

## **CITY OF KIRKLAND**

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### **DEPARTMENT OF PUBLIC WORKS PRE-APPROVED PLANS POLICY**

#### **Policy W-2: IRRIGATION SPECIFICATIONS FOR CITY MAINTAINED SYSTEMS**

When an irrigation system is to be installed in the public right of way, whether in conjunction with a Capital Improvement Project or by Private Development, and that system is to be maintained by the City of Kirkland, the following specifications will need to be incorporated into the design of the system:

- Pipe, Tubing and fitting – All pipe and tubing shall be  $\frac{3}{4}$ " to 1" schedule 40 PVC or approved equal (all piping in median islands to be 1"). All fittings shall be schedule 80 PVC, or brass. All sleeving shall be 2" schedule 40 PVC. 1" water service lines shall use  $\frac{3}{4}$ " meter unless otherwise approved.
- Polyvinyl Chloride Pipe and Fittings – Pipe shall be schedule 40 PVC pipe for the main, laterals and sleeves.
- Automatic Controller – Battery operated controller shall be Hunter Battery Operated Node Controller. If using a fixed controller with a designated power source supply, a Weathermatic controller with smart link air card with wireless rain sensor shall be used. When possible, a Wireless Solar Sync sensor should also be installed. Controller, and air card shall be operable and fully functioning prior to final inspection. For City of Kirkland Parks Department project sites, please see current Parks and Community Services manager for irrigation controller specifications.
- Sprinkler Heads – Pop-up spray heads, impact heads and bubblers shall be Hunter or approved equal. If installed along curbing, heads shall be flush and adjacent to top of curb, 1" away from curbing. Nozzles shall be MP rotators.
- Valve Boxes and Protective Sleeves – Valve boxes for control valves, and flow meters shall have full size rectangular Carson 1419 or Pro Spec Box, with locking lid or approved equal. Valve boxes for double check valve assembly shall be Carson, Pro Spec, or concrete vault and must allow for maintenance access and

have locking lid, or approved equal. All irrigation unions must be exposed within box for maintenance.

- Automatic Control Valves – Automatic control valves shall be Hunter PGV series (1"-2").
- Quick Coupling Equipment – Quick coupling equipment shall be Rainbird #44DLRC or approved equal, and requires a metal stake with 2 stainless steel attachment points.
- Irrigation Service – The Contractor shall install the appropriate size water service to meet the design of the system. The service shall be installed per specifications outlined in the current edition of the Public Works Department Pre-Approved Plans Manual. The Contractor shall coordinate with the City of Kirkland Public Works Department for the installation of the water meter (fees may apply). All irrigation components shall be either SCH 40, SCH 80 or Brass. (No galvanized components allowed in system.) All irrigation wiring shall be minimum 12 AWG. (Tying into controller clock may be multiwire).
- Coverage – There shall be full, uniform, and complete coverage of irrigation area and coverage test shall be performed under automatic operation.
- Appropriate backflow devices and/or Pressure Reducing valves will be installed according to the latest version of the Uniform Plumbing Code as adopted by the City of Kirkland Building Department. Contractor shall test and field verify that existing backflow and PRV are in good working order, and pass backflow test prior to start of construction. If existing backflow and PRV are greater than 5 years old, both shall be replaced.
- Drip irrigation zones shall have a 2-year maintenance and ownership agreement with annual inspection with COK inspector, prior to City of Kirkland possession.
- During construction, the City of Kirkland requires 3 inspections with COK inspector prior to turnover.
  - 1<sup>st</sup> – Pre-cover inspection, prior to trench backfill
  - 2<sup>nd</sup> – Following installation of heads, valves, controllers and backflow.
  - 3<sup>rd</sup> – After system is fully installed and operational, prior to final inspection.