

SURVEY DATA:

- HORIZONTAL CONTROL:
 - HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON NAD 83 (1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE 3501.
 - ACCURACY - 1ST ORDER.
- BEARINGS:
 - THE BEARINGS SHOWN HEREIN WERE DERIVED BY USING THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (NORTH ZONE).
 - ACCURACY - 1ST ORDER.
- VERTICAL CONTROL:
 - VERTICAL CONTROL FOR THIS PROJECT IS BASED ON NAVD 1988.
 - ACCURACY - 1ST ORDER.



CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT WOODYCREST UNSEWERED AREA SANITARY SEWER LINE EXTENSION CITY OF TULSA PROJECT NO. ES 2017-06

LEGEND AND MAP SYMBOLS

PROPOSED ROAD	SIGN
EXISTING ROAD	FIRE HYDRANT
CONSTRUCTION REF. LINE (CENTERLINE)	FLAG POLE
CONCRETE CURB AND GUTTER	POWER POLE
EXISTING CURB AND GUTTER	LIGHT POLE
TOP OF CUT OR TOE OF SLOPE	DOWN GUY
DRAINAGE STRUCTURES NEW	SHRUB
DRAINAGE STRUCTURES EXISTING	IRON PIN
LOT LINE	PEDESTAL
PROPOSED RIGHT-OF-WAY	ELECTRIC VAULT
EXISTING RIGHT-OF-WAY/PROPERTY LINE	TELEPHONE PEDESTAL
WATER LINE	MANHOLE
SS SANITARY SEWER LINE	STORM MANHOLE
SW STORMWATER	SANITARY MANHOLE
UT UNDERGROUND TELEPHONE	WATER VALVE
OE OVERHEAD ELECTRIC	WATER METER
UE UNDERGROUND ELECTRIC	SANITARY SEWER CLEAN-OUT
G GAS LINE	GAS VALVE
CTV CABLE T.V.	GAS METER
FOC FIBER OPTIC	REINFORCED CONCRETE PIPE
FENCE	FLOWLINE
RAILROAD TRACKS	CENTERLINE
FINISH GRADE CONTOURS	BUILDING LINE
EXISTING GROUND PROFILE	UTILITY EASEMENT
EXISTING DITCH LT PROFILE	DRAINAGE EASEMENT
EXISTING DITCH RT PROFILE	RESTRAINED JOINT
FINISHED GROUND PROFILE	RIGHT-OF-WAY
PROFILE GRADE LINES	
DRAINAGE AREA BOUNDARY	
DRAINAGE AREA REACH LINE	
FORCE MAIN	
TREE LINE	
REGULATORY FLOOD PLAIN BOUNDARY	

UTILITY COORDINATION

COMPANY	CONTACT	PHONE NO.
AT&T	AL NICHOLS	918-596-4237
COX COMMUNICATIONS	BRANDON WADE	918-286-4716
ONG	JONATHON MEADOWS	918-831-8215
AEP/PSO	ADAM FIELDS	918-250-6257
CITY OF TULSA	CHRIS KOVAC	918-596-9649
MTTA	ERIC SMITH	918-830-0024

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CALL OKIE 1-800-522-6543
UTILITIES LOCATION SHOWN ON PLAN AND PROFILE WERE OBTAINED FROM INFORMATION PROVIDED BY UTILITY SYSTEM OWNER IN CONJUNCTION WITH EXISTING PHYSICAL FEATURES VISIBLE AT THE TIME OF THE TOPOGRAPHIC SURVEY. LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION

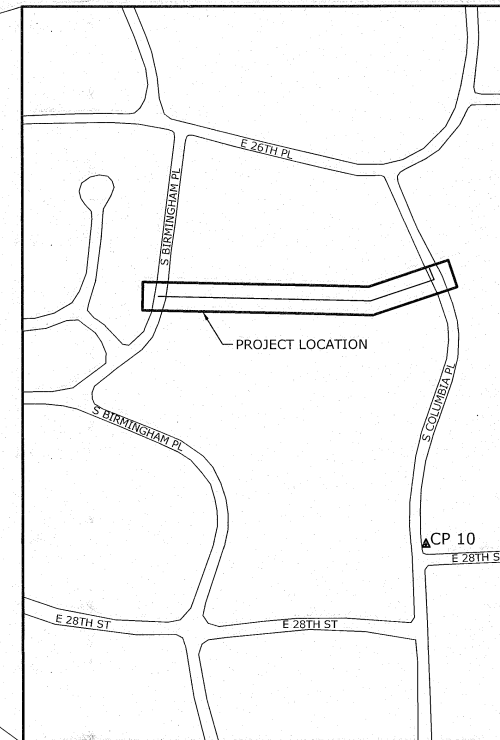
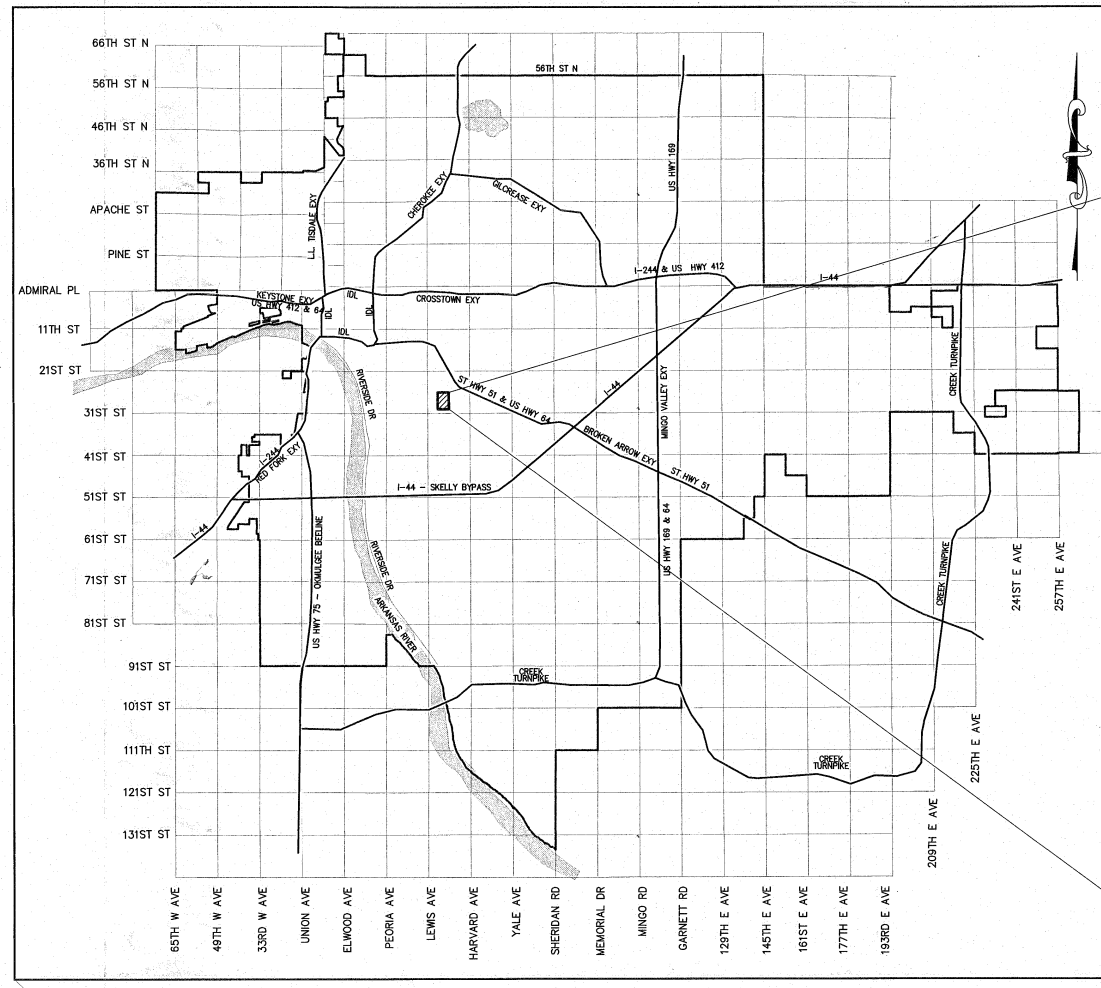
UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE LOCATIONS ONLY. LOCATIONS SHOWN ARE THOSE SUPPLIED BY UTILITY COMPANY ATLAS SHEETS AND SOME HORIZONTAL LOCATIONS FLAGGED IN THE FIELD. NO VERTICAL LOCATIONS OR EXPOSED LOCATIONS WERE OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES BEFORE STARTING ANY EXCAVATION.

ALL WATER AND SEWER CONSTRUCTION SHALL BE GOVERNED BY "CONSTRUCTION SPECIFICATIONS" OF THE DEPARTMENT OF ENGINEERING SERVICES, LATEST EDITION.

THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS AND IS ENTIRELY LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF TULSA (COT).

CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2009 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ENTIRE PROJECT IS WITHIN THE CORPORATE LIMITS OF THE CITY OF TULSA (COT).



LOCATION MAP
N.T.S.

VICINITY MAP
SANITARY SEWER LENGTH = 732.59 FT = 0.14 MILES

PREPARED AND SUBMITTED BY:

MCE McCLELLAND
CONSULTING
ENGINEERS, INC.

4606 S. Garnett Rd., Suite 401 Tulsa, OK 74146
PH# 918.619.6803 Fax # 918.340.5395
HTTP://WWW.MCE.US.COM

CERTIFICATE OF AUTHORIZATION #5917 EXPIRES 6-30-21

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	PAY ITEMS & NOTES (ROADWAY & TRAFFIC)
3	SURVEY DATA
4	RIGHT-OF-WAY MAP
5	STORM WATER MANAGEMENT PLAN
6	PLAN AND PROFILE (SHEET 1 OF 2)
7	PLAN AND PROFILE SHEET 2 OF 2)
8	MANHOLE DETAILS
9	TRAFFIC DETOUR PLAN

CITY OF TULSA STANDARD DETAILS & DRAWINGS

126	STANDARD SILT FENCE AND CONSTRUCTION ENTRANCE
314	MANHOLE STEPS
351	BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE
353	FRAME AND LID FOR 4' I.D. SANITARY MANHOLE
358	SANITARY SEWER PRE-CAST SANITARY SEWER MANHOLES
361	IN-LINE TEES FOR SERVICE CONNECTION
409	CONCRETE MANHOLE COLLAR
702	RESIDENTIAL CONCRETE DRIVEWAY ASPHALT STREET
714	PAVEMENT CUTS

ODOT STANDARDS *USE LATEST EDITION

TRAFFIC

TCS4-1-01
TCS9-1-01
TCS1-1-01
TCS5-1-00

BENCHMARK
CP 10
N:414850.9810
E:2573728.7840
ELEV:768.58

APPROVED BY:
ENGINEERING SERVICES DEPARTMENT
CITY OF TULSA, OKLAHOMA

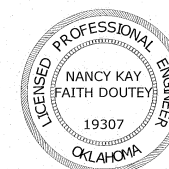
CLAYTON EDWARDS 6-15-20
CLAYTON EDWARDS DATE
DIRECTOR
WATER AND SEWER DEPT.

PAUL D. ZACHARY, P.E. 06-17-20
CITY ENGINEER DATE

ADVERTISEMENT DATE: 06-26-20

ENGINEER'S CERTIFICATION:

NANCY KAY FAITH DOUTEY 6-10-2020
NANCY KAY FAITH DOUTEY, P.E. DATE



PLOT DATE: 7/17/2020 10:43 AM, DRAWING NAME: PAY QUANTITIES

PAY ITEMS - WASTEWATER					
ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	TOTAL
1	COT 301	RIGHT-OF-WAY CLEARING AND RESTORING	5,7,8,9	LF	150
2	COT 302	EXCAVATION AND BACKFILL, UNCLASSIFIED	6	CY	170
3	COT 303	MOBILIZATION		EA	1
4	COT 304	CONTRACTOR CONSTRUCTION STAKING	4	EA	1
5	COT 309A	10 INCH HDPE AWWA C906 PE4710 DR-11 (DIPS) (TRENCHED)	6	LF	39
6	COT 313	4 INCH POLYVINYL CHLORIDE (PVC) PIPE, SEWER SERVICE		EA	2
7	COT 314	MANHOLE 4' DIAMETER, COMPLETE IN PLACE (SANITARY)	2	EA	4
8	COT 314	ADDITIONAL DEPTH IN MANHOLE OVER SIX FEET (SANITARY)	2	VF	18
9	COT 314	MANHOLE 4' DIAMETER, COMPLETE IN PLACE (STORM)	2,18	EA	1
10	COT 315	CONNECTION	2,15	EA	4
11	COT 315	SERVICE TEE CONNECTION		EA	2
12	COT 329	PAVEMENT, REMOVAL AND REPLACEMENT (ASPHALT)	13	SY	169
13	COT 329	PAVEMENT, REMOVAL AND REPLACEMENT (CONCRETE)	3,14	SY	91
14	COT 329	CURB AND GUTTER, REMOVE AND REPLACE		LF	40
15	COT 330	TEMPORARY SILT FENCE		LF	200
16	COT 330	SOLID SLAB SODDING	1	SY	112
17	COT 404	SANITARY SEWER PIPE REMOVAL	3	LF	31
18	COT 404	SANITARY SEWER MANHOLE REMOVAL	3	EA	2
19	COT 404	STORM PIPE REMOVAL	3,18	LF	60
20	COT 404	STORM MANHOLE REMOVAL	3,18	EA	1
21	COT 613	18" RCP IN PLACE	18	LF	60
22	ODOT402E	TBSC TYPE E	17	TON	15
23	06225	10 INCH HDPE AWWA C906 PE4710 DR-11 (DIPS) (DIRECTIONAL BORE)	6	LF	679
24	SPECIAL	OWNER'S ALLOWANCE		ALLOW	1
25	SPECIAL	PUMP EXISTING SANITARY SEWER	16	EA	1
PAY ITEMS -TRAFFIC CONTROL					
26	COT 327	SIGNS 0 TO 6.25 SF	10,11,12	SD	300
27	COT 327	SIGNS 6.26 TO 15.99	10,11,12	SD	150
28	COT 327	BARRICADES (TYPE III)	10,11,12	SD	270
29	COT 327	TYPE 'A' WARNING LIGHT	11	SD	510

PAY ITEM NOTES

1. THE COST OF FERTILIZING AND WATERING SHALL BE INCLUDED IN THE BID PRICE FOR ITEM #330 SOLID SLAB SODDING.” FERTILIZER SHALL BE 10-20-10 APPLIED AT THE RATE OF 1.5 POUNDS PER 10 SQUARE YARDS. FERTILIZER SHALL BE APPLIED PER SECTION 230.04(H). WATERING SHALL BE APPLIED AS NECESSARY UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE WORK IS ACCEPTED AS COMPLETE.
2. INCLUDES ALL ITEMS TO COMPLETE STRUCTURE INCLUDING BUT NOT LIMITED TO EXCAVATION, FLOWABLE FILLS, CONCRETE, REINFORCING STEEL, MASONRY, MANHOLE, FRAMES, CASTINGS, STRUCTURAL STEEL, LABOR AND INCIDENTALS.
3. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF BY HIM IN A MANNER SUITABLE TO THE ENGINEER AND AT NO COST TO THE CITY OF TULSA.
4. INCLUDES THE COST OF ALL SURVEYING AND STAKING NECESSARY TO COMPLETE THE ENTIRE PROJECT AND SHALL BE PERFORMED BY AN OKLAHOMA REGISTERED LAND SURVEYOR.
5. FENCES, RETAINING WALLS, AND DRAINAGE STRUCTURES DISTURBED DUE TO SANITARY SEWER CONSTRUCTION SHALL BE REPLACED WITH NEW MATERIALS AND PAID FOR UNDER 301.
6. CONTRACTOR TO EXCAVATE ALL UTILITY CROSSINGS AHEAD OF PIPE LAYING TO AVOID UTILITY CONFLICTS. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED SEWER LINE. COST FOR EXCAVATING UTILITY CROSSINGS SHALL BE INCLUDED IN COST OF EXCAVATION AND BACKFILL, UNCLASSIFIED.
7. CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS, LANDSCAPING, PLANTS, AND/OR ELECTRICAL SYSTEMS DAMAGED DURING THE COURSE OF CONSTRUCTION AND RESTORING TO SATISFACTION OF THE PROPERTY OWNER. NO ADDITIONAL PAYMENT SHALL BE MADE. PAYMENT SHALL BE INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORING.
8. COST OF ANY TEMPORARY LIVESTOCK OR PET FENCING AND POLES SHALL BE INCLUDED IN COST OF RIGHT-OF-WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.
9. SHALL INCLUDE THE COST OF RESTORING GRAVEL DRIVEWAY DISTURBED BY CONSTRUCTION AT THE 2636 S. COLUMBIA PL. E. PROPERTY WITH SEPARATOR FABRIC AND A MIN. DEPTH OF 6” TBSC TYPE E.
10. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.
11. IF WARNING LIGHTS ARE TO BE USED ON TRAFFIC CONTROL DEVICES, TYPE “A” LIGHTS SHALL ONLY BE USED ON DEVICES WARNING OF UNEXPECTED HAZARDS, AND SHALL NOT BE USED FOR DELINEATION OF THE TRAVELED WAY. ONLY TYPE “C” WARNING LIGHTS SHALL BE USED FOR DELINEATION OF THE TRAVELED WAY, AND TYPE “C” LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.
12. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL REQUIRED FOR COMPLETION OF THE PROJECT.
13. PRICE BID INCLUDES TACK COAT, ASPHALTIC CONCRETE TYPE S3, ASPHALTIC CONCRETE TYPE 4, TYPE A AGG BASE AND SEPARATOR FABRIC AS SHOWN ON TYPE I AC PATCH DETAIL ON SHEET 6.
14. TO BE USED FOR REMOVAL AND REPLACEMENT OF EXISTING CONCRETE DRIVEWAYS.
15. PRICE BID INCLUDES ONE CONNECTION OF EXISTING SERVICE TO NEW MANHOLE, AND THREE CONNECTIONS OF EXISTING MAINS TO NEW MANHOLES.

16. EXISTING SANITARY SEWER MAY CONTAIN BLACK WATER. CONTRACTOR SHALL REMOVE ANY BLACK WATER AND DISPOSE OF IN A MANNER APPROVED BY THE ENGINEER PRIOR TO REMOVING EXISTING PIPE. COST TO BE INCLUDED IN "PUMP EXISTING SANITARY SEWER" PAY ITEM.
17. TO BE USED FOR TEMPORARY ACCESS TO HOMES.
18. THIS ITEM IS ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER AND MAY BE OMITTED ENTIRELY.

MANHOLE / PIPELINE NOTES

MP-1. NO ADDITIONAL PAYMENT SHALL BE MADE FOR DEWATERING. WATER TABLE CRADLE SHALL BE INSTALLED AT ALL LOCATIONS WHERE TRENCH CONDITIONS WARRANT ITS USE AS DIRECTED BY THE ENGINEER.

MP-2. CONTRACTOR SHALL BE REQUIRED TO VACUUM-TEST ALL MANHOLES, ACCORDING TO CITY OF TULSA STANDARDS AND SPECIFICATION.

MP-3. ALL MANHOLES, PIPE SIZES AND LENGTHS, SURFACE TYPES AND THEIR LOCATIONS SHOWN ON SCHEDULES AND PLANS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR IS TO FIELD VERIFY ALL INFORMATION.

MP-4. FLOW IN EXISTING PIPES SHALL BE MAINTAINED AT ALL TIMES, ANY BY-PASS PUMPING REQUIRED SHALL BE CONSIDERED INCIDENTAL AND ALL ASSOCIATED EXPENSES RELATED TO BY-PASS PUMPING SHALL BE INCLUDED IN OTHER ITEMS.

MP-5. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.

MP-6. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION (PARALLEL), AND 2 FEET OF VERTICAL SEPARATION (CROSSING) SHALL BE MAINTAINED BETWEEN WATER AND SANITARY SEWER LINES, IF MINIMUM SEPARATION IS NOT POSSIBLE THEN SEWER SHALL BE CONSTRUCTED WITH PRESSURE PIPE TESTED TO WATER LINE STANDARDS. IN ACCORDANCE WITH ODEQ.

MP-7. REMOVE AND RECONSTRUCT INVERTS WHERE NEW CONNECTIONS ARE MADE TO EXISTING MANHOLES. NO ADDITIONAL PAYMENT SHALL BE MADE, COST TO BE INCLUDED IN OTHER ITEMS.

WASTEWATER GENERAL NOTES

G-1. ALL CONSTRUCTION SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH CITY OF TULSA, ENGINEERING SERVICES DEPARTMENT STANDARDS AND SPECIFICATIONS.L OTHER CONSTRUCTION SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CITY OF TULSA.

G-2. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORKSITE SAFETY, MANHOLE VENTILATION, WORKER EQUIPMENT, FIRST AID, HYGIENE, AND OTHER RELATED TOPICS. THE CONTRACTOR WILL 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.

G-3. THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.

G-4. UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON THE ENGINEER'S REVIEW OF UTILITY ATLASES AND UTILITY COMPANY COMMENTS. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UTILITIES. PRIOR TO EXCAVATING FOR MANHOLE OR PIPELINE REPAIR OR REPLACEMENT, CONTRACTOR SHALL CONTACT 1-800-CALL-OKIE (1-800-522-6543) TO LOCATE BURIED UTILITIES. UTILITIES DISTURBED BY THE CONTRACTOR SHALL BE THE CONTRACTORS FULL RESPONSIBILITY FOR REPAIR ACCORDING TO THE UTILITY'S SPECIFICATIONS AND REQUIREMENTS AT NO COST TO OWNER. ALL EXISTING WATER METERS ENCOUNTERED WITHIN SEWER LINE CONSTRUCTION TRENCH SHALL BE REPLACED, REFER TO PAY ITEMS SCHEDULE AND PAY ITEM NOTES.

G-5. CONTRACTOR SHALL PROVIDE TEMPORARY ORANGE SAFETY FENCING AROUND ALL EXCAVATION, INCLUDING TRENCHES, PITTS, VAULTS, ETC. TO MAINTAIN SECURITY AND SAFETY FOR ANIMALS, CHILDREN OR ANY BYSTANDER. THE COST FOR ORANGE SAFETY FENCE TO BE INCLUDED IN OTHER PAY ITEMS.

G-6. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. FOR ALL ROAD CLOSURES, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AND APPROVED BY CITY OF TULSA, FIELD ENGINEERING. CONTRACTOR MUST NOTIFY EMSA, POLICE, FIRE AND MTTA 48 HOURS PRIOR TO STREET CLOSURE.

G-7. PRIOR TO EXCAVATING, THE CONTRACTOR IS RESPONSIBLE FOR BRACING OR SUPPORTING ANY POWER 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.

G-8. DRIVEWAYS, SIDEWALKS, FENCES AND OTHER AREAS PUBLIC AND PRIVATE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT PRIOR TO THE PROJECT AT HIS OWN EXPENSE.

G-9. ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEAT LINES SHOWN ON THE PLANS OR AS INDICATED IN THE SPECIFICATIONS (SEE SPEC. DETAIL 733). SAW-CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE FULL DEPTH OF THE EXISTING SURFACE. SAW-CUTS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.

G-10. ALL UNSUITABLE MATERIALS REMOVED DURING TRENCHING OR EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. PRIOR TO TRENCHING OR EXCAVATION, THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE TO THE ENGINEER FOR HIS REVIEW. STOCKPILING OF EXCAVATED MATERIAL IN STREET OR ALLEY RIGHTS-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE ENGINEER. MAINTENANCE OF STOCKPILE SITES 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.

G-11. ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.

G-12. IN ALL AREA WHERE EXCAVATION WILL OCCUR, CONTRACTOR SHALL VIDEOTAPE ALL CONCRETE, PAVEMENT, BUILDINGS, FOUNDATIONS, LANDSCAPING, LAWNS, AND TREES PRIOR TO CONSTRUCTION AND SUBMIT THE VIDEO DATA TO ENGINEER FOR PROJECT RECORDS.

G-13. CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES, HOWEVER IF DAMAGE OCCURS TO TREES WITHIN EASEMENT, THE CONTRACTOR SHALL NOT BE HELD RESPONSIBLE.

G-14. TRAFFIC ON ALL STREETS AND ACCESS TO ALL BUSINESSES SHALL BE MAINTAINED DURING REGULAR BUSINESS HOURS FOR EACH ESTABLISHMENT. CONTRACTOR MUST MAINTAIN PROPER CONSTRUCTION SIGNAGE AND TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

G-15. CONTRACTOR MUST NOTIFY HOMEOWNER A MINIMUM OF 48 HOURS PRIOR TO ANY REHAB OR CONSTRUCTION BEING DONE ON HOMEOWNERS PROPERTY.

G-16. ALL HIGH-PRESSURE GAS LINES SHALL BE POTHOLED, TO VERIFY LOCATION. CONTRACTOR TO COORDINATE WITH UTILITY OWNER.

G-17. CONTRACTOR TO BE RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ANY EXISTING STORAGE SHEDS LOCATED WITHIN THE CONSTRUCTION AREA DAMAGED DURING CONSTRUCTION, AT NO COST TO THE CITY OF TULSA OR THE HOMEOWNER.

G-18. CONTRACTOR SHALL REPAIR ANY OF IRRIGATION SYSTEMS DAMAGED OR DISTURBED DURING THE COURSE OF CONSTRUCTION, PAYMENTS SHALL BE INCLUDED IN OTHER ITEMS. NO ADDITIONAL PAYMENT SHALL BE MADE.

G-19. ALL WATER, SANITARY SEWER, AND STORM SEWER MANHOLE CASTINGS, LIDS, FRAMES, CURB HOODS, GRATES, HYDRANTS, VALVES, AND ANY OTHER FITTINGS REMOVED AS PART OF ANY CONSTRUCTION PROJECT ARE THE PROPERTY OF THE CITY OF TULSA. CONTRACTOR WILL NOT TAKE OWNERSHIP.

G-20. ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE DELIVERED TO THE SEWER OPERATIONS MAINTENANCE BASE AT 9319 E. 42ND STREET N., AND PLACED IN THE METAL RECYCLE BIN IN THE STOCKROOM ARE BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM, MONDAY THROUGH FRIDAY. PHONE: 918-669-6130

G-21. ALL HYDRANTS, VALVES, AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE SALVAGED AND DELIVERED BY THE CONTRACTOR TO THE SOUTH YARD AT 2317 SOUTH JACKSON AVE. CONTRACTOR WILL COORDINATE THE RETURN OF SUCH ITEMS WITH THE SOUTH YARD PERSONNEL AT 918-596-9401.



REVISION	BY	DATE	PLAN SCALE:	DRAWN	RJP	06/2018	APPROVED:
-	-	-	1"=20'	DESIGNED	RJP	06/2018	
-	-	-		SURVEY	FLS	12/2017	
-	-	-	PROFILE SCALES:	PROJ MNGR.:			
-	-	-	HORIZONTAL:	LEAD ENGR.:			
-	-	-	1"=20'	FIELD MNGR.:			CITY ENGINEER
-	-	-	VERTICAL	RECOMMENDED:			
-	-	-	1"=5'	DESIGN MANAGER			ADVERTISEMENT DATE
-	-	-	DRAWING: PAY QUANTITIES				
-	-	-	ATLAS PAGE NO: 59				SHEET 2 OF 9

NOTE: CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN

48 HOURS BEFORE YOU DIG!



CALL OKIE 1-800-522-6543
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SUMMARY OF PAY ITEMS & NOTES

PROJECT NO. ES 2017-06

WOODYCREST UNSEWERED AREA
SANITARY SEWER LINE EXTENSION

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 **MCCLELLAND CONSULTING ENGINEERS, INC.**

4606 S. Garnett Rd., Suite 401
Tulsa, OK 74146
PH # 918.619.6803
Fax # 918.340.5395
HTTP://WWW.MCE.US.COM
CA #5917 EXP. 6-30-21

PLOT DATE: 6/10/2020 1:33 PM, DRAWING NAME: SURVEY DATA SHEETS.DWG

BENCHMARK
10066
N:415585.3227
E:2573088.9260
ELEV:750.66
BENCHMARK
1019
N:415469.2155
E:2573095.5890
ELEV:746.61

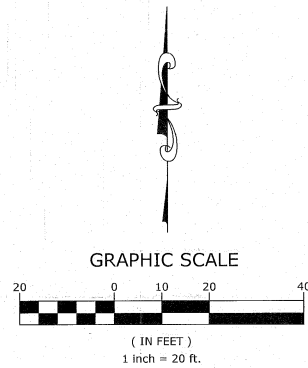
LEGEND:
SECTION LINE
UTILITY EASEMENT
RIGHT OF WAY
PROPERTY LINE
CENTERLINE OF ROAD-RIGHT OF WAY
PROPERTY ADDRESS
BENCHMARK

EXISTING MANHOLE
COORDINATES

50' ROW

MATCHLINE STA. 13+75

POINT NO.	NORTHING	EASTING	FL ELEV.	RIM ELEV.
0729	415540.9808	2573724.2300	738.67	750.66
0728	415538.6694	2573737.9190	738.75	750.35
0727	415409.2695	2573792.7750	739.45	750.91
SSA	415585.3227	2573088.9260	732.23	750.66
SSB	415433.1179	2573067.0750	732.71	741.95



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UTILITIES LOCATION SHOWN ON PLAN AND PROFILE WERE OBTAINED FROM INFORMATION PROVIDED BY UTILITY SYSTEM OWNER IN CONJUNCTION WITH EXISTING PHYSICAL FEATURES VISIBLE AT THE TIME OF THE TOPOGRAPHIC SURVEY. LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

BENCHMARK
1000
N:415537.5204
E:2573717.5400
ELEV:750.11
BENCHMARK
10
N:414850.9810
E:2573728.7840
ELEV:768.58

BENCHMARK
10063
N:415538.6694
E:2573737.9190
ELEV:750.35

I ADAM K HINDS, PLS # 1781 DO HEREBY CERTIFY THAT THIS SURVEY WAS PERFORMED ON THE GROUND BY ME OR UNDER MY DIRECT SUPERVISION AND THAT IT IS TRUE, ACCURATE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IT DOES NOT PURPORT TO REPRESENT A PROPERTY BOUNDARY SURVEY OF THE PARCELS SHOWN AND SHALL NOT BE USED FOR CONVEYANCES OR THE ESTABLISHMENT OF PROPERTY BOUNDARIES.

ADAM K. HINDS
ADAM K HINDS, PLS # 1781
Last Date of Survey: Dec 13, 2017


SURVEY DATA

PROJECT NO. ES 2017-06

WOODYCREST UNSEWERED
AREA SANITARY SEWER LINE
EXTENSION

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
MCE McCLELLAND CONSULTING ENGINEERS, INC.
4606 S. Garnett Rd., Suite 401
Tulsa, OK 74146
PH: 918-618-6803
Fax: 918-340-5395
HTTP://WWW.MCE.US.COM
CA #5917 EXP. 6-30-21

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RJP	06/2018	APPROVED:
-	-	-	1"=20'	DESIGNED	RJP	06/2018	 CITY ENGINEER 6-26-20 ADVERTISEMENT DATE
-	-	-		SURVEY	FLS	12/2017	
-	-	-	PROFILE SCALES:	PROJ MNGR.:			
-	-	-	HORIZONTAL:	LEAD ENGR.:	APR 6-20		
-	-	-	N/A	FIELD MNGR.:	6-26-20		
-	-	-	VERTICAL:	RECOMMENDED	6-26-20		
-	-	-	N/A	DESIGN MANAGER			
-	-	-	DRAWING: SURVEY DATA SHEETS.DWG				
-	-	-	ATLAS PAGE NO: 59				SHEET 3 OF 9

MATCHLINE STA. 13+75

2636 S COLUMBIA PL E
UMEZAWA, JYO AND
SHARON SUE TRUSTEES
UMEZAWA FAMILY TRUST

2632 S COLUMBIA PL E
HARBER, DAVID M AND
CAROLE A

N: 415457.7401'
E: 2573591.6543'

N: 415504.6367'
E: 2573732.4814'

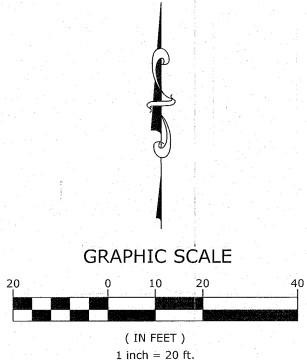
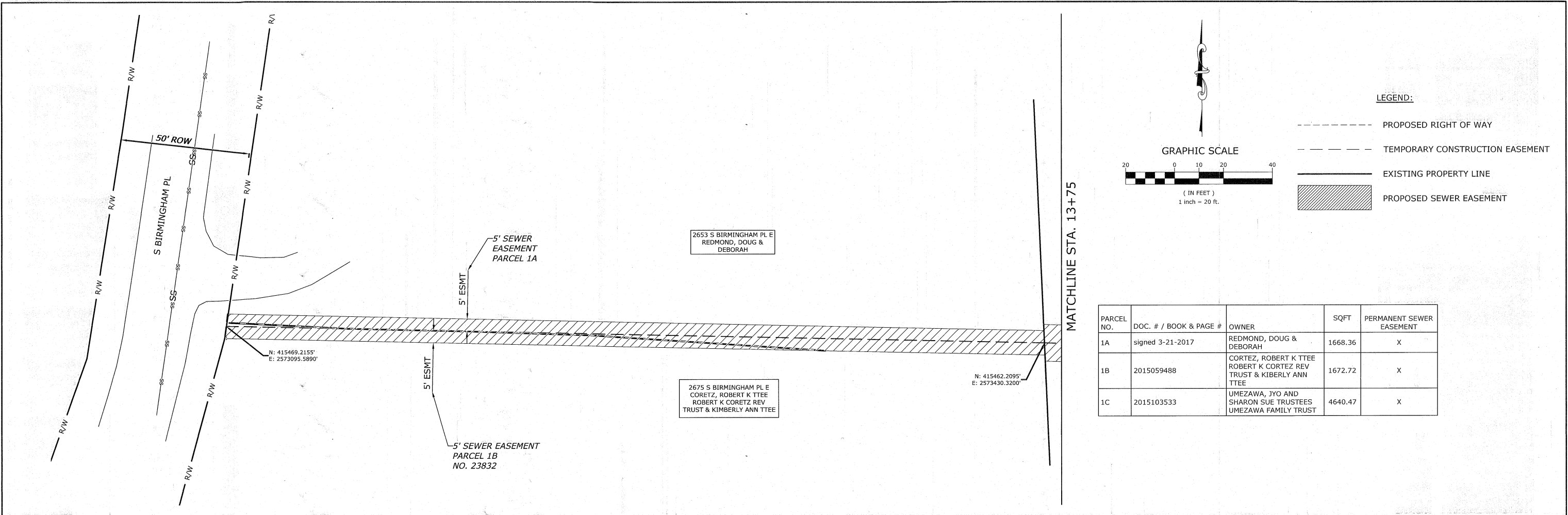
15' SEWER EASEMENT NO. 23932

15' SEWER EASEMENT NO. 23932

50' ROW

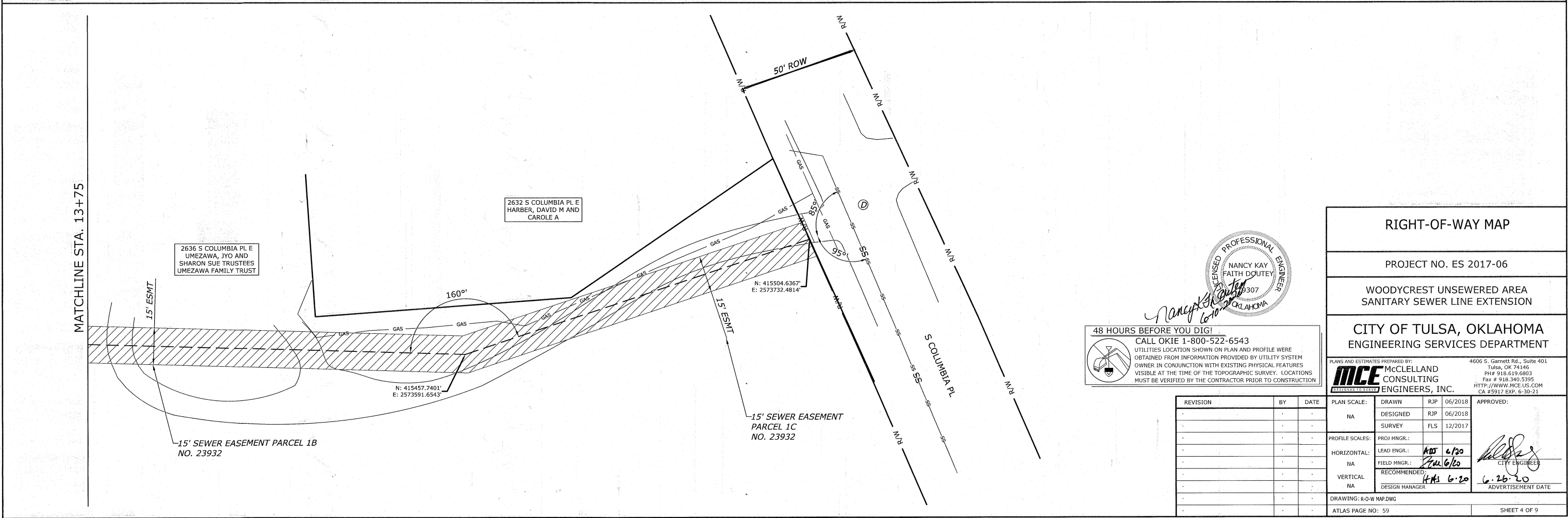
S COLUMBIA PL

PLOT DATE: 6/10/2020 1:33 PM, DRAWING NAME: R-O-W MAP.DWG



- LEGEND:
- PROPOSED RIGHT OF WAY
 - TEMPORARY CONSTRUCTION EASEMENT
 - EXISTING PROPERTY LINE
 - PROPOSED SEWER EASEMENT

PARCEL NO.	DOC. # / BOOK & PAGE #	OWNER	SQFT	PERMANENT SEWER EASEMENT
1A	signed 3-21-2017	REDMOND, DOUG & DEBORAH	1668.36	X
1B	2015059488	CORTEZ, ROBERT K TTEE ROBERT K CORETZ REV TRUST & KIBERLY ANN TTEE	1672.72	X
1C	2015103533	UMEZAWA, JYO AND SHARON SUE TRUSTEES UMEZAWA FAMILY TRUST	4640.47	X



48 HOURS BEFORE YOU DIG!
CALL OKIE 1-800-522-6543
UTILITIES LOCATION SHOWN ON PLAN AND PROFILE WERE OBTAINED FROM INFORMATION PROVIDED BY UTILITY SYSTEM OWNER IN CONJUNCTION WITH EXISTING PHYSICAL FEATURES VISIBLE AT THE TIME OF THE TOPOGRAPHIC SURVEY. LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION

RIGHT-OF-WAY MAP				
PROJECT NO. ES 2017-06				
WOODYCREST UNSEWERED AREA SANITARY SEWER LINE EXTENSION				
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY: 4606 S. Garnett Rd., Suite 401 Tulsa, OK 74146 PH# 918.619.6803 Fax # 918.340.5395 HTTP://WWW.MCE.US.COM CA #5917 EXP. 6-30-21				
MCE McCLELLAND CONSULTING ENGINEERS, INC.		APPROVED:		
PLAN SCALE: NA		DRAWN: RJP 06/2018		
DESIGNED: RJP 06/2018		SURVEY: FLS 12/2017		
PROFILE SCALES: NA		PROJ MNGR.: AD 6/20		
HORIZONTAL: NA		LEAD ENGR.: AD 6/20		
VERTICAL: NA		RECOMMENDED: HK 6/20		
DRAWING: R-O-W MAP.DWG		CITY ENGINEER		
ATLAS PAGE NO: 59		ADVERTISEMENT DATE		
		6-26-20		
		SHEET 4 OF 9		

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BEGINNING AT THE INTERSECTION OF E 26TH PL AND S BIRMINGHAM PL, GO SOUTH 419 FT TO THE POINT OF BEGINNING. THE PROJECT EXTENDS EAST 686 FT TO S COLUMBIA PL.

PROJECT DESCRIPTION: EXTENDING SANITARY SEWER TO CONNECT TWO EXISTING SANITARY SEWER LINES.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. INSTALLATION OF TEMPORARY EROSION CONTROL.
2. INSTALLATION OF SANITARY SEWER EXTENSION.
3. INSTALLATION OF PERMANENT EROSION CONTROL.

SOIL TYPE: B

TOTAL AREA OF THE CONSTRUCTION SITE: 0.2 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.002 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.02 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.02 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.5

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36.123776 -95.951865 DEGREES

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: CROW CREEK

SENSITIVE WATERS OR WATERSHEDS: YES X NO

303 (d)IMPAIRED WATERS: YES X NO

IF YES, LIST IMPAIRMENT: FISH BIOASSESSMENTS, MACROINVERTEBRATE BIO, ESCHERICHIA COLI, OXYGEN, DISSOLVED

LOCATED IN A TMDL: YES NO X

LAKE THUNDERBIRD TMDL: YES NO X

MS4 ENTITY YES X NO

IF YES, LOCATION: CITY OF TULSA

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

SOIL STABILIZATION PRACTICES:

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

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

STRUCTURAL PRACTICES:

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

OFFSITE VEHICLE TRACKING:

- X HAUL ROADS DAMPENED FOR DUST CONTROL
- X LOADED HAUL TRUCKS TO BE COVERED WITH TARPULAIN
- X EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

EROSION AND SEDIMENT CONTROLS

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

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

WASTE MATERIALS:

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

HAZARDOUS MATERIALS:

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

GENERAL NOTES:

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

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

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

IN ADDITION:

ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM ONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA. ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

NOTE: CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN

48 HOURS BEFORE YOU DIG!
CALL OKIE 1-800-522-6543
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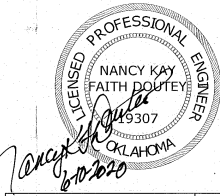
STORM WATER MANAGEMENT PLAN

PROJECT NO. ES 2017-06

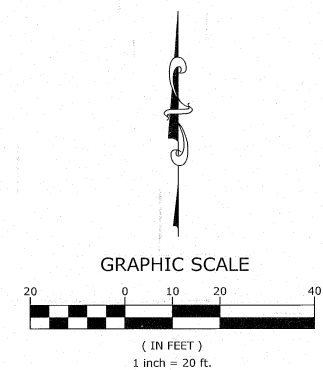
WOODYCREST UNSEWERED AREA
SANITARY SEWER LINE EXTENSION

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
MCE McCLELLAND CONSULTING ENGINEERS, INC.
4606 S. Garnett Rd., Suite 401
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CA #5917 EXP. 6-30-21



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-	-	-	PROFILE SCALES:	PROJ MNGR.:			
-	-	-	HORIZONTAL:	LEAD ENGR.:	ADJ	L/20	
-	-	-	1"=20'	FIELD MNGR.:	Ben L/20		
-	-	-	VERTICAL	RECOMMENDED:	HAS	L-20	
-	-	-	1"=5'	DESIGN MANAGER			
-	-	-	DRAWING:				
-	-	-	ATLAS PAGE NO: 59				SHEET 5 OF 9



- ① FULL DEPTH REMOVAL AND REPLACEMENT (TYPE I AC) (SEE DETAIL THIS SHEET)
 - ② HORIZONTAL DIRECTIONAL DRILL HDPE
 - ③ OPEN TRENCH HDPE
 - ④ REMOVE EXISTING 4' DIAM. SANITARY SEWER MANHOLE
 - ⑤ REMOVE EXISTING 8" D.I.P. SANITARY SEWER
 - ⑥ MAINTAIN DRIVE ACCESS AT ALL TIMES
 - ⑦ SERVICE CONNECTION, COMPLETE TO R/W LINE
 - ⑧ REMOVE AND REPLACE CONCRETE
 - ⑨ REMOVE AND REPLACE CURB AND GUTTER
- ☐ STREET ADDRESS
- ☒ BENCHMARK
- ☐ FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT



BENCHMARK
10063
N:415538.6694
E:2573737.9190
ELEV:750.35

NOTE: CONTRACTOR SHALL NOT STORE EQUIPMENT
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WOODYCREST UNSEWERED AREA
SANITARY SEWER LINE EXTENSION

CITY OF TULSA, OKLAHOMA
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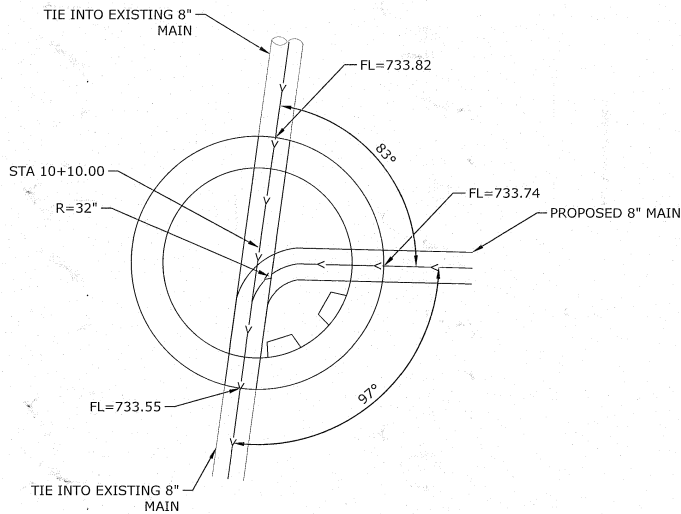
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REVISION			BY	DATE	PLAN SCALE: 1"=20'	DRAWN	RJP	06/2018	APPROVED:  CITY ENGINEER 6-24-20 ADVERTISEMENT DATE
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-	-	-	-	-		SURVEY	FLS	12/2017	
-	-	-	-	-		PROFILE SCALES: HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ MNGR.: LEAD ENGR.: FIELD MNGR.: RECOMMENDED: DESIGN MANAGER	 RJS 6/20 RJC 6/20 HKS 6-20	
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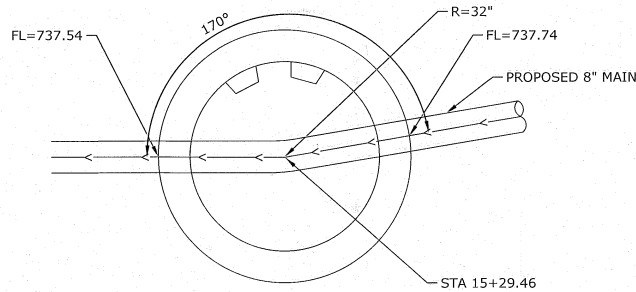
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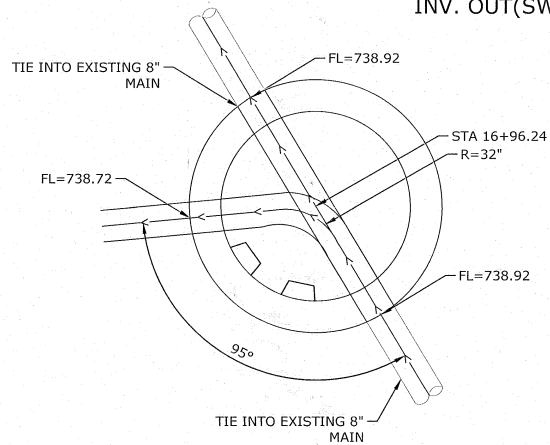
SS-01
4' I.D. MANHOLE
STA:10+10.00
RIM:744.04
INV. IN(N)=733.82
INV. IN(E)=733.74
INV. OUT(S)=733.55



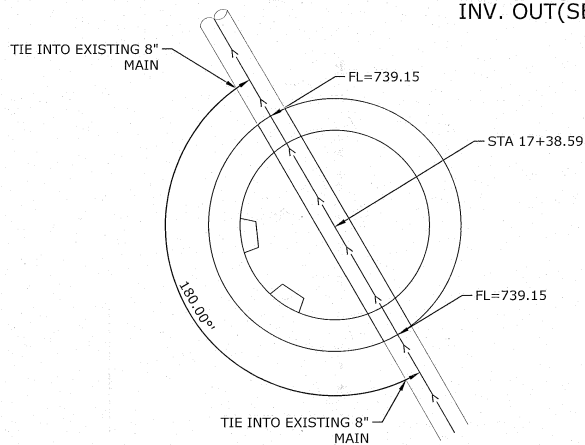
SS-02
4' I.D. MANHOLE
STA:15+29.46
RIM=744.38
INV. IN(NE)=737.74
INV. OUT(W)=736.64



SS-03
4' I.D. MANHOLE
STA:16+96.24
RIM=750.47
INV. IN(SE)=738.92
INV. IN(NW)=738.92
INV. OUT(SW)=738.72



SS-04
4' I.D. MANHOLE
STA:17+38.59
RIM=751.00
INV. OUT(SE)=739.15



MANHOLE DETAILS
N.T.S.

NOTES

1. OPENINGS FOR INLET AND OUTLET PIPES ARE TO BE LOCATED AS REQUIRED PER PLANS WITH A-LOK GASKET OR EQUAL.
2. 12" X 9" MANHOLE STEP AT APPROXIMATELY 15" O.C. VERTICAL LOAD RESISTANCE = 400 LBS. PULL-OUT LOAD RESISTANCE = 1000 LBS.
3. CONTRACTOR WILL BE REQUIRED TO VACUUM TEST ALL MANHOLES ACCORDING TO CITY OF TULSA, PUBLIC WORKS DEPARTMENT STANDARDS AND SPECIFICATIONS MAY 2005 EDITION.

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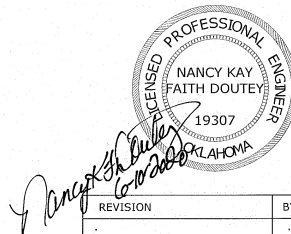
MANHOLE DETAILS

PROJECT NO. ES 2017-06

WOODYCREST UNSEWERED AREA
SANITARY SEWER LINE EXTENSION

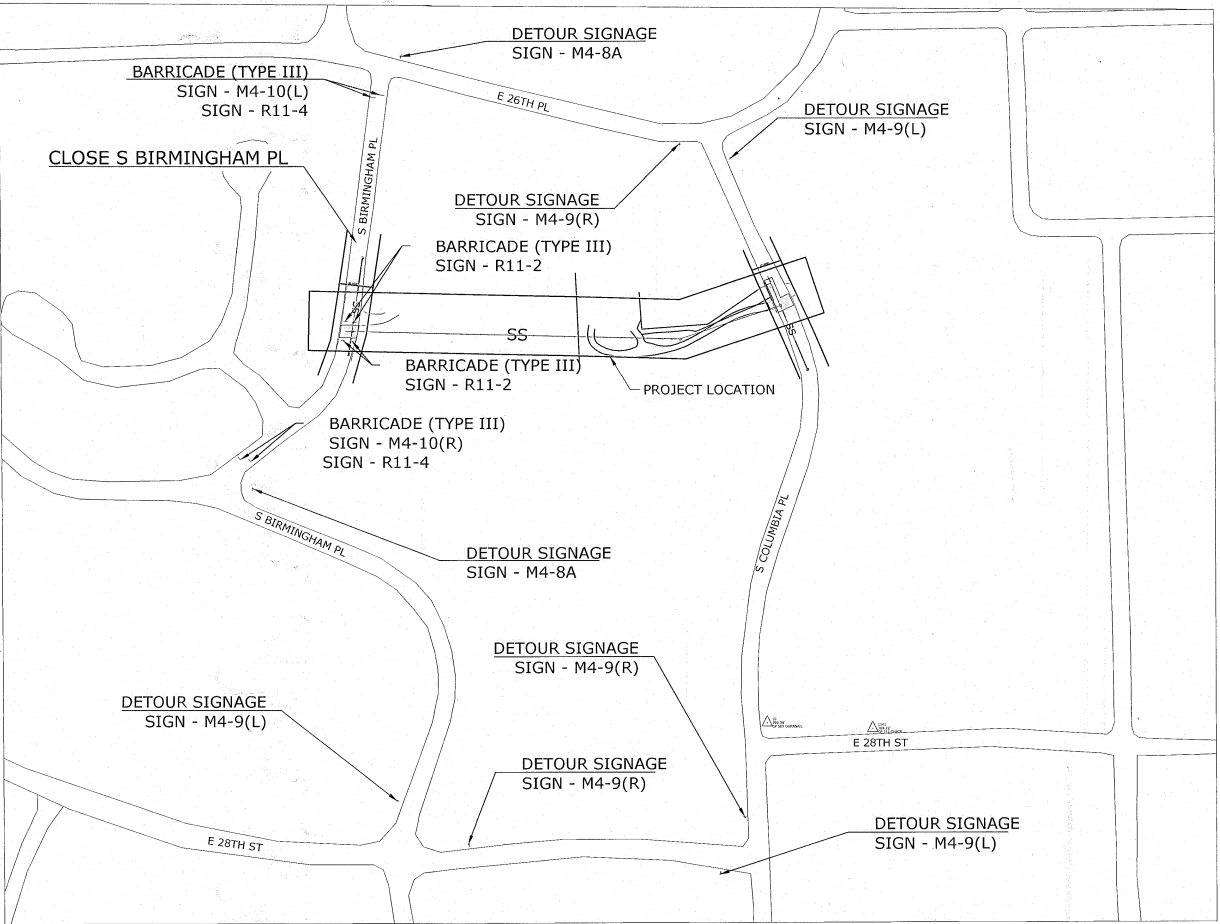
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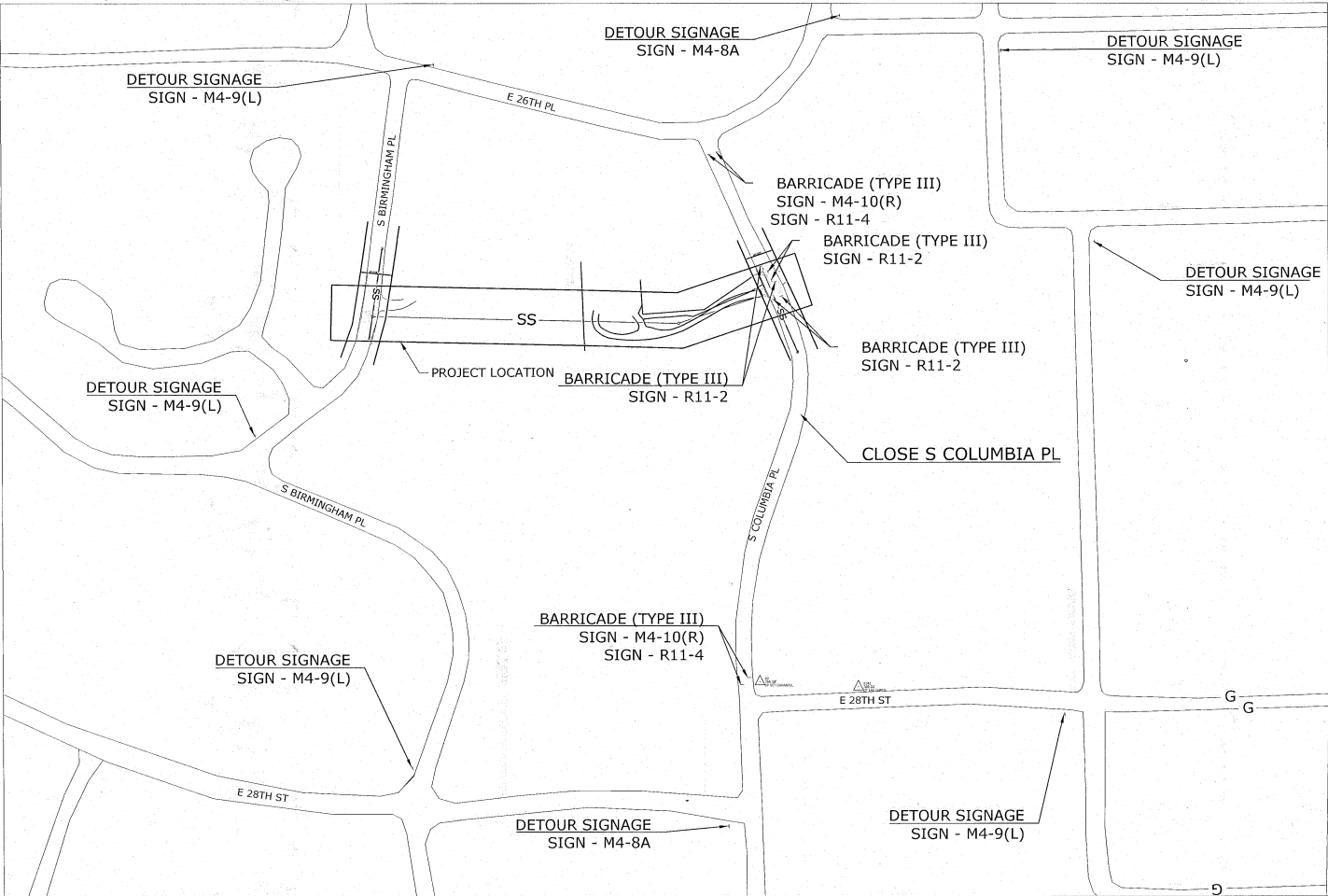


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-	-	-	DRAWING: ACAD-SANITARY SEWER LINE EXTENSION.DWG				
-	-	-	ATLAS PAGE NO: 59				SHEET 8 OF 9

CLOSE S BIRMINGHAM PL



CLOSE S COLUMBIA PL



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TRAFFIC DETOUR PLAN

PROJECT NO. ES 2017-06

WOODYCREST UNSEWERED
AREA SANITARY SEWER LINE
EXTENSION

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-	-	-	HORIZONTAL:	LEAD ENGR.:	NOT 6/10		
-	-	-	N/A	FIELD MNGR.:	8/10 6/10		
-	-	-	VERTICAL:	RECOMMENDED:	HA 6-20		
-	-	-	N/A	DESIGN MANAGER			
-	-	-	DRAWING: TRAFFIC DETOUR PLAN.DWG				
-	-	-	ATLAS PAGE NO: 59				SHEET 9 OF 9