P2-07/08, Part II
IRC R202

THIS CODE CHANGE WILL BE HEARD ON THE IRC PLUMBING PORTION OF THE HEARING ORDER.

NOTE: PART I DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA, PART I IS REPRODUCED FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART I.

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, representing himself.

PART II – IRC

Delete definition without substitution:

SECTION R202
DEFINITIONS

~~**BALL COCK.** A valve that is used inside a gravity-type water closet flush tank to control the supply of water into the tank. It may also be called a flush tank fill valve or water control.~~

Reason: This is an antiquated term that has been replaced with the term fill valve. It is not referenced in the IPC therefore it need not be located in the IPC definition section.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: Removal of the definition is not appropriate because there is no definition for a fill valve.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy Tomberlin, Fairfax County, representing himself requests Approval as Submitted.

Commenter's Reason: The committee disapproved this proposal based on the fact that "fill valve" is not in the IRC. It is true the term fill valve does not appear in the IRC but neither does the term "ballcock". This proposal does not request the insertion of the term fill valve, even though it would be an appropriate term, This proposal was submitted to remove the term ballcock because it is an antiquated outdated term that is not referenced in the IRC and therefore, it is not necessary to define the word. If the term fill valve were to be added to the text of the IRC, similar to the IPC, then the definition would need to be added as well. For now, neither term needs to the in definitions because neither term appears in the text of the IRC.

Final Action: AS AM AMPC____ D

NOTE: PART I REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

P2-07/08, PART I – IPC

Delete definition without substitution:

SECTION 202
GENERAL DEFINITIONS

~~**BALL COCK.** See "Fill valve."~~

Reason: This is an antiquated term that has been replaced with the term fill valve. It is not referenced in the IPC therefore it need not be located in the IPC definition section.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Approved as Submitted**

Committee Reason: Outdated terminology should be removed from the code.

Assembly Action: **None**

P4-07/08
202 (New)

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Charlotte Pipe and Foundry (CP&F)

Add new definition as follows:

SECTION 202
GENERAL DEFINITIONS

CHEMICAL WASTE. An industrial or process liquid to be treated or disposed of that contains acids or other corrosive and non-corrosive chemical substances of any dilution.

Reason: There is a need for a clear definition of chemical waste in the code in order for appropriate materials to be used in these types of systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Modified**

Modify proposal as follows:

SECTION 202
GENERAL DEFINITIONS

CHEMICAL WASTE. An industrial or process liquid to be treated or disposed of that contains acids or other corrosive and non-corrosive chemical substances ~~of any dilution~~.

Committee Reason: The definition is needed in order for the user to properly select the piping materials for chemical waste service. The words deleted by modification did not add any value to the definition.

Assembly Action: **Disapproved**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful.

Final Action: AS AM AMPC____ D

P7-07/08, Part II
IRC P2603.3

THIS CODE CHANGE WILL BE HEARD ON THE IRC PLUMBING PORTION OF THE HEARING ORDER.

NOTE: PART I DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART I IS REPRODUCED ONLY FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART II.

Proposed Change as Submitted:

Proponent: Richard Grace, Fairfax County, representing Virginia Plumbing and Mechanical Inspectors Association

PART II – IRC-P

Revise as follows:

P2603.3 Breakage and corrosion. Pipes passing through or under walls shall be protected from breakage. Pipes passing through concrete or cinder walls and floors, cold-formed steel framing or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement including expansion and contraction of piping ~~to prevent any rubbing action~~. Minimum wall thickness of material shall be 0.025 inch (0.64 mm).

Reason: The new wording is meant to clarify the intent of the statement. Movement should not be limited to expansion and contraction. Movement may include internal forces within the piping system. The sheathing or wrapping must be protected during any movement of the piping system. The use of the term "prevent any rubbing action" is unnecessary and may be moved to the commentary.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: It is unclear as to what piping movements are being referred to.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Shauna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council requests Approval as Submitted.

Commenter's Reason: The Colorado Chapter requests the committee action be overturned and Part II be approved as submitted.
P7 Part I 07/08 was approved as submitted by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Final Action: AS AM AMPC____ D

NOTE: PART I REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

P7-07/08, PART I – IPC

Revise as follows:

305.1 Corrosion. Pipes passing through concrete or cinder walls and floors or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from the lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement including expansion and contraction of piping ~~to prevent any rubbing action~~. Minimum wall thickness of material thickness shall be 0.025 inch (0.64 mm).

Reason: The new wording is meant to clarify the intent of the statement. Movement should not be limited to expansion and contraction. Movement may include internal forces within the piping system. The sheathing or wrapping must be protected during any movement of the piping system. The use of the term "prevent any rubbing action" is unnecessary and may be moved to the commentary.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Approved as Submitted**

Committee Reason: Sheathing or wrapping of piping must not restrict movements of the piping.

Assembly Action: **None**

P9-07/08, Part I
Table 308.5

Proposed Change as Submitted:

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing himself

PART I – IPC

Revise table footnote as follows:

TABLE 308.5
PIPING SUPPORT

b. Midstory guide <u>required</u> for sizes 2 inches and smaller <u>except where piping is enclosed in a wall cavity</u>.

(Portions of table and footnotes not shown remain unchanged)

Reason: A current discussion in our office is the midstory guide as found in the footnote stated above. It is my opinion that this language (though vague) would not apply to 2 inch or smaller piping located in a 8, 10, or even 12 foot 2X wall space or cavity. This wall design is typical framed construction. This added language will more cleanly identify the real need for the midstory guide. Also note that both the top and bottom plate penetrations will act as a guide.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: A midstory guide prevents the vertical piping from bowing in any horizontal direction, not just in the direction towards the wall faces.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Lawrence Suggars, South Salt Lake City, representing Utah Chapter of ICC, requests Approval as Modified.

Modify table footnote as follows:

TABLE 308.5
PIPING SUPPORT

b. Midstory guide required for sizes 2 inches and smaller<u>.</u> ~~except where piping is enclosed in a wall cavity.~~ <u>For ABS-DWV and PVC-DWV piping enclosed in a wall cavity that is not over 12 feet in height, a midstory guide is not required</u>.

(Portions of table and footnotes not shown remain unchanged)

Commenter's Reason: The IRC accepted this code change without the additional modification. Commercial buildings can be designed with very tall walls and potentially increase the chance for movement in a wall cavity. The additional language will clarify that ABS-DWV and PVC –DWV can be installed in limited applications without the midstory guide. The flexibility of pipe can benefit performance.

Public Comment 2:

Julius Ballanco, PE, CPD, JB Engineering and Code Consulting, P.C., representing himself, requests Disapproval.

Commenter's Reason: The plastics industry recommends a midstory guide for all plastic piping installations, whether installed in a wall cavity or not. There is no technical justification for deleting this requirement.

Final Action: AS AM AMPC____ D

P9-07/08, Part II
IRC Table P2605.1

Proposed Change as Submitted:

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing himself

PART II – IRC-P

Revise table footnote as follows:

TABLE P2605.1
PIPING SUPPORT

b. Midstory guide required for sizes 2 inches and smaller except where piping is enclosed in a wall cavity.

(Portions of table and footnotes not shown remain unchanged)

Reason: A current discussion in our office is the midstory guide as found in the footnote stated above. It is my opinion that this language (though vague) would not apply to 2 inch or smaller piping located in a 8, 10, or even 12 foot 2X wall space or cavity. This wall design is typical framed construction. This added language will more cleanly identify the real need for the midstory guide. Also note that both the top and bottom plate penetrations will act as a guide.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The midstory guide is unnecessary where wall cavities are enclosed because the wall covering will keep the pipe within the wall cavity.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Julius Ballanco, PE, CPD, JB Engineering and Code Consulting, P.C., representing himself, requests Disapproval.

Commenter's Reason: The plastics industry recommends a midstory guide for all plastic piping installations, whether installed in a wall cavity or not. There is no technical justification for deleting this requirement.

Public Comment 2:

Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA), representing PPFA, requests Disapproval.

Commenter's Reason: PPFA is opposed to this proposed change. The change appears to be only a minor modification to a footnote, but it impacts an entire table (P2605.1 PIPING SUPPORT). This change would eliminate the use of mid-story guides in piping and tubing under 2 inches. Several of the systems in the table do require the mid-story guide for optimal performance and proper functioning. While this unintended consequence was not noted during the IRC hearing, it was during the IPC hearing and this proposal was rejected in the IPC. We urge the disapproval of this proposal.

Public Comment 3:

Shaunna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council, requests Disapproval.

Commenter's Reason: The Colorado Chapter requests disapproval of Part II. P9 Part I 07/08 was disapproved by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Final Action: AS AM AMPC____ D

P10-07/08
310.4

Proposed Change as Submitted:

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

310.4 Water closet compartment. Each water closet utilized by the public or employees shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy.

Exceptions:

1. Water closet compartments shall not be required in a single-occupant toilet room with a lockable door.
2. Toilet rooms located in day care and child-care facilities and containing two or more water closets shall be permitted to have one water closet without an enclosing compartment.
3. This provision is not applicable to toilet areas located within Group I-3 housing areas.

Reason: Occupants of an I-3 facility must be watched closely to assure that they do not harm others or themselves. This clarification is needed to assure supervision and sightlines needed for security in detention and correctional facilities is allowed to be maintained.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The absence of compartments or partitions in I-3 housing is necessary for monitoring inmates for illegal activities.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jud Collins, JULYCO, representing himself requests Disapproval.

Commenter's Reason: The section in which the proponent is trying to locate this change is the wrong location. As clearly stated in Section 310.4, this applies to water closets utilized by the public or employees. There is no way the occupants (prisoners) in an I-3 facility can be considered as the public or as employees.

Final Action: AS AM AMPC____ D

P13-07/08, Part I
IPC 312.9 (New), 417.5.2

Proposed Change as Submitted:

Proponent: Pat Clark, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO)

PART I – IPC

1. Add new text as follows:

312.9 Shower liner test. Where shower floors and receptors are made water tight by the application of materials required by Section 417.5.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches measured at the threshold. Where a threshold of at least 2 inches high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall not be evidence of leakage.

(Renumber subsequent section)

2. Revise as follows:

417.5.2 Shower lining. Floors under shower compartments, except where prefabricated receptors have been provided, shall be lined and made water tight utilizing material complying with Sections 417.5.2.1 through 417.5.2.4. Such liners shall turn up on all sides at least 2 inches (51 mm) above the finished threshold level. Liners shall be recessed and fastened to an approved backing so as not to occupy the space required for wall covering, and shall not be nailed or perforated at any point less than 1 inch (25 mm) above the finished threshold. Liners shall be pitched one-fourth unit vertical in 12 units horizontal (2-percent slope) and shall be sloped toward the fixture drains and be securely fastened to the waste outlet at the seepage entrance, making a water-tight joint between the liner and the outlet. The completed liner shall be tested in accordance with Section 312.9.

Exception: Floor surfaces under shower heads provided for rinsing laid directly on the ground are not required to comply with this section.

PART I – IPC
Committee Action: **Approved as Submitted**

Committee Reason: Shower liner seams and connection to drains must be tested to insure that they are water tight to protect property from future water damage.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence Brown, CBO, National Association of Home Builders (NAHB), representing National Association of Home Builders, requests Disapproval.

Commenter's Reason: The IRC MP Code Committee's Disapproval of Part-2 had it right when they stated, *"The proposal's criteria for evidence of leakage is not readily apparent and the proposed language is too complicated to be easily understood."* Among the problems with the proposed change is mandating that potable water be used to fill a reservoir to test for leaks. Any available water would serve the same purpose, especially during the rough-in phase where potable water to the building may not be available. Another problem is why is there a need to construct a "temporary threshold" to construct a reservoir when the ponding effect of the reservoir will not be present during everyday use, as with an accessible shower. From past experience, leaks from the roof and flashing occur more frequently that any leaks from shower pans. Though, there is no required leak test for roof and building flashing. If the leak is discovered it is repaired. Also, the drain in a shower acts the same as a floor drain, especially is an accessible shower. Yet, there is no required test to see if the floor leaks. As the proponent states *"leaks from poorly constructed liners go unnoticed for long periods of time"*… Using his exact words, a tested liner may not show any leaks at all and can leak later after it has been inspected and approved. Though there have been minor problems in the past in these application, there is no one simple solution. And, the proposed test is not the solution. We urge Disapproval of Part-1.

Final Action: AS AM AMPC____ D

P13-07/08, Part II
IRC P2503.6 (New), P2709.2

Proposed Change as Submitted:

Proponent: Pat Clark, Jefferson County, CO, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO)

PART II – IRC-P

1. Add new text as follows:

P2503.6 Shower liner test. Where shower floors and receptors are made water tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches measured at the threshold. Where a threshold of at least 2 inches high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall not be evidence of leakage.

2. Revise as follows:

P2709.2 Lining required. The adjoining walls and floor framing enclosing on-site built-up shower receptors shall be lined with sheet lead, copper or a plastic liner material that complies with ASTM D 4068 or ASTM D 4551. The lining material shall extend not less than 3 inches (76 mm) beyond or around the rough jambs and not less than 3 inches (76 mm) above finished thresholds. Hot mopping shall be permitted in accordance with Section P2709.2.3. The completed liner shall be tested in accordance with Section P2503.6.

Reason: The installation of shower linings involves making water tight joints:

- Between the lining and the shower drain.
- Between adjacent sections of lining material.
- At threshold corner areas.
- At the shower corners.

Unless the completed liner installation is water tested, there no way to assure that the shower floor or receptor "is made water tite" as is required by Section 417.5.2. Leaks from poorly constructed leaky liners go unnoticed for long periods of time resulting in significant structural damage and the development of mold in concealed locations. The repair process is costly as it typically involves the complete removal of finished surfaces of shower floor, mold remediation, structural repair, replacement of shower floor finish materials and in most cases, repair/refinishing of the water-damaged ceiling below. Since this problem typically shows up within the first 5 years of occupancy, the building owner is perplexed as to why he has incurred such a significant repair expense for a "new" building.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The proposal's criteria for evidence of leakage is not readily apparent and the proposed language is too complicated to be easily understood.

Assembly Action: **Approved as Submitted**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful and public comments were submitted.

Public Comment 1:

Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Approval as Submitted.

Commenter's Reason: It's very important the IPC and the IRC are consistent regarding shower lining testing as it was approved as submitted in the IPC. How is a code official to verify the lining material is "water tight" as Section 417.5.2 requires if it is not tested? This is a simple test that most Jurisdictions have been requiring for years anyway.

Public Comment 2:

Robert F. Loeper, Jr., President, representing Region VII Chapter of ICC, requests Approval as Submitted

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Submitted.

Commenters' Reason: There was a successful assembly action for approval as submitted. The IPC Committee approved this same language. The IRC committee's reason for disapproval is not understandable and goes against all principals of Section P2503 of the IRC which requires plumbing systems to be tested. A shower liner is a portion of the plumbing system and therefore needs to be tested prior to being put into use. As like any other plumbing fixture it receives large quantities of water on a regular basis, why wouldn't it be expected to be tested first? Comments were made as to who is supposed to test the shower liner and when does it get tested. This is no different that any other plumbing system, the code does not get into who performs any testing for inspection. This is already covered, it is up to the permit holder, Section P2503.3. As well as current Section P2503.2 already adequately addresses the fact that tests need to occur prior to the area or system being concealed. Leakage from shower liners is a serious problem. They typically occur very slowly over long periods of time before its noticed and usually in areas that are concealed. This promotes insanitary conditions such as mold and mildew growth.

Final Action: AS AM AMPC____ D

P14-07/08
402.5 (New), 402.5.1 (New), Chapter 13 (New)

Proposed Change as Submitted:

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C., representing McGuire Manufacturing Co., Inc.

1. Add new text as follows:

402.5 Pipe and trap covers. Materials used for pipe coverings and trap coverings under accessible sinks or lavatories shall be classified "HB" when tested to ASTM D635. Such materials shall have a zero bacterial and fungus growth when tested to ASTM G21.

402.5.1. Covers for accessible fixtures. Pipe coverings and trap coverings for accessible plumbing fixtures shall be permanently installed. Such coverings shall not be readily removable.

2. Add standards to Chapter 13 as follows:

ASTM

D635-06	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
G21-96 (2002)	Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi

Reason: The code is currently silent on the material requirements for pipe coverings and trap covering used on accessible plumbing fixtures. The testing protocol used to evaluate the material are ASTM D635, G21, and G22. These standards are common in the industry for evaluating the material.

ASTM D635 is a linear burn test used to evaluate sheet plastic. Since the covering are made with sheet plastic, this is the proper standard for testing the linear burn rate. An "HB" rating indicates that the specimen has no visible flame after the ignition source is removed. It also indicates that the burn rate does not exceed 40 mm per minute under worst case condition.

ASTM G21 is a fungi test for polymeric materials. Since the covering are located in a toilet room and bathroom environment, it important for sanitation purposes that they do not support the growth of fungi or bacteria.

Section P402.5.1 will require the pipe coverings to be installed such that building occupants cannot remove the coverings, nor that the covering will fall off when someone comes in contact with the covering. The purpose of the covering is to protect the user of the fixture. Hence, the covering must be permanently attached such that they will always be present to protect the user.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Review of proposed new standard ASTM D635-06 indicated that, in the opinion of ICC staff, the standard did comply with ICC standards criteria.

Analysis: Review of proposed new standard ASTM G21-96 (2002) indicated that, in the opinion of ICC staff, the standard did not comply with ICC standards criteria (Section 3.6.2.1).

Committee Action: **Disapproved**

Committee Reason: The proposal appears to require the use of a propriety product.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Julius Ballanco, PE, CPD, JB Engineering and Code Consulting, P.C., representing McGuire Manufacturing, requests Approval as Modified.

Modify proposal as follows:

402.5 Pipe and trap covers. Materials used for pipe coverings and trap coverings under accessible sinks or lavatories shall ~~be classified "HB" when tested to ASTM D635~~. ~~Such materials shall~~ have a zero ~~bacterial and~~ fungus growth when tested to ASTM G21.

402.5.1. Covers for accessible fixtures. Pipe coverings and trap coverings for accessible plumbing fixtures shall be ~~permanently~~ installed~~. Such coverings shall not be~~ to prevent ~~readily~~ ready ~~removable~~ removal.

~~**ASTM**~~

~~D635-06 Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position~~

Commenter's Reason: As indicated by an interpretation, there is no requirement for having any fire testing of pipe or trap covers for accessible fixtures. Therefore, I am proposing the revision to this section. The remaining ASTM standard assures that fungus will not grow on the cover material. This is intended to prevent an unsanitary condition under a sink or lavatory, or, the possibility of a physically challenged person having fungus get on themselves or their clothing when they hit into the cover material.

During the first hearing, there was confusion regarding the permanent installation of the cover material. This requirement is not intended to be proprietary. Covers should remain in place when an individual hits into them. Some installations have the cover hanging off, serving no useful purpose after being hit. The purpose of these covers is to remain in place when the fixture is used by an individual confined to a wheelchair.

Final Action: AS AM AMPC____ D

P15-07/08
Table 403.1 (IBC [P] Table 2902.1)

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise table as follows:

TABLE 403.1 ((Table [P] 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS	LAVATORIES	BATHTUBS/ SHOWERS
5	Institutional	I-4	Adult day care and child care	1 per 15	1 per 15	1

(Portions of table and footnotes not shown remain unchanged)

Reason: At least one bathtub or shower should be provided to ensure sanitary conditions in this use group. Such facilities are commonly needed to bath clients that have soiled themselves.

Cost Impact: The code change proposal will increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: The decision on whether a tub or shower is needed for these occupancies is the responsibility of the facility owner. Some licensing agencies prohibit bathtubs or showers in child and adult care facilities.

Assembly Action: **Approved as Submitted**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful.

Final Action: AS AM AMPC____ D

P17-07/08
Table 403.1 (IBC [P] Table 2902.1)

Proposed Change as Submitted:

Proponent: Don Davies, Salt Lake City Corp., representing Utah Chapter ICC

Revise table by adding footnote e to every entry in the "Drinking Fountain" column:

TABLE 403.1 (Supp) (IBC TABLE [P] 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSET (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/SHOWERS	DRINKING FOUNTAIN[e] (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			

(Portions of table not shown remain unchanged)

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the *International Building Code*.
b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e. Drinking fountains are not required for occupant loads fewer than 50.

Reason: Now that two drinking fountains are required in I.B.C. Section 1109.5.1 for high and low spouts the requirement for drinking fountains becomes excessive for smaller spaces. There is currently no lower limit for the requirement for drinking fountains in the code. The requirement for two restrooms starts at 15 occupants and for retail sales starts at 50 occupants and yet there is no lower limit for drinking fountains. Typically smaller offices provide bottled water or an ice and water dispenser on the refrigerator. Because there is no lower limit we feel that this requirement is ignored or overlooked in smaller occupant load areas anyway and because of that they may be overlooked altogether even in larger spaces. By requiring a reasonable lower limit we feel that this requirement will be more often enforced overall.

Cost Impact: The code change proposal will not increase the cost of construction. This proposal actually reduces the cost of construction by eliminating the requirement for drinking fountains in smaller buildings and spaces.

Committee Action: **Disapproved**

Committee Reason: Drinking water is a basic necessity that must be provided for in all buildings, regardless of the occupant load.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Eirene Oliphant, MCP, City of Leawood, KS, representing Metropolitan Kansas City Chapter of the ICC, requests Approval as Submitted.

Commenter's Reason: The intention of the proposed code change is to provide relief to small tenant spaces, regardless of the use group. This would allow small spaces to use a sink, break room sink, refrigerator water dispenser, or other means for water. An occupant load of fifty for an E use group is only 1,000 square feet. Most occupants within an I occupancy use group are not able to get to the drinking fountains.

Public Comment 2:

Don K. Davies, Salt Lake City Corporation, representing Utah Chapter of ICC, requests Approval as Modified.

Modify proposal as follows:

TABLE 403.1 (Supp) (IBC TABLE [P] 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSET (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/SHOWERS	DRINKING FOUNTAIN[e] (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			

(Portions of table not shown remain unchanged)

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the *International Building Code*.
b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e. Drinking fountains are not required for an occupant load~~s~~ of 15 or fewer ~~than 50~~.

Commenter's Reason: Now that two drinking fountains are required in I.B.C. Section 1109.5.1 for high and low spouts the requirement for drinking fountains becomes excessive for smaller spaces. There is currently no lower limit for the requirement for drinking fountains in the code. The requirement for two restrooms starts at 15 occupants and for retail sales starts at 50 occupants and yet there is no lower limit for drinking fountains. Typically smaller offices are provided with break rooms which have sinks in them which can be used for drinking water or a water dispenser is provided in the refrigerator. We have reduced the lower limit from 49 to 15 occupants to align with the requirements where two restrooms are required. Because there is no lower limit we feel that this requirement is ignored or overlooked in smaller occupant load areas anyway and because of that they may be overlooked altogether even in larger spaces. By requiring a reasonable lower limit we feel that this requirement will be more uniformly enforced overall.

Public Comment 3:

Jerry L. Bowen, Clinton, MS, represents himself, requests Disapproval.

Commenter's Reason: The intent of the Code is to have free drinking water for building occupants no mater what the occupant load. You cannot depend on a building owner or tenant to provide alternate means of drinking water via another type of dispenser. By not providing a compliant drinking fountain for ADA or ANSI A117.1 you could open up a litigation if and when the occupant of the building hires or cannot accommodate a person with a physical disability. You have to provide a low water source for those in wheel chairs and a higher water source for those who have trouble bending and stooping to be in compliant with ADA or ANSI A117.1. The adoption of the proposed footnote "e" would be unwise. It would cost the owner or tenant much more if an ADA litigation arouse.

Final Action: AS AM AMPC____ D

P18-07/08
Table 403.1 (IBC [P] Table 2902.1)

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

TABLE 403.1 (IBC [P] Table 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES	
				MALE	FEMALE	MALE	FEMALE
1	Assembly (see Sections 403.2, 403.4 and 403.4.1)	A-1[d]	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200	
		A-2[d]	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75	
			Restaurants, banquet halls and food courts	1 per ~~75~~ 25 for the first 25 and 1 per 75 for the remainder exceeding 25	1 per 75 25 for the first 25 and 1 per 75 for the remainder exceeding 25	1 per ~~200~~ 40 for the first 40 and 1 per 200 for the remainder exceeding 40	

(Portions of table and footnotes not shown remain unchanged)

Reason: The purpose of the change is to substitute revised material for current provisions of the code. The American Restroom Association (ARA) is often questioned by the public and by reporters doing stories about the problems people face finding proper toilet facilities when away from home. One of the problems relates to having to wait too long for a restaurant toilet to free. To the degree that respondent recall details and also based on informal observation by ARA advocates, when more then 50 people are in a restaurant one will begin to see occasional toilet queuing when only 1 single occupant per sex toilet is available. Above 100, multiple person lines will appear. This problem is addressed in the UPC [2], which requires between 2 & 3 WC per sex between 15 - 150. The IPC [1] requires only 1 WC per sex for A-2 restaurant occupancies between 16-150. This problem is particularly onerous in venues where people handle food. While those with an urgent need to void bowel or bladder will queue, those needing to wash their hands before eating may defer.

The low IPC A-2 minimum is made worse by the typical no-stall implementation of a single WC toilet. Unlike multi-stalled toilets, single WC toilets are typically user locked and the WC is not available to the next patron until the toilet door is unlocked. While studies such as the APSE Cohen reports [3,4] have shown that the average user typically needs less then 2 minutes to use a WC, there appears to be no studies of the impact of single WC, user lockable toilets. Information is available, however, via the logs generated by automated public toilets (APT). Every American municipality, that has installed single occupant APT's has found that for legitimate reasons (wheel chair, express breast milk, change ostomy bag, absorbent pads or a child's diaper) user occasionally have a legitimate need to be in the toilet for at least 15 minutes and one city now allows more then 20 minutes before a misuse alarm sounds. This same 'occasional long use' problem occurs in buildings with user lockable toilets and the problem is exacerbated because these lockable toilets also facilitate activities not related to sanitation.

(The following tables are unofficial interpretations and are not intended for inclusion in the code.

Table 403.1 (A-2) Restaurants, Banquet Halls & Food Courts
(Current Requirements)
Occupant Load - (50% Male / 50% Female)

Total Occupants	Water Closets Per Sex @ 1 per 75	Total Occupants	Lavatories Per Sex @ 1 per 200
50[a] - 150	1	50[a] - 400	1
151 – 300	2	401 - 800	2
301 – 450	3	801 – 1,200	3
451 – 600	4	-	-
601 – 750	5	-	-
751 – 900	6	-	-
901 – 1,050	7	-	-

[a] Assembly less than 50 classified as Business (See IBC Section 303.1)

Table 403.1 (A-2) Restaurants, Banquet Halls & Food Courts (Proposed Change) Occupant Load - (50% Male / 50 % Female)			
Total Occupants	**Water Closets Per Sex** @ 1 per 25 for the first 25 and 1 per 75 for the remainder exceeding 25	**Total Occupants**	**Lavatories Per Sex** @ 1 per 40 for the first 40 and 1 per 200 for the remainder exceeding 40
50[a]	1	50[a] - 240	1
51 – 200	2	241 - 640	2
201 – 350	3	641 – 1,040	3
351 – 500	4	-	-
501 – 650	5	-	-
651 – 800	6	-	-
801 – 950	7	-	-
951 – 1,100	8	-	-

Bibliography:
2006 International Plumbing Code Table 403.1 for Occupancy A-2
2006 Uniform Plumbing Code Table 4.1
ASPE report 95-01 Cohen 'Queuing theory approach to plumbing design research'
ASPE report 92-02 Cohen 'Plumbing fixture requirements for office buildings research report'

Cost Impact: The code change proposal will increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The proposed revision is needed because of long queuing times reported for restaurants having an occupant load of 150 or less.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Julius Ballanco, PE, CPD, JB Engineering and Code Consulting, P.C, representing himself, requests Disapproval.

Commenter's Reason: There was no data submitted to justify this change. The tables were developed using data that had been accumulated regarding toilet room use and waiting time. A change should not be accepted just because someone believes there may be a problem.
There are a number of neighborhood small restaurants that have a single occupant toilet room for the men and women. These rooms have served the restaurants very well. Many of these restaurants are placed in existing tenant spaces of strip type centers.

By adding this requirement, you eliminate space for the dining of 12 individuals. That could make or break a neighborhood restaurant. When comment was originally offered, the response was build the building larger originally. Well, that is not possible with existing buildings. That is what will be impacted the most. This change should be denied.

Public Comment 2:

Lawrence G. Perry, AIA, representing Building Owners and Managers Association (BOMA) International, requests Disapproval.

Commenter's Reason: The proposal significantly increases the number of water closets and lavatories required in A-2 Restaurants, Banquet Halls and Food Courts without adequate substantiation and without clearly indicating the extent of the impact. The tables provided to support the change do not appear to accurately indicate the impact of the proposed change. Because of the 'two-tier' scoping proposed, the number of fixtures required varies significantly depending on whether one divides the assumed 50% male/50% female ratio prior to calculating the required fixtures or after.

For example, the proposal requires water closets as follows: 1 per 25 occupants for the first 25 occupants, and 1 per 75 occupants for the remainder exceeding 25.
If a facility has 100 occupants, and one first assumes 50 male and 50 female, using the proposed criteria would result in the following:

Men: 2 required water closets (1 for the first 25, 1 for the remaining 25)
Women: 2 required water closets (1 for the first 25, 1 for the remaining 25)

I believe this is how the table is typically applied. This is the total shown in the proposal reason statement. (Note that this is not consistent with the tabulation method used in similar proposal P21-07/08, and is also inconsistent with the method shown in the lavatory tabulation for this proposal).

However, if one first does the calculation using 100 occupants, only 2 total water closets are required (1 for the first 25, 1 for the remaining 75). These 2 water closets are then divided by sex, providing 1 for men and 1 for women.

Current code would require 2 water closets (1 men, 1 women) total for an A-2 occupancy with 100 occupants; the proposal claims to require 4 (2 men, 2 women), but it can also be calculated to still require only 2.

The same problem occurs for when calculating lavatories. The proposal would require lavatories as follow: 1 per 40 occupants for the first 40, and 1 per 200 for the remainder exceeding 40. Again, assuming 100 total occupants, if one first divides the population assuming 50% of each sex, lavatories are required as follows:

Men: 2 required lavatories (1 for the first 40, 1 for the remaining 41-50)

Women: 2 required lavatories (1 for the first 40, 1 for the remaining 41-50)

The proposal claims that only 2 total lavatories are required, because they apply the formula first (1 lavatory for first 40, 1 for the remaining 60 from 41-100).

Current code would require 2 lavatories (1 men, 1 women) total for a A-2 occupancy with 100 occupants; the proposal claims to only require 2 (1 men, 1 women), but it actually appears to require 4 (2 men, 2 women).

Such a significant change without rationale clearly indicating the need to double a current requirement should not be approved.

Final Action: AS AM AMPC____ D

P20-07/08
403.4.1 (New)

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Add new text as follows:

403.4.1 Door locking. Entrance doors to required public and employee toilet facilities shall not be lockable from the ingress side.Where a toilet room contains more than one water closet or contains a urinal substituted for a required water closet, the door for such room shall not be lockable from either side.

Reason: The change is submitted as clarification of the code. In modern society access to public restroom facilities is a basic human need. Many requirements of the International Plumbing Code are driven by this human necessity. Access to required public and employee toilet facilities should not be restricted in any way. It's becoming common practice to secure public restroom doors on the outside, thus limiting access to only those individuals deemed eligible to use them. This practice is clearly in conflict with the intent of the code. IPC Section 403.2 specifically states that "Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization."

It's not enough to simply provide the minimum number of required toilet facilities in a building. Unrestricted access to the facilities must also be provided. The practice of externally locking restroom doors has resulted in a steadily increasing number of public toilet facilities becoming unavailable to the public for which they were designed. Keys, keycards and key codes are common tools used to restrict public access to restrooms. Keys, are typically maintained by employees and are kept in out of sight locations. Cards are issued to employees but the public is not provided with a card when they enter the building. In the case of key codes, any person not knowing the code will not be able to access the facilities. Another relevant issue is accessibility. Any restroom door hardware that requires "tight grasping, pinching, or twisting of the wrist" for its operation is clearly prohibited by 2003 ICC/ANSI A117.1 Section 304.

From the employee and property owner's perspective, an externally locked restroom door has the advantage of restricting access to individuals considered a security risk. Less usage also results in less maintenance cost. If building owners wish to provide security in their buildings, the entrance to the restroom door is not the appropriate place to do it. Once an individual is granted access to the building they must also be provided with unrestricted access to the required public toilet facilities. Maintenance of public restroom facilities is a condition of the buildings certificate of occupancy.

The change will not increase the cost of construction. Installation costs, associated with operable parts on restroom doors, are typically less when the operable part does not incorporate an external lock, key card device, key code device, etc in its design. The change is submitted to clarify that access to required public and employee toilet facilities must not be restricted. The problem is widespread throughout the country and a public outcry for unrestricted access to adequate, sanitary restroom facilities is growing.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The code should provide for unrestricted access to toilet facilities for all persons utilizing a building. The second sentence of the proposed text prohibits door locking capability from either side where the toilet room is intended to be for multiple users.

Assembly Action: **Disapproved**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful and public comments were submitted.

Public Comment 1:

Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association requests Approval as Submitted.

Commenter's Reason: P20 was approved as submitted by committee action at the public hearings in Palm Springs, CA but was subsequently disapproved by assembly action. The proponent agrees with the committee that "The code should provide for unrestricted access to toilet facilities for all persons utilizing a building." This is clearly the intent of IPC Section 403.4. It states, in part, "Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization." When doors to public toilet facilities are fitted with external locking devices, the required facilities are not provided to the public when the door is locked from the outside. Also, when doors are locked from the outside, the unobstructed path of egress required by IBC Chapter 10 is not available to any occupant that may be locked inside the restroom when the need to exit the building in an emergency arises. IBC Section 1013.2 states, in part, "An exit access shall not pass through a room that can be locked to prevent egress". Additionally, toilet room door hardware that requires "tight grasping, pinching, or twisting of the wrist" is prohibited by 2003 ICC/ANSI A117.1 Section 304. Keys must be tightly grasped & twisting of the wrist is required to operate the lock. Use of a key card requires it to be pinched between the fingers. Therefore, external locking devices on toilet room doors do not comply with at least three key principles of the ICC codes. 1) An unobstructed path of egress must be provided from all spaces, 2) access to required public toilet facilities should not be restricted and 3) hardware on accessible restroom doors must be operable by individuals having disabilities, without the need of assistance by others. In accordance with the committee's action, the proponent urges a final action of approved as submitted based on these key principles of the International Codes and the Federal ADA requirements.

Public Comment 2:

Julius Ballanco, P.E., CPD, JB Engineering and Code Consulting, P.C., representing himself, requests Disapproval.

Commenter's Reason: This change will completely take away the opportunity of a building owner to provide security. There are many bathrooms that are accessible from the outside. By prohibiting a lock on the ingress, the rooms can be vandalized or vagrants can occupy the space. Since 9/11, building owners are providing better security of their buildings to prevent terrorism. One such level of security is with bathrooms in common spaces. This right of security should not be denied a building owner, nor for that matter, the public.

Public Comment 3:

Jud Collins, JULYCO, representing himself, requests Disapproval.

Commenter's Reason: Although this proposal was recommended for approved as submitted by the committee, a floor vote has recommended disapproval of the proposal. This proposal would prohibit office building owners from locking toilet facilities where buildings are not provided with security guards. Requiring the public to get a key from a tenant in one of the offices allows some security for employees. Otherwise, who knows who could be waiting in the toilet room for an unsuspecting employee to enter the toilet room and cause them harm?

Public Comment 4:

Jonathan D. Hamrick, Florida Department of Education, requests Disapproval.

Commenter's Reason: This is not a building code issue. This is an operations issue and does not belong in a building code. This proposal is unenforceable by the building official or plumbing inspector. While the use of toilet rooms is a requirement and need to be readily available, in some occupancies the need to restrict access is also required.

Public Comment 5:

Lawrence G. Perry, AIA, representing Building Owners and Managers (BOMA) International, requests Disapproval.

Commenter's Reason: BOMA International is opposed to both portions of this proposed change, and request that the membership disapprove the item. First, this proposal would prohibit any public or employee toilet room from being locked from the ingress side. The proposal cites a need for unrestricted access to toilet facilities. This approach does not recognize today's legitimate security concerns. Building tenants will not accept an explanation that providing a security guard at the front door eliminates the need to secure the toilet room doors, as the proposal implies in the reason statement. Where a facility is not open to the 'public', it is perfectly reasonable (and necessary) to secure the toilet rooms, and provide keys either at a controlled location or to employees. Without evidence of a problem at a specific facility with this approach, there is no basis to introduce the major security risk of leaving doors to these rooms unsecured. Current text provides adequate criteria: "Customers, patrons and visitors shall be provided with public toilet facilities…" If it can be shown that customers, patrons, or visitors are being denied access to required facilities, there is due cause to issue a violation.

Second, this proposal would prohibit providing a lock on the inside of a toilet/bathing room that contains both a water closet and a urinal. This directly conflicts with the BCMC unisex toilet room package that was added to the IPC in response to concerns expressed by the federal government regarding the need for unisex facilities. (Note: The term "Unisex" toilet room has since been changed to "Family or assisted-use" room in the I-codes.) The rationale for allowing a 2-fixture room to be lockable from the inside was that 2 persons entering the toilet room, one to use the fixtures, and one to provide assistance, is no different than two persons independently entering the room to use the facilities. It was also intended to allow a small men's room to be usable as a 'unisex' toilet room as needed, without requiring additional dedicated unisex toilet rooms to be provided. Deleting this lockable door option removes a major portion of the flexibility that was intended in the BCMC unisex toilet room package, and will significantly increase the cost and space impact of providing unisex facilities. Finally, this would directly conflict with IBC 1109.2.1.2 (Supp), which specifically permits a urinal and a water closet to be provided in a family or assisted-use toilet room, while 1109.2.1.7 specifically requires that family or assisted-use toilet rooms be lockable from within the room. This should not be done unless a total reassessment of the triggers for unisex toilet room provisions is undertaken, and the conflicts this change would create are first resolved.

Final Action: AS AM AMPC____ D

P21-07/08
Table 403.1 (IBC [P] Table 2902.1)

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

TABLE 403.1 (IBC [P] Table 2902.1) (Supp)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES	
				MALE	FEMALE	MALE	FEMALE
6	Mercantile (see Sections 403.2, 403.4, 403.4.1 and 403.4.2)	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per ~~500~~ 125 for the first 250 and 1 per 500 for the remainder exceeding 250		1 per ~~750~~ 200 for the first 400 and 1 per 750 for the remainder exceeding 400	

(Portions of table and footnotes not shown remain unchanged)

Reason: The purpose of the change is to substitute revised material for current provisions of the code. The IPC requires 1 WC per sex for mercantile occupancies between 51-1000. The UPC [(1)] requires between 2 to 6 WC per sex between 51 - 800. Based on an ARA/Wall Street Journal investigation [(2)], this low IPC minimum has not caused problems because a majority of the public is not aware that they are allowed to use sanitation facilities in small to midsize mercantile establishments. Media awareness campaigns like the Wall Street Journal story and Section 403.5.1 Directional Signs (P34-06/07) will change the public's awareness.

Unlike multi-stalled toilets, single WC toilets are typically user locked and the WC is not available to the next patron until the toilet door is unlocked. While studies such as the Cohen report [(4,5)] have shown that the average user typically needs less then 2 minutes to use a WC, there appears to be no studies of the impact of single WC, user lockable toilets. Information is available, however, via the experience of those American cities that have installed automated public toilets (APT). Every municipality has found that for legitimate reasons (wheel chair, express breast milk, change ostomy bag, absorbent pads or a child's diaper) user occasionally have a legitimate need to be in the toilet for at least 15 minutes and at least one city's now allows more then 20 minutes before an alarm sounds. This same 'occasional long use' problem occurs in buildings with user lockable toilets and the problem is exacerbated because these user lockable toilets also accommodate activities not related to sanitation. A retail store with 1000 people will sometimes include more then 15 employees. OHSA requires 2 WC for 16 on site employees [(3)]. It is likely that those 16 employees competing with 984 other occupants does not satisfy the intent of the OSHA requirement.

(The following tables are unofficial interpretations and are not intended for inclusion in the code)

Mercantile (current requirements)			
Water Closets @ 1 per 500		Lavatories @ 1 per 750	
Occupants	Minimum Per Sex	Occupants	Minimum Per Sex
1 - 50	[a]	1 - 50	[a]
51 – 1,000	1	51 – 1,500	1
1,001 – 2,000	2	1,501 – 3,000	2
2,001 – 3,000	3	3,001 – 4,500	3
3,001 – 4,000	4	4,501 – 6,000	4
4,001 – 5,000	5	6,001 – 7,500	5
5,001 – 6,000	6	7,501 – 9,000	6
6,001 – 7,000	7	9,001 – 10,500	7
7,001 – 8,000	8	-	-
8,001 – 9,000	9	-	-
9,001 – 10,000	10	-	-

Mercantile (proposed change)			
Water Closets @ 1 per 125/250 Then 1 per 500		Lavatories @ 1 per 200/400 Then 1 per 750	
Occupants	Minimum Per Sex	Occupants	Minimum Per Sex
1 - 50	[a]	1 - 50	[a]
51 - 250	1	51 - 400	1
251 – 1,250	2	401 – 1,900	2
1,251 – 2,250	3	1,901 – 3,400	3
2,251 – 3,250	4	3,401 – 4,900	4
3,251 – 4,250	5	4,901 – 6,400	5
4,251 – 5,250	6	6,401 – 7,900	6
5,251 – 6,250	7	7,901 – 9,400	7
6,251 – 7,250	8	9,401 – 10,900	8
7,251 – 8,250	9	-	-
8,251 – 9,250	10	-	-
9,251 – 10,250	11	-	-

Family Dollar 7,500 sq ft 250 Occupants	Family Dollar 9,500 sq ft 317 Occupants	Rite Aid, CVS, Walgreens 11,000 – 15,000 sq ft 367 - 500 Occupants	Big K-Mart , small Wal-Mart 80,000 – 110,000 sq ft 2,667 - 3,667 Occupants	Wal-Mart Super Center 200,000 sq ft 6,667 Occupants

[a] Separate facilities not required for M of 50 or less (IPC Section 403.2)

Bibliography:
2006 Uniform Plumbing Code Table 4.1 'Retail or Wholesale Stores
Wall Street Journal 'Bathroom Backlash Arrives on Main Street ' July 26, 2005
29CFR1910.141(c)(1)(i) Table J-1
ASPE report 95-01 Cohen 'Queuing theory approach to plumbing design research'
ASPE report 92-02 Cohen 'Plumbing fixture requirements for office buildings research report'

Cost Impact: The code change proposal will increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: Where only a single user toilet room per sex is provided, queuing time can become excessively long because a toilet room occupant can lock the door, taking as long as her or she wishes. The proposed revision is needed to shorten the anticipated long queuing times for mercantile occupancies with occupants loads greater than 125.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence G. Perry, AIA, representing Building Owners and Managers Association (BOMA) International requests Disapproval.

Commenter's Reason: The proposal significantly increases the number of water closets and lavatories required in Mercantile Occupancies without adequate substantiation and without adequately indicating the extent of the impact. The tables provided to support the change do not appear to accurately indicate the impact of the proposed change. Because of the 'two-tier' scoping proposed, the number of fixtures required varies significantly depending on whether one divides the assumed 50% male/50% female ratio prior to calculating the required fixtures or after.

For example, the proposal requires water closets as follows: 1 per 125 occupants for the first 250 occupants, and 1 per 500 occupants for the remainder exceeding 250.

If a facility has 1000 occupants, and one first assumes 500 male and 500 female, using the proposed criteria would result in the following:

Men: 3 required water closets (1 for the first 125, 1 for the second 125-250, and 1 for the 'remainder' from 251-500)

Women: 3 required water closets (1 for the first 125, 1 for the second 125-250, and 1 for the 'remainder' from 251-500)

I believe this is how the table is typically applied. However, if one first does the calculation using 1000 occupants, only 4 total water closets are required (1 for the first 125, 1 for the second 125-250, 1 for the 500 between 250-750, and 1 for the 'remaining' 250). These 4 water closets are then divided by sex, providing 2 for men and 2 for women. This is the total shown in the proposal reason statement.

Current code would require 2 water closets (1 men, 1 women) total for a mercantile occupancy with 1000 occupants; the proposal claims to require 4 (2 men, 2 women), but it actually appears to require 6 (3 men, 3 women).

The same problem occurs for when calculating lavatories. The proposal would require lavatories as follow: 1 per 200 occupants for the first 400, and 1 per 750 for the remainder exceeding 400. Again, assuming 1000 total occupants, if one first divides the population assuming 50% of each sex, lavatories are required as follows:

Men: 3 required lavatories (1 for the first 200, 1 for the second 201-400, 1 for the remaining 401-500)
Women: 3 required lavatories (1 for the first 200, 1 for the second 201-400, 1 for the remaining 401-500)

The proposal claims that only 4 total lavatories are required, because they apply the formula first (1 lavatory for first 200, 1 for the next 201-400, and 1 for the remaining 401-600), which results in 3 required lavatories; they apparently then round up from 1.5 lavatories per sex after dividing the required number.

Current code would require 2 lavatories (1 men, 1 women) total for a mercantile occupancy with 1000 occupants; the proposal claims to require 4 (2 men, 2 women), but it actually appears to require 6 (3 men, 3 women).

Such a significant change without rationale clearly indicating the need to triple a current requirement should not be approved.

Staff Analysis: Section 403.1.1 of the 2007 Supplement requires that the occupant load be divided in half before applying the fixture ratios to each sex.

Final Action: AS AM AMPC____ D

P22-07/08
403.1.1

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, representing Virginia Plumbing & Mechanical Inspectors Association

Revise as follows:

403.1.1 (Supp) Family or assisted-use toilet and bath fixtures. ~~Fixtures~~ Water closets, lavatories, showers and bathtubs located within family or assisted-use toilet and bathing rooms required by Section 1109.2.1 of the *International Building Code* are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies.

Reason: The change is submitted as a recommended solution to an oversight in the current code text. Urinals located in family or assisted-use (Family/A-U) toilet rooms should not be counted toward the minimum number of required plumbing fixtures. IBC Section 1109.2.1.7 requires doors to Family/A-U toilet rooms to be securable from within the room and the exception to IBC Section 1109.2.1.2 permits installation of an optional urinal. Due to the internally locked door, a single restroom occupant causes both the water closet & urinal to become simultaneously unavailable to other building occupants. Therefore only the required water closet and lavatory should be permitted to count toward the minimum number of required fixtures. The change will not increase the cost of construction because a urinal is not required in a F/A-U toilet room. Therefore urinals in F/A-U toilet rooms which are currently permitted to be counted toward the minimum number of required fixtures may be installed in multi-occupant restrooms which makes the fixtures independently available for use. The change correlates with the proposed changes to IPC 419.2 and IBC 1109.2.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: See related proposal E167-07/08.

Committee Action: **Approved as Submitted**

Committee Reason: The proposed change does not allow a urinal in a Family/A-U toilet room to be counted toward the minimum number of required plumbing fixtures for the occupancy because that fixture is not available to the public when the Family/A-U toilet room is in use.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence G. Perry, AIA, Building Owners and Managers Association (BOMA) International requests Disapproval.

Commenter's Reason: This proposal would prohibit urinals that are located within family or assisted-use toilet/bathing rooms from being included in the required number of plumbing fixtures. This change conflicts with the original intent of the BCMC unisex toilet room package. Allowing both a urinal and a water closet to be provided in the same room provides the greatest amount of design flexibility for the assembly and mercantile occupancies affected by the new unisex toilet room provisions. Because a family or assisted-use toilet/bathing room is intended to be used, at times, by two people, one using the fixture and one providing assistance, the impact on the facility is no different than two separate individuals using two separate fixtures. Note that separate provisions in the code would require partitions and privacy partitions if both a urinal and a water closet are provided. When the original BCMC package was developed, the scoping trigger was set relatively low (facilities where 6 or more water closets are required), a major factor in setting the trigger so low was the inclusion of several provisions that gave a facility a lot of flexibility in achieving compliance. If this major piece of design flexibility is to be deleted, it should not be done until the overall scoping triggers are reassessed and modified as needed to reduce the additional impact of this change.

Analysis: Inconsistent public hearing committee actions on P22-07/08 and E167-07/08 have created a conflict between IBC Sections 1109.2.1 and 2902.1.1 and IPC Section 403.1.1. The public comments to P22 and E167 allow for two possible outcomes that will eliminate this conflict. P22 and E167 need to have consistent final action to avoid a conflict within the 2009 IBC and between the 2009 IBC and 2009 IPC.

Final Action: AS AM AMPC____ D

P27-07/08, Part I
405.3 (New)

Proposed Change as Submitted:

Proponent: Brien L. Bellous, City of Columbus. Ohio

PART I – IPC

Add new text as follows:

405.5 Fixture mounting. Fixtures shall be fastened to the building structure in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

PART I – IPC
Committee Action: **Approved as Modified**

405.5 Fixture mounting. Fixtures shall be ~~fastened~~ secured ~~to the building structure~~ in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

Committee Reason: The proposed text provides better coverage than Section 303.2 does ensuring that fixtures will be properly secured whether or not the manufacturer provide for it in their installation instructions. The modification recognizes that fasteners may not be the only method that a manufacturer might use for securing a fixture and fixtures may not necessarily be secured to the building structure.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Eirene Oliphant, MCP, Metropolitan Kansas City, Chapter of the ICC, requests Disapproval.

Commenter's Reason: The proposed language is already provided for in Chapter 3, Section 303.2. In addition, the proposed language does not add anything worthwhile – what is an approved method?

Final Action: AS AM AMPC____ D

P27-07/08, Part II
IRC P2705.2 (New)

Proposed Change as Submitted:

Proponent: Brien L. Bellous, City of Columbus. Ohio

Add new text as follows:

P2705.2 Fixture mounting. Fixtures shall be fastened to the building structure in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

Reason: Current IPC text does not speak to how fixtures are anchored to the structure; save wall hung fixtures with carriers and closet flanges. Other fixtures, such as lavatories, sinks, tub/shower enclosures and laundry trays need to be attached to the structure in an approved manner and with accepted methods. It is not too uncommon to see items such as dry wall screws with washers or improperly sized toggle bolts holding sinks and lavatories to walls. Other scenarios being seen are roofing nails anchoring tubs to framing or a tube talon to hold a shower head wing ell in place. Some of our jurisdictions are being challenged when requiring proper anchoring or attachment or fixtures, since the code is silent on the issue. This code text addition will give clear guidance that all fixtures need to be attached and anchored to walls and floors with manufacturer recommended hardware or other accepted engineering practice.
Some in the industry believe that it is appropriate to use IPC 303.2 – Installation of materials for this issue. Where this seems like a reasonable thing, materials are defined differently than fixtures. This change makes sense in the chapter dealing with fixtures and requirements related to them.

Cost Impact: The code change proposal will not increase the cost of construction because (in most cases) mounting hardware comes with the plumbing fixture and needs to be attached in some fashion.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The proposed language is arbitrary. The topic is already covered by Section P2705.1, Items 1-4.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Shaunna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council, requests Approval as Modified.

Modify proposal as follows:

P2705.2 Fixture mounting. Fixtures shall be ~~fastened~~ secured ~~to the building structure~~ in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

Commenter's Reason: The Colorado Chapter requests overturning the committee action on Part II. P27 Part I 07/08 was approved as modified by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Public Comment 2:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify proposal as follows:

P2705.2 Fixture mounting. Fixtures shall be ~~fastened to the building structure~~ attached in place in accordance with the fixture manufacturer's installation instructions. Where the manufacturer's installation instructions do not prescribe fastening methods, approved methods shall be utilized.

(Renumber subsequent sections)

Commenter's Reason: This is the same text as the IPC Committee approved. The IRC Committee reason for disapproval was that this is arbitrary and 2705.1 1–4 already covers this. Two examples of everyday installations that this new text will address and where current text fails. First a whirlpool installation. What is the correct installation of the unit? is it to be set in concrete, drywall mud, sand or nothing at all? You must go to the manufacturer for this information. Second example, a wall hung lavatory. Some would believe that anchors in the wall are an approved installation for mounting the fixture itself. However if you check with the manufacturer's installation instructions you will find solid backing is required inside the wall and the fixture mounting bracket must be screwed into this backing. If all we have is current text these two everyday common installations are not addressed and are routinely being installed incorrectly. The proposed text corrects this deficiency, it does not add any requirements, nor does it make plumbing installations more restrictive it simply clarifies what the intent of the code actually is.

Final Action: AS AM AMPC____ D

P29-07/08, Part I
410.1, 410.2

Proposed Change as Submitted:

Proponent: Mike Baker, City of Prescott, representing the Arizona Building Officials

PART I – IPC

Revise as follows:

SECTION 410
DRINKING FOUNTAINS

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M 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, water coolers or bottled water dispensers shall be permitted to be substituted ~~for not more than 50 percent of the required drinking fountains~~.

410.2 Prohibited location. Drinking fountains, water coolers and bottled water dispensers shall not be installed in public restrooms.

Reason: The current code language provides for only one method of supplying drinking water for the public. As written one drinking fountain is required in any occupancy. The reality of the code is that two drinking fountains are always required to meet the requirements of IBC Chapter 11, section 1109.5.1 Minimum Number, which specifically states “no fewer than two drinking fountains shall be installed”. Many people have argued that bottled water coolers do not meet current ADA height requirements. This is not true as we install hundreds of soda fountains across this country. The soda fountains meet the forward and side reach requirements as established by current ADA requirements. In addition current ADA language permits the substitution of bottled water dispensers. Section 4.15.1 of the Americans with Disabilities Act Accessibility Guidelines states “Minimum Number. Drinking fountains or water coolers required to be accessible by 4.1 shall comply with 4.15.” The ADAAG’s intent is not to limit the use of water coolers. Water coolers and bottled water dispensers are viable listed alternatives to drinking fountains. These units provide equivalent accessibility and provide a less expensive alternative to standard accessible compliant drinking fountains. Accessibility standards and narrative explanations published by the Access Board, (www.access-board.gov/adaag/about/4.15-4.24.htm#Drinking%20Fountains%20and%20Water%20Coolers%20[4.15], recognize that the use of alternate dispensers is common place, permissible and compliant.

Sanitation and contamination have been addressed for years in the legacy codes as well as in the I-code family. However we seem to look the other way when drinking fountains are discussed. Once the fixture is installed we assume someone will clean, maintain and service the fountain when needed. Sanitation of these fountains may be performed once per day by the nightly cleaning crew. Maintenance or cleaning of the fountains is generally complaint driven from persons wanting to use the fountain. Again we assume that most drinking fountains are not sanitary and are not polluted from contaminated water.

Contamination is not limited to cross connections. In medical and dental offices the doctors could mitigate the chances of bio-hazard contaminations through the use of disposable cups. People having dental surgery or persons with mouth injuries would not be able to gargle with the water from the drinking fountain and then spit it back into the fountain. This type of bio-hazard is not limited to the medical field as many times the public is greeted by someone’s mucus or chewing tobacco that was spat into the drinking fountain. In many businesses the drinking fountains are not routinely cleaned during the day. This allows for items such as cigarette butts, gum and trash to lie in the drinking fountain for hours at a time. Drinking fountains are not sanitary if they are not maintained and routinely cleaned.

Arguments such as the cooler will be removed after the final inspection or the occupant will discontinue service at some future date presents no reasonable justification for eliminating the use of these fixtures to achieve minimum code compliance. We can not read into the future what might happen. We do not assume that once a building is approved all the exit signs will be removed and all of the emergency egress doors will be chained shut. We move forward with the understanding that the building user will maintain the building as it was turned over to them under the Certificate of Occupancy. All too often permanently installed drinking fountains fall into disrepair, are expensive to maintain and the occupant disconnects the unit. This can happen to a water dispensing device, however, if a water cooler or bottled water dispenser malfunctions, it is often repaired or replaced as part of a service contract at little or no cost to the occupant.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: the maintenance of the technical content of the text to be placed into the IBC by this proposal rests with the IPC Code Development Committee. The need for suitability and duplication of the language within the IBC is a matter to be determined by the IBC General Code Development Committee. If both portions of this change are approved, the IBC text will be automatically revised to be consistent with the IPC.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The proposed change to allow water coolers and bottled water be a substitute for all required drinking fountains may result in no drinking water availability as bottled water service can be cancelled and water coolers are too easily removed.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment 1:

Julius Ballanco P. E. CPD, JB Engineering and Code Consulting, P.C., representing himself, requests Approval as Submitted by this Public Comment.

Commenter's Reason: There is no justification for the change a few years ago to mandate 50 percent of the water requirements being drinking fountains. In a strip mercantile/business building, which tenant spaces should get drinking fountains as opposed to bottled water. Today, the public is not suffering with lack of water. On the contrary, people are drinking more water than ever before. It is common for people to carry their own water.

Public Comment 2:

Jerry L. Bowen, Clinton, MS, representing himself, requests Approval as Modified by this Public Comment.

Modify proposal as follows:

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M 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, water coolers or bottled water dispensers shall be permitted to be substituted <u>for not more than 50 percent of the required number of drinking fountains</u>.

410.2 Prohibited location. Drinking fountains, water coolers and bottled water dispensers shall not be installed in public restrooms.

Commenter's Reason: Approval of the original proposal as submitted would allow bottled water coolers and bottled water dispensers to completely eliminate the installation of permanent drinking fountains in an occupancy. Bottled water dispensers and bottled water coolers are too easily removed or allowed to be remain empty therefore eliminating the public's access to free drinking water. Leaving the text :"for not more than 50 percent of the required drinking fountains." intact assures that an uninterrupted supply of free drinking water from at least one permanent fixture will always be available to the building occupants.

Final Action: AS AM AMPC____ D

P29-07/08, Part II

IBC [P] 2903.1 (New), [P] 2903.2 (New), Chapter 35 (New)

Proposed Change as Submitted:

Proponent: Mike Baker, City of Prescott, representing the Arizona Building Officials

PART II – IBC GENERAL

1. Add new section as follows:

<u>SECTION [P] 2903</u>
<u>DRINKING FOUNTAINS</u>

<u>[P] 2903.1 Approval.</u> <u>Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M 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, water coolers or bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.</u>

<u>[P] 2903.2 Prohibited location.</u> <u>Drinking fountains shall not be installed in public restrooms.</u>

2. Add standards to Chapter 35 as follows:

<u>Air-Conditioning & Refrigeration Institute (ARI)</u>

<u>1010—02 Self-contained, Mechanically Refrigerated Drinking-water Coolers</u>

ASME

A112.19.1M—1994 (R1999)	Enameled Cast Iron Plumbing Fixtures with 1998 and 2000 supplements
A112.19.2M—2003	Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals
A112.19.9M—1991(R2002)	Non-Vitreous Ceramic Plumbing Fixtures with 2002 Supplement

Reason: The current code language provides for only one method of supplying drinking water for the public. As written one drinking fountain is required in any occupancy. The reality of the code is that two drinking fountains are always required to meet the requirements of IBC Chapter 11, section 1109.5.1 Minimum Number, which specifically states "no fewer than two drinking fountains shall be installed". Many people have argued that bottled water coolers do not meet current ADA height requirements. This is not true as we install hundreds of soda fountains across this country. The soda fountains meet the forward and side reach requirements as established by current ADA requirements. In addition current ADA language permits the substitution of bottled water dispensers. Section 4.15.1 of the Americans with Disabilities Act Accessibility Guidelines states "Minimum Number. Drinking fountains or water coolers required to be accessible by 4.1 shall comply with 4.15." The ADAAG's intent is not to limit the use of water coolers. Water coolers and bottled water dispensers are viable listed alternatives to drinking fountains. These units provide equivalent accessibility and provide a less expensive alternative to standard accessible compliant drinking fountains. Accessibility standards and narrative explanations published by the Access Board, (www.access-board.gov/adaag/about/4.15-4.24.htm#Drinking%20Fountains%20and%20Water%20Coolers%20[4.15], recognize that the use of alternate dispensers is common place, permissible and compliant.

Sanitation and contamination have been addressed for years in the legacy codes as well as in the I-code family. However we seem to look the other way when drinking fountains are discussed. Once the fixture is installed we assume someone will clean, maintain and service the fountain when needed. Sanitation of these fountains may be performed once per day by the nightly cleaning crew. Maintenance or cleaning of the fountains is generally complaint driven from persons wanting to use the fountain. Again we assume that most drinking fountains are not sanitary and are not polluted from contaminated water.

Contamination is not limited to cross connections. In medical and dental offices the doctors could mitigate the chances of bio-hazard contaminations through the use of disposable cups. People having dental surgery or persons with mouth injuries would not be able to gargle with the water from the drinking fountain and then spit it back into the fountain. This type of bio-hazard is not limited to the medical field as many times the public is greeted by someone's mucus or chewing tobacco that was spat into the drinking fountain. In many businesses the drinking fountains are not routinely cleaned during the day. This allows for items such as cigarette butts, gum and trash to lie in the drinking fountain for hours at a time. Drinking fountains are not sanitary if they are not maintained and routinely cleaned.

Arguments such as the cooler will be removed after the final inspection or the occupant will discontinue service at some future date presents no reasonable justification for eliminating the use of these fixtures to achieve minimum code compliance. We can not read into the future what might happen. We do not assume that once a building is approved all the exit signs will be removed and all of the emergency egress doors will be chained shut. We move forward with the understanding that the building user will maintain the building as it was turned over to them under the Certificate of Occupancy. All too often permanently installed drinking fountains fall into disrepair, are expensive to maintain and the occupant disconnects the unit. This can happen to a water dispensing device, however, if a water cooler or bottled water dispenser malfunctions, it is often repaired or replaced as part of a service contract at little or no cost to the occupant.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: the maintenance of the technical content of the text to be placed into the IBC by this proposal rests with the IPC Code Development Committee. The need for suitability and duplication of the language within the IBC is a matter to be determined by the IBC General Code Development Committee. If both portions of this change are approved, the IBC text will be automatically revised to be consistent with the IPC.

PART II – IBC GENERAL
Committee Action: **Disapproved**

Committee Reason: The proposed text does not mandate the use of drinking fountains and such provisions are only necessary within the IPC. Table 2902.1 already addresses where such drinking fountains are required.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jerry L. Bowen, Clinton, MS, representing himself, requests Approval as Submitted by this Public Comment.

Commenter's Reason: Approval of the original proposal as submitted would put important information about drinking fountain substitutions as well as location prohibitions directly in front of designers and architects of buildings.

Final Action: AS AM AMPC____ D

P31-07/08
419.1.1 (New)

Proposed Change as Submitted:

Proponent: Earnest Preacely, Energy Services & Technology

Add new text as follows:

419.1.1 Nonwater urinals. Where non water urinals are installed, they shall be listed and comply with all of the requirements of ANSI Z124.9 for plastic urinals and ASME A112.19.19 for vitreous china urinals. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

Reason: As a general contractor I feel it would be beneficial for the model plumbing codes to be consistent and the above code change submittal is identical to one that is proposed to be included in the 2009 *Uniform Plumbing Code* (UPC) so that when work is performed in different jurisdictions the requirements are similar. The proposed conditions will help protect the public health and safety whenever nonwater urinals are installed.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: It doesn't make sense to require a water supply for plumbing fixtures that don't require water to properly function.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Daniel Gleiberman, Falcon Waterfree Technologies, requests Approval as Submitted.

Commenter's Reason: This justification from the original code change proposal is still valid and should be considered in order to ensure the public health and safetyare protected. All of the requirements proposed by this code change should be included in the 2009 IPC.

Public Comment 2:

John M. Halliwill, Halliwill and Associates, representing Caroma, requests Approved as Modified.

Modify proposal as follows:

419.1.1 Nonwater urinals. Where non water urinals are installed, they shall be listed and comply with all of the requirements of ANSI Z124.9 for plastic urinals and ASME A112.19.19 for vitreous china urinals. ~~Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal.~~ Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. ~~Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.~~

Commenter's Reason: I am recommending that the wording "Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal." be deleted.

1. Adding the new wording as originally proposed would introduce additional wording to the Code that is not needed.
2. This new wording would establish two requirements in the code as Section 1002.4 already has requirements for a **liquid seal in all fixture traps** that adequately protects the public health and safety.
3. Further adding this additional prescriptive wording would not allow for future technologies as they are developed and would not allow for these new products to be installed even though they may provide better performance.
4. Additionally I have proposed the deletion of the wording "When nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit." Because the Code Committee feels it is not necessary to provide water to a fixture that does not require it for its proper operation.
5. I have especially requested that the body overturn to Code Committee action and accept the suggested changes because the remaining code language clarifies the code and shows that nonwater urinals are an acceptable plumbing fixture!

Final Action: AS AM AMPC____ D

P35-07/08
419.2

Proposed Change as Submitted:

Proponent: Paul Rimel, City of Staunton, VA, representing Virginia Plumbing & Mechanical Inspectors 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. Urinals substituted for required water closets shall not be located within family or assisted-use toilet and bathing rooms.

Reason: The purpose of the change is clarification of the code. When a required water closet and a urinal substituted for a required water closet are located within the same toilet room, both fixtures must remain independently available to the public and/or employees. IBC Section 1109.2.1.7 requires internal locks on family or assisted-use toilet room doors and the exception to IBC Section 1109.2.1.2 permits the installation of an optional urinal. When a urinal is installed within a family or assisted-use toilet room it is not being substituted for a required water closet. Where urinals are substituted for required water closets, doors should not be internally lockable. The recent addition of IPC Section 310.5 requires privacy partitions for all urinals except those in single occupant/unisex toilet rooms or in child/day care under certain conditions. Toilet rooms where privacy partitions are required are designed as multi-occupant toilet rooms, therefore their doors should not be internally lockable.

Additionally the proposed text will better assure that the intent of OHSA 29 CFR 1910.141(c)(1)(i): Toilet Facilities Table J-1 para c is not undermined. Referring to toilets that can be locked from the inside, it states. 'Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room shall be counted for the purpose of table' In other words, a toilet with multiple water closets that has an internal lock can only satisfy the requirement for a single fixture.

The change will not increase the cost of construction because a urinal is not required in a F/A-U toilet room. Therefore urinals in F/A-U toilet rooms which are currently permitted to be counted toward the minimum number of required fixtures may be installed in multi-occupant restrooms which makes the fixtures independently available for use. The change provides much needed clarification regarding the difference between an optional urinal located in an internally lockable F/A-U toilet room and a urinal substituted for a required water closet located in a multi-occupant toilet room whose door should not be internally lockable.

The change correlates with the proposed change to IPC 403.1.1 and IBC 1109.2.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: A urinal in a family/assisted use toilet room is not available to other users when the family/A-U is in use and, therefore must be not be allowed where it substitutes for a required water closet. Where a urinal is installed by choice and is not substituting for a required fixture, it would be allowed and the family/A-U toilet room.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence G. Perry, AIA, Building Owners and Managers Association (BOMA) International, requests Disapproval.

Commenter's Reason: This proposal would prohibit urinals that are located within family or assisted-use toilet/bathing rooms from being included in the required number of plumbing fixtures. This change conflicts with the original intent of the BCMC unisex toilet room package. Allowing both a urinal and a water closet to be provided in the same room provides the greatest amount of design flexibility for the assembly and mercantile occupancies affected by the new unisex toilet room provisions. Because a family or assisted-use toilet/bathing room is intended to be used, at times, by two people, one using the fixture and one providing assistance, the impact on the facility is no different than two separate individuals using two separate fixtures. Note that separate provisions in the code would require partitions and privacy partitions if both a urinal and a water closet are provided. When the original BCMC package was developed, the scoping trigger was set relatively low (facilities where 6 or more water closets are required), a major factor in setting the trigger so low was the inclusion of several provisions that gave a facility a lot of flexibility in achieving compliance. If this major piece of design flexibility is to be deleted, it should not be done until the overall scoping triggers are reassessed and modified as needed to reduce the additional impact of this change.

Final Action: AS AM AMPC____ D

P48-07/08, Part I
501.2, 501.2.1 (New), 501.2.2 (New), 501.2.2.1 (New), 501.2.2.2 (New), 501.2.3 (New), 608.1

Proposed Change as Submitted:

Proponents: Mark Eatherton, Denver, CO, representing himself; David Yates, York, PA, representing himself

PART I – IPC

1. Delete and substitute 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.~~

501.2 Water heaters used for space heating. Storage tank water heating systems that supply hot water for domestic and space heating purposes shall comply with sections 501.2.1 through 501.2.3.

2. Add next text as follows:

501.2.1 Temperature control. Where hot water in excess of 140 degrees F is required for space heating, a thermostatic mixing valve complying with ASSE 1017 shall be installed to limit the hot water temperature in the domestic water distribution system to not greater than 140 degrees F.

501.2.2 Heat exchanger required. A heat exchanger shall be installed to isolate the potable water system from the space heating system fluid. Where the space heating system uses a toxic fluid, the heat exchanger shall comply with Section 608.16.3.

501.2.2.1 Potable water circuit for heat exchanger. The developed length of piping and heat exchanger flow path for the potable water circuit for the heat exchanger shall not exceed 20 feet (6096 mm). Exposed piping and components of the potable water circuit and uninsulated exterior heated surfaces of the heater exchanger shall be insulated.

501.2.2.2 Heater exchanger location. The location of the heater exchanger shall be at an elevation above the top of the water heater. The potable water inlet and outlet of the heater exchanger shall be oriented to cause natural convective circulation in the potable water circuit.

501.2.3 Cold water supply connection. The piping system shall be arranged so that the cold water supply for the water heater passes through to the potable water side of the heat exchanger before entering the water heater.

3. Revise as follows:

608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from nonpotable liquids, space heating system fluids, solids or gases being introduced into the potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to Table 608.1, except as specifically stated in Sections 608.2 through 608.16.10.

Reason (Eatherton, Yates): The purpose of this code change is to add new installation requirements for "dual purpose, single fluid" water heaters that provide hot water for domestic use and space heating purposes. The new requirements will eliminate the potential for dispersion of Legionella bacteria that have been amplified by these dual purpose water heating systems, a known cause of Legionnaires' disease.

Within the last 30 years, specially designed domestic water heaters began to be used as a source of hot water for both domestic use and space heating. While conceptually similar to a dedicated heating boiler that circulates hot water for space heating and provides heat for domestic water heating, "dual purpose" water heater systems differ in one important detail: the space heating water is mixed with the domestic hot water.

This "cross-connection" of water systems can have devastating health consequences for the building occupants.

When there is a demand for space heating, hot water is pumped from the water heater storage tank to the space heating pipe loop(s) and returned to the water heater storage tank. When there is a demand for hot water for domestic use, hot water is drawn from the water heater storage tank. It is assumed that the incoming cold water is being sent first into the space heating system circuits to "flush" the heating water out of the tubing circuits and into the heating vessel. With today's multiple micro-zoned systems it is virtually impossible to guarantee that all stagnant water is being flushed from the heating system circuits, and during extended periods of non occupancy/non use, the heating system circuits are not being flushed at all.

During periods when space heating is not required, water in the space heating pipe loop is not circulated. As the demand for space heating lessens, the water in the space-heating pipe loop can eventually become extremely stagnant as no pumped circulation occurs for days and even months. The space-heating pipe loop, installed in the building's concealed and insulated spaces, is warmed by the natural ambient summer temperatures which results in warming of the stagnant water.

This stagnant, warm water is prime breeding ground for Legionella bacteria, the cause of Legionnaires' disease. Legionella bacteria are commonly found, in small numbers, in all potable water systems – both municipal and private well systems. Many studies have found that Legionella bacteria multiply when the following four conditions are met:

1. water pH of 5.0 to 8.5,
2. temperatures between 55F and 133F (with the ideal range being 80F to 122F),
3. stagnant conditions and
4. the presence of bio-films/rust/sediment (a food/shelter source).

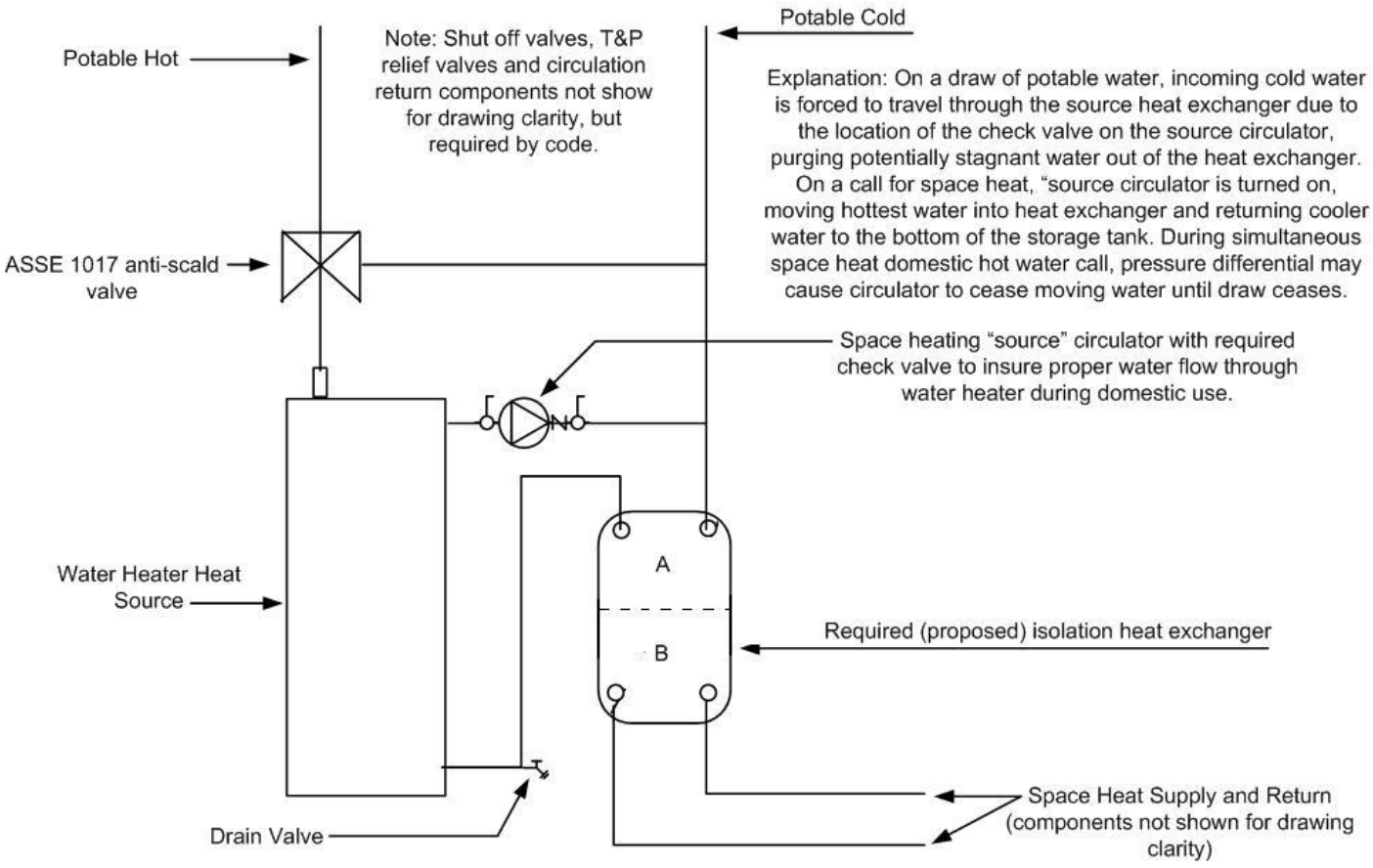
The stagnant, warm water in the space-heating loop satisfies all the requirements for reproduction of Legionella bacteria.

When the demand for space heating increases, the bacteria laden water in the space heating loop is circulated into the water heater storage tank and is eventually drawn out of the tank for domestic hot water use. If the hot water is sprayed or misted such as occurs with flow through a showerhead or vegetable sprayer, the bacteria in the water becomes aerosolized airborne and is easily inhaled by humans.

Even steam from boiled water, a dishwasher, or a kitchen sink filled with hot water can expose the building occupants to Legionella bacteria. This is a serious health threat to humans.

The proposed code requirements for installation isolates the space heating loop water by requiring a heat exchanger to separate the potable hot water from the space heating fluid. To mitigate any stagnant water in the potable domestic hot water circuit of the heat exchanger, the cold water supply is to be connected so that it flushes the heat exchanger upon every draw of domestic hot water. And finally, to reduce the possibility of stagnant water in the domestic hot water supply line to the heater exchanger, the exchanger is located above the water heater and in close proximity to the water heater in order to promote natural water circulation by convection. See drawing below.

This code change is necessary to assure the safety of the building occupants where domestic water heaters are also used for space heating purposes.



PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The proposed requirements appear to be overly restrictive and would limit the application of these types of water heating units.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Mark Eatherton, Denver, CO, representing himself; David Yates, York, PA, representing himself requests Approval as Submitted.

Commenter's Reason: The bacteria responsible for legionaires disease is always present in the water. It is omni-present Continuing to allow the current practice of using potable water for both space heating and domestic hot water heating use in a singular system is exposing people to the real possibility of contracting this deadly disease. It is only a matter of time before law suits begin over wrongful deaths due to this currently allowed practice. The U.S. Center for Disease Control recognizes this threat and has stated publicly that it is directly responsible for 8,000 to 10,000 cases of illness per year, with a known death toll of between 5 and 30%. The CDC also states that it is the most misdiagnosed disease in the world due to symptoms that resemble flu and pneumonia.

Technically speaking, it could be considered a "cross connection" due to the creation of water of questionable character (stagnant during summer non use) and the allowed practice should be eliminated immediately.

By its' inaction of not approving these recommended code changes, the I.C.C. itself may be taken up and co-named as a responsible party because they had an opportunity to make changes, and didn't take appropriate action in a timely manner. I would suggest that the I.C.C. legal counsel be allowed to review these recommended changes and see if they concur. I have no "dog in this race", and do not stand to make any profit by its' being accepted and passed. I am strictly concerned with doing the job that I have been given by accepting my master plumber's license, that being to "Protect the health of the nation". Please do the right thing and get this recommended change adopted.

Public Comment 2:

Bradley R. Talbot, The VLPA representing self & company, requests Approval as Submitted.

Commenter's Reason: I would like to comment on behalf of myself and the 457 individual subscriber base of The VLPA. The VLPA is a Vermont advocacy and continuing education provider for Vermont Licensed Plumbers, Gas Installers, and Fuel Oil Installers.

There has been much discussion in Vermont with respect to the changes addressed in proposal P48-07/08 by Mr. Eatherton and Mr. Yates. In fact, Legionnaires' Disease continues to cause sickness, job loss, costly repairs, and health fears throughout the World. Locally, a recent outbreak closed the 92 room 'Cortina Inn' in Killington, Vermont. Officials discovered a colony of legionella bacteria and concluded that the tank temperature was too low. Three individuals were hospitalized and the Inn was closed for over a month. More information may be obtained by doing a google search of "Cortina Inn".

In reviewing the proposed changes in P48-07/08, I agree with the proponents in setting a temperature minimum of 140 degrees F and preventing space heating fluid from mixing with potable water. I believe that they are simple changes that will pay out important dividends.

Maintaining the temperature of storage water at a minimum of 140 degrees F has its roots in theories proposed by Louis Pasteur in the 19th century. The same principle works with Legionella bacteria. On the other hand, having a temperature set at 140 degrees presents a scalding danger. Thus, the use of an anti-scald thermostatic mixing valve must be required.

It is difficult to find information concerning problems related to dual systems and public health. In the past, virtually no dual systems were installed without heat exchangers! Thus, I have no formal information to present concerning the lack of effectiveness of exchangers. In light of that fact, and in testament to their safety, the use of heat exchangers remains commonplace. Yet, in the face of rising energy costs, some label them unnecessary and inefficient. Lest we find ourselves in the midst of creating thousands of 'energy saving' bacterial time-bombs, I submit that the time has come to mandate their use.

Concerning bacterial growth, in addition to Eatherton's and Yates's facts, it's well known that stagnant water in tubing circuits is a breeding ground for algae and legionella eats algae. Reviewing the stated facts, an obvious conclusion would be that in a dual system, the separation of potable from heating space fluid (by using a heat exchanger) provides the safest way to prevent exposure to the dangerous results of bacterial growth.

Beware of those who would argue that this is an 'energy efficiency' or 'cost-saving' issue. I have attended several forums where proponents of that argument used anecdotal evidence to support claims that legionella is a 'non-issue'. Legionnaires' Disease is an established public safety issue. I suggest that Eatherton's and Yates's reasoning in proposing P48-07/08 is sound. For the future safety of all concerned, please adopt the proposed changes and additions as submitted (AS).

Final Action: AS AM AMPC____ D

P48-07/08, Part II

IRC P22802.1, P2802.3 (New), P2802.4 (New), P2802.5 (New), P2902.1

Proposed Change as Submitted:

Proponent: Mark Eatherton, Denver, CO, representing himself; David Yates, York, PA, representing himself

PART II – IRC-P

1. Revise as follows:

P2802.1 Protection of potable water. Piping and components connected to a water heater for space heating applications shall be suitable for use with potable water in accordance with Chapter 29. A heat exchanger shall be installed to isolate the potable water system from the space heating system fluid. Where the space heating system uses a toxic fluid, the heat exchanger shall be a double wall type having an air gap open to atmosphere that

separates the chambers between the potable water and the space heating fluid. ~~Water heaters that will be used to supply potable water shall not be connected to a heating system or~~ Components previously used ~~with~~ in a nonpotable-water heating ~~appliances~~ system shall not be used in a potable water heating system. Chemicals for boiler treatment shall not be introduced into the water heater.

2. Add new text as follows:

P2802.3 Cold water supply connection. The piping system shall be arranged so that the cold water supply for the water heater passes through to the potable water side of the heat exchanger before entering the water heater.

P2802.4 Potable water circuit for heat exchanger. The developed length of piping and heat exchanger flow path for the potable water circuit for the heat exchanger shall not exceed 20 feet (6096 mm). Exposed piping and components of the potable water circuit and uninsulated exterior heated surfaces of the heater exchanger shall be insulated.

P2802.5 Heater exchanger location. The location of the heater exchanger shall be at an elevation above the top of the water heater. The potable water inlet and outlet of the heater exchanger shall be oriented to cause natural convective circulation in the potable water circuit.

3. Revise as follows:

P2902.1 General. A potable water supply system shall be designed and installed as to prevent contamination from nonpotable liquids, space heating system fluids, solids or gases being introduced into the potable water supply. Connections shall not be made to a potable water supply in a manner that could contaminate the water supply or provide a cross-connection between the supply and a source of contamination unless an approved backflow-prevention device is provided. Cross-connections between an individual water supply and a potable public water supply shall be prohibited.

Reason (Eatherton, Yates): The purpose of this code change is to add new installation requirements for "dual purpose, single fluid" water heaters that provide hot water for domestic use and space heating purposes. The new requirements will eliminate the potential for dispersion of Legionella bacteria that have been amplified by these dual purpose water heating systems, a known cause of Legionnaires' disease.

Within the last 30 years, specially designed domestic water heaters began to be used as a source of hot water for both domestic use and space heating. While conceptually similar to a dedicated heating boiler that circulates hot water for space heating and provides heat for domestic water heating, "dual purpose" water heater systems differ in one important detail: the space heating water is mixed with the domestic hot water.

This "cross-connection" of water systems can have devastating health consequences for the building occupants.

When there is a demand for space heating, hot water is pumped from the water heater storage tank to the space heating pipe loop(s) and returned to the water heater storage tank. When there is a demand for hot water for domestic use, hot water is drawn from the water heater storage tank. It is assumed that the incoming cold water is being sent first into the space heating system circuits to "flush" the heating water out of the tubing circuits and into the heating vessel. With today's multiple micro-zoned systems it is virtually impossible to guarantee that all stagnant water is being flushed from the heating system circuits, and during extended periods of non occupancy/non use, the heating system circuits are not being flushed at all.

During periods when space heating is not required, water in the space heating pipe loop is not circulated. As the demand for space heating lessens, the water in the space-heating pipe loop can eventually become extremely stagnant as no pumped circulation occurs for days and even months. The space-heating pipe loop, installed in the building's concealed and insulated spaces, is warmed by the natural ambient summer temperatures which results in warming of the stagnant water.

This stagnant, warm water is prime breeding ground for Legionella bacteria, the cause of Legionnaires' disease. Legionella bacteria are commonly found, in small numbers, in all potable water systems – both municipal and private well systems. Many studies have found that Legionella bacteria multiply when the following four conditions are met:

1. water pH of 5.0 to 8.5,
2. temperatures between 55F and 133F (with the ideal range being 80F to 122F),
3. stagnant conditions and
4. the presence of bio-films/rust/sediment (a food/shelter source).

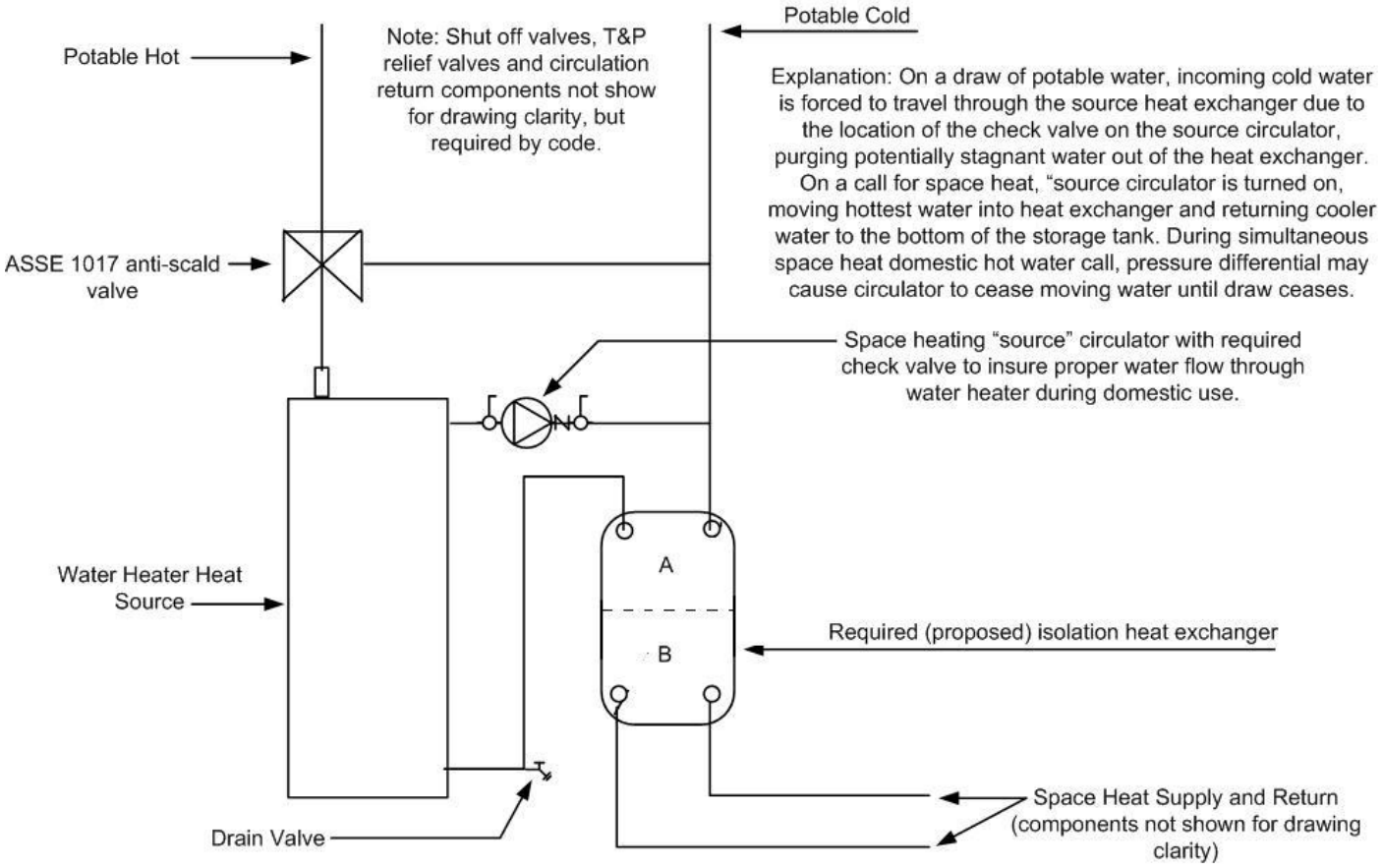
The stagnant, warm water in the space-heating loop satisfies all the requirements for reproduction of Legionella bacteria.

When the demand for space heating increases, the bacteria laden water in the space heating loop is circulated into the water heater storage tank and is eventually drawn out of the tank for domestic hot water use. If the hot water is sprayed or misted such as occurs with flow through a showerhead or vegetable sprayer, the bacteria in the water becomes aerosolized airborne and is easily inhaled by humans.

Even steam from boiled water, a dishwasher, or a kitchen sink filled with hot water can expose the building occupants to Legionella bacteria. This is a serious health threat to humans.

The proposed code requirements for installation isolates the space heating loop water by requiring a heat exchanger to separate the potable hot water from the space heating fluid. To mitigate any stagnant water in the potable domestic hot water circuit of the heat exchanger, the cold water supply is to be connected so that it flushes the heat exchanger upon every draw of domestic hot water. And finally, to reduce the possibility of stagnant water in the domestic hot water supply line to the heater exchanger, the exchanger is located above the water heater and in close proximity to the water heater in order to promote natural water circulation by convection. See drawing below.

This code change is necessary to assure the safety of the building occupants where domestic water heaters are also used for space heating purposes.



PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: Some of the language is ambiguous and no rationale was provided for the maximum developed length of the potable water circuit.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Mark Eatherton, Denver, CO representing himself, requests Approval as Submitted.

Commenter's Reason: The bacteria responsible for legionaires disease is always present in the water. It is omni-present Continuing to allow the current practice of using potable water for both space heating and domestic hot water heating use in a singular system is exposing people to the real possibility of contracting this deadly disease. It is only a matter of time before law suits begin over wrongful deaths due to this currently allowed practice. The U.S. Center for Disease Control recognizes this threat and has stated publicly that it is directly responsible for 8,000 to 10,000 cases of illness per year, with a known death toll of between 5 and 30%. The CDC also states that it is the most misdiagnosed disease in the world due to symptoms that resemble flu and pneumonia.

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Public Comment 2:

Bradley R. Talbot, The VLPA, representing himself and company, requests Approval as Submitted.

Commenter's Reason: I would like to comment on behalf of myself and the 457 individual subscriber base of The VLPA. The VLPA is a Vermont advocacy and continuing education provider for Vermont Licensed Plumbers, Gas Installers, and Fuel Oil Installers.

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Beware of those who would argue that this is an 'energy efficiency' or 'cost-saving' issue. I have attended several forums where proponents of that argument used anecdotal evidence to support claims that legionella is a 'non-issue'. Legionnaires' Disease is an established public safety issue. I suggest that Eatherton's and Yates's reasoning in proposing P48-07/08 is sound. For the future safety of all concerned, please adopt the proposed changes and additions as submitted (AS).

Final Action: AS AM AMPC____ D

P50-07/08, Part I
504.6

Proposed Change as Submitted:

Proponent: Jud Collins, JULYCO, representing himself

PART I – IPC

Revise as follows:

504.6 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 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.
14. Not terminate or discharge into a pan.

Reason: This proposed code change is to clarify the intent of the code. While some jurisdictions allow TPRV drains to terminate or discharge into pans, the current code text does not allow this practice. The proposed text is merely stating in plain language what the code already prohibits. The following code sections clearly indicate the practice to be in violation of the code.

Section 802.3 (IRC P2706.1) requires waste receptors to have a removable strainer or basket covering the waste outlet of waste receptors. It also requires waste receptors to be installed in ventilated spaces and prohibits their installation in bathrooms, toilet rooms and inaccessible or unventilated spaces such as a closet or storeroom. Section 802.3.1 (IRC P2706.1) requires waste receptors to be sized for the maximum discharge of all indirect waste pipes served by the receptor. It also requires waste receptors to be installed to prevent splashing or flooding.

A pan for a water heater does not comply with any of these requirements. Pans are required to be installed where leakage of the tanks or connections will cause damage.

Cost Impact: The code change proposal will not increase the cost of construction since this change is only clarifying what the code already requires.

Committee Action: **Disapproved**

Committee Reason: The termination of T&P relief valve discharge pipes into water heater drip pans has been a long standing practice with no evidence of property damage to justify prohibition of this practice.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Jud Collins, JULYCO, representing himself, requests Approval as Submitted.

Commenter's Reason: This proposed code change is to clarify the intent of the code. While some jurisdictions allow TPRV drains to terminate or discharge into pans, the current code text does not allow this practice. The proposed text is merely stating in plain language what the code already prohibits. The following code sections clearly indicate the practice to be in violation of the code.

Section 802.3 (IRC P2706.1) requires waste receptors to have a removable strainer or basket covering the waste outlet of waste receptors. It also requires waste receptors to be installed in ventilated spaces and prohibits their installation in bathrooms, toilet rooms and inaccessible or unventilated spaces such as a closet or storeroom. Section 802.3.1 (IRC P2706.1) requires waste receptors to be sized for the maximum discharge of all indirect waste pipes served by the receptor. It also requires waste receptors to be installed to prevent splashing or flooding.

A pan for a water heater does not comply with any of these requirements. Pans are required to be installed where leakage of the tanks or connections will cause damage.

Public Comment 2:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify proposal as follows:

504.6 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, <u>to the pan serving the water heater or storage tank,</u> 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 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.
14. ~~Not terminate or discharge into a pan.~~

Commenter's Reason: The proposed modification is consistent with the discussion at the public comment hearings in Palm Springs. It was indicated that for years many people have viewed the pan as a waste receptacle even though it does not meet the strict letter of the definition. Logically if the discharge is already permitted to terminate to the floor, how would termination into a pan be less safe?

The committee discussions as reflected in the printed Report on the Hearings identify that if the original proposal was approved it would be in conflict with existing Section P2801.5.1. And this has been a long standing practice with no reported damage to property or structures.

Final Action: AS AM AMPC____ D

P50-07/08, Part II
IRC P2803.6.1

Proposed Change as Submitted:

PART II – IRC-P

Revise as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve 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 structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed 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 the 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.
14. Not terminate or discharge into a pan.

Reason: This proposed code change is to clarify the intent of the code. While some jurisdictions allow TPRV drains to terminate or discharge into pans, the current code text does not allow this practice. The proposed text is merely stating in plain language what the code already prohibits. The following code sections clearly indicate the practice to be in violation of the code.

Section 802.3 (IRC P2706.1) requires waste receptors to have a removable strainer or basket covering the waste outlet of waste receptors. It also requires waste receptors to be installed in ventilated spaces and prohibits their installation in bathrooms, toilet rooms and inaccessible or unventilated spaces such as a closet or storeroom. Section 802.3.1 (IRC P2706.1) requires waste receptors to be sized for the maximum discharge of all indirect waste pipes served by the receptor. It also requires waste receptors to be installed to prevent splashing or flooding.

A pan for a water heater does not comply with any of these requirements. Pans are required to be installed where leakage of the tanks or connections will cause damage.

Cost Impact: The code change proposal will not increase the cost of construction since this change is only clarifying what the code already requires.

Committee Action: **Disapproved**

Committee Reason: Section P2801.5.1 indicates that the water heater pan is to receive all drippings from the water heater which includes drippings from the T&P relief valve. The proposed change would be in conflict with Section P2801.5.1.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Jud Collins, JULYCO, represents himself, requests Approval as Submitted.

Commenter's Reason: This proposed code change is to clarify the intent of the code. While some jurisdictions allow TPRV drains to terminate or discharge into pans, the current code text does not allow this practice. The proposed text is merely stating in plain language what the code already prohibits. The following code sections clearly indicate the practice to be in violation of the code.

Section 802.3 (IRC P2706.1) requires waste receptors to have a removable strainer or basket covering the waste outlet of waste receptors. It also requires waste receptors to be installed in ventilated spaces and prohibits their installation in bathrooms, toilet rooms and inaccessible or unventilated spaces such as a closet or storeroom. Section 802.3.1 (IRC P2706.1) requires waste receptors to be sized for the maximum discharge of all indirect waste pipes served by the receptor. It also requires waste receptors to be installed to prevent splashing or flooding.

A pan for a water heater does not comply with any of these requirements. Pans are required to be installed where leakage of the tanks or connections will cause damage.

Public Comment 2:

Guy Tomberlin, Fairfax County, VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify as follows:

P2803.6.1 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, <u>to the pan serving the water heater or storage tank,</u> 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 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.
14. ~~Not terminate or discharge into a pan.~~

The proposed modification is consistent with the discussion at the public comment hearings in Palm Springs. It was indicated that for years many people have viewed the pan as a waste receptacle even though it does not meet the strict letter of the definition. Logically if the discharge is already permitted to terminate to the floor, how would termination into a pan be less safe?

The committee discussions as reflected in the printed Report on the Hearings identify that if the original proposal was approved it would be in conflict with existing Section P2801.5.1. And this has been a long standing practice with no reported damage to property or structures.

Final Action: AS AM AMPC____ D

P51-07/08, Part I
504.6.1 (New)

Proposed Change as Submitted:

Proponent: Chuck King, Town of Oro Valley, AZ, representing himself

PART I – IPC

Add new text as follows:

<u>504.6.1 Discharge outdoors.</u> <u>Where a drainage pipe that conveys the discharge of a temperature relief, pressure relief or combination temperature and pressure relief valve terminates outdoors, the pipe shall terminate not less than 6 inches (152 mm) and not greater than 24 inches (610 mm) above grade and shall be oriented to discharge flow in a downward direction.</u>

Reason: It is even more critical that direct discharge relief lines from relief valves terminate properly, in a manner currently required for pan drains as shown in Section 504.7.2 and P2801.5.2. The code as written does not provide direction for termination at exterior locations. This allows for the piping termination to be less than 6" above grade. In many regions of the country yearly snowfall and blowing snow can drift up above the pipe termination. This could lead to a blockage in the pipe due to freezing. The 6" height would be sufficient in most regions and maintains the air break dimension currently specified in item #10. If no dimensions are specified, in areas with heavy rain, cross connection contamination can occur from ponding water when the termination point is at or near grade. The 6" dimension is consistent with the provisions for protection of potable water in Section 608.15.4 atmospheric vacuum breakers.

In many commercial locations the termination point is over concrete or asphalt where pedestrian traffic can occur. By indicating a maximum height we can reduce the height of splashing water when the relief valve releases water. The 24" height dimension will reduce the amount of scalding that can occur by hot water discharged under pressure.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: No justification was provided for the 24 inch dimension which could be a safety problem for passersby if a full-open relief discharge occurs. The 6 inch dimension may be too low for regions having snow accumulation.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tom Hedges, Phoenix, AZ, representing himself, requests Approval as Modified.

Replace proposal as follows:

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

Items 1-13 (No change to current text)
14. Have any outdoor termination point oriented to direct flow downward with the open end of the piping not less than 6 inches (152 mm) and not greater than 12 inches (610 mm) above grade.

Commenter's Reason: As stated in the proponent's reasons, this change will provide guidance for any P & T drain piping extending to the outdoors. IPC Section 504.6 Item 5 allows the discharge to go directly outdoors, but no guidance is provided for a safe termination. The 6" minimum termination height provides an air gap. This proposed change reduces the proposed termination height limit of 24" to 12" to address the Committee's concern and to reduce any scalding potential. This method of termination is very common in locations that have previously utilized the Uniform Plumbing Code for over 50 years. No data exists to suggest this method has created unsafe conditions. The Committee reason for disapproval of Item P50-07/08 clarifies that the code allows a discharge pipe to terminate over a water heater drip pan. The code currently establishes drip pan drain terminations at 6" minimum and 24" maximum termination heights in IPC Section 504.7.2. If it's safe to drain a discharge pipe to a drip pan using these heights, then it certainly would be no more harmful to use the same heights for an outdoors termination. The Plumbing Code Committee approved item P49-07/08 with text reconfirming a direct pipe to the outdoors is acceptable. This proposal improves the termination requirements.

Final Action: AS AM AMPC____ D

P51-07/08, Part II
P2803.6.1.1 (New)

Proposed Change as Submitted:

Proponent: Chuck King, Town of Oro Valley, AZ, representing himself

PART II – IRC-P

Add new text as follows:

P2803.6.1.1 Discharge outdoors. Where a drainage pipe that conveys the discharge of a temperature relief, pressure relief or combination temperature and pressure relief valve terminates outdoors, the pipe shall terminate not less than 6 inches (152 mm) and not greater than 24 inches (610 mm) above grade and shall be oriented to discharge flow in a downward direction.

Reason: It is even more critical that direct discharge relief lines from relief valves terminate properly, in a manner currently required for pan drains as shown in Section 504.7.2 and P2801.5.2. The code as written does not provide direction for termination at exterior locations. This allows for the piping termination to be less than 6" above grade. In many regions of the country yearly snowfall and blowing snow can drift up above the pipe termination. This could lead to a blockage in the pipe due to freezing. The 6" height would be sufficient in most regions and maintains the air break dimension currently specified in item #10. If no dimensions are specified, in areas with heavy rain, cross connection contamination can occur from ponding water when the termination point is at or near grade. The 6" dimension is consistent with the provisions for protection of potable water in Section 608.15.4 atmospheric vacuum breakers.

In many commercial locations the termination point is over concrete or asphalt where pedestrian traffic can occur. By indicating a maximum height we can reduce the height of splashing water when the relief valve releases water. The 24" height dimension will reduce the amount of scalding that can occur by hot water discharged under pressure.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The proposed 24 inch dimension could be a safety problem for children if a full-open relief discharge occurs.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tom Hedges, Phoenix, AZ, representing self, requests Approval as Modified.

Replace proposal as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature relief valve or combination valve shall:

Items 1-13 (No change to current text)

14. Have any outdoor termination point oriented to direct flow downward with the open end of the piping not less than 6 inches (152 mm) and not greater than 12 inches (610 mm) above grade.

Commenter's Reason: As stated in the proponents reasons, this change will provide guidance for any P & T drain piping extending to the outdoors. IRC P2803.6.1 Item 5 allows the discharge to go directly outdoors, but no guidance is provided for a safe termination. The 6" minimum termination height provides an air gap. This proposed change reduces the proposed termination height limit of 24" to 12" to address the Committee's concern and to reduce any scalding potential. This method of termination is very common in locations that have previously utilized the Uniform Plumbing Code for over 50 years. No data exists to suggest this method has created unsafe conditions. The Committee reason for disapproval of Item P50-07/08 clarifies that the code allows a discharge pipe to terminate over a water heater drip pan. The code currently establishes drip pan drain terminations at 6" minimum and 24" maximum termination heights in IPC Section 504.7.2. If it's safe to drain a discharge pipe to a drip pan using these heights, then it certainly would be no more harmful to use the same heights for an outdoors termination. The Plumbing Code Committee approved item P49-07/08 with text reconfirming a direct pipe to the outdoors is acceptable. This proposal improves the termination requirements.

Final Action: AS AM AMPC____ D

P55-07/08, Part I
202

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

PART I – IPC

Revise definition as follows:

SECTION 202
GENERAL DEFINITIONS

QUICK-CLOSING VALVE. ~~A~~ An electronic solenoid valve ~~or faucet~~ that closes automatically in one complete operation ~~when released manually or that is controlled by mechanical means for fast action closing~~.

Reason: There is no clear interpretation of this definition some folks say that virtually all faucets and valves are "quick closing" and others say that none are, and then everywhere in between.

Current text in IRC-P 2903.5 and IPC-604.9 states water hammer arrestors are required where quick closing valves are utilized. No one is actually installing these devices at every faucet because that is not necessary or reasonable. But the code must clearly state its intent. It would seem in this case it is clear that water hammer arrestors are only necessary for electronic solenoid type valves, because they close automatically at a high rate of speed. Webster's New World Dictionary defines a solenoid as "a coil of wire with a movable iron core, used as an electromagnetic switch." The definition of electromagnetic describes the "flow of electric current" which indicates that electricity is involved with the operation. This clearly separates mechanical or manual devices from the electronic valves for the purposes of the requirements for water hammer arrestors. Faucets and shut off valves do not need water hammer arrestors, electronic solenoids that close in one operation, do. The reason for the inclusion of the language "in one operation" is that some solenoids are available that actually close in "stages" specifically to avoid hammer. This proposed text will make it clear that these type devices do not require the installation of water hammer arrestors either.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: The proposed revision limits quick closing valves to only those that are electronic. Non-electronic valves can also be quick closing.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify proposal as follows:

SECTION 202
GENERAL DEFINITIONS

QUICK-CLOSING VALVE. A~~n electronic solenoid~~ valve that closes automatically ~~in one complete operation~~ when released manually or that is controlled by electric or mechanical means for fast-action closing.

Commenter's Reason: The discussion in Palm Springs was that the original submission of P–55 did not account for some devices that did need water hammer arrestors installed. The specific example was a commercial spring loaded valve. The as modified version before you incorporates the public comments and has been altered to address the key concerns. Currently there is some confusion about what is a "quick–closing valve." Some say a single handle lavatory or kitchen faucet is quick–closing. They certainly can be fast closing but not to the extent they would need water hammer arrestors installed. For example a public lavatory is limited to .5 gpm at 60 psi (Table 604.4). One half gallon per minute, abruptly shut off, is not going to cause excessive water hammer to the extent that a device needs to be installed to control it. Others have asserted that a lever handle ¼ turn shut off valve is quick closing. This is one of the issues that the previous submission was attempting to correct. Upon further review and evaluation, it is clear by the current definition that that this application is not included as quick–closing.

Final Action: AS AM AMPC____ D

P55-07/08, Part II
IRC R202

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

PART II – IRC

Revise definition as follows:

SECTION R202
DEFINITIONS

QUICK-CLOSING VALVE. ~~A~~ An electronic solenoid valve ~~or faucet~~ that closes automatically in one complete operation ~~when released manually or controlled by mechanical means for fast-action closing~~.

Reason: There is no clear interpretation of this definition some folks say that virtually all faucets and valves are "quick closing" and others say that none are, and then everywhere in between.

Current text in IRC-P 2903.5 and IPC-604.9 states water hammer arrestors are required where quick closing valves are utilized. No one is actually installing these devices at every faucet because that is not necessary or reasonable. But the code must clearly state its intent. It would seem in this case it is clear that water hammer arrestors are only necessary for electronic solenoid type valves, because they close automatically at a high rate of speed. Webster's New World Dictionary defines a solenoid as "a coil of wire with a movable iron core, used as an electromagnetic switch." The definition of electromagnetic describes the "flow of electric current" which indicates that electricity is involved with the operation. This clearly separates mechanical or manual devices from the electronic valves for the purposes of the requirements for water hammer arrestors. Faucets and shut off valves do not need water hammer arrestors, electronic solenoids that close in one operation, do. The reason for the inclusion of the language "in one operation" is that some solenoids are available that actually close in "stages" specifically to avoid hammer. This proposed text will make it clear that these type devices do not require the installation of water hammer arrestors either.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The definition should include other valves which are not electronic.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful and a public comment was submitted.

Public Comment:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify proposal as follows:

SECTION R202
DEFINITIONS

QUICK-CLOSING VALVE. A~~n electronic solenoid~~ valve that closes automatically ~~in one complete operation~~ when released manually or that is controlled by electric or mechanical means for fast-action closing.

Commenter's Reason: The discussion in Palm Springs was that the original submission of P–55 did not account for some devices that did need water hammer arrestors installed. The specific example was a commercial spring loaded valve. The as modified version before you incorporates the public comments and has been altered to address the key concerns. Currently there is some confusion about what is a "quick–closing valve." Some say a single handle lavatory or kitchen faucet is quick–closing. They certainly can be fast closing but not to the extent they would need water hammer arrestors installed. For example a public lavatory is limited to .5 gpm at 60 psi (Table 604.4). One half gallon per minute, abruptly shut off, is not going to cause excessive water hammer to the extent that a device needs to be installed to control it. Others have asserted that a lever handle ¼ turn shut off valve is quick closing. This is one of the issues that the previous submission was attempting to correct. Upon further review and evaluation It is clear by the current definition that that this application is not included as quick–closing.

Final Action: AS AM AMPC____ D

P56-07/08, Part I
604.9

NOTE: PART II DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART II IS REPRODUCED FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART I.

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

PART I – IPC

Revise as follows:

604.9 Water-hammer arrestors. ~~The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A~~ Water-hammer arrestors shall be installed in water distribution systems where quick-closing valves are ~~used~~ utilized. Water-hammer arrestors shall be installed in accordance with manufacturer's ~~specifications~~ installation instructions. Water-hammer arrestors shall conform to ASSE 1010.

Reason: What this proposal does is clarify exactly where water hammer arrestors are required to be installed. This is a much needed correction of a code section that is consistently misapplied. Currently some require water hammer arrestors be installed at a ¼ turn shut off ball valve that may not be used for many years. Others require they be installed on any single handle faucet. Some still require them be installed at a flush valve even when the definitions clearly identify a flush valve is not a quick closing valve. However, most require individual arrestors at every washing machine hot and cold, ice makers and humidifiers. This new text clarifies where they must be installed and that a manufacturer can determine if they need to be installed at each solenoid valve or a single device to serve the entire system.

The stricken text that addresses flow velocity is a function of the sizing criteria for the piping system served not to determine the use of a water hammer arrestor or not. The velocity that is associated with water hammer is that of "shock" pressure in a piping system, not design velocity. Designers will rarely design a water system using the velocity values produced by "shock" pressure in the system, these numbers are typically three times that of normal design velocity. Water hammer arrestors are just that, a device that controls the "hammer" effect from "shock" in water in a piping system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The proponent requested disapproval based upon committee's action on P55-07/08 so he can bring forth better wording in a public comment for the final action hearing.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified.

Modify proposal as follows:

604.9 Water-hammer arrestors. The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. Water-hammer arrestors shall be installed in water distribution systems where quick-closing valves are utilized. Water-hammer arrestors shall be installed in accordance with manufacturer's installation instructions. Water-hammer arrestors shall conform to ASSE 1010.

Commenter's Reason: It is important to incorporate the language "in water distribution systems," identifying the fact that you may not need a water hammer arrestor installed at each quick–closing valve but rather the system design needs to account for all of the quick–closing devices and locate the water hammer arrestors accordingly. It is further important to change the terms to "installation instructions" rather than the existing term "specifications" for enforcement purposes. The code requires products to be installed per their certification which includes the installation instructions, however manufacturer "recommendations" are not enforceable.

The discussion in Palm Springs was that P–55 needs to be more inclusive before this language is approved. P–55 has been altered to accommodate the comments received. The modification before you is to have the first sentence remain. It was stated that water hammer arrestors control velocity, however this is not true.

Final Action: AS AM AMPC____ D

NOTE: PART II REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

P56-07/08, PART II – IRC-Plumbing

Revise as follows:

P2903.5 (Supp) Water hammer arrestors. ~~The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer.~~ Water-hammer arrestors shall be installed in water distribution systems where quick-closing valves are utilized. Water hammer arrestors shall be installed in accordance with the manufacturer's installation instructions. Water hammer arrestors shall conform to ASSE 1010.

Reason: What this proposal does is clarify exactly where water hammer arrestors are required to be installed. This is a much needed correction of a code section that is consistently misapplied. Currently some require water hammer arrestors be installed at a ¼ turn shut off ball valve that may not be used for many years. Others require they be installed on any single handle faucet. Some still require them be installed at a flush valve even when the definitions clearly identify a flush valve is not a quick closing valve. However, most require individual arrestors at every washing machine hot and cold, ice makers and humidifiers. This new text clarifies where they must be installed and that a manufacturer can determine if they need to be installed at each solenoid valve or a single device to serve the entire system.

The stricken text that addresses flow velocity is a function of the sizing criteria for the piping system served not to determine the use of a water hammer arrestor or not. The velocity that is associated with water hammer is that of "shock" pressure in a piping system, not design velocity. Designers will rarely design a water system using the velocity values produced by "shock" pressure in the system, these numbers are typically three times that of normal design velocity. Water hammer arrestors are just that, a device that controls the "hammer" effect from "shock" in water in a piping system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: RP15-06/07 removed the term "quick closing valve" from this section and there is no need to reintroduce the term.

Assembly Action: **Approved as Submitted**

P58-07/08 Part I
Table 605.4

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Noveon

PART I – IPC

Revise table as follows:

TABLE 605.4 (Supp)
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Chlorinated Poly (Vinyl Chloride)-aluminum-chlorinated poly (vinyl Chloride) CPVC-AL-CPVC	ASTM D 2846

(Portions of table not shown remain unchanged)

Reason: This code change recognizes a somewhat new technology that is currently being produced and used on a limited basis. It has a NSF specification, and IAPMO IGC and a project is underway at ASTM to add requirements to D2846 and should be finished in time to be included in the 2009 code. The piping uses the same fittings currently approved for use with CPVC in the UPC (ASTM F438 and F439).

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC

Committee Action: **Disapproved**

Committee Reason: The standard for the product is not yet completed

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing Lubrizol, requests Approval as Submitted.

Commenter's Reason: Hopefully by the time the hearing is held we will have completed the project at ASTM for a new standard or addition to an existing standard so that this new technology can be recognized in the 2009 IPC. The non completion of the project was the only reason given by the committee to reject this proposal.

Final Action: AS AM AMPC____ D

P58-07/08 Part II
IRC Table P2904.5

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Noveon

PART II – IRC

Revise table as follows:

TABLE P2904.5 (Supp)
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Chlorinated Poly (Vinyl Chloride)-aluminum-chlorinated poly (vinyl Chloride) CPVC-AL-CPVC	ASTM D 2846

(Portions of table not shown remain unchanged)

Reason: This code change recognizes a somewhat new technology that is currently being produced and used on a limited basis. It has a NSF specification, and IAPMO IGC and a project is underway at ASTM to add requirements to D2846 and should be finished in time to be included in the 2009 code. The piping uses the same fittings currently approved for use with CPVC in the UPC (ASTM F438 and F439).

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The standard for the product is not yet completed

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing Lubrizol, requests Approval as Submitted.

Commenter's Reason: Hopefully by the time the hearing is held we will have completed the project at ASTM for a new standard or addition to an existing standard so that this new technology can be recognized in the 2009 IPC. The non completion of the project was the only reason given by the committee to reject this proposal.

Final Action: AS AM AMPC____ D

P60-07/08, Part I
605.16.2, 605.22.2, 705.14.2

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing IPS Corp.

PART I – IPC

Revise as follows:

605.16.2 Solvent cementing. Joint surfaces shall be clean and free from moisture, and an approved purple primer or clear detectable primer shall be applied. Solvent cement, orange in color and conforming to ASTM F 493, shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and in accordance with ASTM D 2846 or ASTM F 493. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM F 493.
2. The solvent cement used is yellow in color.
3. The solvent cement is used only for joining ½ inch (12.7 mm) through 2 inch (51 mm) diameter CPVC pipe and fittings.
4. The CPVC pipe and fittings are manufactured in accordance with ASTM D 2846.

605.22.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable 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.

705.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable 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.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: It is too much burden on inspectors to have to carry a special light and climb around to illuminate joints to check to see if primer was used.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Sid Cavanaugh, Cavanaugh Consulting, representing IPS Corp, requests Approval as Submitted

Commenter's Reason: Wording recognizing clear detectable primers has been added to the appropriate standard ASTM F656. This code change simply gives an option to the contractor/user to assure that primers are used when required by the code. This is seen as beneficial in preventing visible damage to finished surfaces in case of primer spills or splashes as recognized by the IRC committee and it is the responsibility of the contractor/manufacturer to assure that proper UV lighting sources are provided to inspectors and on the jobsite to allow proper inspection the of installations using these clear detectable primers.

Public Comment 2:

Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Submitted.

Commenter's Reason: PPFA members support the UV detectable primer technology, as it can offer a builder an additional option in jurisdictions requiring primers and the use of UV primers may reduce incidental damages to finished surfaces. The builder must supply the UV lamps and have them on site when inspections may occur. The IRC approved this change in P60 - Part II.

Final Action: AS AM AMPC____ D

P60-07/08, Part II
IRC P2904.9.1.2, P2904.9.1.3, P3003.14.2

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing IPS Corp.

PART II – IRC-P

Revise as follows:

P2904.9.1.2 CPVC plastic pipe. Joint surfaces shall be clean and free from moisture and an approved purple primer or clear detectable primer shall be applied. Solvent cement for CPVC plastic pipe, orange in color and conforming to ASTM F 493, shall be applied to all joint surfaces. The parts shall be joined while the cement is wet and in accordance with ASTM D 2846 or ASTM F 493. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM F 493.
2. The solvent cement used is yellow in color.
3. The solvent cement is used only for joining ½-inch (13 mm) through 2-inch (51 mm) diameter CPVC pipe and fittings.
4. The CPVC pipe and fittings are manufactured in accordance with ASTM D 2846.

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

P3003.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or clear detectable 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 or CSA B181.2 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.

Reason: This code change recognizes a new technology that allows a clear primer to be used which is detectable with a UV or "blue light". The code change also underscores the fact that a primer must be detectable either by color or other means to assure it is used when required.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The product would be beneficial in preventing visible damage to finished surfaces in case of primer spills or splashes.

Assembly Action: **Disapproved**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful.

Final Action: AS AM AMPC____ D

P61-07/08, Part I
705.8.2, 705.14.2

Proposed Change as Submitted:

PART I – IPC

Revise as follows:

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 D2564, 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 primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter.

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 ASTMD2564, 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 primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter

Reason: To introduce an exception in chapter 7, Sanitary Drainage, allowing for the practice of one-step solvent cementing of non-pressure DWV systems 4" and under.

This exception allows for an optional one-step procedure for joining non-pressure DWV PVC piping systems 4" in diameter and below with solvent cement conforming to ASTM D 2564. This method is practiced, and the code should include specific language to indicate when it is acceptable.

Pressure testing completed by NSF International has shown that solvent cement conforming to ASTM D 2564, when used without primer on PVC DWV pipe and fittings, both solid wall and cell core, generates bonding forces well in excess of what is required for these systems. See attached NSF International report.

Bibliography: NSF International report J-00036842.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: Pipe manufacturer's literature requires the use of primer. There is no evidence to justify that not using primer will not create problems.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Jeremy Brown, NSF International, requests Approval as Submitted.

Commenter's Reason: I am requesting the assembly vote to approve the code change as submitted. One step solvent cements have already been approved in the code for CPVC pressure pipe applications for several years. Certainly the requirements for DWV applications are much less stringent. The standard for PVC solvent cement, ASTM D2564, requires that cement is tested by performing a 400psi hydrostatic pressure test on the joint between a PVC pipe and PVC fitting without the use of primer to make the joint. This is well in excess of the pressures required in a DWV system. In addition, lap shear testing required by the standard do not involve the use of primer.

Public Comment 2:

Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Submitted.

Commenter's Reason: Allowing an exception for one step cementing of PVC non-pressure DWV systems 4" and under is a reasonable practice. Since the last hearing, we have reached an understanding with a major producer who was originally opposed that this proposal does not require the practice, but only allows it as an exception in limited cases.

Final Action: AS AM AMPC____ D

P61-07/08, Part II
IRC P3003.9.2, P3003.14.2

Proposed Change as Submitted:

PART II – IRC-P

Revise as follows:

P3003.9.2 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 or CSA B181.2 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 primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter

P3003.14.2 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 or CSA B181.2 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 primer is not required where all of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564.
2. The solvent cement is used only for joining drain waste and vent PVC pipe and fittings in non-pressure applications in sizes up to and including 4 inch (100 mm) in diameter.

Reason: To introduce an exception in chapter 7, Sanitary Drainage, allowing for the practice of one-step solvent cementing of non-pressure DWV systems 4" and under.

This exception allows for an optional one-step procedure for joining non-pressure DWV PVC piping systems 4" in diameter and below with solvent cement conforming to ASTM D 2564. This method is practiced, and the code should include specific language to indicate when it is acceptable.

Pressure testing completed by NSF International has shown that solvent cement conforming to ASTM D 2564, when used without primer on PVC DWV pipe and fittings, both solid wall and cell core, generates bonding forces well in excess of what is required for these systems. See attached NSF International report.

Bibliography: NSF International report J-00036842.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: Not using primer in a field application is not good logic. Primer assures high quality joints under non-ideal conditions.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Jeremy Brown, NSF International, requests Approval as Submitted.

Commenter's Reason: I am requesting the assembly vote to approve the code change as submitted. One step solvent cements have already been approved in the code for CPVC pressure pipe applications for several years. Certainly the requirements for DWV applications are much less stringent. The standard for PVC solvent cement, ASTM D2564, requires that cement is tested by performing a 400psi hydrostatic pressure test on the joint between a PVC pipe and PVC fitting without the use of primer to make the joint. This is well in excess of the pressures required in a DWV system. In addition, lap shear testing required by the standard do not involve the use of primer.

Public Comment 2:

Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Submitted.

Commenter's Reason: Allowing an exception for one step cementing of PVC non-pressure DWV systems 4" and under is a reasonable practice. Since the last hearing, we have reached an understanding with a major producer who was originally opposed that this proposal does not require the practice, but only allows it as an exception in limited cases.

Final Action: AS AM AMPC____ D

P63-07/08, Part I
608.8, 608.8.2

Proposed Change as Submitted:

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

PART I – IPC

Revise as follows:

608.8 Identification of potable and nonpotable water. In all buildings where ~~two or more water distribution systems, one potable water and the other~~ a nonpotable water system ~~are~~ is installed, ~~each~~ the nonpotable system shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.3. Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted.

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify municipally reclaimed water, rain water, and gray water distribution systems.

PART I – IPC

Committee Action: **Disapproved**

Committee Reason: The proposed text for Section 608.8 contains ambiguous terms such as "inadvertently" and "any nonpotable outlet. There doesn't appear to be a widespread consensus agreement of those in the industry with regard for marking or coloring of reclaimed water piping.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association requests Approval as Modified by this public comment.

Robert F. Loeper, Jr., President, Regional VII Chapter of ICC, requests Approval as Modified by this public comment.

Modify proposal as follows:

608.8 Identification of ~~potable and~~ nonpotable water. In ~~all~~ buildings where nonpotable water systems~~, is~~ are installed~~, the nonpotable system~~ the piping conveying the nonpotable water shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.3. ~~Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted.~~ All nonpotable water outlets such as hose connections, open ended pipes, and faucets shall be identified at the point of use for each outlet with the words, nonpotable–not safe for drinking. The words shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches in height and of color in contrast to the background on which they are applied.

Commenter's Reason: This proposed modified language maintains consistency with the original proposal to require identification of nonpotable outlets. It clearly identifies the intent of this section. Existing text would require almost every building to identify all their water distribution systems including the potable system. This is not common industry practice, typically only the nonpotable water system is identified. In addition, this text provides the complete guidance on how to install such identification.

The original proposal has been split to separate the issues as they are totally different topics.

Public Comment 2:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association requests Approval as Modified by this public comment.

Robert F. Loeper, Jr., President, Regional VII Chapter of ICC, requests Approval as Modified by this public comment.

Modify proposal as follows:

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify ~~municipally~~ reclaimed ~~water~~, rain ~~water~~ and gray water distribution systems.

Commenter's Reason: This proposal splits the original proposal so the issues can be voted on separately. Some were not in favor of the color purple for these systems. This proposal simply attempts to clean up the language. The use of purple may be appropriate for now until industry collectively addresses the situation and develops consensus on this topic. The color purple did receive IRC-P committee approval (IRC P63-07/08 Part II).

Public Comment 3:

Michael W. Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified.

Modify proposal as follows:

608.8 Identification of potable and nonpotable water. In all buildings where a nonpotable water system is installed, the nonpotable system shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.3. Any nonpotable outlet shall be posted.

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify non-potable water distribution systems that convey municipally reclaimed water, rain water ~~and~~ or gray water.

Commenter's Reason: This modification removes the language the Committee had issue with and still meets the intent of the changes. Greenbuilding is promoting increased use of non-potable reclaimed, storm, gray and other water for use both in commercial and residential buildings. Getting the various codes to identify these systems in a consistent manner is critically important. Part II of this change was approved by the IRC committee.

Final Action: AS AM AMPC____ D

P63-07/08, Part II
IRC P2901.1

Proposed Change as Submitted:

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association

Revise as follows:

P2901.1 Potable water required. Dwelling units shall be supplied with potable water in the amounts and pressures specified in this chapter. In a building where ~~both~~ a ~~potable and~~ nonpotable water-distribution system ~~are~~ is installed, ~~each~~ the nonpotable system shall be identified by color marking, metal tags or other appropriate method. Where color is utilized for marking, purple shall be used to identify municipally reclaimed water, rain water, and gray water distribution systems. Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted.

Reason: To improve the language and requirements section on non-potable water systems.

Green and Sustainable Building rating systems and standards are being used and developed that encourage the use of various non-potable water systems in commercial and residential buildings and implementation is on the rapid increase. In order to have a consistent color scheme when color is used to identify piping for these systems, we suggest that purple be chosen. This change would also correct a few oversights in the IPC section with language from the IRC section.

Numerous purple products already exist in the marketplace for reclaimed water systems and the color is understood by many to imply non-potable water. Non potable water standards, such as CSA standard B128.1-06 *Design and installation of non-potable water systems***,** section 12.2.1 states purple clearly;

Pipe for non-potable water systems shall be
(a) marked with the legend WARNING: NON-POTABLE WATER — DO NOT DRINK; and*
(b) purple in colour, or marked with a continuous purple stripe.

The proposed change also corrects some weakness in the current code language that would not require one to identify a non-potable water system in a building in the absence of a potable system. There also appears to be important language missing that exists in the IRC section P2901.1 that should be carried over; *"Any nonpotable outlet that could inadvertently be used for drinking or domestic purposes shall be posted."*

Bibliography: CSA standard B128.1-06 *Design and installation of non-potable water systems*

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: The proposed text recognizes that reclaimed water can be used in the same building alongside of potable water systems and provides for the appropriate labeling.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Shaunna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council, requests Disapproval.

Commenter's Reason: The Colorado Chapter requests disapproval of Part II. P63 Part I 07/08 was disapproved by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Final Action: AS AM AMPC____ D

P70-07/08, Part II
IRC Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3

THIS CODE CHANGE WILL BE HEARD ON THE IRC PLUMBING PORTION OF THE HEARING ORDER.

NOTE: PART I DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART I IS REPRODUCED FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART II.

Proposed Change as Submitted:

Proponent: Marty Ocedek representing Genova Products, Inc.

PART II – IRC-P

Revise tables as follows:

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

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS DR, PS 140, PS 200 DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22, (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	TM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

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

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene(ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949; ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE P3002.2
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core,or composite wall	ASTM D 2661; ~~ASTM D 2751~~; ASTM F 628; ASTM F 1488
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
~~Coextruded composite~~ Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including SDR 42 (PS 20), PS 35, SDR 35 (PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid, cellular core, or composite wall	ASTM F 1488; ASTM D 2751
~~Coextruded composite~~ Polyvinyl Chloride (PVC) plastic pipe in sewer and drain ~~DR-PS~~ diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140, and PS 200; with a solid, cellular core, or composite wall	ASTM F 891; ASTM F 1488; ASTM D 3034; CSA B182.2; CSA B182.4
~~Coextruded PVC sewer and drain PS25, PS50, PS100, (cellular core)~~	~~TM F 891~~

TABLE P3002.2
BUILDING SEWER PIPE
(continued)

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV, SDR 26, SDR 35, SDR 41, PS50, PS100),~~ in IPS diameters, including schedule 40, DR 22 (PS200) and DR 24 (PS140); with solid, cellular core, or composite wall~~-~~	ASTM D 2665; ~~ASTM D 2949~~: ASTM F 891, ~~ASTM D 3034;~~ ~~A B182.2, CSA B 182.4~~ ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall.	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE P3002.3 (Supp)
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters	ASTM D 2661; ASTM D 3311; ASTM F 628; CSA B 181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)~~	~~ASTM D 2661; ASTM D 3311; ASTM F 628~~
~~Coextruded composite PVC DWV schedule 40 IPS-DR, PS 140, PS 200 (solid or cellular core)~~	~~ASTM D 2665; ASTM D 3311; ASTM F 891~~
~~Coextruded composite~~ Acrylonotrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters ~~DR-PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 2751
~~Coextruded composite~~ Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters ~~DR-PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 3034
Polyvinyl chloride (PVC) plastic in IPS diameters	ASTM D 2665; ASTM D 3311; ASTM F 1866
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D.	ASTM D 2949

(Portions of table not shown remain unchanged)

Reason (Part II): This revision does not add or remove any pipes or fittings that were not previously accepted. It simply re-groups them using the same criteria in all 4 tables. By doing so it clarifies the plastic pipe materials, sizes, and standards that are permitted by Tables P3002.1(1), P3002.1(2), and P3002.2. In addition, Table P3002.3 now identifies the fittings that are "approved and compatible with the type of piping being used", as required by Clause P3002.3.

The new groups are based on the plastic material (either ABS or PVC) and the diameter (IPS, sewer and drain, or 3.25 inch O.D.). These criteria were chosen because they are the factors that determine both applicability for the end use and compatibility of the pipe and fittings. Pipe in sewer and drain diameters, for example, is not used for DWV and only IPS-ABS fittings are used with IPS-ABS pipe. Some examples of the inconsistencies in the current tables are as follows:

1. Table P3002.2 includes ASTM F 1412, *Polyolefin Pipe and Fittings for Corrosive Waste,* as a PVC plastic pipe standard.
2. ASTM F 1412 is also listed as a fitting standard for use with PVC pipe in Table P3002.3.
3. In Table P3002.1(1) a reference to PVC "Type DWV" includes pipe made to ASTM F 1488. In Table P3002.1(2) it does not.
4. Table P3002.3 permits ASTM D 3034 fittings to be used with coextruded composite PVC sewer and drain pipe, but not with solid PVC pipe made to the same D 3034 pipe and fitting standard.
5. PVC fittings to ASTM D 2665 and/or F 891 are listed for use with ABS composite pipe in Table P3002.3.
6. The 2007 Supplement moved ASTM F 1866 fabricated fittings to a separate line item, but there is no way to know what type of pipe they can be used with. This proposal links them to PVC pipe with an IPS O.D. They cannot be used with PVC pipe made to a sewer and drain O.D.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: Proponent's reason statement did not address the addition of the new pipe material designations to the table.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Jeremy Brown, NSF International, requests Approval as Submitted.

Commenter's Reason: I am requesting the assembly vote to approve the code change as submitted. This would be consistent with the action taken by the IPC committee on P-70 Part I. As confirmed by the committee reason for approving P-70 Part I, there is no new material added by this proposal. This change was disapproved because there was some confusion about the relationship between DR's and PS's. In ASTM F1488 pipe is identified by its dimension ratio (DR) and pipe stiffness (PS). For each DR there is a corresponding PS value. For example DR 22 has a pipe stiffness (PS) of 200, and DR 24 has a pipe stiffness (PS) of 140. Because both DR's and PS's terminology is used in the industry, both have been added to the table for clarification.

Public Comment 2:

Shaunna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council, requests Approval as Submitted.

Commenter's Reason: The Colorado Chapter requests overturning the committee action in favor of as submitted on Part II. P70 Part I 07/08 was approved as submitted by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Public Comment 3:

Robert F. Loeper, Jr., President, representing Region VII Chapter of ICC, requests Approval as Submitted.

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building Code Officials Association, requests Approval as Submitted.

Commenters' Reason: The proponent of the original proposal testified that this reorganization did not add any new materials but rather re–grouped and formatted existing pipe and fittings. The published reason for disapproval is that the proponent's reason statement did not address new pipe material designations to the table.

Public Comment 4:

Marty Ocedek, Genova Products, requests Approval as Modified.

Modify proposal as follows:

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

PIPE MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including schedule 40, DR 22~~,~~ (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ASTM F 891; ASTM F 1488; CSA B181.2

(Portions of table not shown remain unchanged)

(Portions of proposal not shown remain unchanged)

Commenter's Reason: This change was disapproved because the errant comma led the Committee to believe that a new pipe, i.e. DR22, was being added to the table. In fact, ASTM F 1488 pipe with a dimension ratio of 22 (i.e. DR22) has a pipe stiffness of 200 (i.e. PS200). The proposal was intended to show that equivalence. It does not add any pipes that were not previously accepted. Part 1 of the change was approved after the comma was editorially removed. Approval of Part II will unify the IRC and UPC.

Final Action: AS AM AMPC____ D

NOTE: PART I REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

P70-07/08, PART I – IPC

Revise tables as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200 DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22, (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

PIPE ~~MATERIAL~~	STANDARD
Acrylonitrile butadiene styrene(ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS-DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV)~~ in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS140); with a solid, cellular core, or composite wall	ASTM D 2665; ~~ASTM D 2949~~; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall	ASTM D 2949; ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.3
BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core,or composite wall	ASTM D 2661; ~~ASTM D 2751~~; ASTM F 628; ASTM F 1488
~~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 891, ASTM F 1488~~
~~Coextruded composite PVC IPS DR, PS 140, PS 200, DWV~~	~~ASTM F 1488~~
~~Coextruded composite~~ Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain ~~DR PS~~ diameters, including SDR 42 (PS 20), PS 35, SDR 35 (PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid, cellular core, or composite wall	ASTM F 1488; ASTM D 2751
~~Coextruded composite~~ Polyvinyl Chloride (PVC) plastic pipe in sewer and drain ~~DR PS~~ diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140, and PS 200; with a solid, cellular core, or composite wall	ASTM F 891; ASTM F 1488; ASTM D 3034; CSA B182.2; CSA B182.4
~~Coextruded PVC sewer and drain PS25, PS50, PS100, (cellular core)~~	~~ASTM F 891~~
Polyvinyl chloride (PVC) plastic pipe ~~(Type DWV, SDR 26, SDR 35, SDR 41, PS50, PS100),~~ in IPS diameters, including schedule 40, DR 22 (PS200) and DR 24 (PS140); with solid, cellular core, or composite wall~~-~~	ASTM D 2665; ~~ASTM D 2949~~: ASTM F 891, ~~ASTM D 3034; CSA B182.2, CSA B 182.4~~ ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, cellular core, or composite wall.	ASTM D 2949, ASTM F 1488

(Portions of table not shown remain unchanged)

TABLE 702.4
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters	ASTM D 2661; ASTM D 3311; ASTM F 628; CSA B 181.1
~~Coextruded composite ABS DWV schedule 40 IPS pipe (solid or cellular core)~~	~~ASTM D 2661; ASTM D 3311; ASTM F 628~~
~~Coextruded composite PVC DWV schedule 40 IPS DR, PS 140, PS 200 (solid or cellular core)~~	~~ASTM D 2665; ASTM D 3311; ASTM F 891~~
~~Coextruded composite~~ Acrylonotrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters ~~DR PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 2751
~~Coextruded composite~~ Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters ~~DR PS in PS 35, PS 50, PS 100, PS 140, PS 200~~	ASTM D 3034
Polyvinyl chloride (PVC) plastic in IPS diameters	ASTM D 2665; ASTM D 3311; ASTM F 1866
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D.	ASTM D 2949

(Portions of table not shown remain unchanged)

Reason (Part I): This revision does not add or remove any pipes or fittings that were not previously accepted. It simply re-groups them using the same criteria in all 4 tables. By doing so it clarifies the plastic pipe materials, sizes, and standards that are permitted by Tables 702.1, 702.2 and 702.3. The new groups and revised column headings also identify the fittings that are "approved for installation with the piping material installed", as required by Clause 702.4. The new groups are based on the plastic material (either ABS or PVC) and the diameter (IPS, sewer and drain, or 3.25 inch O.D.). These criteria were chosen because they are the factors that determine both applicability for the end use and compatibility of the pipe and fittings. Pipe in sewer and drain diameters, for example, is not used for DWV and only IPS-ABS fittings are used with IPS-ABS pipe. Some examples of the inconsistencies in the current tables are as follows:

1. In Table 702.1, solid IPS - ABS pipe (D 2661) and cell core ABS pipe (F 628) are grouped together. In the same table, solid IPS – PVC pipe (D 2665) and cell core PVC pipe (F 891) are NOT grouped together.
2. Instead, solid IPS - PVC pipe (D 2665) is grouped with 3.25 in O.D. PVC pipe (D 2949) and with composite pipe (F 1488).
3. In Table 702.1 a group referred to as "Type DWV" includes ASTM F 1488. In Tables 702.2 and 702.3 it does not.
4. Table 702.4 lists F 891 fittings for use with composite PVC pipe, but the F 891 standard does not include any fittings. It is strictly a pipe standard.
5. Table 702.4 allows D 2751 fittings to be used with composite sewer and drainpipe, but not with solid pipe made to the same D 2751 pipe and fitting standard.

PART I – IPC
Committee Action: **Approved as Submitted**

Editorially modify the proposal as follows:

TABLE 702.1
ABOVE-GROUND DRAINAGE AND VENT PIPE

PIPE	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including schedule 40, DR 22~~,~~ (PS 200), and DR 24 (PS 140); with a solid, cellular core, or composite wall	ASTM D 2665; ASTM F 891; ASTM F 1488; CSA B181.2

(Portions of table not shown remain unchanged)

Committee Reason: The proposed revisions condense the number of table entries, making the table more user friendly. No materials were added or deleted.

Assembly Action: **None**

P74-07/08
708.3.2

Proposed Change as Submitted:

Proponent: James Ranfone, American Gas Association

Revise as follows:

708.3.2 Building sewers. Building sewers shall be provided with cleanouts located not more than 100 feet (30 480 mm) apart measured from the upstream entrance of the cleanout. For building sewers 8 inches (203 mm) and larger, manholes shall be provided and located not more than 200 feet (60 960 mm) from the junction of the building drain and building sewer, at each change in direction and at intervals of not more than 400 feet (122 m) apart. Manholes and manhole covers shall be of an approved type. A cleanout shall also be provided at the property line.

Reason: Installing underground utilities includes a method known as directional boring. The use of directional boring equipment eliminates the need for open trench or ditch work but may have some uncertainty concerning the location of existing underground utilities. The amendment will provide a needed cleanout to clear blockages that frequently occur at the junction of the sewer tap and the building sewer. The cleanout at the property line provides a permanent marker that will help reduce the damage to such underground facilities and most of all would help protect the building and its occupants from hazards created from damaged utilities.

Cost Impact: The code change proposal will increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: Inadequate technical justification was provided for requiring an additional cleanout. The property line area is outside of the scope of this code.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Ted A. Williams, American Gas Association, requests Approval as Submitted.

Commenter's Reason: Third party excavation damage to underground systems, including natural gas piping systems, is a leading cause of damage to underground utilities. In the case of damage to underground natural gas piping, these events can lead to catastrophic consequences from migration of natural gas into building foundations through common trenched sewer and other utility penetrations. The purpose of the proposal is to provide a clean out alternative for blockages that would reduce the need for excavation and the risk of third party damage. It should be noted that the Committee reason for disapproval, "The property line area is outside of the scope of the code," is not strictly applicable since 'property line area' is neither proposed nor defined, and the proposal for the cleanout 'at the property line' is clearly associated with jurisdictional portions of the system, much as the current code coverage of manholes.

Final Action: AS AM AMPC____ D

P79-07/08
901.3, 917.8

Proposed Change as Submitted:

Proponent: Jack Beuschel, Studor, Inc.

Revise as follows:

901.3 Chemical waste vent system. The vent system for a chemical waste system shall be independent of the sanitary vent system and shall terminate separately through the roof to the ~~open air~~ outdoors or to an air admittance valve installed in compliance with Section 917.

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8 except where such valves are constructed of materials complying with Section 702.5 and ASTM F1412. Air admittance valves shall not be located in spaces utilized as supply or return air plenums.

Reason: The purpose of this code change is to add new provisions to the code to permit air admittance valves (AAVs) to serve as the vent for a chemical waste system as an option to open pipe vents.

Sinks in laboratories into which acids and chemicals are dumped are usually located in islands in the middle of rooms. To vent the sinks with open pipe vents requires extensive labor and material. The pipe and findings made from materials that are acid and chemical resistant are costly compared to ABS or PVC used in sanitary drainage systems. The installation of AAVs will significantly reduce labor and material costs in chemical waste systems compared with open pipe vents.

The performance requirements for AAVs that comply with ANSI/ASSE 1051 for single fixture and branch venting are the same for both normal sanitary DWV systems and nonneutralized special waste systems with the exception of the high temperature range which must be 212°F instead of 150°F and chemical waste material specifications. Although they are separate systems, the dynamics, with regard to trap seal protection, for both systems is the same. The only difference in a nonneutralized special waste system is that the DWV piping and components must be manufactured from material that is acid and chemical resistant in accordance with Section 702.5 of the IPC. Therefore, AAVs that are manufactured from materials that meet recognized industry standards for chemical and acid resistant material in compliance with Section 702.5, such as flame retardant polypropylene, and tested to ASTM F1412 for chemical resistance, must be permitted to serve as a vent for nonneutralized special waste systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: The proposed revision would require the use of a proprietary product.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jack Beuschel, Studor, Inc., requests Approval as Submitted.

Commenter's Reason: The fact that Studor, Inc. is the only distributor to have an air admittance valve manufactured from chemical resistant material in compliance with Section 702.5 (Chemical Waste Systems), and ASTM 1412 Section 8.3 (Chemical Resistance), is not a technical reason for denial.

Final Action: AS AM AMPC____ D

P80-07/08, Part I
Table 906.1

Proposed Change as Submitted:

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing Utah Chapter of ICC

PART I – IPC

Revise table as follows:

TABLE 906.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[b]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 6 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture(s) drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent(s) shall be 5 feet.
b. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 8 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent shall be 6 feet.

Reason: In the current language of "Table 906.1" a 2 inch trap can be installed up to 8 feet from the vent and the 1½ trap up to 6 feet. In truth, this installation is only permitted in a very limited application. In fact, in most installations this application would put the weir of the trap above the vent. A clear violation of Section 906.2. It is easer to understand that a trap can be located per the said table than to understand Section 906.2. (… shall connect above the weir of the fixture trap being vented). I believe that the current language used in these two sections are in direct conflict with each other. In the built environment they work against each other more than they help. This application must be clarified. It is in the best interest of both the installer and inspector to bring together these two sections, "Table 906.1 and 906.2" for a better understanding of how they both apply. The footnotes will correct the problem.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The proposed notes to the table are difficult to interpret and no evidence was provided that the revisions would improve venting.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence Suggars, South Salt Lake City, representing Utah Chapter of ICC, requests Approval as Modified.

Replace proposal as follows:

TABLE 906.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[a]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Refer to Section 906.2 as it applies to trap weir to vent fitting distance.

Commenter's Reason: Table 906.1 without referring back to "Section 906.2" can be interpreted incorrectly. For example, in the application where the developed length of a 2 inch fixture drain is 8 feet from a sanitary tee fitting and in the drainage pattern application, will be placing the weir of the trap below the vent. A clear violation of "Section 906.2." These footnotes will assist both plumbers and inspectors meet the intent of the code.

Final Action: AS AM AMPC____ D

P80-07/08, Part II
IRC Table P3105.1

Proposed Change as Submitted:

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing Utah Chapter of ICC

PART II – IRC-P

Revise table as follows:

TABLE P3105.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[b]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 6 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture(s) drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent(s) shall be 5 feet.

b. Where a vertical vent pipe, oriented 90 degrees from horizontal, connects to a horizontal run of fixture drain pipe, the maximum distance from the fixture trap to the vent shall be 8 feet. Where the vent pipe connects to the top of a single or double sanitary tee oriented such that the run of the tee is 90 degrees from horizontal and the fixture drain to be vented connects to the branch of the single or double sanitary tee, the maximum distance from the fixture trap to the vent shall be 6 feet.

Reason: In the current language of "Table 906.1" a 2 inch trap can be installed up to 8 feet from the vent and the 1½ trap up to 6 feet. In truth, this installation is only permitted in a very limited application. In fact, in most installations this application would put the weir of the trap above the vent. A clear violation of Section 906.2. It is easer to understand that a trap can be located per the said table than to understand Section 906.2. (… shall connect above the weir of the fixture trap being vented). I believe that the current language used in these two sections are in direct conflict with each other. In the built environment they work against each other more than they help. This application must be clarified. It is in the best interest of both the installer and inspector to bring together these two sections, "Table 906.1 and 906.2" for a better understanding of how they both apply. The footnotes will correct the problem.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The table notes are too wordy and seem to conflict with the distance numbers in the table.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lawrence Suggars, South Salt Lake City, representing Utah Chapter of ICC, requests Approval as Modified.

Replace proposal as follows:

TABLE P3105.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1½	¼	6[a]
2	¼	8[a]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,
1 inch per foot = 83.3 mm/m.

a. Refer to section P3105.2 as it applies to trap weir to vent fitting distance.

Commenter's Reason: Table 3105.1 without referring back to section P3105.2 can be interpreted incorrectly. For example in the application where the developed length of a 2 inch fixture drain is installed 8 feet from a sanitary tee fitting installed in the drainage pattern application will locate the vent below the weir of the trap. This will violate section P3105.2. The footnotes will assist both the plumber and inspector meet the intent of the code.

Final Action: AS AM AMPC____ D

P82-07/08
914 (New)

Proposed Change as Submitted:

Proponent: Robert Evans, PE, American Society of Plumbing Engineers

Add new section as follows:

SECTION 914
SINGLE STACK VENT SYSTEM

914.1 Where permitted. A drainage stack shall serve as a single stack vent system where sized and installed in accordance with Sections 914.2 through 914.9. The drainage stack and branch piping shall be the vents for the drainage system. The drainage stack shall have a stack vent.

914.2 Stack size. Drainage stacks shall be sized in accordance with Table 914.2. Stacks shall be uniformly sized based on the total connected drainage fixture unit load. The stack vent shall be the same size as the drainage stack. A 3-inch stack shall serve not more than two water closets.

TABLE 914.2
SINGLE STACK SIZE

STACK SIZE (inches)	MAXIMUM CONNECTED DRAINAGE FIXTURE UNITS		
	Stacks less than 75 feet in height	Stacks 75 feet to less than 160 feet in height	Stacks 160 feet and greater in height
3	24	NP	NP
4	225	24	NP
5	480	225	24
6	1,015	480	225
8	2,320	1,015	480
10	4,500	2,320	1,015
12	8,100	4,500	2,320
15	13,600	8,100	4,500

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

914.3 Branch size. Horizontal branches connecting to a single stack vent system shall be sized in accordance with Table 710.1(2). Not more than one water closet shall discharge into a 3 inch (76.2 mm) horizontal branch at a point within a developed length of 18 inches (457.2 mm) measured horizontally from the stack.

Where a water closet is within 18 inches (457.2 mm) measured horizontally from the stack and not more than one fixture with a drain size of not more than 1-1/2 inch (38.1 mm) connects to a 3 inch (76.2 mm) horizontal branch, the branch drain connection to the stack shall be made with a sanitary tee.

914.4 Length of horizontal branches. The length of horizontal branches shall conform to the requirements of Sections 914.4.1 through 914.4.3.

914.4.1 Water closet connection. Water closet connections shall be not greater than 4 feet (1219 mm) in developed length measured horizontally from the stack.

> **Exception:** Where the connection is made with a sanitary tee, the maximum developed length shall be 8 feet (2438 mm).

914.4.2 Fixture connections. Fixtures other than water closets shall be located not greater than 12 feet (3657 mm) in developed length measured horizontally from the stack.

914.4.3 Vertical piping in branch. The length of vertical piping in a fixture drain connecting to a horizontal branch shall not be considered in computing the fixture's distance in developed length measured horizontally from the stack.

914.5 Minimum vertical piping size from fixture. The minimum size of the vertical portion of piping in a fixture drain connecting to a horizontal branch shall be 2 inches (50.8 mm). The minimum size of the vertical portion of piping in a fixture drain for a urinal or standpipe shall be 3 inches (76.2 mm).

914.6 Additional venting required. Additional venting shall be provided where more than one water closet discharges to a horizontal branch and where the distance from a fixture trap to the stack exceeds the limits in Section 914.4. Where additional venting is required, the fixture(s) shall be vented by individual vents, common vents, wet vents, circuit vents, or a combination waste and vent pipe. The dry vent extensions for the additional venting shall connect to a branch vent, vent stack, stack vent, air admittance valve, or shall terminate outdoors.

914.7 Stack offsets. Where fixture drains are not connected below a horizontal offset in a stack, a horizontal offset shall not be required to be vented. Where horizontal branches or fixture drains are connected below a horizontal offset in a stack, the offset shall be vented in accordance with Section 915. Fixture connections shall not be made to a stack within 2 feet (609.6 mm) above or below a horizontal offset.

914.8 Prohibited lower connections. Stacks greater than 2 branch intervals in height shall not receive the discharge of horizontal branches on the lower two floors. Where a separate stack is provided for the lower two floors, the stack shall connect to the building drain at a distance of not less than 10 pipe diameters downstream from the base of the connection of any single stack vented system.

914.9 Sizing building drains and sewers. The building drain and building sewer receiving the discharge of a single stack vent system shall be sized in accordance with Table 710.1(1).

Reason: This change was submitted last year and failed to receive the 2/3rds ballot by 9 votes. ASPE believes that the change is a worthwhile change, even though the previous change was not submitted by ASPE. This method of venting is addressed in the ASPE Plumbing Engineering Design Handbook. Single stack venting is currently permitted in the UPC and NSPC. The IPC is the only model plumbing code that does not have provisions for the single stack venting system.

The only difference in the text between this change and the one submitted last year is Section 914.6 on additional venting requirements. This section requires a second water closet on a branch to be vented by other means. This requirement was developed by the Philadelphia Chapter of ASPE. They have extensive experience in the design of single stack systems.

There is over 100 years of experience with single stack venting systems. If the stack is large enough, additional venting is not required provided that the fixtures are within a limited distance to the stack. It should be noted that the single stack system is one without long horizontal branches, nor drops in piping. By limiting the length of the branch and the vertical drops into the branch, you can control the pressure excursions in the piping system.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: In Section 914.8, it is not clear which pipe is referred to relative to the "10 pipe diameters." (The stack or the building drain diameter?)

Committee Action: **Approved as Submitted**

Committee Reason: Single stack venting systems have been used with great success for over 100 years. It is time that the IPC embrace this venting method as other model codes have done.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Julius Ballanco, PE, CPD, President, American Society of Plumbing Engineers, representing ASPE, requests Approved as Modified.

Modify proposal as follows:

914.5 Minimum vertical piping size from fixture. ~~The minimum size of~~ t The vertical portion of piping in a fixture drain ~~connecting~~ to a horizontal branch shall be 2 inches (50.8 mm). The minimum size of the vertical portion of piping ~~in a fixture drain~~ for a water supplied urinal or standpipe shall be 3 inches (76.2 mm). The maximum vertical drop shall be 4 feet. Fixture drains that are not increased in size, or have a vertical drop in excess of 4 feet shall be individually vented.

(Portions of proposal not shown remain unchanged)

Commenters' Reason: It was noticed after the first hearing that there was an editorial error with the code change. The proposed additional sentences were missing from the initial text. The new text specifies the maximum permitted drop for this system. The other change is to clarify that the reference to urinals applied to water supplied urinals, not non-water supplied urinals.

Public Comment 2:

Robert F. Loeper, Jr., President, representing Region VII Chapter of ICC, requests Disapproval.

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Disapproval.

Commenters' Reason: This type system design is already permitted by Section 105.2. This supporting statement will demonstrate an overwhelming abundance of factual information that will make it crystal clear exactly why this system is not a good idea for the IPC. First conceptually, the current IPC has about 10 different venting methods available. These methods include many different variable applications from individual venting each and every fixture trap to taking advantage of the liberal nature of the combination drain and vent system. Each of these particular methods incorporates some type advantage to the user. The proposed system does not accomplish any type of advantage in any way. It was testified that other codes have adopted this method. The basis of this system comes from the City of Philadelphia's Plumbing Code. However this proposal does not have all the complete information contained in the Philadelphia Code on this topic. Besides, the fact that a system shows up in another document is not a sound basis for incorporation into the IPC.

Now for the technical reasons this system should not be included into the IPC:

Section 914.1 Allows the stack and branch piping to serve as the vent for the system. The piping configurations that are permitted throughout the section are in direct conflict fundamental plumbing practices in which the IPC is based upon with no justification. It also requires a vent stack but never requires the vent stack extend to the outdoors.

Section 914. 2 uses the term "uniformly sized" but never explains how you achieve that. Does it mean the size must remain full size from top to bottom or just "uniformly' reduce in size as the load allows per proposed Table 914.2. The vent stack shall be the same size as the drainage stack. Is that the base or the top of the stack? How is it justified to limit two water closets on a 3" stack? Current IPC will permit up to 72 DFUs on a 3" stack, all of which can be water closets. This is the first example of the overly conservative characteristics that will render this method impractical and no one will use it. Even one of the proponents publicly stated something like, this is a costly system and I would not design to it. It may be different if Philadelphia were going to adopt the IPC if this system were to be added, since apparently they are the ones who use it, but that has never been part of the rational from the proponents.

Section 914.3 allows branches to be sized in accordance with IPC Table 710.1(2). How can that be? 710.1(2) is based on the conventional methods of piping systems currently addressed IPC. The proposed system asserts that the branches and the stacks are serving as part of the venting system, Section 914.1. This makes absolutely no sense. The second sentence says that not more than one water closet on a 3" branch within 18" measured horizontally can connect to the stack. Measured horizontally from where to where? Where does this measurement come from? It is extremely overly restrictive, what is the justification? Water closets in the IPC only need to be connected to a vented drain with no distance specified. The next sentence goes on to talk about a single water closet within 18" and a single 1–1/2" drain on a 3"horizontal branch shall connect to the stack with a sanitary tee. What if there are two water closets or two drains, or a single drain that's 2"? Do you increase the pipe size or just change to a long turn fitting? Again this section makes no sense and leaves an enormous amount of needed information blank.
Section 914.4.1 states water closet connections shall not be greater than 4' measured horizontally from the stack. Again what points do you measure from? Is it the center of the flange to the center of the stack? Then the same section goes on to say that if the water closet is a maximum of 8" from the stack, a sanitary tee fitting shall be used for connection. Where is this logic coming from? The previous section just told us if we are within 18" of a stack we shall use a sanitary tee, now if we extend our distances of water closets to 8" we need to use a sanitary tee? When do you use long pattern fittings? Do they give us more allowance or less?

Section 914.4.2 talks about the "measured horizontally" again but as before fails to explain where this measurement occurs. Is it to the center of the fixture from the center of the stack? Is it the actual run of pipe? Why does the vertical portion of pipe not count?
Section 914.4.3 says the vertical distance is unlimited? What if the fixture is two, three, four…. stories above the stack connection? The text never requires that the fixtures be located on the same floor level.

Section 914.5 requires the vertical portions of piping from fixtures to be a minimum of 2" and 3" for urinals. Why would a drinking fountain be sized the same a washing machine drain? Why would a drain that's already supposed to be 2" in a conventional system such as a washing machine drain, not have to be increased? What logical purpose would it be to run a 3" vertical pipe to a waterless urinal that probably has less flow than a drinking fountain? In order to transition the 3" vertical pipe down to 2" for a urinal then insert a flange on it would take an enormous amount of wall space. Increased plumbing wall space equals decreased occupiable tenant space. This again equates to a cost increase to the end user.

Section 914.6 requires additional venting where more than one water closet discharges into a branch that exceeds the distance percsribed in Section 914.4. Does this mean that one water closet is always allowed to exceed the distances prescribed in Section 914.4? Note the last sentence, consistent with Section 914.1, still never requires a vent to the outdoors, "or to the outdoors."

Section 914.7 talks about venting stack offsets and fixture drain connections but it never requires the stack be size as a building drain. This is a basic plumbing principal stated in IPC Section 710.1.1, but it is never referenced in the proposed systems criteria. You could size your stack and have several horizontal offsets, size them as the stack, and never take the horizontal load into consideration.

Section 914.8 talks about stacks two branch intervals or greater. This section raises two very odd issues. Number 1, why does this section reference "branch intervals" but the sizing Table 914.2 references "feet in height" and never mentions branch intervals? You will notice the IPC stays consistent with the term branch intervals for all vertical piping system sizing. Number 2. is the fact that this section is titled "single stack" but if you have a design that includes more than 2 branch intervals you really need to install a "second stack to serve those lowest 2 branch intervals." This is inconsistent with the single stack principal.

Section 914.9 as stated earlier in Section 914.7 the horizontal offsets never have to be sized as building drains only the actual building drain and building sewer.

Table 914.2 as pointed out earlier in section 914.8 this table is written in feet of height instead of branch intervals. This is not consistent with any other system sizing method. The numbers in the charts are unlike current waste stack venting that the IPC currently has in Section 910. This section utilizes the principals stated in the proposed 914.1 Only IPC Section 910 requires larger piping across the board. In proposed Table 914.2 look the entries in buildings less than 75 (approximately 7 branch intervals) in height vs. stacks 3 branch intervals (approximately 30') located in IPC Table 710.1.(2). You will notice only a mild reduction for the proposed single stack system in sizes 3" and 4". But for 5" and above this method is more liberal! Again where is the logic behind this system? If the pipe is being utilized for waste and serving as the vent wouldn't it seem that the piping would be larger than conventional systems?

This proposal contradicts itself in many instances as illustrated above, such as the use of fittings and the size of the piping. Sovent systems are far more prevalent than the system in this proposal. It is a bad idea to add these provisions to the IPC, they have no technical justification, no one will use the information, and the system installation will most likely increase the cost of construction but at this point the provisions are to difficult to understand.

Final Action: AS AM AMPC____ D

P83-07/08
903.2

Proposed Change as Submitted:

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C.

Revise as follows:

903.2 (Supp) Vent stack required. A vent stack shall be required for every drainage stack that has five branch intervals or more.

Exception: Drainage stacks installed in accordance with Section 910 or 914.

Reason: This change is necessary to coordinate with the change proposed by ASPE to add single stack venting systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Approved as Submitted**

Committee Reason: Approval is consistent with the action taken on P82-07/08.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Robert F. Loeper, Jr., President, representing Region VII Chapter of ICC, requests Disapproval.

Guy Tomberlin, Fairfax County, VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Disapproval.

Commenters' Reason: This is a companion request for disapproval of P82-07/08.

Final Action: AS AM AMPC____ D

P84-07/08, Part I
917.8

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

PART I – IPC

Revise as follows:

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves shall not be utilized to vent sumps or tanks of any type.

Reason: Theses devices are listed to vent fixtures and specific portions of plumbing systems such as stacks. Testimony has been provided at previous code hearings that "an engineer can easily design tank systems in order to take advantage of AAV's" however they are not listed to serve these devices as a typical conventional venting system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Approved as Modified**

Modify proposal as follows:

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type.

Committee Reason: Air admittance valves are not specifically listed for venting sumps or tanks, however, they could be used for these applications if the venting system is of an engineered design.

Analysis: The modification appears to be misplaced in the sentence. As written, the phrase "without an engineered design" refers to air admittances valves (AAV's) and AAV's are always an engineered design. The intent was to require the installation of the AAV to be an engineered design. The following text captures the committee's intent in modifying the proposal: Air admittance valves utilized to vent sumps or tanks shall be installed in accordance with an engineered design.

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approved as Modified.

Modify proposal as follows:

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves shall not be utilized to vent sumps or tanks of any type unless installed in accordance with an approved engineered design for the specific application.

Commenter's Reason: The as modified language approved in Palm Springs could be easily misinterpreted to allow any air admittance device to be installed to vent sumps or tanks because all of the AA devices are manufactured under an approved engineered design. This is nothing more than a grammatical correction that ensures the intent is clear.

Public Comment 2:

Jack Beuschel, Studor, Inc., requests Disapproval.

Commenter's Reason: There is no technical justification to require an engineer to design the installation of air admittance valves to vent sumps or tanks. Manufacturers Design Criteria and Installation Instructions provide a safe installation. See the following diagram:

SEWER EJECTOR

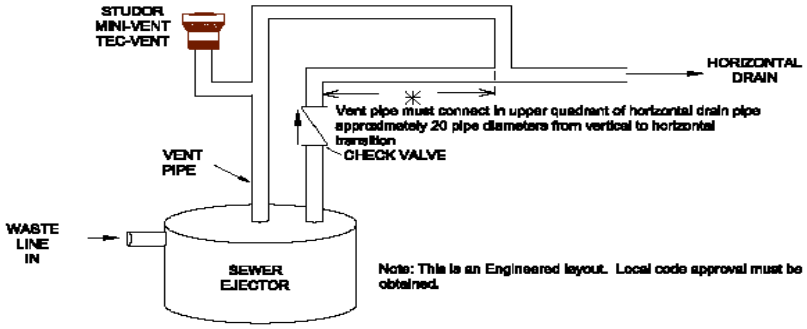

Figure 12

Final Action: AS AM AMPC____ D

P84-07/08, Part II
IRC P3114.8 (New)

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Fairfax County, VA, representing himself

PART II – IRC-P

Add new text as follows:

P3114.8 Prohibited installations. Air admittance valves shall not be utilized to vent sumps or tanks of any type.

Reason: Theses devices are listed to vent fixtures and specific portions of plumbing systems such as stacks. Testimony has been provided at previous code hearings that "an engineer can easily design tank systems in order to take advantage of AAV's" however they are not listed to serve these devices as a typical conventional venting system.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P

Committee Action: **Approved as Modified**

Modify proposal as follows:

P3114.8 Prohibited installations. Air admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type.

Committee Reason: As part of an engineered design for sump or tank venting, air admittance valves could be utilized. Without an engineered design for these venting system, AAV's might not provide for proper venting.

Analysis: The modification appears to be misplaced in the sentence. As written, the phrase "without an engineered design" refers to air admittances valves (AAV's) and AAV's are always an engineered design. The intent was to require the installation of the AAV to be an engineered design. The following text captures the committee's intent in modifying the proposal: Air admittance valves utilized to vent sumps or tanks shall be installed in accordance with an engineered design.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comment was submitted.

Public Comment 1:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approved as Modified.

Modify proposal as follows:

P3114.8 Prohibited installations. Air admittance valves shall not be utilized to vent sumps or tanks of any type unless installed in accordance with an approved engineered design for the specific application.

Commenter's Reason: The as modified language approved in Palm Springs could be easily misinterpreted to allow any air admittance device to be installed to vent sumps or tanks because all of the AA devices are manufactured under an approved engineered design. This is nothing more than a grammatical correction that ensures the intent is clear.

Public Comment 2:

Jack Beuschel, Studor, Inc., requests Disapproval.

Commenter's Reason: There is no technical justification to require an engineer to design the installation of air admittance valves to vent sumps or tanks. Manufacturers Design Criteria and Installation Instructions provide a safe installation. See the following diagram:

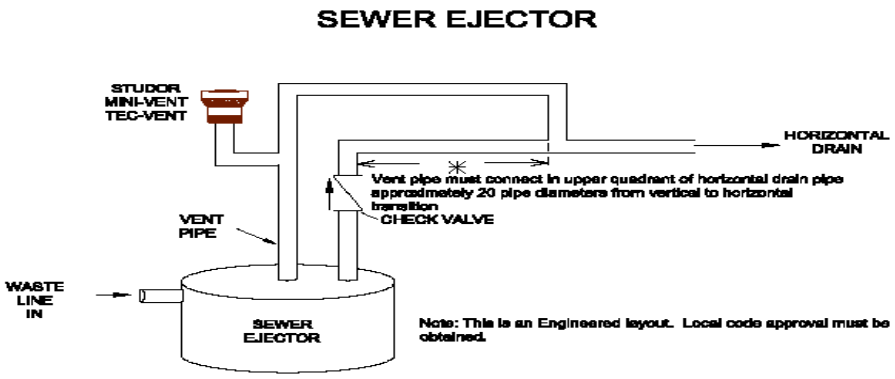

Figure 12

Final Action: AS AM AMPC____ D

P86-07/08, Part I
1002.3

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Falcon Waterless

PART I – IPC

Revise as follows:

1002.3 Prohibited traps. The following types of traps are prohibited:

1. Traps that depend on <u>the action of elastomeric check valves or any other type of</u> moving parts to maintain the seal.
2. Bell traps.
3. Crown-vented traps.
4. Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of an approved material that is resistant to corrosion and degradation.
5. “S” traps.
6. Drum traps.

   Exception: Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.

Reason: A device, that can be described as an elastomeric check valve, is being marketed as a replacement or substitution for the code required liquid seal trap. Many code officials don’t understand how this device works and mistakenly approve these devices for trap applications even though the device is a moving part, violating this code section. Adding this wording will clarify that this type of trap device is specifically prohibited as the code has long intended to have traps perform sealing by liquid only.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The current text already prohibits moving parts in traps; therefore, the added language is redundant.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing himself, requests Approval as Submitted.

Commenter's Reason: The reason given for denial by the IPC and IRC committee clearly defines the confusion over this issue. The current language should prohibit these new types of mechanical traps (elastomeric check valves) from being approved but these devices are being marketed as a replacement or substitution for code required liquid seal traps. Many code officials do not understand how these devices work and mistakenly approve them which violates the code section. Adding the wording will only clarify that these type of devices are specifically prohibited by the code. Finally, it should restrict new products and there development if they in fact do violate the code and the protection of health and safety.

Final Action: AS AM AMPC____ D

P86-07/08, Part II
IRC P3201.5

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Falcon Waterless

PART II – IRC-P

Revise as follows:

P3201.5 Prohibited trap designs. The following types of traps are prohibited:

1. Bell traps.
2. Separate fixture traps with interior partitions, except those lavatory traps made of plastic, stainless steel or other corrosion-resistant material.
3. "S" traps.
4. Drum traps.
5. Trap designs with moving parts <u>or elastomeric check valves</u>.

Reason: A device, that can be described as an elastomeric check valve, is being marketed as a replacement or substitution for the code required liquid seal trap. Many code officials don't understand how this device works and mistakenly approve these devices for trap applications even though the device is a moving part, violating this code section. Adding this wording will clarify that this type of trap device is specifically prohibited as the code has long intended to have traps perform sealing by liquid only.

Cost Impact: The code change proposal will not increase the cost of construction.

PART II – IRC-P
Committee Action: **Disapproved**

Committee Reason: The definition of elastomeric check valve is unclear and a prohibition appears to restrict new products unnecessarily.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing himself, requests Approval as Submitted.

Commenter's Reason: The reason given for denial by the IPC and IRC committee clearly defines the confusion over this issue. The current language should prohibit these new types of mechanical traps (elastomeric check valves) from being approved but these devices are being marketed as a replacement or substitution for code required liquid seal traps. Many code officials do not understand how these devices work and mistakenly approve them which violates the code section. Adding the wording will only clarify that these type of devices are specifically prohibited by the code. Finally, it should restrict new products and there development if they in fact do violate the code and the protection of health and safety.

Final Action: AS AM AMPC____ D

P89-07/08, Part I
1002.4, Chapter 13 (New)

Proposed Change as Submitted:

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C., representing Sure-Seal

PART I – IPC

1. Revise as follows:

1002.4 (Supp) Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, a trap seal primer valve or trap seal protection device shall be installed. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal. Trap seal protection devices shall be installed in accordance with the manufacturer's installation instructions. ~~A~~ Trap seal primer valves shall conform to ASSE 1018 or ASSE 1044. Trap seal protection devices shall conform to ASSE 1072.

2. Add standard to Chapter 13 as follows:

ASSE

1072-06 Performance Requirements for Barrier Type Floor Drain Trap Seal Protection Devices.

Reason: I submitted a similar change last year. The new standard had been completed; however, it was not published in printed form prior to the final code hearing. The standard has now been printed.

One of the newest devices is a floor drain trap seal protection device. The new ASSE standard regulates these protection devices. The trap seal protection device provides a barrier over the opening to the floor drain. This prevents evaporation of the trap seal. In addition, the barrier prevents the escape of sewer gas by closing off the opening. While this is not the primary function of the device, it is one of the added benefits that such a barrier device provides.

At the International SARS Symposium, all three methods of protecting a trap seal where discussed. It was recognized that these three levels of protection are necessary to prevent the passage of sewer gas that may be contaminated with a corona virus. The proposed new section will permit the design professional or contractor the option to use any one of the viable methods of protecting a floor drain trap seal from evaporation.

The difference between this change and last year's change is the addition of the sentence regarding the installation requirements. This sentence was added following the addition of the new text last year regarding in the installation of trap seal primer valves. The new text simply states that the trap seal protection devices must be installed in accordance with the manufacturer's installation.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Review of proposed new standard ASSE 1072-06 indicated that, in the opinion of ICC staff, the standard did comply with ICC standards criteria.

PART I – IPC
Committee Action: **Disapproved**

Committee Reason: The proposed trap seal device standard to be added indicates that there are six different device styles intended to be installed in six different floor draining applications. Because the six styles will all fit a standard floor drain, the wrong style could be accidently installed for any particular floor drain application which might render the device ineffective.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Julius Ballanco, PE, CPD, JB Engineering and Code Consulting, P.C., representing Sure Seal requests Approval as Submitted.

Commenter's Reason: The Committees reason for recommending disapproval is inappropriate. The Committee readily recognizes that the standard is appropriate, the technology is appropriate, just they are confused as to how to apply the standard. Lack of education or training is not justification for denying acceptance of a viable technology. Currently, there is only one product that has completed the listing requirements of this new standard. The product is rated for all floors – grease waste. Hence, this device can be installed in any floor drain. The concern expressed by the Committee does not exist. If another product is listed for specific floors, it is the responsibility of the code official to become knowledgeable with regard to those limitations. This is no different than any other plumbing product. I encourage the membership to accept this code change.

Final Action: AS AM AMPC____ D

P89-07/08, Part II
IRC P3201.2, Chapter 43 (New)

Proposed Change as Submitted:

Proponent: Julius Ballanco, PE, JB Engineering and Code Consulting, P.C., representing Sure-Seal

PART II – IRC-P

1. Revise as follows:

P3201.2 Trap seals and trap seal protection. Traps shall have a liquid seal not less than 2 inches (51 mm) and not more than 4 inches (102 mm) <u>in depth</u>. Traps for floor drains shall be fitted with a trap primer <u>or trap seal protection device</u> or shall be of the deep seal design. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal.<u>Trap seal protection devices shall be installed in accordance with the manufacturer's installation instructions</u>. <u>Trap seal protection devices shall conform to ASSE 1072.</u>

2. Add standard to Chapter 43 as follows:

ASSE

<u>1072-06</u> <u>Performance Requirements for Barrier Type Floor Drain Trap Seal Protection Devices.</u>

Reason: I submitted a similar change last year. The new standard had been completed; however, it was not published in printed form prior to the final code hearing. The standard has now been printed.

One of the newest devices is a floor drain trap seal protection device. The new ASSE standard regulates these protection devices. The trap seal protection device provides a barrier over the opening to the floor drain. This prevents evaporation of the trap seal. In addition, the barrier prevents the escape of sewer gas by closing off the opening. While this is not the primary function of the device, it is one of the added benefits that such a barrier device provides.

At the International SARS Symposium, all three methods of protecting a trap seal where discussed. It was recognized that these three levels of protection are necessary to prevent the passage of sewer gas that may be contaminated with a corona virus. The proposed new section will permit the design professional or contractor the option to use any one of the viable methods of protecting a floor drain trap seal from evaporation.

The difference between this change and last year's change is the addition of the sentence regarding the installation requirements. This sentence was added following the addition of the new text last year regarding in the installation of trap seal primer valves. The new text simply states that the trap seal protection devices must be installed in accordance with the manufacturer's installation.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Review of proposed new standard ASSE 1072-06 indicated that, in the opinion of ICC staff, the standard did comply with ICC standards criteria.

PART II – IRC-P
Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides a viable alternative to trap primers for preventing trap seal liquid evaporation loss.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Shaunna Mozingo, City of Westminster, representing Colorado Chapter of the International Code Council, requests Disapproval.

Commenter's Reason: The Colorado Chapter requests disapproval of Part II. P89 Part I 07/08 was disapproved by the plumbing committee. The results of the Palm Springs hearings have established two separate, distinct sets of minimum standards for the same code application, while the physical dynamics are the same in both. Divergent actions on this item will lead to confusion and inconsistency in code enforcement and construction. When the differences are justified based on technical merit, we can all readily provide a reasonable explanation and achieve code compliance. This is one of a series of public comments attempting to bring consistency back to the family of I-codes.

Public Comment 2:

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Disapproval.

Commenter's Reason: Many different device designs are currently on the market that comply with 1072. Some of these devices actually don't use a trap and assert the product is equivalent to a trap with a water seal. While the specific proponent's device does work in conjunction with a trap, others may not. These other devices have a life expectancy unlike the water seal in the typical trap with a primer. For a residential application the locations in which these devices will be installed are not in high use fixtures but rather the floor drain in a utility room. A certain level of false sense of security exists, because when these devices fail they are leaving the homeowner subject to potentially dangerous sewer gases. These device designs incorporate a reduced available inlet opening rendering the drain to less than the excepted capability. If the drain utilizing these devices were to be rodded by use of electric cable, they can easily become damaged rendering them inoperable. The service technician may not even know they exist in some cases. After the device is unknowingly damaged, again the homeowner is left subject to potentially dangerous sewer gases.

Final Action: AS AM AMPC____ D

P90-07/08
202, 1003.3.1

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing Thermaco

Revise as follows:

SECTION 202
GENERAL DEFINITIONS

GREASE INTERCEPTOR. A plumbing appurtenance that is installed in a sanitary drainage system to intercept oily and greasy wastes from a wastewater discharge. Such device has the ability to intercept free-floating fats and oils.

Hydromechanical. A grease interceptor, compact in size and usually located indoors, that is designed to separate fats, oils and grease in a time period of approximately one minute, by means of the simultaneous actions of hydraulic flow action, air entrainment and differences in specific gravities.

Gravity. A grease interceptor, large in size and usually located outdoors and underground, that is designed to separate fats, oils and grease in a time period of 30 minutes or more by means of differences in specific gravities only.

1003.3.1 Grease interceptors and automatic grease removal devices required. A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without prerinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. Where lack of available space or other physical constraint prevents the installation of the required size gravity grease interceptor, one or more hydromechanical grease interceptors shall be installed upstream of the gravity grease interceptor to achieve the overall required grease removal capacity.

Reason: This code change recognizes the need for combinations of grease interceptors for renovation projects involving existing buildings where there is insufficient space to install a large enough in-ground grease interceptor (gravity type) to meet local sewer ordinance requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: The proposed language in both definitions and the added text is ambiguous and vague with regard to distinguishing between in-ground and compact types of grease interceptors as well as the indoor/outdoor, underground locations.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing Thermaco, requests Approved as Modified by this public comment.

Modify proposal as follows:

1003.3.1 Grease interceptors and automatic grease removal devices required. A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without prerinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. ~~Where lack of available space or other physical constraint prevents the installation of the required size gravity grease interceptor, one or more hydromechanical grease interceptors shall be installed upstream of the gravity grease interceptor to achieve the overall required grease removal capacity~~**.** A single interceptor or device or any combination of interceptors, devices and engineered systems shall be utilized to meet the intent of this section.

Commenter's Reason: The modified wording proposed addresses the issues raised by the IPC committee at the previous hearing. This code change is important and recognizes the need for combinations of grease interceptors for renovation projects (change of occupancy) involving existing buildings where there is insufficient space or it is cost prohibitive to install a large enough in-ground interceptor (usually a gravity type) to meet local sewer ordinance requirements.

Final Action: AS AM AMPC____ D

P91-07/08
1003.3.2

Proposed Change as Submitted:

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting, representing In-Sink-Erator

Delete without substitution:

~~**1003.3.2 Food waste grinders.** Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.~~

Reason: This section as now written is totally confusing and implies that all grease interceptors must have a solids interceptor if a garbage disposal is discharging into the interceptor. This is not only impractical (potential clogging) but there are no solids interceptors large enough to accommodate all installations. In addition, many jurisdictions do add chemicals and bacteria to help remediate potential sewer problems (such as grease and hydrogen sulfide).

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: Solids interceptors are necessary to prevent food waste grinders from overloading grease interceptors.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sid Cavanaugh, Cavanaugh Consulting, representing In-Sink Erator, requests Approval as Modified by this public comment.

Modify proposal as follows:

1003.3.2 Food waste grinders. A food waste grinder shall connect downstream of any grease interceptor unless approved to be connected upstream of a grease interceptor. Where a food waste grinder discharges to a grease interceptor complying with Section 1003.3.4, a solids interceptor shall be installed upstream of the grease interceptor. Where a food waste grinder discharges to a grease interceptor not complying with Section 1003.3.4, a solids interceptor shall not be required. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. ~~Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.~~

Commenter's Reason: This proposed wording addresses an industry concern with mandating a solids interceptor for all types of interceptors which was not the original intent of the code change wording that was added to the 2006 edition of the IPC. This requirement will only create confusion and is impractical (potential clogging) as there are no solids interceptors large enough to accommodate all installations. In addition, many jurisdictions do add chemical and bacteria to help remediate potential sewer problems (such as grease and hydrogen sulfide buildup). This proposed wording also clarifies that in most cases food waste disposals should not connect to interceptors of any type but should connect downstream directly in sewer system. Studies have shown that this is the proper way to dispose of food waste which is not a contributor to sewer stoppages and overflows.

Final Action: AS AM AMPC____ D

P96-07/08
1102.6, 1111 (New), Chapter 13 (New)

Proposed Change as Submitted:

Proponent: John M. Rattenbury, RMS Engineering LLC

1. Revise as follows:

1102.6 Roof drains. Roof drains shall conform to ASME A112.21.2M, ~~or~~ ASME A112.3.1 or ASME A112.6.4. Siphonic roof drains shall conform to ASME A112.6.9.

2. Add new text as follows:

SECTION 1111
SIPHONIC ROOF DRAINAGE SYSTEMS

1111.1 General. Siphonic roof drainage systems shall be an alternative to the roof drain systems designed in accordance with Sections 1105 and 1106. Siphonic roof drainage systems shall be designed and installed in accordance with ASPE 45.

(Renumber subsequent sections)

3. Add standards to Chapter 13 as follows:

ASME
A112.6.4-2003 Roof Deck and Balcony Drains

A112.6.9–2005 Siphonic Roof Drains

ASPE
45-2007 Siphonic Roof Drainage

Reason: The purpose of this code change is to incorporate by reference the consensus standards for siphonic roof drainage to serve as the basis for authority approval under Section 105.4 "Alternative engineering design." The current code does not reference the relevant standards.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Review of proposed new standard ASPE 45-2007 indicated that, in the opinion of ICC staff, the standard did not comply with ICC standards criteria (Sections 3.6.2.1 and 3.6.2.8).

Analysis: Review of proposed new standards ASME A112.6.4-2003 and A112.6.9-2005 indicated that, in the opinion of ICC staff, the standard did comply with ICC standards criteria.

Committee Action: **Approved as Submitted**

Committee Reason: The proposed technology has been proven by years of successful installations and provides for more flexibility in installing storm drain piping.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Robert F. Loeper, Jr., President, representing Region VII Chapter of ICC, requests Disapproval.

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Disapproval.

Commenters' Reason: This type system design is already permitted by Section 105.2. ASPE 45 does not comply with ICC Standards criteria Sections 3.6.2.1 and 3.6.2.8. It is not proper format to include a plumbing system design that requires a calculation from a single independent design. When asked how would these figures be verified on a plan check during the Public Comment Hearings, it was testified that either use the program, available from the proponent, or hire another engineer.

Final Action: AS AM AMPC____ D

P98-07/08

1107.1 (New), 1107.1.1 (New), 1107.1.2 (New), 1107.1.3 (New), 1107.1.3.1 (New), 1107.1.3.2 (New)

Proposed Change as Submitted:

Proponent: Robert Evans, P.E., American Society of Plumbing Engineers

Delete and substitute as follows:

~~**1107.1 Secondary drainage required**. Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.~~

~~**1107.2 Separate systems required.** Secondary roof drain systems shall have the end point of discharge separate from the primary system. Discharge shall be above grade, in a location that would normally be observed by the building occupants or maintenance personnel.~~

~~**1107.3 Sizing of secondary drains.** Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 based on the rainfall rate for which the primary system is sized in Tables 1106.2, 1106.3 and 1106.6. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.~~

1107.1 Secondary drainage required. Where failure of the primary drainage system will result in a depth of water exceeding that for which the roof was designed in accordance with Section 1101.7, a secondary roof drainage system shall be required. The secondary roof drainage system shall comply with one or more of the systems described in Sections 1107.1.1 through 1107.1.3.

1107.1.1 Open side roof. An open-sided roof shall be utilized for secondary drainage to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7.

1107.1.2 Scuppers. Scuppers shall be utilized for secondary drainage and shall be designed to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7. Scupper openings shall have a height of not less than 4 inches and shall have a width of not less than the circumference of the roof drain sized in accordance with Section 1106 for draining the roof area served by the scupper.

1107.1.3 Secondary roof drains. Secondary roof drains shall be be utilized for secondary drainage and shall be designed to prevent a ponding water depth that would exceed that for which the roof was designed in accordance with Section 1101.7. The weir of the secondary roof drains shall be installed at an elevation not less than 2 inches above the roof surface at the secondary drain location. The top of the roof drain shall be installed at an elevation not greater than the depth of ponding water that would exceed that for which the roof was designed in accordance with Section 1101.7. Secondary roof drains shall be served by a piping system conforming to Section 1107.1.3.1 or 1107.1.3.2.

1107.1.3.1 Separate piping System. Secondary roof drains shall discharge to a piping system that is independent from the primary roof drain piping system. Secondary roof drain piping systems shall be sized in accordance with Section 1106 using the same rainfall rate for which the primary system is sized. The point of discharge of the piping system shall be above grade and shall be in a location that would normally be observed by the building occupants or maintenance personnel.

1107.1.3.2 Combined piping system. The piping from secondary and primary roof drains shall be independent until after all horizontal piping offsets below the roof and above the ceiling have occurred. The junction of secondary and primary roof drain piping systems shall occur only in vertical piping. All piping down stream from the point where such two piping systems combine shall be sized in accordance with Section 1106 using a rainfall rate that is two times the rate determined by Section 1106.1. The combined primary and secondary drain piping shall connect to a building storm sewer that connects to an underground public storm sewer.

Reason: ASPE developed code text to clarify the various options for secondary storm drainage. Text similar to this has been adopted by other plumbing codes. The proposed new text also references the appropriate other sections of the chapter.

Roof loads based on ponding is already stated in Section 1101.7. There is no need to duplicate the requirements.

The code mandates secondary roof drainage for all buildings hence, the first section is clear in simply stating this requirement. The remaining sections provide the options.

Currently, the code provides no sizing for scuppers. This section includes the minimum scupper size. It also lists the open side of a roof as an acceptable secondary drainage method.

When a secondary drainage system is piped, there are two options for such design. The first would be to separately pipe the system. A separate system is sized the same as a primary system. The discharge is required to be above grade as currently required in the code.

The second option would be to tie the primary into the secondary. This design has been used successfully for many years. The limitation requires the secondary to be piped into the vertical downspout downstream of any horizontal offset. The common piping must be size for double the rainfall rate. This provides the additional factor of safety to the roof design for unusual occurrences.

It should be noted that the propose requirements list a minimum height above the roof of 2 inches for the secondary drain. The current code has no such requirement. A secondary drain could be at roof level, thus reducing the reliability of the secondary system.

Cost Impact: The code change proposal will not increase the cost of construction.

Committee Action: **Disapproved**

Committee Reason: There are known problems with having the secondary and primary storm drain systems tied together.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Julius Ballanco, PE, CPD, President, American Society of Plumbing Engineers, representing ASPE, requests Approval as Submitted.

Commenter's Reason: The proposed change offers viable options for the design and installation of secondary roof drainage systems. The concern voiced by the Committee was that there is no warning if the primary roof drain is blocked. The current code has no warning. While it may be separately pipe, or be by scuppers, there is no warning mechanism when the separate system or scuppers are used. The method of combining primary to secondary has been used for many years. Furthermore, it is currently accepted in many codes. Yet, those opposed could not identify one failure of a system designed in accordance with this recommended change. ASPE would encourage your acceptance of this change.

Public Comment 2:

Julius Ballanco, PE, CPD, President, American Society of Plumbing Engineers, representing ASPE, requests Approval as Modified by this public comment.

Modify proposal as follows:

1107.1.3.2 Combined piping system. The piping from secondary and primary roof drains shall be independent until after all horizontal piping offsets below the roof and above the ceiling have occurred. The junction of secondary and primary roof drain piping systems shall occur only in vertical piping. An automatic alarm shall be provided to indicate when the secondary roof drain is discharging rainwater. All piping down stream from the point where such two piping systems combine shall be sized in accordance with Section 1106 using a rainfall rate that is two times the rate determined by Section 1106.1. The combined primary and secondary drain piping shall connect to a building storm sewer that connects to an underground public storm sewer.

Commenter's Reason: The only concern by the Committee was the lack of notification when the secondary roof drain is discharging water. This proposed modification will add a requirement to have an alarm on the secondary roof drainage system. Such an alarm is currently available and can be added to the design of the storm drainage system.

Final Action: AS AM AMPC____ D

P99-07/08
1107.1.1 (New), 1107.1.2 (New)

Proposed Change as Submitted:

Proponent: Luke Thomas Connable, Jr., Code Enforcement, Shelby County, TN

Add new text as follows:

1107.1.1 Scupper location. Scuppers in parapet walls shall be located at a point that results in the least horizontal distance between a scupper and a primary drain. The weir of scuppers shall be located at an elevation not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) above the roof surface at the parapet wall.

1107.1.2 Secondary drain location. Secondary drains shall be located within 4 feet horizontally of a primary drain location. The weir of secondary drains shall be located at an elevation not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) above the roof surface at the secondary drain location.

Reason: The height of the scuppers or roof drains above the roof was dropped in the 1999 *Southern Building Code* Section 1511.6.4.3 and there is no reference that can be found in either the 2006 *International Building Code* or *International Plumbing Code*. Limitations should be set on the height of ponding water, and this would make it much easier for the structural engineer to design the roof to carry such load. Keeping the secondaries as close as possible to the primaries would also help limit ponding water amounts.

Cost Impact: The code change proposal will not increase the cost of construction. This change could possibly create a savings due to roof design requirements if ponding water was deeper.

Committee Action: **Approved as Submitted**

Committee Reason: The proposed text provides specifications for scupper elevations and location of secondary drains for storm drain systems that are currently lacking in the code.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Robert F. Loeper, Jr., President, representing Region VII, Chapter of ICC, requests Approval as Modified by this public comment.

Guy Tomberlin, Fairfax County, representing VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association, requests Approval as Modified by this public comment.

Modify proposal as follows:

1107.1.1 Scupper location. ~~Scuppers in parapet walls shall be located at a point that results in the least horizontal distance between a scupper and a primary drain.~~ The weir of scuppers shall be located at an elevation not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) above the roof surface at the parapet wall~~.~~, unless such roof is structurally designed to support the resultant depth of water.

(Portions of proposal not shown remain unchanged)

Commenters' Reason: The sentence proposed to be stricken is purely subjective and impossible to comply with. This is an issue that clearly needs to be left up to the design professional, general contractor, and installer. To believe that the "least distance" can always be achieved is not realistic. As written, literally, the primary drain would always need to be installed directly next to the scupper. That is not a typical roof design but isn't that the "least distance." There are far too many items that must be taken into consideration for the placement of drains and scuppers. Things like structural members and roof material typically assist with determining the location of roof drains. It would be an unfortunate situation to have a complete roof system, including drainage system, installed only to have an inspector show up on site and reject the installation because a scupper may be 1 foot farther than the "point resulting in the least horizontal distance" from the primary drain. Unless the primary is installed touching the parapet wall where the scupper is located it is probably not within the "least horizontal distance." The new text proposed in the last sentence is to recognize that some roof designs specifically incorporate the storage of water.

Final Action: AS AM AMPC____ D