

**SECTION 12100 - DESIGN STANDARDS FOR WATER MAIN SPECIFICATIONS  
(SEE STANDARD TECHNICAL SPECIFICATIONS AND 10 STATE STANDARDS  
FOR COMPLETE REQUIREMENTS)**

**DESIGN**

- Residential Area - All public water mains in residential areas shall be 8-inch minimum diameter and shall be looped to create a grid system, except as otherwise permitted below.
  1. Dead end 8-inch water mains will be permitted where the line serves a cul-de-sac street or configuration of less than 26 ERUs.
  2. Dead end 6-inch water mains will be permitted where all of the following are true:
    - A. The line serves a cul-de-sac street or other configuration of less than 26 ERUs
    - B. The total length of the 6-inch main is no longer than 600 feet
    - C. Fire flow requirements for the area served do not exceed 1,000-gpm
    - D. BCWS' water system model demonstrates that a residual pressure of not less than 20-psi can be maintained along the main with a 1,000-gpm fire flow during peaks day conditions
    - E. There is no chance of the water main being extended in the future to serve additional customers or such an extension would not exceed the above limitations
- Commercial Areas, Collector Streets and Other Major Roadways - All public water mains in a commercial area shall be 10-inch minimum diameter and shall be looped to create a grid system, except as otherwise permitted below.
- Dead end 10-inch water mains will be permitted where the line serves a cul-de-sac street or other configuration of less than 26 ERUs.

Material: See Technical Specifications

Depth: Four feet (4') minimum cover from finished grade. Minimum of 18-inch vertical separation between water main and other pipes, conduits or structures when crossing perpendicular, and 10 foot horizontal separation when running parallel

**VALVES**

Type: See Technical Specifications

Accessories: See Technical Specifications

Location: Approximately every 1,000 feet on main line extensions and at each branch main connection. Valves located at street intersections shall be placed at the tangent point of the curb and between intersections shall be placed at or near property lines when possible.

**FIRE HYDRANTS**

Type/Operation/: See Technical Specifications  
Location/Color

Accessories: Each hydrant shall be accompanied by an auxiliary valve and box (see valve spec. above)

## **WATER MAIN**

Installation/  
Material: See Technical Specifications.

Accessories: Lab sampling stations and purity test stations; see Technical Specifications 2270

## **SERVICE CONNECTIONS**

Installation/  
Material: See Technical Specifications. Minimum size for duplex lots shall be 1-inch.

Location: See Technical Specifications. Service line shall be located so that it is not constructed under the future driveway (generally near the center of the lot).

Finished Grade: It is the responsibility of the developer, builder and/or lot owner to see that the meter pit or curb stop box is adjusted to the finished grade.

## **INSPECTION**

Inspection: An authorized agent of BCWS must inspect all work.

Requirements: Contractors must notify BCWS at least 48 hours in advance of initiating construction or amending a construction schedule.

Fees: Inspection fees are based on the length of pipe to be installed (See Section 10200) and shall be paid prior to initiation of construction.

Testing: See Technical Specifications.

Field Approval: Field acceptance will be made when the water mains and all appurtenances have been installed, tested and approved. Initial acceptance will be made when all supporting documentation has been submitted and approved. Final acceptance will be made when final grade is established; appurtenances are adjusted to final grade; concrete collars are set around each valve box; and at least one (1) full year of satisfactory operation is achieved.

## **SERVICE ABANDONMENT**

- Any services abandoned after initial construction shall be the developer/owner's responsibility to shut off at the curb stop at the main and the copper line disconnected under the supervision of a BCWS inspector. Basic facility charges will remain until the service is properly abandoned.

## **EASEMENTS**

- All water mains shall be installed so that a minimum of 7.5 feet of right-of-way and/or easement is provided to each side of the main. If the water main is not installed within or adjacent to the right-of-way, a minimum of a 20-foot easement is required. Private water services installed within said easement shall be extended to the edge of the easement, with meter pits located two feet (2') outside the edge of the easement.

## **EXTENSION TO DEVELOPMENT BOUNDARIES**

- Water mains must be extended across the development boundary(s) along each public roadway. Water mains must also be extended to development boundaries as required for system looping.

END OF SECTION