FOR FLINTSTONE WATERLINE UNIVERSAL CITY, TEXAS

6S JOB NO. 2025-003-02

MAYOR TOM MAXWELL

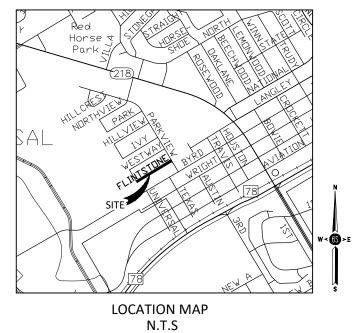
MAYOR PRO-TEM CHRISTINA FITZPATRICK

> COUNCILMEN BEAR GOOLSBY LORI PUTT ASHTON BULMAN BERNARD RUBAL PHIL VAUGHAN

CITY MANAGER KIM TURNER

DIRECTOR OF PUBLIC WORKS
RANDY LUENSMANN







Sheet List Table

Sheet Number	Sheet Title	
1	COVER	
2	GENERAL WATER NOTES	
3	FLINTSTONE WATER PLAN LAYOUT	
4	WATER DETAIL SHEET	
5	WATER DETAIL SHEET-2	



100% SUBMITTAL

WATER SYSTEM GENERAL NOTES

- 1. ALL WORK IS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF UNIVERSAL CITY MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT AND SHALL CONFORM TO APPLICABLE CITY OF UNIVERSAL CITY SUBDIVISION REGULATIONS AND, STANDARD SPECIFICATIONS AND DETAILS. MATERIAL AND CONSTRUCTION PROCEDURES SHALL COMPLY WITH THE FOLLOWING STANDARDS WHERE REFERENCED AND/OR WHEN APPLICABLE: A) TEXAS COMMISSION OF ENVIRONMENTAL QUALITY (T.C.E.Q.) "PUBLIC DERINKING WATER" TAC TITLE 30 PART 1 CHAPTER 290 AND "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS" TAC TITLE 30 PART 1 CHAPTER 217 AND/OR B) SAN ANTONIO WATER SYSTEM (SAWS "STANDARD SPECIFICATIONS FOR WATER AND SANTARY SEWER CONSTRUCTION"; LATEST EDITION OR PUBLICATION UNLESS OTHERWISE SPECIFIED IN THE CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL CONTACT THE CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS 72 HOURS PRIOR TO COMMENCING WORK ON EACH SECTION OF THE PROJECT AND 24 HOURS PRIOR TO THE NEED TO CLOSE ANY UTILITY VALVE OR MAIN.
- 2. LAY WATER MAINS SIX FEET (6') OFF PROPERTY LINE UNLESS OTHERWISE NOTED
- 3. MACHINE CHLORINATION WILL BE BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- 4. ALL NECESSARY WATER APPURTENANCES OR MATERIALS NEEDED TO CONDUCT HYDROSTATIC TESTS SHALL BE FURNISHED BY THE CONTRACTOR AS SPECIFIED IN SAWS
- 5. CONTRACTOR TO DISINEECT AND HYDROSTATICALLY TEST ALL MAINS IN ACCORDANCE WITH AN ANTONIO WATER SYSTEM (SAWS) STANDARD ITEM NUMBERS 841 AND 847. MICROBIOLOGICAL SAMPLING SHALL BE IN STRICT ACCORDANCE WITH CITY OF UNIVERSAL CITY WATER SYSTEM, SAN ANTONIO WATER SYSTEM (SAWS), AMERICAN WATER WORKS (AWWAY) AND TEXAS COMMISSION OF ENVIRONMENTAL QUALITY (TCEQ) STANDARDS OF THE LATEST REVISION. THE CONTRACTOR SHALL NOTIFY THE CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS AT LEAST 48 HOURS PRIOR TO CONDUCTING ALL SAMPLING AND TESTING. THE CONTRACTOR SHALL FURNISH THE TEST RESULTS TO CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS BEFORE CONNECTING TO EXISTING MAIN. THE CONTRACTOR SHALL FRON THE TEST RESULTS TO CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS PRIOR TO INTERCIPE TO THE CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS PRIOR TO INTERRUPTING SERVICES TO MAKE CONNECTIONS. THE SERVICE OUTAGE SHALL BE LIMITED TO THE PERIOD OF 12:00 A.M. TO 6:00 A.M. THE CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS OR HIS AUTHORIZED REPRESENTATIVES SHALL BE IMPRESENT DURING ALL SAMPLING, TESTING, TIE-INS OR WHEN VALVES ARE OPPENDO OR CLOSED BY THE CONTRACTOR (NO EXCEPTIONS).
- ALL WATER MAINS SHALL BE PVC C909 PRESSURE CLASS 235 AND BE INSTALLED IN ACCORDANCE WITH CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS.
- MAXIMUM PIPE DEFLECTION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION GUIDE.
- 8. CONTRACTOR SHALL FURNISH THE ENGINEER AND/OR THE CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS WITH AS-BUILTS THAT SHALL HAVE THE FINAL MEASUREMENTS FOR ALL PIPE INSTALLED AND ALL TAPS AND LENGTH OF SERVICE CONNECTIONS WITH BLUE MARKED HUBS AT EACH SERVICE.
- 9. THE LOT CORNERS SHALL BE SET BY THE ENGINEER FOR WATER SERVICES. LOT CORNERS WILL BE CAREFULLY PRESERVED BY CONTRACTOR SO THAT THE METER BOXES CAN BE SET. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES WILL BE REPLACED ATTHE CONTRACTOR'S EXPENSE.
- 10. STREETS SHALL HAVE BEEN EXCAVATED DOWN TO SUBGRADE, AND THE PARKWAY WILL BE CUT DOWN TO THE TOP OF THE CURB BY THE STREET CONTRACTOR PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR THEIR FOUIPMENT IF NECESSARY.
- 11. WATER METER BOXES WILL BE INSTALLED ONE FOOT (1') BEHIND THE CURB, AND SHALL BE EITHER A PLASTIC OR CAST IRON METER BOX WITH A HOLE CUT IN THE LID FOR A TOUCH TONE READER AND SET AT FINAL GRADE LEVEL. TO SUPPORT THE REQUIRED SPACE NEEDED (6') FOR INSTALLATION OF THE TOUCH READ METER AND THE SZOM RADIO READ TRANSMITTOR MOUNTED ON TOP LID, THE CONTRACTOR SHALL FURNISH A SUBMITTAL FOR CITY APPROVAL PRIOR TO INSTALLATION OF ANY METER BOX. METER BOXES SHALL BE SUPPORTED WITH BRICKS, ALL METER BOXES ARE TO HAVE THE CITY OF UNIVERSAL CITY LOGO ON THE BOX LID.
- 12. ALL WATER SERVICES SHALL BE ONE-INCH (1") MINIMUM UP TO THE CURB STOP IN ACCORDANCE WITH CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS. USE 1" X 3/4" CURB STOP WHEN NECESSARY FOR METER LESS THAN ONE-INCH (1").
- 13. EXCESS MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY THE PROJECT ENGINEER. NO EXCESS MATERIAL SHALL BE DUMPED OR ALLOWED TO ENTER ANY WATERWAY, CULVERT OR OTHER DRAINAGE STRUCTURE. THE CONTRACTOR SHALL NOT PLACE ANY MATERIAL IN THE 100-YEAR FLOODPLAIN WITH OUT OBTIANING AN APROVED FLOODPLAIN PERMIT. UNACCEPTABLE MATERIAL SHALL BE DEFINED AS EXISTING UNSTABLE MATERIALS AND LAYING CONDITIONS ENCOUNTERED ANY TIME DURING EXCAVATION, TRENCHING OR BACKFILLING. SUCH MATERIALS INCLUDE AND ARE NOT LIMITED TO THE FOLLOWING:
- A. ANY SHARP ABRASIVE OBJECT, WATER, SILT, MUCK, TRASH OR DEBRIS, ROCK IN LEDGE, COARSE GRAVEL WITH PARTICLE SIZE LARGER THAN 1-½ INCH DIAMETER DURING INITIAL BACKFILL, ROCKS OR BOULDERS GREATER THAN ONE-HALF (1/2) THE TRENCH WIDTH DURING SECONDARY BACKFILL, AND ANY SUCH MATERIAL SHALL BE REMOVED FROM THE TRENCH AND THE JOB SITE.
- B. THERE SHALL BE NO EXTRA COMPENSATION OR TIME ALLOWANCE FOR ENCOUNTERING ROCK, REMOVAL OF ROCK, DEBRIS OR ANY UNACCEPTABLE MATERIAL.
- 14. ANY CAVERNS OR SOLUTION CHANNELS ENCOUNTERED DURING CONSTRUCTION WILL BE REPORTED TO THE ENGINEER AND THE CITY OF UNIVERSAL CITY WITH A REQUEST FOR ADESIGN REVISION WHEN THE STRENGTH OF THE PIPE, IS NOT SUFFICIENT TO BRIDGE THE GAP. THE CONTRACTOR SHALL ALSO REPORT THE FINDING OF THE CAVERN TO THE APPROPRIATE REGULATORY AGENCIES AND STOP WORK UNTIL AUTHORIZATION TO CONTINUE IS RECEIVED.
- 15. THRUST BLOCKS SHALL BE INSTALLED AS REQUIRED BY THE CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS, AND/OR AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE OR THE PROJECT ENGINEER.
- 16. 2-1/8-INCH POST TYPE FIRE HYDRANTS ARE TO BE INSTALLED IN LIEU OF PERMANENT BLOWOFFS.
- 17. ALL FITTINGS, PIPES, AND SERVICES SHALL BE ENCASED WITH SIX-INCHES (6") OF PIT RUN SAND UNDER THE BOTTOM OF THE PIPE AND TWELVE-INCHES (12") ABOVE THE TOP OF THE PIPE.
- 18. THE DIRECTOR OF PUBLIC WORKS OR HIS AUTHORIZED REPRESENTATIVE WILL INSPECT AND APPROVE PIT RUN SAND BEDDING BEFORE PIPE IS LAID AND INITIAL SAND BACKFILL BEFORE REMAINING BACK FILL IS INSTALLED. ALL BEDDING PLACED IN THE WATER TRENCH SHALL BE COMPACTED IN MAXIMUM EIGHT-INCH (8") LIFTS TO 95% DENSITY OF TXDOTS TEST METHOD TEX-113-E. PROVIDE TESTING ON EACH EIGHT-INCH (8")

- COMPACTED LLIFT, SUBGRADE MOISTURE DENSITY TESTING SHALL BE AT THE MINIMUM FREQUENCY OF THREE (3) PER BLOCK AND SHALL NOT EXCEED 500 FOOT SPACING.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND WORKMANSHIP AFTER PRELIMINARY ACCEPTANCE BY CITY AND UNTIL FINAL ACCEPTANCE BY CITY. AFTER FINAL ACCEPTANCE OF CONSTRUCTION IS ISSUED, THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR WARRANTY IN ACCORDANCE WITH THE SPECIFICATION'S SPECIAL CONDITIONS. THE CONTRACTOR SHALL REPAIR ANY AREAS WITHIN ONE (1) WEEK OF WRITTEN NOTIFICATION DURING WARRANTY PERIOD.
- 20. CONTRACTOR SHALL PROVIDE THE FOLLOWING SUPPORT ACTIVITY:
- A. ATTEND PRE-CONSTRUCTION CONFERENCE WITH CITYAND SECURE CITY PERMIT
- B. ATTEND PRELIMINARY AND FINAL ACCEPTANCE INSPECTIONS WITH CITY AND PROVIDE SUPPORT MANPOWER AS NEFDED FOR TESTING AND INSPECTIONS.
- 21. FIRE HYDRANTS SHALL BE MOST CURRENT EJIW 5CD250 OR AMERICAN DARLING NO. B-84-B: FIRE HYDRANTS TO OPEN LEFT AND INSTALLED IN ACCORDANCE WITH CITY OF UNIVERSAL STANDARD SPECIFICATIONS AND DETAILS.
- 22. ALL GATE VALVES SHALL BE MOST CURRENTAWWA APPROVED RESILIENT SEAT VALVES, LEFT HAND OPEN, AS MANUFACTURED BY EAST JORDAN IRON WORKS, MUELLER (A-2370-20) AMERICAN DARLING OR CLOW VALVES AND INSTALLED IN ACCORDANCE WITH THE CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS.
- 23. 8 MIL POLYETHYLENE SLEEVE WRAPPING WITH RUST PREVENTIVE SHALL BE REQUIRED ON ALL DUCTILE IRON OR CAST IRON PIPE OR FITTINGS.
- ALL FITTINGS SHALL BE MECHANICAL JOINT WITH CONCRETE BLOCKING UNLESS OTHERWISE NOTED IN ACCORDANCE WITH THE CITY OF UNIVERSAL CITY STANDARD SPECIFICATIONS AND DETAILS.
- CONTRACTOR WILL NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS PRIOR TO EXCAVATION. THE LIST PROVIDED BELOW IS A COURTESY AND SHALL NOTI BE CONSTRUED AS TO INCLUDE ALL UTILITY COMPANIES THAT MAY BE ENCOUNTERED.

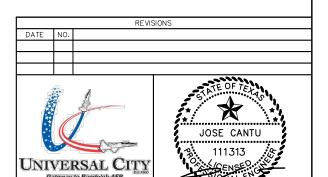
CITY OF LINIVERSAL CITY

	CITT OF UNIVERSAL CITT	(210) 030-3304	
	WATER AND SANITARY SEWER	(210) 658-5365	
	STORM DRAIN	(210)	
658-5364			
	TRAFFIC SIGNAL OPERATIONS TXDOT	(210) 615-5975	
	CITY OF UNIVERSAL CITY	(210) 658-5364	
	DIG TESS	811	
	TEXAS STATE WIDE ONE CALL LOCATORS	811	
	CITY PUBLIC SERVICE	(210) 353-3333	
	TIME WARNER CABLE	811	
	AT&T	811	
	MCI		
1-800-MCU-WORK			

CENTERPOINT GAS 1-800-427-7142

- 26. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS OR MARKED IN THE FIELD ARE UNDERSTOOD TO BE APPROXIMATE ONLY AND ALL UILITIES MAY NOT BE SHOWN, PRIOR TO CONSTUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL UTILITIES DURING CONSTRUCTION AND SHALL REPAIR ANY DAMAGE TO OTHER UTILITIES AT NO EXPENSE TO THE CITY OF UNIVERSAL CITY. THE TEXAS UTILITY CODE REQUIRES A CONTRACTOR TO CONTACT A NOTIFICATION CENTER AT LEAST 48 HOURS (BUSINESS DAYS) PRIOR TO DIGGING DEEPER THAN 16-INCHES, WITH LIMITED EXCEPTIONS.
- 27. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE (S) WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR AN ADEQUATE TRENCH SAFETY SYSTEM THAT COMPLIES WITH AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANTS WILL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION. TRENCH SAFETY REQUIREMENTS PERTAIN TO ALL WORK.
- 28. CONTRACTOR TO VERIFY HORIZONTAL LOCATION AND TOP OF CURB ELEVATION AT FIRE HYDRANT LOCATIONS WITH THE DIRECTOR OF PUBLIC WORKS OR HIS DESIGNEE BEFORE INSTALLATION OF ANY FIRE HYDRANT.
- 29. WATER SERVICES IN ROADWAY OR UTILITY EASEMENTS AND CUL-DE-SAC'S SHALL BE ENCASED IN 3" SCHEDULE 40" PVC PIPES MEETING ASTM D-1785 AND D-2665.
- 30. NO BLASTING IS ALLOWED.
- 31. NO WATER JETTING IS ALLOWED.
- 32. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED AND IT WILL BE THE CONTRACTORS RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, HIS EMPLOYED OF SUBGONTRACTOR BY ANY MEANS NECESSARY. ANY SUCH STAKES, MARKS, ETC. THAT ARE DAMAGED OR MISSING, SHALL BE REPLACED AT THE CONTRACTOR'S EVENTURE.
- 33. CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC IN EXISTING STREETS AT ALL TIMES, EXCEPT AS NOTED. PAVEMENT CUTS ACROSS AN EXISTING STREET ARE TO BE MADE ONE-HALF (1/2) AT A TIME AND THE PAVEMENT SHALL BE SAWCUT. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS FOR CHILDREN, RESIDENTS, BUSINESSES, CITY REPRESENTATIVES AND MAINTAIN ONE-HALF (1/2) OF ALL STREETS OPEN TO THRU TRAFFIC AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE STEEL PLATE TRAFFIC COVERS OVER THE TRENCH AT STREETS, SIDEWALKS, AND AT DRIVEWAYS AS REQUIRED. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR THE US POSTAL SERVICE CARRIERS. ANY DAMAGES INCURRED TO MAILBOXES SHALL BE AT THE CONTRACTOR 'EXPENSE AND SHALL BE RESTORED TO THEIR ORIGINAL OR IMPROVED CONDITION. BARRACADES AND TLAG MEN SHALL BE PROVIDED FOR THE PROTECTION OF CHILDREN, PDESTRIANS AND TO PROVIDE SMOOTH TRAFFIC FLOW ACCORDING TO THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) STANDARDS AND TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATES YERSION AT TIME OF CONSTRUCTION).

- 34. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CITY'S CONSTRUCTION INSPECTOR OR THE TRAFFIC ENGINEERING REPRESENTATIVE SHALL ONLY BE RESPONSIBLE TO INSPECTOR BARRICADES AND SIGNS. IF IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE, OR THE CONSTRUCTION INSPECTOR, THE TRAFFIC CONTROL DEVICES DO NOT CONFORM TO ESTABLISHED STANDARDS, ARE INCORRECTLY PLACED, OR INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR OR TRAFFIC ENGINEERING REPRESENTATIVE SHALL HAVE THE OPTION OF STOPPING THE OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED AT NO EXPENSE TO THE CITY OF UNIVERSAL CITY.
- 35. CONTRACTOR SHALL PLACE AN INSULATED 12 GAUGE WIRE DIRECTLY ON TOP OF THE WATER MAIN WITH PLASTIC WARNING TAPE ONE–FOOT (1') ABOVE THE TOP OF PIPE. WIRE SPLICE CONNECTIONS TO BE WITH APPROVED GEL CAPS.
- 36. DUE TO FEDERAL REGULATIONS, TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA
- 37. WHENEVER POWER POLES ARE ADJACENT TO THE PROPOSED TRENCH, THE CONTRACTOR SHALL PROVIDE PROPER SHORING OR BRACING DURING CONSTRUCTION OF THE TRENCH, ACCORDING TO THE METHODS APPROVED BY THE APPROPRIATE UTILITY COMPANY. ANY DAMAGES INCURRED SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE AND RESORED TO ITS ORIGINAL OR IMPROVED CONDITION TO THE SATISFACTION OF THE UTILITY OWNER.
- 38. THE CONTRACTOR SHALL MARK THE LOCATION OF METER BOXES ON THE CURB WITH BLUE PAINT, WATER VALVES SHALL NOT BE PLACED IN WHEEL CHAIR RAMPS OR CURBS.
- 39. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER LINE UNTIL IT IS ABANDONED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SERVICE AS THE PROPOSED WATER MAIN IS BEING LAID.
- 40. NO PIPE WHICH HAS BEEN USED FOR ANY PREVIOUS PURPOSE SHALL BE ACCEPTED OR RELOCATED FOR USE IN THIS PROJECT. ALL WATER LINES INSTALLED SHALL MEET
- AMERICAN WATER WORKS ASSOCIATION (AWWA) AND NATIONAL SANITATION FOUNDATION (NSF) STANDARDS WITH PUSH ON JOINTS.
- 41. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PROPER CLEARANCE REQUIRED BY THE NATIONAL ELECTRICAL CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), TEXAS STATE LAW VERNON'S ANNOTATED TEXAS STATUES ARTICLE 1436 (C) PERTAINING TO CLEARANCES WHEN WORKING IN CLOSE PROXIMITY TO OVERHEAD ELECTRICAL LINES AND EQUIPMENT; AND TEXAS STATE LAW HEALTH AND SAFETY CODE-CHAPTER 752 HIGH VOLTAGE OVERHEAD LINES. ALL COSTS INCURRED BY THE CITY OF UNIVERSAL CITY AND/OR A UTILITY PROVIDER BECAUSE OF FAILURE TO COMPLY WITH THE REQUIRED CLEARANCE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR NOT FOLLOWING EFFECTIVE PRECAUTIONARY MEASURES.
- 42. THE CONTRACTOR'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL INCLUDE EROSION AND SEDIMENTATION CONTROLS FOR ALL SOIL STAGING AND STORAGE AREAS
- 43. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROLS.
- 44. ALL DISTURBED EXCAVATED AREAS WITHIN THE CITY RIGHT-OF-WAY SHALL BE RESODDED TO MATCH THE EXISTING SITE CONDITIONS.
- 45. ALL BACKFLOWS ARE TO BE TESTED UPON INSTALLATION AND YEARLY THEREAFTER BY AN APPROVED TESTER. THE ORIGINAL INSTALLATION TEST FORMS WILL BE IMMEDIATLY SUBMITTED TO CITY OF UNIVERSAL CITY DIRECTOR OF PUBLIC WORKS.
- 46. ALL TRENCHES IN TRAFFIC AREAS ARE TO BE BACKFILLED WITH FLOWABLE FILL FROM THE TOP OF BEDDING TO WITHIN 2 INCHES OF TOP GRADE FOR SURFACE HOT MIX, WARM
- 47. METERS 1½" OR LARGER SHALL BE THE COMPOUND TYPE AND INSTALLED WITH A METER STRAINER UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
- 48. INLINE PRV'S INSTALLED WILL HAVE A PRESSURE RANGE SETTING OF 15 TO 150 PSIG AND HAVE A MINIMUM WORKING PRESSURE OF AT LEAST 150 PSIG.
- 49. ALL METER VAULT LIDS ARE TO HAVE A 2-1/2" HOLE FOR THE 520M RADIO READ TRANSMITTOR (MXU).
- 50. CONTRACTOR SHALL PAY FOR HYDRANT METER DEPOSIT (REFUNDABLE UPON RETURN) AND FOR WATER USED DURING CONSTRUCTION. AN APPROVED BACKFLOW DEVICE SHALL BE INSTALLED ON ALL HOOKUPS TO FIRE HYDRANTS. (SEE CITY UTILITY ADMINISTRATION 659-0333 EXT.710).
- 51. WHERE WATER AND SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE OF LESS
 THAN NINE (9) FEET AS MEASURED FROM OUTSIDE TO OUTSIDE, THE INSTALLATION
 MUST MEET THE REQUIREMENTS OF TAC TITLE 30 CHAPTERS 217.53(d) AND 290.44(e).
- 52. ANY WORK COMPLETED WITHOUT PRIOR AUTHORIZATION, WHETHER INCLUDED IN THE PLANS AND SPECIFICATIONS OR NOT, SHALL NOT BE COMPLENSATED BY THE CITY OF INNIVERSAL CITY.
- 53. THE CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING AROUND AND PROTECT ALL SPECIES OF OAK TREES.
- 54. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS OR DRIVEWAYS, FIRE HYDRANTS, VALVES, RIGHT OF WAY MONUMENTS, GATES, ETC (NO SEPARATE PAY ITEM).





FLINTSTONE WATERLINE UNIVERSAL CITY, TEXAS

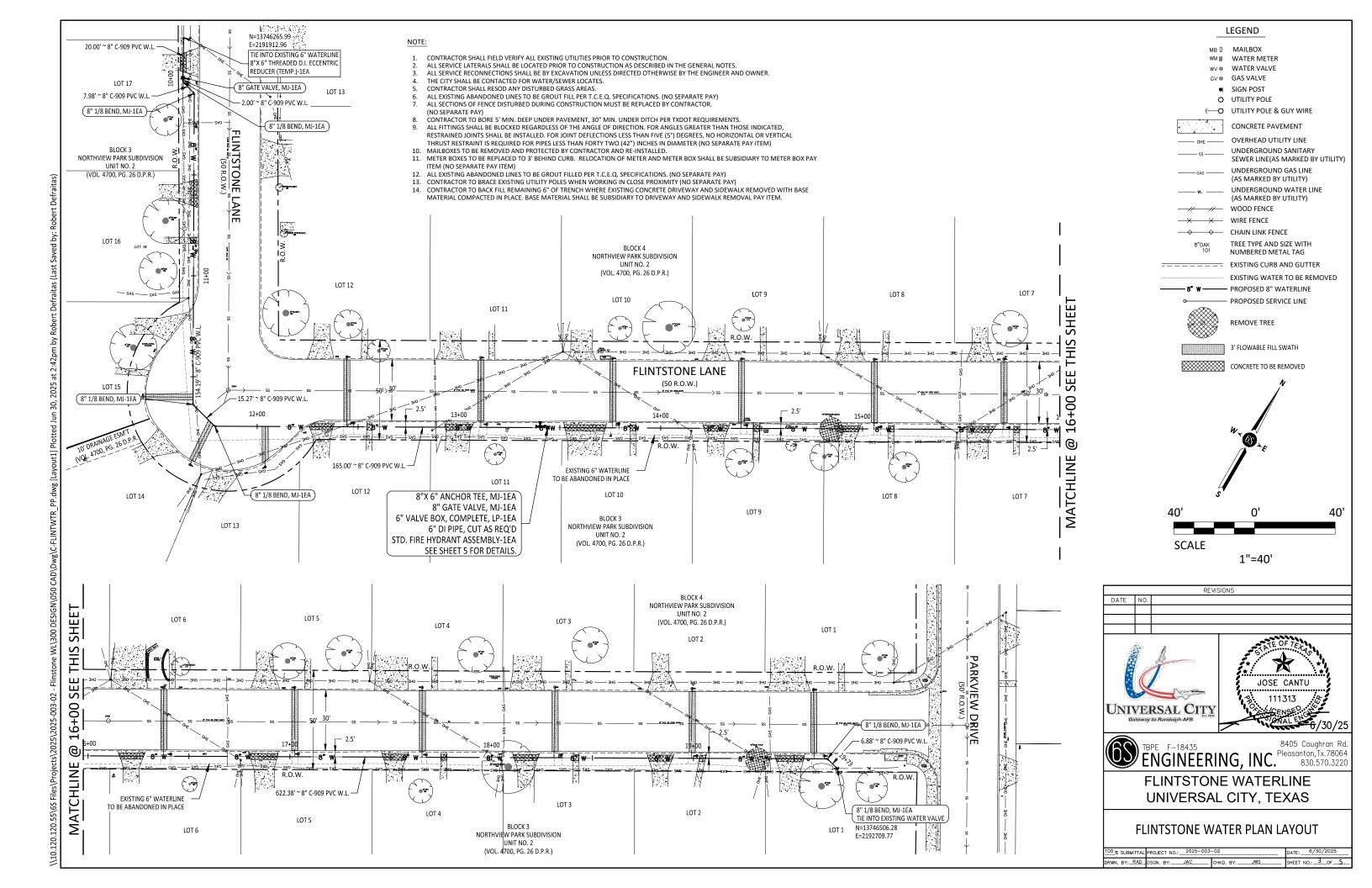
8405 Coughran Ro

Pleasanton, Tx. 78064

GENERAL WATER NOTES

 100 % SUBMITTAL PROJECT NO.:
 2025-003-02
 DATE:
 6/30/2025

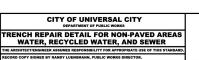
 DRWN. BY:
 RAD
 DSGN. BY:
 JAC
 CHKD. BY:
 JWS
 SHEET NO.:
 2 OF
 5



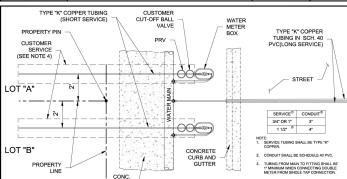
NIVERSAL CIT

- 1. INITIAL AND SECONDARY BACKFILL SHALL BE COMPACTED TO 98% PER TXDOT STANDARD TEX-113-E.
- 2. INITIAL AND SECONDARY MATERIAL PLACED TO REQUIRED HEIGHT IN 6 INCH LIFTS UP TO 12 INCHES ABOVE THE UTILITY
- INITIAL BACKFILL FOR WATER SHALL BE PIT SILICA SAND. INITIAL BACKFILL FOR SEWER SHALL BE 3/4* SEWER GRAVEL PER CUC SPECIFICATIONS.

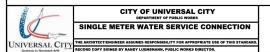
- 6. SIDEWALKS SHALL BE REMOVED ACROSS ITS ENTIRE WIDTH.



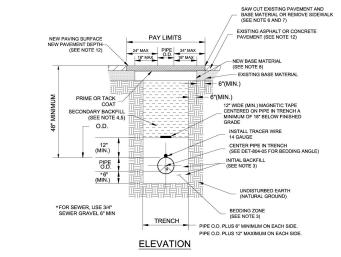
DET-804-02 1 OF 2



- DEVELOPER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF THE METER, INSTALL METER BOXES AND COVERS. ALL IN ACCORDANCE WITH INFORMATION ON APPLICABLE STANDARD DRAWING. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITTINGS.
- DEVELOPER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEM UNTIL THE METER IS INSTALLED AND WATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY THE DEVELOPER, WHO SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT CONNECTIONS TO THE DEPARTMENT OF PUBLIC WORKS SYSTEMS, ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. DEVELOPER ALSO HAS THE RESPONSIBILITY TO ASSURE THAT ALL VALVES, STOPS, AND METER BOXES REMAIN CLEAR OF SIDEWALKS, CURBS AND DRIVEWAYS.
- THE DEPARTMENT OF PUBLIC WORKS ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY WATER SYSTEMS. FOR MAINTENANCE PURPOSES, THE DEPARTMENT OF PUBLIC WORKS RESPONSIBILITY ENDS AT THE WATER METER.
- NO METER BOX SHALL BE SET IN A SIDEWALK , DRIVEWAY, OR CURB AREA WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.
- PIPING AND TUBING IN THE STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN A PIT SAND MATERIAL AND ENCASED IN A SCHEDULE 40 PVC CONDUIT SLEEVE, AS REQUIRED IN THE SPECIFICATIONS. SERVICE LINES SHALL HAVE A MINIMUM COVER BELOW FINAL GRADE OF THIRTY-SIX (36") INCHES.
- PRV WILL MEET ANSI/ASSE 1003-2009 WATER PRESSURE REDUCING VALVE REQUIREMENTS. REDUCED PRESSURE RANGES SHALL BE 15 PSI TO 150 PSI OR AS APPROVED FROM THE DEPARTMENT OF PUBLIC WORKS.



DET-824-01



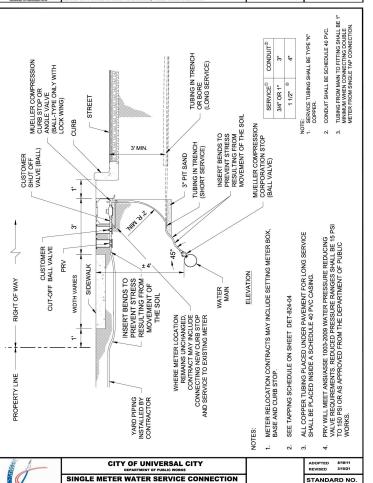
- 2. INITIAL MATERIAL PLACED TO REQUIRED HEIGHT IN 6 INCH LIFTS UP TO 12 INCHES ABOVE THE UTILITY
- INITIAL BACKFILL FOR WATER SHALL BE PIT SILICA SAND. INITIAL BACKFILL FOR SEWER SHALL BE 3/4" SEWER GRAVEL PER CUC SPECIFICATIONS.

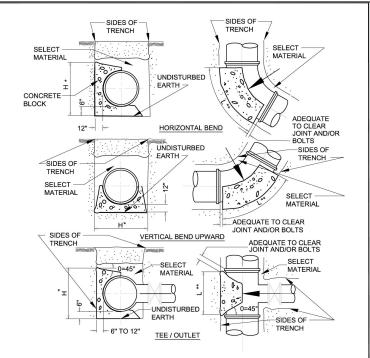
- 10. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND. OF EQUAL THICKNESS
- 11. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 8 INCHES OF BASE OR MATCH EXISTING, WHICHEVER IS GREATER.

NIVERSAL CITY THE ARC

CITY OF UNIVERSAL CITY UTILITY TRENCH REPAIR DETAIL FOR ROADWAY AND ALLEY CROSSINGS

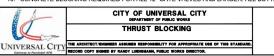
STANDARD NO **DET-804-02**





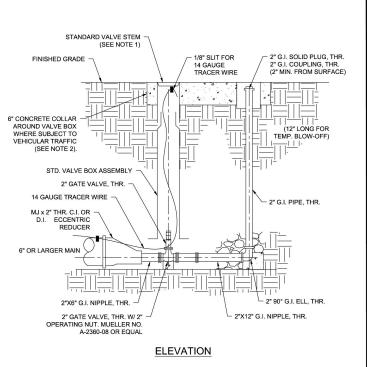
- THE DIMENSION FOR "H" OF THE BLOCK SHALL BE EQUAL TO OR LESS THAN 1/2 THE TOTAL DEPTH FROM FINISHED GRADE TO THE BOTTOM OF THE BLOCK, BUT NOT LESS THAN THE DIAMETER OF THE PIPE. LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 THAN 2 THES "H".

- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAYS.
 THRUST BLOCKING ORIENTATION SHALL BE SUCH THAT THE CENTER OF THE FITTING CORRESPONDS WITH THE
- CENTER OF THE THRUST BLOCK.
- CENTER OF THE THRUST BLUCK.
 PIPES 18" AND LARGER SHALL HAVE RESTRAINED JOINTS.
 POUR THE BASE FOR THE FIRE HYDRANT AFTER IT HAS BEEN PLACED, AND DO NOT BLOCK THE DRAIN HOLES.
 CONCRETE BLOCKING REQUIRED FOR ALL 12" GATE VALVES AND LARGER. ALL BUTTERFLY VALVES 16" OR LARGEF



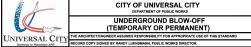
STANDARD NO **DET-812-02**

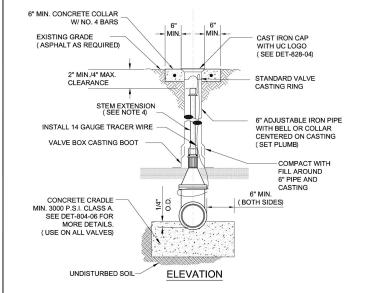




- VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18" AND 24" FROM FINISHED GRADE.
- CASTING AND COVER (INCLUDING COLLAR) SHALL BE TRAFFIC LOAD RATED IF SET IN PAVEMENT OR VEHICLE MOVEMENT AREAS (DRIVEWAY, PARKING LOT, ETC.)

DET-834-04





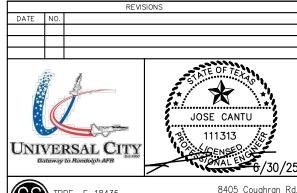
- 1. WELD SOCKET 2 1/2" x 2" DEEP TO 1" (SCH. 40) ROUND STEM EXTENSION. FITTED ON OPERATING, SCH. 80 FOR LENGTHS OVER TEN (10) FEET.
- 2. STANDARD VALVE CASTING RING AND METAL LID IN UNPAVED AREAS.
- 3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE TWO (2") INCHES LONG WELDED TO TOP OF ROD.
- 4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED THREE (3) FEET DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN EIGHTEEN (18') INCHES TO TWENTY-FOUR (24") INCHES FROM THE FINISHED GRADE



DET-824-01

CITY OF UNIVERSAL CITY
DEPARTMENT OF PUBLIC WORKS

STANDARD NO **DET-828-05**

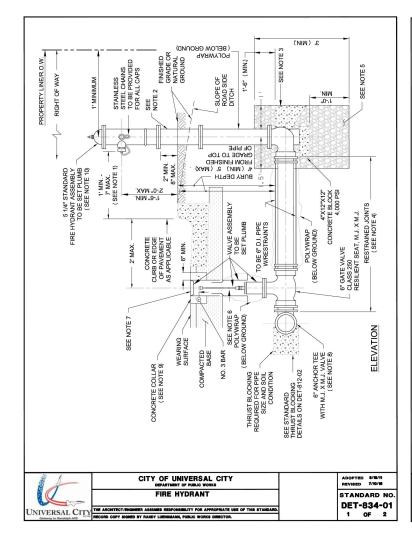


TBPE F-18435 ENGINEERING, INC.

FLINTSTONE WATERLINE UNIVERSAL CITY, TEXAS

WATER DETAIL SHEET-1

DRWN. BY: RAD DSGN. BY: JAC CHKD. BY: JWS ___ SHEET NO.: 4_OF_5_



WI\300 DESIGN\050 CAD\Dwg\C-FLINT WTR DTLS.dwg [DTLS2] Plotted Jun 30, 2025 at 2:17pm by

NOTES:

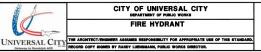
- . IN PUBLIC OR COMMERCIAL AREAS WHERE CURBS AND SIDEWALKS EXIST, VALVES SHALL BE PLACED AT LEAST TWO (2) FEET IN FRONT OF THE CURB AND FIRE HYDRANTS SHALL BE A MINIMUM DISTANCE OF THREE (3) TO SIX (6) FEET BEHIND THE CURB OR EDGE OF PAVEMENT, IN AREAS WITHOUT CURBS OR SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED 3:6" FROM THE MAIN. THE FIRE HYDRANT MAY BE SET NEXT TO THE PROPERTY LINE TO AVOID CONFLICTS WITH SIDEWALKS OR RAMPS, PROVIDED THE MAXIMUM DISTANCES FROM THE STREET OR CURB FACE ARE ACCOUNTED FOR.
- 2. ONE BARREL EXTENSION, NOT EXCEEDING TWO (2) FEET LENGTH, SHALL BE ALLOWED TO BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT IN ORDER TO MEET THE REQUIRED BURY DEPTH OF FOUR TO FIVE (4'-5') FEET. BREAKAWAY BOLTS (SHOE TYPE) SHALL BE PROPERLY SPACED AND PLACED WHEN EXTENSIONS ARE NEEDED TO ACCOMMODATE THE FIRE HYDRANTS.
- 3. CONCRETE BLOCKING WITH A MINIMUM OF TWO (2) FEET BEARING AREA, 4,000 P.S.I. CONCRETE. DO NOT BLOCK DRAIN HOLES (BITUMINOUS FELT PAPER BETWEEN FIRE HYDRANT AND THE CONCRETE.
- I. FIRE LINE SHALL HAVE RESTRAINT JOINT FROM THE MAIN TO THE HYDRANT
- 5. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF THE FIRE HYDRANT FOR A RADIUS OF AT LEAST 1'-6' AND EXTEND AT LEAST 1'-6" ABOVE THE DRAIN OUTLET. DO NOT BLOCK DRAIN HOLES (MUST BE ABLE TO DRAIN).
- 6. WELD SOCKET (2 1/2" x 2") TO 1" SCHEDULE 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT. USE SCHEDULE 80 ROUND STEM EXTENSIONS FOR LENGTHS OVER TEN (10) FEET. VALVE STEM EXTENSIONS SHALL CONSIST OF A SINGLE PIECE, OF REQUIRED LENGTH, WITH A SOCKET ON ONE END AND A NUT ON THE OTHER.
- 7. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED THREE (3) FEET DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN EIGHTEEN (18) AND TWENTY-FOUR (24) INCHES FROM FINISHED GRADE.
- VALVE, DUCTILE IRON PIPE AND FIRE HYDRANT SYSTEM SHALL BE RESTRAINT JOINT CONTINUOUSLY TOGETHER.
- CONCRETE COLLAR AND VALVE COVER SHALL BE TRAFFIC LOAD RATED IN TRAFFIC OR VEHICLE MOVEMENT AREAS (DRIVEWAYS, PARKING LOTS, ETC.). CONCRETE COLLARS SHALL BE ON ALL VALVE SETTINGS.
- 10. FIRE HYDRANT MUST HAVE A CLEARANCE OF THREE (3) FEET ALL AROUND THE FIRE HYDRANT. FOR HIGHWAY INSTALLATION SEE TXDOT SPECIFICATIONS. INSTALL SIX (6°) INCH STEEL PIPE GUARD POST (WITH SAFETY YELLOW PAINT) AS REQUIRED TO PROTECT FIRE HYDRANT FROM VEHICULAR TRAFFIC.
- 11. WHEN A FIRE HYDRANT IS INSTALLED AT A CUL-DE-SAC, IT SHALL BE PLACED A MINIMUM OF EIGHT (8") INCHES AND MAXIMUM OF SIX (6) FEET FROM THE BACK OF THE CURB. THE GATE VALVE SHALL BE TWO (2) FEET MINIMUM FROM THE BACK OF THE CURB TO THE FACE OF THE GATE VALVE, INSTALLED IN THE STREET, ANCHOR WITH REACTION BLOCK BEFORE THE ASSEMBLY.

ADOPTED 8/18/11 REVISED 7/10/15

STANDARD NO

DET-834-01

12. WRAP 8 MIL POLYWRAP ON ALL BURIED PIPE AND FITTINGS.



DATE NO.

DATE NO.

JOSE CANTU



UNIVERSAL CITY

8405 Coughran Rd. Pleasanton,Tx.78064 830.570.3220

111313

FLINTSTONE WATERLINE UNIVERSAL CITY, TEXAS

WATER DETAIL SHEET-2

 100 % SUBMITTAL PROJECT NO.:
 2025-003-02
 DATE:
 6/30/2025

 DRWN. BY:
 RAD
 DSGN. BY:
 JAC
 CHKD. BY:
 JWS
 SHEET NO.:
 5
 5

DATE NO.