

## **REQUIRED LVVWD INSPECTIONS**

**NOTE:**

*A. ALL MATERIALS USED MUST BE ON THE LVVWD APPROVED PRODUCTS LIST.*

*B. WHEN NATIVE SOILS ARE USED, THE INSPECTOR MUST BE PRESENT WHEN REPRESENTATIVE SAMPLES ARE OBTAINED, A SOILS ANALYSIS MUST BE SUBMITTED TO THE INSPECTOR AND THE SOIL MUST MEET THE REQUIREMENTS OF TABLE G OF THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS" (UDACS), OR BE ON THE INTER-AGENCY QUALITY ASSURANCE COMMITTEE "QUALIFIED MATERIALS LIST".*

**PRE-CONSTRUCTION MEETING / FIELD START** - THIS MEETING IS REQUIRED SO THE LVVWD INSPECTOR, THE DEVELOPER, AND THE CONTRACTOR CAN REVIEW DETAILS OF INSPECTION PROCESSES AND SPECIFICS AS WELL AS ANY SPECIAL REQUIREMENTS CALLED OUT ON THE PROJECT. CONTRACTOR OR DEVELOPER MUST SCHEDULE THE FIELD START MEETING PRIOR TO START OF WORK.

**1A. FIXED TIMES FOR INSPECTIONS ARE AVAILABLE ONLY FOR THE FOLLOWING:**

- FIELD MEETINGS
- WET TAPS
- PRESSURE TESTS
- VALVE OPERATIONS
- WATER SAMPLING
- FINAL WALK-THROUGH

**1B. DISTRICT INSPECTIONS OCCUR BETWEEN 6:00 A.M. AND 4:00 P.M., MONDAY THROUGH THURSDAY. OVERTIME FEES APPLY FOR INSPECTIONS PERFORMED OUTSIDE OF THESE BUSINESS HOURS.**

**2. WET TAPS** - WET TAPS MUST BE SCHEDULED AND INSPECTED PRIOR TO THE TAP OCCURRING. THE INSPECTOR WILL USE SURVEY STAKING TO VERIFY TAP SIZE, LOCATION, AND EASEMENTS. A 15 MINUTE, 200-PSI PRESSURE TEST OF TAPPING SADDLES, TEES, AND VALVES MUST BE PERFORMED PRIOR TO THE WET TAP. THERE MUST BE NO LOSS OF PRESSURE DURING THE TEST.

**2A. DISINFECTION OF WET TAP AND APPURTENANCES** - THE INSPECTOR MUST VERIFY THAT A 200 PPM CHLORINE SOLUTION IS USED TO DISINFECT ALL NEWLY INSTALLED APPURTENANCES ALONG WITH THE OUTSIDE OF THE EXISTING WATER MAIN.

**3. UNDERGROUND INSPECTIONS** - "REQUIRED" BEFORE ANY NEWLY INSTALLED FACILITIES ARE BACKFILLED OR COVERED. ELEVATION AND LOCATION SURVEY STAKING MUST BE IN PLACE AT 50-FOOT INTERVALS DURING CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO PROTECT AND MAINTAIN STAKING DURING CONSTRUCTION. THE INSPECTOR WILL TAKE FIELD MEASUREMENTS TO VERIFY THAT THE INSTALLATION IS IN ACCORDANCE WITH THE APPROVED PROJECT PLANS. PIPE JOINT DEFLECTION IS LIMITED TO ONE DEGREE. BENDING OF PIPE IS NOT ALLOWED. ENGINEER APPROVAL IS REQUIRED WHEN TRENCH WIDTH EXCEEDS UDACS STANDARD PLATES # 16, #17, #18.

**3A. ALL UTILITY CROSSINGS MUST BE SCHEDULED TO VERIFY THAT OTHER UTILITIES SUCH AS POWER, GAS, STORM DRAIN AND SEWER HAVE THE APPROPRIATE VERTICAL AND HORIZONTAL SEPARATIONS AND APPROPRIATE USE OF JOINT SEALANT. WHEN REQUIRED, JOINT SEALANT NEEDS TO BE INSPECTED TO MEET THE ACCEPTABLE POTABLE / NON-POTABLE REQUIREMENTS. IF WATER QUALITY SEWER PIPE IS CALLED OUT ON THE APPROVED PLANS, A LVVWD INSPECTOR MUST VERIFY AND NOTATE INSTALLATION.**

**3B. WATER SERVICE LATERALS AND SEWER LATERALS MUST BE INSTALLED PER SURVEY STAKING.**

**4. GPS SCHEDULING** - CONTRACTORS ARE ENCOURAGED TO INSTALL APPURTENANCES SO THAT GPS DATA CAN BE COLLECTED EFFICIENTLY AND BEFORE ANY BACKFILLING OCCURS. THE LVVWD INSPECTOR WILL SCHEDULE FOR COLLECTION OF GPS DATA AFTER A PASSING UNDERGROUND INSPECTION. GENERALLY, GPS DATA WILL BE COLLECTED THE NEXT WORK DAY.

**5. SURVEY OF PIPELINE GRADES** - WHEN THE PROJECT PLANS SHOW THE WATERLINE OR A SECTION OF WATERLINE ON A PROFILE, THE CONTRACTOR MUST SUPPLY SURVEY STAKING TO MATCH THE STATIONS OR LOCATIONS SHOWN ON THE APPROVED LVVWD PROJECT PLANS. CUT SHEETS MUST BE PROVIDED BY A LICENSED SURVEYOR WITH THE WET STAMP SEAL. THE CONTRACTOR MUST PROVIDE A COPY FOR THE INSPECTOR. THE LVVWD INSPECTOR WILL VERIFY THAT THE PROFILE AND THE CUT SHEET ELEVATIONS MATCH THE APPROVED PLANS. (UDACS SECTION - 3 /3.06)

**6. THRUST AND ANCHOR BLOCK PRE-POUR INSPECTIONS** - THE LVVWD INSPECTOR WILL VERIFY THAT THE SIZE OF THE

EXCAVATIONS COMPLY WITH UDACS STANDARD PLATES # 30 AND / OR # 31. APPROVED REINFORCING STEEL MUST BE IN PLACE AT THE TIME OF INSPECTION. **GPS SHOTS MUST BE TAKEN PRIOR TO BACKFILLING.**

**7. COATING OF FERROUS MATERIALS** – THE LVVWD INSPECTOR MUST VERIFY THAT ALL NUTS, BOLTS, AND ALL-THREAD FITTINGS ARE COATED WITH AGENCY APPROVED COATING.

**8. WRAPPING OF FERROUS MATERIALS** - ALL FITTINGS MUST BE WRAPPED WITH A MINIMUM OF 2 LAYERS OF 8 MIL. POLYETHYLENE AS PER UDACS 3.11.04 D.

**9. THRUST AND ANCHOR BLOCK POST POUR INSPECTION** - THE INSPECTOR MUST VERIFY THAT THE SIZE OF THE PLACED CONCRETE COMPLIES WITH UDACS STANDARD PLATE # 30 AND OR # 31. REBAR IS IN CONTACT WITH FITTINGS.

**10. WATER SERVICE LATERAL INSTALLATIONS** – SERVICES LOCATIONS MUST BE STAKED OUT AND INSTALLED AS PER THE APPROVED PLANS AND MUST BE OF THE SIZE SHOWN ON THE PLANS. THE NUMBER OF SERVICES INSTALLED MUST COMPLY WITH THE QUANTITIES SHOWN ON THE APPROVED PLANS.

**10A.** - 4 INCHES OF SAND BEDDING MUST BE INSPECTED PRIOR TO COVERING THE SERVICES WITH 4 INCHES OF TOP SAND, WHICH MUST ALSO BE INSPECTED. KINKED OR DAMAGED COPPER TUBING MUST BE REPLACED. NO COUPLINGS ARE ALLOWED ON NEW SERVICE LATERAL INSTALLATIONS WITHOUT LVVWD CONSENT. BOTH ENDS OF THE COPPER SERVICE LATERAL MUST BE REAMED AND THE REAMING MUST BE VERIFIED BY THE LVVWD INSPECTOR. ANY ADJUSTMENTS TO ANY COPPER SERVICE LATERAL MUST BE SCHEDULED. WHEN ADJUSTMENTS ARE MADE, A NEW COMPRESSION GASKET IS REQUIRED. INSTALLATION OF THE NEW COMPRESSION GASKETS MUST HAPPEN WITH THE LVVWD INSPECTOR PRESENT.

**11. CASINGS** - CASINGS MUST BE INSPECTED PRIOR TO PLACEMENT. WELDING PERFORMED ON CASINGS MUST BE COMPLETED BY A LICENSED WELDER AND INSPECTED. PIPING BEING PLACED INTO CASINGS MUST BE INSPECTED PRIOR TO PLACEMENT IN THE CASINGS. PIPING INSIDE CASINGS MUST BE RESTRAINED AND FITTINGS PROPERLY TORQUED. APPROVED CASING SPACERS MUST BE PLACED AS SHOWN ON UDACS STANDARD PLATE #23. ALL FITTINGS INSIDE THE CASING MUST BE GREASED, WRAPPED, TAPED, AND INSPECTED PRIOR TO PLACEMENT INTO CASINGS. CASINGS MUST BE FILLED WITH CLSM 1 OR AGENCY APPROVED MATERIALS.

**12. ABANDONMENTS** - WHERE PIPING AND / OR APPURTENANCES ARE SHOWN TO BE ABANDONED, THE LVVWD INSPECTOR MUST INSPECT AND AS-BUILT THE ABANDONMENT. THE CONTRACTOR MAY BE REQUIRED TO RETURN METERS AND BACKFLOW DEVICES TO THE MAIN LVVWD YARD.

**13. MARKER BALLS** - MARKER BALLS MUST BE PLACED OVER ALL FITTINGS IN ACCORDANCE WITH UDACS STANDARD PLATE # 15. THE CONTRACTOR MUST VERIFY THAT MARKER BALLS CAN BE DETECTED USING DETECTION EQUIPMENT BEFORE SCHEDULING A FINAL WALK THROUGH INSPECTION WITH LVVWD. A PROJECT WILL NOT BE ACCEPTED IF ALL MARKER BALLS CANNOT BE LOCATED.

**14. DENSITY TESTING** - DENSITY TESTING MUST BE PERFORMED BY THE LVVWD INSPECTOR ON ALL EXCAVATIONS. THE CONTRACTOR MUST SCHEDULE DENSITY TESTING ONE DAY IN ADVANCE. FAILING AREAS MUST BE REWORKED AND TESTING RESCHEDULED BY THE CONTRACTOR.

**15. SEWER / WATER CROSSINGS** - WHEN WATER AND SEWER / STORM MAIN CROSSINGS OCCUR, THE APPROPRIATE PROVISIONS OF UDACS SECTIONS 2.2.01 THROUGH 2.22.02. ARE TO BE FOLLOWED AND APPLIED.

**16. START OF 24-HOUR CHLORINE CONTACT PERIOD** - A 50 PPM CHLORINE SOLUTION MUST BE MIXED AND THEN INJECTED INTO NEWLY INSTALLED MAINS AND APPURTENANCES. THE CONTRACTOR MUST SCHEDULE A CHLORINE START INSPECTION WHERE THE LVVWD INSPECTOR VERIFIES THAT THE CHLORINE SOLUTION IS AT THE CORRECT 50 PPM DOSAGE AND EVENLY DISTRIBUTED THROUGHOUT THE SYSTEM. CARE MUST BE TAKEN TO ASSURE THAT EXISTING POTABLE WATER FACILITIES ARE NOT CONTAMINATED WITH CHLORINATED OR NON-POTABLE WATER. ALL VALVES THAT CONNECT THE NEWLY INSTALLED FACILITIES TO THE EXISTING POTABLE WATER SYSTEM MUST REMAIN IN THE CLOSED POSITION DURING THE CHLORINATION PROCESS. THE CHLORINE SOLUTION MUST REMAIN IN THE SYSTEM FOR 24 HOURS AND THE CONTRACTOR MUST SCHEDULE A CHLORINE END INSPECTION.

**17. END OF 24 HOUR CHLORINE CONTACT PERIOD** - THE CONTRACTOR MUST SCHEDULE A CHLORINE END INSPECTION. THE CHLORINE DOSAGE MUST BE AT LEAST 10 PPM OR THE CHLORINATION HAS FAILED AND THE MAIN MUST BE FLUSHED, RECHLORINATED, AND A NEW CHLORINE START INSPECTION MUST BE SCHEDULED.

**18. 2 HOUR PRESSURE TEST** - NEWLY INSTALLED MAINS AND APPURTENANCES MUST HOLD FOR A 2 HOUR, 200 PSI PRESSURE TEST. THE CONTRACTOR MUST SCHEDULE THE DATE AND TIME OF THE PRESSURE TEST. A METER AND A PUMP MUST BE INSTALLED ON THE SYSTEM THAT IS BEING TESTED AND THE CONTRACTOR MUST NOT LET THE PRESSURE DROP BELOW 195 PSI FOR THE ENTIRE 2-HOUR TEST. IF THE PRESSURE TEST FAILS AND REPAIRS ARE MADE, AN INSPECTION MUST BE CONDUCTED ON THE REPAIRS, AND THE REPAIRS MUST BE DOCUMENTED BY THE LVVWD INSPECTOR.

THE CONTRACTOR MUST RE-TEST THE SYSTEM BEFORE SCHEDULING ANOTHER PRESSURE TEST INSPECTION WITH LVVWD

**19. BIOLOGICAL HEALTH SAMPLES** - AFTER PASSING ALL PREREQUISITE INSTALLATION, DISINFECTION, AND PRESSURE TESTING INSPECTIONS, THE CONTRACTOR WILL SCHEDULE THE LVVWD INSPECTOR TO COLLECT HEALTH SAMPLES. THE NEWLY INSTALLED SYSTEM SHALL REMAIN ISOLATED FROM THE EXISTING POTABLE WATER SYSTEM BY CLOSED VALVES. FINAL CONNECTIONS BETWEEN THE NEWLY-INSTALLED SYSTEMS AND EXISTING POTABLE WATER SYSTEMS CAN BE MADE ONLY AFTER NOTIFICATION OF PASSING HEALTH SAMPLES. ANY FAILING HEALTH SAMPLES MUST TAKE THE CORRECTIVE ACTION SHOWN ON THE LVVWD RETEST FORM, WHICH MAY INCLUDE FLUSHING AND RE-CHLORINATION OF THE ENTIRE SYSTEM. NEW HEALTH SAMPLES MUST BE TAKEN FROM THE SAME LOCATION THAT THE PREVIOUS FAILING HEALTH SAMPLES WERE TAKEN FROM.

**20. CONCRETE PADS AND / OR COLLARS** - PLACEMENT OF PROPER BACKFILL AND COMPACTION TO THE APPLICABLE STANDARD IS REQUIRED PRIOR TO ANY CONCRETE PLACEMENT. INSPECTION OF BACKFILL AND DENSITY TESTING IS REQUIRED. BACKFLOW PADS, FIRE HYDRANT SHEAR PADS, AVAR PADS, METER BOX COLLARS, AND VALVE COLLARS MUST HAVE HAD INSPECTIONS SCHEDULED PRIOR TO CONCRETE PLACEMENT. FAILURE TO SCHEDULE THESE PRE-POUR INSPECTIONS WILL RESULT IN REMOVAL OF THE PAD OR COLLAR AND A FAILED INSPECTION OF THE NEWLY FORMED COLLAR OR PAD. REBAR OR MESH REINFORCEMENT MUST BE INSTALLED PRIOR TO SCHEDULING PRE-POUR INSPECTION. ADOBE BLOCKS MUST BE USED TO ENSURE THAT THE REBAR / MESH REINFORCEMENT IS NOT TOUCHING THE GROUND. REFER TO UDACS STANDARD PLATES #1, #2, #3, AND #4 FOR METER BOX PRE-POURS, UDACS STANDARD PLATE #8 FOR SMALL RPPA, STANDARD PLATE #36 FOR 2" BLOWOFF, PLATE #37 & 38 FOR 6" MANUAL BLOW OFFS, STANDARD PLATE #38 FOR AVAR PAD AND ENCLOSURE, STANDARD PLATE #39 FOR VALVE CAN COLLARS, STANDARD PLATE #40 & 41 FOR FIRE HYDRANT SHEAR PADS, AND STANDARD PLATES #56 - #59 FOR LARGE BACKFLOW ASSEMBLIES.

**21. VAULT INSTALLATION** - PROPER PLACEMENT OF APPROVED BACKFILL IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE. COMPACTION AND DENSITY TESTING BY LVVWD INSPECTION IS REQUIRED PRIOR TO CONCRETE PLACEMENT. REINFORCEMENTS MUST BE INSPECTED ON THE VAULT FLOOR, VAULT WALLS AND ROOF PRIOR TO PLACEMENT OF CONCRETE. ALL CONCRETE USED MUST BE LISTED ON THE IQAC WEBSITE UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR WILL PROVIDE THE LVVWD INSPECTOR WITH COPIES OF ALL BATCH TICKETS. THE LVVWD INSPECTOR WILL PROVIDE THE CONTRACTOR WITH LVVWD APPLICATION NUMBERS TO STAMP ON THE INSIDE OF THE VAULT HATCH, THE LADDER AND LADDER SUPPORT PRIOR TO FINAL INSPECTION.

**22. BACKFLOW TESTING** - THE LVVWD INSPECTOR MUST INSPECT THE BRASS PIPING INSTALLED FOR SMALLER BACKFLOW ASSEMBLIES PRIOR TO CONCRETE PAD PLACEMENT. ALL PARTS, PIPING, AND ASSEMBLIES MUST COME FROM THE APPROVED PRODUCTS LIST UNLESS OTHERWISE SPECIFIED ON THE APPROVED PLANS. THE WATER SYSTEM MUST HAVE PASSED INSPECTIONS FOR DISENFECTION, PRESSURE TESTING, AND HEALTH SAMPLING BEFORE A BACKFLOW TEST INSPECTION CAN BE SCHEDULED. THE BACKFLOW PAD MUST HAVE PASSED INSPECTION AND THE PAD POURED WITH AN APPROVED BACKFLOW ENCLOSURE PRIOR TO CONTRACTOR SCHEDULING FOR (BFT). WHEN ALL COMPLETE CONTRACTOR CAN CALL AND SCHEDULE FOR A BACKFLOW INSPECTION.

**23. CERTIFICATE OF OCCUPANCY (C OF O) INSPECTION** - THE DISTRICT-ISSUED METER MUST BE INSTALLED INTO AN APPROVED DISTRICT METER BOX WITH LID. BOTH THE METER AND THE METER BOX MUST BE OF THE SIZE SPECIFIED ON THE PROJECT PLANS. THE METER, METER BOX, AND PIPING MUST BE ALIGNED PROPERLY WITHIN THE BOX. THE METER BOX MUST BE CLEAN, DRY, AND FREE OF DEBRIS. THE METER AND ALL RELATED APPURTENANCES SHOULD NOT BE LEAKING. METER INSTALLATIONS SHOULD COMPLY WITH APPLICABLE STANDARD PLATE #1 THROUGH #7. THE LOCATION OF THE SEWER AND WATER LATERALS MUST BE SCRIBED IN THE CURB LINE. WATER AND SEWER MUST BE SEPARATED BY A MINIMUM OF 4' OR THE C OF O WILL NOT BE RELEASED.

**24. FINAL INSPECTION** - ALL PRE-REQUISITE INSPECTIONS SUCH AS UNDERGROUND INSPECTION, DENSITY TESTING, DISINFECTION OF FACILITIES, HEALTH SAMPLING, PAD AND COLLAR INSPECTIONS, BACKFLOW TESTING, MARKER BALL PLACEMENT MUST ALL HAVE PASSED PRIOR TO SCHEDULING FINAL INSPECTION. THE CONTRACTOR MUST HAVE ALL VALVES CLEAN, COLLARED, ACCESSIBLE, AND IN THE OPEN POSITION. ALL FIRE HYDRANTS MUST BE PAINTED AND GREASED. ALL METER BOXES WILL BE OPENED AND INSPECTED. THE CONTRACTOR MUST VERIFY THAT ALL MARKER BALLS CAN BE DETECTED BEFORE SCHEDULING FINAL INSPECTION.