

CHAPTER 25  
STATE PLUMBING CODE

[Prior to 7/29/87, see Health Department[470] Ch 25]

**641—25.1(105) Adoption.** Sections 101 and 102 and Chapters 2 to 17 of the Uniform Plumbing Code, 2021 Edition, as published by the International Association of Plumbing and Mechanical Officials, 4755 E. Philadelphia Street, Ontario, California 91761-2816, are hereby adopted by reference with amendments as the state plumbing code authorized by Iowa Code section 105.4. Portions of this chapter reproduce excerpts from the 2021 International Plumbing Code; Copyright 2020; Washington, D.C.: International Code Council. Such excerpts are reproduced with permission, all rights reserved.

[www.ICCSAFE.org](http://www.ICCSAFE.org)

[ARC 8860B, IAB 6/16/10, effective 7/21/10; ARC 1089C, IAB 10/16/13, effective 11/20/13; ARC 2474C, IAB 3/30/16, effective 6/1/16; ARC 3062C, IAB 5/10/17, effective 6/14/17; ARC 4611C, IAB 8/14/19, effective 9/18/19; ARC 5626C, IAB 5/19/21, effective 6/23/21]

**641—25.2(105) Applicability.** The provisions of the Uniform Plumbing Code, as adopted and amended by this chapter, are applicable to the plumbing in buildings or on premises in Iowa. Local jurisdictions may not adopt other plumbing codes. Local jurisdictions may adopt additional amendments provided they are stricter than the Uniform Plumbing Code as amended by this chapter. Copies of any local amendments shall be provided to the board.

[ARC 8860B, IAB 6/16/10, effective 7/21/10; ARC 5626C, IAB 5/19/21, effective 6/23/21]

**641—25.3(105) Fuel gas piping.** Fuel gas piping shall comply with the requirements of Chapter 12 of the Uniform Plumbing Code, 2021 Edition, unless the provisions conflict with 661—Chapter 226, Liquefied Petroleum Gas, Iowa Administrative Code. Where Chapter 12 conflicts with 661—Chapter 226, the provisions of 661—Chapter 226 shall be followed.

[ARC 8860B, IAB 6/16/10, effective 7/21/10; ARC 1089C, IAB 10/16/13, effective 11/20/13; ARC 2474C, IAB 3/30/16, effective 6/1/16; ARC 4611C, IAB 8/14/19, effective 9/18/19; ARC 5626C, IAB 5/19/21, effective 6/23/21]

**641—25.4(105) Amendments to Uniform Plumbing Code.** The Uniform Plumbing Code (UPC), as adopted by reference in rule 641—25.1(105), shall be amended as follows:

**25.4(1)** The following amendment shall apply to UPC Chapter 1: Section 101.2 Scope. Modify the section by adding the following sentence to the end of the section: “Local jurisdictions may administer the permit, inspection, testing, and enforcement provisions contained in this code. Permit, inspection, testing, and enforcement provisions contained in this code shall not be administered by the Plumbing and Mechanical Systems Board or the state.”

**25.4(2)** The following amendments shall apply to UPC Chapter 3:

*a.* Section 301.5 Alternative Engineered Design. Modify the section by adding the following sentence to the end of the section: “No engineered single-stack drainage system shall be installed.”

*b.* Section 309.6 Dead Legs. Modify the section by adding the following sentence to the end of the section: “The authority having jurisdiction can determine the method of flushing.”

*c.* Subsection 314.4.1 Installation of Thermoplastic Pipe and Fittings. Trench width for thermoplastic pipe shall be limited to six times the outside diameter of the piping at the base. Thermoplastic piping shall be bedded in not less than 4 inches (102 mm) of aggregate bedding material supporting the pipe. Initial backfill shall encompass the pipe. Aggregate material shall be three-eighths (3/8) inch p-gravel or 1-inch clean class one bedding.

**25.4(3)** The following amendments shall apply to UPC Chapter 4:

*a.* Section 402.5 Setting. Modify the section by adding the following sentence to the end of the section that begins “Exception:”: “Sanitary napkin receptors are not dispensers and shall not be within the clear space of the water closet.”

*b.* Section 407.3 Limitation of Hot Water Temperature for Public Lavatories. Modify the section by adding the following sentence to the end of the section: “These devices shall be installed at or as close as possible to the point of use.”

*c.* Section 408.3.2 Temperature Limiting.

(1) Modify this section by adding the following to the end of (3): “and installed at or as close as possible to the point of use.”

(2) Modify this section by adding the following to the end of (5): “may be used downstream of other allowed device. TAFR valves are not intended to be installed in place of devices complying with ASSE 1016, ASSE 1017, ASSE 1066, ASSE 1069, or ASSE 1070.”

*d.* Section 408.11 Showers. Create a new Section 408.11 stating: “Limitation of Hot Water Temperature of Hair Shampoo Bowls and Pet Grooming Stations. The maximum hot water temperature discharging from hair shampoo bowls and pet grooming stations shall be limited to 120°F (49°C). The maximum temperature shall be regulated by one of the following means, which shall be installed at or as close as possible to the point of use:

“(1) A limiting device conforming to ASSE 1070, ASME A112.1070, CSA B125.70, or CSA B125.3.

“(2) A water heater conforming to ASSE 1084.”

*e.* Section 409.4 Limitation of Hot Water in Bathtubs and Whirlpool Bathtubs. Modify the section by adding the following sentence to the end of the section: “These devices shall be installed at or as close as possible to the point of use.”

*f.* Section 410.3 Limitation of Water Temperature in Bidets. Modify the section by adding the following sentence to the end of the section: “These devices shall be installed at or as close as possible to the point of use.”

*g.* Section 416.5 Drain. Modify the section by deleting the last sentence, which states: “Where a drain is provided, the discharge shall be in accordance with Section 811.0.”

*h.* Section 418.3 Location of Floor Drains. Modify the section by adding the following to the end of the section: “(5) Rooms equipped with a water heater.”

*i.* Section 422.1 Fixture Count.

(1) Modify the section by deleting the first paragraph and inserting the following in lieu thereof: “Plumbing fixtures shall be provided in each building for the type of building occupancy and in the minimum number shown in Table 403.1 of the International Plumbing Code, reprinted here as Table 422.1. The design occupant load and occupancy classification shall be determined in accordance with the state building code or the authority having jurisdiction. Required public facilities shall be designated by a legible sign for each sex. Signs shall be readily visible and located near the entrance to each toilet facility.”

(2) The minimum number of fixtures shall be calculated at 50 percent male and 50 percent female based on the total occupant load. Where information submitted indicates a difference in the distribution of the sexes, such information shall be used to determine the number of fixtures for each sex. Once the occupancy load and occupancy are determined, Table 422.1 shall be applied to determine the minimum number of plumbing fixtures required. When gender-neutral restrooms are provided, the total number of fixtures provided must be the sum of men’s and women’s fixtures as figured, and urinals in gender-neutral restrooms shall not be substituted for more than 67 percent of men’s water closets in assembly and educational occupancies or 50 percent of men’s water closets in all other occupancies. Where gender-neutral fixtures are provided in addition to separate men’s and women’s facilities, those gender-neutral fixtures shall be included in determining the number of fixtures provided in an occupancy. Where applying the fixture ratios in Table 422.1 results in fractional numbers, such numbers shall be rounded to the next whole number. For multiple occupancies, fractional numbers shall be first summed and then rounded to the next whole number.

*j.* Subsection 422.1.1 Family or Assisted-Use Toilet and Bathing Facilities. Modify the subsection by adding the following sentence to the end of the subsection: “Required family or assisted-use fixtures are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.”

*k.* Table 422.1 Minimum Plumbing Facilities. Delete the table and insert the following table in lieu thereof.

<b>TABLE 422.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup></b>									
<b>(See Sections 403.1.1 and 403.2)</b>									
<b>(Reprinted with permission,* from the 2018 International Plumbing Code, excerpt from IPC Table 403.1)</b>									
NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 422.7)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 415.0)	OTHER
			MALE	FEMALE	MALE	FEMALE			
1	Assembly	Theaters and other buildings for the performing arts and motion pictures <sup>d</sup>	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink
		Nightclubs, bars, taverns, dance halls and buildings for similar purposes <sup>d</sup>	1 per 40	1 per 40	1 per 75		—	1 per 500	1 service sink
		Restaurants, banquet halls and food courts <sup>d</sup>	1 per 75	1 per 75	1 per 200		—	1 per 500	1 service sink
		Gaming areas	1 per 100 for the first 400 and 1 per 250 for the remainder exceeding 400	1 per 50 for the first 400 and 1 per 150 for the remainder exceeding 400	1 per 250 for the first 750 and 1 per 500 for the remainder exceeding 750		—	1 per 1,000	1 service sink
		Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums <sup>d</sup>	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink
		Passenger terminals and transportation facilities <sup>d</sup>	1 per 500	1 per 500	1 per 750		—	1 per 1,000	1 service sink
		Places of worship and other religious services <sup>d</sup>	1 per 150	1 per 75	1 per 200		—	1 per 1,000	1 service sink

<b>TABLE 422.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup></b> (See Sections 403.1.1 and 403.2) (Reprinted with permission,* from the 2018 International Plumbing Code, excerpt from IPC Table 403.1)									
NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 422.7)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 415.0)	OTHER
			MALE	FEMALE	MALE	FEMALE			
1	Assembly (cont'd)	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
		Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
2	Business	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		—	1 per 100	1 service sink <sup>e</sup>
3	Educational	Educational facilities	1 per 50		1 per 50		—	1 per 100	1 service sink
4	Factory and Industrial	Structures in which occupants are engaged in work fabricating, assembly or processing of products or materials	1 per 100		1 per 100		—	1 per 400	1 service sink

<b>TABLE 422.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup></b>									
<b>(See Sections 403.1.1 and 403.2)</b>									
<b>(Reprinted with permission,* from the 2018 International Plumbing Code, excerpt from IPC Table 403.1)</b>									
NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 422.7)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 415.0)	OTHER
			MALE	FEMALE	MALE	FEMALE			
5	Institutional	Custodial care facilities	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		Medical care recipients in hospitals and nursing homes	1 per room <sup>c</sup>		1 per room <sup>c</sup>		1 per 15	1 per 100	1 service sink per floor
		Employees in hospitals and nursing homes <sup>b</sup>	1 per 25		1 per 35		—	1 per 100	—
		Visitors in hospitals and nursing homes	1 per 75		1 per 100		—	1 per 500	—
		Prisons <sup>b</sup>	1 per cell		1 per cell		1 per 15	1 per 100	1 service sink
		Reformatories, detention centers, and correctional centers <sup>b</sup>	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
		Employees in reformatories, detention centers and correctional centers <sup>b</sup>	1 per 25		1 per 35		—	1 per 100	—
		Adult day care and child day care	1 per 15		1 per 15		1	1 per 100	1 service sink
6	Mercantile	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		—	1 per 1,000	1 service sink <sup>e</sup>

<b>TABLE 422.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup></b> (See Sections 403.1.1 and 403.2) (Reprinted with permission,* from the 2018 International Plumbing Code, excerpt from IPC Table 403.1)									
NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 422.7)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 415.0)	OTHER
			MALE	FEMALE	MALE	FEMALE			
7	Residential	Hotels, motels, boarding houses (transient)	1 per sleeping unit		1 per sleeping unit		1 per sleeping unit	—	1 service sink
		Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units

<b>TABLE 422.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup></b> (See Sections 403.1.1 and 403.2) (Reprinted with permission,* from the 2018 International Plumbing Code, excerpt from IPC Table 403.1)									
NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 422.7)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 415.0)	OTHER
			MALE	FEMALE	MALE	FEMALE			
7	Residential (cont'd)	Congregate living facilities with 16 or fewer persons	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		One- and two-family dwellings and lodging houses with five or fewer guestrooms	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per dwelling unit
		Congregate living facilities with 16 or fewer persons	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
8	Storage	Structures for the storage of goods, warehouses, storehouse and freight depots. Low and Moderate Hazard.	1 per 100		1 per 100		—	1 per 1,000	1 service sink

a The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the International Building Code.

b Toilet facilities for employees shall be separate from facilities for inmates or care recipients.

c A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted provided that each patient sleeping unit has direct access to the toilet room and provision for privacy for the toilet room user is provided.

d The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.

e For business and mercantile classifications with an occupant load of 15 or fewer, service sinks shall not be required.

\*Excerpted (with modifications) from Table 403.1 of the 2018 International Plumbing Code; Copyright 2017; Washington, D.C.: International Code Council. Reproduced with permission. All rights reserved. [www.ICCSAFE.org](http://www.ICCSAFE.org)

*l.* Section 422.2 Separate Facilities. Modify this section by adding an additional exception: “(4) Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by any gender and sufficient privacy for water closets is installed. Partitions or compartment walls shall extend from no more than 1 inch from the floor to no less than 84 inches from the floor. Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall.”

*m.* Subsection 422.2.2 Family or Assisted-Use Toilet Facilities. Modify the subsection by adding the following sentence to the end of the subsection: “Required family or assisted-use fixtures are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.”

*n.* Insert the following text at the end of Chapter 4:

“422.6 Substitution for Water Closets. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies. (Reprinted from the 2018 International Plumbing Code section 424.2)”

**25.4(4)** The following amendments shall apply to UPC Chapter 6:

*a.* Section 603.4.8 Drain Lines. Modify the section by adding the following language to the end of the last sentence in the section: “or in accordance with the manufacturer’s drain-sizing chart for installation.”

*b.* Section 609.1 Installation. Delete Section 609.1 and insert the following in lieu thereof:

Section 609.1 Installation. Water piping shall be adequately supported in accordance with Table 313.3. Burred ends shall be reamed to the full bore of the pipe or tube. Changes in direction shall be made by the appropriate use of fittings, except that changes in direction in copper or copper alloy tubing shall be permitted to be made with bends, provided that such bends are made with bending equipment that does not deform or create a loss in the cross-sectional area of the tubing. Changes in direction are allowed with flexible pipe and tubing without fittings in accordance with the manufacturer’s instructions. Provisions shall be made for expansion in hot-water piping. Piping, equipment, appurtenances, and devices shall be installed in a workmanlike manner in accordance with the provisions and intent of the code. Building supply yard piping shall be not less than 60 inches below earth cover.

*c.* Section 609.12 Pipe Insulation. Delete Sections 609.11 through 609.11.2 and insert the following in lieu thereof:

Section 609.12 Pipe Insulation. Insulation of domestic hot water piping shall be in accordance with the applicable energy conservation code.

*d.* Section 611.4 Sizing of Residential Softeners. Modify the section by adding the following to the end of the last sentence in the section: “or as specified in the manufacturer’s installation instructions.”

*e.* Section 612 Residential Fire Sprinkler Systems. Delete sections 612.0 through 612.7.2.

**25.4(5)** The following amendments shall apply to UPC Chapter 7:

*a.* Section 702.1 Trap Size. Table 702.1 Note 9. Modify this note by deleting “a maximum shower size of 36 inches (914 mm) in width and 60 inches (1524 mm) in length” and inserting the following in lieu thereof: “showers having only one shower head rated at a maximum of 2.5 gpm.”



b. Section 710.1 Backflow Protection. Modify the section by adding the following sentences to the end of the section: “The requirement for the installation of a backwater valve shall apply only when determined necessary by the Authority Having Jurisdiction based on local conditions. When a valve is required by the Authority Having Jurisdiction, it shall be a manually operated gate valve or fullway ball valve. An automatic backwater valve may also be installed but is not required.”

**25.4(6)** The following amendments shall apply to UPC Chapter 8:

a. Section 807.3 Domestic Dishwashing Machine. Modify the section by deleting the section and inserting the following language in lieu thereof: “No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine, or by looping the discharge line of the dishwasher as high as possible near the flood level of the kitchen sink where the waste disposer is connected. Listed air gap fittings shall be installed with the flood level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher.”

b. Section 814.5 Point of Discharge. Delete Section 814.5 and insert the following in lieu thereof:  
 Section 814.5 Point of Discharge. Air-conditioning condensate waste pipes shall connect indirectly to a properly trapped fixture, floor drain, or open sight drain, or where permitted in Section 814.6, to the drainage system through an air gap or air break to trapped and vented receptors, dry wells, leach pits, sump pump, the tailpiece of plumbing fixtures or indirectly to the building storm sewer through a roof drain. A condensate drain shall be trapped in accordance with appliance manufacturer’s instructions or as approved.

**25.4(7)** The following amendments shall apply to UPC Chapter 9:

a. Section 901.1 Applicability. Modify the section by adding the following sentence to the end of the section: “No engineered single-stack drainage systems shall be installed.”

b. Section 906.1 Roof Termination. Modify the section by deleting the last sentence.

c. Section 906.7 Frost or Snow Closure. Modify the section by deleting “two (2) inches (50.8 mm)” in the first sentence and inserting “three (3) inches (76.2 mm)” in lieu thereof.

d. Section 908.2.2 Size. Delete the second sentence in this section and insert the following new sentence in lieu thereof: “The wet vent shall be not less than 2 inches (50 mm) in diameter for 6 drainage fixture units (dfu) or less, and not less than 3 inches (80 mm) in diameter for 7 dfu or more.”

**25.4(8)** The following amendments shall apply to UPC Chapter 10:

a. Table 1002.2 Horizontal Lengths of Trap Arms. Delete the table and insert the following table in lieu thereof:

**TABLE 1002.2**  
**Horizontal Lengths of Trap Arms**  
**(Except for Water Closets and Similar Features)<sup>1,2</sup>**

<b>Trap Arm Diameter (inches)</b>	<b>Distance Trap to Vent Minimum (inches)</b>	<b>Length Maximum (feet)</b>
1¼	2½	5
1½	3	6
2	4	8
3	6	12
4	8	12
Exceeding 4	2 × Diameter	12

For SI units: 1 inch = 25.4 mm

Notes:

<sup>1</sup>Maintain ¼ inch per foot slope (20.8 mm/m).

<sup>2</sup>The developed length between the trap of a water closet or similar fixture (measured from the top of the closet flange to the inner edge of the vent) and its vent shall not exceed 6 feet (1829 mm).

b. Section 1007.1 Trap Seal Protection. General. Modify this section by deleting “not deemed necessary for safety or sanitation by the Authority Having Jurisdiction” and inserting the following in lieu thereof: “floor drains or similar traps that receive a liquid discharge year round.”

c. Section 1014.1.3 Food Waste Disposers and Dishwashers. Modify the section by deleting the second sentence and inserting the following in lieu thereof: “Commercial food waste disposers shall discharge into the building’s drainage system in accordance with the requirements of the Authority Having Jurisdiction.”

**25.4(9)** The following amendments shall apply to UPC Chapter 12:

a. Sections 1205.0 through 1205.2 Authority to Render Gas Service. Delete the sections.

b. Sections 1207.0 and 1207.1 Temporary Use of Gas. Delete the sections.

c. Subsection 1208.6.4.5 Corrugated Stainless Steel Tubing. Delete subsection 1208.6.4.5 and insert the following in lieu thereof:

Subsection 1208.6.4.5 Corrugated Stainless Steel Tubing. Only CSST with an arc-resistant jacket or covering system listed in accordance with ANSI LC-1 (Optional Section 5.16)/CSA 6.26-2016 shall be installed, in accordance with the terms of its approval, the conditions of listing, the manufacturer’s instructions and this code, including electrical bonding requirements in Section 1211.2. CSST shall not be used for through-wall penetrations from the point of delivery of the gas supply to the inside of the structure. CSST shall not be installed in locations where subject to physical damage unless protected in an approved manner.

d. Section 1211.3 Arc-Resistant Jacketed CSST. Delete the section.

**25.4(10)** The following amendment shall apply to UPC Chapter 13:

Section 1319.3 Report Items. Modify the section by deleting “Authority Having Jurisdiction” and inserting “responsible facility authority” in lieu thereof.

[ARC 8860B, IAB 6/16/10, effective 7/21/10; ARC 1089C, IAB 10/16/13, effective 11/20/13; ARC 2474C, IAB 3/30/16, effective 6/1/16; ARC 3062C, IAB 5/10/17, effective 6/14/17; ARC 4611C, IAB 8/14/19, effective 9/18/19; ARC 5626C, IAB 5/19/21, effective 6/23/21]

**641—25.5(105) Backflow prevention with containment.** Cities with populations of 15,000 or greater as determined by the 2010 census or any subsequent regular or special census shall have a backflow prevention program with containment. The minimum requirements for a program are given in subrules 25.5(1) through 25.5(5). These requirements are in addition to the applicable requirements of Section 603 of the Uniform Plumbing Code, 2021 Edition.

**25.5(1) Definitions.** The following definitions are added to those in Chapter 2 and Section 603 of the Uniform Plumbing Code, 2021 Edition, or are modified from those definitions for the purposes of rule 641—25.5(105) only.

a. *Administrative authority.* The administrative authority for this rule is the city council and its designees or, with respect to private water utilities, the Iowa utilities board.

b. *Approved backflow prevention assembly for containment.* Approved backflow prevention assembly for containment means a backflow prevention assembly which is approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. The approval listing shall include the limitations of use based on the degree of hazard. The backflow prevention assembly shall also be listed by the International Association of Plumbing and Mechanical Officials (IAPMO) or by the American Society of Sanitary Engineering (ASSE) as having met the requirements of one of the standards listed below.

Standard	Product Covered
ANSI <sup>®</sup> /ASSE* 1013-2009	Reduced Pressure Principle Backflow Preventers
ANSI <sup>®</sup> /ASSE* 1015-2009	Double Check Backflow Prevention Assembly
ANSI <sup>®</sup> /ASSE* 1047-2009	Reduced Pressure Detector Backflow Preventer
ANSI <sup>®</sup> /ASSE* 1048-2009	Double Check Detector Assembly Backflow Preventer
ANSI <sup>®</sup> /AWWA <sup>†</sup> C510-07	Double Check Valve Backflow Prevention Assembly
ANSI <sup>®</sup> /AWWA <sup>†</sup> C511-07	Reduced-Pressure Principle Backflow Prevention Assembly

□American National Standards Institute, 1899 L Street NW, 11th Floor, Washington, DC 20036

\*American Society of Sanitary Engineering, 18927 Hickory Creek Drive #220, Mokena, IL 60448

†American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235

*c. Approved backflow prevention assembly for containment in a fire protection system.* Approved backflow prevention assembly for containment in a fire protection system means a backflow prevention assembly to be used in a fire protection system which meets the requirements of Factory Mutual Research Corporation (FM) and Underwriters Laboratory (UL) in addition to the requirements of 25.5(1)“b.”

*d. Containment.* Containment is a method of backflow prevention which requires a backflow prevention assembly on certain water services. Containment requires that the backflow prevention assembly be installed on the water service as close to the public water supply main as is practical.

*e. Customer.* Customer means the owner, operator or occupant of a building or property which has a water service from a public water system, or the owner or operator of a private water system which has a water service from a public water system.

*f. Degree of hazard.* Degree of hazard means the rating of a cross connection or a water service which indicates if it has the potential to cause contamination (high hazard) or pollution (low hazard).

*g. Water service.* Depending on the context, water service is the physical connection between a public water system and a customer’s building, property or private water system, or the act of providing potable water from a public water system to a customer.

**25.5(2) Proposed water service.**

*a.* No person shall install, or cause to have installed, a water service to a building, property or private water system before the administrative authority has evaluated the proposed water service for degree of hazard.

*b.* The administrative authority shall require the submission of plans, specifications and other information deemed necessary for a building, property or private water system to which a water service is proposed. The administrative authority shall review the information submitted to determine if cross connections will exist and the degree of hazard.

*c.* The owner of a building, property or private water system shall install, or cause to have installed, an approved backflow prevention assembly for containment as directed by the administrative authority before water service is initiated.

*d.* Reconstruction of an existing water service shall be treated as a proposed water service for the purposes of rule 641—25.5(135).

**25.5(3) Existing water services.**

*a.* Each customer shall survey the activities and processes which receive water from the water service and shall report to the administrative authority if cross connections exist and the degree of hazard.

*b.* The administrative authority may inspect the plumbing of any building, property and private water system which has a water service to determine if cross connections exist and the degree of hazard.

*c.* If, based on information provided through 25.5(3)“a” and “b,” the administrative authority determines that a water service may contaminate the public water supply, the administrative authority shall require that the customer install the appropriate backflow prevention assembly for containment.

*d.* If a customer refuses to install a backflow prevention assembly for containment when it is required by the administrative authority, the administrative authority may order that water service to the customer be discontinued until an appropriate backflow prevention assembly is installed.

**25.5(4) Backflow prevention assemblies for containment.**

*a.* Backflow prevention assemblies for containment shall be installed immediately following the water meter or as close to that location as deemed practical by the administrative authority.

*b.* A water service determined to present a high hazard shall be protected by an air gap or an approved reduced-pressure principle backflow prevention assembly.

*c.* A water service determined to present a low hazard shall be protected by an approved double check valve assembly or as in 25.5(4)“b.”

*d.* A water service to a fire protection system shall be protected from backflow in accordance with the recommendations of American Water Works Association Manual M14. Where backflow prevention

is required for a fire protection system, an approved backflow prevention assembly for containment in a fire protection system shall be used.

**25.5(5) Backflow incidents.**

*a.* The customer shall immediately notify the agency providing water service when the customer becomes aware that backflow has occurred in the building, property or private water system receiving water service.

*b.* The administrative authority may order that a water service be temporarily shut off when a backflow occurs in a customer's building, property or private water system.

[ARC 8860B, IAB 6/16/10, effective 7/21/10; ARC 1089C, IAB 10/16/13, effective 11/20/13; ARC 2614C, IAB 7/6/16, effective 6/15/16; ARC 4611C, IAB 8/14/19, effective 9/18/19; ARC 5626C, IAB 5/19/21, effective 6/23/21]

These rules are intended to implement Iowa Code chapter 105.

[Filed 12/3/81, Notice 9/2/81—published 12/23/81, effective 1/27/82]

[Filed 2/24/84, Notice 10/26/83—published 3/14/84, effective 4/18/84]

[Filed emergency 7/11/86 after Notice 4/23/86—published 7/30/86, effective 7/11/86]

[Filed emergency 7/10/87—published 7/29/87, effective 7/10/87]

[Filed 1/17/89, Notice 11/16/88—published 2/8/89, effective 3/15/89]

[Filed 7/17/92, Notice 1/22/92—published 8/5/92, effective 9/9/92]

[Filed 5/13/96, Notice 3/13/96—published 6/5/96, effective 7/10/96]

[Filed 9/14/01, Notice 8/8/01—published 10/3/01, effective 11/19/01]

[Filed ARC 8860B (Notice ARC 8703B, IAB 4/21/10), IAB 6/16/10, effective 7/21/10]

[Filed ARC 1089C (Notice ARC 0811C, IAB 6/26/13), IAB 10/16/13, effective 11/20/13]

[Filed ARC 2474C (Notice ARC 2317C, IAB 12/23/15), IAB 3/30/16, effective 6/1/16]

[Filed Emergency ARC 2614C, IAB 7/6/16, effective 6/15/16]

[Filed ARC 3062C (Notice ARC 2900C, IAB 1/18/17), IAB 5/10/17, effective 6/14/17]

[Filed ARC 4611C (Notice ARC 4447C, IAB 5/22/19), IAB 8/14/19, effective 9/18/19]

[Filed ARC 5626C (Notice ARC 5478C, IAB 2/24/21), IAB 5/19/21, effective 6/23/21]