

PLAN REQUIREMENTS

The plans for street design shall conform to the requirements of Sections 3 and 4. The following requirements shall also be shown on the plans where applicable.

Road and Storm Plans:

- Plan and profile view.
- All existing trees 6 inches in diameter or larger, and which trees are proposed to be removed and remain.
- Existing and proposed contours at 1-foot intervals.
- The fill and/or excavation quantities in cubic yards.
- The type of fill materials and compaction requirements.
- State whether or not the fill material will be placed upon native or stripped vegetation.
- Cross-sections at 200 feet minimum intervals showing the fill/grading shall be shown on the plans through all properties, and 30 feet beyond the property lines.
- Limits of grading.
- Street names.
- Center line bearings.
- Center line/baseline stationing.
- Center line elevations at 50-foot intervals, except as otherwise stated.
- Where transverse slope (crown) varies from 3 percent, include gutter line elevations at 50-foot intervals, and the beginning, end, and other critical locations throughout the duration of slope variations (i.e., P.C.'s, P.T.'s, B.V.C.'s, E.V.C.'s and slope transition changes).
- Center line grade shall be in percentage.

- Horizontal curve datum at center line.
- Vertical curve datum at center line.
- Intersection gutter line elevations at 1/4 points and right-of-way curve.
- Intersection elevation datum at 1/4 points of radii.
- Accurate locations of monuments at all center line intersections, cul-de-sacs, P.C.'s, P.T.'s and P.R.C.'s.
- Location, length, width of sidewalks, and driveways.
- Length, type, and location of curb and gutter.
- Wheelchair ramp locations.
- Right-of-way and width; lot/subdivision lines and street addresses.
- Right-of-way radii.
- Curb to curb pavement width.
- Mailbox design and/or placement/replacement.
- Street landscaping.
- Standard street construction notes.
- Legend (complete for existing and new).
- Storm drainage system.
- Utility locations (new and existing) for:
 - ▶ Water system
 - ▶ Sanitary sewer system
 - ▶ Gas
 - ▶ Telephone
 - ▶ Power
 - ▶ Cable TV
 - ▶ Address any horizontal or vertical conflicts

Street Light Plans:

- Street light layout plans shall be on separate drawings from the street plan/profile sheets. The final locations shall be determined by the City Engineer after the City receives a copy of the Puget Power transformer layout design drawings. Street light bases shall be located 22 inches from face of curb to center of light standard bolt circle.
- Street light disconnects shall be located near the power transformers.
- Street light conduit for wiring shall be located within the utility easement for power, gas, telephone, and cable TV wherever possible.
- Street Light: Location, type, height, and wattage.
- Service Cabinets: Location and type.
- Conduits and Wire: Location, type, size, and length.
- Junction Boxes: Locations and types.

Channelization and Signing Plans:

- Incorporated with “Street Light Plans”.
- Lane Markers: Locations and types.
- Pavement Markings: Locations and types.
- Signs: Locations, types, and mountings.
- Painted street curbs.

Signalization Plans:

- Separate detailed plans required.
- Pole base locations.
- Traffic loop location.
- Conduit location.

- Details of traffic signal system to be reviewed and approved by the City Engineer.
- Location of power source.

Storm Drainage Plan Requirements:

The following requirements shall be shown on the street plans:

- Plan and profile.
- Storm pipe including locations, lengths, materials, slopes, depths, and sizes.
- Manholes and catch basins including location, types, and rim and invert elevations. All new and existing manholes and catch basins shall be numbered consecutively.
- Typical ditch cross-sections shall be shown on the plans.
- Easement widths and locations.
- Identify any possible utility conflicts.
- Roof drain connections.
- The distance from the center line of pipes to any building structure.
- An all-weather maintenance access to all structures, ditches, ponds, etc., including typical cross-section of said access road.

WATER SYSTEM DESIGN REQUIREMENTS

Water Mains:

- All new water main lines shall be installed to the size as indicated in the City's Comprehensive Plan. The minimum water main pipe size shall be 8 inches in diameter.

- Connections to existing water mains shall be wet taps through a tapping tee and tapping valve and shall be made by a city approved contractor. The City shall approve the time and location for these connections.
- Where water mains are to be extended to serve a particular property, the water lines shall be extended along the entire frontage of the property to be served. Looped connections may be required to maintain continuity in the system.
- All public water mains shall have a minimum cover of 36 inches in improved right-of-way, and 42 inches cover in unimproved right-of-way or easements.
- All water mains and appurtenances shall be hydrostatically tested at 200 psi in accordance with Section 7-11.3(11) of the Standard Specifications.
- Two-inch (2") Blow-off Assemblies are required on dead-end water lines, except where fire hydrants are installed at the dead-end. The blow-off assembly shall be installed in accordance with City Standards. Water valves shall be installed along the water line at a maximum space of 400 feet and at the intersection of lateral lines.
- Minimum distance between sewer and water lines shall be 10 feet horizontally and 1-foot vertically.
- Air relief valves are required at high points in water lines. Air relief valves shall be installed in accordance with City Standards.
- Water valves shall be located in clusters when possible and shall be located so that each leg of the main line system can be isolated separately.
- Easements shall be a minimum of 20 feet in width for water lines. No building structures shall be allowed within easements.
- Sampling station per City standards shall be installed by the developer at locations designated by the City.

Fire Hydrants:

- Fire hydrants shall be installed at a maximum lateral spacing of 600 feet along streets in single-family residential zones. A fire hydrant is required within 300 feet of a proposed structure on a new building lot.

Fire Service Connections:

- A double detector check valve assembly (DDCVA) complete with 3/4-inch bypass DCVA and 5/8-inch Rockwell SR-II water meter reading in cubic feet is required on the fire service line to any building which is equipped with a fire sprinkler system.
- The DDCVA shall be located in a vault at or near the property line and shall be installed in accordance with City Standard.
- Upon approval of the installation by the City Inspector, the DDCVA and the DCVA shall be tested with a Washington State certified backflow assembly tester, and the test report results shall be submitted to the City prior to use of the water system.
- The domestic water service shall not be connected directly to a fire system service line, but rather shall be a separate connection to the main line.
- The fire department connection shall be located within 15 feet of a fire hydrant but not less than 10 feet.
- All underground piping shall be installed by a State of Washington Licensed Sprinkler Contractor.

Brass or dielectric unions shall be installed immediately downstream of all backflow assemblies 2 inches and smaller. A Rockwell #912 (or approved equal) flanged coupling adapter shall be installed on the immediate upstream side of all backflow assemblies 3 inches and larger.

All landscape irrigation systems require backflow protection. The City will determine the type of backflow device required for each installation.

Integral air-vacuum breakers are required on all threaded water outlets, including lab faucets, janitor sink faucets, and hose bib faucets.

Water System Plan Requirements:

The following items shall be shown on the plans:

- Plan and profile.
- Water pipe, including location, length, material, slope, depth, and size.

- Detail all new connections to the existing water system.
- Identify any possible utility conflicts.
- Stationing and reference points.
- Valves, meters, and fittings, including size and location.
- Fire hydrant protection if hydrant is not protected by street curb and gutter.
- Blow-offs at low points or dead-ends (2-inch minimum).
- Air and vacuum relief valve at high points.
- Pressure reducing valves.
- Concrete blocking.
- An all-weather maintenance access, including typical cross-section of said access road.
- Service sizes and locations.
- Meter sizes and locations.
- Minimum one (1) service per lot.
- Sewer deduct meter locations and sizes.

SANITARY SEWER PLAN REQUIREMENTS

The following requirements shall be shown on the plans:

- Plan and profile.
- Sanitary sewer pipe, including locations, length, material, slope, depth, and size.
- Manholes, including location, type, and rim and invert elevations. All new manholes shall be numbered consecutively.

- Detail any inside drop manhole connections per City Standard.
- Identify any possible utility conflicts.
- Provide stationing and reference points.
- All public sewer main lines shall be located within roadway rights-of-way or easements.
- Location and stationing from downstream manholes shown.
- Perpendicular connection of side sewers to the main lines.
- Proper reference and layout for saw cutting and patching existing streets.
- An all-weather maintenance access, including typical cross-section of said access roads.