CONSTRUCTION PLANS FOR
2–INCH WATER LINE REPLACEMENT, CITYWIDE
31ST ST. S – 36TH ST S.
HARVARD AVE – YALE AVE
PROJECT NO. TMUA–W 07–26
PUBLIC WORKS DEPARTMENT
CITY OF TULSA, OKLAHOMA

SURVEY DATUM

HORIZONTAL CONTROL: OKLAHOMA STATE PLANE COORDINATE SYSTEM NAD 1983 (1993)
VERTICAL CONTROL: NAVD 1988
SCALE FACTOR: 0.999911102
HORIZONTAL CONTROL ACCURACY 1st ORDER
VERTICAL CONTROL ACCURACY 2nd ORDER OR BETTER

Symbol Legend

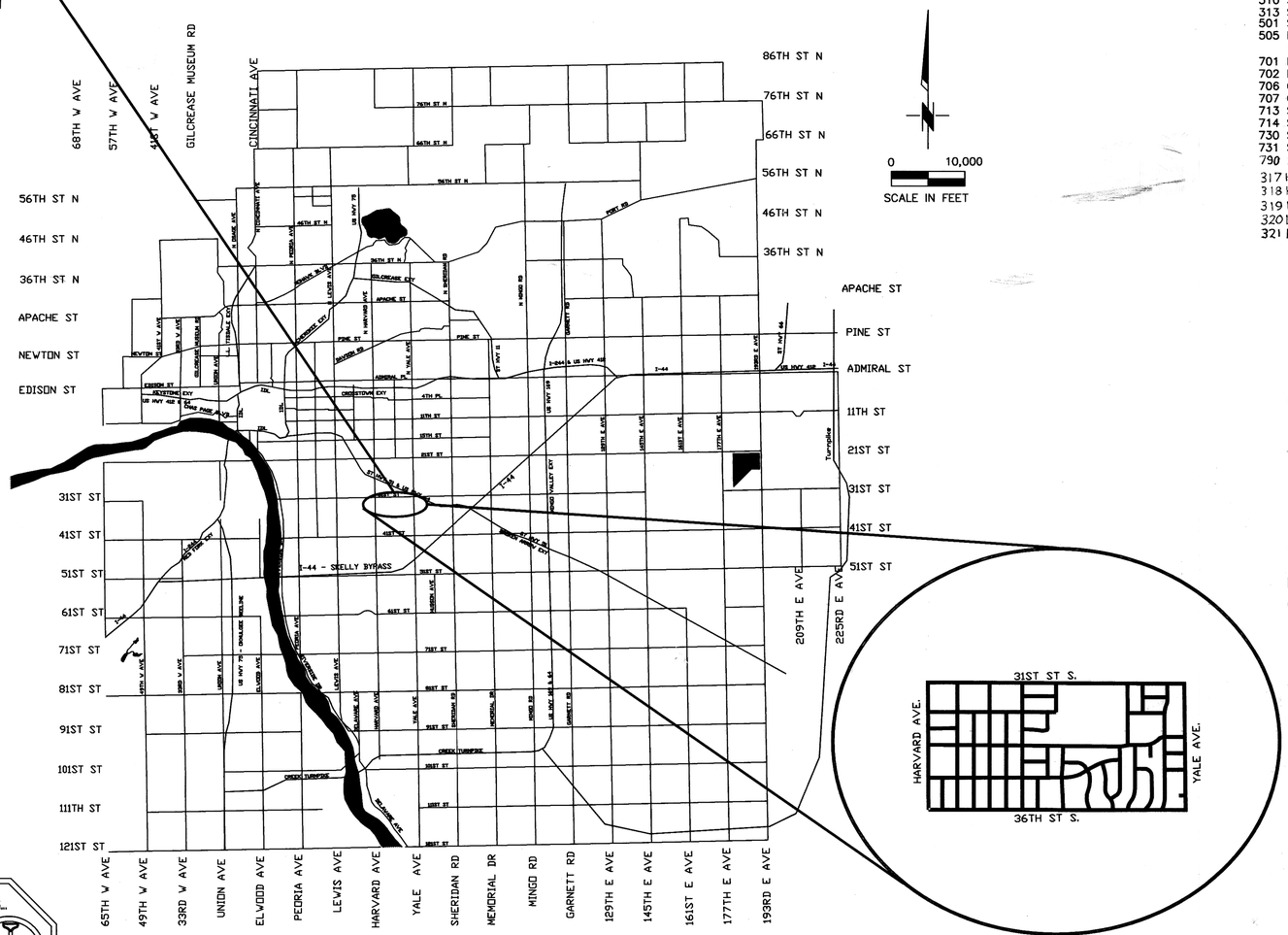
- EM – Electric Meter
- GM – Gas Meter
- GV – Gas Valve
- ICV – Irrigation Control Valve
- WM – Water Meter
- WV – Water Valve
- – Valve Vault
- – Blowoff Hydrant Assembly
- FH – Fire Hydrant
- MH – Manhole
- SSMH – Sanitary Sewer Manhole
- CO – Cleanout
- PP – Power Pole
- GUY – Guy Anchor
- LP – Light Pole
- TPED – Telephone Pedestal
- – Sign
- MB – Mailbox
- – Bench Mark
- – Boring
- CP – Survey Control Point
- – Deciduous Tree
- – Coniferous Tree
- – Bush
- – Treeline
- – Overhead Elec. (and Other Util's)
- UG – Underground Electric
- OHT – Overhead Telephone
- UT – Underground Telephone
- – Natural Gas Line
- – Existing Water Line
- – Stormwater Line
- – Sanitary Sewer Line
- – Property Line
- – Ditch Line/Swale
- – Wrought Iron Fence (WIF)
- – Barbed Wire Fence (BWF)
- – Chain Link Fence (CLF)
- – Wooden Fence (WF)
- – Right–Of–Way (ROW)
- – Existing Water Line Easement
- – Survey Basement Line (S.B.L.)
- – Flood Plain Boundary
- FO – Fiber Optic
- CMP – Corrugated Metal Pipe
- RCP – Reinforced Concrete Pipe

UTILITY COORDINATION	
UTILITY/DEPARTMENT	NUMBER
OKLAHOMA ONE–CALL SYSTEM, INC.	1–800–522–6543
PUBLIC WORKS	
WATER DESIGN	596–9566
WASTEWATER DESIGN	596–9564
TRANSPORTATION DESIGN	596–9636
TRAFFIC ENGINEERING DESIGN	596–9741
COT TRAFFIC ENGINEER: MARK BROWN	596–9749
STORMWATER DESIGN	596–9498
OKLAHOMA NATURAL GAS	831–8261
SBC	596–6702
AEP/PSO	599–2757
MCI	1–800–762–1709
COX COMMUNICATIONS	

GOVERNING SPECIFICATIONS:

CITY OF TULSA, STANDARD CONSTRUCTION SPECIFICATIONS
1999 OKLAHOMA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

PROJECT LOCATION



LOCATION MAP

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS AND ALL PORTIONS ARE LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF TULSA (COT),

INDEX TO DRAWINGS

1. COVER SHEET
2.–3. QUANTITIES & NOTES
4. WATERLINE KEY MAP
5.–38. PLAN AND PROFILE SHEETS
39. HDPE DETAILS

THE FOLLOWING CITY OF TULSA STANDARDS

304 BEDDING DETAIL RIGID PIPE
305 BEDDING DETAIL SEMI–RIGID PIPE
306 TRENCH DETAIL CONSTRUCTION ADJACENT TO ROADWAY
307 BORE DETAIL
308 STANDARD DETAIL AIR RELEIF, CHECK VALVES, & VAULTS
309 STANDARD DETAIL FIRE HYDRANT
310 STANDARD DETAIL BLOWOFF HYDRANT
313 STANDARD DETAIL VALVE BOX
501 STANDARD METER SETTINGS FOR 5/8" X 3/4" AND 3/4" WATER SERVICE
505 METER CAN WITH RIM AND LID FOR 5/8" X 3/4" AND 1" WATER METER CAN INSTALLATION
701 RESIDENTIAL CONCRETE DRIVEWAY CONCRETE STREET
702 RESIDENTIAL CONCRETE DRIVEWAY ASPHALT STREET
706 COMMERCIAL DRIVEWAY
707 COMMERCIAL DRIVEWAY
713 STANDARD DETAIL FOR PAVEMENT REMOVAL AND REPLACEMENT
714 STANDARD DETAIL FOR PAVEMENT CUTS
730 STANDARD ASPHALT PAVEMENT CUT AND REPAIR
731 STANDARD CONCRETE PAVEMENT CUT AND REPAIR
790 STANDARD SIDEWALK RAMP
317 HDPE DUCTILE IRON FITTINGS
318 HDPE DUCTILE IRON FITTINGS
319 HDPE SPLICE AND FIRE HYDRANT DETAILS
320 HDPE REALIGNMENT DETAILS
321 HDPE ANCHOR DETAILS

APPROVED BY

CLAYTON EDWARDS 3.31.21
DIRECTOR, WATER AND SEWER DEPT. DATE

APPROVED BY

PUBLIC WORKS DEPARTMENT
CITY OF TULSA, OKLAHOMA

CITY ENGINEER 04.13.21
DATE

PREPARED BY

CGA ENGINEERS, INC.
8179 E 41st ST.
TULSA, OKLAHOMA 74145
PHONE: (918) 749–5800
FAX: (918) 749–5858

C.A. No.: 1371 – Expires: 6/30/12

JEREMY C. WEILAND P.E.
OKLAHOMA REG. P.E. NO. 23423

JUNE 23, 2010
DATE

CGA ENGINEERS INC.

SHEET 1 OF 39 SHEETS

PROJECT # TMUA–W 07–26 2–INCH WATER LINE REPLACEMENT, CITYWIDE

Item Number	Spec Number	Item Description	Pay Item Notes	Bid Unit	Quantity	Line A	Line B	Line C	Line D	Line E	Line F	Line G	Line H	Line I	Line J	Line K	Line L	Line M	Line N	Line O
(Schedule I) Water Line Rehabilitation																				
1	COT 301	Right-of-Way Clearing and Restoring	(4)(5)(6)(7)(22)29	LF	8,998	433	820	957	1216	606	689	317	428	572	629	458	506	281	254	206
2	COT 302	Excavation and Backfill	(15)30,31	CY	3,333															
3	COT 303	Mobilization	37, 38	EA	1															
4	COT 304	Contractor Construction Staking		EA	1															
5	COT 307(A)	6-Inch DIP, AWWA C151, Class 51 (Restrained)	(1)(2)(3)(8)(9)(10)33	LF	3,120	107	342	405	376	176	350	119	174	467	184	85	211	124		
6	COT 307(B)	6-Inch DIP, AWWA C151, Class 51	(1)(2)(3)(9)(10)	LF	596															
7	COT 307(C)	12-Inch DIP, AWWA C151, Class 51(Restrained)	(1)(2)(3)(8)(9)(10)33	LF	30												30			
8	COT 312(A)	6" x 6" x 6" x 6" Cross (Restrained)	(8)	EA	9		2	4	2		1									
9	COT 312(B)	6" x 6" x 6" Tee (Restrained)	(8)	EA	45	1	3	5	4	4	5	2	2	4	3	3	5	2		2
10	COT 312(C)	12" x 12" x 6" Tee (Restrained)	(8)	EA	1												1			
11	COT 312(E)	6-Inch 11 1/4 Degree Bend (Restrained)	(8)	EA	10								3	7						
12	COT 312(F)	6-Inch 22 1/2 Degree Bend (Restrained)	(8)	EA	15		2			2	2	2		1	2		2	2		
13	COT 312(G)	6-Inch 45 Degree Bend (Restrained)	(8)	EA	95	2	18	26	16	6	12	2	3	4			4	2		
14	COT 312(H)	6-Inch 90 Degree Bend (Restrained)	(8)	EA	1									1						
15	COT 312(I)	6-Inch Plug (Restrained)	(8)	EA	1				1											
16	COT 312(J)	6" Solid Sleeve (Restrained)	(8)(16)	EA	62		7	11	7	6	6	2	3	4	5	4	2	3		2
17	COT 312(K)	12" Solid Sleeve (Restrained)	(8)(16)	EA	2												2			
18	COT 312(L)	24"X6" Tapping Sleeve and Valve	(16)	EA	1	1														
19	COT 315(A)	3/4" Type K Copper Tubing	(24)	LF	3,507															
20	COT 315(B)	1" Type K Copper Tubing	(24)	LF	100															
21	COT 315(C)	3/4" Corporation Stop	35,36	EA	248															
22	COT 315(D)	1" Corporation Stop		EA	2															
23	COT 315(E)	3/4" Three Part Union		EA	248															
24	COT 315(F)	1" Three Part Union		EA	2															
25	COT 315(G)	3/4" Meter Setters	(25)	EA	137															
26	COT 315(H)	1" Meter Setters	(25)	EA	2															
27	COT 315(I)	Bore Under Street For Long Service	(21)	LF	1,028															
28	COT 315(J)	3/4" Meter Cans, Rim, Lids	(25)	EA	137															
29	COT 315(K)	1" Meter Cans, Rim, Lids	(25)	EA	2															
30	COT 317(A)	3-Way Fire Hydrant, 3' Bury, In Place		EA	32	2	3	6	5	2	2	1	2	1	1	2	3			2
31	COT 317(B)	Fire Hydrant Extension, 12"		EA	32	2	3	6	5	2	2	1	2	1	1	2	3			2
32	COT 317(C)	6" Gate Valve (Restrained)	(8)	EA	75	0	11	15	10	7	7	3	4	5	2	3	3	3		2
33	COT 318(A)	Standard Valve Box	26	EA	76	1	11	15	10	7	7	3	4	5	2	3	3	3		2
34	COT 318(B)	Valve Box Extension		EA	76	1	11	15	10	7	7	3	4	5	2	3	3	3		2
35	COT 325	Sod Replacement	(11)(22)	SY	2,499															
36	COT 326	Street Washdown		LF	12,965															
37	COT 329(A)	Remove and Replace Concrete Street (Std. 731)		SY	468	17	54	77	81	51	78	20				17	52	15		5
38	COT 329(B)	Remove and Replace Asphalt Street (Std 730)		SY	268	8		32	15				29	93	88				2	
39	COT 329(C)	Remove and Replace 6" Concrete Drive (HES)		SY	742		48	91	37	111		18	73	65	93	33	25	23	125	
40	COT 329(D)	Remove and Replace Concrete Curb and Gutter		LF	737	20	80	95	78	54	86.7	19	28	87.7	68	25	60	16	12	9
41	COT 329(E)	Remove and Replace Sidewalk	39	SY	129	89	9	5		6		4				5	12			
42	COT 329(F)	Temporary Silt Fence		LF	400															
43	COT 329(G)	Drums		SD	3596															
44	COT 329(H)	Type III Barricade		SD	482															
45	COT 329(I)	Flagman		SD	136															
46	801	Repair Damaged ONG Services	(13)	ALLOW	5															
47	804	Construction Contingency Allowance	(23)	ALLOW	1															
48	805	Project Sign Per COT 102		EA	1															
49		OMITTED			1															

Item Number	Spec Number	Item Description	Pay Item Notes	Bid Unit	Quantity	Line A	Line B	Line C	Line D	Line E	Line F	Line G	Line H	Line I	Line J	Line K	Line L	Line M	Line N	Line O
(Schedule II) PVC Material Option #1																				
50	COT 307(A)	6-Inch DIP, AWWA C151, Class 51 (Restrained)	(1)(2)(3)(8)(9)(10)33	LF	1,237	0	40	185	120	181	69		95		213	40			254	40
51	COT 309(A)	6-Inch PVC, AWWA C900, Class 200	(1)(3)(9)(14)	LF	8,769	537	978	1841	1555	341	406	403	318	163	493	617	485	393		239
52	COT 312(A)	6" x 6" x 6" Tee (Restrained)	(2)(8)	EA	10		1	3	2				2			1				1
53	COT 312(B)	6-Inch 11 1/4 Degree Bend (Restrained)	(2)(8)	EA	6								1		5					
54	COT 312(C)	6-Inch 22 1/2 Degree Bend (Restrained)	(2)(8)	EA	6						0								6	
55	COT 312(D)	6-Inch 45 Degree Bend (Restrained)	(2)(8)	EA	23			4		8	4		2						5	
56	COT 312(E)	6-Inch Plug (Restrained)	(2)(8)	EA	1															1
57	COT 315(A)	3/4" x 6" Service Clamp (PVC Only)		EA	248															
58	COT 315(A)	1" x 6" Service Clamp		EA	2															
59	COT 328	Bore 6" Water Line	(12)(18)	LF	4,754	210	540	1474	835	92	136	205	159	58	261	284	190	235		73

Item Number	Spec Number	Item Description	Pay Item Notes	Bid Unit	Quantity	Line A	Line B	Line C	Line D	Line E	Line F	Line G	Line H	Line I	Line J	Line K	Line L	Line M	Line N	Line O
(Schedule III) HDPE Material Option #2 (PE 4710 DIPS, DR11)																				
60	COT 309A	8-Inch HDPE, DR 11,	(1)(3)(9)(14)26,27,34	LF	10,006	537	1018	2026	1675	522	475	403	413	163	706	657	485	393	254	279
61	COT 312(A)	8" x 8" x 8" HDPE Tee		EA	11		1	3	3				2			1				1
62	COT 312(B)	OMITTED			3								1		5					
63	COT 312(C)	OMITTED			3						0								6	
64	COT 312(D)	8-Inch HDPE 45 Degree Bend		EA	23			4		8	4		2						5	
65	COT 312(E)	8-Inch HDPE Plug		EA	1															1
66	COT 312(F)	8"x6" DIP Reducer		EA	64	2	6	8	6	8	4	2	6	2	2	4	4	2	2	6
67	COT 312(G)	8-Inch HDPE MJ Adaptor (Restrained), Complete In Place		EA	64	2	6	8	6	8	4	2	6	2	2	4	4	2	2	6
68	COT 315	8"X3/4" Transition Saddle HDPE (Restrained)		EA	248															
69	COT 315	8"X1" Transition Saddle HDPE (Restrained)		EA	2															
70	COT 323	HDPE Anchor, Complete In Place	(19)32	EA	50	2	6	8	6	4	4	2	2	2	2	2	4	2	2	2
71	COT 328	Bore 8" HDPE Water Line	(12)(18)	LF	4,754	210	540	1474	835	92	136	205	159	58	261	284	190	235		73

Item Number	Spec Number	Item Description	Pay Item Notes	Bid Unit	Quantity	Line A	Line B	Line C	Line D	Line E	Line F	Line G	Line H	Line I	Line J	Line K	Line L	Line M	Line N	Line O
(Schedule IV) DIP Material Option #3																				
72	COT 307	6-Inch DIP, AWWA C151, Class 51	(1)(2)(3)(9)(10)34	LF	10,006	537	1018	2026	1675	522	475	403	413	163	706	657	485	393	254	279
73	COT 312(A)	6" x 6" x 6" Tee (Restrained)	(8)	EA	13		1	3	3				2			1				3
74	COT 312(B)	6-Inch 11 1/4 Degree Bend (Restrained)	(8)	EA	6								1		5					
75	COT 312(C)	6-Inch 22 1/2 Degree Bend (Restrained)	(8)	EA	6						0								6	
76	COT 312(D)	6-Inch 45 Degree Bend (Restrained)	(8)	EA	23		0	4		8	4		2						5	
77	COT 312(E)	6-Inch Plug (Restrained)	(8)	EA	1															1
78	COT 315	1" x 6" Service Clamp		EA	2															
79	COT 328	Bore 6" Water Line	(12)(18)	LF	4,754	210	540	1474	835	92	136	205	159	58	261	284	190	235		73





QUANITIES

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

JMJ

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN		2/08
	DESIGNED		2/08
	SURVEY		2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: N/A	SECT. MNGR.		3/2021
	PROJ. MNGR.		
VERTICAL: N/A	RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

APPROVED:

PUBLIC WORKS DIRECTOR

FILE: 07-53-001-19/DESIGN/SHTS/G-Quantities
DATE: 4-23-21

ATLAS PAGE NO. 093

SHEET 2 OF 39 SHEETS

WATERLINE PAY ITEM NOTES

1. TESTING AND CHLORINATION OF WATER MAINS SHALL BE PERFORMED BY THE CITY OF TULSA. TESTING, CHLORINATION, AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH SECTION 109.3 OF THE GENERAL SPECIFICATIONS.

   CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY PLUGS WITH ADEQUATE BLOCKING OR RESTRAINTS, PLUS CORPORATION COCKS, AS DIRECTED BY CITY TESTING PERSONNEL, THEN, ONCE TESTING, CHLORINATION AND FLUSHING BY CITY PERSONNEL IS COMPLETED, REMOVE TEMPORARY BLOCKING AND TIE INTO EXISTING SYSTEM, USING FITTINGS SWABBED INTERNALLY WITH 2% BLEACH SOLUTION.

   TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAIN SHALL BE PERFORMED BY CITY PERSONNEL ON MAINS WHICH ARE PHYSICALLY DISCONNECTED FROM THE EXISTING WATER SYSTEM. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAINS SHALL NOT BE PERFORMED AGAINST VALVES WHICH ARE PHYSICALLY CONNECTED TO EXISTING SYSTEM.

   ALL COSTS FOR TEMPORARY PLUGS, BLOCKING, RESTRAINING, CORPORATION COCKS, TUBING, THREADED CONNECTIONS, BLEACH AND OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.

2. BURIED BOLTS, HARNESS LUGS, AND COUPLINGS SHALL BE GIVEN TWO COATS OF KOPPER'S BITUMASTIC 300-M (DRY MIL THICKNESS OF 16 MILS) OR EQUAL. COST TO BE INCLUDED IN COST OF PIPE.

3. CONTRACTOR TO EXCAVATE ALL UTILITY CROSSINGS AHEAD OF PIPE LAYING SO THAT THE GRADES CAN BE ADJUSTED ON THE PROPOSED WATER MAIN TO AVOID UTILITY CONFLICTS. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED WATER MAIN. COST FOR EXCAVATING UTILITY CROSSINGS SHALL BE INCLUDED IN COST OF PIPE.

4. CONTRACTOR SHALL INSURE ALL POLES WHICH ARE EFFECTED BY TRENCHING CONDITIONS ARE BRACED BY OWNERS. PAYMENT SHALL BE INCLUDED IN "RIGHT-OF-WAY CLEARING AND RESTORING". NO ADDITIONAL PAYMENT SHALL BE MADE.

5. SALVAGED HYDRANTS, VALVES AND OTHER FITTINGS SHALL BE DELIVERED TO SOUTH YARD, 2317 S JACKSON. PAYMENT TO BE MADE UNDER RIGHT-OF-WAY CLEARING AND RESTORATION. NO ADDITIONAL PAYMENT SHALL BE MADE.

6. CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS DAMAGED DURING THE COURSE OF CONSTRUCTION TO SATISFACTION OF THE PROPERTY OWNER. PAYMENT SHALL BE INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

7. COST OF ANY TEMPORARY LIVESTOCK FENCING AND POLES SHALL BE INCLUDED IN COST OF RIGHT-OF-WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

8. ALL COSTS FOR COMPONENTS NECESSARY TO RESTRAIN JOINTS FOR PIPE AND FITTINGS DESIGNATED "RESTRAINED JOINT" (RJ) SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS. US PIPE TRFLEX, GRIFFIN SNAPLOK, McWANE THRUSTLOCK, AMERICAN FLEXRING: OR EBAA MEGALUG, SMITH-BLAIR CAMLOCK, CLOW TUFGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. LOCKING GASKETS NOT ALLOWED. SHOULD RJ PIPE BE SPECIFIED THRU UNCASED BORES, ONLY US PIPE TRFLEX, GRIFFIN SNAPLOK, McWANE THRUSTLOCK, OR AMERICAN FLEXRING IS TO BE USED. NO ADDITIONAL PAYMENT SHALL BE MADE.

9. ALL ABANDONED WATER LINES LEFT IN PLACE SHALL BE PLUGGED WITH 24" OF CONCRETE AT EACH LINE BREAK ONCE SALVAGEABLE FITTINGS ARE REMOVED. COST OF PLUGGING THE EXISTING PIPE TO BE INCLUDED IN COST OF PIPE. NO ADDITIONAL PAYMENT SHALL BE MADE.

10. DETECTABLE MARKING TAPE SHALL BE INSTALLED OVER DUCTILE IRON PIPE AS PER CONST. SPEC 310.2 AND 310.3. COST WILL BE INCLUDED IN THE COST OF DUCTILE IRON PIPE.

11. CONTRACTOR SHALL REPLACE EXISTING GRASS WITH SEED/SOD OF SAME TYPE AND VARIETY.

12. COST FOR EXCAVATION REQUIRED FOR BORE PIT SHALL BE INCLUDED IN COST OF BORE.

13. AT THE DIRECTION OF THE ENGINEER, CONTRACTOR SHALL "REPAIR DAMAGED ONG SERVICES" THAT ARE AFFECTED BY CONSTRUCTION AT THE ACTUAL COST, BUT NOT TO EXCEED AN ALLOWANCE OF $2,500 PER OCCURRENCE. THE AMOUNT PAID UNDER THIS PAY ITEM SHALL NOT EXCEED $12,500. NO ADDITIONAL PAYMENTS SHALL BE MADE.

14. TRACER WIRE AND DETECTABLE MARKING TAPE SHALL BE INSTALLED ABOVE ALL PVC AND HDPE PIPE, TERMINATING ONLY ONTO HYDRANTS JUST ABOVE GROUND LEVEL AS PER CONST SPEC 310. CONST SPEC 310.0 NOW ALLOWS COPPER-CLAD STEEL 12 (CCS) WIRE, 21% CONDUCTIVITY, IN LIEU OF COPPER WIRE AS TRACER WIRE. COST WILL BE INCLUDED IN THE COST OF PIPE.

15. CONTRACTOR IS REMINDED TO BED AND BACK FILL ALL TRENCHES EXCAVATED ACROSS ANY EXISTING OR PROPOSED DRIVING OR PARKING SURFACE WITH TYPE A BASE, PLACED IN 8-INCH MAXIMUM LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. SEE STANDARD SPECIFICATION 302.6 FOR FULL DISCUSSION. COST TO BE PAID FOR IN EXCAVATION AND BACKFILL. NO ADDITIONAL PAYMENT SHALL BE MADE.

16. ALL LABOR, MATERIALS, AND EQUIPMENT TO CONNECT PROPOSED WATER MAINS TO EXISTING WATER MAINS IS INCLUDED IN COST OF SLEEVES. NO ADDITIONAL PAYMENT SHALL BE MADE.

17. NOT USED

18. BORING TO BE DONE UNDER ASPHALT AND CONCRETE STREETS AND DRIVEWAYS, ALSO WHERE INDICATED FOR TREE BORES UNDER DRIP LINES.

19. COST OF HDPE WALL ANCHOR FITTING, REINFORCING STEEL, CONCRETE AND ALL LABOR AND MATERIALS TO INSTALL THESE ITEMS ARE TO BE INCLUDED IN THE PRICE OF THE HDPE ANCHOR (EACH). NO ADDITIONAL PAYMENT SHALL BE MADE. REFER TO DETAIL ON SHEET 28.

20. METERS ON THE SAME SIDE OF THE STREET AS THE NEW MAIN SHALL BE RELOCATED WITHIN THE RIGHT-OF-WAY AND 2 FEET OFF OF THE PROPERTY LINE.

PAY ITEM NOTES CONT.

21. FOR THIS PROJECT, AT LEAST 25% OF ALL LONG SERVICE BORES OF THIS SIZE ARE ASSUMED DEFECTIVE AND REQUIRE REPLACEMENT. COPPER PIPE OF THIS SIZE IS PAID SEPARATELY. NO ADDITIONAL PAYMENT SHALL BE MADE.

22. QUANTITIES DO NOT INCLUDE LENGTHS THROUGH BORED CONDUIT.

23. THE "CONSTRUCTION CONTINGENCY ALLOWANCE" CAN BE USED FOR VARIOUS WORK AND MISCELLANEOUS ITEMS NOT IDENTIFIED IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING PROVISIONS:
   A. THE ALLOWANCE SHALL BE USED FOR THE COST OF MATERIALS, LABOR, INSTALLATION AND OVERHEAD AND PROFIT FOR ADDITIONAL WORK AND MISCELLANEOUS ITEMS THAT ARE NOT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AND PLANS, AND NOT INCLUDED IN THE BID ITEMS OF THE CONTRACT.

   B. THE ALLOWANCE SHALL BE USED ONLY AT THE DISCRETION OF THE CITY. ANY ALLOWANCE BALANCE REMAINING AT THE COMPLETION OF THE PROJECT WILL BE CREDITED BACK TO THE CITY ON THE FINAL APPLICATION FOR PAYMENT SUBMITTED BY THE CONTRACTOR.

   C. THE CONTRACTOR SHALL PROVIDE, TO THE CITY, A WRITTEN REQUEST FOR THE USE OF ANY ALLOWANCE, WITH A SCHEDULE OF VALUES, AND ALL ASSOCIATED BACKUP INFORMATION, INCLUDING ANY TIME EXTENSIONS REQUIRED TO PERFORM THE WORK.

   THE CONTRACTOR SHALL PROCEED WITH THE WORK INCLUDED IN THE ALLOWANCE ONLY AFTER RECEIVING A WRITTEN ORDER, FROM THE ENGINEER AND CITY AUTHORIZING SUCH WORK. PROCEEDING WITH WORK IN THE ALLOWANCE WITHOUT A WRITTEN ORDER FROM THE CITY WILL BE AT THE CONTRACTOR'S EXPENSE.

24. FOR THIS PROJECT, ALL WATER SERVICE TRANSFERS OF THIS SIZE ADJACENT TO THE PROPOSED MAIN ARE ASSUMED TO REQUIRE TEN FEET.

25. FOR THIS BID, AT LEAST 25% OF EXISTING WATER METER CANS AND SETTERS OF THIS SIZE ON THE NEW WATER LINE SIDE OF STREET ARE ASSUMED TO REQUIRE REPLACEMENT. USE OF THIS ITEM SHALL BE DIRECTED BY ENGINEER. COST OF SETTER SHALL INCLUDE COST OF TRANSFERRING OLD WATER METER TO NEW METER SETTER.

WATERLINE GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SPECIFICATIONS AND STANDARD DRAWINGS FOR WATER AND WASTEWATER, CITY OF TULSA DEPARTMENT OF PUBLIC WORKS

2. EXISTING SERVICE CONNECTIONS ARE TO BE KEPT IN SERVICE UNTIL CONNECTIONS TO NEW MAIN ARE MADE. ALL SERVICE LINE RECONNECTIONS SHALL BE MADE BY THE CONTRACTOR. SERVICE RECONNECTIONS SHALL BE INSTALLED AS PER CITY OF TULSA WATER AND WASTEWATER STANDARDS. METERS ON THE SAME SIDE OF THE STREET AS THE NEW MAIN SHALL HAVE THE SERVICE LINE ENTIRELY REPLACED FROM THE MAIN TO THE METER. METERS SERVED ON THE OPPOSITE SIDE OF THE STREET FROM THE NEW MAIN SHALL HAVE THEIR EXISTING SERVICE LINES ADJACENT THE NEW MAIN CONNECTED TO A NEW SERVICE LINE FROM THE NEW MAIN BY FLARED END 3-PART UNION.

3. MINIMUM COVER OVER WATER LINES SHALL BE 3 FEET.

4. CONTRACTOR SHALL BORE EXISTING TREES UNDER DRIP LINE, UNLESS DIRECTED OTHERWISE BY ENGINEER.

5. CONTRACTOR SHALL BORE EXISTING DRIVEWAYS, UNLESS DIRECTED OTHERWISE BY PLANS OR ENGINEER.

6. CITY CREWS ARE TO OPERATE ALL VALVES. CONTRACTOR SHALL NOTIFY CITY THROUGH INSPECTOR.

7. CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF THE OKLAHOMA ONE-CALL SYSTEM, INC, NOTICE OF ANY EXCAVATION NO SOONER THAN 10 DAYS OR NO LATER THAN 48 HOURS, EXCLUDING SATURDAYS, SUNDAYS, LEGAL HOLIDAYS PRIOR TO COMMENCEMENT OF WORK, PHONE 1-800-522-6543.

8. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THOROUGH PROJECT AT ALL TIMES. OPEN CUT STREET CROSSINGS REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WITH TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH CURRENT MUTCD REQUIREMENTS.

9. ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) CRITERIA SHALL BE MET.

DIP/PVC TO HDPE SIZE CONVERSION CHART

DIP/PVC SIZE	HDPE DR11 SIZE
6" PIPE	8" PIPE

LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND — 23423 — 12-18-2020 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

REVISION	BY	DATE

NOTES

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE: N/A	DRAWN	JRD	2/08	APPROVED:
	DESIGNED	JCW	2/08	
	SURVEY	GG	2/08	
PROFILE SCALE: N/A	FIELD MNGR.	[illegible]	3/21	
HORIZONTAL: N/A	SECT. MNGR.	[illegible]	3/2021	
	PROJ. MNGR.			
VERTICAL: N/A	RECOMMENDED: DEPUTY DIRECTOR	HBS	3.21	PUBLIC WORKS DIRECTOR

FILE: 07-53-001-19/DESIGN/SHTS/G-Quantities
DATE: 3/23/21
ATLAS PAGE NO. 093
SHEET 3 OF 39 SHEETS

PAY ITEM NOTES CONTINUED

26 WHERE PLANS IDENTIFY A 22.5 DEG OR 11.25 DEG VERTICAL OR HORIZONTAL BEND, HDPE WILL BE DEFLECTED PER MANUFACTURER'S MINIMUM ALLOWABLE BEND RADIUS.

27 WHERE PLANS IDENTIFY A CROSS, HDPE WILL USE TWO (2) TEE'S. NO ADDITIONAL PAYMENT SHALL BE MADE.

28 TOP OF VALVE BOX SHALL BE FLUSH WITH FINISHED GRADE.

29 THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING IMPROVEMENTS. LIMITS OF DISTURBANCE SHALL NOT EXCEED 9 FEET CENTERED ON THE WATERLLINE. ANY DISTURBANCE OUTSIDE OF THIS AREA SHALL BE RESTORED AT THE CONTRACTORS EXPENSE. STREETS, DRIVEWAYS AND ASSOCIATED ITEMS SHALL BE PAID FOR UNDER OTHER ITEMS OF WORK.

30 SPOT ELEVATIONS ON THE MAIN WATER LINE RELAVTIVE TO FINISHED GRADE SHALL BE PROVIDED AT EACH 100 FT INTERVAL. COMPLETE WITH STATION AND OFFSET. IN ADDITION, ALL VALVES, FITTNGS, FIRE HYDRANTS (TOP OF NUT) AND OTHER MAJOR APPURTENANT ITEMS SHALL BE SHOWN WITH THE PROPER DESCRIPTION, STATION, OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM.

31 SPOT ELEVATIONS ON WATER METER CANS, VAULTS, SHALL BE SHOWN WITH THE PROPER DESCRIPTION (METER TYPE, METER SIZE, METER NUMBER, SERVICE MATERIAL, SERVICE SIZE), STATION OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM.

32 WORK UNDER THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING HDPE WALL ANCHOR AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE ENGINEER. THE UNIT PRICE SHALL INCLUDE THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR EXCAVATION, BACKFILLING, OR CONCRETE BLOCKING.

33 RESTRAINED JOINT ("RJ") SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS.

A. DUCTILE IRON PIPE RESTRAINED JOINT SYSTEMS: US PIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, AMERICAN FLEXRING, EBAA MEGALUG, STAR STARGRIP, SMITH-BLAIR CAMLOCK, CLOW TUFGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. SHOULD RJ PIPE BE SPECIFIED THROUGH UNCASED BORES, ONLY USPIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, OR AMERICAN FLEXRING IS TO BE USED. LOCKING GASKETS NOT PERMITTED.

B. POLYVINYL CHLORIDE (PVC) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED. LOCKING GASKETS NOT PERMITTED; SHOULD RJ PIPE BE SPECIFIED, BORE CASING IS REQUIRED.

C. HIGH DENSITY POLYETHYLENE (HDPE) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT.

NO ADDITONAL PAYMENT SHALL BE MADE.

34 TRACER WIRE AND DETECTABLE MYLAR MARKING TAPE SHALL BE INSTALLED ABOVE ALL PVC AND HDPE PIPE, TERMINATING ONLY ONTO HYDRANTS JUST ABOVE GROUND LEVEL AS PER CONST SPE 310. COST OF TRACER WIRE AND DETECTABLE MYLAR TAPE SHALL BE INCLUDED IN UNIT PRICE BID FOR PVC AND HDPE PIPE. CONST SPEC 310.1 NOW ALLOWS #12 COPPER WIRE AS TRACER WIRE ATOP PVC AND HDPE PIPE.

35 WATER SERVICE CONNECTIONS SHALL INCLUDE COST OF MATERIAL, LABOR AND EQUIPMENT TO REMOVE AND INSTALL SADDLES, SERVICE CLAMPS, CORPORATION STOPS, BENDS, 3-PART UNIONS, COUPLINGS, SETTERS AND ANY OTHER INCIDENTALS REQUIRED FOR A COMPLETE WATER SERVICE CONNECTION WITH EXCEPTION OF METER CANS, RIMS AND LIDS. NO ADDITIONAL PAYMENT SHALL BE MADE. METER CANS, LIDS AND RIMS SHALL BE PAID AS A SEPARATE BID ITEM.

A. SHORT SERVICE SHALL BE ANY SERVICE LINE THAT IS 25 FEET OR LESS IN LENGTH. SHORT SERVICES DO NOT INCLUDE PAVEMENT REPLACEMENT. I.E. 3/4 INCH WATER SERVICE CONNECTIONS (SHORT SERVICE).

B. LONG SERVICE SHALL BE ANY SERVICE LINE THAT IS GREATER THAN 2 FEET UP TO 80 FEET IN LENGTH. LONG SERVICES INCLUDE PAVEMENT REPLACEMENT AND/OR COST TO BORE. EXAMPLE: 3/4 IN WATER SERVICE CONNECTIONS (LONG SERVICE).

C. SHORT AND LONG SERVICE INES EXCEEDING THE ABOVE PARAMETERS WILL BE COMPENSATED FOR LINEAR FOOTAGE ABOVE AND BEYOND. COMPENSATION SHALL BE PAID AS "SERVICE LINES, EXTENSION", PER LF.

36 SERVICE LINES ON NON-ARTERIALS SHALL BE EITHER COPPER TUBING (TYPE K SOFT ANNEALED CONFORMING TO ASTM B 88) OR PEX TUBING (UPONOR AQUA PEX 5206 BUE CONFORMING TO ASTM F876/F877/F2023). PEX TUBING IS NOT PERMITTED WITHIN ARTERIAL RIGHT-OF-WAY. WHEN CONTRACTOR ELECTS TO USE PEX TUBING:

A. 3/4 INCH WATER SERVICE CONNECTION SHALL USE 1 INCH PEX TUBING MINIMUM

B. 1 INCH WATER SERVICE CONNECTION SHALL USE 1 1/4 INCH PEX TUBING MINIMUM

37 OWNERS OUTLINEING THE STEPS REQUIRED TO THOROUGHLY FLUSH THEIR WATERLINES AFTER CONNECTION TO THE NEW WATER MAIN. ALL COSTS TO PRODUCE AND DISTRIBUTE THE BROCHURE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM.

38 PRESSURE TESTING AND CHLORINATION OF WATER MAINS SHALL NOT BE PERFORMED UNTIL THE CITY INSPECTOR HAS RECEIVED REQUIRED CONSTRUCTION AS BULT RECORDS.

39 SIDEWALKS SHALL INCLUDE ADA RAMPS AS REQUIRED.

CONSTRUCTION NOTES CONTINUED

10 THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT SHALL INSPECT ALL TRENCHING, BEDDING, PIPE INSTALLATION, BACKFILL AND COMPACTION.

11 EXISTING SERVICE CONNECTIONS ARE TO BE KEPT IN SERVICE UNTIL CONNECTIONS TO NEW MAIN ARE MADE. ALL SERVICE LINE RECONNECTIONS SHALL BE MADE BY THE CONTRACTOR. SERVICE RECONNECTIONS SHALL BE INSTALLED AS PER CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS.

12 CONTRACTOR SHALL REPLACE EXISTING GRASS WITH SEED/SOD OF SAME TYPE AND VARIETY OR AS NOTED ON PLANS.

13 WATER OPERATIONS SHALL OPERATE ALL VALVS ON TRANSMISSION MAINS (16" AND LARGER). CONTRACTOR SHALL OPERATE ALL VALVES ON DISTRIBUTION MAINS (SMALLER THAN 16") WITH THE COORDINATION OF FIELD ENGINEERING AND WATER OPERATIONS AND IN THE PRESENCE OF A FIELD ENGINEERING INSPECTOR.

A. ATTEMPS WILL BE MADE WITH ASSISTANCE FROM TE CONTRACTOR TO NOTIFY ALL AFFECTED CUSTOMERS 48 HOURS IN ADVANCE, PARTICULARLY IF COMMERCIAL OR INDUSTRICAL CUSTOMERS ARE INVOLVED. PRIOR TO SHUTDOWN, FIELD ENGINEERING WILL NOTIFY WATER OPERATIONS, AT 918-596-9488, GIVING AN ESTIMATED DOWNTIME. WATER OPERATIONS WILL NOTIFY THE FIRE DEPARTMENT OF ALL FIRE HYDRANTS OUT OF SERVICE AND WHEN THEY ARE BACK IN SERVICE, BY STREET ADDRESS OR INTERSECTION.

B. WHERE COMMERCIAL, INDUSTRIAL, OR CRITICAL CUSTOMERS ARE AFFECTED, AND FOR ALL LINES 16 INCH AND LARGER IN SIZE, FIELD ENGINEERING WILL REQUEST WATER OPERATIONS TO SHUT DOWN THE MAIN. THERE WILL BE A MINIMUM OF 48 HOURS NOTICE TO WATER OPERATIONS.

14 CONTRACTOR SHALL PROVIDE AT LEAST 48 HOUR NOTICE TO ALL RESIDENTS OR BUSINESSES AFFECTED BEFORE TURNING OFF ANY WATER. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING DOOR HANGERS ON AFFECTED HOMES AND BUSINESSES.

15 ANY DAMAGE CAUSED BY CONTRACTOR TO ADJACENT TRAFFIC SIGNAL INFRASTRUCTURE SHALL BE REPAIRED AT CONTRATOR'S EXPENSE TO THE SATISFACTION OF THE TRAFFIC ENGINEER.

16 PRIOR TO PAVEMENT SAWING AND EXCAVATION NEAR SIGNALIZED INTERSECTION, CONTRACTOR SHALL CONTACT ENGINEERING SERVICES, TRAFFIC OPERATIONS, 918-596-9766, FOR SITE SPECIFIC, UNDERGROUND TRAFFIC UTILITY LOCATES.

17 CONSTRUCTION FOR ALL ENGINEERING SERVICES FACILITIES SHALL BE IN COMPLIEANCE WITH THE LATEST EDITION OF TITLE 252, DEPARTMENT OF ENVIRONMENTAL QUALITY, CHAPTER 626, PUBLIC WATER SUPPLY CONSTRUCTION STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).

18 ALL EXCVATED MATERIAL NOT REQUIRED IN OTHER AREAS OF THE PROJECT SHALL BECOME TE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY EXCESS MATERIAL IS TO BE DISPSED OF WITHIN THE CITY LIMITS OF TULSA.

19 ANY CHANGES FROM APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF TULSA FOR WRITTEN APPROVAL PRIOR TO INSTALLATION.

LEGEND

- POWER POLE
- TELEPHONE PEDESTAL
- GATE VALVE
- FIRE HYDRANT
- GAS METER
- WATER METER
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPERTY LINE
- EASEMENT
- —X— FENCE
- —G— GAS LINE
- RJ RESTRAINED JOINT

BEFORE YOU DIG CALL OKIE 1-800-522-OKIE 811

LICENSED PROFESSIONAL ENGINEER Cheryl E. Wilson 29603 OKLAHOMA

REVISION	BY	DATE

PAY QUANTITIES AND CONSTRUCTION NOTES

PROJECT NUMBER TMUA-W 07-26

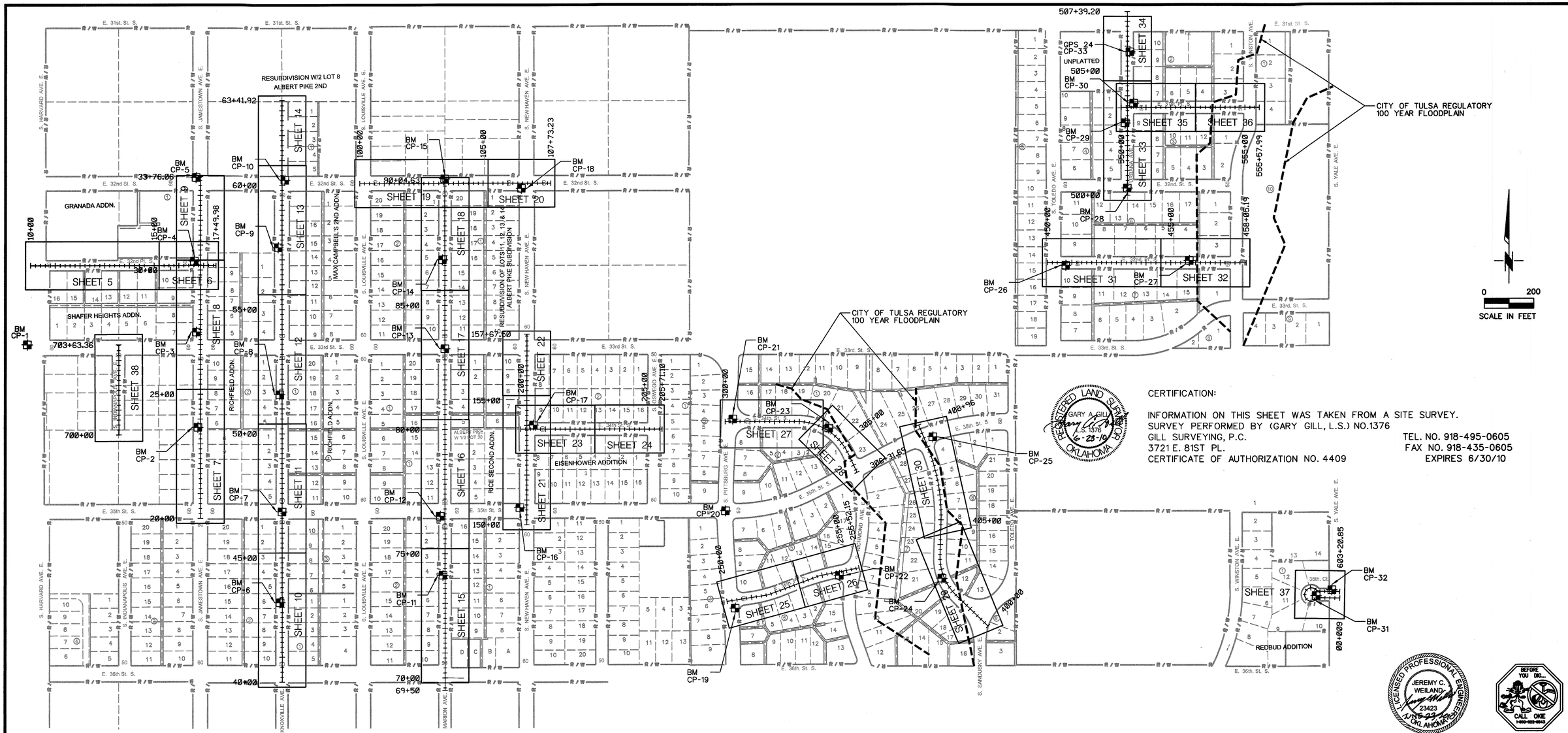
2 INCH WATER LINE REPLACEMENT, CITYWIDE

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: CITY OF TULSA

PLAN SCALE: N/A	DRAWN	CEW	03/2021	APPROVED:
	DESIGNED	CEW	03/2021	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: N/A	LEAD ENGR.	CEW	3/21	
	FIELD MGR.		3/21	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	HAS	3.21	CITY ENGINEER
FILE:	DRAWING:			DATE: 4.23.21
ATLAS PAGE NO: 93				SHEET 3A OF 39 SHEETS

PATH NAME: drive\Folder\Folder\Folder\PayQuanConstNotes.dgn INITIALS MM/DD/YYYY



SURVEY CONTROL DATA				
CP	DESCRIPTION	N	E	ELEV.
1	IRON PIN	412408.18	2576790.68	744.58
2	SIXTY D NAIL	412091.79	2577488.60	744.13
3	IRON PIN	412475.13	2577473.01	750.61
4	MAG NAIL	412760.52	2577457.28	754.75
5	MAG NAIL	413096.94	2577456.16	757.88
6	SIXTY D NAIL	411393.93	2577837.81	733.56
7	MAG NAIL	411760.12	2577836.82	735.16
8	MAG NAIL	412231.72	2577816.02	744.64
9	MAG NAIL	412822.80	2577794.79	748.58
10	MAG NAIL	413094.82	2577814.94	751.23
11	MAG NAIL	411518.68	2578494.94	736.79
12	MAG NAIL	411756.14	2578478.02	736.66
13	MAG NAIL	412430.89	2578479.82	746.75
14	MAG NAIL	412788.56	2578461.12	750.94
15	MAG NAIL	413114.47	2578461.76	755.31
16	IRON PIN	411798.32	2578799.17	735.46

SURVEY CONTROL DATA				
CP	DESCRIPTION	N	E	ELEV.
17	IRON PIN	412132.36	2578845.86	739.68
18	MAG NAIL	413083.55	2578773.33	753.19
19	MAG NAIL	411413.29	2579679.73	731.05
20	MAG NAIL	411804.66	2579630.83	736.30
21	MAG NAIL	412175.04	2579651.44	733.79
22	MAG NAIL	411554.85	2580097.78	719.14
23	SIXTY D NAIL	412147.12	2580040.29	721.23
24	MAG NAIL	411552.61	2580512.39	709.95
25	MAG NAIL	412121.36	2580461.88	718.09
26	MAG NAIL	412825.18	2580981.42	730.81
27	MAG NAIL	412856.87	2581481.16	720.87
28	MAG NAIL	413142.44	2581222.68	729.75
29	MAG NAIL	413404.22	2581208.15	732.81
30	IRON PIN	413484.48	2581240.19	733.21
31	MAG NAIL	411518.34	2582026.79	719.01
32	MAG NAIL	411543.66	2582089.74	718.79
33	GPS 24	413690.79	2581219.95	736.86

COORDINATE POINT TABLE					
STREET NAME	PI	STATION	NORTHING	EASTING	RADIUS
E. 32nd PL.	POB	10+00.00	412726.85	2576795.57	
E. 32nd PL.	POE	17+49.98	412744.81	2577545.33	
S. JAMESTOWN AVE.	POB	20+00.00	411725.77	2577508.04	
S. JAMESTOWN AVE.	POE	33+76.06	413101.39	2577473.28	
S. KNOXVILLE AVE.	POB	40+00.00	411075.05	2577854.82	
S. KNOXVILLE AVE.	POE	63.41.92	413416.22	2577795.47	
S. MARION AVE.	POB	69+50.00	411056.23	2578515.55	
S. MARION AVE.	POE	90+04.63	413110.18	2578462.68	
E. 32nd ST.	POB	100+00.00	413088.03	2578117.77	
E. 32nd ST.	POE	107+73.23	413107.01	2578890.77	
S. NEW HAVEN AVE.	POB	150+00.00	411730.24	2578828.62	
S. NEW HAVEN AVE.	POE	157+67.50	412497.52	2578810.32	
E. 34th ST.	POE	200+00.00	412114.43	2578794.45	
E. 34th ST.	POB	205+71.10	412127.22	2579365.40	
E. 35th PL.	POE	250+00.00	411439.88	2579646.57	
E. 35th PL.	PI	251+66.83	411489.56	2579810.74	
E. 35th PL.	PI	253+88.06	411553.54	2580018.19	
E. 35th PL.	POE	255+52.15	411586.92	2580176.49	
E. 34th ST.	POB	300+00.00	412164.02	2579620.78	
E. 34th ST.	PC	302+90.76	412170.81	2579911.47	230
E. 34th ST.	PI	304+36.84	412137.85	2580035.58	230
E. 34th ST.	PT	305+51.05	412043.49	2580122.68	230
E. 34th ST.	POE	306+31.69	411971.32	2580158.66	
S. SANDUSKY AVE.	POB	400+00.00	411365.29	2580702.79	

COORDINATE POINT TABLE					
STREET NAME	PI	STATION	NORTHING	EASTING	RADIUS
S. SANDUSKY AVE.	PC	401+76.97	411484.95	2580572.40	215
S. SANDUSKY AVE.	PI	402+71.97	411545.82	2580524.13	215
S. SANDUSKY AVE.	PT	403+55.87	411644.17	2580502.77	215
S. SANDUSKY AVE.	PC	404+95.52	411783.82	2580503.29	735
S. SANDUSKY AVE.	PI	406+51.67	411936.62	2580487.82	735
S. SANDUSKY AVE.	PT	408+03.25	412082.87	2580440.93	735
S. SANDUSKY AVE.	POE	408+95.94	412167.69	2580403.57	
E. 32nd PL.	POB	450+00.00	412834.55	2580906.33	
E. 32nd PL.	POE	458+05.19	412852.38	2581711.91	
S. URBANA AVE.	POB	500+00.00	413113.41	2581224.85	
S. URBANA AVE.	POE	507+39.20	413852.36	2581205.78	
E. 31st PL.	POB	550+00.00	413465.81	2581190.75	
E. 31st PL.	POE	555+57.99	413480.95	2581747.66	
E. 35th CT.	POB	600+00.00	411479.77	2582053.80	
E. 35th CT.	PC	600+74.52	411510.33	2582047.82	
E. 35th CT.	PI	600+87.33	411510.24	2582035.01	
E. 35th CT.	PRC	600+99.09	411501.90	2582025.28	
E. 35th CT.	PRC	602+21.93	411543.83	2582024.47	
E. 35th CT.	PI	602+34.25	411536.18	2582034.13	
E. 35th CT.	PT	602+45.62	411536.27	2582046.45	
E. 35th CT.	POE	603+20.85	411536.80	2582121.67	
S. INDIANAPOLIS AVE.	POB	700+00.00	412053.87	2577170.01	
S. INDIANAPOLIS AVE.	POE	703+63.36	412417.08	2577159.90	

CERTIFICATION:

INFORMATION ON THIS SHEET WAS TAKEN FROM A SITE SURVEY.
SURVEY PERFORMED BY (GARY GILL, L.S.) NO.1376
GILL SURVEYING, P.C. TEL. NO. 918-495-0605
3721 E. 81ST PL. FAX NO. 918-435-0605
CERTIFICATE OF AUTHORIZATION NO. 4409 EXPIRES 6/30/10

REGISTERED LAND SURVEYOR GARY A. GILL L.S. 1376 OKLAHOMA 6-23-10

CITY OF TULSA - ADS CONTROL POINTS
501 AND 502 WERE USED FOR PROJECT CONTROL

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA 6-23-10

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

SURVEY DATA AND WATER LINE KEYMAP

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=200'
PROFILE SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWN	ASB	2/08
DESIGNED	JCW	2/08
SURVEY	GG	2/08
FIELD MNGR.		3/21
SECT. MNGR.		3/21
PROJ. MNGR.		
RECOMMENDED: DEPUTY DIRECTOR		7.21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/G-Keymap
DATE: 7.21
ATLAS PAGE NO. 093
SHEET 4 OF 39 SHEETS

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
2	24"X6" TAPPING SLEEVE	10+54.72	412712.29	2576850.65
2	6" TAPPING VALVE			
4	3-WAY FIRE HYDRANT ASSEMBLY	10+64.31	412712.52	2576860.24

LOT 12 BLOCK 1 GRANADA ADDN. LOT 1

LIBRARY

OVERHEAD ELECTRIC

SEE CONNECTION DETAIL #1
REMOVE VALVES AND PLUG EXISTING WATERLINE

24" C.I.P. WATERLINE

8" SANITARY SEWER

VALVE OFF EXISTING 2" CORP STOP

10+00 11+00 12+00 13+00 14+00 15+00

E 32nd PL S

ROW 40.00' ROW 50.00'

MATCHLINE-STA. 15+20

24"X6" TAPPING SLEEVE AND VALVE
REPLACE FIRE HYDRANT ASSEMBLY
CUT AND PLUG EXISTING 2" WATERLINE
CONNECTION DETAIL #1

2" WATERLINE TO BE ABANDONED

EDGE OF CONCRETE

2-7.80 SY

CONTRACTOR TO VALVE OFF 2" CORP STOP

5-1.05 SY

4.80 SY 5
6.9'X6.2'

SIDEWALK

CONC DRIVE

ASPHALT DRIVE

CHAINLINK FENCE

ASPHALT PARKING LOT

PROPERTY PIN

FLOWER BED

SECURE FENCE DURING CONSTRUCTION

5-6.89 SY

3' 2' 4'

POWER POLE

BUILDING 3229

HOUSE 3334

HOUSE 3336

UTILITY EASEMENT

S. HARVARD AVE.

SHAFER HEIGHTS ADDN.

LOT 16 LOT 15 LOT 14 LOT 13 LOT 12 LOT 11

20 10 0 20 40
SCALE IN FEET

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

770 765 760 755 750 745 740 735 730 725

EXIST. GRADE ℄ ROAD
EXIST. GRADE ℄ WL

STA. 11+66.12 BEGIN BORE
STA. 12+36.54 END BORE
STA. 13+05.74 BEGIN BORE
STA. 13+39.87 END BORE
STA. 13+70.67 BEGIN BORE
STA. 13+87.75 END BORE
STA. 14+15.13 BEGIN BORE
STA. 14+70.06 END BORE

36" MIN COVER
24" MIN CLEAR

PROPOSED 6" WATERLINE

740.48 F.L.

STA. 12+17.81 SANITARY SEWER LINE
STA. 10+64.31 FIRE HYDRANT ASSEMBLY
STA. 10+98.47

30' RESTRAINED D.I.P. ONLY

10+00 11+00 12+00 13+00 14+00 15+00

REVISION	BY	DATE

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE A- E. 32nd PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

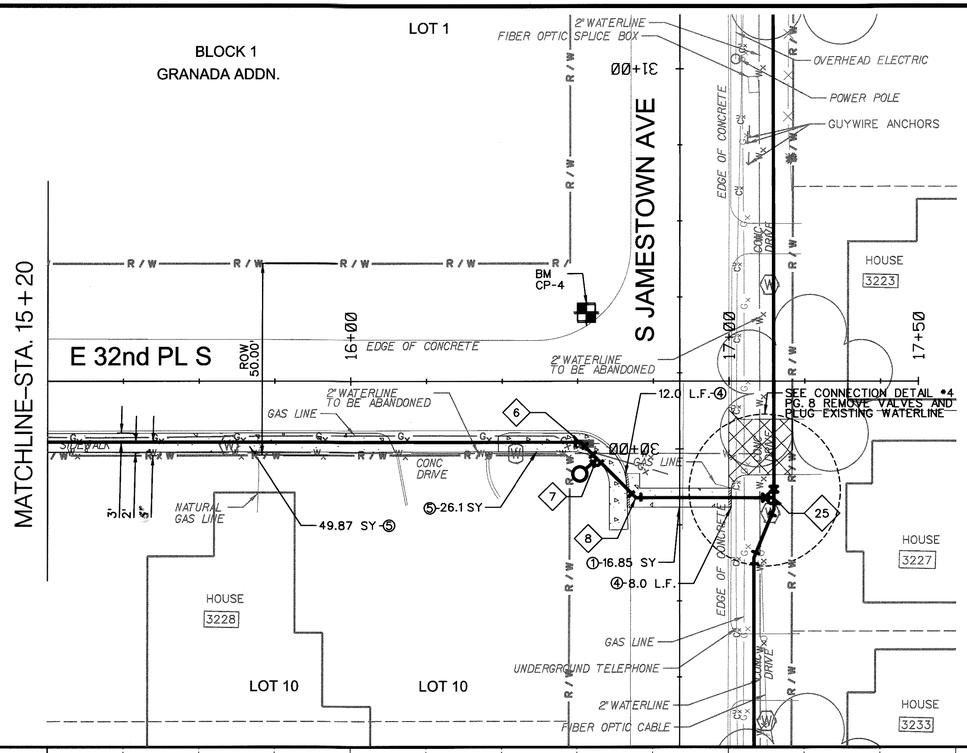
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800 FAX: (918) 749-5858

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HBS	3-21

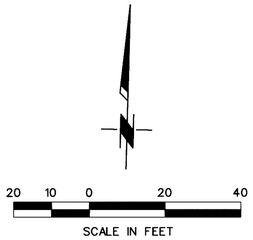
APPROVED: PUBLIC WORKS DIRECTOR

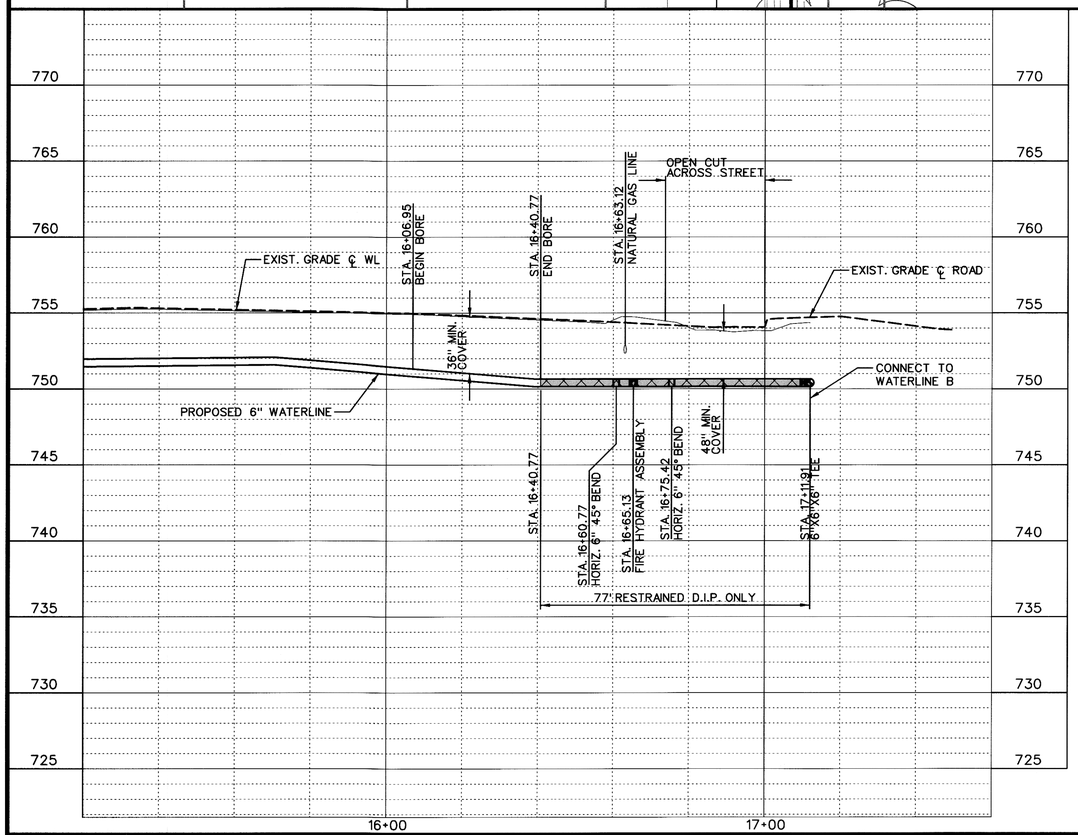
FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINEA
DATE: 3-23-21
ATLAS PAGE NO. 093
SHEET 5 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
6	6" 45 DEGREE BEND (REST.)	16+60.77	412726.54	2577456.54
7	3-WAY FIRE HYDRANT ASSEMBLY	16+65.13	412722.37	2577461.00
8	6" 45 DEGREE BEND (REST.)	16+75.42	412712.31	2577471.54
25	SEE SHEET 8	17+11.91	412713.21	2577508.02

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	MAG NAIL	412760.52	2577457.3	754.75





PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE A- E. 32nd PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.	[illegible]	3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: HAS 3.21 DEPUTY DIRECTOR		

APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/
DATE: 4.23.21
ATLAS PAGE NO. 093
SHEET 6 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
10	6"X6"X6" TEE (REST.)	20+16.94	411743.48	2577537.88
10	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
10	1 - 6" SOLID SLEEVE			
10A	6"X6"X6" TEE (REST.)	20+17.51	411743.78	2577527.22
10A	1 - 6" SOLID SLEEVE			
11	6" 45 DEGREE BEND (REST.)	20+48.60	411775.13	2577537.08
12	6" 45 DEGREE BEND (REST.)	20+60.94	411787.15	2577524.44
12A	3-WAY FIRE HYDRANT ASSEMBLEY	23+54.73	412080.85	2577516.99
12A	6" GATE VALVE (REST.) ASSEMBLY			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
2	SIXTY D NAIL	412091.79	2577488.6	744.13

CONNECTION DETAIL •2

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

REVISION	BY	DATE

LINE B- S. JAMESTOWN AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

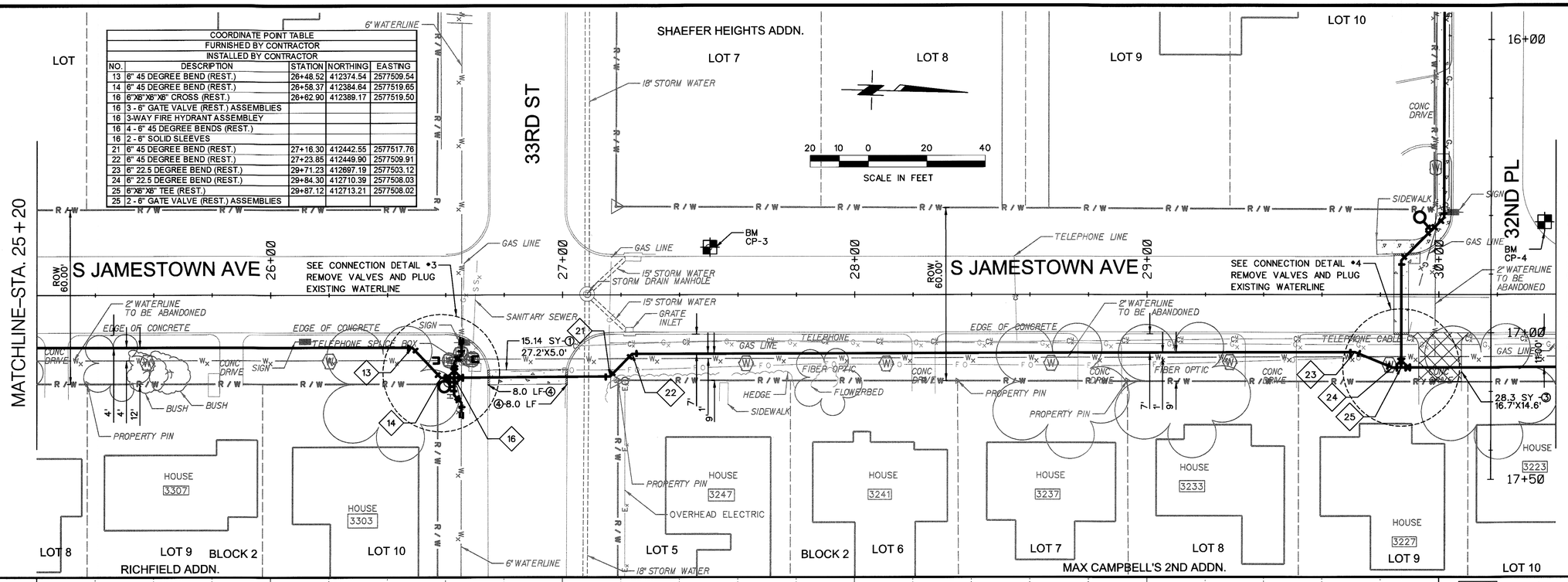
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
9178 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

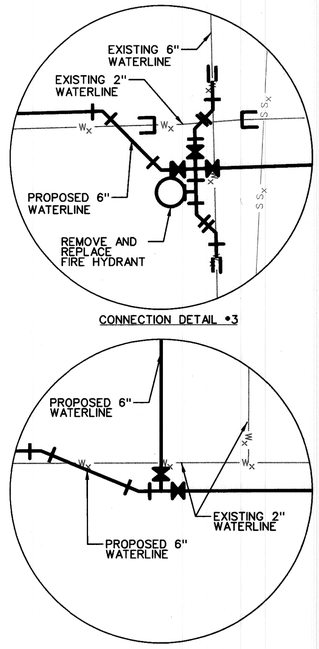
PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE:	FIELD MNGR.		3/11
HORIZONTAL:	SECT. MNGR.	CGW	3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		3-31

APPROVED:
PUBLIC WORKS DIRECTOR
DATE: 4-23-21

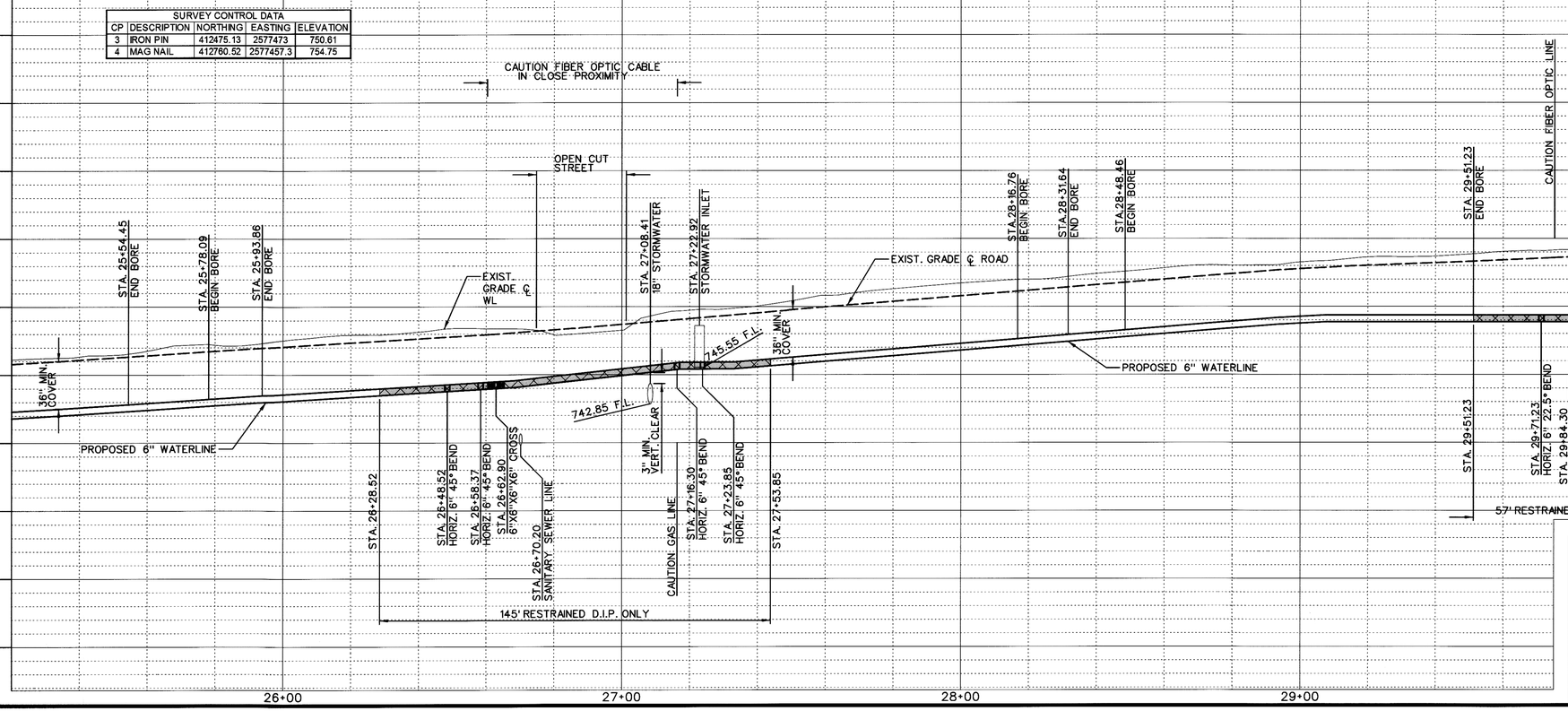
FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE B
ATLAS PAGE NO. 093
SHEET 7 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
13	6" 45 DEGREE BEND (REST.)	26+48.52	412374.54	2577509.54
14	6" 45 DEGREE BEND (REST.)	26+58.37	412384.64	2577519.65
16	6"X6"X6"X6" CROSS (REST.)	26+62.90	412389.17	2577519.50
16	3 - 6" GATE VALVE (REST.) ASSEMBLIES			
16	3-WAY FIRE HYDRANT ASSEMBLEY			
16	4 - 6" 45 DEGREE BENDS (REST.)			
16	2 - 6" SOLID SLEEVES			
21	6" 45 DEGREE BEND (REST.)	27+16.30	412442.55	2577517.76
22	6" 45 DEGREE BEND (REST.)	27+23.85	412449.90	2577509.91
23	6" 22.5 DEGREE BEND (REST.)	29+71.23	412697.19	2577503.12
24	6" 22.5 DEGREE BEND (REST.)	29+84.30	412710.39	2577508.03
25	6"X6"X6" TEE (REST.)	29+87.12	412713.21	2577508.02
25	2 - 6" GATE VALVE (REST.) ASSEMBLIES			





SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
3	IRON PIN	412475.13	2577473	750.61
4	MAG NAIL	412760.52	2577457.3	754.75



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

(1) REMOVE AND REPLACE CONCRETE STREET STD. 731
(2) REMOVE AND REPLACE ASPHALT STREET STD. 730
(3) REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
(4) REMOVE AND REPLACE CONCRETE CURB AND GUTTER
(5) REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
3/15/21
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE B- S. JAMESTOWN AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/4
HORIZONTAL:	SECT. MNGR.	CEW	3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		

APPROVED:
PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE B
DATE: 3.23.21
ATLAS PAGE NO. 093
SHEET 8 OF 39 SHEETS

BLOCK 1

LOT 1

GRANADA ADDN.

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
27	6" 45 DEGREE BEND (REST.)	32+98.65	413024.62	2577499.47
28	6" 45 DEGREE BEND (REST.)	33+00.06	413025.99	2577498.02
29	3-WAY FIRE HYDRANT ASSEMBLY	33+12.43	413038.36	2577497.69
29A	6"X6"X6" CROSS (REST.)	33+24.60	413050.52	2577497.33
29A	4-6" 45 DEGREE BENDS (REST.)			
29A	3-6" GATE VALVE (REST.) ASSEMBLIES			
29A	1 - 6" SOLID SLEEVE			
29B	6" 45 DEGREE BEND (REST.)	33+28.92	413054.85	277497.18
29C	6" 45 DEGREE BEND (REST.)	33+31.09	413056.95	2577494.92

MATCHLINE–STA. 30 + 40

S JAMESTOWN AVE

31+00 32+00 33+00 33+76

ROW 60.00'

SEE CONNECTION DETAIL •5
REMOVE VALVES AND PLUG
EXISTING WATERLINE

BM CP-5

2" WATERLINE TO BE ABANDONED

2.12 SY-①

④24.0 LF

3.67 SY-①

TELEPHONE LINE
EDGE OF CONCRETE
GAS LINE
OVERHEAD ELECTRIC
POWER POLE
GUYWIRE ANCHOR
TELEPHONE S-BOX
CONC DRIVE
CHAINLINK FENCE
19.51 SY -③ 9.3'X17.3'
ASPHALT PARKING LOT
BLOCK WALL
FLOWERBED
APARTMENT 3510
SIGN
PROPERTY PIN
6" WATERLINE
OVERHEAD ELECTRIC

28 29 29C 29B 29A 27

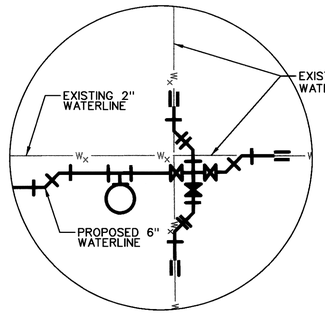
HOUSE 3223

LOT 10

MAX CAMPBELL'S 2ND ADDN.

LOT 10

32ND ST

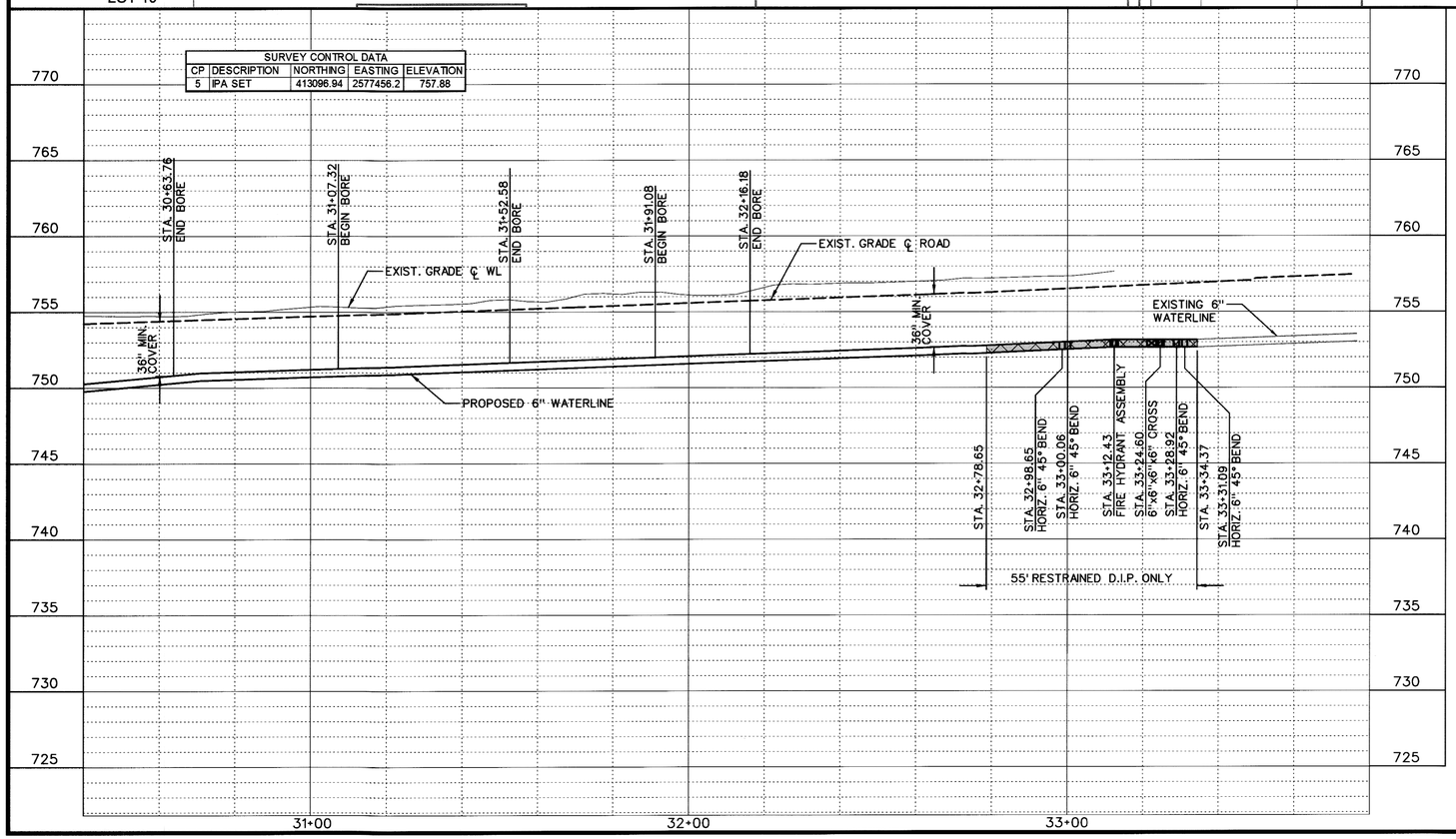


CONNECTION DETAIL •5

20 10 0 20 40

SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
5	IPA SET	413096.94	2577456.2	757.88



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA 3-9-21

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE B- S. JAMESTOWN AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

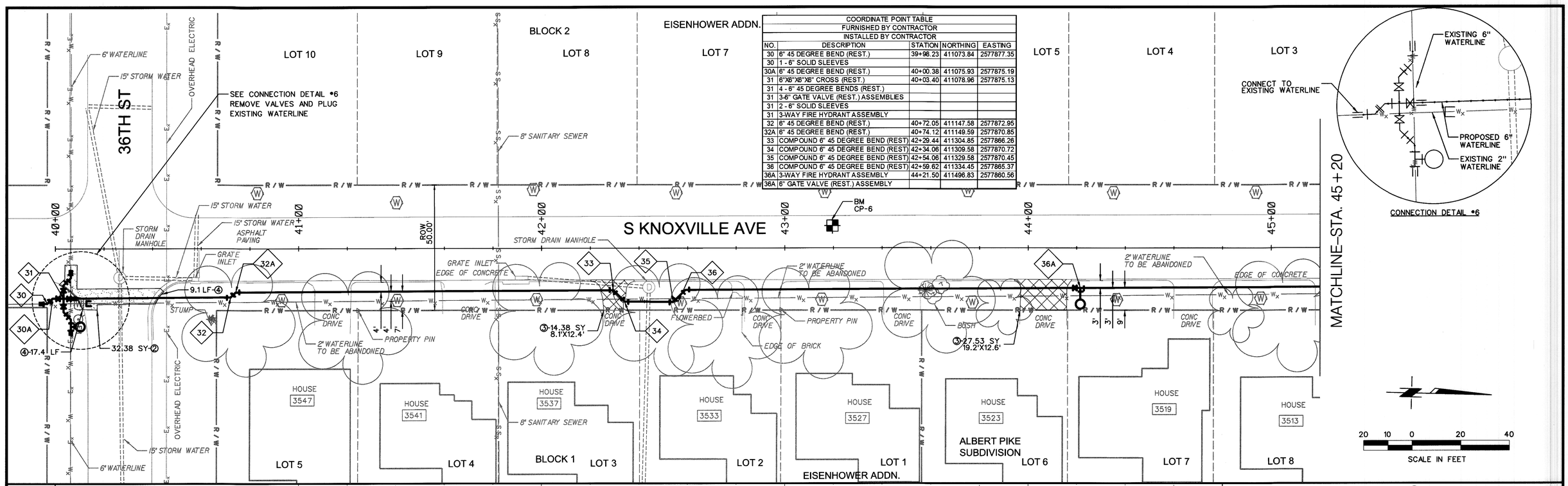
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

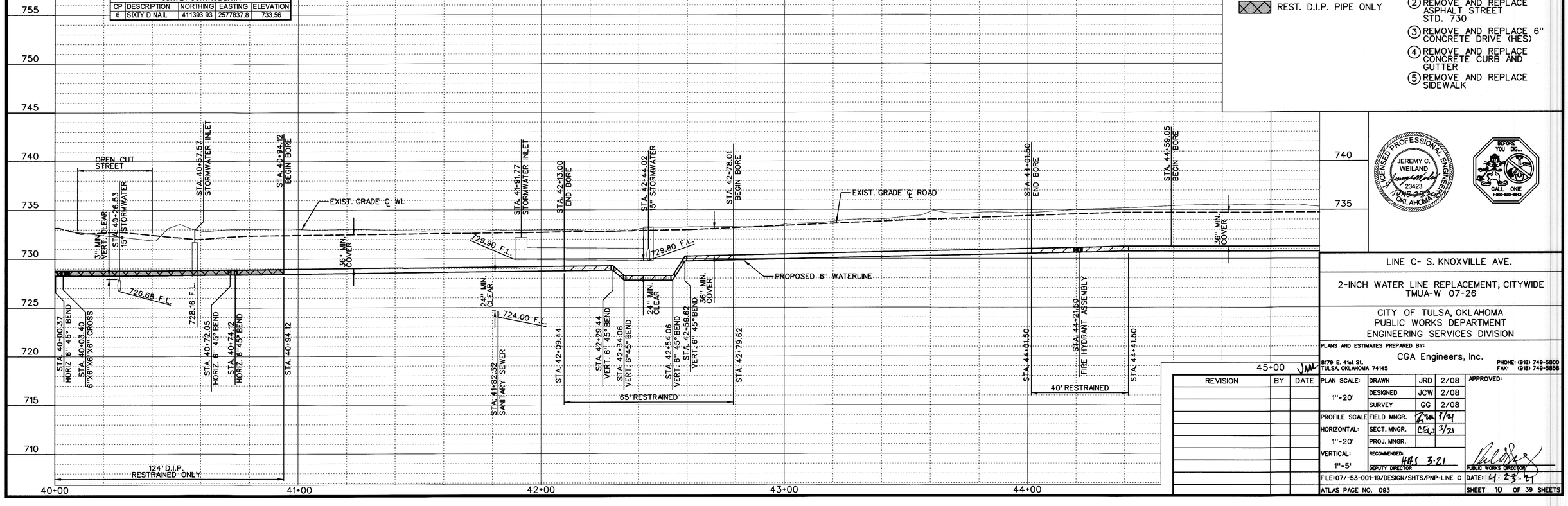
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE B
DATE: 4.23.21
ATLAS PAGE NO. 093
SHEET 9 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
30	6" 45 DEGREE BEND (REST.)	39+98.23	411073.84	2577877.35
30	1 - 6" SOLID SLEEVES			
30A	6" 45 DEGREE BEND (REST.)	40+00.38	411075.93	2577875.19
31	6"X6"X6"X6" CROSS (REST.)	40+03.40	411078.96	2577875.13
31	4 - 6" 45 DEGREE BENDS (REST.)			
31	3-6" GATE VALVE (REST.) ASSEMBLIES			
31	2 - 6" SOLID SLEEVES			
31	3-WAY FIRE HYDRANT ASSEMBLY			
32	6" 45 DEGREE BEND (REST.)	40+72.05	411147.58	2577872.95
32A	6" 45 DEGREE BEND (REST.)	40+74.12	411149.59	2577870.85
33	COMPOUND 6" 45 DEGREE BEND (REST)	42+29.44	411304.85	2577866.26
34	COMPOUND 6" 45 DEGREE BEND (REST)	42+34.06	411309.58	2577870.72
35	COMPOUND 6" 45 DEGREE BEND (REST)	42+54.06	411329.58	2577870.45
36	COMPOUND 6" 45 DEGREE BEND (REST)	42+59.62	411334.45	2577865.37
36A	3-WAY FIRE HYDRANT ASSEMBLY	44+21.50	411496.83	2577860.56
36A	6" GATE VALVE (REST.) ASSEMBLY			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
6	SIXTY D NAIL	411393.93	2577837.8	733.56



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
JUNE 30, 2021
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE C- S. KNOXVILLE AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
9179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		7/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		PUBLIC WORKS DIRECTOR

APPROVED:

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE C
DATE: 6.23.21
ATLAS PAGE NO. 093
SHEET 10 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
37	6" 45 DEGREE BEND (REST.)	46+46.96	411722.18	2577853.87
37A	6" 45 DEGREE BEND (REST.)	46+51.46	411726.8	2577858.26
38	3-WAY FIRE HYDRANT ASSEMBLY	46+54.46	411729.80	2577858.18
39	6"X6"X6"X6" CROSS (REST.)	46+59.22	411734.55	2577858.03
39	3 - 6" GATE VALVE (REST.) ASSEMBLIES			
39	4 - 6" 45 DEGREE BENDS (REST.)			
39	3 - 6" SOLID SLEEVE			
40	VERT. 6" 45 DEGREE BEND (REST.)	46+74.38	411749.74	2577857.61
41	VERT. 6" 45 DEGREE BEND (REST.)	46+78.13	411753.46	2577857.49
42	VERT. 6" 45 DEGREE BEND (REST.)	46+98.12	411773.45	2577856.94
43	VERT. 6" 45 DEGREE BEND (REST.)	47+02.45	411777.8	2577856.86
43A	3-WAY FIRE HYDRANT ASSEMBLY	50+22.54	412097.75	2577848.34
43A	6" GATE VALVE (REST.) ASSEMBLY			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
7	MAG NAIL	411760.12	2577836.8	735.16

CONNECTION DETAIL •7

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

SCALE IN FEET

REVISION	BY	DATE

PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL:	SECT. MNGR.	CEW	3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		PUBLIC WORKS DIRECTOR

APPROVED:

LINE C- S. KNOXVILLE AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE C
DATE: 4.23.21
ATLAS PAGE NO. 093
SHEET 11 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
44	6" 3-WAY FIRE HYDRANT ASSEMBLY (REST.)	53+19.30	412394.41	2577840.43
45	6"X6"X6"X6" CROSS (REST.)	53+27.38	412402.48	2577840.25
45	3 - 6" GATE VALVE (REST.) ASSEMBLIES			
45	4 - 6" 45 DEGREE BENDS (REST.)			
45	3 - 6" SOLID SLEEVES			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
8	MAG NAIL	412231.72	2577816	744.64

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

REVISION	BY	DATE

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA
12-31-21

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE C- S. KNOXVILLE AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.		3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		3.21

APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE C
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 12 OF 39 SHEETS

LOT 2 | LOT 1 BLOCK 2 | MAX CAMPBELL'S 2ND ADDN. LOT 10 | LOT 7

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
49	3-WAY FIRE HYDRANT ASSEMBLY	56+76.38	412751.41	2577833.36
49	6" GATE VALVE (REST.) ASSEMBLY			
50	6"X6"X6"X6" CROSS (REST.)	59+78.34	413053.33	2577827.41
50	3 - 6" GATE VALVE (REST.) ASSEMBLIES			
50	4 - 6" 45 DEGREE BENDS (REST.)			
50	2 - 6" SOLID SLEEVE			
51	6" 45 DEGREE BEND (REST.)	59+82.84	413057.83	2577827.32
51A	6" 45 DEGREE BEND (REST.)	59+89.57	413064.38	2577820.42

MATCHLINE–STA. 55 + 60

S KNOXVILLE AVE

56+00 | 57+00 | 58+00 | 59+00 | S KNOXVILLE AVE | 60+00

ROW 60.00'

BM CP-9

SEE CONNECTION DETAIL •9
REMOVE VALVES AND PLUG
EXISTING WATERLINE

6" WATERLINE

32ND ST

MATCHLINE–STA. 60 + 80

EDGE OF CONCRETE

2" WATERLINE TO BE ABANDONED

49

15.68 SY
7.8'X16.7'

FLOWERBED

CONC DRIVE

PROPERTY PIN

8' | 8' | 3'

HOUSE 3233

HOUSE 3227

HOUSE 3223

HOUSE 3219

HOUSE 3213

HOUSE 3209

HOUSE 3203

GRAVEL DRIVE

BONE DRIVE

4 16.8 LF

17.00 SY-1

50

51

51A

BM CP-10

9.00'

7' | 9' | 2'

SIDEWALK

2" WATERLINE TO BE ABANDONED
RETAINING WALL

CABLE FENCE

ORDINANCE NO. 19357

EDGE OF ASPHALT

ASPHALT PARKING LOT

25.00'

SIDEWALK

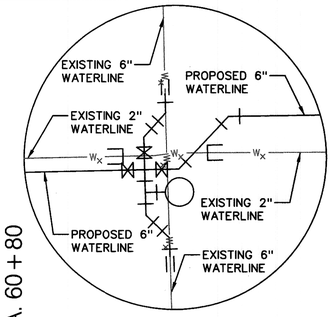
EDGE OF BUILDING

APARTMENT 3609

FH

6" WATERLINE

NOTE: STREET CLOSED BY ORDINACE NO. 19357, BUT ALLOWS UTILITIES TO REMAIN.



CONNECTION DETAIL •9

20 10 0 20 40
SCALE IN FEET

LOT 14 | MAX CAMPBELL'S 2ND ADDN. BLOCK 2 LOT 15 | LOT 16 | LOT 17 | LOT 18 | LOT 19 | LOT 20 | LOT 5

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
9	MAG NAIL	412822.80	2577794.79	748.58
10	MAG NAIL	413094.82	2577814.94	751.23

765 | 760 | 755 | 750 | 745 | 740 | 735 | 730 | 725 | 720

STA. 55+77.24 END BORE

STA. 55+99.00 BEGIN BORE

36" MIN. COVER

EXIST. GRADE ℄ ROAD

STA. 56+56.38 END BORE

STA. 56+56.38

STA. 56+76.38 FIRE HYDRANT ASSEMBLY

STA. 56+96.38

40' RESTRAINED

STA. 57+19.46 BEGIN BORE

EXIST. GRADE ℄ WL

PROPOSED 6" WATERLINE

STA. 58+21.14 END BORE

STA. 58+40.00 BEGIN BORE

36" MIN. COVER

STA. 59+16.35 END BORE

STA. 59+31.14 BEGIN BORE

STA. 59+58.34 END BORE

STA. 59+58.34

STA. 59+78.34 6"X6"X6" CROSS

STA. 59+82.84 HORIZ. 6" 45° BEND

STA. 59+89.57 HORIZ. 6" 45° BEND

80' RESTRAINED D.I.P. ONLY

STA. 60+13.34 BEGIN PARKING LOT BORE AND CASE

48" MIN. COVER

PROPOSED 6" WATERLINE

750 | 745

56+00 | 57+00 | 58+00 | 59+00 | 60+00

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
3-15-21
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE C- S. KNOXVILLE AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.	[illegible]	3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CGW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE C

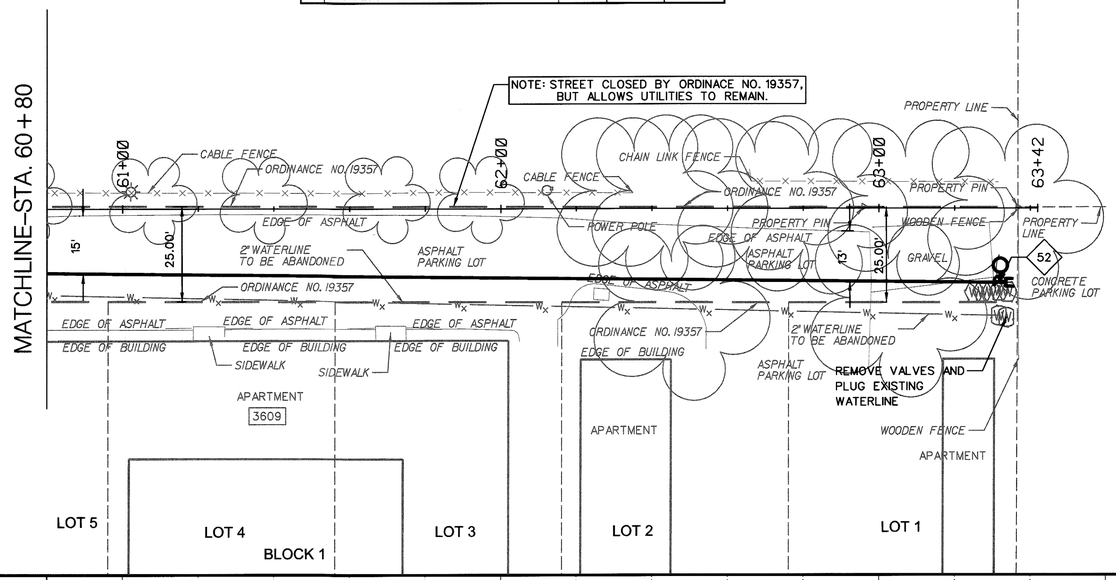
DATE: 4-23-21

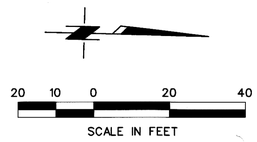
ATLAS PAGE NO. 093

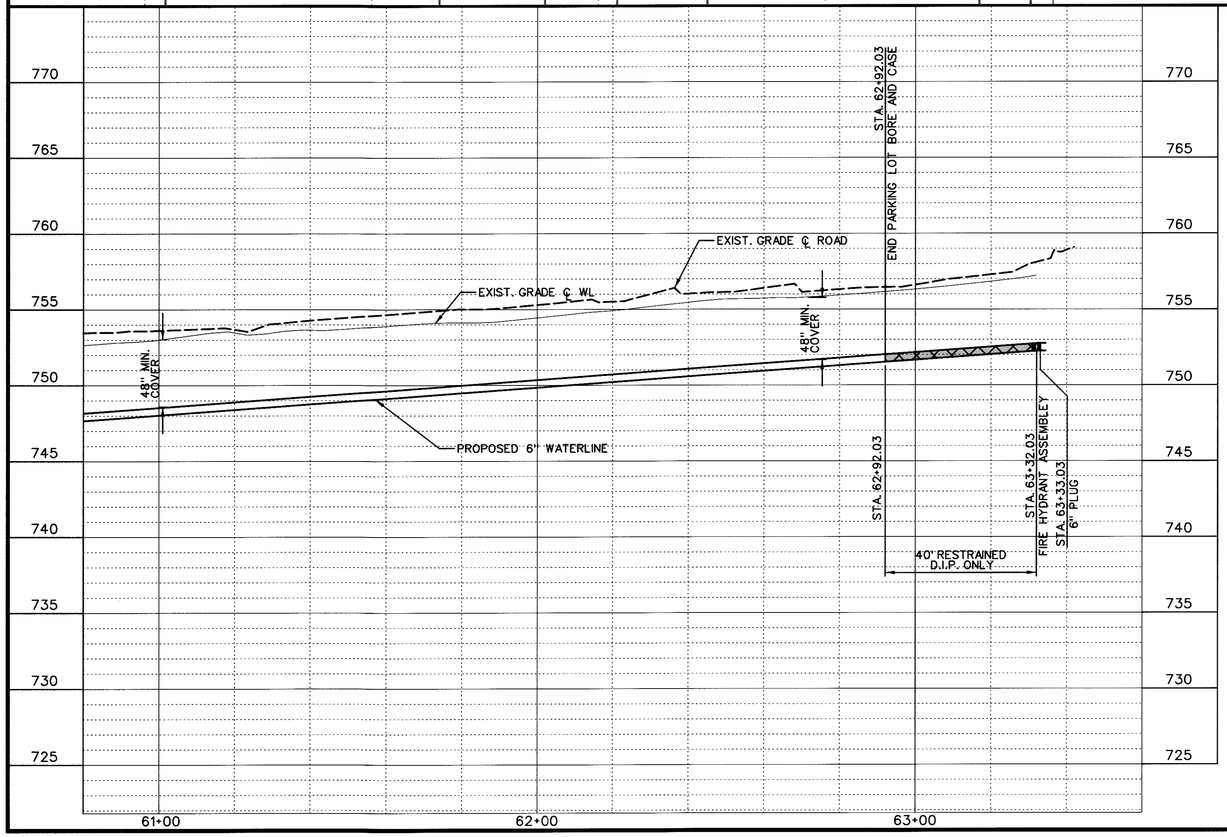
SHEET 13 OF 39 SHEETS

LOT 7

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
52	6" 3-WAY FIRE HYDRANT ASSEMBLY (REST.)	63+32.03	413406.83	2577815.32
52	1 - 6" PLUG			







PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE C- S. KNOXVILLE AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.		
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS 3-21	

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE C
DATE: 04-23-21
ATLAS PAGE NO. 093
SHEET 14 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
53	6"X6"X6" TEE (REST.)	69+90.99	411098.06	2578477.5
53	1 - 6" GATE VALVE (REST.) ASSEMBLY			
53	2 - 6" SOLID SLEEVE			
54	6" 45 DEGREE BEND (REST.)	70+28.43	411135.48	2578546.62
54A	6" 3-WAY FIRE HYDRANT ASSEMBLY	70+35.64	411142.51	2578539.26
55	6" 45 DEGREE BEND (REST.)	70+43.57	411150.23	2578531.18
56	VERT. 6" 45 DEGREE BEND (REST.)	70+46.32	411152.93	2578531.11
57	VERT. 6" 45 DEGREE BEND (REST.)	70+48.00	411154.61	2578531.08
57A	3-WAY FIRE HYDRANT ASSEMBLY	73+44.99	411451.62	2578526.59
57A	6" GATE VALVE (REST.) ASSEMBLY			

LOT 10 | LOT 9 | LOT 8 | LOT 7 BLOCK 2 | LOT 6 | LOT 5 EISENHOWER EXTENDED | LOT 4 | LOT 3

36TH ST

6" WATERLINE, 8" SANITARY SEWER, OVERHEAD ELECTRIC

SEE CONNECTION DETAIL •10
REMOVE VALVES AND PLUG EXISTING WATERLINE

REMOVE VALVE AND PLUG WATERLINE

④-14.3 LF

② 15.37 SY 26.7'X5.0'

④-8.0 LF

④-8.0 LF

③ 23.86 SY 16.7'X12.6'

2" WATERLINE TO BE ABANDONED

EXISTING 2" WATERLINE

EXISTING 6" WATERLINE

PROPOSED 6" WATERLINE

CONNECTION DETAIL •10

BM CP-11

S MARION AVE — ROW 50.00'

70+00 | 71+00 | 72+00 | 73+00 | 74+00 | 75+00

MATCHLINE-STA. 75+20

OVERHEAD ELECTRIC, POWER POLE, RR TIE, SIDEWALK, EDGE OF ASPHALT, CULVERT, ASPHALT, CONC DRIVE, CONC BLOCKS, FLOWERBED, RETAINING WALL, CHAINLINK FENCE, PROPERTY PIN

HOUSE 3803 | HOUSE 3537 | HOUSE 3531 | HOUSE 3527 | HOUSE 3521 | HOUSE 3517 | HOUSE 3511

LOT D BLOCK 1 | LOT 9 | LOT 10 | LOT 11 | LOT 12 | LOT 13 | LOT 14 EISENHOWER EXTENDED

20 10 0 20 40
SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
11	MAG NAIL	411518.68	2578494.94	736.79

755 | 750 | 745 | 740 | 735 | 730 | 725 | 720 | 715 | 710

OPEN CUT STREET

STA. 70+92.75 BEGIN BORE
STA. 71+18.98 END BORE
STA. 72+01.49 BEGIN BORE
STA. 72+72.37 END BORE
STA. 72+92.71 BEGIN BORE
STA. 73+24.99 END BORE
STA. 73+78.42 BEGIN BORE
STA. 73+95.54 END BORE
STA. 74+37.03 BEGIN BORE
STA. 74+57.40 END BORE
STA. 74+98.51 BEGIN BORE

EXIST. GRADE ℄ ROAD
EXIST. GRADE ℄ WL
PROPOSED 6" WATERLINE

36" MIN. COVER
48" MIN. COVER
24" MIN. COVER

STA. 69+90.99 6"X6"X6" TEE
STA. 70+13.23 SANITARY SEWER PIPE
724.41 F.L.
STA. 70+28.43 HORIZ. 6" 45° BEND
STA. 70+35.64
FIRE HYDRANT ASSEMBLY
STA. 70+43.57 HORIZ. 6" 45° BEND
STA. 70+46.32 VERT. 6" 45° BEND
STA. 70+48.00 VERT. 6" 45° BEND
STA. 70+80.99
113" RESTRAINED D.I.P. ONLY

STA. 73+24.99
STA. 73+44.99 FIRE HYDRANT ASSEMBLY
STA. 73+64.99
40' RESTRAINED

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

69+80 | 70+00 | 71+00 | 72+00 | 73+00 | 74+00

LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND — 23423 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE D- S. MARION AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
9179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HBS	3.21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE-D
DATE: 4.23.21
ATLAS PAGE NO. 093
SHEET 15 OF 39 SHEETS

BLOCK 2 LOT 2
EISENHOWER EXTENDED

LOT 1

LOT 11
BLOCK 1

LOT 12

LOT 13

LOT 14
RICE 2ND ADDN.

LOT 15

LOT 16

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
58	6" 45 DEGREE BEND (REST.)	76+21.60	411728.11	2578517.87
59	6" 45 DEGREE BEND (REST.)	76+26.27	411732.66	2578513.11
60	6" 3-WAY FIRE HYDRANT ASSEMBLY (REST.)	76+39.33	411745.72	2578512.81
61	6"X6"X6"X6" CROSS (REST.)	76+52.62	411759.00	2578512.50
61	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
61	4 - 6" 45 DEGREE BENDS (REST.)			
61	2 - 6" SOLID SLEEVE			
62	6" 45 DEGREE BEND (REST.)	76+55.62	411762.00	2578512.43
63	6" 45 DEGREE BEND (REST.)	76+58.61	411765.07	2578515.35
64	6" GATE VALVE (REST.) ASSEMBLY	76+93.63	411800.08	2578514.50
64A	3-WAY FIRE HYDRANT ASSEMBLY	80+06.29	412112.64	2578506.95
64A	6" GATE VALVE (REST.) ASSEMBLY			

MATCHLINE–STA. 75+20

MATCHLINE–STA. 80+40

35TH ST

S MARION AVE

SEE CONNECTION DETAIL #11
REMOVE VALVES AND PLUG
EXISTING WATERLINE

BM
CP-12

15" STORM WATER

STORM DRAIN MANHOLE

OVERHEAD ELECTRIC

6" WATERLINE

76+00

77+00

78+00

79+00

80+00

ROW
50.00'

2" WATERLINE
TO BE ABANDONED

CULVERT

EDGE OF ASPHALT

④-13.0 LF

43.54 SY-①

10.0 LF-④

GRATE INLET

EDGE OF CONCRETE

⑤-12.65 SY
8.8'X11.0'

64A

POWER POLE

PROPERTY PIN

BUSH

CONC DRIVE

BB TW

6'

5'

2'

58

59

60

61

62

63

64

HOUSE 3507

HOUSE 3804

HOUSE 3809

HOUSE 3347

HOUSE 3335

HOUSE 3331

HOUSE 3327

HOUSE 3321

BLOCK 1

EISENHOWER EXTENDED

RICE 2ND ADDN.

LOT 15

LOT 16

LOT 5

LOT 4

LOT 3

LOT 2

LOT 1

LOT 5

EXISTING 6" WATERLINE

PROPOSED 6" WATERLINE

EXISTING 2" WATERLINE

POWER POLE

CONNECTION DETAIL #11

PROPOSED 6" WATERLINE

20 10 0 20 40

SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
12	IPA SET	411756.14	2578478.02	736.66

760
755
750
745
740
735
730
725
720
715

STA. 75+75.60 END BORE

OPEN CUT STREET

STA. 77+04.72 STORMWATER INLET

STA. 78+04.11 BEGIN BORE

STA. 78+22.66 END BORE

STA. 78+63.33 BEGIN BORE

STA. 79+86.29 END BORE

EXIST. GRADE ℄ WL

EXIST. GRADE ℄ ROAD

48" MIN. COVER

36" MIN. COVER

PROPOSED 6" WATERLINE

STA. 76+01.60

STA. 76+21.60 HORIZ. 6" 45° BEND

STA. 76+26.27 HORIZ. 6" 45° BEND

STA. 76+39.33 FIRE HYDRANT ASSEMBLY

STA. 76+52.62 6"X6"X6" CROSS

STA. 76+55.62 HORIZ. 6" 45° BEND

STA. 76+58.61 HORIZ. 6" 45° BEND

STA. 77+13.63

136' RESTRAINED D.I.P. ONLY

STA. 79+86.29

STA. 80+06.29 FIRE HYDRANT ASSEMBLY

STA. 80+26.29

40' RESTRAINED

PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731

② REMOVE AND REPLACE ASPHALT STREET STD. 730

③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)

④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER

⑤ REMOVE AND REPLACE SIDEWALK

76+00 77+00 78+00 79+00 80+00

REVISION	BY	DATE

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG...
CALL OKIE
1-800-522-6543

LINE D- S. MARION AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:

CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL:	SECT. MNGR.	CEW	3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED: DEPUTY DIRECTOR	HH	3-21
1"=5'	APPROVED: PUBLIC WORKS DIRECTOR		

FILE: 077-53-001-19/DESIGN/SHTS/PNP-LINE D DATE: 04-23-21

ATLAS PAGE NO. 093

SHEET 16 OF 39 SHEETS

LOT 16 | LOT 17 | LOT 18 BLOCK 1 | LOT 19 RICE 2ND ADDN. | LOT 20 | LOT 10 BLOCK 2 | LOT 9 ALBERT PIKE SUB. | LOT 8 | LOT 7

MATCHLINE–STA. 80 + 40

MATCHLINE–STA. 85 + 60

33RD ST

S MARION AVE

ROW 50.00'

81+00 | 82+00 | 83+00 | 84+00 | 85+00

10" SANITARY SEWER

6" WATERLINE

15" STORM WATER

STORM DRAIN MANHOLE

SEE CONNECTION DETAIL #12
REMOVE VALVES AND PLUG
EXISTING WATERLINE

BM CP-13

GRATE INLET

9.6 LF ④

34.96 SY ①

14.8 LF ④

2" WATERLINE TO BE ABANDONED

EDGE OF CONCRETE

CONC DRIVE

PROPERTY PIN

SIGN

CARPORT

POWER POLE

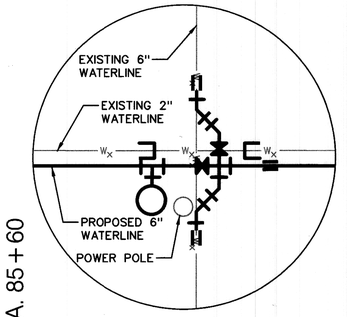
OVERHEAD ELECTRIC

UTILITY EASEMENT

HOUSE 3317 | HOUSE 3313 | HOUSE 3307 | HOUSE 3303 | HOUSE 3805 | HOUSE 3241 | HOUSE 3237

LOT 5 | LOT 4 BLOCK 2 | LOT 3 | LOT 2 | LOT 1 RICE 2ND ADDN. | LOT 11 | LOT 12 BLOCK 1 | LOT 13 ALBERT PIKE RESUB LOT 11, 12, 13, 14 | LOT 14

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
65	6" 3-WAY FIRE HYDRANT ASSEMBLY (REST.)	83+03.41	412409.68	2578499.76
66	6"X6"X6"X6" CROSS (REST.)	83+12.24	412418.51	2578499.55
66	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
66	4 - 6" 45 DEGREE BENDS (REST.)			
66	3 - 6" SOLID SLEEVE			
66A	6" GATE VALVE (REST.) ASSEMBLY	83+49.67	412455.93	2578498.64



CONNECTION DETAIL #12

20 10 0 20 40

SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	MAG NAIL	412430.89	2578473.82	746.75

765 | 760 | 755 | 750 | 745 | 740 | 735 | 730 | 725 | 720

STA. 80+45.11 BEGIN BORE

STA. 80+55.98 END BORE

STA. 81+03.64 BEGIN BORE

STA. 81+16.24 END BORE

STA. 81+62.18 BEGIN BORE

STA. 81+81.10 END BORE

STA. 82+15.55 BEGIN BORE

STA. 82+83.41 END BORE

STA. 83+03.41 FIRE HYDRANT ASSEMBLY

STA. 83+12.24 6"X6"X6"X6" CROSS

STA. 83+63.64 STORMWATER INLET

STA. 83+84.57 BEGIN BORE

STA. 83+69.67

STA. 84+21.49 END BORE

STA. 84+63.92 BEGIN BORE

STA. 80+61.73 SANITARY SEWER PIPE

EXIST. GRADE ℄ WL

EXIST. GRADE ℄ ROAD

OPEN CUT STREET

PROPOSED 6" WATERLINE

PROPOSED 6" WATERLINE

36" MIN. COVER

48" MIN. COVER

36" MIN. COVER

24" MIN. CLEAR

730.00 F.L.

107' RESTRAINED D.I.P. ONLY

81+00 | 82+00 | 83+00 | 84+00 | 85+00

PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731

② REMOVE AND REPLACE ASPHALT STREET STD. 730

③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)

④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER

⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
6-23-21
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

REVISION	BY	DATE

LINE D- S. MARION AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:

CGA Engineers, Inc.

8179 E. 41st St.
TULSA, OKLAHOMA 74145

PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

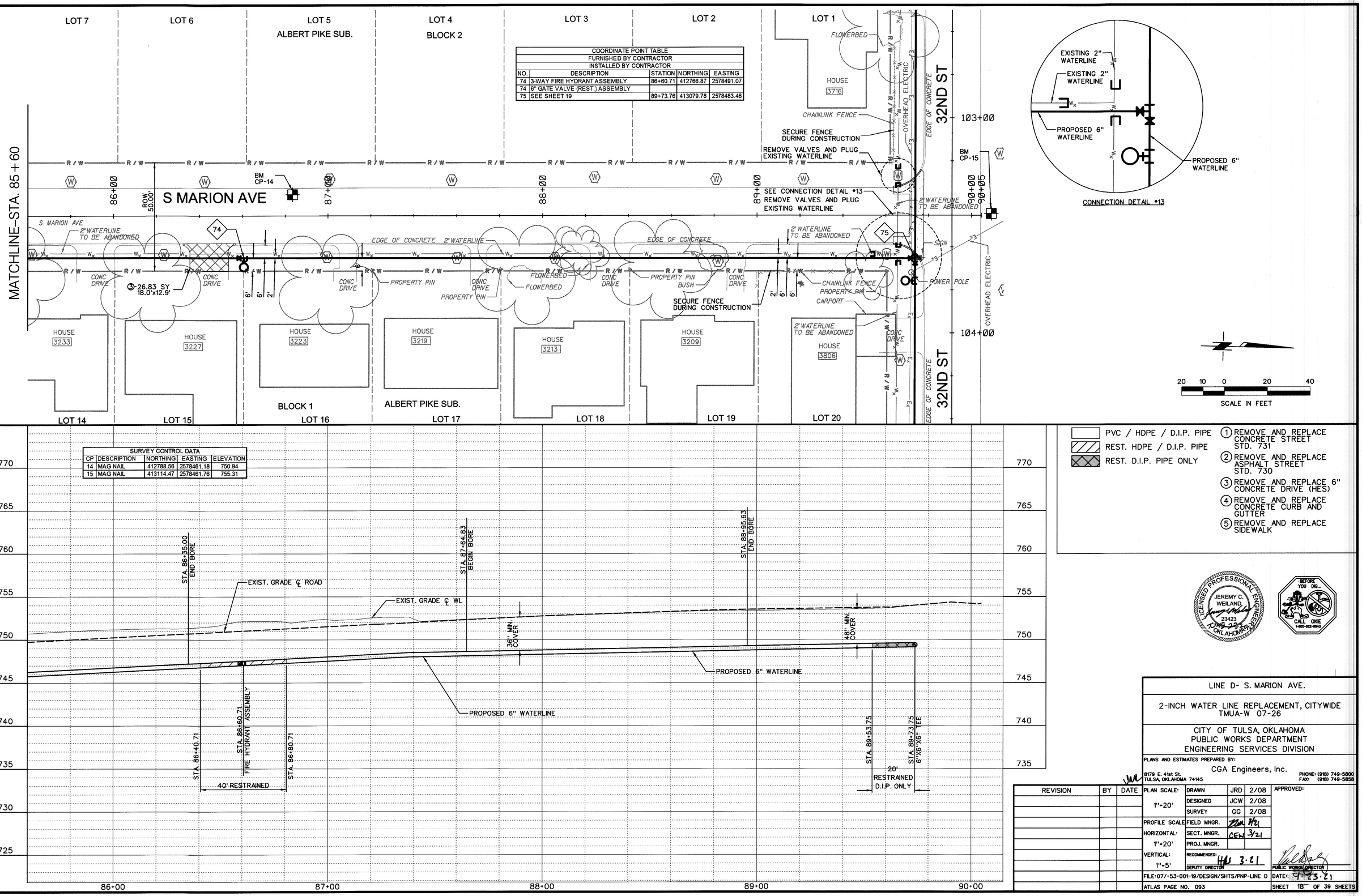
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE D

DATE: 4-23-21

ATLAS PAGE NO. 093

SHEET 17 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
74	3-WAY FIRE HYDRANT ASSEMBLY	86+60.71	412766.87	2578491.07
74	6" GATE VALVE (REST.) ASSEMBLY			
75	SEE SHEET 19	89+73.76	413079.78	2578483.46

CONNECTION DETAIL #13

20 10 0 20 40

SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
14	MAG NAIL	412788.56	2578461.18	750.94
15	MAG NAIL	413114.47	2578461.76	755.31

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

REVISION	BY	DATE

LINE D- S. MARION AVE.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		3-21

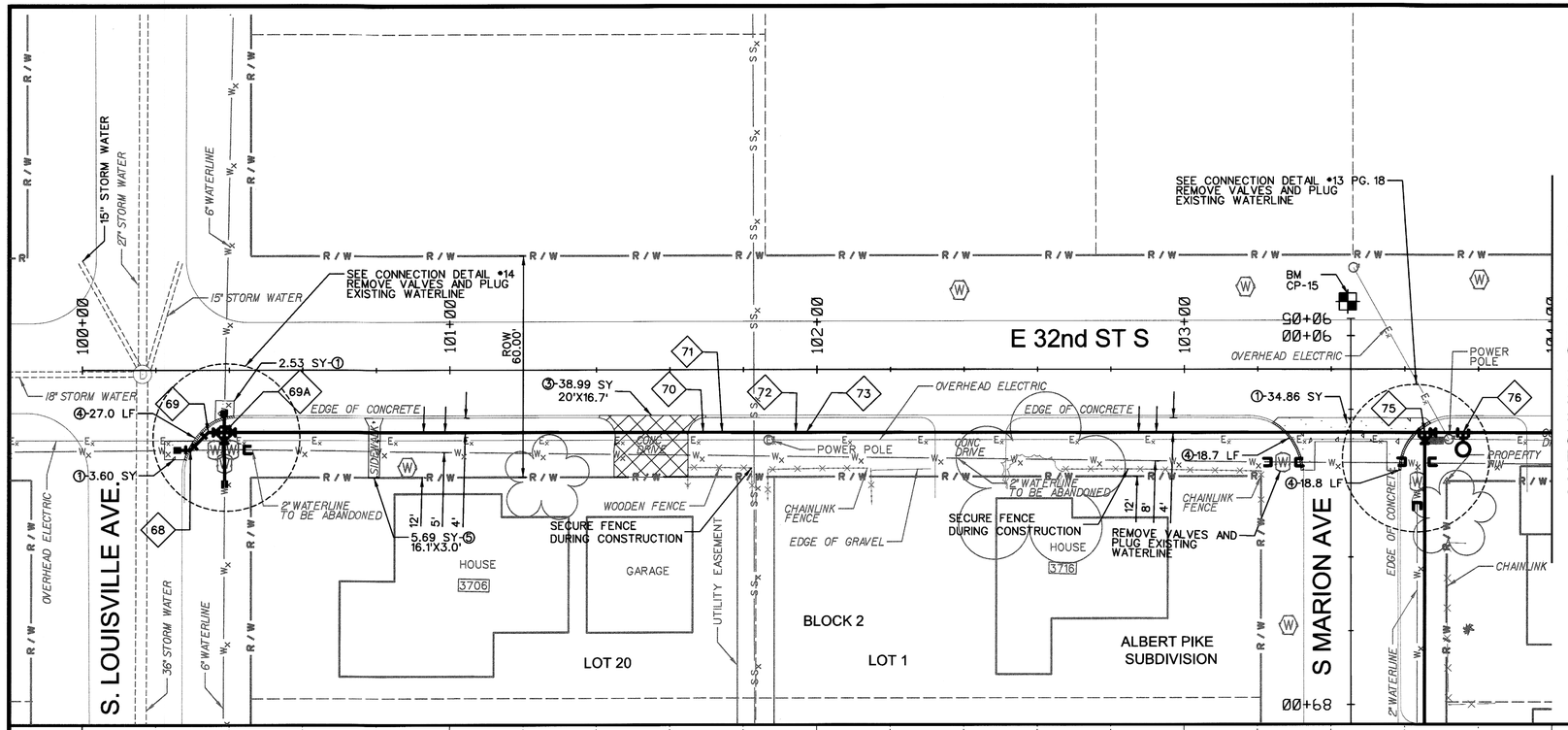
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE D

DATE: 3-23-21

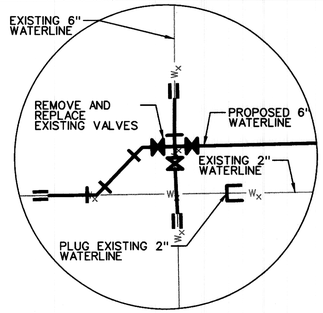
ATLAS PAGE NO. 093

SHEET 18 OF 39 SHEETS

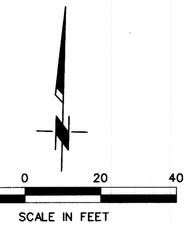


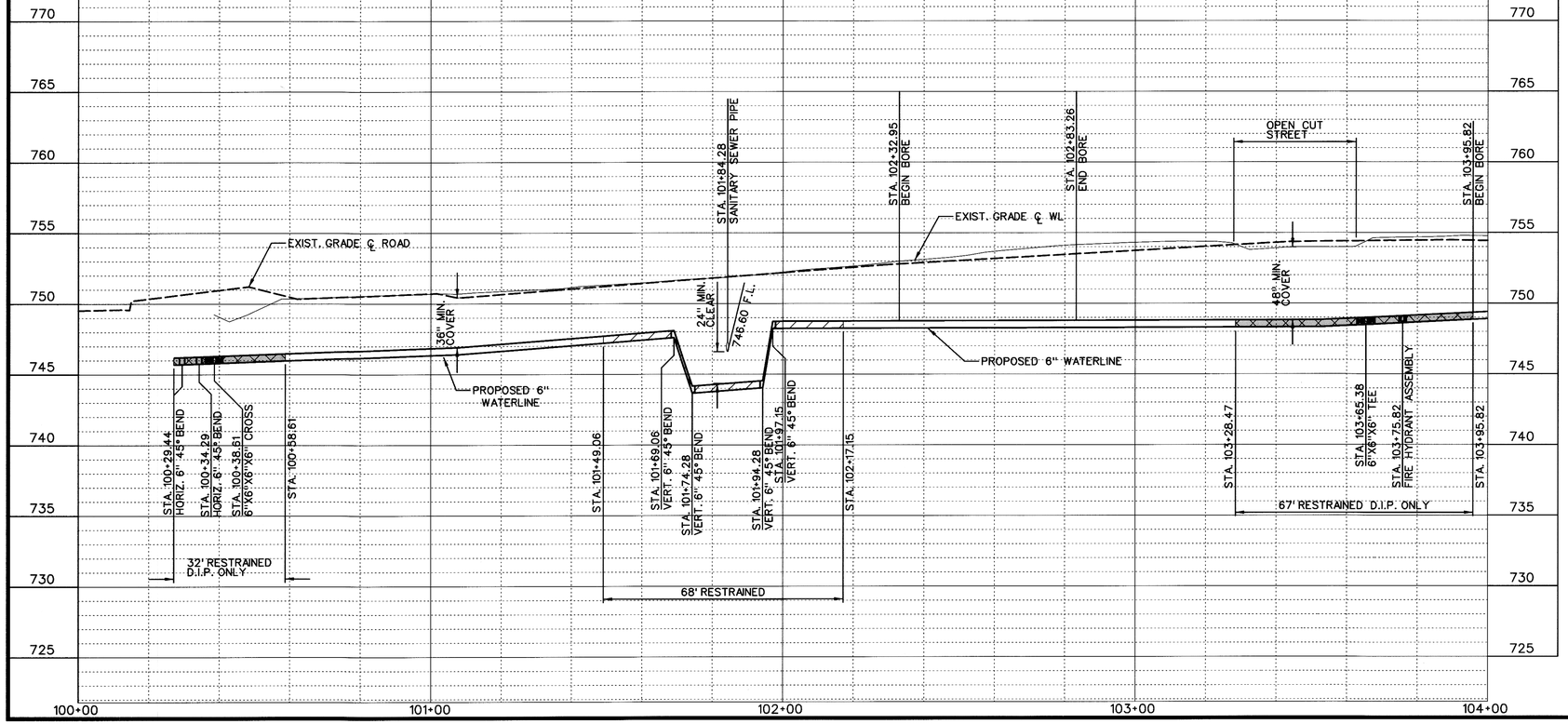
COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
68	6" 45 DEGREE BEND (REST.)	100+29.44	413067.67	2578147.73
69	6" 45 DEGREE BEND (REST.)	100+34.29	413072.01	2578152.46
69A	6"X6"X6"X6" CROSS (REST.)	100+38.61	413072.11	2578156.79
69A	3-6" GATE VALVE (REST.) ASSEMBLIES			
69A	3 - 6" SOLID SLEEVES			
70	VERT. 6" 45 DEGREE BEND (REST.)	101+69.06	413075.21	2578287.19
71	VERT. 6" 45 DEGREE BEND (REST.)	101+74.28	413075.28	2578292.42
72	VERT. 6" 45 DEGREE BEND (REST.)	101+94.28	413075.76	2578312.41
73	VERT. 6" 45 DEGREE BEND (REST.)	101+97.15	413075.83	2578315.28
75	6"X6"X6" TEE (REST.)	103+65.38	413079.78	2578483.46
75	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
76	6" 3-WAY FIRE HYDRANT ASSEMBLY	103+75.82	413080.03	2578493.91

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
15	MAG NAIL	413114.47	2578461.76	755.31



CONNECTION DETAIL #14





PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE E- E. 32nd ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

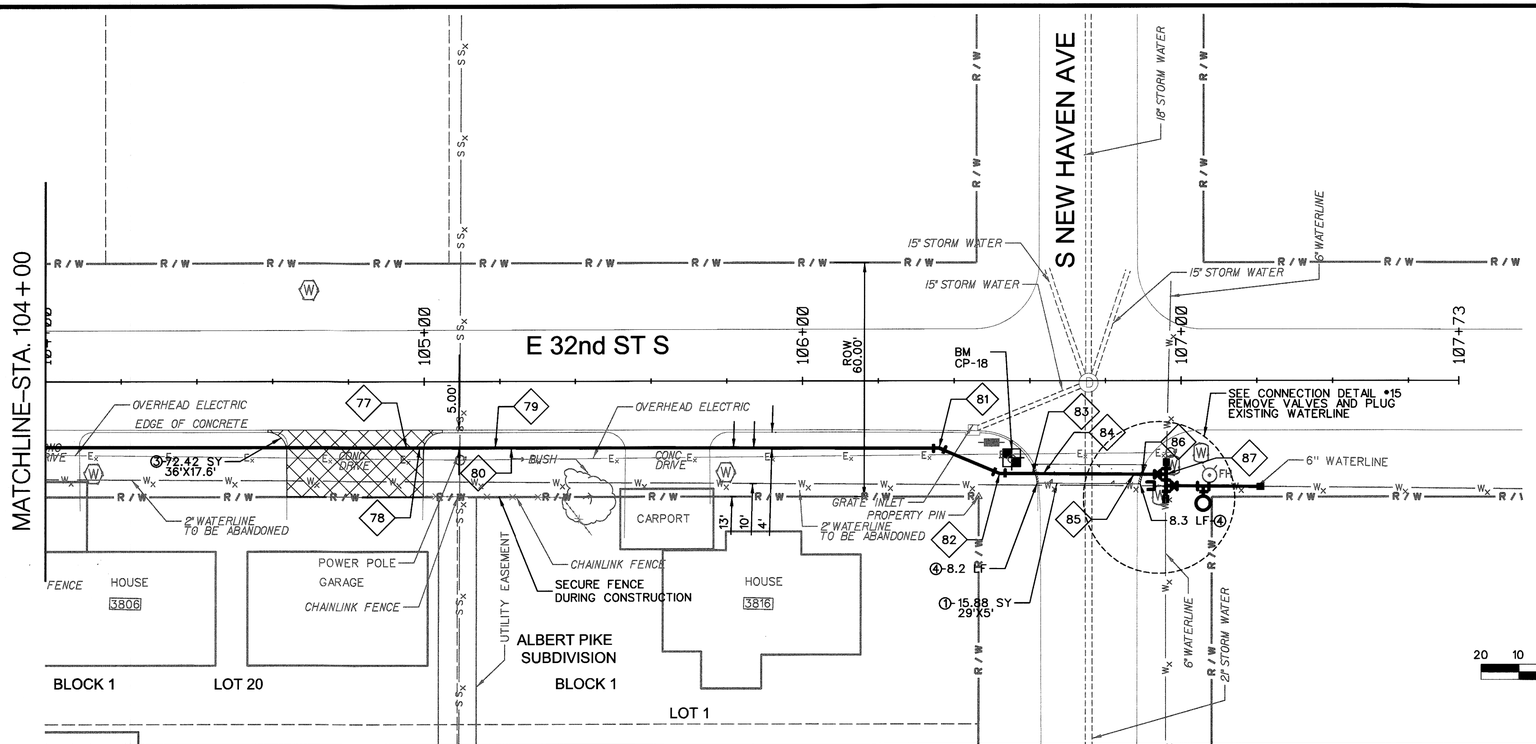
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

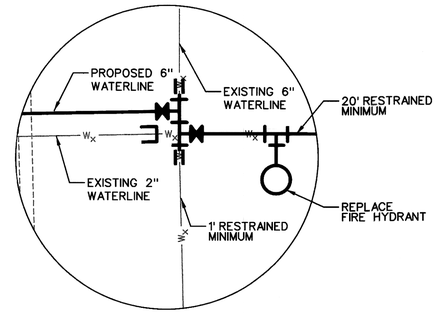
REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.		3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		3-21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE E
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 19 OF 39 SHEETS



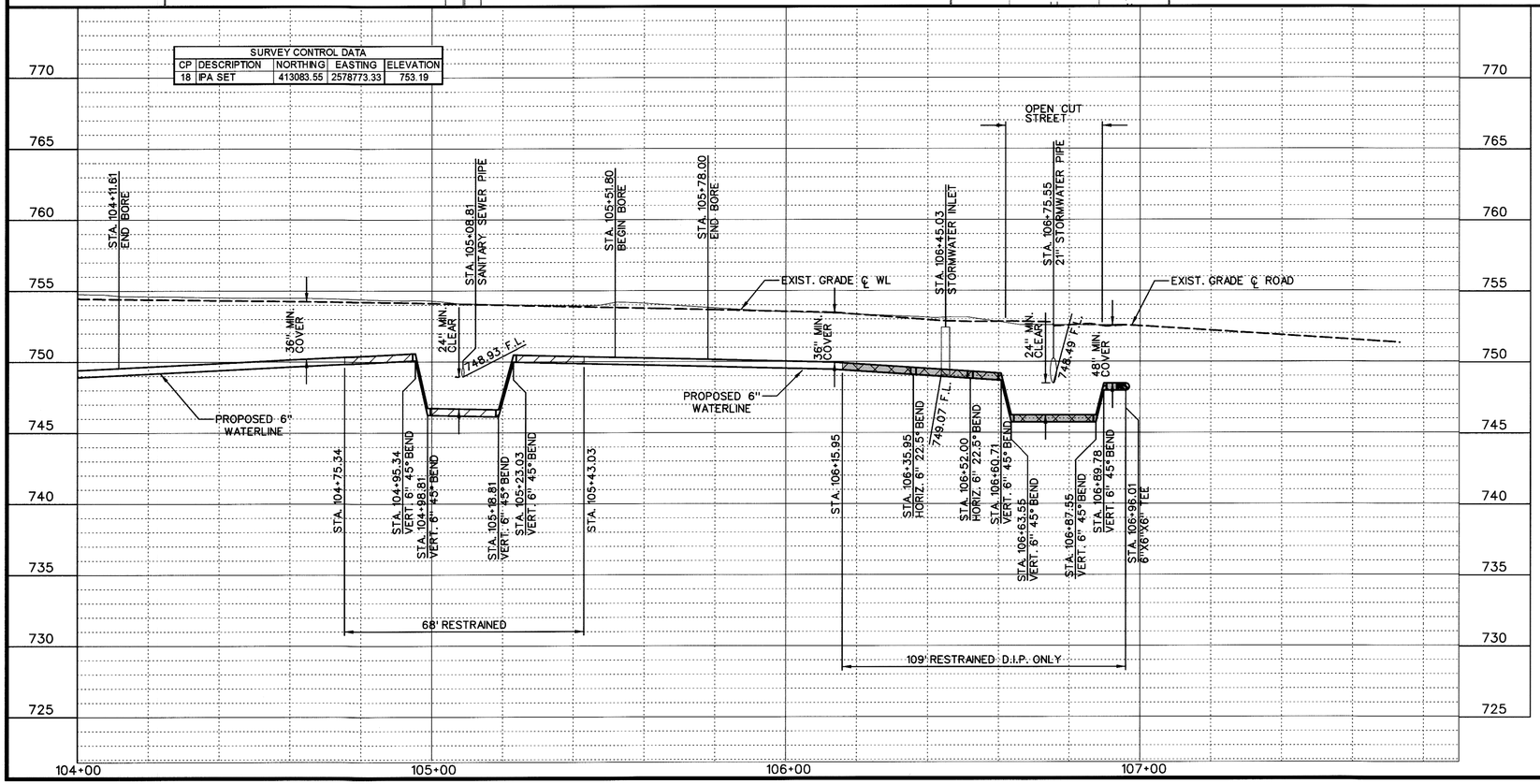


CONNECTION DETAIL #15

20 10 0 20 40

SCALE IN FEET

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
77	VERT. 6" 45 DEGREE BEND (REST.)	104+95.34	413082.71	2578613.39
78	VERT. 6" 45 DEGREE BEND (REST.)	104+98.81	413082.78	2578616.86
79	VERT. 6" 45 DEGREE BEND (REST.)	105+18.81	413083.25	2578636.85
80	VERT. 6" 45 DEGREE BEND (REST.)	105+23.03	413083.33	2578641.08
81	6" 22.5 DEGREE BEND (REST.)	106+35.95	413085.87	2578753.97
82	6" 22.5 DEGREE BEND (REST.)	106+52.00	413079.61	2578770.17
83	VERT. 6" 45 DEGREE BEND (REST.)	106+60.71	413079.76	2578778.88
84	VERT. 6" 45 DEGREE BEND (REST.)	106+63.55	413079.81	2578781.72
85	VERT. 6" 45 DEGREE BEND (REST.)	106+87.55	413080.24	2578805.72
86	VERT. 6" 45 DEGREE BEND (REST.)	106+89.78	413080.28	2578807.95
87	6"X6"X6" TEE (REST.)	106+96.01	413080.4	2578814.18
87	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
87	6"X6"X6" TEE (REST.)			
87	3 - 6" SOLID SLEEVES			
87	3-WAY FIRE HYDRANT ASSEMBLY			



PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE E- E. 32nd ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'
PROFILE SCALE HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

DRAWN	JRD	2/08
DESIGNED	JCW	2/08
SURVEY	GG	2/08
FIELD MNGR.	[illegible]	3/21
SECT. MNGR.	CGW	3/21
PROJ. MNGR.		
RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

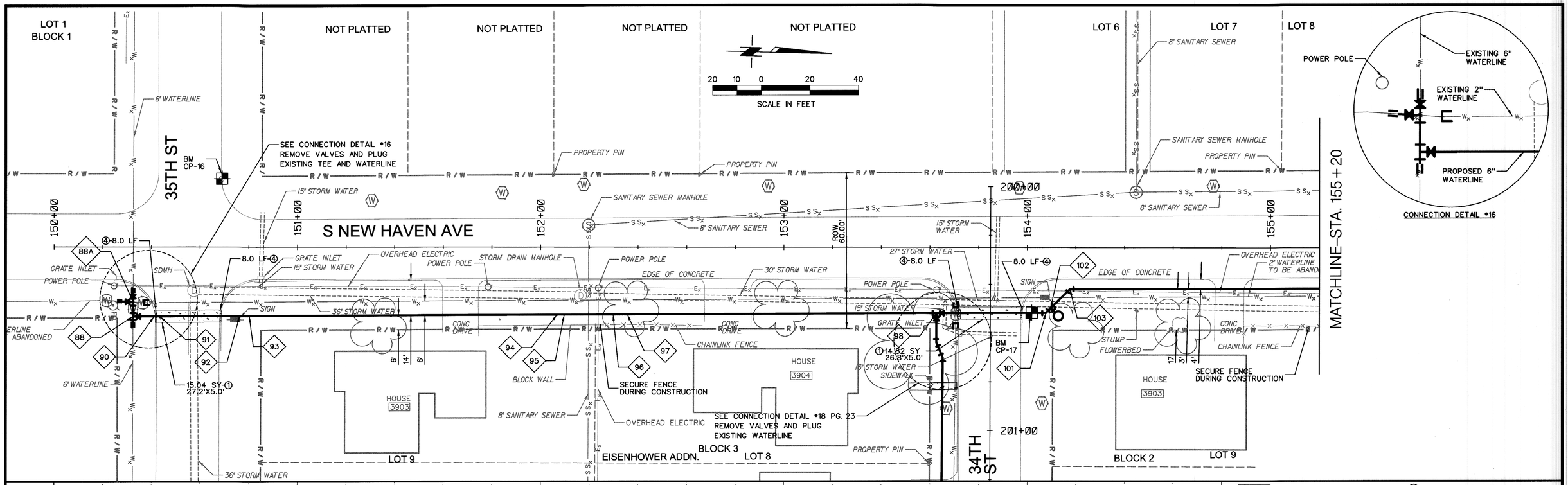
APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE E

DATE: 4.29.21

ATLAS PAGE NO. 093

SHEET 20 OF 39 SHEETS



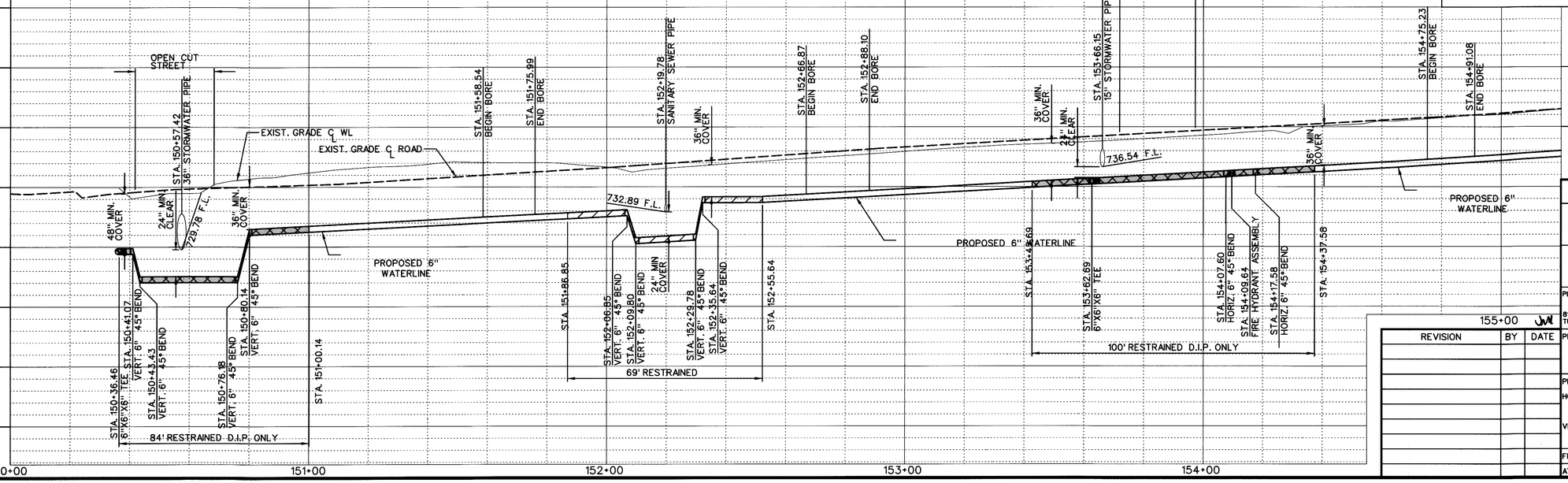
COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
88	6"X6"X6" TEE (REST.)	150+36.46	411763.43	2578856.3
88	1 - 6" GATE VALVE (REST.) ASSEMBLIES			
88	1 - 6" SOLID SLEEVE			
88A	6"X6"X6" TEE (REST.)	150+32.54	411763.31	2578850.38
88A	2 - 6" SOLID SLEEVES			
88A	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
90	VERT. 6" 45 DEGREE BEND (REST.)	150+41.07	411772.07	2578856.05
91	VERT. 6" 45 DEGREE BEND (REST.)	150+43.43	411774.43	2578855.99
92	VERT. 6" 45 DEGREE BEND (REST.)	150+76.18	411807.16	2578855.05

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
93	VERT. 6" 45 DEGREE BEND (REST.)	150+80.14	411811.12	2578854.94
94	VERT. 6" 45 DEGREE BEND (REST.)	152+06.85	411931.69	2578851.34
95	VERT. 6" 45 DEGREE BEND (REST.)	152+09.80	411940.64	2578851.25
96	VERT. 6" 45 DEGREE BEND (REST.)	152+29.78	411960.62	2578850.68
97	VERT. 6" 45 DEGREE BEND (REST.)	152+35.64	411966.47	2578850.52
98	6"X6"X6" TEE (REST.)	153+62.69	412093.46	2578846.90
98	6" GATE VALVE (REST.) ASSEMBLY			
101	6" 45 DEGREE BEND (REST.)	154+07.60	412138.42	2578845.62
102	6" 3-WAY FIRE HYDRANT ASSEMBLY	154+09.64	412140.39	2578843.80
103	6" 45 DEGREE BEND (REST.)	154+17.58	412148.10	2578835.66

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
16	IRON PIN	411796.32	2578799.17	735.46
17	IRON PIN	412132.56	2578845.86	739.68

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK



LINE F- S. NEW HAVEN AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

155+00 JW

REVISION	BY	DATE

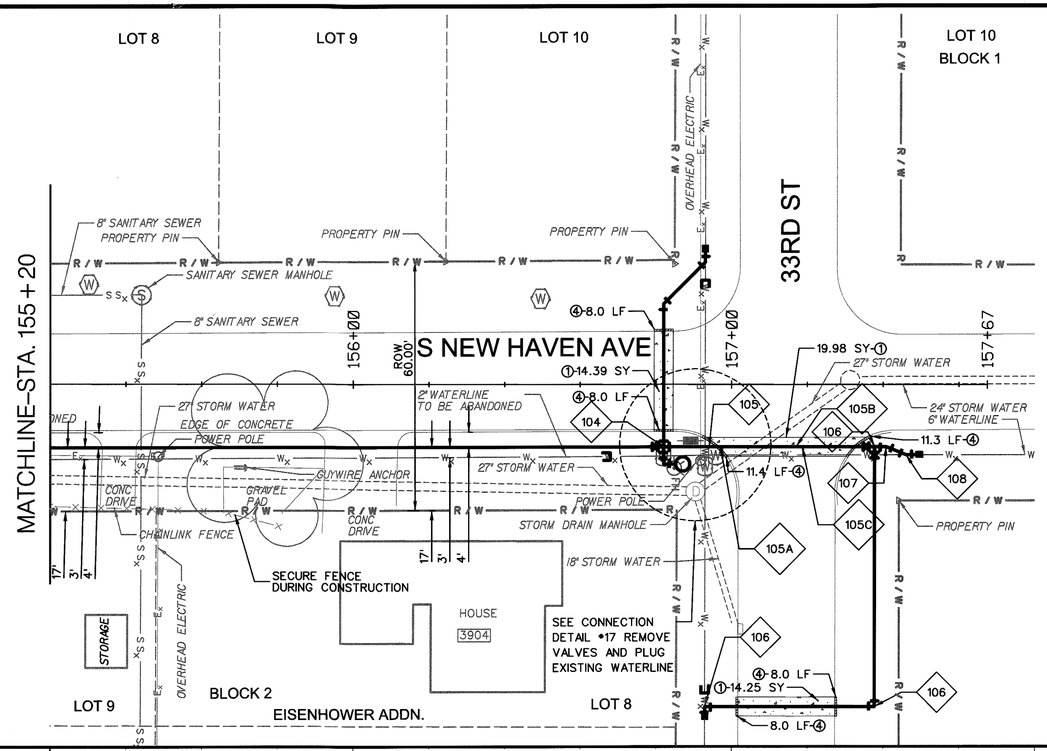
PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		3-21

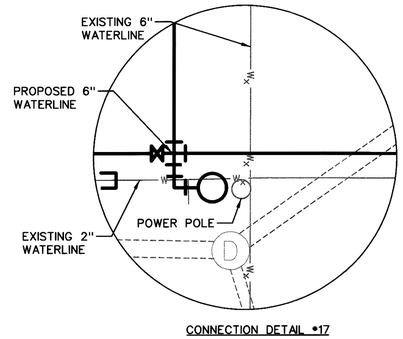
APPROVED:
PUBLIC WORKS DIRECTOR
DATE: 3-23-21

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE F
ATLAS PAGE NO. 093
SHEET 21 OF 39 SHEETS

CENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

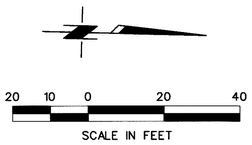
BEFORE YOU DIG... CALL OKIE 1-800-522-6543

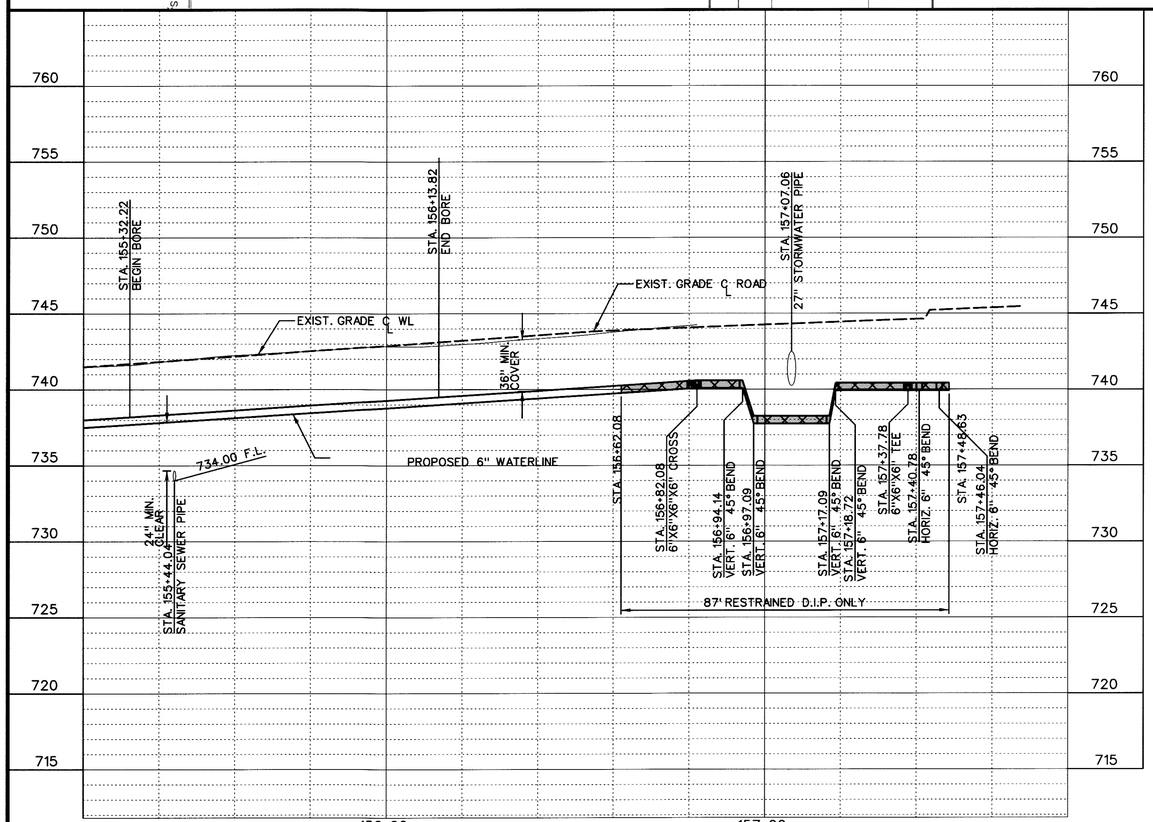




CONNECTION DETAIL •17

FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
104	6"X6"X6" CROSS (REST.)	156+82.08	412412.52	2578828.78
104	FIRE HYDRANT ASSEMBLY			
104	6" 90 DEGREE BEND (REST.)			
104	6" GATE VALVE (REST.) ASSEMBLY			
104	2 - 6" 45 DEGREE BENDS (REST.)			
104	6" SOLID SLEEVE			
105	VERT. 6" DEGREE BEND (REST.)	156+94.14	412424.57	2578828.47
105A	VERT. 6" DEGREE BEND (REST.)	156+97.09	412427.52	2578828.40
105B	VERT. 6" DEGREE BEND (REST.)	157+17.09	412447.51	2578827.89
105C	VERT. 6" DEGREE BEND (REST.)	157+18.72	412449.14	2578827.85
106	6"X6"X6" TEE (REST.)	157+37.78	412468.20	2578827.39
106	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
106	2 - 6" 90 DEGREE BENDS (REST.)			
106	6" SOLID SLEEVE			
107	6" 22.5 DEGREE BEND (REST.)	157+40.78	412471.19	2578827.30
108	6" 22.5 DEGREE BEND (REST.)	157+46.04	412476.51	2578829.31
108	6" SOLID SLEEVE			





PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
STATE OF OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE F- S. NEW HAVEN AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

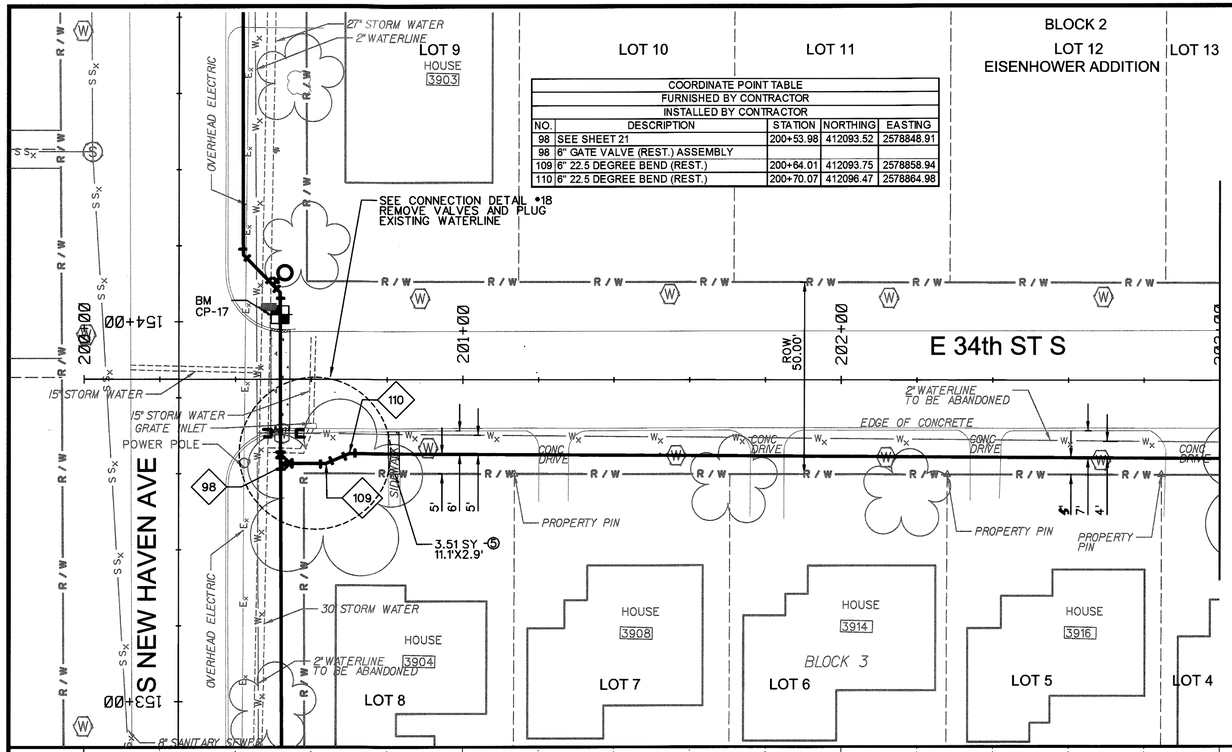
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

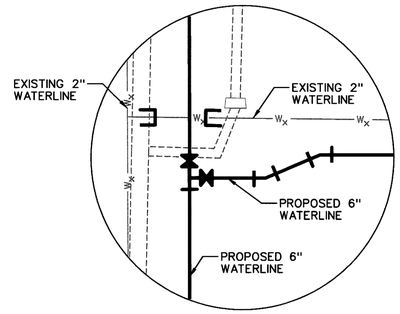
PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:	HAS 3-21	
1"=5'	DEPUTY DIRECTOR		PUBLIC WORKS DIRECTOR

APPROVED:

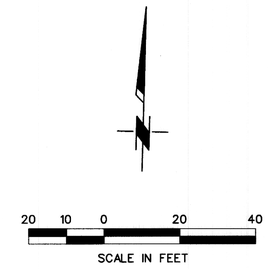
FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE F
DATE: 3-23-21
ATLAS PAGE NO. 093
SHEET 22 OF 39 SHEETS

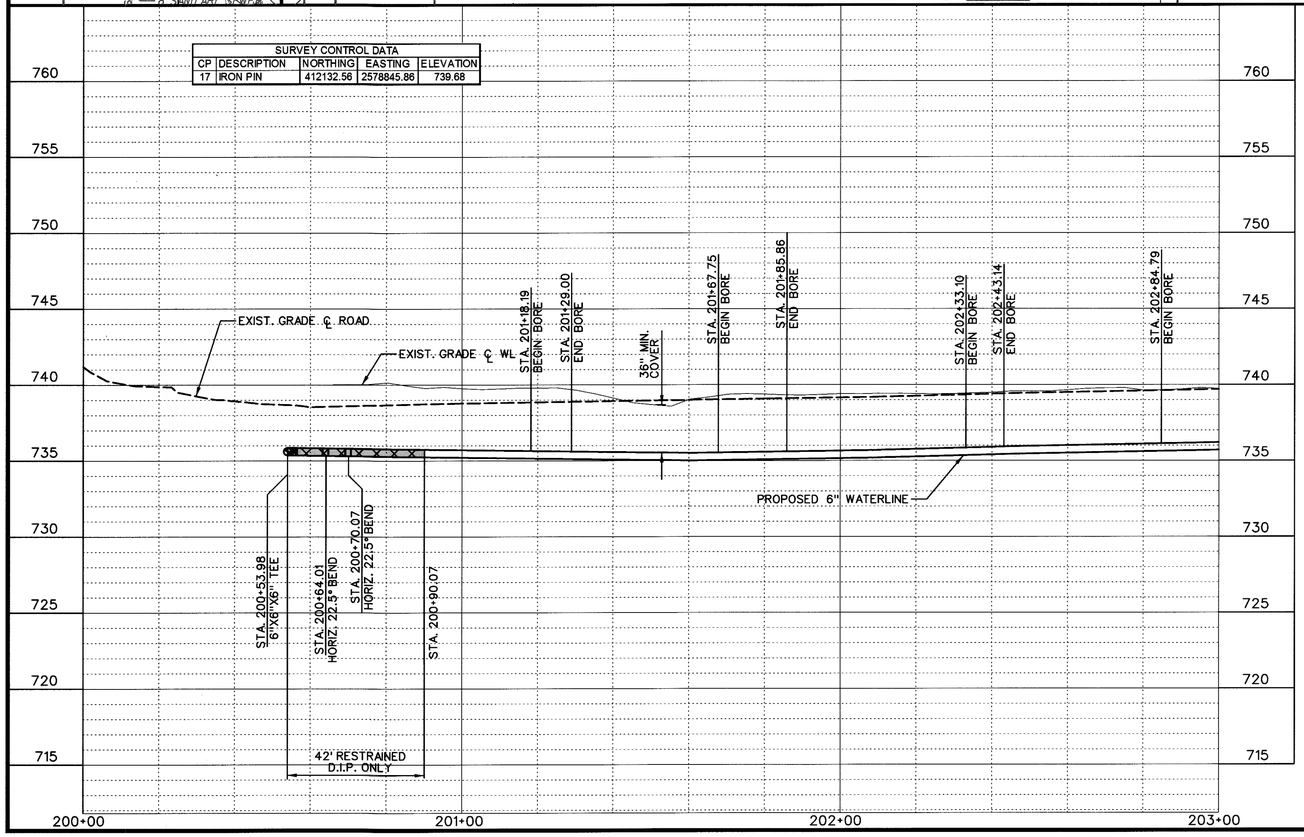


COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
98	SEE SHEET 21	200+53.98	412093.52	2578848.91
98	6" GATE VALVE (REST.) ASSEMBLY			
109	6" 22.5 DEGREE BEND (REST.)	200+64.01	412093.75	2578858.94
110	6" 22.5 DEGREE BEND (REST.)	200+70.07	412096.47	2578864.98



CONNECTION DETAIL •18





PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE G- E. 34th ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

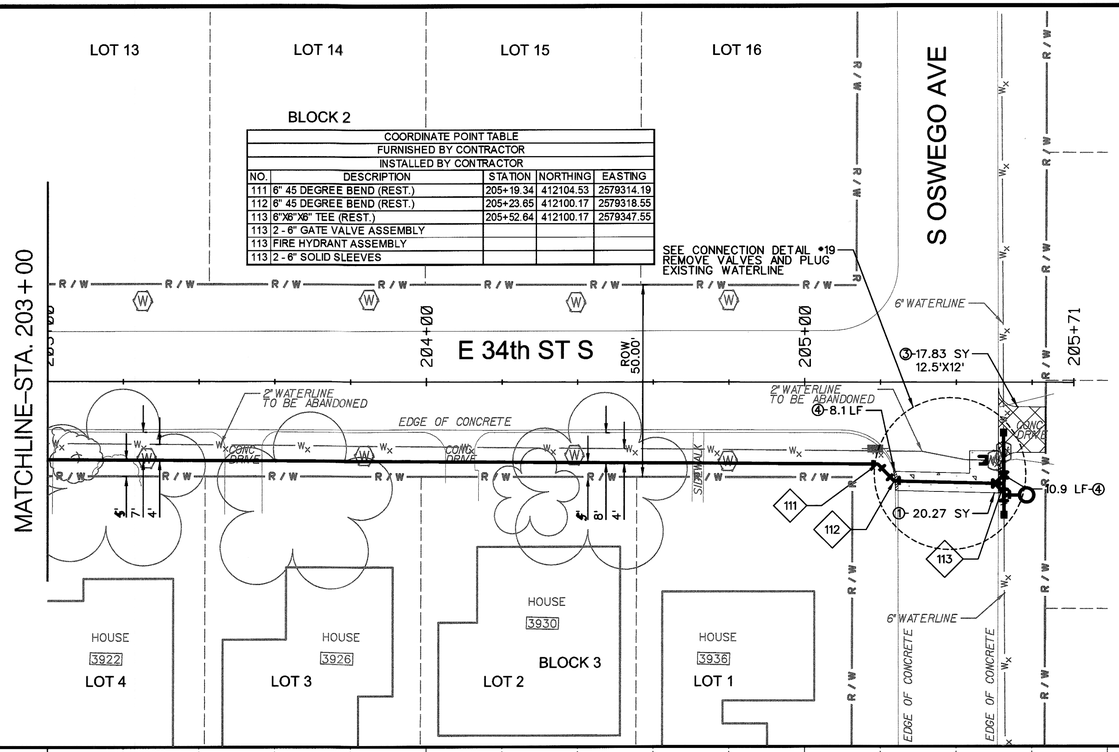
PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.	CGW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAH	3-21

APPROVED: PUBLIC WORKS DIRECTOR

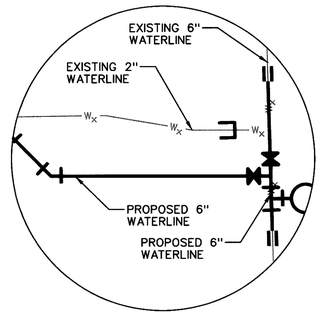
FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE G
DATE: 4.23.21

ATLAS PAGE NO. 093

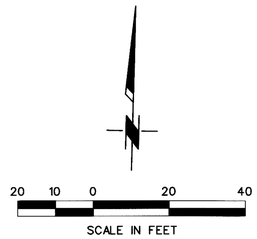
SHEET 23 OF 39 SHEETS

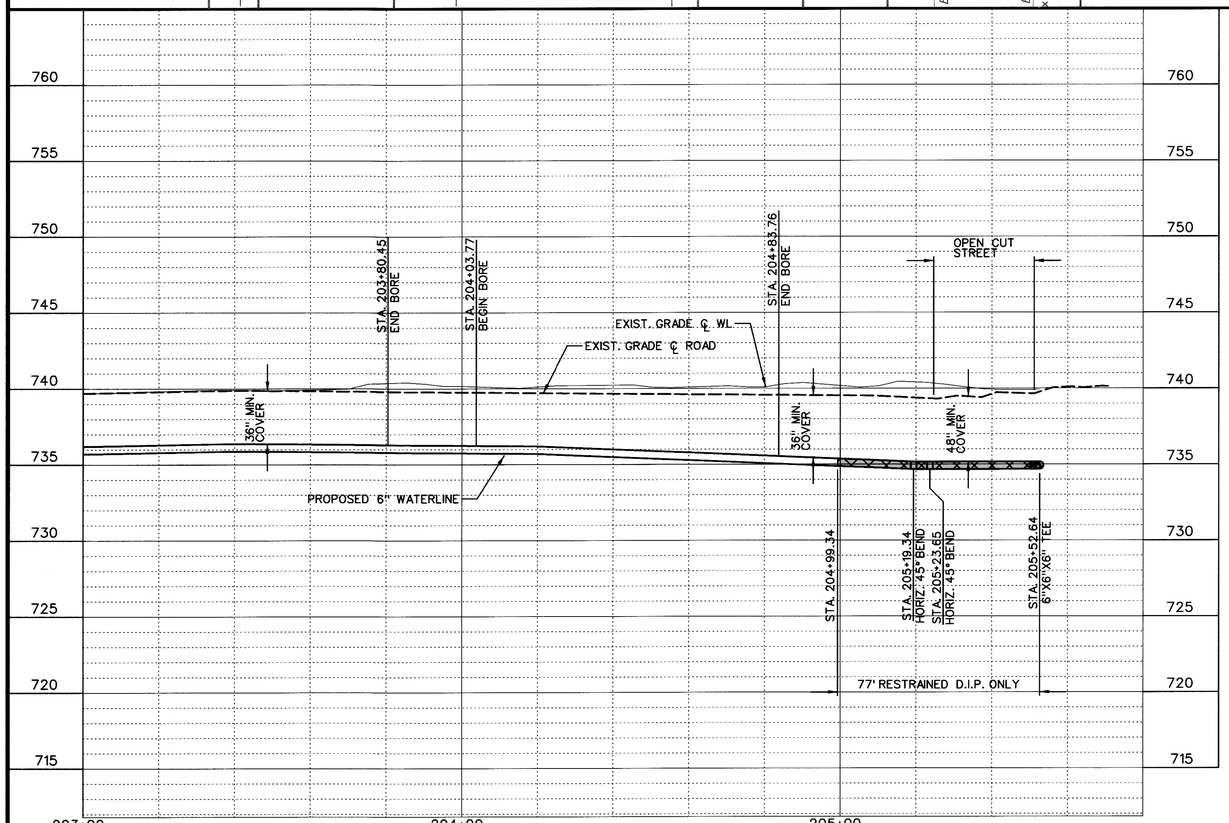


COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
111	6" 45 DEGREE BEND (REST.)	205+19.34	412104.53	2579314.19
112	6" 45 DEGREE BEND (REST.)	205+23.65	412100.17	2579318.55
113	6"X6"X6" TEE (REST.)	205+52.64	412100.17	2579347.55
113	2 - 6" GATE VALVE ASSEMBLY			
113	FIRE HYDRANT ASSEMBLY			
113	2 - 6" SOLID SLEEVES			



CONNECTION DETAIL #19





- PVC / HDPE / D.I.P. PIPE
- REST. HDPE / D.I.P. PIPE
- REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE G- E. 34th ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/9
HORIZONTAL: 1"=20'	SECT. MNGR.		3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		3-21

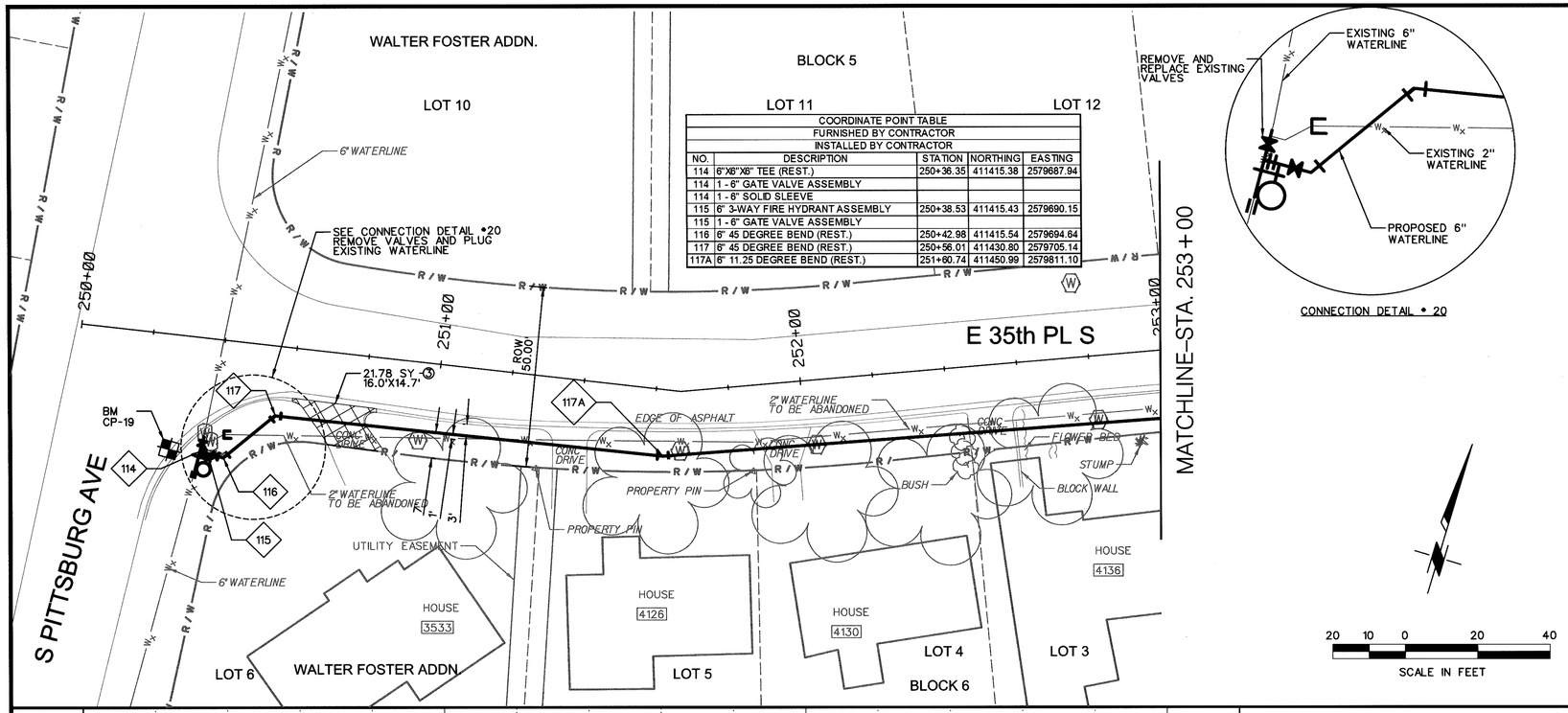
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE G

DATE: 4.23.21

ATLAS PAGE NO. 093

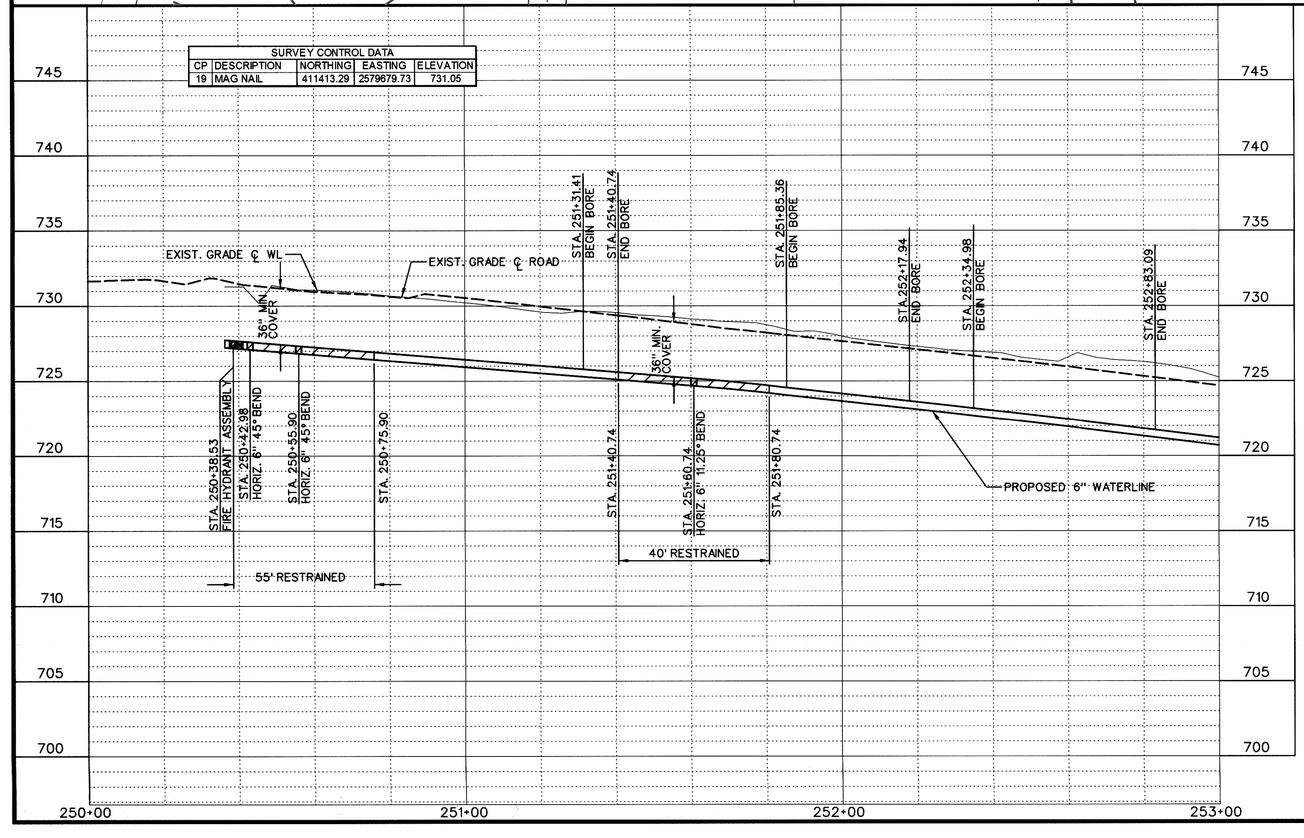
SHEET 24 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
114	6"X6"X6" TEE (REST.)	250+36.35	411415.38	2579687.94
114	1 - 6" GATE VALVE ASSEMBLY			
114	1 - 6" SOLID SLEEVE			
115	6" 3-WAY FIRE HYDRANT ASSEMBLY	250+38.53	411415.43	2579690.15
115	1 - 6" GATE VALVE ASSEMBLY			
116	6" 45 DEGREE BEND (REST.)	250+42.98	411415.54	2579694.64
117	6" 45 DEGREE BEND (REST.)	250+56.01	411430.80	2579705.14
117A	6" 11.25 DEGREE BEND (REST.)	251+80.74	411450.99	2579811.10

CONNECTION DETAIL • 20

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
19	MAG NAIL	411413.29	2579679.73	731.05



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE H- E. 35th PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

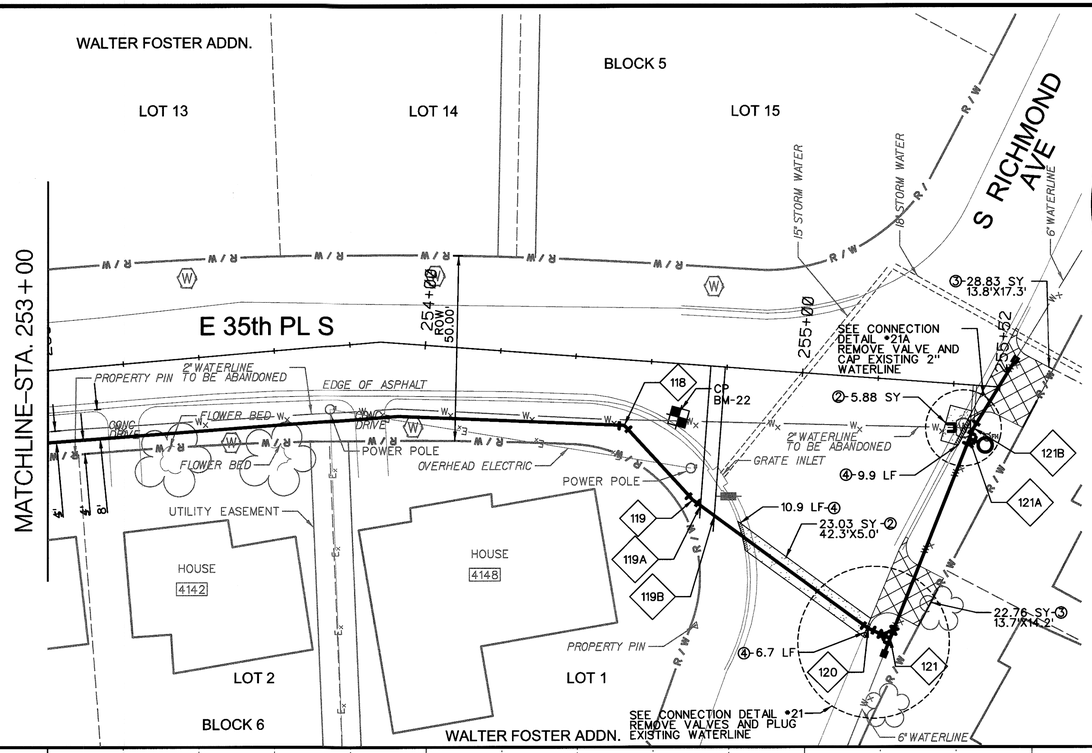
JWL

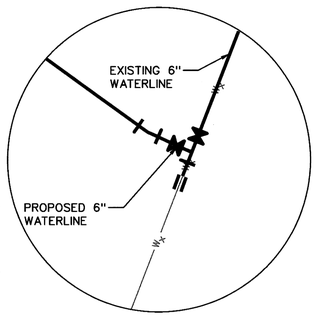
REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CGW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS	3-21

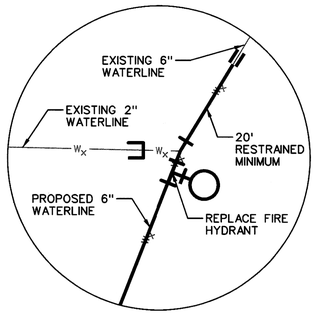
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE H
DATE: 07-23-21
ATLAS PAGE NO. 093
SHEET 25 OF 39 SHEETS

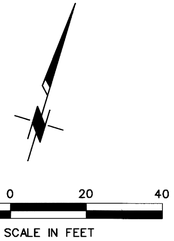




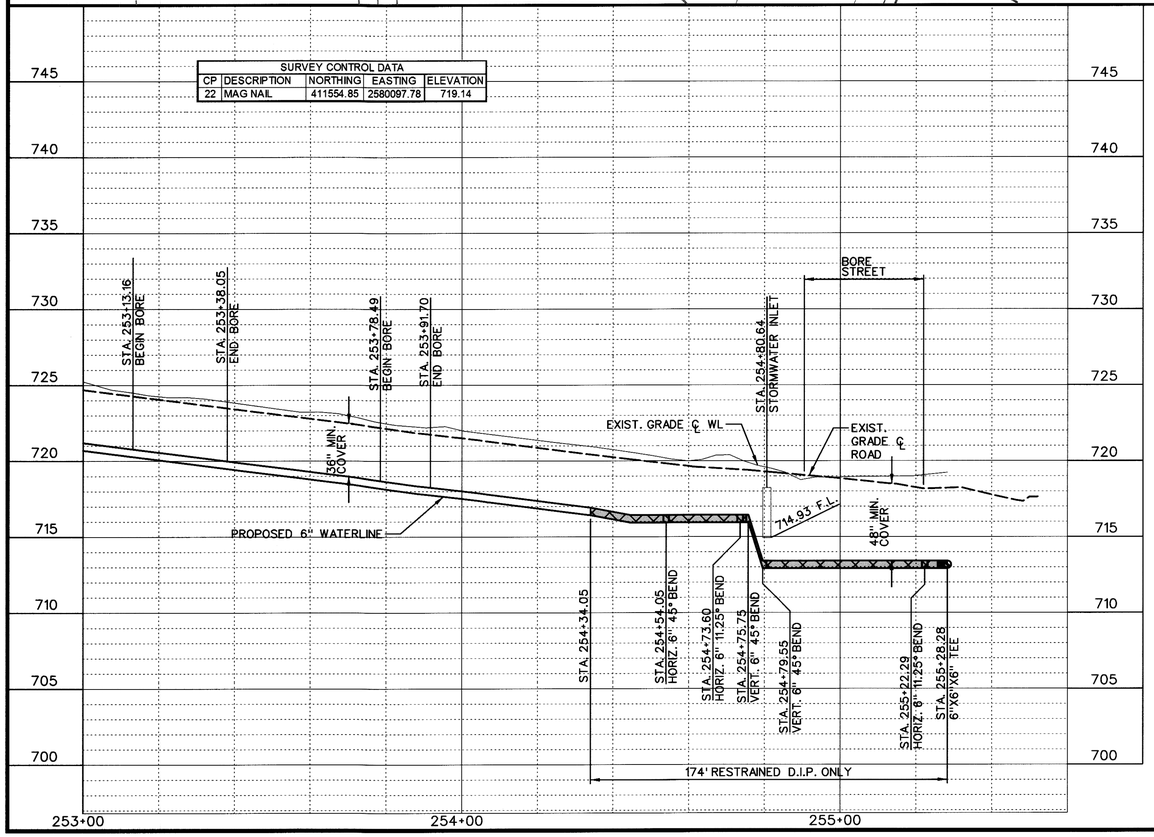
CONNECTION DETAIL • 21



CONNECTION DETAIL • 21A



SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
22	MAG NAIL	411554.85	2580097.78	719.14



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
118	6" 45 DEGREE BEND (REST.)	254+54.05	411548.82	2580084.47
119	6" 11.25 DEGREE BEND (REST.)	254+73.60	411535.20	2580107.52
119A	VERT. 6" 45 DEGREE BEND (REST.)	254+75.75	411534.36	2580109.91
119B	VERT. 6" 45 DEGREE BEND (REST.)	254+79.55	411532.88	2580114.14
120	6" 11.25 DEGREE BEND (REST.)	255+22.29	411516.22	2580161.63
121	6"X6"X6" TEE (REST.)	255+28.28	411515.36	2580167.95
121	2 - 6" GATE VALVE ASSEMBLIES			
121	1 - 6" SOLID SLEEVE			
121A	3-WAY FIRE HYDRANT	255+45.14	411571.63	2580172.72
121B	6" 11.25 DEGREE BEND (REST.)	255+46.04	411574.62	2580172.97
121B	1 - 6" SOLID SLEEVE			

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
4/23/21
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE H- E. 35th PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
JWL
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

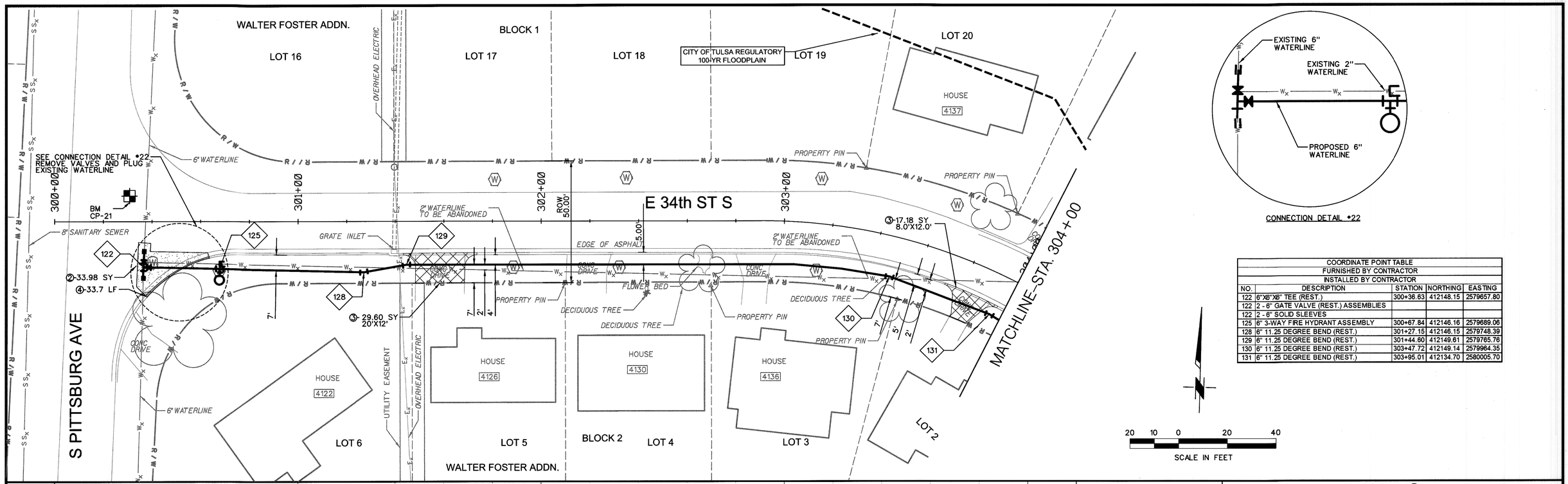
PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HAS	3.21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE H
DATE: 4.23.21

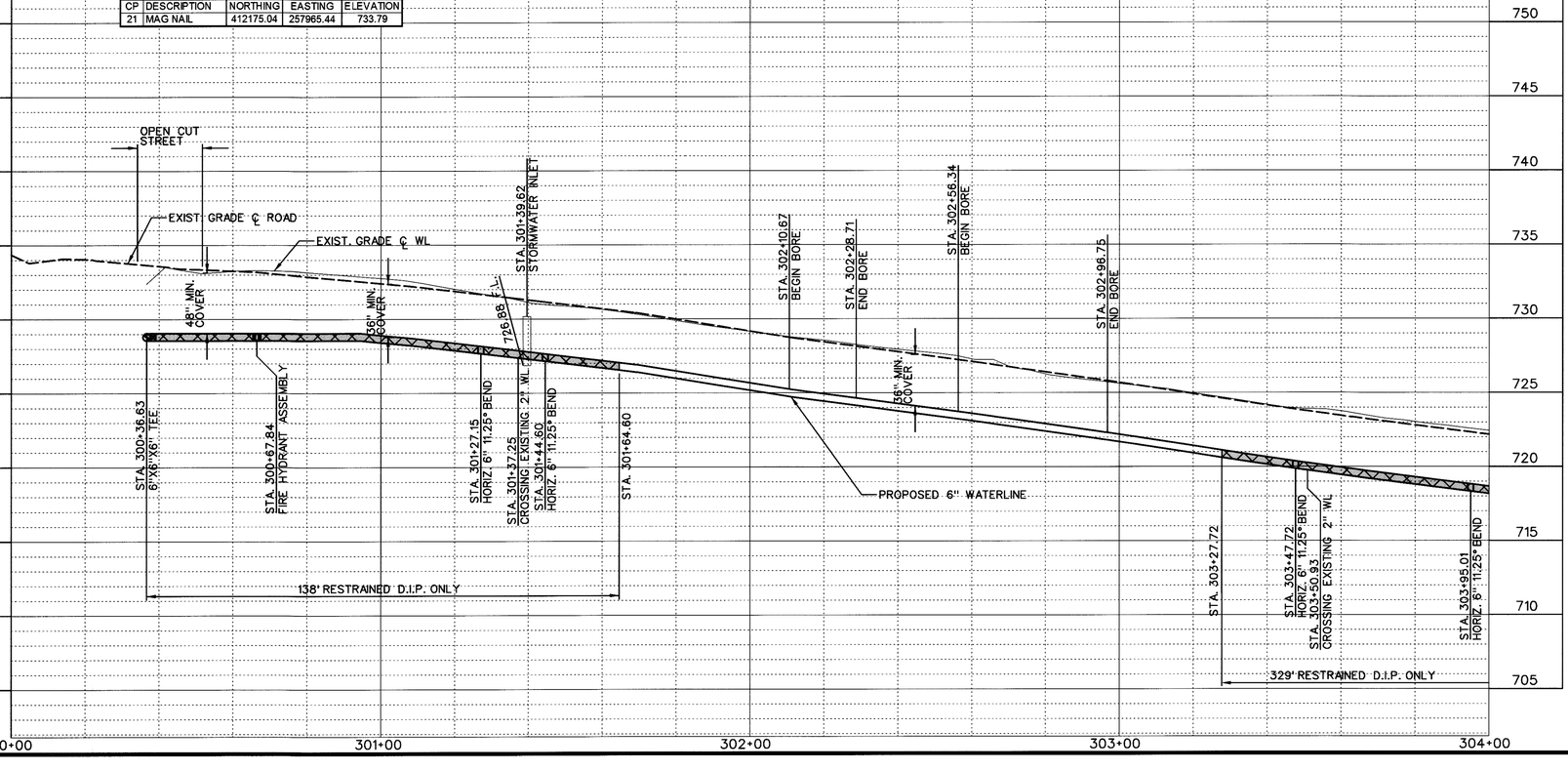
ATLAS PAGE NO. 093

SHEET 26 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
122	6"X6"X6" TEE (REST.)	300+36.63	412148.15	2579657.80
122	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
122	2 - 6" SOLID SLEEVES			
125	6" 3-WAY FIRE HYDRANT ASSEMBLY	300+67.84	412146.16	2579689.06
128	6" 11.25 DEGREE BEND (REST.)	301+27.15	412146.15	2579748.39
129	6" 11.25 DEGREE BEND (REST.)	301+44.60	412149.61	2579765.76
130	6" 11.25 DEGREE BEND (REST.)	303+47.72	412149.14	2579964.35
131	6" 11.25 DEGREE BEND (REST.)	303+95.01	412134.70	2580005.70

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
21	MAG NAIL	412175.04	257965.44	733.79



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND — 23423 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE I- E. 34th ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

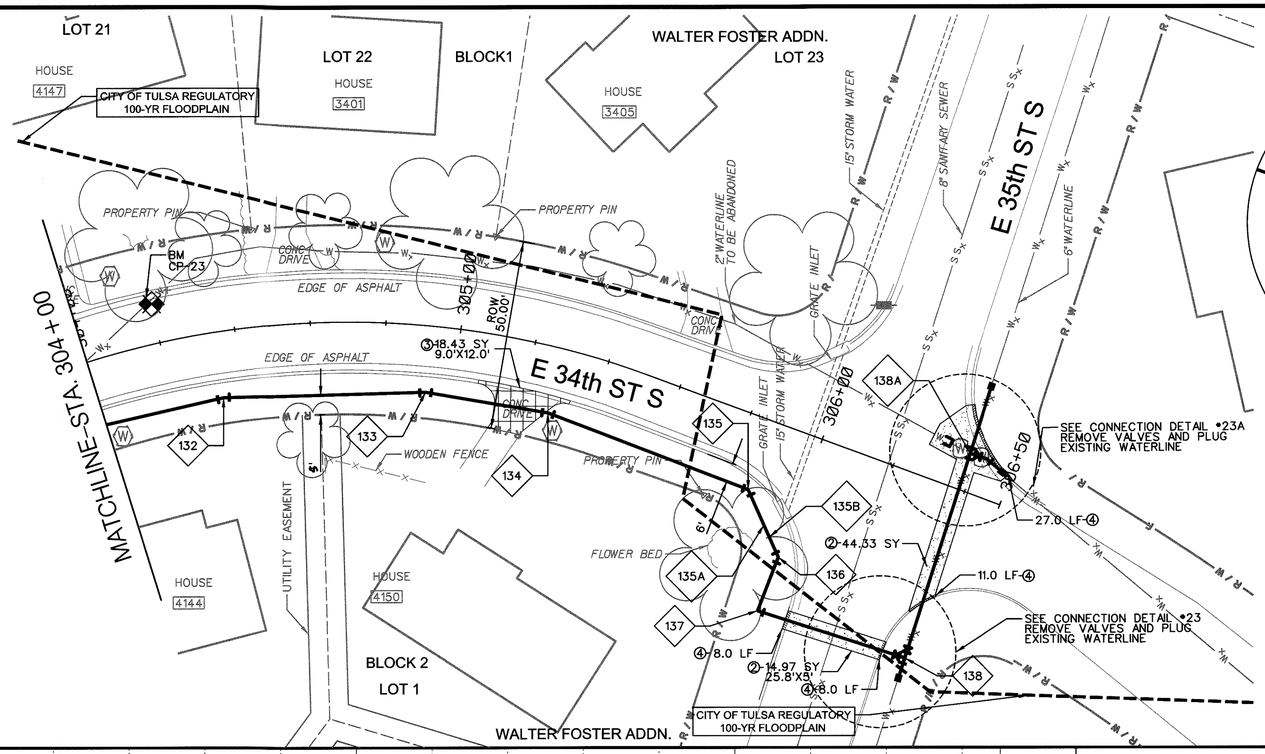
REVISION	BY	DATE

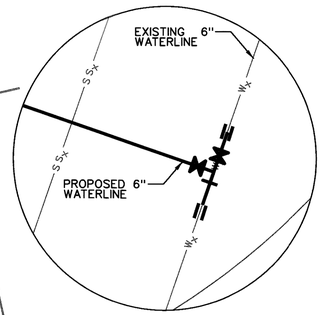
PLAN SCALE: 1"=20'
PROFILE SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=5'

DRAWN	JRD	2/08
DESIGNED	JCW	2/08
SURVEY	GG	2/08
FIELD MNGR.		3/21
SECT. MNGR.	CEW	3/21
PROJ. MNGR.		
RECOMMENDED: DEPUTY DIRECTOR	HBS	3-21

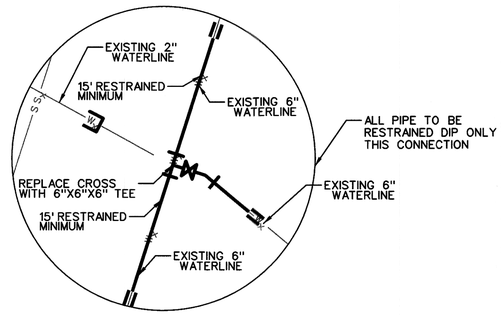
APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE 1
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 27 OF 39 SHEETS

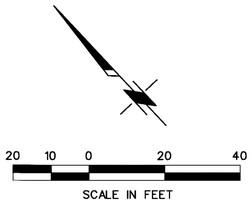




CONNECTION DETAIL 23



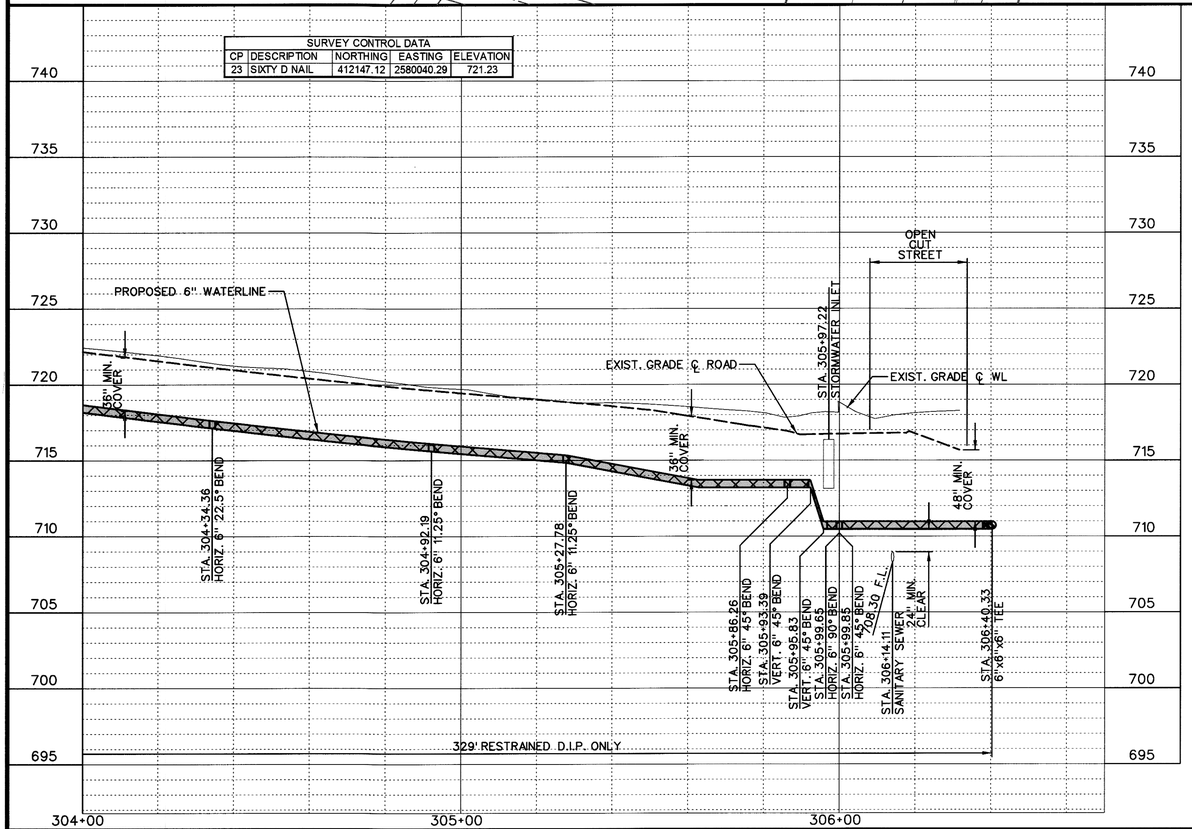
CONNECTION DETAIL 23A



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
132	6" 11.25 DEGREE BEND (REST.)	304+34.36	412116.23	2580037.06
133	6" 11.25 DEGREE BEND (REST.)	304+92.19	412080.74	2580076.82
134	6" 11.25 DEGREE BEND (REST.)	305+27.78	412054.49	2580096.6
135	6" 45 DEGREE BEND (REST.)	305+86.26	412003.43	2580121.23
135A	VERT. 6" 45 DEGREE BEND (REST.)	305+93.39	411993.78	2580117.86
135B	VERT. 6" 45 DEGREE BEND (REST.)	305+95.83	411990.48	2580116.71
136	6" 45 DEGREE BEND (REST.)	305+99.85	411985.04	2580114.81
137	6" 90 DEGREE BEND (REST.)	305+99.65	411978.47	2580101.18
138	6"X6"X6" TEE (REST.)	306+40.33	411942.84	2580120.88
138	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
138	1 - 6" SOLID SLEEVE			
138A	6"X6"X6" TEE (REST.)	306+37.93	411970.18	2580170.35
138A	6" GATE VALVE (REST.) ASSEMBLY			
138A	6" 22.5 DEGREE BEND (REST.)			
138A	2 - 6" SOLID SLEEVES			

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK



LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
3/18/21
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

REVISION	BY	DATE

LINE I- E. 34th ST S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

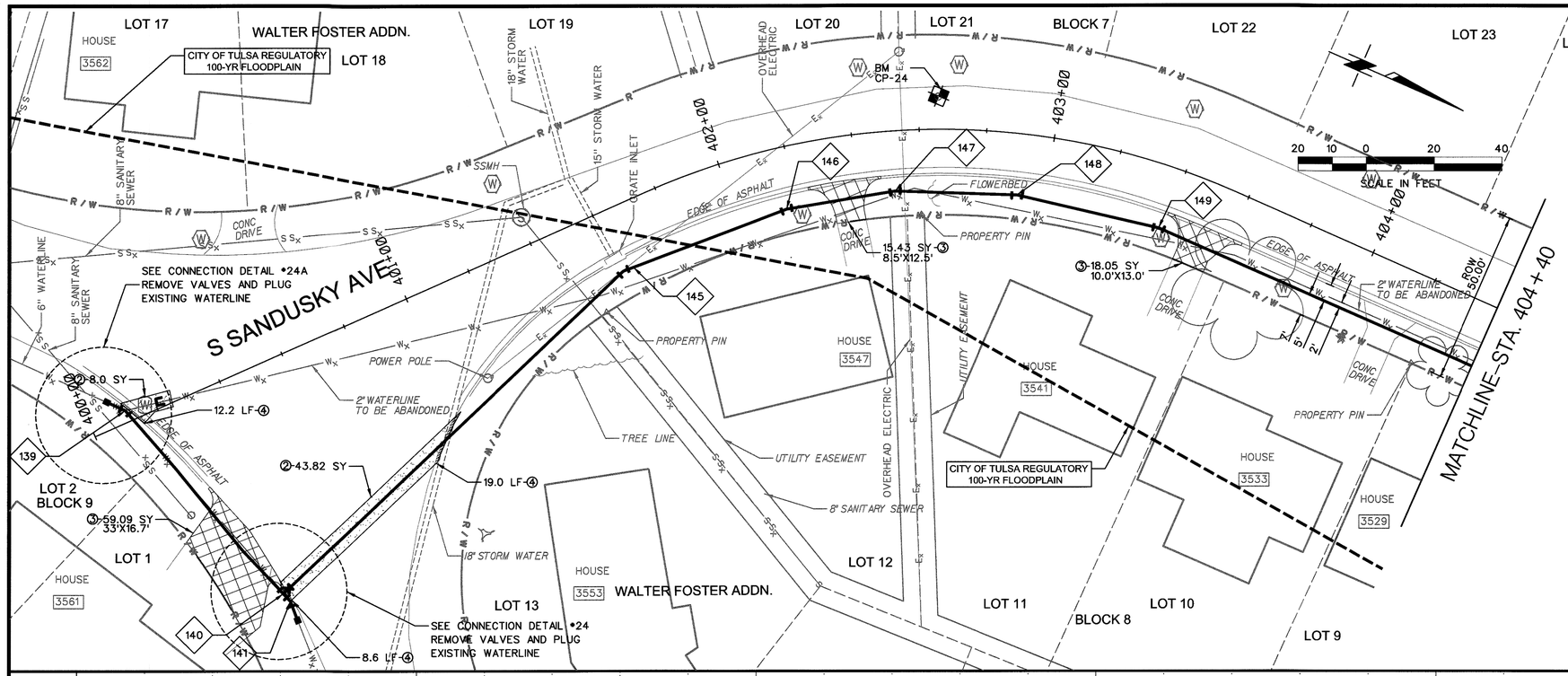
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.	BWH	3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HMH	3-21

APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE I
DATE: 3-23-21
ATLAS PAGE NO. 093
SHEET 28 OF 39 SHEETS



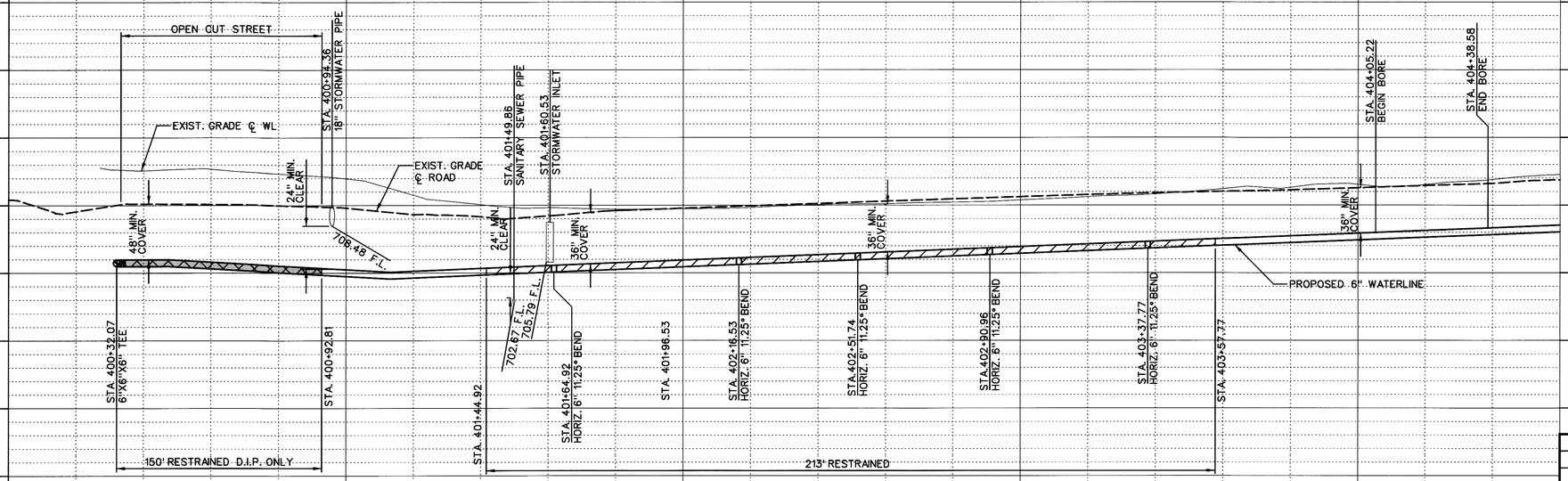
CONNECTION DETAIL •24

CONNECTION DETAIL •24

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
139	6" 22.5 DEGREE BEND (REST.)	400+11.17	411370.31	2580692.24
139	1 - 6" SOLID SLEEVE			
140	6"X6"X6" TEE (REST.)	400+32.07	411434.59	2580722.86
140	1 - 6" GATE VALVE (REST.) ASSEMBLY			
141	6" 22.5 DEGREE BEND (REST.)	400+33.08	411437.35	2580724.02
141	1 - 6" SOLID SLEEVE			
145	6" 11.25 DEGREE BEND (REST.)	401+61.70	411488.28	2580596.19
146	6" 11.25 DEGREE BEND (REST.)	402+16.53	411525.07	2580560.32
147	6" 11.25 DEGREE BEND (REST.)	402+51.91	411552.22	2580542.64
148	6" 11.25 DEGREE BEND (REST.)	402+90.96	411585.47	2580529.41
149	6" 11.25 DEGREE BEND (REST.)	403+37.77	411627.55	2580521.60

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
24	MAG NAIL	411552.61	2580512.39	709.95

730 / 725 / 720 / 715 / 710 / 705 / 700 / 695 / 690 / 685



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND 23423 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE J- S. SANDUSKY AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

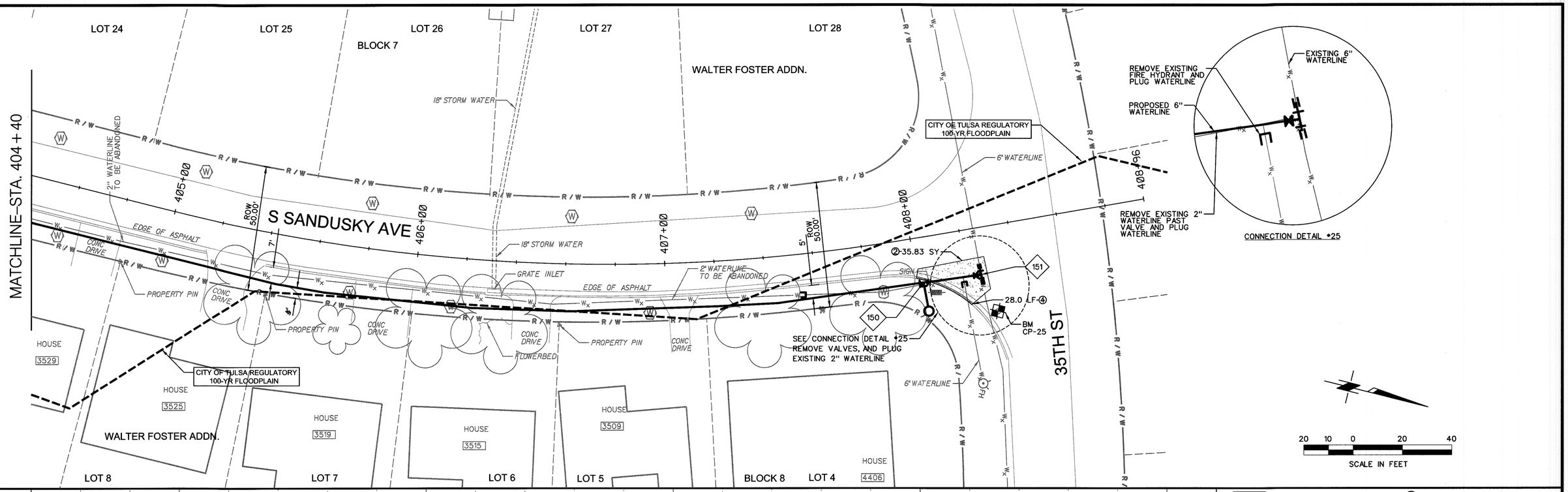
REVISION	BY	DATE

PLAN SCALE: 1"=20'
PROFILE SCALE HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

DRAWN	JRD	2/08
DESIGNED	JCW	2/08
SURVEY	GG	2/08
FIELD MNGR.		
SECT. MNGR.		
PROJ. MNGR.		
RECOMMENDED: DEPUTY DIRECTOR		

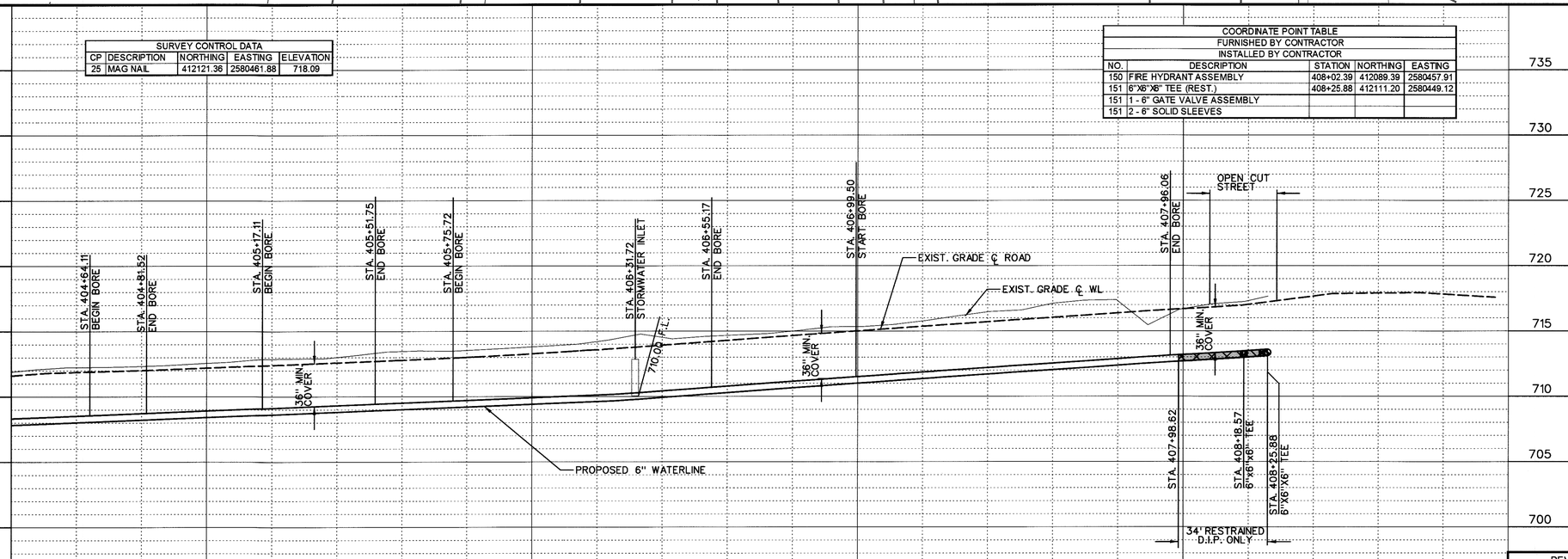
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE J
DATE:
ATLAS PAGE NO. 093
SHEET 29 OF 39 SHEETS



SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	MAG NAIL	412121.36	2580461.88	718.09

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
150	FIRE HYDRANT ASSEMBLY	408+02.39	412089.39	2580457.91
151	6"X6"X6" TEE (REST.)	408+25.88	412111.20	2580449.12
151	1 - 6" GATE VALVE ASSEMBLY			
151	2 - 6" SOLID SLEEVES			



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE J- S. SANDUSKY AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

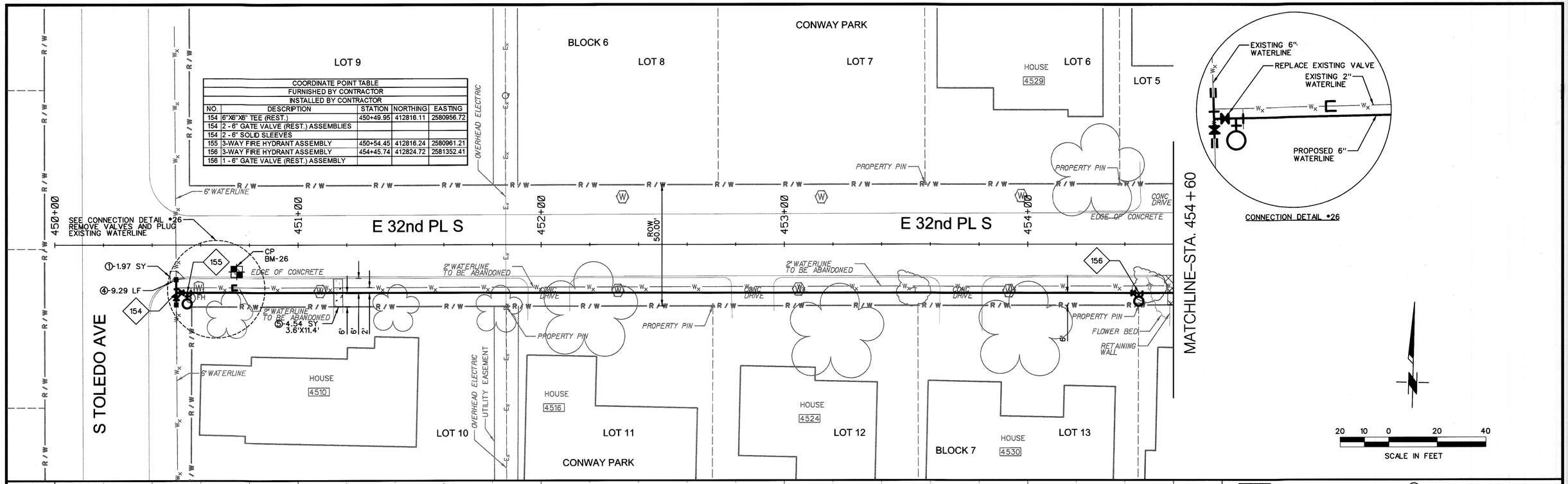
PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: HAS 3-21 DEPUTY DIRECTOR		

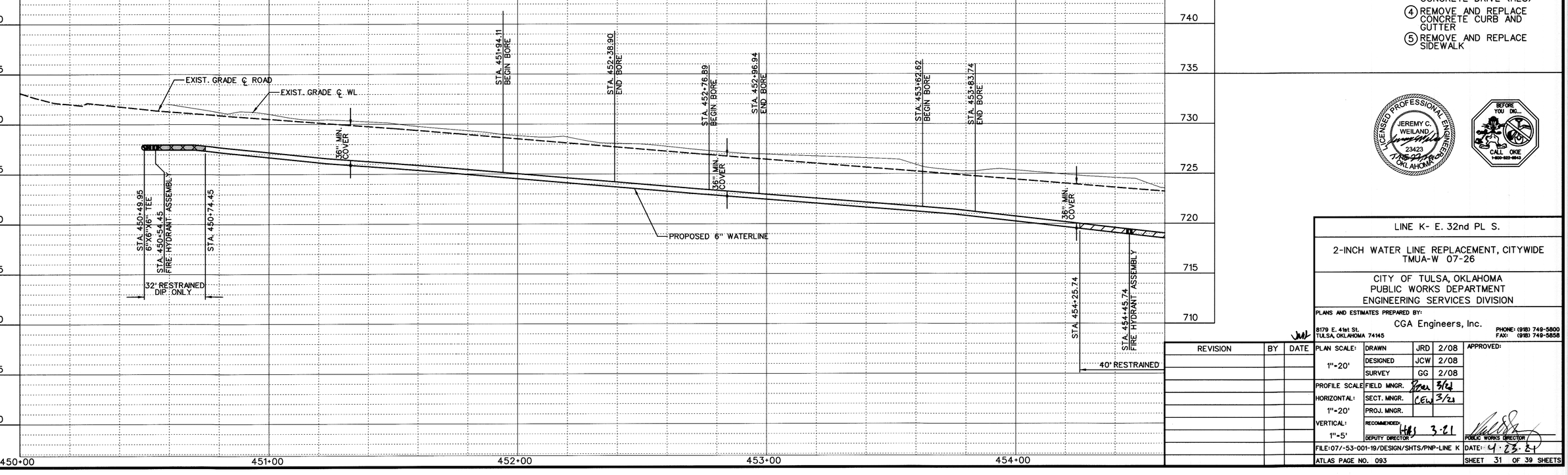
APPROVED: PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE J
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 30 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
154	6"X6"X6" TEE (REST.)	450+49.95	412816.11	2580956.72
154	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
154	2 - 6" SOLID SLEEVES			
155	3-WAY FIRE HYDRANT ASSEMBLY	450+54.45	412816.24	2580961.21
156	3-WAY FIRE HYDRANT ASSEMBLY	454+45.74	412824.72	2581352.41
156	1 - 6" GATE VALVE (REST.) ASSEMBLY			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
26	MAG NAIL	412825.18	2580981.42	730.81





PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE K- E. 32nd PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

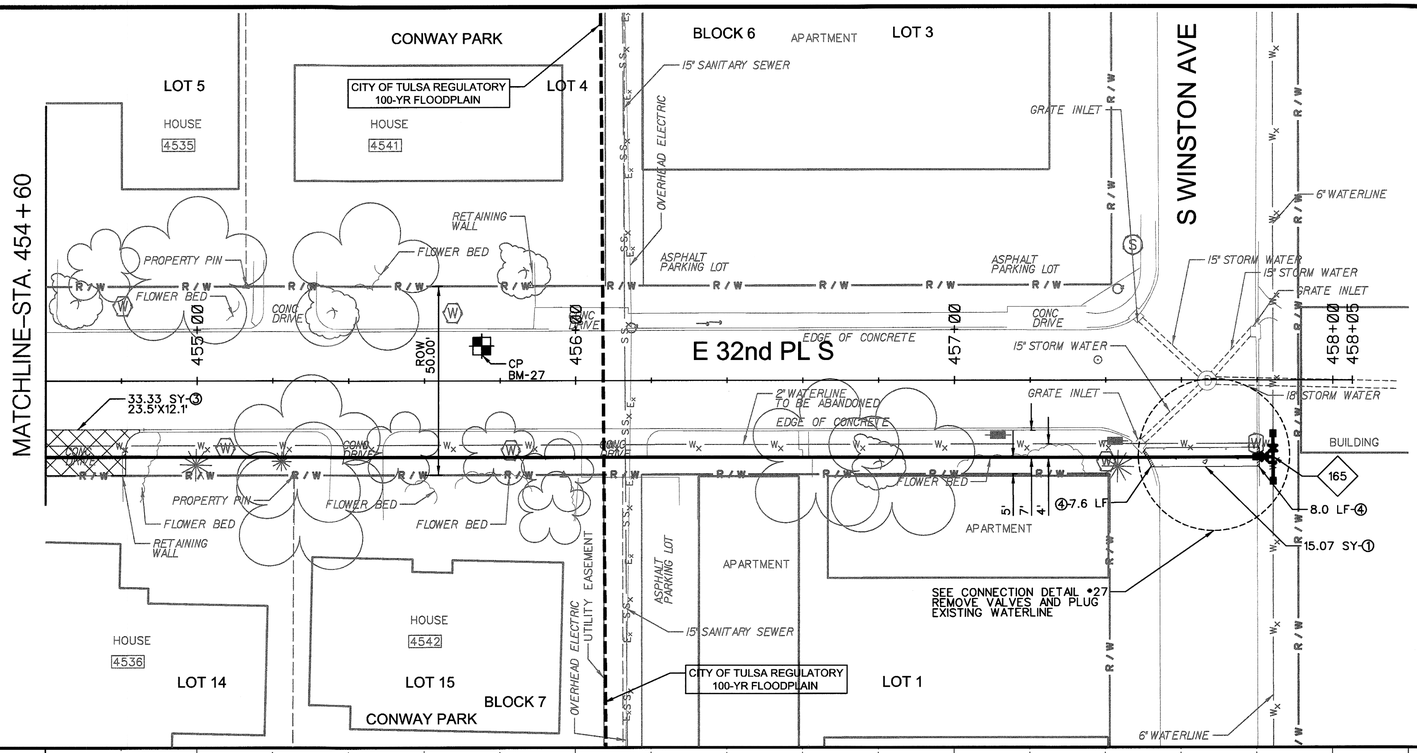
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.	[signature]	3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	HBJ	3-21

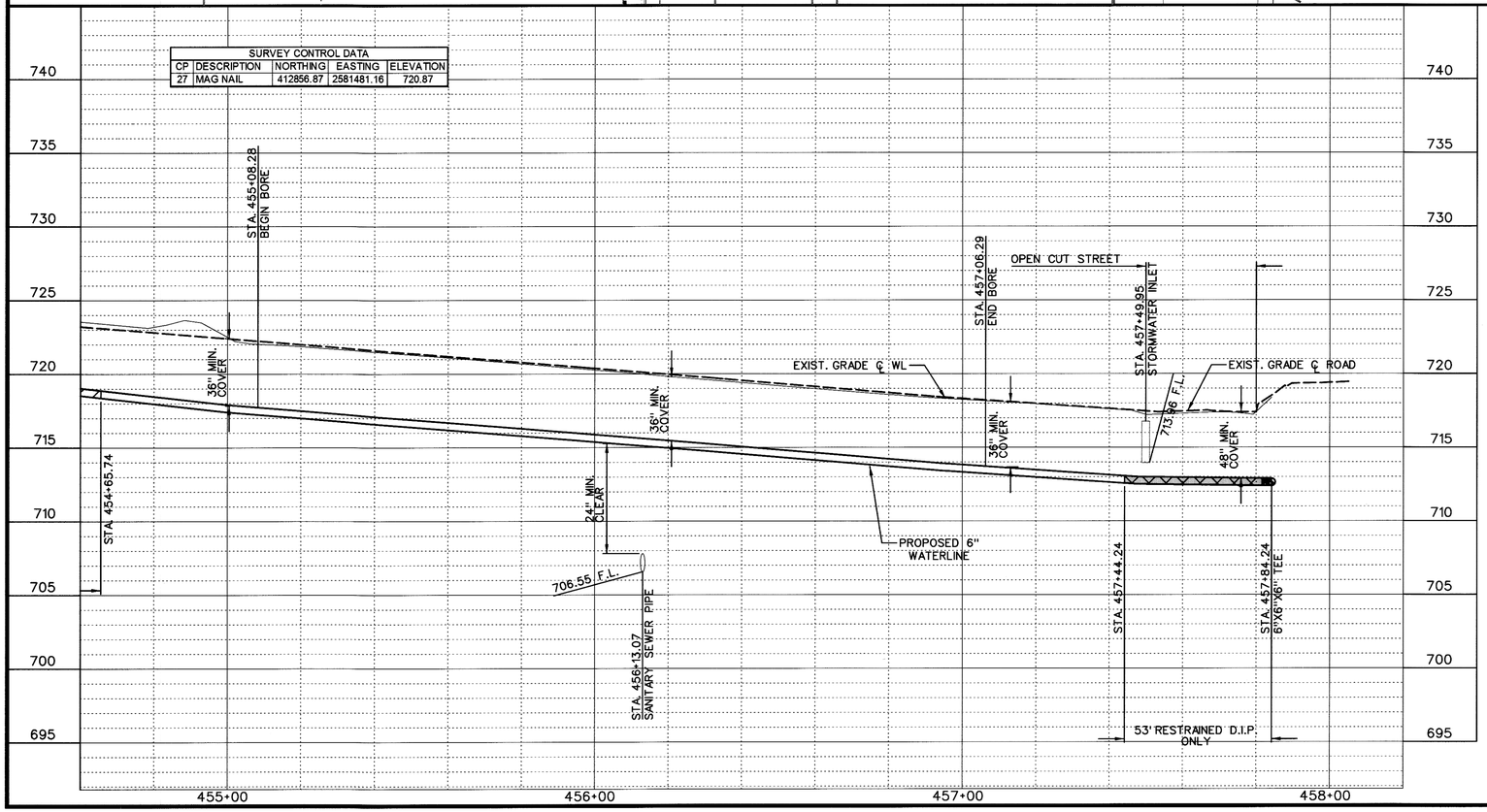
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE K
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 31 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
165	6"X6"X6" TEE (REST.)	457+84.24	412832.23	2581690.82
165	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
165	1 - 6" SOLID SLEEVE			

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
27	MAG NAIL	412856.87	2581481.16	720.87



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731
② REMOVE AND REPLACE ASPHALT STREET STD. 730
③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER
⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE K- E. 32nd PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

JMJ

REVISION	BY	DATE

PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR	HAS	3-21

APPROVED:
PUBLIC WORKS DIRECTOR

FILE:07/-53-001-19/DESIGN/SHTS/PNP-LINE K DATE: 4-23-21

ATLAS PAGE NO. 093

SHEET 32 OF 39 SHEETS

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
166	6"X6"X6" TEE (REST.)	500+20.29	413134.47	2581254.44
166	1 - 6" GATE VALVE (REST.) ASSEMBLIES			
166	2 - 6" SOLID SLEEVES			
167	VERT. 6" 45 DEGREE BEND (REST.)	500+23.50	413137.68	2581254.38
168	VERT. 6" 45 DEGREE BEND (REST.)	500+28.78	413138.38	2581254.39
171	6" 45 DEGREE BEND (REST.)	500+55.05	413169.22	2581253.61
172	6" 45 DEGREE BEND (REST.)	500+67.42	413181.26	2581241.07
173	6" 3-WAY FIRE HYDRANT ASSEMBLY	500+72.08	413185.93	2581241.11
174	6" 3-WAY FIRE HYDRANT ASSEMBLY	503+28.72	413442.52	2581235.97
174	1 - 6" GATE VALVE (REST.) ASSEMBLIES			
175	6"X6"X6" TEE (REST.)	503+31.72	413445.52	2581235.90
176	6" 22.5 DEGREE BEND (REST.)	503+59.70	413473.5	2581235.34
177	6" 22.5 DEGREE BEND (REST.)	503+69.90	413483.59	2581230.92

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
28	MAG NAIL	413142.44	2581222.68	729.75
29	MAG NAIL	413404.22	2581208.15	732.81
30	IRON PIN	413484.48	2581240.19	733.21

- PVC / HDPE / D.I.P. PIPE
- REST. HDPE / D.I.P. PIPE
- REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

CONECTION DETAIL #28

CONECTION DETAIL #29

LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND — 23423 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE L- S. URBANA AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8170 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR	LHS	3.21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE L

DATE: 4.23.21

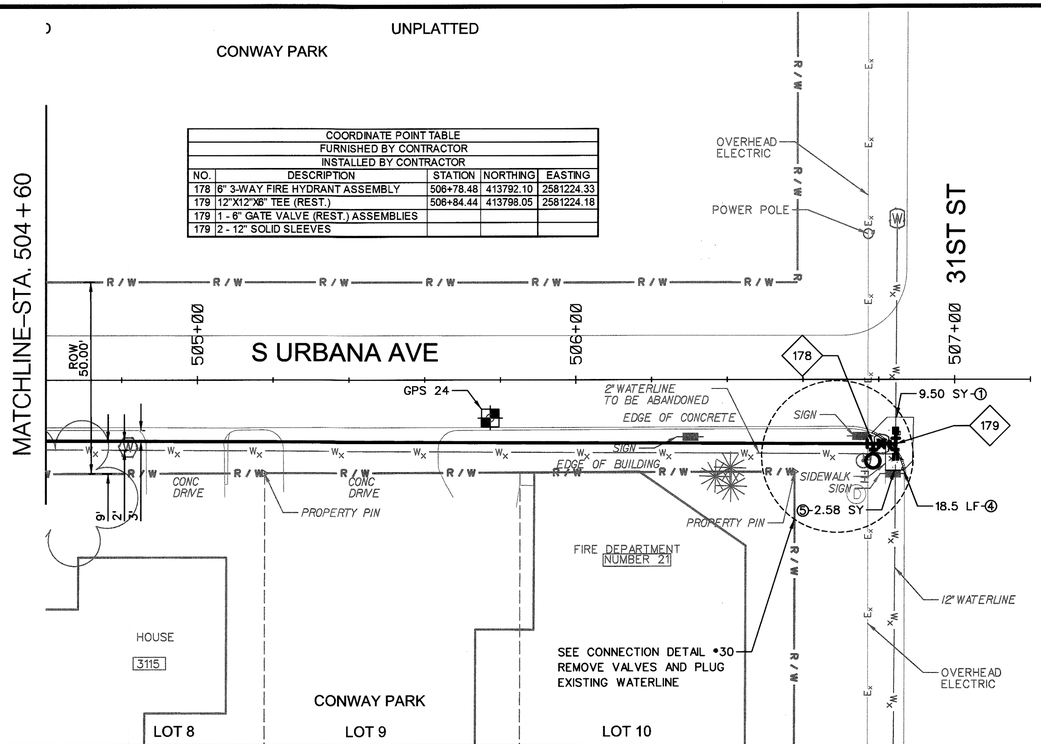
ATLAS PAGE NO. 093

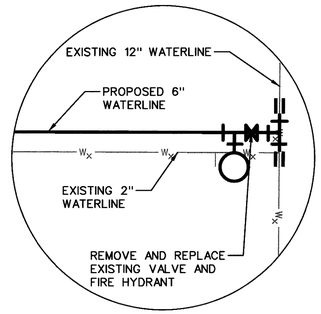
SHEET 33 OF 39 SHEETS

UNPLATTED

CONWAY PARK

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
178	6" 3-WAY FIRE HYDRANT ASSEMBLY	506+78.48	413792.10	2581224.33
179	12"X12"X6" TEE (REST.)	506+84.44	413798.05	2581224.18
179	1 - 6" GATE VALVE (REST.) ASSEMBLIES			
179	2 - 12" SOLID SLEEVES			

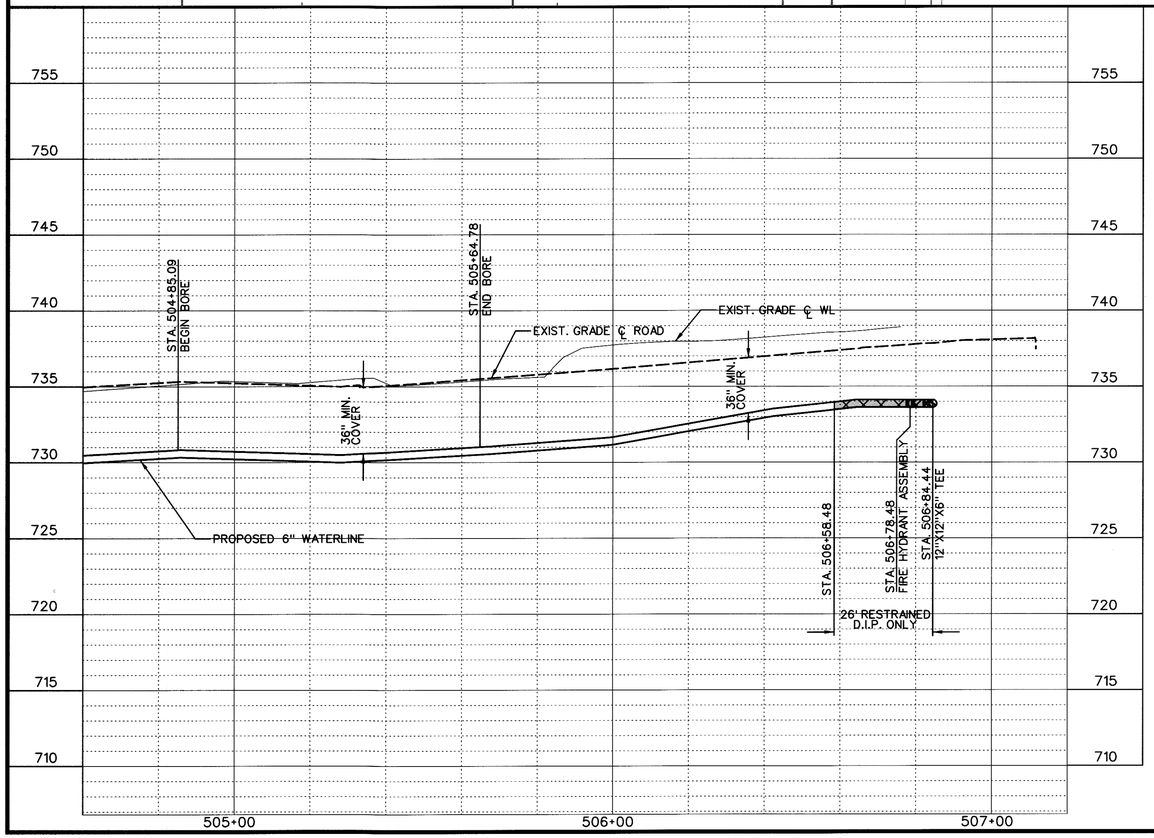




CONNECTION DETAIL •30

20 10 0 20 40

SCALE IN FEET



PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE L- S. URBANA AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

JMJ

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL: 1"=20'	SECT. MNGR.		3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		3-21

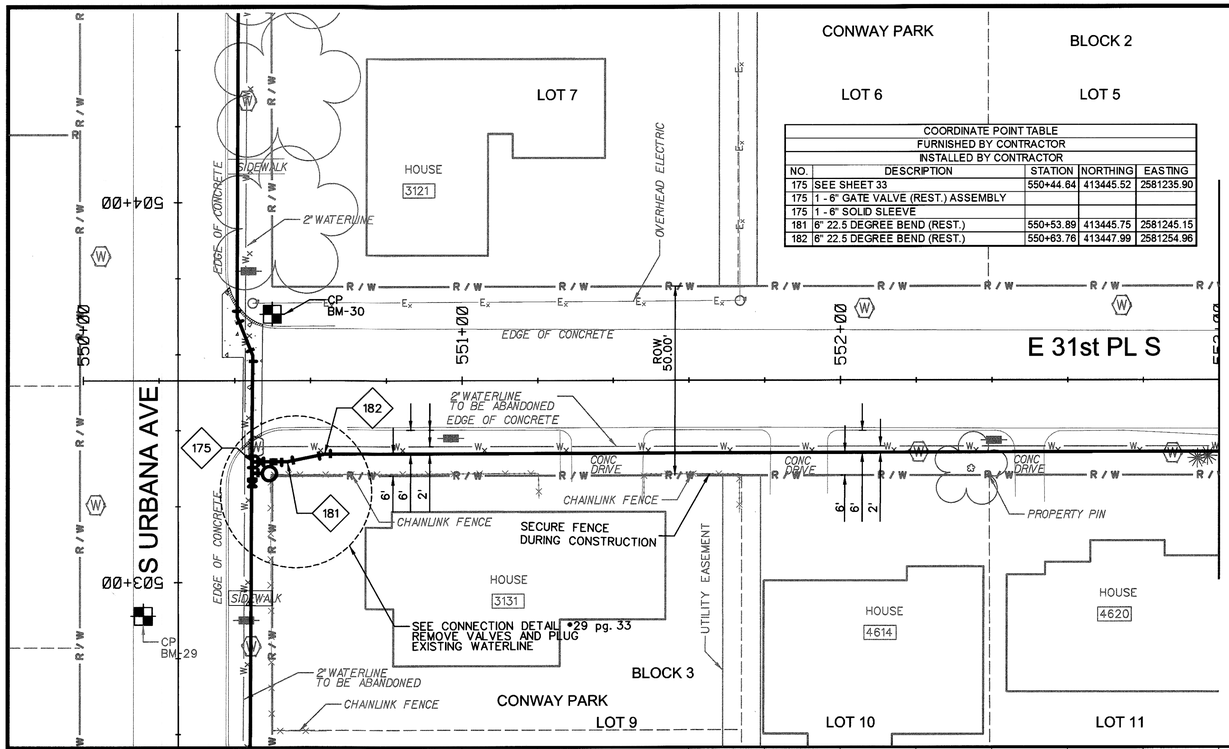
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE L

DATE: 4-23-21

ATLAS PAGE NO. 093

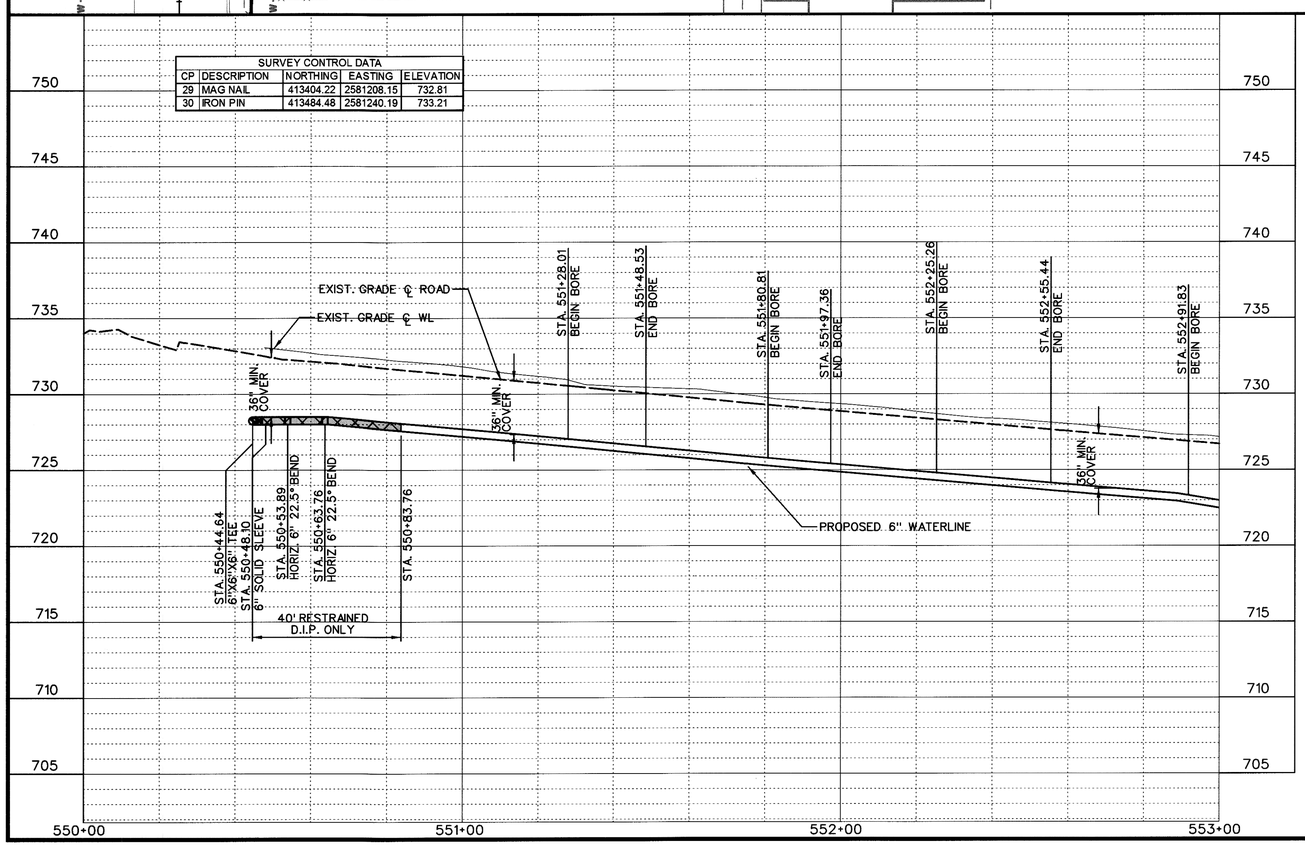
SHEET 34 OF 39 SHEETS



COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
175	SEE SHEET 33	550+44.64	413445.52	2581235.90
175	1 - 6" GATE VALVE (REST.) ASSEMBLY			
175	1 - 6" SOLID SLEEVE			
181	6" 22.5 DEGREE BEND (REST.)	550+53.89	413445.75	2581245.15
182	6" 22.5 DEGREE BEND (REST.)	550+63.76	413447.99	2581254.96

20 10 0 20 40
SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
29	MAG NAIL	413404.22	2581208.15	732.81
30	IRON PIN	413484.48	2581240.19	733.21



PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER
JEREMY C. WEILAND
23423
6/30/22
OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE M- E. 31st PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

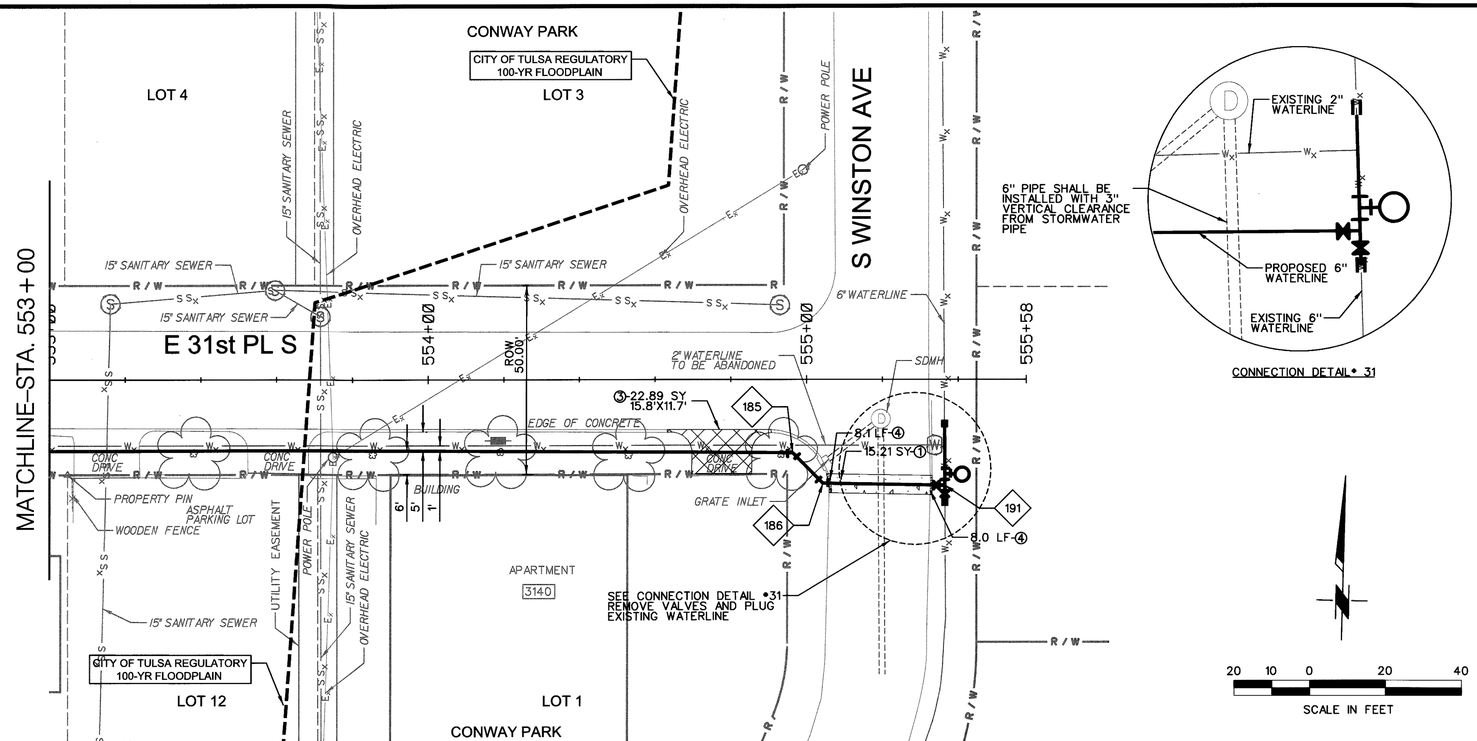
PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE:	DRAWN	JRD	2/08
1"=20'	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		3/21
HORIZONTAL:	SECT. MNGR.		3/21
1"=20'	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1"=5'	DEPUTY DIRECTOR		

APPROVED:
PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE M
DATE: 6-23-21
ATLAS PAGE NO. 093
SHEET 35 OF 39 SHEETS

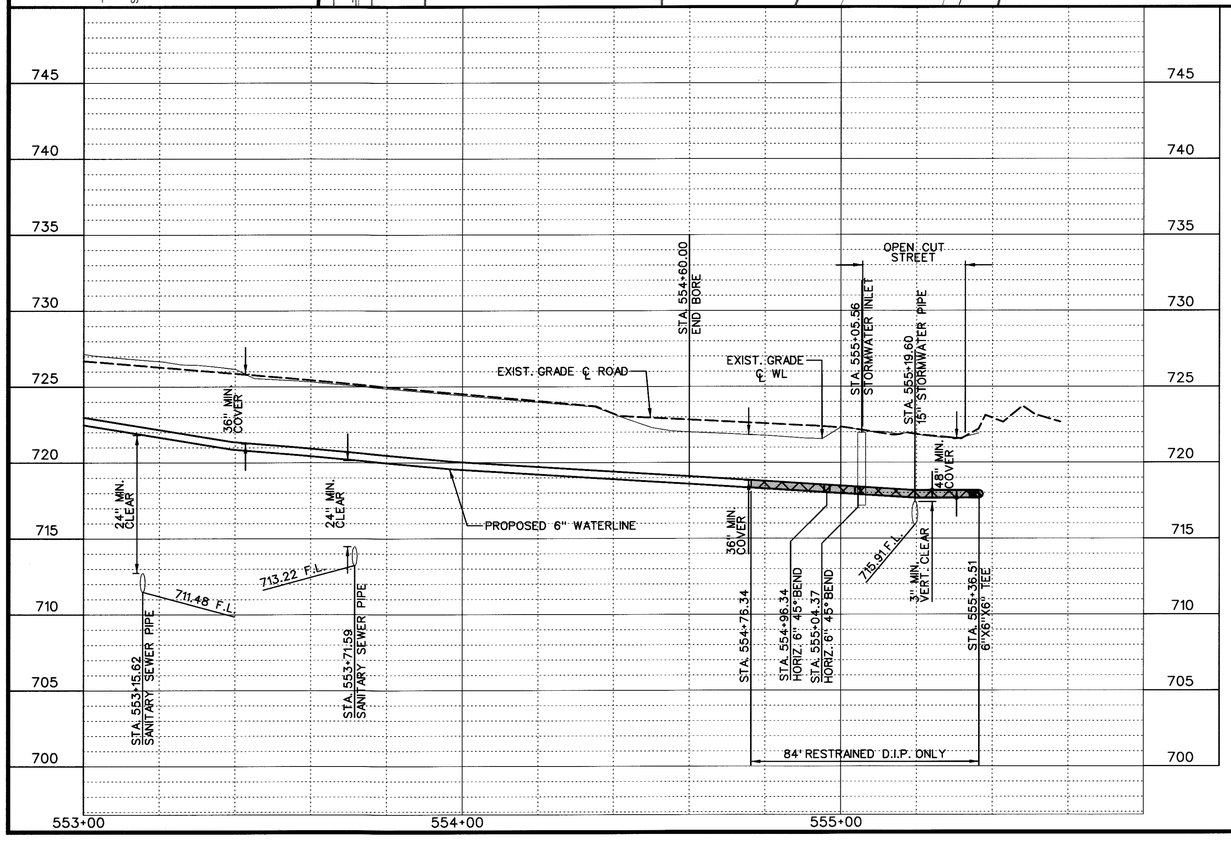


CONNECTION DETAIL • 31

COORDINATE POINT TABLE				
FURNISHED BY CONTRACTOR				
INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
185	6" 45 DEGREE BEND (REST.)	554+96.34	413458.69	2581687.41
186	6" 45 DEGREE BEND (REST.)	555+04.37	413450.86	2581695.64
191	6"X6"X6" TEE (REST.)	555+36.51	41345.09	2581727.78
191	2 - 6" GATE VALVE (REST.) ASSEMBLY			
191	6" 3-WAY FIRE HYDRANT ASSEMBLY			
191	2 - 6" SOLID SLEEVE			

PVC / HDPE / D.I.P. PIPE
REST. HDPE / D.I.P. PIPE
REST. D.I.P. PIPE ONLY

1. REMOVE AND REPLACE CONCRETE STREET STD. 731
2. REMOVE AND REPLACE ASPHALT STREET STD. 730
3. REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)
4. REMOVE AND REPLACE CONCRETE CURB AND GUTTER
5. REMOVE AND REPLACE SIDEWALK



LICENSED PROFESSIONAL ENGINEER — JEREMY C. WEILAND — 23423 — OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE M- E. 31st PL S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St. TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800 FAX: (918) 749-5858

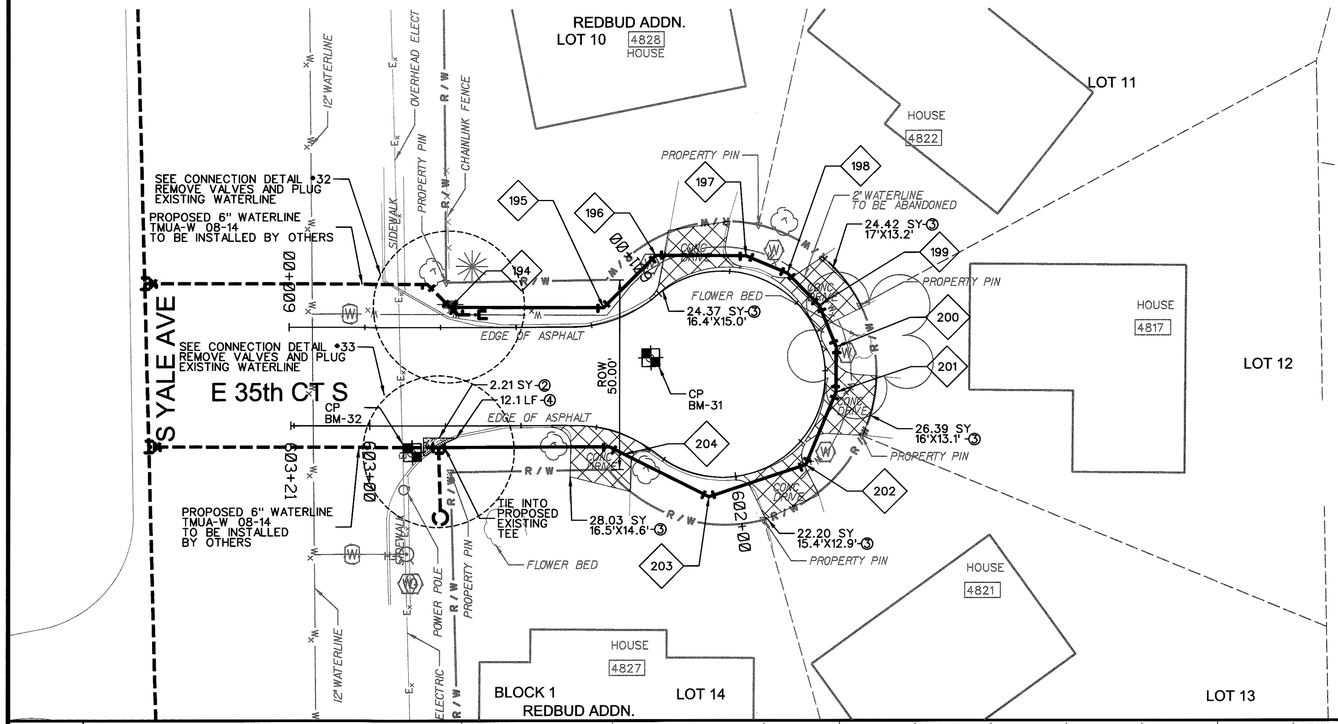
JMJ

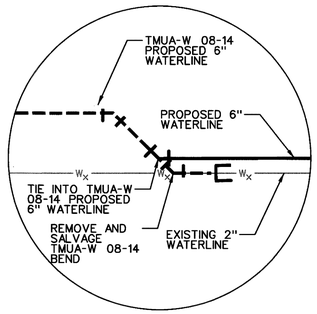
REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.	JCW	3/21
HORIZONTAL: 1"=20'	SECT. MNGR.	CEW	3/21
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: HMS 3-21 DEPUTY DIRECTOR		

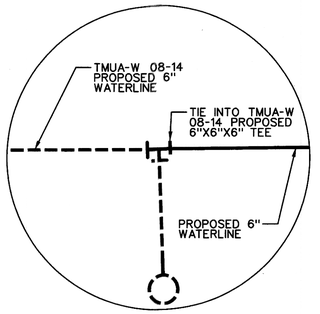
APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE M
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 36 OF 39 SHEETS

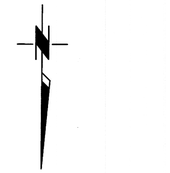




CONNECTION DETAIL •32



CONNECTION DETAIL •33



20 10 0 20 40

SCALE IN FEET

SURVEY CONTROL DATA				
CP	DESCRIPTION	NORTHING	EASTING	ELEVATION
31	MAG NAIL	411518.34	2582026.79	719.01
32	MAG NAIL	411543.66	2582089.74	718.79

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
194	6" 45 DEGREE BEND (REST.)	600+42.53	411505.27	2582079.84
195	6" 45 DEGREE BEND (REST.)	600+84.38	411505.14	2582039.21
196	6" 45 DEGREE BEND (REST.)	601+04.18	411491.33	2582025.50
197	6" 22.5 DEGREE BEND (REST.)	601+23.43	411491.24	2582001.66
198	6" 22.5 DEGREE BEND (REST.)	601+33.69	411495.76	2581990.84
199	6" 22.5 DEGREE BEND (REST.)	601+44.02	411504.16	2581982.18
200	6" 22.5 DEGREE BEND (REST.)	601+54.49	411515.15	2581977.58
201	6" 22.5 DEGREE BEND (REST.)	601+65.11	411527.07	2581977.54
202	6" 45 DEGREE BEND (REST.)	601+83.24	411546.2	2581985.38
203	6" 45 DEGREE BEND (REST.)	602+06.54	411554.85	2582010.95
204	6" 22.5 DEGREE BEND (REST.)	602+30.24	411543.71	2582033.48

PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

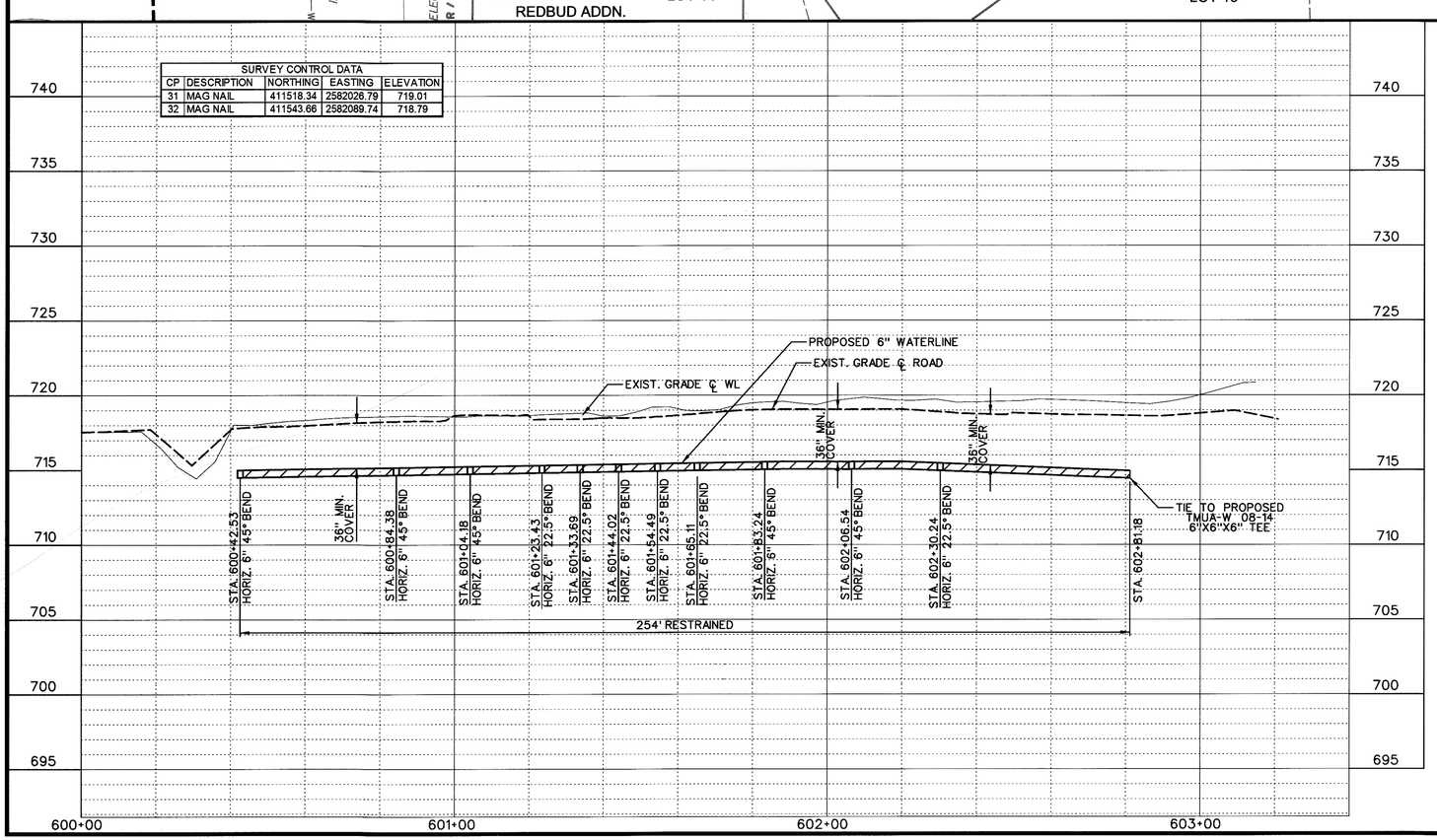
① REMOVE AND REPLACE CONCRETE STREET STD. 731

② REMOVE AND REPLACE ASPHALT STREET STD. 730

③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)

④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER

⑤ REMOVE AND REPLACE SIDEWALK







LINE N- E. 35th CT S.

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE: 1"=20'	DRAWN	JRD	2/08
	DESIGNED	JCW	2/08
	SURVEY	GG	2/08
PROFILE SCALE	FIELD MNGR.		
HORIZONTAL: 1"=20'	SECT. MNGR.		
	PROJ. MNGR.		
VERTICAL: 1"=5'	RECOMMENDED: DEPUTY DIRECTOR		

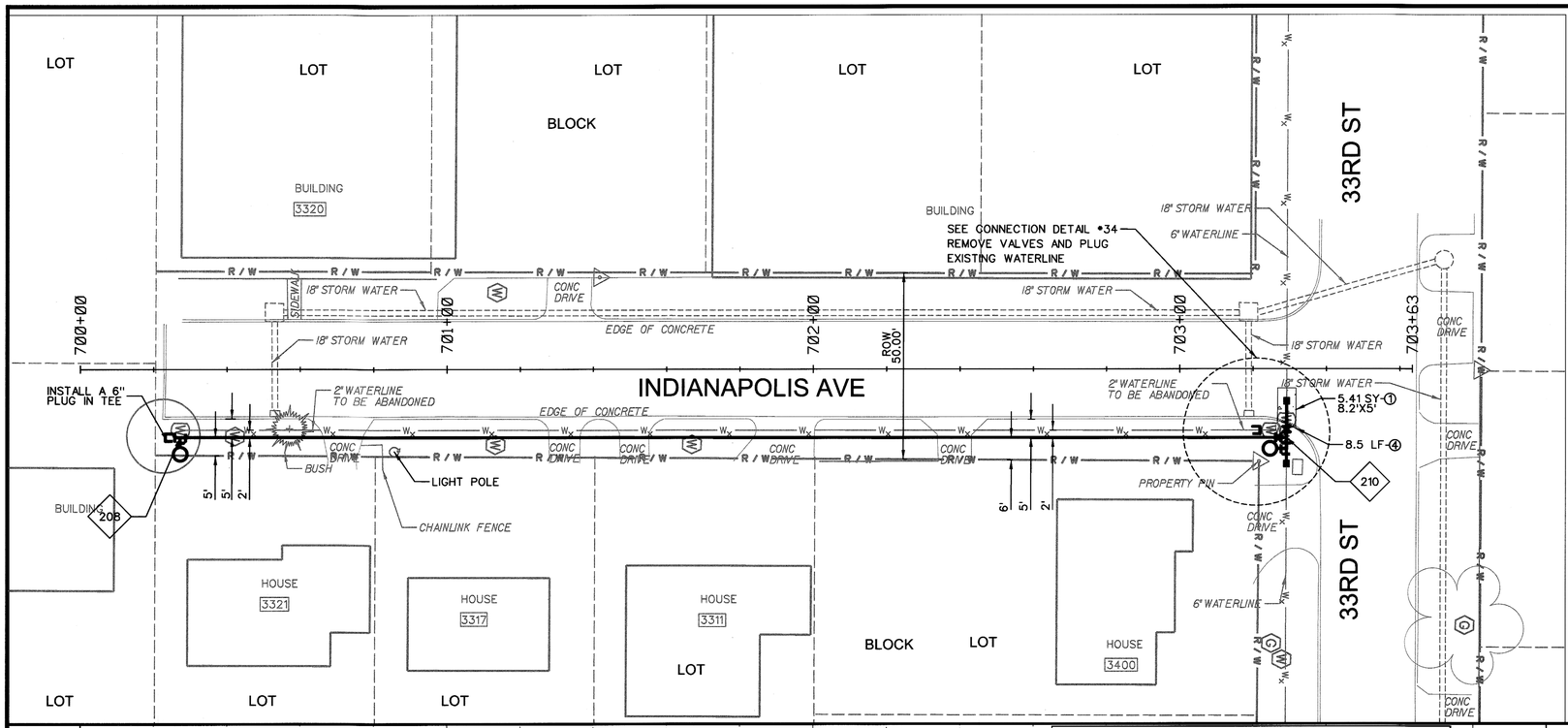
APPROVED: PUBLIC WORKS DIRECTOR

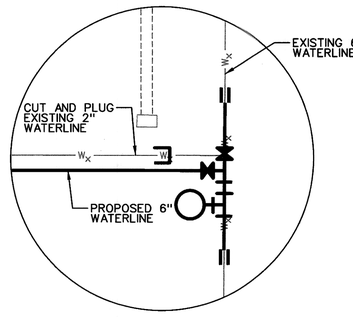
FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE N

DATE: 4-23-21

ATLAS PAGE NO. 093

SHEET 37 OF 39 SHEETS



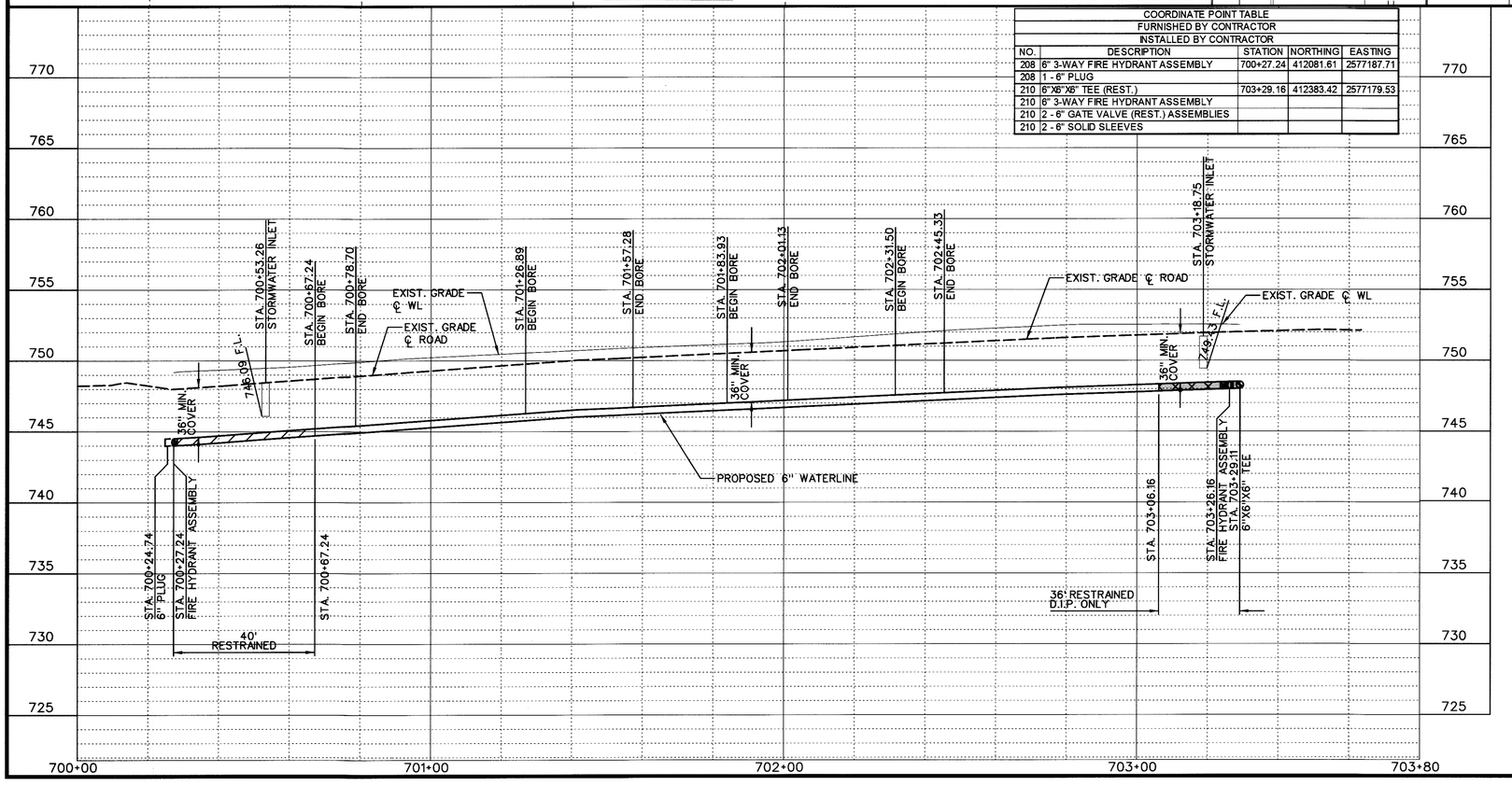


CONNECTION DETAIL •34

20 10 0 20 40

SCALE IN FEET

COORDINATE POINT TABLE FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR				
NO.	DESCRIPTION	STATION	NORTHING	EASTING
208	6" 3-WAY FIRE HYDRANT ASSEMBLY	700+27.24	412081.61	2577187.71
208	1 - 6" PLUG			
210	6"X6"X6" TEE (REST.)	703+29.16	412383.42	2577179.53
210	6" 3-WAY FIRE HYDRANT ASSEMBLY			
210	2 - 6" GATE VALVE (REST.) ASSEMBLIES			
210	2 - 6" SOLID SLEEVES			



PVC / HDPE / D.I.P. PIPE

REST. HDPE / D.I.P. PIPE

REST. D.I.P. PIPE ONLY

① REMOVE AND REPLACE CONCRETE STREET STD. 731

② REMOVE AND REPLACE ASPHALT STREET STD. 730

③ REMOVE AND REPLACE 6" CONCRETE DRIVE (HES)

④ REMOVE AND REPLACE CONCRETE CURB AND GUTTER

⑤ REMOVE AND REPLACE SIDEWALK

LICENSED PROFESSIONAL ENGINEER JEREMY C. WEILAND 23423 STATE OF OKLAHOMA

BEFORE YOU DIG... CALL OKIE 1-800-522-6543

LINE O - INDIANAPOLIS AVE

2-INCH WATER LINE REPLACEMENT, CITYWIDE
TMUA-W 07-26

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
CGA Engineers, Inc.
8179 E. 41st St.
TULSA, OKLAHOMA 74145
PHONE: (918) 749-5800
FAX: (918) 749-5858

REVISION	BY	DATE

PLAN SCALE:
PROFILE SCALE
HORIZONTAL:
VERTICAL:

DRAWN	JRD	2/08
DESIGNED	JCW	2/08
SURVEY	GG	2/08
FIELD MNGR.	BSM	3/21
SECT. MNGR.	CEG	3/21
PROJ. MNGR.		
RECOMMENDED: DEPUTY DIRECTOR	HRS	3-21

APPROVED: PUBLIC WORKS DIRECTOR

FILE: 07/-53-001-19/DESIGN/SHTS/PNP-LINE O
DATE: 4-23-21
ATLAS PAGE NO. 093
SHEET 38 OF 39 SHEETS