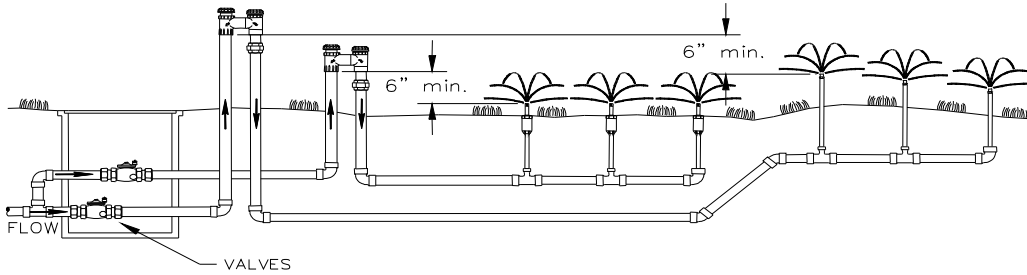


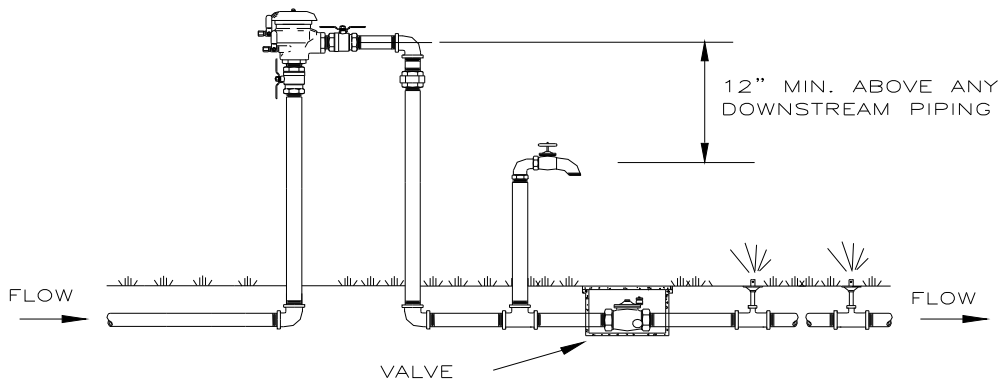
333-061-0071

Backflow Prevention Assembly Installation and Operation Standards

- (1) Any approved backflow prevention assembly required by OAR 333-061-0070 shall be installed in a manner that:
 - (a) Facilitates its proper operation, maintenance, inspection, and in-line testing using standard installation procedures approved by the Department, such as, but not limited to, University of Southern California, Manual of Cross-Connection Control, 9th Edition, the Pacific Northwest Section American Water Works Association, Cross Connection Control Manual, 6th Edition, or the local administrative authority having jurisdiction;
 - (b) Precludes the possibility of continuous submersion of an approved backflow prevention assembly, and precludes the possibility of any submersion of the relief valve on a reduced pressure principle backflow prevention assembly; and
 - (c) Maintains compliance with all applicable safety regulations and the Oregon Plumbing Specialty Code.
- (2) For premise isolation installation:
 - (a) The approved backflow prevention assembly shall be installed at a location adjacent to the service connection or point of delivery; or
 - (b) Any alternate location must be with the advance approval of the water supplier and must meet the water supplier's cross connection control requirements; and
 - (c) The premise owner shall ensure no cross connections exist between the point of delivery from the public water system and the approved backflow prevention assembly.
- (3) Bypass piping installed around any approved backflow prevention assembly must be equipped with an approved backflow prevention assembly to:
 - (a) Afford at least the same level of protection as the approved backflow prevention assembly being bypassed; and
 - (b) Comply with all requirements of these rules.
- (4) All Oregon Plumbing Specialty Code approved residential multi-purpose fire suppression systems constructed of potable water piping and materials do not require a backflow prevention assembly.
- (5) Stand-alone fire suppression systems shall be protected commensurate with the degree of hazard, as defined in Table 50 (Backflow Prevention Methods).
- (6) Stand-alone irrigation systems shall be protected commensurate with the degree of hazard, as defined in Table 50 (Backflow Prevention Methods).
- (7) An Atmospheric Vacuum Breaker (AVB) shall:



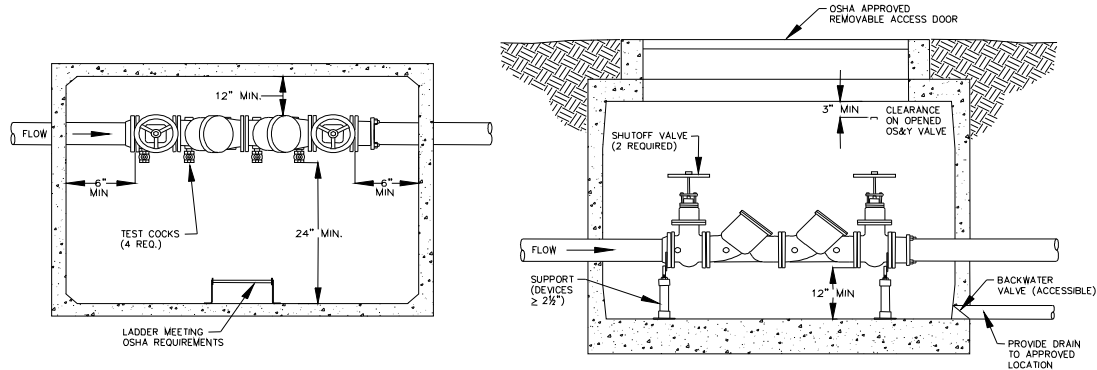
- (a) Have absolutely no means of shut-off on the downstream or discharge side of the atmospheric vacuum breaker;
 - (b) Not be installed in dusty or corrosive atmospheres;
 - (c) Not be installed where subject to flooding;
 - (d) Be installed a minimum of 6 inches above the highest downstream piping and outlets;
 - (e) Be used intermittently;
 - (f) Have product and material approval under the Oregon Plumbing Specialty Code for non-testable devices.
 - (g) Not be pressurized for more than 12 hours in any 24-hour period; and
 - (h) Be used to protect against backsiphonage only, not backpressure.
- (8) A Pressure Vacuum Breaker Backsiphonage Prevention Assembly (PVB) or Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly (SVB) shall:



- (a) Be installed where occasional water discharge from the assembly caused by pressure fluctuations will not be objectionable;
- (b) Have adequate spacing available for maintenance and testing;
- (c) Not be subject to flooding;
- (d) Be installed a minimum of 12 inches above the highest downstream piping and outlets;
- (e) Have absolutely no means of imposing backpressure by a pump or other means. The downstream side of the pressure vacuum breaker backsiphonage prevention assembly or spill-resistant pressure vacuum

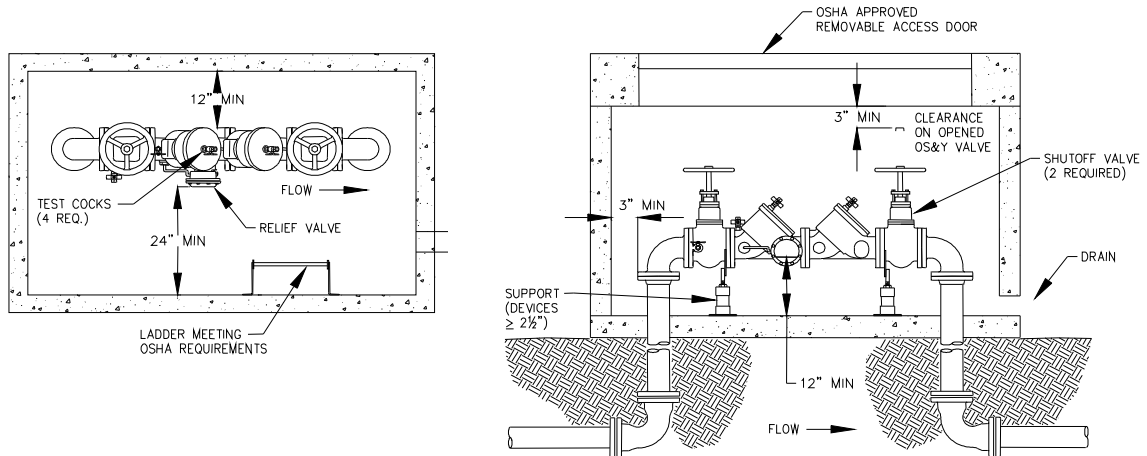
breaker backsiphonage prevention assembly may be maintained under pressure by a valve; and

- (f) Be used to protect against backsiphonage only, not backpressure.
- (9) A Double Check Valve Backflow Prevention Assembly (DC) or Double Check Detector Backflow Prevention Assembly (DCDA):



- (a) Shall conform to bottom and side clearances when the assembly is installed inside a building;
- (b) May be installed vertically as well as horizontally provided the assembly is specifically listed for that orientation in the Department's Approved Backflow Prevention Assembly List.
- (c) May be installed below grade in a vault, provided that water-tight fitted plugs or caps are installed in the test cocks, and the assembly shall not be subject to continuous immersion;
- (d) Shall not be installed at a height greater than 5 feet unless there is a permanently installed platform meeting Oregon Occupational Safety and Health Administration (OR-OSHA) standards to facilitate servicing the assembly;
- (e) May be installed with reduced clearances if the pipes are 2 inches in diameter or smaller, provided that they are accessible for testing and repairing, and approved by the appropriate local administrative authority having jurisdiction;
- (f) Shall have adequate drainage provided except that the drain shall not be directly connected to a sanitary or storm water drain. Installers shall check with the water supplier and appropriate local administrative authority having jurisdiction for additional requirements;
- (g) Shall be protected from freezing when necessary; and
- (h) Be used to protect against non-health hazards under backsiphonage and backpressure conditions.
- (10) A Reduced Pressure Principle Backflow Prevention Assembly (RP) or Reduced Pressure Principle-Detector Backflow Prevention Assembly

(RPDA):



- (a) Shall conform to bottom and side clearances when the assembly is installed inside a building. Access doors may be provided on the side of an above-ground vault;
- (b) Shall always be installed horizontally, never vertically, unless they are specifically approved for vertical installation;
- (c) Shall always be installed above the 100-year (1%) flood level unless approved by the appropriate local administrative authority having jurisdiction;
- (d) Shall never have extended or plugged relief valves;
- (e) Shall be protected from freezing when necessary;
- (f) Shall be provided with an approved air gap drain;
- (g) Shall not be installed in an enclosed vault or box unless a bore-sighted drain to daylight is provided;
- (h) May be installed with reduced clearances if the pipes are 2 inches in diameter or smaller, are accessible for testing and repairing, and approved by the appropriate local administrative authority having jurisdiction;
- (i) Shall not be installed at a height greater than 5 feet unless there is a permanently installed platform meeting Oregon Occupational Safety and Health Administration (OR-OSHA) standards to facilitate servicing the assembly; and
- (j) Be used to protect against a non-health hazard or health hazard for backsiphonage or backpressure conditions.