

## WATER NOTES

### *Unless Otherwise Noted*

1. All materials for water distribution must be new and in accordance with sections 7-11 to 7-15 and 9-30 of the City of Seattle standard specifications.
2. Pipe (w) 4" and larger must be ductile iron pipe (dip) class 52 conforming to AWWA c-151 with double thick cement mortar lining conforming to AWWA c-104. Joints must be restrained joint. Laterals for hydrants and 4" and larger services must be dip with mechanical joints (MJ).
3. Fittings on restrained jointed (RJ) pipe (w) 4" and larger must be ductile iron, restrained jointed fittings. RJ fittings must conform to standard specifications 9-30.2(3). Mechanically jointed (MJ) fittings must be ductile iron and conform to AWWA c-110 and c-111, or AWWA c-153. All RJ and MJ fittings must be double-thick cement mortar lined conforming to AWWA c-104.
4. All mechanical joints on ductile iron pipe must be restrained with wedge restraint glands (WRG). Wedge restraint glands must not be used on cast iron pipe.
5. Pipe (w) 4" and larger must be subject to Seattle public utilities taste and odor testing procedure per standard specifications 7-11.2(2) and 7-11.2(3).
6. All material must be supplied by contractor except as noted on city of Seattle Standard Plan 300 series.
7. All connections to existing water mains will be made by SPU in accordance with city of Seattle Standard Plan 300 series.
8. Four weeks prior to laying pipe the contractor must:
  - 8.1. In the presence of the SPU resident engineer, expose the existing watermain to determine its elevation and alignment at connection points. The contractor must expose the pipe all around for SPU to obtain outside diameter at the same time.
  - 8.2. Provide all control surveys required to define the alignment and elevations of the water main in conformance with the approved plan. The surveys must be performed by a surveyor licensed by the State of Washington. All reference marks must be preserved during construction. A grade sheet, in acceptable format, must be provided to SPU prior to beginning work.
9. Water/sewer separation must be per cos Standard Plan 286a. If a sewer or side sewer is encountered in the WM trench, contact SPU resident engineer for direction.
10. Contractor must use a wax tape coating system on valve connections (flanged and MJ) as specified in standard specifications section 7- 11.3(8)a to fully encapsulate flanges, bolts, MJ followers, and/or WRGs.
11. Concrete thrust blocking for vertical bend fittings must be per city of Seattle Standard Plan #330a & 330b.

12. Concrete thrust blocking for horizontal fittings must be per city of Seattle Standard Plan #331a & 331b.
13. If deflecting pipe joints for curves, horizontal and vertical angle points must be constructed by deflecting a maximum one-half of the manufacturer's allowable joint deflection for pipe and fittings.
14. The contractor must pothole or maintain an open excavation of 60 feet minimum ahead of the water main installation to uncover and obtain location and depth information for existing crossing utilities. The contractor must notify the engineer if a conflict is identified to allow for adjustments that may be necessary.
15. Where the proposed water main designed elevation or adjusted elevation crosses through the location of existing water services, the contractor must coordinate work with the SPU resident engineer.
16. All water mains must be pressure tested in accordance with section 7-11.3(11) and disinfected in accordance with section 7-11.3(12) of the city of Seattle standard specifications. All pressure testing must be done in the presence of the SPU resident engineer. The contractor must provide plugs and temporary blowoff assemblies for pressure testing and disinfection. See cos std plan 300 for flushing connection details.
17. Install corrosion protection as detailed in the drawings.