

# 2004/2005 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING CODE

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# TENTATIVE ORDER OF DISCUSSION

## 2004-2005 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING/PRIVATE SEWAGE DISPOSAL CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation **does not** necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair.

P - International Plumbing Code

PSD - International Private Sewage Disposal Code

### **PLUMBING**

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P28-04/05, Part I	P65-04/05	P102-04/05, Part I	<b><u>PRIVATE SEWAGE</u></b>
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## P1-04/05 202

**Proponent:** Guy Wayne Harrison, Josam Company, Edmond, OK

Add new definition as follows:

### SECTION 202 GENERAL DEFINITIONS

**FLOW CONTROL (Vented).** A device installed upstream from the interceptor having an orifice that controls the rate of flow through the interceptor and an air intake (vent) downstream from the orifice which allows air to be drawn into the flow stream.

**Reason:** This definition is needed to define such devices as they are referenced in ASME A112.14.3 and Section 1003.4.2.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P2-04/05 202

**Proponent:** Guy Wayne Harrison, Josam Company, Edmond, OK

Revise as follows:

### SECTION 202 GENERAL DEFINITIONS

**GREASE INTERCEPTOR.** ~~A passive interceptor whose rated flow exceeds 50 gpm (189 L/m).~~ A plumbing appurtenance that is installed in a sanitary drainage system in order to intercept oily and greasy wastes from a wastewater discharge. Such device has the ability to intercept free-floating fats and oils.

**GREASE TRAP.** ~~A passive interceptor whose rated flow is 50 gpm (189 L/m) or less. See "Grease Interceptor."~~

**Reason:** Current text causes a conflict between the code and referenced standards (ASME A112.14.3 and ASME A112.14.4) and should be consistent with such standards which indicates that all grease traps are called interceptors.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P3-04/05 202

**Proponent:** Guy Wayne Harrison, Josam Company, Edmond, OK

Add new definition as follows:

### SECTION 202 GENERAL DEFINITIONS

**GREASE REMOVAL DEVICE, AUTOMATIC (GRD).** A plumbing appurtenance that is installed in the sanitary drainage system in order to intercept free-floating fats, oils, and grease from wastewater discharge. Such device operates on a time or event controlled basis and has the ability to remove free-floating fats, oils and grease automatically without intervention from the user except for maintenance. The removed material is essentially water-free which allows for recycling of the removed product.

**Reason:** This definition is needed to define such devices as they are referenced in ASME A112.14.4 and Section 1003.3.4.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P4-04/05 202; IRC R202 (New)

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA, representing Nvent

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

Revise definition as follows:

### SECTION 202 GENERAL DEFINITIONS

**MECHANICAL JOINT.** A connection between pipes, fittings, or pipes and fittings that is not screwed, caulked, threaded, soldered, solvent cemented, brazed or welded. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting or adapter. These joints include both the press-type and push-type joining system.

**PART II — IRC**

**Add new definition as follows:**

**SECTION 202  
DEFINITIONS**

**MECHANICAL JOINT.** A connection between pipes, fittings, or pipes and fittings that is not screwed, caulked, threaded, soldered, solvent cemented, brazed or welded. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting or adapter. These joints include both the press-type and push-type joining system.

**Reason:** This definition is needed to clarify the use of some types of mechanical joints and to recognize new technology that offers solder-less joining systems that meet appropriate copper pipe and copper tube standards.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P5-04/05**

**202 (New); IRC P202 (New)**

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA, representing Nvent

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Add new definition as follows:**

**SECTION 202  
GENERAL DEFINITIONS**

**PUSH-TYPE JOINTS.** A type of mechanical joint used in copper tube water distribution systems consisting of elastomeric seals and corrosion resistant tube grippers. Such joints can be permanent or non-permanent depending on design and must be installed in accordance with the

manufacturer's instructions.

**PART II — IRC**

**Add new definition as follows:**

**SECTION R202  
DEFINITIONS**

**PUSH-TYPE JOINTS.** A type of mechanical joint used in copper tube water distribution systems consisting of elastomeric seals and corrosion resistant tube grippers. Such joints can be permanent or non-permanent depending on design and must be installed in accordance with the manufacturer's instructions.

**Reason:** This definition is needed to clarify the use of some types of mechanical joints and to recognize new technology that offers solder-less joining systems that meet appropriate copper pipe and copper tube standards.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P6-04/05**

**202 (New)**

**Proponent:** Ronald L. George, CIPE, CPD, Ron George Design & Consulting Services, Detroit, MI, representing Code Study & Development Committee of Southeast Michigan

**Add new definition as follows:**

**SECTION 202  
GENERAL DEFINITIONS**

**TEPID WATER.** Water for emergency fixtures such as emergency showers, eye/face washes and hand held drench hoses. Tepid water is delivered from a thermostatic mixing valve with a cold water bypass conforming to ANSI Z358.1. The water delivery temperature range is determined by medical or safety personnel that have reviewed the exposure hazard and provide written direction as to the maximum and minimum tepid water temperature range for the application.

**Reason:** This definition for “Tepid water” has been confused with tempered water which has a specific, yet unsuitable temperature range for emergency showers and eyewashes. The ANSI Z358.1 standard on emergency showers recommends providing tepid water but does not define tepid water. Adding this definition will clear up the confusion and give direction to code officials and users.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

## P7-04/05

### Table 308.5; IRC Table P2605.1

**Proponent:** James Paschal, Bodycote, Ypsilanti, MI, representing various plastic pipe manufacturers

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

Add new table entries as follows:

**TABLE 308.5  
 HANGER SPACING**

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
<u>Polypropylene (PP) pipe or tubing 1 inch or smaller</u>	<u>2.67 (32 inches)</u>	<u>10<sup>b</sup></u>
<u>Polypropylene (PP) pipe or tubing, 1 1/4 inches or larger</u>	<u>4</u>	<u>10<sup>b</sup></u>

(Portions of table not shown do not change)

#### PART II — IRC

Add new table entries as follows:

**TABLE P2605.1  
 PIPING SUPPORT**

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING

<u>Polypropylene (PP) pipe or tubing 1 inch or smaller</u>	<u>2.67 (32 inches)</u>	<u>10<sup>b</sup></u>
<u>Polypropylene (PP) pipe or tubing, 1 1/4 inches or larger</u>	<u>4</u>	<u>10<sup>b</sup></u>

(Portions of table not shown do not change)

**Reason:** This code change is being re-submitted in conjunction with several others with the overall purpose of allowing the use of polypropylene (PP) in hot and cold water distribution piping and radiant heating systems.

The previous submittal was rejected due to lack of an appropriate ASTM standard which required a minimum 100 psi rating at 180°F. This standard now exists (ASTM F 2389) and is proposed for inclusion into the various Tables of the IPC and IRC. It requires the minimum rating of 160 psi at 73°F (water service) and 100 psi at 180°F (hot-and-cold water distribution). PP materials meeting these requirements have over 30 years of successful history in hot and cold water piping, radiant heating systems, chemical process piping, swimming pool circulation, compressed air systems and irrigation. In addition to being a very versatile material offering time and material savings, PP is environmentally friendly in terms of initial manufacturing, raw material usage, and energy consumption. PP can be recycled, meets the health effects criteria of NSF 61 without any special conditions or exemptions, and has a long history of use in these applications.

Polypropylene (PP) has been used extensively in these applications in Europe, Eastern Europe, Russia, Middle Eastern and Far East countries for over 30 years. It has also been used in the U.S. for more demanding chemical process piping systems. Due to its resistance to fatigue failures, PP has been specified as the material of choice in shipbuilding firms around the world. Some examples of plumbing and hydronic installations include hotels, hospitals, stadiums, water parks, cruise ships, churches, office buildings and apartment buildings.

The proposed revision includes requirements for dimensions, materials, pressure rating at 73°F and 180°F, performance tests, thermal stability, fitness-for-purpose and compliance with NSF 61.

The products are currently tested and listed by numerous organizations around the world including NSF (U.S.), KIWA (Netherlands), DVGW (Germany), AENOR (Spain) and others.

**Bibliography:** A CD containing product specifications, quality assurance information, test certifications, installation instructions and planning documents, as well as a copy of the ASTM standard and NSF test reports has been supplied to the ICC to support this proposal.

**Cost Impact:** None

#### PART I — IPC

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

#### PART II — IRC

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

## P8-04/05

### 308.9

**Proponent:** John Walters, Prince William County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Delete without substitution:**

~~308.9 Stacks. Bases of stacks shall be supported by concrete, brick laid in cement mortar or metal brackets attached to the building or by other approved methods.~~

**Reason:** This is a duplicate provision. Piping support, which includes stacks, is already provided for in Sections 308.2, 308.3 and 308.4. This text is antiquated language left over from previous legacy codes.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## P9-04/05

### 310.5

**Proponent:** Robert A. Packheiser, CBO, National Association of Home Builders, Washington, D.C.

**Revise as follows:**

**310.5 (Supp) Urinal ~~privacy partitions.~~** Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. ~~The construction of such walls or partitions shall incorporate waterproof, smooth, readily cleanable and nonabsorbent finish surfaces.~~ The walls or partitions shall begin at a height not more than 12 inches (304.8 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal a minimum of 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished back wall surface, whichever is greater.

**Exceptions:**

1. Urinal partitions shall not be required in a single occupant or unisex toilet room with a lockable door.
2. Urinals located in day care and child-care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.

**Reason:** The text of the second sentence that is stricken is already covered in Section 310.3, the same as for water closet compartment surfaces covered by Section 310.4. The second exception is added to recognize the same situation for urinals in day care and child-care facilities where assistance to young may be required as shown for water closets in Section 310.4 Exception #2. This second exception is a result of Proposal P18-98 (that was Approved as Submitted) in which the Reason stated: "In day care facilities, privacy is not always a critical concern especially when dealing with very young children. Staff in these facilities are often required to provide assistance and partitions restrict or prevent this from occurring. The code still requires partitions around not less than one water closet for those individuals needing privacy."

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## P10-04/05

### 312.9.2.1 (New)

**Proponent:** Phillip A. Brown, American Fire Sprinkler Association, Dallas, TX

**Add new text as follows:**

**312.9.2.1 Fire protection systems.** Backflow prevention assemblies installed in fire protection system piping shall be forward flow tested at the fire protection system demand, at the time of installation, immediately after repairs or relocation and at least annually.

**Reason:** When backflow assemblies are installed in water supply lines to automatic fire sprinkler systems, they take on a new role. They protect against any backward movement of water and they also have to ensure that there will be no disruption of forward flow of water. A disruption in the forward flow of water to an automatic fire sprinkler system could be critical. This is not an issue were the disruption of forward flow would cause an inconvenience such as to a plumbing system but were a disruption could result in the loss of life and property. It is important that a forward flow test at the supply demand of the automatic fire sprinkler system be conducted to ensure that the backflow assembly will perform as required.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## P11-04/05

### 403.1; IBC [P] 2902.1

**Proponent:** John Berry, Cole + Russell Architects, Inc., Cincinnati, OH

**Revise as follows:**

**403.1 Minimum number of fixtures.** Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined by the *International Building Code* Occupancy classification shall be determined in accordance with the *International Building Code* .

**Exception:** Where the actual occupant load is significantly different than that determined by the *International Building Code*, the code official shall be permitted to accept an alternative basis for the determination of the occupant load.

**Reason:** This proposal simply allows the code official to accept an alternate occupant load for the determination of plumbing fixtures in contrast to the occupant load used to establish means of egress requirements. This is allowed via amendments to many jurisdictional codes, including Ohio, which is where the basic text for this proposal originated. Because the code currently requires rest room facilities to be designed per Section 1004.1, it is not uncommon for them to be designed in excess of the practical needs of the actual use. The provision of plumbing fixtures is not a matter of life safety and should be allowed to be established on a more realistic basis. This proposal does not require the code official to accept an alternative method, but rather allows him to consider an alternate method if he decides that it is appropriate for the project. This proposal also does not require the code official to 'establish' an alternative method as stated in the Ohio Building Code, but rather places the burden of proof on the applicant for permit.

**Analysis:** The proponent does not specify the basis on which to accept such alternative. This promotes non-uniform enforcement.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P12-04/05**  
**Table 403.1; IBC [P] Table 2902.1**

**Proponent:** Guy Tomberlin, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Revise table entries as follows:**

**TABLE 403.1 (Supp)**  
**MINIMUM NUMBER OF REQUIRED**  
**PLUMBING FIXTURES<sup>a</sup>**  
**(See Sections 403.2 and 403.3)**

OCCUPANCY	DESCRIPTION
A-1	Theaters <del>usually with fixed seats</del> and other buildings for the performing arts and motion pictures
A-3	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums
	Passenger terminals and transportation facilities
	Places of worship and other religious services. <del>Churches without assembly halls.</del>

**(Portions of table not shown do not change)**

a. through e. (No change to current text)

**Reason:** The current table, as written fails to provide the user guidance for A-1 occupancies, when a theater does not provide "fixed seats" and in A-3 occupancies when a church happens to provide an assembly hall. However, these different type provisions are appropriately covered in the IBC because that is where the occupancy load is determined prior to applying the fixture requirements to the IPC.

This proposal also removes the term "church", the utilization of the existing terms "places of worship and other religious services" covers this occupancy.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P13-04/05**  
**Table 403.1; IBC [P] Table 2902.1**

**Proponent:** Michael Baker, City of Peoria, AZ, representing Arizona Building Officials

Revise table entries as follows:

**TABLE 403.1 (Supp)**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup>**  
 (See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER
		Male	Female	Male	Female		
2	Business (see Sections 403.2, 403.4 and 403.6)	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	<del>1 service sink</del>
6	Mercantile (see Sections 403.2, 403.5 and 403.6)	1 per 500		1 per 750		1 per 1,000	<del>1 service sink</del>

(Portions of table not shown do not change)

**Reason:** The current requirement for 1 service sink for mercantile and business occupancies is not necessary due to the nature of the occupancy. The majority of business and mercantile occupancies, by the very nature of their operations, do not warrant the need to clean up spills that often occur in other occupancies such as restaurants and schools. The requirement for a service sink often becomes overly restrictive and onerous to small office and mercantile tenant spaces. This revision will not apply if another governing agency, such as the local or state health department, requires a service sink.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

R-3	One-and two-family dwellings	1 kitchen sink per dwelling unit; 1 automatic clothes washer connector per dwelling unit <sup>e</sup>
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(Portions of table not shown do not change)

a. through d. (No change to current text)  
~~e. For attached one- and two-family dwellings, one automatic clothes washer connection shall be required per 20 dwelling units.~~

**Reason:** The provisions provided by footnote "e" are only applied to R-2 (Apartment house) and R-3 (One-and two family dwellings) table entries. In the "other" column alongside these two entries, the footnote provisions are stated; therefore, duplicated requirements are not necessary to be located in a footnote.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

## P14-04/05

### Table 403.1; IBC [P] Table 2902.1

**Proponent:** Guy Tomberlin, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

Revise table entries as follows:

**TABLE 403.1 (Supp)**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup>**  
 (See Sections 403.2 and 403.3)

OCCUPANCY	DESCRIPTION	OTHER
R-2	Apartment house	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units <sup>e</sup>

## P15-04/05

### 403.2, 403.4, 403.4.1, 403.5, 403.6; IBC [P] 2902.2, [P] 2902.4, [P] 2902.5, [P] 2902.6

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

Revise as follows:

**403.2(Supp) Separate facilities.** Where plumbing fixtures are required, separate facilities shall be provided for each sex.

**Exceptions:**

- 1. Separate facilities shall not be required for dwelling units and sleeping units.
- 2. ~~Separate employee facilities shall not be required in occupancies in which 15 or less people are employed.~~
- 3. 2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.
- 4. 3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 50 or less.

**403.4 Location of employee toilet facilities in occupancies other than ~~assembly or mercantile covered malls.~~** Access to toilet facilities in occupancies other than ~~mercantile and assembly occupancies~~ covered mall buildings shall be from within the public area or employees' working area. Employee facilities shall be either separate facilities or combined employee and public facilities.

**Exception:** Facilities that are required for employees in storage structures or kiosks, and are located in adjacent structures under the same ownership, lease or control, shall be a maximum travel distance of 500 feet (152 m) from the employees' working area.

**403.4.1 Travel distance.** The required toilet facilities in occupancies other than assembly or mercantile shall be located not more than one story above or below the employee's working area and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

**Exception:** The location and maximum travel distances to required ~~employee~~ toilet facilities in factory and industrial occupancies are permitted to exceed that required in Section 403.4.1, provided the location and maximum travel distance are approved by the code official.

~~**403.5 Location of employee toilet facilities in mercantile and assembly occupancies.** Employees shall be provided with toilet facilities in building and tenant spaces utilized as restaurants, nightclubs, places of public assembly and mercantile occupancies. The employee facilities shall be either separate facilities or combined employee and public facilities. The required toilet facilities shall be located not more than one story above or below the employees' work area and the path of travel to such facilities, in other than covered malls, shall not exceed a distance of 500 feet (152 m). The path of travel to required facilities in covered malls shall not exceed a distance of 300 feet (91 440 mm).~~

~~**Exception:** Employee toilet facilities shall not be~~

~~required in tenant spaces where the travel distance from the main entrance of the tenant space to a central toilet area does not exceed 300 feet (91 440 mm) and such central toilet facilities are located not more than one story above or below the tenant space.~~

**403.6 (Supp) Public facilities.** ~~Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. The accessible route to public facilities shall not pass through kitchens, storage rooms, closets or similar spaces. Public toilet facilities shall be located not more than one story above or below the space required to be provided with public toilet facilities and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).~~

**403.6.1 403.5 Covered malls.** In covered mall buildings, the path of travel to required toilet facilities shall not exceed a distance of 300 feet (91 440 mm). Facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum travel distance to the central toilet facilities in covered mall buildings shall be measured from the main entrance of any store or tenant space where there are public facilities, and the maximum travel distance shall be measured from the public area or employee's work area of any store or tenant space where toilet facilities are not provided.

**(Renumber subsequent sections)**

**Reason:** IPC does not require a separate employee and public toilet facilities, but the code appears to dictate the same requirements for them. This proposed change is indented for clean up only where duplication appears.

**Analysis:** The proposed text is very confusing and unclear. The proponent does not explain the justification for the revisions. The proponent uses vague language such as "measurements from a public area" and fails to define such language.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P16-04/05  
405.3.1**

**Proponents:** Charles Gerber, Henrico County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

Bob Cesleiga, CPD, Limbach Co., Detroit, MI, representing Code Study & Development Committee of Southeast Michigan

**Revise as follows:**

**405.3.1 Water closets, urinals, lavatories and bidets.** A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction, or closer than 30 inches (762 mm) center-to-center between ~~water closets, urinals or~~ adjacent fixtures. There shall be at least a 21-inch (533 mm) clearance in front of the water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall not be less than 30 inches (762 mm) wide or 60 inches (1524 mm) deep. ~~There shall be at least a 21-inch (533 mm) clearance in front of a lavatory to any wall, fixture or door~~ (see Figure 405.3.1).

**Reason (Gerber):** This proposal is not adding or deleting any requirements, it is just correctly formatting the provisions. By deleting the words "water closets or urinals or" in the first sentence, it clarifies the intent of this section to apply to all the fixtures referenced by the section title. Adding the word "lavatory" in the second to the last sentence permits the removal of the last sentence as it is duplicating the same requirements.

**(Cesleiga):** Current text reads ... "or closer than 30 inches center-to-center between water closets, urinals or adjacent fixtures." The first part of the sentence includes lavatories, however it is left out at the end of the sentence. The stricken text makes this section clearer and it eliminates conflicting language.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P17-04/05**

**405.3.2**

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

**Delete without substitution:**

~~**405.3.2 Public lavatories.** In employee and public toilet rooms, the required lavatory shall be located in the same room as the required water closet.~~

**Reason:** The requirement for the public lavatory to be located in the same room as water closet has created problems in many areas:

1. This section has created an interpretation issue since it is only saying that the required lavatory shall be located with the required water closet, and many jurisdictions have interpreted that a non-required lavatory can be located anywhere or a non-required water closet does not need a lavatory.
2. In grade schools where there is a single occupancy toilet room located in the class room, many state and local laws require a lavatory outside the toilet room so teachers can monitor the kids washing their hands. Present code will cause them to install an

additional lavatory inside the room.

3. In small mercantile or business occupancies it will save lots of space as the designer has the option of installing the lavatory adjacent to the toilet room.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P18-04/05**

**406.3**

**Proponent:** Robert Adkins, Prince William County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Revise as follows:**

**406.3 Waste connection.** The waste from an automatic clothes washer shall discharge through an air break into a standpipe in accordance with Section 802.4 or into a laundry sink. The trap and fixture drain for an automatic clothes washer standpipe shall be a minimum of 2 inches (51 mm) in diameter. The automatic clothes washer fixture drain shall connect to a branch drain or drainage stack a minimum of 3 inches (76 mm) in diameter. Automatic clothes washers that discharge by gravity shall be permitted to drain to a floor drain, waste receptor or an approved trench drain.

**Reason:** Existing text fails to address a common appliance installation that cannot possibly discharge in accordance with the current Section 406.3. A gravity discharge washer cannot discharge upward. The provision for approved receptors often times enables a cost effective method of complying with Section 1003.6. The proposed text will coordinate these two sections and allow the code to state clearly its intent.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P19-04/05**

**410.1**

**Proponent:** David W. Viola, Plumbing Manufacturers Institute, Schaumburg, IL

**Revise as follows:**

**410.1 Approval.** Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASMEA112.19.9M and

water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Where water is served in restaurants, drinking fountains shall not be required. ~~In other occupancies, where drinking fountains are required, bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.~~

**Reason:** The revision will delete an unenforceable exception that allows the replacement of permanently installed plumbing fixtures with a temporary drinking water source. Bottled water dispensers are not in place when the certificate of occupancy is issued, they have to be maintained and they can be removed at any time. There are no guarantees that bottled water dispensers will be provided initially or throughout the life of a building. A comparable compromise doesn't exist anywhere else in the plumbing or building code.

**Cost Impact:** This code change will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P20-04/05

### 412.2; IRC P2719.1

**Proponent:** Guy Tomberlin, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Revise as follows:**

**412.2 (Supp) Floor drains.** Floor drains shall have removeable strainers. The floor drain shall be constructed so that the drain is capable of being cleaned. Ready A access shall be provided to the drain inlet.

#### PART II — IRC

**Revise as follows:**

**P2719.1 (Supp) Floor drains.** Floor drains shall have waste outlets not less than 2 inches (51 mm) in diameter and shall be provided with a removable strainer. The floor drain shall be constructed so that the drain is capable of being cleaned. Ready A access shall be provided to the drain inlet.

**Reason:** Current language fails to require ready access to floor drains which is the intent of this section. This is a simple editorial revision to existing language.

**Cost Impact:** None

#### PART I — IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

#### PART I — IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P21-04/05

### 413.3

**Proponent:** Gary S. Duren, Code Compliance, Inc., Keystone Heights, FL

**Revise as follows:**

**413.3 Commercial food waste grinder waste outlets.** Commercial food waste grinders shall be connected to a drain a minimum of 2 inches (51 mm) in diameter. Commercial food waste grinders shall be connected and trapped separately from any other fixtures or sink compartments. Commercial food waste grinders shall be permitted to discharge directly into the building drainage system.

**Reason:** Research papers demonstrate that the typical food waste (solids) do not contain significant amounts of fats oils or grease, therefore they should be permitted to discharge directly into the sanitary system. Some utilities actually want food waste to be a part of the treated waste because food waste greatly assists in the on-site production of methane gas used for power generation. Decaying solids produce a terrible stench and a potential health hazard. Research further demonstrates that by discharging food wastes directly into the sanitary a more environmental friendly means of disposing of food wastes is achieved.

**Analysis:** The IPC already permits commercial food waste grinders to discharge directly into the sanitary drainage system.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P22-04/05

### 417.4; IRC P2708.1

**Proponent:** Shabbir Rawalpindiwala, Kohler Co., Kohler, WI

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS**

**FOR THESE COMMITTEES.**

**PART I — IPC**

**Revise as follows:**

**417.4 Shower compartments.** All shower compartments shall have a minimum of 900 square inches (0.58 m<sup>2</sup>) of interior cross-sectional area. Shower compartments shall not be less than 30 inches (762 mm) in minimum dimension measured from the finished interior dimension of the compartment, exclusive of fixture valves, showerheads, soap dishes, and safety grab bars or rails. Except as required in Section 404, the minimum required area and dimension shall be measured from the finished interior dimension at a height equal to the top of the threshold and at a point tangent to its centerline and shall be continued to a height not less than 70 inches (1778 mm) above the shower drain outlet.

Exception: Where a shower replaces an existing bathtub, the minimum dimension shall be not less than 25 inches (635 mm), provided that the cross-sectional area is not less than 1024 square inches (0.66 m<sup>2</sup>).

**PART II — IRC**

**Revise as follows:**

**P2708.1 General.** Shower compartments shall have at least 900 square inches (0.581 m<sup>2</sup>) of interior cross-sectional area. Shower compartments shall not be less than 30 inches (762 mm) in minimum dimension measured from the finished interior dimension of the shower compartment, exclusive of fixture valves, shower heads, soap dishes, and safety grab bars or rails. The minimum required area and dimension shall be measured from the finished interior dimension at a height equal to the top of the threshold and at a point tangent to its centerline and shall be continued to a height not less than 70 inches (1778 mm) above the shower drain outlet.

**Exceptions:**

1. Fold-down seats shall be permitted in the shower, provided the required 900-square-inch (0.581 m<sup>2</sup>) dimension is maintained when the seat is in the folded-up position.
2. Where a shower replaces an existing bathtub, the minimum dimension shall be not less than 25 inches (635 mm), provided that the cross-sectional area is not less than 1024 square inches (0.66 m<sup>2</sup>).

**Reason:** The exception is similar to a provision in the National Standard Plumbing Code. It is intended to allow the replacement of a bathtub with a similar-sized shower receptor in an existing installation. This is necessary to address the increasing trend by property owners to replace bathtubs with shower receptors in order to provide greater

access to the shower for our aging population.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P23-04/05**

**417.4.2 (New); IRC P2708.1.1 (New)**

**Proponent:** Rene' M. Beliveau, City of Golden, CO, representing Colorado Association of Plumbing and Mechanical Officials

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Add new text as follows:**

**417.4.2 Access.** The shower compartment access and egress opening shall have a minimum clear and unobstructed width of 22 inches (559 mm). Shower compartments required to be designed in conformance to accessibility provisions shall comply with Section 404.1.

**PART II — IRC**

**Add new text as follows:**

**P2708.1.1 Access.** The shower compartment access and egress opening shall have a minimum clear and unobstructed width of 22 inches (559 mm).

**Reason:** Within our jurisdiction, we have had to approve shower access openings as low as 16 ½ inches. Without a clearly stated minimum width, we are unable to uniformly enforce a minimum required access opening so that the shower compartment is functionally accessible and usable for its intended purpose. This will lead to arbitrary and inconsistent enforcement. A reasonable clear width is required not only for functional accessible by the occupant, but also for 1) service and maintenance of the compartment and the shower valves, drain, and head, 2) emergency egress, and 3) for facilitating emergency response and rescue should the need arise. As stated in the 2000 International Building Code Commentary (page 10-16); . . . "The traditional unit for measurement of egress capacity was based on a "unit exit width," which was to simulate the body ellipse with a basic

dimensional width of 22 inches (559 mm)—approximately the shoulder width of an average adult.” The 22 in minimum opening also complies with requirements enforced under previously adopted plumbing codes within our jurisdiction.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II— IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P24-04/05**  
**417.5.2.5 (New), Chapter 13; P2709.3.2 (New), Chapter 43**

**Proponent:** Sean Gerolimos, Schluter Systems, L.P., Plattsburgh, NY

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Add new text as follows:**

**417.5.2.5 Load bearing, waterproof membrane. Load bearing, bonded waterproof sheet membranes and liquid-applied membranes shall conform to ANSI A118.10. The membrane, bonding material and grout shall be installed in accordance with the manufacturer’s installation instructions.**

**2. Add new standard to Chapter 13 as follows:**

ANSI A118.10-99 Specification for the Installation of Ceramic Tile . . . . . 417.5.2.5

**PART II — IRC**

**P2709.3.2 Load bearing, waterproof membrane. Load bearing, bonded waterproof sheet membranes and liquid-applied membranes shall conform to ANSI A118.10. The membrane, bonding material and grout shall be installed in accordance with the manufacturer’s installation instructions.**

**2. Add new standard to Chapter 43 as follows:**

ANSI A118.10-99 Specification for the Installation of Ceramic Tile . . . . . P2709.3.2

**Reason:** The purpose of this proposed revision is to provide an alternative system for waterproofing shower installations. Currently, the IPC only has provisions for unbonded shower pan liners.

Traditional pan liners are unbonded and must be placed under a mortar bed that distributes loads from the tile covering. Load bearing, bonded waterproof membranes are applied on top of the mortar bed, with the tile applied directly to the membrane with thin-set mortar. The primary advantage of such a system is that water is not allowed to saturate the substrate, thus eliminating the potential for mold growth in the system. Load bearing, bonded waterproof membranes offer a superior system for waterproofing in tile shower applications and should be made available to the building community through inclusion in Section 417 of the International Plumbing Code. With increased awareness of moisture and mold issues related to construction and public health, making this change to the Code will provide immediate and tangible benefits to the construction industry.

ANSI has already recognized the importance of bonded waterproof membranes and approved the ANSI A118.101 “American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation.” This is keeping with the ICC requirements to reference codes that are “developed and maintained through a consensus process such as ASTM or ANSI.” The International Association of Plumbing and Mechanical Officials (IAPMO) offers listings to the Uniform Plumbing Code (UPC) for products that comply with ANSI A118.10. Further, the International Code Council Evaluation Service (ICC-ES) has adopted an “Interim criteria for waterproof membranes for flooring and shower liners” (AC1154) that references ANSI A118.10. The ICC-ES criteria base recognition of these materials under the provision of IPC Section 105.2, which states, “The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternate has been approved.”

**Bibliography:**

1. Tile Council of America, Incorporated, “American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation.” American National Standard Specifications for the Installation of Ceramic Tile, Tile Council of America, Incorporated, Anderson, SC, 2000, pp. 97 – 100.
2. International Code Council, “ICC Public Proposal Form.” p. 2.
3. IAPMO, “Shower pan liner.” <http://pld.iapmo.org> (enter shower pan liners in a search engine).
4. ICC-ES, “Interim Criteria for Waterproof Membranes for Flooring and Shower Liners (AC 115).” <http://icc-es.org/Criteria/ac.shtml>.
5. International Code Council, International Plumbing Code 2003, Country Club Hills, IL, 2003, p. 3.

**Analysis:** It is staff’s opinion that ANSI A118.10 complies with Section 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P25-04/05 419.1

**Proponent:** Robert Friedlander, Construction Code Consultants, Dallas, TX, representing Falcon Waterfree Technologies

### Revise as follows:

**419.1 (Supp) Approval.** Urinals shall conform to ASME A112.19.2M, ASME A112.19.10, CSA B45.1 or CSA B45.5. Urinals shall conform to the water consumption requirements of Section 604.4. Water supplied urinals shall conform to the hydraulic performance requirements of ASME A112.19.6, CSA B45.1 or CSA B45.5.

**Reason:** This change will add the national consensus standard for vitreous china non-water consuming urinals.

**Analysis:** The reference to the standard is premature in that the standard has not been published.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P26-04/05 419.2

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

### Revise as follows:

**419.2 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.

**Reason:** Allowing the substitution of urinals for 2/3 of the water closets located in assembly and educational occupancies only makes sense. All other occupancies, need the extra water closets.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P27-04/05 421.5

**Proponent:** Robert A. Packheiser, CBO, National Association of Home Builders, Washington, D.C.

### Revise as follows:

**421.5 (Supp) Access to pump.** Access shall be provided to circulation pumps in accordance with the ~~fixture~~ manufacturer's installation instructions. Where manufacturer's instructions do not specify the location and minimum size of field fabricated access openings, a 12"x 12" (304 mm x 304 mm) minimum size ~~door or panel~~ opening shall be installed to provide access to the circulation pump. Where pumps are located more than 2 feet (609 mm) from the access opening, a 18"x 18" (457 mm x 457 mm) minimum size ~~door or panel~~ opening shall be installed. A door or panel shall be permitted to close the opening. In all cases, the access panel and door openings shall be unobstructed and large enough of the size necessary to permit the removal and replacement of the circulation pump.

**Reason:** This is to provide clarification for access to, and replacement of, the circulation pump. It is the size of the opening that is of concern, not a possible door. This clarifies that it is the opening that needs to be of sufficient size as indicated. If one so desires, a door or other means may be installed to close the opening.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P28-04/05 424.2; IRC P2708.3 (New)

**Proponent:** David W. Viola, Plumbing Manufacturers Institute, Schaumburg, IL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

### PART I — IPC

#### Revise as follows:

**424.2 Hand showers.** Hand-held showers shall conform to ~~ASSE 1014~~ ASME A112.18.1 or CSA B125.

### PART II — IRC

#### Add new text as follows:

**P2708.3 Hand showers.** Hand-held showers shall conform

to ASME A112.18.1 or CSA B125.

**(Renumber subsequent sections)**

**Reason:** Like all faucets and accessories, hand showers are fixture fittings that are regulated by ASME A112.18.1 and CSA B125. These standards address all aspects of fixture fitting product performance including mechanical wear, temperature and pressure resistance, surface finishing in addition to backflow prevention. ASSE 1014 is an important standard in addressing backflow protection for hand showers. However, it is one of several options recognized by the IPC. Devices complying with other standards referencing in the IPC are also commonly utilized to provide protection. These include ASSE 1001, ASSE 1011 and ASME A112.18.3.

The revision to reference ASME A112.18.1 and CSA B125 ensures that backflow protection in accordance with one of these methods, while eliminating an inadvertent limitation that only ASSE 1014 applies to hand showers.

**Analysis:** ASME A112.18.1 (Plumbing Fixture Fittings) and CSA B125 (Plumbing Fittings) are currently referenced in various sections in both the IPC and IRC.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P29-04/05**

**424.4**

**Proponent:** Tim Kilbane, Symmons Industries, Inc., Braintree, MA

**Revise as follows:**

**424.4 (Supp) Multiple (gang) showers supplied with a single tempered water supply pipe.** Multiple (gang) showers supplied with a single tempered water supply pipe shall have the water supply for such showers controlled by an approved automatic temperature control mixing valve that conforms to ASSE 1069 or CSA B125, or each shower head shall be individually controlled by a balanced pressure, thermostatic or combination balanced-pressure/thermostatic valves that conform to ASSE 1016 or CSA B125 and shall be installed at the point of use. Such valves shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer’s instructions.

**Reason:** 1) Add reference to the new ASSE 1069 standard, which was developed for gang shower applications and therefore contains the necessary testing criteria within the standard that a device in an application such as this would be subjected to in the field.

2) Include/allow an individual point of use control as a means of controlling the temperature at the point of use under the auspices of the ASSE 1016 standard.

**Analysis:** The proponent had not submitted the referenced standard (ASSE 1069) for review prior to the printing of the monograph. If the standard is submitted within a reasonable time frame, staff will review and provide the results to the committee members prior to the code hearings.

ASSE 1016 and CSA B125 are already referenced in the IPC and complies with 3.6 of the ICC code development procedures.

Consistent action should be considered for related proposals P30-04/05 and P31-04/05.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P30-04/05**

**424.4**

**Proponent:** David W. Viola, Plumbing Manufacturers Institute, Schaumburg, IL

**Revise as follows:**

**424.4 (Supp) Multiple (gang) showers supplied with a single tempered water supply pipe.** Multiple (gang) showers supplied with a single tempered water supply pipe shall have the water supply for such showers controlled by an approved automatic temperature control mixing valve that conforms to ASSE 1069 or CSA B125, or each shower valve shall be individually controlled by balanced pressure, thermostatic or combination balanced pressure/thermostatic valves that conform to ASSE 1016 or CSA B125. Such valves shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer’s instructions.

**Reason:** There are two primary reasons for the proposal:

1. Add reference to the new ASSE standard 1069, which was specifically developed to address gang shower protection. These devices are installed in-line to supply multiple shower stations with a single water supply line. The bather has no control over temperature (only flow control).
2. Clarify that each gang showers station can still be individually protected with a valve complying with ASSE 1016 or CSA B125.

**Analysis:** The proponent had not submitted the referenced standard (ASSE 1069) for review prior to the printing of the monograph. If the standard is submitted within a reasonable time frame, staff will review and provide the results to the committee members prior to the code hearings.

ASSE 1016 and CSA B125 are already referenced in the IPC and complies with 3.6 of the ICC code development procedures.

Consistent action should be considered for related proposals P29-04/05 and P31-04/05.

**Cost Impact:** This code change will increase the cost of construction.

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P31-04/05 424.4

**Proponent:** William Chapin, Cash Acme, Cullman, AL

**Revise as follows:**

**424.4 (Supp) Multiple (gang) showers supplied with a single tempered water supply pipe.** Multiple (gang) showers supplied with a single tempered water supply pipe shall have the water supply for such showers controlled by an approved automatic temperature control mixing valve that conforms to ASSE 1069. Such valves shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions.

**Reason:** Specifying a maximum of 120°F without specifying the means of achieving this temperature leaves open the possibility of an inappropriate or inadequate device being installed. Over the last several years an ASSE working group has been developing a more comprehensive suite of standards for water temperature control devices. One of the resulting standards, ASSE 1069 Performance Requirements for Automatic Temperature Control Mixing Valves, is specifically intended for this type of application as recommended by IPC Ad Hoc Committee.

**Analysis:** The proponent had not submitted the referenced standard for review prior to the printing of the monograph. If the standard is submitted within a reasonable time frame, staff will review and provide the results to the committee members prior to the code hearings.

Consistent action should be considered for related proposals P29-04/05 and P30-04/05.

**Cost Impact:** This code change will increase the cost of construction.

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P32-04/05 424.5 (New), Chapter 13; IRC P2713.3 (New), Chapter 43

**Proponent:** James Brothers, City of Decatur, Alabama,

representing Ad Hoc Committee on Temperature Control

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

### PART I — IPC

#### 1. Add new text as follows:

**424.5 Bathtub valves.** The hot water supplied to a bathtub shall be limited to a maximum temperature of 120° F (49° C) by a water temperature limiting device that conforms to ASSE 1070, except where such protection is otherwise provided by a combination tub/shower valve in accordance with Section 424.3

(Renumber subsequent sections)

#### 2. Add new standard to Chapter 13 as follows:

ASSE 1070-04 Performance Requirements for Water Limiting Devices . . . . . 424.5

### PART II — IRC

#### 1. Add new text as follows:

**P2713.3 Bathtub valves.** The hot water supplied to a bathtub shall be limited to a maximum temperature of 120° F (49° C) by a water temperature limiting device that conforms to ASSE 1070, except where such protection is otherwise provided by a combination tub/shower valve in accordance with Section P2708.3.

(Renumber subsequent sections)

#### 2. Add new standard to Chapter 43 as follows:

ASSE 1070-04 Performance Requirements for Water Limiting Devices . . . . . 2713.3

**Reason:** This code change will provide protection from inadvertent scalding in bathtubs by requiring a water temperature limiting device that is listed to ASSE 1070 as a minimum code requirement. The ASSE 1070 standard has been developed in accordance with ICC standards policy. The standard provides for devices to be installed appropriately with the fixture fitting or can be integral to the plumbing fixture fitting supplying the water.

**Analysis:** It is the staff's opinion that ASSE 1070-04 complies with Section 3.6 of the ICC code development procedures.

Consistent action should be considered for related proposal P33-04/05.

**Cost Impact:** This code change will increase the cost of construction.

### PART I — IPC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P33-04/05**  
**424.5 (New), Chapter 13; IRC P2722.4 (New), Chapter 43**

**Proponent:** William Chapin, Cash Acme, Cullman, AL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Add new text as follows:**

424.5 Bathtub valves. The discharge water temperature from an individual bathtub fixture fitting shall be limited to a maximum temperature of 120° F (49°C) by a water temperature limiting device that conforms to ASSE 1070.

**(Renumber subsequent sections)**

**2. Add new standard to Chapter 13 as follows:**

ASSE 1070-04 Performance Requirements for Water Temperature Limiting Devices . . . . . 424.5

**PART II — IRC**

**1. Add new text as follows:**

P2722.4 Bathtub valves. The discharge water temperature from an individual bathtub fixture fitting shall be limited to a maximum temperature of 120° F (49°C) by a water temperature limiting device that conforms to ASSE 1070.

**2. Add new standard to Chapter 43 as follows:**

ASSE 1070-04 Performance Requirements for Water Temperature Limiting Devices . . . . . P2722.4

**Reason:** The IPC does not currently protect the user of bathtub valves installed in a combination tub/shower from scalding, therefore requiring

the addition of this new text.

Over the last several years an ASSE working group has been developing a more comprehensive suite of standards for water temperature control devices. One of the resulting standards, ASSE 1070 Performance Requirements for Water Temperature Limiting Devices, is specifically intended for this type of application as recommended by the IPC Ad Hoc Committee.

**Analysis:** It is the staff's opinion that ASSE 1070 complies with Section 3.6 of the ICC code development procedures.

Consistent action should be considered for related proposal P32-04/05.

**Cost Impact:** This code change will increase the cost of construction.

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P34-04/05**  
**424.6 (New), Chapter 13; IRC P2722.5 (New), Chapter 43**

**Proponent:** William Chapin, Cash Acme, Cullman, AL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Add new text as follows:**

424.6 Whirlpool bathtub valves. The discharge water temperature from whirlpool bathtub fillers shall be limited to a maximum temperature of 120° F (49°C) by a water temperature limiting device that conforms to ASSE 1070.

**2. Add new standard to Chapter 13 as follows:**

ASSE 1070-04 Performance Requirements for Water Temperature Limiting Devices . . . . . 424.6

**PART II — IRC**

**1. Add new text as follows:**

P2722.5 Whirlpool bathtub valves. The discharge water

temperature from whirlpool bathtub fillers shall be limited to a maximum temperature of 120° F (49°C) by a water temperature limiting device that conforms to ASSE 1070.

**2. Add new standard to Chapter 43 as follows:**

ASSE 1070-04 Performance Requirements for Water Temperature Limiting Devices . . . . . P2722.5

**Reason:** Scald injuries do occur in whirlpool tubs. Currently there is no requirement to protect the users of whirlpool tubs from scalding, therefore requiring the addition of this new text.

Over the last several years an ASSE working group has been developing a more comprehensive suite of standards for water temperature control devices. One of the resulting standards, ASSE 1070 Performance Requirements for Water Temperature Limiting Devices, is specifically intended for this type of application as recommended by the IPC Ad Hoc Committee.

**Analysis:** It is the staff's opinion that ASSE 1070 complies with Section 3.6 of the ICC code development procedures.

**Cost Impact:** This code change will increase the cost of construction.

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P35-04/05**

**501.2; IRC P2802.2**

**Proponent:** Guy McMann, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Revise as follows:**

**501.2 Water heater as space heater.** Where a combination potable water heating and space heating system requires water for space heating at temperatures higher than 140°F (60°C), a master thermostatic mixing valve complying with ASSE 1017 shall be provided to limit the water supplied to the potable hot water distribution

system to a temperature of 140°F (60°C) or less. ~~The potability of the water shall be maintained throughout the system.~~ Continuous circulation shall be maintained so as to prevent stagnation of the water.

**PART II — IRC**

**Revise as follows:**

**P2802.2 Temperature control.** Where a combination water heater–space heating system requires water for space heating at temperatures exceeding 140°F (60°C), a master thermostatic mixing valve complying with ASSE 1017 shall be installed to temper the water to a temperature of 140°F (60°C) or less for domestic uses. Continuous circulation shall be maintained so as to prevent stagnation of the water.

**Reason:** The last sentence leaves something to be desired in specificity. The new language spells out the true intention. Circulation can be achieved a number of ways including but not limited to orifices in isolation valves, thermostatic sensors or cycle timing switches. Just how long it takes for water to become non-potable due to stagnation is a guess. This added text will make it clear that circulation is required.

**Cost Impact:** This code change will increase the cost of construction.

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P36-04/05**

**501.9 (New); IRC P2801.7 (New)**

**Proponent:** William Chapin, Cash Acme, Cullman, AL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Add new text as follows:**

**501.9 Minimum hot water storage temperature.** The minimum temperature of water stored in a storage-type water heater shall be 140° F (60°C).

**PART II — IRC**

Add new text as follows:

**P2801.7 Minimum hot water storage temperature.** The minimum temperature of water stored in a storage-type water heater shall be 140° F (60°C).

**Reason:** This proposal returns water heaters to their intended function of “hot water generators” and eliminates the pretense of them being “a water delivery temperature control device.” It is a dangerous misconception that setting the water heater thermostat to 120°F ensures “safe” hot water:

(1) Leaving the heater thermostat at 120°F and declaring it safe avoids dealing with water temperature control properly. The thermostat cannot accurately control the temperature of delivered water. It is inevitably turned up so the heater can deliver more hot water. This is dangerous to those expecting the thermostat setting to be 120°F. This proposal highlights that water in the heater is not at 120°F, and forces delivery temperature control back to the appropriate devices as referenced in Section 424 and others. By storing water at 140°F or higher the heater becomes more efficient by delivering more hot water from the same physical size heater.

(2) Water stored at less than 140°F supports legionella bacteria. There is ample evidence of Legionnaires’ disease in institutional environments from legionella in water systems. New evidence points to the same occurrence in residential. Raising the temperature of stored water is one important step in addressing this issue.

Please refer to this web site for complete supporting data: [www.cashacme.com/watertemp.html](http://www.cashacme.com/watertemp.html)

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P37-04/05**

**501.9 (New); IRC P2801.7 (New)**

**Proponent:** Ronald L. George, CIPE, CPD, Ron George Design & Consulting Services, Detroit, MI, representing Code Study & Development Committee of Southeast Michigan

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

Add new text as follows:

**501.9 Thermostatic mixing valve piping.** Where a thermostatic mixing valve conforming to ASSE 1017 is installed in the domestic hot water piping above a water heater and there is not a circulating pump in the system, a heat trap shall be installed by providing a drop of 2 feet (610 mm) in the piping before connecting to the mixing valve. A heat trap shall not be required where the valve is located not less than 2 feet (610 mm) below the hot water piping outlet of the water heater.

**PART II — IRC**

Add new text as follows:

**P2801.7 Thermostatic mixing valve piping.** Where a thermostatic mixing valve conforming to ASSE 1017 is installed in the domestic hot water piping above a water heater and there is not a circulating pump in the system, a heat trap shall be installed by providing a drop of 2 feet (610 mm) in the piping before connecting to the mixing valve. A heat trap shall not be required where the valve is located not less than 2 feet (610 mm) below the hot water piping outlet of the water heater.

**Reason:** Convection currents in hot water piping systems cause hot water to rise in the piping. Where the thermostatic mixing valve is located above the water heater, the hot water can flow up into a thermostatic mixing valve and cause temperature fluctuations in uncirculated domestic hot water systems. Providing a drop of two feet in the piping prior to entering the thermostatic mixing valve creates a heat trap that will prevent the convection currents from flowing through the mixing valve and into the piping system.

Many manufacturers require this piping arrangement in their installation literature. There are some manufacturers that do not cover this in their installation requirements. Adding this to the code will provide inspectors with the language to enforce this piping arrangement that can prevent a sudden change in temperature that can result in scalding or thermal shock.

**Analysis:** It is the staff’s opinion that ASSE 1017 complies with Section 3.6 of the ICC code development procedures. This standard is already referenced in the IPC and IRC.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P38-04/05

### 501.10 (New); IRC P2801.8 (New)

**Proponent:** Ronald L. George, CIPE, CPD, Ron George Design & Consulting Services, Detroit, MI, representing himself

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Add new text as follows:**

501.10 Temperature actuated mixing valve. The minimum temperature of hot water supplied to a temperature actuated mixing valve conforming to ASSE 1017 shall be 140° F (60°C) and shall be located at the hot water source.

#### PART II — IRC

**Add new text as follows:**

P2801.8 Temperature actuated mixing valve. The minimum temperature of hot water supplied to a temperature actuated mixing valve conforming to ASSE 1017 shall be 140° F (60°C) and shall be located at the hot water source.

**Reason:** Where a thermostatic mixing valve is installed in a domestic hot water system, the minimum temperature of hot water supplied to the thermostatic mixing valve should be 140 degrees Fahrenheit. This is because many thermostatic mixing valves require a fifteen to twenty-degree differential between the hot water temperature and the mixed water temperature for the valve to work properly. Also when there are ASSE 1016 devices installed at the shower or tub/shower some models require a fifteen to a twenty-degree temperature differential in order to mix properly. If a bath or shower temperature is around 105 degrees then 120-125 degree water would be required for the ASSE 1016 thermostatic valves to mix properly. There are ASSE 1017 mixing valves that would then require at least 140 degree water in order to safely deliver hot water at 120 – 125 degrees Fahrenheit to ASSE 1016 valves.

**Analysis:** It is the staff's opinion that ASSE 1017 complies with Section 3.6 of the ICC code development procedures. This standard is already referenced in the IPC and IRC.

**Cost Impact:** None

#### PART I — IPC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

#### PART II — IRC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P39-04/05

### 501.11 (New); IRC P2801.9 (New)

**Proponent:** Ronald L. George, CIPE, CPD, Ron George Design & Consulting Services, Detroit, MI, representing himself

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Add new text as follows:**

501.11 Maximum hot water delivery temperature. Domestic hot water systems supplying bathing and washing facilities shall be provided with a master thermostatic mixing valve conforming to ASSE 1017 to limit the hot water distribution temperature to a maximum of 120° F (49°C).

**Exception:** Kitchen equipment and other equipment requiring hot water temperatures in excess of 120° F (49°C) shall be provided with hot water at the temperature required by this code.

#### PART II — IRC

**Add new text as follows:**

P2801.9 Maximum hot water delivery temperature. Domestic hot water systems supplying bathing and washing facilities shall be provided with a master thermostatic mixing valve conforming to ASSE 1017 to limit the hot water distribution temperature to a maximum of 120° F (49°C).

**Exception:** Kitchen equipment and other equipment requiring hot water temperatures in excess of 120° F (49°C) shall be provided with hot water at the temperature required by this code.

**Reason:** Thermostatic mixing valves installed on domestic hot water systems can eliminate hundreds of tap water scald burns per year.

**Analysis:** It is the staff's opinion that ASSE 1017 complies with Section 3.6 of the ICC code development procedures. This standard is already referenced in the IPC and IRC.

**Cost Impact:** This code change will increase the cost of construction.

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P40-04/05**

**504.6; IRC P2803.6.1**

**Proponent:** Gary Kozan, CPD, Ridgeway Plumbing, Boynton Beach, FL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Revise as follows:**

**504.6 (Supp) Requirements for discharge piping.** The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to an indirect waste receptor, or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.
6. Discharge in a manner that does not cause personal injury or ~~property~~ **structural** damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for

such use in accordance with ASME A112.4.1.

**PART II — IRC**

**Revise as follows:**

**P2803.6.1 (Supp) Requirements for discharge piping.**

The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to an indirect waste receptor, or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.
6. Discharge in a manner that does not cause personal injury or ~~property~~ **structural** damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section P2904.5 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.

**Reason:** The revised text in the supplement was approved at last year's hearings. It consolidates all of the requirements for relief valve piping, and provides uniformity between the IPC and IRC. Prior IPC editions used the term "structural damage," not "property damage." Property damage is not defined in the code, and can be construed to include not only building components (wet flooring, drywall, baseboards) but personal property as well. Relief line discharge, like fire sprinkler activation, is an emergency response to a dangerous situation. In such an occurrence, the code should protect against structural damage, not property damage.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P41-04/05**

**601.3 (New)**

**Proponent:** Richard F. Ali, The Irrigation Association, Falls Church, VA

**Add new text as follows:**

**601.3 Irrigation systems.** Automatically operated residential and commercial landscape irrigation systems shall be provided with an automatic means that interrupts operation of the irrigation system during periods of rainfall.

**Reason:** It is estimated that landscape water use represents an average of 60% of residential and commercial water usage. Water shortages, and drought conditions becoming an annual reality, prudent steps can and must be taken to conserve water whenever possible. Everyone has witnessed the wasteful and costly scenario of an automatic irrigation system running through its full cycle even though it is raining. This is because automatic systems are operated by programmed controllers, and these controllers in and of themselves cannot automatically compensate and adjust during times of rainfall. However, the technology does exist to do just that. In these types of conditions, available rain sensing technology acts to inhibit the system shutting it down almost instantaneously.

The concept of this technology is simple and quite passive in nature – in times of rainfall it interrupts the run cycle of the automatic irrigation system controller.

The amount of water that can be saved using a rain shut-off device varies, but in a year with average rainfall, savings are quite substantial. In a year such as this one, the savings can be extremely large. There are several factors involved in determining how much a sensor reduces water usage, most notably how often it rains, and the amount of water applied by the system per cycle. If the water costs and the amount of water applied per watering cycle by the whole system are known, it is easy to calculate how much is being saved each time the sensor interrupts the watering cycle because of rainfall.

As an example, if a system irrigates ½-acre of turf and is set to operate so that ½-inch of water is applied by the irrigation system one can calculate that 6,789 gallons are being applied over the ½ acre of turf during every cycle. Using this as a guide, one can see that, using this scenario, in times of rainfall, interrupting one run cycle would equal water savings lost to runoff of almost 7,000 gallons. In addition, use of this technology helps protect surface and groundwater by reducing the runoff and deep percolation that carries pollutants, such as fertilizers, into storm drains and groundwater.

**Analysis:** This proposed subject is not under the scope of the plumbing code. The proponent may want to expand the scope of the IPC.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P42-04/05

### 603.2

**Proponent:** Charles Gerber, Henrico County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Revise as follows:**

**603.2 Separation of water service and building sewer.** Water service pipe and the building sewer shall be separated by 5 feet (1524 mm) of undisturbed or compacted earth.

**Exceptions:**

1. The required separation distance shall not apply where the bottom of the water service pipe within 5 feet (1524 mm) of the sewer is a minimum of 12 inches (305 mm) above the top of the highest point of the sewer and the pipe materials conform to ~~Section 703.1~~ Table 702.3.
2. Water service pipe is permitted to be located in the same trench with a building sewer, provided such sewer is constructed of materials listed in Table 702.2.
3. The required separation distance shall not apply where a water service pipe crosses a sewer pipe provided the water service pipe is sleeved to at least 5 feet (1524 mm) horizontally from the sewer pipe centerline, on both sides of such crossing with pipe materials listed in Table 605.3, Table 702.2 or Table 702.3.

**Reason:** Exception 1 was utilized prior to the adoption of Exceptions 2 and 3. Exception 1 needs to be expanded and allow the usage of the other approved sewer materials based on the provisions currently permitted in Exception 2. Instead of referencing Section 703.1 which references Table 702.3, this clarification deletes the reference section and provides the correct Table references.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P43-04/05

### 603.3 (New); IRC P2904.4.2 (New)

**Proponent:** Mark Dunn, City of Hoover, AL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Add new text as follows:**

**603.3 Tracer.** A green insulated copper tracer wire or other

approved conductor shall be installed adjacent to underground nonmetallic piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall not be less than 18 AWG and the insulation type shall be suitable for direct burial.

## PART II — IRC

Add new text as follows:

**P2904.4.2 Tracer.** A green insulated copper tracer wire or other approved conductor shall be installed adjacent to underground nonmetallic piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall not be less than 18 AWG and the insulation type shall be suitable for direct burial.

**Reason:** This would allow easy location of water service piping after installation for future tie-ins and repairs at a minimal cost. The IFGC already requires this for nonmetallic gas piping in Section 404.14.3. Nonmetallic water service piping should be no different.

**Cost Impact:** This code change will increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P44-04/05

### 604.4

**Proponent:** Dennis Martinelli, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

Revise as follows:

**604.4 Maximum flow and water consumption.** The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 604.4.

**Exceptions:**

1. Blowout design water closets having a maximum water consumption of {3.5 gallons (13 L) per flushing cycle}.
2. Vegetable sprays.
3. Clinical sinks having a maximum water consumption of {4.5 gallons (17 L) per flushing cycle}.
4. Service sinks.
5. Emergency showers.

**Reason:** This is an editorial change that properly formats and states the intent of the current code text.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P45-04/05

### Table 604.5; IRC Table P2903.6

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., Munster, IN, representing himself

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

## PART I — IPC

Add table entries as follows:

**TABLE 604.5  
MINIMUM SIZES OF  
FIXTURE WATER SUPPLY PIPES**

FIXTURE	MINIMUM PIPE SIZE (inch)
Shower, single head <sup>a</sup>	1/2
Shower, 2 - 3 showerheads/Bodysprays	1/2
Shower 4-8 Showerheads/Bodysprays	3/4
Shower 9-12 Showerheads/Bodysprays	1
Shower 13-16 Showerheads/Bodysprays	1-1/4
Shower 17-18 Showerheads/Bodysprays	1-1/2

(Portions of table not shown do not change)

**PART II — IRC**

Revise table entry as follows:

**TABLE P2903.6  
WATER-SUPPLY FIXTURE-UNIT VALUES FOR  
VARIOUS PLUMBING FIXTURES AND FIXTURE GROUPS**

TYPE OF FIXTURE OR GROUP OF FIXTURES	WATER-SUPPLY FIXTURE-UNIT VALUE (w.s.f.u.)		
	Hot	Cold	Combined
Shower stall (per showerhead)	1.0	1.0	1.4

(Portions of table not shown do not change)

**Reason:** During the 2003/2004 Code Change Cycle, I attempted to clarify that the intent of the code and the Federal Energy Act was one shower head for one shower. Thus, for water conservation, the limitation on the use of water was 2.5 gpm per bather. This change was soundly defeated. Previously, I submitted changes to lower the trap size for a shower based on the lowering of the flow rate to 2.5 gpm. Since the ICC membership has interpreted the code as allowing any number of shower heads for a single shower, the code requirements for drainage pipe sizing and water pipe sizing are incorrect. The code must be modified to address the additional load that will be placed on the drain and the additional peak demand requirements for water supply.

The maximum number of showerheads that has to date been demonstrated has been 17 showerheads and bodysprays. This was shown in Reeves Journal for a single shower. Hence, I ran calculations for showerheads and bodysprays up to 18 per shower. The pipe sizes are based on a hot water supply of 120° F water and a cold water supply of 45° F water. The resulting maximum flow is 75 percent of the total flow. For each showerhead or bodyspray that would equate to 1.875 gpm. For 4 showerheads or bodysprays, the flow rate calculation is based on 7.5 gpm. This flow rate exceeds the allowable flow rate for a 1/2 inch tubing. For 9 showerheads the flow rate is 16.875 which exceeds the flow rate for a 3/4 inch tubing.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P46-04/05**

**Table 605.3, Table 605.4, Table 605.5 Chapter 13; IRC Table P2904.4.1, Table P2904.5, Table P2904.6, Chapter 43**

**Proponent:** James Paschal, Bodycote, Ypsilanti, MI, representing various plastic pipe manufacturers

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Add new table entries as follows:

**TABLE 605.3 (Supp)  
WATER SERVICE PIPE**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**TABLE 605.4 (Supp)  
WATER DISTRIBUTION PIPE**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**TABLE 605.5 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

ASTM F2389-04 Standard Specification for Pressure-rated Polypropylene (PP) Piping Systems . . . . . Table 605.3, Table 605.4, Table 605.5, 605.21

**PART II — IRC**

**1. Add new table entries as follows:**

**TABLE P2904.4.1 (Supp)  
WATER SERVICE PIPE**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**TABLE P2904.5 (Supp)  
WATER DISTRIBUTION PIPE**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**TABLE P2904.6 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

ASTM F2389-04 Standard Specification for Pressure-rated Polypropylene (PP) Piping Systems . . . Table 2904.4.1, Table 2904.5, Table 2904.6, P2904.10

**Reason:** This code change is being re-submitted in conjunction with several others with the overall purpose of allowing the use of polypropylene (PP) in hot and cold water distribution piping and radiant heating systems.

The previous submittal was rejected due to lack of an appropriate ASTM standard which required a minimum 100 psi rating at 180°F. This standard now exists (ASTM F 2389) and is proposed for inclusion into the various Tables of the IPC and IRC. It requires the minimum rating of 160 psi at 73°F (water service) and 100 psi at 180°F (hot-and-cold water distribution). PP materials meeting these requirements have over 30 years of successful history in hot and cold water piping, radiant heating systems, chemical process piping, swimming pool circulation, compressed air systems and irrigation. In addition to being a very versatile material offering time and material savings, PP is environmentally friendly in terms of initial manufacturing, raw material usage, and energy consumption. PP can be recycled, meets the health effects criteria of NSF 61 without any special conditions or exemptions, and has a long history of use in these applications.

Polypropylene (PP) has been used extensively in these applications in Europe, Eastern Europe, Russia, Middle Eastern and Far East countries for over 30 years. The proposed revision includes requirements for dimensions, materials, pressure rating at 73°F and 180°F, performance tests, thermal stability, fitness-for-purpose and compliance with NSF 61. The products are currently tested and listed by numerous organizations around the world including NSF (U.S.), KIWA (Netherlands), DVGW (Germany), AENOR (Spain) and others, for compliance with the reference ASTM F2389, as well as ISO and DIN standards.

**Bibliography:** A CD containing product specifications, quality assurance information, test certifications, installation instructions and planning documents, as well as a copy of the ASTM standard and NSF test reports has been supplied to the ICC to support this proposal.

**Analysis:** It is the staff's opinion that ASTM F2389 complies with Section 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P47-04/05**

**Table 605.3, Table 605.4, Chapter 13; IRC Table P2904.4.1, Table P2904.5, Chapter 43**

**Proponent:** Robert Friedlander, Construction Code Consultants, Dallas, TX, representing Vanguard Piping Systems

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise tables as follows:**

**TABLE 605.3 (Supp)  
WATER SERVICE PIPE**

MATERIAL	STANDARD
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) plastic tubing	ASTM F 1281, <u>ASTM F 2262</u> , CANA/CSAB137.10M

(Portions of table not shown do not change)

**TABLE 605.4 (Supp)  
WATER DISTRIBUTION PIPE**

MATERIAL	STANDARD
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) plastic tubing	ASTM F 1281, <u>ASTM F 2262</u> , CANA/CSAB137.10M

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

ASTM F 2262-03 Standard Specification for Cross-Linked Polyethylene/Aluminum/Cross-Linked Polyethylene Tubing OD Controlled  
SDR9 . . . . . Tables 605.3, 605.4

**PART II — IRC**

**1. Revise tables as follows:**

**TABLE P2904.4.1 (Supp)  
WATER SERVICE PIPE**

MATERIAL	STANDARD
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) plastic tubing	ASTM F 1281, <u>ASTM F 2262</u> , CANA/CSAB137.10M

(Portions of table not shown do not change)

**TABLE P2904.5 (Supp)  
WATER DISTRIBUTION PIPE**

MATERIAL	STANDARD
Cross-linked polyethylene/aluminum cross-linked polyethylene (PEX-AL-PEX) plastic tubing	ASTM F 1281, <u>ASTM F 2262</u> , CANA/CSAB137.10M

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

ASTM F 2262-03 Standard Specification for Cross-Linked Polyethylene/Aluminum/Cross-Linked Polyethylene Tubing OD Controlled  
SDR9 . . . Tables P2904.4.1, P2904.5

**Reason:** The reason for this change is to include a nationally recognized standard for PEX/AL/PEX. This standard is for what is commonly known as CTS or SDR9.

**Analysis:** It is the staff’s opinion that ASTM F2262 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P48-04/05**

**605.3.1, Table 608.1, Chapter 13; IRC P2904.4.1 (New), Table P2902.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise as follows:**

**605.3.1 Dual check-valve-type backflow preventer.**

Where a dual check-valve backflow preventer is installed on the water supply system, it shall comply with ASSE 1024 or CAN/CSA-B64.6.

**TABLE 608.1 (Supp)  
APPLICATION OF BACKFLOW PREVENTERS**

DEVICE	DEGREE OF HAZARD <sup>a</sup>	APPLICATION <sup>b</sup>	APPLICABLE STANDARDS
Dual-check-valve-type backflow preventer	Low hazard	Backpressure or backsiphonage Sizes 1/4"-1"	ASSE 1024, <u>CAN/CSA B64.6</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

CAN/CSA B64.6-01 Backflow Preventers, Dual Check Valve Type (DuC)  
..... 605.3.1, Table 608.1

**PART II — IRC**

**1. Add new text as follows:**

**P2904.4.1 Dual check-valve-type backflow preventer.**  
Where a dual check-valve backflow preventer is installed on the water supply system, it shall comply with ASSE 1024, CAN/CSA B64.6.

**2. Revise table entry as follows:**

**TABLE P2902.2 (Supp)  
APPLICATION FOR BACKFLOW PREVENTERS**

DEVICE	DEGREE OF HAZARD <sup>a</sup>	APPLICATION <sup>b</sup>	APPLICABLE STANDARDS
Dual-check-valve-type backflow preventer	Low hazard	Backpressure or backsiphonage Sizes 1/4"-1"	ASSE 1024, <u>CAN/CSA B64.6</u>

(Portions of table not shown do not change)

**3. Add new standard to Chapter 43 as follows:**

CAN/CSA B64.6-01 Backflow Preventers, Dual Check Valve Type (DuC)  
..... P2904.4.1, Table P2902.2

**Reason:** The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B64.6 to have their products used as options to products that meet the requirements of ASSE 1024. This change will also allow the authorities having jurisdiction to allow the use of products that meet either CSA or ASSE Standards.

The requirements in both CAN/CSA-B64.6 and ASSE 1024 provide for the equivalent evaluation of materials, working pressure and

temperature range, design and construction, evaluation of discrete parts such as ports, air bleeds, replacement parts, and diaphragms or bellows, pipe threads, fouling of moving parts, hydrostatic pressure strength, back flow and back siphonage, corrosion resistance, shut-off valves and test cocks, check valve sealing pressure, water flow and pressure drop, deterioration at temperature and pressure extremes, and torque test.

**Analysis:** It is the staff's opinion that CSA B64.6 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P49-04/05  
605.5**

**Proponent:** Charles Gerber, Henrico County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Revise as follows:**

**605.5 Fittings.** Pipe fittings shall be approved for installation with the piping material installed and shall conform to ~~the respective pipe standards~~ or one of the standards listed in Table 605.5. All pipe fittings utilized in water supply systems shall also conform to NSF 61. The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing flow in the piping. Ductile and gray iron pipe fittings shall be cement mortar lined in accordance with AWWA C104.

**Reason:** The pipe standard is not an acceptable standard to which fittings must comply. This leads to the misapplication of materials and potential failure due to use as not intended.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P50-04/05  
Table 605.5**

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, Inc., Munster, IN, representing Viega North America

Revise table entry as follows:

**TABLE 605.5 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29; ASME B16.51

(Portions of table not shown do not change)

**Reason:** This change will add the new ANSI standard for copper press fittings. The fittings regulated in this standard are both wrought and cast fittings. Unlike other copper fitting standards, this standard includes performance requirements for press connect fittings. Section 14 identifies a number of performance tests for these fittings.

**Analysis:** The proponent had not submitted the referenced standard for review prior to the printing of the monograph. If the standard is submitted within a reasonable time frame, staff will review and provide the results to the committee members prior to the code hearings.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P51-04/05

### Table 605.5, Chapter 13; IRC Table P2904.6, Chapter 43

**Proponent:** Robert Friedlander, Construction Code Consultants, Dallas, TX, representing Vanguard Piping Systems

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

1. Revise table entry as follows:

**TABLE 605.5 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2159

(Portions of table not shown do not change)

2. Add new standard to Chapter 13 as follows:

ASTM F 2159-03 Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing . . . . . Table 605.5

#### PART II — IRC

1. Revise table entry as follows:

**TABLE P2904.6 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASTM F 1807, ASTM F 1960, ASTM F 2080, ASTM F 2159

(Portions of table not shown do not change)

2. Add new standard to Chapter 43 as follows:

ASTM F 2159-03 Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing . . . . . Table P2904.6

**Reason:** The purpose of this code change is to include a nationally recognized standard for fittings used with PEX SDR9 tubing.

**Analysis:** It is the staff's opinion that ASTM F2159 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

#### PART I — IPC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

#### PART II — IRC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P52-04/05

### 605.7; IRC P2903.9.3.4 (New)

**Proponent:** Jeremy Brown, NSF International, Ann Arbor, MI

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Revise as follows:**

**605.7 Valves.** All valves shall be of the approved type and compatible with the type of piping material installed in the system. Valves utilized in water supply systems shall conform to NSF 61 except for backflow prevention valves and balanced pressure, thermostatic and combination balanced-pressure/thermostatic control valves.

#### PART II — IRC

**Add new text as follows:**

**P2903.9.3.4 Valves.** All valves shall be of the approved type and compatible with the type of piping material installed in the system. All valves utilized in water supply systems shall conform to NSF 61 except for backflow prevention valves and balanced pressure, thermostatic and combination balanced-pressure/thermostatic control valves.

**Reason:** Currently the IPC requires conformance with ANSI/NSF Standard 61 for water distribution pipe and fittings. This is an extension of this requirement to include valves. The current code has no requirements for valves relating to health effects. Adding this language is a critical step in protecting public health, by ensuring that these products do not release dangerous levels of lead or other hazardous chemicals into drinking water.

**Analysis:** It is the staff's opinion that NSF 61 complies with Section 3.6 of the ICC code development procedures. This standard is already referenced in the IPC and IRC.

**Cost Impact:** This code change will increase the cost of construction.

#### PART I — IPC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

#### PART II — IRC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P53-04/05

### 605.15.3; IRC P2904.13 (New)

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA, representing Nvent

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Revise as follows:**

**605.15.3 Mechanical joints.** Mechanical joints shall be installed in accordance with the manufacturer's instructions. Mechanical joints shall include press-type or push-type joining systems.

#### PART II — IRC

**Add new text as follows:**

**P2904.13 Mechanical joints.** Mechanical joints shall be installed in accordance with the manufacturer's instructions. Mechanical joints shall include press-type or push-type joining systems.

**Reason:** This code change clarifies the code and will recognize new technology that offers a solder-less joining system that complies with appropriate copper pipe and copper tube standards.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P54-04/05

### 605.15.3.1 (New)

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, Inc., Munster, IN, representing Viega North America

**Add new text as follows:**

**605.15.3.1 Copper press fittings.** Copper press fittings shall be joined with a tool certified by the manufacturer of the copper press fittings.

**Reason:** Copper press fittings are regulated by a new standard published by ASME. Part of that standard is a requirement for the fitting manufacturer to approve the tool used to press the fittings. This additional language will add this requirement to the code. Press connect fittings are a type of mechanical fitting. They are still required to be

joined in accordance with the manufacturer's instructions as stated in Section 605.15.3.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## **P55-04/05**

### **605.15.4 (New); IRC P2904.18 (New)**

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA, representing Nvent

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### **PART I — IPC**

**Add new text as follows:**

**605.15.4 Push-Type joints.** A push-type mechanical joint consists of elastomeric seals and corrosion resistant tube grippers. Such joints can be permanent or non-permanent depending on the design and must be installed in accordance with the manufacturer's instructions.

#### **PART II — IRC**

**Add new text as follows:**

**P2904.18 Push-Type joints.** A push-type mechanical joint consists of elastomeric seals and corrosion resistant tube grippers. Such joints can be permanent or non-permanent depending on the design and must be installed in accordance with the manufacturer's instructions.

**Reason:** This code change will recognize new technology that offers a solder-less joining system that complies with appropriate copper pipe and copper tube standards.

**Analysis:** Consistent action should be considered for related proposal P56-04/05.

**Cost Impact:** None

#### **PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

#### **PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## **P56-04/05**

### **605.15.5 (New)**

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA, representing Nvent

**Add new text as follows:**

**605.15.5 Push-joints.** Push-type joints shall be made in accordance with the manufacturer's instructions using elastomeric seals and corrosion resistant tube grippers.

**Reason:** This code change will recognize new technology that offers a solder-less joining system that complies with appropriate copper pipe and copper tube standards.

**Analysis:** Consistent action should be considered for related proposal P55-04/05.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

## **P57-04/05**

### **605.17.2, Table 605.5, Chapter 13; IRC P2904.9.1.4.2, Table P2904.6, Chapter 43**

**Proponent:** Dave Watson, Dave Watson Associates, Adrian, MI

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### **PART I — IPC**

**1. Revise as follows:**

**605.17.2 Mechanical joints.** Mechanical joints shall be installed in accordance with the manufacturer's instructions. Fittings for cross-linked polyethylene (PEX) plastic tubing as described in ASTM F877, ASTM F1807, ASTM F1960, and ASTM F2080 shall be installed in accordance with the manufacturer's instructions.

**TABLE 605.5  
PIPE FITTINGS**

MATERIAL	STANDARD
Fittings for cross-linked polyethylene (PEX) plastic tubing	<u>ASTM F877</u> ; ASTM F1807, ASTM F1960, ASTM F2080

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

ASTM F877-00      Standard Specification For Crosslinked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems  
Table 605.5, 605.17.2

**PART II — IRC**

**1. Revise as follows:**

**P2904.9.1.4.2 Mechanical joints.** Mechanical joints shall be installed in accordance with the manufacturer's instructions. Fittings for cross-linked polyethylene (PEX) plastic tubing as described in ASTM F877, ASTM F1807, ASTM F1960, and ASTM F2080 shall be installed in accordance with the manufacturer's instructions.

**TABLE P2904.6  
PIPE FITTINGS**

MATERIAL	STANDARD
Fittings for cross-linked polyethylene (PEX) plastic tubing	<u>ASTM F877</u> ; ASTM F1807, ASTM F1960, ASTM F2080

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

ASTM F877-00      Standard Specification For Crosslinked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems Table P2904.6, P2904.9.1.4.2

**Reason:** This standard covers requirements, test methods, and methods of marking for crosslinked polyethylene plastic hot and cold water distribution systems components which include tubing and compression fittings. Therefore, ASTM 877 should be referenced in Table 605.5 for pipe fittings. This standard is currently referenced in Table 605.4 for water distribution pipe and Table 605.3 for water service pipe.

In addition, CSA B137.5 was added to Table 605.5 for pipe fittings and Table P2904.6 for pipe fittings in the 2004 Supplement. CSA B137.5

addresses the same criteria and test methods for Crosslinked Polyethylene (PEX) Tubing Systems for pipe and fittings.

**Analysis:** It is the staff's opinion that ASTM F877-00 complies with 3.6 of the ICC code development procedures and is already referenced in the IPC and IRC.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:    Committee:    AS    AM    D  
                          Assembly:    ASF    AMF    DF

**PART II — IRC**

Public Hearing:    Committee:    AS    AM    D  
                          Assembly:    ASF    AMF    DF

**P58-04/05**

**605.21 (New), 605.21.1 (New), 605.21.2 (New);  
 IRC P2904.10 (New), P2904.10.1 (New),  
 P2904.10.2 (New)**

**Proponent:** James Paschal, Bodycote, Ypsilanti, MI, representing various plastic pipe manufacturers

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Add new text as follows:**

**605.21 Polypropylene (PP) plastic.** Joints between PP plastic pipe and fittings shall comply with Sections 605.21.1 and 605.21.2.

**605.21.1 Heat-fusion joints.** Heat fusion joints for polypropylene pipe and tubing joints shall be installed with socket-type heat-fused polypropylene fittings, butt-fusion polypropylene fittings or electrofusion polypropylene fittings. Joint surfaces shall be clean and free from moisture. The joint shall be undisturbed until cool. Joints shall be made in accordance with ASTM F 2389.

**605.21.2 Mechanical and compression sleeve joints.** Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

**PART II — IRC**

**Add new text as follows:**

**P2904.10 Polypropylene (PP) plastic.** Joints between PP plastic pipe and fittings shall comply with Sections P2904.10.1 through P2904.10.2.

**P2904.10.1 Heat-fusion joints.** Heat fusion joints for polypropylene pipe and tubing joints shall be installed with socket-type heat-fused polypropylene fittings, butt-fusion polypropylene fittings or electrofusion polypropylene fittings. Joint surfaces shall be clean and free from moisture. The joint shall be undisturbed until cool. Joints shall be made in accordance with ASTM F 2389.

**P2904.10.2 Mechanical and compression sleeve joints.** Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

**Reason:** This code change is being re-submitted in conjunction with several others with the overall purpose of allowing the use of polypropylene (PP) in hot and cold water distribution piping and radiant heating systems.

The previous submittal was rejected due to lack of an appropriate ASTM standard which required a minimum 100 psi rating at 180°F. This standard now exists (ASTM F 2389) and is proposed for inclusion into the various Tables of the IPC and IRC. It requires the minimum rating of 160 psi at 73°F (water service) and 100 psi at 180°F (hot-and-cold water distribution). PP materials meeting these requirements have over 30 years of successful history in hot and cold water piping, radiant heating systems, chemical process piping, swimming pool circulation, compressed air systems and irrigation. In addition to being a very versatile material offering time and material savings, PP is environmentally friendly in terms of initial manufacturing, raw material usage, and energy consumption. PP can be recycled, meets the health effects criteria of NSF 61 without any special conditions or exemptions, and has a long history of use in these applications.

Polypropylene (PP) has been used extensively in these applications in Europe, Eastern Europe, Russia, Middle Eastern and Far East countries for over 30 years. The proposed revision includes requirements for dimensions, materials, pressure rating at 73°F and 180°F, performance tests, thermal stability, fitness-for-purpose and compliance with NSF 61. The products are currently tested and listed by numerous organizations around the world including NSF (U.S.), KIWA (Netherlands), DVGW (Germany), AENOR (Spain) and others, for compliance with the reference ASTM F2389, as well as ISO and DIN standards.

**Bibliography:** A CD containing product specifications, quality assurance information, test certifications, installation instructions and planning documents, as well as a copy of the ASTM standard and NSF test reports has been supplied to the ICC to support this proposal.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P59-04/05**

**605.21.2, 705.8.2, 705.14.2; IRC P2904.9.1.3**

**Proponent:** J. Keith Courtway, Gorilla PVC Cement LLC, Hollywood, FL

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Revise as follows:**

**605.21.2 Solvent cementing.** Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564 or CSA-B137.3 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

**Exception:** A separate purple primer shall not be required where the PVC solvent cement, clear or purple, conforms to both ASTM F 656 and ASTM D 2564. The joint shall be primed and cemented in one-step.

**705.8.2 Solvent cementing.** Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

**Exception:** A separate purple primer shall not be required where the PVC solvent cement, clear or purple, conforms to both ASTM F 656 and ASTM D 2564. The joint shall be primed and cemented in one-step.

**705.14.2 Solvent cementing.** Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

**Exception:** A separate purple primer shall not be required where the PVC solvent cement, clear or purple,

conforms to both ASTM F 656 and ASTM D 2564. The joint shall be primed and cemented in one-step.

**PART II — IRC**

**Revise as follows:**

**P2904.9.1.3 (Supp) PVC plastic pipe.** A purple primer that conforms to ASTM F 656 shall be applied to all PVC solvent cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

**Exception:** A separate purple primer shall not be required where the PVC solvent cement, clear or purple, conforms to both ASTM F 656 and ASTM D 2564. The joint shall be primed and cemented in one-step.

**Reason:** The purpose of this code change is to acknowledge that there is unique PVC solvent cements, fundamentally different from those that have been historically used by the industry, that by the nature of their chemistry are exceptional degreasers and are able to clean and soften PVC pipe without the need of a primer.

If cement can conform to and pass the governing primer standard ASTM F656 as well as the solvent cement standard ASTM D2564, then it stands to reason that it should be allowed to be used without a separate primer because it functions both as a primer and cement.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P60-04/05  
606.3**

**Proponent:** John Walters, Prince William County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**Revise as follows:**

**606.3 Access to valves.** Access shall be provided to all required full-open valves and shutoff valves.

**Reason:** Current text is misleading. It presents a situation where a valve may be installed by choice instead of being required and then not

providing access. This is clearly not the intent. All valves need access regardless of whether they are required or not required by the code.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P61-04/05  
606.5.4**

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

**Revise as follows:**

**606.5.4 Overflows for water supply tanks.** Each gravity or suction water supply tank shall be provided with an overflow with a diameter not less than that shown in Table 606.5.4. The overflow outlet shall discharge at a point above and within not less than 6 inches (152 mm) of a above the roof or roof drain, floor or floor drain, or over an open water-supplied fixture. The overflow outlet shall be covered with a corrosion-resistant screen of not less than 16 by 20 mesh per inch (630 by 787 mesh per m) and by 0.25-inch (6.4 mm) hardware cloth or shall terminate in a horizontal angle seat check valve. Drainage from overflow pipes shall be directed so as not to freeze on roof walks.

**Reason:** The current IPC wording is confusing and this proposed change will clarify this section.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P62-04/05  
607.2; IRC P2901.2 (New)**

**Proponent:** Ronald L. George, CIPE, CPD, Ron George Design & Consulting Services, Detroit, MI, representing Code Study & Development Committee of Southeast Michigan

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**Revise as follows:**

**607.2 Hot water supply temperature maintenance.** Where the developed length of hot water piping from the source of hot water supply to the farthest fixture exceeds ~~400 50~~ feet (~~30 480 15 240~~ mm), the hot water supply system shall be provided with a method of maintaining the temperature of the hot water to within 50 feet (15 240 mm) of the fixtures in accordance with the *International Energy Conservation Code*.

**PART II — IRC**

**Add new text as follows:**

**P2901.2 Hot water supply temperature maintenance.** Where the developed length of hot water piping from the source of hot water supply to the farthest fixture exceeds 50 feet (15 240 mm), the hot water supply system shall be provided with a method of maintaining the temperature of the hot water to within 50 feet (15 240 mm) of the fixtures in accordance with the *International Energy Conservation Code*.

**Reason:** This change is intended to address the long delays and waste of previously heated water when plumbing fixtures utilizing hot water are located near the 100-foot maximum distance from a source of hot water. In 1992 the Energy Policy act mandated low flow fixtures and cut the allowable flow from a public lavatory from a bout 2.5 to 3 gallons per minute down to 0.5 gallons per minute for public lavatories. The current code allows fixtures requiring HW to be up to 100 feet away from the heated main before requiring a means of maintaining HW temperature. The code has not been updated to address the reduced flow rate of new fixtures. In cases where metering & infra-red faucets are installed and has a mixed flow rate of 0.5gpm the hot water flow rate to those fixtures is approximately 0.375 gallons per minute. The American Society of Plumbing Engineers (ASPE) publishes the Domestic Water Heating Design Manual and Chapter 10 and 11 of the manual deals with Hot water temperature maintenance and recommends hot water delivery from the faucet within 10 seconds of opening the faucet. The book also discusses a minimally acceptable wait time of 11-30 seconds which relates to a distance of about 25 feet from the source when opening a faucet and waiting for hot water flowing 0.5 GPM.

When the 100-foot criteria of the current code are followed to the extreme, it creates considerable problems, such as lack of hot water at fixtures, insufficient water heater capacity and thermal temperature escalation and scalding in showers with only pressure balancing valves. People have been scalded in showers when long un-circulated runs of cooled-down, hot water flows to a shower. The bather sets the shower at a comfortable temperature and several minutes later, the hot water finally arrives causing thermal shock and the potential for scalding.

The proposed distance was only reduced to 50 feet in lieu of 25 feet which would correspond to the ASPE manual. This was done to not require temperature maintenance systems in smaller occupancies. Using life cycle costs, this proposed change can save money when the wasted water and sewer costs along with wasted fuel are factored in.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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**P63-04/05**

**608.7 (New), Chapter 13**

**Proponent:** Herb Hoepfner, Hoepfner Perfected Products, Gilroy, CA

**1. Delete and substitute as follows:**

~~**608.7 Stop and waste valves prohibited.** Combination stop and waste valves or cocks shall not be installed underground.~~

**608.7 Sanitary yard hydrants and stop and waste valves.** Sanitary yard hydrants shall comply with ASSE 1057. Combination stop and waste valves or cocks and weep hole yard hydrants shall not be installed underground.

**2. Add new standard to Chapter 13 as follows:**

ASSE 1057-01 Performance Requirements for Freeze Resistant Sanitary Yard Hydrants with Backflow Protection . . . . . 608.7

**Reason:** Few people realize that a weep hole yard hydrant is nothing more than an oversized stop and waste valve. Stop and waste valves are prohibited in Section 608.7. Over 1 million weep hole hydrants are still sold annually because most people do not realize that they will become cross contaminated with the soil. Many states have been forced to develop their own sanitary yard hydrant requirements. ASSE realized the problem and developed the ASSE 1057 Sanitary Yard Hydrant Standard. More clarification is needed to protect the public, than merely prohibiting stop and waste valves. Devices that incorporate stop and waste valve techniques should also be clearly stated as being prohibited.

**Analysis:** It is the staff's opinion that ASSE 1057 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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## P64-04/05

### 608.8 (New)

**Proponent:** Herb Hoepfner, Hoepfner Perfected Products, Gilroy, CA

**Add new text as follows:**

**608.8 Frost free drinking fountains.** Where outdoor drinking fountains are installed, the water in the supply standpipe shall drain into a sump chamber and the sump chamber shall discharge to an approved location.

**Reason:** Few people realize that a frost free drinking fountain is nothing more than an oversized stop and waste valve. Stop and waste valves are prohibited in Section 608.7. More clarification is needed to protect the public, than merely prohibiting stop and waste valves. Devices that incorporate stop and waste valve techniques should also be clearly stated as prohibited.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P65-04/05

### 608.16.10 (New)

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

**Add new text follows:**

**608.16.10 Coffee machines and noncarbonated beverage dispensers.** The water supply connection to coffee machines and noncarbonated beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or by an air gap.

**Reason:** There isn't any backflow requirement for coffee machines and non carbonated beverage dispensers in IPC. These devices have the potential of back siphonage and should be protected by a backflow prevention device or by an air gap integral with the equipment. The IPC already references ASSE 1022 "Backflow Preventer for Beverage Dispensing Equipment" and this will add a level of protection for this type of equipment.

**Analysis:** It is the opinion that ASSE 1022 complies with Section 3.6 of the ICC Code Development Procedures and is already referenced in the IPC.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## P66-04/05

### Tables 702.1, 702.2, 702.3; IRC Tables P3002.1(1), P3002.1(2), P3002.2

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I — IPC

**Revise tables as follows:**

**TABLE 702.1  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; CSA B181.2; ASTM F 1488

(Portions of table not shown do not change)

**TABLE 702.2 (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488

(Portions of table not shown do not change)

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded composite PVC sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488

(Portions of table not shown do not change)

**PART II — IRC**

**TABLE P3002.1(1) (Supp)  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; CSA B181.2; ASTM F-1488

(Portions of table not shown do not change)

**TABLE P3002.1(2) (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488

Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR, PS140, PS200 DWV	ASTM F 1488

(Portions of table not shown do not change)

**TABLE P3002.2 (Supp)  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite ABS DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488
Coextruded composite PVC DWV schedule 40 IPS pipe (cellular core)	ASTM F 1488; ASTM F 891
Coextruded composite PVC IPS-DR-PS DWV, PS140, PS200	ASTM F 1488
Coextruded composite ABS sewer and drain DR-PS in PS35, PS50, PS100, PS140, PS200	ASTM F 1488
Coextruded composite PVC sewer and drain DR-PS in PS35, PS40, PS100, PS140, PS200	ASTM F 1488

(Portions of table not shown do not change)

**Reason:** To begin with there are no manufacturers making product that is covered under this standard. Secondly, users of the code are being confused and think that this is the same product as cellular core PVC pipe that is covered by appropriate standards (ASTM F891) in the Tables. A comparison of pipe stiffness and Impact strength requirements in ASTM F891 (600 and 50 for 1 ½, 300 and 100 for 3", 200 and 100 for 4") and ASTM F1488 (140 and 25 for 1 ½, 140 and 25 for 3", 140 and 40 for 4") is embarrassing and points to potential problems if the product is ever used. Finally, none of the other model codes (UPC, NSPC) reference this standard which is the right thing to do for ICC.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

# P67-04/05

Tables 702.1, 702.2, 702.4; IRC Tables P3002.1(1), P3002.1(2), P3002.3

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

## PART I — IPC

Revise tables as follows:

**TABLE 702.1  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; <del>CSA B181.4</del>

(Portions of table not shown do not change)

**TABLE 702.2 (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; <del>CSA B181.4</del>

(Portions of table not shown do not change)

**TABLE 702.4 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 3311; ASTM D 2661; <del>CSA B181.4</del>

(Portions of table not shown do not change)

## PART II — IRC

Revise tables as follows:

**TABLE P3002.1(1) (Supp)  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; <del>CSA B181.4</del>

(Portions of table not shown do not change)

**TABLE P3002.1(2) (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; <del>CSA B181.4</del>

(Portions of table not shown do not change)

**TABLE P3002.3 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 3311; <del>CSA B181.4</del> ASTM D2661

(Portions of table not shown do not change)

**Reason:** This code change will clarify the code since these are incorrect references and the pipe and fittings included in these CSA B181 series standards use different dimensions, different colored pipe and fittings, different colored solvent cements, different radius which conflict with current ASTM standards used predominantly across North America.

**Analysis:** Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with other standards. Markings on the pipe and fittings clearly indicate the type of pipe or fitting.

**Cost Impact:** None

## PART I — IPC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## PART II — IRC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

# P68-04/05

Tables 702.1, 702.2; IRC Tables P3002.1(1), P3002.1(2)

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

## PART I — IPC

Revise table entries as follows:

**TABLE 702.1  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; <del>CSA B181.2</del> ; ASTM F 1488

(Portions of table not shown do not change)

**TABLE 702.2 (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; <del>CSA B181.2</del>

(Portions of table not shown do not change)

**PART II — IRC**

Revise table entries as follows:

**TABLE P3002.1(1) (Supp)  
ABOVE-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; <del>CSA B181.2</del> ; ASTM F 1488

(Portions of table not shown do not change)

**TABLE P3002.1(2) (Supp)  
UNDERGROUND BUILDING DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; <del>CSA B181.2</del>

(Portions of table not shown do not change)

**Reason:** This code change will eliminate confusion and possible miss-application in the field since this CSA B181.2 is in conflict with other appropriate standards listed in the tables for Polyvinyl Chloride (PVC) plastic pipe (Type DWV). B181.2 covers pipe that uses different dimensions, different color and different colored solvent cement than the ASTM specifications. Until this problem is resolved these standards should not be referenced in the code.

**Analysis:** Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with other standards. Markings on the pipe and fittings clearly indicate the type of pipe or fitting.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:   Committee:   AS   AM   D  
                           Assembly:    ASF   AMF   DF

**PART II — IRC**

Public Hearing:   Committee:   AS   AM   D  
                           Assembly:    ASF   AMF   DF

**P69-04/05**

**Table 702.1, Chapter 13; IRC Table 3002.1(1), Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Revise table entries as follows:

**TABLE 702.1  
ABOVE-GROUND DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>
Coextruded composite PVC DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 13 as follows:

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe . . . . . Table 702.1

**PART II — IRC**

1. Revise table entries as follows:

**TABLE P3002.1(1) (Supp)  
ABOVE-GROUND DRAINAGE  
AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>
Coextruded composite PVC DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 43 as follows:

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe  
 ..... Table P3002.1(1)

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.5 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B181.5 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P70-04/05**  
**Table 702.2, Chapter 13; IRC Table P3002.1(2), Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entries as follows:**

**TABLE 702.2 (Supp)**

**UNDERGROUND BUILDING DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>
Coextruded composite PVC DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 13 as follows:**

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe  
 ..... Table 702.2

**PART II — IRC**

**1. Revise table entries as follows:**

**TABLE P3002.1(2) (Supp)**  
**UNDER-GROUND DRAINAGE AND VENT PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>
Coextruded composite PVC DWV Schedule 40 IPS pipe (solid)	ASTM F1488; <u>CAN/CSA-B181.5</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 43 as follows:**

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe  
 ..... Table P3002.1(2)

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.5 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B181.5 complies with 3.6 of the ICC code development procedures.

Cost Impact: None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P71-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Revise table entries as follows:

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488; <u>CAN/CSA-B181.5</u>
Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; <u>CAN/CSA-B181.5</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 13 as follows:

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe . . . . . Table 702.3

**PART II — IRC**

1. Revise table entries as follows:

**TABLE P3002.2 (Supp)  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Coextruded composite ABS DWV schedule 40 IPS pipe (solid)	ASTM F 1488; <u>CAN/CSA-B181.5</u>

Coextruded composite PVC DWV schedule 40 IPS pipe (solid)	ASTM F 1488; <u>CAN/CSA-B181.5</u>
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(Portions of table not shown do not change)

2. Add new standard to Chapter 43 as follows:

CSA B181.5-02 Coextruded ABS/PVC Drain, Waste, and Vent Pipe . . . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.5 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B181.5 complies with 3.6 of the ICC code development procedures.

Cost Impact: None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P72-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entry as follows:**

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; CSA F 628; <u>CAN/CSA-B181.1</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 13 as follows:**

CSA B181.1-02 ABS Drain, Waste, and Vent Pipe and Pipe Fittings . . . . . Table 702.3

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE P3002.2 (Supp)  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; CSA F 628; <u>CAN/CSA-B181.1</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 43 as follows:**

CSA B181.1-02 ABS Drain, Waste, and Vent Pipe and Pipe Fittings . . . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.1 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

The requirements in both CAN/CSA-B181.1 and ASTM D 2661 [Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS)

Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings], currently referenced in the 2003 edition of the International Plumbing Code, provide for the equivalent evaluation of materials (resins and compounds), chemical resistance, structural integrity, and dimensions and configurations of ABS DWV pipe and fittings.

**Analysis:** It is staff's opinion that CSA B181.1 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P73-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entry as follows:**

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <u>CAN/CSA-B181.2</u> ; <u>CAN/CSA-B182.2</u> ; <u>CAN/CSA-B182.4</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 43 as follows:**

**PART II — IRC**

Revise table entry as follows:

**TABLE P3002.2 (Supp)  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <u>CAN/CSA-B181.2</u> ; <u>CAN/CSA-B182.2</u> ; <u>CAN/CSA-B182.4</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

CSA B181.2-02 PVC Drain, Waste, and Vent Pipe and Pipe Fittings . . . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.2 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

The requirements in both CAN/CSA-B181.2 and ASTM D 2665 [Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings], currently referenced in the 2003 edition of the International Plumbing Code, provide for the equivalent evaluation of materials (resins and compounds), chemical resistance, structural integrity, and dimensions and configurations of PVC DWV pipe and fittings.

**Analysis:** It is staff's opinion that CSA B181.2 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

**P74-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entry as follows:**

**TABLE 702.3  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714; <u>CAN/CSA-B182.8</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

CSA B182.8-02 Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings . . . . . Table 702.3

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE P3002.2 (Supp)  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714; <u>CAN/CSA-B182.8</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

CSA B182.8-02 Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings . . . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems

assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.8 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B182.8 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P75-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Add table entry as follows:**

**TABLE 702.3  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
<u>Polypropylene (PP) plastic pipe</u>	<u>CAN/CSA-B182.1</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 13 as follows:**

CAN/CSA-B182.1-02      Polypropylene (PP) plastic pipe . . . . . Table 702.3

**PART II — IRC**

**1. Add table entry as follows:**

**TABLE P3002.2 (Supp)  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
<u>Polypropylene (PP) plastic pipe</u>	<u>CAN/CSA-B182.1</u>

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 43 as follows:**

CAN/CSA-B182.1-02      Polypropylene (PP) plastic pipe . . . . . Tables P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with polypropylene products certified to CAN/CSA-B182.1 to have their products used as options to products that meet the requirements of other standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of polypropylene products that meet CAN/CSA-B182.1.

CAN/CSA-B182.1 has general requirements, and methods of testing for plastic drain and sewer pipe and pipe fittings. In general, the requirements in the CSA and ASTM standards currently referenced in the 2003 edition of the International Plumbing Code provide for the equivalent evaluation of materials (resins and compounds), pressure strength, chemical resistance, structural integrity, and dimensions of plastic drain and sewer pipe and pipe fittings (non-pressure applications).

**Analysis:** It is staff's opinion that CSA B182.1 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P76-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entries as follows:**

**TABLE 702.3  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; ASTM F 628; <u>CAN/CSA-B182.1</u>
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <u>CAN/CSA-B182.1</u> ; CAN/CSA-B182.2; CAN/CSA-B182.4

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . . . Table 702.3

**PART II — IRC**

**1. Revise table entries as follows:**

**TABLE P3002.2 (Supp)  
 BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM D 2751; ASTM F 628; <u>CAN/CSA-B182.1</u>
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <u>CAN/CSA-B182.1</u> ; CAN/CSA-B182.2; CAN/CSA-B182.4

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.1 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

CAN/CSA-B182.1 has general requirements and methods of testing for plastic (ABS, PVC and PP) drain and sewer pipe and pipe fittings. In general, the requirements in the CSA and ASTM standards currently referenced in the 2003 edition of the International Plumbing Code provide for the equivalent evaluation of materials (resins and compounds), pressure strength, chemical resistance, structural integrity, and dimensions of plastic drain and sewer pipe and pipe fittings (non-pressure applications).

**Analysis:** It is staff's opinion that CSA B182.1 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P77-04/05**

**Table 702.3, Chapter 13; IRC Table P3002.2, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT**

**COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Revise table entry as follows:

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714; <u>CAN/CSA-B182.6</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 13 as follows:

CSA B182.6-02 Profile Polyethylene Sewer Pipe and Fittings for Leak-Proof Sewer Applications . . . . Table 702.3

**PART II — IRC**

1. Revise table entry as follows:

**TABLE P3002.2 (Supp)  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714; <u>CAN/CSA-B182.6</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 43 as follows:

CSA B182.6-02 Profile Polyethylene Sewer Pipe and Fittings for Leak-Proof Sewer Applications . . . Table P3002.2

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.6 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B182.6 complies with 3.6 of the ICC code development procedures.

Cost Impact: None

**PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P78-04/05**

**Table 702.3; IRC Table P3002.2**

**Proponent:** Sidney Cavanaugh, Cavanaugh Consulting, Burbank, CA

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

Revise table as follows:

**TABLE 702.3  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <del>CSA B182.2</del> ; CAN/CSA B182.4

(Portions of table not shown do not change)

**PART II — IRC**

Revise table as follows:

**TABLE P3002.2 (Supp)  
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)	ASTM D 2665; ASTM D 2949; ASTM D 3034; <del>CSA B182.2</del> ; CSA B182.4

(Portions of table not shown do not change)

**Reason:** The same problems exist for CSA B182.2 as CSA B181.2: conflict with other ASTM standards regarding dimensions, color and color of solvent cements. This reference should be removed to eliminate confusion and miss-application in the field.

**Analysis:** Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with other standards. Markings on the pipe and fittings clearly indicate the type of pipe or fitting.

Cost Impact: None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART I — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P79-04/05**

**Table 702.4, Chapter 13; IRC Table P3002.3, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Revise table entry as follows:

**TABLE 702.4 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B182.2</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 13 as follows:

CAN/CSA B182.2-02 PVC Sewer Pipe and Fittings (PSM Type) . . . . . Table 702.4

**PART II — IRC**

1. Revise table entry as follows:

**TABLE P3002.3 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B182.2</u>

(Portions of table not shown do not change)

2. Add new standard to Chapter 43 as follows:

CAN/CSA B182.2-02 PVC Sewer Pipe and Fittings (PSM Type) . . . . . Table P3002.3

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.2 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B182.2 complies with 3.6 of the ICC code development procedures.

Cost Impact: None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P80-04/05**

**Table 702.4, Chapter 13; IRC Table P3002.3, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

1. Revise table entry as follows:

**TABLE 702.4 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B181.2</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

CSA B181.2-02 PVC Drain, Waste, and Vent Pipe and Pipe Fittings . . . Table 702.4

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE P3002.3 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B181.2</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

CSA B181.2-02 PVC Drain, Waste, and Vent Pipe and Pipe Fittings . . . . Table P3002.3

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B181.2 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

The requirements in both CAN/CSA-B181.2 and ASTM D 2665 [Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings], currently referenced in the 2003 edition of the International Plumbing Code, provide for the equivalent evaluation of materials (resins and compounds), chemical resistance, structural integrity, and dimensions and configurations of PVC DWV pipe and fittings.

**Analysis:** It is staff's opinion that CSA B181.2 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P81-04/05**

**Table 702.4, Chapter 13; IRC Table P3002.3, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entry as follows:**

**TABLE 702.4 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyethylene	<u>CAN/CSA-B182.6; CAN/CSA-B182.8</u>

(Portions of table not shown do not change)

**2. Add new standards to Chapter 13 as follows:**

CAN/CSA B182.6-02 Profile Polyethylene Sewer Pipe and Fittings for Leak-Proof Sewer Applications . . Table 702.4

CAN/CSA B182.8-02 Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings . . . . . Table 702.4

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE P3002.3 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Polyethylene	<u>CAN/CSA-B182.6; CAN/CSA-B182.8</u>

(Portions of table not shown do not change)

**2. Add new standards to Chapter 43 as follows:**

CAN/CSA B182.6-02 Profile Polyethylene Sewer Pipe and Fittings for Leak-Proof Sewer Applications . . . . Table P3002.3

CAN/CSA B182.8-02 Profile Polyethylene Storm Sewer and Drainage Pipe and Fittings . . . . . Table P3002.3

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.6 or CAN/CSA-B182.8 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

**Analysis:** It is staff's opinion that CSA B182.6 and B182.8 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**P82-04/05  
Table 702.4, Chapter 13; IRC Table P3002.3,  
Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

**1. Revise table entries as follows:**

**TABLE 702.4 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 3311; CSA B181.1; ASTM D 2661; <u>CAN/CSA-B182.1</u>
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B182.1</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 13 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . . . Table 702.4

**PART II — IRC**

**1. Revise table entries as follows:**

**TABLE P3002.3 (Supp)  
PIPE FITTINGS**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 3311; CSA B181.1; ASTM D 2661; <u>CAN/CSA-B182.1</u>
Polyvinyl chloride (PVC) plastic	ASTM D 3311; ASTM D 2665; ASTM F 1866; <u>CAN/CSA-B182.1</u>

(Portions of table not shown do not change)

**2. Add new standard to Chapter 43 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . Table P3002.3

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with products certified to CAN/CSA-B182.1 to have their products used as options to products that meet the requirements of the ASTM standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of products that meet either CSA or ASTM Standards.

CAN/CSA-B182.1 has general requirements and methods of testing for plastic (ABS, PVC and PP) drain and sewer pipe and pipe fittings. In general, the requirements in the CSA and ASTM standards currently referenced in the 2003 edition of the International Plumbing Code provide for the equivalent evaluation of materials (resins and compounds), pressure strength, chemical resistance, structural integrity, and dimensions of plastic drain and sewer pipe and pipe fittings (non-pressure applications).

**Analysis:** It is staff's opinion that CSA B182.1 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

**PART I — IPC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**PART II — IRC**

Public Hearing: Committee: AS AM D  
 Assembly: ASF AMF DF

**P83-04/05**

**Table 702.4, Chapter 13; IRC Table P3002.3, Chapter 43**

**Proponent:** Abraham I. Murra, Canadian Standards Association, Mississauga, Ontario, Canada

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE 702.4 (Supp)  
 PIPE FITTINGS**

MATERIAL	STANDARD
Polypropylene (PP)	CAN/CSA-B182.1

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 13 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . . . Table 702.4

**PART II — IRC**

**1. Revise table entry as follows:**

**TABLE P3002.3 (Supp)  
 PIPE FITTINGS**

MATERIAL	STANDARD
Polypropylene (PP)	CAN/CSA-B182.1

**(Portions of table not shown do not change)**

**2. Add new standard to Chapter 43 as follows:**

CSA B182.1-02 Plastic Drain and Sewer Pipe and Pipe Fittings . . . . . Table P3002.3

**Reason:** The CAN/CSA-B1800 Series-02, Plastic Nonpressure Pipe Compendium, is a series of stand-alone documents, developed to be used independently of other plastic piping standards. Piping systems assembled with products manufactured in accordance with CAN/CSA-B1800 Series-02 can be used as alternate systems to ASTM. Products meeting the performance requirements and installation practices of this series of CSA standards provide these alternate systems.

Products manufactured in accordance with CSA standards are only meant to be used with products referenced in the CSA standards and not meant to be commingled with products manufactured in accordance with ASTM standards. Markings on the pipe and fittings clearly indicate compliance to the appropriate standard of the CAN/CSA-B1800 Series-02.

The acceptance of the proposed change will enable manufacturers with polypropylene products certified to CAN/CSA-B182.1 to have their products used as options to products that meet the requirements of other standards currently referenced in the 2003 edition of the International Plumbing Code. This change will also allow the authorities having jurisdiction to permit the use of polypropylene products that meet CAN/CSA-B182.1.

CAN/CSA-B182.1 has general requirements, and methods of testing for plastic drain and sewer pipe and pipe fittings. In general, the requirements in the CSA and ASTM standards currently referenced in the 2003 edition of the International Plumbing Code provide for the equivalent evaluation of materials (resins and compounds), pressure strength, chemical resistance, structural integrity, and dimensions of plastic drain and sewer pipe and pipe fittings (non-pressure applications).

**Analysis:** It is staff's opinion that CSA B182.1 complies with 3.6 of the ICC code development procedures.

**Cost Impact:** None

## PART I — IPC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

## PART II — IRC

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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### P84-04/05 703.1

**Proponent:** Charles Gerber, Henrico County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

#### Revise as follows:

**703.1 Building sewer pipe near the water service.** Where the building sewer is installed within 5 feet (1524 mm) of the water service, the installation shall comply with the provisions of as provided for in Section 603.2, the building sewer pipe shall conform to one of the standards for ABS plastic pipe, cast-iron pipe, copper or copper-alloy tubing, or PVC plastic pipe listed in Table 702.3.

**Reason:** This eliminates the burden of coordinating the same provisions in two different sections. Section 603.2 contains complete coverage needed for this application.

**Analysis:** Consistent action should be considered for related proposal P85-04/05 and P86-04/05.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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### P85-04/05 703.1

**Proponent:** Barry Pines, CPD, C&R Plumbing, Detroit, MI, representing Code Study & Development Committee of Southeast Michigan

#### Revise as follows:

**703.1 Building sewer pipe near the water service.** Where the building sewer is installed within 5 feet (1524 mm) of the water service, as provided for in Section 603.2, the building sewer pipe shall conform to one of the

standards for ABS plastic pipe, cast-iron pipe, copper or copper-alloy tubing, PE plastic pipe or PVC plastic pipe listed in Table 702.3.

**Reason:** Polyethylene pipe should be added as an acceptable piping material because it is listed as an approved material in Table 702.3 for building sewer pipe.

**Analysis:** Consistent action should be considered for related proposal P84-04/05 and P86-04/05.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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### P86-04/05 703.1

**Proponent:** Brian L. Bellous, City of Columbus, OH, representing himself

#### Revise as follows:

**703.1 Building sewer pipe near the water service.** Where the building sewer is installed within 5 feet (1524 mm) of the water service, as provided for in Section 603.2, the building sewer pipe shall conform to one of the standards for ABS plastic pipe, cast-iron pipe, copper or copper-alloy tubing, or PVC plastic pipe, polyethylene (PE) plastic pipe, stainless steel pipe and coextruded ABS or PVC pipe listed in Table 702.3.

**Reason:** This section needs to be updated to include materials meeting the same air/gas tight properties listed in the current text. This section allows the water service pipe to be placed closer to the building sewer as long as the chance for contamination is minimized. The new verbiage simply adds materials that meet these criteria.

**Analysis:** Consistent action should be considered for related proposal P84-04/05 and P85-04/05.

**Cost Impact:** None

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

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### P87-04/05 705.5.2

**Proponent:** William H. LeVan, Cast Iron Soil Pipe Institute, Chattanooga, TN, representing Tyler Pipe, Charlotte Pipe and Foundry Co., ABI

#### Revise as follows:

**705.5.2 Compression gasket joints.** Compression gaskets for hub and spigot pipe and fittings shall conform to ASTM C 564 and shall be tested to ASTM C1563. Gaskets shall be compressed when the pipe is fully inserted.

**Reason:** Rubber compression gaskets are required to be manufactured to an ASTM material standard C564. A newly completed ASTM standard, C1563 sets test criteria for the finished gaskets which includes hydrostatic tests of the finished gaskets in typical field installations.

**Analysis:** The proponent had not submitted the referenced standard for review prior to the printing of the monograph. If the standard is submitted within a reasonable time frame, staff will review and provide the results to the committee members prior to the code hearings.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P88-04/05

**705.16, 705.16.1, 705.16.2; IRC P3003.16(New), P3003.16.1 (New), P3003.16.2 (New)**

**Proponent:** Guy Tomberlin, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building and Code Officials Association

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

### PART I — IPC

**Revise as follows:**

**705.16 (supp) Polyethylene plastic pipe.** Joints between polyethylene plastic pipe and fittings shall be underground and shall comply with Sections 705.16.1 and 705.16.2.

**705.16.1 Heat fusion joints.** Joint surfaces shall be clean and free from moisture. All joint surfaces shall be cut, heated to melting temperature and joined using tools specifically designed for the operation. Joints shall be undisturbed until cool. ~~The~~ Joints shall be made in accordance with ASTM D 2657 and the manufacturer's instructions.

**705.16.2 Mechanical jointan** elastomeric seal conforming to ASTM C 1173, ASTM D 3212 or CAN/CSA-B602. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

**(Renumber subsequent sections)**

### PART II — IRC

**Add new text as follows:**

**P3003.16 Polyethylene plastic.** Joints between polyethylene plastic pipe and shall be underground and shall comply with Sections P3003.16.1 and P3003.16.2.

**P3003.16.1 Heat fusion joints.** Joint surfaces shall be clean and free from moisture. All joint surfaces shall be cut, heated to melting temperature and joined using tools specifically designed for the operation. Joints shall be undisturbed until cool. Joints shall be made in accordance with ASTM D 2657 and the manufacturer's instructions.

**P3003.16.2 Mechanical joints.** Mechanical joints in drainage piping shall be made with an elastomeric seal conforming to ASTM C 1173, ASTM D 3212 or CAN/CSA-B602. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

**(Renumber subsequent sections)**

**Reason:** I must place great emphasis on the fact this proposal is not an endorsement of this product or this method of installation. It merely attempts to complete installation requirements of an IPC approved piping material.

This material was added into the code based on the reason it would allow "trench less" installations of sewers. While in some select cases, this may appear to be a cost effective method for installing sewers. It may also appear to help preserve other items on existing property such as other underground utilities, trees, etc...

It must be made perfectly clear that a heat fusion joint WILL ABSOLUTELY make a slight bump on the interior of the piping system around the entire circumference of each joint. No practical method exists that will permit removal of this slight obstruction.

The basis of this proposal was developed using several similar existing code sections relating to each of the respective areas. The underground restriction is used because the material only appears in the "building sewer material" table. The ASTM standards referenced were borrowed from Sections 605.20.2 for PE heat fusion and 705.14.1 for PVC mechanical joints. The language "using tools specifically designed for the operation" came from Section 705.2.3 for threaded joints. The Reference to installing joints in accordance with the manufacture's installation instructions is used throughout the code in Sections such as 705.14.1, 705.8.1 or 605.20.3.

Again, this is an attempt to correct a huge omission created in the IPC when this pipe was introduced and adopted.

**Cost Impact:** None

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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## P89-04/05

**705.16.4; IRC P3003.17.4**

**Proponent:** Dennis Martinelli, Fairfax County, VA, representing Virginia Plumbing and Mechanical Inspectors

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

Revise as follows:

**705.16.4 Plastic pipe or tubing to other piping material.** Joints between different ~~grades~~ types of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

**PART II — IRC**

Revise as follows:

**P3003.17.4 (Supp) Plastic pipe or tubing to other piping material.** Joints between different ~~grades~~ types of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

**Reason:** The current term “grade” could be misinterpreted that only changes in plastic materials such as SDR 35 to SDR 40 are applicable to this section because that is an actual “grade” change. In fact, the correct application of this section is totally generic for all “types” of plastics.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P90-04/05**

**708.3.3; IRC P3005.2.4**

**Proponent:** James Anjam, Arlington County, VA, representing Virginia Plumbing and Mechanical Inspectors Association and Virginia Building Code Official Association

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**

Revise as follows:

**708.3.3 Changes of direction.** Cleanouts shall be installed at each change of direction greater than 45 degrees (0.79 rad) in of the building sewer, building drain and or horizontal waste or soil lines. ~~greater than 45 degrees (0.79 rad).~~ Where more than one change of direction occurs in a run of piping, only one cleanout shall be required for each 40 feet (12 192 mm) of developed length of the drainage piping.

**PART II — IRC**

Revise as follows:

**P3005.2.4 Change of direction.** Cleanouts shall be installed at each change of direction greater than 45 degrees (0.79 rad) in of the building sewer, building drain or and horizontal waste or soil lines drainage system greater than 45 degrees. ~~except not~~ Where more than one change of direction occurs in a run of piping, only more than one cleanout shall be required in each 40 feet (12 192 mm) of developed length of the drainage piping. run regardless of the change in direction.

**Reason:** This proposed change is to clarify the code that cleanouts are required where there is change of direction greater than 45 degrees for the building sewer. Editorial revisions are made to improve the readability.

**Cost Impact:** None

**PART I — IPC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**PART II — IRC**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**P91-04/05**

**Table 709.1; IRC Tables P3004.1 and P3201.7**

**Proponent:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., Munster, IN, representing himself

**THIS PROPOSAL IS ON THE AGENDA OF THE IPC AND THE IRC PLUMBING CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**PART I — IPC**