BROWNSVILLE
PUBLIC UTILITIES BOARD

Backflow Prevention
Cross Connection Control

Department can be contact at
(956) 983-6519 or (956) 983-6347

Revised July 6, 2015

BROWNSVILLE
PUBLIC UTILITIES BOARD

BACKFLOW PREVENTION ASSEMBLY INSTALLATION STANDARDS

All backflow prevention assembly installations shall be in accordance with the following standards unless otherwise directed or approved by the Brownsville Public Utilities Board. These instructions are general guidelines and are subject to change without notice. Any inquires or requests should be directed to the Brownsville Public Utilities Board, Backflow Prevention Department at 983-6347.

I. GENERAL INSTRUCTIONS

1. Assemblies will be installed in an accessible location to facilitate maintenance, testing, and repair, and should never be located more than five feet above the floor or grade level. The backflow preventer must be installed between the meter and owner's first tap or tee. In no instance will the assembly be allowed in the same vault with the Brownsville Public Utilities Board's water meter. Containment assemblies on fire lines must be located within 100' (pipe length) of the property line.

2. Vault lids will be constructed in such a manner as to permit easy accessibility at all times by an individual. Vaults deeper than 5 feet shall be provided with a ladder permanently attached to a sidewall. It is the contractor's and owner's obligation and responsibility to ensure OSHA regulations are adhered to in the construction of all vaults. Additionally, confined space regulations are to be consulted and followed in the testing and maintenance of backflow prevention assemblies.

3. Before installing the assembly, pipelines should be thoroughly flushed to remove foreign material

4. Test cocks must never be used as supply connections and must be plugged except when being tested. Plugs must be no-ferris, e.g., brass, plastic, etc. Backflow preventers must be installed horizontally and in an upright position. Future testing and repair on backflow prevention assemblies require the indicated clearances to be provided regardless of test cock locations except for 1" or smaller double check valve assemblies that are repairable from the top, have test cocks on top of the assembly and not installed in concrete or asphalt. Backflow preventers installed in a vertical position or on their side will be disapproved.

5. All hot water heating systems should be evaluated before the backflow prevention assembly is installed to ensure that temperature and pressure relief valves have been properly installed and are in working condition. Future backflow prevention assembly tests should also include the testing of pressure relief valves.

6. In order to ensure that backflow prevention assemblies continue to operate satisfactorily, it will be necessary that they be tested at the time of installation and on an annual basis thereafter. Such tests will be conducted in accordance with BPUB performance standards and field test procedures as prescribed by the American Water Works Association or the University of Southern California. The Brownsville Public Utilities Board shall provide appropriate "test and maintenance" report forms.

7. The Brownsville Public Utilities Board will inspect all containment installations, i.e., located between the water meter and owner's first tap or tee. This does not negate the customer's responsibility of internal protection.

8. All costs entailed in the subject program are to be borne by the customer. This includes the initial purchase of the backflow preventer, its proper installation, testing and maintenance. Both containment and internal isolation backflow preventers must be tested and maintained in good working condition.

3-2.5. Type of Establishment - Inside and Outside City Limits Device Required

A/G - Air Gap Separation
R/P - Reduced Pressure Principle Backflow Prevention Assembly
D/C - Double Check Valve Assembly
DCDA - Double Check Detector Assembly
P.T.V.B. - Pressure Type Vacuum Breaker
S.V.B - Spill/Resistant Vacuum Breaker

We are adding Air Gap to all of these

Type of Establishment/ Business	Device Required	Type of Establishment/ Business	Device Required
Apartments/ Condominiums Four Stories or more	**R/P**	Photo Lab (More Than Two Machines)	**R/P**
Auxiliary Water Supply Recycled, Wells, etc.	**Air Gap or R/P**	Plating Plant	**R/P**
Belted Meter Installation (By Individual Review)	**DCVA or R/P**	Swimming pool Commercial/Residential (By Individual Review)	**R/P or PTVB**
Building – Four Stories or more	**R/P**	Commercial Businesses or Establishments (By Individual Review)	**DCVA or R/P**
Car Wash (internal containment option- within two feet of main water service entry into car wash)	**R/P or Air Gap**	Post Mix Carbonated Beverage Mixers & Dispensers (CO_2)	**R/P**
Fire Line (With Chemical Additive)	**R/P**	Commercial Kitchen equipment including (Mop sinks) (By Individual Review)	**SVB/ PTVB/ R/P**
Fire Line (With Fire Hydrant – see 4.2.4.1)	**DCDA or RPDA**	R/V Park (By Individual Review)	**R/P**

Fire Line (Without Fire Hydrant)	**DCVA or DCDA**	Gated Community Dedicated Services (By Individual Review)	**R/P**
Food Processing/Packaging Plant	**R/P**	Cooling Tower, Heat Exchangers, Chillers	**R/P**
Greenhouse, Landscape and or Grass Farms	**R/P**	Stock Yard/Farm & Ranch (By Individual Review)	**R/P**
Hospital /Dental/Medical Facility	**R/P**	Schools-Colleges Universities (elementary school-individual review)	**R/P**
Jail	**R/P**	Transportation Terminal	**R/P**
Laboratory – Chemical or Clinical	**R/P or Air Gap**	Wholesale Connections (Planned Unit Develop)	**R/P or Air Gap**
Laundry and Dry Cleaning Plants-Retail (Internal Containment Optional)	**R/P**	Water and Ice Vending Machine	**R/P or Air Gap**
Lawn Irrigation Systems	**PTVB-SVB**	Petroleum Processes and Storage Plant	**R/P**
Lawn Irrigation Systems (With Fertilizer Injector or alternative water source)	**R/P**	Manufacturing Processing Plant (Toxics)	**R/P**
Lease Space (two or More Single Service) Internal Containment Option-Inside City Limits	**R/P**	Beauty Saloon/ Parlors With Foot Spas (Individual Review)	**R/P**

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Fire Line System Checklist

1) Name of fire line company installing the back flow preventer?

   _____

2) Will BPUB provide the service connection / tap?
   a. □Yes
   b. □No

3) Will the system be using foam injection or anti-freeze type solutions?
   a. □Yes
   b. □No

4) What is the distance between the property line and the fire line riser?

   _____

5) What type of backflow protection will you be using?

   a. R/P_____ D/C _____ DCDA _____

      i. Model _____

      ii. Manufacture_____

Brownsville PUB Cross Connection Compliance representative must inspect the installation of the back flow prevention assembly. It is the installer's responsibility to call BPUB for inspection or risk termination of services. (956) 983-6347 or (956)983-6519

Service order # _____ License # _____

Address _____ Telephone _____

Print Name Signature Date

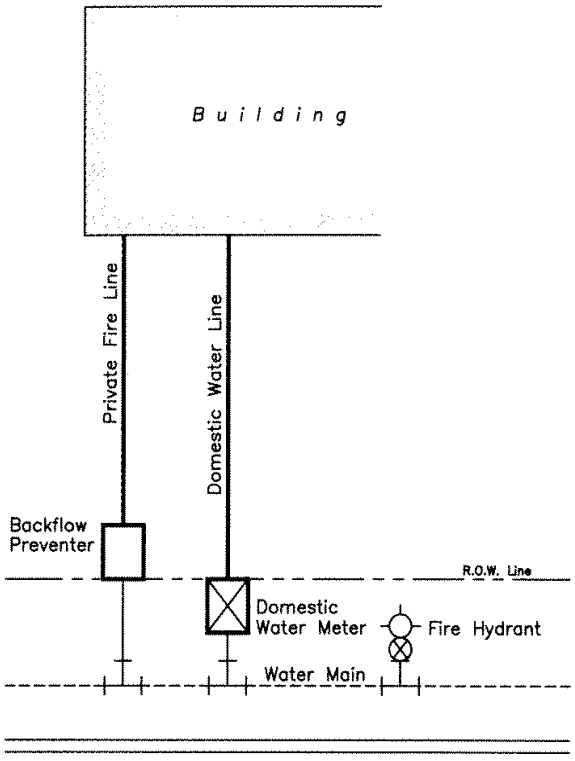
_____ _____ _____

3-2.8. Classification and Requirements for Backflow Protection on Fire-lines

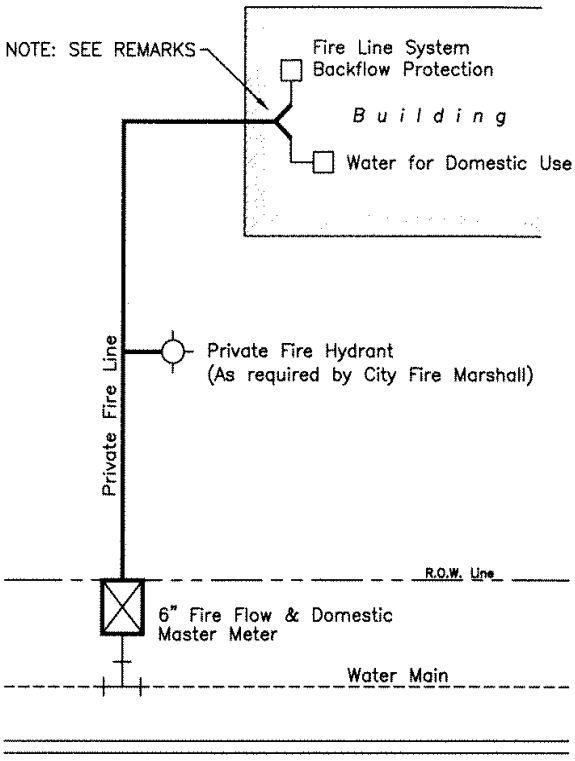
	TYPE OF FIRELINE	REQUIRED PROTECTION
A.	Fire-line with no chemical Additive and no additional Water supply - less than 100' Total piping from property line (Including internal sprinkler line)	No requirement
B.	Fire-line with no chemical Additive and no additional Water supply - greater than 100' Total piping from property line* (Including internal sprinkler line)	Double Check Valve Assembly
C.	Fire-line with fire hydrant no chemical Additive and no additional water Supply - greater than 100' total piping From pproperty line* (Including internal sprinkler line)	Double Check Detector Assembly
D.	Fire-line with fire hydrant - no chemical Additive and no additional water supply Less than 100' total piping from property Line (Including internal sprinkler line)	Detector Check Valve
E.	Fire protection system Utilizing chemical additives** (Including internal sprinkler line)	Air Gap Separation or Reduced Pressure Principle assembly
F.	Fire protection system with access to An auxiliary water supply *** (Including internal sprinkler line)	Air Gap Separation or Reduced Pressure Principle assembly

*Systems under a total renovation and systems installing booster pumps will include provisions to protect the potable water supply from stagnant water as outlined in Section 3-2.4.**Systems with chemical loops and/or foam injection will require a reduced pressure principle backflow prevention assembly at the loop or foam injection point; however, an expansion chamber or relief valve will have to be installed to compensate for thermal expansion in accordance with the fire codes. The installation of reduced pressure principle assemblies for containment backflow protection on fire-lines should be avoided and installed only in situations where chemical injection occurs prior to any taps or tees.

A



B



NOTE:

WAREHOUSE WITH MULTIPLE LEASE SPACE OR INDUSTRIAL WILL REQUIRE AN RP BACKFLOW PREVENTER BEFORE ENTERING BUILDING.

ALTERNATE

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Lawn Irrigation System Check List

1) Who is the installer of the system?
_____

2) Will the system be using auxiliary water?
   a. □ Yes
   b. □ No
   c. If yes, what type? _____

3) Will the system be using a pump?
   a. □ Yes
   b. □ No

4) Will the system be using a chemical injection?
   a. □ Yes
   b. □ No

5) What type of backflow protection will you be using?
   a. PVB
   b. R/P
   c. AVB

   Model _____

   Manufacture_____

6) What size of water meter? _____

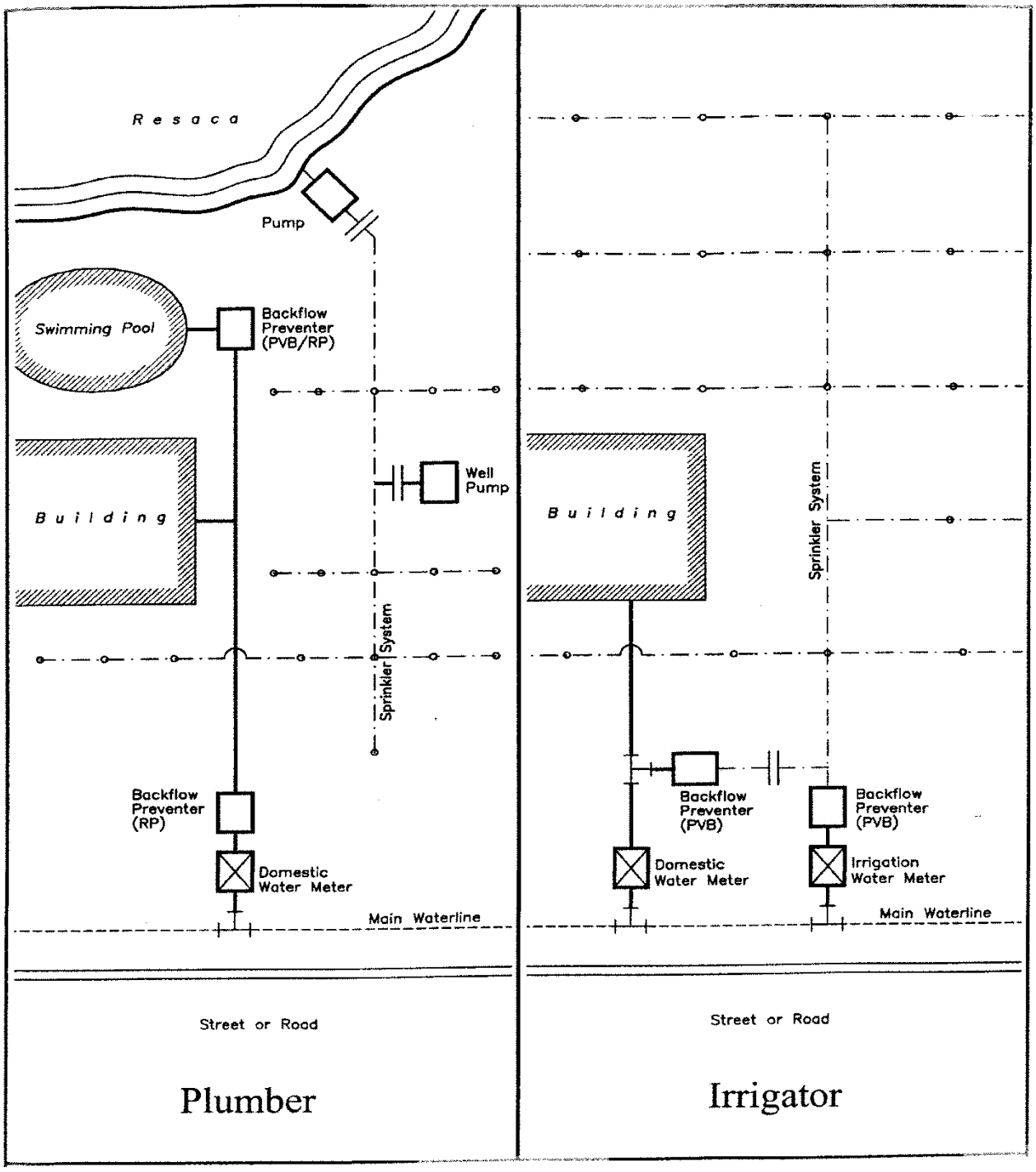
**Brownsville PUB Inspector must inspect the service line between the water meter and the backflow prevention assembly. It is the installer's responsibility to call BPUB for inspection or risk termination of services (956) 983-6347.

Permit # _____ License # _____

Address of Location _____ Telephone _____

_____ _____ _____

Print Name Signature Date


Resaca
Pump
Swimming Pool
Backflow Preventer (PVB/RP)
Building
Well Pump
Sprinkler System
Backflow Preventer (RP)
Domestic Water Meter
Main Waterline
Street or Road
Plumber
Building
Sprinkler System
Backflow Preventer (PVB)
Backflow Preventer (PVB)
Domestic Water Meter
Irrigation Water Meter
Main Waterline
Street or Road
Irrigator