

STANDARD SPECIFICATIONS

SECTION 15112

BACKFLOW PREVENTERS

PART 1 - GENERAL

A. Description

This section includes materials, installation, and testing of backflow prevention assemblies.

B. Related Work Specified Elsewhere

All related work specified elsewhere, or in other codes or standards, will be as last revised, unless a specific date of issuance is called out in opposition to later revision date(s).

Other sections of the technical specifications, not referenced below, shall also apply to the extent required for proper performance of this work.

- 1. Concrete: 03300
- 2. Ductile-Iron Pipe and Fittings: 15056
- 3. Copper, Brass, and Bronze pipe, Fittings, and Appurtenances: 15057
- 4. Manual Valves: 15100
- 5. Meters: 15150

C. Approved Assemblies

The backflow prevention assembly shall be included in the latest edition of the "List of Approved Backflow Prevention Assemblies," Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, School of Engineering.

D. Application

- 1. A backflow prevention device shall be installed at all locations where the potential for a backflow condition into the District's domestic water mains exists. The device shall be located immediately behind the meter assembly.
- 2. The type of device required will depend on the level of potential hazard which exists. The District Cross Connection Inspector, will make the final determination of, and what type of backflow device is required.
- 3. Any service providing domestic water to anything other than a private residential dwelling shall have backflow protection.

4. A double check detector check assembly is required on a private on-site fire protection system or a private on-site distribution system with two or more separate connections to the District's domestic water mains.

E. Responsibility

The District will maintain only the upstream mainline shut-off valve and service to the point of connection of the assembly and the by-pass meter. The owner is responsible for the testing, maintenance and repair or replacement of the device.

PART 2 - MATERIALS

A. Shut-Off Valves

1. The shut-off valves for assemblies 3-inch and larger shall be resilient seat gate valves conforming to Section 15100. Ball valves shall be used on assemblies smaller than 3-inch.
2. Shut-off valves shall have outside stems and yokes.

B. Ductile Iron Piping and Fittings

Ductile iron piping and fittings shall be furnished and installed in accordance with Section 15056.

C. Concrete

Concrete thrust blocks and supports shall be in conformance with Section 03300.

D. By-Pass Piping

By-pass piping shall be copper or brass conforming with Section 15057.

E. Backflow Prevention Assembly

All backflow prevention assemblies shall conform to the latest edition of AWWA C506 and the "Manual of Cross-Connection Control," Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, School of Engineering.

F. By-Pass Meter

The by-pass meter shall conform with the requirements of Section 15150 and shall be compatible with the backflow device on which it is installed. The backflow prevention assembly and the by-pass meter shall be furnished as one complete unit. All by-pass meters shall be 5/8-inch by 3/4-inch, manufactured by Invensys, with registers reading in cubic feet.

PART 3 - EXECUTION

A. Installation

Installation of the double detector check assembly, or a reduced pressure principle assembly will be per MNWD standard drawings W-15, W-15A and W-17, respectively, and as noted below.

1. Installation shall comply with the latest plumbing codes and applicable local agency requirements.
2. Installation shall comply with the requirements of the latest edition of the Manual of Cross-Connection Control.

B. Testing

Upon completion of the installation of the device, a test shall be performed and a certificate of the adequacy and operational compliance shall be furnished to the District. The tests shall be performed by a testing agency approved by the Orange County Health Department.

END OF SECTION