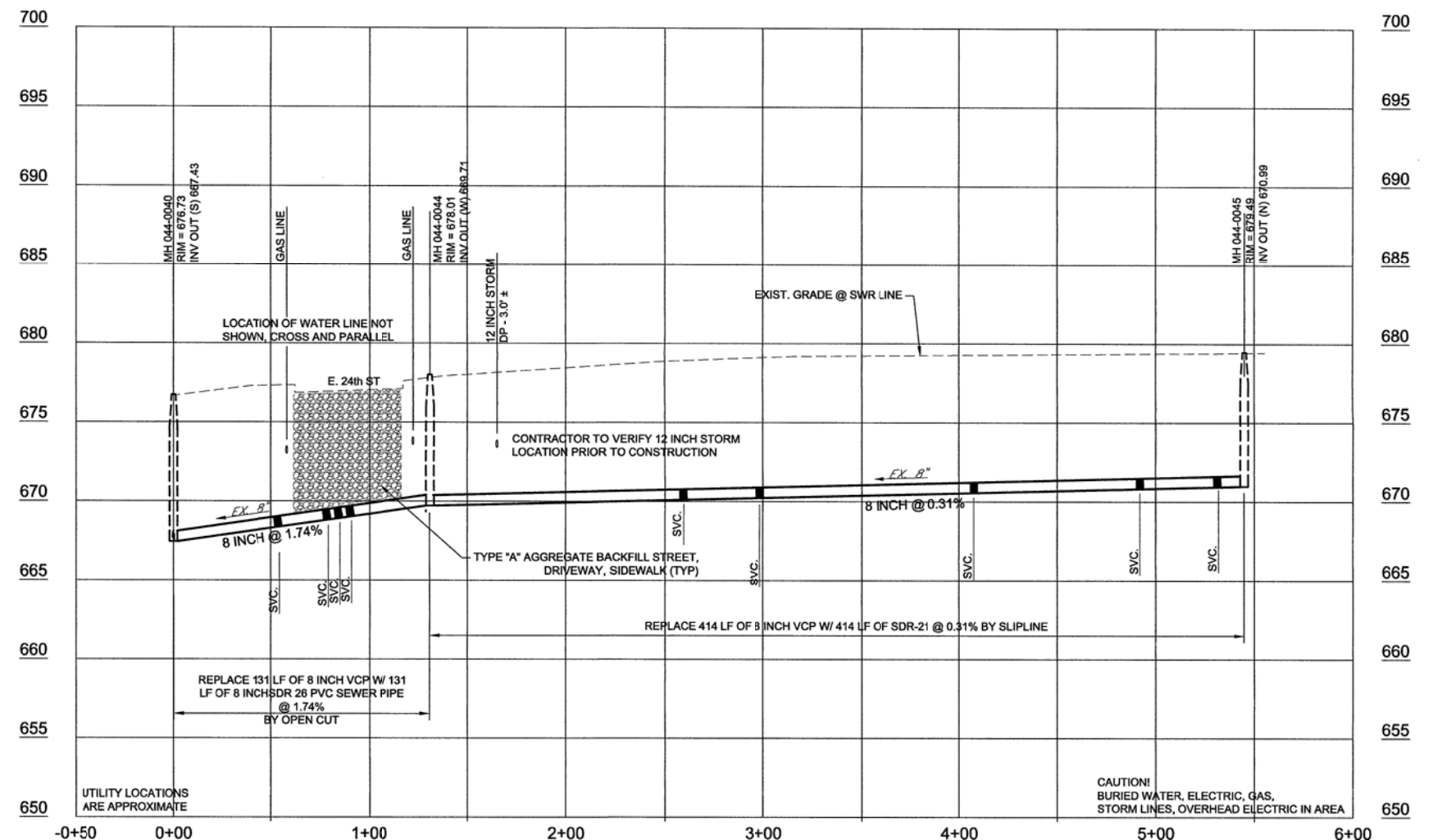
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			VERTICAL	LEAD ENGR.	5/26		
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			FILE:	DRAWING:			
			ATLAS PAGE NO.:	34			

DESIGN MANAGER
DATE: APRIL 2026
SHEET 16 OF 49 SHEETS



044-0044 - 044-0040
OPEN CUT

044-0045 - 044-0044
SLIPLINE



044-0044- 044-0040
OPEN CUT

044-0045- 044-0044
SLIPLINE

POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

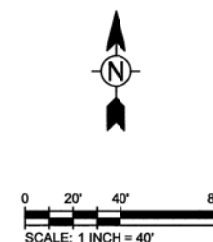
SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
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GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
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SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 34 - DETAILS 7

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

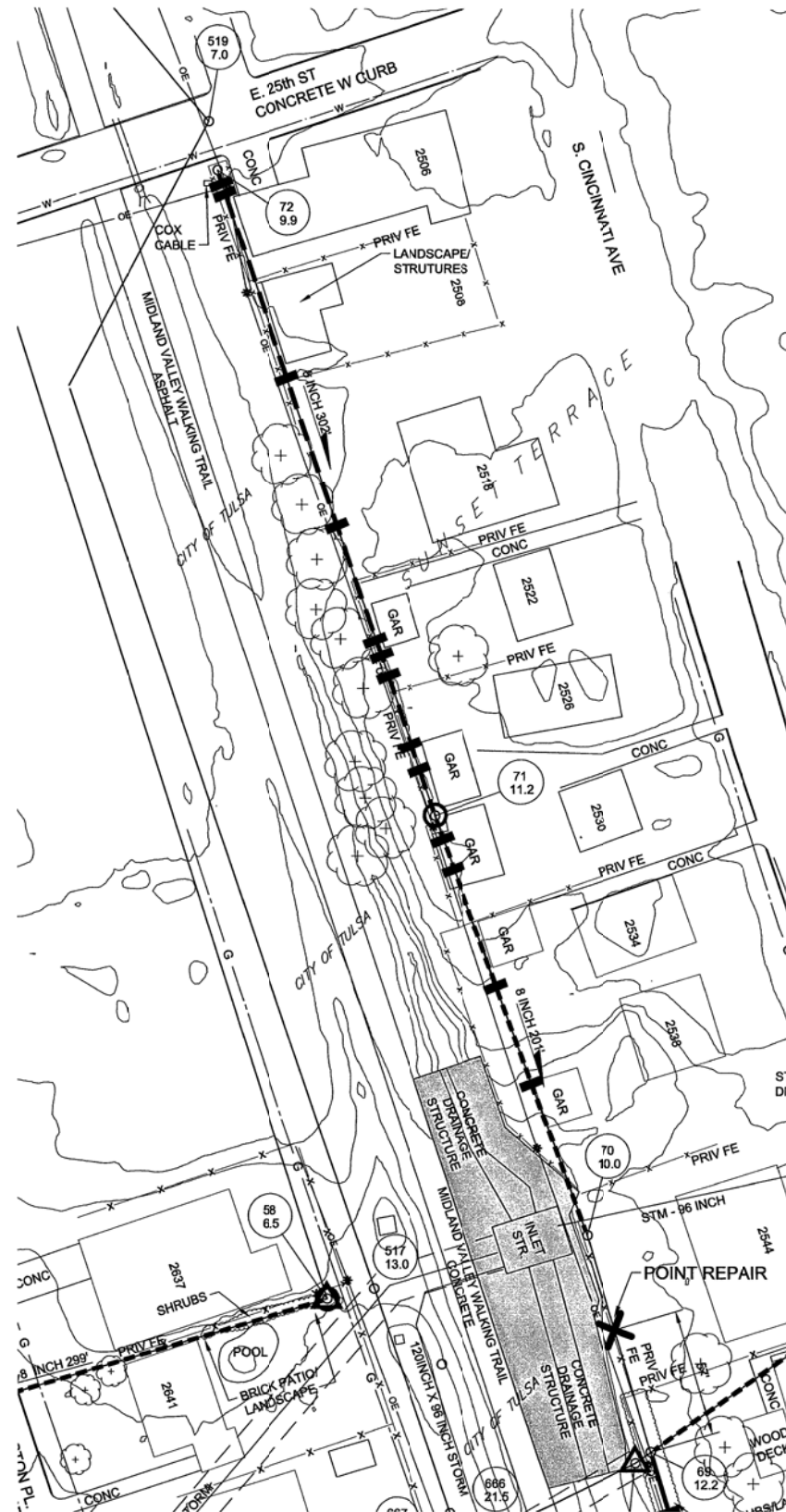
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 83rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	8/2	5/26	
			HORIZONTAL	LEAD ENGR.	8/2	5/26	
			1" = 40'	FIELD MGR.	8/2	5/26	
			VERTICAL				
			1" = 5'				
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			ATLAS PAGE NO.:	34			

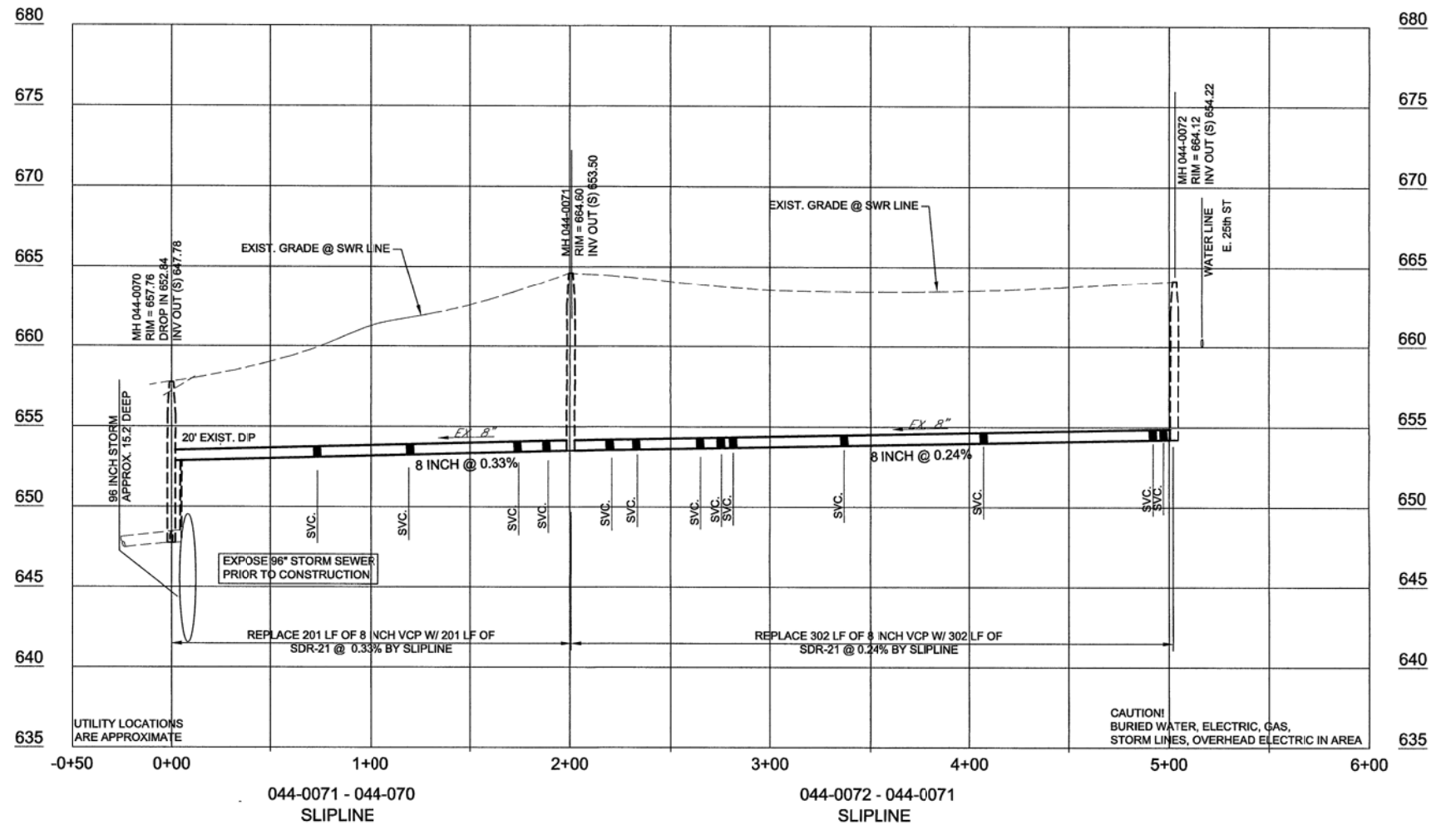
DESIGN MANAGER
DATE: APRIL 2026
SHEET 17 OF 49 SHEETS



044-0072 - 044-0071
SLIPLINE

044-0071 - 044-0070
SLIPLINE

044-0070 - 044-0069
POINT REPAIR



- 2506 S. CINCINNATI AVE. E D & D K WALDEN
LOT 8 BLK 6
SUNSET TERRACE
- 2508 S. CINCINNATI AVE. G W OLTMAN & F E DUSSINGER
LOT 9 BLK 6
SUNSET TERRACE
- 2518 S. CINCINNATI AVE. G W OLTMAN & F E DUSSINGER
LOT 9, 10 BLK 6
SUNSET TERRACE
- 2522 S. CINCINNATI AVE. M J & R T STORM
LOT 12 & S 6.5' LOT 11 BLK 6
SUNSET TERRACE
- 2526 S. CINCINNATI AVE. P J PHILLIPS & T D MONROE
LOT 13 BLK 6
SUNSET TERRACE
- 2530 S. CINCINNATI AVE. L G JANGER
LOT 14 BLK 6
SUNSET TERRACE
- 2534 S. CINCINNATI AVE. C & T WALDEN FAMILY TRUST
LOT 15 BLK 6
SUNSET TERRACE
- 2538 S. CINCINNATI AVE. NUGGET HOLDINGS LLC
LOT 16 & N/2 LOT 17 BLK 6
SUNSET TERRACE
- 2544 S. CINCINNATI AVE. M & J DREYER
S/2 LOT 17 & LOT 18 & N 20' LOT 19 BLK 6
SUNSET TERRACE

- POINT REPAIR X
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP



0 20' 40' 80'
SCALE: 1 INCH = 40'

APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
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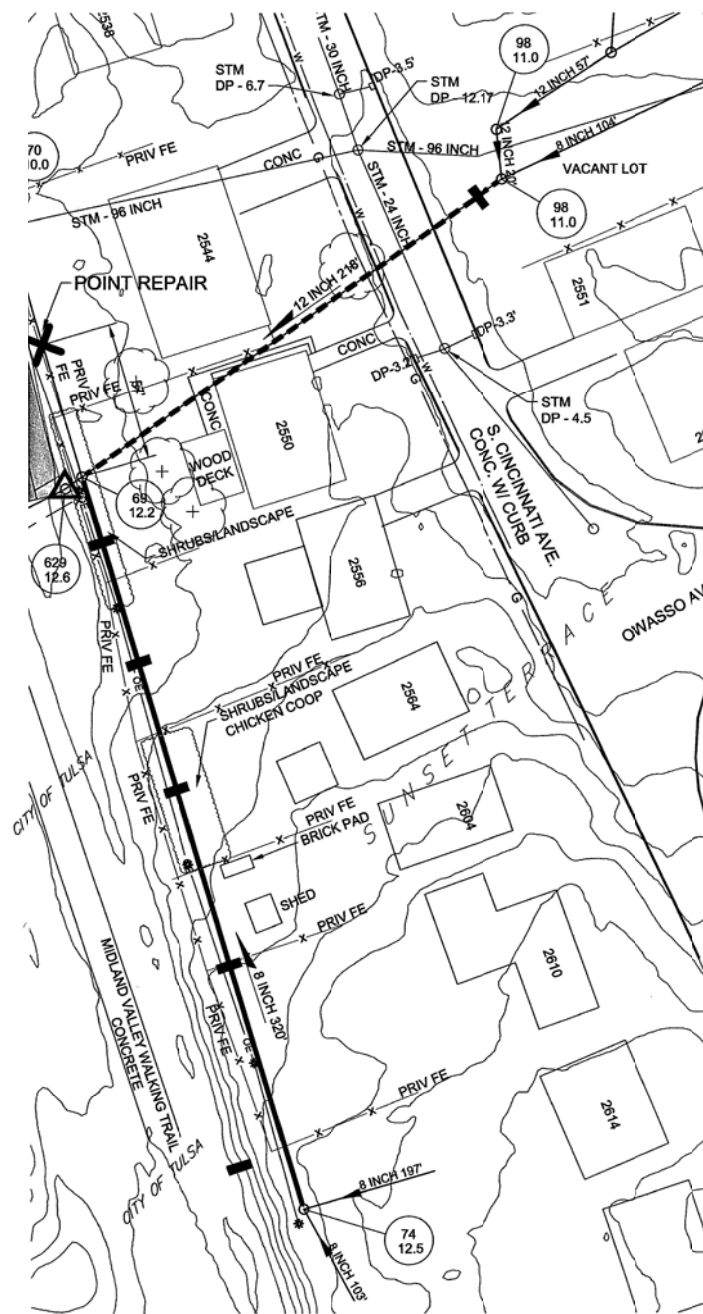
GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV



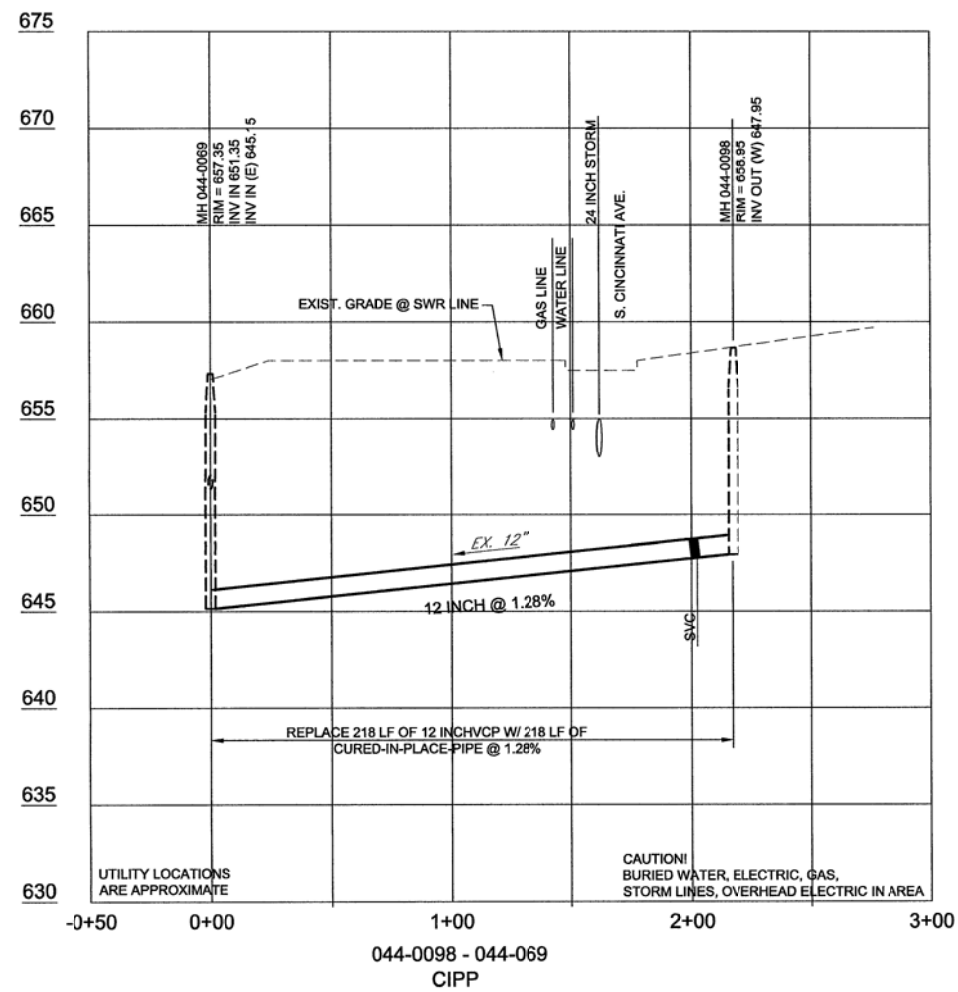
ATLAS 34 - DETAILS 8	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK	
SPECIFIC REMEDIATION PLAN, CONTRACT 6	
CITY OF TULSA, OKLAHOMA	
WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	

REVISION	BY	DATE	PLAN SCALE:	TITLE	DATE	APPROVED:
			1" = 40'	DRAWN	04/2026	
				DESIGNED	04/2026	
				SURVEY	04/2026	
			PROFILE SCALE:	PROJ. MGR.	04/26	
			1" = 40'	LEAD ENGR.		
			1" = 5'	FIELD MGR.		
			FILE:	DRAWING:		
			ATLAS PAGE NO.: 34			
						SHEET 18 OF 49 SHEETS

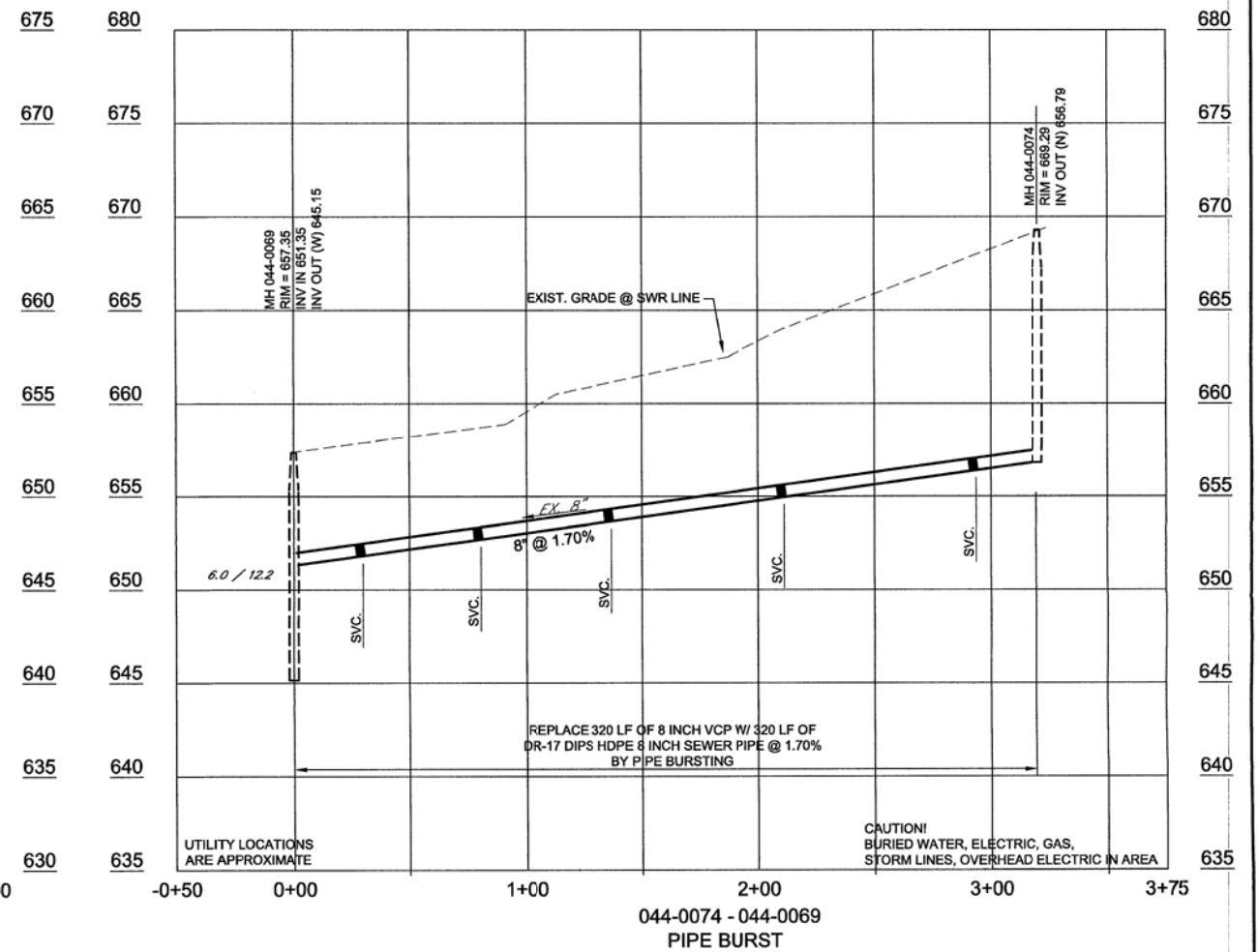


044-0074 - 044-0069
PIPE BURST

044-0098 - 044-0069
CIPP



- 2544 S. CINCINNATI AVE. M & J DREVER
S/2 LOT 17 ALL LOT 18 N 20' LOT 19, BLK 6
SUNSET TERRACE
- 2550 S. CINCINNATI AVE. S L PARKER & T L TRIPP
S 30' LOT 19 & N 40' LOT 20 BLK 6
SUNSET TERRACE
- 2550 S. CINCINNATI AVE. S D WAMS
S 10' LOT 20 ALL LOT 21 BLK 6
SUNSET TERRACE
- 2564 S. CINCINNATI AVE. J B & E A EDWARDS
LOT 22 N 14' LOT 23 BLK 6
SUNSET TERRACE
- 2604 S. CINCINNATI AVE. S T AVECILLA
S 48.6 LOT 23 BLK 6
SUNSET TERRACE
- 2610 S. CINCINNATI AVE. M SWENSON & N BLEICHER
LOT 24, N 27' LOT 25 BLK 6
SUNSET TERRACE
- 2614 S. CINCINNATI AVE. GILBREATH FAMILY TRUST
S 23' LOT 25 & 26 LESS TRI BEG SE COR LOT
26 W 132.8' S 12' E 131.93' TO BEG BLK 6
SUNSET TERRACE
- 2551 S. CINCINNATI AVE. EVA A WELCH REV TRUST
LOT 12 BLK 17
SUNSET TERRACE



- POINT REPAIR X
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST —————
- SLIPLINE OR CIPP - - - - -



0 20' 40' 80'
SCALE: 1 INCH = 40'

APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 34 - DETAILS 9

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
			HORIZONTAL	SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	9/ 5/26		
			1" = 40'	LEAD ENGR.	9/ 5/26		
			VERTICAL	FIELD MGR.	9/ 5/26		
			1" = 5'				
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	34			

DESIGN MANAGER
DATE: APRIL 2026
SHEET 19 OF 49 SHEETS

SEE ATLAS 34
26th ST

SEE ATLAS 62
S. Elwood Ave.

S. Peoria Ave.
SEE ATLAS 60

31st ST.
SEE ATLAS 96

LEGEND

- MANHOLE/LAMPHOLE REPLACEMENT

TOPSIDE MANHOLE/LAMPHOLE REPAIR

INTERIOR MANHOLE REPAIR

APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN

MANHOLE BUBBLE
- MANHOLE #

MANHOLE DEPTH (per atlas)
- POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP

COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

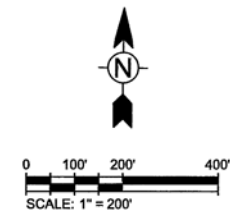
NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.
- X

—————

■■■■■■■■

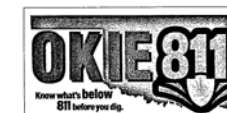
CNL

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 61			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909			
REVISION		BY	DATE
PLAN SCALE:		DRAWN	TJ 04/2026
DESIGNED		TJ 04/2026	
SURVEY		TJ 04/2026	
PROFILE SCALE:		PROJ. MGR.	BJ 5/26
HORIZONTAL		LEAD ENGR.	BJ 5/26
VERTICAL		FIELD MGR.	BJ 6/16
FILE:		DRAWING:	
ATLAS PAGE NO.:		61	
APPROVED:		DATE:	APRIL 2026
SHEET 20 OF 49 SHEETS			

ATLAS 61- LINE REHAB SCHEDULE

[illegible]

ATLAS 61 - LINE SCHEDULE			
TMUA PROJECT NO. ES 2024-04 (2)			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		TETRA TECH 7845 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909	
DATE	PLAN SCALE:	DRAWN	T1 04/2026
		DESIGNED	T1 04/2026
		SURVEY	T1 04/2026
PROFILE SCALE:	PROJ. MGR.	<i>W</i>	5/26
HORIZONTAL	LEAD ENGR.	<i>6/2</i>	5/26
VERTICAL	FIELD MGR.	<i>Jim</i>	6/6
FILE:	DRAWING:	APPROVED: <i>Thomas W. [Signature]</i> DESIGN MANAGER	
ATLAS PAGE NO.:	61	DATE:	APRIL 2026
		SHEET	21 OF 49 SHEETS

ATLAS 61 - MANHOLE REHAB SCHEDULE

Atlas	Basin	MH	Diameter (ft)	Depth (ft) (Rim to Invert)	Grade to Rim	Drop Manhole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fc (EA)	TYPE Gg (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Go (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. (VF)	DROP MANHOLE REPLACEMENT 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. DROP (VF)	MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. (VF)	DROP MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. DROP (VF)	LAMPHOLE REPLACEMENT (EA)	REPLACE LAMPHOLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)
61	45	045-0019	4	12.35	2.8	No	145 E 29th Pl	Grass/Dirt													1	6.4									1	
61	45	045-0020	4	12.7	4.45	No	2920 S Cincinnati Ave	Grass/Dirt	1									1													1	
61	45	045-0096	4	9.05	0.22	No	2949 Woodward Blvd	Grass/Dirt													1	3.1									1	
61	45	045-0097	0.66	6.82			2949 Woodward Blvd	Grass/Dirt													1	0.8										
61	45	045-0101	4	4.1	0	No	2965 S Cincinnati Ave	Grass/Dirt	1				51.5																		1	
61	45	045-0106	4	6.04	0.40	No	3016 S Boston Pl	Grass/Dirt																							1	
61	45	045-0107	4	5.73	0	No	3032 S Boston Pl	Grass/Dirt	1												1										1	
61	45	045-0116	4	5.42	0	No	3003 S Boston Pl	Grass/Dirt	1										1												1	
61	45	045-0137	4	5.96	0	No	3030 S Detroit Ave	Grass/Dirt			1																				1	
61	45	045-0138	4	3.56	0	No	3002 S Detroit Ave	Grass/Dirt													1										1	
61	45	045-0147	4	9.75	0	No	3054 S Madison Ave	Grass/Dirt													1	3.8									1	
61	45	045-0148	4	6.74	0	No	3034 S Madison Ave	Grass/Dirt	1																						1	
61	45	045-0149	4	5.93	0	No	2953 S Detroit Ave	Grass/Dirt	1							1															1	
61	45	045-0150	4	2.84	0	No	2949 S Detroit Ave	Concrete Pavement													1										1	
61	45	045-0153	4	13.23	0	No	3015 S Madison Ave	Grass/Dirt													1	7.2									1	
61	45	045-0156	4	11.34	0	No	1257 E 30th Pl	Grass/Dirt	1																							
61	45	045-0158	4	13.55	-0.15	Yes	3041 Woodward Blvd	Grass/Dirt								1																
61	45	045-0160	4	7.40	1.00	No	1227 E 31st St	Grass/Dirt	1																							
61	45	045-0161	4	7.10	0.34	No	3046 S Peoria Ave	Grass/Dirt	1																							
61	45	045-0838	4	10.41	0.50	No	2950 Woodward Blvd	Grass/Dirt			1																					

REHABILITATION METHODS

- TYPE A
REPLACEMENT OF MANHOLE COVER, FRAME AND FRAME SEAL (418)

TYPE B
REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C
REPLACEMENT OF MANHOLE COVER, FRAME, FRAME SEAL AND CHIMNEY (418)

TYPE D
REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY (418)

TYPE Fc
PRECAST CORBEL SECTION (418)

TYPE Gg
INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh
BENCH AND INVERT REHABILITATION (419)

TYPE Gk
PIPE SEAL REHABILITATION (421)

TYPE Go
PLUG LIFT HOLES, PLUG HOLES (419)

- TYPE Gp
SEAL PRE-CAST JOINTS (421)

TYPE Gr
PATCH HOLE (419)

TYPE Gs
EPOXY COATING (421)

TYPE I
REPLACEMENT OF MANHOLE STEPS – AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE I
CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT
COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT
LAMPHOLE REPLACEMENT (417)



ATLAS 61 - MANHOLE SCHEDULE

TMUA PROJECT NO. ES 2024-04

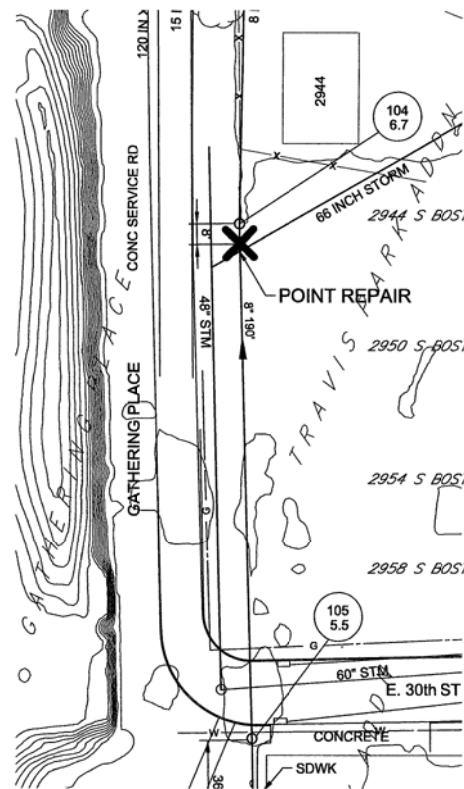
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 **TETRA TECH**
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE

PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
	DESIGNED	TI	04/2026	
	SURVEY	TI	04/2026	
PROFILE SCALE:	PROJ. MGR.	SV	5/26	 DESIGN MANAGER
HORIZONTAL	LEAD ENGR.	SV	5/26	
VERTICAL	FIELD MGR.	SV	5/26	
FILE:	DRAWING:			DATE: APRIL 2026
ATLAS PAGE NO.: 61		SHEET 22 OF 49 SHEETS		



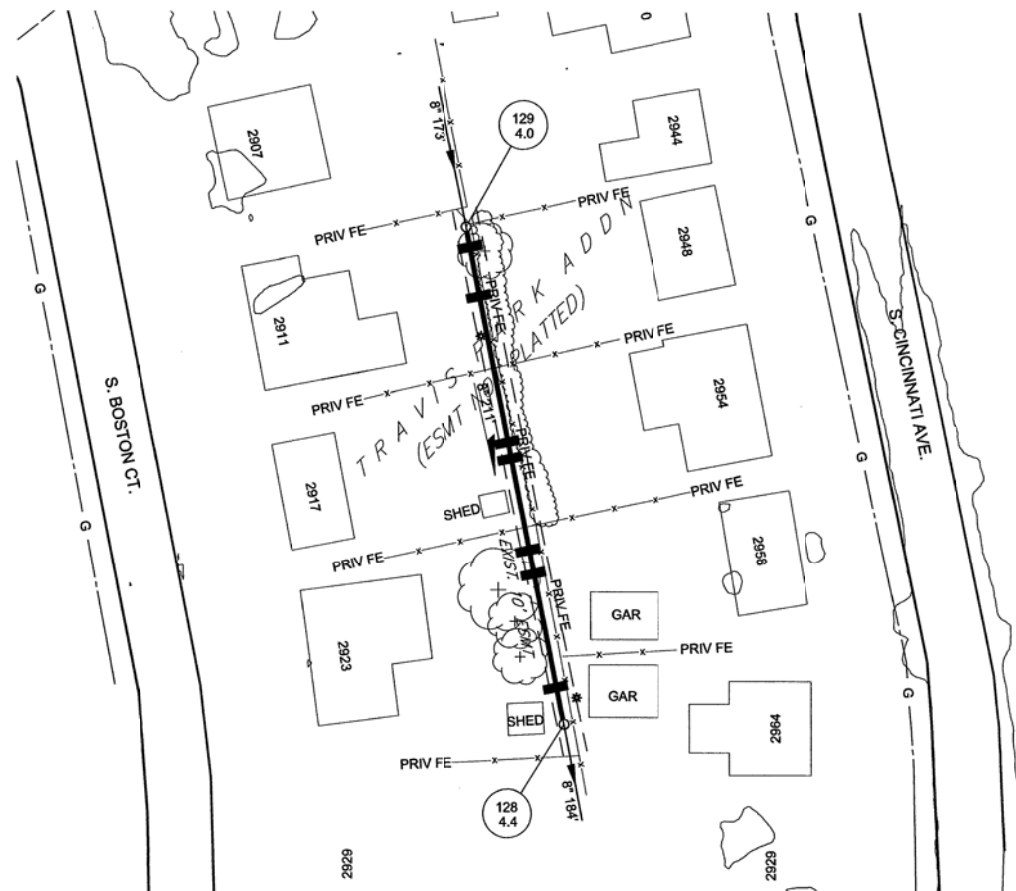
045-0105 - 045-0104
POINT REPAIR

GA SMITH & DK SMITH REV TRUST
LOT 11 & W 15 LOT 10 BLK 1
TRAVIS PARK ADDN

SL & RL MUSHRUSH REV TRUST
LOT 12 BLK 1
TRAVIS PARK ADDN

JF & MJ DYBIEC
N 58' LOT 13 BLK 1
TRAVIS PARK ADDN

MA DORAN
S/2 LOT 13 ALL LOT 14 BLK 1
TRAVIS PARK ADDN



045-0129 - 045-0128
OPEN CUT

2911 S BOSTON CT C & NH GIBBONS
LOT 14 & S 5 LOT 16 BLK 3
TRAVIS PARK ADDN

2917 S BOSTON CT RA PITRE
N 10' LOT 13 & ALL LOT 14 BLK 3
TRAVIS PARK ADDN

2923 S BOSTON CT JH, JR & CJ JOHNSON
PT LOT 12 & LOT 13 BLK 3
TRAVIS PARK ADDN

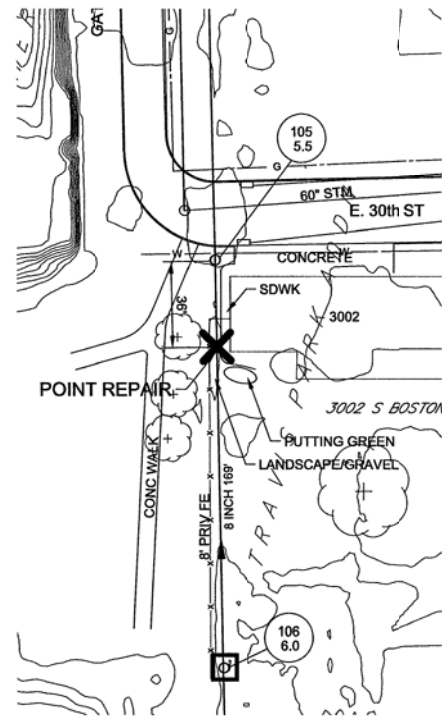
2944 S CINCINNATI AVE WK DORZAB
S 50 LOT 4 BLK 3
TRAVIS PARK ADDN

2948 S CINCINNATI AVE WEBB FAMILY TRUST
LOT 5 & N 5' LOT 6 BLK 3
TRAVIS PARK ADDN

2954 S CINCINNATI AVE JD JANDEBEUR
S 50 LOT 6 & N 20 LOT 7 BLK 3
TRAVIS PARK ADDN

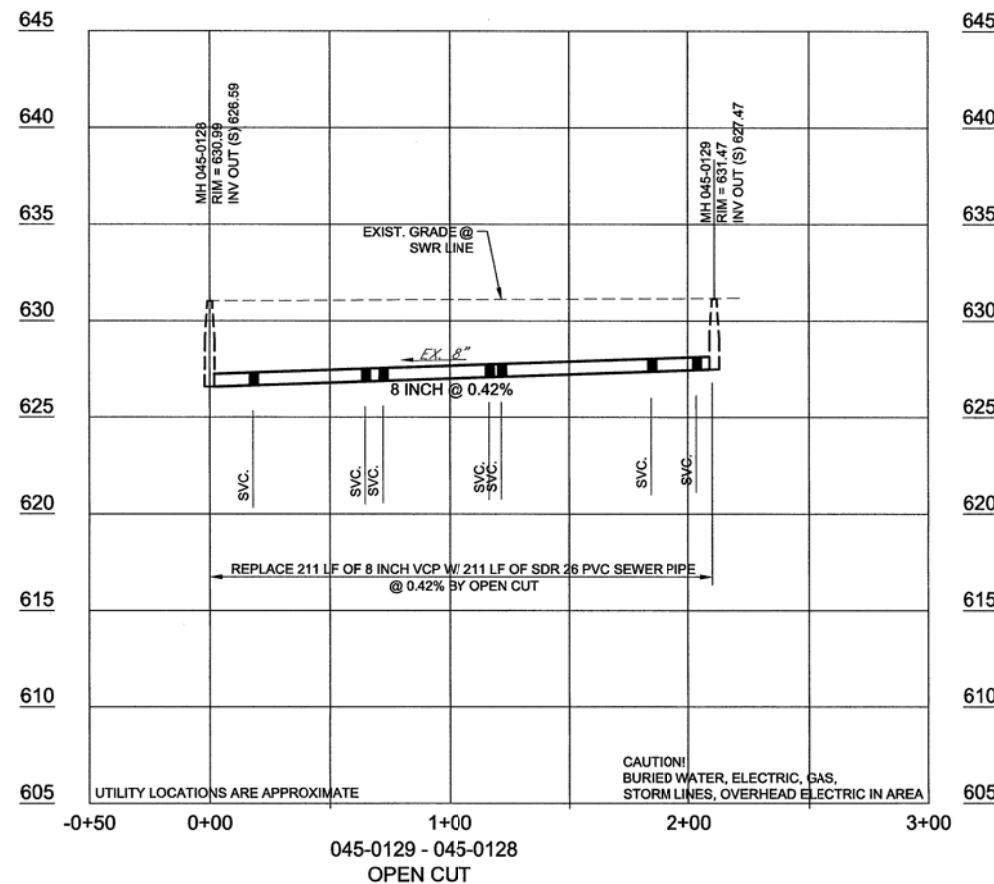
2958 S CINCINNATI AVE GA BROWN
S35 LOT 7 & LOT 8 LES S25 BLK 3
TRAVIS PARK ADDN

2964 S CINCINNATI AVE MORGAN FAMILY TRUST
S25 LOT 8 & N40 LOT 9 BLK 3
TRAVIS PARK ADDN

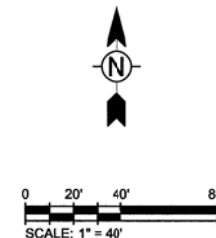


045-0106 - 045-0105
POINT REPAIR

S COWEN LIV TRUST
LOT 1 N 10 LOT 2 BLK 11
TRAVIS PARK ADDN



POINT REPAIR X
LINE REPLACEMENT
OPEN CUT OR PIPEBURST
SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

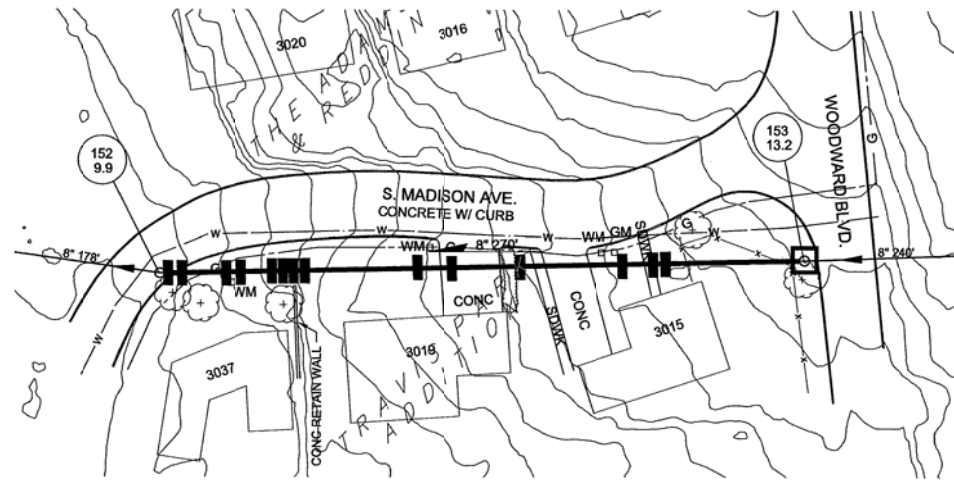
NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

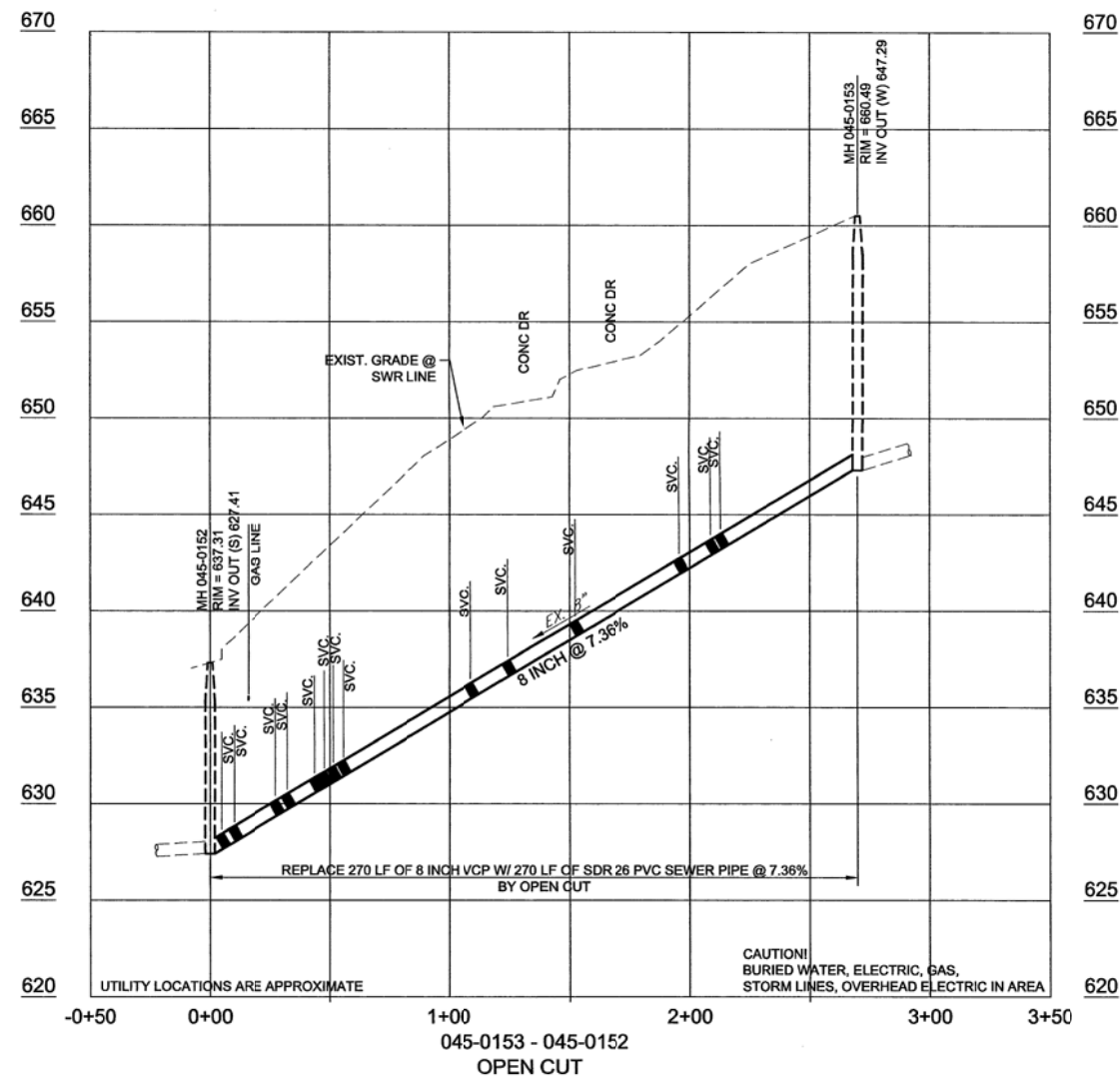


SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 61 - DETAILS 2			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909			
REVISION		BY	DATE
PLAN SCALE:		DRAWN	TI 04/2020
1" = 40'		DESIGNED	TI 04/2020
SURVEY		TI	04/2020
PROFILE SCALE:		PROJ. MGR.	BI 5/26
HORIZONTAL		LEAD ENGR.	BI 5/26
1" = 40'		FIELD MGR.	BI 5/26
VERTICAL		FILE:	DRAWING:
1" = 5'		ATLAS PAGE NO.:	61
APPROVED:		DATE:	APRIL 2026
SHEET 24 OF 49 SHEETS			



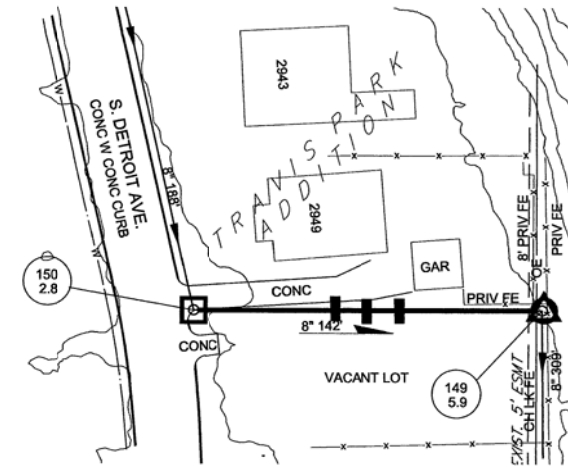
045-0153 - 045-0152
OPEN CUT



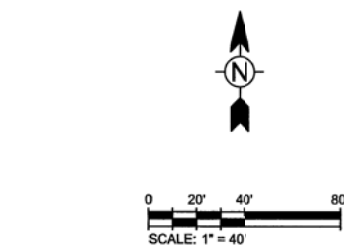
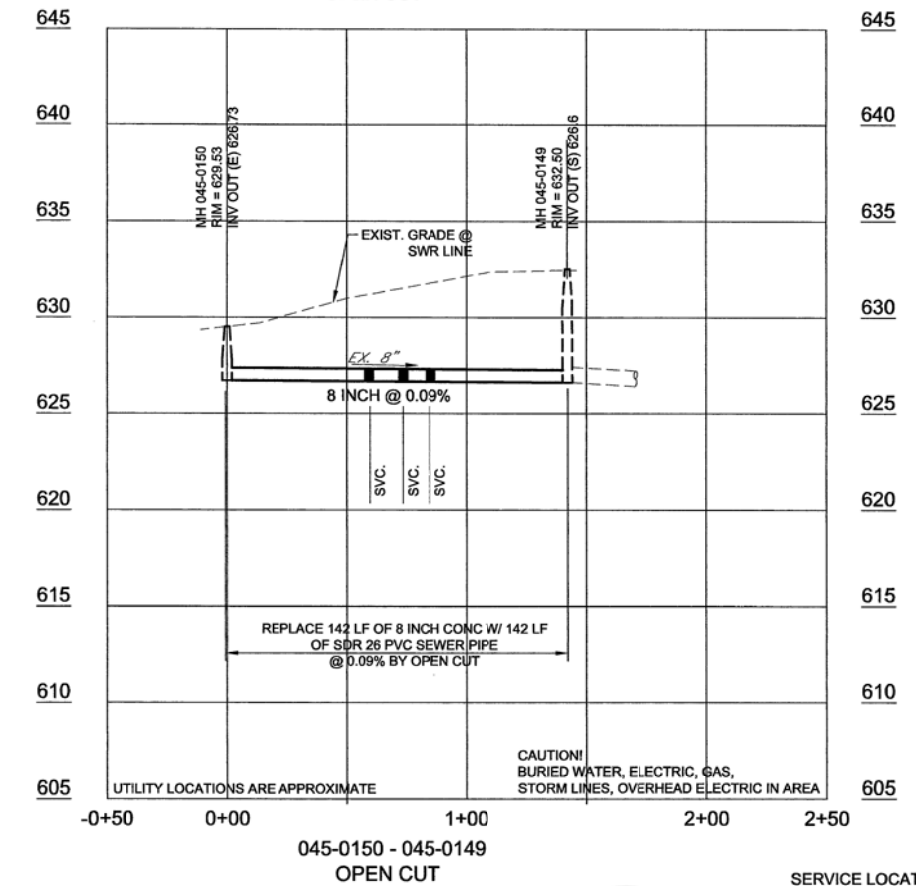
3037 S MADISON AVE SIXTY THREE II LLC
LOT 3 BLK 2
THE ADAMS AND REDDIN RESUB AMD
B2-3 SOUTHMOOR ADDN

3019 S MADISON AVE EKMAN, ERIK & ISABEL ALVAREZ-SANCHO
LOT 2 BLK 2
THE ADAMS AND REDDIN RESUB AMD B2-3
SOUTHMOOR ADDN

3015 S MADISON AVE ARD RUBITSKY
LOT 2 BLK 2
THE ADAMS AND REDDIN RESUB AMD B2-3
SOUTHMOOR ADDN



045-0150 - 045-0149
OPEN CUT



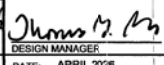
APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

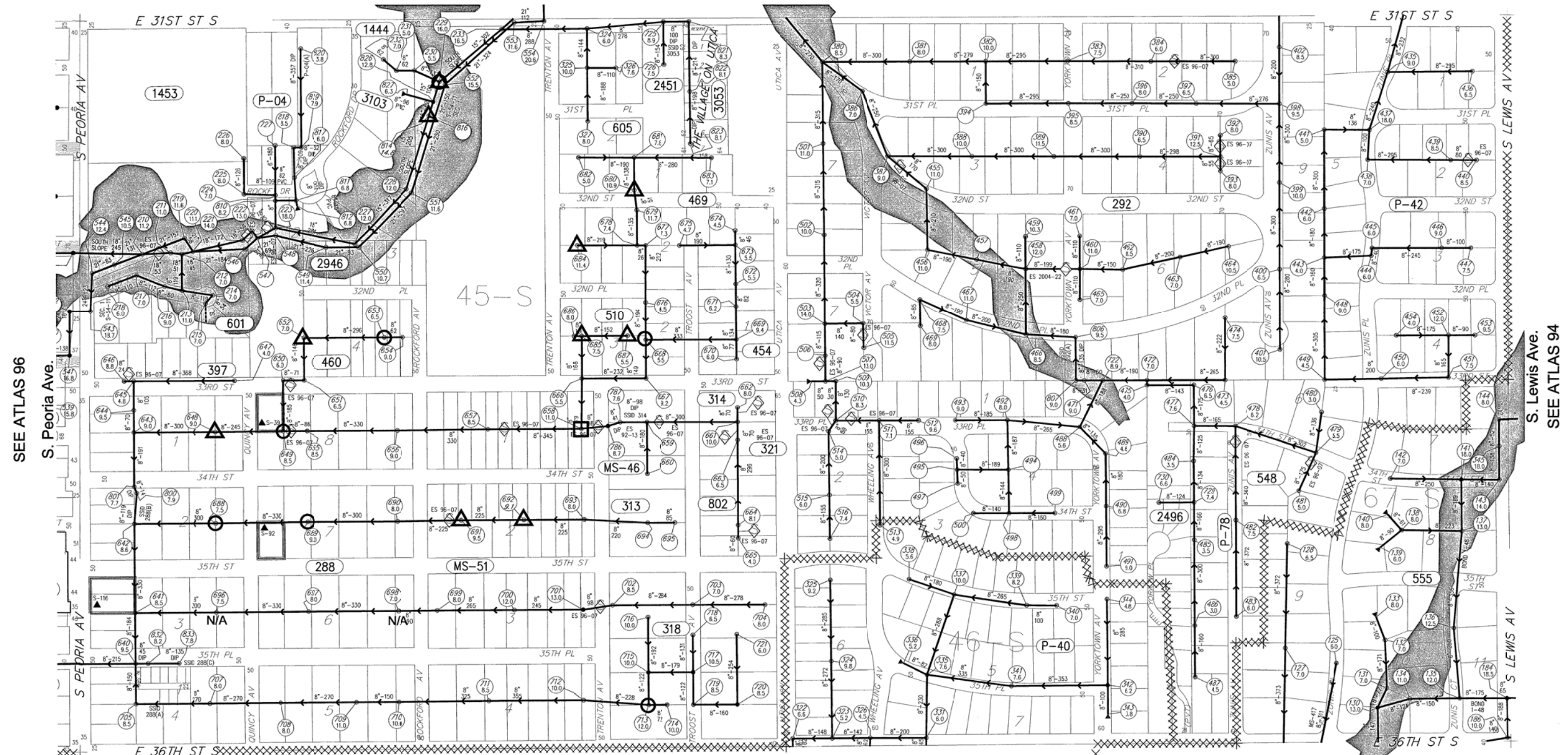
GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

ATLAS 61 - DETAILS 3			
TMUA PROJECT NO. ES 2024-04 (2)			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH			
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.249.3909			
APPROVED:			
REVISION	BY	DATE	APPROVED
DESIGNED	TI	04/20/20	
SURVEY	TI	04/20/20	
PROJ. MGR.	TI	04/20/20	
LEAD ENGR.	TI	04/20/20	
FIELD MGR.	TI	04/20/20	DESIGN MANAGER
FILE:	DRAWING:	DATE:	DATE:
ATLAS PAGE NO.:	61		SHEET 25 OF 49 SHEETS

SEE ATLAS 60
31st ST



SEE ATLAS 96

S. Peoria Ave.

**S. Lewis Ave.
SEE ATLAS 94**

LEGEND

- MANHOLE/LAMPHOLE REPLACEMENT
- TOPSIDE MANHOLE/LAMPHOLE REPAIR
- INTERIOR MANHOLE REPAIR

- APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN

- MANHOLE BUBBLE
- 78
12.5
- MANHOLE #
- MANHOLE DEPTH (per atlas)

- POINT REPAIR
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP

- COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

- NO ACCESS

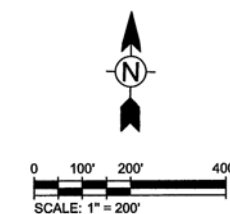
NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.

X

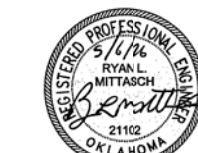
■■■■■■

CNL

N/A



CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 95		
TMUA PROJECT NO. ES 2024-04		
CROW CREEK		
SPECIFIC REMEDIATION PLAN, CONTRACT 6		
CITY OF TULSA, OKLAHOMA		
WATER AND SEWER DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:		
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909		
DATE	PLAN SCALE:	APPROVED:
	DRAWN	Ti 04/20/26
	1" = 200'	
	DESIGNED	Ti 04/20/26
	SURVEY	Ti 04/20/26
PROFILE SCALE:	PROJ. MGR.	SV 5/16
HORIZONTAL	LEAD ENGR.	6/2 5/16
VERTICAL	FIELD MGR.	6/20 5/16
		John M. M.
		DESIGN MANAGER
FILE:	DRAWING:	DATE: APRIL 2026
ATLAS PAGE NO.: 95		SHEET 27 OF 49 SHEETS

ATLAS 95 - MANHOLE REHAB SCHEDULE

[illegible]

"BURIED" - MANHOLE 045-0684 IS BURIED WILL REQUIRE "D" REHAB AND FURTHER INSPECTION.

* MANHOLE'S 045-0696 AND 045-0698 WERE RESTRICTED FROM ACCES, REHAB RECOMMENDATION SHALL BE DETERMINED BY ENGINEER DURING LINE SEGMENT 045-0698 - 045-0697, IF ADD ALTERNATE 2 IS AWARDED.

REHABILITATION METHODS

TYPE A

REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B

REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C

REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D

REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY (418)

TYPE F_C

PRECAST CORBEL SECTION (418)

TYPE Gg

INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh

BENCH AND INVERT REHABILITATION (419)

TYPE Gk

PIPE SEAL REHABILITATION (421)

TYPE Go

PLUG LIFT HOLES, PLUG HOLES (419)

TYPE G_D

SEAL PRE-CAST JOINTS (421)

TYPE Gr

PATCH HOLE (419)

TYPE Gs

EPOXY COATING (421)

TYPE I

REPLACEMENT OF MANHOLE STEPS - AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE I

CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT

COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT

ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT

LAMP HOLE REPLACEMENT (417)



REVISION	BY	DATE	PLAN SCALE:	DRAWN	Tt	04/20/26	APPROVED:
				DESIGNED	Tt	04/20/26	
				SURVEY	Tt	04/20/26	
			PROFILE SCALE:	PROJ. MGR.	BT	5/126	
			HORIZONTAL	LEAD ENGR.	AK	506	
			VERTICAL	FIELD MGR.	AK	466	
			FILE:	DRAWING:			
ATLAS PAGE NO.:				95			DESIGN MANAGER
							DATE: APRIL 2026
							SHEET 28 OF 49 SHEETS

SEE ATLAS 61

SEE ATLAS 97

S. Elwood Ave.

PUBLIC SERVICE COMPANY

S. Peoria Ave.

SEE ATLAS 95

36th ST.

SEE ATLAS 139

LEGEND

MANHOLE/LAMPPOLE REPLACEMENT



TOPSIDE MANHOLE/LAMPPOLE REPAIR



INTERIOR MANHOLE REPAIR



APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN



MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



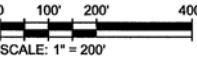
SLIPLINE OR CIPP



COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.



ATLAS 96			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
TETRA TECH			
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.249.9909			
REVISION		BY	DATE
PLAN SCALE:		1" = 200'	
PROFILE SCALE:		HORIZONTAL	
VERTICAL			
FILE:		DRAWING:	
ATLAS PAGE NO.:		96	
DRAWN		TI	04/2026
DESIGNED		TI	04/2026
SURVEY		TI	04/2026
PROJ. MGR.		SV	5/12/24
LEAD ENGR.		WZ	5/16/24
FIELD MGR.		WZ	5/16/24
DATE:		APRIL 2026	
SHEET		29 OF 49 SHEETS	

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

ATLAS 96 - MANHOLE REHAB SCHEDULE

Atlas	Basin	MH	Diameter (Ft)	Depth (Ft) (Rim to Invert)	Grade to Rim	Drop Man/hole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fc (EA)	TYPE Gg (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Go (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' L.D. (EA)	Additional Depth OVER 6' FOR 4' L.D. (VF)	DROP MANHOLE REPLACEMENT 4' L.D. (EA)	Additional Depth OVER 6' FOR 4' L.D. DROP (VF)	MANHOLE REPLACEMENT 5' L.D. (EA)	Additional Depth OVER 6' FOR 5' L.D. (VF)	DROP MANHOLE REPLACEMENT 5' L.D. (EA)	Additional Depth OVER 6' FOR 5' L.D. DROP (VF)	LAMPHOLE REPLACEMENT (EA)	REPLACE LAMPHOLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)
96	45	045-0111	4	11.79	0	No	3143 Riverside Dr	Grass/Dirt										1														
96	45	045-0114	4	11.13	0	No	3048 S Boston Ct	Concrete Pavement	1																						1	
96	45	045-0120	4	11.45	0	No	3101 S Boston Ct	Concrete Pavement			1																				1	
96	45	045-0131	4	10.20	0	No	3102 S Cincinnati Ave	Concrete Collar	1																						1	
96	45	045-0133	4	6.3	0	Yes	3148 S Cincinnati Ave	Concrete Collar	1																						1	
96	45	045-0136	4	10.21	0	No	3104 S Detroit Ave	Concrete Collar	1							1															1	
96	45	045-0141	0.667	7	1.1	No	3210 S Detroit Ave	Grass/Dirt													1	1.0									1	
96	45	045-0195	4	6	0	No	1004 E 32nd Pl	Grass/Dirt	1							1															1	
96	45	045-0199	4	10.72			3102 S Owasso Ave	Grass/Dirt								1																
96	45	045-0202	4	14.3	0	Yes	3132 S Owasso Ave	Grass/Dirt								1																
96	45	045-0203	4	14.75	0	Yes	3139 S Owasso Ave	Concrete Collar								1																
96	45	045-0206	4	7.6	0.11	No	1226 E 31st Ct	Grass/Dirt				1				1																
96	45	045-0517	4	10.8	0	No	103 E 33rd Pl, Tulsa	Grass/Dirt			1																					
96	45	045-0524	4	8.51	0.6	No	3266 S Cincinnati Ave	Grass/Dirt				1																				
96	45	045-0594	4	5.5	0	No	124 E 33rd Pl	Grass/Dirt								1																
96	45	045-0602	4	14.55	0	Yes	1004 E 34th St	Grass/Dirt			1																					
96	45	045-0608	4	7.71	0.49	No	1203 E 33rd St	Grass/Dirt			1																				1	
96	45	045-0610	4	7.85	0	No	3330 S Peoria Ave	Concrete Collar								1																
96	45	045-0612	0.667	8.2	0.65	No	1135 E 33rd Pl	Grass/Dirt													1	2.2										
96	45	045-0615	4	8.3	0	No	1110 E 34th St	Grass/Dirt	1																							
96	45	045-0616	4	7.95	0	No	1136 E 34th St S	Concrete Pavement								1																
96	45	045-0620	4	10.7	0	No	1026 E 34th St	Concrete Pavement											1													
96	45	045-0621	4	10.55	-0.15	No	1050 E 34th St	Grass/Dirt	1																							
96	45	045-0623	0.667	8.48	0	No	1039 E 35th Pl	Grass/Dirt													1	2.5										
96	45	045-0627	Not Found *				1131 E 35th Pl	Gravel																								
96	45	045-0630	0.667	9.32	0	No	3565 S Madison Pl	Concrete Collar													1	3.3										
96	45	045-0631	4	7.8	0	No	1003 E 35th Pl	Grass/Dirt								1																
96	45	045-0633	4	9.95	0.15	No	1023 E 36th St	Grass/Dirt	1																							
96	45	045-0635	4	9.65	0	No	1115 E 36th St	Grass/Dirt	1							1																
96	45	045-0747	4	7.51	0	No	1201 E 33rd St	Grass/Dirt								1																
96	45	045-0751	4	4.45	0	No	1204 E 33rd St S	Concrete Pavement			1					1																
96	45	045-0752	0.667	4.2	0	No	1204 E 33rd St S	Concrete Pavement																					1			
96	45	045-0755	667	4.1	0	No	1218 E 33rd St S	Sidewalk																					1			

* - MANHOLE 045-0627 WAS NOT FOUND. REHAB RECOMMENDATION SHALL BE DETERMINED BY ENGINEER DURING LINE SEGMENT 045-0627-045-0625 OPEN CUT REPAIR, IF ADD ALT 3 IS AWARDED.

REHABILITATION METHODS

TYPE A

REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B

REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C

REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D

REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY (418)

TYPE Fc

PRECAST CORBEL SECTION (418)

TYPE Gg

INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh

BENCH AND INVERT REHABILITATION (419)

TYPE Gk

PIPE SEAL REHABILITATION (421)

TYPE Go

PLUG LIFT HOLES, PLUG HOLES (419)

TYPE Gp

SEAL PRE-CAST JOINTS (421)

TYPE Gr

PATCH HOLE (419)

TYPE Gs

EPOXY COATING (421)

TYPE I

REPLACEMENT OF MANHOLE STEPS - AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE I

CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT

COMPLETE MANHOLE REPLACEMENT (416)

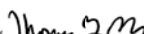
MANHOLE REPLACEMENT

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT

LAMP HOLE REPLACEMENT (417)



ATLAS 96 - MANHOLE SCHEDULE			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL918.249.3909	
DATE	PLAN SCALE:	DRAWN T1 04/20/26 DESIGNED T1 04/20/26 SURVEY T1 04/20/26	APPROVED:
	PROFILE SCALE: HORIZONTAL VERTICAL	PROJ. MGR. SV 5/26 LEAD ENGR. gzk 5/26 gkm 5/26 FIELD MGR.	 DESIGN MANAGER
FILE:	DRAWING:		DATE: APRIL 2026
ATLAS PAGE NO.: 96		SHEET 30 OF 49 SHEETS	

SEE ATLAS 60
31st ST

SEE ATLAS 96

S. Peoria Ave.

S. Lewis Ave.
SEE ATLAS 94

36th ST.
SEE ATLAS 138

LEGEND

MANHOLE/LAMPPOLE REPLACEMENT



TOPSIDE MANHOLE/LAMPPOLE REPAIR



INTERIOR MANHOLE REPAIR



APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN



MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



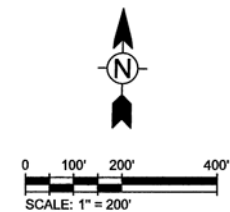
SLIPLINE OR CIPP



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RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

NOTE:
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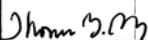


ATLAS 95 - ADD ALTERNATE 1			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH			
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.245.3909			
REVISION		BY	DATE
PLAN SCALE:		DRAWN	TI 04/2026
1" = 200'		DESIGNED	TI 04/2026
PROFILE SCALE:		SURVEY	TI 04/2026
HORIZONTAL		PROJ. MGR.	9/1 5/24
VERTICAL		LEAD ENGR.	9/1 5/24
FILE:		FIELD MGR.	9/1 5/24
ATLAS PAGE NO.: 95		DRAWING:	9/1 5/24
		DATE:	APRIL 2026
		SHEET	31 OF 49 SHEETS

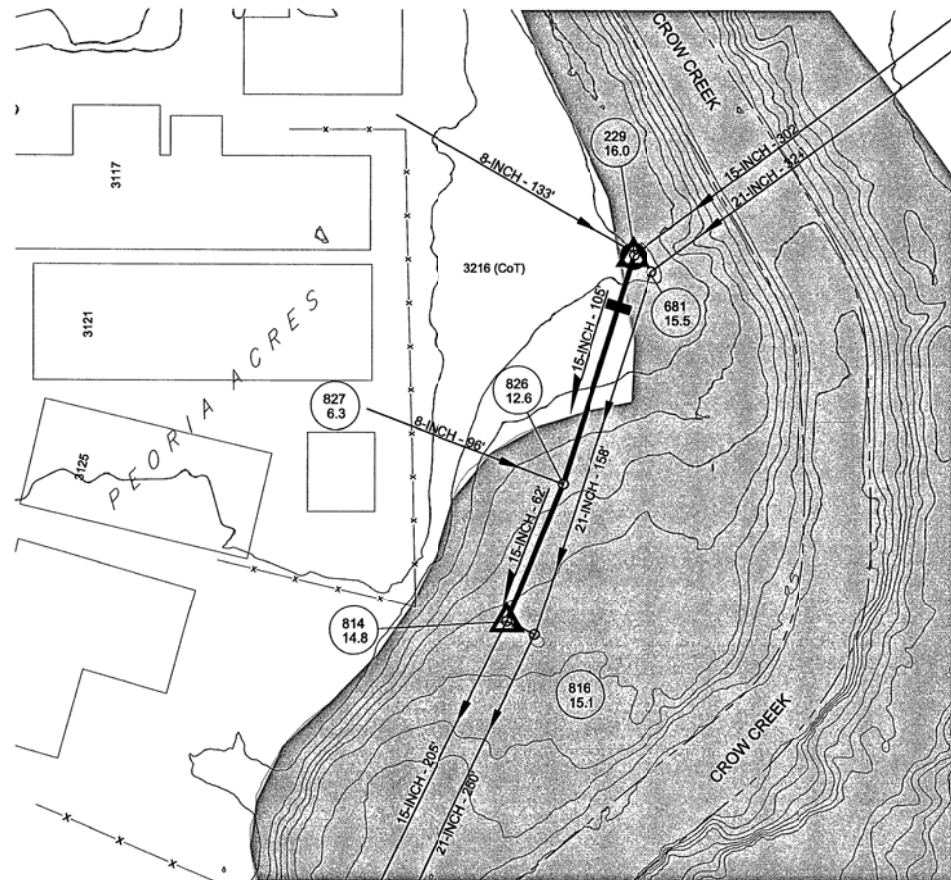
CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
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REGULATORY FLOODPLAIN

ATLAS 95- LINE REHAB SCHEDULE

[illegible]

ATLAS 95 - LINE SCHEDULE - ADD ALTERNATE 1											
TMUA PROJECT NO. ES 2024-04 CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6											
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT											
PLANS AND ESTIMATES PREPARED BY:											
	TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909										
PLAN SCALE:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DRAWN</td> <td style="width: 10%;">Tt</td> <td style="width: 10%;">04/2025</td> </tr> <tr> <td>DESIGNED</td> <td>Tt</td> <td>04/2025</td> </tr> <tr> <td>SURVEY</td> <td>Tt</td> <td>04/2025</td> </tr> </table>	DRAWN	Tt	04/2025	DESIGNED	Tt	04/2025	SURVEY	Tt	04/2025	APPROVED:
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DESIGNED	Tt	04/2025									
SURVEY	Tt	04/2025									
PROFILE SCALE: HORIZONTAL	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">PROJ. MGR.</td> <td style="width: 10%;">JN</td> <td style="width: 10%;">5/1/26</td> </tr> <tr> <td>LEAD ENGR.</td> <td></td> <td></td> </tr> <tr> <td>FIELD MGR.</td> <td></td> <td></td> </tr> </table>	PROJ. MGR.	JN	5/1/26	LEAD ENGR.			FIELD MGR.			 DESIGN MANAGER
PROJ. MGR.	JN	5/1/26									
LEAD ENGR.											
FIELD MGR.											
VERTICAL											
FILE:	DRAWING:	DATE: APRIL 2026									
ATLAS PAGE NO: 61		SHEET 32 OF 49 SHEETS									

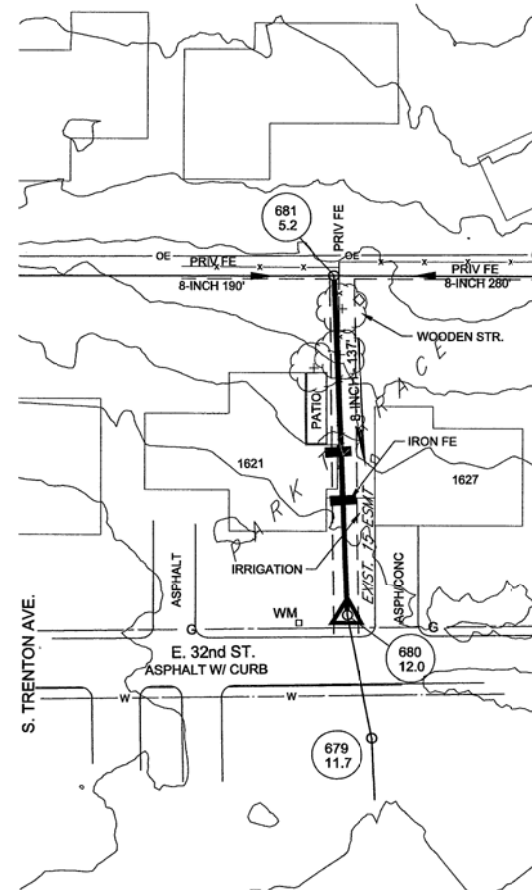
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				DESIGNED	TI	04/2026	
				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	BN	5/26	
			HORIZONTAL	LEAD ENGR.	BN	5/26	
			VERTICAL	FIELD MGR.	BN	9/26	J. Brown B. M. DESIGN MANAGER
			FILE:	DRAWING:			
ATLAS PAGE NO.: 61				DATE:		APRIL 2026	
				SHEET 32 OF 49		SHEETS	



3216 S TRENTON AVE CITY OF TULSA C/O PARKS DEPT
PRT NE NW SEC 19, TWP 19 RING 13

045-0229 - 045-0826
PIPE BURST

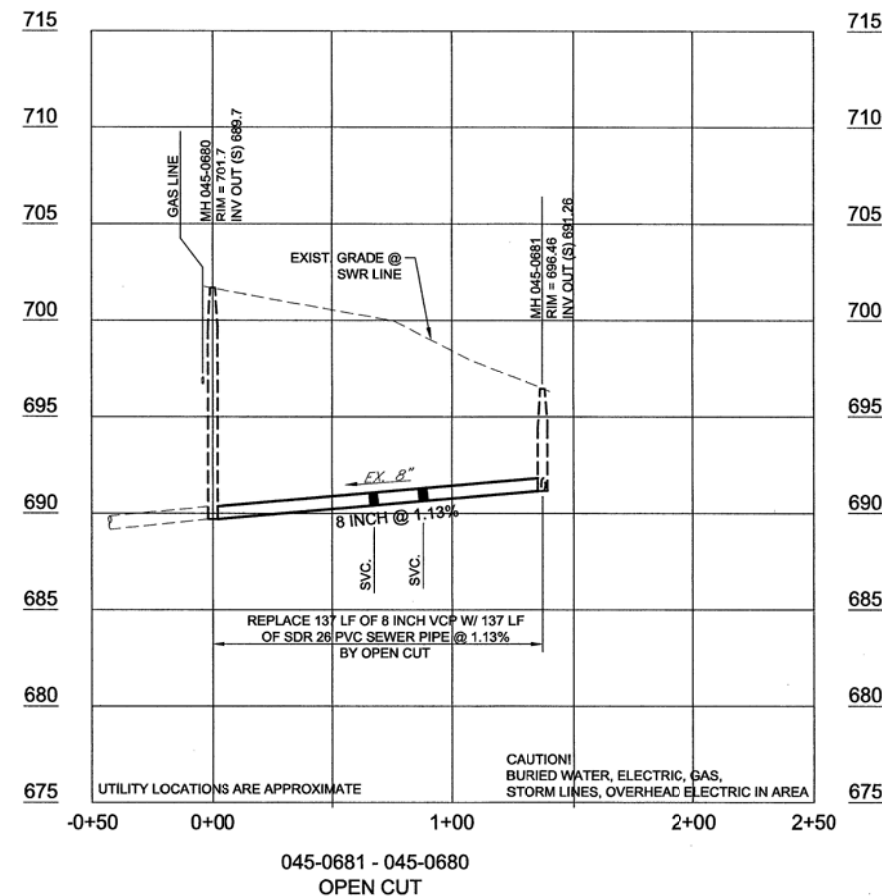
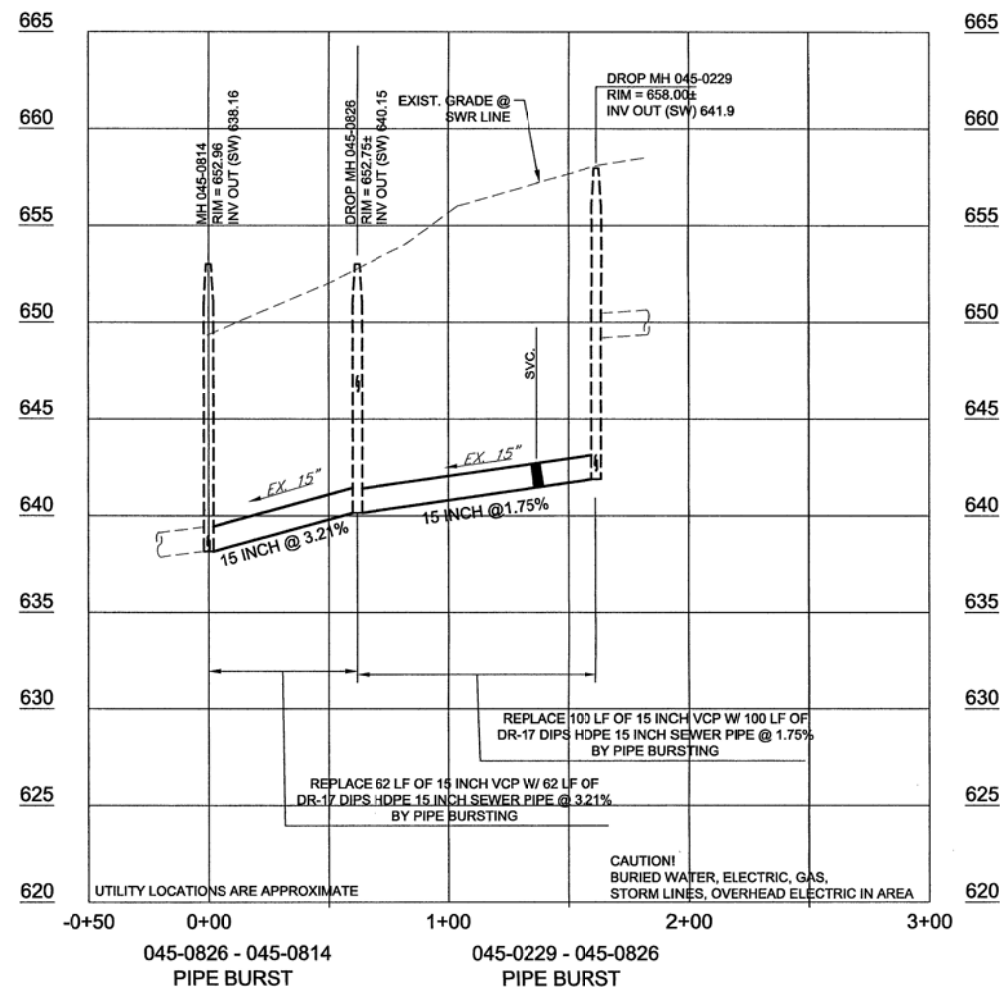
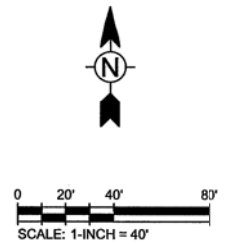
045-0826 - 045-0814
PIPE BURST



045-0681 - 045-0680
OPEN CUT

1621 E 32nd ST DELGADO FAMILY TRUST
E 85' LOT 5 BLK 1
PARK TERRACE

1627 E 32nd ST K BURKE
LOT 4 BLK 1
PARK TERRACE



POINT REPAIR X

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 95 - ADD ALTERNATE 1 - DETAILS 1

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

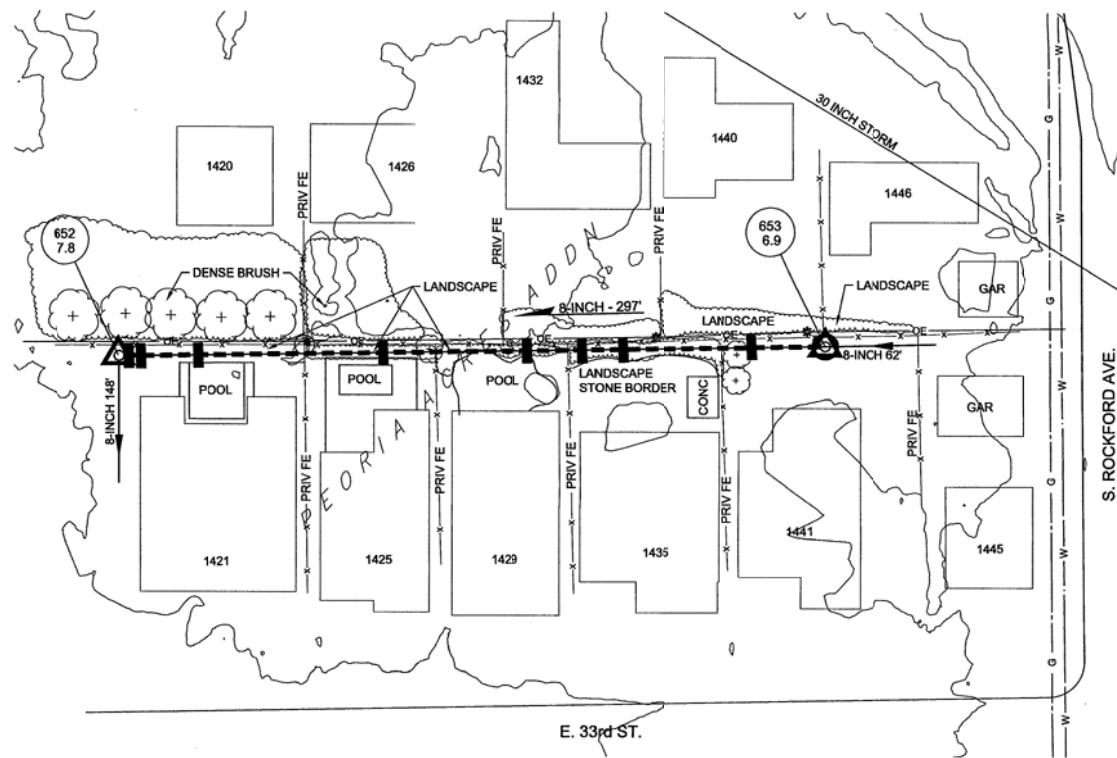
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

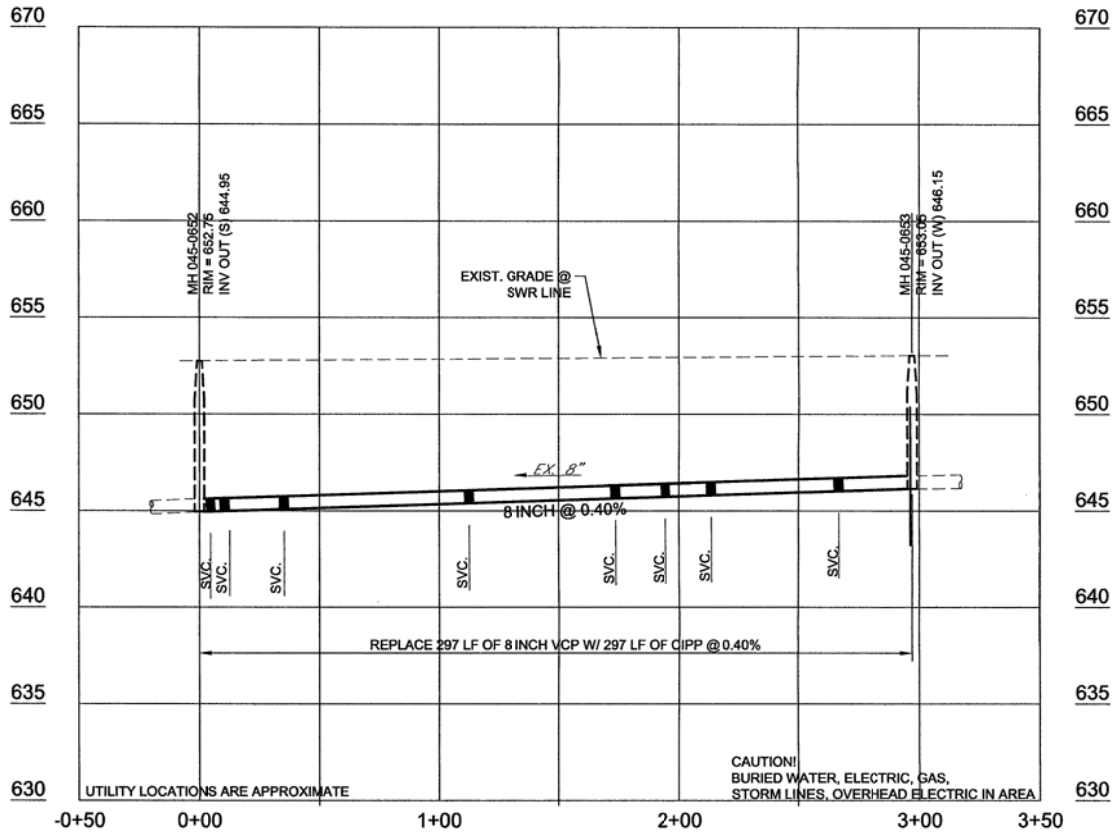


REVISION	BY	DATE	PLAN SCALE:	DRAWN	TR	04/2026	APPROVED:
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SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV



045-0653 - 045-0652
CIPP



045-0653 - 045-0652
CIPP

1420 E 32nd PL
HS CULPPER
LOT 1 BLK 4
PEORIA ACRES ADDN

1426 E 32nd PL
PB WILSON & JS KUNNEMAN
LOT 2 BLK 4
PEORIA ACRES ADDN

1432 E 32nd PL
I OMOL
LOT 3 & W20.5' LOT 4 BLK 4
PEORIA ACRES ADDN

1440 E 32nd PL
JC & GD TURCOTTE
PRT LOT 4 ALL LOT 5 BLK 4
PEORIA ACRES ADDN

1446 E 32nd PL
JT MARSHALL
LOTS 6 & 7 BLK 4
PEORIA ACRES ADDN

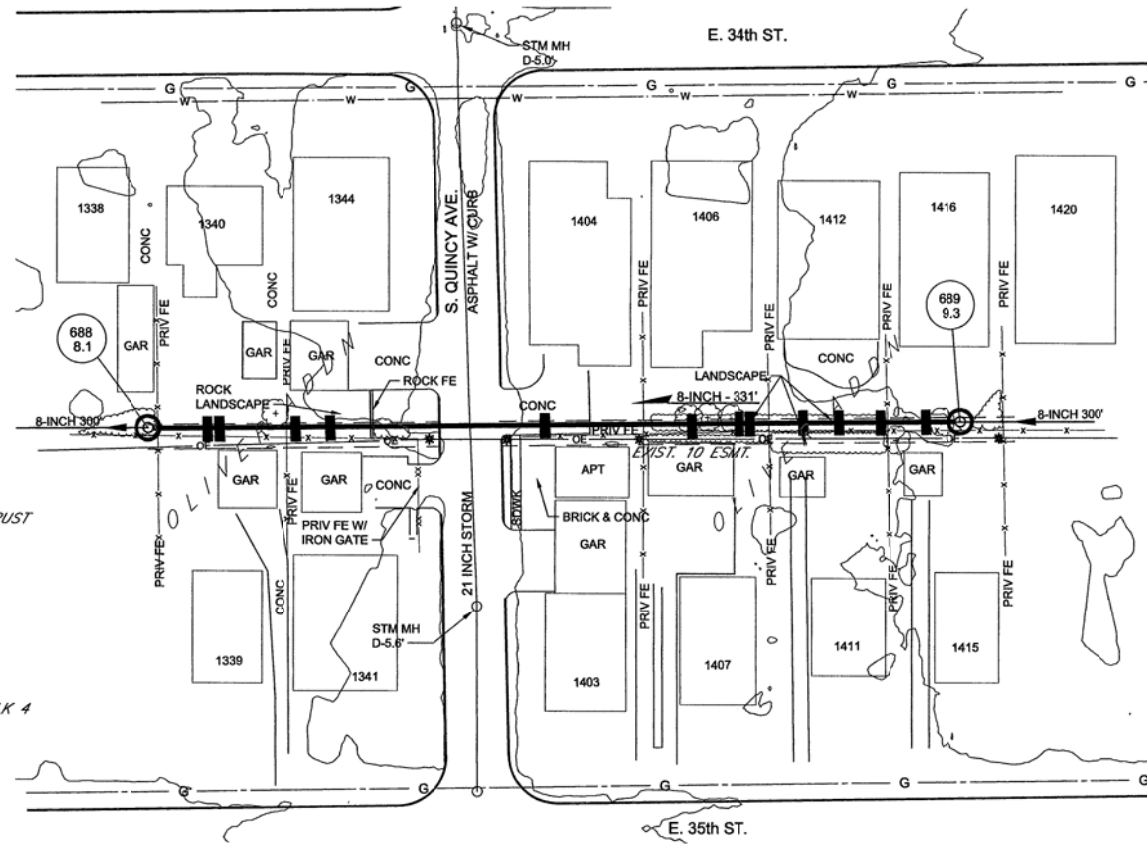
1421 E 33rd ST
DEWITTE & COCHRAN FAMILY TRUST
LOT 14 BLK 4
PEORIA ACRES ADDN

1425 E 33rd ST
SHIPMAN REV TRUST
W55.4' LOT 13 BLK 4
PEORIA ACRES ADDN

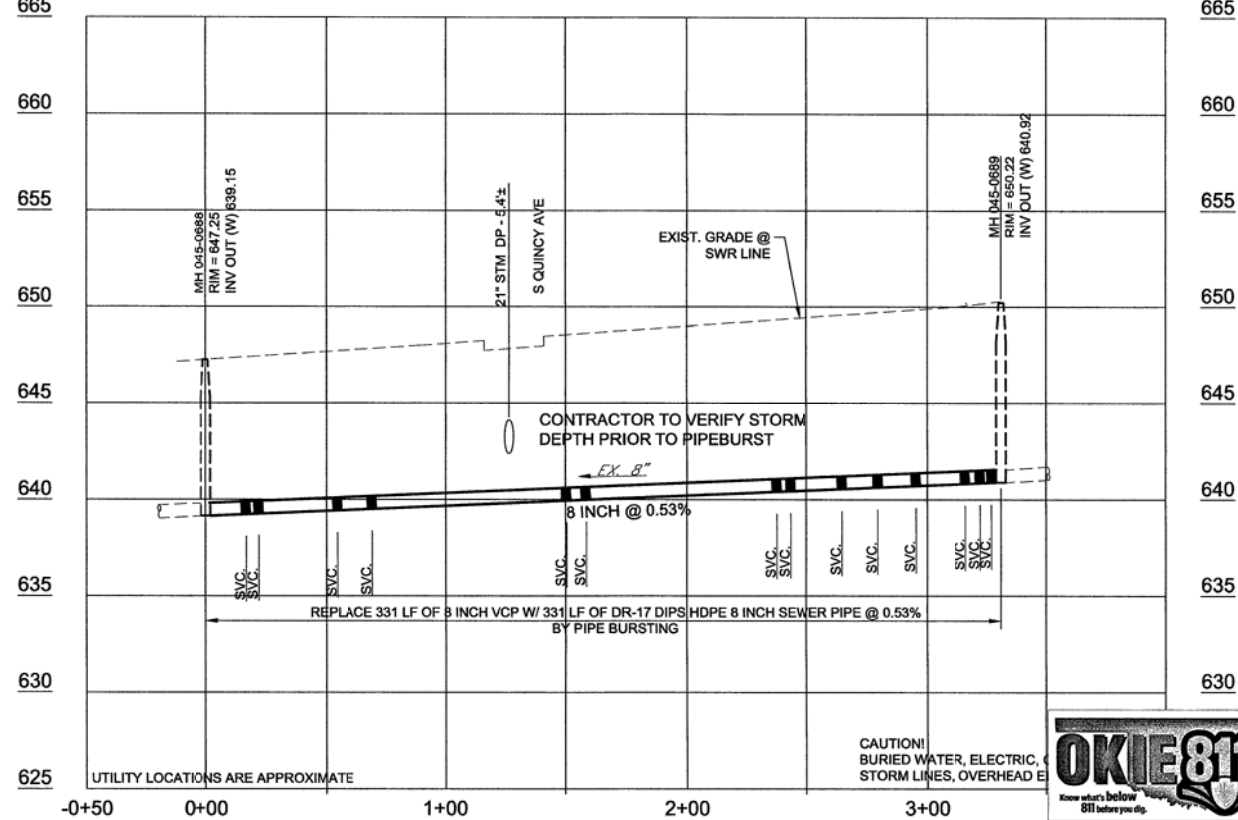
1429 E 33rd ST
TR & M BUCCI
E29 OF LOT 13, W26 LOT 12 BLK 4
PEORIA ACRES ADDN

1435 E 33rd ST
KELLY J OLSON TRUST
LOT 11, E19 LOT 12 BLK 4
PEORIA ACRES ADDN

1441 E 33rd ST
FX HENKE IV
W39.2' LOT 9, LOT 10 BLK 4
PEORIA ACRES ADDN



045-0689 - 045-0688
PIPE BURST



045-0689 - 045-0688
PIPE BURST

POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP

SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

1340 E 34th ST
CJ & L STEPHENS
W/2 LOT 8 BLK 2
OLIVER ADDN

1344 E 34th ST
V MAYFIELD 2007 REV TRUST
DG MAYFIELD 2007 REV TRUST
E/2 LOT 8 BLK 2
OLIVER ADDN

1404 E 34th ST
CWPB REV TRUST
W/2 LOT 12 BLK 7
OLIVERS ADDN

1406 E 34th ST
AP & L HOLDER
E/2 LOT 12 BLK 7
OLIVERS ADDN

1412 E 34th ST
T & L BRYANT
W/2 LOT 11 BLK 7
OLIVER ADDN

1416 E 34th ST
PETE REGAN
E/2 LOT 11 BLK 7
OLIVER ADDN

1339 E 35th ST
CADOGAN HOLDINGS LLC
W/2 LOT 9 BLOCK 2
OLIVERS ADDN

1341 E 35th ST
A & LA THOMPSON NIX
E/2 LOT 9 BLK 2
OLIVER ADDN

1403 E 35th ST
OD MERRELL REV LIVING TR
W/2 LOT 1 BLK 7
OLIVERS ADDN

1407 E 35th ST
JC SINGLETARY
E/2 LOT 1 BLK 7
OLIVERS ADDN

1411 E 35th ST
RK STEINKIRCHNER &
L STEINKIRCHNER SHUJUN
W/2 LOT 2 BLK 7
OLIVERS ADDN

1415 E 35th ST
AW VANHANKER
E/2 LOT 2 BLK 7
OLIVERS ADDN



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

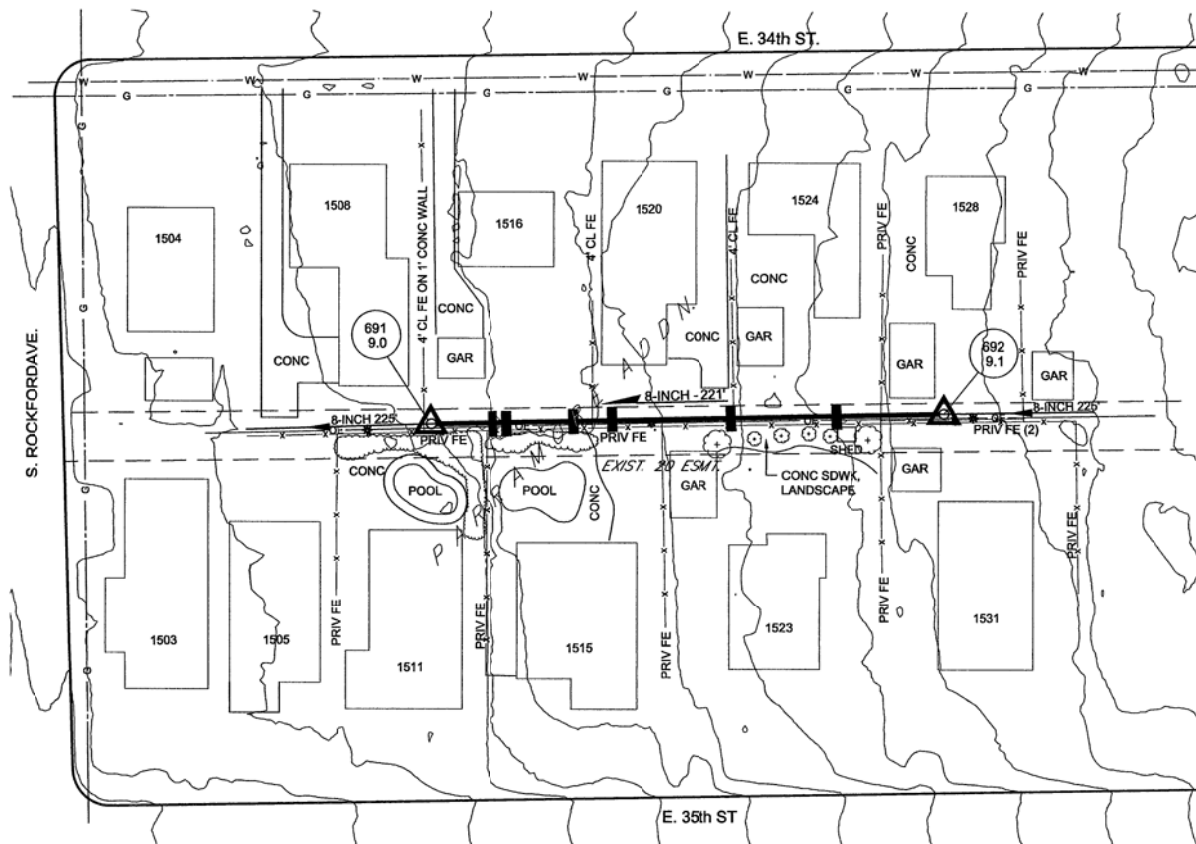
NOTE:
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GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 95 - ADD ALTERNATE 1 - DETAILS 2
TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909

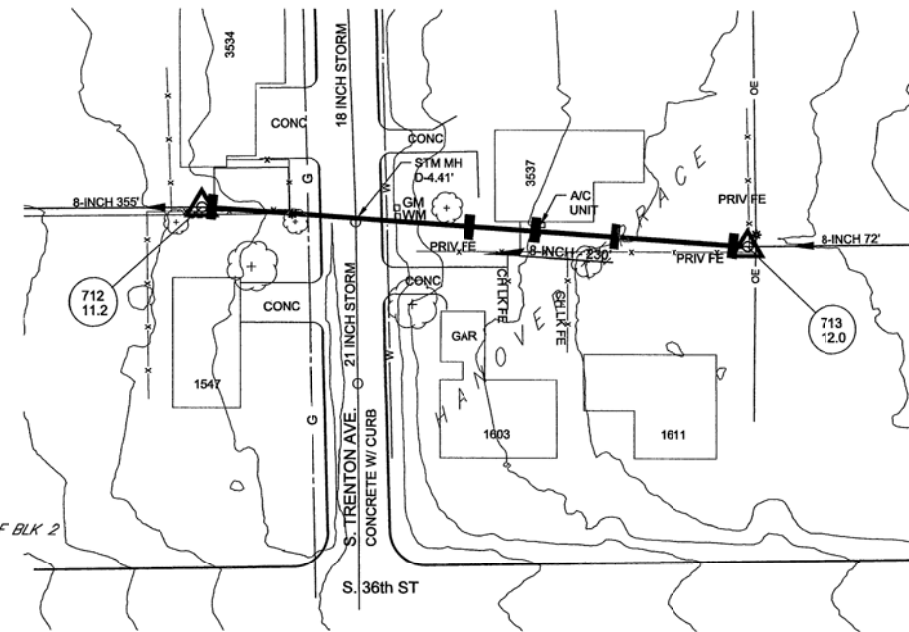


REVISION	BY	DATE	PLAN SCALE:	TH	DATE	APPROVED:
			1" = 40'	TH	04/2026	
			DESIGNED	TH	04/2026	
			SURVEY	TH	04/2026	
			PROJ. MGR.	SV	5/24	
			LEAD ENGR.	SV	5/24	
			FIELD MGR.	TH	5/24	
			DRAWING:			
			DATE:		APRIL 2026	
			ATLAS PAGE NO.:	95		
						SHEET 34 OF 49 SHEETS

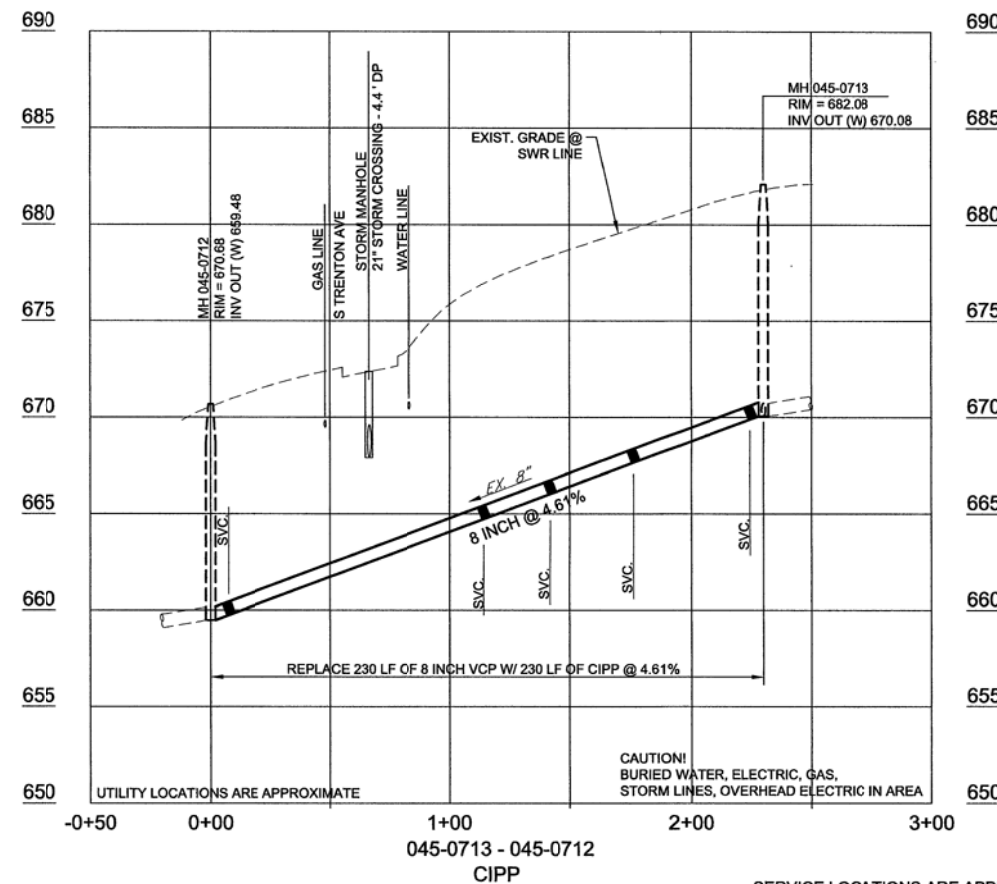
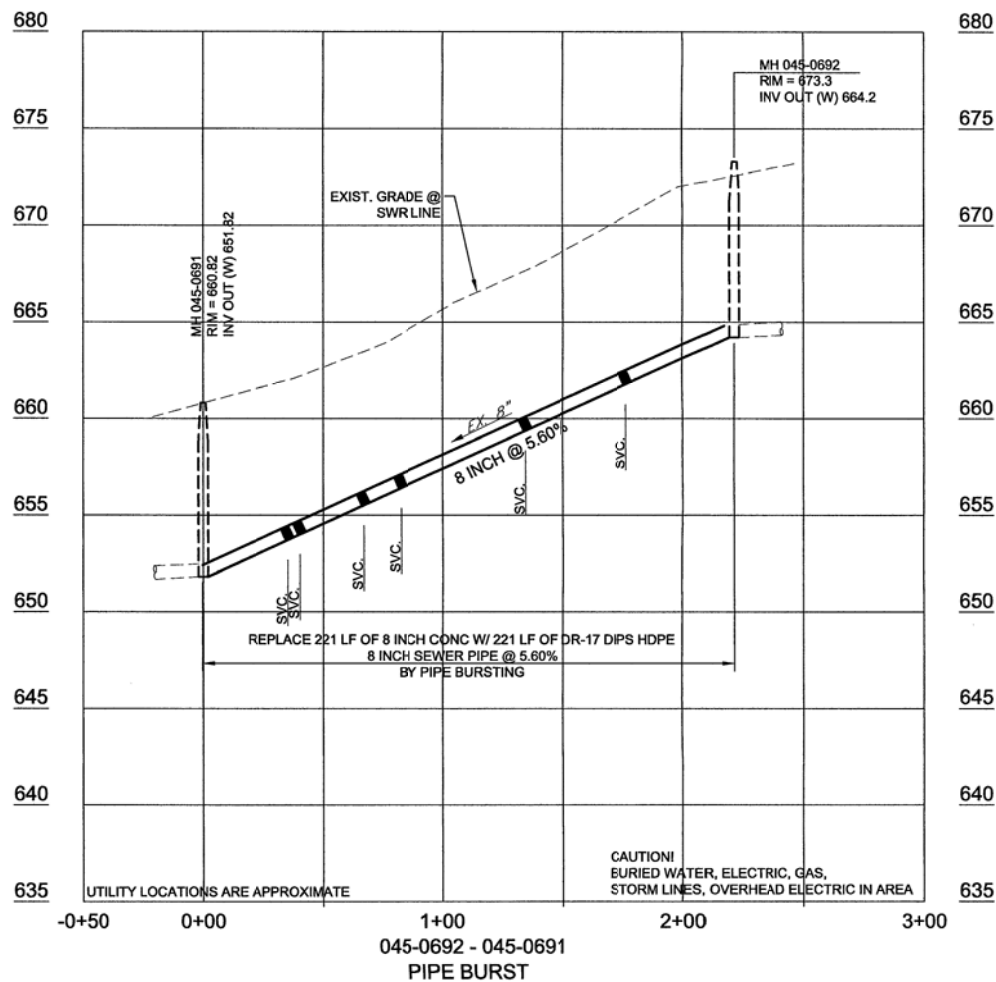


045-0692 - 045-0691
PIPE BURST

- 1504 E 34th ST T & V CASEY TRUST
LOT 1, W 10 LOT 2 BLK 2
PARRAMORE ADDN
- 1508 E 34th ST HALL PARTY TRUST ETAL
E 40 LOT 2 W 30 LOT 3 BLK 2
PARRAMORE ADDN
- 1516 E 34th ST P J & J TURLEY
E 20 LOT 3, LOT 4 BLK 2
PARRAMORE ADDN
- 1520 E 34th ST DESMOND 2023 TRUST
LOT 5, W 10 LOT 6 BLK 2
PARRAMORE ADDN
- 1524 E 34th ST QUELLAR EDWARDS TRUST
E 40 LOT 6, W 20 LOT 7 BLK 2
PARRAMORE ADDN
- 1528 E 34th ST RP & VR BROWN
E 30 LOT 7, W 30 LOT 8 BLK 2
PARRAMORE ADDN
- 1511 E 35th ST C BEGNOGHE
W 60 E 140 LOT 20 BLK 2
PARRAMORE ADDN
- 1515 E 35th ST LS RIVAS FAMILY TRUST
E 140 LOT 20 LESS W 60 THEREOF BLK 2
PARRAMORE ADDN
- 1523 E 35th ST MK SMITH & SE WELCH
W 25 LOT 18, LOT 19 BLK 2
PARRAMORE ADDN
- 1531 E 35th ST MB & MS SMITH
LOT 17 & E 35 LOT 18 BLK 2
PARRAMORE ADDN



045-0713 - 045-0712
CIPP



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

- POINT REPAIR X
- LINE REPLACEMENT
OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 95 - ADD ALTERNATE 1 - DETAILS 3

TMUA PROJECT NO. ES 2024-04

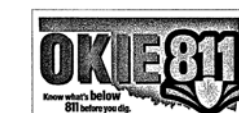
CROW CREEK

SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

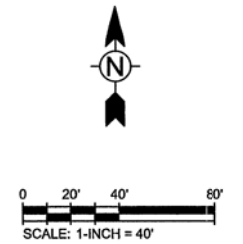
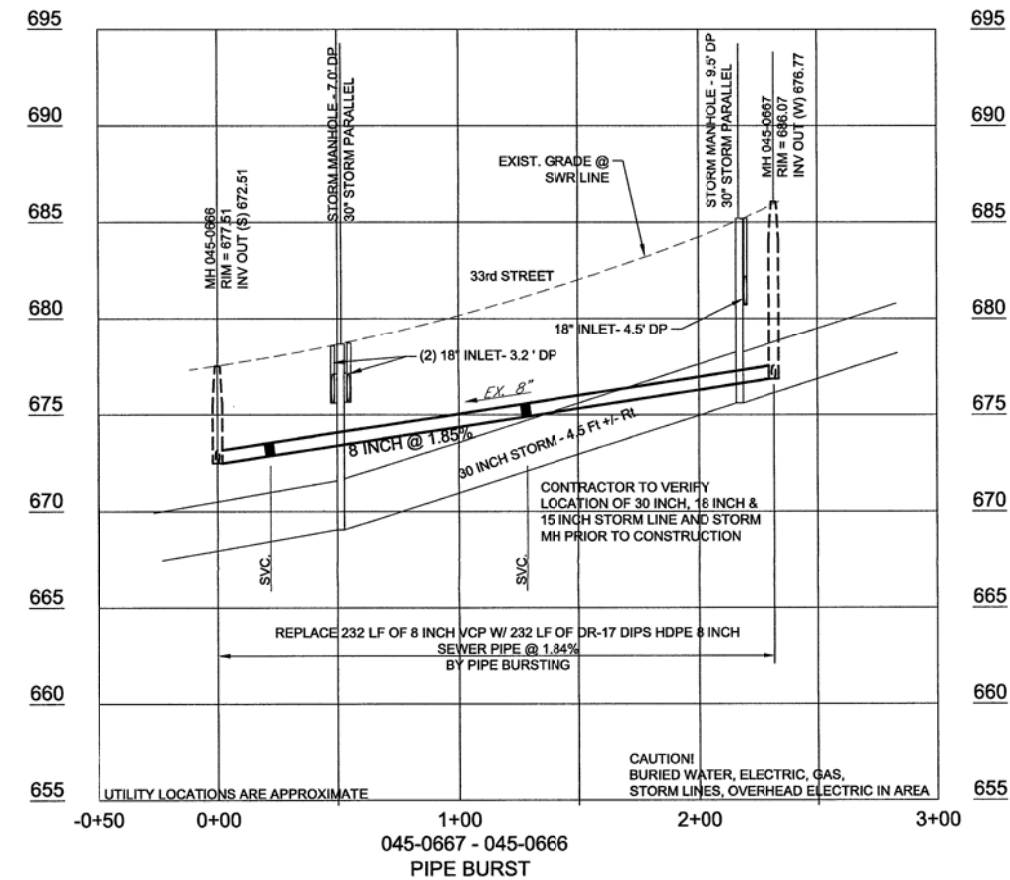
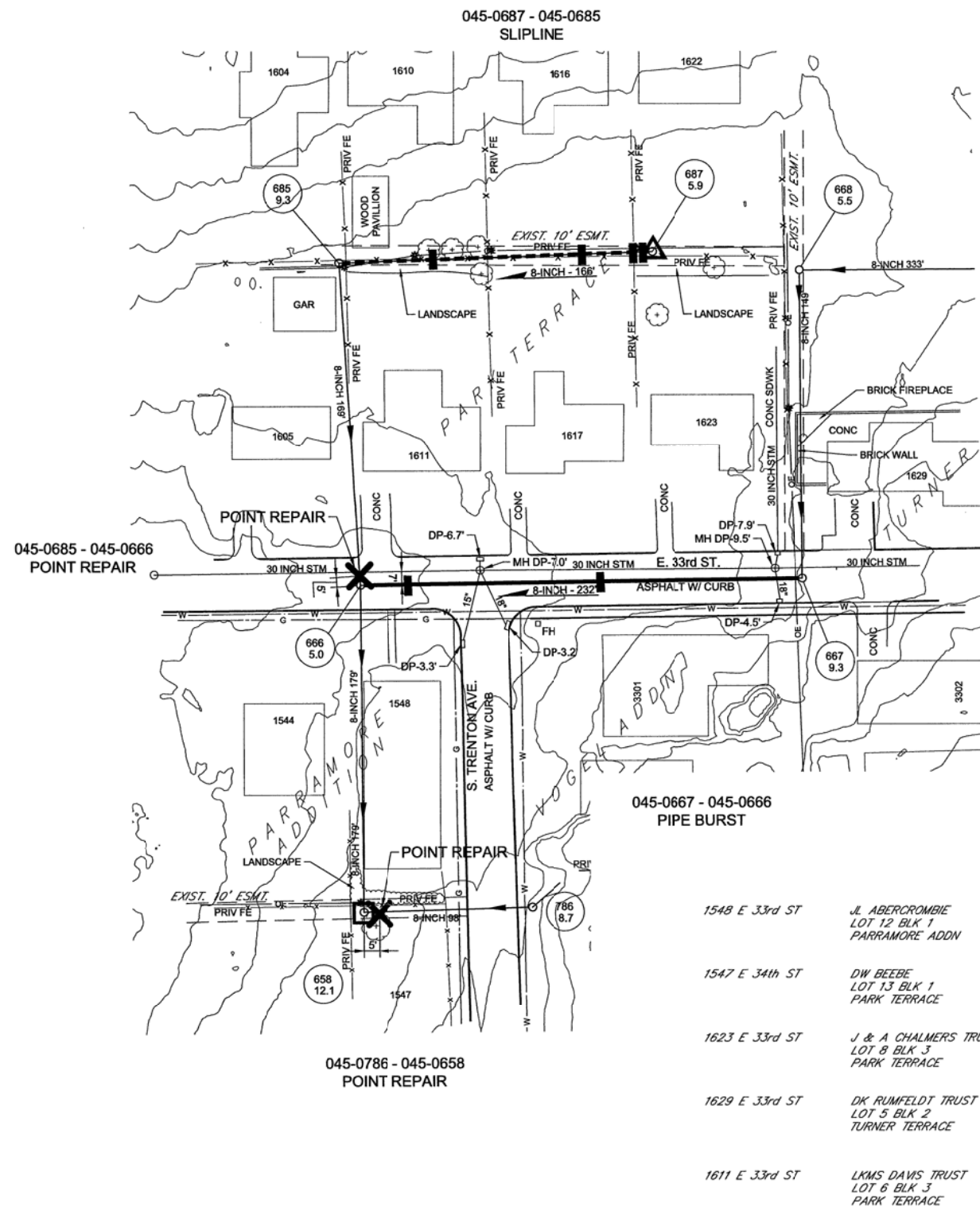
PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	DATE	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
				SURVEY	TI	04/2026	
				PROFILE SCALE:	PROJ. MGR.	DN	
			HORIZONTAL	LEAD ENGR.	6/2	5/26	
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			VERTICAL		1" = 5'		
			FILE:	DRAWING:			
			ATLAS PAGE NO.: 95				
			SHEET 35 OF 49 SHEETS				
			DATE: APRIL 2026				

4/16/2026 3:48 PM
P:\11383200-11383-2403\CAD\Sheet\Atlas 95 Details.dwg



APPROXIMATE LOCATION EXISTING SERVICE TAP.
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 95 - ADD ALTERNATE 1 - DETAILS 4

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



SLIPLINE OR CIPP



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	DN	5/26	
			1" = 40'	LEAD ENGR.	DN	5/26	
			HORIZONTAL	FIELD MGR.	DN	5/26	
			1" = 5'				
			VERTICAL				
			FILE:	DRAWING:			
			ATLAS PAGE NO.: 95				

DATE: APRIL 2026
SHEET 36 OF 49 SHEETS

SEE ATLAS 61
S. Peoria Ave.

S. Lewis Ave.
SEE ATLAS 59

31st ST.
SEE ATLAS 95

LEGEND

MANHOLE/LAMPHOLE REPLACEMENT



POINT REPAIR



TOPSIDE MANHOLE/LAMPHOLE REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



INTERIOR MANHOLE REPAIR



SLIPLINE OR CIPP



APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN



COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

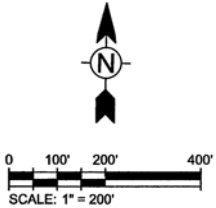
MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.



ATLAS 60 - ADD ALTERNATE 2
TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

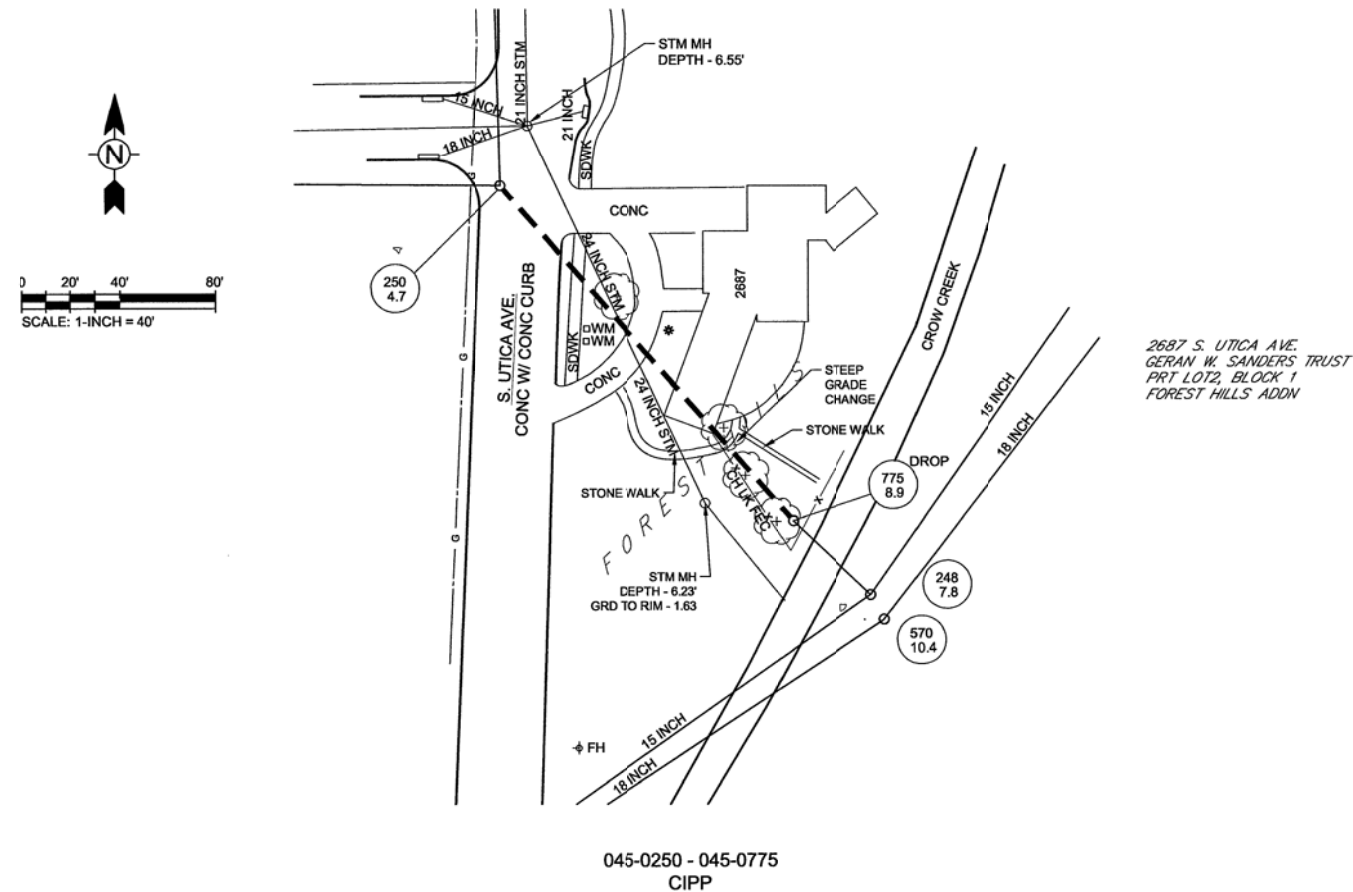
PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
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			PROFILE SCALE:	PROJ. MGR.	DI	5/26	
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			VERTICAL	FIELD MGR.	DI	5/26	
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	60			

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

ATLAS 60- LINE REHAB SCHEDULE - ADD ALTERNATE 2

[illegible]

2687 S. UTICA AVE.
GERAN W. SANDERS TRUST
PRT LOT2, BLOCK 1
FOREST HILLS ADDN

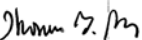
045-0250 - 045-0775
CIPP

POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP



ATLAS 60 - LINE SCHEDULE - ADD ALTERNATE 2			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	
PLAN SCALE:	DRAWN	Ti	04/2020
	DESIGNED	Ti	04/2020
	SURVEY	Ti	04/2020
PROFILE SCALE:	PROJ. MGR.	SV	5/26
HORIZONTAL:	LEAD ENGR.	SV	5/26
VERTICAL:	FIELD MGR.	SV	5/26
FILE:	DRAWING:	 DESIGN MANAGER	
ATLAS PAGE NO.: 61		SHEET 38 OF 49 SHEETS	

SEE ATLAS 60
31st ST

SEE ATLAS 96

S. Peoria Ave.

S. Lewis Ave.
SEE ATLAS 94

36th ST.
SEE ATLAS 138

LEGEND

MANHOLE/LAMP HOLE REPLACEMENT



TOPSIDE MANHOLE/LAMP HOLE REPAIR



INTERIOR MANHOLE REPAIR



APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN



MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



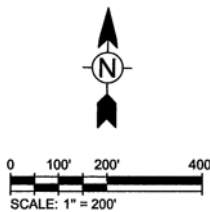
SLIPLINE OR CIPP



COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.



CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 95 - ADD ALTERNATE 2			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
TETRA TECH			
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.249.3909			
REVISION			
BY			
DATE			
PLAN SCALE:			
DRAWN			
DESIGNED			
SURVEY			
PROFILE SCALE:			
HORIZONTAL			
VERTICAL			
FILE:			
ATLAS PAGE NO.:			
APPROVED:			
DATE:			
SHEET			

ATLAS 95- LINE REHAB SCHEDULE - ADD ALTERNATE 2

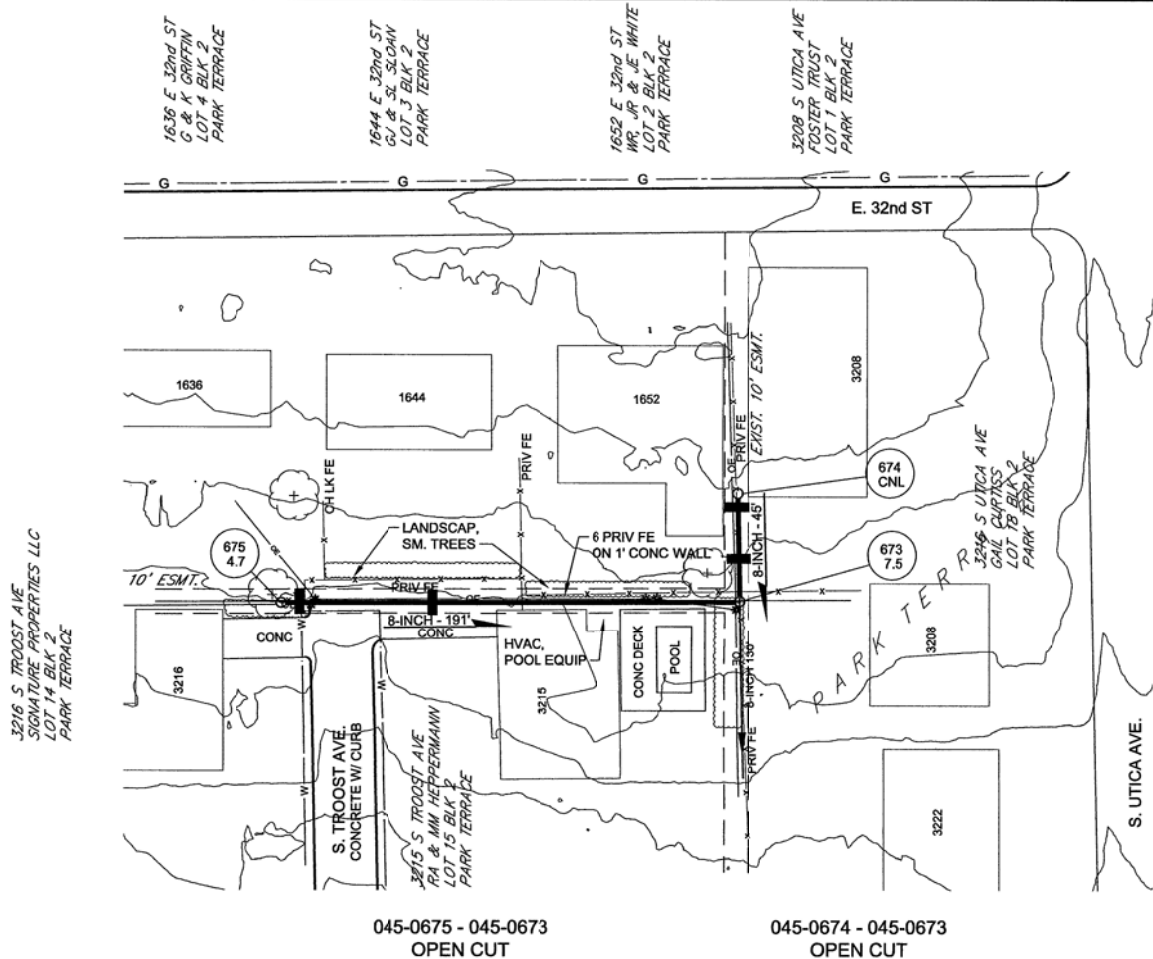
Video Year	Atlas	U/S Manhole	US Rim to Invert	D/S Manhole	DS Rim to Invert	Diameter	Material	CCTV Length	GIS Length	Incomplete CCTV (rehab estimated)	8" - Point Repair (EA)	10" - Point Repair (EA)	15" - Point Repair (EA)	Point Repair Location	8" - Add'l Footage (LF)	10" - Add'l Footage (LF)	15" - Add'l Footage (LF)	8" - Slipline SDR 21 (LF)	8" - Slipline SDR 19 (LF)	8" - Slipline SDR 17 (LF)	10" - Slipline SDR 19 (LF)	12" - Slipline SDR 21 (LF)	15" - Slipline SDR 21 (LF)	8" Cured-in-Place-Pipe (LF)	10" Cured-in-Place-Pipe (LF)	12" Cured-in-Place-Pipe (LF)	15" Cured-in-Place-Pipe (LF)	18" Cured-in-Place-Pipe (LF)	8" - Pipeburst (LF)	10" - Pipeburst (LF)	12" - Pipeburst (LF)	15" - Pipeburst (LF)	8" Open Cut Only (LF)	10" Open Cut Only (LF)	12" Open Cut Only (LF)	15" Open Cut Only (LF)	24" Open Cut Only (LF)	24" - Pipeburst (LF)	Remove & Replace Concrete Pmnt. (SY)	Remove & Replace Asphalt Pmnt. (SY)	Remove & Replace Driveway SDWK. (SY)	Remove & Replace Concrete Curb (LF)	Sodding (SY)	Rehab Services (EA)	Television Pre Inspection		
2024	95	045-0226	7.8	045-0225	8.1	8	VCP	91	126	35	1			90-100ft from MH 0225																													0	126			
2024	95	045-0227	11.7	045-0223	18	18	VCP	281	284																																			2	281		
2024	95	045-0642	8.5	045-0641	9.3	8	DIP	335	330																																			9	335		
2024	95	045-0660	10.2	045-0659	8.4	8	Conc	159	182									159							335																			6	159		
2024	95	045-0664	8.1	045-0663	7.7	8	VCP	296	296		1			0-10ft from MH 0664																														0	296		
2024	95	045-0674	CNL	045-0673	7.5	8	VCP	45	45																																				100	2	45
2024	95	045-0675	4.7	045-0673	7.5	8	VCP	191	190																																				357	2	191
2024	95	045-0703	6.3	045-0702	6.7	8	VCP	291	284																																				8	291	
2024	95	045-0704	7.7	045-0703	6.3	8	VCP	278	278																																				7	278	

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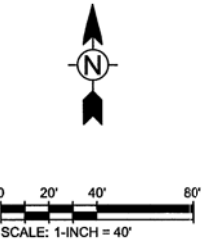
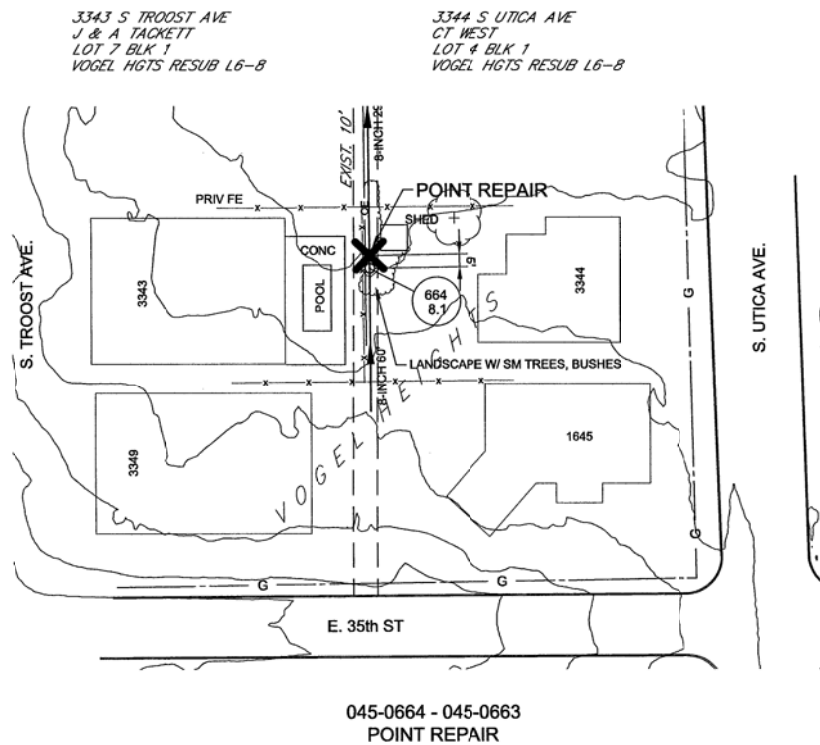


ATLAS 95 - LINE SCHEDULE - ADD ALTERNATE 2	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6	
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
	TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2028	APPROVED:
				DESIGNED	TI	04/2028	
				SURVEY	TI	04/2028	
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			VERTICAL:	FIELD MGR.	6/25/26		
			FILE:	DRAWING:			DATE: APRIL 2028
			ATLAS PAGE NO.:	95			SHEET 40 OF 49 SHEETS



4/30/2026 10:15 AM
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APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 95 - ADD ALTERNATE 2 - DETAILS 2
TMUA PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:  TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909



POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SUPLINE OR CIPP

X

■■■■■■■■

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	SV	5/26	
			HORIZONTAL:	LEAD ENGR.	SV	5/26	
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			FILE:	DRAWING:			DATE: APRIL 2026
			ATLAS PAGE NO.:	95			SHEET 42 OF 49 SHEETS

4/30/2026 10:24 AM
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LEGEND

MANHOLE/LAMPHOLE REPLACEMENT



TOPSIDE MANHOLE/LAMPHOLE REPAIR



INTERIOR MANHOLE REPAIR



APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN



MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



SLIPLINE OR CIPP



COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

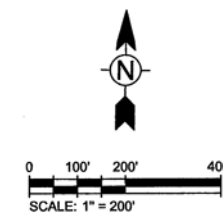
CNL

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.

SEE ATLAS 61

36th ST.
SEE ATLAS 139

SEE ATLAS 95



CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 96-ADD ALTERNATE 3

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 200'	DESIGNED	TI	04/2026	
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DATE: APRIL 2026
SHEET 43 OF 49 SHEETS

ATLAS 96 - LINE REHAB SCHEDULE - ADD ALTERNATE 3

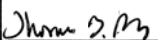
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ATLAS 96 - MANHOLE REHAB SCHEDULE - ADD ALTERNATE 3

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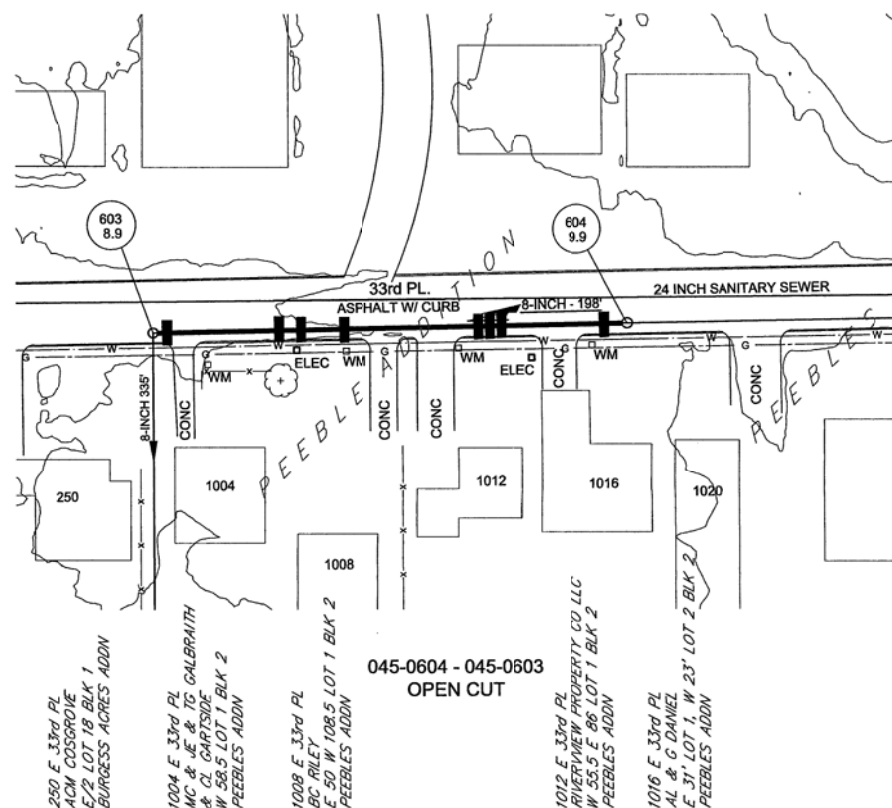
LAMPHOLE 045-0627 WAS NOT FOUND.
DURING CONSTRUCTION OF LINE SEGMENT 045-0627 TO 045-625, CONTRACTOR TO REPLACE LAMPHOLE WITH NEW 4' ID
MANHOLE, IF EXISTING STRUCTURE IS A MANHOLE, CONTACT ENGINEER FOR INSPECTION AND REHAB RECOMMENDATION



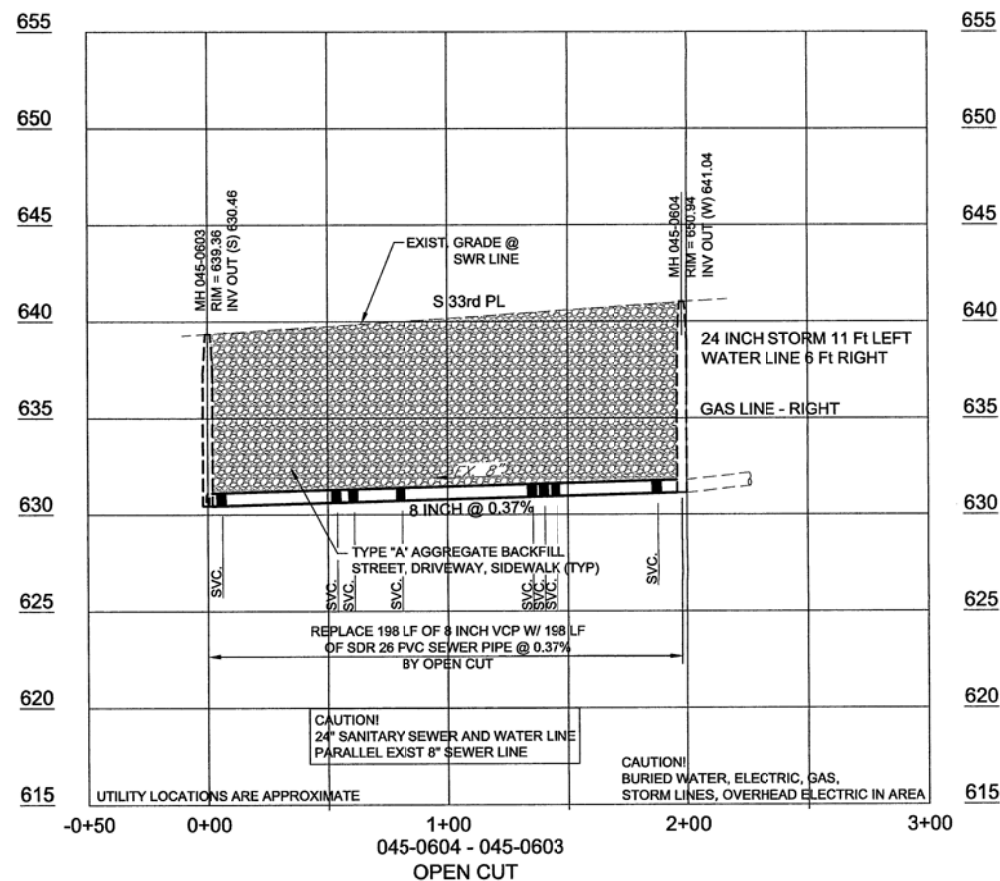
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TMUA PROJECT NO. ES 2024-04 (2)			
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6			
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909	
PLAN SCALE:	DRAWN	TI	04/20/26
	DESIGNED	TI	04/20/26
	SURVEY	TI	04/20/26
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HORIZONTAL	FIELD MGR.	SV	5/16/26
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ATLAS PAGE NO.: 96		DATE: APRIL 2026	
		SHEET 44 OF 49 SHEETS	



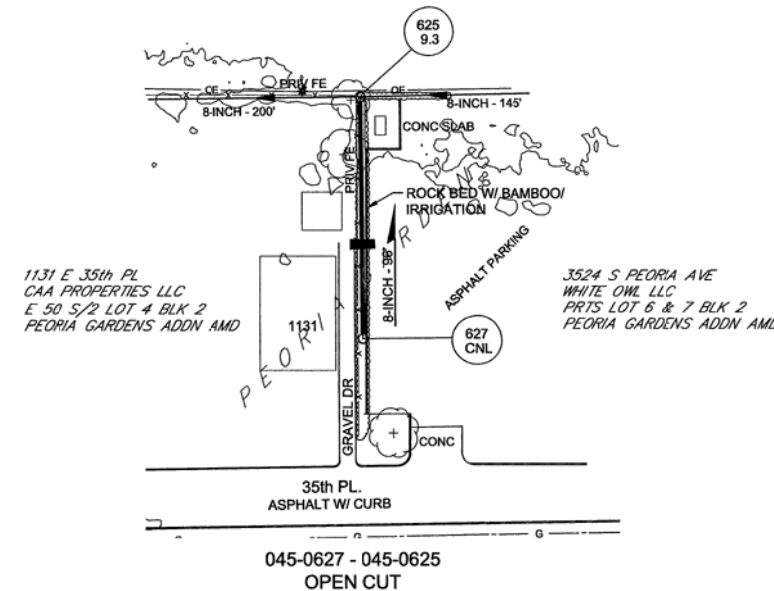
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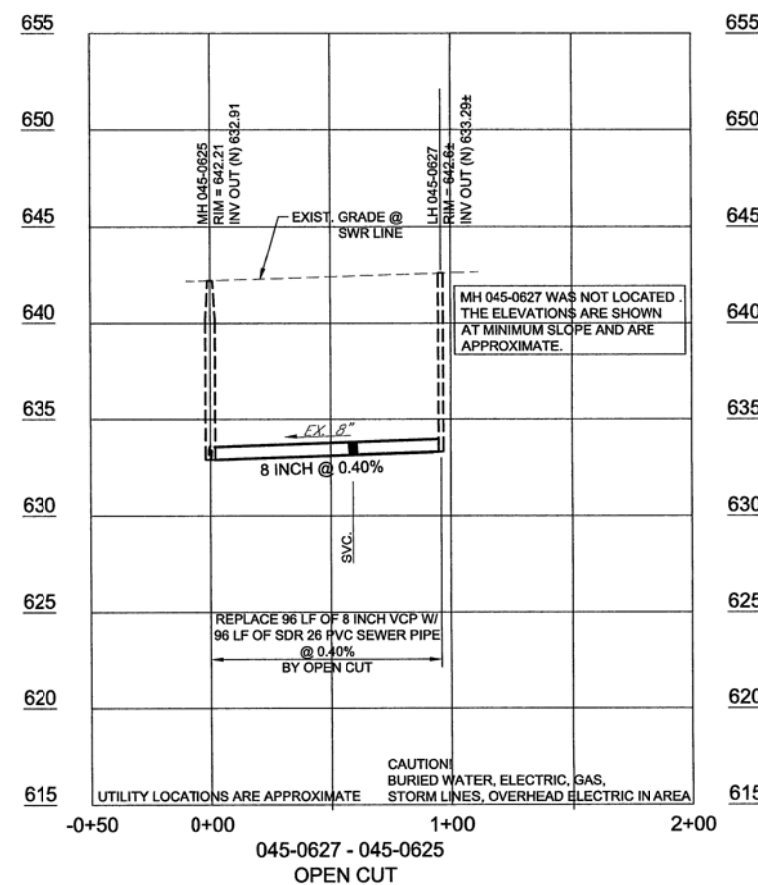
045-0604 - 045-0603
OPEN CUT



045-0604 - 045-0603
OPEN CUT



045-0627 - 045-0625
OPEN CUT



POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP

SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

LAMPHOLE 045-0627 WAS NOT LOCATED.
DURING CONSTRUCTION OF LINE SEGMENT
045-0627 TO 045-625, CONTRACTOR TO
REPLACE LAMPHOLE WITH NEW 4' ID
MANHOLE, IF EXISTING STRUCTURE IS A
MANHOLE, CONTACT ENGINEER FOR
INSPECTION AND REHAB RECOMMENDATION



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 96 - ADD ALTERNATE 3 - DETAILS 1

TMUA PROJECT NO. ES 2024-04

CROW CREEK

SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA

WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH

7645 E. 63rd Street, Suite 301, Tulsa, OK 74133

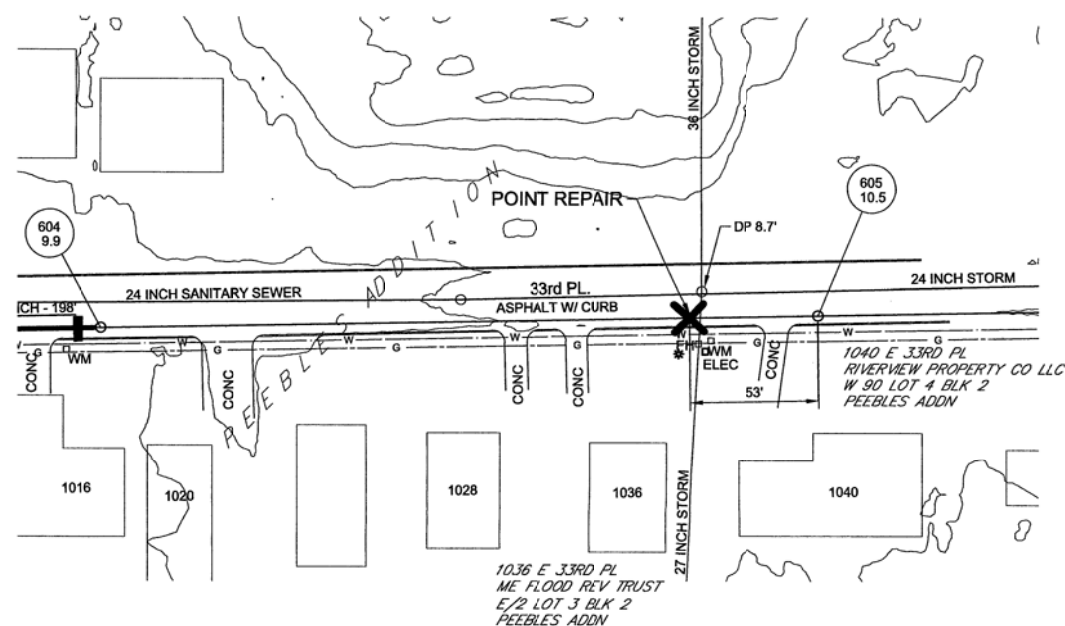
TEL 918.249.3909



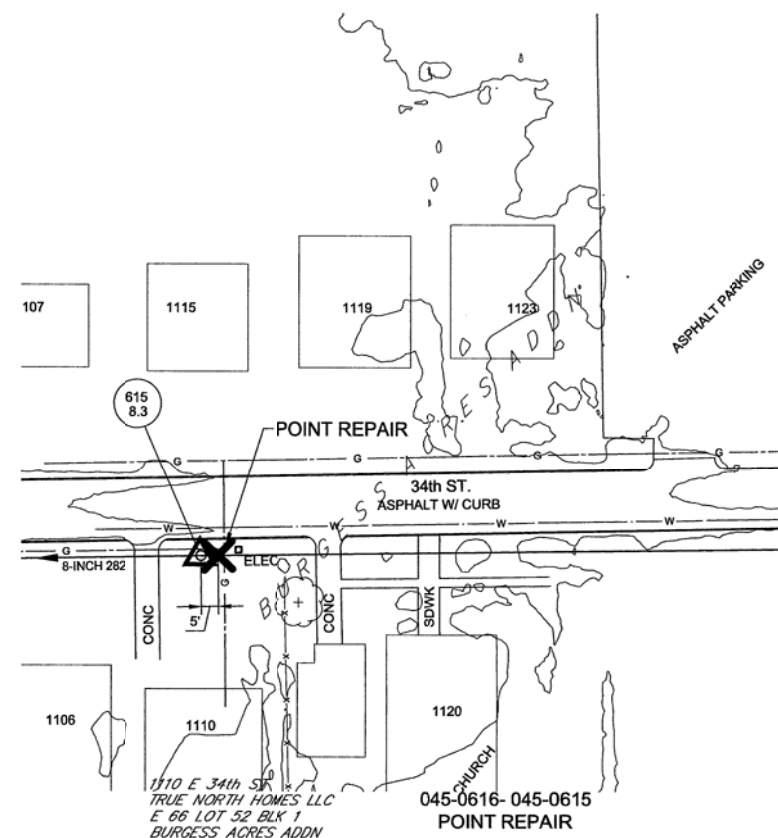
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				SURVEY	TL	04/2026	
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			HORIZONTAL	LEAD ENGR.	TL		
			1" = 40'	FIELD MGR.	TL		
			1" = 5'				
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	96			



0 20' 40' 60'
SCALE: 1-INCH = 40'



045-0605 - 045-0604
POINT REPAIR



APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 96 - ADD ALTERNATE 3 - DETAILS 2

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7045 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	DESIGN MANAGER DATE: APRIL 2026 SHEET 46 OF 49 SHEET
				SURVEY	TI	04/2026	
			PROFILE SCALE:	PROJ. MGR.	BN	5/26	
			HORIZONTAL	LEAD ENGR.	BN	5/26	
			VERTICAL	FIELD MGR.	BN	5/26	
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	96			

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST

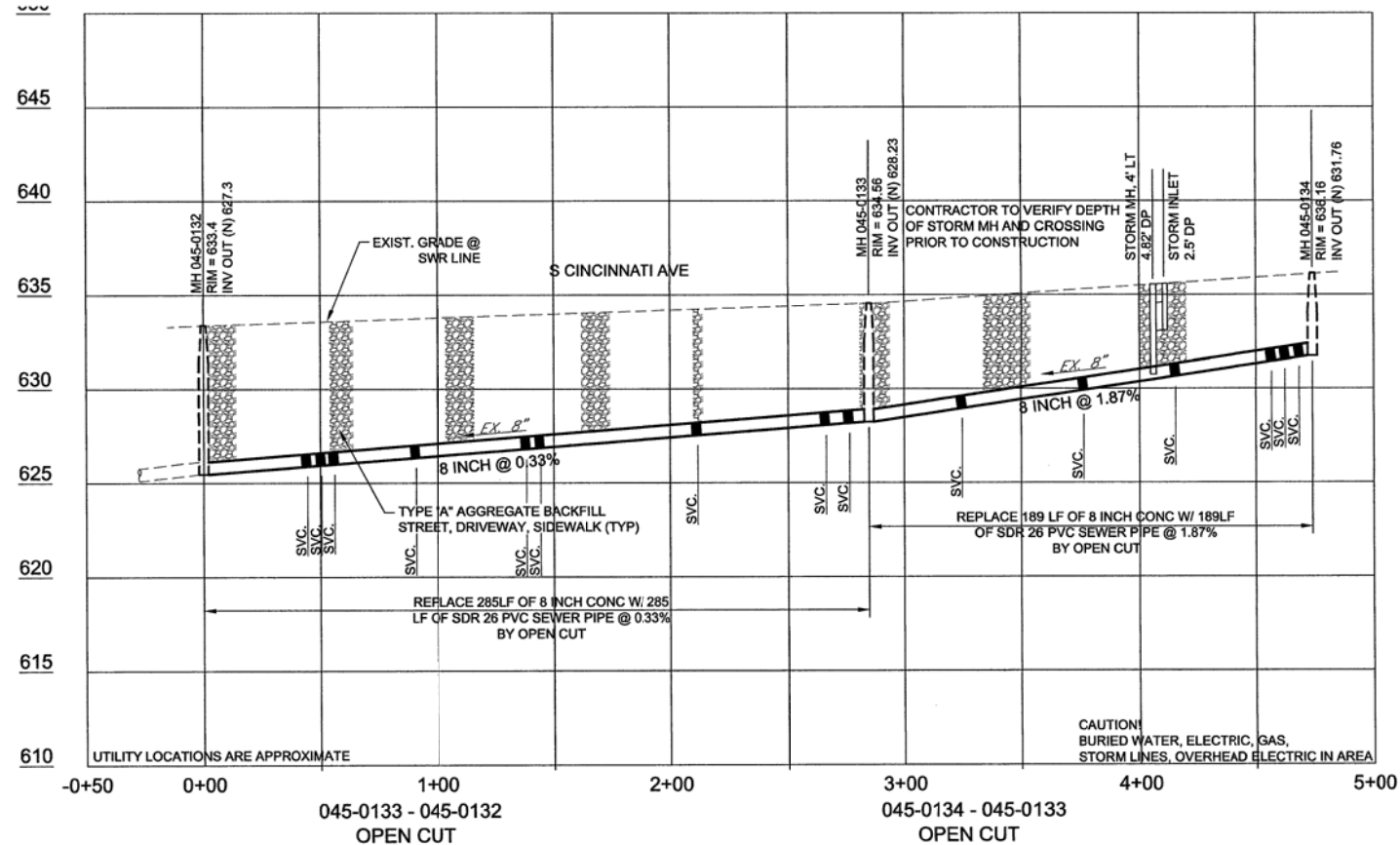
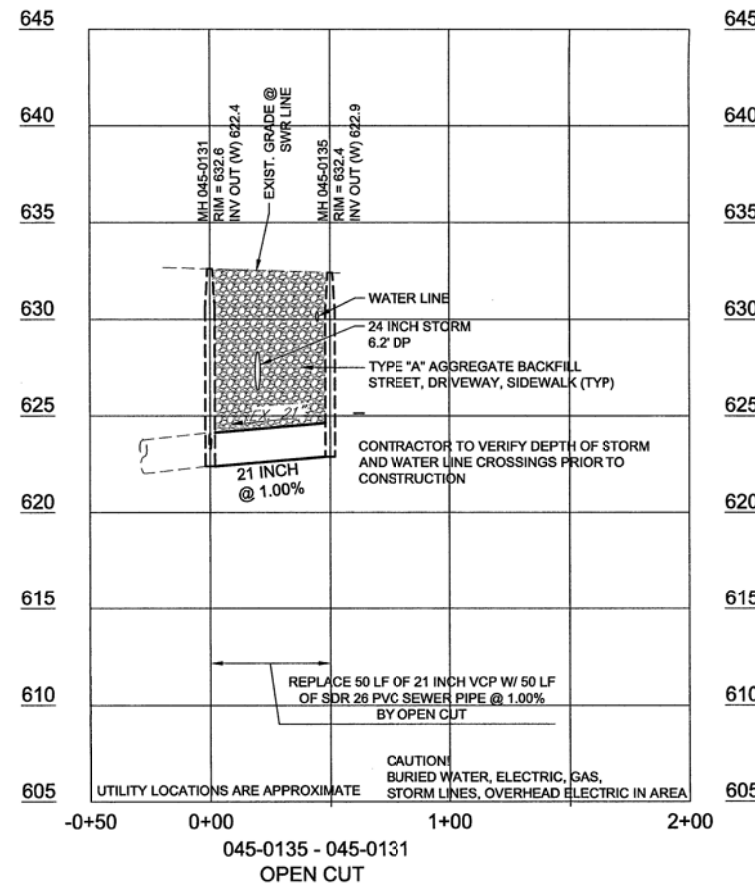
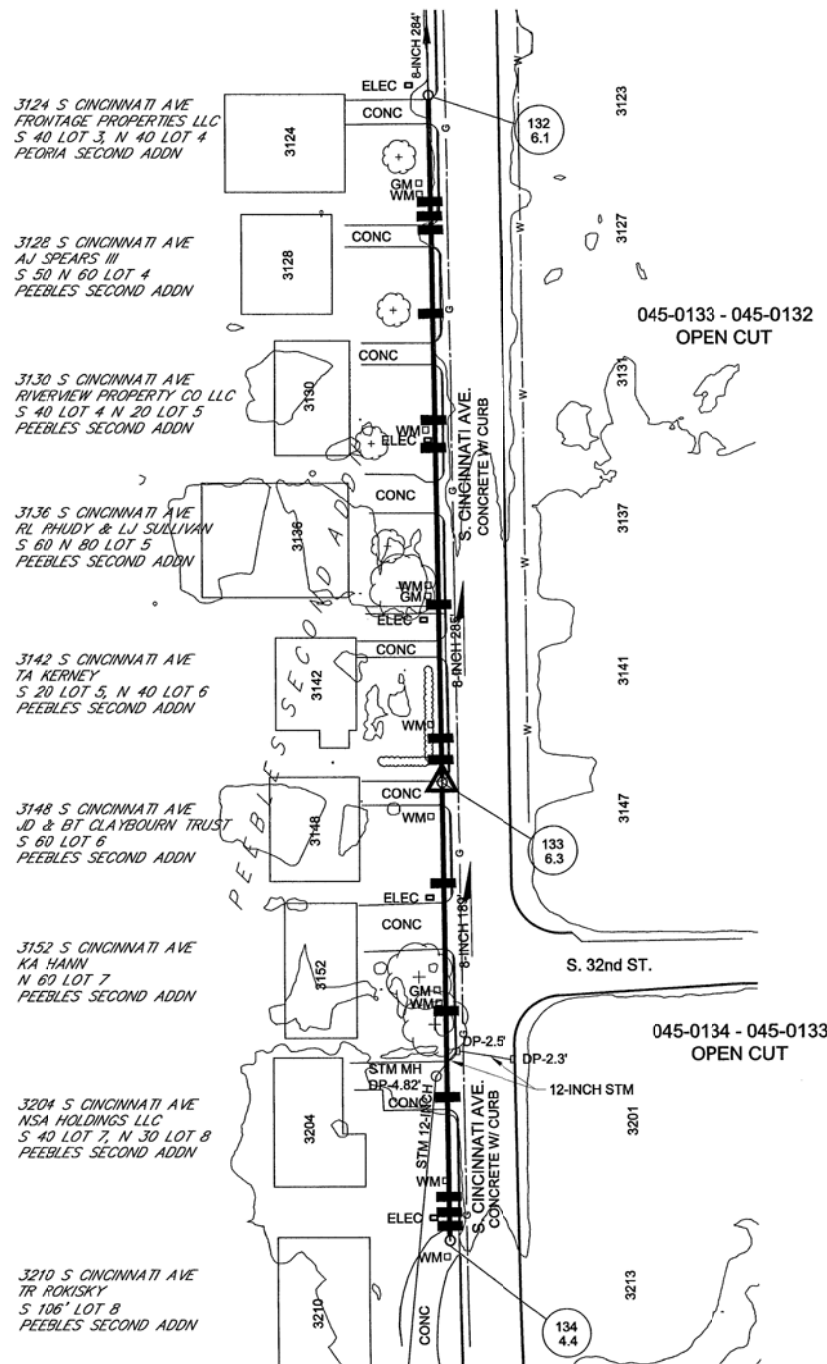
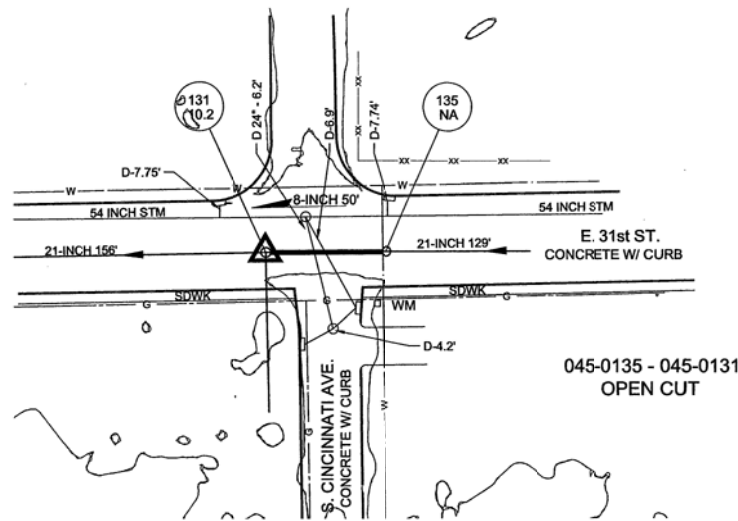


SLIPLINE OR CIPP

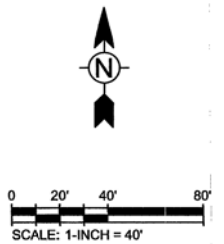


SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV

4/30/2026 10:47 AM
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SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV



POINT REPAIR X
LINE REPLACEMENT
OPEN CUT OR PIPEBURST
SLIPLINE OR CIPP



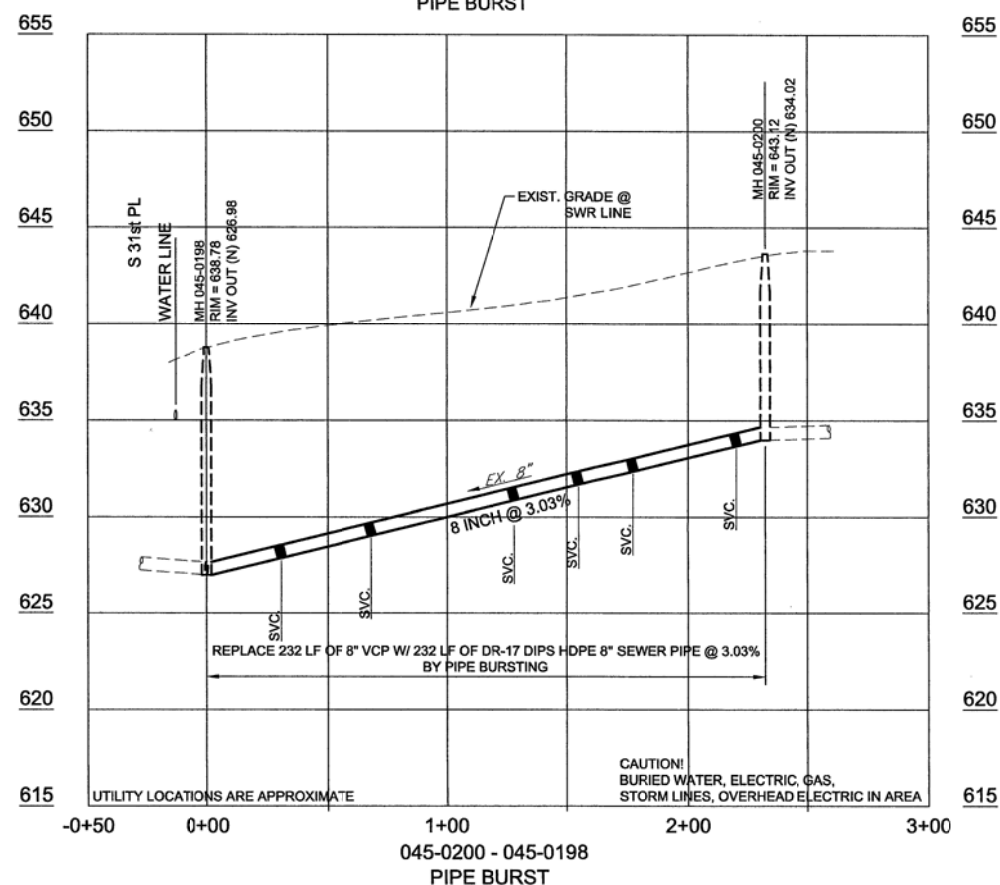
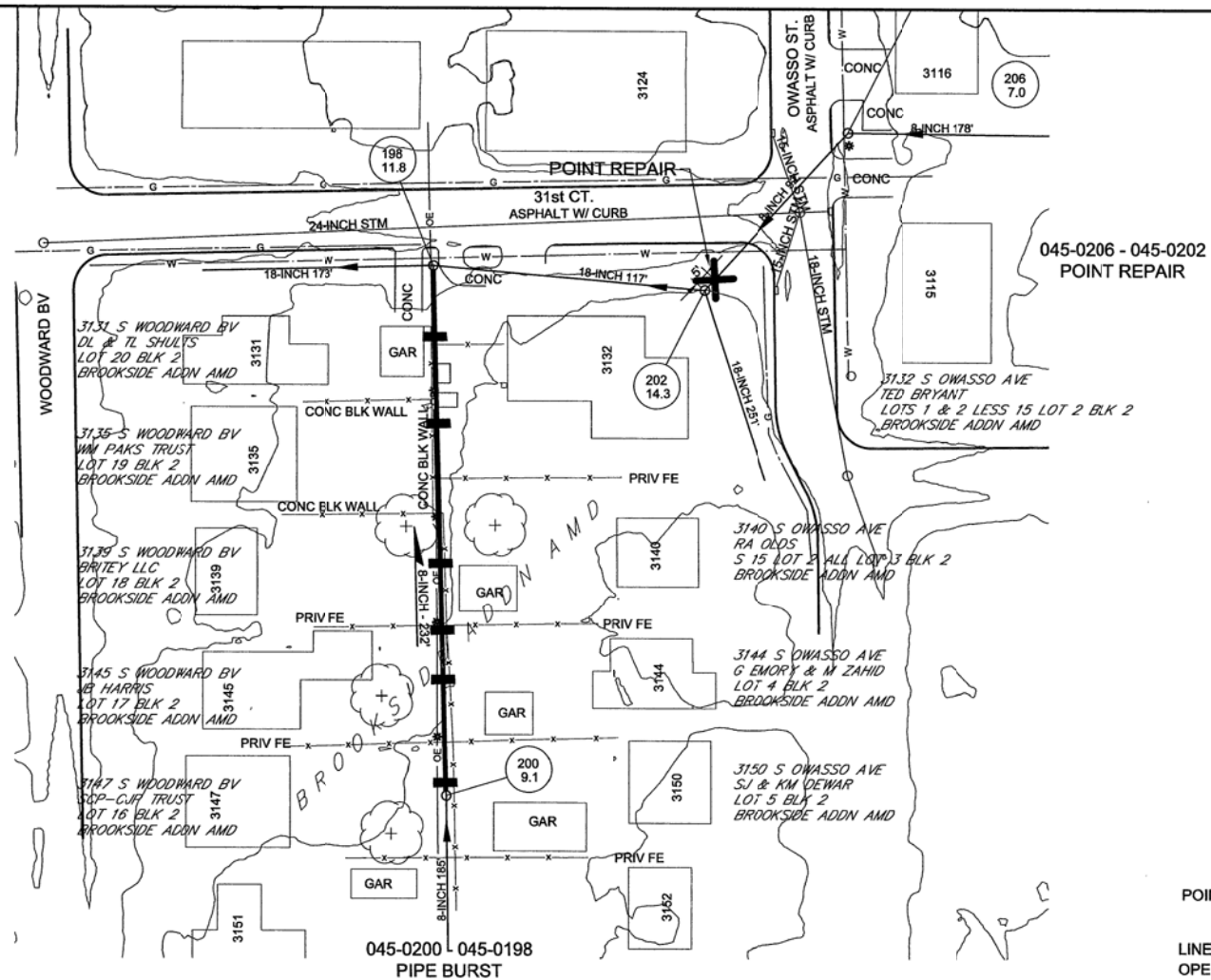
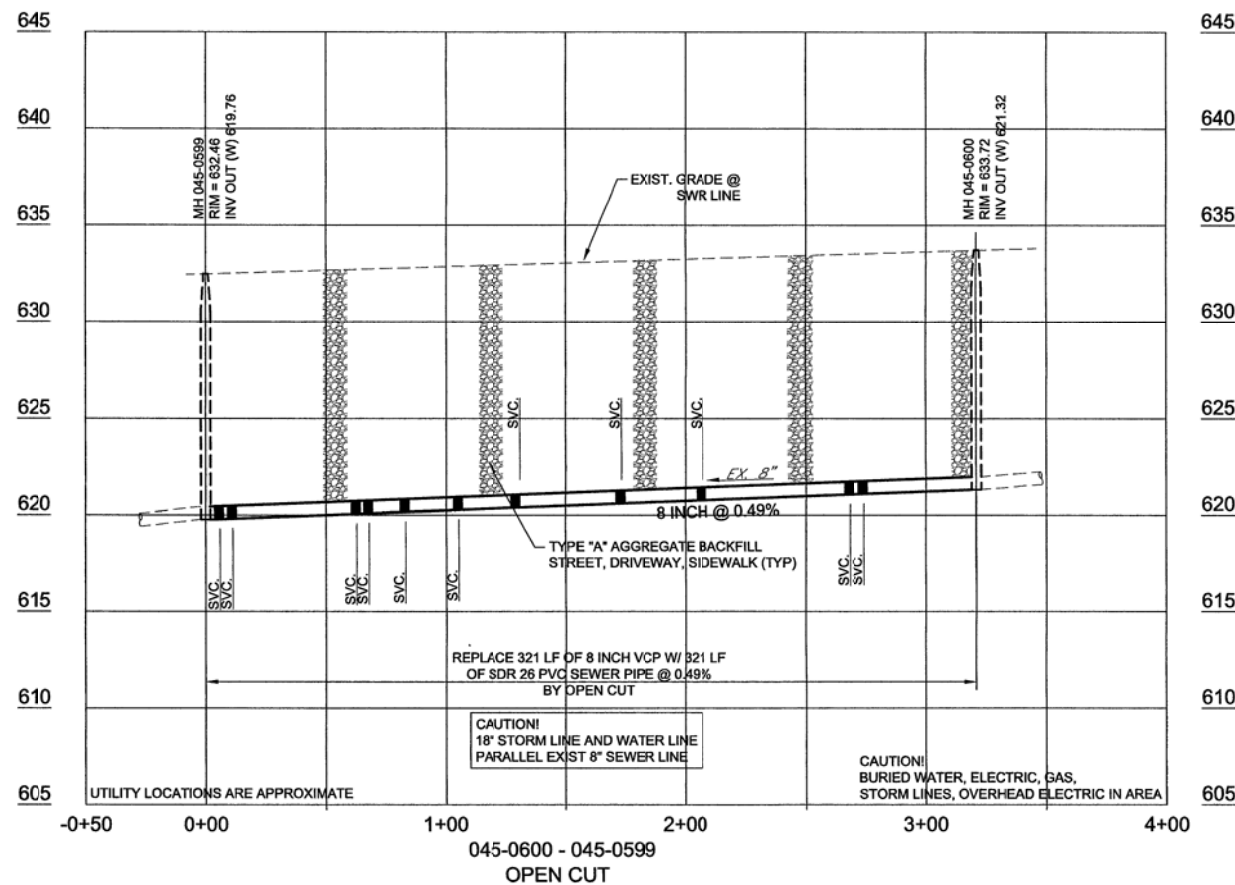
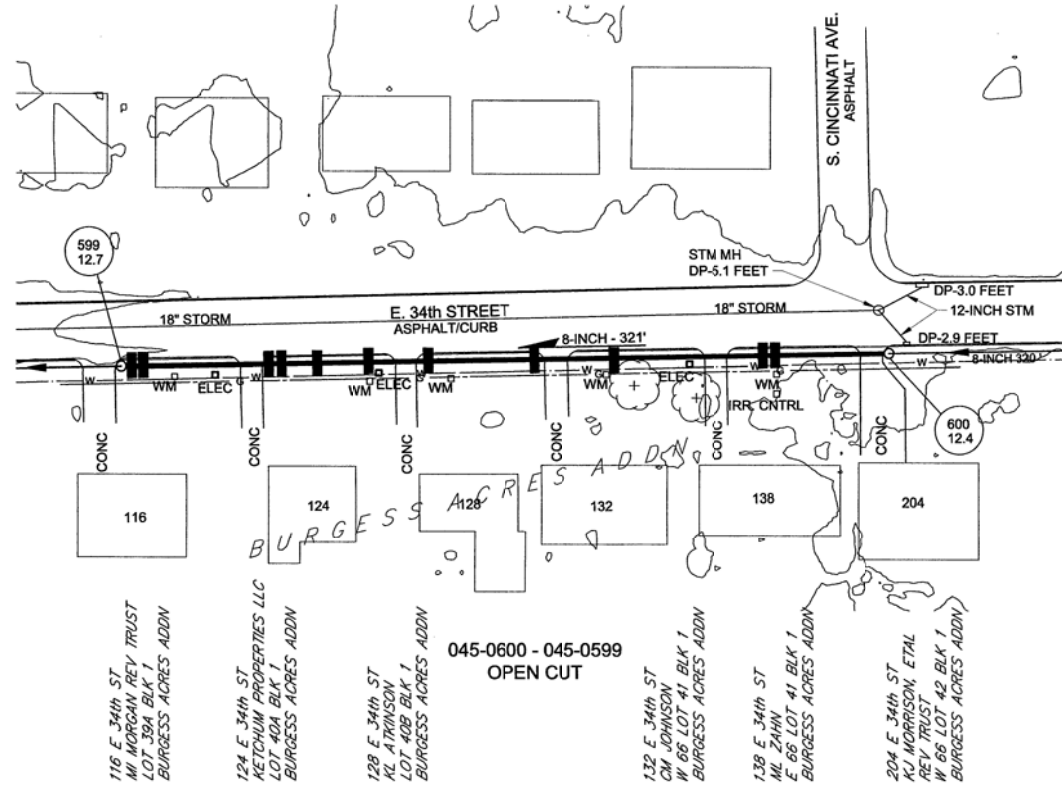
APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
			1" = 40'	DESIGNED	TI	04/2026	
			HORIZONTAL	SURVEY	TI	04/2026	
			1" = 40'	PROJ. MGR.	BT	5/26	
			VERTICAL	LEAD ENGR.	BT	5/26	
				FIELD MGR.	BT	5/26	
			FILE:	DRAWING:			DATE: APRIL 2026
			ATLAS PAGE NO.:	96			SHEET 47 OF 49 SHEETS



- POINT REPAIR
- LINE REPLACEMENT
- OPEN CUT OR PIPEBURST
- SLIPLINE OR CIPP



APPROXIMATE LOCATION EXISTING SERVICE TAP, CONTRACTOR TO VERIFY LOCATIONS THROUGH PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND TRENCHING TO BE COMPLETED PER CITY OF TULSA STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA NATURAL GAS ATLAS AND ARE APPROXIMATE

ATLAS 96 - ADD ALTERNATE 3 - DETAILS 4
TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 6
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

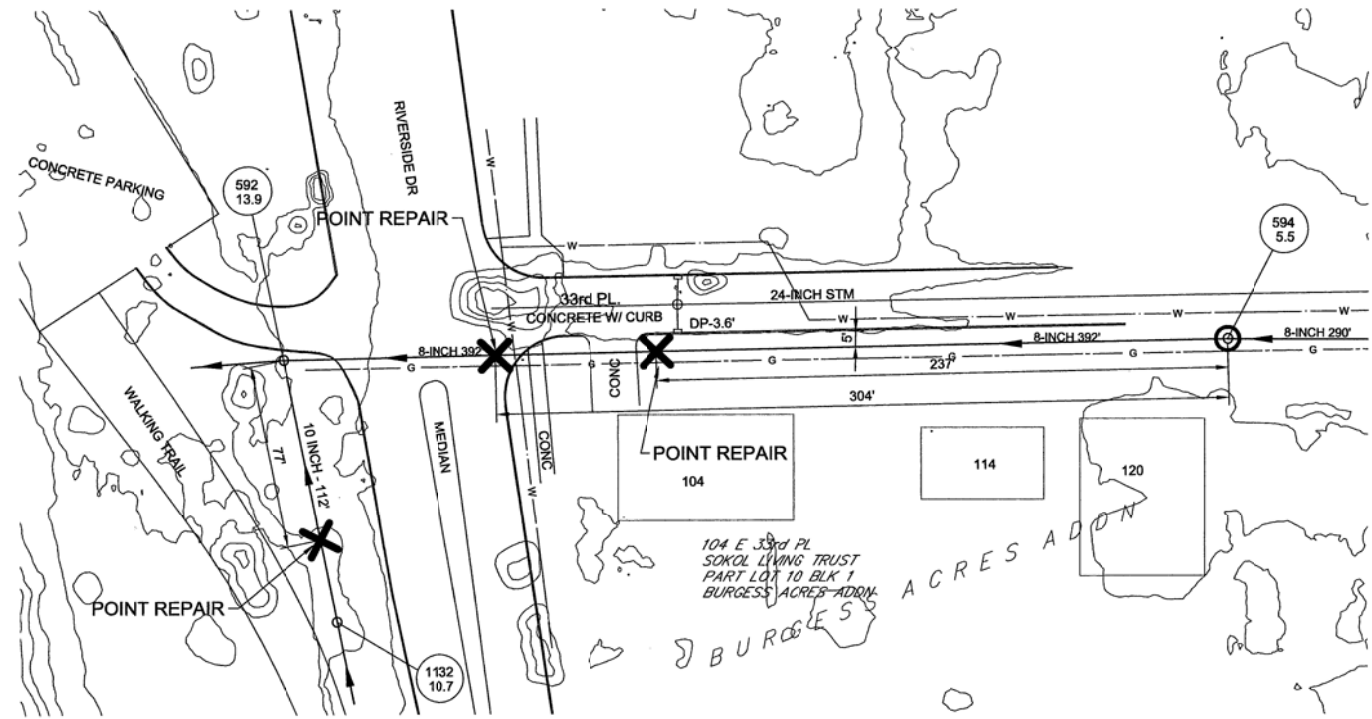


REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	04/2026	APPROVED:
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			PROFILE SCALE:	PROJ. MGR.	TV	5/24	
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			1" = 5'				
			FILE:	DRAWING:			DATE: APRIL 2026
			ATLAS PAGE NO.:	96			SHEET 48 OF 49 SHEETS

SERVICE LOCATIONS ARE APPROXIMATE, CONTRACTOR TO VERIFY WITH PRE-CCTV

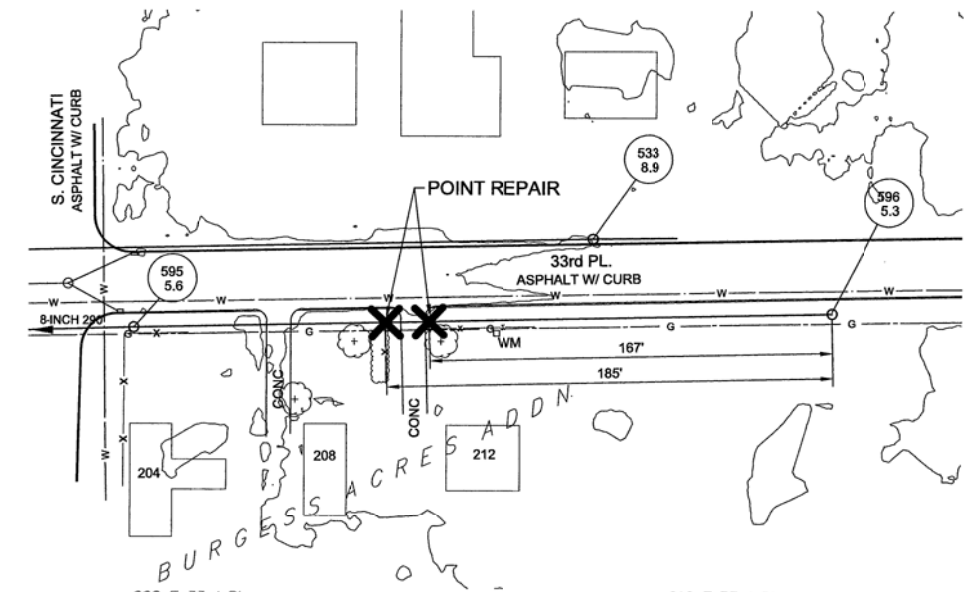


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SCALE: 1-INCH = 40'

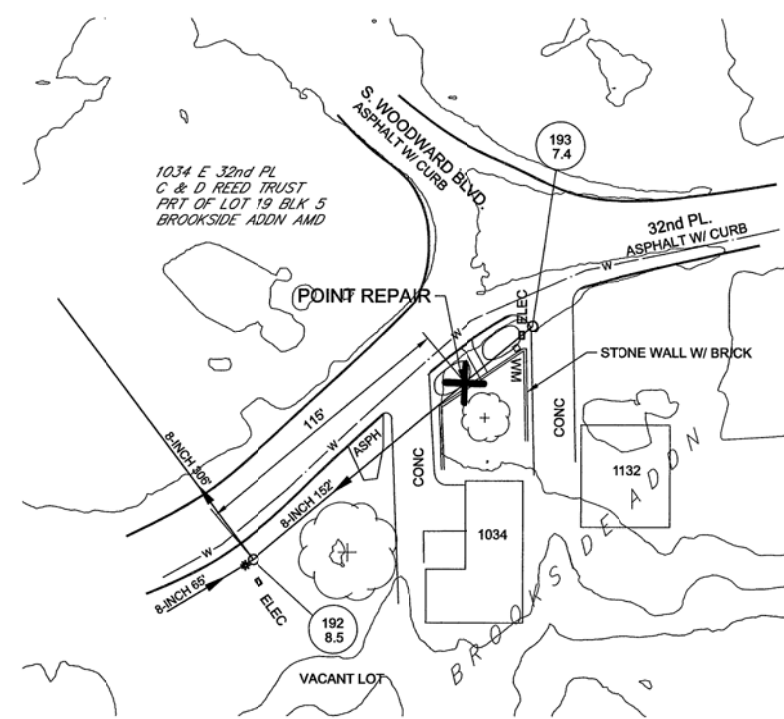


045-1132 - 045-0592
POINT REPAIR

045-0594 - 045-0592
2 POINT REPAIRS



045-0596 - 045 - 0595
2 POINT REPAIRS



045-0193 - 045-0192
POINT REPAIR

POINT REPAIR

LINE REPLACEMENT
OPEN CUT OR PIPEBURST

SLIPLINE OR CIPP



SERVICE LOCATIONS ARE APPROXIMATE,
CONTRACTOR TO VERIFY WITH PRE-CCTV



APPROXIMATE LOCATION EXISTING SERVICE TAP,
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ATLAS 96 - ADD ALTERNATE 3 - DETAILS 5	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 6	
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
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REVISION	BY	DATE	PLAN SCALE:	DRAWN	TR	04/2026	APPROVED:
			1" = 40'	DESIGNED	TR	04/2026	
				SURVEY	TR	04/2026	
			PROFILE SCALE:	PROJ. MGR.	SV	5/26	
			HORIZONTAL	LEAD ENGR.	SV	5/26	
			1" = 40'	FIELD MGR.	SV	5/26	
			VERTICAL	DRAWING:			
			1" = 5'				
			FILE:				
			ATLAS PAGE NO.:	96			

DESIGN MANAGER
DATE: APRIL 2026
SHEET 49 OF 49 SHEETS