

GENERAL WATER NOTES

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED INTO THESE CONTRACT DOCUMENTS BY REFERENCE:
 - a. *PARK CITY DESIGN STANDARDS, CONSTRUCTION SPECIFICATIONS, AND STANDARD DETAILS*
 - b. AMERICAN WATER WORKS ASSOCIATION STANDARDS (AWWA)
 - c. UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER (DDW), R309-550 FACILITY DESIGN AND OPERATION: TRANSMISSION AND DISTRIBUTION PIPELINES
 - d. INTERNATIONAL PLUMBING CODE
2. ALL PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO ANSI/NSF STANDARD 61 AND APPLICABLE SECTIONS OF AWWA STANDARDS C104-08 THROUGH C550-05 AND C900-07 THROUGH C950-07. ALL BRASS AND BRONZE PIPE, FITTINGS, AND VALVES SHALL MEET LOW LEAD COMPLIANCE REQUIREMENTS IN ACCORDANCE WITH ANSI/ASTM 371.
3. ALL PRODUCTS AND MATERIALS SHALL BE "MADE IN THE USA", UNLESS SPECIFICALLY APPROVED BY THE PARK CITY WATER DIRECTOR. STEEL AND IRON MATERIAL PRODUCTS SUCH AS PIPE, FITTINGS, VALVES, MANHOLE, METER VAULT, AND VALVE BOX CASTINGS SHALL BE "MELTED & MANUFACTURED IN THE USA". PARK CITY WATER ACKNOWLEDGES THAT CERTAIN SPECIALIZED WATER SYSTEM PRODUCTS INCLUDED IN THE ACCEPTABLE PRODUCTS LIST, SUCH AS HIGHER PRESSURE-RATED VALVES, MAY NOT MEET THE MADE IN USA REQUIREMENT AND ARE IN THE "QUALIFIED" MADE IN USA CATEGORY. THESE PRODUCTS HAVE BEEN PREVIOUSLY REVIEWED AND APPROVED.
4. UTAH DIVISION OF DRINKING WATER (DDW) APPROVALS:
 - a. FOR PROJECTS WITH TRANSMISSION AND/OR DISTRIBUTION LINES OVER 16 INCHES IN DIAMETER AND/OR INCLUDING A WATER BOOSTER STATION OR PRESSURE REDUCING STATION, DDW APPROVALS OUTLINED IN R309-500 MUST BE OBTAINED IN CONJUNCTION WITH SUBMITTAL OF A WATER MASTER PLAN TO THE CITY. FOLLOWING DESIGN REVIEW BY THE CITY AND INCORPORATION OF CITY COMMENTS, THE DESIGN ENGINEER SHALL SUBMIT WATER CONSTRUCTION PLANS TO THE DDW TO OBTAIN APPROVALS. NO WATER CONSTRUCTION SHALL COMMENCE UNTIL ALL REQUIRED DDW APPROVALS HAVE BEEN OBTAINED.
 - b. FOR PROJECTS WITH TRANSMISSION AND/OR DISTRIBUTION LINES OVER 16 INCHES IN DIAMETER AND/OR INCLUDING A WATER BOOSTER STATION OR PRESSURE REDUCING STATION A DDW FINAL OPERATING PERMIT IS REQUIRED PRIOR TO THE CITY OPERATING AND ACCEPTING THE WATER IMPROVEMENTS. FOLLOWING THE CITY'S WATER SYSTEM WALK-THROUGH AND THE CONTRACTOR'S SUBSEQUENT COMPLETION OF PUNCH-LIST ITEMS, THE CITY'S WATER DEPARTMENT WILL SUBMIT AN OPERATING PERMIT REQUEST TO THE DDW. THE FOLLOWING ITEMS ARE REQUIRED FROM THE DEVELOPER FOR THE CITY'S SUBMITTAL:
 - i. FINAL RECORD DRAWINGS AND O&M MANUALS
 - ii. HYDROSTATIC TESTING AND FLUSHING RECORDS (COMPLETED BY THE CITY'S INSPECTOR)
 - iii. ACCEPTABLE BACTERIOLOGICAL TESTING RESULTS
 - iv. CERTIFICATION BY THE (DEVELOPER'S) ENGINEER OF RECORD
5. THE CITY UTILIZES AN ADVANCED METERING INFRASTRUCTURE (AMI) SYSTEM. THE DEVELOPER MAY BE REQUIRED TO CONDUCT A PROPOGATION STUDY AND INSTALL RESULTING RECOMMENDED IMPROVEMENTS TO FACILITATE A CLEAR SIGNAL TO THE PROJECT. REFER TO STANDARD PLAN 520 FOR SPECIFIC METER TRANSMITTER UNIT (MXU) REQUIREMENTS.
6. REFER TO APPLICABLE STANDARD PLANS FOR WATER SYSTEM DETAILS AND REQUIREMENTS
7. EXTERNAL CORROSION PROTECTION SHALL BE INCLUDED ON ALL WATER SYSTEM IMPROVEMENTS, REFERENCE STANDARD PLAN 534 FOR REQUIREMENTS. A SOILS ANALYSIS MAY BE REQUIRED IN CONJUNCTION WITH THE DESIGN OF THE WATER SYSTEM TO DETERMINE THE EXTENT OF CORROSION PROTECTION REQUIRED.
8. REFER TO STANDARD PLAN 520 FOR GENERAL REQUIREMENTS FOR WATER METERS, METER VAULTS, AND WATER SERVICE LINES
9. CITY INSPECTION OF WATER SYSTEM IMPROVEMENTS WILL FOLLOW THE "*PUBLIC WATER SYSTEM FIELD OBSERVATION GUIDELINES*" AND ESTABLISHED CITY POLICIES. CONTRACTOR SHALL PROVIDE NECESSARY ASSISTANCE TO MEET THE GUIDELINE REQUIREMENTS.
10. NOTIFY CITY ENGINEER'S OFFICE AT LEAST 48 HOURS BEFORE PERFORMING ANY WATER RELATED WORK. ARRANGE A PRECONSTRUCTION CONFERENCE SPECIFIC TO WATER CONSTRUCTION WITH THE CITY ENGINEER AND WATER DEPARTMENT AT LEAST 48 HOURS BEFORE START OF WORK. FOR PROJECTS INVOLVING ONLY SERVICE LINE AND/OR METER VAULT INSTALLATION, AN ON-SITE MEETING WITH THE CITY ENGINEER 48 HOURS PRIOR TO CONSTRUCTION IS ACCEPTABLE.
11. FOR TEMPORARY USE OF EXISTING WATER SYSTEM AND FIRE HYDRANTS TO OBTAIN CONSTRUCTION WATER, REFER TO STANDARD PLAN 531.

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12. ALL CONSTRUCTION OF WATER SYSTEM SHALL BE CLEARLY STAKING BY THE DEVELOPER'S OR CONTRACTOR'S SURVEYOR. STAKING SHALL INCLUDE ALL BENDS, VALVES, HYDRANTS, SERVICES, METER VAULTS, AND SPECIALS. A MINIMUM OF 50-FOOT STATIONING IS REQUIRED FOR PIPELINE.
13. CHANGES TO THE APPROVED WATER PLANS, INCLUDING PIPE ALIGNMENT, SIZE, AND DEPTH AS WELL AS FITTINGS, VALVES, SERVICES, AND METER VAULT LOCATIONS SHALL BE AUTHORIZED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
14. WATER SERVICE INTERRUPTION. THE FOLLOWING SHALL BE MET WITH RESPECT TO THE INTERRUPTION OF SERVICE TO CUSTOMERS INCLUDING THE SHUTDOWN OF THE EXISTING WATER SYSTEM:
 - a. CONTRACTOR SHALL NOT OPERATE EXISTING WATER VALVES
 - b. SCHEDULE SERVICE WORK REQUIRING WATER SERVICE INTERRUPTIONS OR SHUTDOWN OF THE EXISTING WATER SYSTEM A MINIMUM OF 96 HOURS IN ADVANCE WITH THE WATER DEPARTMENT (48HR WATER DEPARTMENT REVIEW, AND 48HR NOTIFICATION PERIOD)
 - c. LIMIT INTERRUPTIONS TO OCCUR AND BE COMPLETED ON MONDAY THRU THURSDAY, 9:00 AM TO 4:00 PM. NO INTERRUPTIONS SHALL OCCUR ON FRIDAYS, WEEKENDS, OR HOLIDAYS.
 - d. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION TO AFFECTED CUSTOMERS. CONTACT THE WATER DEPARTMENT FOR NOTIFICATION REQUIREMENTS. BE ADVISED THAT ON OCCASION VALVES IN THE EXISTING WATER SYSTEM MAY BE INOPERABLE AND MAY REQUIRE NOTIFICATION OF A LARGER AREA. IF VALVE MAINTENANCE IS REQUIRED, A SHUTDOWN DELAY OF SEVERAL DAYS SHOULD BE EXPECTED.
 - e. FOR WATER SHUTDOWNS LONGER THAN 8 HOURS, CONTRACTOR SHALL SUBMIT A TEMPORARY WATER PLAN TO KEEP ALL CUSTOMERS IN SERVICE. ALL COSTS ASSOCIATED WITH MAINTAINING SERVICE TO AFFECTED CUSTOMERS SHALL BE BORNE BY THE CONTRACTOR
 - f. CONTRACTOR SHALL HAVE ALL PERTINENT PARTS AND MATERIALS ON SITE PRIOR TO SHUTDOWN OF THE WATER SYSTEM BY THE WATER DEPARTMENT
 - g. CONSTRUCTION EXCAVATION MUST BE PREPARED AND THE WATER MAIN EXPOSED PRIOR TO SHUTDOWN OF THE WATER SYSTEM
15. EXPOSE EXISTING WATER PIPES AND VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO INSTALLING NEW IMPROVEMENTS, POTHOLE ANY AND ALL UTILITIES TO ELIMINATE POTENTIAL CONFLICTS
16. THE HORIZONTAL DISTANCE BETWEEN WATER LINES AND SANITARY SEWER LINES SHALL BE AT LEAST 10 FEET. WHERE A WATER MAIN AND SEWER MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18 INCHES ABOVE THE SEWER LINE. SEPARATION DISTANCES SHALL BE MEASURED EDGE-TO-EDGE (I.E. FROM THE NEAREST EDGES OF THE FACILITIES)
17. IF THE BASIC SEPARATION STANDARDS CANNOT BE MET, AN EXCEPTION TO THE RULE CAN BE APPLIED WITH ADDITIONAL MITIGATION MEASURES TO PROTECT PUBLIC HEALTH, IN ACCORDANCE WITH UTAH ADMINISTRATIVE CODE R309-105-6(2)(B).
18. THE OPEN ENDS OF ALL PIPELINES UNDER CONSTRUCTION SHALL BE COVERED AND EFFECTIVELY SEALED AT THE END OF THE DAY'S WORK.
19. PROVIDE ACCESS TO EXISTING MAIN LINE VALVES THROUGHOUT CONSTRUCTION. ALL VALVES MUST BE ACCESSIBLE WITHIN 24 HOURS AFTER PAVING OR COLLAR ADJUSTMENTS.
20. UNDER NO CIRCUMSTANCE SHALL THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH.
21. WHERE JOINING EXISTING ASBESTOS CEMENT PIPE, CUT IN ACCORDANCE WITH OSHA REQUIREMENTS AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS.
22. PROVIDE EXTENSIONS ON VALVE STEM TOPS HAVING OVER 5 FEET BURY. REFER TO STANDARD PLAN 570.
23. INSTALL AIR AND VACUUM VALVES PER STANDARD PLANS 574 AND 575 AT HIGH POINTS (8" DIAMETER PIPE OR LARGER) AS DEEMED NECESSARY BY THE DESIGN ENGINEER AND CITY.
24. THRUST BLOCKING IS REQUIRED ON ALL WATER MAIN AND FIRE LINES. REFER TO STANDARD PLANS 561 AND 562
25. REMOVE AND CORRECT DEFECTIVE WORK WITHIN 24 HOURS FOLLOWING WRITTEN NOTIFICATION BY THE CITY ENGINEER.
26. CONSTRUCT TEMPORARY FLUSHING VALVES/BLOW-OFF PIPING ON THE END OF NEW WATER MAINS AS REQUIRED TO MEET FLUSHING REQUIREMENTS. CONSULT WITH CITY INSPECTOR TO DETERMINE ACCEPTABLE LOCATIONS AND SIZING REQUIREMENTS. MINIMUM ACCEPTABLE FLUSHING VELOCITY FOR INITIAL FLUSH IS 6 FEET PER SECOND. DO NOT PERFORM INITIAL FLUSH THROUGH FIRE HYDRANTS.
27. ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600-10
28. ALL NEW WATER MAINS OR APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651-05 OR A METHOD APPROVED BY THE DIRECTOR. THE SPECIFICATIONS SHALL INCLUDE DETAILED PROCEDURES FOR THE ADEQUATE FLUSHING, DISINFECTION AND MICROBIOLOGICAL TESTING

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OF ALL WATER MAINS. ON ALL NEW AND EXTENSIVE DISTRIBUTION SYSTEM CONSTRUCTION, EVIDENCE OF SATISFACTORY DISINFECTION SHALL BE PROVIDED TO THE CITY INSPECTOR. SAMPLES FOR COLIFORM ANALYSES SHALL BE COLLECTED AFTER DISINFECTION IS COMPLETE AND THE SYSTEM IS REFILLED WITH DRINKING WATER. A STANDARD HETEROTROPHIC PLATE COUNT IS ADVISABLE. THE USE OF WATER FOR PUBLIC DRINKING WATER PURPOSES SHALL NOT COMMENCE UNTIL THE BACTERIOLOGICAL TESTS INDICATE THE WATER IS FREE FROM CONTAMINATION.

29. DISINFECTING, FLUSHING, AND HYDROSTATIC PLANS SHALL BE SUBMITTED TO THE CITY INSPECTOR A MINIMUM OF 5 WORKING DAYS PRIOR TO COMMENCEMENT OF ACTIVITY. CONTRACTOR SHALL NOT OPERATE EXISTING WATER VALVES.
30. BACKFLOW PREVENTION DEVICES MAY BE REQUIRED. IF REQUIRED, THE CITY MAY NOT SET A WATER METER UNTIL AN APPROVED AND TESTED BACKFLOW DEVICE IS INSTALLED AND INSPECTED
31. ALL BACKFLOW PREVENTERS HAVE TO BE TESTED PERIODICALLY TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. A VISUAL CHECK OF AIR GAPS IS SUFFICIENT, BUT MECHANICAL BACKFLOW PREVENTERS HAVE TO BE TESTED BY A STATE CERTIFIED BACKFLOW SPECIALIST, WITH PROPERLY CALIBRATED GAUGE EQUIPMENT. TO OBTAIN A LIST OF STATE CERTIFIED TESTERS EITHER CALL US OR REFER TO THE STATE OF UTAH WEBSITE PAGE OF BACKFLOW TESTERS.
[HTTP://WWW.DRINKINGWATER.UTAH.GOV/DOCUMENTS/COMPLIANCE/BACKFLOW TECHNICIANS COMMER AVAIL.PDF](http://www.drinkingwater.utah.gov/documents/compliance/backflow_technicians_commer_avail.pdf)
32. FIRE SPRINKLER SYSTEM BOOSTER PUMPS: FIRE SPRINKLER SYSTEM PUMPS, INTEGRAL TO THE FIRE SPRINKLER PIPING, REQUIRED TO MEET FIRE SPRINKLER PRESSURE DESIGN REQUIREMENTS, ARE CONSIDERED OUTSIDE THE INTENT OF UTAH DDW REGULATION R309-550-11(3) AND DO NOT REQUIRE APPROVAL OF THE DDW IF THEIR INSTALLATION CONFORMS TO UTAH ADOPTED PLUMBING CODE AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13 D. FIRE BOOSTER PUMPS SHALL BE INSTALLED ON THE BUILDING SIDE OF THE WATER METER VAULT, OUTSIDE THE VAULT, AND SHALL BE APPROVED BY THE CITY ENGINEER, FIRE MARSHAL, AND BUILDING DEPARTMENT.

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