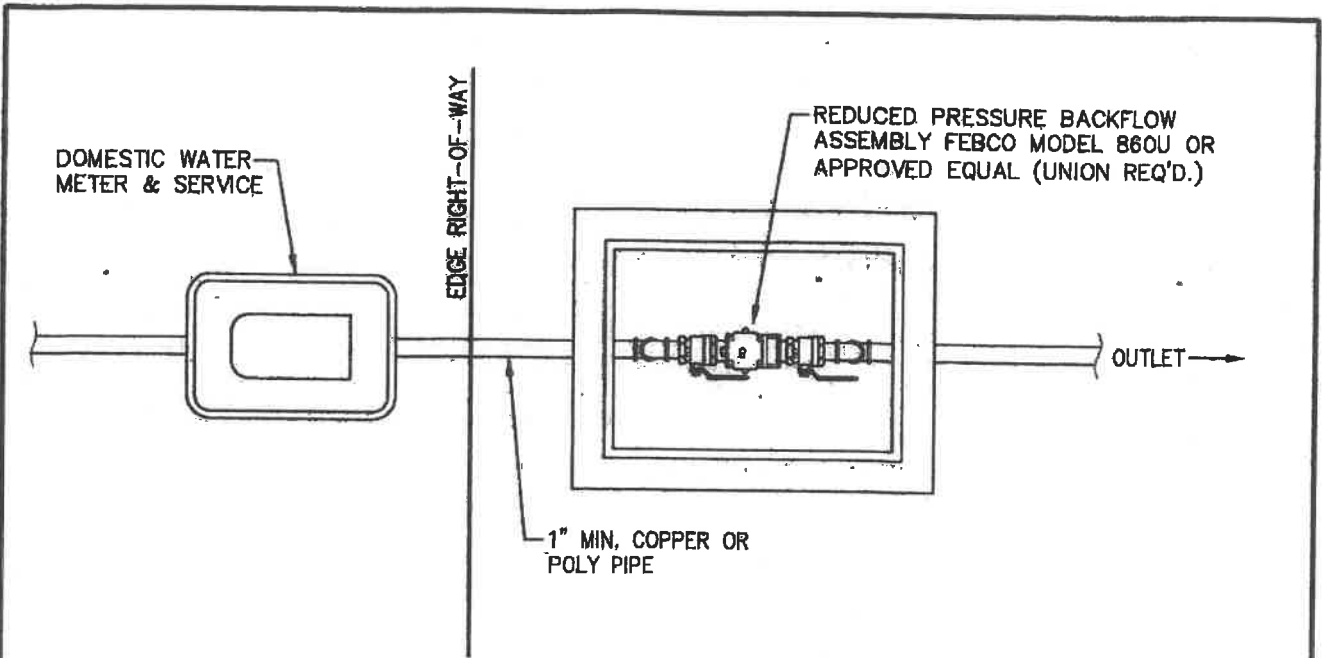


**King County Water District #90**  
**Standard Specification for Installation of**  
**Reduced Pressure Backflow Assembly (RPBA)**  
**For Premise Isolation**

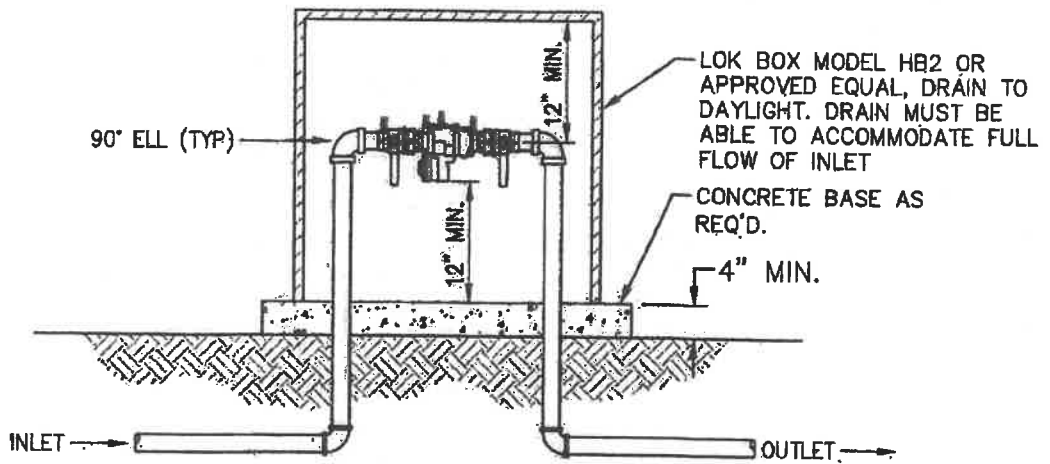
1. The RPBA must be an approved backflow assembly on the Washington state-approved list.
2. The installation of a RPBA must be inspected by District personnel. Call the District at 425-255-9600 Monday through Friday between 8:00 a.m. to 4:30 p.m. for an appointment.
3. No pipes or sprinkler heads are allowed within a five (5)-foot radius of the RPBA meter box.
4. The property owner shall be responsible to maintain an area within a five (5)-foot radius around the RPBA and water meter box and keep it clear of all trees or scrubs, etc.
5. The water meter must remain accessible for periodic meter readings. The RPBA must remain accessible for periodic inspections.
6. It is the responsibility of the property owner and/or general contractor to maintain established finished grade, adjacent to the RPBA and the water meter.
7. The RPBA must be installed behind the water meter in an above ground box with a drain to daylight that is designed to handle the full discharge flow from the relief port of a 1" RPBA. Hotbox is one manufacturer who supplies approved boxes.
8. The RPBA must be installed in the orientation for which it is approved (e.g. horizontal) with the test cocks facing upward or to one side. (See Drawing)
9. The RPBA must be installed with a minimum of 12" clearance below the top of the box. There must be a minimum of 12" clearance above grade. There must be a minimum of 3" clearance on each end of the assembly. (See Drawing)
10. Make sure that there is at least six inches of clearance between the box and the test cocks.
11. Sufficient drainage must be provided under the assembly to prevent flooding.
12. Compressed air fittings used for winterizing the system must be installed downstream of the RPBA.
13. Unions should be installed on both sides of the device for removal.
14. The RPBA must be tested when installed and annually thereafter.
15. All test cocks must be plugged.
16. If the RPBA is installed on a water line supplying a hot water tank, ensure that the hot water tank is equipped with a pressure relief valve and/or expansion tank.

**Backflow Equipment Suppliers**

HD Fowler	800-847-5290	HD Supply Waterworks	800-422-2038
Keller Supply	425-226-6881	McLendon's Hardware	425-235-3555



**PLAN**



**ELEVATION**


**NOTE:**  
 DETERMINATION OF DCVA OR RPBA FOR CROSS  
 CONNECTION CONTROL WILL BE MADE BY WD NO. 90  
 ON A CASE BY CASE BASIS.



**Stantec**  
 11130 NE 33rd Place,  
 Bellevue WA 98004  
 phone: (425) 869-9448

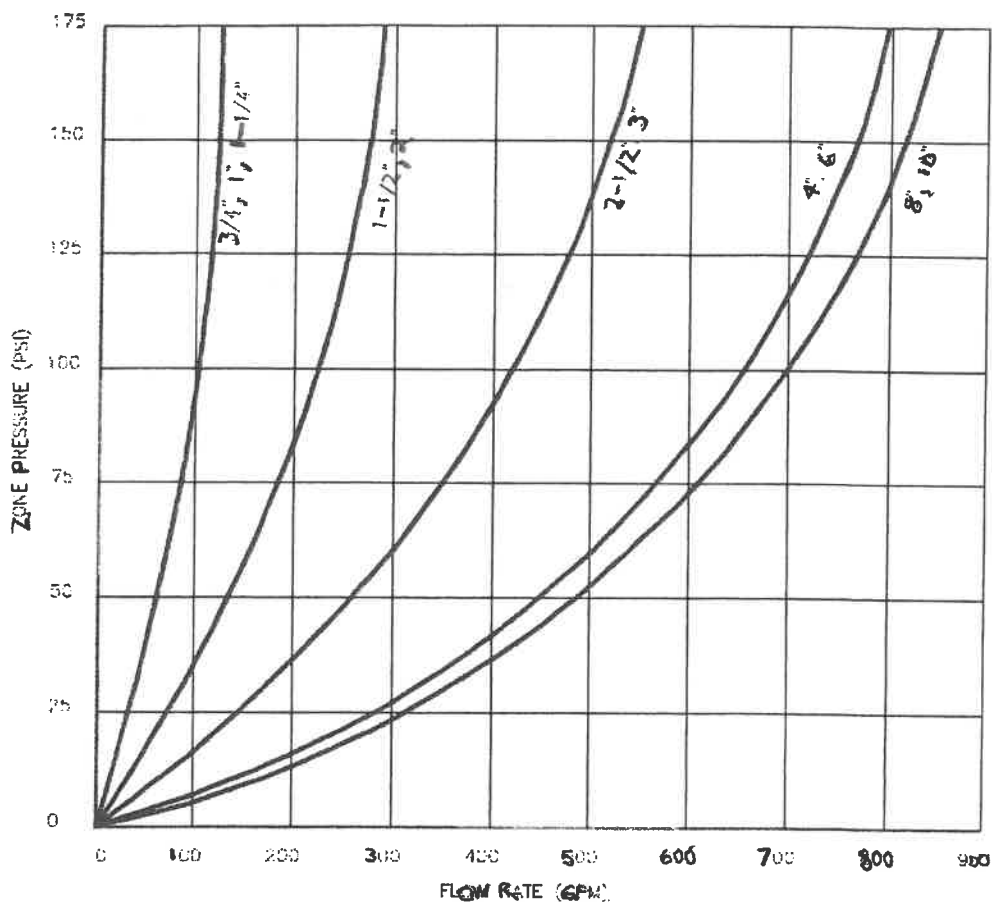
**CROSS CONNECTION  
 CONTROL-RPBA**

PLOTTING DATE JAN 2016	DRAWN	CHECKED <i>JSF</i>	APPROVED <i>JD</i>	DATE APPROVED 2-16-16
SCALE	FILE NAME R:\cad\detail\outocad\WD90\WATER\32_rpba.dwg			



**WATER DISTRICT NO.90**  
 DWG. NO. 32

**APPROXIMATE RELIEF VALVE DISCHARGE RATES FOR REDUCED PRESSURE BACKFLOW ASSEMBLIES**



**Table 6-1**  
Approximate Relief Valve Discharge Rates for Reduced Pressure Backflow Assemblies

Care should be taken to ensure that the entire drainage system has adequate capacity to carry the continuous discharge rates shown above. Zone pressure is line pressure. The assembly sizes range from 3/4 inch to 10 inch. In some jurisdictions, plumbing code has increased drain sizes to accommodate full flow discharges. Refer to manufacturer’s recommendations or administrative authority for guidance on proper drain sizing. The following are typical flow rates as sized by one floor drain manufacturer and they represent only the floor drain capacity:

- Drain Size (in inches):                      2"    3"    4"    6"    8"
- Capacity (gallons per minute/gpm):      55    112    170    450    760

For example, in Table 6-1 above, if the system pressure is 90 psi, a 1-inch RP with the relief valve fully open could discharge approximately 100 gpm. This may require a 3-inch drain to handle the flow. For parallel assemblies, the drainage system should be designed for the discharge from both assemblies.

