

**WATER MAIN INSTALLATION  
GENERAL NOTES**

1. All workmanship and material shall be in accordance with the City of Centralia standards and the most current copy of the State of Washington Specifications for Road, Bridge and Municipal Construction, Washington Department of Health regulations and American Water Works Association standards.
2. All water lines 12" and larger shall be made of ductile iron, thickness class 52 and a rated working pressure of 350 PSI conforming to AWWA C151. All pipe shall be cement mortar lined per AWWA C104 with push on joints conforming to AWWA C111. Water lines under 12" diameter may be P.V.C. C-900 DR14.
3. Fittings shall be class 250 cement mortar lined ductile iron with mechanical joint or ANSI flanges. All bolted fittings shall be dressed with Anita-Seize product for protection. All ductile iron fitting connection(s) shall be completed by the use of mega-lugs. When connecting to an existing inline water main, all connections will be made using a Ductile Iron (DI) sleeve, with mega-lugs, or Romac Alpha coupling except when connecting to a AC main where a Hymax coupler (or equal) will be used.
4. Gate valves shall be resilient wedge, NRS (Non-Rising Stem) with O-ring seals. Valve ends shall be mechanical joint or ANSI flanges. Valves shall conform to AWWA (latest) 509 std. Valves shall be Mueller, M & H, Clow, Waterous, Kennedy or American AVK. Existing valves shall be operated by City employees only.
5. All NIBCO Gate Valves must have brass handles.
6. Fire hydrants shall be 3-port M & H Reliant Style 129, Mueller Centurion, 5 1/4" with steamer port thread of 498. The distance between operating nut and break away flange shall be 32 inches in vertical measurement. All hydrant shoes shall be epoxy coated. Each hydrant shall be provided with a Storz coupler on the steamer port. All hydrants shall be bagged until system is approved.
7. Brass wedges shall be installed in all ductile iron joints for continuity, two (2) per section of pipe. P.V.C. pipe, C.T.S. HDPE sch. 200 psi pipe shall be installed with a toning (tracer) wire. Toning wire shall be UL listed, type UF, solid core, 12 gauge insulated copper and shall be taped to the top of the pipe to prevent movement during backfilling. The wire shall be laid loosely enough to prevent stretching and damage. The wire shall be brought up and tied off at valve body or meter setting.
8. The contractor shall maintain a min. cover of 30 inches and a max. cover of 36 inches over the pipe at all times.
9. All water mains shall be staked for grade and alignment by the design engineer or a licensed land surveyor. All vertical control shall be established using the 1988 USGS Datum.
10. All new water mains shall be filled and chlorinated for a minimum of 24 hrs prior to flushing. Contractor shall coordinate with the City to have lines filled and flushed.
11. Bacteria sampling of potable water lines shall be performed by the City prior to hydrostatic pressure testing. Contractor shall provide an approved sampling bottle from the Lewis County Health Dept., 360 NW North St, Chehalis, WA 98532
12. All pipe and appurtenances shall be hydrostatically tested at 225 PSI (min.) for 15 minutes and witnessed by the City. Fire line testing behind the metering vault shall be coordinated with Riverside Fire authority.
13. Service lines of 3/4" and 1" shall be type "K" copper or copper tubing size (C.T.S.) Blue HDPE Polyethylene, 200 psi pipe. Galvanized fittings shall not be used in construction of service lines.  
Note: In soil sensitive areas, service lines may be constructed of HDPE-cl200psi. Toning (tracer) wire is required when using HDPE pipe water mains/services. Services larger than 1" may be Blue HDPE or brass.
14. For any water main tap to existing City mains where the contractor encounters a coupling or existing assemblies, the contractor shall provide a minimum of 18" of clearance from coupling or assemblies to edge of tapping sleeve and the tapping process shall be witnessed by the City with 2 days prior notice.

<i>APPROVED BY</i>	<i>REVISED DATE</i>	<b>CITY OF CENTRALIA</b>	
<i>CITY ENGINEER</i>	<b>02/2020</b>	<b>WATER MAIN INSTALLATION GENERAL NOTES</b>	<b>1 OF 2</b>

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15. Where the water line crosses a sanitary sewer, the water line shall be above the sewer line whenever possible, with a separation of at least 18 inches between the invert of the water line and the crown of the sewer pipe. If this criteria can not be achieved the sewer pipe shall be cased within ductile iron pipe for a distance of 10 feet either side of the water line.
16. All "LONG SIDE SERVICES" shall be cased in 160 psi pipe.
17. Water services noted as "long side" shall require a schedule 160 PVC pipe as a casing to cross the R.O.W.
 

3/4" service – casing dia. 1.5"	1.5" service – casing dia. 3"
1" service – casing dia. 2"	2" service – casing dia. 3"
18. ALL ASBESTOS PIPE WORKMANSHIP MUST FOLLOW THE GUIDE LINES SET FORTH BY THESE AGENCIES:  
Southwest Washington Air Pollution Control Authority (SWAPCA) and Labor and Industries (L&I).
19. Call the Underground Location Center at 1-800-424-5555 or 811 at least 48 hours before any excavation.

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