



# WATER MAIN TRENCHING REQUIREMENTS

The following are general requirements for installing underground water mains in the customer-provided trench. Each customer may have specific requirements, and a District representative must be contacted in order to arrange a preconstruction conference prior to the start of any trenching (**one week minimum notice is required**). District requirements include, but are not limited to, the following:

- A. The excavation contractor hired by the customer must be on the District's list of approved contractors.
- B. The term "trench" shall be defined to mean trenching, bedding, backfilling, restoration, and maintenance of subsequent ditch settling.
- C. All trenches shall be provided by the contractor.
- D. Any area where personnel must enter the trench shall be excavated in accordance with Chapter 296-155 WAC of the Washington State Safety Code. This code requires that the excavated material be at least 2 feet from the edge of the trench, and that any trench over 4 feet deep be sloped, shored, sheeted, or otherwise adequately protected against sloughing.

The trench shall be excavated to the line and depth designated by the District to provide a minimum of 36 inches of cover over the pipe, and/or 30 inches of cover when crossing an existing roadway ditch, whichever is deeper, unless otherwise shown on the contract drawings. Except for unusual circumstances where approved by the District, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space. The maximum trench width at the top of the pipe shall normally be the outside diameter of the pipe barrel plus 16 inches. The top width of the trench shall not exceed the outside diameter of the pipe plus 30 inches. Boulders, rocks, roots, and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below water main grade. Where material is removed from below water main grade, the trench shall be backfilled to grade with material satisfactory to the District and thoroughly compacted.

- E. Bedding material for the backfill must be approved by a District representative. Prior to installation, the contractor shall place the approved bedding material in the trench in sufficient quantity to protect the water main.
- F. To facilitate the installation, the contractor shall place all excavated material in a manner which allows District vehicles to drive on the opposite side of the trench the full length of the project, unless prior specific arrangements have been approved the District representative.
- G. All areas over the water main must be accessible for future District operations including (but not limited to), maintenance, location, repair, and replacement.

The customer shall not construct any building, fence, landscaping device, or other obstruction that restricts said access over the water main route. In addition, the route must remain suitable for vehicular access.

Should future District operations require direct buried facilities to be excavated for maintenance or repair, the District will restore the excavation area to level ground. The customer shall be responsible for the proper trench location in relation to property lines and easements. All property lines shall be properly located prior to excavation. Once the water main is installed, it will not be relocated except at the customer's expense. The customer shall provide all necessary easements for the route of the water main.

H. After installation, the customer shall not change the water main depth by cutting or filling without the express consent of the District.

I. All trenches shall be compacted to the satisfaction of the District in the following manner:

- 1) General Trench Route: Shall be compacted sufficiently to prevent later settling of the fill material.
- 2) Road or Driveway Crossing: Compact in lifts to attain 95% compaction. Should the District determine that native material is unsuitable for backfill, the contractor shall provide compatible 1-inch minus granular material (i.e., sand, screen reject, or pit run). The surface material shall be replaced with material equal to existing surface (crushed rock, asphalt, concrete, etc.). Note: County repairs must meet County road specifications. Also, please note that the above compaction requirements must be completed by using an approved mechanical compactor.

J. All water mains shall be installed in separate ditches from all power and sewer lines, and shall maintain the following minimum horizontal separations:

Power	5 feet
Sewer	10 feet *

\* Where water mains and sewer mains cross, the water main will be encased in a minimum of 20-foot continuous stick of PVC conduit/casing. Water mains may not be installed within 10 feet of a septic drainfield.

K. All signing and traffic control shall be the responsibility of the contractor.

The customer is responsible for contacting the "Call Before You Dig" toll-free telephone number, **1-800-424-5555**, 48 hours in advance, to be sure all underground utilities are located before trenching is started. The customer's excavation contractor is responsible for all damages to existing underground utilities caused by trenching, and should plan to have an employee(s) on site to hand locate where appropriate.

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