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DEPARTMENT OF  
PUBLIC WORKS

WATER DIVISION

CITY OF SACRAMENTO  
CALIFORNIA

1391-35TH AVENUE  
SACRAMENTO, CA  
95822-2911

916-449-5271

May 30, 1989

City Council  
Sacramento, California

Honorable Members in Session:

**SUBJECT: CROSS CONNECTION CONTROL POLICY**

**APPROVED**  
BY THE CITY COUNCIL

MAY 30 1989

OFFICE OF THE  
CITY CLERK

SUMMARY

Under federal and state rules and regulations, the City as a water purveyor has primary responsibility for preventing water from unapproved sources and other foreign substances from entering the public potable water system. In compliance with these laws, it is recommended that the City Council adopt, by resolution a revised cross-connection control policy which establishes the requirements for design, construction, installation, and maintenance of cross-connection devices. This item was approved by the Transportation and Community Development Committee at its May 16, 1989, meeting.

BACKGROUND

A detailed report to the Transportation and Community Development Committee is attached.

FINANCIAL

There is no financial impact directly associated with this report.

POLICY CONSIDERATION

The proposed resolution, if adopted, would simply update the City's current cross-connection control policy to bring it in-line with that of Sacramento County's.

Cross-Connection Control Policy  
May 30, 1989  
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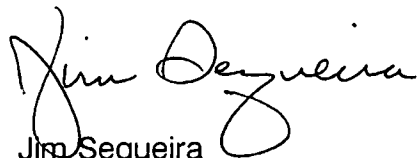
MBE/WBE EFFORTS

No impact.

RECOMMENDATION

It is recommended that the attached resolution revising the cross-connection control program be approved.

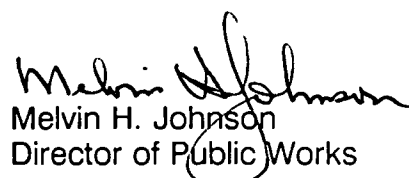
Respectfully submitted

  
Jim Sequeira  
Water Division Manager

RECOMMENDATION APPROVED:

  
For. Walter J. Slipe  
City Manager

APPROVED:

  
Melvin H. Johnson  
Director of Public Works

May 30, 1989  
ALL DISTRICTS

CONTACT PERSON:

Jim Sequeira  
Water Division Manager

449-1291

**RESOLUTION No.** 89-422

**Adopted by The Sacramento City Council on date of**

**RESOLUTION ESTABLISHING REVISED  
CROSS-CONNECTION CONTROL POLICY  
PURSUANT TO THE CALIFORNIA ADMINISTRATIVE CODE TITLE 17**

**APPROVED  
BY THE CITY COUNCIL**

**MAY 30 1989**

**OFFICE OF THE  
CITY CLERK**

**BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SACRAMENTO:**

That the policy shown as Exhibit A, attached hereto and incorporated herein by reference, is hereby established as the City's cross-connection control policy pursuant to California Administrative Code Title 17. This resolution shall take effect on June 1, 1989.

\_\_\_\_\_  
MAYOR

ATTEST:

\_\_\_\_\_  
CITY CLERK



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DEPARTMENT OF  
PUBLIC WORKS

CITY OF SACRAMENTO  
CALIFORNIA

1391-35TH AVENUE  
SACRAMENTO, CA  
95822-2911

WATER DIVISION

916-449-5271

May 16, 1989

Transportation and Community Development Committee  
Sacramento, California

Honorable Members in Session:

**SUBJECT: CROSS-CONNECTION CONTROL POLICY**

### SUMMARY

Under federal and state rules and regulations, the City as a water purveyor has primary responsibility for preventing water from unapproved sources and other foreign substances from entering the public potable water system. In compliance with these laws, the City adopted a cross-connection control policy. This policy is in need of revision in order to reflect changes in Sacramento County Code. It is recommended that the City Council adopt, by resolution, a revised and updated cross-connection control policy (attached as Exhibit A).

### BACKGROUND

Protection of the public water supply from contamination is of prime importance to all community officials. In striving to provide water that is safe, clear, clean, potable, abundant, and inexpensive, many potential threats located beyond the City's treatment plants and within the distribution system are overlooked. One of the most important of these threats exists under the general heading of cross-connections.

A cross-connection can be defined as any actual or potential connection between the City's or consumer's potable water system and any other system or source through which it is possible to introduce any substance other than the intended potable water with which the system is supplied. An example would be the backflow of toxic waste from an industrial facility into the City's drinking water system. The potential threat that cross-connections represent can be mitigated by the installation and maintenance of "backflow prevention devices" of which there are a variety of types.

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In 1987, the State of California's Department of Health Services, the regulatory agency for drinking water supply, has mandated that the City and other water purveyors improve dramatically their cross-connection control program. As part of an acceptable program, the Department of Health Services requires that the City set forth requirements for cross-connection control. It is toward this end that the City Council adopted, on May 19, 1987, a resolution establishing city policy for cross-connection control.

In an effort to standardize cross-connection control requirements and philosophy throughout the area, staff has agreed through the Sacramento Area Water Works Association to participate with the other area water purveyors in a county-wide cross-connection control program.

Under the County-wide program, the County Environmental Health Branch will act to enforce all state and local cross-connection control standards by administering the device testing program, keeping necessary records, and informing the customers of violations. The City, for its part, will identify to the County where cross-connection control protection is needed and where backflow prevention devices are located. Since the City's cross-connection control policy was adopted in 1987, more than 173 devices have been installed. The current total of operating devices is 375.

The original City policy, adopted in May of 1987, is in need of revision. This policy was adopted prior to the County's and as a result there are some differences. The proposed updated policy, if adopted, will bring City policy in-line with that of the County. As a result, the County's Environmental Health Branch will be enforcing one "policy" rather than having to deal with the differences between them. The proposed revised policy is shown as Exhibit A.

FINANCIAL

There is no financial impact associated with this report.

POLICY CONSIDERATIONS

The proposed resolution, if adopted, would simply update the City's current cross-connection control policy to bring it in-line with that of Sacramento County's.

MBE/WBE

No impact.

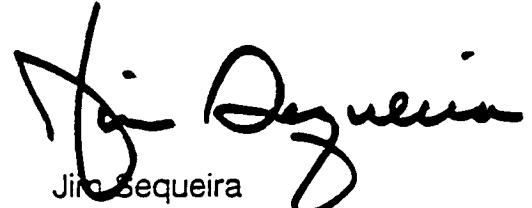
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May 16, 1989

RECOMMENDATION

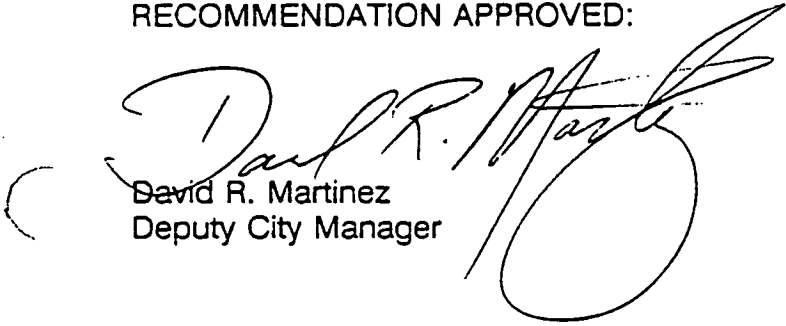
It is recommended that the attached resolution revising the Water Division's cross-connection control policy be recommended for Council adoption.

Respectfully submitted,



Jim Sequeira  
Water Division Manager

RECOMMENDATION APPROVED:



David R. Martinez  
Deputy City Manager

APPROVED:



Melvin H. Johnson  
Director of Public Works

May 16, 1989  
All Districts

CONTACT PERSON:

Jim Sequeira  
Water Division Manager  
449-1291

**CROSS-CONNECTION CONTROL POLICY**

**JUNE 1, 1989**

**CITY OF SACRAMENTO  
WATER DIVISION  
CROSS-CONNECTION CONTROL  
POLICY**

**JUNE 1, 1989**

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**CITY OF SACRAMENTO  
WATER DIVISION  
CROSS-CONNECTION CONTROL  
POLICY  
June 1, 1989**

**Section 1 INTENT**

Under Public Law 93-523, the Safe Drinking Water Act of 1974, and regulations of the State of California, Administrative Code, Title 17 - Public Health, the water purveyor has the primary responsibility for preventing water from unapproved sources or any other substances, from entering the public potable water system. In compliance with Title 17, it is the intent of this Water Division Policy to adopt cross-connection control standards which establish the requirements for design, construction, installation, and maintenance of backflow prevention assemblies.

It is the purpose of this policy to protect the potable water supply of the City of Sacramento from the possibility of contaminants, pollutants, or water from an unapproved source from entering the City of Sacramento's water system. More specifically, this policy is intended to prevent delivered water that has passed beyond the City's water system and into the consumers water system from re-entering the City's system.

This policy aims to protect the City's water system and its consumers from water-using establishments which have a greater possibility of harming the quality and safety of the City's potable water through backflow and/or cross-connections.

**Section 2 DEFINITIONS**

The following words and terms used in this policy shall be interpreted as indicated unless the context clearly indicates otherwise:

**"Air-gap separation (AG)"** shall mean a physical separation between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressurized receiving vessel. An "approved air-gap separation" shall be at least double the inside diameter of the supply pipe measured vertically above the top rim of the vessel but in no case shall be less than 1 inch.

**"Approved"** as used in reference to a type of backflow prevention assembly or methods shall mean an approval by the City of Sacramento's Water Division.

**"Approved Backflow Prevention Assembly"** shall mean those backflow prevention assemblies tested and approved by the Foundation or other person or entity approved by the Water Division Manager.

CROSS CONNECTION CONTROL POLICY  
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**"Approved Water Supply"** shall mean the source, well or plant whose potability is regulated and monitored by a State or local health agency. This supply includes all sources, wells, pumps tanks, equipment and appurtenances used to produce, treat or store water for public consumption or use.

**"Auxiliary water supply"** shall mean any water supply on or available to the premises other than the City's water system. These auxiliary waters may include water from another purveyor's potable water system or any natural source such as a well, spring, river, stream, etc., or "used water" or "industrial fluids."

**"AWWA"** shall mean American Water Works Association.

**"Backflow"** shall mean the undesirable reversal of the flow of water or other liquids, mixtures, gases or other substances into or towards the of City's water system from any source or sources.

**"Backflow prevention assembly"** shall mean an assembly used to prevent backflow into a potable water system.

**"Backpressure"** shall mean any elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration which would cause or tend to cause a reversal of the normal flow through the backflow prevention assembly.

**"Backsiphonage"** shall mean a form of backflow due to a reduction in system pressure which causes a negative or sub-atmospheric pressure to exist at a site in the water system.

**"Certified backflow prevention assembly tester"** shall mean a person who has proven his/her competency in testing, repair, overhaul and making test reports on backflow preventers to the satisfaction of the Water Division. They shall be currently certified by the AWWA or the Health Officer and approved by the Water Division Manager.

**"City"** shall mean the City of Sacramento.

**"City water system"** shall mean the City owned water mains operated as a public utility, under a current health permit, to furnish water for domestic purposes. This system will include all facilities and appurtenances between the approved water supply and the point of service such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment, and appurtenances used to convey, water for public consumption or use.

**"Consumer", "Customer" or "User"** shall mean the owner or operator of a private water system served from the City's water system.

CROSS CONNECTION CONTROL POLICY  
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**"Consumer's potable water system"** shall mean that portion of the privately owned potable water system lying between the point of service and point of use. This system will include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store or use potable water.

**"Consumer's water system"** shall include any water system located on the consumer's premises, whether supplied by the City's water system or an auxiliary water supply. The system or systems may be either a potable water system or an industrial piping system.

**"Contamination"** shall mean an impairment of the quality of the water which creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids or waste.

**"Cross-connection"** shall mean any unprotected actual or potential connection or structural arrangement between the City's or a consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas or substance other than the intended potable water with which the system is supplied. By-pass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices through which or because of which "backflow" can or may occur are considered to be cross-connections.

**"Double Check Valve Assembly (DC)"** shall mean an assembly composed of two independently acting approved check valves, including tightly closing shutoff valves attached on each end of the assembly and fitted with properly located test cocks available for testing the watertightness of each check valve.

**"Degree of hazard"** shall be derived from the evaluation of conditions within a system which can be classified as either a pollutional (non-health) or a contamination (health) hazard.

**"Designee"** shall mean a Water Division employee in possession of a current certificate in cross connection control and who meets all other requirements set forth in Title 17. The employee shall administer certain areas of this policy as directed by the Water Division Manager.

**"Health Agency"** shall mean either the State of California, Department of Health Services or the County of Sacramento's Environmental Management Department.

**"Health hazard"** shall mean an actual or potential threat of contamination of a physical or toxic nature to the City's water system or the consumer's potable water system that would be a danger to health.

**"Health Officer"** shall mean the Health Officer for the County of Sacramento or a designated representative of the Health Officer.

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**"Hearing Officer"** shall mean the Health Officer for the County of Sacramento or a designated representative of the Health Officer.

**"Hospital"** shall mean any institution, place, building or agency which maintains and operates facilities for one or more persons for the diagnosis, care and treatment of human illness, including convalescence and care during and after pregnancy or which maintains and operates organized facilities for any such purposes, and to which persons may be admitted for overnight stay or longer.

**"Industrial fluids"** shall mean any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration, such as would constitute a health hazard if introduced into a potable water supply.

**"Laboratory--Approved Testing"** shall mean the Foundation for Cross-Connection Control and Hydraulic Research University of Southern California or another laboratory having the equivalent facilities for both the laboratory and field evaluation of backflow prevention assemblies and approved by the Water Division Manager.

**"Point of Service"** shall mean the terminal end of the City's water system, where the Water Division loses jurisdiction and sanitary control over the water at its point of delivery to the consumer's water system.

**"Plumbing official"** shall mean the individual, department, board or agency established and authorized by state, county, city or other political subdivision created by law to administer and enforce the provisions of the Plumbing Code as adopted or amended.

**"Plumbing hazard"** shall mean an internal or plumbing type cross-connection in a consumer's potable water system that may be either a pollutional or a contamination type hazard. This includes but is not limited to cross-connections to toilets, sinks, lavatories, wash trays, domestic washing machines and lawn sprinkling systems. Plumbing type cross-connections can be located in many types of structures including homes, apartment houses, hotels and commercial or industrial establishments. Such a connection, if permitted to exist, must be properly protected by an appropriate type of cross-connection control assembly.

**"Pollutional hazard"** shall mean an actual or potential threat to the physical properties of the water system or the potability of the City's or the consumer's potable water system but which would not constitute a health or system hazard, as defined. The maximum degree or intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

**"Potable water"** shall mean water from any source which has been investigated by the Health Agencies and which has been approved for human consumption.

CROSS CONNECTION CONTROL POLICY  
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**"Reduced pressure principle backflow prevention assembly (RP)"** shall mean an assembly containing two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located testcocks and tightly closing shut-off valves at each end of the assembly.

**"System hazard"** shall mean an actual or potential threat of severe danger to the physical properties of the City's water system or the consumer's potable water system or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.

**The Foundation"** shall mean the University of Southern California Foundation for Cross Connection Control and Hydraulic Research.

**"Title 17"** shall mean the State of California Administrative Code, Title 17 - Public Health.

**"Unapproved water supply"** shall mean a water supply which has not been approved for human consumption by the California Department of Health Services or the County Health Officer.

**"Water Division"** shall mean the Division of the Public Works Department, City of Sacramento responsible for the operation and maintenance of the City's water supply and water system.

**"Water Division Manager"** shall mean an employee of the City of Sacramento appointed by the City Manager. He is responsible for the Administration, Production, Maintenance and Distribution functions of the Water Division.

**"Water Purveyor"** shall mean the City of Sacramento, Water Division.

**"Water Service Connection"** shall mean the City's water pipe and appurtenances from the City's water main to the point of service.

Section 3 **RESPONSIBILITY**

Under the rules of Title 17 - relating to cross-connection, the Water Division has primary responsibility to prevent water from unapproved sources or any other substances, from entering the City's water system.

CROSS CONNECTION CONTROL POLICY  
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The Water Division is primarily responsible for the prevention of contamination and pollution of the City's water system. Such responsibility begins at the point of origin of the City's water supply and includes adequate treatment facilities and water mains, and ends at the point of service to the consumer's water system. The Water Division shall insure adequate backflow and back-siphonage protection is maintained on consumer water systems directly connected to the City's system.

The Water Division may delegate responsibility to the Plumbing Official. The purpose shall be for determining the cross-connection control standards as outlined in this policy and applicable for the protection of the City water system as a result of new installations, and alterations or repairs of existing consumer water systems. The Water Division may also delegate administrative responsibility to the Health Officer for maintaining, the provisions of the policy, applicable for the protection of the City water system as a result of new installations and alternations or repairs of existing consumer water systems.

The consumer shall have the prime responsibility of preventing contaminants and pollutants from his water system from entering the City's water system as required by this policy and the Health Agency.

The City shall not be responsible for any loss or damage directly or indirectly resulting from or caused by any improper or negligent installation, operation, use, repair, or maintenance of, or interfering with, any approved backflow prevention assembly, required by this policy, by any consumer or any other person.

The customer shall bear all costs for the installation of pumps or renovation of existing consumer piping, as a result of any decreases in line pressure attributed to the upgrading of existing backflow prevention assemblies or the installation of approved backflow prevention assemblies.

The City shall not be held responsible for any losses or damages incurred by the consumer as a result of upgrading existing backflow prevention assemblies or the installation of approved backflow prevention assemblies.

**Section 4 OPERATIONAL CRITERIA**

It is the responsibility of the Water Division as water purveyor, or the Health Officer to evaluate the hazards beyond the service connection in a consumer's water system to determine whether solid, liquid or gaseous pollutants or contaminants are, or may be, handled on the consumer's premises in such a manner as to possibly permit contamination of the public water system. When a hazard or potential hazard to the public water system is found or suspected, the consumer shall be required to install an approved backflow prevention assembly as indicated in Drawings TDW-22 and TDW-26 (attached) and in accordance with the provisions of this policy.

CROSS CONNECTION CONTROL POLICY  
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**Section 5 LEVEL OF PROTECTION**

The type of protection that shall be provided to prevent backflow into the City's water system shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of approved backflow prevention assemblies that may be required (listed in an increasing level of protection) includes: Approved Double Check Valve Assembly - DC, Approved Reduced Pressure Principle Assembly - RP, or an Approved Air-Gap Separation - AG. The customer may choose a higher level of protection than required by this policy. Types of approved assemblies are listed in Section 10 of this policy. Situations which are not covered in this policy shall be evaluated on a case-by-case basis and appropriate backflow protection shall be determined by the Water Division Manager or the Health Officer.

**Section 6 CUSTOMER RESPONSIBILITIES**

The customer shall furnish and install all approved air gap separation and approved backflow prevention assemblies in accordance with this policy and as directed by the Water Division Manager, his designee, the Plumbing Official or the Health Officer. All air gap separation and approved backflow prevention assemblies shall be kept in good working order and in safe condition.

Upon notification by the Water Division Manager, his designee or the Health Officer, the customer shall test, repair or replace existing air gap separation and backflow prevention assemblies determined to be unapproved, defective or not providing the level of protection specified in this policy. The length of time allotted for the correction of the deficiency shall be determined by the Water Division Manager, his designee or the Health Officer. All work shall be arranged by the owner through private contract. In the event water service is to be maintained during the repair or removal of an existing backflow prevention assembly, the customer shall provide that an approved backflow prevention assembly be temporarily installed. The temporary approved backflow prevention assembly shall be tested at the time of its installation.

The customer shall bear all costs of testing and inspections provided by the certified backflow prevention assembly testor. The customer shall bear all costs for the installation of approved air gap separation and approved backflow prevention assemblies. In addition, the customer shall bear all costs for the maintenance, repairs and replacement of existing air gap separation and backflow prevention assemblies.

The consumer shall assure the necessary plumbing permits are obtained for new consumer water system installations, and for alterations or repairs to his existing system.

The customer's premises shall be available for inspection at all reasonable times to the Water Division Manager, his designee or the Health Officer to determine if protection of the City's water system is required.

CROSS CONNECTION CONTROL POLICY  
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**Section 7 APPROVAL OF BACKFLOW PREVENTION ASSEMBLIES**

All backflow prevention assemblies whether installed by the City or the customer shall be assemblies approved by the Foundation or a person or entity that is competent and possesses the necessary facilities, as determined by the Water Division Manager or the Health Officer to investigate and evaluate backflow prevention assemblies and is independent of backflow prevention assembly manufacturers.

A current list of approved backflow prevention assemblies shall be kept on file in the office of the Water Division or the Health Officer.

**Section 8 CERTIFICATION OF BACKFLOW PREVENTION ASSEMBLY TESTERS**

Backflow prevention assembly testers are limited to those individuals with a current certificate of competence from the Health Officer or the A.W.W.A. In addition, their name must appear on the list of approved testers. A current list of certified backflow prevention assembly testers shall be kept on file in the office of the Water Division and will be made available upon request. Final determination of individual certification rests with the Water Division Manager.

**Section 9 TESTING**

Testing of backflow prevention assemblies shall be performed by certified backflow prevention assembly testers. Backflow preventers shall be tested immediately after they are installed, relocated or repaired and not placed in service unless they are functioning as required. The Water Division Manager or the Health Officer will ensure that as a minimum, each approved backflow-prevention assembly is tested at the time of installation and annually thereafter to assure proper operation. In instances where a hazard is deemed great enough, testing may be required at more frequent intervals. Test procedures shall be those currently recommended by the Foundation.

The Water Division Manager or Health Officer shall notify the customer when tests are required. Necessary test forms shall be provided and completed by the certified backflow prevention assembly tester and returned to the Water Division and the Health Officer. Records of inspections, testing or repairs shall be kept by the Water Division and made available to the health agency through agreement.

**Section 10 INSTALLATION REQUIREMENTS**

Approved backflow prevention assemblies shall have the same size diameter as the existing or proposed water meter. Approved backflow prevention assemblies shall be the same size diameter as the water service connection when installed on unmetered services.



CROSS CONNECTION CONTROL POLICY  
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A. Approved Air-Gap Separation (AG):

1. An AG shall be located on the water customer's side of, and as close to, the point of service as is practicable.
2. All piping from the point of service or the meter to the receiving tank shall be above grade and visible. Unless otherwise approved by the Water Division Manager, his designee or the Health Officer, the receiving tank shall be located on the customers side and no further than five (5) feet from the point of service or the meter. Installation shall be as indicated in Drawing TDW 22 (attached).
3. There shall be no outlet, tee, tap, take-off or connection of any sort, to or from the service connection or the customer's water system, between the City's water main and the air-gap separation.

B. Approved Reduced Pressure Principle Assembly (RP):

1. The RP shall be installed aboveground, in a horizontal and level position. Unless otherwise approved by the Water Division Manager, his designee or the Health Officer, the assembly shall be located on the customers side and no further than five (5) feet from the point of service or the meter.
2. The RP shall be installed a minimum of twelve (12) inches above finished grade and not more than thirty-six (36) inches above finished grade as measured from the bottom of the assembly, and shall be readily accessible for maintenance and testing. The installation shall be as indicated in Drawing TDW-26 (attached).
3. There shall be no outlet, tee, tap, take-off or connection of any sort, to or from the service connection or the customer's water system, between the City's water main and the RP.
4. The RP shall be installed such that no part of the assembly will be submerged during normal operation and weather conditions.

C. Approved Double Check Valve Assembly (DC):

1. The DC shall be installed aboveground, in a horizontal and level position. Unless otherwise approved by the Water Division Manager, his designee or the Health Officer, the assembly shall be located on the customers side and no further than five (5) feet from the point of service or the meter.
2. The DC shall be installed a minimum of twelve (12) inches above finished grade and not more than thirty-six (36) inches above finished grade as measured from the bottom of the assembly, and shall be readily accessible for maintenance and testing. The installation shall be as indicated in Drawing TDW-26 (attached).

CROSS CONNECTION CONTROL POLICY  
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- 3. There shall be no outlet, tee, tap, take-off or connection of any sort, to or from the service connection or the customer's water system, between the City's water main and the DC.

**Section 11 SPECIFIC FACILITIES WHERE BACKFLOW PROTECTION IS REQUIRED**

Situations which are not covered in this policy shall be evaluated on a case-by-case basis and appropriate backflow protection shall be determined by the Water Division Manager or the Health Officer.

The City has a responsibility to require an approved backflow prevention assembly on any fire service where a hazard can be demonstrated. Fire protection systems that are classified as a low-hazard or high hazard shall have an approved backflow prevention assembly installed. Listed in increasing level of protection they are:

- I. Low- Hazard Fire Protection Systems:
  - (i) Premises where the fire system is directly supplied from the City's water system and there is an unapproved auxiliary water supply on or to the premises (not interconnected) - DC
  - (ii) Premises where the fire system is supplied from the City water system and where either elevated storage tanks or fire pumps which take from private reservoirs or tanks are used - DC
  - (iii) Premises where the fire system is directly supplied from the City water system and interconnected with another public water service - DC
  
- II. High-Hazard Fire Protection Systems:
  - (i) Fire protection system is supplied from the City water system and interconnected with an unapproved auxiliary water supply - RP
  - (ii) Fire protection system is supplied from the City water system and contains any hazardous substance - RP

Specific plants and facilities listed that are supplied water from the City water system, shall have an approved backflow prevention assembly installed. They are:

- 1. Aircraft and Missile Plants - RP
- 2. Automotive Plants - RP
- 3. Autopsy Facilities - RP
- 4. Auxiliary Water System - Defined as any water supply on, or available to, a customer's premises other than the City's water system:

CROSS CONNECTION CONTROL POLICY  
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- (a) Auxiliary water systems with no known cross-connections - DC
- (b) Auxiliary water systems where cross-connections are known to exist - RP
- 5. Beverage Bottling Plants - RP
- 6. Breweries - RP
- 7. Buildings:
  - (a) Hotels, apartment houses, public and private buildings, or other structures, where sewage pumps and/or sewage ejectors have been installed - RP
  - (b) Any commercial structure in which the specific business activity cannot be ascertained - RP
  - (c) Multi-storied buildings that use booster pumps or elevated storage tanks to distribute potable water within the premises - DC
  - (d) Any building that exceeds forty (40) feet in height as measured from the service connection to the highest water outlet - DC
- 8. Canneries, Packing Houses and Reduction Plants - RP
- 9. Chemical Plants - Any premises, served from the City water system, where there is a facility requiring the use of water in the industrial process of manufacturing, sorting, compounding or processing chemicals. This will also include facilities where chemicals are used as additives to the water supply or in the processing of products - RP.
- 10. Chemically Contaminated Water Systems - Any premises, served from the City water system, where chemicals are used as additives to the water supply, or where the water supply is used for transmission or distribution of chemicals, or where chemicals are used with water in the compounding or processing of products - RP.
- 11. Cold Storage Plants - RP
- 12. Convalescent Homes - RP
- 13. Dairy Processing Plants - RP
- 14. Dental Clinics - RP
- 15. Dry Cleaning Facilities - RP
- 16. Dye Works - RP

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17. Film Processing Facilities or Film Manufacturing Plants - RP
18. Hospitals - RP
19. Ice Manufacturing Plants - RP
20. Irrigation Systems:
  - (a) Premises or locations where facilities have been installed for pumping, injecting or spreading fertilizers, pesticides or other hazardous substances - RP
  - (b) Premises or locations having a separate service connection for irrigation purposes - RP
21. Laboratories - Including, but not limited to, teaching institutions, biological and analytical facilities - RP
22. Laundries (Commercial) - RP
23. Medical Buildings and Clinics - RP
24. Metal Manufacturing, Cleaning, Processing or Fabricating Plants - RP
25. Morgues - RP
26. Mortuaries - RP
27. Multi-Storied Buildings: See Buildings
28. Multiple Services: Includes two or more interconnected services provided by one or more water purveyors to a single consumer complex.  
Minimum Backflow Protection Required: DC, at each service connection.
29. Nursing Homes - RP
30. Oil/Gas Production, Storage or Transmission premises - RP
31. Paper and Paper Products Manufacturing Plants - RP
32. Plastic Manufacturing, Extruding and Injection Molding - RP See Chemical Plants
33. Plating Plants - RP
34. Portable Spray or Cleaning Equipment which can be connected to a public water system - AG
35. Radioactive Materials or Substances - Plants or Facilities that process, handle or store radioactive materials or substances - RP

CROSS CONNECTION CONTROL POLICY  
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- 36. Reclaimed Water Distribution Systems:
  - (a) Premises where the City's water system is used to supplement the reclaimed water system - AG
  - (b) Premises where reclaimed water is used and there is no interconnection with the potable water system - RP
- 37. Restricted, Classified or Other Closed Facilities - RP
- 38. Rubber Manufacturing Plants - Natural or Synthetic - RP
- 39. Sand and Gravel Plants - RP
- 40. Sanitariums - RP
- 41. Schools, Colleges and Universities - RP, if actual or potential health hazard exists on the premises.
- 42. Solar Heating Systems:
  - (a) Solar collector system which contains any hazardous substance and where there is a direct make-up connection to the City water system - RP
  - (b) Protection of the City's water system is not required for "once through" solar heating systems including, but not limited to, domestic hot water systems.
- 43. Tank Trucks - AG - See Portable Spray and Cleaning Equipment.
- 44. Vehicle Washing Facilities - RP
- 45. Veterinary Clinics - RP
- 46. Waterfront facilities and Industries - Including, but not limited to, docks, fisheries, fish hatcheries and marinas - RP

Section 12 **PENALTIES FOR NON-COMPLIANCE**

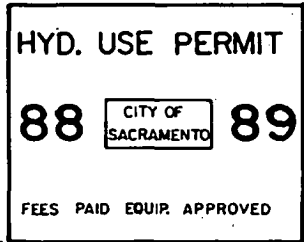
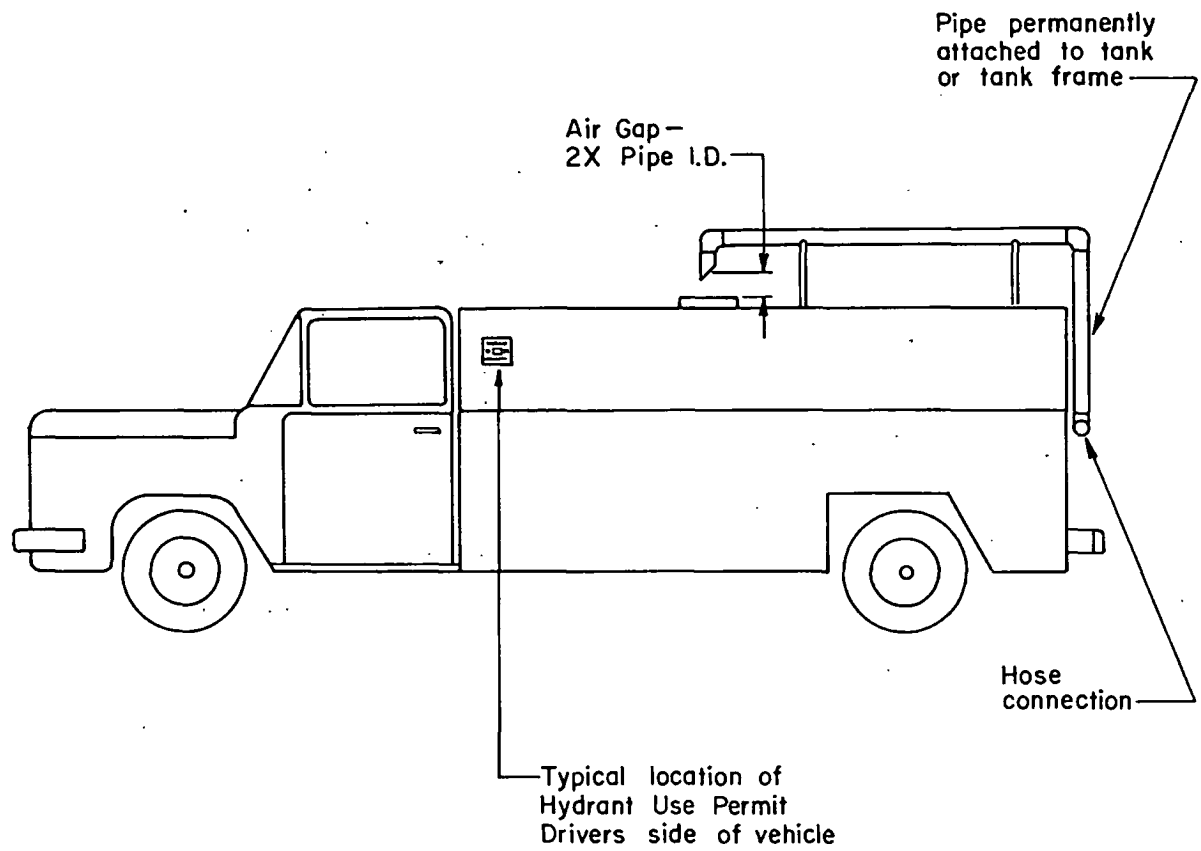
In the event a customer is determined to be in violation of this code by the Water Division Manager or the Health Officer, appropriate administrative and/or legal remedies shall be taken.

Customers not complying with the sections of this policy or the articles contained in Title 17 may be subject to discontinuance of water service as required by Section 47.51 of the City Code.

CROSS CONNECTION CONTROL POLICY  
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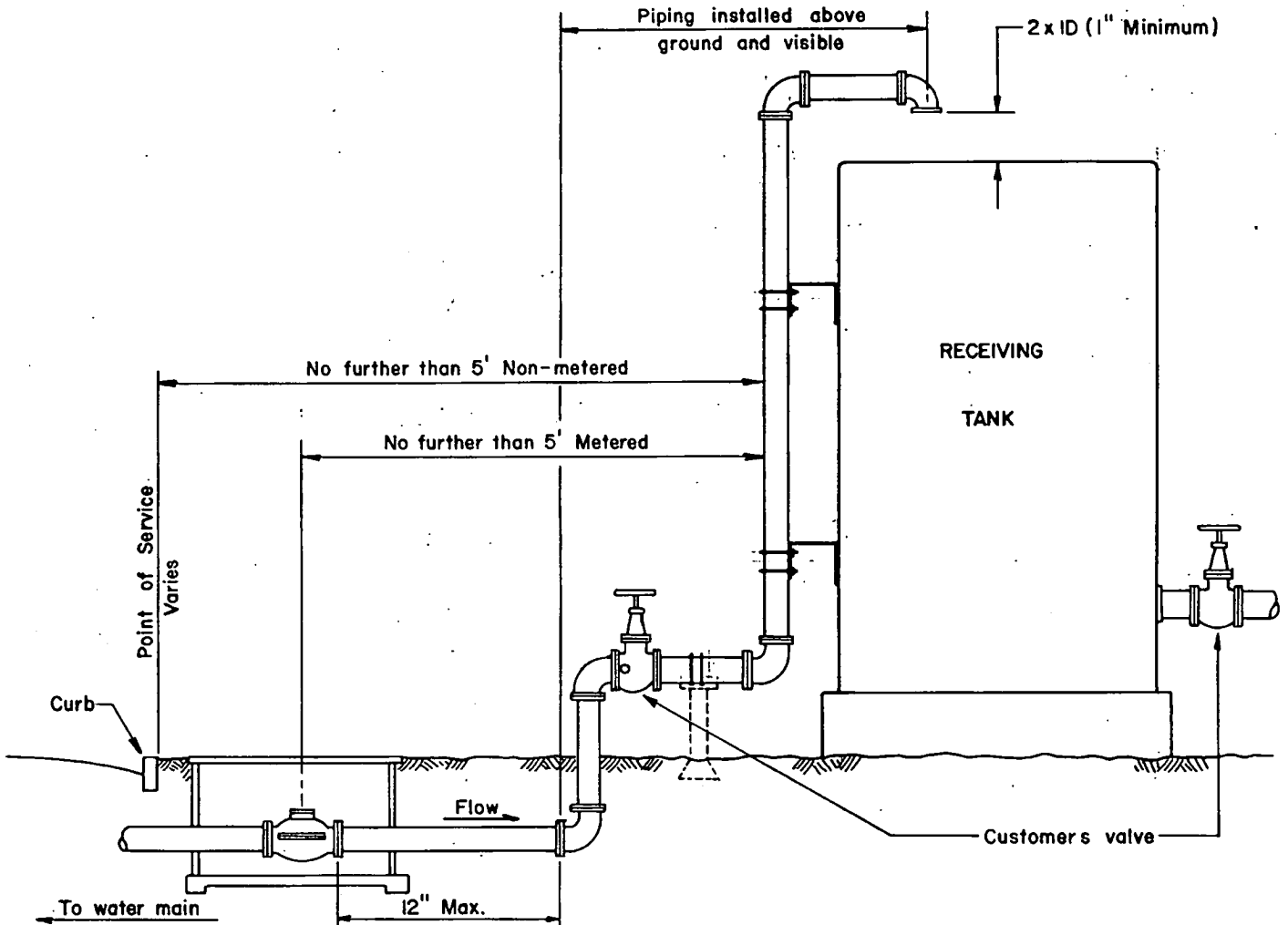
Notification of intent to terminate City water service shall be commensurate with the hazard to public health and shall be delivered to the tenant, owner or both as the situation requires.

In addition, any person violating the provisions of this policy shall be guilty of an infraction and may be subject to punishment as prescribed by Section 1.7 of the Sacramento City Code. (Ord. No. 2808, §1)



**NOTE:**

1. "Air Gap Separation" shall mean a physical separation between the discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An "approved air-gap separation" shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the receiving vessel and in no case shall be less than one inch.

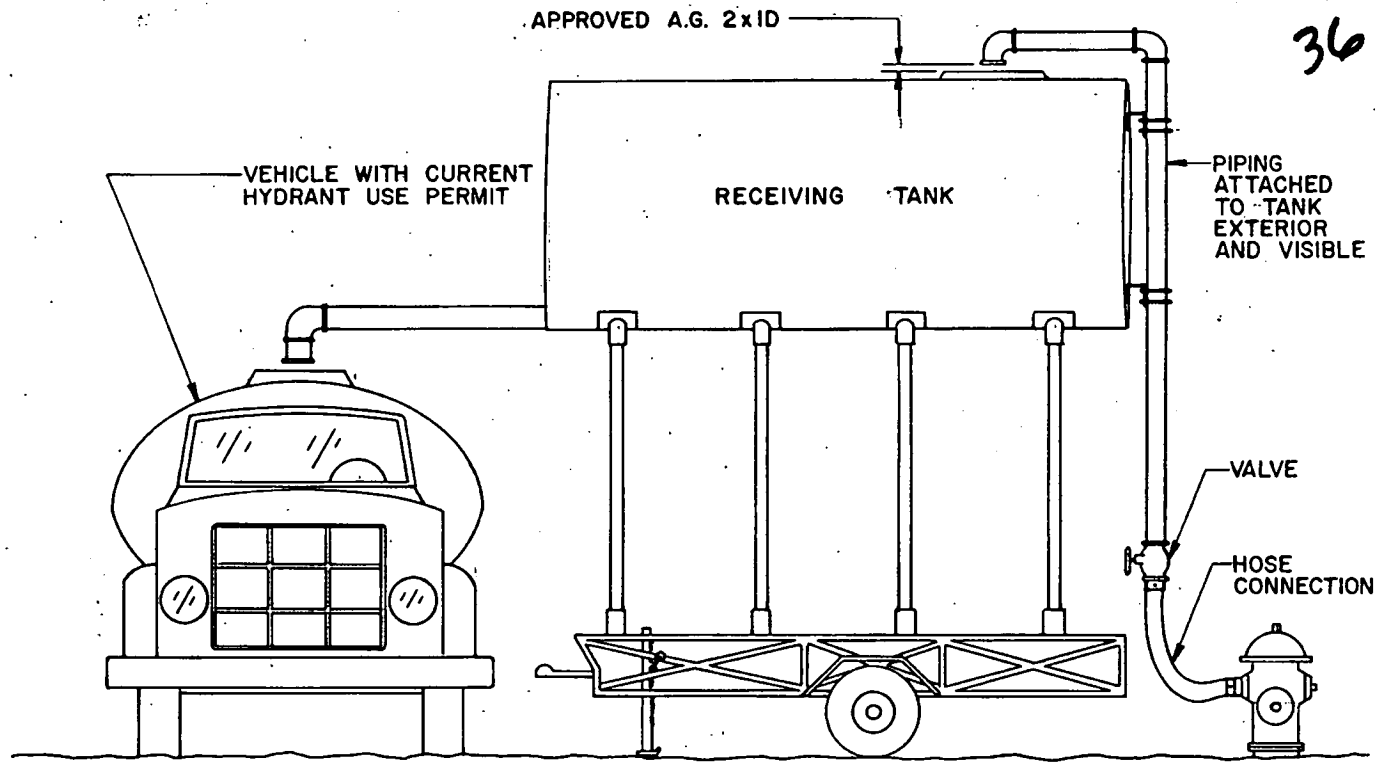


**NOTES:**

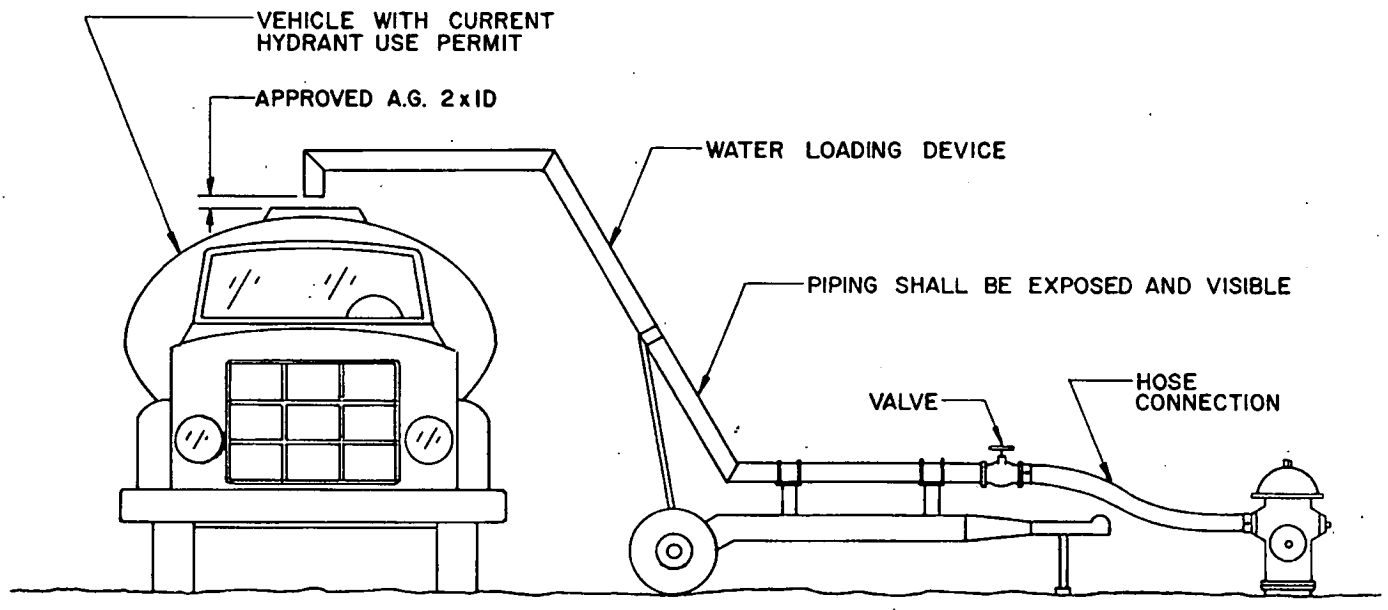
1. No outlet, tap, tee or connection between water main and air gap separation is allowed.
2. PVC pipe shall not be used for the above ground portion of the installation.
3. Approved air gap separation installation shall be installed within 5' from point of service or 5' from the meter unless otherwise approved by the Water Division Manager.
4. Piping shall be installed above ground and visible. In no case shall piping installed below ground exceed 12" from the point of service or 12" from the meter if meter is required.



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PORTABLE TANK

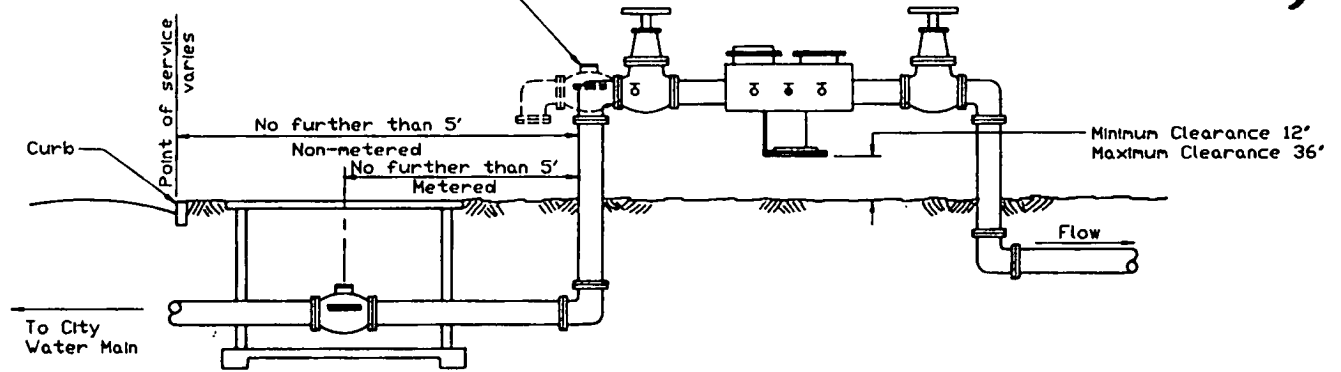


PORTABLE WATER LOADING DEVICE

**NOTES:**

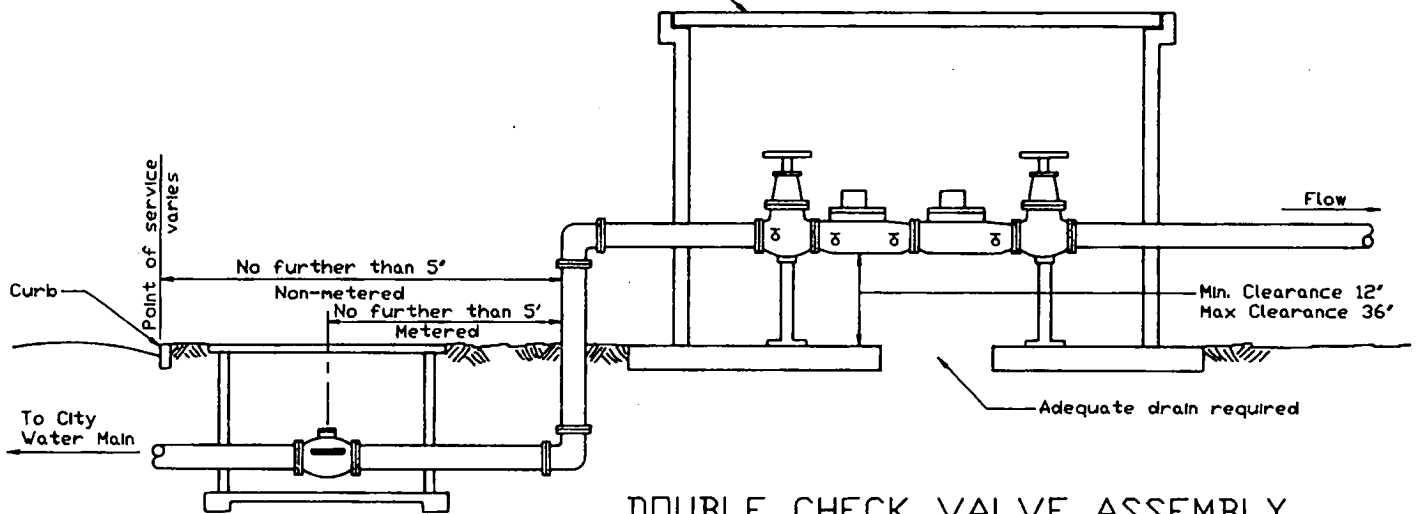
- 1. PORTABLE WATER TRUCK FILL STATIONS SHALL BE INSPECTED ANNUALLY BY THE WATER DIVISION, PRIOR TO THEIR USE.
- 2. ALTERNATIVE WATER TRUCK FILL STATION SHALL BE SUBMITTED TO THE WATER DIVISION, PRIOR TO USE.
- 3. ONLY WATER TRUCKS WITH CURRENT PERMIT STICKER SHALL BE ALLOWED TO FILL AT PORTABLE WATER TRUCK FILL STATION.
- 4. LOCATION OF PORTABLE WATER TRUCK FILL STATION SHALL BE SITE SPECIFIC.

Water meter 3' and larger may be installed above ground at city's option (All assemblies)



**REDUCED PRESSURE PRINCIPLE ASSEMBLY  
ABOVE GROUND INSTALLATION**

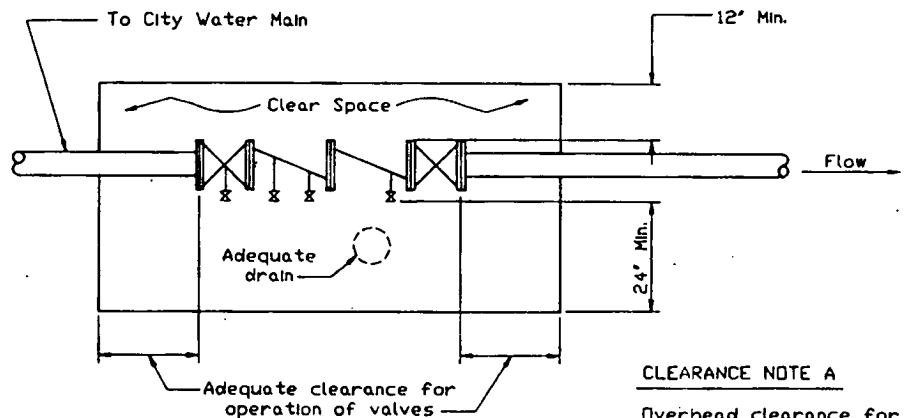
Protective enclosure - optional (All assemblies)



**DOUBLE CHECK VALVE ASSEMBLY  
ABOVE GROUND INSTALLATION**

**NOTES:**

1. Point of Service:
  - A. Point of service is the back of curb for all city streets with planter strips.
  - B. Point of service is the back of sidewalk for streets with combined curb and sidewalk.
  - C. Point of service is the property line on all unimproved streets and alleys.
  - D. Where the point of service is unclear the location shall be determined by the Water Division Manager or his designee.
2. Lists of approved backflow prevention assemblies and certified backflow prevention assembly testers are available at the Water Division Administration office at 1391 35th Ave.
3. The backflow prevention assemblies shall be installed above ground, in a horizontal and level position. Unless otherwise approved by the Water Division Manager, his designee or the Health Officer, the assembly shall be located on the customers side and no further than five (5) feet from the point of service or the meter.
4. No outlet, tap, tee, or connection between water main and backflow prevention assembly is allowed.
5. PVC pipe shall not be used for the above portion of the installation.
6. Supports recommended for assemblies 3' and larger.



**MINIMUM CLEARANCES  
FOR ALL INSTALLATIONS**

**CLEARANCE NOTE A**

Overhead clearance for the clear space shall be a minimum of 7' measured from finished grade (All assemblies)