

BACKFLOW PREVENTION DEVICES

The purpose of this information is to aid you in compiling the necessary information required for approval of the installation of your **Reduced Pressure Zone Device/Double Check Valve**.

THE FOLLOWING PAPERWORK IS REQUIRED FOR SERVICE TO **ALL NEW BUILDINGS** (REGARDLESS OF THE SERVICE SIZE), **EXISTING BUILDINGS WITH SERVICES OVER 2"**, AND **ALL FIRELINES**.

THREE (3) COPIES OF THE FOLLOWING (unless otherwise noted):

1. APPLICATION FORM 236 **OR** NYS DOH 1013*
2. PLOT PLAN - **STAMPED BY YOUR ARCHITECT OR ENGINEER** (see sample)
3. INSTALLATION DRAWING - **STAMPED BY YOUR ARCHITECT OR ENGINEER** (see sample)*
4. ENGINEERS REPORT (see sample)
5. LETTER OF COMPLIANCE – 1 Copy

There is a Plan Review Fee of \$170.00 payable to Suffolk County Water Authority that should accompany first time submittals.

*Regardless of the Application Form submitted, the NYS DOH 1013 must be completed by the design Engineer / RA upon completion of device installation and submitted to the Cross Connection Control Department.

*The sample drawings are designed to supply you with as much information as possible. **THEY ARE GENERIC PRINTS ONLY.**

Forward 4 complete sets to:

**SCWA / Cross Connection Control Department
4060 Sunrise Hwy
PO Box 38
Oakdale NY 11769**

Cross Connection Control Department: 631-563-0266

REV. 6/1/17

SUFFOLK COUNTY WATER AUTHORITY CROSS CONNECTION CONTROL

Policy of Suffolk County Water Authority as a condition of service:

1. Cross Connection Control will be one of complete containment by having the customer install a backflow prevention device as determined by degree of hazard under the guidelines of NYS Sanitary Code Section 5-1.31.
2. All **New** Commercial Buildings will be required to install a Reduced Pressure Zone (RPZ) device.
3. New fire line services will require a backflow prevention device based upon M-14 guidelines.
4. Retrofit Commercial Accounts will require the installation of either a Reduced Pressure Zone Assembly (RPZ) or Double Check Valve (DCV), based upon degree of hazard determined under NYS Department of Health guidelines.
5. Retrofit Commercial Accounts determined as non- hazardous by a Cross Connection survey will be required to have a dual check valve installed at the meter.
6. Residential Accounts with high degree of hazard will be required to install a RPZ device. These include, but not limited to, private well(s) connected to house, chemicals in sprinkler systems, geo-thermal systems connected to SCWA.
7. Residential Accounts with low and no degree of hazard will be required to have a dual check valve installed at the meter.
8. SCWA may permit domestic RPZ devices to be installed in a building provided the length of the service line run does not exceed 125'. Where it is not feasible to install the device inside the building, it will be required to be installed at or near the property line in a heated enclosure or above ground vault. The owner must sign a letter of compliance attesting to the fact that no connections will be permitted between the meter and the RPZ.
9. Only devices approved by New York State Health Department will be acceptable. Plans and installations must conform to Suffolk County Water Authority's Cross Connection Control Booklet and NYS Department of Health guidelines. Failed installation inspections will necessitate a \$25 fee billed to the customer's account.
10. Devices required to be tested annually will be at the customer's expense and results forwarded to Suffolk County Water Authority on SCWA Test and Maintenance of Backflow Device (215B) issued form, which can be downloaded from SCWA website. All tests must be performed by a NYS Certified backflow prevention device tester who holds all appropriate licensing under Suffolk County Consumer Affairs Law regarding Backflow Testing. Should the test not be performed within the allotted 60 day time period, the account will be slated for shut off.

New and Existing Master Metered Residential Communities
Including but not limited to apartments, townhouses, condos/co-ops

Board Approved: June 1996: We will not require the installation of large Primary RPZ devices behind each master meter **if**:

The customer allows the Cross Connection Control Department of the Suffolk County Water Authority to survey their existing facility. This would enable us to detect areas that would require the installation of an RPZ/DCV device. The purpose behind installing these smaller devices is two-fold, protecting you internally from these concerns, as well as not compromising your fire protection. Often, this will be a substantial cost savings. Typically, smaller devices will be required to be installed for sewage treatment/lift stations, pool/clubhouses, commercial boiler feeds, cooling towers, maintenance buildings, slop sinks, as well as extensive irrigation systems. For **existing** master meter communities, a fee of \$190 will be charged for this survey.

If there are private hydrants on site, the customer must sign a "Hydrant Maintenance Agreement" under which all hydrants are turned over to SCWA. Suffolk County Law requires private hydrants to be tested annually. This agreement enables SCWA to flow test and maintain your hydrants. Only SCWA and the local Fire Districts will have use of these hydrants. There is an upfront fee to be paid for each hydrant. Call our Hydrant Department at (631) 218-1143 for current fees.

If the owner does not want to comply with this updated version of our program, a Primary RPZ installation will be required directly behind each master meter.

In June 1998, the Board of the Suffolk County Water Authority approved another option for the installation of RPZ devices for the above Master Metered Residential Communities:

By mutual agreement we would install the required Reduced Pressure Zone Devices for you. You would reimburse the Authority for the cost of the installation. There would be a warranty period for the installation, and it would become your property. The installation would be strictly for master RPZ devices behind the meter. It would not include internal devices throughout your distribution system. The agreement could be financed over five years at a rate of 6%. This surcharge would be added to your water bill.

Through the Authority's bidding process, a licensed plumber would be hired to provide for the installation of the RPZ devices and for the design work required by an engineer/architect. SCWA would supervise the installation as required by code. This option is offered to ensure the quality of the work and to keep costs reasonable for our customers.

Please call the Cross Connection Control Department at 631-563-0266 for further information.

SUFFOLK COUNTY WATER AUTHORITY
CROSS CONNECTION CONTROL FIRE PROTECTION SYSTEMS

M-14

CLASS	ARRANGEMENT	PROTECTION REQUIRED
1	Direct Connections from public water mains only; no pumps, tanks, or reservoirs; no physical connection form other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharging to atmosphere; dry wells, or other safe outlets.	Approved Double Check Valve (DCV)
2	Same as Class 1, except that booster pumps may be installed in the connections from the street mains. (Booster pumps do not affect the potability of the system, it is necessary however to avoid drafting so much water that the pressure in the water main is reduced below 20 psi).	Approved Double Check Valve (DCV) Flow regulator to control over drafting.
3	Direct connection from public water supply main, plus one or more of the following: elevated storage tanks; fire pumps taking suction from above-ground covered reservoirs or tanks; and pressure tanks (all storage facilities are filled or connected to public water only, the water in the tanks to be maintained in a potable condition. Otherwise, Class 2 systems are the same as Class 1.	Approved Double Check Valve (DCV)
4	Directly supplied from public water mains similar to Classes 1 and 2, and with an auxiliary water supply on or available to the premises; or an auxiliary water supply located within 1700' of the fire dept. connection.	Approved Reduced Pressure Zone Device (RPZ)
5	Directly supplied from public mains, and interconnected with auxiliary supplies, such as pumps taking suction from reservoirs exposed to contamination, or rivers or ponds; driven wells; mills or other industrial water systems; or where antifreeze or other additives are used.	Approved Reduced Pressure Zone Device (RPZ)
6	Combined industrial and fire protections systems supplied from public water mains only, with or without gravity storage or pump suction tanks.	Minimum protection Approved Double Check Valve (DCV). Protection would depend on the requirements of both industry and fire protection, and could only be determined by a survey of the premises.

PRIVATE HYDRANTS: In order to be granted a waiver on installing an RPZ for a Private Hydrant, a Maintenance Agreement must be signed with SCWA. If there is no agreement, an RPZ device is required. Fire lines without hydrants are determined by M-14 guidelines.

REV.2001

DRY RECHARGE BASIN REQUIREMENTS

Suffolk County Water Authority has always considered a recharge basin (sump) as an “auxiliary water supply”; this is referred to in **M-14 Class 4 Fire Protection Systems**. This interpretation held true whether there was water in the recharge basin or whether it was dry. This interpretation has been reviewed and the determination has been made that a dry recharge basin is not to be considered an auxiliary water supply. In order to be considered a dry recharge basin, all of the following criteria **must** be met:

- A. Site inspection by a representative of Suffolk County Water Authority.
- B. Certified results of a test boring confirming the ground water elevation to be lower than the floor of the recharge basin. This information can be obtained by the Town’s Engineering Department.
- C. A report in writing from a Professional Engineer certifying to the dry condition of the recharge basin.

NEW and MODIFIED EXISTING FIRELINE SYSTEMS

At the October 30, 2001 meeting of the Board of the Suffolk County Water Authority, a new resolution was passed concerning new and modified existing fire lines.

Effective November 1, 2001, all fire line services are mandated to have a **minimum** of a Double Check Valve (DCV) installed on the line. A Double Check Valve filing is required by a licensed Engineer or Architect.

Reduced Pressure Zone Devices will be required where a Double Check Valve is not acceptable as per M-14 Code requirements.

Regardless of the length of service, fire line devices will be acceptable installed within the building so long as the Siamese or other connections are installed downstream of the said device.

In order to obtain a decision as to which type of backflow device is required, please submit a detailed site plan showing the fire line service, size, the street the service is being taken from, the tie-in distance to the nearest cross street, and the location of the Siamese connection (if any). A field survey will be performed to determine if an RPZ or DCV is required.

NEW YORK STATE DEPARTMENT OF HEALTH
APPLICATION FOR APPROVAL OF BACKFLOW PREVENTION DEVICES

FOR DEPARTMENT USE ONLY

COMPLETE 1 THRU 12

LOG NO.:

1. Name of Facility:	2. City, Village, Town:	3. County
4. Exact Location of Facility; i.e., Street Address:		
5. Approx. Location of Device:	6. Mfg., Size, Model No. of Device(s)	
7. Name & Title of Owner:		
Mailing Address:		Telephone Number
Zip:		8. Nature of Works
Owner's Signature	Date:	[] New [] Revised
9. Design Engineer or Architect	10. NYS License No.	
11. Water System Pressure (psi) at Point of Connection Max. Avg. Min.	12. Estimate Install Cost :	
13. Degree of Hazard: <div style="text-align: center;"> <input type="checkbox"/> Hazardous <input type="checkbox"/> Aesthetically Objectionable </div> List Processes or reasons which lead to degree of hazard checked above:		
14. Public Water Supply Name: Name and Title of Suppliers Designated Rep: Suffolk County Water Authority _____ 4060 Sunrise Hwy/PO Box 38 _____ Oakdale NY 11769 * Signature _____ *Signature endorses proposal Telephone #: 631-563-0266		

NOTE: All applications must be accompanied by plans, specifications and an engineer's report describing the project in detail. The project must be submitted to the Suffolk County Water Authority. This form must be prepared with 3 copies of all plans, specifications and supporting information.

GEN 236 (8/08)

SAMPLE ENGINEER'S REPORT

February 2, 2011

Suffolk County Water Authority
4060 Sunrise Hwy/PO Box 38
Oakdale NY 11769

We have been retained by Emerson Development Corporation to prepare the design for the reduced pressure backflow prevention device (RPZ/DCV) for the Inn at Montauk, in Montauk, New York. The proposed project will consist of two 2-bedroom and six 1-bedroom units. Each unit will have an individual 1" water service. The average daily demand is estimated at 150GPD with a peak demand of 14000 GPD (10GPM).

In compliance with the requirements of the New York State Health Department, Suffolk County Department of Health Services and the Suffolk County Water Authority, an RPZ is proposed for each service. The RPZ will be located on the first floor of each unit. The RPZ proposed is Febco Model LF825Y-1". At the peak demand of 10GPM, the head loss through each RPZ is 9 psi.

Very truly yours,

Consulting Engineer/Registered Architect

COMPLIANCE LETTER

Date_____

SUFFOLK COUNTY WATER AUTHORITY
CROSS CONNECTION CONTROL DEPT.
4060 Sunrise Hwy
PO Box 38
Oakdale, NY 11769

Gentlemen:

RE:

I request that water service be provided to the above named facility. This request is being made with the understanding and agreement that we will at our expense comply with any and all changes requested by the New York State Department of Health Services.

The Public Health code prohibits any connections before a backflow prevention device. Should any connections be made, I understand that I am in violation and I must take appropriate action to remove said violations.

Should we fail to comply with these requests, it is understood that the service will be terminated within 30 days.

Very truly yours,

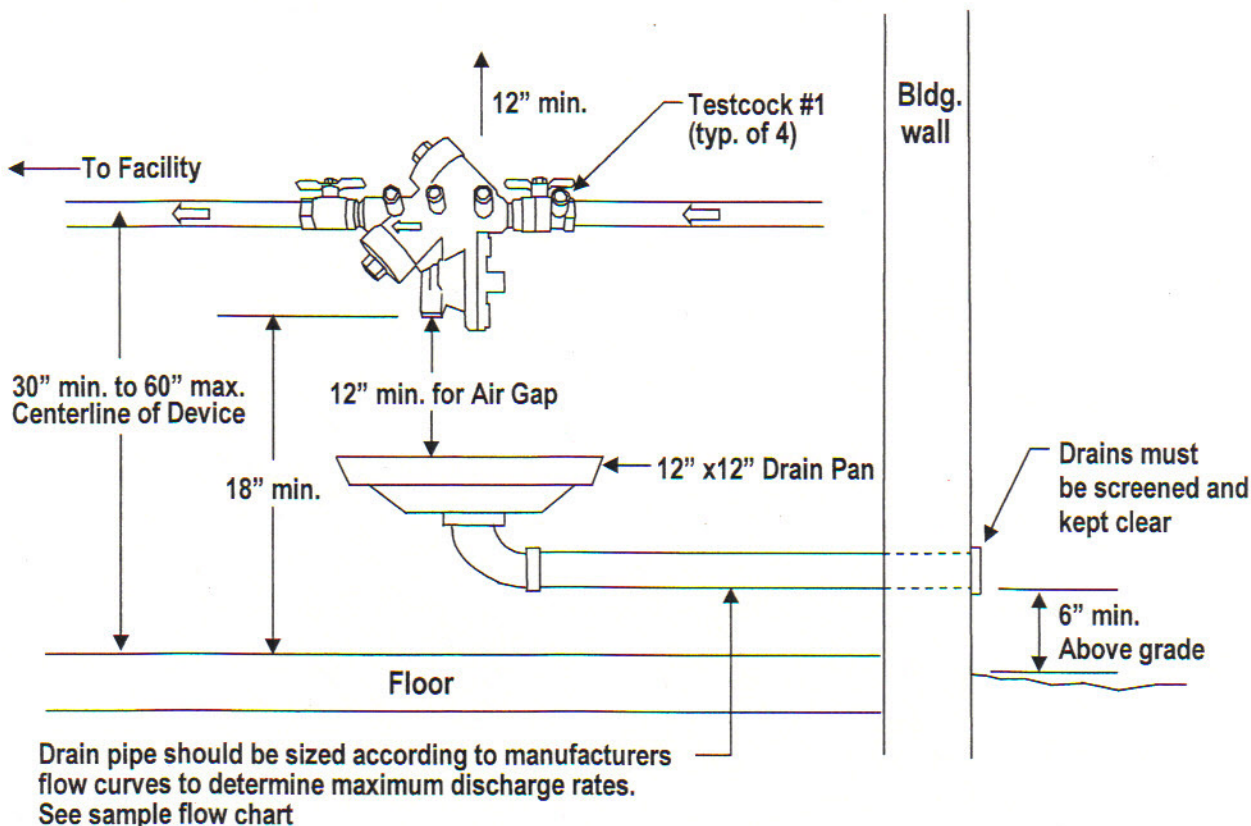
(signature)

Name: _____
(please print)

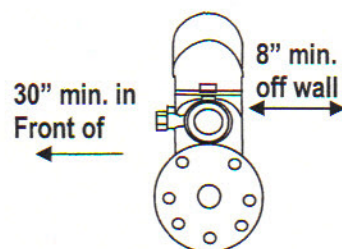
Address:



PREFERRED INSTALLATION (FIRST FLOOR): REDUCED PRESSURE ZONE DEVICES (3/4" - 2")



FRONT VIEW



SIDE VIEW

NOTES:

1. Must be protected against freezing.
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. All connections T's, hose bibs, irrigation etc. must be installed after (downstream) of RPZ.
4. Drains cannot be subject to flooding and must be screened.
5. RPZ must be a Lead Free model.
6. Proper maintenance must be performed.
7. RPZ must have USC Foundation for Cross Connection Control approval.
8. RPZ must be adequately supported to prevent lateral movement to either the wall behind or the floor. 2" must be supported to the floor.
9. Supports must be placed where they will not obstruct the function or access to relief valve.
10. A separate shut off valve is required upstream of the assembly.
11. Adequate lighting must be provided.
12. RPZ may not be installed higher than 5' above the floor or a fixed platform is required.
13. Where the distance between the water meter and device is greater than 10' all exposed piping must be labeled every 5' displaying the words " feed to Backflow Preventer DO NOT TAP "

Design by: L. Wynhurst

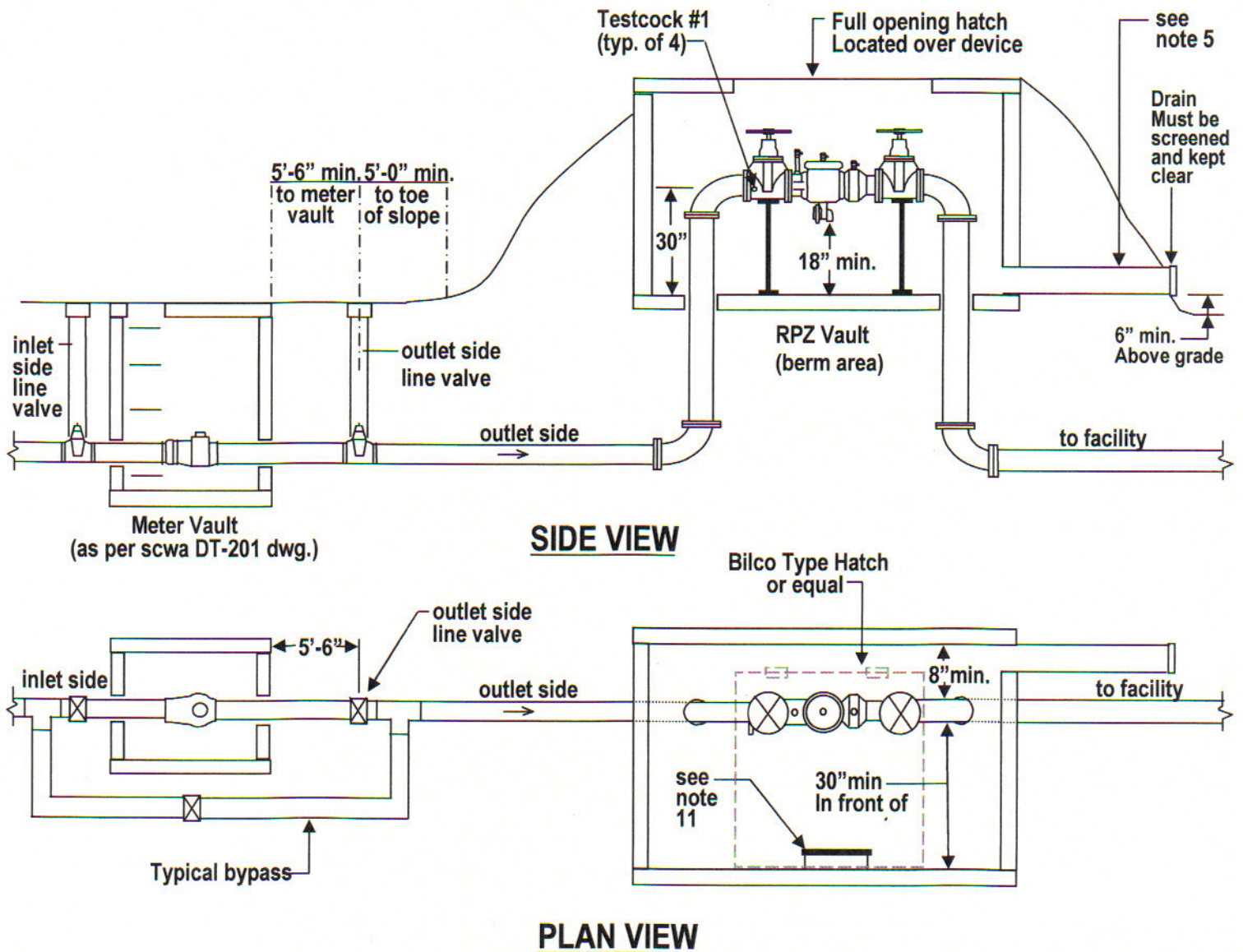
Drawn by: B. Wehnke

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RPZ VAULT WITH LARGE METER VAULT



NOTES:

1. Must be protected against freezing.
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. All connections T's, hose bibs, irrigation etc. must be installed after (downstream) of device.
4. Drain(s) cannot be subject to flooding and must have exterior screen(s).
5. Drain pipe should be sized according to manufacturers flow curves to determine maximum discharge rates. See sample flow chart.
6. Destination of drainage must be shown.
7. RPZ must be adequately supported to prevent lateral movement. Devices 2" or larger must be supported to the floor with pipe stantions.
8. Supports must be placed where they will not obstruct the function or access to relief valve.
9. RPZ must have USC Foundation for Cross Connection Control approval.
10. RPZ must be tested annually.
11. Access ladder to be provided.
12. Full opening hatch to encompass centerline of device.
13. RPZ must be a Lead Free model

Design by: L. Wynhurst

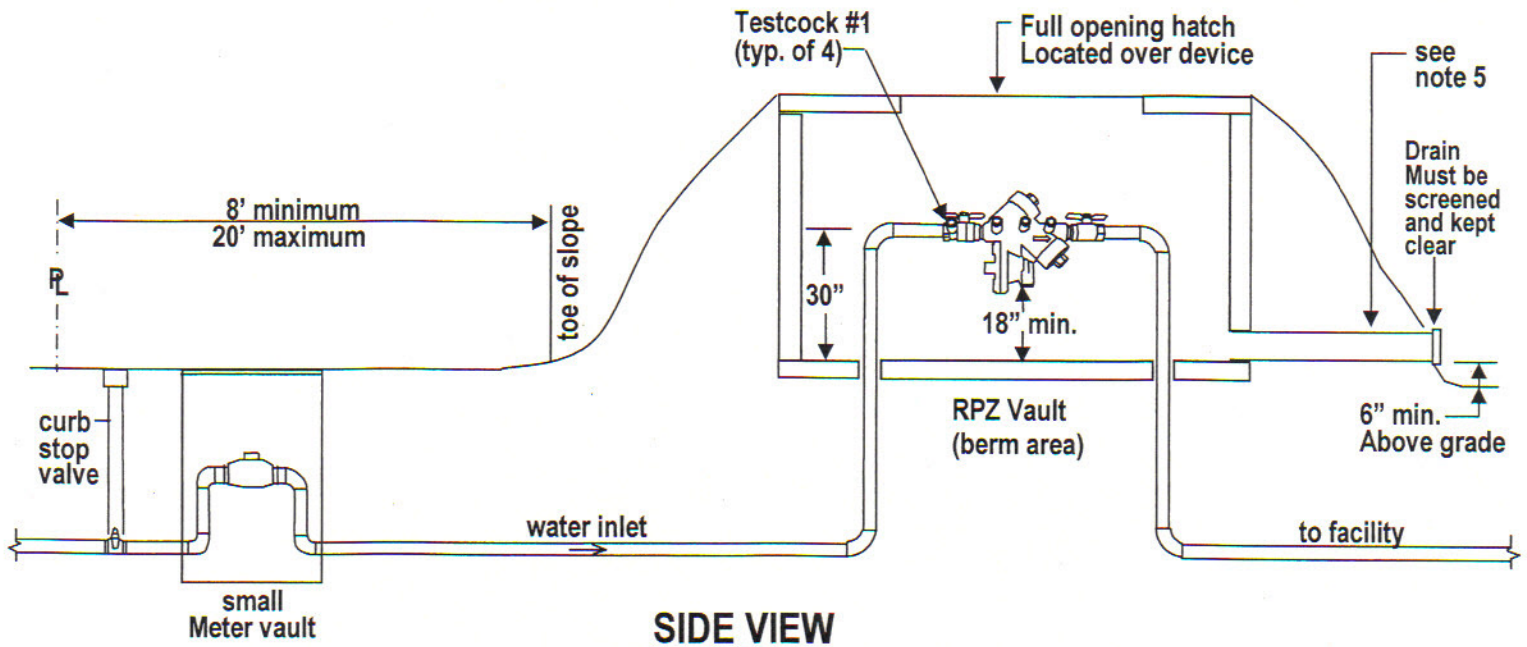
Drawn by: B. Wehnke

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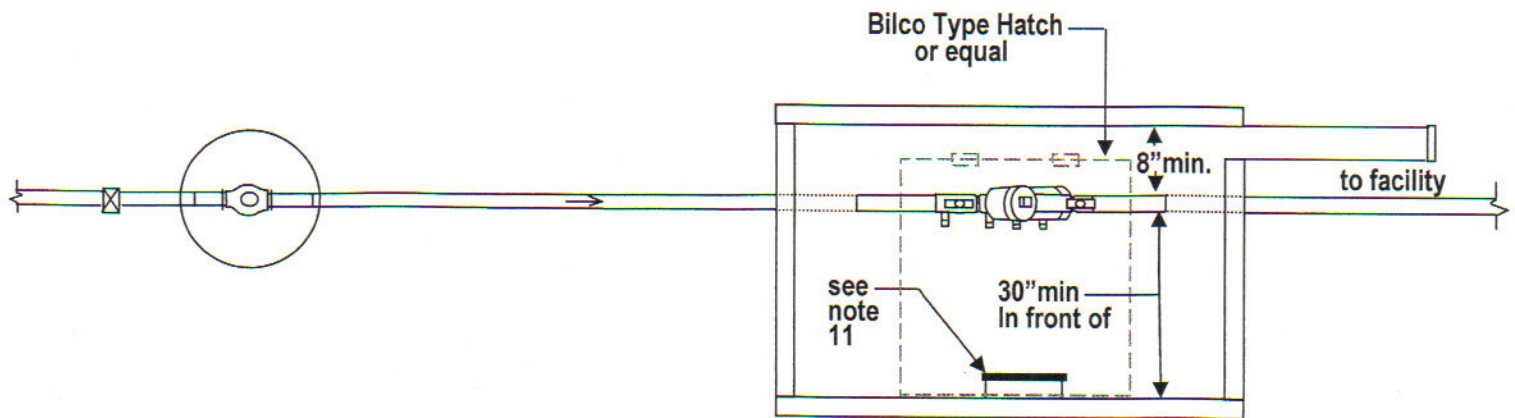
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RPZ (3/4"-2") INSTALLED IN LOW PROFILE BERM VAULT WITH SMALL METER VAULT



SIDE VIEW



PLAN VIEW

NOTES:

1. Must be protected against freezing.
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. All connections T's, hose bibs, irrigation etc. must be installed after (downstream) of device.
4. Drain(s) cannot be subject to flooding and must have exterior screen(s).
5. Drain pipe should be sized according to manufacturers flow curves to determine maximum discharge rates.
6. RPZ must be a Lead Free model
7. RPZ must be adequately supported to the wall behind or to the floor to prevent lateral movement. 2" must be supported to the floor with pipe stantions.
8. Supports must be placed where they will not obstruct the function or access to relief valve.
9. RPZ must have USC Foundation for Cross Connection Control approval.
10. RPZ must be tested annually
11. Access ladder to be provided.
12. Full opening hatch to encompass centerline of device.

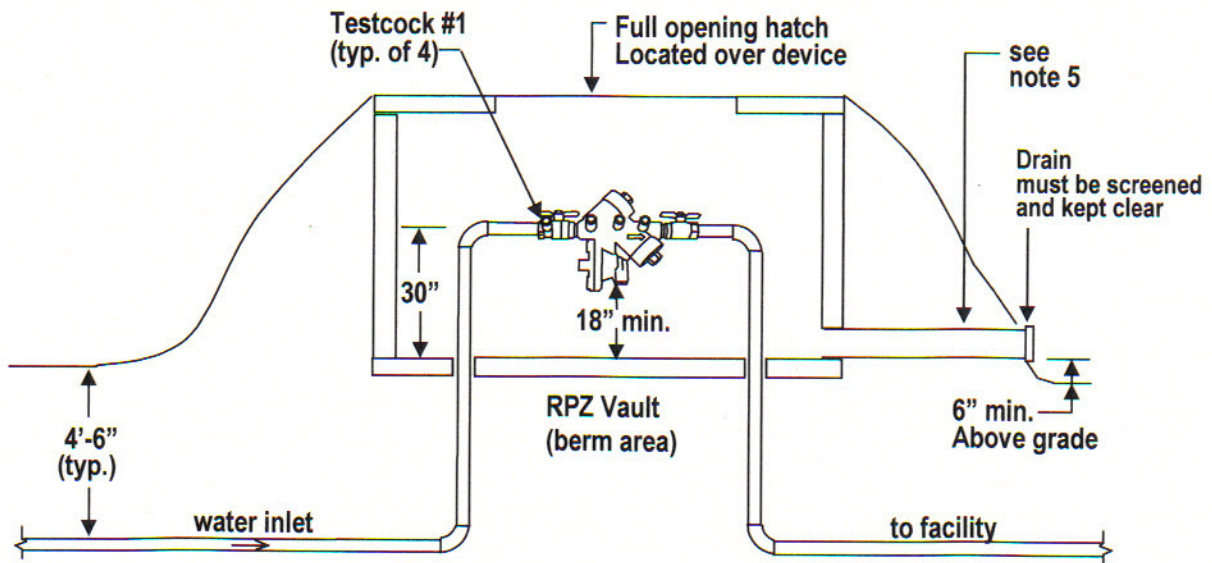
Design by: L. Wynhurst

Drawn by: B. Wehnke

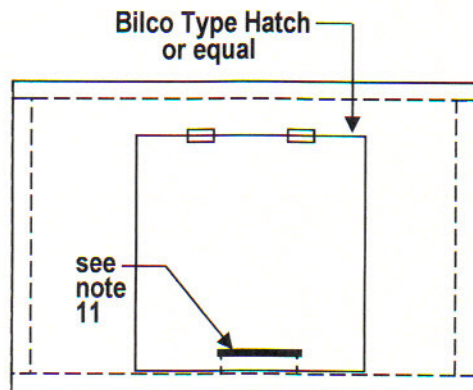
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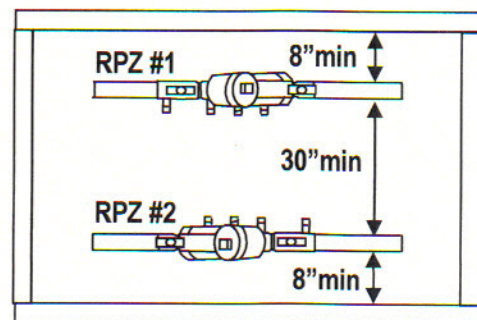
DUAL DEVICES WITHIN THE SAME VAULT



SIDE VIEW



top of vault



within vault

PLAN VIEW

NOTES:

1. Must be protected against freezing
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. All connections T's, hose bibs, irrigation etc. must be installed after (downstream) of device.
4. Drain(s) cannot be subject to flooding and must have exterior screen(s).
5. Drain pipe should be sized according to manufacturers flow curves to determine maximum discharge rates. See sample flow chart.
6. Destination of drainage must be shown.
7. Each RPZ must be adequately supported to the wall behind or to the floor to prevent lateral movement. 2" or larger must be supported to the floor.
8. Supports must be placed where they will not obstruct the function or access to relief valve.
9. Each RPZ must have USC Foundation for Cross Connection Control approval.
10. Each RPZ must be tested annually.
11. Access ladder to be provided.
12. Full opening hatch to encompass centerline of one device to centerline of the opposite device.
13. Length of hatch should be long enough to lift larger device thru opening (check to check).
14. Each RPZ must be a Lead Free model

Design by: L. Wynhurst

Drawn by: B. Wehnke

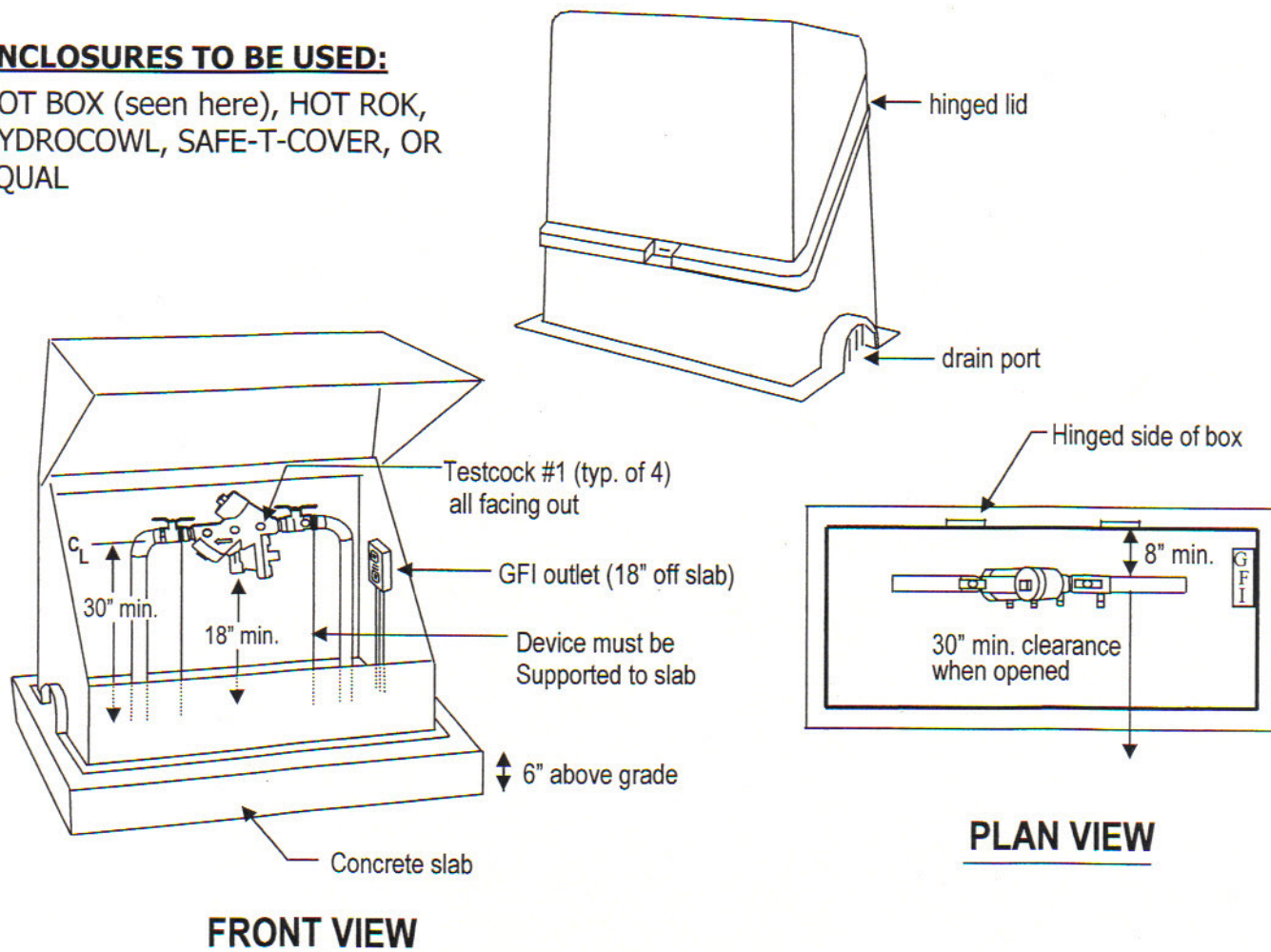
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INSTALLATION OF RPZ (3/4"-2") IN A HEATED INSULATED ENCLOSURE

ENCLOSURES TO BE USED:

HOT BOX (seen here), HOT ROK,
HYDROCOWL, SAFE-T-COVER, OR
EQUAL



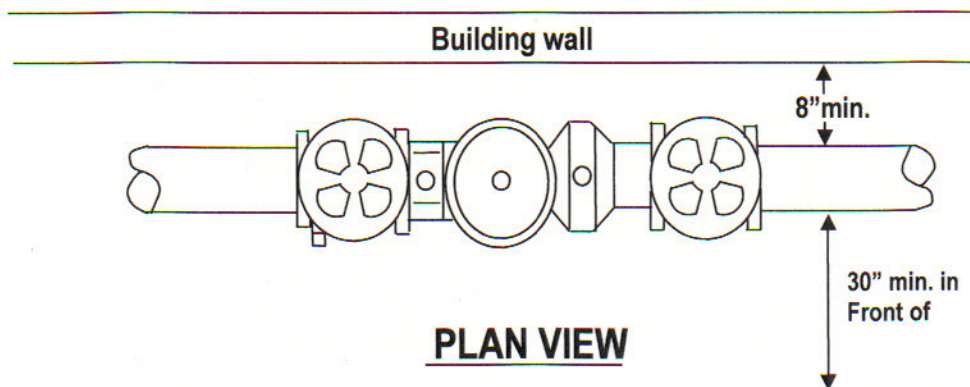
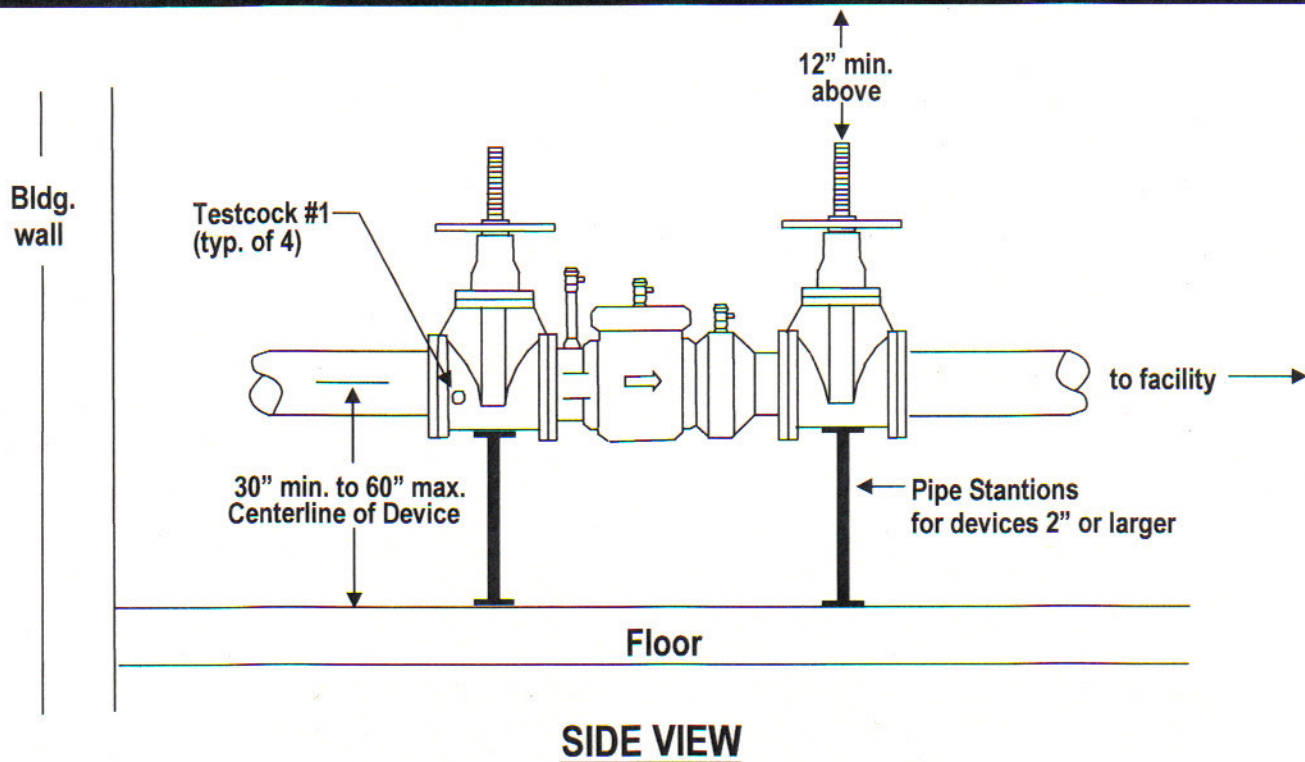
NOTES:

1. Must be protected against freezing
2. Adequate electric power required within the box for heat trace tape and/or enclosure approved heater.
3. Outlet must be GFI and be a minimum 18" off slab
4. Test cocks must be positioned to facilitate testing (30" minimum clearance).
5. All connections T's, hose bibs, irrigation etc. must be installed after (downstream) of device.
6. Enclosure must have weep holes for drainage.
7. RPZ must be supported to concrete slab.
8. Supports must be placed where they will not obstruct the function or access to relief valve.
9. RPZ must have USC Foundation for Cross Connection approval.
10. RPZ must be tested annually.
11. RPZ must be a Lead Free Model
12. Enclosure to be N.Y. designation.
13. Diaphragm of Febco models must be on open side of box.
14. Concrete slab to be sized according to manufacturer's recommendations.

Design by: L. Wynhurst
Drawn by: B. Wehnke
Date of last revision: 6/21/2017

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TYPICAL FIRELINE DOUBLE CHECK VALVE INSTALLATION



NOTES:

1. Must be protected against freezing.
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. Testcock #1 and testcock #4 both need to be installed on inlet side of each resilient seated valve.
4. Double Check Valve must be a Lead Free Model.
5. Resilient seated valves required to be OS & Y on 2 1/2" and larger.
6. Siamese connection must be shown downstream of double check valve.
7. Proper maintenance must be performed.
8. Double Check Valve must have USC Foundation for Cross Connection Control approval.
9. Double Check Valve must be adequately supported to prevent lateral movement. Devices 2" or larger must be supported to the floor with pipe stantions.
10. Adequate lighting must be provided.
11. Double Check Valve may not be installed higher than 5' above the floor or a OSHA approved fixed platform is required.
12. SCWA only approves ductile iron pipe or galvanized pipe upstream of backflow device

Design by: L. Wynhurst.

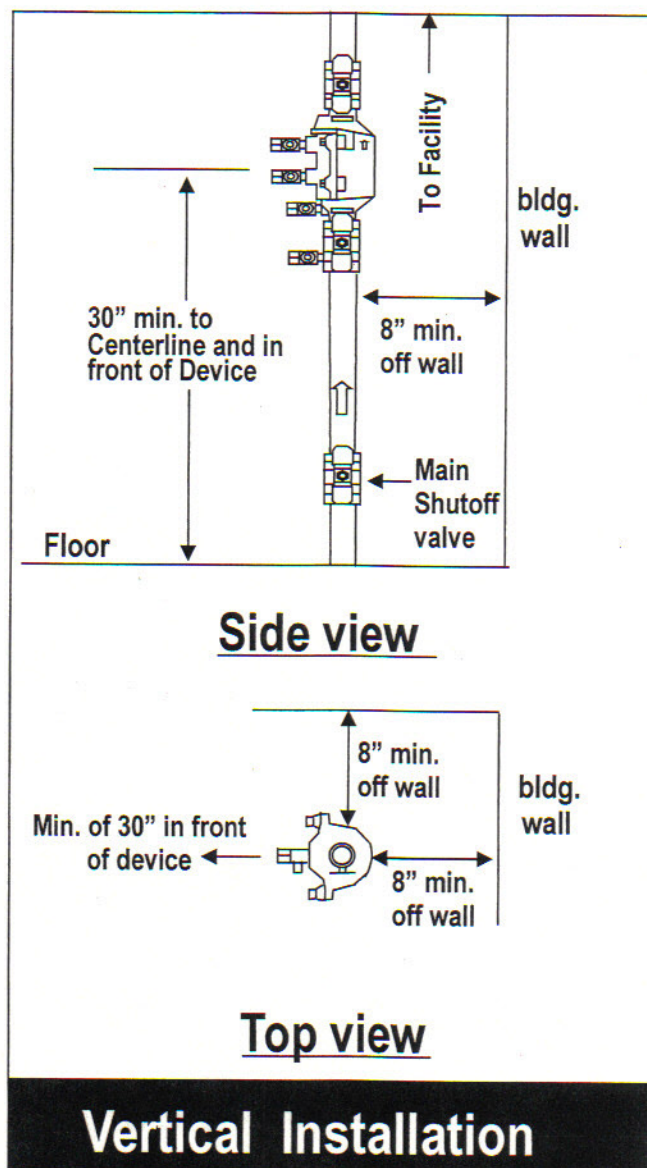
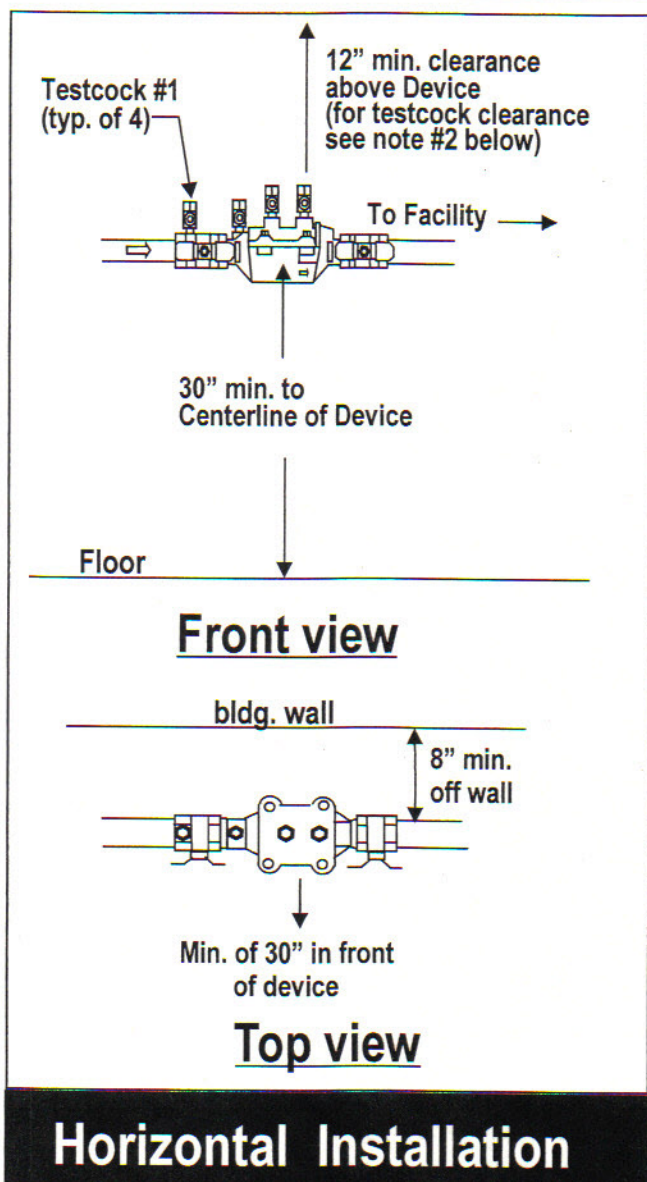
Drawn by: B. Wehnke

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DOUBLE CHECK VALVE INSTALLATION 3/4"-2" IN SIZE



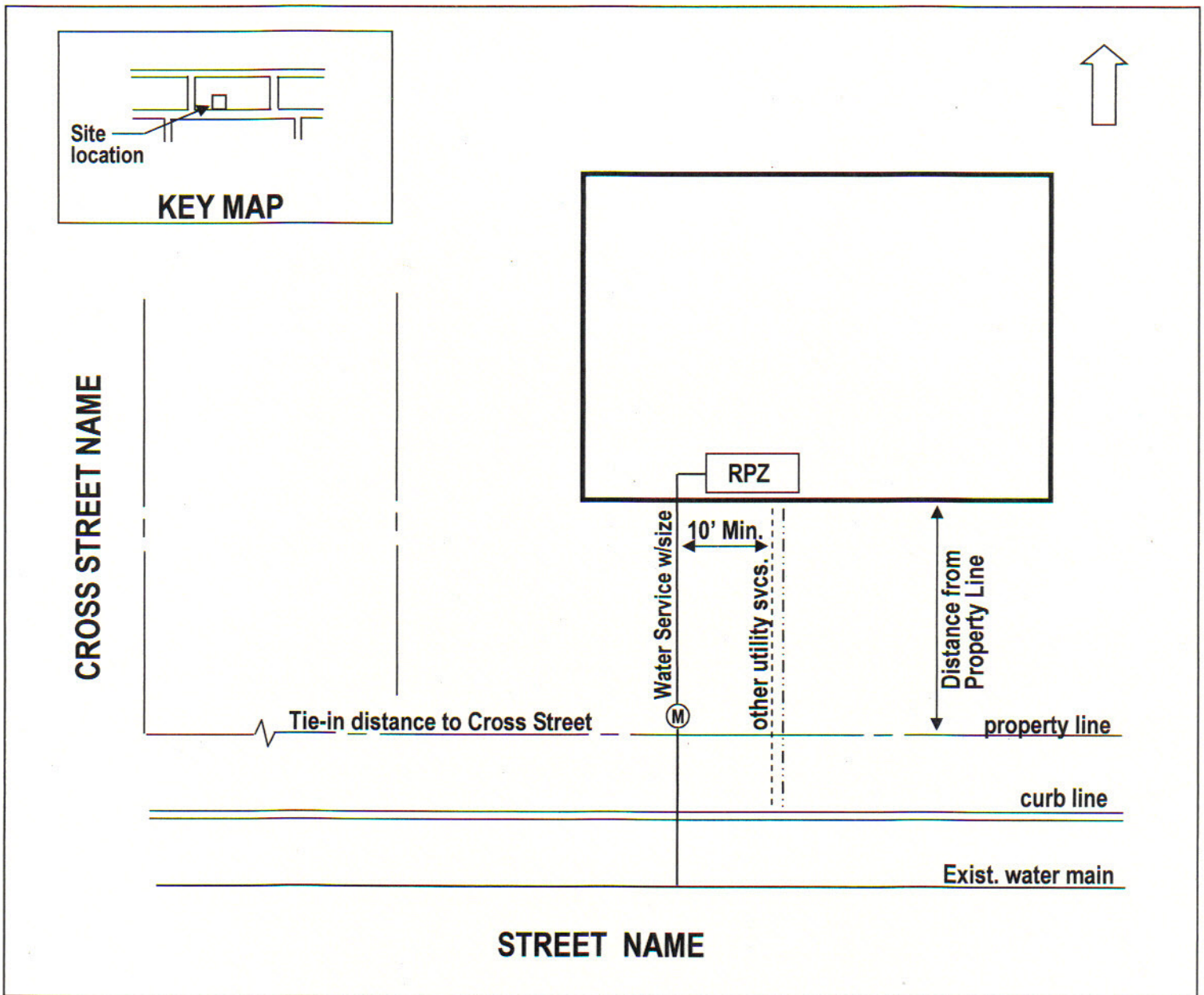
NOTES:

1. This Double Check Valve must be protected against freezing.
2. Test cocks must be positioned to facilitate testing (30" minimum clearance).
3. All connections T's, hose bibs, irrigation etc. must be installed after device.
4. Proper maintenance must be performed.
5. Double Check Valve must have USC Foundation for Cross Connection Control approval.
6. Double Check Valve can be installed vertically if on approved list for vertical installation by The USC Foundation for Cross Connection Control.
7. Double Check Valve must be adequately supported to the wall behind or to the floor to prevent lateral movement. 2" must be supported to the floor with pipe stantions.
8. A separate shut off valve is required upstream of the assembly.
9. Adequate lighting must be provided.
10. Double Check Valve may not be installed higher than 5' above the floor or a fixed platform is required.
11. Where the distance between the water meter and device is greater Than 10' all exposed piping must be labeled every 5' displaying the words " feed to Backflow Preventer "DO NOT TAP".
12. Double Check Valve must be a Lead Free model

Designed by: L. Wynchurst
Drawn by: B. Wehnke

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UTILITY SITE PLAN IS REQUIRED



INDICATE THE FOLLOWING ON SITE PLAN:

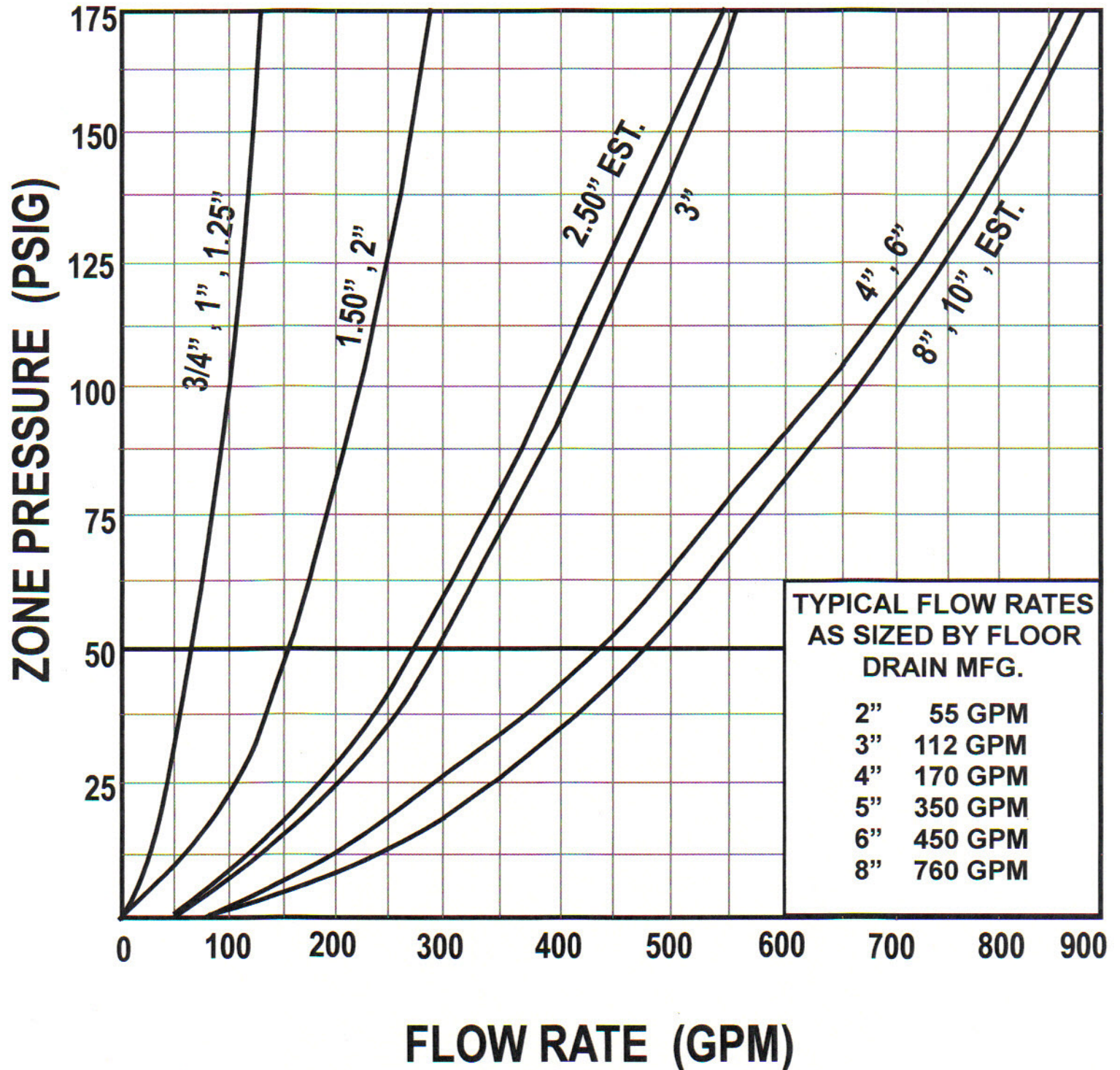
- 1) Location of existing water main.
- 2) Location of curb line
- 3) Location of property line
- 4) Location of water meter
- 5) Location and size of water service
- 6) Location of proposed RPZ device
- 7) Distance from property line to building.
- 8) Street Name
- 9) Cross Street name(s)
- 10) Distance from closest Cross Street
- 11) North Arrow
- 12) Key Map
- 13) Tax Map Number
- 14) Locations of all new and existing utility Service lines. (Note: a minimum of a 10' separation from prospsd water svc.)

NOTE:

Maximum distance of 125' for RPZ / DCV to be acceptable inside a building. If service is greater than 125' than RPZ / DCV is required to be installed in a outside enclosure.

SAMPLE RELIEF VALVE DISCHARGE RATES

(PLEASE REFER TO THE ACTUAL MANUFACTURER'S DISCHARGE RATE CHART)



Design by: L. Wynhurst.

Drawn by: B. Wehnke

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