



**Public Hearing
CITY OF AUSTIN
RECOMMENDATION FOR COUNCIL ACTION**

**AGENDA ITEM NO.: 107
AGENDA DATE: Thu 12/15/2005
PAGE: 1 of 2**

SUBJECT: Conduct a public hearing to consider an ordinance repealing and replacing Article 5 of Chapter 25-12 of the City Code (*Mechanical Code*) to adopt the 2003 Uniform Mechanical Code and local amendments.

AMOUNT & SOURCE OF FUNDING: N/A

FISCAL NOTE: There is no unanticipated fiscal impact. A fiscal note is not required.

REQUESTING Watershed Protection and **DIRECTOR'S**
DEPARTMENT: Development Review **AUTHORIZATION:** Joe Pantalione

FOR MORE INFORMATION CONTACT: Dan McNabb, 974-2752; Dan Garcia, 974-2377; Joan Esquivel, 974-2377

PRIOR COUNCIL ACTION: Adopted the 1997 Uniform Plumbing Code with local amendments on February 5, 1998.

BOARD AND COMMISSION ACTION: Approved by the Mechanical, Plumbing and Solar Board on October 29, 2004. Approved 5-0.

PURCHASING: N/A

MBE / WBE: N/A

The Mechanical, Plumbing and Solar Board hears appeals of orders, decisions, or determinations made by the Building Official under the Mechanical Code. The Board also reviews and makes recommendations on proposed changes to the Mechanical, Plumbing and Solar Energy Codes.

The following recommendations are a result of extensive work by the Board, Staff and stakeholders. The Watershed Protection and Development Review Department supports the proposed amendments, which include the following elements:

- Adoption of the 2003 Uniform Mechanical Code which is supported by design professionals and other stakeholders;
- Continuation of the modern code format and mechanical systems supported by design professionals and stakeholders;
- The Neighborhood Housing and Community Development Department (NHCD) finds that the adoption of the 2003 Uniform Mechanical Code will require multi-family development to meet nationally accepted standards for safety. NHCD finds that adoption of the 2003 Uniform Mechanical Code on balance will have no significant impact on housing affordability.



City of Austin

MEMO

P.O. Box 1088, Austin, TX 78767
www.cityofaustin.org/housing

Neighborhood Housing and Community Development Department

Paul Hilgers, Director

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Date: July 5, 2005

To: Joe Pantallion, Director
Watershed Protection and Development Review

From: Paul Hilgers, Director
Neighborhood Housing and Community Development Department

Subject: Affordability Impact Statement - 2003 Uniform Mechanical Code

The Mechanical, Plumbing and Solar Board is recommending adoption of the 2003 Uniform Mechanical Code with local amendments and the repeal of existing Mechanical Code provisions governing multi-family and commercial construction. The Neighborhood Housing and Community Development found that this action will have no impact on housing affordability for multi-family construction.

The Watershed Protection and Development Review Department and the Neighborhood Housing and Community Development Department will continue to examine opportunities for reducing barriers to housing affordability by surveying surrounding communities that have adopted other mechanical code provisions allowed under Texas law. This survey is expected to be completed as the 2006 editions of mechanical codes are available for public review in the Spring, 2006.

Please let me know if you need additional information.

ORDINANCE NO.

AN ORDINANCE AMENDING CHAPTER 25-12 TO REPEAL AND REPLACE ARTICLE 6 (PLUMBING CODE) TO ADOPT THE 2003 UNIFORM PLUMBING CODE AND LOCAL AMENDMENTS.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. Article 6 of Chapter 25-12 of the City Code is repealed and replaced to read as follows:

ARTICLE 6: PLUMBING CODE

§ 25-12-151 PLUMBING CODE.

(A) The Uniform Plumbing Code, 2003 edition, published by the International Association of Plumbing and Mechanical Officials (2003 Plumbing Code) is adopted and incorporated into this section, including all appendices except Appendices H and K, with deletions and amendments in Subsection (B) and Section 25-12-153 (*Local Amendments to the Plumbing Code*).

(B) The following provisions of the 2003 Plumbing Code are deleted:

Sec. 103.1.2	Sec. 103.1.3	Sec. 103.4	Sec. 103.5.1
Sec. 313.7	Sec. 320.0	Sec. 413.6	Table 5-1
Sec. 501.0	Sec. 508.4	Sec. 704.3	Sec. 710.3.3
Sec. 712.0	Sec. 713.4	Sec. 801.3	Sec. 807.4
Sec. 905.3	Table 10-2	Sec. 1009.2	Sec. 1014.1
Sec. 1014.4	Sec. 1017.1	Sec. 1017.2	Sec. 1101.1
Sec. 1101.3	Sec. 1101.4	Sec. 1101.5	Sec. 1101.6
Sec. 1101.9	Sec. 1101.10	Sec. 1102.1.1	Sec. 1102.2.1
Sec. 1104.3	Sec. 1106.3	Sec. 1109.0	Sec. 1202.0
Sec. 1204.3.1	Sec. 1204.3.2	Sec. 1204.4	Sec. 1205.2
Sec. 1209.5.3.2	Sec. 1211.3.2	Sec. 1213.0	Sec. 1214.0
Table 12-5	Table 12-6	Sec. 1501.1	Sec. 1507.1

(C) The city clerk shall file a copy of the 2003 Plumbing Code with the official ordinances of the City.

1 **§ 25-12-152 CITATIONS TO THE BUILDING CODE.**
2

3 In the City Code, "Plumbing Code" means the 2003 Plumbing Code adopted by
4 Section 25-12-151 (*Plumbing Code*), as amended by Section 25-12-153 (*Local*
5 *Amendments to the Plumbing Code*).
6

7 **§ 25-12-153 LOCAL AMENDMENTS TO THE PLUMBING CODE.**
8

9 The following provisions are local amendments to the 2003 Plumbing Code. Each
10 provision in this section is a substitute for the identically numbered provision deleted by
11 Section 25-12-151(B) (*Plumbing Code*) or is an addition to the 2003 Plumbing Code.

12 **103.1.1.1 Persons Authorized to Obtain Permits.** A master plumber licensed by the
13 State of Texas and registered with the City may obtain permits required by this Code.
14 Exception: A permit may be issued to an unlicensed person for plumbing work that under
15 state law may be done by an unlicensed person.
16

17 **103.1.2 Exempt Work.** A plumbing permit is not required for the following:
18

19 **103.1.2.1** The stopping of leaks in drains, soil pipe, waste pipe or vent pipe, provided,
20 however, that the removal or replacement of a defective concealed trap, drain pipe, soil
21 pipe, waste pipe or vent pipe is new work and a permit shall be procured and inspection
22 made as provided in this Code.
23

24 **103.1.2.2** The clearing of stoppages, the repair of leaks in pipes, valves or fixtures, or the
25 removal and reinstallation of water closets, if the repairs do not involve or require the
26 replacement or rearrangement of valve, pipes, or fixtures.
27

28 **103.1.2.3** Repairs or replacement of fixtures and replacement of traps, continuous waste
29 piping, water shut-off valves, faucets, are exempt from permit requirements if the work is
30 performed in accordance with the requirements of the Plumbing Code, and does not
31 involve other city departments or inspections from other trades.
32

33 Exemption from the permit requirements of this Code is not authorization for the work to
34 be done in violation of this Code or other laws or ordinances of the City.
35

36 **103.1.3 Homestead Permit.** A person who is not licensed to perform plumbing work
37 may perform plumbing work within dwelling premises owned by the person if the person
38 has filed an affidavit with the Building Official stating that the location at which the work
39 is to be done is the affiant's homestead. Before beginning any plumbing work, the
40 unlicensed person shall obtain from the Building Official a homestead permit to do the

1 work and shall pay required permit fees. No person who has obtained a homestead permit
2 for a certain location within the proceeding 12 months shall be issued a homestead permit
3 at a different location. No person who has obtained a homestead permit shall allow or
4 cause any other person to perform plumbing work under the permit. The Building
5 Official may suspend or revoke a homestead permit under which plumbing work has
6 been performed by anyone other than the person who obtained the permit.
7

8 **103.1.4 Licensing.** Every person who enters into a contract for the installation or repair
9 of plumbing systems covered by this Code for which a permit is required shall comply
10 with licensing regulations of the State of Texas.
11

12 **103.1.4.1 Registration of Plumbers.** A plumber shall register with the City before
13 performing any work regulated by this Code. A registration fee shall be paid when a
14 license is presented for initial registration, after a license suspension, or after license
15 expiration. A new fee shall not be required for a renewal of a license before expiration.
16

17 **103.1.4.2 Landscape Irrigation.** A person licensed by the Texas Board of Irrigators shall
18 register with the City. A plumbing permit shall be purchased before installing landscape
19 irrigation or a yard sprinkler system. A registration fee is required when a license is
20 presented for initial registration, after a license suspension, or after license expiration. A
21 new fee shall not be required for a renewal of a license before expiration.
22

23 **103.1.5 Booklet Permit Program.** As an alternative to the requirements of this Code, a
24 master plumber or licensed irrigator may secure permits under the City's booklet permit
25 program. The booklet program may be applied to plumbing and irrigation within the
26 zoning jurisdiction of the City, to the water and wastewater service areas outside of the
27 city limits that require inspections, and to municipal utility districts under agreement with
28 the City of Austin.
29

30 (A) To participate in the booklet permit program the contractor must:
31

32 1. register to participate in the Booklet Program and pay an annual registration fee;
33 and
34

35 2. agree to authorize, or obtain appropriate authorization for the building official to
36 inspect sites for work completed under the booklet program.
37

38 (B) Rules for booklet permits.
39

40 1. Work done under a booklet permit may not involve work that would require a
41 permit for other trades or from other City departments.

2. A contractor must complete all sections of the permit job ticket and post the ticket on the job site prior to the commencement of the work.
3. Using a booklet permit in violation of this section of the ordinance will result in a regular permit being required at the investigation fee price.
4. A contractor must return the completed booklet to the City Permit Center before purchase of additional booklets.
5. Permit booklets must be used in sequence in which they are issued.
6. Three violations of the booklet permit program within a consecutive 12-month period of time shall result in a 12-month suspension of participation in the program. All outstanding permits shall be due to the permit center at the time of suspension and no booklet permits will be issued for a period of 12 months.

(C) Work allowed under the booklet program.

1. Plumbing - the replacement only of underground water services and unconcealed water distribution lines, unconcealed building drains and waste piping not located below a slab on grade, vent stacks, water heaters not to exceed 100 gallons or 75,000 Btu and the replacement of backflow devices.
2. Irrigation - the installation of the irrigation system; non-potable water outlets or decorative fountains cannot be installed in the irrigation system under the booklet program.
3. At least one permit from a book of permits must be inspected and pass final inspection for a booklet permit to be completed. Failure of the inspection will result in a re-inspection fee and the inspection must be rescheduled.
4. All booklet permits not used within 180 days of purchase, will expire, and must be turned in to the Permit Center.

103.1.5 Registered Industrial Plant Program. A licensed plumber may perform the following plumbing installations in a registered industrial plant, as defined by the Building Code.

Installation, repair, and replacement of fixtures, traps, shut-off valves, water distribution piping, drains, building waste piping, vent stacks and water heaters with a capacity of 100

gallons or less and a rating of 75,000 BTU or less, provided the work does not require approval of the Austin Travis County Health Department, the City of Austin Water and Wastewater Utility, or the Texas Department of License and Regulation.

A plan review fee or permit fee is not be required if records are maintained in accordance with the registered industrial plant program established in the Building Code.

103.2.1.7 Contain the name of the master plumber licensed by the State of Texas Board of Plumbing Examiners and registered with the City.

103.4 Fees

103.4.1 Permit and Plan Review Fees. Permit and plan review fees shall be established under separate ordinance by the City Council.

103.9 Solar Heating Systems. A private solar water heater or a solar recreational and therapeutic water-heating system shall be installed in accordance with the requirements of this Code and the Solar Code.

A public solar recreational and therapeutic water heating system shall be installed in accordance with the requirements of this Code, the Solar Code, and the Health Authority.

104.0 Private Sewage Systems

The Health Authority regulates private sewage disposal systems covered by this Code.

105.0 Mechanical, Plumbing and Solar Board.

Regulations regarding the Mechanical, Plumbing and Solar Board are found in Chapter 2-1 of the City Code.

106.0 Qualified Inspectors. An inspector who performs inspections under this Code must meet the following qualifications.

106.1 Chief Plumbing/Mechanical Inspector.

(1) The chief plumbing/mechanical inspector must:

a. be an employee of the City;

b. maintain a current plumbing inspector license issued by the State Board of

Plumbing Examiners;

- c. maintain a current certification as a mechanical and plumbing inspector under the certification program established by the International Code Conference or International Association of Plumbing and Mechanical Officials; and
 - d. have at least ten years of experience as a licensed master plumber or equivalent experience as a City or state licensed air conditioning and refrigeration contractor, at least three years of which must be in a responsible supervisory capacity.
- (2) Five years of inspection experience may be substituted for five years of craft experience required in Subsection 1(d) above.

106.2 A plumbing inspector must :

- a. be an employee of the City;
- b. maintain a current plumbing inspector license issued by the State Board of Plumbing Examiners;
- c. maintain a current a current certification as a plumbing inspector under the certification program established by the International Code Conference or the International Association of Plumbing and Mechanical Officials; and
- d. have at least five years of experience as a state licensed master or journeyman plumber, one year of which must be in a responsible supervisory capacity.

106.3 A person hired by the City as a commercial plumbing inspector after the effective date of this Code must become certified through the certification program established by the International Code Conference or the International Association of Plumbing and Mechanical Officials not later than one year after the date of employment.

220.0 The following definition is added to Section 220.0.

Restricted Use Restrooms: A restricted use restroom is a restroom that is immediately accessible only through one or more single occupant offices and that are located on a floor where adequate public restroom facilities are also available. A restricted use restroom is not a public restroom for purposes of this Code.

222.0 The following definition is added to Section 222.0.

1
2 **Trap, Deep Seal P-trap.** A fixture trap having a water seal of at least four inches, but not
3 more than twice the diameter of the trap arm, not to exceed twelve (12) inches. A trap
4 shall set true with respect to its water seal and, where necessary, it shall be protected from
5 freezing.
6

7 **305.2.1 Sewage System Connection Required.** The drainage system of every house or
8 building shall be separately and independently connected to an organized sewage
9 disposal system if any part of the lot or tract that contains the house or building is within
10 100 feet in horizontal distance (measured on the closest practicable access route) of an
11 organized sewage disposal system. Connection to an organized sewage disposal system is
12 not required if any one of the following applies.
13

- 14 (A) The property owner has received a written denial of service from the owner or
15 governing body of the organized disposal system.
16
17 (B) The property owner has received a written determination from the water utility that it
18 is not feasible for the building to be connected to the organized disposal system.
19
20 (C) The property is served by an existing private sewage facility and the water utility has
21 determined that the private sewage facility may continue to be used based on factors
22 such as the type of facility served, the age, condition, and capacity of the private
23 sewage facility, and the availability of records regarding the system, changes to the
24 system, or the generating unit.
25
26 (D) A composting toilet serves the property; if the Water Utility has approved the
27 disposal of liquid wastes in a private on-site sewage facility.
28

29 **313.2.1 Walls containing plumbing pipe** that is two (2) inch or three (3) inches in size
30 shall be a minimum of six (6) inches in width. Walls containing plumbing pipe of four
31 (4) inches or larger shall be sized to adequately accommodate the plumbing system but
32 shall not be less than eight (8) inches in width.
33

34 **313.7 Piping penetrations of fire resistance rated walls, partitions, floors, floor/ceiling**
35 **assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance**
36 **with the requirements of the Building Code.**
37

38 **320.0 Medical Gas and Vacuum Systems.** The installation of any medical gas and
39 vacuum system used in conjunction with human health care purposes shall comply with
40 all requirements of the current edition of the National Fire Protection Association
41 (NFPA) 99C, entitled "*Medical Gas and Vacuum Systems*". The latest edition of the

1 ANSI/ASSE Series 6000 titled "*Professional Qualifications Standards for Medical Gas*
2 *Systems Installers, Inspectors, Verifiers, Maintenance Personnel and Instructors*" shall
3 also be applicable except that which conflicts with the Texas State Board of Plumbing
4 Examiners License Law requirements.

5 6 **321.0 Requirements for Flood Plain Areas**

7 8 **321.1 Definitions**

- 9
- 10 (1) **Regulatory Flood Datum (RFD)** means an established plane of reference from which
11 elevations and depth of flooding may be determined for specific locations of the
12 flood plain in accordance with the Building Code.
- 13
- 14 (2) **W-1 spaces** means spaces that must remain completely dry during flooding to the
15 RFD. Walls must be impermeable to water and water vapor in accordance with the
16 Building Code.
- 17
- 18 (3) **W-2 spaces** means spaces that remain essentially dry during flooding to the RFD.
19 Walls must be impermeable to water, but may pass some water vapor or seep
20 slightly in accordance with the Building Code.

21

22 **321.2** For the purpose of this section, plumbing systems include sanitary and storm
23 drainage, sanitary facilities, water supply, and storm water disposal systems.

24

25 **321.3** Sanitary sewers and storm drainage systems that have openings below the RFD
26 shall be provided with automatic backwater valves or other automatic backflow devices
27 that are installed in each discharge line passing through a building exterior wall. In
28 W-1 spaces, manually operated shut-off valves that can be operated from a location above
29 the RFD shall also be installed on the lines to serve as supplementary safety provisions
30 for preventing backflow if the automatic backflow device fails.

31

32 **321.4** If the dryness of a space depends on sump pump systems, all interior storm water
33 drainage or seepage, appliance drainage, and under slab drain tile systems shall be
34 directly connected to a sump pump and discharged at an elevation of five feet above the
35 RFD.

36

37 **321.5** Septic tanks and disposal beds are not permitted in the 25-year flood hazard area.
38 In other areas within the flood hazard areas, the use of septic tanks and disposal beds for
39 sewage disposal is subject to the approval of the Health Authority.

40

1 **321.6** Potable water supply systems that are located in the flood hazard area shall be
2 designed and installed in a manner that prevents contamination from floodwaters up to
3 the RFD.
4

5 **321.7** Approved backflow preventers or devices shall be installed on main water service
6 lines to building entry locations to protect the system from backflow or back siphonage of
7 waters or other contaminants in the event of a line break. Devices shall be installed at
8 accessible locations and shall be maintained in accordance with this Code.
9

10 **402.7 Compliance with State Water Conservation Standards.** Water saving
11 performance standards for all plumbing fixtures must comply with ANSI A112.18.1 –
12 Plumbing Fixtures (Flow Capacity).
13

14 **402.8** Pre-rinse spray valves used in restaurant and food service operation shall use no
15 more than two (2) gallons per minute.
16

17 **408.6.1** Fixtures, brackets and flanges shall be set on finished walls and floors.
18

19 **Exception:** Water closets in carpeted bathrooms.
20

21 **Table 4-1.1 Minimum Plumbing Facilities for Certain Occupancies.** Table 4-1.1
22 includes the minimum fixture requirements for the following occupancies:
23

- 24 (1) Office or Public Buildings for Employee Use (5000 square feet, or less).
25 (2) Retail or Wholesale
26 (3) Exercise and Health Spas
27 (4) Restaurants, Pubs and Lounges (4500 square feet, or less).
28 (5) Libraries
29 (6) Workshops
30 (7) Warehouses
31
32

TABLE 4-1.1 Minimum Plumbing Facilities

Each building shall be provided with sanitary facilities, including provisions for the physically handicapped as prescribed by the Department having jurisdiction. For requirements for the handicapped, Texas accessibility Standards shall be used.

The total occupant load shall be determined by minimum exiting requirements. The minimum number of fixtures shall be calculated at fifty (50) percent male and fifty (50) percent female based on the total occupant load.

Type of Building Or Occupancy	Water Closets (Fixtures per Person)		Urinals (Fixtures per Person)	Lavatories (Fixtures per Person)		Drinking Fountains (Fixtures per Person) Note: (2)
	Male	Female		Male	Female	
Offices or Public Buildings for employee use (For Use with 5000 Total Square Foot or less using 100 Square Feet per person.)	Male 1:1-15 2:16-25	Female 1:1-15 2:16-25	Male 0:1-15 1:16-50	Male 1 per 40	Female 1 per 40	See note (2) for Offices.
Retail or Wholesale Libraries (use 200 square foot per occupant for the minimum number of plumbing fixtures)	Male 1:1-50 2:51-100 3:101-400 Over 400, add one for each additional 500 males	Female 1:1-50 2:51-100 3:101-200 4:201-300 5:301-400 Over 400, add one for each additional 150 females	No urinals required	One for each two water closets.		See note (2) for Retail.
Exercise and Health Spas Libraries (use 50 square foot per occupant for the minimum number of plumbing fixtures)	Male 1:1-30 2:31-60 Over 60 add 1 fixture for each 40 males	Female 1:1-30 2:31-60 Over 60 and 2 fixtures for each 40 females	No urinals required	Male 1: 1-60 2: 61-120 Add 1 fixture for each additional 60 persons No urinals required	Female 1:1-60 2:61-120 Add 1 fixture for each additional 60 persons	One drinking fountain for the first 150 person, and one additional fountain for each additional 300 persons thereafter.
Restaurants, Pubs and Lounges (for use with up to 4500 square feet of space. Libraries (use 15 square foot per occupant for the minimum number of plumbing fixtures)	Male 1:1-50 2:51-150	Female 1:1-25 2:26-50 3:51-150	Male 1:1-150	Male: 1:151-200 2:151-200	Female 1:1-150 2:151-200	None required.
Libraries (use 50 square foot per occupant for the minimum number of plumbing fixtures)	Male 1:1-50 2:51-300 Over 300 add 1 fixture for each additional 300 males	Female 1:1-10 2:11-15 3:25-50 4:51-75 5:76-100 Over 100 add one fixture for each additional 300 females.	No urinals required	Male 1:1-100 2:100-300 Over 300, add 1 fixture for each additional 300 males	Female 1:1-100 2:100-300 Add 2 fixtures for each additional 300 females	1:1-150 Occupants

Workshops and Foundries (Use 2000 Square feet per occupant for the minimum number of plumbing fixtures)	Male 1:1-10 2:11-15 3:25-50 4:51-75 5:76-100 Over 100 persons, add one fixture for each additional 300 males and females.	Female 1:1-10 2:11-15 3:25-50 4:51-75 5:76-100 Over 100 persons, add one fixture for each additional 300 females.	No urinals required.	One for each two water closets.	See note (2) for Warehouses
Warehouses (Use 5000 Square feet per occupant for the minimum number of plumbing fixtures)	Male 1:1-10 2:11-15 3:25-50 4:51-75 5:76-100 Over 100 persons, add one fixture for each additional 300 males.	Female 1:1-10 2:11-15 3:25-50 4:51-75 5:76-100 Over 100 persons, add one fixture for each additional 300 females.	No urinals required	One per 40 occupants of each sex.	See note (2) for Warehouses

Table 4-1.1 Footnotes.

- (1) Location and quantity of hand washing facilities (lavatory or hand sink) shall meet the requirements of the Health Department.
- (2) Mercantile and Business occupancies consisting of 5000 square feet or less shall have one drinking fountain, or an accessible break room sink for public and employee use. Each floor occupied shall have one accessible drinking fountain and/or a break room sink.

412.11.1 Accessible Shower Stalls. A room that contains an accessible shower that measures thirty inches by sixty inches that is a roll-in accessible shower stall shall be equipped with a Code-approved emergency floor drain.

501.0 General.

1 The regulations of this chapter shall govern the construction, location, and installation of
2 fuel burning and other water heaters heating potable water, together with all chimneys,
3 vents, and their connectors.
4

5 All design, construction, and workmanship shall be in conformity with accepted
6 engineering practices, manufacturer's installation instructions, and applicable standards
7 and shall be of such character as to secure the results sought to be obtained by this Code.
8 No water heater shall be hereinafter installed which does not comply in all respects with
9 the type and model of each size thereof approved by the Authority Having Jurisdiction.
10 A list of accepted gas equipment standards is included in Table 14-1.
11

12 **501.1 Water Heater Location.** The total developed length of water piping from the
13 outlet of the water heater to the inlet of the furthest fixture served by the water piping
14 may not be greater than 70 feet, unless the water heater is installed with a gravity flow
15 design system or a mechanical pump to provide continuous hot water to the fixture or
16 with additional water heaters.
17

18 **501.1.1 Compliance with the Energy Code Required.** Water heaters installed after the
19 effective date of this Code in sites served by the City's electric utility shall comply with
20 the Energy Code. All replacement electrical equipment must comply with the Energy
21 Code.
22

23 **Exception:** An original electric heater installed before March 1, 1985 may be
24 replaced with an electric heater of the same amperage or less.
25

26 **507.1.1. A new exception is added.**
27

28 **Exception No. 3.** Outside air shall not be obtained by any means that violates the
29 Energy Code.
30

31 **508.4 Protection From Damage.** When a water heater is located in an attic or furred
32 space where damage may occur from a leaking water heater, a watertight pan of
33 corrosion resistant materials shall be installed beneath the water heater with a minimum
34 three-quarter (3/4) inch diameter drain to an approve location. The water heater pan shall
35 have a depth of two (2) inches and have a diameter that is two (2) inches larger than the
36 water heater.
37

38 **508.28 Access and Working Space** A water heater installation shall be accessible for
39 inspection, repair, or replacement. The appliance space shall be provided with an opening
40 or doorway of sufficient size to remove the water heater. The openings or doorways must
41 be at least twenty-four (24) inches in width and three (3) inches higher than the water

1 heater to be installed. The access shall be continuous and shall be accomplished by one or
2 more of the methods described in this section.

3
4 **508.28.1** By an opening or door, the passageway not less than two twenty-four (24)
5 inches in width and large enough to permit removal of the water heater, but not less than
6 thirty (30) inches in height. Stairways and ramps that lead to or are a part of the
7 passageway shall comply with the Building Code.

8
9 **508.28.2** For an attic, roof, mezzanine, or platform that is more than eight (8) feet above
10 ground level or floor level, by a stairway or ladder permanently fastened to the building.
11 The ladder or stairway may not be more than eighteen (18) feet in length between
12 landings and not less than fourteen (14) inches in width. The ladder shall have rungs
13 spaced not more than fourteen (14) inches center to center and not less than six (6) inches
14 from the face of the wall. Each stile shall extend thirty (30) inches above the surface to be
15 reached or as high as possible if height is limited. Permanent ladders for water heater
16 accesses are not required at parapets or walls less than thirty (30) inches in height.

17
18 **Exception:** Permanent ladders or platforms are not required for electric water
19 heaters with a capacity of seventeen (17) gallons or less.

20
21 **508.28.3** By a trap door or opening and passageway not less than thirty (30) inches by
22 thirty (30) inches in size, but in no case smaller than the water heater. The unobstructed
23 passageway shall be continuous from the trap door or opening to the water heater. The
24 catwalk shall be level and free of any obstruction to allow safe removal of the water
25 heater. The trap door or opening shall be located not more than twenty (20) feet from the
26 water heater.

27
28 **603.1.1 Cross Connection Control-Other Requirements.** In addition to requirements
29 under this Code, cross connection control shall be provided in accordance with Chapter
30 15-1 of the City Code.

31
32 **609.1.1 Freeze Protection.** The following list of plumbing installations are acceptable
33 methods of providing freeze protection.

- 34
35 (1) Shutoff valves. Property owner shutoff valves located in the ground at the water
36 meter that meet American Water Works Association standards.
37
38 (2) Insulated exterior walls. If the wall member is six (6) inches or greater in nominal
39 width, the piping may be placed on the conditioned side of the wall insulation and no
40 additional pipe insulation is required.
41

- (3) If the wall is less than six inches nominal width, the piping shall be insulated with material that has an R-value of at least four (4). The water piping and the pipe insulation shall be placed on the conditioned side of the wall.
- (4) Uninsulated exterior walls, attics and crawl spaces. All water piping installed in uninsulated exterior walls and unconditioned crawl spaces shall be protected by pipe insulation with a minimum R-value of four (4). All water piping installed in attics above the building insulation shall be protected with pipe insulation having an R-value of at least four (4).
- (5) Exterior hose bibs. Exterior hose bibs shall be self-draining and frost-resistant with an integral backflow preventer. Standard hose bibs shall be protected by adding pipe insulation with an R-value of at least four (4) up to the edge or wall flange of the hose bib.

609.1.2 Pipe Insulation wall thickness for domestic hot water run-outs and circulation shall be in accordance to Table 6-9 for sizes of pipe and thicknesses of insulation.

Table 6-9		Nominal Pipe Sizes and Insulation Thicknesses			
Service Water-Heating Temperatures Fahrenheit	Non-recirculation run outs	Circulating mains and run outs			
	Up to 1"	Up to 1.25"	1.5" to 2"	Over 2"	
170-180	0.5	1.0	1.5	2.0	
140-169	0.5	0.5	1.0	1.5	
100-139	0.5	0.5	0.5	1.0	

609.11 Heat Traps. Water heaters with vertical pipe risers shall have a heat trap on both the inlet and the outlet of the water heater unless the water heater has an integral heat trap or is part of a circulating system.

609.12 Private Fire Lines. Private fire lines shall be installed in accordance with the latest standards of the National Fire Protection Association (NFPA) 24 *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, published by the National Fire Protection Association, as adopted by the Austin Fire Department *Fire Protection Criteria Manual*. Private fire lines shall adhere to NFPA 25 *Standard for the*

1 *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems as*
2 *required by the Austin Fire Department.*

3
4 **612.0 Plumbing for Multi-family Sub-meters.** All multi-family housing units,
5 including, but not limited to, apartments, condominiums, and mixed-use facilities, shall
6 have single cold water stub-outs supplying all fixtures in each dwelling unit supplied by
7 the master meter in order to make possible the installation of private meters. Each stub
8 out shall have a full opening shut off valve immediately ahead of the sixteen (16) inch
9 section of pipe provided for the private meter location. The length of pipe shall have a
10 clearance of at least four (4) inches on all sides to facilitate the installation of a private
11 meter. The location of the straight pipe for the private meter installation must be
12 accessible for reading, testing and inspection of the private meter.

13
14 **613.0 Once Through Cooling.** The use of potable water for once through cooling of
15 commercial equipment including, but not limited to, ice machines, ice cream machines,
16 refrigerators, coolers, freezers, air conditioning equipment and condensers for dry
17 cleaning equipment is prohibited unless 100 percent of potable water is returned for non-
18 potable uses such as cooling tower make up or other approved uses for any new
19 installation.

20
21 **704.3 Fixture Connections.** Pot sinks, scullery sinks, and dishwashing sinks, silverware
22 sinks, commercial dishwashing machines, silverware-washing machines, and other
23 similar fixtures shall be connected indirectly to the drainage system.

24
25 **707.4** A new exception is added.

26
27 **Exception 5.** A two-way tee with a maximum eighteen (18) inch extension may be
28 installed as a cleanout on a four (4) inch sewer line.

29
30 **710.3.3 Ejectors and Sumps.** Unless otherwise approved by the Authority Having
31 Jurisdiction, in other than single-family and two-family dwelling units located on a single
32 lot, the ejector or pump shall be capable of passing a two (2) inch diameter solid ball and
33 the discharge piping of each ejector or pump shall have a backwater valve and gate valve,
34 and be a minimum of two (2) inch in diameter.

35
36 **710.7.1 Fitting Allowance.** The installation of schedule 40 polyvinyl chloride pressure
37 wyes, schedule 40 polyvinyl chloride pressure couplings and schedule 40 polyvinyl
38 chloride pressure 45 degree bends shall be allowed for drainage of the discharge line
39 from an ejector, pump, or other mechanical devices.
40

1 **710.9.1 Single Sumps.** A one and two-fixture unit fixture that is not a required plumbing
2 fixture under this Code, may be served by a single pump ejector system.

3
4 **Exception 1:** A single pump ejector system serving an accessible break room sink
5 with a one and one-half (1 ½) inch outlet and a one and one-half (1 ½) inch inlet
6 shall be allowed.

7
8 **Exception 2:** A one and one-half (1 ½) inch outlet service sink is allowed to be
9 drained by means of a single pump ejector system.

10
11 **712.0 Testing.**

12
13 **712.1 Media.** The piping of the plumbing, drainage, and venting systems shall be tested
14 with water or air. The level of the water shall be filled to the top and be visible so that an
15 inspector may mark the level of the water. The Authority Having Jurisdiction may require
16 the removal of any cleanouts, etc., to ascertain whether the pressure has reached all parts
17 of the system.

18
19 **712.2 Testing Procedures for Drain, Waste and Vent Piping.**

- 20 (1) The waste and drainage system may be tested with a water test, or an air test.
- 21
- 22 (2) When moister conditions make it impracticable to verify tightness of joints in a
23 drainage system with a water test, the system shall be tested with air using a Class
24 1A diaphragm test gauge calibrated to an accuracy of ±1 percent of the span. Refer
25 to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.
- 26
- 27 (3) A water and or air test shall be maintained at least fifteen (15) minutes prior to the
28 start of the inspection.
- 29
- 30 (4) The entire portion of the system tested shall be subjected to a three (3) pound per
31 square inch air test for fifteen (15) minutes.
- 32
- 33 (5) Any leaks detected from water or air test shall be corrected, re-tested and inspected
34 until work is found to be tight and conforms to this Code. To test with a water test in
35 a single story building, soil and waste stacks shall be plugged and filled with water
36 to provide a minimum of five foot head-pressure at a point where the house sewer
37 connects to the house drain. Risers shall not be filled until the entire system is full.
- 38

- 1 (6) In a multistory building, storm drainage stacks shall be plugged and filled to a point
2 of 42 inches above the top of the floor for a partial test or through the roof to the
3 overflow of the roof drain, whichever is applicable.
4
- 5 (7) A person may not use cement, sealing wax, resin, paint, tallow, or other materials
6 that may prevent the detection of cracks, holes or other imperfections on any
7 material used in the plumbing system.
8
- 9 (8) When a floor drain, floor sink, or other indirect waste receptor has a piping
10 connection below ground floor level that was not tested on the initial rough-in test,
11 the following requirements shall be met.
12
- 13 (a) A water test shall be readministered for the portion of the drain, waste and vent
14 system below ground floor level.
15
- 16 (b) The drain shall be filled to a point of overflow.
17
- 18 (c) Sinks shall tested by filling the drain to the point of overflow at the time that the
19 plumbing copper inspection and before the slab is poured.
20

21 **712.3 Trench Drains.** All pre-manufactured trench drains shall be tested in place to
22 assure the tightness of the drain by plugging the drain and filling the drain with water to
23 the overflow of the trench drain. This test shall be performed before the concrete is
24 poured in place.
25

26 **713.4** Austin Water Utility shall determine the availability of the public sewer for any
27 proposed building or exterior drainage facility on any lot or premises, which abuts and is
28 served by such sewer.
29

30 **713.6** A new exception is added.
31

32 **Exception.** The Health Authority shall regulate existing private sewage disposal
33 systems.
34

35 **715.1** A new exception is added.
36

37 **Exception.** For sewer lines that are smaller than four inches in diameter, the sewer
38 pipe materials shall be of the same material required for under or with the building.
39

40 **723.1 Manhole Test.** Manholes shall be tested with water by plugging all outlets and
41 filling the manhole to the overflow. A water test must be performed when the manhole is

1 fully exposed with no visible leakage. Manholes may be tested with air by plugging all
2 inlets and outlets and vacuum tested with five (5) inches of vacuum for five (5) minutes
3 with no loss.
4

5 **801.3 Bar and Fountain Sink Traps.** Where the sink in a bar, soda fountain or counter
6 is so located that the trap serving the sink cannot be vented, the sink drain shall discharge
7 through an air gap or air break (see Section 801.2.3) into an approved receptor which is
8 vented. The developed length from the fixture outlet to the receptor shall not exceed
9 fifteen (15) feet.
10

11 **804.1** A new exception is added.
12

13 **Exception.** Hub drains receiving the discharge from water heater T & P drains, pan
14 drains, condensation drains and other similar drains may be located under kitchen
15 sink cabinets, water heater closets, walk-in storage rooms and other similar
16 accessible locations.
17

18 **807.4 Domestic Dishwashing Machines.** A domestic dishwashing machine may not be
19 directly connected to a drainage system or food waste disposal:
20

- 21 (1) unless an approved dishwasher air-gap fitting is used on the discharge side of the
22 dishwashing machine; or
23
24 (2) if the discharge line from the dishwasher is looped up and securely fastened to the
25 underside of the counter, then the discharge may be connected either to the chamber
26 of the food waste grinder or to a wye fitting between the food waste grinder outlet
27 and the trap inlet or to a branch tailpiece fitting above the trap inlet.
28

29 **905.3 Vent Pipe Grades and Connections** Unless prohibited by structural conditions,
30 each vent shall rise vertically to a point not less than six inches above the flood level rim
31 of the fixture served before offsetting horizontally, and whenever two or more vent pipes
32 converge, each such vent pipe shall rise to a point at least six inches in height above the
33 flood level rim of the plumbing fixture it serves before being connected to any other vent.
34 Vents that offset horizontally below the flood level rim of the fixture shall be installed
35 with approved drainage fittings and materials, shall be graded to a drain and shall be
36 served with a cleanout.
37

38 **Exception:** Horizontal wet venting may be installed in accordance with
39 Section 911.0 (*Horizontal Wet Venting*) when shown on the approved plans.
40

41 **909.0 Special Venting for Island Fixtures.** A new exception is added.

1
2 **Exception:** Deep seal P-traps may be installed under the floor of island fixtures if
3 the trap and trap vent are at least at least two inches in diameter and the trap vent is
4 located in the nearest partition wall. The vent riser shall contain a cleanout and the
5 vent shall continue through the roof to open air. The vent shall take off no more
6 than three feet downstream from the trap being served. Pipe sizing for island
7 fixtures shall be in accordance with this Code.
8

9 **911.0 Horizontal Wet Venting**

10 **911.1 Definitions**

11 **Double bathroom group** is a group of fixtures consisting of no more than two water
12 closets, two or more lavatories, and no more than two bathtubs or showers serving two
13 separate dwelling units or located in a separate bathroom within the same dwelling unit.
14

15 **Single bathroom group** means a group of fixtures consisting of no more than one water
16 closet, one or more lavatories, and a bathtub or shower serving a dwelling unit.
17

18 **911.2.** No more than one single bathroom group may drain into a two-inch diameter wet
19 vent. No more than one double bathroom group may drain into a three-inch diameter wet
20 vent.
21

22 **911.3** Water closets, floor drains, and indirect waste receptors may be horizontally wet
23 vented with fixtures that are not more than one or two fixture units in size. No more than
24 two fixtures may be located on the horizontal wet vent section of the water closet, floor
25 drain, or indirect waste receptors.
26

27 **911.4** Horizontal wet vented pipe shall be served with a minimum two-inch cleanout.
28

29 **1009.2 Approval.** Austin Water Utility shall approve the size, design, type, and location
30 of each interceptor or separator. Except as otherwise specifically permitted in the City
31 Code, wastes other than those requiring treatment or separation, may not be discharged
32 into any interceptor.
33

34 **Exception:** Interceptors or separators on a septic system must meet requirements
35 established by the Health Authority.
36

37 **1011.1 Auto Wash Drains.** Water shall drain or discharge into an approved mud box
38 and then into an interceptor (clarifier) of an approved design.

1 **1011.2 Car Wash Equipment.** New installation of car wash equipment except for self
2 service (spray wand) type systems shall be sleeved or piped under the slab to
3 accommodate future reuse equipment that can be easily installed underground and run to
4 an area where a water reclaim system would be anticipated to be installed. The sleeve or
5 piping shall extend approximately 24 inches past the exterior wall from the car wash
6 equipment room and 18 inches from the interior wall. Both ends of the sleeve or piping
7 shall be equipped with a cleanout extended to grade.

8
9 **1014.1** When pretreatment is required, an approved type grease trap complying with
10 Austin Water Utility regulations shall be installed in the waste leading from sinks, drains,
11 and other fixtures or equipment. Grease traps are required in commercial or institutional
12 food preparation business, including; food processors, bakeries, restaurants, schools,
13 hospitals, retirement homes, assisted living centers, grocery stores or other commercial or
14 institutional food preparation facilities where grease may be introduced into the drainage
15 or sewage system in quantities that can effect line stoppage or hinder sewage treatment or
16 private sewage disposal. A grease trap is not required for one-and-two-family dwelling
17 units.

18
19 **1014.4** Austin Water Utility shall determine the minimum liquid holding volume of
20 grease traps/interceptors and sand and grit traps/interceptors.

21
22 **1017.1** When interceptors are required in any facility that has oily, flammable, or both
23 types of waste, the waste shall be collected into an approved hold haul tank by gravity or
24 pumps. The tanks and pumps shall be accessible and shall be vented to the atmosphere in
25 a Code- approved manner.

26
27 **1017.2 Design.** Austin Water Utility shall approve the design of interceptors.

28
29 **1017.3 Interceptor and Grease Trap Testing.** An interceptor and grease trap shall be
30 field tested by applying a minimum of a one-inch (1") water column above the lid seal of
31 the interceptor.

32
33 **1101.1 Where Required.** Roofs and courtyards shall be drained into a separate storm
34 sewer system or to some other place of disposal satisfactory to the administrative
35 authority. For one and two-family dwellings, storm water may be discharged on flat areas
36 such as streets or lawns so long as the storm water shall flow away from the building and
37 away from adjoining property and shall not create a nuisance.

38
39 **1101.3 Materials for Rainwater Piping.** Rainwater piping placed within the interior of a
40 building or run within a vent or shaft shall be of cast iron, galvanized steel, wrought iron,

1 brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC, DWV, or other approved
2 materials and change in direction shall conform to the requirements of Section 706.0.
3 ABS and PVC DWV piping installations shall be installed in accordance with IS #5 and
4 IS #9. Fire stopping ABS and PVC shall comply with the Building Code.

5
6 **1101.5 Subsoil Drains.** When required by the Authority Having Jurisdiction, subsoil
7 drains shall be provided around the perimeter of buildings having basements, cellars,
8 crawl spaces or floors below grade. Such subsoil drains may be positioned inside or
9 outside of the footing, shall be of perforated or open jointed approved drain tile or pipe
10 not less than three (3) inches (80 mm) in diameter, and shall be laid in gravel, slag,
11 crushed rock, approved three-quarter (3/4) inch (19.1 mm) crushed recycled glass
12 aggregate, or other approved porous material with a minimum of four (4) inches (102
13 mm) surrounding the pipe on all sides. Filter media shall be provided for exterior subsoil
14 piping.

15
16 **1102.1.1 Conductors.** The materials for conductors within the footprint of the building
17 shall be the same as required for a drain, waste and vent system.

18 **1102.2.1 Leaders.** The material for leaders within the footprint of the building shall be
19 the same as required for a drain, waste and vent system.

20 **1106.5 Sizing of Rain Piping.** Sizing of rainwater piping is based upon maximum of
21 five inches (5") of rainfall per hour falling upon a given roof area in square feet. Five
22 inches per hour shall be used for sizing both primary rainwater systems and overflow or
23 emergency rainwater systems.

24
25 **1108.3 Window Areaway Drains.** Window areaway drains must terminate to an
26 approved location as approved by the Authority Having Jurisdiction. Window areaways
27 not exceeding ten (10) square feet in area may discharge to the subsoil drain through a
28 two (2) inch discharge pipe. However, areaways exceeding ten (10) square feet in area
29 shall be drained to an approved storm drainage system.

30
31 **1109.2 Methods of Testing Storm Drainage Systems.** Except for outside leaders and
32 perforated or open jointed drain tile, the piping of storm drain systems shall be tested
33 upon completion of the rough piping installation by water or air, and proved tight. The
34 Authority Having Jurisdiction may require the removal of any cleanout plugs to ascertain
35 if the pressure has reached all parts of the system. Either of the following test methods
36 shall be used.

37
38 **1109.2.1 Test Procedures for Material other than Polyvinyl Chloride (PVC)**
39 **Drainage Piping.** This section applies to material other than PVC drainage piping (for
40 example, cast iron).

- (1) The storm drainage system may be tested with a water test or an air test.
- (2) When utilizing a water test, the level of the water shall be visible so that an inspector may mark the level of the water unless the system is filled to the point of overflow.
- (3) A water and or air test shall be maintained at least fifteen (15) minutes prior to the start of the inspection.
- (4) If tested with air, the entire portion of the system tested shall be subjected to a five (5) pound per square inch air test for fifteen (15) minutes.
- (5) When moister conditions make it impracticable to verify tightness of joints in a drainage system with a water test, the system shall be tested with air using a Class 1A diaphragm test gauge calibrated to an accuracy of ± 1 percent of the span. Refer to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.
- (6) To test with a water test in a single story building, storm water system stacks shall be plugged and completely filled with water to provide a minimum of ten (10) foot head-pressure at the highest portion of the system being tested, or to a point of roof drain overflow.
- (7) In a multistory building storm water system stacks shall be plugged and filled to a point of overflow at the roof drain, or in sectional test the roof drainage system shall be tested with a minimum of a ten (10) foot head of water or a five (5) pound per square inch air test for fifteen (15) minutes.
- (8) Any leaks detected from water or air test shall be corrected, re-tested and inspected until work is found to be tight and conforms to this Code.
- (9) A person may not use cement, sealing wax, resin, paint, tallow, or other materials that may prevent the detection of cracks, holes or other imperfections on any material used in the plumbing system.

1109.2.2 Testing Procedures for Drain, Waste, and Venting Plastic Piping.

- (1) A PVC drainage system shall be tested utilizing water.
- (2) The level of the water shall be visible so that an inspector may mark the level of the water.

- 1 (3) To test with a water test in a single story building, storm water system stacks shall
2 be plugged and completely filled with water to provide a minimum of ten (10) foot
3 head-pressure at the highest portion of the system being tested, or to a point of roof
4 drain overflow.
5
6 (4) In a multistory building the storm water system stacks shall be plugged and filled to
7 a point of overflow at the roof drain, or a sectional test of the roof drainage system
8 shall be allowable when tested with a minimum of a ten (10) foot head of water, or a
9 three (3) pound per square inch air test for fifteen (15) minutes after the system has
10 been filled with water and the system is full of water at the time of the air test.
11
12 (5) When moister conditions make it impracticable to verify tightness of joints in a
13 drainage system with a water test, the system shall be tested with air using a Class
14 1A diaphragm test gauge calibrated to an accuracy of $\pm 1\%$ of the span. Refer to
15 Section 319.0 (*Test Gauges*) of this Code for gauge requirements.
16
17 (6) A water and or air test shall be maintained at least fifteen (15) minutes prior to the
18 start of the inspection.
19
20 (7) The entire portion of the system tested shall be subjected to a three (3) pound per
21 square inch air test for fifteen (15) minutes.
22
23 (8) Any leaks detected from water or air test shall be corrected, re-tested and inspected
24 until work is found to be tight and conforms to this Code.
25
26 (9) A person may not use cement, sealing wax, resin, paint, tallow, or other materials
27 that may prevent the detection of cracks, holes or other imperfections on any
28 material used in the plumbing system.
29

30 **1202.0 General** The regulations of this chapter govern the installation of all fuel gas
31 piping in or connected to a building or structure and to fuel gas piping installed on private
32 property that is not gas utility service pipe. Installation of liquefied petroleum gas piping
33 shall comply with standards established by the State and by the Fire Code.
34

35 **1204.3.1 Top Out Inspection.** This inspection shall be made after all piping authorized
36 by the permit has been installed, before the portions of the piping that are to be covered
37 or concealed are concealed, and before any fixture, appliance or shutoff valve has been
38 attached to the pipe.
39

- 40 1) **Low Pressure Gas Test.** This inspection shall include an air, carbon dioxide, or
41 nitrogen pressure test. The test pressure for gas piping may not be less than fifteen

(15) pounds per square inch gauge pressure. Test pressures shall be held for at least fifteen (15) minutes with no perceptible drop in pressure or for a longer time if determined necessary by the Building Official. A Bourdon tube ("Spring") gage may be utilized for this test. Refer to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.

- 2) **Medium Pressure Gas Test.** For welded piping and for piping that carries gas at pressures of more than fourteen (14) inches water column pressure, the test pressure may not be less than sixty (60) pounds per square inch and shall be continued for a length of time satisfactory to the Building Official, but in no case for less than thirty (30) minutes. These tests shall be made using air, carbon dioxide, or nitrogen pressure only, and shall be made in the presence of the inspector. All necessary apparatus for conducting tests shall be furnished by the permittee. Test pressures shall be held for at least fifteen (15) minutes with no perceptible drop in pressure or for a longer time if determined necessary by the Building Official. A Bourdon tube ("Spring") gage may be utilized for this test. Refer to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.

1204.3.2 Final Gas Inspection. The final test on the gas piping shall be made after the water heaters, floor furnaces, and gas appliance shutoff valves have been installed. Whenever changes or extensions are made to any existing gas piping from a point where no gas stop valve has been provided in the original gas system, the responsible plumber or responsible person shall prepare the entire system for inspection and testing.

- (1) **Low Pressure Final Gas Test.** A low-pressure gas distribution system shall be tested with a minimum of five (5) pounds of air, carbon dioxide, or nitrogen pressure for ten (10) minutes using a *Class 1A* diaphragm gauge test gauge calibrated to an accuracy of $\pm 1\%$ of the span. Refer to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.
- (2) **Medium Pressure Final Gas Test.** A medium pressure gas distribution system shall be tested with a ten (10) pound per square inch test for the entire medium pressure gas system using a *Class 1A* diaphragm calibrated to an accuracy of $\pm 1\%$ of the span. The test shall hold tight for at least 30 minutes. Refer to Section 319.0 (*Test Gauges*) of this Code for gauge requirements.
- (3) The permittee shall notify the plumbing inspector when the system is ready for final inspection and arrange for the buildings to be unlocked so the inspector may enter the buildings.

- 1 (4) The testing equipment and labor necessary for making the required tests and
2 inspections shall be furnished by the permittee.
3

4 **1204.4 Pulled Meters, Gas Repair, and Remodeling.**

5
6 **1204.4.1 Definitions.**
7

8 **Pulled Gas Meter.** A pulled meter is an active gas system that has been terminated by
9 the gas supplier because of a Code violation that will require a permit and inspection by
10 the City to verify that the system meets the requirements of the Code before restoring gas
11 service to the customer. Refer to the pulled gas meter procedures in Section 1204.4.2
12 (*Pulled Natural Gas Meter Inspection Criteria*).
13

14 **1204.4.2 Pulled Natural Gas Meter Inspection Criteria.** The following requirements
15 must be met before the inspector may authorize a final inspection on a plumbing permit:
16

17 (1) **Pulled Meter Testing Pressure Requirements.**
18

- 19 (a) **Low Pressure Test.** A five (5) pound per square inch test shall be made on the
20 entire low-pressure natural gas system using a Class 1A diaphragm test gauge
21 calibrated to an accuracy of ± 1 percent of the span. The test shall hold tight for
22 at least fifteen (15) minutes. Refer to Section 319.0 (*Test Gauges*) of this Code
23 for gauge requirements.
24
25 (b) **Medium Pressure Test.** A ten (10) pound per square inch test is required for the
26 entire medium pressure gas system using a Class 1A diaphragm test gauge
27 calibrated to an accuracy of ± 1 percent of the span. The test shall hold tight for
28 at least 30 minutes. Refer to Section 319.0 (*Test Gauges*) of this Code for
29 gauge requirements.
30

- 31 (2) **All natural gas piping, valves, connectors, and appliances that have been installed**
32 **under a pulled meter plumbing permit must meet current Plumbing Code and**
33 **Mechanical Code standards.**
34

- 35 (3) **Existing gas valves no longer in use shall be capped if an adequate number of outlets**
36 **are available to provide a temperature of 70 degrees three feet above the floor in**
37 **habitable rooms. All existing valves that leak shall be replaced with listed valves and**
38 **connectors.**
39

- 40 (4) **All rubber hose gas connectors shall be replaced with listed connectors.**

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- (5) Existing single wall vent piping for gas appliances and water heaters may be retained if all of the following conditions are met:
 - (a) the vent is properly sized for the application serviced;
 - (b) the vent is properly connected for the appliance;
 - (c) the vent is not rusted or deteriorated; and
 - (d) the vent terminates above the roofline and has a minimum two-inch clearance from combustibles at all points.
 - (6) Existing water heaters must have operable temperature and pressure relief valves and properly sized relief lines (where practical). If water heaters lack an opening for a properly sized temperature and pressure relief valve, a pressure relief valve shall be installed on the hot water side of the water heater.
 - (7) All natural gas appliances shall be provided with combustion air in accordance with the product listing. If no combustion air is provided for an existing gas appliance, properly sized louvers in doors or ducts shall be placed in proper locations.
 - (8) Except for enclosed water heaters located in existing closets with weather-stripped tight fitting doors, all existing or replacement gas water heaters located in garages shall be at least 18 inches above the finished floor level unless the water heater is listed to be located at finished floor level and is protected from damage in accordance with the code. Water heaters located in tight fitting closets must obtain combustion air from approved locations.
 - (9) Battery operated smoke detectors shall be installed within three foot of the entrance of each sleeping room of the dwelling units.

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1211.3.2 Connections. Pipe connections such as elbows, tees, and couplings shall be used.

- (1) Where gas piping is to be concealed and where unions are necessary, right and left nipples and couplings shall be used.
- (2) Ground-joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve.

1 (3) Heavy duty flanged type unions may be used in special cases, when first approved
2 by the Administrative Authority. Bushings shall not be used in concealed locations.
3

4 **Exception:** Unions for emergency hood fire suppression systems, shut-off valves
5 and regulators may be installed in accessible locations.
6

7 **1213.0 Liquefied Petroleum Gas Systems.** In addition to requirements of Texas State
8 Board of Plumbing Examiners requirements for plumbing licenses, other regulatory
9 authorities, including the State of Texas Railroad Commission and the Fire Department,
10 may require additional certifications or licenses for the installation of gas piping and
11 appurtenances. These certifications may include certified welder, certified installer of
12 factory designed gas piping systems, and certified or licensed LP Gas piping installer.
13 On completion of the installation, alteration, repair, or testing of the gas piping system,
14 the installer shall identify all piping installations requiring such certified or licensed
15 personnel. The installer shall attach to the end of the piping nearest the service entrance a
16 decal or tag of metal or other permanent material indicating the following information:
17

- 18 (1) the installer's name;
19
20 (2) the license and/or certification number; and
21
22 (3) the date the piping was installed, altered, repaired or tested.
23

24 **1213.1 Liquefied Petroleum Approval.** The City of Austin Fire Department shall
25 approve the liquefied petroleum gas container size, location and service line to the
26 building.
27

28 **1214.0. Detection of Leaks and Defects.**
29

30 **1214.1** The piping system shall withstand the test pressure specified without showing any
31 evidence of leakage or other defects. Any reduction of test pressures as indicated by
32 pressure gauges shall be deemed to indicate the presence of a leak unless such reduction
33 can be readily attributed to some other cause.
34

35 **1214.2** The leakage shall be located by means of an approved gas detector, a
36 noncorrosive leak detection fluid, or other approved leak detection methods. Matches,
37 candles, open flames, or other methods that provide a source of ignition shall not be used.
38

39 **1218.0 Multiple Buildings on a Single Lot.** A business or apartment complex with
40 more than one building on a single lot or one master gas meter serving a single lot must

1 secure separate permits for each building (for example, an apartment complex with 20
2 separate buildings will need 20 separate permits).

- 3
- 4 (1) Buildings with multiple meters must have each meter identified.
- 5
- 6 (2) Existing life-safety conditions that are unsafe and that violate this Code shall be
7 corrected before a gas plumbing system is approved.
- 8
- 9 (3) Existing conditions created by installations made under prior regulations that do not
10 create life-safety hazards may remain.
- 11

12 **1302.0.1 Medical Gas and Vacuum Piping Systems.** The medical gas installer shall
13 present a copy of his medical gas endorsement to the plumbing inspector before the first
14 inspection.

15

16 **1312.1.1 Medical Gas Plan Review and Permits.** Plans shall be submitted for review of
17 a new or revised medical gas system. An engineer licensed with the State of Texas shall
18 design plans for medical gas systems. After approval of the medical gas plan, a master
19 plumber licensed by the State of Texas with a current medical gas endorsement shall
20 secure a medical gas permit. This permit shall be for medical gas installations and
21 alterations of a medical gas system.

22

23 **1505.1 Conflicts.** If there is a conflict between the Plumbing Code, Fire Code or
24 Building Code regarding firestop protection, the most stringent code requirement shall
25 prevail.

26

27 **Appendix E, Section E3.1**

28

29 This Code applies to mobile home parks and recreational vehicle parks within the zoning
30 jurisdiction of the City and to mobile home parks or recreational vehicle parks connected
31 to the City water or sewage system.

1 **PART 2.** This ordinance takes effect on December 31, 2005, at 11:59 p.m.

2
3 **PASSED AND APPROVED**

4
5
6
7 _____, 2005

§
§
§

8 _____
9 Will Wynn
Mayor

10
11
12 **APPROVED:** _____
13 David Allan Smith
14 City Attorney

15 **ATTEST:** _____
16 Shirley A. Brown
City Clerk