



**CITY OF
TALLAHASSEE**

Rules and Regulations
for
Backflow Prevention and Cross-Connection Control

July 2021 Update

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Section 1 – General Policy

1.1 Purpose

To protect the public water system from the possibility of contamination or pollution by isolating actual or potential hazards using approved backflow prevention methods.

To promote the elimination or control of existing cross-connections, actual or potential, with a customer's water system, non-potable water system, plumbing fixtures, and industrial piping systems.

To provide for a continuing program of cross-connection control that will prevent the contamination or pollution of the public water system.

1.2 Application

These Rules and Regulations shall apply to all properties and areas served by the City of Tallahassee's public water system, whether inside or outside City limits.

1.3 Water System/Point of Delivery

For the purposes of these Rules and Regulations, the water system shall consist of two parts, the public water system and the customer's water system. The public water system shall consist of all source, treatment, storage, distribution, and metering facilities under the control of the City of Tallahassee. The customer's water system shall include all components and facilities downstream of the point at which the City of Tallahassee's jurisdiction over the sanitary control of the public water system ends and the customer's responsibility for operation and maintenance begins. When a water meter is installed at this point, the customer's water system shall mean the components and facilities beyond the downstream side of the meter setting used to convey water from the public water system to the points of use, typically at the customer's isolation valve. The point at which the public water system ends, and the customer's water system begins, shall hereinafter be referred to as the Point of Delivery.

1.4 Responsibility

The City of Tallahassee, as the purveyor of potable water, shall be responsible for the protection of the public water system from contamination or pollution due to the backflow (back-pressure or back-siphonage) of contaminants or pollutants through a customer's water system.

1.5 Authority

This Policy implements the provisions of Rule 62-555.360 of the Florida Administrative Code (FAC), promulgated under the authority of Part VI of Chapter 403, Florida Statutes by the Department of Environmental Protection, which requires public water systems to establish a cross-connection control program to detect and prevent cross-connections that create or may create an imminent and substantial danger to public health. Rule 62-555.360(2), FAC states, "Each community water system (CWS) shall establish and implement a cross-connection

control program utilizing backflow protection at or for service connection from the CWS to protect the CWS from contamination caused by cross-connections on customers' premises.”

Therefore, pursuant to the authority granted under City of Tallahassee Code of General Ordinances; Ordinance 90-O-0017; and Resolution 90-R-0004; the City of Tallahassee hereby adopts, establishes, and publishes these Rules and Regulations.

The City of Tallahassee shall designate a representative(s) to serve as an Authorized Agent(s) for the Cross-Connection Control Program. Said agent(s) shall be trained in accordance with accepted industry practices to identify hazards, actual or potential, with a customer's water system, non-potable water system, plumbing fixtures, and industrial or process piping systems and shall have the authority to require a customer to install, test, and repair or replace an approved backflow prevention assembly suitable for the customer's water system for the purpose of adequately protecting the public water system.

As a condition of continuing water service, all water service customers shall provide the City access to their properties and facilities for determining compliance with the requirements of these Rules and Regulations. Such access shall be unobstructed, safely accessible and made available during normal business hours.

[END OF SECTION 1]

Section 2 – Definitions

For purposes of these Rules and Regulations, the following definitions shall apply unless the context clearly indicates or requires a different meaning. If a word or term used in these Rules and Regulations is not contained in the following list, its definition, or other technical terms used, shall have the meanings or definitions listed in the most recent edition of the American Water Works Association Manual M14, Recommended Practice for Backflow Prevention and Cross-Connection Control.

APPROVED – Accepted by the City of Tallahassee - Office of Cross-Connection Control. Or, as it relates to a backflow prevention assembly, APPROVED shall mean having received full acceptance and approval in both field and laboratory testing by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

ASSEMBLY – An assembly of one or more approved body components and including approved shutoff valves.

AUTHORIZED AGENT – An employee of the City of Tallahassee who has been trained in accordance with accepted industry practices to identify hazards, actual or potential, with a customer’s water system, non-potable water system, plumbing fixtures, and industrial or process piping systems; whose primary job duties are to protect the public water system by eliminating existing and potential cross-connections and backflow hazards through the enforcement of these Rules and Regulations; and with the authority to require a customer install, test, and repair or replace an approved backflow prevention assembly for the purpose of adequately protecting the public water system.

AUXILIARY WATER SUPPLY – Any water supply on, or available to the premises, other than water supplied from the City of Tallahassee’s public water system. Auxiliary water supplies may include, but not be limited to wells or water from another purveyor’s public or private potable water system. These auxiliary waters may be contaminated or polluted, or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

BACKFLOW – The undesirable reversal of flow in a potable water distribution system resulting from a cross-connection with an auxiliary water supply or unacceptable water source over which the purveyor does not have sanitary control.

BACK PRESSURE – A pressure, higher than the public potable water supply pressure, caused by a pump, elevated tank, boiler, or any other means that may cause backflow.

BACK SIPHONAGE – Backflow caused by negative or reduced pressure in the public water system piping.

BACKFLOW PREVENTER (ALSO BACKFLOW PREVENTION ASSEMBLY OR BACKFLOW ASSEMBLY) – An assembly, device, or method that prohibits flow of fluid back into a potable water system. The type of backflow preventer used shall be based on the degree of hazard, either existing or potential.

Air Gap (AG) – The unobstructed vertical distance through free atmosphere between the lowest effective opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood rim of the receptacle. These vertical, physical separations must be at least twice the effective opening of the water supply outlet and never less than 1 inch above the receiving vessel flood rim.

Double Check Valve Backflow Prevention Assembly (DC) – A complete assembly consisting of two internally spring-loaded, independently operating check valves located between two tightly closing resilient-seated shut-off valves and with four properly placed resilient-seated test cocks for testing the water tightness of each check valve. This assembly shall only be used to protect against non-health (low) hazards.

Double Check Detector Backflow Prevention Assembly (DCDA) – A specially designed backflow assembly composed of a line-sized approved double check valve assembly with a bypass connection containing a specific water meter and an approved double check valve assembly. The bypass meter shall be capable of accurately registering very low flow rates (up to 3 gpm) and shall show a registration for all flow rates. This assembly shall only be used to protect against non-health (low) hazards.

Dual Check (DuC) – A device containing two internally spring-loaded, independently acting check valves, excluding shut-off valves and test cocks which cannot be tested in-line. This is not an approved backflow prevention assembly.

Pressure Vacuum Breaker Assembly (PVB) – An assembly containing an independently operating check valve and an internally spring-loaded, independently operating air inlet valve located on the discharge side of the check valve, and which is equipped with properly placed resilient-seated test cocks and tightly closing resilient-seated shut-off valves located at each end of the assembly designed to be operated under pressure for prolonged periods of time to prevent back siphonage. The assembly may not be subjected to any back pressure.

Reduced Pressure Principle (Zone) Backflow Prevention Assembly (RP) – A complete assembly consisting of a mechanical, independently acting, hydraulically dependent relief valve, located between two internally spring-loaded, independently operating check valves, located between two tightly-closing resilient-seated shut-off valves and with four properly placed resilient-seated test cocks for testing the water tightness of each check valve. This assembly shall be used to protect against health (high) hazards.

Reduced Pressure Principle Detector Backflow Prevention Assembly (RPDA) – A specially designed backflow assembly composed of a line-sized approved reduced pressure principle assembly, with a bypass connection containing a specific water meter and an approved reduced pressure principle assembly. The bypass meter shall be capable of accurately registering very low flow rates (up to 3 gpm) and shall show a registration for all flow rates. This assembly shall be used to protect against both non-health (low) and health (high) hazards.

BRANCH WATER SERVICE (also BRANCH SERVICE) – Multiple water services split from a single connection to the public water system. Branch services are typically (but not exclusively) a combination of domestic water service and irrigation and/or fire service connections.

CITY – City of Tallahassee.

CONTAMINATION – A change or impairment of the quality of water in the public water system by the introduction or admission of any foreign substance that degrades the water quality or creates an actual or potential health hazard.

CROSS-CONNECTION – A connection, actual or potential, between any part of the public water system and any other environment containing “other substances” in a manner that, under any circumstances, would

allow such substances to enter the public water system. “Other substances” may be gases, liquids, or solids, such as chemicals, waste products, steam, water from other sources (potable or non-potable), or any matter that may change the physical characteristics of the water. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies through which, or because of which, backflow could occur are considered to be cross-connections.

CUSTOMER VALVE – The water service isolation valve, generally included as part of the metering assembly, that is downstream and adjacent to the water meter assembly, and that serves as the customer’s point of delivery and the termination point of the City of Tallahassee’s public water system.

DOMESTIC WATER SERVICE (also DOMESTIC SERVICE) – The water system connection serving a property, facility or area conveying potable water for the purpose of human consumption and supplying common use facility plumbing fixtures (toilets, lavatories, dishwashers, clothes washers, etc.).

FIRE PROTECTION WATER SERVICE (also FIRE SERVICE) – The water system connection serving a property, facility, or area conveying potable or non-potable water for the purpose of providing fire protection or supporting fire suppression systems (fire sprinklers, standpipes, hydrants, etc.). All water supplied through a fire service is considered non-potable, regardless of the source water designation.

HAZARD, DEGREE OF – The term is derived from an evaluation of the potential risk to public health and the potential adverse effect of the hazard upon the public water system. The evaluation of the degree of hazard shall be determined by the City of Tallahassee’s Authorized Agent(s).

HAZARD, HEALTH (HIGH) – A cross-connection, or potential cross-connection, involving any substance that could, if introduced in the public water system, cause death or illness, spread disease, or have a high probability of causing such effects.

HAZARD, NON-HEALTH (LOW) – A cross-connection, or potential cross-connection, involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable, if introduced into the public water system.

INDUSTRIAL FLUIDS SYSTEM – Any system containing fluid or solution, including all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances to produce, convey, or store substances that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration, such as would constitute a health hazard or a non-health hazard, if introduced into a public water system. Industrial fluids may include, but not be limited to, polluted or contaminated waters; all types of processed water and “used water” originating from the public water system which may have deteriorated in sanitary quality; chemicals in fluid form; plating acids or alkalis; circulated cooling waters connected to a cooling tower that is chemically or biologically treated or stabilized; contaminated natural waters such as from wells, springs, streams, rivers, irrigation canals, or other systems; oils, gases, paraffins, caustic and acid solutions; and other liquids and gaseous fluids used in industrial processes or for fire-fighting purposes.

IRRIGATION SYSTEM – A pressurized system of piping which allows water to be applied to land or soils by means of a permanent above-ground or subsurface drip system, sprinkler, or micro-sprinkler equipment.

IRRIGATION WATER SERVICE (also IRRIGATION SERVICE) – The water system connection serving a property, facility, or area conveying potable or non-potable water for the purpose of supplying an irrigation system.

All water supplied through an irrigation water service is considered non-potable, regardless of the source water designation.

LICENSED PLUMBER (also PLUMBING CONTRACTOR) – An individual that has satisfied, and continues to maintain, the licensing requirements of the Florida Department of Professional Regulation Construction Industry Licensing Board for certification as a Plumbing Contractor.

NON-POTABLE WATER – Water that is not intended for, or not safe for, human consumption as determined by the jurisdictional regulatory authority.

NON-RESIDENTIAL SERVICE CONNECTION – Any water service connection that is greater than two inches in diameter or that supplies water to a building or premise containing commercial, industrial, or other non-dwelling units. See RESIDENTIAL definition.

POLLUTION – Any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the public water system.

POTABLE WATER – Water that is safe for human consumption as determined by the jurisdictional regulatory authority.

PUBLIC WATER SYSTEM (PWS) – The water source(s), pumping, and treatment facilities; potable water distribution piping network and storage facilities; and water service piping up to, and including, the metering assembly that are under the control of the City of Tallahassee. Water service piping downstream of the metering assembly (customer valve), including the backflow assembly, is not part of the public water system.

REGULATED – As related to Public Water Systems (PWS), a potable water system that is permitted under the authority and jurisdiction of the Florida Department of Environmental Protection (DEP) or the Florida Department of Health (DOH) and that is routinely monitored and reported for water quality to ensure drinking water standards are met. See UNREGULATED definition.

RESIDENTIAL SERVICE CONNECTION – Any water service connection that is two inches or less in diameter and that supplies water to a building or premise containing only dwelling units. Non-residential service connection means any other service connection.

TESTER (also REGISTERED TESTER) – Any person or business (including a licensed plumber) that (1) has received proper training and certification for backflow assembly testing as required herein, (2) has filed a Backflow Assembly Tester Registration Application with the City, (3) meets the City's requirements to perform backflow testing, and (4) has not had City registration suspended or terminated for the violations cited herein.

UNACCEPTABLE WATER SOURCE – Any source of water, including any natural source(s) such as a lake, spring, stream, river, etc.; or any man-made source(s) such as a well, landscape pond, or swimming pool; or any stored source(s) such as “used waters” or “industrial fluids” for which the City of Tallahassee does NOT have sanitary control. These unacceptable waters may be contaminated, polluted, or objectionable.

UNREGULATED – As related to Auxiliary Water Supplies, a water supply or system that is not permitted under the authority and jurisdiction of the Florida Department of Environmental Protection (DEP) or the

Florida Department of Health (DOH) and that is not routinely monitored and reported for water quality to ensure drinking water standards are met.

USED WATER(S) – Any water supplied by a water purveyor from a public water system to a customer’s water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

VENDOR(S) – Any registered tester or licensed plumber certified to perform backflow testing at the request of the City or on behalf of a City water customer; or any licensed plumber performing replacement, repair, or maintenance at the request of the City or on behalf of a City water customer.

WATER PURVEYOR – The owner or operator of a public or private potable water system. As used herein, the terms “water purveyor” and “City” or “City of Tallahassee” may be used synonymously.

WATER SERVICE CONNECTION – Also known as the “Point of Delivery,” this is the point at which the water purveyor’s jurisdiction over the sanitary control of the public water system ends and the customer’s responsibility for operation and maintenance begins. When a water meter is installed at the water service connection, the water service connection shall mean the downstream end of the meter setting, typically at the customer’s isolation valve. Water service connections shall also include water service connections from a piped fire line system, fire hydrant, and all other temporary or emergency water service connections from the public water system.

[END OF SECTION 2]

Section 3 – Backflow Prevention Assembly Requirements

3.1 Water Service Connections

No water service connection to any premise, facility, or area shall be installed or maintained unless the public water system is protected from contamination, actual or potential, as required by State and local rules and regulations and these Rules and Regulations for Backflow Prevention and Cross-Connection Control.

3.2 Degree of Hazard

3.2.1 Health (High) Hazard – All new potable water service connections capable of creating a health (high) hazard per AWWA Manual M14, or as determined by the City, shall be installed with an approved reduced pressure principle backflow prevention assembly (RP) prior to receiving water service. Existing potable water service connections with health (high) hazard, or any change in use of an existing water service which has the potential to create a health (high) hazard, shall require the installation of an approved RP. All costs associated with the procurement, installation, testing, maintenance, and repair of a required approved RP shall be the responsibility of the customer.

3.2.2 Non-Health (Low) Hazard – All new non-health (low) hazard potable water service connections shall be installed with an approved double check valve backflow prevention assembly (DC) prior to receiving water service. Existing potable water service connections with non-health (low) hazard, or any change in use of an existing water service which has the potential to create a non-health (low) hazard, shall require the installation of an approved DC. All costs associated with the procurement, installation, testing, maintenance, and repair of a required approved DC shall be the responsibility of the customer.

3.3 Backflow Prevention Assembly Installation Applications

The installation of approved backflow prevention assemblies shall be in accordance with the City plumbing code (current edition) and these Rules and Regulations for Backflow Prevention and Cross-Connection Control.

3.3.1 Installation Applications – An approved backflow prevention assembly or method shall be installed at ALL water service connections if a cross-connection, actual or potential, exists. Other specific circumstances requiring the installation of an approved backflow prevention assembly shall include, but not be limited to, the following:

1. When the City determines that installation of a backflow prevention assembly is necessary due to the degree of hazard to the public water system posed by any circumstances at a service location.
2. When internal cross-connections are present and cannot be eliminated.
3. When a fire sprinkler system is installed.
4. When reclaimed water serves the facility.
5. In all multi-story buildings with 5 or more levels (including elevated facilities above carports/garages).

6. Any building with a booster pump or elevated storage tank connected to the water service or plumbing.
7. When the plumbing system makes it impractical to ascertain whether cross-connections exist.
8. When the City determines that additions or changes have been made to the plumbing system of any facility without proper permits.
9. When a facility has multiple water service connections for adequacy of supply or fire protection. In such case, each service connection shall have a backflow prevention assembly commensurate with the highest degree of hazard likely to occur at the facility.
10. When the nature and extent of any activity at a service location, or the materials or equipment used in connection with any activity at a service location, or materials stored at a service location could present a hazard upon entry into the City's system.
11. When entry to property and improvements at any service location is restricted so that inspections for cross-connections cannot be made with sufficient thoroughness or frequency to assure that cross-connections do not exist.
12. When a building is constructed on commercial property and the end use of such building is not determined or could change.
13. When any premise has an auxiliary water supply available, whether it be interconnected or not interconnected with the public water system.
14. When construction projects require access to the public water system.
15. When a person owns or operates any vehicle, including, but not limited to, storage tanks, spray rigs, or similar equipment, that uses water from the public water system. In such case, vehicles shall connect only to water service connections protected by an approved backflow prevention assembly commensurate with the highest degree of hazard likely to occur at the time of filling.
16. When a potable water service and meter is connected to an in-ground irrigation system.
17. When a separate City irrigation service and meter is connected to the public water system.

At its discretion, the City may identify or determine that other conditions, in addition to the circumstances listed above, may require installation of a backflow prevention assembly. In such cases, the City shall determine the type and location of any backflow prevention assembly to be installed based upon these Rules and Regulations and the degree of hazard posed by the situation.

3.3.2 Installation Prohibited on Rights-of-Way/Exceptions – No person shall install or maintain a backflow prevention assembly upon or within any City right-of-way except as allowed by this section.

1. The City may grant an exception and allow installation of a backflow prevention assembly upon or within a City right-of-way if the person requesting permission demonstrates that there is no other feasible location for installing the assembly and that installing it in the right-of-way will not interfere with traffic, utilities, or any other public use of the right-of-way. The exception shall be approved in

writing and the location, height, enclosure, and other requirements relating to such installation shall be set forth in the terms and conditions of the approval.

2. The owner of the property, or the owner, operator, and manager of a facility served by a backflow prevention assembly installed upon or within a city right-of-way shall, at the request of the City and at the sole expense of such owner, operator, or manager, relocate the assembly when such relocation is deemed necessary for street, sidewalk, or utility construction or repairs or for purposes of public safety or for convenience in use of the right-of-way.

3. If a backflow prevention assembly is installed by a person in the City right-of-way per the above referenced exception, it is understood that the City shall have no responsibility for maintaining such assembly and, at all times, such responsibility shall remain with the entity entering into the agreement with the City for such an exception.

3.4 Backflow Prevention Assembly Installation Requirements

3.4.1 General Installation Requirements – The installation of approved backflow prevention assemblies shall be in accordance with the City Standards Specifications for Water and Sewer Construction (latest edition), City plumbing code, and these Rules and Regulations for Backflow Prevention and Cross-Connection Control.

3.4.2 Installation Details - Approved backflow prevention assemblies shall be sized and installed in accordance with the following guidelines and limitations:

1. Each assembly shall be sized to provide an adequate supply of water and pressure for the facility being served.
2. The size of each assembly shall be equal to or greater than the water meter providing service. For branched services with a single meter, the assembly shall be sized to match the service pipe diameter supplying the assembly.
3. On facilities where non-interruption of water supply is critical, two assemblies of the same type shall be installed in parallel.
4. Bypass lines are prohibited. Pipefittings that could be used for connecting a bypass line shall not be installed.
5. Each assembly shall be installed on the customer side of the water meter, prior to any water take off serving the site, and located within 5 feet of the meter, unless otherwise approved in writing by the City.
6. Each assembly shall have a minimum of eighteen (18) inches clearance on the back side and eighteen (18) inches clearance on the test cock side. The relief valve opening shall be at least twelve (12) inches above the grade/floor or highest possible water level, but no higher than 36".
7. Assemblies shall only be installed in the orientation (horizontal or vertical) for which they have received full acceptance and approval in both field and laboratory testing by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

8. Each assembly shall be readily accessible for testing and maintenance and shall be located in an area where water damage to buildings or furnishings will not occur from relief valve discharge.
9. Air gap separations shall not be altered in any way and shall be available for inspection at all reasonable times.
10. For reduced pressure principle assemblies that have been approved to be installed in interior areas within facilities, an approved air gap shall be located at the relief valve orifice.
11. For reduced pressure principle assemblies, an approved air gap funnel assembly may be used to direct minor discharges away from the assembly provided the air gap funnel assembly will not control flow in a continuous relief situation. Daylight drain ports shall be provided to accommodate full pressure discharge from the assembly.
12. No deviations from the requirements of this section shall be permitted without prior written approval of the City.

3.4.3 **Backflow Prevention Assembly/Method Type and Application** - The following are common backflow prevention assembly/method types, and their corresponding general installation applications, as acceptable to the City. Many specific facility types or installation applications may require a more protective backflow prevention assembly/method than described below. A list of facility types and each corresponding required backflow prevention assembly/method is listed in Appendix A.

Air Gap (AG) – Air gap separations provide maximum protection from backflow hazards and, as an alternate to mechanical backflow prevention assemblies, may be installed at any facility where a substance is handled that could be hazardous to health if introduced into the public water system.

Reduced Pressure Principle Backflow Prevention Assembly (RP) – Reduced pressure principle assemblies shall be installed at any facility where a substance is handled that could be hazardous to the public health if introduced into the public water system.

Reduced Pressure Principle Detector Backflow Prevention Assembly (RPDA) – Reduced pressure principle detector assemblies shall be installed on fire protection systems for which a main-line meter is not used but the need to determine leaks or unwanted usage is desired and where a substance is handled that could be hazardous to the public health if introduced into the public water system.

Double Check Valve Backflow Prevention Assembly (DC) – Double check valve assemblies shall be installed at a facility where a substance is handled that could be objectionable, but not hazardous to health, if the substance is introduced into the public water system.

Double Check Detector Backflow Prevention Assembly (DCDA) – Double check detector assemblies shall be installed on fire protection systems for which a main-line meter is not used but the need to determine leaks or unwanted usage is desired and where a substance is handled that could be objectionable, but not hazardous to health, if the substance is introduced into the public water system.

Dual Check (DuC) – Dual check valves may be installed to reduce risks from backflow at residential properties for internal protection only and are not acceptable for protection of the public water system. Installations shall be in accordance with the Code of Ordinances, the current adopted plumbing code by the City and

applicable State of Florida requirements, as determined by the City of Tallahassee Growth Management Department, Building Inspection.

3.5 Water Service and Premise Plumbing Inspections

An inspection of the customer's water service and premise plumbing for determining adequate protection of the public water system and the need for cross-connection control shall be required by the City prior to establishing or continuing water service under the following circumstances:

1. Prior to providing potable water service to a newly constructed facility.
2. After any alterations or improvements to the water service connection or customer's water system of a facility served by the public water system.
3. Upon installation of an irrigation system, non-potable irrigation system, or fire suppression system at a facility served by the public water system.
4. As part of the City's Backflow Prevention and Cross-Connection Control Program, or when the City has cause to believe that an existing service location, commercial or residential, contains an actual or potential cross-connection.

At the discretion of the City, continuation or provision of permanent water service to any facility or customer location can be made contingent upon completion of such inspections and installation of all approved backflow prevention assemblies required by the City's Authorized Agent.

For all new construction or modifications that require a permit, Certificates of Occupancy and permits shall not be issued by the City until final inspection of required approved backflow prevention assemblies by the City's Authorized Agent has been performed, and that satisfactory test results by a registered, cross-connection tester have been received and recorded.

3.6 Backflow Prevention Assembly Registration, Reporting and Recordkeeping

To ensure the continued protection of the public water system, all approved backflow prevention assemblies required shall be registered with the City and field-tested to verify the assembly is properly functioning.

3.6.1 Registration – All backflow prevention assemblies installed to protect the City's public water system shall be initially registered with the City. Such registration shall be completed using the most current City Backflow Prevention Assembly Test and Maintenance Report (TMR) form available on the City's official website.

3.6.2 Reporting & Recordkeeping - Any registered tester who performs an operational test on any backflow assembly installed to protect the City's public water system shall report the results of that test using the City's web-based electronic backflow assembly test reporting system.

Registered testers shall supply all testing information as required by the electronic reporting system and the Backflow Prevention Assembly Test and Maintenance Report (TMR). All applicable fields of the TMR forms shall be filled out completely. Reporting information shall be provided no later than 15 days from the day the test was performed.

Web-service fees and account setup for using the electronic reporting system may be required by the web-service company or the City and shall be the responsibility of the certified tester.

Records of all backflow assembly testing shall be maintained by the registered tester for a minimum of three years following the date of the most recent test. Records of all backflow assembly maintenance, repairs, and subsequent testing shall be maintained by the licensed plumber performing such activities for a minimum of three years from the date of the test.

3.7 Backflow Prevention Assembly Testing

3.7.1 Responsibility for Testing – It is the responsibility of the water service customer, as listed on the water utility account, for compliance with the testing requirements for the backflow prevention assembly, as well as the reporting required by these Rules and Regulations, as a condition of establishing or continued water service provided by the City. Failure to comply with these Rules and Regulations may warrant a cessation of the water service customer’s water service pursuant to Section 4. Assignment of testing responsibilities between a water service customer and a third party (property owner, property manager, lessor, etc.) shall be the sole responsibility of the water service customer.

Water service customers also have the option of authorizing the City to test their domestic water service backflow prevention assembly. The City will use a licensed plumber to perform the test and the cost of testing the assembly will be charged to the customer on their utility bill. Refer to the City of Tallahassee Testing Program and the City of Tallahassee Repair Program later in this section.

3.7.2 Testing Frequency – Each approved assembly shall be tested according to the following schedule:

1. At the time of installation, but no later than 10 calendar days after installation of a new backflow prevention assembly;
2. After the date of installation:
 - (a) Annually for all non-residential and fire protection water service connections, and for residential water service connections that do not meet the conditions for biennial testing in (b) below;
 - (b) Biennially for residential water service connections if all the following conditions are met:
 - (i) The dwelling, or building within which the dwelling is located, is fewer than five stories in height;
 - (ii) There is no booster pump serving, or within, the premise; and
 - (iii) There is no alternate water source serving, or within, the premise.
3. Immediately after the repair or replacement of the assembly;
4. Immediately after the assembly has been relocated; and
5. At the request and discretion of the City’s Authorized Agent.

3.7.3 **Testing Procedures** – All testing of approved backflow prevention assemblies shall be in accordance with each assembly manufacturer’s recommended procedures and the following:

1. The American Backflow Prevention Association Tester Certification Program, Florida Section; or
2. The University of Florida TREEO Center – Backflow Prevention: Theory and Practice; or
3. Florida Section – American Water Works Association (FS-AWWA).

3.7.4 **City of Tallahassee-Coordinated Testing Program** – To ensure the protection of the public water system and protect the health, safety and welfare of its customers the City shall coordinate a backflow prevention assembly testing program for residential and commercial water customers, including fire service backflow prevention assemblies. Under this program, City-contracted licensed plumbers will test the domestic and fire water service backflow prevention assembly on the customer’s behalf if: a) the water service customer notifies the City of their preference to participate in the program in writing or b) the water customer fails to complete a required backflow prevention assembly test and submit a passing test to the City within fourteen (14) days of receipt of second written notice of the required testing deadline. After choosing to participate in the program or being placed into the program based on failure to respond to a second written notice for testing, the customer will be charged the cost for coordinating and testing the backflow assembly on the monthly utility bill, amortized over 12 months or 24 months, depending on the required testing frequency of the assembly.

Customers who voluntarily choose to participate in the City-coordinated testing program and notify the City of that preference in writing will remain in the program for future testing cycles until such time as the City is notified of the sale of property or a written request to stop participation.

Customers who are placed into the City-coordinated testing program resulting from failure to complete the required backflow prevention assembly testing and/or failure to submit a passing test within the required time period will be removed automatically from the City testing program upon receipt of a passing test. These customers will then be required to obtain their own backflow assembly test and submit the passing test results for the next required testing cycle.

If maintenance or service needs are identified during the City-coordinated testing, these maintenance and service needs are the responsibility of the water service customer, not the City. The City’s contracted plumber will notify the customer of any required maintenance or repair needs identified during the backflow assembly test. The water customer must ensure that the maintenance or repairs are made by a licensed plumber and a passing test is submitted within fourteen (14) days of the failing test. Failure to complete the maintenance or repairs within fourteen (14) days may subject the water service customer to suspension, discontinuation, or denial of water service until the customer has eliminated the actual or potential backflow hazard or cross-connection in accordance with these Rules and Regulations and to the satisfaction of the City.

3.7.5 **Registered Testers/Testing Companies** – All required testing of approved backflow prevention assemblies shall be performed by a certified backflow assembly tester or licensed plumber registered with the City. Companies that provide backflow prevention assembly testing must have each tester approved for registration accordingly. For a tester or licensed plumber to be registered by the City to do testing on backflow prevention assemblies, a person must meet the following minimum requirements:

1. Complete, sign and submit a Backflow Assembly Tester Registration Application with the City;
2. Furnish evidence satisfactory to the City that each individual applicant has attended and successfully completed a comprehensive backflow assembly testing training and certification program provided by the University of Florida TREEO Center, the Florida Water Pollution Control Operators Association (FWPCOA), or other City-approved backflow certification training school;
3. Demonstrate that the applicant has available the necessary tools and equipment to properly test backflow prevention assemblies; and
4. Provide evidence that all test kits to be used to test backflow prevention assemblies have been calibrated and tested for accuracy (+/- 2.0%) in accordance with the equipment manufacturer's recommendations.

The City shall provide written notification to each applicant within 30 calendar days following receipt of a registration application. The City's notification will either inform the applicant that the application is complete (including all support documentation and information) and that the applicant's registration is now active, or, in the alternative, if the application is incomplete, provide a list of the information needed to complete registration and provide the applicant 15 days from the date of the notification to supplement the application for consideration. Failure to supplement an incomplete registration application in the 15-day timeframe will result in the registration being deemed incomplete and the applicant will not be registered. Once the applicant is notified the submitted application is complete, the applicant may provide testing services for City water service customers, provided they maintain their registered status in good standing with the City.

3.7.6 Maintaining Registered Status – In order to maintain registered status, registered backflow assembly testers/testing companies are required to comply with the following conditions:

1. The tester or licensed plumber is not subject to disciplinary action in accordance with Section 5 – Registered Tester and Plumber Violations and Enforcement.
2. Every two years, attend and successfully complete a re-certification training course provided by the University of Florida TREEO Center, the Florida Water Pollution Control Operators Association (FWPCOA), or other City-approved backflow certification/re-certification training school or organization. Documentation of re-certification shall be provided to the City.
3. Annually, have each test kit calibrated and tested for accuracy (+/- 2.0%). Documentation of calibration testing shall be provided to the City.
4. Have routinely performed competent and accurate certifications of each backflow prevention assembly tested. Documentation of inspection reports with test results shall be made available to the City, if requested, for each assembly tested for a period of three years.
5. Have made no changes to the design or operating characteristics of any backflow prevention assembly tested.

3.8 Backflow Prevention Assembly Maintenance, Repair, and Replacement

It is the responsibility of the water service customer, as listed on the water utility account, for compliance with the maintenance, repair, or replacement of the backflow prevention assembly, as well as the reporting required by these Rules and Regulations, as a condition of establishing or continued water service provided by the City. Failure to comply with these Rules and Regulations may warrant a cessation of the water service customer's water service pursuant to Section 4. Assignment of maintenance, repair, or replacement responsibilities between a water service customer and a third party (property owner, property manager, lessor, etc.) shall be the sole responsibility of the water service customer.

Maintenance, repair and replacement of a backflow prevention assembly must be made by a licensed plumber or by a property owner if in strict accordance with the limited contractor exemption set forth in Section 489.103(7)(a), Florida Statutes.

If the City discovers that maintenance, repair, or replacement of a backflow prevention assembly is made by an unauthorized party, the City may require the water service customer to have the work re-done or reviewed by a person authorized to conduct such activities at the customer's expense. All maintenance, repair and replacement activities shall be done in accordance with the manufacturer's recommended procedures, using manufacturer's approved parts, and in accordance with these Rules and Regulations, City Code of Ordinances, applicable plumbing code, and State law.

When maintenance or repairs to a backflow prevention assembly cannot be made to comply with the requirements of these Rules and Regulations, the customer shall replace the backflow assembly himself or herself or have the backflow prevention assembly replaced by a licensed plumber, with a proper approved backflow prevention assembly, suitable for the degree of hazard, in accordance with these Rules and Regulations. The new assembly shall be tested upon installation and the passing test results shall be submitted to the City as required.

The City shall not be liable for any damages, financial or otherwise, resulting from the required maintenance, repair or replacement of the approved backflow prevention assembly.

3.8.1 City of Tallahassee-Coordinated Maintenance, Repair, or Replacement – If a water service customer fails to properly maintain, repair, or replace a backflow prevention assembly, has received previous notices of non-compliance from the City requesting action to correct such noncompliance, and has failed to correct the violation within fourteen (14) days of receiving the final notification, the City may coordinate the services necessary on behalf of the water customer. In such case, the City will contract with a licensed plumber to perform the needed maintenance, repairs or replacement and submit passing test results for the backflow prevention assembly on the customer's behalf. The customer will be charged the cost for coordinating and performing the needed maintenance, repairs, or replacement on their utility bill and will be required to pay these charges in full. The City will ensure that the plumber that performs the maintenance, repair, or replacement is not associated with the plumber that performed the initial test. The plumber that performs the repair will be responsible for re-testing the assembly and submitting passing test results to the City.

Ownership and/or maintenance responsibility for a repaired or replaced backflow prevention assembly shall remain the sole responsibility of the water service customer. Failure of the customer to allow the City-contracted plumber to perform the needed maintenance, repairs, or replacement of the backflow

prevention assembly may result in the suspension, discontinuation, or denial of water service until the customer has eliminated the actual or potential backflow hazard or cross-connection in accordance with these Rules and Regulations and to the satisfaction of the City.

[END OF SECTION 3]

Section 4 – Water Customer Violations, Threat Levels, and Extensions

4.1 Violations

These Rules and Regulations are established to ensure the availability of clean, safe drinking water and to protect the health, welfare and safety of the City's water customers. Pursuant to Rule 62-555.360(3), FAC, the water purveyor has the authority and responsibility to ensure that a cross-connection is eliminated, ensure that appropriate backflow protection is installed, and/or discontinue water service to any customer who refuses to install or properly test and maintain a cross connection control assembly where an actual and/or potential cross-connection may exist. A water customer's non-compliance with these Rules and Regulations may result in suspension, discontinuation, or denial of water service until the customer has eliminated the actual or potential backflow hazard or cross-connection in accordance with these Rules and Regulations and to the satisfaction of the City.

4.2 Serious and Immediate Threats

When a backflow hazard or uncontrolled cross-connection, actual or potential, has been identified within a customer's water system and is judged to be a serious and immediate threat to the health or welfare of any person, public water system, or to the environment, the City may, without prior notice, disconnect or suspend potable water service to any customer, facility, or area when such disconnect or suspension is necessary to temporarily eliminate the threat.

Upon the disconnection of service, the City shall attempt to notify the water service customer of such suspension of service in person or by certified mail, return receipt requested, and shall order the water service customer to permanently eliminate the threat.

The affected potable water service, once disconnected, shall be restored only when the affected customer presents satisfactory proof to the City that the backflow hazard or cross-connection has been eliminated and its cause has been determined and corrected. The customer is responsible for all fees, costs, and damages incurred due to actual or potential backflow incidents.

4.3 Less Serious but Ongoing Threats

When a backflow hazard or uncontrolled cross-connection, actual or potential, has been identified within a customer's water system and is judged not to be a serious and immediate threat to the health or welfare of any person, public water system, or to the environment, as to constitute an emergency requiring an immediate service interruption, the customer shall be allowed 30 calendar days from receipt of written notification from the City to eliminate the threat. Such threats include the absence of an approved backflow prevention assembly or the failure on behalf of the water service customer to properly test or maintain an existing backflow prevention assembly in accordance with these Rules and Regulations.

4.3.1. **No Existing Backflow Prevention Assembly** - If a backflow prevention assembly is required and has not been installed, the water service customer shall install an approved backflow prevention assembly. If, after 30 calendar days of receipt of the City notice, the water service customer has not corrected the backflow hazard or uncontrolled cross-connection, the City shall issue a final notification by

certified mail-return receipt requested. The final notification shall instruct the water service customer to permanently eliminate the threat within 14 calendar days and notify the water service customer that failure to do so within 14 calendar days will result in the immediate interruption of water service. After the 14 calendar days, the City shall disconnect or suspend water service if the water service customer has not complied or been granted an extension.

4.3.2. **Improper Testing of Existing Backflow Prevention Assembly** - If a water service customer has installed a backflow prevention assembly, but the assembly has not been properly tested per Section 3.5 of this Manual, the water service customer shall have the backflow prevention assembly tested within 30 calendar days of written notification by the City about such testing requirement. If the water service customer fails to provide the City with a test report complying with Section 3.5 within 30 calendar days of the City's written notification, the City shall take action to reduce or eliminate the threat as indicated below or disconnect or suspend water service for the water service customer if the City, or its contractor, is not allowed site access to complete such test. All such costs for testing will be billed to customer on its water service bill over either a 12 month or 24 month period, depending on the appropriate time frame for testing the water service customer's backflow prevention assembly as set forth in Section 3.7.4 of this Manual.

4.4 Requests for Extension

If, for any reason, a water service customer cannot comply within the time requirements for eliminating a backflow hazard or uncontrolled cross-connection, the customer may request a time extension in writing for consideration and possible approval by the City. Each request shall be accompanied by a compliance plan - clearly identifying the actions or steps to be taken by the water service customer in order to make the necessary corrections to eliminate the threat. The compliance plan must include a time schedule for implementing the proposed actions or steps. Requests for extensions without a compliance plan will not be considered. Requests for an extension of time to avoid mandatory enrollment in the City's Testing Program which is the result of a failure to address testing or maintenance of a backflow prevention assembly, shall also not be considered. Requests for an extension of time will not be considered if such request is made after the expiration of the time frame for testing or repair.

4.5 City-Coordinated Testing

A water service customer may voluntarily participate in the City's Program for Backflow Assembly Testing, described in Section 3.7.4, for which the City will hire a licensed plumber to perform the required testing. Additionally, when a water service customer fails to properly test or fails to properly maintain, repair, or replace a backflow assembly that has failed a test, the City may hire a licensed plumber to perform the necessary services. All costs associated with testing and maintenance, repairs or replacement of the assembly will be charged to the customers water utility account, which may be amortized as determined by the City.

[END OF SECTION 4]

Section 5 – Violations and Enforcement for a Registered Tester or Licensed Plumber

5.1 General

These Rules and Regulations are established to ensure the availability of clean, safe drinking water and to protect the health, welfare and safety of the City’s water customers. The City reserves the right to cancel tester and licensed plumber registration for testing, maintenance, repair and replacement of backflow assemblies if there is a violation of Section 5 of this manual, for reasons relating to the public health, safety, or general welfare, or for other good and sufficient cause as determined by the City in its sole discretion. Actions of registered testers and licensed plumbers can potentially threaten the quality of water in the Community Water System and, as a result, threaten the health, safety, and welfare of the City’s water customers. Therefore, the City has established parameters for quality assurance inspection, violations, and enforcement procedures to protect the public water system.

5.2 Quality Assurance/Quality Control Inspections and Testing

City-Authorized Agents may, on occasion, perform quality assurance/quality control inspections and testing of customer backflow assemblies to verify testing and results submitted by a registered tester or licensed plumber. City-Authorized Agents may also perform quality assurance/quality control inspections and testing for verification and quality of replacement, repairs, and maintenance of backflow assemblies reported by licensed plumbers. If the Authorized Agent discovers a violation during the quality assurance/quality control inspection, the Authorized Agent will notify the registered tester or licensed plumber in writing by a Warning Letter and provide ten (10) business days for the registered tester or licensed plumber to correct the violation or provide information proving the violation did not occur. Failure to correct any violation within the specified time frame will result in the matter being referred to the Code Enforcement Board for hearing as set forth in Section 5.5.

5.3 Violations

If a vendor commits any of the violations listed in this Section 5.3, the vendor will be subject to the disciplinary actions set forth in Section 5.4, which will result in a warning letter or a suspension or revocation of a vendor’s registered status with the City to provide backflow assembly testing, replacement, repair, or maintenance. Additionally, civil penalties, fines, and costs may be pursued if the quality of the public water system is impacted as a direct result of the activities of a registered tester or licensed plumber as they relate to backflow assembly testing, replacement, repair, or maintenance, as specified in the violations listed below.

5.3.1 **Noncompliant Activities** – Noncompliant activities associated with inspections, reports, repairs, replacements, or maintenance activities include, but are not limited to:

1. Any backflow assembly test, replacement, repair, or maintenance that is falsely represented as being performed on a report but is not actually performed;
2. Any backflow assembly test not performed by a City registered tester or licensed plumber;

3. Any backflow assembly test that is not properly executed by a registered tester or licensed plumber (Examples of improperly executed tests include, but are not limited to, tests performed using expired or uncalibrated test equipment, tests reported as completed but not actually completed, and tests reporting false test results); and
4. Any testing, repair, replacement, or maintenance activity the City determines noncompliant with the Cross-Connection rules and regulations, including this Manual, completed with the intention to deceive and which results in financial gain for the person completing the activity.

5.3.2 **Failure to Maintain Certification or License** – Testers that fail to maintain or renew their backflow assembly tester certification with an approved tester training school or organization, and licensed plumbers that fail to maintain their license with, or have had their license revoked by, the Florida Department of Business Regulation shall be considered noncompliant with the Cross Connection rules and regulations, including this Manual, and in violation of this Section.

5.3.3 **Contracting Without a License** – Maintenance, repair and replacement of a backflow prevention assembly must be made by a licensed plumber or property owner, as allowed under Section 489.103(7)(a), Florida Statutes. Any City registered tester that is not a licensed plumber in the State of Florida found performing replacement, repairs, or maintenance to a water customer’s backflow assembly as a service is “contracting without a license” and considered a violation of this Section.

5.3.4 **Prosecutions for Related Activities** – Testers and licensed plumbers that have been prosecuted and had a judgment or order entered against them in Federal, State, or Administrative Courts, or other relevant governing body, for (1) activities related to testing, replacement, repair, or maintenance activities for backflow assemblies, (2) issues relating to their qualifications or certifications to conduct such activities, or (3) contracting without a license for activities relating to backflow assemblies shall be considered noncompliant with the Cross-Connection rules and regulations, including this Manual, and in violation of this Section 5.3. Such noncompliance shall be considered ongoing until such time that any license suspension, penalty payment, or other such conditions arising from an order and/or judgment in the case are completed and closed out by the prosecuting authority.

5.3.5 **Other Violations** – Any failure to test, replace, repair, or maintain backflow assemblies in accordance with the manufacturer’s recommended procedures, using manufacturer’s approved parts, and in accordance with these Rules and Regulations, City Code of Ordinances, applicable plumbing code, and State law shall be a violation of this Section 5.3.

5.4 Disciplinary Actions

5.4.1 Violations -

For violations set forth in Section 5.3, a vendor will be issued a warning letter for a first offense and given ten (10) business days to correct the violation or provide exculpatory information illustrating that the alleged violation did not occur. If a vendor corrects the violation or provides exculpatory information acceptable to the City within the required time period, no further action will be taken. If a vendor fails to correct the violation or provide exculpatory information acceptable to the City within the required time period, the case will be forwarded to the Code Enforcement Board for disciplinary action which may include

suspension or revocation of registration, along with a request for civil penalties, fines, and costs, as appropriate.

If a repeat violation is identified and a vendor has already received a previous warning letter for a violation of Section 5.3, no warning letter will be issued. The vendor will be notified that the violation will be referred to the Code Enforcement Board for disciplinary action which may include registration suspension or revocation, along with a request for civil penalties, fines, and costs, as appropriate.

A first suspension from registration with the City shall be for six (6) months. A second violation shall result in permanent revocation of tester registration with the City.

5.4.2 [Pollution or Contamination Events](#) - In the event the quality of water in the public water system is impacted as a direct result of a vendor's activities as it relates to backflow assembly testing, replacement, repair or maintenance, or as a result of a violation as identified herein, the City may also pursue substantial civil penalties against the violator.

5.5 [Hearing and Appeals Process](#)

5.5.1 [Hearing Process](#) – In the event of disciplinary actions, the City Manager, or designee, shall provide written notice of the City's proposed action to the Vendor pursuant to the procedure set forth in Chapter 2 of the City Code of Ordinances informing the vendor of the action taken and providing a notice of the hearing so that the vendor can participate in the process if he or she chooses.

The hearing will be scheduled and conducted by the Code Enforcement Board in accordance with the authority and hearing procedures set forth in Chapter 2 of the City Code of Ordinances. The Code Enforcement Board shall render its order affording the proper relief consistent with its powers and these Cross-Connection rules and manual upon conclusion of the hearing. A copy of the order shall be provided to the parties by certified mail or, upon mutual agreement of the parties, by electronic communication.

5.5.2 [Appeal Process](#) – A vendor may appeal the final order entered by the Code Enforcement Board in accordance with Florida law to the Circuit Court no later than thirty (30) days following the entry of the order to be appealed.

[END OF SECTION 5]

Section 6 – Construction Standards

6.1 General Construction Standards

All backflow prevention assemblies and associated piping shall be installed in accordance with the City Code of Ordinances, the current adopted plumbing code, and applicable State of Florida Law. Additionally, all backflow prevention assemblies shall be installed in accordance with the following requirements to ensure the proper operation of and accessibility to the assembly:

6.1.1. **Approved Assemblies - Only “approved” backflow prevention assemblies shall be installed.** Assemblies that have been installed or repaired shall not be altered from their Approved configuration.

6.1.2. **Test Cocks and Isolation Valves** – Each approved assembly shall be equipped with four test cocks, properly located and unobstructed to allow pressure testing across each stage of the backflow assembly. Approved assemblies shall also be equipped with resilient seat isolation (shut-off) valves. All valves 2-inches diameter and smaller shall be quarter-turn ball valves.

6.1.3. **Inlet Shut-off Valve** – Backflow prevention assemblies shall be installed so that the inlet shut-off valve of the backflow assembly is the next piped fitting (including piping) after the water meter, except where a meter bypass, limited area fire system, or strainer is needed; in which case, the inlet shut-off valve shall be the next piped fitting after the bypass, fire system, or strainer. All shut off valves two (2) inches and under are to be ball valve types.

6.1.4. **Thermal Protection** – If a backflow assembly must be subjected to environmental conditions that could freeze or heat the assembly beyond its working temperatures, some means of protection shall be installed to provide the correct temperature environment for the assembly. Special precautions shall be taken to protect the assembly from external heat sources (i.e. welding or soldering equipment) that could damage the internal components and prevent proper operation of the assembly. No freeze protection equipment may be attached to the backflow prevention assembly or test cocks. If needed it shall be placed on the riser pipe located closest to the premise to allow flow through the assembly.

6.1.5. **Submergence / Flood Protection** – No part of a backflow prevention assembly shall be submerged in water or installed in a location subject to flooding. This requirement precludes installation of an assembly in a below ground vault or structure.

6.1.7. **Ground Clearance** – Minimum and maximum ground clearance is measured from the floor or ground to the lowest part of the assembly. The maximum height for any component of the assembly shall be no greater than seventy-two (72) inches above ground. If a backflow assembly is located within a swale, ditch, or other area subject to flooding, the minimum ground clearance shall be measured from the established flood elevation.

6.1.8. **Location of Assembly** – A backflow prevention assembly shall be installed within 5 feet of the point of delivery, before any branch in the customer’s water service. Any variance to this requirement must be pre-approved in writing by the City’s Cross-Connection Control Program enforcement agent.

6.1.9. **Interior Installation** – Where the backflow prevention assembly has been approved to be installed within the served building, the backflow prevention assembly inlet valve shall have a minimum clearance of eighteen (18) inches on all sides. It is recommended that a floor drain be installed as close as possible to the assembly and that the assembly be installed with a relief valve orifice. The assembly shall be readily accessible between 8:00 a.m. and 5:00 p.m., Monday through Friday. Closet minimum size is forty (40) inches by seventy-two (72) inches with a thirty (30) inch standard door.

6.1.10 **Flushing and Debris Removal** – Water service lines shall be thoroughly flushed prior to installation of the backflow assembly. A Y-Type strainer with blow-down connection may be required ahead of the assembly to protect the assembly from recurring debris.

6.1.11 **Pipe Risers** – All backflow prevention assemblies shall be installed on pipe risers made of material approved by the City. Backflow prevention assemblies three (3) inches diameter and smaller shall use hard copper or galvanized metal riser material. Above-ground PVC is not allowed in any application.

[END OF SECTION 6]

Appendix A – Typical Hazards

There are varying degrees of hazards, and the degree of protection should be commensurate with the degree of hazard. The following sections provide partial list of facilities and equipment that require protection against cross-connections. These facilities and equipment shall be served by an approved backflow prevention assembly of the type(s) designated below. Facilities and equipment not specifically identified within this section may require cross-connection control and shall be reviewed on a case-by-case basis by the City’s Authorized Agent.

| | |
|------|--|
| AG | Air Gap |
| DC | Double Check Valve Backflow Prevention Assembly |
| DCDA | Double Check Detector Backflow Prevention Assembly |
| RP | Reduced Pressure Principle Backflow Prevention Assembly |
| RPDA | Reduced Pressure Principle Detector Backflow Prevention Assembly |
| PVB | Pressure Vacuum Breaker Assembly |

A.1 Typical Facilities Requiring Protection

The following facilities shall require an approved backflow prevention assembly as indicated in the table below. The table lists the assemblies that provide the minimum level of protection required. The customer may elect to install an assembly that will provide a greater level of protection, but the assembly shall be subject to City approval. The assembly shall be installed prior to any water connection serving the site and shall be located within five feet of the meter or service connection to the public water system.

Table A-1 – Required Backflow Protection by Facility Type

| | Facility Type | Required Assembly |
|-----|---|-------------------|
| 1. | Aircraft and Missile Plants | RP |
| 2. | Automotive Plants | RP |
| 3. | Auxiliary Water Supply (Interconnected; Regulated PWS) | RP |
| 4. | Auxiliary Water Supply (Interconnected; Unregulated; Commercial or Residential) | AG |
| 5. | Auxiliary Water Supply (Not Interconnected; Commercial or Residential) | RP |
| 6. | Beverage Bottling Plants | DC |
| 7. | Breweries | RP |
| 8. | Buildings with sewer ejectors | RP |
| 9. | Canneries, Packing Houses and Reduction Plants | RP |
| 10. | Car Wash and water reclamation systems | RP |
| 11. | Centralized Heating and Air Conditioning Plants | RP |
| 12. | Chemical Plants | RP |
| 13. | Commercial Laundries | RP |
| 14. | Commercial Swimming Pools | RP |
| 15. | Dairies and Cold Storage Plants | RP |
| 16. | Dye Works | RP |

| | | |
|-----|--|------|
| 17. | Food Processing or Preparation Facilities | RP |
| 18. | Film Processing Laboratories | RP |
| 19. | Fire Systems (residential 13D) less than 2" | DC |
| 20. | Fire Systems with Stand Pipe Systems | DCDA |
| 21. | Fire Systems with Sprinkler Systems | DCDA |
| 22. | Fire Systems with pump and/or storage tank | DCDA |
| 23. | Fire Systems with auxiliary supply | RPDA |
| 24. | Fire System with Chemicals Additives | RPDA |
| 25. | Schools, High Schools, and Colleges | RP |
| 26. | Hospital, Mortuaries, Medical and Dental Buildings and Sanitariums | RP |
| 27. | Laundries and Dye works | RP |
| 28. | Irrigation Systems (with pop-up sprinkler heads, injector pumps, or alt. water source) | RP |
| 29. | Laboratories | RP |
| 30. | Manufacturing, Processing or Fabricating Plants | RP |
| 31. | Mop Sinks | RP |
| 32. | Motion Picture Studios | RP |
| 33. | Multistoried Buildings (with booster pumps or internal reservoir) | RP |
| 34. | Multistoried Buildings (with boiler systems or cooling towers) | RP |
| 35. | Multistoried Buildings (non-health hazard) | DC |
| 36. | Oil and Gas Production Plants | RP |
| 37. | Paper and Paper Products Facilities | RP |
| 38. | Plating Plants | RP |
| 39. | Radioactive Materials Processing Facilities | RP |
| 40. | Restaurants, Kitchens, Food Processing Facilities | RP |
| 41. | Restricted, Classified or other Closed Facilities | RP |
| 42. | Rubber Plants | RP |
| 43. | Sand and Gravel Plants | RP |
| 44. | Served by reuse or reclaimed water | RP |
| 45. | Solar Domestic Hot-Water Systems with direct make-up lines | RP |
| 46. | Steam Boiler Plants | RP |
| 47. | Sewage and Storm Drainage Facilities (Including lift stations) | RP |
| 48. | Water-Hauling Equipment | RP |
| 49. | Where Cross-Connection is Maintained | RP |

A.2 Other Equipment Requiring Protection

The presence of specific equipment on a site may also require the installation of an approved backflow prevention assembly. The type of assembly required shall be determined by the City of Tallahassee's Authorized Agent and shall be commensurate with the degree of hazard. If required, the assembly shall be installed prior to any water connection serving the site and shall be located within five feet of the meter or service connection to the public water system. The presence of an equipment-specific backflow prevention assembly may not necessarily relieve the need for (or requirement of) a site-specific backflow prevention assembly on the water service connection to protect the public water system.

Appendix B – Construction Details

BFP-1 – Backflow Prevention Assembly Configuration Requirements

BFP-2 – Reduced Pressure Principle Backflow Prevention Assembly (1/2”-2” Outdoor Installation)

BFP-3 – Meter w/Double Check Backflow Assembly (3”-12” Outdoor Installation)

BFP-4 – Meter w/Reduced Pressure Principle Backflow Prevention Assembly (3”-12” Outdoor Installation)

BFP-5 – Fire Line w/ Double Check Detector Assembly (2”-12” Outdoor Installation)



BFP-6 – Backflow Prevention Assembly Indoor Installation Clearance Requirements

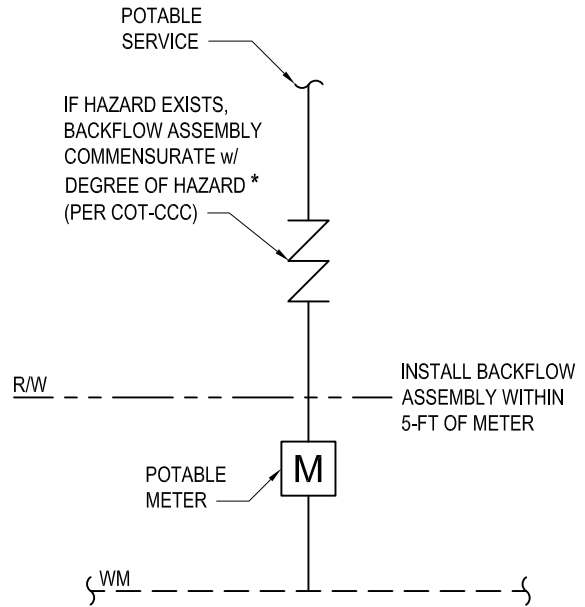
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NOTES

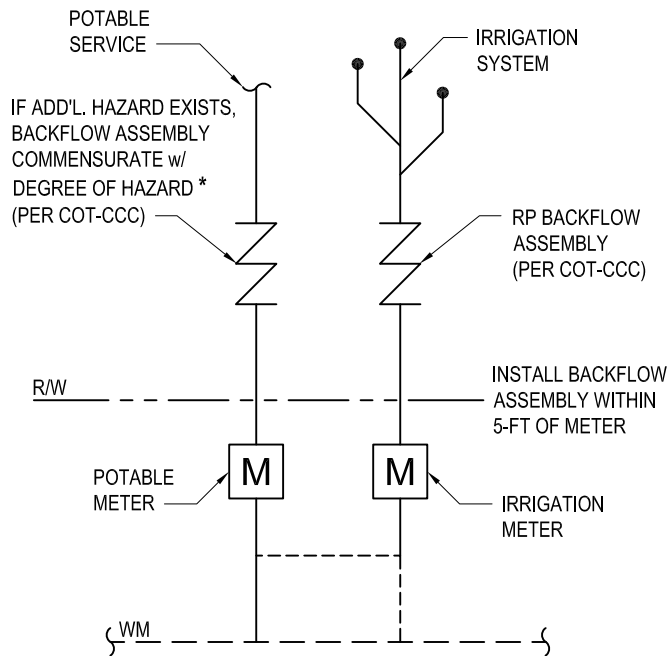
*AN APPROVED BACKFLOW ASSEMBLY IS TYPICALLY NOT REQUIRED FOR RESIDENTIAL WATER SERVICE UNLESS A HAZARD EXISTS. AN APPROVED BACKFLOW ASSEMBLY IS TYPICALLY REQUIRED FOR ALL COMMERCIAL WATER SERVICES, REGARDLESS OF HAZARD. COMMON HAZARDS INCLUDE, BUT ARE NOT LIMITED TO, SWIMMING POOLS, SPAS, LAKES, PONDS, LANDSCAPE OR FISH POOLS, WATER SUPPLY WELLS, AND BOOSTER PUMPS.

LEGEND

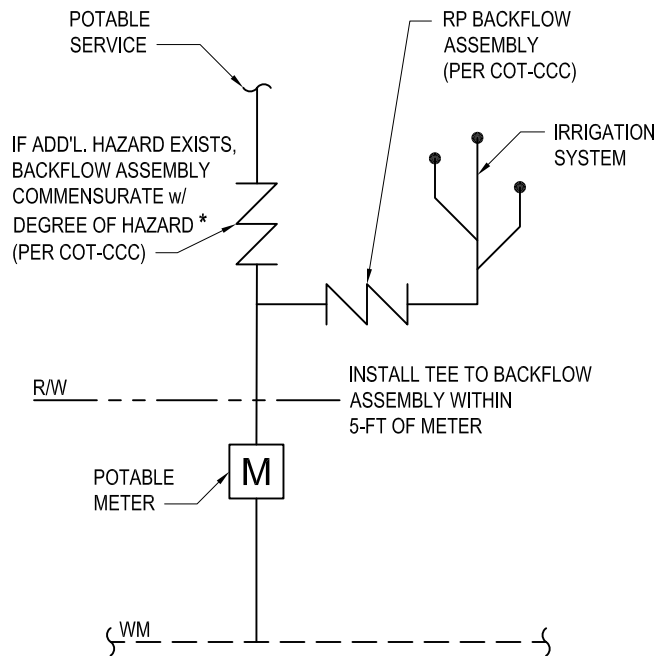
- COT - CITY OF TALLAHASSEE
- CCC - CROSS CONNECTION CONTROL
- FBC - FLORIDA BUILDING CODE
- R/W - RIGHT OF WAY
- WM - WATER MAIN
-  - APPROVED BACKFLOW ASSEMBLY
-  - WATER METER



**WATER SERVICE
NO IRRIGATION**



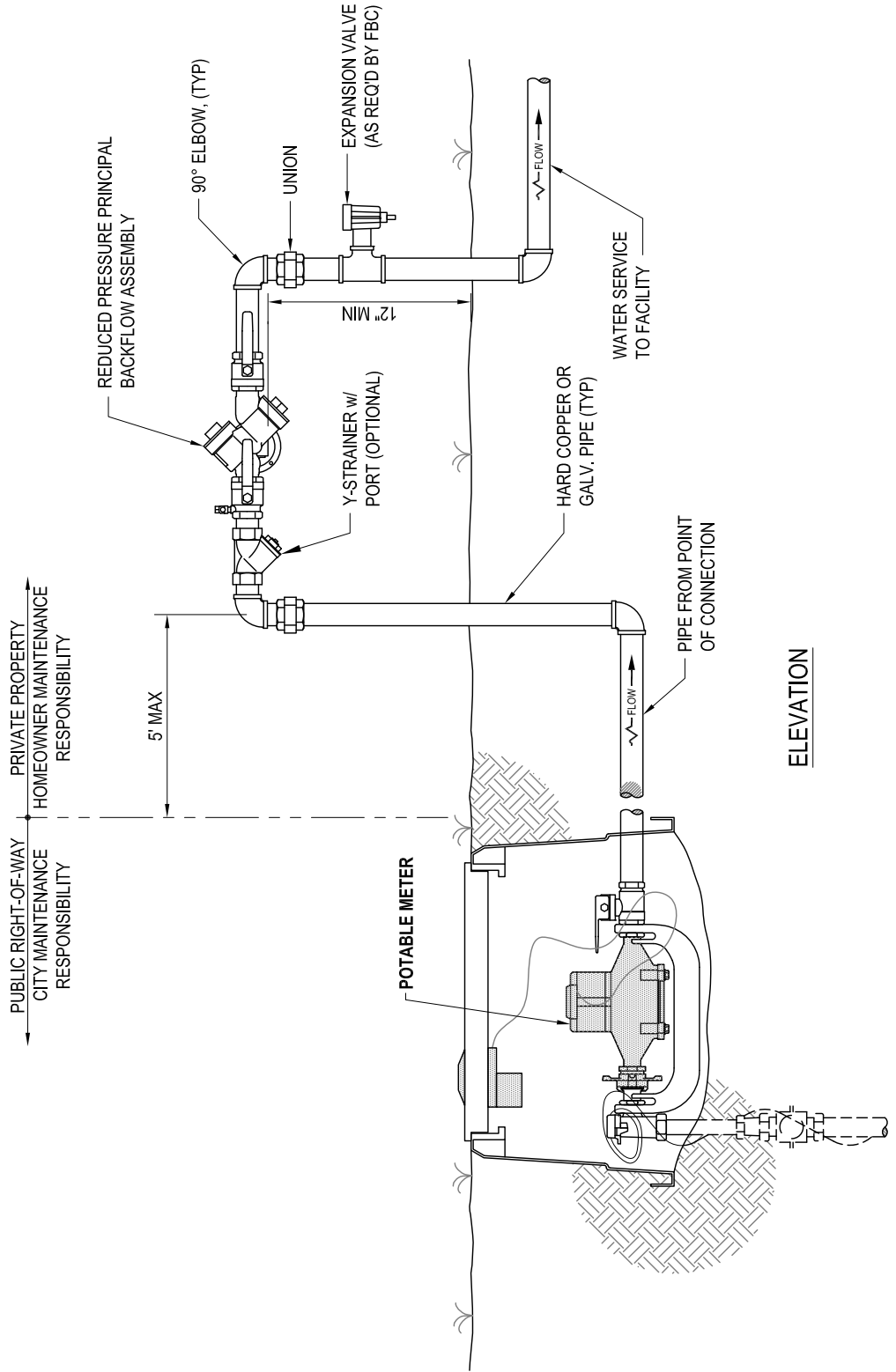
**WATER SERVICE
w/ IRRIGATION (SEPARATE METERS)**



**WATER SERVICE
w/ IRRIGATION (SINGLE METER)**



| | |
|--|----------------------|
| Date Issued: APRIL 2021 | SHEET BFP1 |
| Approved by: WQ | |
| File Location: WS\PROG\1600\04\10\BFP | Scale: NTS |



ELEVATION

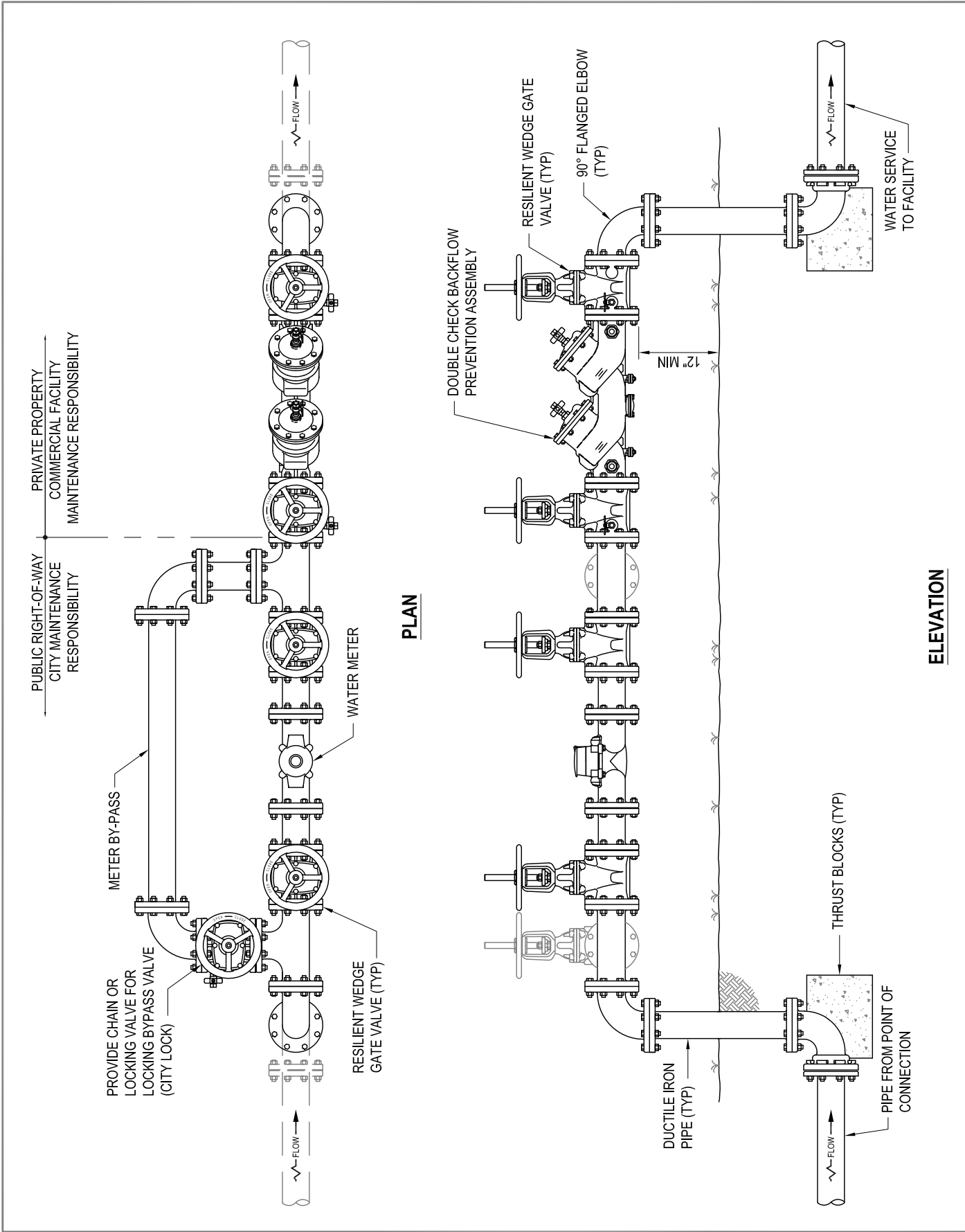


Title:

REDUCED PRESSURE
PRINCIPAL BACKFLOW
PREVENTION ASSEMBLY
1/2" - 2" OUTDOOR INSTALLATION

Date Issued:
JANUARY 2021
Approved by:
WQ
File Location:
WS\PROG\1600\04\10\BFP

SHEET
BFP2
Scale:
NTS



Title:

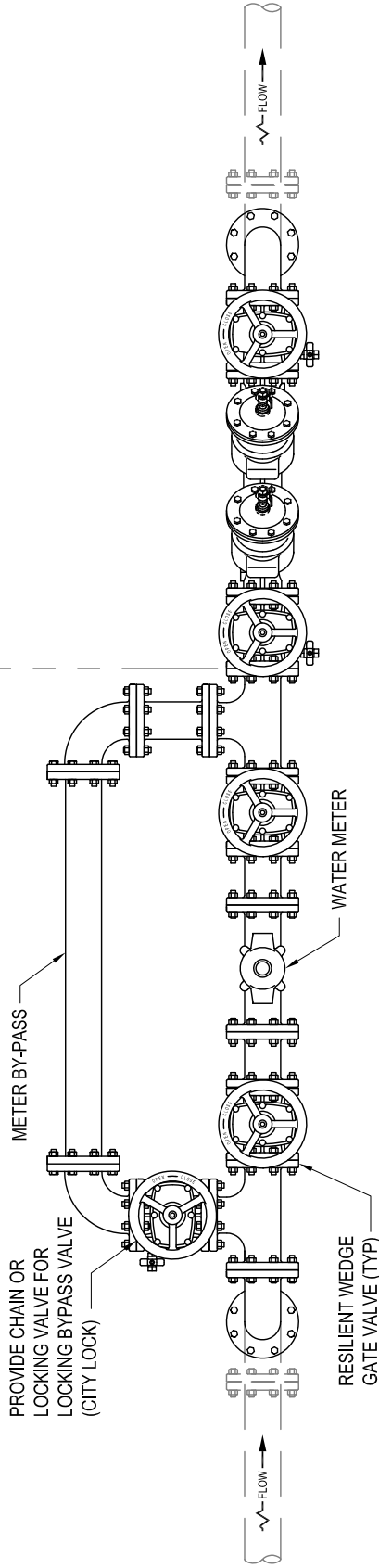
METER w/ DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY
3" - 12" OUTDOOR INSTALLATION

Date Issued:
JANUARY 2021
Approved by:
WQ
File Location:
WS\PROG\1600\04\10\BFP

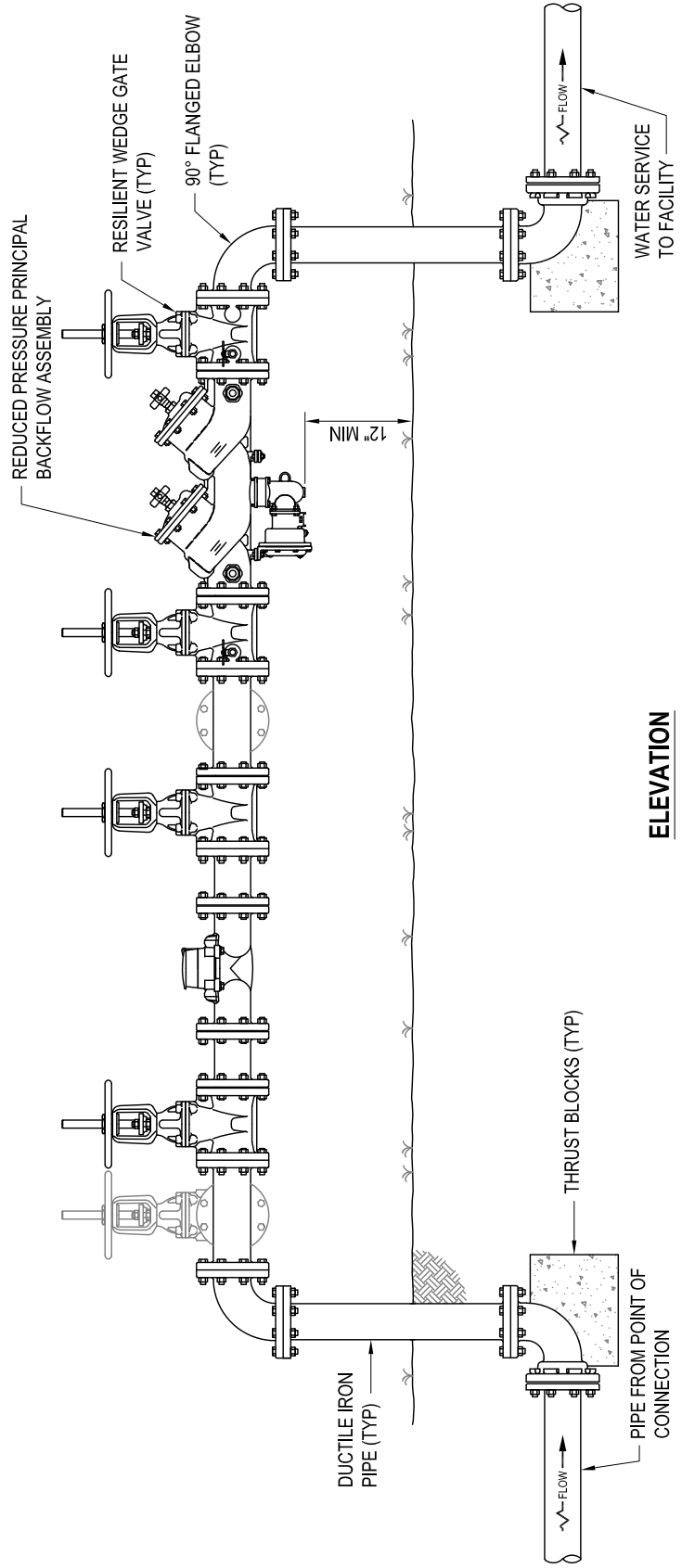
SHEET
BFP3
Scale:
NTS

PUBLIC RIGHT-OF-WAY
CITY MAINTENANCE
RESPONSIBILITY

PRIVATE PROPERTY
COMMERCIAL FACILITY
MAINTENANCE RESPONSIBILITY



PLAN



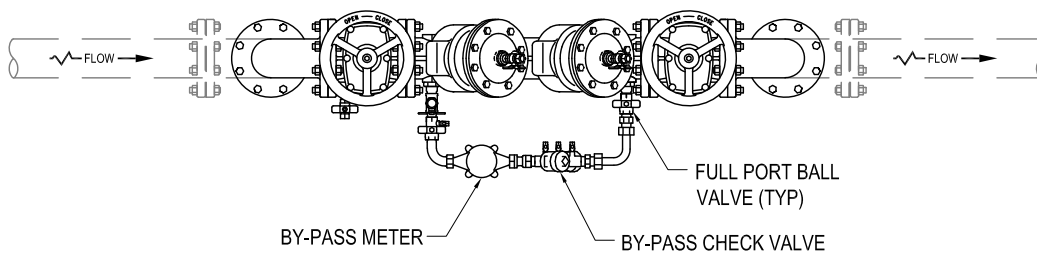
ELEVATION



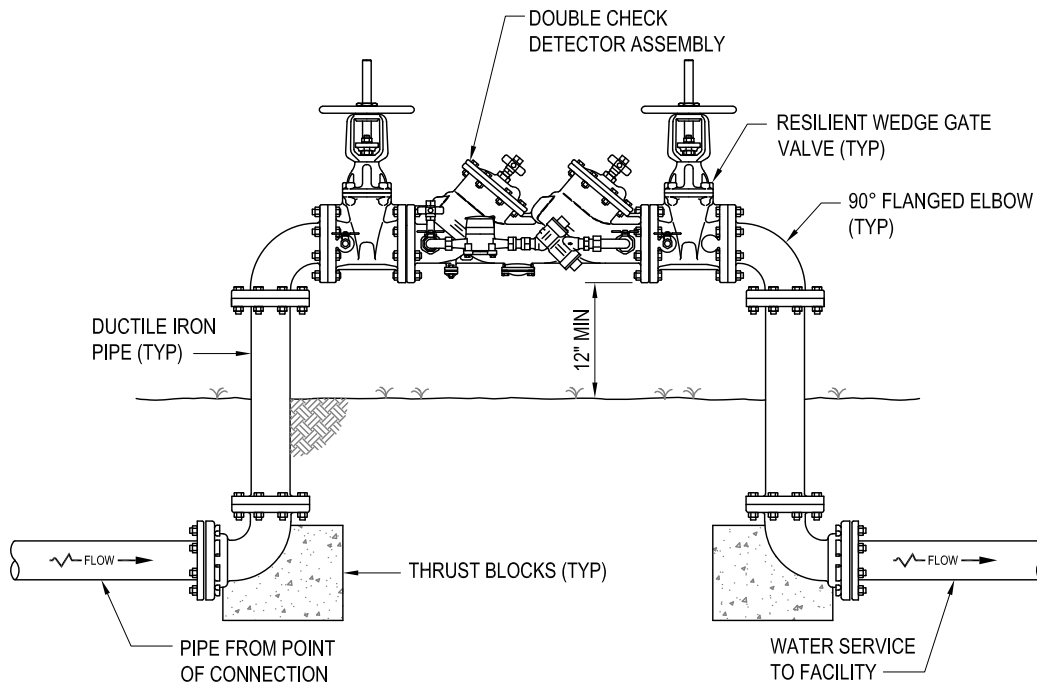
Title: **METER w/ REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY**
3" - 12" OUTDOOR INSTALLATION

Date Issued: **JANUARY 2021**
 Approved by: **WQ**
 File Location: **WS\PROG\1600\04\10\BFP**

SHEET
BFP4
 Scale:
 NTS



PLAN



ELEVATION



Title:

**FIRELINE w/ DOUBLE CHECK
DETECTOR ASSEMBLY
2" - 12" OUTDOOR INSTALLATION**

Date Issued:

JANUARY 2021

Approved by:

WQ

File Location:

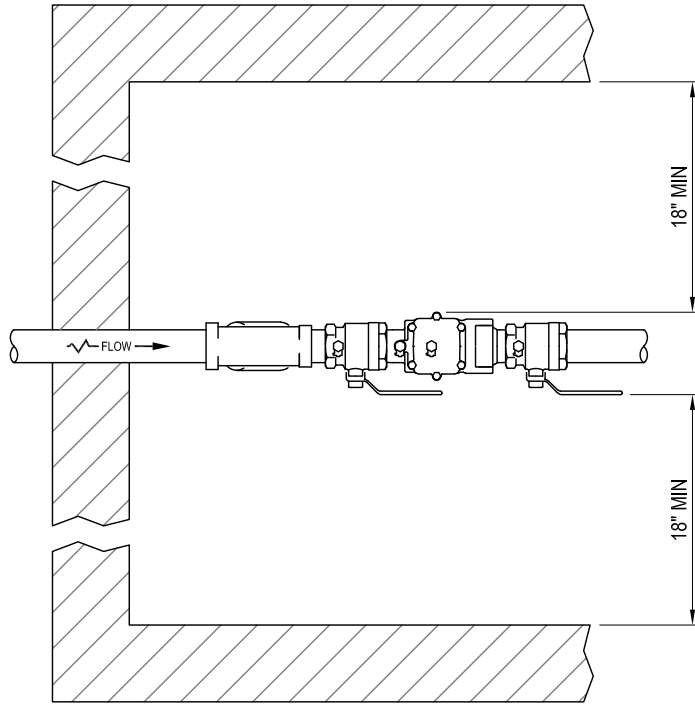
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SHEET

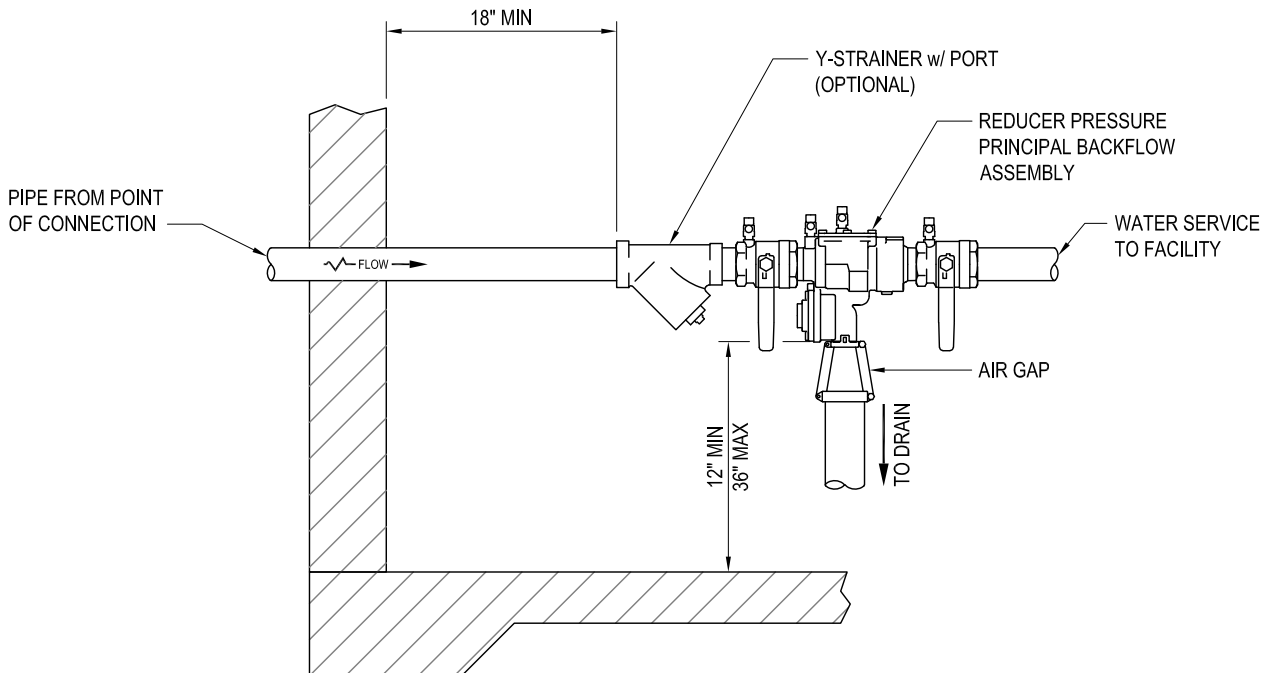
BFP5

Scale:

NTS



PLAN



ELEVATION