

CITY OF SPOKANE WATER DEPARTMENT RULES AND REGULATIONS FOR WATER SERVICE INSTALLATIONS Revised 2/10/2023

For Water Tap and Meter Applications	509-625-6300, 509-625-6999 or (permitteam@spokanecity.org)
Tap and New Meter Installation	509-625-7847
South Side Inspection	509-625-7844 or 509-435-5567
North Side Inspections	509-625-7845 or 509-994-1669
Cross Connection Inspections	509-625-7969

1. **THE RULES AND REGULATIONS INCLUDED HEREIN ARE NOT TO BE CONSIDERED AS COMPLETE. THE FOLLOWING PAMPHLET IS DESIGNED TO ADDRESS THE MORE COMMON CONCERNS FOUND DURING INSPECTIONS OF THE WATER SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE BUILDER, OWNER, OR CONTRACTOR, TO CALL INSPECTORS TO CLARIFY ANY SITUATION THAT IS NOT CLEARLY ADDRESSED IN THESE REGULATIONS IN REGARD TO SITE PLANS, BUILDING DESIGN, ETC. ALL REQUIREMENTS LISTED MUST BE MET PRIOR TO A CERTIFICATE OF OCCUPANCY BEING ISSUED.**

2. All excavations will be sloped, shored, or benched according to DOSH Department of Labor and Industry standards to provide safe access per WAC 296 155 Part N. Water service excavation, bedding & backfill/restoration shall be responsibility of property owner/developer unless otherwise stated.

3. **INSPECTIONS:**
 - New service lines. No on property inspection will be scheduled or performed until a meter permit has been purchased.
 - Repairing an existing service requires a service repair permit.
 - All Water Service Installations, from the property line to the main shut-off valve or valves inside the building or basement, require inspection by the Water Department Inspector before covering.
 - ALL INSPECTIONS REQUIRE A 48 HOUR NOTICE.

4. **BACKFLOW / CROSS-CONNECTION:**

The policies, procedures, and criteria for determining Backflow/Cross Connections (actual and possible) and appropriate levels of protection shall be in accordance with the City of Spokane Water Department Cross Connection Control and Backflow program, Water Department Rules and Regulations, Washington Administrative Code (WAC 246-290-490) and the City of Spokane Municipal Code 13.04.0814.

- Some examples of areas where devices/assemblies will be needed: Backflow protection shall be installed on service laterals where the point of use exceeds 30 feet above the distribution main, Strip malls/multi use facilities, medical facilities, laboratories/clinics, fire protection systems, irrigation systems (yard hydrants are considered a part of an irrigation system), boilers, post mix soda pop machines, food processing, commercial coffee machines with under-counter boiler, steam generating equipment, water cooled ice machines, car washes, plumbing systems with booster pumps, and/or other facilities where chemicals are used or are injected into the water system, wells and unapproved auxiliary sources, etc.
- All Backflow Assemblies must be on the Washington State Approved Assemblies list. All Backflow Assemblies shall be tested by a State Certified Backflow Tester (BAT) when initially installed, repaired, replaced, moved and annually thereafter. If the backflow assembly has been turned off for freeze protection it must be tested before it is returned to service.
 - The property owner is required to have a WA State certified backflow assembly tester (BAT), test all backflow assemblies annually. The BAT shall tag assemblies tested noting date of test. Where a meter exists in a meter box and the concrete rings are 36" or less inside diameter, then the DCVA for irrigation must be installed outside of the meter box and plumbed into a box of the appropriate size to allow for testing and repair as per the City of Spokane Water Department Municipal Codes. All installations must meet the City of Spokane Water Department requirements. Where premises isolation is required, thermal expansion could exist from a water heater or boiler. Thermal expansion may result in an unsafe buildup of pressure within the plumbing system. Please follow the local rules, regulations, and the Uniform Plumbing Code to protect from thermal expansion. Reduced Pressure Backflow Preventers for premises isolation of high health hazard (Table 13 WAC 246 290 490) and irrigation systems utilizing a booster pump shall be required and installed at the property line. Where the meter is installed at the property line, the Reduced Pressure Backflow Preventer shall be installed downstream of the meter near the property line.
- Single Check replacement in vaults, shall be inspected by the Cross-Connection Control Inspector before removal of old assembly and again after the new assembly has been installed and tested. All service lines must have a City of Spokane Meter.

5. NEW TAPS AND RETAPS:

In ALL cases the property owner is responsible for service location and depth.

In all cases where a new water service is to be installed, a stake marked "WATER" and the Address point to be served must be placed at the property line by the contractor, builder or the owner showing where the service is to enter property. If the service extends through a utility easement, a second stake shall be placed by the contractor, builder or the owner denoting the end of the service line installation. Failure to place these stakes will result in the tap not being made and a reschedule permit must be purchased before the tap is scheduled and completed.

Only City Water Personnel will tap or make connections to the City Water mains. Size of tap shall be maintained to the water meter. Taps on new mains will not be made until bacteriological tests are taken and the sample has been approved by County Health Department. All water services must be 5 feet deep from finished grade. (A depth of 5 feet shall be maintained through any 208 or swale system.)

After backfilling the new service must have 2 vertical blue 2x4's no less than 3' out of the ground 1 at depth of curb stop and 1 at depth of end of copper at the edge of easement.

6. WATER SERVICE PIPE:

Materials for all water services shall be:

- In the public right of way, 1" shall be seamless, soft- annealed, type "K" copper.; with flared fittings or approved compression fittings within the public right of way or traveled roads and to the water meter. All water services from main to curb stop/right of way shall be installed by the City of Spokane water department.
- Outside public right-of-way and downstream of the water meter services up to 1-1/2" shall be seamless, soft- annealed, type "K" copper or HDPE (250 psi CTS SDR 9) with steel stiffeners and compression fittings with steel stiffeners and compression fittings. Pack joints are not allowed, and contractor shall supply all fittings downstream of the meter valve.
- 2" Outside public right-of-way and downstream of the water meter services shall be seamless, soft-annealed Type K copper, HDPE (250 psi, CTS or IPS, SDR 9) with stainless steel stiffeners and compression fittings. Pack Joints are not allowed, and contractor shall supply all fittings downstream of the meter valve.
- All HDPE pipe will be installed with 12-guage tracer wire and affixed to pipe every 10'.
- 3" shall be HDPE shall meet the requirements of AWWA C901, with a minimum 250 psi rating, SDR 9, and have butt fused joints.
- 4" and larger shall be ductile iron. Fittings must be used when a change in direction of pipe is necessary.
- All pipes shall be bedded per standard detail A-1.
- All water services in the same trench shall have a horizontal separation of 2 feet.
- Elbows for change in horizontal direction are not allowed between tap at the main and the meter box/vault. Service line must be perpendicular to water main.

All services need to meet current water department standards if building is gone or service is off, and meter has been removed for over a year.

No galvanized fittings shall be directly buried.

All water services viable or not that will not be reused shall be disconnected at the water main before a certificate of occupancy will be completed. The physical disconnection will be done by Water Department personnel at no charge, all excavations and surface restorations will be at the owner's expense prior to the Certificate of Occupancy.

The installation of all curb and valve boxes are the responsibility of the property owner or contractor. They are to be installed flush with finished grade or paving, made of iron, and marked WATER on the lid. Boxes must line up with the curb stop or valve centered within the box allowing full operation of the valve. Any curb box located within a proposed or established vehicle pathway, or in concrete must have traffic rated valve box top section.

7. WATER AND SEWER SEPARATION:

The sewer must be a minimum of 18" deeper and a minimum of 5' horizontally from the center line of ANY water service.

When sewer elevation is higher than the water service, there must be a separate water trench with 6 feet

of undisturbed earth between water and sewer. All water service installations shall be at least 10 feet from any cesspool, catch basin, septic tank.

Sleeving for parallel sewer and water lines that cannot meet the above distance criteria, must be pressure rated oversized pipe and shall be limited to straight runs and cannot be used to install water and sewer services in the same trench. No more than one service per sleeve is allowed. 2" and smaller must be wrapped with split foam pipe insulation. The end of the sleeves must be sealed with waterproof foam. Water/sewer crossings must meet City of Spokane Standard Plan A-5.

8. **OTHER UTILITIES:**

All other utilities (telephone, cable TV, electric, gas, etc.) shall have a minimum of 5-foot horizontal separation from the water line.

9. **WATER SERVICE ENTERING BUILDING:**

Where a water service pipe enters a building a depth of 5 feet shall be maintained. Where there is no basement i.e., crawl space or slab floor, the water service pipe, including fire lines will maintain a 5 foot bury and extend 2 feet inside the footing before rising to the point of use. No joints will be allowed under the floor, or within 5 feet of the outer wall. DI piping may have one mechanical joint fitting under the floor for the vertical riser. All service installations running parallel to buildings shall be at least 10 feet from the outer foundation walls.

10. **METER LOCATION:**

Residential and Commercial meters shall be in an approved meter box or vault on property, within 3' of the closest property line. *On a commercial service, when the building is within 20' of the property line the meter may be installed inside on a case-by-case basis as approved by the Water Director.* All meters within a building must be installed in a room with a concrete floor and an approved floor drain. The installation must also include shutoff valves on both the inlet and outlet sides of the meter. Meters shall not be installed under stairs, in closets, crawl areas, garages, or unheated areas. There shall be not more than 18" of exposed pipe before the meter. All 3/4" or 1" services where water pressure is 80 psi or higher, shall have an approved pressure reducer installed before the meter when the meter is located within the structure. On services 1½" and larger, the pressure regulator shall be after the meter.

Roughed in meter makeup shall be / 16.5" length for 1" / 14" length for ¾" / 12.5 "length for 5/8"

11. **LARGE WATER SERVICES (3" AND LARGER):**

All meters 3" or larger shall be installed at the property line, in a vault built to Water Department Specifications, or can be installed in the building when less than 20 feet from property line to meter. For maintenance, all large meters must be accessible and have a minimum 12" clearance from any wall or floor. Water Department personnel and owners' representatives will visit the site prior to the estimate for a complete determination of requirements. Meters and backflow devices are no longer allowed to be located within structural/vault sidewalks (typical of downtown).

12. **WATER SERVICE REPAIR AND REPLACEMENT:**

The repair of service leaks after the first right of way or property line is the responsibility of the property owner. Any repair or replacement of existing services shall follow all current rules and regulations and be *inspected before covering*. *No service relays shall be pulled unless a minimum depth of 4 ½' can be maintained with a minimum of 5' sewer separation*. Where a new building, or an addition to existing building, is erected over an existing service, the water service shall be either sleeved or offset by relaying the service a minimum of 10' from outer foundation wall. Repairs can be made with like materials. Silver solder is acceptable for repairing underground copper services.

The property owner is responsible for any water service located near or behind a manmade obstruction such as a retaining wall and must maintain their service at their own expense per Spokane Municipal Code 13.04.0806. This applies to obstructions located within the public right of way.

13. **RECORDED EASEMENTS REQUIRED:**

Easements shall be avoided but considered on a case-by-case basis, granted by the Director of the Spokane Water Department.

When water services cross property other than the property being serviced, the water meter shall be installed in a water department approved meter box. This box must be installed no more than 3' inside the first property line and an easement number must be filed and recorded with the County Recorder's office. If approved, minimum water easement width is 10 feet for private and 20 feet for public to allow for excavation and stockpiling.

14. **METER BOX:**

Meter boxes and vaults, for single meters up to 1" in size, when installed by the property owner, shall meet City of Spokane Water Department traffic rating standards, shall be placed on property not more than 3' inside the closest property line, and built to Water Department specifications. All meter boxes and lids shall be maintained by the property owner.

Single meters 1.5" or 2" in size require a meter box with a minimum dimension of 36" inside 42" outside, made of concrete, and have a 24" cast iron ring and cover.

If there will be two meters 2" in size or smaller and serving the same property, a concrete meter box with a 48" minimum inside diameter with a standard 24" cast iron ring and cover will be required.

For meters larger in size than 2" or if there will be more than two meters, please contact our inspectors for appropriate vault dimensions. All meter boxes and vaults must meet H20 traffic load rating if in an area where traffic loads are expected.

Any meter box located within a proposed or established vehicle pathway must be traffic rated. Plastic or PVC meter boxes are not considered traffic rated and must be installed at least 1' off any driveway or established vehicle pathway.

15. **REMOTE READOUT CONDUIT:**

All commercial buildings and residential homes with a vault or concrete meter box (including duplex and triplex dwellings) are required to install an approved ¾ inch PVC electrical grade conduit per meter or as approved by the inspector and must be installed from the water meter to an accessible location on the outside of the building (or near an above ground structure such as a metal post or bollard), approximately 3' above finished grade. If the length of the conduit exceeds 50', a pull string shall be provided. All directional changes will be made with sweeps, 90-degree elbows will not be allowed. All commercial buildings which are remodeled, reconstructed, or additions added on will be required to install conduit.

REMOTE READER CABLE INSTALLATION POLICY

The City of Spokane Water Department will require a minimum three wire, 22-gauge, color coded cable to be installed by the builder during the construction of all residential and commercial buildings for remote water meter reading purposes.

The cable shall begin at the water meter location and terminate on the street side of the building or on either side of the building within two feet of the street side of the building. The cable shall be in an accessible location approximately 36 inches above finished grade and with approximately 4' of excess cable left on each end.

16. **CONTRACTOR'S GUARANTEE:**

Work being done by private contractors, pertaining to quality of materials and installation procedures, shall be guaranteed for two (2) years from time of installation.

17. **OPERATION OF CURB STOPS**

If water is turned on or found on without proper inspection by the Water Division, the following City Ordinance applies:

CITY ORDINANCE CHAPTER 13.04 WATER

13.04.200 PENALTY. Any person violating any of the provisions of this chapter, or the rules and regulations of the Water Division, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine in any sum not exceeding \$300.00, or by imprisonment in the City Jail for not more than ninety days, or by both fine and imprisonment. Each day of a continuing violation shall constitute a new and separate violation unless otherwise specified. (Source, Section 40, C2452) City Ordinance Chapter 13.04 WATER 13.04.130 Sub-Section D

The Director of the City of Spokane Water department may also permit qualified plumbers, licensed, and bonded in accordance with state laws, to open and shut the street cock to make the necessary repairs or to test their work, and in every such case such persons shall leave the stop cock as they found it. They shall be responsible for any damage, losses, or liabilities of the City or third parties arising from their acts, errors, or omissions. (Source, Section 35, part C-2452; Cross ref., Section 13.04.0806 - 13.04.0812)

18. Temporary Zoning Change (Ordinance No. C36232) and ADU Guidelines

The interim zoning ordinance will allow duplexes, triplexes, quadplexes and townhomes in all residential zones citywide for one year. The ordinance has no restrictions on the allowable number of attached town houses. The housing allowed in this ordinance shall follow the water service rules and regulations listed in this document. With the specialized use we have the following requirements.

- a. The water meter(s) shall be placed within 3-feet of the first property line per standards.
- b. Each service line after the meter shall have a valve located outside of the structures, to be able to isolate the service without interrupting any other service.
- c. Existing water service shall be 1-inch to be able to serve two units or provide engineering analysis showing the existing service is adequate.
- d. Due to house setbacks being 10-feet or less the parallel water service shall be sleeved when adjacent to new or existing homes per section 9 above.
- e. Easements shall be avoided but considered on a case-by-case basis, granted by the Director of the Spokane Water Department per section 13 above.

**SPECIFICATIONS FOR UNDERGROUND INSTALLATION OF LARGE DOMESTIC WATER SERVICES, MAINS, AND FIRELINES
(Shall Conform to A.P.W.A. with Spokane Supplemental Standards)**

1. All material installed in the City of Spokane, including fire hydrants and valves, must conform to City of Spokane Specifications. Pipe and Fittings shall be approved ductile iron. All fire hydrants must be individually valved. When in Fire Districts outside of City of Spokane jurisdiction, installation, and materials will conform to City of Spokane Rules and Regulations.
2. Water services shall meet current backflow standards per WAC 246-290-490 and follow City of Spokane Water Department Rules and Regulations for Water Service Installations.
<https://static.spokanecity.org/documents/business/resources/engineeringpolicies/water-service-rules-and-regulations.pdf>
3. Pipe shall be laid at a minimum depth of 5 feet deep from finished grade. (A depth of 5 feet shall be maintained through any 208 or swale system.)
4. Pipe and fittings shall be pressure class 350 ductile and installed in accordance with manufactures instructions and in an approved manner. (A.W.W.A C600-64) (Example - Tyton slip joint connections require continuity wedges, and all taps 2-in or less will have Double strap saddles and greater than 2-in will have a stainless-steel tapping sleeve)
5. Pipes shall be clean inside when installed and open ends shall be protected when work is stopped, to prevent foreign material from entering pipe.
6. Pipe joints will be either mechanical joint or Tyton slip joint; change in direction shall not exceed 75% of manufacturers' maximum deflection standards.
7. All tees, plugs, caps and bends on pipe installed underground shall be mechanically restrained. Mega lugs and field lock gaskets or other restraint systems approved by the Director of the City of Spokane Water Department, shall be used. Thrust blocking is not acceptable.

8. All underground fire lines, or fire suppression systems that are separated or protected from the potable water system requires a State Level III or "U" licensed contractor for installation.
9. All hydrants shall be properly restrained, from the main to the hydrant (mega lugs or field lock gaskets).
10. All water mains and appurtenances 3" and larger shall be tested in sections of convenient length under a hydrostatic pressure equal to 1.5 times that under which they will operate or in no case shall the test pressure be less than 175 psi. Fire lines will be tested at 200 psi or 1.5 times the operation pressure, whichever is greater. All pumps, gauges, plugs, saddles, corporation stops, miscellaneous hose and piping and measuring equipment necessary for performing the test shall be furnished and operated by the contractor. Contractor must provide restrained MJ cap on last pipe (or plug on last new valve) near intertie with existing water line and include 2" threaded port with 2" ball valve/curb stop assembly for flushing and testing. Chlorination shall only be done by city forces at the expense of the developer and all arrangements shall be made through the City of Spokane water service inspectors.
11. During cold weather, the contractor is responsible for protecting all mains and services from freezing, to include all equipment used for flushing, pressure testing and chlorination. Failure to adequately protect mains, services, and equipment from freezing could result in the replacement of these items at the contractor's expense.
12. Earth shall be well tamped (per std. plan A-1 & A-2) under and around pipes to prevent settling or lateral movement. Care shall be taken to prevent rocks, etc. from damaging pipe while backfilling. Frozen earth and/or asphalt shall not be used for backfilling material. Backfilling will be done according to APWA specifications.
13. If the property line is in a 208-swale area the meter vault\box may have to be relocated farther on property in a recorded utility easement.
14. All approved main extension installations will be required to extend 10' beyond the property line unless otherwise required by the water department.
15. Fire hydrant use requires a City of Spokane issued reduced pressure backflow preventer (RPBA) and flow meter assembly for all fire hydrant water usage (e.g., construction phase dust control, etc.). Hydrants that have been locked are no longer available for public use. Call 311 or City Water Dept. at 509-625-7800 for more info on Fire Hydrant Use
16. All Fire Hydrants, meter vault\box, curb boxes, & valve boxes must maintain an unobstructed 3' radius.
17. FDC's & PIV's must be installed downstream of the water meter and backflow assembly.
18. *If a bypass service line is installed it must be metered, and with same backflow protection as the service being bypassed.*
19. *When the meter or the double check are susceptible to being submerged in ground water, they must be installed above ground or in an approved watertight vault.*

IF THERE ARE ANY QUESTIONS PLEASE CALL (509)625-7800

MORE INFORMATION CAN BE FOUND AT THE FOLLOWING WEBSITES

City of Spokane Business and Development & Permits

<https://my.spokanecity.org/business/>

The Municipal Code Water Section can be found at:

<https://my.spokanecity.org/smc/?Chapter=13.04>

Standard Plans can be found at:

<https://my.spokanecity.org/business/bid-and-design/standard-plans/>

Design Standards can be found at:

<https://my.spokanecity.org/business/bid-and-design/design-standards/>

General Special Provisions (City Std. Specs) for Private Contracts

<https://my.spokanecity.org/business/bid-and-design/private-gsps/>

WSDOT Standards and Specifications can be found at:

<http://www.wsdot.wa.gov/Publications/Manuals/M41-10.htm>

Washington State Department of Labor and Industries

<http://www.lni.wa.gov/SAFETY/TOPICS/ATOZ/ABOUT/DEFAULT.ASP>

Washington State Safety Standards for Construction Work

<http://app.leg.wa.gov/wac/default.aspx?cite=296-155>

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