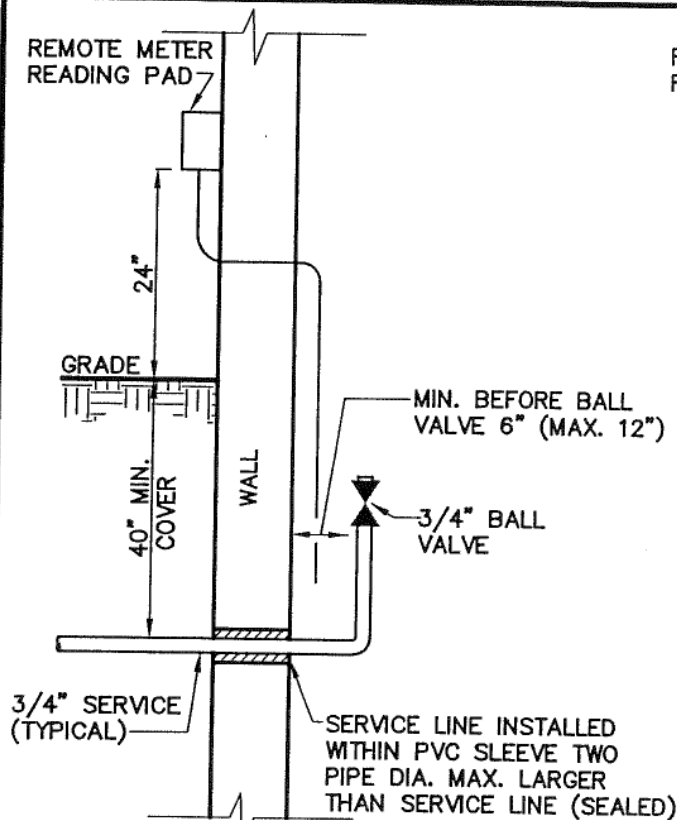
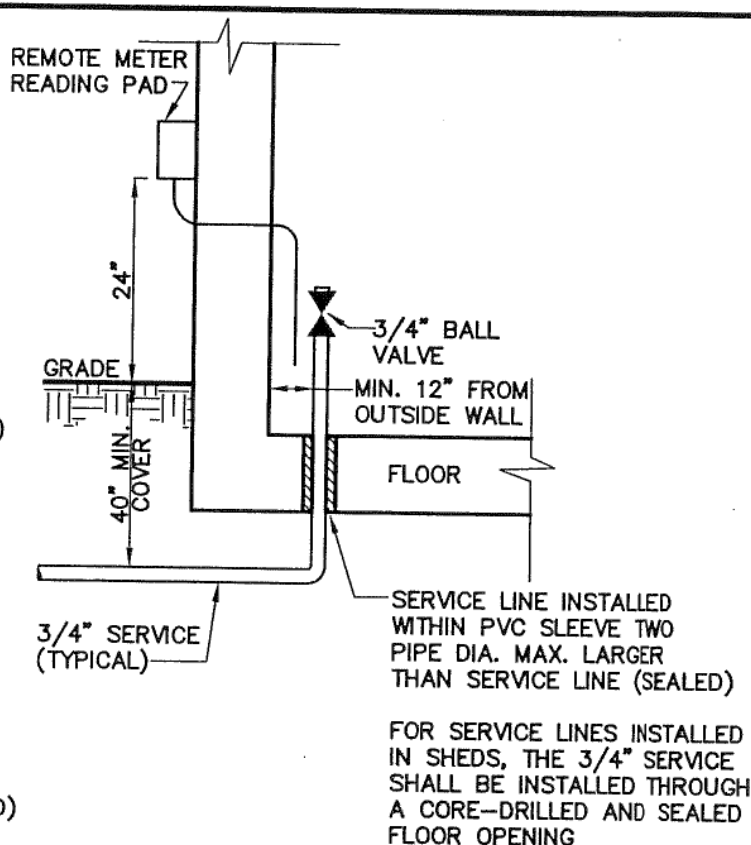


M:\WATER\PBA\PBAW10.dwg, Model, 12/10/2010 9:00:28 AM, joeh



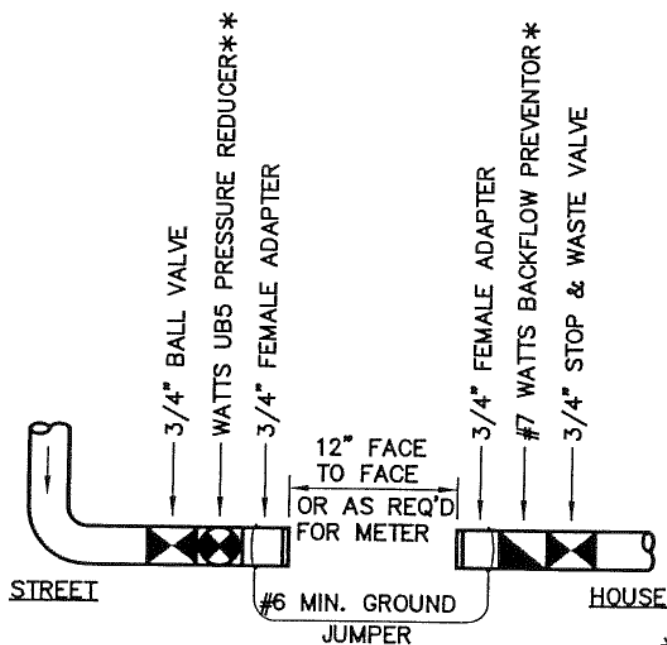
BASEMENT SERVICE



THROUGH FLOOR SERVICE

GENERAL NOTES:

1. NOTIFY AUTHORITY AT 215-257-3654 WHEN WATER SERVICE IS READY FOR INSPECTION AND TESTING. DO NOT BACKFILL ANY PORTION OF TRENCH PRIOR TO APPROVAL 24 HOURS NOTICE REQUIRED.
2. WATER AUTHORITY WILL SUPPLY 5/8"x5/8" SR BRONZE REMOTE TYPE METER AND REMOTE METER READING PAD.
3. PRESSURE REDUCING VALVE IS REQUIRED WHERE PRESSURE IS GREATER THAN 65 PSI.
4. METER LOCATION MUST BE APPROVED BY THE AUTHORITY.
5. ALL SERVICE LINES ARE TO BE K-TYPE TUBING ONLY WITH NO SWEAT JOINTS OR COUPLINGS UNDERGROUND.
- * 6. WATTS NUMBER 7 BACKFLOW PREVENTOR SHALL BE PROVIDED WHEN REQUIRED BY PBA.
- ** 7. PRESSURE REDUCER VALVE TO BE WATTS UB5 (IF REQUIRED).



FRONT VIEW OF SETTING

RESIDENTIAL METER SETTING REQUIREMENTS

NOT TO SCALE

REVISED: 12/10/10

RESIDENTIAL METER SETTING REQUIREMENTS

PREPARED FOR:

PERKASIE BOROUGH AUTHORITY

**ANDERSEN
ENGINEERING
ASSOCIATES
INCORPORATED**

306 NORTH FIFTH STREET, PERKASIE, PA
(215) 257-5711

DSN BY: P.C.A.

CHK BY: P.C.A.

DATE: 4/08/96

DWG NO. PBA-W10

RULES, REGULATIONS AND RATES

SECTION I - WATER SERVICE

1.0 ADMINISTRATIVE AND GENERAL

1.01 Application for Water Service

- a. Applications for water service shall be made at the Authority office by either the property owner or his designated representative. The application shall be made in a manner specified by the Authority.
- b. Upon proper application and payment of the permit fees and deposits specified in Section III of these regulations, a connection permit shall be issued by the Authority.
- c. A separate permit shall be required for each water service provided. A separate water service shall be defined as a water service intended to service a single premise or individual units within a premise for which separate meters are provided. The fee schedule in Section III hereof shall apply to each permit issued.

1.02 Rates and Fees

- a. The Authority Board shall establish and from time to time may modify, change, or amend the rates and fees for water service. Such rates and fees shall include:
 1. Connection Fee to cover the cost of installation of a standard 3/4 inch water service (5/8 inch meter). Larger size services shall be subject to an extra charge to cover the actual cost of materials and installation.
 2. A flat rate fee payable at the time of permit application for water used during the construction of the proposed customer's facilities.
 3. A comprehensive quarterly rate schedule for water service based on water sales (metered and unmetered) and designed to provide revenue sufficient to meet:

- a. operating expenses.
 - b. capital additions and improvements to the water system.
 - c. debt service requirement.
- 4. A charge for removal and testing of water meters at the request of the customer.
 - 5. Charges for miscellaneous services and repair of damage caused by others.
 - 6. Other fees or charges that may from time to time be established by resolution of the Board.

1.03 Owner Responsibility

- a. It shall be the responsibility of the owner or contractor to advise the Authority within five (5) days of the occupancy of any newly constructed building or any building renovated to increase or decrease the number dwelling units or commercial establishments. Failure to do so will be grounds for discontinuance of service.

1.1 SERVICE LINE AND METER SETTING

1.11 Water Service Line

- a. The water service line shall be a minimum of three quarter inch (3/4") connected to the corporation stop in the water main and extending to a curb stop set at the curb line, or in the absence of a curb, at the edge of the paved surface or public right of way (see Construction Details).
- b. It shall be the responsibility of the property owner to connect to the property side of the curb stop and extend the line to the building. At a location near where the service line enters the building, the owner shall provide a location for a meter to be supplied by the Authority. **The location shall be kept convenient and accessible for reading, maintenance and installation of remote reading cable and head.** Valves shall be installed immediately

before and after the meter. It shall be the responsibility of the property owner to assure that the curb stop is kept at grade and exposed to assure that Authority personnel have accessibility to the curb stop at all times.

- c. Private Fire Protection: Where service to a residential unit is required, the minimum service line will be determined by the customer's engineer or fire system provider.
- d. Where private fire protection is required both domestic and fire service shall be provided through a single service line into the building. Domestic service will then be segregated inside of the building with appropriate backflow devices installed on the fire service.

1.12 Location of Service Line

- a. The applicant may designate at what point along the curb abutting his property the service line shall be placed contingent upon the approval of the Authority. In special cases, however, the Authority shall reserve the right to designate the service line location. Only in extreme instances will service connections be allowed in right of ways. All curb stops must be accessible from public streets or alleys.

1.13 Service Line Material

- a. The applicant's service line may be soft copper tubing type "K", pressure rated for 160 PSI working pressure or copper tubing size plastic (ASTM D2737) with magnetic tape one (1) foot above the service for the length of the trench.

1.14 Separate Trenches for Water and Sewer Lines

- a. Under normal conditions, water service and building sewer lines shall be placed in separate trenches, at least ten feet (10') apart horizontally and separated by undisturbed or compacted earth. Under certain conditions this distance may be reduced, but only upon prior approval by the Authority. This condition may be waived for existing services being replaced or for existing homes connecting to the system.

1.15 Placement and Installation of Service Lines

- a. Under extreme conditions where it is impossible or cost prohibitive to dig separate trenches, the water and sewer lines may be placed in the same trench, provided all the following conditions are complied with and the Authority has given prior approval to such installation.
 1. The bottom of the water service pipe at all points shall be at least eighteen inches (18") above the top of the sewer line at its highest point.
 2. The water line shall be placed on a solid shelf excavated at one side of the common trench.
 3. The materials and joints of sewer and water service shall be installed in such a manner and shall possess the necessary strength and durability to prevent the escape of solids, liquids and gasses there from and/or under all known adverse conditions such as corrosion, strains due to temperature changes, settlement, vibrations and superimposed loads.
There shall be no soldered connections before the water meter. Only compression fittings are permitted.
 4. Service lines shall be run from the curb stop to the point of entrance to the building in as straight a line as possible.

1.16 Service Connections

- a. Under normal conditions, Authority personnel will make all service connections from the street main to the curb. In certain circumstances or under special conditions, the Authority may permit others to perform all or part of this work. In either event, all lines and appurtenances in the street between the water main and the curb stop shall become the property and responsibility of the Authority.
- b. Inspection and testing of the facilities shall be required in accordance with the following schedule:
 1. Upon installation of the water line in the trench, a 6 inch bed of screenings shall be placed under the line. The line shall be tested at system pressure to assure there is no leakage.
 2. Cover shall be free of all sizable materials with a minimum of 12 inches of screens placed on top of the service. Damage to, or displacement of the service line must be avoided.
 3. Inspection will be complete when installation of the line is approved, there is no leakage, and the remote reading device installed and operational.

1.17 Inactive Water Service

- a. A water service will not be considered inactive and exempt from charges unless the building has been removed and the property is returned to vacant land. The Authority reserves the right to require the property owner to plug the service at the curb stop at the owners sole cost. It shall be the responsibility of the property owner to notify the Authority of such an occurrence. The Authority reserves the right to review any reactivation and assess a reactivation fee equal to the base rate over the period the service was inactive, for the equivalent existing tap size or a new tapping fee whichever is less.

- b. The full base rate charge will be imposed for any billing period during which the service is active at any time, even though such service may not be active for the entire billing period.
- c. Where more than one base rate charge is imposed under the provisions of Section 3.13 hereof, the number of base rate charges will not be reduced by reason of a vacancy in any unit.

1.2 LARGE WATER SERVICES

1.21 Conditions for Larger Water Service

- a. When application is made for a water service larger than the standard three quarter inch size (3/4"), the Authority shall install the required service, if approved, but shall make a charge equal to the costs of the materials, equipment and supplies, labor and other expenses in accordance with the provisions of Section III hereof. In no event shall the said charge be less than the standard connection fee.

1.3 SPECIAL WORK

1.31 Applicant to Pay Costs of Special Work

Special work described below, when requested by the customer and subsequently approved by the Authority, shall be undertaken at the sole expense of the customer or applicant for such work. Charges shall be computed in accordance with Section III hereof.

- 1. Enlargement, relocation, alteration or extension of a water service.
- 2. Enlargement, relocation, alteration or extension of an existing water main.

1.32 Deposit Required

- a. Prior to commencing any special work, the Authority may require a deposit from the applicant equal to the estimated cost of the improvements in accordance with the provisions of Section III hereof.

1.33 Customer Eligible for Refund

- a. Customer refunds must be specifically provided for under a separate agreement, and in accordance with Act 203, to be eligible for a refund, rebate or other reimbursement for future Authority utilization of facilities paid by said customer.

1.4 CONDITIONS FOR SERVICE

1.41 Single Water Service to a Premise

- a. A single water service shall be installed to provide water service to the premise for which the permit is issued.
- b. There shall be no connections permitted to any water service line for the purpose of serving a second structure either on or off the property served.
- c. Where two or more dwelling units or commercial enterprises are located within the same structure, the following rules will generally apply for water services:
 - 1. If the units are designed to be used as individually owned units or if the structure can at some future time be sub-divided into separately owned units (such as condominiums or townhouses) then separately metered water service shall be required for each unit.
 - 2. If the units within a structure are to be rental units owned by a single individual or business firm, and are not considered adaptable to individual ownership, there may at the Authority's discretion be one water service and one meter sized to provide adequate service to all units in the building.
 - 3. In the case of conversion of an existing structure from one use to another, the Authority shall at the time of conversion review requirements for water service based on the individual circumstances and, if necessary, establish an additional requirement for service.

1.42 Access to Authority Facilities on Customer Property

- a. The property owner shall provide Authority personnel with the right of access to the premises for the purpose of reading and maintaining the water meter and for inspections relative to the service, use and protection of the potable water supply.
- b. The owner shall be responsible for providing safe, convenient access to the remote reading receptacle located on the exterior of the building. Trees, shrubbery, bushes or other vegetation shall be trimmed as required, other obstructions shall be removed. If unsatisfactory conditions develop, the owner shall correct them within fifteen (15) days notice either written or verbal by the Authority. Failure of the owner to reply to the Authority's request authorizes Authority personnel to do the trimming as deemed necessary or to discontinue service to the property in accordance with section 1.46. The property owner will be charged accordingly.

1.43 Responsibility for Service

- a. The Authority shall not be liable for any inconvenience or damage caused by high or low water pressure or for shutting off the supply of water for the purpose of making repairs or changes in the mains or appurtenances to the water distribution system.
- b. The Authority shall not be responsible for any damage to the user's service line which may occur during repair or replacement of the Authority's portion of the service line.

1.44 Protection of the Meter

- a. The owner of a water service must at all times protect the meter from damage due to freezing, hot water, tampering, or any other cause.

- b. The Authority shall place a meter seal on each meter and shall periodically inspect it. The seal shall be installed through the meter coupling nut and the register mounting screws so as to prevent unauthorized removal of the meter register or removal of the meter from the supply side of the water service.
- c. The customer shall be responsible for any damage to the water meter and will be held liable for the full cost of repair or replacement of a damaged meter.
- d. Removal, cutting or tampering with the meter seal or connecting wire for the purpose of bypassing the meter shall be cause for immediate shut off of the water service. If the seal is removed accidentally or unintentionally, or if it is necessary to remove the seal for work on the internal water system, it shall be the responsibility of the customer to so advise the Authority office within three (3) working days of removal. Failure to do so may result in the assessment of the fees specified in 3.25.
- e. In addition to the fees specified in 3.25, the Authority shall retain the right to file criminal charges against any customer found to be using unmetered water through violations of these regulations.

1.45 Repairs to Services

- a. Repairs to water services between the street main and the curb stop shall be the responsibility of the Authority.
- b. Repairs to water services between the curb stop and the building served shall be the responsibility of the property owner.
- c. Repairs to leaks occurring on the property side of the curb stop shall be made within five (5) calendar days of written notice to the owner that such repairs are required.

1.46 Discontinuance of Service

- a. Authority personnel shall be empowered to shut off the water to any premise for any of the following reasons:
 1. Failure to pay water and/or sewer charges in accordance with the provisions of Section 3.01 hereof.
 2. Non-compliance or violations of regulations of the Authority or the Pennridge Waste Water Treatment Authority or with the provisions of the applicable plumbing code of any of the Municipalities serviced by the Authority.
 3. Excessive and continued waste of water.
 4. Failure to repair leaks in accordance with Paragraph 1.45.
 5. Continued failure to provide access to Authority personnel in accordance with Paragraph 1.42.
 6. In the event of discontinuance of service a fee of Fifteen (\$15.00) will be charged.

1.47 Removal of Meters

- a. The Authority shall remove meters for repair, inspection, replacement and/or periodical testing. Property owners will be contacted by the Authority to arrange a mutually convenient time for service/replacement of the meter.

1.5 PROTECTION OF THE AUTHORITY'S POTABLE WATER SUPPLY

1.6 STANDARD CONSTRUCTION SPECIFICATIONS

1.6 Authority Specifications

- a. The provisions of the Authority's Standard Specifications and Requirements for the Construction of Water Supply Systems, as prepared by Andersen Engineering & Associates, Inc. currently in effect and from time to time amended and revised by Resolution, are hereby incorporated into these regulations, by reference, in their entirety.

1.7 Water Use Restriction

1.7 Unauthorized Water Use

- a. No individual, firm or corporation, or public or private entity of any description shall be permitted to withdraw water from any location within the Authority's water systems, except for emergency purpose, without the expressed prior authorization by the Authority.
- b. These provisions shall apply, but not be limited to building contractors, developers, street and highway construction crews, lawn care firms, etc.
- c. In the event the Authority authorizes temporary or construction water withdrawal to a building contractor, developer, construction crew, lawn care firm, etc., it shall be at a location specified by the Authority. Metering and backflow prevention shall be required to such uses and approved by the Authority prior to water withdrawal.
- d. Nothing herein shall prevent any fire company or other agency engaged in public protection from using water as required in the protection of the public health, safety and welfare.

1.72 Water Loss Due to Customer Negligence

- a. The customer shall be responsible for the protection of all water facilities on the property or within any building or structures owned by him.
- b. The loss of water or damage to the Authority facilities due to the negligence or failure by the owner to properly operate and/or maintain the facilities shall be billed to the owner in accordance with Section III of these regulations.

**PROTECTION OF POTABLE WATER SUPPLY
AND CONSERVATION REQUIREMENTS AND FIXTURES REQUIREMENTS**

1.73 General

A potable water supply system shall be designed, installed and maintained in such a manner as to prevent contamination from non-potable liquids, solids or gasses being introduced into the potable water supply through cross connections or any other piping connections to the systems.

1.74 Identification of Potable and Non-Potable Water

In all buildings where dual water distribution systems, one (1) potable water and the other non-potable water, are installed, each system shall be identified either by color marking or metal tags as required in ANSI A13.1, or other approved method as may be approved by the plumbing official.

1.75 Cross Connection Control

Cross connections are prohibited except when and where as approved by the authority having jurisdiction, suitable protective devices such as the reduced pressure zone back flow preventer or equal are installed, tested and maintained to insure proper operation on a continuing basis.

1.76 Private Water Supplies

Cross connections between a private water supply and a potable public supply shall not be made, unless specifically approved by the authority having jurisdiction.

1.77 Interconnections

Interconnections shall be subject to the following requirements:

1.78 Public Water Supplies

Interconnection between two (2) or more public water supplies shall be permitted only with the approval of the authority having jurisdiction.

1.79 Toxic Materials

Toxic materials shall be kept out of the potable water system

1.80 Construction

Piping conveying potable water shall be constructed of non-toxic material.

1.81 Chemical and Other Substances

Chemicals or other substances that could produce toxic conditions, taste, odor or discoloration in a potable water system shall not be introduced into, or used in, such systems.

1.82 Painting of Water Tanks

The interior surface of potable water tanks shall not be lined, painted or repaired with any material which will affect either the taste, odor, color or potability of the water supply when the tank is placed in, or returned to, service.

1.83 Used Piping

Piping which has been used for any purpose other than conveying potable water shall not be used for conveying potable water.

1.84 Connections to Boilers

Potable water connections to boiler feed water systems in which boiler water conditioning chemicals are introduced shall be made through an air gap, or provided with an approved backflow preventer located in the potable water line before the point where such chemicals are introduced. Boilers shall be equipped with a check valve in the cold water supply to the boiler.

1.85 Prohibited Connections to Fixture and Equipment

Connection to the potable water supply system for the following uses shall be protected against backflow:

1. Bidets

2. Operating dissection, embalming and mortuary table or similar equipment. In such installation the hose used for water supply shall terminate at least twelve (12) inches away from every point of the table or attachments.
3. Pumps for non-potable water, chemicals or other substances. Primary connections may be made only through an air gap.
4. Building drainage, sewer or vent systems.
5. Any other fixture of similar hazard.

1.86 Refrigerating Unit Condensers and Cooling Jackets

Except where potable water provided for a refrigerator condenser or cooling jacket is entirely outside the piping or tank containing a toxic or flammable refrigerant as defined in ANSI B9.1, Paragraphs 5.1.2 and 5.1.3, with two (2) separate thicknesses separating the refrigerant from the potable water supply, inlet connection shall be provided with an approved check valve. Also, adjacent to and at the outlet side of the check valve, an approved pressure relief valve set to relieve at five (5) PSI above the maximum water pressure at the point of installation shall be provided if the refrigeration units contain more than twenty (20) pounds of refrigerants.

1.86.1 Used Water Return Prohibited

Water used for cooling of equipment or other processes shall not be returned to the potable water system. Such water shall be discharged into a drainage system through an air gap, or may be used for non-potable purposes on written approval of the plumbing official.

1.87 Protection Against Backflow and Backsiphonage

Protection against backflow and backsiphonage shall be provided as required in the following Section P-1605.11 through P-1605.11.10.

1.87.1 Water Outlets

A potable water system shall be protected against backflow and backsiphonage by providing at each outlet:

- a. An air gap as specified herein between the potable water outlet and the flood level rim of the fixture it supplies, or between the outlet and any other source of contamination; or, where the air gap is impracticable.
- b. A backflow preventer device or vacuum breaker approved as hereinafter provided.

1.87.2 Minimum Required Air Gap

Minimum required air gap shall be determined as follows:

- a. How measured:

The minimum required air gap shall be measured vertically from the lowest end of a potable water outlet to the flood rim of the fixture or receptacle into which it discharges.

- b. Size:

The minimum required air gap shall be twice the effective opening of a potable water outlet, unless the outlet is a distance less than three (3) times the effective opening away from a wall or similar vertical surface, in which case the minimum required air gap shall be three (3) times the effective opening of the outlet. The minimum required air gap shall not be less than shown in Table 1.88

Minimum Air Gaps for Plumbing Fixtures.

1.87.3 Devices for the Protection of the Potable Water Supply

Approved backflow preventers or vacuum breakers shall be installed with any plumbing fixture or equipment, where the potable water supply outlet may be submerged and cannot be protected by a minimum air gap.

1.87.4 Approval of Devices

Before any device for the prevention of backflow or backsiphonage is installed, it shall have first been identified by a recognized testing laboratory acceptable to the plumbing official. Devices installed in a building potable water supply distribution system for protection against backflow shall be maintained in good working condition by the person or persons responsible for the maintenance of the system.

TABLE 1.88
MINIMUM AIR GAPS FOR PLUMBING FIXTURES

Fixture	<u>MINIMUM AIR GAP</u>	
	When not affected by near wall 1 (inches)	When affected by near wall 2 (inches)
Lavatories and other fixtures with effective opening not greater than 1/2 inch diameter.	1	1 1/2
Sink, laundry trays, goose-neck bath faucets and other fixtures with effective openings not greater than 1 inch diameter.	1 1/2	2 1/4
Drinking water fountains-single orifice not greater than 7/16 (0.437) inch diameter or multiple orifices having total area of 0.150 square inches (area of circle 7/16 inch diameter).	2	1 1/2
Effective openings greater than one	2x diameter of effective opening	3x dia-inch. meter of effective opening

Note 1: Side walls, ribs or similar obstructions do not affect air gaps when spaced from inside edge of spout opening a distance greater than three (3) times the diameter of the effective opening for a single wall, or a distance greater than four (4) times the diameter of the effective opening for two (2) intersecting walls.

Note 2: Vertical walls, ribs, or similar obstructions extending from the water surface above the horizontal plane of the spout opening require a greater air gap when spaced closer to the nearest inside edge of the spout opening than specified in Note 1, above. The effect of three (3) or more such vertical wall or ribs has not been determined. In such cases, the air gap shall be measured from the top of the wall.

1.88.1 Installation of Devices:

Installation of backflow or backsiphonage protection devices shall be subject to the following requirements:

1. Vacuum Breakers

Vacuum breakers shall be installed with the critical level at least six (6) inches above the flood level rim of the fixture they serve and on the discharge side of the last control valve to the fixture. Shut off valve or faucet shall not be installed beyond the vacuum breaker. For closed equipment or vessels such as pressure sterilizers, the top of the vessel shall be treated as a flood level rim, but a check valve shall be installed on the discharge side of the vacuum breaker.

2. Reduced Pressure Zone Backflow Preventer

A reduced pressure zone type backflow preventer may be installed subject to full static pressure.

3. Devices of All Types

Backflow and backsiphonage preventing devices shall be accessibly located, preferably in the same room with the fixture they serve. Installation in utility or service spaces, provided they are readily accessible, is also permitted.

1.88.2 Tanks and Vats, Below Rim Supply

1. Where a potable water outlet terminates below the rim of a tank or vat and the tank or vat has an overflow of diameter not less than given in Table P-1605.2.4, Sizes of Overflow Pipes for Water Supply Tanks, the overflow pipe shall be provided with an air gap as close to the tank as possible.
2. The potable water outlet to the tank or vat shall terminate a distance not less than one and one half (1 1/2) times the height to which water can rise in the tank above the top of the overflow. This level shall be established at maximum flow rate of the supply to the tank or vat, and with all outlets, except the air gap overflow outlet, closed.

3. The distance from the outlet to the high water level shall be measured from the critical point of the potable water supply outlet.

1.88.3 Protective Devices Required

1. In the installation of the following list of fixtures and devices, where an air gap is not provided or is impracticable, approved backflow preventers shall be installed in all supply line according to Table P-1605.11.7, Cross Connections Where Protective Devices are Required and Critical Level (C-L) Setting for Backflow Preventers.

TABLE 1.89

CROSS CONNECTION WHERE PROTECTIVE DEVICES ARE REQUIRED AND CRITICAL LEVEL (C-L) SETTINGS FOR BACKFLOW PREVENTERS

Fixture or Equipment	Method of Installation
Aspirators, ejectors and hand held "telephone" showers	C-L at least 6 inches above flood level of machine
Cup beverage vending machines	C-L at least 12 inches above flood level of machine
Dental units	On models without built-in vacuum breakers C-L at least 6 inches above flood level rim of bowl
Dishwashing machines	C-L at least 6 inches above flood level of machine
Flushometers (closet & urinal)	C-L at least 6 inches above top of fixture supplied
Garage can cleaning machine	C-L at least 6 inches above flood level of machine
Hose outlets	C-L at least 6 inches above highest point of hose line
Laundry machines	C-L at least 6 inches above flood level of machine
Lawn sprinkler	C-L at least 12 inches above highest sprinkler or discharge outlet
Steam tables	C-L at least 6 inches above flood level
Tank and vats	C-L at least 6 inches above flood level
Trough urinals	C-L at least 30 inches above perforated flush pipe

TABLE 1.89

**CROSS CONNECTION WHERE PROTECTIVE DEVICES ARE REQUIRED AND CRITICAL
LEVEL (C-L) SETTINGS FOR BACKFLOW PREVENTERS**

Fixture or Equipment	Method of Installation
Flush tanks	Equip with an approved float valve. In all cases the float valves shall be located above the overflow level of the tank and the outlet terminated one inch above the overflow or provided with a backflow preventer located at least one inch above the overflow
Hose bibs (where aspirators or ejectors could be connected)	C-L at least 6 inches above flood level of receptacle served

Note 1: Critical Level (C-L) is defined as the level to which the backflow preventer (vacuum breaker) may be submerged before backflow will occur. Where C-L marking is not shown on the preventer, the bottom of the device shall be taken as the C-L.

1.89.1 Connecting Subject to Back Pressure

Where a potable water connection is made to a line, fixture, tank, vat, pump or other equipment with a hazard of backflow or siphonage where the water connection is subject to back pressure, and an air gap or backflow preventer cannot be installed, the plumbing official may require the use of an approved reduced pressure zone backflow preventer and, also, in extreme situations, an approved pressure type vacuum breaker. A partial list of such connections is shown in Table 1.89.2 Partial List of Cross Connections Subject to Pressure.

TABLE 1.89.2

**PARTIAL LIST OF CROSS CONNECTIONS
SUBJECT TO BACK PRESSURE**

Chemicals	Pumps
Cup beverage vending machines	Steam lines
Dock water outlets	Swimming pools
Individual water supplies	Tank and vats, bottom inlets
Industrial process water lines	Hose bibs
Pressure tanks	

1.89.3 Barometric Loops

Water connections not subject to back pressure where an actual or potential backflow or backsiphonage hazard exists may, in lieu of devices specified in Section and Table 1.89, be provided with a barometric loop. Barometric loops shall precede the point of connection (see Figure B-37, Appendix B).

1.89.4 Vacuum Breakers or Protective Devices Sill Cocks

Sill cocks, hose bibs, wall hydrants and any type of faucet that has either male or female threads for the connection of a hose or similar equipment shall be protected by an approved vacuum breaker or device which will not permit its removal without damaging the connection.

1.89.5 Backflow Prevention on Fire Service Lines

Any fire service line connected to the Authority's public water supply shall have installed, at a minimum, a double check valve with a detector check system. Backflow preventer must be approved by the Authority prior to installation.

1.90 Conservation Fixtures Required

1. All new structures to be connected to the water and/or sanitary sewer systems of the Authority, and all existing structures currently connected, that subsequently make any additions, changes, replacements or modifications to the plumbing system shall be required to install or have installed the following:
 - a. Water saving or low-flush toilets requiring no more than one and six-tenths (1.6) gallons per flush; water saving or low-flush urinals requiring no more than one and one-half (1.5) gallons per flush.
 - b. Water saving shower heads that will prevent discharge rates in excess of three (3.0) gallons per minute at normal system pressure.

- c. Water saving aerated faucets that will prevent discharge rates in excess of three (3.0) gallons per minute.
- 2. In the event any municipality served by the Authority, or any other regulatory agency having the power and jurisdiction shall enact more stringent regulations, such regulations shall take precedence over the conditions of items 1 a., b. and c. above.
- 3. The Code Enforcement Officers of the Borough of Perkasio, East Rockhill Township, West Rockhill Township and Hilltown Township shall be requested and authorized to act as an agent of the Authority for the enforcement of this section of the Authority's Rules and Regulations. Further, he shall be requested to withhold Occupancy Permits for any structure that is not in full compliance with these Regulations.
- 4. The terms and conditions of this Section shall apply to all the applicable buildings and structures for which Construction Permits are issued on or after October 15, 1992.

