



GVSUD CONSTRUCTION PLAN GENERAL NOTES



1. ALL WORKMANSHIP AND MATERIALS FOR THE WATER SYSTEM SHALL CONFORM TO THE CONSTRUCTIONS STANDARDS OF GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD).
2. PIPE 6-INCHES AND ABOVE SHALL BE PVC AWWA APPROVED C-909/C-900 OR PRESSURE CLASS 235. SERVICES SHALL BE MUNICIPEX WITH CTS 200 PSI PLASTIC INSERT. ALL FITTINGS SHALL BE DOMESTIC DUCTILE IRON MECHANICAL JOINTS AND ALL BOLTS SHALL HAVE KOPR KOTE OR APPROVED EQUAL ANTI-SEIZE. VALVES SHALL BE ATTACHED TO TEES BY FOSTER ADAPTOR OR ANCHOR NIPPLE. FOSTER ADAPTER, ANCHOR NIPPLE, OR FORD UNI-FLANGE RETAINER GLANDS AND THRUST BLOCKS SHALL BE USED ON ALL FITTINGS AND VALVES. WATER MAINS SHALL HAVE AN ABSOLUTE MINIMUM DEPTH OF 5- FEET DEPTH IN STREET AND 42-INCHES IN ALL OTHER AREAS. ALL WATERLINES MUST BE BEDDED; BEDDING MATERIAL SHALL BE "MANUFACTURED SAND" - APPROVED BY GVSUD. A TRACER WIRE SHALL BE INSTALLED ON ALL PIPELINES INCLUDING SERVICE LINES AND BROUGHT INTO VALVE AND METER BOXES FOR LOCATING PURPOSES. A 12-INCH WIDE DETECTABLE METAL TAPE SHALL BE PLACED 18-INCHES ABOVE THE PIPE.
3. THE ANGULAR DEFLECTION AT JOINTS SHOULD NOT EXCEED ONE (1) DEGREE. THIS WILL PRODUCE A 4-INCH OFFSET FOR EVERY 20-FOOT SECTION OF PIPE. JOINT DEFLECTION IS ACHIEVED AFTER THE JOINT IS ASSEMBLED IN STRAIGHT ALIGNMENT AND DEFLECTED TO THE REFERENCE MARK. THE BELL SHOULD BE BRACED TO ALLOW THE FREE END TO MOVE Laterally UNDER STEADY PRESSURE USING A PRY BAR OR OTHER SUITABLE MEANS. CARE SHOULD BE TAKEN NOT TO EXCEED THE MAXIMUM DEFLECTION ALLOWED OR TO DAMAGE THE PIPE WITH MACHINERY USED. ABRUPT CHANGES IN DIRECTION SHALL BE ACCOMPLISHED WITH FITTINGS. AVOID OVER STRESSING THE BELL (OVER INSERTING THE JOINTS OR EXCEEDING MAXIMUM DEFLECTION ALLOWED) TO PREVENT POSSIBLE BREAKAGE AND / OR LEAKS.
4. STREETS SHALL BE EXCAVATED DOWN TO SUB-GRADE AND PARKWAYS EXCAVATED TO THE TOP OF CURB BY STREET CONTRACTOR PRIOR TO CONSTRUCTION OF THE SEWER AND WATER MAINS.
5. ALL SEWER PIPES CROSSING THE WATER DISTRIBUTION SYSTEM WILL BE HELD IN STRICT ACCORDANCE WITH TCEQ RULES AND REGULATIONS. PROPOSED SUBGRADE LIMITS AND DIMENSIONS MUST SHOWN ON THE PLANS, AND CONSTRUCTION PROCEDURES WILL BE INSPECTED TO VERIFY WITH TCEQ 290.44(E)(5)(B).



GVSUD CONSTRUCTION PLAN GENERAL NOTES (CONT.)



6. CONTRACTOR SHALL PROVIDE "AS-BUILT" WATER LINE PLANS BEFORE FINAL INSPECTION. THE PLANS SHALL LIST MATERIAL MANUFACTURERS, LINE LENGTH FROM FITTING TO FITTING, TAP LOCATIONS, AND GIS/GPS LOCATION. THE CONTRACTOR SHALL FURNISH GVSUD AS-BUILT DRAWINGS WITH FINAL MEASUREMENTS. CONTRACTOR SHALL PROVIDE AN ASCII COMMA DELIMITED OR EXCEL FILE CONTAINING THREE-DIMENSIONAL GPS SURVEY POINTS WITH FOUR (4) DECIMAL PLACES OF PRECISION, LESS THAN FOUR (4) INCHES OF HORIZONTAL POSITION ACCURACY, AND LESS THAN EIGHT (8) INCHES OF VERTICAL POSITION ACCURACY. POINTS SHALL BE PROVIDED FOR A MINIMUM OF THREE (3) CONTROL POINTS AND ALL FITTINGS, APPURTENANCES, ENCASEMENTS, VAULTS, AND TANKS.
7. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED. CONTRACTOR SHALL INVESTIGATE AND FIELD VERIFY LOCATIONS A MINIMUM OF 48-HOURS BEFORE STARTING WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO, AND FOR MAINTENANCE PROTECTION OF THE EXISTING UTILITIES, WHETHER THEY ARE SHOWN ON THE PLANS OR NOT.
8. A PRE-CONSTRUCTION MEETING SHALL BE HELD BEFORE CONSTRUCTION BEGINS.
9. THE GREEN VALLEY INSPECTOR SHALL BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO BACK FILLING OR TESTING.
10. NO VALVES IN THE GVSUD WATER DISTRIBUTION SYSTEM SHALL BE OPERATED BY THE CONTRACTOR WITHOUT PRIOR PERMISSION OF THE DISTRICT. THE CONTRACTOR SHALL NOTIFY GVSUD WHEN A VALVE IS TO BE OPERATED AND SHALL ONLY OPERATE THE VALVE IN THE PRESENCE OF THE GVSUD REPRESENTATIVE.
11. ALL WATER PIPE, FITTINGS, AND VALVES SHALL BE LAID IN SAND EMBEDMENT. THE SAND SHALL FULLY ENCASE ALL PIPES, INCLUDING FITTINGS AND VALVES, BY A MINIMUM OF 12-INCHES. ALL FITTINGS AND VALVES ARE TO RECEIVE THRUST BLOCKING, FOSTER ADAPTER, ANCHOR NIPPLE, FORD UNI-FLAN RETAINER GLAND JOINT RESTRAINTS, AND BELL JOINT RESTRAINTS WHEN SPECIFIED BY GVSUD OR THE DISTRICT'S ENGINEER.
12. NEW WATER MAINS SHALL PASS PRESSURE TESTING AND THE MINIMUM PUBLIC HEALTH STANDARDS FOR BACTERIOLOGICAL QUALITY PRIOR TO ANY TIE IN TO EXISTING WATER MAINS AND SERVICE LINE TRANSFERS. THE CONTRACTOR SHALL MAKE ALL TIES TO EXISTING MAINS REQUIRED BY THE PLANS AS SOON AS PIPE LAYING REACHES THE DESIGNATED LOCATION EXCEPT WHERE THE PLANS PROVIDE FOR A TIE IN TO BE MADE AFTER NEW MAINS HAVE BEEN APPROVED AND ACCEPTED FOR SERVICE BY THE OWNER.



GVSUD CONSTRUCTION PLAN GENERAL NOTES (CONT.)



13. NO OTHER UTILITIES SHALL BE LOCATED CLOSER THAN 3-FEET TO WATER MAINS.
14. TAPPING MACHINES UTILIZED FOR INSTALLING TAPPING VALVES UP TO 2-INCHES, CORPORATION STOPS, AND AIR RELEASE VALVES WILL BE OF THE PURGE TYPE, WHICH AT THE TIME OF TAPPING SHALL EXPEL ALL CHIPS AND RESIDUE TO ATMOSPHERE THROUGH AN APPROPRIATE OUTLET.
15. PRESSURE TESTING SHALL BE EVERY 200 LF (MAX) OF LINE OR AS APPROVED BY THE ENGINEER. ALL ERRORS OF WORKMANSHIP SHALL BE CORRECTED IMMEDIATELY. ALL PARTS OF THE PIPELINE SHALL BE BACKFILLED AND BRACED SUFFICIENTLY TO PREVENT MOVEMENT UNDER PRESSURE.
16. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
17. SERVICE TAPS TO BE MADE WITH SINGLE BRASS STRAP TAPPING SADDLE WITH IRON PIPE THREADS. ALL TAPS SHALL BE 1-INCH, INCLUDING SINGLE SERVICES. (EXCEPTION: IF LOCATED WITHIN CITY OF CIBOLO) SERVICE TAPS TO BE MADE WITH DOUBLE STAINLESS STRAP EPOXY COATING SADDLES WITH IRON PIPE THREADS.
18. STANDARD FIRE HYDRANT SHALL INCLUDE HYDRANT, 6-INCH RESILIENT GATE VALVE AND BOX, ANCHOR FITTINGS, PIPE, AND ALL APPURTENANCES. HYDRANTS SHALL BE LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, OR EAST JORDAN. HYDRANT BARRELS SHALL BE RED, AND HYDRANT SHALL HAVE A STORZ CONNECTION ON STEAMER NOZZLE. FITTINGS FOR PLUG TO BE TIED TO VALVE. ONLY MUELLER HYDRANTS SHALL BE USED IN CITY OF CIBOLO'S JURISDICTION.
19. VALVES SHALL BE AWWA APPROVED RESILIENT SEATED GATE VALVE, OPEN LEFT, AND LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, OR EAST JORDAN. CONTRACTOR SHALL INSTALL VALVES AS TO NOT INTERFERE WITH CURB OR WHEELCHAIR RAMPS. NO WATER METER SERVICES MAY BE SET IN WHEEL CHAIR RAMPS.
20. CONTRACTOR SHALL CHLORINATE NEW MAINS WITH HTH; THE CONTRACTOR SHALL COORDINATE WITH THE GVSUD INSPECTOR TO WITNESS CHLORINATING OF NEW MAINS AND PRESSURE TEST. ACCEPTABLE TEST RESULTS MUST BE PROVIDED TO GVSUD.
21. ALL SERVICE CROSSINGS TO BE ENCASED WITH NO LESS THAN 3-INCH PVC GLUED TYPE PIPE. 2-INCH CROSSINGS TO BE 2-INCH CERTA-LOK YELOMINE PIPE WITH HARCO FITTINGS THROUGH A 4-INCH PVC GLUED TYPE PIPE.



GVSUD CONSTRUCTION PLAN GENERAL NOTES (CONT.)



22. NO TREES MAY BE PLANTED IN THE AREAS DESIGNATED AS WATER OR UTILITY EASEMENTS, OR AREAS WHERE WATER MAINS AND WATER SERVICE CROSSINGS EXIST OR ARE PLANNED TO BE CONSTRUCTED.
23. ALL GARBAGE OR SPOIL MATERIAL FROM THE WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT CONTRACTOR'S EXPENSE.
24. SINGLE METER BOXES SHALL BE DFW36C 16" X 11" PLASTIC METER BOX WITH REBAR, ARM, AND KNOCK OUT. DOUBLE METER BOXES SHALL BE DFW38C 17" X 15" DUAL PLASTIC METER BOX WITH REBAR, ARM, AND KNOCK OUT. 1-INCH METER BOXES SHALL BE DFW65C-14-1A 15 1/4" X 30 3/8" PLASTIC METER BOX WITH REBAR, ARM, AND KNOCK OUT.
25. THE FORD U BRANCH TO BE USED ON ALL DUAL SERVICES (U48-43Q) WITH THE 5/8" X 3/4" FEMALE THREAD ANGLE HEAD. ALL OTHER ANGLE HEADS WILL BE THE FORD Q NUT. ALL CORPORATION STOPS WILL BE IPS X Q NUT. NO CC THREADED CORPORATION STOPS WILL BE ACCEPTED.
26. GVSUD CONTACT NUMBER: 830-914-2330

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