

CITY OF AUSTIN
2003-2009
Uniform Plumbing Code
Changes

2009 Uniform Plumbing Code with 59 pages of Local Ordinance

- The 2009 UPC goes into effect October 1st, 2010
- Affects projects submitted to the City on or after this date

Section 103.1.1

(Local Amendment)

- 103.1.1 Permits Required. It shall be unlawful for any person, firm, or corporation to make any installation, alteration, repair, replacement, or to remodel any plumbing system regulated by this code except as permitted in section 103.1.2, or to cause the same to be done without first obtaining a separate plumbing permit for each separate building, structure, or on-site plumbing *or non-potable water reuse system.*

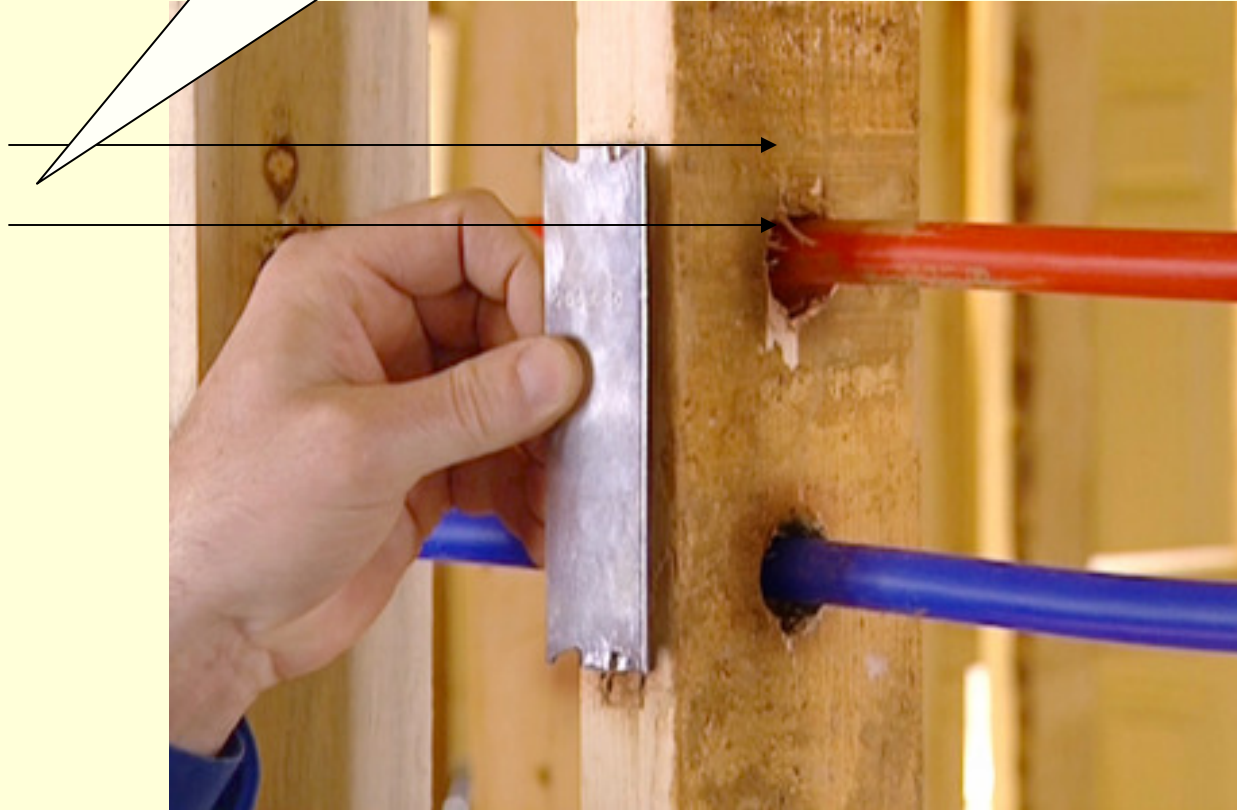
Ch. 2 Definitions (Local Ordinance)

- Plumbing System: includes all potable water, building supply, and distribution pipes; all plumbing fixtures and traps; all drainage and vent pipes; and all building drains and building sewers, including their respective joints and connections, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, nonpotable water reuse systems, irrigation systems, potable water treating or using equipment, medical gas and medical vacuum systems, liquid and fuel gas piping, and water heaters and vents for same.

Chapter 3-General Regulations

- **313.9** Plastic and copper piping penetrating a framing members to within one (1) inch (25.4 mm) of the exposed framing shall be protected by steel nail plates not less than No. 18 gauge (0.0478 inches) (1.2 mm) in thickness. The steel nail plate shall extend along the framing member not less than one and one-half (1-1/2) inches (38 mm) beyond the outside diameter of the pipe or tubing.

Minimum
1-1/2"



Chapter 4 Fixtures (Local Amendment)

- 402.2 Water Closets. Effective May 1st, 2010, water closets, including flush tank, flushometer tank, and flushometer valve operated, shall have an average consumption of a maximum of 1.28 gallons of water per flush.
- (The Ordinance is effective October 1st, 2010)

Chapter 4 Fixtures

(Local Amendment)

- 402.3.1 Nonwater Urinals. Nonwater urinals shall be listed and comply with the applicable standards referenced in Table 14-1. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit. (cont'd)

Chapter 4 Fixtures (Local Amendment)

- Nonwater urinals that are determined by the Authority Having Jurisdiction to have been maintained contrary to the manufacturer's instructions, and determined to be a health hazard or detrimental to public health and safety shall be retrofitted by a flushometer type urinal complying with Section 402.3. The Building Official shall establish the timeline for a retrofit if public health is compromised.

Chapter 4 Fixtures

- **407.5 Setting.** Fixtures shall be set level and in proper alignment with reference to adjacent walls. No water closet or bidet shall be set closer than fifteen (15) inches (381 mm) from its center to any side wall or obstruction nor closer than thirty (30) inches (762 mm) center to center to any similar fixture. The clear space in front of any water closet or bidet shall be not less than twenty-four (24) inches (610 mm). No urinal shall be set closer than twelve (12) inches (305 mm) from its center to any side wall or partition nor closer than twenty-four (24) inches (610 mm) center to center.
- **Exception:** *The installation of paper dispensers or accessibility grab bars shall not be considered obstructions.*

Chapter 4 Fixtures (Local Amendment)

- 411.6.1 Accessible Shower Stalls. A room that contains an accessible shower which has a threshold or curb which is less than 1/2 inch in height and all roll-in accessible showers shall be equipped with a Code-approved emergency floor drain.

Chapter 4 Fixtures

- Excerpt from 411.8
- Showers that are provided with a built in place, permanent seat or seating area that is located within the shower enclosure, shall be first lined with sheet plastic,* lead,* copper,* or shall be lined with other durable and water-tight materials that extend not less than three (3) inches (76 mm) above horizontal surfaces of the seat or the seating area.

Chapter 4 Fixtures

- **413.1 Limitation of Hot Water Temperature for Public Lavatories.** Hot water delivered from public use lavatories shall be limited to a maximum temperature of 120°F (49°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Chapter 4 Fixtures

- **414.5 Limitation of Hot Water in Bathtubs and Whirlpool Bathtubs.** The maximum hot water temperature discharging from the bathtub and whirlpool bathtub filler shall be limited to 120°F (49°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Chapter 4 Fixtures

- **416.3 Limitation of Water Temperature in Bidets.** The maximum hot water temperature discharging from a bidet shall be limited to 110°F (43°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Chapter 4 Fixtures

- **418.0 Shower and Tub-Shower Combination Control Valves.** Showers and tub-shower combinations in buildings shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection. These valves shall conform to ASSE 1016 or ASME A112.18.1/CSA B125.1. Gang showers, when supplied with a single temperature-controlled water supply pipe, shall be controlled by a mixing valve that conforms to ASSE 1069. Handle position stops shall be provided on such valves and shall be adjusted per the manufacturer's instructions to deliver a maximum mixed water setting of 120°F (49°C). The water heater thermostat shall not be considered a suitable control for meeting this provision.

Chapter 5 Water Heaters

- **505.0 Water Heater Requirements.**
- **505.1 Location.** Water heater installations in bedrooms and bathrooms shall comply with one of the following [NFPA 54:10.28.1]:
- (1) Fuel-burning water heaters may be installed in a closet located in the bedroom or bathroom provided the closet is equipped with a listed, gasketed door assembly and a listed self-closing device. The self-closing door assembly shall meet the requirements of Section 505.1.1. The door assembly shall be installed with a threshold and bottom door seal and shall meet the requirements of Section 505.1.2. All combustion air for such installations shall be obtained from the outdoors in accordance with Section 507.4. The closet shall be for the exclusive use of the water heater.
- (2) Water heater shall be of the direct vent type. [NFPA 54:10.28.1(2)]
- (contd)

Chapter 5 Water Heaters

- **505.1.1 Self-Closing Doors.** Self-closing doors shall swing easily and freely and shall be equipped with a self-closing device to cause the door to close and latch each time it is opened. The closing mechanism shall not have a hold open feature. [NFPA 80:6.1.4.2]
- (contd)

Chapter 5 Water Heaters

- **505.1.2 Gasketing.** Gasketing on gasketed doors or frames shall be furnished only in accordance with the published listings of the door, frame, or gasketing material manufacturer. [NFPA 80:6.4.8]
- **Exception:** Where acceptable to the Authority Having Jurisdiction, gasketing of non-combustible or limited-combustible material (see NFPA 220, *Standard on Types of Building Construction*) shall be permitted to be applied to the frame, provided closing and latching of the door are not inhibited.

Chapter 5 Water Heaters

- **510.7.4.1 Prohibited Use.** Single-wall metal pipe shall not be used as a vent in dwellings and residential occupancies. [NFPA 54-09:12.8.4.1]

Chapter 5 Water Heaters

- **510.10.4.1** Where two (2) or more openings are provided into one (1) chimney flue or vent, the openings shall either be at different levels, or the connectors shall be attached to the vertical portion of the chimney or vent at an angle of 45 degrees or less relative to the vertical. [NFPA 54-09:12.11.4.1]

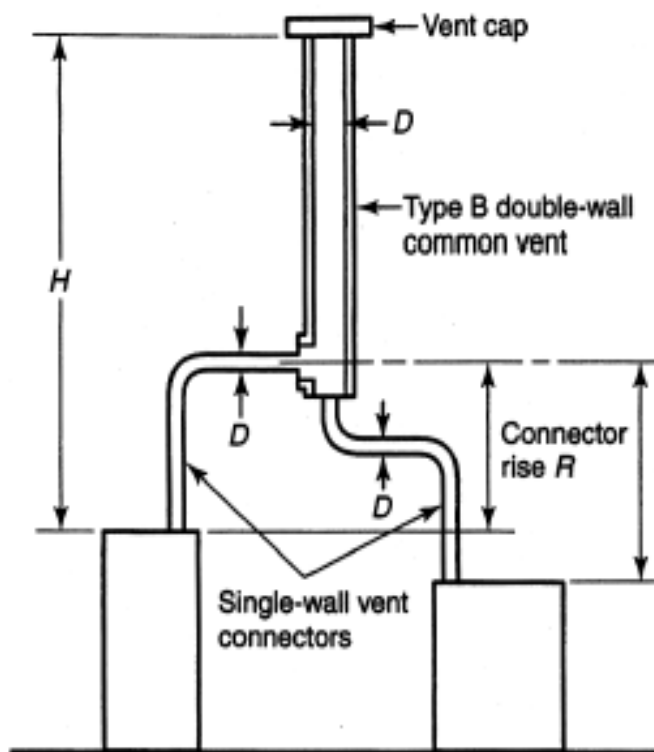


Table 5-15 is used when sizing single-wall vent connectors attached to a Type B double-wall common vent.

Note: Each appliance can be either Category I draft-hood-equipped or fan-assisted type.

ENERGY ORDINANCE LANGUAGE THAT AFFECTS COMMERCIAL WATER HEATERS

- 504.8 Electric water heater timers. For Group R buildings electric resistance water heaters must be installed in conjunction with a preprogrammed water heater timer. The timer shall be preprogrammed to turn the water heater off between the hours of 3:00 p.m. and 7:00 p.m. from June 1 to September 30 and from 12:00 a.m. to 4:00 a.m. throughout the year. The timer shall have a readily accessible override, as defined by the building official administrative rule, capable of restoring power to the water heater for one hour when activated.

Chapter 6 Water Supply

- 601.1.1 Hot and Cold Water Required. In occupancies where plumbing fixtures are installed for private use, hot and cold potable water shall be required for bathing, washing, laundry, cooking purposes, dishwashing, or maintenance. In occupancies where plumbing fixtures are installed for public use, hot water shall be required for bathing and washing purposes. This requirement shall not supersede the requirements for individual temperature control limitations for public lavatories, bathtubs, whirlpool bathtubs and shower control valves, nor shall it supersede the requirements for hot water by the Health Authority.

Chapter 6 Water Supply (Local Ordinance)

- 601.1.2 Water System Connection Required. The water system of every house or building shall be separately and independently connected to a state licensed public potable water system if any part of the lot or tract that contains the house or building is within 100 feet in horizontal distance (measured on the closest practicable access route) of the public water system. Connection to the public water system is not required if any of the following apply: (cont'd)

Chapter 6 Water Supply (Local Ordinance)

- (1) The property owner has received a written denial of service from the owner or governing body of the public water system.
- (2) The property owner has received a written determination from the water utility that it is not feasible for the building to be connected to the potable water system.
- (3) The property is served by an existing private potable water system and the water utility has determined that the private potable water system may continue to be used based on factors such as the type of facility served, the age, condition, and capacity of the private potable water system, and the availability of records regarding the system, changes to the system, or the system demand.

Chapter 6 Water Supply (Local Ordinance)

- 601.1.3 If a state licensed public potable water system is unavailable within the full purpose jurisdiction of the City of Austin, then any alternative source used for potable water shall be installed per the provisions of this code. Rain water collection systems utilized for potable water shall comply with the latest edition of the Texas Manual on Rainwater Harvesting by the Texas Water Development Board and any other applicable state laws.

Chapter 6 Water Supply (Local Ordinance)

- 601.2.2 Color and Information. Each system shall be identified with a colored pipe or band and coded with paints, wraps and materials compatible with the piping. Except as required by Chapter 16, non-potable water systems shall have a yellow background with black uppercase lettering, with the words "CAUTION: NONPOTABLE WATER, DO NOT DRINK." Each nonpotable system shall be identified to designate the liquid being conveyed, and the direction of normal flow shall be clearly shown. The minimum size of the letters and length of the color field shall conform to Table 6-1. The background color and required information shall be indicated every twenty (20) feet (6,096mm) but not less than once per room, and shall be visible from the floor level.

Chapter 6 Water Supply

- **604.8** Approved plastic materials shall be permitted to be used in water service piping, provided that where metal water service piping is used for electrical grounding purposes, replacement piping therefore shall be of like materials.
- **Exception:** Where a grounding system acceptable to the Authority Having Jurisdiction is installed, inspected, and approved, metallic pipe shall be permitted to be replaced with nonmetallic pipe. Plastic materials for water service piping outside underground shall have a blue insulated copper tracer wire or other approved conductor installed adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 18 AWG and the insulation type shall be suitable for direct burial.

Chapter 6 Water Supply

This is in response to your request for clarification on the Uniform Plumbing Code regarding Materials. The question (s) considered was (were):

The exception to 604.8 requires the installation of a tracer wire. Is the tracer wire installation requirement only applicable to replacement installation? Per Section 604.8 do all installations of outside underground water piping require a tracer wire to be installed?

The 2010 UPC Answers & Analysis Committee answered Item #10-19 as follows:

The requirements, found in Section 604.8 of the 2009 UPC, for a tracer wire for underground plastic water services is required for both new and replacement installations.

Chapter 6 Water Supply

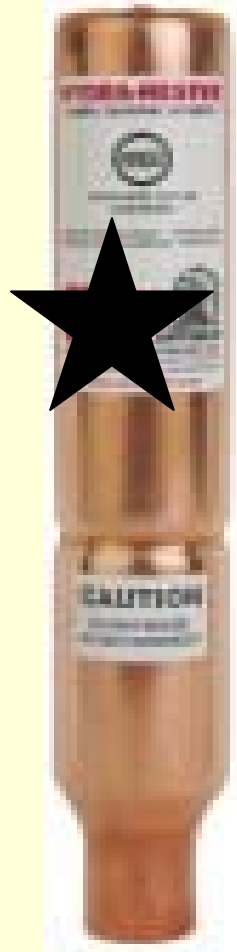
- 608.2 Excessive Water Pressure. If local static water pressure is in excess of sixty-five (65) pounds per square inch, an approved pressure regulator preceded by an adequate strainer shall be installed and the static pressure reduced to sixty-five (65) pounds per square inch or less. Pressure regulator(s) equal to or exceeding one and one-half (1-1/2) inches shall not require a strainer. Such regulator(s) shall control the pressure to all water outlets in the building unless otherwise approved by the Authority Having Jurisdiction. Each such regulator and strainer shall be accessibly located above ground or in a vault equipped with a properly sized and sloped bore-sighted drain to daylight, shall be protected from freezing, and shall have the strainer readily accessible for cleaning without removing the regulator or strainer body or disconnecting the supply piping. (cont'd)

Chapter 6 Water Supply

- Pipe size determinations shall be based on eighty (80) percent of the reduced pressure when using Table 6-6 (Fixture Unit Table for Determining Water Pipe and Meter Sizes). An approved expansion tank shall be installed in the cold water distribution piping downstream of each such regulator to prevent excessive pressure from developing due to thermal expansion and to maintain the pressure setting of the regulator. The expansion tank shall be properly sized and installed in accordance with the manufacturer's instructions and listing. Systems designed by registered engineers shall be permitted to use approved pressure relief valves in lieu of expansion tanks provided such relief valves have a maximum pressure relief setting of one-hundred (100) pounds per square inch (698 kPa) or less.

Chapter 6 Water Supply

- **609.10 Water Hammer.** Building water supply systems where quick-acting valves are installed shall be provided with water hammer arrester(s) to absorb high pressures resulting from the quick closing of these valves. Water hammer arrestors shall be approved mechanical devices in accordance with the applicable standard(s) referenced in Table 14-1 and shall be installed as close as possible to quick-acting valves.
- **609.10.1 Mechanical Devices.** When listed mechanical devices are used, the manufacturer's specifications as to location and method of installation shall be followed.



Chapter 6 Water Supply (Local Ordinance)

- 609.1.2 Pipe Insulation wall thickness for domestic hot water run outs and circulation shall be in accordance with the energy code.

2009 Energy Code (Local Ordinance)

- AFFECTS RESIDENTIAL STRUCTURES
- 403.4. Circulating hot water systems. All circulating hot water piping shall be insulated to a minimum of R-3 or with insulation having a minimum thickness of 1/2 inch. Circulating hot water systems shall be controlled with either a manual "On" switch and automatic "Off" or a programmable timer that allows the circulating system to operate for a maximum of four hours in a 24 hour period combined, with a thermal control that automatically turns the system off when hot water reaches a point beyond the last hot water runout on the system. Pumps in circulating hot water systems shall be sized in accordance with the Plumbing Code and the piping system manufacturer's recommendations. A manufacturer's specification sheet for the installed pump shall be left at the jobsite for review by the building inspector.

2009 Energy Code (Local Ordinance)

- AFFECTS RESIDENTIAL STRUCTURES
- 403.4.2 Hot water piping. All service hot water piping with an internal diameter of 3/4 inch or greater shall be insulated to a minimum of R-3 or with insulation having a minimum thickness of 1/2 inch. Hot water piping serving the kitchen sink shall be insulated to a minimum of R-3 or with insulation having a minimum thickness of 1/2 inch along its entire length.

2009 Energy Code (Natural Code Language)

- AFFECTS COMMERCIAL STRUCTURES
- 504.5 Pipe insulation. For automatic-circulating hot water systems, piping shall be insulated with 1 inch of insulation having a conductivity not exceeding 0.27 Btu per inch/h x ft² x °F. The first 8 feet of piping in noncirculating systems served by equipment without integral heat traps shall be insulated with .5 inch of material having a conductivity not exceeding 0.27 Btu per inch/h x ft² x °F.

- The short answer is that most commonly used pipe insulation materials such as polystyrene, fiberglass, etc will comply in most circumstances. Use a product designed for another purpose, such as duct or wall insulation, and compliance will likely become an issue. Unfortunately, thermal conductivity, which is specified in the IECC, changes with temperature and if the material's temperature range is exceeded, any pipe insulation product may not comply for that application. One of those scenarios might be steam lines. The IECC has been criticized in the past for not simply stating the "thickness" of insulation required so the current wording seeks to address those criticisms. In order to accomplish that though, thermal conductivity must also be included to account for differing material properties. If you want to convert from R-value to thermal conductivity (k) you can, sort of, but it takes algebra and an understanding of a few engineering principles.

Chapter 7 Sanitary Drainage

- **710.0 Drainage of Fixtures Located Below the Next Upstream Manhole or Below the Main Sewer Level.**
- **710.1** Where a fixture is installed on a floor level that is lower than the next upstream manhole cover of the public or private sewer, serving such drainage piping, shall be protected from backflow of sewage by installing an approved type of backwater valve. Fixtures on floor levels above such elevation shall not discharge through the backwater valve. Cleanouts for drains that pass through a backwater valve shall be clearly identified with a permanent label stating “backwater valve downstream”.

Chapter 7 Sanitary Drainage

- **710.12 Grinder Pump Ejector.** Grinder pumps shall be permitted to be used.
- **710.12.1 Discharge Piping.** The discharge piping shall be sized per the manufacturer's instructions and shall be not less than one and one-fourth (1-1/4) inches (32 mm) in diameter. A check valve and fullway-type shutoff valve shall be located within the discharge line.

Chapter 9 Vents

- **901.2 Trap Seal Protection.** The vent system shall be designed to prevent a trap seal from being exposed to a pressure differential that exceeds one (1) inch of a water column (249 Pa) on the outlet side of the trap.

Chapter 9 Vents

- **911.0 Engineered Vent System.**
- **911.1 General.** The design and sizing of a vent system shall be permitted to be determined by accepted engineering practice. The system shall be designed by a registered design professional and approved in accordance with Section 301.4.
- **911.2 Minimum Requirements.** An engineered vent system shall provide protection of the trap seal in accordance with Section 901.2.

Chapter 10 Traps (Local Ordinance)

- 1007.0 Trap Seal Protection. Floor drains or similar traps directly connected to the drainage system and subject to infrequent use shall be protected with a trap seal primer, except where not deemed necessary for safety or sanitation by the Authority Having Jurisdiction. When structurally feasible, traps for floor drains and similar fixtures shall be primed by methods utilizing gravity flow wastewater from acceptable plumbing fixtures. Fixtures used for grease or food particle wasting shall not be used for trap seal priming. Trap seal primers shall be accessible for maintenance.

Chapter 12 Fuel Piping

- **1211.6 Appliance Over Pressure Protection.** The maximum operating pressure for piping systems serving appliances designed to operate at fourteen (14) inches w.c. inlet pressure or less shall be two (2) psig unless an over-pressure protection device designed to limit pressure at the appliance to two (2) psig upon failure of the line gas pressure regulator is installed.

**From Gas Meter
(flexible connector)**

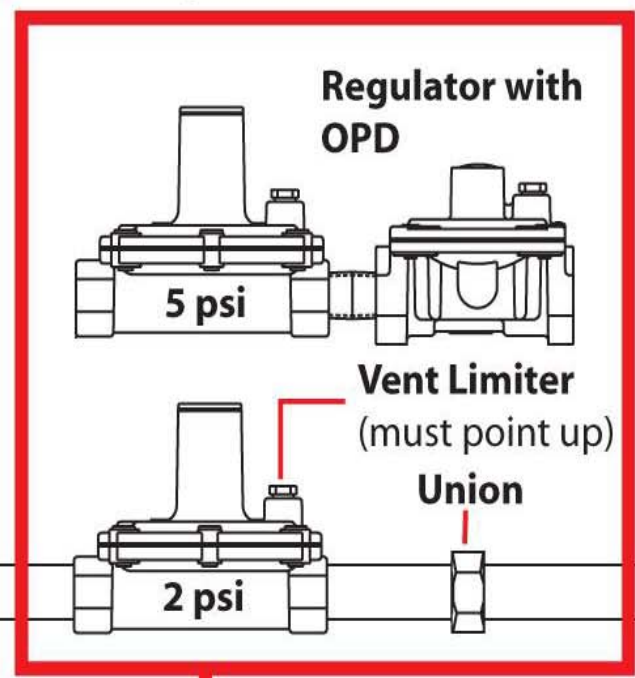
**Steel / Black
Iron Pipe**

**Low Pressure
to Appliance**

**Ball Valve Side
Pressure Tap**
(see code for
requirements)

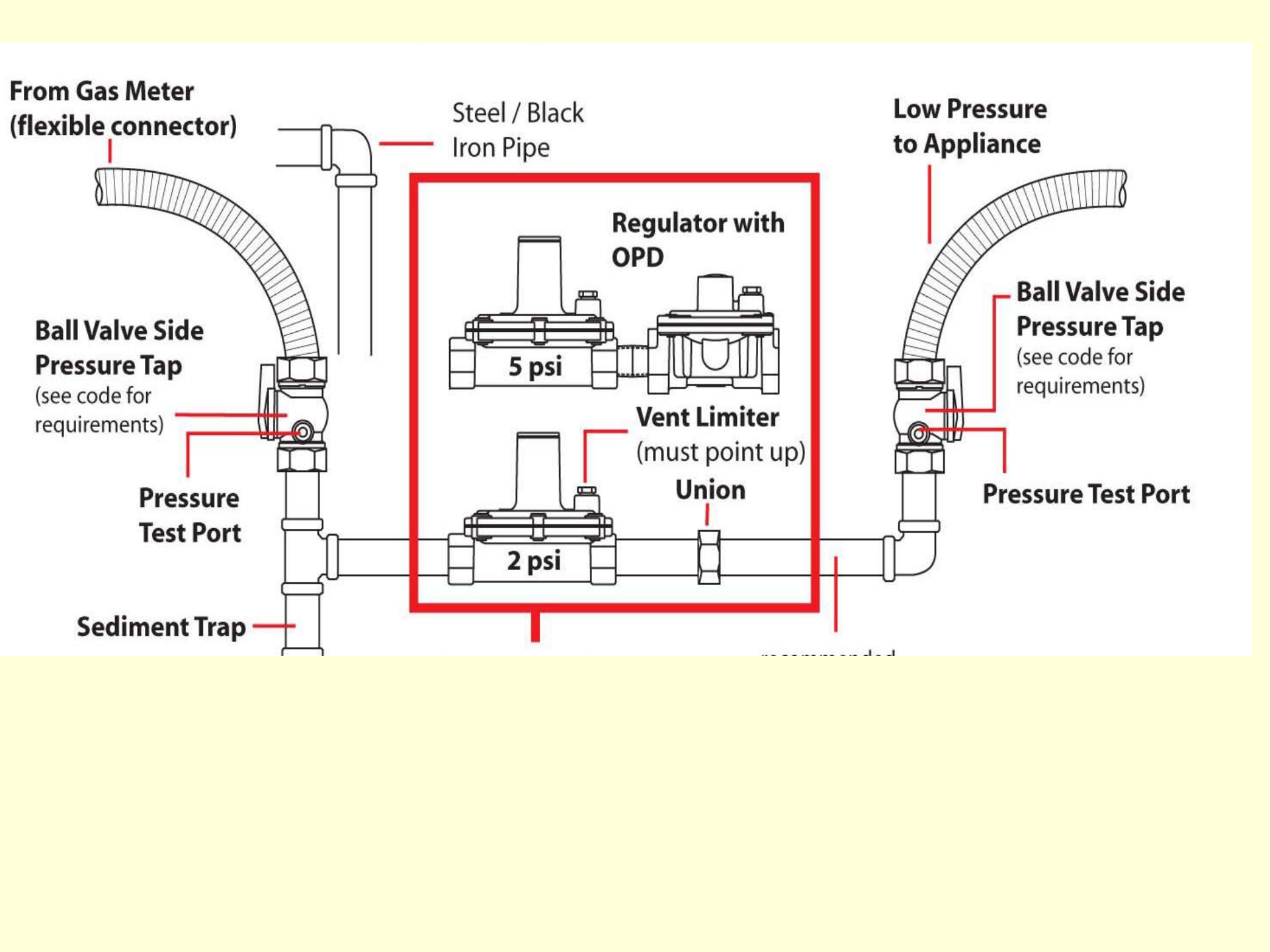
**Pressure
Test Port**

Sediment Trap



**Ball Valve Side
Pressure Tap**
(see code for
requirements)

Pressure Test Port



Chapter 12 Fuel Piping

- **1211.11.4 Shutoff Valve For Laboratories.**
- Each laboratory space containing two (2) or more gas outlets installed on tables, benches, or in hoods in educational, research, commercial and industrial occupancies shall have a single shutoff valve through which such gas outlets are supplied. The shutoff valve shall be accessible and shall be located within the laboratory or located adjacent to the laboratory's egress door and shall be identified. [NFPA 54-09:7.9.2.4]

Chapter 12 Fuel Piping

- **1211.15 Electrical Bonding and Grounding.**
- **1211.15.1 Pipe and Tubing other than CSST.**
Each above ground portion of a gas piping system other than CSST that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas piping, other than CSST shall be considered to be bonded when it is connected to appliances that are connected to the appliance grounding conductor of the circuit supplying that appliance. [NFPA 54-09:7.13.1]

Chapter 12 Fuel Piping

- **1211.15.2** CSST gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall be not smaller than (6) AWG copper wire. [NFPA 54-09:7.13.2]
- **1211.15.3** Gas piping shall not be used as a grounding conductor or electrode. This does not preclude the bonding of metallic piping to a grounding system. [NFPA 54-09:7.13.3]

Chapter 12 Fuel Piping

- **1212.2 Suspended Low-Intensity Infrared Tube Heaters.** Suspended low-intensity infrared tube heaters shall be connected to the building piping system with a connector listed for the application in accordance with CSA Z21.24/CGA 6.10, *Connectors for Gas Appliances*. [NFPA 54-09:9.6.1.3]
- **(A)** The connector shall be installed in accordance with the tube heater installation instructions, and shall be in the same room as the appliance.
- **(B)** Only one connector shall be used per appliance.

Chapter 12 Fuel Piping

- **1212.7 Sediment Trap.** Where a sediment trap is not incorporated as a part of the gas utilization appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated in Figure 12-1, or other device recognized as an effective sediment trap. Illuminating appliances, ranges, clothes dryers, decorative vented appliances for installation in vented fireplaces, gas fireplaces, and outdoor grills shall not be required to be so equipped. [NFPA 54-09:9.6.7]

Chapter 13 Medical Gas (Local Ordinance)

- 1302.0 Medical Gas Plan Review and Permits. Plans shall be submitted for review of a new or revised medical gas system. An engineer licensed with the State of Texas shall design plans for medical gas systems installed for human uses. After approval of the medical gas plan, a master plumber licensed by the State of Texas with a current medical gas endorsement shall secure a medical gas permit. This permit shall be for all medical gas installations and alterations of a medical gas system

Chapter 13 Medical Gas (Local Ordinance)

- 1304.0 Medical Gas For Non-Human Uses.
- 1304.1 Piping Materials For Field-Installed Medical Gas And Vacuum Systems For Non-Human Uses.
- (1) Hard drawn seamless copper tube:
 - (a) ASTM B 88, Standard Specification for Seamless Copper Water Tube, copper tube (K,L,M)
 - (b) ASTM B 280, Standard Specification for Seamless Copper Tubing for Air Conditioning and Refrigeration Field Service, copper ACR tube
 - (c) ASTM B 819, Standard Specification for Seamless Copper Tube for Medical Gas Systems, copper medical gas tubing (K or L)
- (2) Stainless steel tube
- Exception: Piping for field installed vacuum systems for nonhuman use may be installed with schedule 40 polyvinylchloride (PVC).

Chapter 13 Medical Gas (Local Ordinance)

- 1304.2 Testing Requirements.
- 1304.2.1 The test pressure for positive-pressure gas piping installed in medical gas systems for non-human uses shall be 1.5 times the system working pressure, but not less than a gauge pressure of 1035 kpa (150 psi).
- 1304.2.2 The test pressure for copper vacuum systems installed for non-human uses shall be a gauge pressure of 105 kpa (15 psi).
- 1304.2.3 Piping for field installed vacuum systems using PVC pipe and fittings for nonhuman uses shall be subjected to a vacuum of not less than 485mm (19in.) gauge HgV, using either the vacuum source equipment or a test pump.

Chapter 16

Nonpotable water reuse systems

- 1600.0 The provisions of Chapter 16 are strictly voluntary and optional. The Authority Having Jurisdiction shall not require the installation of a gray-water, reclaimed water or any other auxiliary water system. However if a gray-water, reclaimed water or auxiliary water system is installed, it shall comply with the requirements of Chapter 16.

Chapter 16

Nonpotable water reuse systems

- 19 pages of Local Plumbing Ordinance address auxiliary water systems
- Part I- addresses underground/subsurface gray water systems (un-amended language, utilize natural code)
- Part II- addresses Commercial, Institutional and Industrial gray water systems (local ordinance)
- Part III- addresses Reclaimed Water and other Auxiliary Water Systems (local ordinance)

Chapter 16

Nonpotable water reuse systems

- Part I is the same as previous edition's appendix G except prior scope was only applicable to single family dwellings, no restriction on occupancy type now.
- *No above ground or spray irrigation allowed.*

Chapter 16

Nonpotable water reuse systems

- Part II was written to mimic allowances of gray water use in industrial, commercial and institutional occupancies as allowed by State law.
- Gray water, when treated to a specified standard, can be used for spray irrigation or taken back into the building for water closet and urinal flushing in industrial, commercial and institutional occupancies.

Chapter 16

Nonpotable water reuse systems

- Part III was written to address reclaimed water and other auxiliary water use and installation requirements including rain water collection systems.
- Auxiliary water use allowed for irrigation and indoor nonpotable uses.

Chapter 16

Nonpotable water reuse systems

- Auxiliary Water- any pressurized water supply on or available to the premises other than the Austin Water Utility's approved public potable water supply. These auxiliary waters may include water from another water purveyor's public water supply or any natural source(s) , including without limitation, rain, a well, lake, spring, river, stream, harbor, and so forth; or ground water, surface water, ponded water for detention, retention or reirrigation, or used waters, reclaimed water, recycled water, air conditioning condensate, or industrial fluids but does not include forced sewer mains or any pumped sewage that is piped to City of Austin sewer or on site sewage facility system.

Chapter 16

Nonpotable water reuse systems

- General Installation Requirements
- Reclaimed water or other auxiliary water pipes shall not be run or laid in the same trench as potable water pipes. A ten (10) foot (3,048 mm) horizontal separation shall be maintained between pressurized, buried reclaimed water or other auxiliary water and potable water piping.

Chapter 16

Nonpotable water reuse systems

- General Installation Requirements
- To the extent permitted by structural conditions, reclaimed water and other auxiliary water risers within the toilet room, including appurtenances such as air/vacuum relief valves, pressure reducing valves, etc., shall be installed in the opposite end of the room containing the served fixtures from the potable water risers or opposite walls, as applicable. To the extent permitted by structural conditions, reclaimed and other auxiliary water headers and branches off risers shall not be run in the same wall or ceiling cavity of the toilet room where potable water piping is run.

Chapter 16

Nonpotable water reuse systems

- Labeling
- Reclaimed water systems shall have a purple background with black uppercase lettering with the words "CAUTION: NONPOTABLE RECLAIMED WATER, DO NOT DRINK." The minimum size of the letters and length of the color field shall conform to Table 6-1. Where used, a colored identification band shall be indicated every five (5) feet (6,096 mm) not less than once per room, and shall be visible from the floor level. Marking is not required for pipe manufactured with purple color integral to the pipe and marked with black uppercase lettering to read "CAUTION: NONPOTABLE RECLAIMED WATER, DO NOT DRINK" in intervals not to exceed five (5) feet (1,524 mm).

Chapter 16

Nonpotable water reuse systems

- Labeling
- Piping for auxiliary waters other than reclaimed water (rainwater, well, lake, stream, river, pond, etc.) installed below ground shall have a purple background with the words "CAUTION: NONPOTABLE WATER, DO NOT DRINK" in black uppercase lettering. The minimum size of the letters and length of the color field shall conform to Table 6-1. Where used, a colored identification band shall be indicated every five (5) feet (6,096 mm). Marking is not required for pipe manufactured with purple color integral to the pipe and marked with black uppercase lettering to read "CAUTION: NONPOTABLE WATER, DO NOT DRINK" in intervals not to exceed five (5) feet (1,524 mm). Piping for auxiliary waters other than reclaimed water (rainwater, well, lake, stream, river, pond, etc.) installed above ground shall be labeled as non-potable per section 601.2.2.

Chapter 16

Nonpotable water reuse systems

- Backflow Preventer requirements
- If auxiliary water systems are utilized on the premises, all potable supplies shall be provided with appropriate backflow protection, as required by the Authority Having Jurisdiction and Table 16-3.

Chapter 16

Nonpotable water reuse systems

Table 16-3

List of Pressurized Auxiliary Water Sources and Uses (1)	Containment Backflow Protection Required At			Isolation Backflow Protection Required at Point of Supply	
	Domestic Water Meter (2), (3)	Irrigation Water Meter (3)	City Service to Private Fire Mains (4), (5), (6)	Where Austin is used as Back-up to Auxiliary Water Source	
Lake/River Water	RP	RP	RP	RP	
Well Water	RP	RP	RP	RP	
Rainwater Harvesting	RP	RP	RP	RP	
Reclaimed Water	used on property	RP	RP	DC	AG
	used in building	RP	RP	RP	AG
Gray water, Re-Irrigation, Disposal	RP	RP	RP	AG	
Other Water Supply (7)	RP	RP	RP	AG	

Chapter 16

Nonpotable water reuse systems

- Cross-connection survey/Customer Service Inspection
- An initial inspection and test shall be performed on both the potable and reclaimed water or other auxiliary water systems. In addition to this an initial and subsequent periodic Customer Service Inspection as prescribed by TCEQ 30 TAC Chapter 290, Subchapter D 290.46Q shall be performed. The Austin Water Utility Customer requesting to use or continuing to use reclaimed water or other auxiliary water on a site where Austin Water Utility potable water is used shall employ, at their own expense, a licensed individual registered with the Austin Water Utility to schedule and perform the customer service inspection. The potable and reclaimed water or other auxiliary water system shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection as follows and as described in the Austin Water Utilities Criteria Manual. In the event of conflict the most stringent rule will apply.

Chapter 16

Nonpotable water reuse systems

- An annual inspection of the reclaimed water system and periodic inspection of other auxiliary water systems, following the procedures listed in subsection 1629.0 (B)(1), shall be required. Annual cross-connection testing of reclaimed water and periodic testing of other auxiliary water systems, following the procedures listed in subsection 1629.0 (B)(2), shall be required by the Authority Having Jurisdiction, unless site conditions do not require it. In no event shall the test occur less often than once in four (4) years. Alternate testing requirements shall be permitted by the Authority Having Jurisdiction.

Questions?