COMPLETE REVISION HISTORY TO THE 2015 I-CODES®

Successful Changes and Public Comments

ICC
INTERNATIONAL CODE COUNCIL

Complete Revision History to the 2015 I-Codes: Successful Changes with Public Comments: 2015 IPC

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INTRODUCTION

Why did IPC/2015 Section 424.8 change from the 2012 edition? This Complete Revision History to the 2015 I-Codes: Successful Changes with Public Comments: 2015 IPC has been compiled to provide the answers to such questions.

This Complete Revision History to the 2015 I-Codes: Successful Changes with Public Comments: 2015 IPC provides the published documentation for each successful code change in the IPC/2015 since the 2012 edition. Each changed code section is listed in the Table of Changes which contains three headings. The first heading is 2015 IPC which lists the section number in the 2015 code. If (new) appears after the section number it indicates that the section is new in 2015. If (deleted) is indicated in 2012 it means that the section no longer exists and the second column 2012 IPC will show the section number that was deleted. Also, the second heading will indicate if a section number has changed from 2012 to 2015. If there is nothing indicated in the 2012 column, the section number remained the same. The third heading lists the code change number(s) which affected that particular section. The published material for each change is contained in the Documentation section.

HOW TO USE THE HANDBOOK

This Complete Revision History to the 2015 I-Codes: Successful Changes with Public Comments: 2015 IPC makes it possible for the reader to examine, in one location, all published information about a particular code change. For any given change, the text of the proposed change, committee actions and modifications, assembly actions, successful public comments, and final action can be found by using the following steps:

1. Locate the code section in the Table of Changes using the 2015 IPC section number.
2. Note the corresponding proposed code change number(s) from the list.
3. Locate the proposed code change number (listed in numerical order under the appropriate year and letter designation) in the Documentation section to read the complete chronological documentation of the proposed change.

SOURCE DOCUMENTS

The code development cycle (see page vii) involves the publication of four documents, the result of 1) public submittal of proposed changes, 2) a public hearing and committee/assembly actions, 3) submittal of public comments to the committee or assembly actions, and 4) final action results. Under each code change number in the Documentation section of this handbook, material corresponding to that individual proposed change has been drawn from each of the four publications. One code change cycle occurred between published editions of the 2012 and 2015 IPC; therefore, the Documentation section of this handbook contains material collected and collated from the following published documents:

2012 Documentation

2012 Proposed Changes to the International Codes
2012 Report of the Public Hearing on the International Codes
2012 Final Action Agenda on the International Codes
Final Action on 2009 Proposed Changes to the International Codes

2013 Documentation

2013 Proposed Changes to the International Codes
2013 Report of the Public Hearing on the International Codes
2013 Final Action Agenda on the International Codes
Final Action on 2012 Proposed Changes to the In1ternational Codes

Code Change No: P147-12

Code change numbers are identified with a letter and a year designation. For instance, **P147-12** is proposed change number **147** to the International Plumbing Code and was submitted in the **12** (2012) code change cycle. (See IPC Code Change Numbers on page v for a discussion of code committees)

Original Proposal

This is the proposal as published in the 2012 Proposed Changes to the International Codes. It includes the section number(s), proponent's name, who they are representing, the text of the proposed change and their reason for the change. This is a change to IPC Section 602.3.4.

Public Hearing Results

This is the result of the Code Development Hearing held to consider the change, as published in the 2012 Report of the Public Hearing to the International Codes. It includes the committee's action (Approved as Submitted) and reason for the action and also identifies if there was an assembly motion (none).

Public Comments

This is text of the submitted public comment, as published in the 2012 Public Comment Agenda to the International Codes. It includes the public commenter's name and affiliation, the requested action to be considered at the Public Comment Hearing (Approved As Modified by this public comment) and the reason.

Final Hearing Results

This is the action taken by the eligible voting members of the ICC at the Public Comment Hearing, as published in the Final Action on 2012 Proposed Changes to the International Codes. The Final Action was AMPC2 which means the eligible voting members of ICC further overturned the committee's action and approved the change based on the submitted public comment.

CODE CHANGE NUMBERS

The following is the legend for code change numbers, along with the applicable committee and the committee's primary area of responsibility relative to the IPC.

Prefix	Code Committee	Primary IPC Chapters Affected
P	IPC Code Committee	Chapters 1-11; Chapter 13
EC	IECC Code Committee	Chapter 5
F	IFC Code Committee	Chapter 12
FG	IFGC Code Committee	Chapter 1
G	IBC General Committee	Chapters 1, 2, 3, 4
E	IBC Means of Egress Committee	Chapter 4
M	IMC Code Committee	Chapter 3

Although most changes to the IPC are found under proposed change numbers beginning with a P, some changes to the IPC are published within a proposed change to the other *International Codes,* and therefore are found under a proposed code change number beginning with one of the other letters listed above. Use the table of contents to locate appropriate sections by year and letter designation.

CODE SECTION NUMBER DIFFERENCES

For editorial reasons, some code section numbers in the 2015 edition have changed from the 2012 edition. The numbering of code sections is an editorial task which takes place outside of the normal code development cycle, and is necessary to avoid duplicate or non-sequential section numbers.

The Table of Changes typically references the 2012 code section numbers that have been deleted. (See Introduction)

In most cases the section numbers have not changed from the 2012 to the 2015 edition. However, the reader should remember that it is always the 2012 code section numbers which appear in the material contained in the Documentation section. This is due to proposed changes which have as their basis, a section number in the 2012 edition. Since an attempt to correlate code sections by number may lead to confusion, the user is advised to rely on the section content rather than the numbers to locate and compare parallel sections in the two editions.

ABBREVIATIONS FOR ACTIONS

In the Documentation section, the following abbreviations are used to signify committee or final action:

Legend for 2012 and 2013 Documentation:

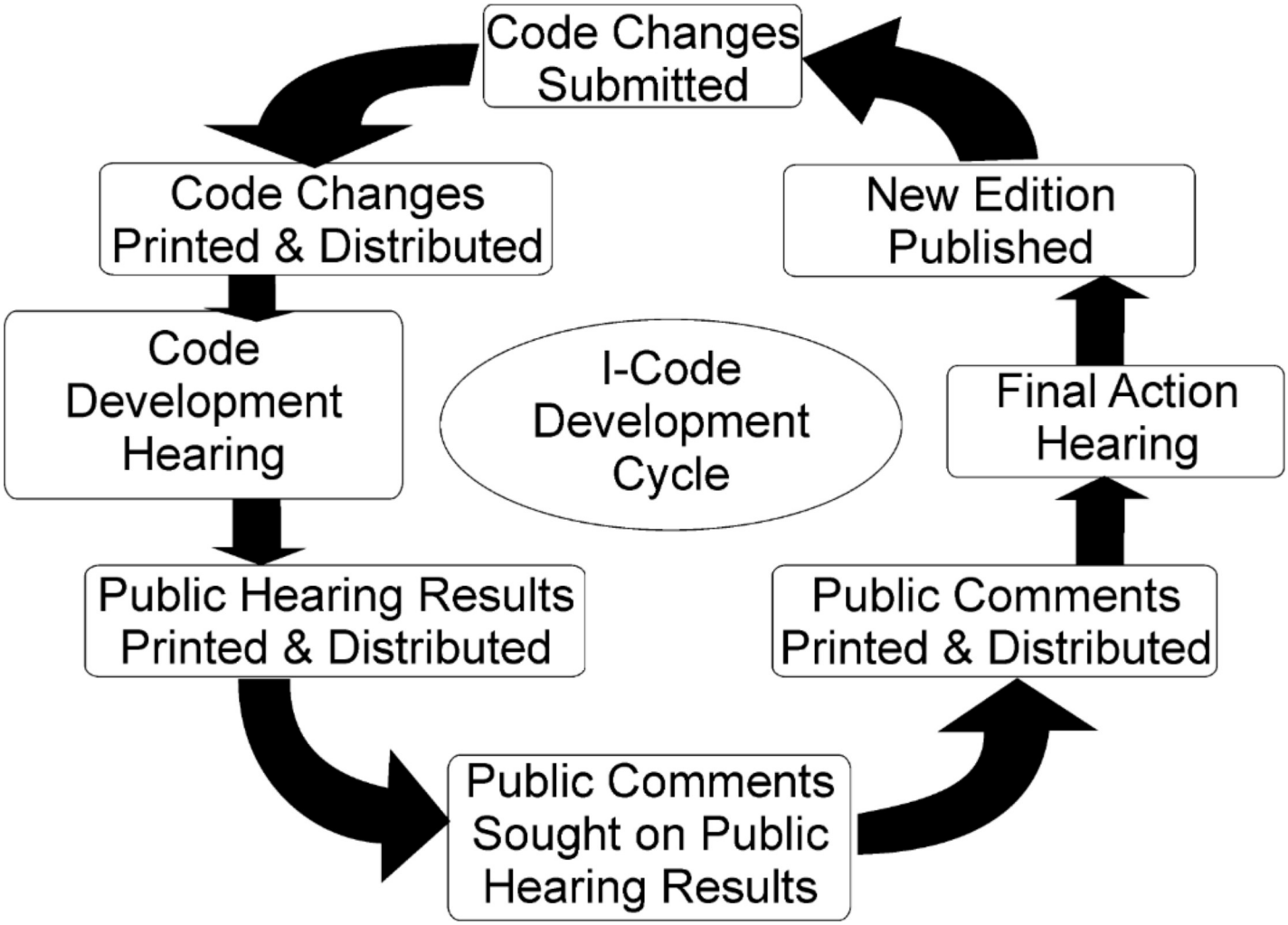
AS = Approved as Submitted
D = Disapproved
AM = Approved as Modified by the Code Committee
AMPC = Approved as Modified by a Public Comment
WP = Withdrawn by Proponent

CODE CORRELATION COMMITTEE

During the course of the code development process, there are editorial issues, issues related to code correlation problems arising from code changes, and issues related to the appropriate committee that should consider certain topics. These issues are placed before the ICC Code Correlation Committee for resolution. During the development of the 2015 Code, from 2012 to 2014, the Code Correlation Committee met 2 times to discuss and resolve these issues. Code Correlation Committee actions are posted on the ICC website in the Code Development Section.

ICC CODE DEVELOPMENT PROCESS

The following depicts the key steps in ICC's Code Development Process:



The procedures governing ICC Code Development are entitled Code Development Process for the International Codes. These procedures are updated periodically and therefore not included here. To obtain the current version, visit ICC's website at www.iccsafe.org.

TABLE OF CONTENTS

PAGE

INTERNATIONAL PLUMBING CODE
TABLE OF CHANGES

Chapter 1
GENERAL

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
[A] 101.3		ADM6-13 Part I AMPC
[A] 102.3		ADM22-13 Part I
[A] 103.4		ADM21-13 Part I
[A] 103.4.1 (New)		ADM21-13 Part I
[A] 104.4		ADM22-13 Part I
[A] 105.1		ADM22-13 Part I
[A] 105.2		ADM23-13 Part I
[A] 106.1		ADM22-13 Part I
[A] 106.1.1 (New)		ADM26-13
[A] 106.1.2 (New)		ADM26-13
[A] 106.3		ADM22-13 Part I
[A] 108.5		ADM22-13 Part I
[A] 108.7.2		ADM22-13 Part I

Chapter 2
DEFINITIONS

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
ALTERNATE ON-SITE NON-POTABLE WATER (New)		P1-12
[A] APPROVED		ADM55-13 Part I
[A] APPROVED AGENCY		ADM57-13 Part I
BACKFLOW PREVENTER		P1-12
COLLECTION PIPE (New)		P11-12 AMPC1
(B) DESIGN FLOOD ELEVATION		G8-12
DRINKING FOUNTAIN (New)		P54-12
GREASE INCERCEPTOR Fats, Oils and Greases (FOG) disposal system (New)		P199-12, P200-12, P202-12
MECHANICAL JOINT		P4-12
METER (New)		P11-12 AMPC1
ONSITE NONPOTABLE WATER REUSE SYSTEM (New)		P11-12 AMPC1
PLUMBING SYSTEM		P5-12
RAINWATER (New)		P11-12 AMPC1, P209-12 AMPC
RECLAIMED WATER (New)		P11-12 AMPC1
SEWER Public Sewer		P7-12
STORMWATER (New)		P209-12 AMPC
TOILET FACILITY (New)		P9-12
WASTE RECEPTOR (New)		P10-12, P182-12
WATER COOLER (New)		P54-12
WATER DISPENSER (New)		P54-12

Chapter 3
GENERAL REGULATIONS

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
301.3		P11-12 AMPC1
307.5		P17-12
307.6	307.5	P17-12
307.7	307.6	P17-12
Table 308.5		P19-12
[B] 309.2		P20-12
[M] 314.2.2		M22-12
[M] 314.2.4.1 (New)		M29-CCC
[M] 314.2.5 (New)		M32-CCC

Chapter 4
FIXTURES, FAUCETS AND FIXTURE FITTINGS

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
403.1		P26-12
Table 403.1		P30-12, G40-12
403.3		P35-12
403.3.3		G71-12, Part III
403.3.4		G71-12, Part III
403.4		P38-12
403.4.1		P39-12
403.5		G71-12, Part III
404.2 (New)		P42-12
404.3 (New)		P42-12
406.1		P46-12
409.2		P50-12
410.1		P51-12
410.2 (New)		P30-12
[B] 410.3	[B] 410.2	P30-12, E201-12
410.4	410.3	P30-12, P54-12
410.5	410.5	P30-12, P54-12
413		P56-12
413.1		P56-12, P57-12
413.2		P56-12
413.3		P56-12
413.4		P56-12
417.4.1		P59-12
420.1		P63-12
421.1		P68-12
423.3 (New)		P70-12
424.8		P73-12

Chapter 5
WATER HEATERS

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
501.3		P75-12
504.6		P80-12
504.7.2		P86-12

Chapter 6
WATER SUPPLY AND DISTRIBUTION

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
601.5		P87-12
602.3.4		P147-12 AMPC
603.2 (New)		P88-12
Table 604.3		P90-12
Table 604.5		P93-12
605.2.1 (New)		P112-12
Table 605.3		P94-12, P95-12
Table 605.4		P94-12
605.5		P113-12
Table 605.5		P97-12, P98-12, P99-12, P100-12, P101-12 AMPC, P102-12
605.7		P115-12, P116-12
Table 605.7 (New)		P116-12
Deleted	605.11	P95-12
605.14	605.15	P95-12, P104-12
605.14.3 (New)		P105-CCC
605.14.5 (New)		P104-12, P106-12
605.15	605.16	P95-12
605.15.2	605.16.2	P95-12 P107-12
605.16 (New)		P94-12
605.16.1 (New)		P94-12
605.16.2 (New)		P94-12
605.18.3 (New)		P109-CCC
605.22.2 (New)		P119-CCC
605.23.3 (New)		P120-CCC
605.24.2		P121-12
605.25		P122-12
Deleted	605.25.1	P122-12
605.25.1	605.25.2	P122-12, P131-12
607.3		P131-12
Deleted	607.3.1	P131-12
Deleted	607.3.2	P131-12
Table 608.1		P132-12, P133-12
608.6		P134-12
608.8 (New)		P135-12 AMPC
608.8.1 (New)		P135-12 AMPC
Figure 608.8.1 (New)		P135-12 AMPC
608.8.2	608.8.1	P135-12 AMPC
608.8.2.2	608.8.2	P135-12 AMPC
Table 608.8.2.2	Table 608.8.3	P135-12 AMPC
608.8.2.3 (New)		P135-12 AMPC
608.13		P142-12
608.13.6		P132-12
608.13.7		P141-12
608.13.10 (New)		P142-12
610.1		P147-12 AMPC

Chapter 7
SANITARY DRAINAGE

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
Deleted	701.7	P152-12
Table 702.2		P95-12
Table 702.3		P95-12
Table 702.4		P95-12
702.5 (New)		P155-12
702.6	702.5	P155-12
702.7	702.6	P155-12
703.1		P157-12
703.6 (New)		P158-12
Deleted	705.3	P95-12
705.4.3	705.5.3	P95-12, P161-12
Deleted	705.7	P162-12
Deleted	705.7.1	P162-12
Deleted	705.7.2	P162-12
Deleted	705.8	P163-12
Deleted	705.8.1	P163-12
Deleted	705.8.2	P163-12
705.11.2	705.14.2	P164-13
708.1. through 708.1.11 (New)		P168-12
Table 709.1		P56-12
712.3.2		P170-12 AMPC
715.1		P172-12
716	Appendix C	P174-12
717 (New)		P159-12 AMPC1

Chapter 8
INDIRECT/SPECIAL WASTE

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
802.1		P175-12, P176-12
802.1.1		P177-12
802.1.6		P56-12, P179-12
802.1.7		P179-12
802.1.8		P175-12
802.2		P179-12
802.2.2		P179-12
802.3		P181-12, P182-12
802.3.2		P182-12
802.3.3	802.4	P182-12
Deleted	803.1	P155-12
803.1	803.2	P155-12
803.2	803.3	P155-12

Chapter 9
VENTS

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
901.2		P184-12
903.1		P185-12
903.2		P186-12
915.1		P56-12
915.2.3		P190-12
916.1		P56-12
918.5		P192-12

Chapter 10
STORM DRAINAGE

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
1002.1		P193-12
1002.4		P195-12
1002.4.1 through 1002.4.1.4 (New)		P195-12 AMPC1
1002.6		P197-12
1003.3.2		P56-12
1003.3.4		P199-12
1003.3.6 (New)		P200-12
1003.3.7 New)		P202-12
1003.4		P204-12, P206-12
1003.6		P207-12
1003.9		P208-12

Chapter 11
STORM DRAINAGE

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
1101.2		P209-12 AMPC1
1101.7		P211-12
Table 1102.4		P95-12
Table 1102.5		P95-12, P214-12
1103.1		P216-12
Deleted	1104.2	P217-12
1105.2 (New)		P218-12
Deleted	1106.2	P219-12
1106.2 (New)		P219-12
Table 1106.2 (New)		P219-12
Deleted	Table 1106.2(1)	P219-12
Deleted	Table 1106.2(2)	P219-12
Deleted	1106.3	P219-12
1106.3 (New)		P219-12
Deleted	Table 1106.3	P219-12
Table 1106.3 (New)		P219-12
1106.6		P219-12
Deleted	Table 1106.6	P219-12
Table 1106.6 (New)		P219-12
1108.1		P220-12
1108.3		P221-12
Section1109		P158-12
1109.1		P158-12
Deleted	Section1110	P222-12

Chapter 13
GRAY WATER RECYCLING SYSTEMS

Deleted		P11-12 AMPC1

Chapter 13
NONPOTABLE WATER SYSTEMS

Chapter 13 (New)		P11-12 AMPC1

Chapter 14
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS

Chapter 14 (New)		P11-12 AMPC1

Chapter 15
REFERENCED STANDARDS

Chapter 15	Chapter 14	ADM62-13, P11-12 AMPC1
API		P225-12
ASME		P42-12, P63-12, P97-12, P98-12, P116-12, P120-12, P132-12, P199-12, P202-12
ASSE		P195-12 AMPC1
ASTM		P87-12, P94-12, P101-12 AMPC1, P105-12, P109-12, P116-12, P119-12, P159-12 AMPC
AWWA		P116-12, P225-12
IAPMO		P200-12, P202-12
ICC		P42-12
MSS		P116-112
NSF		P112-12, P116-12, P223-12
UL		P51-12, P57-12, P68-12, P225-12

APPENDIX C
STRUCTURAL SAFETY

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
Appendix C	Appendix F	P174-12

APPENDIX E
SIZING OF WATER PIPING SYSTEM

2015 IPC	2012 IPC	CODE CHANGE NUMBER(S)
E202.1		P226-12

Code Change No: P1-12

Original Proposal

Section(s): 202

Proponent: Michael Moss, American Backflow Prevention Association (msmoss@utah.gov)

Revise as follows:

BACKFLOW PREVENTER. A backflow prevention assembly, a backflow prevention device or other means or method to prevent backflow into the potable water supply.

Reason: This definition is used throughout the code. However, it does not define to the user of the code, how to specifically identify or apply proper "protection" to a use or connection. Industry standards differentiate between backflow prevention devices and backflow prevention assemblies. A backflow prevention assembly is a specific type of mechanical backflow prevention protection which is field testable and repairable in-line, with shutoff valves and test cock fittings.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P1-12 **AS**

Code Change No: P4-12

Original Proposal

Section(s): 202

Proponent: James Paschal, Paschal Engineering representing himself (Jim@PaschalEngineering.com)

Revise as follows:

MECHANICAL JOINT. A connection between pipes, fittings, or pipes and fittings that is not screwed, caulked, threaded, soldered, solvent cemented, brazed, ~~or~~ welded, or heat-fused. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting, or adapter.

Reason: Heat fusion is now a defined type of joint for plastic piping, and is considered separate from welding because there is not any additional filler material used in forming the joint. However, heat-fusion joints are not mechanical joints and as such should be excluded from the definition of mechanical joints.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal appropriately clarifies that a heat fused joint is not a mechanical joint.

Assembly Action: **None**

Final Hearing Results

P4-12 AS

Code Change No: P5-12

Original Proposal

Section(s): 202

Proponent: Robert G. Konyndyk, Chief, Plumbing Division, Bureau of Construction Codes, Department of Licensing and Regulatory Affairs, State of Michigan, representing The Bureau of Construction Codes (konyndykr@michigan.gov)

Revise as follows:

PLUMBING SYSTEMS. Includes the water ~~supply and~~ distribution pipes; plumbing fixtures and traps; water-treating or water-using equipment; soil, waste and vent pipes; ~~and sanitary and storm sewers~~ and building drains; in addition to their respective connections, devices and appurtenances within a structure or premises~~.~~; and the water service, building sewer and building storm sewer serving such structure or premises.

Reason: This code change revision will improve the code by providing greater clarity. The code proposal revision will not add or delete any of the current areas identified in the code. It will rearrange the items to enhance the understanding that water supplies, storm sanitary and storm sewers are located outside the structures. They are however identified in the code and remain critical to the operation of structures.

Cost Impact: The revision will not affect construction costs and may reduce construction planning costs.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal makes a good clarification of the definition by grouping all of the piping services outside the building into a single concise statement.

Assembly Action: **None**

Final Hearing Results

P5-12 AS

Code Change No: P7-12

Original Proposal

Section(s): 202

Proponent: Windell F. Peters, representing the Georgia State Inspectors Association (windellf@bellsouth.net)

Revise as follows:

Public sewer. ~~A common sewer directly controlled by public authority.~~ That part of the drainage system of pipes, installed and maintained by a city, township, county, public utility company or other public entity, and located on public property, in the street or in an approved dedicated easement of public or community use.

Reason: The AHJ requires approval before work can be performed on any utilities under their control. The IPC references public sewer and water main numerous times. The current definition of Public Sewer does not adequately define the term. Water mains and public sewers are controlled by local government and located in an area controlled by them as well. The definition of public sewer should be as detailed as the current definition of water main
for clarity purposes.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal adds significant clarity to the definition for a better understanding of where the public sewer begins.

Assembly Action: **None**

Final Hearing Results

P7-12 **AS**

Code Change No: P9-12

Original Proposal

Section(s): 202

Proponent: Bob Adkins, Prince William County VA Representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (radkins@pwcgov.org)

Add new definition as follows:

TOILET FACILITY. A room or space that contains not less than one water closet and one lavatory.

Reason: A definition for "toilet facility" is needed. The term is found in the code 27 times but yet the never really provides a clear indication of what is intended in each case its mentioned.

Cost Impact: none

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P9-12 AS

Code Change No: P10-12

Original Proposal

Section(s): 202

Proponent: Shawn Strausbaugh, Arlington County VA representing the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (Sstrausbaugh@arlingtonva.us)

Add new definition as follows:

WASTE RECEPTOR. A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.

Reason: A definition for "waste receptor" is needed. The term is found in the code 24 times with no exact description. Also, see coordinated proposed change in Chapter 8 based on this definition.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Even though the understanding of the term can be determined from the context of the code provisions in Chapter 8, adding a definition in Chapter 2 will improve the clarity of the code.

Assembly Action: **None**

Final Hearing Results

P10-12 AS

Code Change No: P11-12

Original Proposal

Section(s): 202, 301.3, Chapter 13, Chapter 13 (New), Chapter 14 (New)

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Add new definitions as follows:

STORAGE TANK. A fixed container for holding water at atmospheric pressure for subsequent reuse as part of a plumbing or irrigation system.

RECLAIMED WATER. *Non-potable water* that has been derived from the treatment of wastewater by a facility or system licensed or permitted to produce water meeting the jurisdiction's water requirements for its intended uses. Also known as "Recycled Water."

ONSITE NON-POTABLE WATER REUSE SYSTEMS. Water systems for the collection, treatment, storage, distribution, and reuse of non-potable water generated onsite, including but not limited to graywater systems. This definition does not include rainwater harvesting systems.

DISTRIBUTION PIPE. Pressurized or non-pressure piping used within the plumbing system of a building to deliver rainwater or graywater from the *storage tank* or pump to the point of use.

COLLECTION PIPE. Unpressurized pipe used within the collection system that drains onsite non-potable water or rainwater to a storage tank by gravity.

ALTERNATE ON–SITE NON-POTABLE WATER. Non-potable water from other than public utilities, onsite surface sources and subsurface natural freshwater sources. Examples of such water are graywater, on-site reclaimed water, collected rainwater, captured condensate, and rejected water from reverse osmosis systems.

METER. A measuring device used to collect data and indicate water usage.

RAINWATER. Water from natural precipitation.

Revise as follows:

301.3 Connections to drainage system. Plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved ~~gray water~~ system in accordance with Chapter 13 and 14 ~~for flushing of water closets and urinals or for subsurface landscape irrigation~~.

Delete existing Chapter 13 and substitute as follows:

~~**CHAPTER 13**~~
~~**GRAY WATER RECYCLING SYSTEMS**~~

CHAPTER 13
NON-POTABLE WATER SYSTEMS

SECTION 1301
GENERAL

1301.1 Scope. The provisions of Chapter 13 shall govern the materials, design, construction and installation of systems for the collection, storage, treatment, and distribution of non-potable water. The use and application of non-potable water shall comply with laws, rules and ordinances applicable in the jurisdiction.

1301.2 Water quality. Non-potable water for each end use application shall meet the minimum water quality requirements as established for the intended application by the laws, rules and ordinances applicable in the jurisdiction. Where *non-potable* water from different sources is combined in a system, the system shall comply with the most stringent of the requirements of this code that are applicable to such sources.

1301.2.1 Residual disinfectants. Where chlorine is used for disinfection, the *non-potable* water shall contain not more than 4 mg/L of chloramines or free chlorine when tested in accordance with ASTM D1253. Where ozone is used for disinfection, the *non-potable* water shall not contain gas bubbles having elevated levels of ozone at the point of use.

1301.2.2 Filtration required. *Non-potable* water utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

> **Exception:** Reclaimed water sources shall not be required to comply with the requirements of 1301.2.1 and 1301.2.2.

1301.3 Signage required. All non-potable water outlets such as hose connections, open ended pipes, and faucets shall be identified at the point of use for each outlet with signage that reads as follows: "Non-potable water is utilized for [application name]. Caution: non-potable water. DO NOT DRINK." The words shall be legibly and 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 in colors in contrast to the background on which they are applied. In addition to the required wordage, the pictograph shown in Figure 1301.3 shall appear on the signage required by this section.

Figure 1301.3 – Pictograph DO NOT DRINK

1301.4 Permits. *Permits* shall be required for the construction, installation, *alteration*, and *repair* of non-potable water systems. *Construction documents*, engineering calculations, diagrams, and other such data pertaining to the non-potable water system shall be submitted with each application for *permit*.

1301.5 Potable water connections. Where a *potable* system is connected to a non-potable water system, the *potable* water supply shall be protected against backflow in accordance with Section 608.

1301.6 Approved components and materials. Piping, plumbing components, and materials used in the collection and conveyance systems shall be manufactured of material *approved* for the intended application and compatible with any disinfection and treatment systems used.

1301.7 Insect and vermin control. The system shall be protected to prevent the entrance of insects and vermin into *storage tanks* and piping systems. Any screen materials shall be compatible with contacting system components and shall not accelerate corrosion of system components.

1301.8 Freeze protection. Where sustained freezing temperatures occur, provisions shall be made to keep *storage tanks* and the related piping from freezing.

1301.9 Non-potable water storage tanks. Where used, non-potable water *storage tanks* shall comply with Sections 1301.9.1 through 1301.9.11.

1301.9.1 Sizing. The holding capacity of the *storage tank* shall be sized in accordance with the anticipated demand.

1301.9.2 Location. *Storage tanks* shall be installed above or below grade. Above grade *storage tanks* shall be protected from direct sunlight and shall be constructed using opaque, UV resistant, materials such as, but not limited to, heavily tinted plastic, fiberglass, lined metal, concrete, wood, or painted to prevent algae growth, or shall have specially constructed sun barriers including but not limited to installation in garages, crawlspaces, or sheds. *Storage tanks* and their manholes shall not be located directly under any soil or waste piping or any source of contamination.

1301.9.3 Materials. Where collected onsite, water shall be collected in an *approved* tank constructed of durable, nonabsorbent and corrosion-resistant materials. The *storage tank* shall be constructed of materials compatible with any disinfection systems used to treat water upstream of the tank and with any systems used to maintain water quality within the tank. Wooden *storage tanks* that are not equipped with a makeup water source shall be provided with a flexible liner.

1301.9.4 Foundation and supports. *Storage tanks* shall be supported on a firm base capable of withstanding the *storage tank's* weight when filled to capacity. *Storage tanks* shall be supported in accordance with the *International Building Code*.

1301.9.4.1 Ballast. Where the soil can become saturated, an underground *storage tank* shall be ballasted, or otherwise secured, to prevent the tank from floating out of the ground when empty. The combined weight of the tank and hold down ballast shall meet or exceed the buoyancy force of the tank. Where the installation requires a foundation, the foundation shall be flat and shall be designed to support the *storage tank* weight when full, consistent with the bearing capability of adjacent soil.

1301.9.4.2 Structural support. Where installed below grade, *storage tank* installations shall be designed to withstand earth and surface structural loads without damage and with minimal deformation when filled with water or empty.

1301.9.5 Makeup water. Where an uninterrupted supply is required for the intended application, *potable* or reclaimed water shall be provided as a source of makeup water for the *storage tank*. The makeup water supply shall be protected against backflow in accordance with Section 608. A full-open valve located on the makeup water supply line to the *storage tank* shall be provided. Inlets to *storage tank* shall be controlled by fill valves or other automatic supply valves installed so as to prevent the tank from

overflowing and to prevent the water level from dropping below a predetermined point. Where makeup water is provided, the water level shall not be permitted to drop below the source water inlet or the intake of any attached pump.

1301.9.6 Overflow. The *storage tank* shall be equipped with an overflow pipe having a diameter not less than that shown in Table 606.5.4 The overflow pipe shall be protected from insects or vermin and shall be discharged in a manner consistent with storm water runoff requirements of the jurisdiction. The overlow piope shall discharge at a sufficient distance from the tank to avoid damaging the tank foundation or the adjacent property. Drainage from overflow pipes shall be directed so as not to freeze on roof walks. The overflow drain shall not be equipped with a shutoff valve. A cleanout shall be provided on each overflow pipe in accordance with Section 708.

1301.9.7 Access. A minimum of one access opening shall be provided to allow inspection and cleaning of the tank interior. Access openings shall have an *approved* locking device or other *approved* method of securing access. Below grade *storage tanks*, located outside of the *building*, shall be provided with either a manhole not less than 24 inches (610 mm) square or a manhole with an inside diameter not less than 24 inches (610 mm) . Manholes shall extend not less than 4 inches above ground or shall be designed to as to prevent water infiltration. Finished grade shall be sloped away from the manhole to divert surface water from the manhole. Each manhole cover shall be secured to prevent unauthorized access. Service ports in manhole covers shall be not less than 8 inches (203 mm) in diameter and shall be a minimum of 4 inches (102 mm) above the finished grade level. The service port be secured to prevent unauthorized access.

> **Exception:** *Storage tanks* under 800 gallons in volume installed below grade shall not be required to be equipped with a manhole, but shall have a service port not less than 8 inches (203 mm) in diameter.

1301.9.8 Venting. *Storage tanks* shall be provided with a vent sized in accordance with Chapter 9 and based on the aggregate diameter of all tank influent pipes. The reservoir vent shall not be connected to sanitary drainage system vents. Vents shall be protected from contamination by means of a U-bend installed with the opening directed downward or an *approved* cap. Vent outlets shall extend a minimum of 4" above grade, or as necessary to prevent surface water from entering the *storage tank*. Vent openings shall be protected against the entrance of vermin and insects in accordance with the requirements of Section 1307.1.

1301.9.9 Draining of tanks. Where tanks require draining for service or cleaning, tanks shall be drained by using a pump or by a drain located at the lowest point in the tank The tank drain pipe shall discharge as required for overflow pipes and shall not be smaller in size than specified in Table 606.5.7. A minimum of one cleanout shall be provided on each drain pipe in accordance with Section 708.

1301.9.10 Marking and signage. Each non-potable water *storage tank* shall be *labeled* with its rated capacity. The contents of *storage tanks* shall be identified with the words "CAUTION: NON-POTABLE WATER – DO NOT DRINK." Where an opening is provided that could allow the entry of personnel, the opening shall be marked with the words, "DANGER – CONFINED SPACE." Markings shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material mounted on the tank or shall be indelibly printed on the tank. The letters of the words shall be not less than 0.5 inches in height and shall be of a color in contrast with the background on which they are applied.

1301.9.11 Storage tank tests. *Storage tanks* shall be tested in accordance with the following:

Storage tanks shall be filled with water to the overflow line prior to and during inspection. All seams and joints shall be left exposed and the tank shall remain water tight without leakage for a period of 24 hours.

1. After 24 hours, supplemental water shall be introduced for a period of 15 minutes to verify proper drainage of the overflow system and verify that there are no leaks.

2. The tank drain shall be observed for proper operation.
3. The makeup water system shall be observed for proper operation and successful automatic shutoff of the system at the refill threshold shall be verified.

1301.10 System abandonment. If the owner of an onsite non-potable water reuse system or *rainwater collection and conveyance system* elects to cease use of, or fails to properly maintain such system, the system shall be abandoned and shall comply with the following:

1. All system piping connecting to a utility-provided water system shall be removed or disabled.
2. The *distribution piping* system shall be replaced with an *approved potable* water supply piping system. Where an existing *potable* pipe system is already in place, the fixtures shall be connected to the existing system.
3. The storage tank shall be secured from accidental access by sealing or locking tank inlets and access points, or filling with sand or equivalent.

1301.11 Trenching requirements for non-potable water piping. Non-potable water collection and distribution piping and reclaimed water piping shall be separated from the *building* sewer and *potable* water piping underground by 5 feet (1524 m) of undisturbed or compacted earth. Non-potable water collection and distribution piping shall not be located in, under or above cesspools, septic tanks, septic tank drainage fields or seepage pits. Buried non-potable water piping shall comply with the requirements of Section 306.

Exceptions:

1. The required separation distance shall not apply where the bottom of the non-potable water pipe within 5 feet (1524 mm) of the sewer is not less than 12 inches (305 mm) above the top of the highest point of the sewer and the pipe materials conforms to Table 702.3.
2. The required separation distance shall not apply where the bottom of the *potable* water service pipe within 5 feet (1524 mm) of the non-potable water pipe is a minimum of 12 inches (305 mm) above the top of the highest point of the non-potable water pipe and the pipe materials comply with the requirements of Table 605.4
3. Non-potable water pipe is permitted to be located in the same trench with a building sewer, provided that such sewer is constructed of materials that comply with the requirements of Table 702.2.
4. The required separation distance shall not apply where a non-potable water pipe crosses a sewer pipe provided that the pipe is sleeved to at least 5 feet (1524 mm) horizontally from the sewer pipe centerline on both sides of such crossing with pipe materials that comply with Table 702.2.
5. The required separation distance shall not apply where a *potable* water service pipe crosses a non-potable water pipe provided that the *potable* water service pipe is sleeved for a distance of at least 5 feet (1524 mm) horizontally from the centerline of the non-potable pipe on both sides of such crossing with pipe materials that comply with Table 702.2.
6. Irrigation piping located outside of a *building* and downstream of the backflow preventer is not required to meet the trenching requirements where non-potable water is used for outdoor applications.

1301.12 Outdoor outlet access. Sillcocks, hose bibs, wall hydrants, yard hydrants, and other outdoor outlets supplied by *non-potable* water shall be located in a locked vault or shall be operable only by means of a removable key.

SECTION 1302
ONSITE NON-POTABLE WATER REUSE SYSTEMS

1302.1 General. The provisions of Section 1302 shall govern the construction, installation, *alteration,* and *repair* of *onsite non-potable water reuse systems* for the collection, storage, treatment and distribution of on-site sources of non-potable water as permitted by the jurisdiction.

1302.2 Sources. Onsite non-potable water reuse systems shall collect waste discharge from only the following sources: bathtubs, showers, lavatories, clothes washers, and laundry trays. Water from other approved non-potable sources including swimming pool backwash operations, air conditioner condensate, rainwater, cooling tower blow-down water, foundation drain water, steam system condensate, fluid cooler discharge water, food steamer discharge water, combination oven discharge water, industrial process water, and fire pump test water shall also be permitted to be collected for reuse by onsite non-potable water reuse systems, as approved by the code official and as appropriate for the intended application.

1302.2.1 Prohibited sources. Wastewater containing urine or fecal matter shall not be diverted to onsite non-potable water reuse systems and shall discharge to the sanitary drainage system of the building or premises in accordance with Chapter 7. Water from reverse osmosis system reject water, water softener discharge water, kitchen sink wastewater, dishwasher wastewater, and wastewater discharged from wet-hood scrubbers shall not be collected for reuse within a to onsite non-potable water reuse systems.

1302.3 Traps. Traps serving fixtures and devices discharging wastewater to to onsite non-potable water reuse systems shall comply with the Section 1002.4.

1302.4 Collection pipe. Onsite non-potable water reuse systems shall utilize drainage piping *approved* for use within plumbing drainage systems to collect and convey untreated water for reuse. Vent piping *approved* for use within plumbing venting systems shall be utilized for vents within the graywater system. Collection and vent piping materials shall comply with Section 702.

1302.3.1 Installation. Collection piping conveying untreated water for reuse shall be installed in accordance with Section 704.

1302.3.2 Joints. Collection piping conveying untreated water for reuse shall utilize joints *approved* for use with the *distribution piping* and appropriate for the intended applications as specified in Section 705.

1302.3.3 Size. Collection piping conveying untreated water for reuse shall be sized in accordance with drainage sizing requirements specified in Section 710.

1302.3.4 Labeling and marking. Additional marking of collection piping conveying untreated water for reuse shall not be required beyond that required for sanitary drainage, waste, and vent piping by the Chapter 7.

1302.5 Filtration. Untreated water collected for reuse shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gage or other *approved* method to provide indication when a filter requires servicing or replacement. Filters shall be installed with shutoff valves installed immediately upstream and downstream to allow for isolation during maintenance.

1302.6 Disinfection. Where the intended application for non-potable water collected onsite for reuse requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use. Non-potable water collected onsite containing untreated *graywater* shall be retained in collection reservoirs for a maximum of 24 hours.

1302.7 Storage tanks. *Storage tanks* utilized in onsite non-potable water reuse systems shall comply with Section 1301.9.

1302.7.1 Location. *Storage tanks* shall be located with a minimum horizontal distance between various elements as indicated in Table 1302.7.1.

TABLE 1302.7.1
LOCATION OF NON-POTABLE WATER REUSE STORAGE TANKS

ELEMENT	MINIMUM HORIZONTAL DISTANCE FROM STORAGE TANK (FEET)
Critical root zone (CRZ) of protected trees	2
Lot line adjoining private lots	5
Seepage pits	5
Septic tanks	5
Water wells	50
Streams and lakes	50
Water service	5
Public water main	10

1302.7.3 Outlets. Outlets shall be located at least 4 inches (102 mm) above the bottom of the *storage tank*, and shall not skim water from the surface.

1302.8 Valves. Valves shall be supplied on onsite non-potable water reuse systems in accordance with Sections 1302.8.1 and 1302.8.2.

1302.8.1 Bypass valve. One three-way diverter valve listed and labeled to NSF 50 or other *approved* device shall be installed on collection piping upstream of each *storage tank*, or drainfield, as applicable, to divert untreated onsite reuse sources to the sanitary sewer to allow servicing and inspection of the system. Bypass valves shall be installed downstream of fixture traps and vent connections Bypass valves shall be *marked* to indicate the direction of flow, connection and *storage tank* or drainfield connection. Bypass valves shall be installed in accessible locations. Two shutoff valves shall not be installed to serve as a bypass valve.

1302.8.2 Backwater valve. One or more *backwater valves* shall be installed on each overflow and tank drain pipe. *Backwater valves* shall be in accordance with Section 715.

1302.9 Pumping and control system. Mechanical equipment including pumps, valves and filters shall be easily accessible and removable in order to perform *repair*, maintenance and cleaning. The minimum flow rate and flow pressure delivered by the pumping system shall appropriate for the application and in accordance with Section 604.

1302.10 Water-pressure reducing valve or regulator. Where the water pressure supplied by the pumping system exceeds 80 psi (552 kPa) static, a pressure-reducing valve shall be installed to reduce the pressure in the nonnpotable water distribution system piping to 80 psi (552 kPa) static or less. Pressure-reducing valves shall be specified and installed in accordance with Section 604.8.

1302.11 Distribution pipe. *Distribution piping* utilized in onsite non-potable water reuse systems shall comply with Sections 1302.11.1 through 1302.11.4.

Exception: Irrigation piping located outside of the *building* and downstream of a backflow preventer.

1302.11.1 Materials, joints and connections. *Distribution piping* shall conform to the standards and requirements specified in Section 605.

1302.11.2 Design. Onsite non-potable water reuse distribution piping systems shall be designed and sized in accordance with Section 604 for the intended application.

1302.11.3 Marking. Onsite non-potable water distribution piping labeling and marking shall comply with Section 608.8.

1302.12 Tests and inspections. Tests and inspections shall be performed in accordance with Sections 1302.12.1 through 1302.12.6.

1302.12.1 Collection pipe and vent test. Drain, waste and vent piping used for onsite water reuse systems shall be tested in accordance with Section 312.

1302.12.2 Storage tank test. *Storage tanks* shall be tested in accordance with the Section 1301.9.11.

1302.12.3 Water supply system test. The testing of makeup water supply piping and *distribution piping* shall be conducted in accordance with Section 312.5.

1302.12.4 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers and *backwater valves* shall be conducted in accordance with Section 312.10.

1302.12.5 Inspection vermin and insect protection. Inlets and vents to the system shall be inspected to verify that each is protected to prevent the entrance of insects and vermin into the *storage tank* and piping systems in accordance with Section 1301.7.

1302.12.6 Water quality test. The quality of the water for the intended application shall be verified at the point of use in accordance with the requirements of the *jurisdiction*.

1302.13 Operation and maintenance manuals. Operations and maintenance materials shall be supplied with non-potable onsite water reuse systems in accordance with Sections 1302.13.1 through 1302.13.4.

1302.13.1 Manual. A detailed operations and maintenance manual shall be supplied in hardcopy form with all systems.

1302.13.2 Schematics. The manual shall include a detailed system schematic, locations of all system components, and a list of all system components including manufacturer and model number.

1302.13.3 Maintenance procedures. The manual shall provide a maintenance schedule and procedures for all system components requiring periodic maintenance. Consumable parts including filters shall be noted along with part numbers.

1302.13.4 Operations procedures. The manual shall include system startup and shutdown procedures. The manual shall include detailed operating procedures for the system.

SECTION 1303
NON-POTABLE RAINWATER COLLECTION AND DISTRIBUTION SYSTEMS

1303.1 General. The provisions of Section 1303 shall govern the construction, installation, *alteration*, and *repair* of *rainwater collection and conveyance systems* for the collection, storage, treatment and distribution of rainwater for non-potable applications, as permitted by the jurisdiction.

1303.2 Collection surface. *Rainwater* shall be collected only from above-ground impervious roofing surfaces constructed from *approved* materials. Collection of water from vehicular parking or pedestrian surfaces shall be prohibited except where the water is used exclusively for landscape irrigation. Overflow and bleed-off pipes from roof-mounted appliances including but not limited to evaporative coolers, water heaters, and solar water heaters shall not discharge onto *rainwater* collection surfaces.

1303.3 Debris excluders. Downspouts and leaders shall be connected to a *roof washer* and shall be equipped with a debris excluder or equivalent device to prevent the contamination of collected *rainwater*

with leaves, sticks, pine needles and similar material. Debris excluders and equivalent devices shall be self-cleaning.

1303.4 Roof washer. A sufficient amount of *rainwater* shall be diverted at the beginning of each rain event, and not allowed to enter the *storage tank*, to wash accumulated debris from the collection surface. The amount of rainfall to be diverted shall be field adjustable as necessary to minimize *storage tank* water contamination. The *roof washer* shall not rely on *manually* operated valves or devices, and shall operate automatically. Diverted *rainwater* shall not be drained to the roof surface, and shall be discharged in a manner consistent with the storm water runoff requirements of the *jurisdiction*. *Roof washers* shall be accessible for maintenance and service.

1303.5 Roof gutters and downspouts. Gutters and downspouts shall be constructed of materials that are compatible with the collection surface and the *rainwater* quality for the desired end use. Joints shall be made water-tight.

1303.5.1 Slope. Roof gutters, leaders, and *rainwater* collection piping shall slope continuously toward collection inlets. Gutters and downspouts shall have a slope of not less than 1/8 inch per foot along their entire length, and shall not permit the collection or pooling of water at any point.

> **Exception:** Siphonic drainage systems installed in accordance with the manufacturer's installation instructions shall not be required to have slope.

1303.5.2 Size. Gutters and downspouts shall be installed and sized in accordance with Section 1106.6 and local rainfall rates.

1303.5.3 Cleanouts. Cleanouts shall be provided in the water conveyance system so as to allow access to all filters, flushes, pipes and downspouts.

1303.6 Drainage. Water drained from the *roof washer* or debris excluder shall not be drained to the sanitary sewer. Such water shall be diverted from the *storage tank* and discharge in a location that will not cause erosion or damage to property in accordance with the *International Building Code*. *Roof washers* and debris excluders shall be provided with an automatic means of self draining between rain events, and shall not drain onto roof surfaces.

1303.7 Collection pipe. Rainwater collection and conveyance systems shall utilize drainage piping *approved* for use within plumbing drainage systems to collect and convey captured rainwater. Vent piping *approved* for use within plumbing venting systems shall be utilized for vents within the rainwater system. Collection and vent piping materials shall comply with Section 702.

1303.7.1 Installation. Collection piping conveying captured rainwater shall be installed in accordance with Section 704.

1303.7.2 Joints. Collection piping conveying captured rainwater shall utilize joints *approved* for use with the *distribution piping* and appropriate for the intended applications as specified in Section 705.

1303.7.3 Size. Collection piping conveying captured rainwater shall be sized in accordance with drainage sizing requirements specified in Section 710.

1303.7.4 Labeling and marking. Additional marking of collection piping conveying captured rainwater for reuse shall not be required beyond that required for sanitary drainage, waste, and vent piping by the Chapter 7.

1303.8 Filtration. Collected rainwater shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gage or other *approved* method to provide indication when a filter requires servicing or replacement. Filters shall be installed with shutoff valves installed immediately upstream and downstream to allow for isolation during maintenance.

1303.9 Disinfection. Where the intended application for rainwater requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use. Where chlorine is used for disinfection or treatment, water shall be tested for residual chlorine in accordance with ASTM D1253. The levels of residual chlorine shall not exceed the levels allowed for the intended use in accordance with the requirements of the *jurisdiction*.

1303.10 Storage tanks. *Storage tanks* utilized in non-potable rainwater collection and conveyance systems shall comply with Section 1301.9 and 1303.10.1 through 1303.10.3.

1303.10.1 Location. *Storage tanks* shall be located with a minimum horizontal distance between various elements as indicated in Table 1303.10.1.

TABLE 1303.10.1
LOCATION OF RAINWATER STORAGE TANKS

ELEMENT	MINIMUM HORIZONTAL DISTANCE FROM STORAGE TANK (FEET)
Critical root zone (CRZ) of protected trees	2
Lot line adjoining private lots	5
Seepage pits	5
Septic tanks	5

1303.10.2 Inlets. *Storage tank* inlets shall be designed to introduce collected rainwater into the tank with minimum turbulence, and shall be located and designed to avoid agitating the contents of the *storage tank*.

1303.10.3 Outlets. Outlets shall be located at least 4 inches (102 mm) above the bottom of the *storage tank*, and shall not skim water from the surface.

1303.11 Valves. Valves shall be supplied on rainwater collection and conveyance systems in accordance with Sections 1303.11.1 and 1303.11.2.

1303.10.2 Backwater valve. *Backwater valves* shall be installed on each overflow and tank drain pipe. *Backwater valves* shall be in accordance with Section 715.

1303.12 Pumping and control system. Mechanical equipment including pumps, valves and filters shall be easily accessible and removable in order to perform *repair*, maintenance and cleaning. The minimum flow rate and flow pressure delivered by the pumping system shall appropriate for the application and in accordance with Section 604.

1303.13 Water-pressure reducing valve or regulator. Where the water pressure supplied by the pumping system exceeds 80 psi (552 kPa) static, a pressure-reducing valve shall be installed to reduce the pressure in the rainwater distribution system piping to 80 psi (552 kPa) static or less. Pressure-reducing valves shall be specified and installed in accordance with Section 604.8.

1303.14 Distribution pipe. *Distribution piping* utilized in rainwater collection and conveyance systems shall comply with Sections 1303.14.1 through 1303.14.3.

Exception: Irrigation piping located outside of the *building* and downstream of a backflow preventer.

1303.14.1 Materials, joints and connections. *Distribution piping* shall conform to the standards and requirements specified in Section 605 for non-potable water.

1303.14.2 Design. Distribution piping systems shall be designed and sized in accordance with the Section 604 for the intended application.

1303.14.3 Marking. Non-potable rainwater distribution piping labeling and marking shall comply with Section 608.8.

1303.15 Tests and inspections. Tests and inspections shall be performed in accordance with Sections 1303.15.1 through 1303.15.8.

1303.15.1 Roof gutter inspection and test. Roof gutters shall be inspected to verify that the installation and slope is in accordance with Section 1303.5.1. Gutters shall be tested by pouring a minimum of one gallon of water into the end of the gutter opposite the collection point. The gutter being tested shall not leak and shall not retain standing water.

1303.15.2 Roofwasher test. Roofwashers shall be tested by introducing water into the gutters. Proper diversion of the first quantity of water in accordance with the requirements of Section 1303.4 shall be verified.

1303.15.3 Collection pipe and vent test. Drain, waste and vent piping used for rainwater collection and conveyance systems shall be tested in accordance with Section 312.

1303.15.4 Storage tank test. *Storage tanks* shall be tested in accordance with the Section 1301.9.11.

1303.15.5 Water supply system test. The testing of makeup water supply piping and *distribution piping* shall be conducted in accordance with Section 312.5.

1303.15.6 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers and *backwater valves* shall be conducted in accordance with Section 312.10.

1303.15.7 Inspection vermin and insect protection. Inlets and vents to the system shall be inspected to verify that each is protected to prevent the entrance of insects and vermin into the *storage tank* and piping systems in accordance with Section 1301.7.

1303.15.8 Water quality test. The quality of the water for the intended application shall be verified at the point of use in accordance with the requirements of the *jurisdiction*. Except where site conditions as specified in ASTM E2727 affect the rainwater, collected rainwater shall be considered to have the parameters indicated in Table 1303.15.8.

TABLE 1303.15.8
RAINWATER QUALITY

PARAMETER	VALUE
pH	6.0-7.0
BOD	Not greater than 10 mg/L
NTU	Not greater than 2
Fecal Coliform	No detectable fecal coli in 100 mL
Sodium	No detectable sodium in 100 mL
Chlorine	No detectable chlorine in 100 mL
Enteroviruses	No detectable enteroviruses in 100 mL

1303.16 Operation and maintenance manuals. Operations and maintenance materials shall be supplied with rainwater collection and conveyance systems in accordance with Sections 1303.16.1 through 1303.16.4.

1303.16.1 Manual. A detailed operations and maintenance manual shall be supplied in hardcopy form with all systems.

1303.16.2 Schematics. The manual shall include a detailed system schematic, locations of all system components, and a list of all system components including manufacturer and model number.

1303.16.3 Maintenance procedures. The manual shall provide a maintenance schedule and procedures for all system components requiring periodic maintenance. Consumable parts including filters shall be noted along with part numbers.

1303.16.4 Operations procedures. The manual shall include system startup and shutdown procedures. The manual shall include detailed operating procedures for the system.

SECTION 1304
RECLAIMED WATER SYSTEMS

1304.1 General. The provisions of this section shall govern the construction, installation, *alteration*, and *repair* of systems supplying *non-potable reclaimed water*.

1304.2 Water-pressure reducing valve or regulator. Where the *reclaimed water* pressure supplied to the *building* exceeds 80 psi (552 kPa) static, a pressure-reducing valve shall be installed to reduce the pressure in the *reclaimed water* distribution system piping to 80 psi (552 kPa) static or less. Pressure-reducing valves shall be specified and installed in accordance with Section 604.8 of the *International Plumbing Code*.

1304.3 Reclaimed water systems. The design of the *reclaimed water* systems shall conform to ASTM E 2635 and *accepted engineering practice.*

1304.3.1 Distribution pipe. *Distribution piping* shall comply with Sections 1304.3.1.1 through 1304.3.1.3.

Exception: Irrigation piping located outside of the *building* and downstream of a backflow preventer.

1304.3.1.1 Materials, joints and connections. *Distribution piping* conveying reclaimed water shall conform to standards and requirements specified in Section 605 for non-potable water.

1304.3.1.2 Design. Distribution piping systems shall be designed and sized in accordance with the Section 604 for the intended application.

1304.3.1.3 Labeling and marking. Non-potable rainwater distribution piping labeling and marking shall comply with Section 608.8.

1304.4 Tests and inspections. Tests and inspections shall be performed in accordance with Sections 1304.4.1 and 1304.4.2.

1304.4.1 Water supply system test. The testing of makeup water supply piping and *reclaimed water distribution piping* shall be conducted in accordance with Section 312.5.

1304.4.2 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers shall be conducted in accordance with Section 312.10.

Add new Chapter and next text as follows:

CHAPTER 14
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS

SECTION 1401
GENERAL

1401.1 Scope. The provisions of Chapter 14 shall govern the materials, design, construction and installation of subsurface landscape irrigation systems connected to non-potable water from onsite water reuse systems.

1401.2 Materials. Above-ground drain, waste and vent piping for subsurface landscape irrigation systems shall conform to one of the standards listed in Table 702.1. Subsurface landscape irrigation underground building drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

1401.3 Tests. Drain, waste and vent piping for subsurface landscape irrigation systems shall be tested in accordance with Section 312.

1401.4 Inspections. Subsurface landscape irrigation systems shall be inspected in accordance with Section 107.

1401.5 Disinfection. Disinfection shall not be required for onsite non-potable reuse water used for subsurface landscape irrigation systems.

1401.6 Coloring. Onsite non-potable reuse water used for subsurface landscape irrigation systems shall not be required to be dyed.

SECTION 1402
SYSTEM DESIGN AND SIZING

1402.1 Sizing. The system shall be sized in accordance with the sum of the output of all water sources connected to the subsurface irrigation system. Where gray water collection piping is connected to subsurface landscape irrigation systems, gray water output shall be calculated according to the gallons-per-day-per-occupant number based on the type of fixtures connected. The gray water discharge shall be calculated by the following equation:

$C = A \times B$ **(Equation 14-1)**

where:

A = Number of occupants:

Residential–Number of occupants shall be determined by the actual number of occupants, but not less than two occupants for one bedroom and one occupant for each additional bedroom.
Commercial–Number of occupants shall be determined by the *International Building Code*.

B = Estimated flow demands for each occupant:

Residential–25 gallons per day (94.6 lpd) per occupant for showers, bathtubs and lavatories and 15 gallons per day (56.7 lpd) per occupant for clothes washers or laundry trays.

Commercial–Based on type of fixture or water use records minus the discharge of fixtures other than those discharging gray water.

C = Estimated gray water discharge based on the total number of occupants.

1402.2 Percolation tests. The permeability of the soil in the proposed absorption system shall be determined by percolation tests or permeability evaluation.

1402.2.1 Percolation tests and procedures. At least three percolation tests in each system area shall be conducted. The holes shall be spaced uniformly in relation to the bottom depth of the proposed absorption system. More percolation tests shall be made where necessary, depending on system design.

1402.2.1.1 Percolation test hole. The test hole shall be dug or bored. The test hole shall have vertical sides and a horizontal dimension of 4 inches to 8 inches (102 mm to 203 mm). The bottom and sides of the hole shall be scratched with a sharp-pointed instrument to expose the natural soil. All loose material shall be removed from the hole and the bottom shall be covered with 2 inches (51 mm) of gravel or coarse sand.

1402.2.1.2 Test procedure, sandy soils. The hole shall be filled with clear water to a minimum of 12 inches (305 mm) above the bottom of the hole for tests in sandy soils. The time for this amount of water to seep away shall be determined, and this procedure shall be repeated if the water from the second filling of the hole seeps away in 10 minutes or less. The test shall proceed as follows: Water shall be added to a point not more than 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, water levels shall be measured at 10-minute intervals for a period of 1 hour. Where 6 inches (152 mm) of water seeps away in less than 10 minutes, a shorter interval between measurements shall be used, but in no case shall the water depth exceed 6 inches (152 mm). Where 6 inches (152 mm) of water seeps away in less than 2 minutes, the test shall be stopped and a rate of less than 3 minutes per inch (7.2 s/mm) shall be reported. The final water level drop shall be used to calculate the percolation rate. Soils not meeting the above requirements shall be tested in accordance with Section 1303.7.1.3.

1402.2.1.3 Test procedure, other soils. The hole shall be filled with clear water, and a minimum water depth of 12 inches (305 mm) shall be maintained above the bottom of the hole for a 4-hour period by refilling whenever necessary or by use of an automatic siphon. Water remaining in the hole after 4 hours shall not be removed. Thereafter, the soil shall be allowed to swell not less than 16 hours or more than 30 hours. Immediately after the soil swelling period, the measurements for determining the percolation rate shall be made as follows: any soil sloughed into the hole shall be removed and the water level shall be adjusted to 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, the water level shall be measured at 30-minute intervals for a period of 4 hours, unless two successive water level drops do not vary by more than 1/16 inch (1.59 mm). At least three water level drops shall be observed and recorded. The hole shall be filled with clear water to a point not more than 6 inches (152 mm) above the gravel or coarse sand whenever it becomes nearly empty. Adjustments of the water level shall not be made during the three measurement periods except to the limits of the last measured water level drop. When the first 6 inches (152 mm) of water seeps away in less than 30 minutes, the time interval between measurements shall be 10 minutes and the test run for 1 hour. The water depth shall not exceed 5 inches (127 mm) at any time during the measurement period. The drop that occurs during the final measurement period shall be used in calculating the percolation rate.

1402.2.1.4 Mechanical test equipment. Mechanical percolation test equipment shall be of an approved type.

1402.2.2 Permeability evaluation. Soil shall be evaluated for estimated percolation based on structure and texture in accordance with accepted soil evaluation practices. Borings shall be made in accordance with Section 1402.2.1.1 for evaluating the soil.

1402.3 Subsurface landscape irrigation site location. The surface grade of all soil absorption systems shall be located at a point lower than the surface grade of any water well or reservoir on the same or adjoining lot. Where this is not possible, the site shall be located so surface water drainage from the site is not directed toward a well or reservoir. The soil absorption system shall be located with a minimum horizontal distance between various elements as indicated in Table 1402.3. Private sewage disposal systems in compacted areas, such as parking lots and driveways, are prohibited. Surface water shall be diverted away from any soil absorption site on the same or neighboring lots.

TABLE 1402.3
LOCATION OF SUBSURFACE IRRIGATION SYSTEM

ELEMENT	MINIMUM HORIZONTAL DISTANCE	
	STORAGE TANK (feet)	IRRIGATION DISPOSAL FIELD (feet)
Buildings	5	2
Lot line adjoining private property	5	5
Water wells	50	100
Streams and lakes	50	50
Seepage pits	5	5
Septic tanks	0	5
Water service	5	5
Public water main	10	10

For SI: 1 foot = 304.8 mm.

SECTION 1403
INSTALLATION

1403.1 Installation. Absorption systems shall be installed in accordance with Sections 1403.1.1 through 1403.2.1 to provide landscape irrigation without surfacing of water.

1403.1.1 Absorption area. The total absorption area required shall be computed from the estimated daily gray water discharge and the design-loading rate based on the percolation rate for the site. The required absorption area equals the estimated gray water discharge divided by the design-loading rate from Table 1403.1.1.

TABLE 1403.1.1
DESIGN LOADING RATE

PERCOLATION RATE (minutes per inch)	DESIGN LOADING FACTOR (gallons per square foot per day)
0 to less than 10	1.2
10 to less than 30	0.8
30 to less than 45	0.72
45 to 60	0.4

For SI: 1 minute per inch = min/25.4 mm,
1 gallon per square foot = 40.7 L/m2.

1403.1.2 Seepage trench excavations. Seepage trench excavations shall be not less than 1 foot (304 mm) in width and not greater than 5 feet (1524 mm) in width. Trench excavations shall be spaced not less than 2 feet (610 mm) apart. The soil absorption area of a seepage trench shall be computed by using the bottom of the trench area (width) multiplied by the length of pipe. Individual seepage trenches shall be not greater than100 feet (30 480 mm) in developed length.

1403.1.3 Seepage bed excavations. Seepage bed excavations shall be not less than 5 feet (1524 mm) in width and have more than one distribution pipe. The absorption area of a seepage bed shall be computed by using the bottom of the trench area. Distribution piping in a seepage bed shall be uniformly

spaced not greater than 5 feet (1524 mm) and not less than 3 feet (914 mm) apart, and greater than 3 feet (914 mm) and not less than 1 foot (305 mm) from the sidewall or headwall.

1403.1.4 Excavation and construction. The bottom of a trench or bed excavation shall be level. Seepage trenches or beds shall not be excavated where the soil is so wet that such material rolled between the hands forms a soil wire. All smeared or compacted soil surfaces in the sidewalls or bottom of seepage trench or bed excavations shall be scarified to the depth of smearing or compaction and the loose material removed. Where rain falls on an open excavation, the soil shall be left until sufficiently dry so a soil wire will not form when soil from the excavation bottom is rolled between the hands. The bottom area shall then be scarified and loose material removed.

1403.1.5 Aggregate and backfill. Not less than 6 inches in depth of aggregate ranging in size from 1/2 to 21/2 inches (12.7 mm to 64 mm) shall be laid into the trench below the distribution piping elevation. The aggregate shall be evenly distributed not less than 2 inches (51 mm) in depth over the top of the distribution pipe. The aggregate shall be covered with approved synthetic materials or 9 inches (229 mm) of uncompacted marsh hay or straw. Building paper shall not be used to cover the aggregate. Not less than 9 inches (229 mm) of soil backfill shall be provided above the covering.

1403.2 Distribution piping. Distribution piping shall be not less than 3 inches (76 mm) in diameter. Materials shall comply with Table 1303.10. The top of the distribution pipe shall be not less than 8 inches (203 mm) below the original surface. The slope of the distribution pipes shall be not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) per 100 feet (30 480 mm).

TABLE 1403.2
DISTRIBUTION PIPE

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe	ASTM F 405
Polyvinyl chloride (PVC) plastic pipe	ASTM D 2729
Polyvinyl chloride (PVC) plastic pipe with a 3.5 inch O.D. and solid cellular core or composite wall.	ASTM F 1488

1403.2.1 Joints. Joints in distribution pipe shall be made in accordance with Section 705 of this code.

Reason: The sections shown to be added to the code are from the IgCC. These sections really need to be in the IPC as these subjects are more applicable to the IPC scope. Currently, the IPC does not address different types of nonpotable water (other than gray water) and therefore provides no guidance as to how nonpotable waters are to be collected, stored and distributed. The current Chapter 13 only deals with the use/reuse of gray water for the flushing of water closets and urinals and subsurface irrigation. It is clarified that gray water and rain water recycling systems must be separate systems and may not be interconnected.
This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This language is already in the IgCC and doesn't need to be repeated in the IPC. Because testimony indicated that" although this language might need more work, it should still be put in the code" is a concern. The language needs further work for example; The language mandates a roof washer for rainwater collection – there are other ways to accomplish the same function without the expense involved with a pressurized roof washer system. Also, Table 1303.15.8 gives a pH range outside the normal range of reuse water and requires control of enteroviruses which would require adding considerable cost to a rainwater system. This proposal is a lot of language that seems to need more work before it can be added to the code.

Assembly Action: **Approved as Submitted**

Public Comments

Public Comment 1:

Shawn Strausbaugh, Arlington County, VA, International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

~~**STORAGE TANK.** A fixed container for holding water at atmospheric pressure for subsequent reuse as part of a plumbing or irrigation system.~~

~~**DISTRIBUTION PIPE.** Pressurized or non-pressure piping used within the plumbing system of a building to deliver rainwater or graywater from the *storage tank* or pump to the point of use.~~

Remainder of proposal is unchanged

Commenter's Reason: The proposal was approved as submitted by the assembly action. The one point raised in regard to the roof washer was rebutted under testimony and made clear to the committee member that "pressurized" roof washer system was not the only means of satisfying this requirement. The deletion of the above two definitions are due to a conflict with other terms contained within the plumbing code as these definitions would be added to chapter 2 not just chapter 13 and 14 which is the specific chapters where these definitions where intended to be used.

Final Hearing Results

P11-12 **AMPC1**

Code Change No: P17-12

Original Proposal

Section(s): 307.5

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Delete and substitute as follows:

~~**307.5 Protection of footings.** Trenching installed parallel to footings shall not extend below the 45-degree (0.79 rad) bearing plane of the footing or wall~~.

307.5 Protection of footings. Trenching installed parallel to footings and walls shall not extend into the bearing plane of a footing or wall. The upper boundary of the bearing plane is a line that extends downward, at an angle of 45 degrees from horizontal, from the outside bottom edge of the footing or wall.

Reason: The current language is not especially clear and is easily misunderstood. The proposed text is explicit and captures the intent of this provision.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal clears up problems with interpreting this section. The committee agreed with the proponent's reason statement.

Assembly Action: **None**

Final Hearing Results

P17-12 AS

Code Change No: P19-12

Original Proposal

Section(s): Table 308.5

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

TABLE 308.5
HANGER SPACING

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
ABS pipe	4	10[b]
Aluminum tubing	10	15
Brass pipe	10	10
Cast-iron pipe	5[a]	15
Copper or copper-alloy pipe	12	10
Copper or copper-alloy tubing, $1^1/_4$-inch diameter and smaller	6	10
Copper or copper-alloy tubing, $1^1/_2$-inch diameter and larger	10	10
Cross-linked polyethylene (PEX) pipe	2.67 (32 inches)	10[b]
Cross-linked polyethylene/ aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	2.67 (32 inches)	4
CPVC pipe or tubing, 1 inch and smaller	3	10[b]
CPVC pipe or tubing, $1^1/_4$ inches and larger	4	10[b]
Steel pipe	12	15
Lead pipe	Continuous	4
Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe	2.67 (32 inches)	4

Polyethylene of raised temperature (PE-RT) pipe	2.67 (32 inches)	10[b]
Polypropylene (PP) pipe or tubing 1 inch and smaller	2.67 (32 inches)	10[b]
Polypropylene (PP) pipe or tubing, $1^1/_4$ inches and larger	4	10[b]
PVC pipe	4	10[b]
Stainless steel drainage systems	10	10[b]

a. The maximum horizontal spacing of cast iron pipe hangers shall be increased to 10 feet where 10 foot lengths of pipe are installed.
b. ~~Mid-story guide~~ For sizes 2 inches and smaller, a guide shall be installed midway between required vertical supports. Such guides shall prevent pipe movement in a direction perpendicular to the axis of the pipe.

Reason: What constitutes a "mid-story guide" and what is it supposed to do? The current footnote doesn't clearly state a requirement. What is the purpose of the guide and how limiting is the guide supposed to be? The term mid-story seems out of context considering that the intent of the footnote is to require a guide midway between vertical supports. The vertical supports don't necessarily correspond to a support at each story. Stories can be any height. The revised language provides the necessary information to make this footnote clearly state the intent.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P19-12 **AS**

Code Change No: P20-12

Original Proposal

Section(s): 309.2

THIS CODE CHANGE PROPOSAL IS ON THE AGENDA OF THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE. SEE THE HEARING ORDER FOR THE IBC STRUCTURAL DEVELOPMENT COMMITTEE.

Proponent: John Ingargiola and Gregory Wilson, representing Department of Homeland Security, Federal Emergency Management Agency (john.ingargiola@dhs.gov, gregory.p.wilson@dhs.gov) and Rebecca Quinn, RCQuinn Consulting, Inc., representing Federal Emergency Management Agency (rcquinn@earthlink.net).

Revise as follows:

[B] 309.2 Flood hazard. For structures located in flood hazard areas, the following systems and equipment shall be located and installed as required by Section 1612 of the *International Building Code*.

~~**Exception:** The following systems are permitted to be located below the elevation required by Section 1612 of the *International Building Code* for utilities and attendant equipment provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to up to such elevation.~~

1. ~~All~~ water service pipes.
2. Pump seals in individual water supply systems where the pump is located below the *design flood elevation*.
3. Covers on potable water wells shall be sealed, except where the top of the casing well or pipe sleeve is elevated to not less than 1 foot (305 mm) above the *design flood elevation*.
4. ~~All~~ Sanitary drainage piping.
5. ~~All~~ Storm drainage piping.
6. Manhole covers shall be sealed, except where elevated to or above the *design flood elevation*.
7. ~~All~~ Other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.
8. Water heaters.
9. Vents and vent systems.

Exception: The systems listed in this section are permitted to be located below the elevation required by Section 1612 of the *International Building Code* for utilities and attendant equipment provided that the systems are designed and installed to prevent water from entering our accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to such elevation.

Reason: This proposal simply moves the exception language below the list. It is awkward and certainly confusing to have the exception placed between the parent language “the following systems and equipment”) and the list. This change is editorial. ICC staff recommended deletion of “all” in four locations.

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

Public Hearing Results

This code change was heard by the IBC Structural code development committee.

Committee Action: **Approved as Submitted**

Committee Reason: The changes are basically editorial in nature and will improve clarity of this section.

Assembly Action: **None**

Final Hearing Results

P20-12	**AS**

Code Change No: P26-12

Original Proposal

Section(s): 403.1 (IBC [P] 2902.1)

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self. (JBEngineer@aol.com)

Revise as follows:

403.1 (IBC [P] 2902.1) Minimum number of fixtures. Plumbing fixtures shall be provided ~~for the type of occupancy and~~ in the minimum number as shown in Table 403.1 based upon the actual use of the building or space. ~~Types of occupancies~~ Uses not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined by the International Building Code. ~~Occupancy classification shall be determined in accordance with the International Building Code.~~

Reason: The purpose of the table is to provide fixtures based on the use of the building space, not based on the use group classification. By referencing the use group in accordance with the Building Code, an incorrect number of fixtures may be established for a building. A typical example is a mixed use building. Each use must be considered separately as to the fixture demands. Another example would be a high school that has a cafeteria, an auditorium for productions, and a stadium for sporting events. Each space would have different requirements. The listing of the use group in the table was done merely for convenience. The fixture demands have always been based on the use of the space.

Cost Impact: There is no impact to the cost of a building.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal recognizes that a building can have different actual uses with respect to plumbing fixture needs than what the occupancy classification is for the building.

Assembly Action: **None**

Final Hearing Results

P26-12 **AS**

Code Change No: P30-12

Original Proposal

Section(s): Table 403.1 (IBC [P]2902.1), 410.2 (New) (IBC 2902.6 (New))

Proponent: Matt Archer - Douglas County, CO - representing the Colorado Chapter ICC (marcher@douglas.co.us)

Revise as follows:

TABLE 403.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

(See Sections 403.2 and 403.3)

BATHTUBS/ SHOWERS	DRINKING FOUNTAIN[e, f] (SEE SECTION 410.~~1~~)	OTHER

(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 care recipients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units hall be permitted where such room is provided with direct access from each patient sleeping unit 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. The minimum number of required drinking fountains shall comply with Table 403.1 and Chapter 11 of the International Building Code.~~
~~f. Drinking fountains are not required for an occupant load of 15 or fewer.~~
g~~e~~. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.

410.2 (IBC 2902.6)Small occupancies. Drinking fountains shall not be required for an occupant load of 15 or fewer.

(Renumber subsequent section)

Reason: I believe footnotes serve as a guide for how to use the table. Footnotes are not meant to create new requirements or exceptions.

I deleted footnote e because the table will refer you to the main Section 410 where the (existing) section 410.2 stating that 2 drinking fountains are required for accessibility reasons can be found. Therefore, footnote e will be redundant and should be removed.

I deleted footnote f because this footnote applies to the entire table and not a specific function within the table. Therefore, this type of exception should be placed in the body of the code by moving the footnote to a new section under Section 410, drinking fountains.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This change is simply moving an allowance from the footnotes to a code section. This is an improvement in code clarity.

Assembly Action: **None**

Final Hearing Results

P30-12 **AS**

Code Change No: P35-12

Original Proposal

Section(s): 403.3 (IBC [P] 2902.3)

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing Little Caesar Enterprises (JBEngineer@aol.com)

Revise as follows:

403.3 (IBC [P] 2902.3) Required public toilet facilities. Customers, patrons and visitors shall be provided with *public* toilet facilities in structures and tenant spaces intended for public utilization. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 403 for all users. Employees shall be provided with toilet facilities in all *occupancies*. Employee toilet facilities shall be either separate or combined employee and *public* toilet facilities.

Exceptions: Public toilet facilities shall not be required in:

1. Open or enclosed parking garages~~. Toilet facilities shall not be required in parking garages~~ where there are no parking attendants.
2. Structures and tenant spaces intended for quick transactions, including take out, pick up and drop off, having a public access area less than or equal to 300 square feet.

Reason: Tenant spaces that are only intended for quick transactions do not need to provide public facilities for customers, patrons, and visitors. The public does not rely on such spaces to provide public toilet rooms. Patrons spend a short period of time completing a transaction, then they depart.

Examples of these types of spaces include: take out food locations, such as Chinese food take outs; pizza take outs; and carry out ribs. Similar quick transaction facilities include: dry cleaners, atm facilities, florists, shoe repair shops, and newspaper stands.

It is recognized that the text of the second exception could be shortened to read: Structures and tenant spaces having a public access area less than or equal to 300 square feet. The added text is provided for clarity.

The purpose of this section has always been to provide comfort facilities for anyone spending a period of time in the public space. Quick transaction spaces are unique, in that people are not in the space for any length of time. Furthermore, the space open to the public is limited to 300 square feet.

It would be a safety and/or health hazard to have the public travel to the working areas of the tenant space to use toilet facilities. Hence, if a public toilet room is added, the space for the toilet room would have to be located in the front space where the small public area is located. This creates a security concern where the public toilet room would block openings in the front tenant space.The 300 square foot dimension is based on the standard large spaces used by these types of facilities. Most tenant spaces of this type have an area less than 300 square feet for the public.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Small spaces intended for momentary occupancy by the public do not require toilet facilities.

Assembly Action: **None**

Final Hearing Results

P35-12 **AS**

Code Change No: P38-12

Original Proposal

Section(s): 403.4 (IBC [P]2902.4)

Proponent: Larry Brown, National Association of Home Builders (NAHB)

Revise as follows:

403.4 (IBC [P]2902.4)Signage. Required public facilities shall be provided with ~~designated by a~~ ~~legible~~ signs that ~~for each~~ designate the sex as required by Section 403.2. Signs shall be readily visible and located near the entrance to each toilet facility. Signs for accessible toilet facilities shall comply with Section 1110 of the *International Building Code*.

Reason: This modification is proposed as the IPC and IBC do not always require a separate toilet facility for each sex, as shown below in the Exceptions to Section 403.2. As Section 2902.4 (above) only addresses the signs themselves, is it more appropriate that sign itself have the correct designation for the sex, or for a facility that can be used by either sex. This modification achieves this intent.

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

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or fewer.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P38-12 AS

Code Change No: P39-12

Original Proposal

Section(s): 403.4.1 (IBC [P]2902.4.1)

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

403.4.1 (IBC [P] 2902.4.1) Directional signage. Directional signage indicating the route to the required public toilet facilities shall be posted ~~in accordance with Section 3107 of the *International Building Code*. Such signage shall be located~~ in a lobby, corridor, ~~or~~ aisle or similar space, such that it can be readily seen from the main ~~at the~~ entrance to the building or tenant space. ~~facilities for customers, and visitors~~.

Reason: IBC Section 3107 is silent with respect to the posting of this directional signage, so the reference to this section is being removed. The current language indicates that that signage should be located at the entrance to the toilet facilities. The intent of this section is to require signage at the entrance of the building or tenant space so that persons entering such spaces are made aware that toilet facilities do exist and the general direction to those facilities. The overall reason why this section is in the code is to prevent the tenant from telling people that toilet facilities are not available. The requirement for a sign to be displayed at the entrance to the building or tenant space puts the tenant on notice that he cannot deny that public toilet facilities exist to those persons needing those facilities. How can the tenant or owner say that he/she has no public toilet facilities when there is a sign clearly indicating the location of those supposedly non-existing facilities?

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Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P39-12 AS

Code Change No: P42-12

Original Proposal

Section(s): 404.2 (New), 404.3 (New), Chapter 14

Proponent: Julius Ballanco, P.E./JB Engineering and Code Consulting, P.C. representing McGuire Manufacturing (JBEngineer@aol.com)

Add new text as follows:

404.2 Accessible fixture requirements. Accessible plumbing fixtures shall be installed with the clearance, height, spacing, and arrangement in accordance with ICC A117.1.

404.3 Exposed pipes and surfaces. Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact . Pipe coverings shall comply with ASME A112.18.9.

Add new standards to Chapter 14 as follows:

ASME

A112.18.9-2011 Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixtures

ICC

A117.1-2009 Accessible and Usable Buildings and Facilities

Reason: Reference should be made to ICC A117.1 in the plumbing code. While this standard is referenced in the Building Code, it should also be referenced in the Plumbing Code since the standard contains requirements for plumbing fixture installations.

One of the common concerns is who inspects accessible plumbing fixtures for compliance with ICC A117.1? Plumbing fixtures are inspected by the plumbing official. Therefore, appropriate reference to the spacing, sizing, and configuration requirements needs to be placed in the plumbing code.

ASME A112.18.9 Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixtures is the national consensus standard regulating protective covers for water and drain pipes. This Standard is intended to regulate products that must meet the requirements of ICC A117.1. The standard has performance requirements for protectors/insulators for exposed waste and supplies, so a physically challenged person will be protected when using a sink or lavatory in a public/commercial or private/residential facility.

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

Analysis: A review of the standard proposed for inclusion in the code, ASME A112.18.9-2011 and ICC A117.1-2009, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal accurately clarifies the requirement for protecting piping under accessible plumbing fixtures. Similar proposals in past code cycles received good support but the standard for the covers was not finished. Now that the standard is complete, this language is acceptable for addition to the code.

Assembly Action: **None**

Final Hearing Results

P42-12 **AS**

Code Change No: P46-12

Original Proposal

Section(s): 406.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

406.1 Water connection. The water supply to an automatic clothes washer shall be protected against backflow by an air gap that is integral with ~~installed integrally within~~ the machine or ~~with the installation of~~ a backflow preventer shall be installed in accordance with Section 608. Air gaps shall comply with ASME A112.1.3 or A112.1.2.

Reason: The requirement for automatic clothes washing machines to comply with ASSE 1007 (covering the requirement for an internal air gap on the water supply) was removed from the 2012 code because ACW manufacturers are no longer certifying their machines to ASSE 1007. Standards that they do comply with, ASME A112.1.3 or A112.1.2 are being included in this section so that inspectors are able to verify that the ACW's have integral backflow protection.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Adding these standards to the section will give the inspectors something to refer to for clothes washers.

Assembly Action: **None**

Final Hearing Results

P46-12 **AS**

Code Change No: P50-12

Original Proposal

Section(s): 409.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

409.2 Water connection. The water supply to a dishwashing machine shall be protected against backflow by an *air gap* that is integral with the machine or a backflow preventer shall be installed in accordance with Section 608. Air gaps shall comply with ASME A112.1.3 or A112.1.2.

Reason: The requirement for dishwashing machines to comply with ASSE 1006 (covering the requirement for an internal air gap on the water supply) was removed from the 2012 code because DW manufacturers are no longer certifying their machines to ASSE 1006. Standards that they do comply with, ASME A112.1.3 or A112.1.2 are being included in this section so that inspectors are able to verify that the DWM's have integral backflow protection.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal fills the voids that removal of the ASSE standard last cycle caused.

Assembly Action: **None**

Final Hearing Results

P50-12 **AS**

Code Change No: P51-12

Original Proposal

Section(s): 410.1, Chapter 14

Proponent: Bob Eugene, Underwriters Laboratories (Robert.Eugene@ul.com)

Revise as follows:

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1/CSA B45.2 or ASME A112.19.2/CSA B45.1 and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Electrically operated, refrigerated drinking water coolers shall be listed and labeled in accordance with UL 399.

Add new standard to Chapter 14 as follows:

UL
399-2008 Drinking-Water Coolers, with revisions through January 14, 2011

Reason: Referenced UL standards contain important safety and plumbing requirements that should be covered in the International Plumbing Code. UL 399 is an ANSI approved standard for drinking water coolers.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, UL 399-2008 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement. Most manufacturers already comply with the standard.

Assembly Action: **None**

Final Hearing Results

P51-12 AS

Code Change No: P54-12

Original Proposal

Section(s): 202, 410.3, 410.4

Proponent: Roger Harper, Jr, Louisa County VA, representing, the Virginia Plumbing and Mechanical Inspectors Association (sharper@louisa.org)

Add new definitions as follows:

DRINKING FOUNTAIN. A plumbing fixture that is connected to the potable water distribution system and the drainage system. The fixture allows the user to obtain a drink directly from a stream of flowing water without the use of any accessories.

WATER DISPENSER. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition also includes a freestanding apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

WATER COOLER. A drinking fountain that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

Revise as follows:

410.3 Substitution. Where restaurants provide drinking water in a container free of charge, *drinking fountains* shall not be required in those restaurants. 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 number of drinking fountains.

410.4 Prohibited location. *Drinking fountains, water coolers* and ~~bottle~~ *water dispensers* shall not be installed in public restrooms.

Reason: There is often confusion regarding what is or is not a water cooler. Some people think that a water cooler is a drinking fountain since typically, they do also cool the water that is being dispensed. Others think that a water cooler is a bottled water dispenser that is capable of cooling the water dispensed. Currently the code does not define any of the terms. In reality, drinking fountains are drinking fountains and everything else is some form of a water dispenser. Whether or not the water is cooled is irrelevant. The code does not require cooled water. The code can be simplified in Section 410.3 by referring only to drinking fountains or their alternative, water dispensers. The new definitions establish that a drinking fountain and a water dispenser that is connected to the potable water supply system are both plumbing fixtures by definition and a bottled water dispenser is not a plumbing fixture by definition. It is necessary to be clear as to what the code requires to be provided and also what the code intends to allow as an alternative. This proposal also paves the way for new technology that is being marketed and installed today, namely water dispensers that are built into a wall, connected to the potable water supply system and dispense water into cups, glasses and bottles. These units typically treat the potable water with additional filtering and/or reverse osmosis treatment.

Cost Impact: none

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee voted approved as submitted for P53-12 and this proposal is an extension of that proposal that adds a needed definition for water coolers.

Assembly Action: **None**

Final Hearing Results

P54-12 **AS**

Code Change No: P56-12

Original Proposal

Section(s): 413, 413.1, 413.2, 413.3, 413.4, Table 709.1, 802.1.6, 915.1, 916.1, 1003.3.2

Proponent: Julius Ballanco, P.E./ JB Engineering and Code Consulting, P.C. representing InSinkErator (JBEngineer@aol.com)

Revise as follows:

SECTION 413
FOOD WASTE DISPOSERS ~~GRINDER UNITS~~

413.1 Approval. Domestic food waste ~~grinders~~ disposers shall conform to ASSE 1008. Food waste ~~grinders~~ disposers shall not increase the drainage fixture unit load on the sanitary drainage system.

413.2 Domestic food waste ~~grinders~~ disposers waste outlets. Domestic food waste ~~grinders~~ disposers shall be connected to a drain of not less than 1½ inches (38 mm) in diameter.

413.3 Commercial food waste ~~grinders~~ disposers waste outlets. Commercial food waste ~~grinders~~ disposers shall be connected to a drain not less than 1½ inches (38 mm) in diameter. Commercial food waste ~~grinders~~ disposers shall be connected and trapped separately from any other fixtures or sink compartments.

413.4 Water supply required. All food waste ~~grinders~~ disposers shall be provided with a supply of cold water. The water supply shall be protected against backflow by an *air gap* or backflow preventer in accordance with Section 608.

Revise as follows:

TABLE 709.1
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
Kitchen sink, domestic with food waste ~~grinder~~ disposer and/or dishwasher	2	1 ½

(Portions of table not shown remain unchanged.)

Revise as follows:

802.1.6 Domestic dishwashing machines. Domestic dishwashing machines shall discharge indirectly through an *air gap* or *air break* into a standpipe or waste receptor in accordance with Section 802.2, or discharge into a wye branch fitting on the tailpiece of the kitchen sink or the dishwasher connection of a food waste ~~grinder~~ disposer. The waste line of a domestic dishwashing machine discharging into a kitchen sink tailpiece or food waste ~~grinder~~ disposer shall connect to a deck-mounted *air gap* or the waste line shall rise and be securely fastened to the underside of the sink rim or counter.

Revise as follows:

915.1 Type of fixtures. A combination waste and vent system shall not serve fixtures other than floor drains, sinks, lavatories and drinking fountains. Combination waste and vent systems shall not receive the discharge from a food waste ~~grinder~~ disposer or clinical sink.

916.1 Limitation. Island fixture venting shall not be permitted for fixtures other than sinks and lavatories. Residential kitchen sinks with a dishwasher waste connection, a food waste ~~grinder~~ disposer, or both, in combination with the kitchen sink waste, shall be permitted to be vented in accordance with this section.

Revise as follows:

1003.3.2 Food waste grinders. Where food waste ~~grinders~~ disposers 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~~ disposer. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste ~~grinder~~ disposer.

Reason: The proper term used in the plumbing profession is food waste disposers, not food waste grinders. This will correct the language in the code to the proper terminology for this type of plumbing appliance.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Errata:

1003.3.2 Food waste ~~grinders~~ disposers. Where food waste ~~grinders~~ disposers 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~~ disposer. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste ~~grinder~~ disposer.

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P56-12 **AS**

Code Change No: P57-12

Original Proposal

Section(s): 413.1, Chapter 14

Proponent: Bob Eugene, Underwriters Laboratories (Robert.Eugene@ul.com)

Revise as follows:

413.1 Approval. Domestic food waste grinders shall conform to ASSE 1008 and shall be listed and labeled in accordance with UL 430. Food waste grinders shall not increase the drainage fixture unit load on the sanitary drainage system.

Add new standard to Chapter 14 as follows:

UL
430-2009 Waste Disposers, with revisions through March 23, 2011

Reason: Referenced UL standards contain important safety and plumbing requirements that should be covered in the International Plumbing Code. UL 430 is an ANSI approved standard for waste disposers.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, UL 430-2009 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal brings an accepted standard into the code and it does not limit the availability of certain waste disposers.

Assembly Action: **None**

Final Hearing Results

P57-12 **AS**

Code Change No: P59-12

Original Proposal

Section(s): 417.4.1

Proponent: Roger Harper, Jr, Louisa County VA, representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (sharper@louisa.org)

Revise as follows:

417.4.1 Wall area. Bathtub floors, shower floors, ~~the~~ wall areas above built-in tubs ~~with~~ that have installed shower heads and walls in shower compartments shall be constructed of smooth, ~~noncorrosive~~ corrosion-resistant and nonabsorbent waterproof materials. Wall materials shall extend to a height of not less than 6 feet (1829 mm) above the room floor level~~,~~ and not less than 70 inches (1778 mm) above the drain of the tub or shower. ~~where measured from the compartment floor at the drain.~~ Such walls shall form a water-tight joint with each other and with either the tub~~, receptor~~ or shower floor.

Reason: This is consistent with the language currently in the IRC. This adds the missing requirement from the IPC that bath tubs and showers are required to have non-absorbent floors, the same as the IRC currently requires. This change also incorporates the term “corrosion resistant” in place of “non-corrosive”. The materials must be made of materials that resist corrosion. This is consistent industry terminology used throughout the I-codes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal makes the IPC consistent with the language in the IRC.

Assembly Action: **None**

Final Hearing Results

P59-12 AS

Code Change No: P63-12

Original Proposal

Section(s): 420.1, Chapter 14

Proponent: Fred Constantino, American Society of Mechanical Engineers (ASME), representing the ASME A112 Plumbing Materials and Equipment Standards Committee.

Revise as follows:

420.1 Approval. Water closets shall conform to the water consumption requirements of Section 604.4 and shall conform to ANSI Z124.4, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5. Water closets shall conform to the hydraulic performance requirements of ASME A112.19.2/CSA B45.1. Water closet tanks shall conform to ANSI Z124.4, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5. Electro-hydraulic water closets shall comply with ASME A112.19.2/CSA B45.1. Water closets equipped with a dual flushing device shall comply with ASME A112.19.14.

Add new standard to Chapter 14 as follows:

ASME
A112.19.14–2006(R2011) Six-Liter Water Closets Equipped with a Dual Flushing Device

Reason: Dual flush water closets which consist of a full flush of 1.6 gpf and a reduce flush of less than 1.1 gpf do exist and should be required to comply with some performance requirements. This is a National standard (ANSI) which covers the performance requirements for these types of systems.

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

Analysis: A review of the standard proposed for inclusion in the code, ASME A112.19.14-2006(R2011) with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P63-12 **AS**

Code Change No: P68-12

Original Proposal

Section(s): 421.1

Proponent: Bob Eugene, Underwriters Laboratories (Robert.Eugene@ul.com)

Revise as follows:

421.1 Approval. Whirlpool bathtubs shall comply with ASME A112.19.7/CSA B45.10 and shall be listed and labeled in accordance with UL1795.

Add new standard to Chapter 14 as follows:

UL
1795-2009 Hydromassage Bathtubs, including revisions through August 23, 2011

Reason: Referenced UL standard contains important safety and plumbing requirements that should be covered in the International Plumbing Code.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, UL 1795-2009 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Including this standard into the code is very important for health and safety of whirlpool tub users.

Assembly Action: **None**

Final Hearing Results

P68-12 AS

Code Change No: P70-12

Original Proposal

Section(s): 423.3 (New)

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Add new text as follows:

423.3 Footbaths, pedicure baths and head shampoo sinks. The water supplied to specialty plumbing fixtures such as pedicure chairs having an integral foot bath tub, footbaths, and head shampoo sinks, shall be limited to a maximum temperature of 110 °F by a water temperature limiting device that conforms to ASSE 1070 or CSA B125.3.

Reason: The code does not address maximum water temperature for foot baths and head shampoo sinks. Feet and heads should be protected from potentially scalding water.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

423.3 Footbaths, pedicure baths and head shampoo sinks. The water supplied to specialty plumbing fixtures such as pedicure chairs having an integral foot bath tub, footbaths, and head shampoo sinks, shall be limited to a maximum temperature of ~~110 °F~~ 120 °F (49 °C) by a water temperature limiting device that conforms to ASSE 1070 or CSA B125.3.

Committee Reason: The committee modified the proposal because testimony indicated that there is no need to limit the water to 110F as there is very low risk of scalding at the 120°F (49°C) temperature level.

The committee agreed that the water temperature to footbaths and shampoos sinks should be limited to safe levels.

Assembly Action: **None**

Final Hearing Results

P70-12 **AM**

Code Change No: P73-12

Original Proposal

Section(s): 424.8

Proponent: Fred Constantino, American Society of Mechanical Engineers (ASME), representing the ASME A112 Plumbing Materials and Equipment Standards Committee.

Revise as follows:

424.8 Transfer valves. Deck-mounted bath/shower transfer valves containing an integral atmospheric vacuum breaker shall conform to the requirements of ASME ~~A112.18.7~~ A112.18.1/CSA B125.1.

Reason: Update Section 424.8 by referencing ASME A112.18.1/CSA B125.1 since the requirements from A112.18.7 are now covered in A112.18.1/B125.1 and also deleting standards from Chapter 14. The A112.18.7 standard is longer published by ASME.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal makes a necessary update because A112.18.7 is no longer being published.

Assembly Action: **None**

Final Hearing Results

P73-12 **AS**

Code Change No: P75-12

Original Proposal

Section(s): 501.3

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

501.3 Drain valves. Drain valves for emptying shall be installed at the bottom of each tank-type water heater and hot water storage tank. ~~Drain valves shall conform to ASSE 1005.~~ The drain valve inlet shall be not less than ¾ inch nominal iron pipe size and the outlet shall be provided with male garden hose threads.

Reason: ASSE discontinued the 1005 standard. The new language proposed for this section provides for minimum requirements for water heater drain valves.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The language is needed to ensure that drain valves are still provided especially when the valve is removed to use that opening in the water heater tank for a return line of a hot water recirculation system.

Assembly Action: **None**

Final Hearing Results

P75-12 **AS**

Code Change No: P80-12

Original Proposal

Section(s): 504.6

Proponent: Roger Harper, Jr, Louisa County VA Representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (sharper@louisa.org)

Revise as follows:

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

(Items 1-9 remain unchanged)

10. ~~Not~~ terminate not more than 6 inches (152 mm) above and not less than two times the discharge pipe diameter above the floor or waste receptor flood level rim.

Reason: A minimum distance is not stated. Typically, the minimum air gap would be two nominal pipe diameters as stated in Section 802.2.1 for indirect wastes pipe.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the 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 1-9 remain unchanged)

10. Terminate not more than 6 inches (152 mm) above and not less than two times the discharge pipe diameter above the floor or flood level rim of a waste receptor ~~flood level rim~~.

Committee Reason: The committee modified the proposal to read more clearly. The committee agreed with the proponent's written reason statement.

Assembly Action: **Disapproved**

Final Hearing Results

P80-12 **AM**

Code Change No: P86-12

Original Proposal

Section(s): 504.7.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

504.7.2 Pan drain termination. The pan drain shall extend full-size and terminate over a suitably located indirect waste receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches (152 mm) and not more than 24 inches (610 mm) above the adjacent ground surface. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation.

Reason: Consider a water heater installation where the code did not require the original installation to have a drain for the T&P valve or a drain for a drip pan or such drain was required, but never installed. Upon replacement of the water heater, under the current code, a drain is required. Should a drain be installed regardless of the difficulty or cost?

The replacement of an existing water heater must be installed to the current code as if it was a new installation. If the original water heater installation did not require a pan, then in many cases, there is not a suitable disposal point for a pan drain. However, if the installation requires a pan, the current code requires that the pan have a pan drain. Many times, there is not a way to provide for a suitable disposal point for the pan drain. For example, consider a slab-on-grade building where the water heater is located in the center of the building where there is not a floor drain or waste receptor. When that water heater is replaced, the current code requires that the water heater have a pan and that the pan have a pan drain (that runs to a suitable disposal point). How is this to be accomplished in this existing building? There is not always a practical solution. Therefore, the proposed language provides an exception for replacement water heaters to not be required to have a pan drain, if the installation requires a pan. The code would still require the pan, but not the pan drain. A pan with no drain is better than no pan at all.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P86-12 AS

Code Change No: P87-12

Original Proposal

Section(s): 601.5 (New), Chapter 14

Proponent: Sidney L. Cavanaugh, Cavanaugh Consulting representing CuraFlo (sidneycavanaugh@yahoo.com)

Add new text as follows:

601.5 Rehabilitation of piping systems. Where pressure piping systems are rehabilitated using an epoxy lining system, such lining system shall comply with ASTM F 2831.

Add new standard to Chapter 14 as follows:

ASTM

F 2831-11 Standard Practice for Internal Non Structural Epoxy Barrier Coating Material Used In Rehabilitation of Metallic Pressurized Piping Systems

Reason: These systems are being used everyday across North America when systems need to be replaced or repaired when they do not meet minimum pressures and flow rates. It is important that they these epoxy lining systems meet a national consensus standard to assure proper installation and use.

Cost Impact: no additional cost when considering the replacement cost.

Analysis: A review of the standard proposed for inclusion in the code, ASTM F 2831-11 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P87-12 AS

Code Change No: P88-12

Original Proposal

Section(s): 603.2

Proponent: Shawn Strausbaugh, Arlington County VA Representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7

Delete and substitute as follows:

~~**603.2 Separation of water service and building sewer.** Water service pipe and the building sewer shall be separated by not less than 5 feet of undisturbed or compacted earth.~~

~~**Exceptions:**~~

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

603.2 Separation of water service and building sewer. Where water service piping is located in the same trench with the building sewer, such sewer shall be constructed of materials listed in Table 702.2. Where the building sewer piping is not constructed of materials listed in Table 702.2, the water service pipe and the building sewer shall be horizontally separated by not less than 5 feet (1524 mm) of undisturbed or compacted earth. The required separation distance shall not apply where a water service pipe crosses a sewer pipe, provided the water service is sleeved to a point not less than 5 feet (1524 mm) horizontally from the sewer pipe centerline on both sides of such crossing. The sleeve shall be of pipe materials listed in Table 605.3, 702.2 or 702.3. The required separation distance shall not apply where the bottom of the water service pipe located within 5 feet (1524 mm) of the sewer is not less than 12 inches (305 mm) above the highest point of the top of the building sewer.

Reason: This proposal is consistent with IRC Section 2905.4.2. Exception item number 2 of the existing text is the most common method utilized for sewer and water service installations across the country. Therefore it should not be the exception but rather the rule. The other provisions, items 1 and 2 in the proposal, have not been changed but simply reformatted into a more user friendly format.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P88-12 **AS**

Code Change No: P90-12

Original Proposal

Section(s): Table 604.3

Proponent: Edward R. Osann, Natural Resources Defense Council, representing self (eosann@nrdc.org); Harry Misuriello, American Council for an Energy-Efficient Economy, representing himself (misuriello@verizon.net)

Revise as follows:

TABLE 604.3
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA REQUIRED CAPACITY AT FIXTURE SUPPLY PIPE OUTLETS

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE[a] (gpm)	FLOW PRESSURE (psi)
Bathtub, balanced-pressure, thermostatic or combination balanced-pressure/ thermo-static mixing valve	4	20
Bidet, thermostatic mixing valve	2	20
Combination fixture	4	8
Dishwasher, residential	2.75	8
Drinking fountain	0.75	8
Laundry tray	4	8
Lavatory, private	~~2~~ 0.8	8
Lavatory, private, mixing valve	0.8	8
Lavatory, public	0.4	8
Shower	~~3~~ 2.5	8
Shower, balanced-pressure, thermostatic or combination balanced-pressure/ thermo-static mixing valve	~~3~~ 2.5[b]	20
Sillcock, hose bibb	5	8
Sink, residential	~~2.5~~ 1.75	8
Sink, service	3	8
Urinal, valve	12	25
Water closet, blow out, flushometer Valve	25	45
Water closet, flushometer tank	1.6	20
Water closet, siphonic, flushometer Valve	25	35
Water closet, tank, close coupled	3	20
Water closet, tank, one piece	6	20

For SI: 1 pound per square inch = 6.895 kPa,1 gallon per minute = 3.785 L/m.

a. For additional requirements for flow rates and quantities, see Section 604.4.

b. Where the shower mixing valve manufacturer indicates a lower flow rating for the mixing valve, the lower value shall be applied.

Reason: TABLE 604.3 WATER DISTRIBUTION SYSTEM DESIGN CRITERIA REQUIRED CAPACITY AT FIXTURE SUPPLY PIPE OUTLETS requires plumbing distribution system design to achieve flow rates of *at least* 3 gpm for showers, 2.5 gpm for sink faucets, and 2 gpm for lavatory faucets, all of which are excessive as minimum requirements. The *minimum* flow rate for a shower in this table is above the allowable *maximum* flow rate for a showerhead as specified by Table 604.4 of this code and by the

nationwide standard that has been in effect for nearly 20 years. Similarly, the minimum flow rate for lavatories does not distinguish between public and private fixtures, and thus sets a minimum flow for public lavatories that is in excess of the maximum flow allowable under Table 604.4 of this code. And for residential sinks other than service sinks, the *minimum* flow rate is again set higher than the allowable *maximum* flow rate for a sink faucet as specified by Table 604.4. For applications at the low end of the acceptable range of water pressure, these excessive minimum flow values tend to encourage the oversizing of pipes leading to fixture outlets, leaving a larger volume of cooled hot water to purge before use, and thus exacerbating the problem of the energy and water lost while waiting for actual hot water to arrive at the fixture. In some installations, these excessive minimum values may require water pressure booster systems that might otherwise be unnecessary.

Under this proposal, public lavatories would be distinguished from private lavatories, single-handle mixing valves for private lavatories would be recognized, and the minimum flow rates for lavatory, residential sink, and shower supply pipes would be adjusted downward. Minimum flow rates for showers would be set at 2.5 gpm, or such lower flow rate as would match the manufacturer's minimum rated flow for the mixing valve to provide the level of thermal protection prescribed by the industry standard. The minimum flow rate for a residential sink, other than a service sink, would be set at 1.75 gpm, which is 80 percent of the value of the maximum flow rate allowed by this code under Table 604.4. The minimum flow rate for a public lavatory would be set at 0.4 gpm, 80 percent of the value of the maximum flow rate allowed by this code under Table 604.4. The minimum flow rate for a private lavatory would be set at 0.8 gpm, which is the minimum flow rate prescribed for private lavatory faucets by the US EPA's WaterSense specification (version 1.0, October 2007).

Cost Impact: This proposal will have the effect of reducing the diameter of pipe that is allowed to serve lavatories, sinks, and showers in some installations, and may also eliminate the need for water pressure booster systems in some applications. This code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement. This will provide more flexibility to the industry.

Assembly Action: **None**

Final Hearing Results

P90-12 **AS**

Code Change No: P93-12

Original Proposal

Section(s): Table 604.5

Proponent: Gary Klein, Affiliated International Management, LLC, representing self (gary@aim4sustainability.com)

Revise as follows:

TABLE 604.5
MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE[a] (gpm)	FLOW PRESSURE (psi)

a. Where the developed length of the distribution line is ~~60~~ 50 feet or less, and the available pressure at the meter is 35 psi or greater, the minimum size of an individual distribution line supplied from a manifold and installed as part of a parallel water distribution system shall be one nominal tube size smaller than the sizes indicated.

(Portions of table not shown remain unchanged.)

Reason: Section 607.2 of the 2012 IPC limits the developed length of hot or tempered water supply piping to 50 feet.

The change recommended in this proposal correlates Table 604 with Section 607.2. It will apply to cold water as well as to hot or tempered water, which quite frankly is fine from the perspective of minimizing pressure drop and maintaining acceptable performance at the fixtures.

I urge your support for this proposal. Thank you.

Cost Impact: The code change proposal will not increase the cost of construction. In fact, if the smaller diameter piping becomes commonly used, it might decrease the costs of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P93-12 **AS**

Code Change No: P94-12

Original Proposal

Section(s): Table 605.3, Table 605.4, 605.17 (New)

Proponent: David W. Ash, Lubrizol Advanced Materials, Inc.

Revise as follows:

TABLE 605.3
WATER SERVICE PIPE

Chlorinated polyvinyl chloride/aluminum/ chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855

(Portions of table not shown remain unchanged)

TABLE 605.4
WATER DISTRIBUTION PIPE

Chlorinated polyvinyl chloride/aluminum/ chlorinated polyvinyl chloride (CPVC/AL/CPVC) pipe and tubing	ASTM F2855

(Portions of table not shown remain unchanged)

605.17 Chlorinated polyvinyl chloride/aluminum/ chlorinated polyvinyl chloride (CPVC/AL/CPVC) pipe and tubing. Joints between CPVC/AL/CPVC plastic pipe or CPVC fittings shall comply with Sections 605.17.1 and 605.17.2.

605.17.1 Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

605.17.2 Solvent cementing. Joint surfaces shall be clean and free from moisture, and an *approved* primer shall be applied. Solvent cement, orange in color and conforming to ASTM F 493, shall be applied to 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/AL/CPVC pipe and CPVC fittings.
4. The CPVC fittings are manufactured in accordance with ASTM D 2846.

Add new standard to Chapter 14 as follows:

ASTM

F2855-11 Specification for Poly(Vinyl Chloride)/Aluminum/Poly(Vinyl Chloride) (CPVC/AL/CPVC) Composite Pressure Tubing

Reason: CPVC/AL/CPVC pipe has been developed that is suitable for use as potable water piping, both as water service pipe and water distribution pipe. This product has been successfully used successfully on a limited basis since 2007 based on NSF standard

61 and a special engineering standard (SE) from NSF International. Including this product in the IPC will recognize another plumbing pipe option for installers.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, ASTM F 2855-11 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P94-12 **AS**

Code Change No: P95-12

Original Proposal

Section(s): Table 605.3, Table 702.2, Table 702.3, Table 702.4, 705.3, Table 1102.5

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

TABLE 605.3
WATER SERVICE PIPE

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C296~~

(Portions of table not shown remain unchanged)

~~605.11 Asbestos-cement.~~ ~~Joints between asbestos-cement pipe or fittings shall be made with a sleeve coupling of the same composition as the pipe, sealed with an elastomeric ring conforming to ASTM D 1869.~~

(Renumber subsequent sections)

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C428~~

(Portions of table not shown remain unchanged)

TABLE 702.3
BUILDING SEWER PIPE

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C428~~

(Portions of table not shown remain unchanged)

TABLE 702.4
PIPE FITTINGS

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C428~~

(Portions of table not shown remain unchanged)

~~705.3 Asbestos cement.~~ ~~Joints between asbestos-cement pipe or fittings shall be made with a sleeve coupling of the same composition as the pipe, sealed with an elastomeric ring conforming to ASTM D 1869.~~

(Renumber subsequent sections)

TABLE 1102.4
BUILDING STORM SEWER PIPE

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C428~~

Portions of table not shown remain unchanged

TABLE 1102.5
SUBSOIL DRAIN PIPE

MATERIAL	STANDARD
~~Asbestos-cement pipe~~	~~ASTM C508~~

(Portions of table not shown remain unchanged)

Reason: Asbestos cement pipe is no longer manufactured in North America. The potential health issues associated with asbestos make this piping material unsuitable for use. The material needs to be removed from the code.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P95-12 **AS**

Code Change No: P97-12

Original Proposal

Section(s): Table 605.5, Chapter 14

Proponent: Robert Hall, SE Technical Manager, representing Viega, LLC (robert.hall@viega.com)

Revise as follows:

TABLE 605.5
PIPE FITTINGS

MATERIALS	STANDARDS
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME 16.26; ASME B16.29; ASME B16.51

Add new standard to Chapter 14 as follows:

ASME
B16.51-2011 Copper and Copper Alloy Press-Connect Pressure Fittings

Reason: New, ASME Material Standard for Press-Connect fittings.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, ASME B16.51-2011, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with an opponent's testimony that the product is now covered by a ANSI standard and that the product has been previously used based upon an ICC ES report.

Assembly Action: **None**

Final Hearing Results

P97-12 **AS**

Code Change No: P98-12

Original Proposal

Section(s): Table 605.5, Chapter 14

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing himself (JBEngineer@aol.com)

Revise as follows:

TABLE 605. 5
PIPE FITTINGS

MATERIAL	STANDARDS
Copper or copper alloy	ASSE 1061; ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29, ASME B16.51

(Portions of table not shown remain unchanged)

Add new standard to Chapter 14 as follows:

ASME
B16.51-2011 Copper and Copper Alloy Press-Connect Pressure Fittings

Reason: This adds the new standard for copper press connect fittings. ASME B16.51 was published in December 2011. The standard regulates the size, design, and performance requirements for press connect fittings.

Cost Impact: This change does not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASME B16.51-2011 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: To be consistent with the committee's action on P97-12

Assembly Action: **None**

Final Hearing Results

P98-12 **AS**

Code Change No: P99-12

Original Proposal

Section(s): Table 605.5

Proponent: Pennie L. Feehan, Pennie L. Feehan Consulting, representing The Copper Development Association (penniefeehan@me.com)

Revise as follows:

TABLE 605.5
PIPE FITTINGS

MATERIAL	STANDARD
Copper or copper alloy	ASSE 1061; ASME B16.15; ASME B16.18; ASME B16.22; ~~ASME B16.23;~~ ASME B16.26; ~~ASME B16.29~~

Reason: The above proposal removes DWV fittings from Potable Water table to benefit the end user. ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings - DWV and ASME B 16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings – DWV are designed with short cup depth and ¼ inch per foot slope. Both Standards are listed correctly under DWV fittings in Table 704.2 and Chapter 14 Reference Standards.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P99-12 **AS**

Code Change No: P100-12

Original Proposal

Section(s): Table 605.5

Proponent: Larry Gill, P.Eng. IPEX USA LLC (larry.gill@ipexna.com)

Revise as follows:

TABLE 605.5
PIPE FITTINGS

MATERIAL	STANDARD
Fittings for polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F 1807; ASTM F 2098; ASTM F 2159; ASTM F 2735; ASTM F2769

Reason: I am adding standard ASTM F2769 (already in the code) to the pipe fittings table because the standard includes fittings for PE-RT tubing. This standard should have added to this table during the last cycle when the standard was first introduced into the code for Tables 605.3 and 605.4.

Cost Impact: The proposed change will not increase the cost of construction

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P100-12 **AS**

Code Change No: P101-12

Original Proposal

Section(s): Table 605.5, Chapter 14

Proponent: Kevin Simko, Victaulic representing Victaulic (ksimko@victaulic.com)

Revise as follows:

TABLE 605.5
PIPE FITTINGS

MATERIALS	STANDARDS
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME 16.26; ASME B16.29; ASTM B 75: ASTM B 152; ASTM B 584
Gray iron and ductile iron	AWWA C110/A21.10; AWWA C153/A21.53; ASTM A395; ASTM A 536; ASTM F 1476: ASTM F 1548
Stainless steel (Type 304/304L)	ASTM A 312; ASTM A 778; ASTM A 351; ASTM A403: ASTM A 743; ASTM A 744; ASTM A 890
Stainless steel (Type 316/316L)	ASTM A 312; ASTM A 778; ASTM A 351; ASTM A 403: ASTM A 743; ASTM A 744; ASTM A 890
Steel	ASME B16.9; ASME B16.11; ASME B16.28; ASTM A 53; ASTM A 106; ASTM A 234; ASTM A 395; ASTM A 536; ASTM F1476; ASTM F1548

(Portions of table not shown remain unchanged.)

Add new standards to Chapter 14 as follows:

ASTM

A106/A106M-11	Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service
A234/A234M-11a	Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
A 351-10	Standard Specification for Castings, Austenitic, for Pressure-Containing Parts
A 395/A395M-99(2009)	Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures
A 403-11	Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings
A 536-84(2009)	Standard Specification for Ductile Iron Castings
A 743/A743M-06(2010)	Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application
A 744/A744M-10e1	Standard Specification for Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service
A 890/A890M-10	Standard Specification for Castings, Iron-Chromium-Nickel-Molybdenum Corrosion-Resistant, Duplex (Austenitic/Ferritic) for General Application

B 584-11	Standard Specification for Copper Alloy Sand Castings for General Applications
F 1476-07	Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications
F1548-01(2006)	Standard Specification for the Performance of Fittings for Use with Gasketed Mechanical Couplings Used in Piping Applications

Reason: The materials currently listed in Table 605.5 do not fully represent the materials being used for potable water systems in the industry. The code is overly-restrictive with regard to pipe materials and does not allow for the use of materials that offer improved mechanical and electrochemical properties compared with allowed materials. The additions of the standard materials will allows the use of high grade materials that provide improved performance. ,amy of these materials are also currently used in the International Mechanical Code and other piping codes.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Some of the proposed standards are inappropriate as they do not cover fittings but only cover the materials to make fittings (ASTM B 75, B 152 and the standards that cover castings). Some standards have non-mandatory language (ASTM A234, A395, A536).

Assembly Action: **None**

Public Comments

Public Comment 1:

Kevin J. Simko, representing Victaulic, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

TABLE 605.5 PIPE FITTINGS

MATERIAL	STANDARD
Copper or copper alloy	ASSE 1061; ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29; ~~ASTM B 75; ASTM B 152; ASTM B 584~~ ASTM F-1476; ASTM F-1548
Gray iron and ductile iron	AWWA C110/A21.10; AWWA C153/A21.53; ~~ASTM A 395; ASTM A 536;~~ ASTM F-1476; ASTM F-1548
Stainless steel (Type 304/304L)	ASTM A 312; ASTM A 778; ~~ASTM A 351; ASTM A 403; ASTM A 743; ASTM A 744; ASTM A 890~~ ASTM F-1476; ASTM F-1548
Stainless steel (Type 316/316L)	ASTM A 312; ASTM A 778; ~~ASTM A 351; ASTM A 403; ASTM A 743; ASTM A 744; ASTM A 890~~ ASTM F-1476; ASTM F-1548
Steel Pipe	ASME B16.9; ASME B16.11; ASME B16.28; ~~ASTM A 53; ASTM A 106; ASTM A 234; ASTM A 395; ASTM A 536;~~ ASTM F-1476; ASTM F-1548

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The standards listed in the table include a mix of actual fitting standards as well as a material specification for pipe (ASTM A-312). However, the standards currently listed in Table 605.5 do not fully represent the materials or products being used for potable water systems in the industry. The table does not address any standard for grooved mechanical joints or grooved fittings. The ASTM F-1476 and ASTM F-1548 standards outline these criteria. Grooved mechanical joints are currently being used for potable water systems and the addition of the ASTM F-1476 and ASTM F-1548 standards will provide a common criteria for grooved mechanical joints which are currently accepted for use by the code.

The goal here is to remove the material specifications originally proposed and replace them with two standards covering grooved mechanical joints.

No standards/specifications that were included in Table 605.5 in the 2012 IPC have been removed from the table.

Final Hearing Results

P101-12 **AMPC1**

Code Change No: P102-12

Original Proposal

Section(s): Table 605.5

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee (Sstrausbaugh@arlingtonva.us)

Revise as follows:

TABLE 605.5
PIPE FITTINGS

MATERIAL	STANDARD
Cast-iron	ASME B16.4~~; ASME B16.12~~

(Portions of table not shown remain unchanged)

Reason: ASME B16.12 is for threaded *drainage* fittings and is inappropriate in a water distribution pipe fitting table.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P102-12 **AS**

Code Change No: P104-12

Original Proposal

Section(s): 605.15, 605.15.4 (New)

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self (JBEngineer@aol.com)

Revise as follows:

605.15 Copper tubing. Joints between copper or copper alloy tubing or fittings shall comply with Sections 605.15.1 through ~~605.15.4~~ 605.15.5.

605.15.1 Brazed joints. Joint surfaces shall be cleaned. An *approved* flux shall be applied where required. The joint shall be brazed with a filler metal conforming to AWS A5.8.

605.15.2 Flared joints. Flared joints for water pipe shall be made by a tool designed for that operation.

605.15.3 Mechanical joints. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

605.15.4 Press connect. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. The tube shall be fully inserted into the press connect fitting. Press connect joints shall be pressed with a tool certified by the manufacturer.

~~**605.15.4**~~ **605.15.5 Soldered joints.** Solder joints shall be made in accordance with the methods of ASTM B 828. All cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. A flux conforming to ASTM B 813 shall be applied. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solders and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead.

Reason: This change coordinates with the change to add the press connect fitting standard to Table 605.5. The proposed new text identifies the method of joining copper tube by press connect. The tube must be cut square and reamed. The tool must be certified by the manufacturer to assure that the proper press connection is made.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language adds clarification to the code and is preferred over the language of P106-12.

Assembly Action: **None**

Final Hearing Results

P104-12 **AS**

Code Change No: P105-12

Original Proposal

Section(s): 605.15.3 (New), Chapter 14

Proponent: Kevin Simko, Victaulic, representing Victaulic (ksimko@victaulic.com)

Add new text as follows:

605.15.3 Grooved and shouldered mechanical joints. Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an *approved* elastomeric seal and shall be installed in accordance with the manufacturer's instructions. Such joints shall be permitted to be concealed.

Add new standard to Chapter 14 as follows:

ASTM

ASTM F1476-07	Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications

Reason: The code as written contains no provision specifically identifying grooved and shoulder mechanical joints. These types of joints are acceptable within the International Mechanical Code with the same verbiage. These type sof joints are commonly used in steel, stainless steel, copper and PVC potable water systems when incorporating a gasket that meets the requirements of the NSF 61. Without this provision, the current code is not representative of current materials and methods.

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

Analysis: A review of the standard proposed for inclusion in the code, ASTM F1476-07 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P105-12 **AS**

Code Change No: P106-12

Original Proposal

Section(s): 605.15.5 (New)

Proponent: Robert Hall, SE Technical Manager, Viega, LLC, representing Viega LLC (Robert.hall@viega.com)

Add new text as follows:

605.15.5 Press Connect Joints. Press connect joints shall be installed in accordance with the manufacturer's instructions. Press-connect joints shall conform to one of the standards listed in Table 605.5

Reason: Need press connect fittings reference in Section 605.15 Copper tube.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language adds clarification to the code and will meld with the language proposed and approved for P104-12.

Assembly Action: **None**

Final Hearing Results

P106-12 **AS**

Code Change No: P107-12

Original Proposal

Section(s): 605.16.2

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self (JBEngineer@aol.com)

Revise as follows:

605.16.2 Solvent cementing. Joint surfaces shall be clean and free from moisture~~,~~. Joints shall be made in accordance with the pipe manufacturer's installation instructions. Where such instructions require ~~and~~ that ~~an~~ *~~approved~~* primer be used, the primer shall be applied to the joint surfaces and a solvent cement, orange in color and conforming to ASTM F 493, shall be applied to the joint surfaces. Where such instructions allow for a one step solvent cement, yellow in color and conforming to ASTM F 493, to be used, the joint surfaces shall not require application of a primer before the solvent cement is applied. The joint shall be made while the cement is wet and in accordance with ASTM D 2846 or ASTM F 493. Solvent cemented 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.~~

Reason: This section is currently very convoluted. The requirements can be simplified by referencing the pipe manufacturer's installation instructions. The installation instructions are part of the listing which is required by the code. This will also recognize changes to the listing of the joining method, rather than requiring constant changing of this section.

The current requirements are incorrect since UL lists ASTM F442 for joining with one-step solvent cement. Furthermore, UL lists the joining for pipe up to 3 inch in diameter. Neither requirement is addressed in the current code text.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement. The revised language simplifies the code.

Assembly Action: **None**

Final Hearing Results

P107-12 **AS**

Code Change No: P109-12

Original Proposal

Section(s): 605.18.3 (New), Chapter 14

Proponent: Kevin Simko, Victaulic representing Victaulic (ksimko@victaulic.com)

Add new text as follows:

605.18.3 Grooved and shouldered mechanical joints. Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an *approved* elastomeric seal and shall be installed in accordance with the manufacturer's instructions. Such joints shall be permitted to be concealed.

Add new standard to Chapter 14 as follows:

ASTM

ASTM F1476-07	Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications

Reason: The code as written contains no provision specifically identifying grooved and shoulder mechanical joints. These types of joints are acceptable within the International Mechanical Code with the same verbiage. These type sof joints are commonly used in steel, stainless steel, copper and PVC potable water systems when incorporating a gasket that meets the requirements of the NSF 61. Without this provision, the current code is not representative of current materials and methods.

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

Analysis: A review of the standard proposed for inclusion in the code, ASTM F 1476-07 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P109-12 **AS**

Code Change No: P112-12

Original Proposal

Section(s): 605.2.1 (New), Chapter 14

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Add new text as follows:

605.2.1 Lead content of drinking water pipe and fittings. Pipe, pipe fittings, joints, valves, faucets, and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372 and shall have a weighted average lead content of 0.25 percent lead or less.

Add new standard to Chapter 14 as follows:

NSF
372-2010 Drinking Water System Components - Lead Content

Reason: This change will coordinate the IPC with Federal legislation limiting the amount of lead that can be used to supply drinking water. Section 605.2 is still necessary since remaining components in a potable water distribution system must still have a maximum of 8 percent lead. The Federal legislation only applies to drinking water components. There are other components that have a greater quantity of lead than 0.25 percent and are permitted to by Federal law.

NSF 372 is the new standard used to evaluate the weighted average of lead in drinking water components. This standard allows manufacturers to perform a mathematical analysis of their product to determine the weighted average of lead. NSF 372 is consistent with the Federal legislation.

Cost Impact: This change does not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, NSF 372-2010 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P112-12 **AS**

Code Change No: P113-12

Original Proposal

Section(s): 605.5

Proponent: Kevin Simko, Victaulic representing Victaulic (ksimko@victaulic.com)

Revise as follows:

605.5 Fittings. Pipe fittings shall be *approved* for installation with the piping material installed and shall comply with the applicable standards listed in Table 605.5. Pipe fittings utilized in water supply systems shall also comply with NSF 61. Ductile and gray iron pipe and pipe fittings utilized within water service piping systems shall be cement mortar lined in accordance with AWWA C104.

Reason: The code as written requires that any fitting manufactured from ductile iron must be cement lined. This ambiguity results in overly-restrictive fitting requirements that do not represent current materials and methods. The requirement for cement lining needs to be specific for water service pipe and not distribution piping. Distribution piping typically incorporates galvanized steel of ductile iron components and not cement lining. Cement lining is used exclusively in ductile iron water main piping.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P113-12 **AS**

Code Change No: P115-12

Original Proposal

Section(s): 605.7

Proponent: Jeremy Brown, NSF International (brown@nsf.org)

Revise as follows:

605.7 Valves. All valves shall be of an approved type and compatible with the type of piping material installed in the system. ~~Ball valves, gate valves, butterfly valves, globe valves and plug.~~ Valves intended to supply drinking water shall meet the requirements of NSF 61.

Reason: NSF/ANSI Standard 61 Drinking Water System Components-Health Effects addresses crucial aspects of drinking water system components: whether contaminants that leach or migrate from the product/material into the drinking water are above acceptable levels in finished waters. Requiring NSF 61 will help protect the drinking water supply from the leaching of contaminants. The IPC and IRC already requires conformance to NSF 61 for pipes, fittings, faucets and valves intended to supply drinking water. (Sections 424.1, 605.3, 605.4, 605.5, 605.7 of IPC).

The current list of valves in Section 605.7 which require NSF-61 was a concession during previous code change cycles to allow manufacturers time to bring product lines into compliance with this standard. The requirement should apply to all valves intended to supply drinking water. The Uniform Plumbing Code currently requires all valves to conform to NSF 61.

Cost Impact: This will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P115-12 **AS**

Code Change No: P116-12

Original Proposal

Section(s): 605.7, Table 605.7 (New), Chapter 14

Proponent: Jeremy Brown, NSF International (brown@nsf.org)

Revise as follows:

605.7 Valves. ~~All~~ Valves shall be ~~of an approved type and~~ compatible with the type of piping material installed in the system. Valves shall conform to one of the standards listed in Table 605.7 or shall be *approved*. Ball valves, gate valves, globe valves and plug valves intended to supply drinking water shall meet the requirements of NSF 61.

TABLE 605.7
VALVES

MATERIAL	STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic	ASME A112.4.14, ASME A112.18.1/CSA B125.1, ASTM F 1970, CSA B125.3
Copper or copper alloy	ASME A112.4.14, ASME A112.18.1/CSA B125.1, ASME B16.34, CSA B125.3, MSS SP-67, MSS SP-80
Ductile Iron	ASTM A126, AWWA C500, AWWA C504, AWWA C507, MSS SP-67, MSS SP-70, MSS SP-71, MSS SP-72, MSS SP-78, MSS SP110,
Cross-linked polyethylene (PEX) plastic	ASME A112.4.14, ASME A112.18.1, CSA B125.3, NSF 359
Polypropylene (PP) plastic	ASTM F 2389
Polyvinyl chloride (PVC) plastic	ASME A112.4.14, ASTM F 1970

Add new standards to Chapter 14 as follows:

ASME

A112.4.14 – 2004 Manually Operated, Quarter-Turn Shutoff Valves for Use in Plumbing Systems
B16.34 – 2009 Valves Flanged, Threaded and Welding End

ASTM

A126-04(2009) Gray Iron Castings for Valves, Flanges, and Pipe Fittings
F1970 - 05 Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems

AWWA

C500-09 AWWA Standard for Metal-Seated Gate Valves for Water Supply Service
C504-10 AWWA Standard for Rubber-Seated Butterfly Valves
C507-11 AWWA Standard for Ball Valves, 6 In. Through 60 In.

MSS

Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.
127 Park Street, N.E.
Vienna, VA 22180

SP-42-2009 Corrosion Resistant Gate, Globe, Angle and Check Valves with Flanged and

Butt Weld Ends (Classes 150, 300 & 600)

SP-67-2011	Butterfly Valves
SP-70-2011	Gray Iron Gate Valves, Flanged and Threaded Ends
SP-71-2011	Grey Iron Swing Check Valves, Flanged and Threaded Ends
SP-72-2010	Ball Valves with Flanged or Butt-Welding Ends for General Service
SP-78-2011	Cast Iron Plug Valves, Flanged and Threaded Ends
SP-80-2008	Bronze Gate, Globe, Angle and Check Valves
SP-110-2010	Ball Valves, Threaded, Socket Welded, Solder Joint, Grooved and Flared Ends

NSF

359-2011 Valves for Crosslinked Polyethylene (PEX) Water Distribution Tubing Systems

Reason: Currently the code requires valves to be approved but does not contain requirements for which performance standards are acceptable for use. While a number of valve standards have been created over the years, they have not been included in the code. The intent of this code change is to create a table to identify appropriate standards for valves. This list is not all inclusive of all material types and in some cases there are not national standards for every type of valve and material used. For this reason, the language "shall be approved or conform to . . ."

Cost Impact: This will not increase the cost of construction.

Analysis: A review of the standards proposed for inclusion in the code, ASME A112.4.14–2004 , ASME B16.34–2009 , ASTM A126-04(2009), ASTM F1970-05, AWWA C500-09, AWWA C504-10, AWWA C507-11, MSS SP-42-2009, MSS SP-67-2011, MSS SP-70-2011, MSS SP-71-2011, MSS SP-72-2010, MSS SP-78-2011, MSS SP-80-2008, MSS SP-100-2010 and NSF 359-2011 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the 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 1-9 remain unchanged)

10. Terminate not more than 6 inches (152 mm) above and not less than two times the discharge pipe diameter above the floor or flood level rim of a waste receptor ~~flood level rim~~.

Committee Reason: The committee modified the proposal to read more clearly. The committee agreed with the proponent's written reason statement.

Assembly Action: **Disapproved**

Final Hearing Results

P116-12 **AM**

Code Change No: P119-12

Original Proposal

Section(s): 605.22.2 (New), Chapter 14

Proponent: Kevin Simko, Victaulic representing Victaulic (ksimko@victaulic.com)

Add new text as follows:

605.22.2 Grooved and shouldered mechanical joints. Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an *approved* elastomeric seal and shall be installed in accordance with the manufacturer's instructions. Such joints shall be permitted to be concealed.

Add new standard to Chapter 14 as follows:

ASTM

ASTM F1476-07	Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications

Reason: The code as written contains no provision specifically identifying grooved and shoulder mechanical joints. These types of joints are acceptable within the International Mechanical Code with the same verbiage. These type sof joints are commonly used in steel, stainless steel, copper and PVC potable water systems when incorporating a gasket that meets the requirements of the NSF 61. Without this provision, the current code is not representative of current materials and methods.

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

Analysis: A review of the standard proposed for inclusion in the code, ASTM F 1476-07 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P119-12 **AS**

Code Change No: P120-12

Original Proposal

Section(s): 605.23.3 (New), Chapter 14

Proponent: Kevin Simko, Victaulic representing Victaulic (ksimko@victaulic.com)

Add new text as follows:

605.23.3 Grooved and shouldered mechanical joints. Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an *approved* elastomeric seal and shall be installed in accordance with the manufacturer's instructions. Such joints shall be permitted to be concealed.

Add new standard to Chapter 14 as follows:

ASTM

ASTM F1476-07	Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications

Reason: The code as written contains no provision specifically identifying grooved and shoulder mechanical joints. These types of joints are acceptable within the International Mechanical Code with the same verbiage. These type sof joints are commonly used in steel, stainless steel, copper and PVC potable water systems when incorporating a gasket that meets the requirements of the NSF 61. Without this provision, the current code is not representative of current materials and methods.

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

Analysis: A review of the standard proposed for inclusion in the code, ASTM F 1476-07 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P120-12 **AS**

Code Change No: P121-12

Original Proposal

Section(s): 605.24.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

605.24.2 Plastic pipe or tubing to other piping material. Joints between different ~~grades~~ types of plastic pipe or between plastic pipe and other piping material shall be made with ~~an~~ *approved* adapters or transition fittings.

Reason: There is a number of different grades of plastic within a type of plastic pipe. For example, PVC can be made from various grades of PVC. All grades of PVC are solvent welded in the same manner with the same cement. This section is concerned with joints between different types of plastic pipe such as between PVC and ABS. These two different types of pipe cannot be directly joined together because the solvent cement approved for one type is not suitable for the other type. This corresponding section in the IRC was corrected many cycles ago and for uniformity, the IPC needs the same correction.

The term "transition" was added because some manufacturers provide special fittings for the purpose of joining two different types of plastic pipe.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P121-12 **AS**

Code Change No: P122-12

Original Proposal

Section(s): 605.25.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

~~**605.25.1 Flared joints.** Flared pipe ends shall be made by a tool designed for that operation.~~

(Renumber subsequent sections)

Reason: Manufacturers of PE-RT tubing indicate that the tubing cannot be flared and that a tool for flaring this type of tubing does not exist.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P122-12 **AS**

Code Change No: P131-12

Original Proposal

Section(s): 605.25.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

~~**605.25.1 Flared joints.** Flared pipe ends shall be made by a tool designed for that operation.~~

(Renumber subsequent sections)

Reason: Manufacturers of PE-RT tubing indicate that the tubing cannot be flared and that a tool for flaring this type of tubing does not exist.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P131-12 **AS**

Code Change No: P132-12

Original Proposal

Section(s): Table 608.1, 608.13.6, Chapter 14

Proponent: Fred Constantino, American Society of Mechanical Engineers (ASME), representing the ASME A112 Plumbing Materials and Equipment Standards Committee.

Revise as follows:

TABLE 608.1
APPLICATION OF BACKFLOW PREVENTERS

Hose connection backflow preventer	High or low hazard	Low head backpressure, rated working pressure, backpressure or backsiphonage Sizes $^{1}/_{2}$″–1″	ASME A112.21.3, ASSE 1052, CSA B64.2.1.1
Hose connection vacuum breaker	High or low hazard	Low head backpressure or backsiphonage Sizes 1/2″,3/4″, 1″	ASME A112.21.3, ASSE 1011, CSA B64.2, CSA B64.2.1
Vacuum breaker wall hydrants, frost-resistant, automatic draining type	High or low hazard	Low head backpressure or backsiphonage Sizes 3/4″, 1″	ASME A112.21.3, ASSE 1019, CSA B64.2.2

(Portions of table not shown remain unchanged)

608.13.6 Atmospheric-type vacuum breakers. Pipe-applied atmospheric-type vacuum breakers shall conform to ASSE 1001 or CSA B64.1.1. Hose-connection vacuum breakers shall conform to ASME A112.21.3, ASSE 1011, ASSE 1019, ASSE 1035, ASSE 1052, CSA B64.2, CSA B64.2.1, CSA B64.2.1.1, CSA B64.2.2 or CSA B64.7. These devices shall operate under normal atmospheric pressure when the critical level is installed at the required height.

Add new standard to Chapter 14 as follows:

ASME
A112.21.3–1985(R2007) Hydrants for Utility and Maintenance Use

Reason: There also other hydrants and hose connections with the proper backflow preventer or vacuum breaker that exist other than those complying with the ASSE and CSA standards. These hydrants are for utility and maintenance use. This is a National standard (ANSI) which covers the performance requirements for these types of devices.

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

Analysis: A review of the standard proposed for inclusion in the code, ASME A112.21.3-1985(R2007) with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P132-12 **AS**

Code Change No: P133-12

Original Proposal

Section(s): Table 608.1

Proponent: Michael Moss, American Backflow Prevention Association (msmoss@utah.gov)

Revise as follows:

TABLE 608.1
APPLICATION OF BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
BACKFLOW PREVENTION ASSEMBLIES:			
Double check backflow prevention assembly and double check fire protection backflow prevention assembly	Low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1015, AWWA C510, CSA B64.5, CSA B64.5.1
Double check detector fire protection backflow prevention assemblies	Low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1048
Pressure vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/2" - 2"	ASSE 1020, CSA B64.1.2
Reduced pressure principle backflow prevention assembly and reduced pressure principle fire protection backflow assembly	High or low hazard	Backpressure or backsiphonage Sizes 3/8 " – 16 “	ASSE 1013, AWWA C511, CSA B64.4, CSA B64.4.1
Reduced pressure detector fire protection backflow prevention assemblies	High or low hazard	Backpressure or backsiphonage (Fire Sprinkler Systems)	ASSE 1047
Spill-resistant vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/2" - 2"	ASSE 1056
BACKFLOW PREVENTER PLUMBING DEVICES:			
Antisiphon-type fill valves for gravity water closet flush tanks	High hazard	Backsiphonage only	ASSE 1002, CSA B125.3
Backflow preventer for carbonated beverage machines	Low hazard	Backpressure or backsiphonage Sizes 1/4" – 3/8"	ASSE 1022
Backflow preventer with intermediate atmospheric vents	Low hazard	Backpressure or backsiphonage Sizes 1/4" – 3/8"	ASSE 1012, CSA B64.3
Dual check valve type backflow preventers	Low hazard	Backpressure or backsiphonage Sizes 1/4"-1"	ASSE 1024, CSA B64.6
Hose connection backflow preventer	High or low hazard	Low head backpressure, rated	ASSE 1052, CSA B64.2, B64.2.1

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
		working pressure, backpressure or backsiphonage Sizes1/2"- 1"	
Hose connection vacuum breaker	High or low hazard	Low head backpressure or backsiphonage only Sizes 1/2", 3/4 ", 1"	ASSE 1011, CAN/CSA B64.1.1
Laboratory Faucet Backflow Preventer	High or low hazard	Low head backpressure and backsiphonage	ASSE 1035, CSA B64.7
Atmospheric type vacuum breaker	High or low hazard	Backsiphonage only Sizes 1/2" - 4"	ASSE 1001, CSA B64.1.1
Vacuum breaker wall hydrants, frost resistant, automatic draining type	High or low hazard	Low head backpressure and backsiphonage Sizes 3/4 ", 1"	ASSE 1019, CSA B64.2.2
OTHER MEANS or METHODS:			
Air gap	High or low hazard	Backsiphonage only	ASME A112.1.2
Air gap fittings for use with plumbing fixtures, appliances and appurtenances	High or low hazard	Backpressure or backsiphonage	ASME A112.1.3
Barometric loop	High or low hazard	Backsiphonage only	(See Section 608.13.4)

For SI: 1 inch = 25.4 mm

a. Low Hazard - See Pollution (Section 202), High Hazard - See Contamination (Section 202)

b. See Backpressure (Section 202), See Backpressure, low head (Section 202), See Backsiphonage (Section 202)

Reason: There is much confusion concerning protection provided by any 'backflow preventer'. Reorganizing this table would better identify proper and correct applications for code users by identifying the different protection methods: assemblies, backflow prevention devices and other means or methods. The existing table gives the mistaken understanding that "any of the above provides adequate protection for any job". This is not true. Adequate protection is based on hazard classification, application and proper installation. Backflow prevention assemblies are specifically recognized and accepted as separate and distinct units based on Section 312.10.2 because of their requirement for periodic testing to ensure proper and reliable operation in order to protect public health.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P133-12 **AS**

Code Change No: P134-12

Original Proposal

Section(s): 608.6

Proponent: Michael Moss, American Backflow Prevention Association (msmoss@utah.gov)

Revise as follows:

608.6 Cross-connection control. Cross-connections shall be prohibited, except where approved backflow prevention assemblies, backflow prevention devices or other means or methods are installed to protect the potable water supply.

Reason: "Methods" are not defined in the definitions. The term from Chapter 2 is **"**Backflow Preventer**.** The definition of methods would be complete and precise with a change to: "BACKFLOW PREVENTER**.** A backflow prevention assembly, a backflow prevention device or other means or method to prevent backflow into the potable water supply."

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P134-12	**AS**

Code Change No: P135-12

Original Proposal

Section(s): 608.8, 608.8.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

608.8 Identification of nonpotable water systems. Where *nonpotable* water systems are installed, the piping conveying the nonpotable water shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.32.

608.8.1 Signage Required. 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~~ ." with signage that reads as follows: "Non-potable water is utilized for [application name]. Caution: non-potable water. DO NOT DRINK."The words shall be legibly and 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 in colors in contrast to the background on which they are applied. In addition to the required wordage, the pictograph shown in Figure 608.8.1 shall appear on the signage required by this section.

608.8.12 ~~Information~~. Distribution Pipe Labeling and Marking. Non-potable distribution piping shall be of the color purple and shall be embossed or integrally stamped or marked with the words: "CAUTION: NONPOTABLE WATER – DO NOT DRINK" or shall be installed with a purple identification tape or wrap. Pipe identification shall include the contents of the piping system and an arrow indicating the direction of flow. Hazardous piping systems shall also contain information addressing the nature of the hazard. Pipe identification shall be repeated at intervals not exceeding 25 feet (7620 mm) and at each point where the piping passes through a wall, floor or roof. Lettering shall be readily observable within the room or space where the piping is located.

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

608.8.2.2 Lettering Size. The size of the background color field and lettering shall comply with Table 608.8.2.2.

608.8.2.3 Identification Tape. Where used, identification tape shall be at least 3 inches wide and have white or black lettering on purple field stating "CAUTION: NON-POTABLE WATER – DO NOT DRINK". Identification tape shall be installed on top of non-potable rainwater distribution pipes, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.

Table 608.8.2.2

SIZE OF PIPE IDENTIFICATION

PIPE DIAMETER (Inches)	LENGTH BACKGROUND COLOR FIELD (Inches)	SIZE OF LETTERS (Inches)
$^3/_4$ to $1^1/_4$	8	0.5
$1^1/_2$ to 2	8	0.75
$2^1/_2$ to 6	12	1.25
8 to 10	24	2.5
over 10	32	3.5

For SI 1 inch = 25.4 mm.

Figure 706.2 Pictograph – DO NOT DRINK

Figure 608.1.1 Pictograph – DO NOT DRINK

Reason: Water distribution systems of other than potable water are being installed in buildings and the code needs to require marking of the piping and signage for the outlets for safety reasons. The basis for this new language is text from the IgCC and is written to be in alignment with the IgCC requirements.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The coloring requirements for nonpotable water piping should be expanded to differentiate between the different types of nonpotable water as each has different quality levels. Identification tape is mentioned in the last section of the proposal but the first section says that only color marking or metal tags shall be used. This needs corrected.

Assembly Action: **Approved as Submitted**

Public Comments

Public Comment:

Shawn Strausbaugh, Arlington County, VA, representing International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

608.8 Identification of nonpotable water systems. Where *nonpotable* water systems are installed, the piping conveying the nonpotable water shall be identified either by color marking ~~or~~ , metal tags or tape in accordance with Sections 608.8.1 through 608.8.~~3~~2.

Remainder of proposal is unchanged.

Commenter's Reason: At the suggestion of the committee, the proposal was modified to add "tape" to Section 608.8 as one of the ways that piping could be identified because Section 608.8.2.3 Identification tape, specifies that piping can be identified with tape.

With respect to the committee's comment about that the color identification of different nonpotable waters should differ and not just all be identified with the color purple: One of the basic purposes of the IPC is to protect the potable water supply from contamination by nonpotable water supplies. Having various nonpotable water supplies differently colored does not provide for any increase in safety of the potable water supply. The water industry as a whole has been struggling for some time with the issue of colors of piping carrying various nonpotable waters and has yet to come to any conclusion for a variety of reasons (not enough available colors, consensus issues). The IPC only needs to be concerned about keeping water potable-all other waters are nonpotable and where color is used for identification, purple is the only color that is currently widely recognized as indicating nonpotable water. There is no need at this time for the IPC to try to break new ground to establish a color identification system for nonpotable waters, especially in the public comment phase of the code change process.

Final Hearing Results

P135-12 **AMPC**

Code Change No: P141-12

Original Proposal

Section(s): 608.13.7

Proponent: Michael Moss, American Backflow Prevention Association (msmoss@utah.gov)

Revise as follows:

608.13.7 Double check~~-valve~~ backflow prevention assemblies. Double check~~-valve~~ backflow prevention assemblies shall conform to ASSE 1015, CSA B64.5, CSA B64.5.1 or AWWA C510. Double~~-detector~~ check~~-valve~~ detector fire protection backflow prevention assemblies shall conform to ASSE 1048. These ~~devices~~ assemblies shall be capable of operating under continuous pressure conditions.

Reason: To provide consistent terminology throughout the code for reference and comparison.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P141-12 **AS**

Code Change No: P142-12

Original Proposal

Section(s): 608.13.10 (New)

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Add new text as follows:

608.13.10 Dual check valve backflow preventer. Dual check valve backflow preventers shall conform to ASSE 1024 or CSA B64.6.

Reason: Table 608.1 lists ASSE 1024, CSA B64.6 (dual check valves) but currently there is no code text associated with these devices. This new section is added to correct this problem.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

608.13.10 Dual check ~~valve~~ backflow preventer. Dual check ~~valve~~ backflow preventers shall conform to ASSE 1024 or CSA B64.6.

Committee Reason: The modification was made to correct the name of the device to be inline with the title of the standard. The committee agreed with the proponent's written reason statement.

Assembly Action: **Disapproved**

Final Hearing Results

P142-12 **AM**

Code Change No: P147-12

Original Proposal

Section(s): 610.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

610.1 General. New ~~or repaired~~ potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to "on-site" or "in-plant" fabrication of a system or to a modular portion of a system.

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.
2. The system or part thereof shall be filled with a water/chlorine solution containing not less than 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing not less than 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.
3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.
4. The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system.

Reason: The current language seems to suggest that anytime a general repair is made to a potable water system that the entire system must then be disinfected. For example, one riser valve in a 35 story high rise is repaired or replaced. Is it the intent of the code to then require the entire potable water system to be disinfected? Repairs should not trigger the need for disinfection of an entire water system.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Repairs are sometimes not permitted. It would be too costly and too interruptive to perform a system disinfection each time a repair is made.

Assembly Action: **None**

Public Comments

Public Comment:

Shawn Strausbaugh, Arlington County, VA, International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

602.3.4 Disinfection of system. After construction ~~or major repair~~, the individual water supply system shall be purged of deleterious matter and disinfected in accordance with Section 610.

Remainder of proposal is unchanged.

Commenter's Reason: After the public hearing, it was realized that the approved proposal created a conflict with Section 602.3.4. This public comment corrects the conflict.

Final Hearing Results

P147-12 **AMPC**

Code Change No: P152-12

Original Proposal

Section(s): 701.7

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Delete without substitution:

~~**701.7 Connections.** Direct connection of a steam exhaust, blowoff or drip pipe shall not be made with the building drainage system. Waste water where discharged into the building drainage system shall be at a temperature not greater than 140°F (60°C). Where higher temperatures exist, *approved* cooling methods shall be provided.~~

Reason: This section was added to be consistent with Section 803.1. Section 803.1 dates back to the A40.8-1955 National Plumbing Code. The requirement for limiting the temperature of the hot water was based on concerns that temperatures above 140 degrees will remove the galvanizing from galvanized steel pipe. Today, there are numerous other piping materials used for sanitary drainage systems. Most piping materials can handle waste temperatures in excess of 140 degrees.

The last sentence has no meaning since there are no approved cooling methods identified. The common method is adding cold water to the waste stream. However, this is an unnecessary waste of water.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P152-12 **AS**

Code Change No: P155-12

Original Proposal

Section(s): 702.5 (New), 803.1

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self

Revise as follows:

702.5 Temperature rating. Where the wastewater temperature will be greater than 140°F (60°C), the sanitary drainage piping material shall be rated for the highest temperature of the wastewater.

~~**803.1 Waste water temperature.** Steam pipes shall not connect to any part of a drainage or plumbing system and water above 140°F (60°C) shall not be discharged into any part of a drainage system. Such pipes shall discharge into an indirect waste receptor connected to the drainage system.~~

Reason: Section 803.1 dates back to the A40.8-1955 National Plumbing Code. The requirement for limiting the temperature of the hot water was based on concerns that temperatures above 140 degrees will remove the galvanizing from galvanized steel pipe. Today, there are numerous other piping materials used for sanitary drainage systems. Most piping materials can handle waste temperatures in excess of 140 degrees.

In the 1950's, the means of cooling waste water was the addition of cold water. This is a waste of water that the code no longer permits.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P155-12 **AS**

Code Change No: P157-12

Original Proposal

Section(s): 703.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee, the Virginia Plumbing and Mechanical Inspectors Association (VPMIA), the Virginia Building Code Officials Association (VBCOA) and ICC Region 7.

Revise as follows:

703.1 Building sewer pipe near the water service. ~~Where the building sewer is installed within 5 feet (1524 mm) of the water service, the installation shall comply with the provisions of Section 603.2.~~ The proximity of a sewer to a water service shall comply with Section 603.2.

Reason: This section only triggers Section 603.2 if the sewer is 5 feet or less from the water service. If the building sewer and water service are more than 5 foot apart, the reader is not referred back to Section 603.2 which requires that the separation be of undisturbed or compacted earth. In other words, Section 703.1 would allow for a building sewer and water service to be in a wide trench without undisturbed/compacted earth between. This would violate the requirements of Section 603.2. The solution to this problem is simply to refer the reader back to the section that requires the separation so that there is no question that the five foot of separation is of compacted or undisturbed earth.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P157-12 **AS**

Code Change No: P158-12

Original Proposal

Section(s): 703.6 (New), 1109, 1109.1

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Add new text as follows:

703.6 Combined sanitary and storm public sewer. Where the public sewer is a combined system for both sanitary and storm water, the sanitary sewer shall be connected independently to the public sewer.

Revise as follows:

SECTION 1109
COMBINED SANITARY AND STORM ~~SYSTEM~~ PUBLIC SEWER

1109.1 ~~Size of combined drains and sewers.~~ ~~The size of a combination sanitary and *storm drain* or *sewer* shall be computed in accordance with the method in Section 1106.3. The fixture units shall be converted into an equivalent projected roof or paved area. Where the total fixture load on the combined drain is less than or equal to 256 fixture units, the equivalent drainage area in horizontal projection shall be taken as 4,000 square feet (372 m2). Where the total fixture load exceeds 256 fixture units, each additional fixture unit shall be considered the equivalent of 15.6 square feet (1.5 m2) of drainage area. These values are based on a rainfall rate of 1 inch (25 mm) per hour.~~ **General.** Where the public sewer is a combined system for both sanitary and storm water, the storm sewer shall be connect independently to the public sewer.

Reason: The section on combined sanitary and storm systems implies that the two systems are combined inside the building. Hence, the need for some language to reflect how the combined piping is sized. However, when a combined sewer is only available, the connections are made separately to the public sewer. The combined system is in the street. Only older cities have combined sewers. Even these cities strive to separate the sewers. As such, the building connection must be separate to allow for the easy change over to a two sewer system.

The proposed change adds a requirement to Chapter 7 since there is no text regarding combined system. The text in Chapter 11 is modified to be consistent with the proposed new text in Chapter 7.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P158-12 **AS**

Code Change No: P159-12

Original Proposal

Section(s): 705 (New)

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Add new text as follows:

SECTION 705
REPLACEMENT OF UNDERGROUND SEWERS
BY PIPE BURSTING METHODS

705.1 General. This section shall govern the replacement of existing building sewer piping by pipe-bursting methods.

705.2 Applicability. The replacement of building sewer piping by pipe bursting methods shall be limited to gravity drainage piping of sizes 6 inches and smaller. The replacement piping shall be of the same nominal size as the existing piping.

705.3 Pre-installation inspection. The existing piping sections to be replaced shall be inspected internally by a recorded video camera survey. The survey shall include notations of the position of cleanouts and the depth of connections to the existing piping.

705.4 Pipe. The replacement piping shall be of extra high molecular weight PE3408 material and shall be manufactured with an SDR of 17 and in compliance with ASTM F 714.

705.5 Pipe fittings. Pipe fittings to be connected to the replacement piping shall be of extra high molecular weight PE3408 material and shall be manufactured with an SDR of 17 and in compliance with ASTM D2683.

705.6 Cleanouts. Where the existing building sewer did not have cleanouts meeting the requirements of this code, cleanout fittings shall be installed as required by this code.

705.7 Installation procedure. The installation procedure shall be in accordance with the following steps:

1. The existing pipe section to be replaced shall be cleaned of debris.
2. The beginning and end of the piping section to be replaced shall be exposed as necessary to enable pulling equipment to be properly installed and the replacement piping to be inserted without bending of the pipe at less than the minimum allowable bending radius as recommended by the pipe manufacturer.
3. A pulling cable shall be retrieved from the pulling end of the piping to be replaced and pulled to the insertion end of the piping to be replaced.
4. A pipe bursting and pulling head shall be connected to one end of the replacement piping. The bursting/pulling head shall be connected to the pulling cable.
5. In accordance with the pulling equipment and pipe bursting head manufacturer's operating instructions, the pipe bursting/pulling head shall be simultaneously operated and pulled through the existing piping until the end of the new piping exits at the pulling end of the operation.
6. The pipe bursting/pulling head shall be disconnected from the new piping and the pulling equipment removed from the area. The replacement piping ends shall be cut to length as

required and shall be connected to the existing piping beyond the pipe section that was replaced. Connections to the ends of the replacement piping shall be in accordance with Section 705.

7. Where a connection to the replacement piping at a point between the pulling end and the insertion end of the pipe section that was replaced is required, the replacement piping shall be exposed at that location. A section of replacement piping shall be removed and a fitting of the appropriate configuration in accordance with Table 706.3 shall be installed. The connections between the fitting and the pipe shall be made in accordance with Section 705.16.

705.8 Post-installation inspection. The completed replacement piping section shall be inspected internally by a recorded video camera survey. The video survey shall be reviewed and approved by the code official prior to pressure testing of the replacement piping system.

705.9 Pressure testing. The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.

(Renumber subsequent sections)

Add new standards to Chapter 14 as follows:

ASTM

D2683-04	Standard Specification for Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing.
F 714-06a	Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) based on Outside Diameter.

Reason: The IPC lacks coverage concerning the replacement of sewer systems by pipe bursting methods. These methods are being widely used throughout the country. Proper guidance concerning this type of replacement provides additional value to the code.

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Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This section is needed as this method is being successfully used. However, the installation procedures should not be included. The committee suggests bringing it back in a public comment without the installation procedures.

Assembly Action: **None**

Public Comments

Public Comment 1:

Michael Cudahy, Plastic Pipe and Fittings Association (PPFA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

705.4 Pipe. The replacement piping shall be ~~of extra high molecular weight PE3408 material and shall be~~ manufactured with an SDR of 17 and in compliance with ASTM F 714.

~~**705.7 Installation procedure.** The installation procedure shall be in accordance with the following steps:~~

~~1. The existing pipe section to be replaced shall be cleaned of debris.~~
~~2. The beginning and end of the piping section to be replaced shall be exposed as necessary to enable pulling equipment to be properly installed and the replacement piping to be inserted without bending of the pipe at less than the minimum allowable bending radius as recommended by the pipe manufacturer.~~
~~3. A pulling cable shall be retrieved from the pulling end of the piping to be replaced and pulled to the insertion end of the piping to be replaced.~~
~~4. A pipe bursting and pulling head shall be connected to one end of the replacement piping. The bursting/pulling head shall be connected to the pulling cable.~~
~~5. In accordance with the pulling equipment and pipe bursting head manufacturer's operating instructions, the pipe bursting/pulling head shall be simultaneously operated and pulled through the existing piping until the end of the new piping exits at the pulling end of the operation.~~
~~6. The pipe bursting/pulling head shall be disconnected from the new piping and the pulling equipment removed from the area. The replacement piping ends shall be cut to length as required and shall be connected to the existing piping beyond the pipe section that was replaced. Connections to the ends of the replacement piping shall be in accordance with Section 705.~~
~~7. Where a connection to the replacement piping at a point between the pulling end and the insertion end of the pipe section that was replaced is required, the replacement piping shall be exposed at that location. A section of replacement piping shall be removed and a fitting of the appropriate configuration in accordance with Table 706.3 shall be installed. The connections between the fitting and the pipe shall be made in accordance with Section 705.16.~~

705.8 ~~7~~ 7 Post-installation inspection. The completed replacement piping section shall be inspected internally by a recorded video camera survey. The video survey shall be reviewed and approved by the code official prior to pressure testing of the replacement piping system.

705.9 ~~8~~ 8 Pressure testing. The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.

Remainder of proposal is unchanged.

Commenter's Reason: The committee found issues with the language of the instructions, so I am deleting them, but I have a concern over section 705.4 limiting the pipe to only one resin type when ASTM F714 allows several to be used

Final Hearing Results

P159-12 AMPC1

Code Change No: P161-12

Original Proposal

Section(s): 705.5.3

Proponent: William (Bill) LeVan, Cast Iron Soil Pipe Institute representing self (blevan@mindspring.com)

Revise as follows:

705.5.3 Mechanical joint coupling. Mechanical joint couplings for hubless pipe and fittings shall consist of an elastomeric sealing sleeve and a metallic shield that comply with CISPI 310, ASTM C1277 or ASTM C1540. The elastomeric sealing sleeve shall conform to ASTM C564 or CSA B602 and shall be provided with a center stop. Mechanical joint couplings shall be installed in accordance with the manufacturer's installation instructions.

Reason: The metallic shield coupling provides protection for the elastomeric sealing sleeve and provides shear strength for the system.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponents testimony which was that the addition of the proposed words will provide the code official proper guidance as to what couplings are acceptable.

Assembly Action: **None**

Final Hearing Results

P161-12 **AS**

Code Change No: P162-12

Original Proposal

Section(s): 705.7, 705.7.1, 705.7.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Delete without substitution:

~~**705.7 Coextruded composite ABS pipe, joints.** Joints between coextruded composite pipe with an ABS outer layer or ABS fittings shall comply with Sections 705.7.1 and 705.7.2.~~

~~**705.7.1 Mechanical joints.** Mechanical joints on drainage pipe shall be made with an elastomeric seal conforming to ASTM C1173, ASTM D 3212 or CSA B602. Mechanical joints shall not be installed in above-ground systems, unless otherwise approved. Joints shall be installed in accordance with the manufacturer's instructions.~~

~~**705.7.2 Solvent cementing.** Joint surfaces shall be clean and free from moisture. Solvent cement that conforms to ASTM D 2235 or CSA B181.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet. Joints shall be made in accordance with ASTM D 2235, ASTM D 2661, ASTM F 628 or CSA B181.1. Solvent cement joints shall be permitted above or below ground.~~

Reason: ABS pipe can be made by several different methods. The manufacturing method of an ABS pipe has nothing to do with how the pipe is joined. All forms of ABS pipe are joined by the joining method for ABS pipe, Section 705.2. These sections are redundant and should be deleted.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P162-12 **AS**

Code Change No: P163-12

Original Proposal

Section(s): 705.8, 705.8.1, 705.8.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Delete without substitution:

~~**705.8 Coextruded composite PVC pipe.** Joints between coextruded composite pipe with a PVC outer layer or PVC fittings shall comply with Sections 705.8.1 and 705.8.2.~~

~~**705.8.1 Mechanical joints**. Mechanical joints on drainage pipe shall be made with an elastomeric seal conforming to ASTM D 3212. Mechanical joints shall not be installed in above-ground systems, unless otherwise approved. Joints shall be installed in accordance with the manufacturer's instructions.~~

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

Reason: PVC pipe can be made by several different methods. The manufacturing method of a PVC pipe has nothing to do with how the pipe is joined. All forms of PVC pipe are joined by the joining method for PVC pipe, Section 705.14. These sections are redundant and should be deleted.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P163-12 **AS**

Code Change No: P164-12

Original Proposal

Section(s): 705.8.2, 705.14.2

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association (mikec@cmservnet.com)

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 both 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 PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inch (102 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 both 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 PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inch (102 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. The strength of the joint often exceeds the pipe and fitting pressure capacity.

Bibliography: NSF International report J-00036842.can be found on the PPFA website, www.ppfahome.org//ICC09/PPFA_NSF_J-00036842.pdf

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Pipe in the real world is not as pristine as it would be in a laboratory setting when testing without primer. The code should continue requiring primer to ensure that good joints are made consistently.

Assembly Action: **None**

Final Hearing Results

P164-12 **AS**

Code Change No: P168-12

Original Proposal

Section(s): 708

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Delete and substitute as follows:

~~**SECTION 708**~~
~~**CLEANOUTS**~~

SECTION 708
CLEANOUTS

708.1 Cleanouts required. Cleanouts shall be provided for drainage piping in accordance with Sections 708.1.1 through 708.1.11.

708.1.1 Horizontal drains and building drains. Horizontal drainage pipes in buildings shall have cleanouts located at intervals of not more than 100 feet (30 480 mm). Building drains shall have cleanouts located at intervals of not more than100 feet (30 480 mm) except where manholes are used instead of cleanouts, the manholes shall be located at intervals of not more than 400 feet (122 m). The interval length shall be measured from the cleanout or manhole opening, along the developed length of the piping to the next drainage fitting providing access for cleaning, the end of the horizontal drain or the end of the building drain.

> **Exception:** Horizontal fixture drain piping serving a nonremovable trap shall not be required to have a cleanout for the section of piping between the trap and the vent connection for such trap.

708.1.2 Building sewers. Building sewers smaller than 8 inches (203 mm) shall have cleanouts located at intervals of not more than 100 feet (30 480 mm). Building sewers 8 inches (203 mm) and larger shall have a manhole located not more than 200 feet (60 960 mm) from the junction of the building drain and building sewer and at intervals of not more than 400 feet (122 m). The interval length shall be measured from the cleanout or manhole opening, along the developed length of the piping to the next drainage fitting providing access for cleaning, a manhole or the end of the building sewer.

708.1.3 Building drain and building sewer junction. The junction of the building drain and the building sewer shall be served by a cleanout that is located at the junction or within 10 feet (3048 mm) developed length of piping upstream of the junction. For the requirements of this section, the removal of water closet shall not be required to provide cleanout access.

708.1.4 Changes of direction. Where a horizontal drainage pipe, a building drain or a building sewer has a change of horizontal direction greater than 45 degrees (0.79 rad), a cleanout shall be installed at the change of direction. Where more than one change of horizontal direction greater than 45 degrees (0.79 rad) occurs within 40 feet (12 192 mm) of developed length of piping, the cleanout installed at the first change of direction shall serve as the cleanout for all changes in direction within that 40 feet (12 192 mm) of developed length of piping.

708.1.5 Cleanout size. Cleanouts shall be the same size as the piping served by the cleanout except cleanouts for piping larger than 4 inches (102 mm) need not be larger than 4 inches (102 mm).

Exceptions:

1. A removable P- trap with slip or ground joint connections can serve as a cleanout for drain piping that is one size larger than the P-trap size.
2. Cleanouts located on stacks can be one size smaller than the stack size.
3. The size of cleanouts for cast-iron piping can be in accordance with the referenced standards for cast iron fittings as indicated in Table 702.4.

708.1.6 Cleanout plugs. Cleanout plugs shall be brass, plastic or other approved materials. Cleanout plugs for borosilicate glass piping systems shall be of borosilicate glass. Brass cleanout plugs shall conform to ASTM A74 and shall be limited for use only on metallic piping systems. Plastic cleanout plugs shall conform to the referenced standards for plastic pipe fittings as indicated in Table 702.4. Cleanout plugs shall have a raised square head, a countersunk square head or a countersunk slot head. Where a cleanout plug will have a trim cover screw installed into the plug, the plug shall be manufactured with a blind end threaded hole for such purpose.

708.1.7 Manholes. Manholes and manhole covers shall be of an approved type. Manholes located inside of a building shall have gas-tight covers that require tools for removal.

708.1.8 Installation arrangement. The installation arrangement of a cleanout shall enable cleaning of drainage piping only in the direction of drainage flow.

Exceptions:

1. Test tees serving as cleanouts.
2. A two-way cleanout installation that is approved for meeting the requirements of Section 708.1.3.

708.1.9 Required clearance. Cleanouts for 6-inch (153 mm) and smaller piping shall be provided with a clearance of not less than 18 inches (457 mm) from, and perpendicular to, the face of the opening to any obstruction. Cleanouts for 8-inch (203 mm) and larger piping shall be provided with a clearance of not less than 36 inches (914 mm) from, and perpendicular to, the face of the opening to any obstruction.

708.1.10 Cleanout access. Required cleanouts shall not be installed in concealed locations. For the purposes of this section, concealed locations include, but are not limited to, the inside of plenums, within walls, within floor/ceiling assemblies, below grade and in crawl spaces where the height from the crawl space floor to the nearest obstruction along the path from the crawl space opening to the cleanout location is less than 24 inches (610 mm). Cleanouts with openings at a finished wall shall have the face of the opening located within 1-1/2 inches (38 mm) of the finished wall surface. Cleanouts located below grade shall be extended to grade level so that the top of the cleanout plug is at or above grade. A cleanout installed in a floor or walkway that will not have a trim cover installed shall have a countersunk plug installed so the top surface of the plug is flush with the finished surface of the floor or walkway.

708.1.10.1 Cleanout plug trim covers. Trim covers and access doors for cleanout plugs shall be designed for such purposes and shall be approved. Trim cover fasteners that thread into cleanout plugs shall be corrosion resistant. Cleanout plugs shall not be covered with mortar, plaster or any other permanent material.

708.1.10.2 Floor cleanout assemblies. Where it is necessary to protect a cleanout plug from the loads of vehicular traffic, cleanout assemblies in accordance with ASME A112.36.2M shall be installed.

708.1.11 Prohibited use. The use of a threaded cleanout opening to add a fixture or extend piping shall be prohibited except where another cleanout of equal size is installed with the required access and clearance.

Reason: Section 708 is disorganized. For example, the second Section 708.2 discusses requirements for cleanout plugs. The more significant sections of the section are scattered throughout the remainder of the section in a disorganized fashion. This proposal

reorganizes this section in a more logical format for ease of understanding.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposed language inappropriately removes the requirement for a cleanout at the base of each stack. One hundred feet between cleanouts is too long.

Assembly Action: **None**

Public Comment

Public Comment:

Shawn Strausbaugh, Arlington County, VA, representing International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Submitted.

Commenter's Reason: One of the committee's arguments for disapproving this code change was that the proposed language inappropriately removed the requirement for a cleanout at the base of each stack. The other argument was that one hundred feet between cleanouts is too long.

The language for the base of stack is covered through the horizontal drain requirement. A cleanout is required within each horizontal drain at intervals not more than 100 feet. When cleanouts are provided in the horizontal drain at this interval, there is no need for a cleanout at the base of each stack.

As far as the distance between cleanouts being too long, the 100 foot requirement has been in the IPC since the 1997 edition.

Final Hearing Results

P168-12 **AS**

Code Change No: P170-12

Original Proposal

Section(s): 712.3.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

712.3.2 Sump pit. The sump pit shall be not less than 18 inches (457 mm) in diameter and not less than 24 inches (610 mm) in depth, unless otherwise approved. The pit shall be accessible and located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, concrete, steel, plastic or other approved materials. The pit bottom shall be solid and provide permanent support for the pump. The sump pit shall be fitted with a gas-tight removable cover that is installed flush with grade or above grade. The cover shall be adequate to support anticipated loads in the area of use. The sump pit shall be vented in accordance with Chapter 9.

Reason: The cover for sump pits needs to be located at grade or above grade. Otherwise, there is nothing to prevent an installation where the cover is located below grade in a well such that in order to service the pump, someone has to stand on his head in order to just remove the sump pit cover. Requiring the cover to be at or above grade eliminates this problem.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The added text about being flush with grade appears to address sumps that are on the exterior of a building. Sumps could also be inside a building. The language doesn't address that situation.

Assembly Action: **None**

Public Comments

Public Comment:

Shawn Strausbaugh, Arlington County, VA, representing International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

712.3.2 Sump pit. The sump pit shall be not less than 18 inches (457 mm) in diameter and not less than 24 inches (610 mm) in depth, unless otherwise approved. The pit shall be accessible and located such that all drainage flows into the pit by gravity. The sump pit shall be constructed of tile, concrete, steel, plastic or other approved materials. The pit bottom shall be solid and provide permanent support for the pump. The sump pit shall be fitted with a gas-tight removable cover that is installed flush with grade or floor level, or above grade or floor level. The cover shall be adequate to support anticipated loads in the area of use. The sump pit shall be vented in accordance with Chapter 9.

Commenter's Reason: The committee's reason for disapproval was that the added text did not address sump pits that could be located inside a building. For all installations the same provisions should apply. The sump pit contains electrical and mechanical components that require periodic maintenance and or replacement. The sump pit cover is the means of *access* to the sump pit so the cover must be accessible as well and not be concealed by floor coverings or any amount of earth.

Final Hearing Results

P170-12 **AMPC**

Code Change No: P172-12

Original Proposal

Section(s): 715.1

Proponent: Thomas C. Pitcherello, N.J. Department of Community Affairs, representing self (tpitcherello@dca.state.nj.us)

Revise as follows:

715.1 Sewage backflow. Where plumbing fixtures are installed on a floor with a finished floor elevation below the elevation of the manhole cover of the next upstream manhole in the *public sewer,* such fixtures shall be protected by a backwater valve installed in the *building drain,* or horizontal *branch* serving such fixtures. Plumbing fixtures installed on a floor with a finished floor elevation above the elevation of the manhole cover of the next upstream manhole in the *public sewer* shall not discharge through a backwater valve.

Exception: In existing buildings, fixtures above the elevation of the manhole cover of the next upstream manhole in the *public sewer* shall not be prohibited from discharging through a backwater valve.

Reason: Building owners who have experienced a sewage backup in a building that was caused by problems in an existing public sewer main should be allowed to install a backwater valve in the building drain or sewer to protect their property. Having a basement full of raw sewage is an experience that no one wants to repeat. The requirement that only those fixtures that are on a floor elevation below the top of the next upstream manhole in the public sewer are allowed to discharge through the BWV, places a significant impediment for the building owner to protect his property against an event over which currently he has no control. For example, consider an existing two story hotel with multiple stacks connecting to a building drain. The fixtures on the lower floor are connected to the same building drain. The existing code language would require that all of the stacks be rerouted to connect downstream of a backwater valve installed to serve only the fixtures on the lower floor level. This would be cost prohibitive to do. The simpler solution would be to just install the BWV in the building drain or sewer. However, as the code is currently written, this is prohibited. The main reason why the code prohibits this is so that the discharge from upper floors does not flood the lower floor when the building sewer is backed up. If the BWV serves only the lower elevation fixtures, it would be closed when the sewer backed up and any discharge from higher elevation fixtures could not flow out of the lower elevation fixtures. BWV's are not known to create problems in a building sewer; rather, they provide protection from sewage backups and provide peace of mind for the building owners and occupants. Although the current code requirement can be easily accomplished in new construction, it is a hardship for those building owners who need protection for existing buildings. Imagine the work that would be necessary to separate the building drain into different sub building drains in an existing building with piping under slab floors.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P172-12 **AS**

Code Change No: P174-12

Original Proposal

Section(s): 716 (New), Appendix C

Proponent: David R. Scott, AIA, representing Target Corporation.

Delete without substitution:

~~**APPENDIX C**~~
~~**VACUUM DRAINAGE SYSTEM**~~

(Renumber subsequent Appendices)

Add new text as follows:

SECTION 716
VACUUM DRAINAGE SYSTEMS

716.1 Scope. Vacuum drainage systems shall be in accordance with Sections 716.2 through 716.4.

716.2 System design. Vacuum drainage systems shall be designed in accordance with the vacuum drainage system manufacturer's instructions. The system layout, including piping layout, tank assemblies, vacuum pump assembly and other components necessary for proper function of the system shall be in accordance with the manufacturer's instructions. Plans, specifications and other data for such systems shall be submitted to the code official for review and approval prior to installation.

716.2.1 Fixtures. Gravity-type fixtures installed in vacuum drainage systems shall comply with Chapter 4.

716.2.2 Drainage fixture units. Fixture units for gravity drainage systems which discharge into or receive discharge from vacuum drainage systems shall be based on the values in Chapter 7.

716.2.3 Water supply fixture units. Water supply fixture units shall be based on values in Chapter 6 of this code except that the water supply fixture unit for a vacuum-type water closet shall be 1.

716.2.4 Traps and cleanouts. Gravity drainage fixtures shall be provided with traps and cleanouts in accordance with Chapters 7 and 10.

716.2.5 Materials. Vacuum drainage pipe, fitting and valve materials shall be in accordance with the vacuum drainage system manufacturer's instructions and the requirements of Chapter 7.

716.3 Testing and demonstrations. After completion of the entire system installation, the system shall be subjected to a vacuum test of 19 inches (483 mm) of mercury and shall be operated to function as required by the code official and the manufacturer of the vacuum drainage system. Recorded proof of all tests shall be submitted to the code official.

716.4 Written instructions. Written instructions for the operation, maintenance, safety and emergency procedures shall be provided to the building owner. The code official shall verify that the building owner is in receipt of such instructions.

Reason: Vacuum drainage system is a proven technology and should be allowed for situations where draining by gravity is prohibitive or not possible. Moving this information into Chapter 7 will allow for acceptance of vacuum drainage systems in jurisdictions that have not adopted the appendices.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P174-12 **AS**

Code Change No: P175-12

Original Proposal

Section(s): 802.1, 802.1.8

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

802.1 Where required. Food-handling equipment in other than dwelling units, and clearwater waste shall discharge through an indirect waste pipe as specified in Sections 802.1.1 through 802.1.8. Health-care related fixtures, devices and equipment shall discharge to the drainage system through an indirect waste pipe by means of an air gap in accordance with this chapter and Section 713.3. Fixtures not required by this section to be indirectly connected shall be directly connected to the plumbing system in accordance with Chapter 7.

802.1.8 Food utensils, dishes, pots and pans sinks. Sinks, in other than dwelling units, used for the washing, rinsing or sanitizing of utensils, dishes, pots, pans or service ware used in the preparation, serving or eating of food shall discharge indirectly through an air gap or an air break to the drainage system.

Reason: The current language requires that the waste discharge from food handling equipment as specified in Sections 802.1.1 through 802.1.8 in commercial and residential occupancies be indirectly connected. This should not be applicable for dwelling units but nonetheless, Section 802.1.1 requires fixtures (i.e. a kitchen sink in dwelling unit) to be indirectly connected. The IPC applies to multi-family dwelling buildings and is inappropriately requiring an indirect waste connection for a dwelling kitchen sink because such sink is used for food handling and ware washing (i.e. 802.1.1and 802.1.8).

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P175-12 **AS**

Code Change No: P176-12

Original Proposal

Section(s): 802.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

802.1 Where required. Food-handling equipment, ~~and~~ clear-water waste, dishwashing machines and utensil, pots, pans and dish washing sinks shall discharge through an indirect waste pipe as specified in Sections 802.1.1 through 802.1.8. Health-care related fixtures, devices and equipment shall discharge to the drainage system through an indirect waste pipe by means of an air gap in accordance with this chapter and Section 713.3. Fixtures not required by this section to be indirectly connected shall be directly connected to the plumbing system in accordance with Chapter 7.

Reason: The subject of the first sentence of current Section 802.1 is food handling and clear water waste. This sentence introduces Subsections 802.1.6, 802.1.7 and 802.1.8, however, these sections are not food handling or clear-water related. Revising the first sentence of Section 802.1 corrects this inaccuracy.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P176-12 **AS**

Code Change No: P177-12

Original Proposal

Section(s): 802.1.1

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

802.1.1 Food handling. Equipment and fixtures utilized for the storage, preparation and handling of food shall discharge through an indirect waste pipe by means of an air gap. Each well of a multi-compartment sink shall discharge independently to a waste receptor.

Reason: An all too common practice for drain connections to a multi-compartment sink is to manifold the drain piping together and run a single indirect waste pipe to the waste receptor. If one compartment is draining and another compartment is empty or less full , the waste flow can back up into the empty or less full compartment and contaminate that compartment. Requiring each well to discharge independently to the waste receptor prevents this potential for contamination.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P177-12 **AS**

Code Change No: P179-12

Original Proposal

Section(s): 802.1.6, 802.1.7, 802.2, 802.2.2

Revise as follows:

802.1.6 Domestic dishwashing machines. Domestic dishwashing machines shall discharge indirectly through an *air gap* or *air break* into a ~~standpipe or~~ waste receptor in accordance with Section 802.2, or discharge into a wye branch fitting on the tailpiece of the kitchen sink or the dishwasher connection of a food waste grinder. The waste line of a domestic dishwashing machine discharging into a kitchen sink tailpiece or food waste grinder shall connect to a deck-mounted *air gap* or the waste line shall rise and be securely fastened to the underside of the sink rim or counter.

802.1.7 Commercial dishwashing machines. The discharge from a commercial dishwashing machine shall be through an *air gap* or *air break* into a ~~standpipe or~~ waste receptor in accordance with Section 802.2.

802.2 Installation. Indirect waste piping shall discharge through an *air gap* or *air break* into a waste receptor. Waste receptors ~~and standpipes~~ shall be trapped and vented and shall connect to the building drainage system. All indirect waste piping that exceeds 30 inches (762 mm) in developed length measured horizontally, or 54 inches (1372 mm) in total developed length, shall be trapped.

802.2.2 Air break. An *air break* shall be provided between the indirect waste pipe and the trap seal of the waste receptor ~~or standpipe~~.

Reason: Because a standpipe is a waste receptor, it is redundant to state “standpipe and waste receptor” in these sections. Therefore, the word standpipe is removed as waste receptors include standpipes. A companion code change proposal relocates Section 802.4 to be a subsection of 802.3, because standpipes are a type of waste receptor and belong with the other waste receptors.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent’s written reason statement.

Assembly Action: **None**

Final Hearing Results

P179-12 **AS**

Code Change No: P181-12

Original Proposal

Section(s): 802.3

Proponent: Shawn Strausbaugh, Arlington County VA, representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (Sstrausbaugh@arlingtonva.us)

Revise as follows:

802.3 Waste receptors. ~~Waste receptors shall be of an approved type.~~ For other than standpipes and hub drains, a removable strainer or basket shall cover the waste outlet of waste receptors. Waste receptors shall not be installed in ~~ventilated~~ concealed spaces. Waste receptors shall not be installed in ~~bathrooms, toilet rooms~~, plenums, crawl spaces, attics, interstitial spaces above ceilings and below floors ~~or in any inaccessible or unventilated space such as a closet or storeroom~~. Ready access shall be provided to waste receptors.

Reason: This is a companion proposal with a newly added definition of waste receptor. We have attempted to identify exactly what constitutes an 'approved type" of waste receptor. The code fails to provide guidance as to what is a ventilated space, so we suggest removing the terms. This proposal takes the provisions in the direction of clear mandatory language that provides the user with terminology that clearly explains where a waste receptor is not permitted to be located. Further, there is no real problem associated with having a hub drain in a closet or storeroom where items such as water heaters and condensate producing appliances are located so that text has been removed.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Bathrooms and toilet rooms should not have waste receptors because of the potential for people using them as a location to urinate. A waste receptor is not intended for such use.

Assembly Action: **None**

Public Comment

Public Comment:

Shawn Strausbaugh, Arlington County, VA, representing VA Plumbing and Mechanical Inspectors Assoc. (VPMIA), VA Building Code Officials Association (VBCOA), and ICC Region VII, requests Approval as Submitted.

Commenter's Reason: The committee's reasoning for not allowing waste receptors in toilet rooms lacks merit as numerous other fixtures such as floor drains, not used as waste receptors, service sinks, and lavatories are located in toilet rooms. These fixtures would also be a potential for people to urinate in. Are we then supposed to limit these fixtures from being located within toilet rooms? The committee did not comment on the removal of inaccessible or unventilated spaces such as a closet or storeroom, for this change however for P182 which was a companion change the committed did state closet or storerooms are rarely visited so any backups could go undetected and create an insanitary condition. As stated in the original reason statement appliances such as water heaters and condensing appliances are typically located in closets or storerooms and this section would then not allow a waste receptor to be installed were other portions of the code may require such a waste receptor.

Final Hearing Results

Code Change No: P182-12

Original Proposal

Section(s): 202, 802.3, 802.3.2, 802.4

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Add new definition as follows:

WASTE RECEPTOR. A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.

Revise as follows:

802.3 Waste receptors. ~~Waste receptors shall be of an approved type.~~ For other than hub drains that receive only clear-water waste and standpipes, a removable strainer or basket shall cover the waste outlet of waste receptors. Waste receptors shall not be installed in ~~ventilated~~ concealed spaces. Waste receptors shall not be installed in ~~bathrooms, toilet rooms~~, plenums, crawl spaces, attics, interstitial spaces above ceilings and below floors. ~~or in any inaccessible or unventilated space such as a closet or storeroom~~. Ready access shall be provided to waste receptors.

802.3.2 ~~Open~~ Hub drains ~~waste receptors~~. A hub drain~~Waste receptors~~ shall be ~~permitted~~ in the form of a hub or a pipe extending not less than 1 inch (25.4 mm) above a water-impervious floor. ~~and are not required to have a strainer.~~

~~802.4~~ 802.3.3 Standpipes. Standpipes shall be individually trapped. Standpipes shall extend not less than 18 inches (457 mm) but not greater than 42 inches (1066 mm) above the trap weir. *Access* shall be provided to all standpipes and drains for rodding.

Reason: A definition for "waste receptor" is needed. The term is found in the code 24 times with no exact description. The proposed definition identifies exactly what constitutes an 'approved type" of waste receptor. The code fails to provide guidance as to what is a ventilated space so the language was changed to prevent waste receptors from being installed in a concealed space. There is no logical reason to prohibit waste receptors from being installed in a bathroom or toilet room. It is not unusual for a clothes washing machine (requiring a standpipe) to be placed in a bathroom or a toilet room in a multifamily residential occupancy. Waste receptors (typically a hub drain) are frequently needed in closets or storerooms where appliances discharge condensate or where relief valve discharge pipes are located.. The term "open hub waste receptor" is redundant and unclear and was eliminated in favor of the more common term "hub drain". As a hub drain is a waste receptor, a strainer is required except where the hub drain receives only clear water wastes. Standpipes are just another breed of waste receptors and should be included as a subsection under the waste receptor section.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Bathrooms and toilet rooms should not have waste receptors because of the potential for people using them as a location to urinate. Closets and storerooms are rarely visited so any backups could go undetected and create insanitary conditions.

Assembly Action: **None**

Public Comment

Public Comment:

Shawn Strausbaugh, Arlington County, VA, representing International Code Council Plumbing, Mechanical, and Fuel Gas Code Action Committee (ICC PMG CAC), requests Approval as Submitted.

Commenter's Reason: The committee's reasoning for not allowing waste receptors in toilet rooms has no merit as numerous other fixtures such as floor drains, not used as waste receptors, service sinks, and lavatories are located in toilet rooms. These fixtures would also be a potential for people to urinate in based upon this reasoning. Are we then supposed to limit these fixtures from being located within toilet rooms? As stated in the original reason statement appliances such as water heaters and condensing appliances are typically located in closets or storerooms and this section would then not allow a waste receptor to be installed were other portions of the code may require such a waste receptor.

Final Hearing Results

P182-12 **AS**

Code Change No: P184-12

Original Proposal

Section(s): 901.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

901.2 Trap seal protection. The plumbing system shall be provided with a system of vent piping that will permit the admission or emission of air so that the seal of any fixture trap shall not be subjected to a ~~pneumatic~~ pressure differential of more than 1 inch of water column (249 Pa).

Reason: The word "pneumatic" is unnecessary. Pressure is pressure whether its water or air pressure.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P184-12 **AS**

Code Change No: P185-12

Original Proposal

Section(s): 903.1

Proponent: Shawn Strausbaugh, representing the ICC PMG Code Action Committee

Revise as follows:

903.1 Roof extension. Open vent pipes that extend through a roof shall be terminated not less than [NUMBER] inches (mm) above the roof~~, except that~~. Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes ~~for any purpose other than weather protection~~, ~~the~~ open vent pipes ~~extensions~~ shall terminate not less than 7 feet (2134 mm) above the roof.

Reason: The current language literally states that if a roof is to be used for anything other than weather protection, then vent pipes must be extended 7 feet above the roof. If there is equipment on the roof (HVAC units, grease duct fans, etc.), the roof is being used for another purpose, but, that is not the intent of the section. The intent of the section is that when the roof can be "normally occupied" such as where the roof is being used as an assembly area, a promenade, observation deck or sunbathing deck, that is when the vent pipes must be extended. The revised language makes the intent of the section more clear.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P185-12 **AS**

Code Change No: P186-12

Original Proposal

Section(s): 903.2

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

903.2 Frost closure. Where the 97.5-percent value for outside design temperature is 0°F (-18°C) or less, ~~every~~ vent extensions through a roof or wall shall be not less than 3 inches (76 mm) in diameter. Any increase in the size of the vent shall be made not less than 1 foot inside the ~~structure at a point not less than 1 foot (305 mm) below the roof or inside the wall~~ building's thermal envelope.

Reason: Requiring that the size transition occur at least 1 foot below the roof accomplishes nothing if it is just as cold below the roof as it is outdoors. The intent is to prevent frost blockage in the vent by making the part that is exposed to freezing temperatures at least 3 inches in diameter. The part of the vent that is less than 3 inches in size must be located in an area that stays above freezing. In most attics, the attic temperatures are very near the outdoor temperature , therefore, putting the size transition in the cold attic will subject the smaller pipe to freezing temperatures which is exactly what this section intended to avoid. The transition from a smaller size vent pipe to the 3 inch (or larger size) needs to occur at least one foot inside of the building's thermal envelope in order to avoid frost blockage.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P186-12 **AS**

Code Change No: P190-12

Original Proposal

Section(s): 915.2.2

Proponent: Bob Scott and Daryl Kuiper, Colorado Department of Regulatory Agencies, Division of Registrations Electrical and Plumbing Boards

Revise as follows:

915.2.2 Connection. The combination waste and vent system shall be provided with a dry vent connected at any point within the system or the system shall connect to a horizontal drain that serves vented fixtures located on the same floor. ~~is vented in accordance with one of the venting methods specified in this chapter.~~ Combination waste and vent systems connecting to building drains receiving only the discharge from a one or more ~~stack or~~ stacks shall be provided with a dry vent. The vent connection to the combination waste and vent pipe shall extend vertically to a point not less than 6 inches (152 mm) above the flood level rim of the highest fixture being vented before offsetting horizontally. The horizontal length of a combination waste and vent system shall be unlimited.

Reason: The struck out phrase: "is vented in accordance with one of the venting methods specified in this chapter." is vague about how the horizontal drain needs to be vented. Does this mean that the horizontal drain serving a CWV system can be vented through a connection from a waste or soil stack that might extend many floors before exiting the roof? We believe that the intent of the code is for the horizontal drain to be vented by serving vented fixtures on the same floor as the CWV system is located. Depending upon venting air through waste flow in stacks might not provide consistent pressure conditions to keep from causing trap seal problems in the traps on a CWV system.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P190-12 **AS**

Code Change No: P192-12

Original Proposal

Section(s): 918.5

Proponent: Shawn Strausbaugh, representing the ICC PMG Code Action Committee

Revise as follows:

918.5 Access and ventilation. Access shall be provided to all air admittance valves. ~~The~~ Such valves shall be installed in a locat~~ed~~tion ~~within a ventilated space~~ that allows air to enter the valve.

Reason: The question is frequently raised: "What constitutes a ventilated space?" The proposed language simply requires the AAVs to be located where air can enter the valve. For example, an AAV installed in wall cavity would require some means to allow air to enter the cavity.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P192-12 **AS**

Code Change No: P193-12

Original Proposal

Section(s): 1002.1

Proponent: Robert G. Konyndyk, Chief, Plumbing Division, Bureau of Construction Codes, Department of Licensing and Regulatory Affairs, State of Michigan representing The Bureau of Construction Codes.

Revise as follows:

1002.1 Fixture traps. Each plumbing fixture shall be separately trapped by a liquid-seal trap, except as otherwise permitted by this code. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm), and the horizontal distance shall not exceed 30 inches (610 mm) measured from the centerline of the fixture outlet to the centerline of the inlet of the trap. The height of a clothes washer standpipe above a trap shall conform to Section 802.4. A fixture shall not be double trapped.

Exceptions:

1. This section shall not apply to fixtures with integral traps.
2. A combination plumbing fixture is permitted to be installed on one trap, provided that one compartment is not more than 6 inches (152 mm) deeper than the other compartment and the waste outlets are not more than 30 inches (762 mm) apart.
3. A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the *developed length* of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm).
4. Floor drains in multilevel parking structures that discharge to a building storm sewer shall not be required to be individually trapped. Where floor drains in multilevel parking structures are required to discharge to a combined building sewer system, the floor drains shall not be required to be individually trapped provided that they are connect to a main trap in accordance with Section 1103.1.

Reason: This code change revision will improve the code by providing greater clarity. Sections 1002.1 and 1103.1 of the code currently address floor drains, leaders, and storm drains connected to combined building sewers. Storm water shall not discharge to sanitary sewers as stated in Section 1101.3. The absence of trap requirement instruction for floor drains connected to building storm sewer systems has been understood to not required traps for floor drains connected to storm sewers. The exceptions revision to the subject of floor drains in parking structures will provide a logical understanding of the subject.

Cost Impact: Construction cost will be reduced by providing greater understanding of proper floor drain application in building storm sewer use.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Because floor drains in a parking garage that are connected to the storm sewer do not have sewer gases, traps is unnecessary.

Assembly Action: **None**

Final Hearing Results

P193-12 **AS**

Code Change No: P195-12

Original Proposal

Section(s): 1002.4. 1002.4.1 (New), 1002.4.1.1 (New), 1002.4.1.2 (New), 1002.4.1.3 (New), 1002. 4.1.4 (New), Chapter 14

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing Sure Seal (JBEngineer@aol.com)

Revise as follows:

1002.4 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 shall be installed. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal. A trap seal primer valve shall conform to ASSE 1018 or ASSE 1044.~~

1002.4.1 Trap seal protection. Traps seals of emergency floor drain traps and traps subject to evaporation shall be protected by one of the methods in Sections 1002.4.1.1 through 1002.4.1.4.

1002.4.1.1 Potable water supplied trap seal primer valve. A potable water supplied trap seal primer valve shall supply water to the trap. Water supplied trap seal primer valves shall conform to ASSE 1018. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap. Water supplied trap seal primer valves shall discharge not more than 8 gallons of water per year.

1002.4.1.2 Reclaimed or gray water supplied trap seal primer valve. A reclaimed or gray water supplied trap seal primer valve shall supply water to the trap. Water supplied trap seal primer valves shall conform to ASSE 1018. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap. The yearly discharge volume from reclaimed or gray water supplied trap seal primer valves shall not be limited.

1002.4.1.3 Waste water supplied trap primer device. A waste water supplied trap primer device shall supply water to the trap. Waste water supplied trap primer devices shall conform to ASSE 1044. The discharge pipe from the trap seal primer device shall connect to the trap above the trap seal on the inlet side of the trap.

1002.4.1.4 Barrier type trap seal protection device. A barrier-type trap seal protection device shall protect the floor drain trap seal from evaporation. Barrier type floor drain trap seal protection devices shall conform to ASSE 1072 and shall have an ASSE 1072 rating of AF-GW. The devices shall be installed in accordance with the manufacturer's instructions.

Add new standard to Chapter 14 as follows:

ASSE

1072-07 Performance Requirements for Barrier Type Floor Drain Tap Seal Protection Devices

Reason: This modification adds language to identify all of the methods available for protecting the trap seal of emergency floor drain traps or traps subject to evaporation. The four methods available are: water supplied trap seal primers, waste supplied trap primer devices, trap seal protection devices, and reclaimed water. A water supplied trap seal primer that is unrestricted can discharge 300 to 500 gallons a year to a trap. A 2" trap requires less than ½ gallon a year to maintain the trap seal. There are now devices available that limit the amount of water discharging to 8 gallons per year. The IPC currently has many water conservation measures. This is another water conservation measure.

Waste supplied trap primer devices divert water from a sink or lavatory to the trap. There is no need to limit the flow on these devices since they use waste water.

Trap seal protection devices do not require any water. They are tested for providing protection of the trap seal. By requiring a rating of AF-GW, all of the tests in ASSE 1072 become required. There were previous objections to not requiring all of the tests in the standard.

Reclaimed water can also be used to maintain the trap seal. Since the water is reclaimed, there is no need to limit the annual discharge.

Cost Impact: This change does not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, ASSE 1072-07 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal has design restrictive language with respect to gray water supplied trap primer valves. There is uncertainty about what type of waste water is being used in Section 1002.4.1.2. It appears that there is only one manufacturer that can meet the ASSE 1072 standard rating of AF-GW.

Assembly Action: **None**

Public Comments

Public Comment 1:

Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing Sure Seal, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1002.4.1.1 Potable water supplied trap seal primer valve. A potable water supplied trap seal primer valve shall supply water to the trap. Water supplied trap seal primer valves shall conform to ASSE 1018. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap. ~~Water supplied trap seal primer valves shall discharge not more than 8 gallons of water per year.~~

1002.4.1.2 Reclaimed or gray water supplied trap seal primer valve. A reclaimed or gray water supplied trap seal primer valve shall supply water to the trap. Water supplied trap seal primer valves shall conform to ASSE 1018. The quality of reclaimed or gray water supplied to trap seal primer valves shall be in accordance with the requirements of the manufacturer of the trap seal primer valve. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap. ~~The yearly discharge volume from reclaimed or gray water supplied trap seal primer valves shall not be limited.~~

1002.4.1.4 Barrier type trap seal protection device. A barrier-type trap seal protection device shall protect the floor drain trap seal from evaporation. Barrier type floor drain trap seal protection devices shall conform to ASSE 1072. ~~and shall have an ASSE 1072 rating of AF-GW.~~ The devices shall be installed in accordance with the manufacturer's instructions.

Remainder of proposal is unchanged.

Commenter's Reason: This modification responds to the issues presented by the Plumbing Code Committee. An attempt was made to add water conservation requirements for trap seal primer valves. While this is a good idea, the Committee thought this was premature. I have acquiesced and removed the water conservation provisions.

Another concern was with regard to the use of water supplied trap seal primer valves with reclaimed water. My intent all along was the use of treated reclaimed water. I have clarified this requirement in Section 1002.4.1.2. Some manufacturers have claimed that water supplied trap seal primer valves require the use of potable water. That is not correct. Reclaimed water has been used for many years. Water supply trap seal primer valves have been used to supply the reclaimed water to the trap seal. Hence, the modification merely clarifies the practice used in the field. Furthermore, it correlates with Chapter 13, which allows the use of reclaimed water for resealing the traps.

Finally, the Committee was opposed to having a rating requirement for barrier type trap seal protection devices. The reason for adding the rating requirement was in response to the previous code committee's demands. I agree with the current code committee that a rating should not be included in the code. The standard should be permitted to regulate the use and installation of these devices.

Final Hearing Results

P195-12 **AMPC1**

Code Change No: P197-12

Original Proposal

Section(s): 1002.6

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Revise as follows:

1002.6 Building traps. Building (house) traps shall be prohibited~~, except where local conditions necessitate such traps. Building traps shall be provided with a cleanout and a relief vent or fresh air intake on the inlet side of the trap. The size of the relief vent or fresh air intake shall not be less than onehalf the diameter of the drain to which the relief vent or air intake connects. Such relief vent or fresh air intake shall be carried above grade and shall be terminated in a screened outlet located outside the building~~.

Reason: The only remaining purpose identified for the installation of a building trap is to keep rats out of the building. However, super rats can swim through the building trap. Hence, the building trap serves no useful purpose. The problem with building traps is that they create a major obstruction to the flow of sewage. As a result, they often cause stoppages. Since the 1960's, it has been recognized that building traps should be eliminated. The code needs to recognize this by deleting the wording requested by certain major cities. These cities should eliminate their requirements for building traps since they are an obstruction to the flow.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P197-12 **AS**

Code Change No: P199-12

Original Proposal

Section(s): 202, 1003.3.4, Chapter 14

Proponent: Rand H Ackroyd, Rand Technical Consulting LLC, representing Rand Technical consulting LLC (rackroyd@comcast.net)

Add new definition as follows:

GREASE INTERCEPTOR.

Fats, Oils, and Greases (FOG) disposal system. A plumbing appurtenance that reduces nonpetroleum fats, oils, and greases in effluent by separation or mass and volume reduction.

Revise as follows:

1003.3.4 Hydromechanical grease interceptors, fats, oils and greases disposal systems and automatic grease removal devices. *Hydromechanical grease interceptors; fats, oils, and greases disposal systems* and *automatic grease removal devices* shall be sized in accordance with ASME A112.14.3 ~~Appendix A~~, ASME 112.14.4, ASME A112.14.6, CSA B481.3 or PDI G101. *Hydromechanical grease interceptors; fats, oils, and greases disposal systems* and *automatic grease removal devices* shall be designed and tested in accordance with ASME A112.14.3 ~~Appendix A~~, ASME 112.14.4, CSA B481.1, PDI G101 or PDI G102. Hydromechanical grease interceptors*; fats, oils, and greases disposal systems* and *automatic grease removal devices* shall be installed in accordance with the manufacturer's instructions. Where manufacturer's instructions are not provided, *hydromechanical grease interceptors; fats, oils, and greases disposal systems* and *automatic grease removal devices* shall be installed in compliance with ASME A112.14.3, ASME 112.14.4, ASME A112.14.6, CSA B481.3 or PDI G101. ~~This section shall not apply to gravity grease interceptors.~~

Add new standard to Chapter 14 as follows:

ASME
A112.14.6-2010 FOG (Fats, Oils, and Greases) Disposal Systems

Reason: ASME A112.14.6 2010 FOG (Fats, Oils, and Greases) Disposal Systems is a National standard(ANSI) It covers performance requirements for both Hydro-mechanical Grease Interceptors and Gravity Grease interceptors. Appendix A is correct reference. New section proposed for Gravity Grease interceptors.

Cost Impact: None

Analysis: A review of the standard proposed for inclusion in the code, ASME A112.14.6-2010 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P199-12 **AS**

Code Change No: P200-12

Original Proposal

Section(s): 202, 1003.3.6 (New), Chapter 14

Proponent: Rand H Ackroyd, Rand Technical Consulting LLC, representing Rand Technical Consulting LLC (rackroyd@comcast.net)

Add new definition to Chapter 2 as follows:

GREASE INTERCEPTORS.

Fats, Oils, and Greases (FOG) disposal systems. Plumbing appurtenances that reduce nonpetroleum fats, oils, and grease (FOG) in effluent by separation, mass and volume reduction.

Add new text as follows:

1003.3.6 Gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems. The required capacity of *gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be determined by multiplying the peak drain flow into the interceptor in gallons per minute by a retention time of 30 minutes. *Gravity grease interceptors* shall be designed and tested in accordance with IAPMO/ANSI Z100. *Gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be designed and tested in accordance with ASME 112.14.6 and IAPMO/ANSI Z1001. *Gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be installed in accordance with manufacturer's instructions. Where manufacturer's instructions are not provided, *gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be installed in compliance with ASME A112.14.6 and IAPMO/ANSI Z1001.

Add new standards to Chapter 14 as follows:

ASME
A112.14.6-2010 FOG (Fats, Oils, and Greases) Disposal Systems

IAPMO
5001 East Philadelphia Street
Ontario, CA 91761

IAPMO
Z1001 -2007 Prefabricated Gravity Grease Interceptors

Reason: Gravity Grease Interceptors are defined in Chapter 2 and there is a National consensus standard IAPMO/ANSI Z1001-2007. ASME A112.14.6 2010 FOG (Fats, Oils, and Greases) Disposal Systems is a National standard(ANSI) It covers performance requirements for FOG Systems for both Hydro-mechanical Grease Interceptors and Gravity Grease interceptors

Cost Impact: None

Analysis: A review of the standards proposed for inclusion in the code, ASME A112.14.6-2010 and IAPMO Z1001-2007, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P200-12 **AS**

Code Change No: P202-12

Original Proposal

Section(s): 202, 1003.3.6 (New), Chapter 14

Proponent: Rand H Ackroyd, Rand Technical Consulting LLC, representing Rand Technical Consulting LLC (rackroyd@comcast.net)

Add new definition to Chapter 2 as follows:

GREASE INTERCEPTORS.

Fats, Oils, and Greases (FOG) disposal systems. Plumbing appurtenances that reduce nonpetroleum fats, oils, and grease (FOG) in effluent by separation, mass and volume reduction.

Add new text as follows:

1003.3.6 Gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems. The required capacity of *gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be determined by multiplying the peak drain flow into the interceptor in gallons per minute by a retention time of 30 minutes. *Gravity grease interceptors* shall be designed and tested in accordance with IAPMO/ANSI Z100. *Gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be designed and tested in accordance with ASME 112.14.6 and IAPMO/ANSI Z1001. *Gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be installed in accordance with manufacturer's instructions. Where manufacturer's instructions are not provided, *gravity grease interceptors* and *gravity grease interceptors* with *fats, oils, and greases disposal systems* shall be installed in compliance with ASME A112.14.6 and IAPMO/ANSI Z1001.

Add new standards to Chapter 14 as follows:

ASME
A112.14.6-2010 FOG (Fats, Oils, and Greases) Disposal Systems

IAPMO
5001 East Philadelphia Street
Ontario, CA 91761

IAPMO
Z1001 -2007 Prefabricated Gravity Grease Interceptors

Reason: Gravity Grease Interceptors are defined in Chapter 2 and there is a National consensus standard IAPMO/ANSI Z1001-2007. ASME A112.14.6 2010 FOG (Fats, Oils, and Greases) Disposal Systems is a National standard(ANSI) It covers performance requirements for FOG Systems for both Hydro-mechanical Grease Interceptors and Gravity Grease interceptors

Cost Impact: None

Analysis: A review of the standards proposed for inclusion in the code, ASME A112.14.6-2010 and IAPMO Z1001-2007, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P202-12 **AS**

Code Change No: P204-12

Original Proposal

Section(s): 1003.4

Proponent: Robert G. Konyndyk, Chief, Plumbing Division, Bureau of Construction Codes, Department of Licensing and Regulatory Affairs, State of Michigan representing The Bureau of Construction Codes. (konyndykr@michigan.gov)

Revise as follows:

1003.4 Oil separators required. At repair garages, car washing facilities, at factories where oily and flammable liquid wastes are produced and in hydraulic elevator pits, separators shall be installed into which all oil-bearing, grease bearing or flammable wastes shall be discharged before emptying into building drainage system or other point of disposal.

Exception: An oil separator is not required in hydraulic elevator pits where an *approved* alarm system is installed. Such alarm systems shall not terminate the operation of pumps utilized to maintain emergency operation of the elevator by firefighters.

Reason: This code change revision will improve the code by addressing life safety issues. Adoption of the American Society of Mechanical Engineers (ASME) A17.1 Edition 2007, Safety Code for Elevators and Escalators, 2.2.2.5, requires elevators for Firefighters Emergency Operation to have a drain or pump capacity to remove 50 gallons per minute. The removal capacity provides consideration for fire suppression discharges. The consideration is to assure elevator operations for life safety matters by having identified discharge capacities and operations. The IPC Commentary discussion mistakenly only considers the subsoil water presence for drainage. This proposed revision assures that approved alarm systems shall not stop the pump operation. The approval should be centered upon an alarm visual and audio notification to the building operator of oil or water presence.

Cost Impact: Construction cost will not be affected by this life safety matter.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P204-12 **AS**

Code Change No: P206-12

Original Proposal

Section(s): 1003.4

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

1003.4 Oil separators required. At repair garages where floor or trench drains are provided, carwashing facilities, ~~at~~ factories where oily and flammable liquid wastes are produced and ~~in~~ hydraulic elevator pits, oil separators shall be installed into which ~~all~~ oil-bearing, greasebearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

Exception: An oil separator is not required in a hydraulic elevator pit where an approved alarm system is installed.

Reason: The current text appears to assume that repair garages have floor drains, trench drains or some drains into which oily wastes are being discharged. If a repair garage has no such drains, what is the purpose of an oil separator? The requirement for a separator should be triggered by the presence of fixtures that are a source of oily waste. A repair garage with only a toilet facility has no need for a separator.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P206-12 **AS**

Code Change No: P207-12

Original Proposal

Section(s): 1003.6

Proponent: Jim Kendzel, MPH, CAE, Executive Director/CEO American Society of Plumbing Engineers (ASPE) representing himself (jkendzel@aspe.org)

Revise as follows:

1003.6 ~~Laundries~~ Clothes washer discharge interceptor. ~~Laundry facilities not installed within an individual dwelling unit or intended for individual family use~~ Clothes washers shall discharge through an interceptor that is provided with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids ½ inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

Exceptions:

1. Clothes washers in individual dwelling units shall not be required to discharge through an interceptor.
2. A single clothes washer designed for use in individual dwelling units and installed in a location other than an individual dwelling unit shall not be required to discharge through an interceptor.

Reason: The phrase "intended for individual family use" is vague and seems to indicate that a roomful of residential type clothes washing machines in an apartment complex would not require an interceptor. This application is no different from a standalone laundry facility that has multiple residential type clothes washers that would, logically, need an interceptor. The first exception already exists in current code text. The second exception is for the small business establishments such as hair salons, small restaurants, and small apartment buildings where only one dwelling unit-type machine is installed as such use is typically no worse than a family use of the single machine.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The current language is overly restrictive. The revised language provides necessary relief.

Assembly Action: **None**

Final Hearing Results

P207-12 **AS**

Code Change No: P208-12

Original Proposal

Section(s): 1003.9

Proponent: Shawn Strausbaugh, Arlington County VA, representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region (Sstrausbaugh@arlingtonva.us)

Revise as follows:

1003.9 Venting of interceptors and separators. Interceptors and separators shall be designed so as not to become air bound. ~~where tight covers are utilized. Each~~ Interceptors ~~or~~ and separators shall be vented in accordance with one of the methods of Chapter 9. ~~where subject to a loss of trap seal.~~

Reason: Where subject to a "loss of trap seal." is inaccurate terminology for this application. In many instances we are referring to a tank or large sump that contains a body of water which is not actually a "trap seal" but rather a storage area for some type of contained debris. Venting methods located in Chapter 9 are provided to prevent the occurrence of siphonage and eliminate the potential for a piping system to be subject to a pressure differential of more than 1 inch of water column.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P208-12 **AS**

Code Change No: P209-12

Original Proposal

Section(s): 202, 1101.2

Proponent: Karen Hobbs, Natural Resources Defense Council, representing herself (khobbs@nrdc.org); Eddie Van Giesen, BRAE Rainwater Technologies, representing himself (vangig@watts.com); Harry Misuriello, American Council for an Energy-Efficient Economy, representing self (misuriello@verizon.net)

Add new definitions as follows:

RAINWATER: Precipitation on any public or private parcel that has not entered an offsite storm drain system or channel, a flood control channel, or any other stream channel, and has not previously been put to beneficial use.

RAINWATER CAPTURE SYSTEM: A system designed to capture and store rainwater flowing off of a building, parking lot, or any other manmade, impervious surface for the purposes of using the rainwater for beneficial onsite use.

STORMWATER. Precipitation that has contacted a surface at grade or below grade and has not been put to beneficial use.

Revise as follows:

1101.2 Where required. *Rainwater* from ~~all~~ roofs, paved areas, yards, courts and courtyards shall drain onto open, unpaved areas for infiltration or evapotranspiration where such drainage will not cause or contribute to health, geotechnical or other hazards; or rainwater shall drain to a *rainwater capture system*. Where drainage onto open unpaved areas is not possible and a *rainwater capture system* would not provide beneficial use for the building, *rainwater* from ~~all~~ roofs, paved areas, yards, courts and courtyards shall drain into a separate storm *sewer* system, a combined *sewer* system or to an *approved* place of discharge. ~~For one- and two-family dwellings, and where approved,~~ *Storm water* is permitted to discharge onto flat areas, such as streets or lawns, provided that the storm water flows away from the building.

Reason:

1. The costs to repair and replace our nation's aging water infrastructure are enormous, with investment needs of $298 billion or more over the next 20 years, according to the U.S. Environmental Protection Agency (USEPA, 2008; http://water.epa.gov/scitech/datait/databases/cwns/upload/cwns2008rtc.pdf). In 2009, the American Society of Civil Engineers gave the nation's wastewater facilities a grade of D-minus due to their condition (American Society of Civil Engineers, 2009; http://www.infrastructurereportcard.org/sites/default/files/RC2009_full_report.pdf).
2. As NRDC recently documented in its "Rooftops to Rivers II" report (available at http://www.nrdc.org/water/pollution/rooftopsii/files/rooftopstoriversII.pdf), many cities recognize the unnecessary stress to their wastewater systems caused by having roofs and other paved areas draining directly into the sewer system, when other options exist, such as having those same surfaces drain to open, unpaved areas or captured for reuse through a rainwater harvesting system. Cities often require that roofs and paved areas drain into open, unpaved areas where the rainwater can either be infiltrated into the ground, evapotranspirated, or captured for later reuse. Many cities also have mandatory downspout disconnection programs for existing construction and many are considering mandatory downspout disconnections for new construction.
3. There are also a range of benefits that communities accrue when rainwater is either captured or reused. In a study conducted by NRDC and the University of California, Santa Barbara, *A Clear Blue Future (*http://www.nrdc.org/water/lid) found that implementing practices that emphasize on-site infiltration or capture and reuse had the potential to increase local water supplies by up to 405,000 acre-feet per year by 2030 at new and redeveloped residential and commercial properties in Southern California and the San Francisco Bay area. This represents roughly two-thirds of the volume of water used by the entire city of Los Angeles each year. These water savings translate into electricity savings of up to 1,225,500 megawatt-hours—which would decrease the release of carbon dioxide (CO2) into the atmosphere by as much as 535,500 metric tons per

year—because more plentiful local water reduces the need for energy-intensive imported water. And, perhaps most importantly, these benefits would increase every year.

Cost Impact: There is no cost impact to this proposal.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This type of guidance should be in an appendix to the code. This doesn't belong in the IPC as it is already in the IgCC.

Assembly Action: **None**

Public Comments

Public Comment:

Karen Hobbs, Natural Resources Defense Council, representing self (khobbsnrdc.org); Eddie Van Giesen, BRAE Rainwater Technologies, representing self; Maureen Traxler, representing City of Seattle Dept of Planning & Development; Dave Cantrell, Public Health-Seattle and King County; Harry Misuriello. American Council for an Energy-Efficient Economy, representing self, requests Approval as Modified by this Public Comment.

Replace proposal as follows:

Add new definitions as follows:

RAINWATER. Water from natural precipitation.

STORMWATER: Natural precipitation, including snowmelt, that has contacted a surface at grade or below grade.

Revise as follows:

1101.2 ~~Where required.~~ Disposal. ~~All~~ Rainwater from roofs, and stormwater from paved areas, yards, courts and courtyards shall drain ~~into a separate storm *sewer* system, or a combined *sewer* system, or~~ to an *approved* place of disposal. For one- and two-family dwellings, and where *approved*, storm water is permitted to discharge onto flat areas, such as streets or lawns, provided that the storm water flows away from the building.

Commenter's Reason:

1. We respectfully disagree with the committee's reason for disapproval, which was that, "This type of guidance should be in an appendix to the code. This doesn't belong in the IPC as it is already in the IgCC." The current IPC language requires that ALL downspouts be connected to a separate storm sewer system or a combined sewer system, ignoring the fact that many jurisdictions either actively discourage connecting downspouts to the sewer system, or, in some cases, even make those connections illegal (see below for a summary of example jurisdictions). The suggested change does not mandate the use of rainwater, it simply recognizes that many municipalities and states are actively encouraging its use. Thus, the proposed change will make it easier for local adoption.
2. Many municipalities and states recognize the beneficial use of rainwater. For example:

   - The State of Georgia, in 2009, after experiencing extreme drought conditions in 2007 and 2008, amended its state plumbing codes and issued detailed rainwater harvesting guidelines to authorize the use of captured rooftop rainwater for both indoor and outdoor non-potable applications.
   - The State of Texas established a Rainwater Harvesting Evaluation Committee in 2005 and directed the state's Water Development Board and other agencies to formulate recommendations for minimum water quality standards for potable and non-potable indoor use and ways in which the state can further promote rainwater harvesting.
   - The City of Portland, Oregon allows the use of rainwater for indoor and outdoor non-potable applications, and, when properly treated, to replace potable water supply.
   - The City of Tuscon, Arizona, in 2010, put into effect a rainwater harvesting ordinance that requires new developments to meet 50 percent of their landscaping water requirements by harvesting rainwater.
   - The states of Virginia, Oregon, and Washington have all also adopted guidelines for design and use of rainwater harvesting systems, and an estimated 30,000 to 60,000 people in the state of Hawaii (up to nearly 5 percent of the state's population) rely on rainwater to meet their water supply needs.

This information is contained in a report the Natural Resources Defense Council (NRDC) issued last year, "Capturing Rainwater from Rooftops," which is available here: http://www.nrdc.org/water/rooftoprainwatercapture.asp.

3. The costs to repair and replace our nation's aging water infrastructure are enormous, with investment needs of $298 billion or more over the next 20 years, according to the U.S. Environmental Protection Agency (USEPA, 2008; http://water.epa.gov/scitech/datait/databases/cwns/upload/cwns2008rtc.pdf). In 2009, the American Society of Civil Engineers gave the nation's wastewater facilities a grade of D-minus due to their condition (American Society of Civil Engineers, 2009; http://www.infrastructurereportcard.org/sites/default/files/RC2009_full_report.pdf).
4. As NRDC recently documented in its "*Rooftops to Rivers II*" report (available at http://www.nrdc.org/water/pollution/rooftopsii/files/rooftopstoriversII.pdf), many cities recognize the unnecessary stress to their wastewater systems caused by having roofs and other paved areas draining directly into the sewer system, when other options exist, such as having those same surfaces drain to open, unpaved areas or captured for use through a rainwater harvesting system. Cities often require that roofs and paved areas drain into open, unpaved areas where the rainwater can either be infiltrated into the ground, evapotranspirated, or captured for later use. Many cities also have mandatory downspout disconnection programs for existing construction and many are considering mandatory downspout disconnections for new construction.
5. There are also a range of benefits that communities accrue from rainwater. In a study conducted by NRDC and the University of California, Santa Barbara, *A Clear Blue Future (*http://www.nrdc.org/water/lid), found that implementing practices that emphasize on-site infiltration or capture had the potential to increase local water supplies by up to 405,000 acre-feet per year by 2030 at new and redeveloped residential and commercial properties in Southern California and the San Francisco Bay area. This represents roughly two-thirds of the volume of water used by the entire city of Los Angeles each year. These water savings translate into electricity savings of up to 1,225,500 megawatt-hours—which would decrease the release of carbon dioxide (CO2) into the atmosphere by as much as 535,500 metric tons per year—because more plentiful local water reduces the need for energy-intensive imported water. And, perhaps most importantly, these benefits would increase every year.

Final Hearing Results

P209-12 **AMPC**

Code Change No: P211-12

Original Proposal

Section(s): 1101.7

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self (JBEngineer@aol.com)

Revise as follows:

1101.7 Roof design. Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked. The maximum possible depth of water on the roof shall include the height of the water required above the inlet of the secondary roof drainage means to achieve the required flow rate of the secondary drainage means to accommodate the design rainfall rate as required by Section 1106.

Reason: Quite often, structural engineers are using the lower edge of a secondary roof drain to be the determining factor for establishing the maximum depth of water that can pond on the roof. However, the drain requires a certain head height to achieve a particular flow rate. That additional head height of water adds to the structural load. This change merely clarifies the intent of the current requirement. This change is consistent with the load requirements in the Building Code.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P211-12 **AS**

Code Change No: P214-12

Original Proposal

Section(s): Table 1102.5

Proponent: Shawn Strausbaugh representing the ICC PMG Code Action Committee

Revise as follows:

TABLE 1102.5
SUBSOIL DRAIN PIPE

MATERIAL	STANDARD
Polyvinyl chloride (PVC) Plastic pipe (type sewer pipe, SDR 35 PS25, PS50 or PS100)	ASTM D 2729; ASTM D 3034; ASTM F 891; CSA B182.2; CSA B182.4

(Portions of table not shown remain unchanged)

Reason: This type of pipe material is readily available in perforated form and should be allowed to be used in the application.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the PMGCAC has held 2 open meetings, multiple conference calls and multiple workgroup calls which included members of the PMGCAC. Interested parties also participated in all of the meetings and conference calls to discuss and debate the proposed changes.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P214-12 **AS**

Code Change No: P216-12

Original Proposal

Section(s): 1103.1

Proponent: Robert G. Konyndyk, Chief, Plumbing Division, Bureau of Construction Codes, Department of Licensing and Regulatory Affairs, State of Michigan representing The Bureau of Construction Codes (konyndykr@michigan.gov)

Revise as follows:

1103.1 Main trap. Leaders and storm drains connected to a combined sewer shall be trapped. Individual storm water traps shall be installed on the storm water drain *branch* serving each conductor, or a single trap shall be installed in the main *storm drain* just before its connection with the combined *building sewer* or the *public sewer*. Leaders and storm drains connected to a building storm sewer shall not be required to be trapped.

Reason: This code change revision will improve the code by providing greater clarity. Sections 1002.1 and 1103.1 of the code currently address floor drains, leaders, and storm drains connected to combined building sewers. Storm water shall not discharge to sanitary sewers as stated in Section 1101.3. The absence of trap requirement instruction for leader/conductors and storm drains connections to building storm sewer systems has been understood to not require traps to storm sewers. The IPC Commentary for Section 1103.1 states: "Unlike a sanitary system, a storm drainage system is not designed for any precautions against sewer gas."

This last sentence clarification will provide a logical understanding of the subject. Further it is my understanding that text addressing the overall subject matter is preferred to be within the section body rather than using an exception.

Cost Impact: Construction cost will be reduced by providing greater understanding of proper trap requirements when building storm sewers are utilized.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P216-12 **AS**

Code Change No: P217-12

Original Proposal

Section(s): 1104.2

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Delete without substitution:

~~**1104.2 Combining storm with sanitary drainage.** The sanitary and storm drainage systems of a structure shall be entirely separate except where combined *sewer* systems are utilized. Where a combined *sewer* is utilized, the building *storm drain* shall be connected in the same horizontal plane through a single-wye fitting to the combined *sewer* not less than 10 feet (3048 mm) downstream from any soil *stack*.~~

Reason: The section on combined sanitary and storm systems implies that the two systems are combined inside the building. A companion code change will require the connection to be independent to the public sewer. This allows the separation of systems when separate sewer systems are added in the future to the public system.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement and consistency with committee's action on P211-12.

Assembly Action: **None**

Final Hearing Results

P217-12	**AS**

Code Change No: P218-12

Original Proposal

Section(s): 1105.2 (New)

Proponent: Julius Ballanco, P.E., CPD, FASPE, JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Add new text as follows:

1105.2 Roof drain flow rate. The published roof drain flow rate based upon the head of water above the roof drain shall be used to size the storm drainage system in accordance with Section 1106. The flow rate used for sizing the storm drainage piping shall be based on the maximum anticipated ponding at the roof drain.

(Renumber subsequent sections)

Reason: The code currently requires the storm drainage system to be sized based on the roof area. The sizing never considered the flow rate through a roof drain, nor the ponding around the roof drain required to achieve that flow rate. A study by the ASPE Research Foundation discovered that the flow rates through roof drain vary based on the design of the roof drain. The study also found that for certain roof drains, there were different flow rates depending on which strainer was installed. As a result, some smaller drains are allowing more water through the drain than the pipe is designed to handle under open channel flow.

The only proper way to size a storm drainage system is to apply the known flow rates through the roof drain such that the piping is properly sized. Without knowledge of the flow rate through a roof drain, a storm drainage system can be either undersized or oversized.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The report is not yet complete and the final data needs to be put in public comment for the final action.

Assembly Action: **None**

Final Hearing Results

P218-12 **AS**

Code Change No: P219-12

Original Proposal

Section(s): 1106.2, Table 1106.2 (New), Table 1106.2(1), Table 1106.2(2), 1106.3, Table 1106.3 (New), 1106.6, Table 1106.6

Proponent: Julius Ballanco, P.E., CPD, FASPE, JB Engineering and Code Consulting, P.C. representing himself (JBEngineer@aol.com)

Revise as follows:

~~**1106.2 Vertical conductors and leaders.** Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Table 1106.2(1) and Table 1106.2(2).~~

~~**TABLE 1106.2(1)**~~
~~**SIZE OF CIRCULAR VERTICAL CONDUCTORS AND LEADERS**~~

~~**TABLE 1106.2(2)**~~
~~**SIZE OF RECTANGULAR VERTICAL CONDUCTORS AND LEADERS**~~

~~**1106.3 Building storm drains and sewers.** The size of the building *storm drain*, building storm *sewer* and their horizontal branches having a slope of one-half unit or less vertical in 12 units horizontal (4-percent slope) shall be based on the maximum projected roof area in accordance with Table 1106.3. The slope of horizontal branches shall be not less than one-eighth unit vertical in 12 units horizontal (1-percent slope) unless otherwise *approved*.~~

~~**TABLE 1106.3**~~
~~**SIZE OF HORIZONTAL STORM DRAINGE PIPING**~~

1106.2 Size of storm drain piping. Vertical and horizontal storm drain piping shall be sized based on the flow rate through the roof drain. The flow rate in storm drain piping shall not exceed that specified in Table 1106.2.

TABLE 1106.2
STORM DRAIN PIPE SIZING

PIPE SIZE (inches)	CAPACITY (gpm)				
	VERTICAL DRAIN	SLOPE OF HORIZONTAL DRAIN			
		1/16 inch per ft	1/8 inch per ft	¼ inch per ft	½ inch per ft
2	34	15	22	31	44
3	87	39	55	79	111
4	180	81	115	163	231
5	311	117	165	234	331
6	538	243	344	487	689
8	1,117	505	714	1,010	1,429
10	2,050	927	1,311	1,855	2,623
12	3,272	1,480	2,093	2,960	4,187
15	5,543	2,508	3,546	5,016	7,093

1106.3 Vertical leader sizing. Vertical leaders shall be sized based on the flow rate from horizontal gutters or the maximum flow rate through roof drains. The flow rate through vertical leaders shall not exceed that specified in Table 1106.3.

TABLE 1106.3
VERTICAL LEADER SIZING

SIZE OF LEADER (inches)	CAPACITY (gpm)
2	30
2 × 2	30
1½ × 2½	30
2½	54
2½ × 2½	54
3	92
2 × 4	92
2½×3	92
4	192
3 × 4¼	192
3½×4	192
5	360
4 × 5	360
4½ × 4½	360
6	563
5 × 6	563
5½ × 5½	563
8	1208
6 × 8	1208

1106.6 Size of roof gutters. ~~The size of semicircular gutters shall be based on the maximum projected roof area in accordance with Table 1106.6.~~ Horizontal gutters shall be sized based on the flow rate from the roof surface. The flow rate in horizontal gutters shall not exceed that specified in Table 1106.6.

~~**TABLE 1106.6**~~
~~**SIZE OF SEMICIRCULAR ROOF GUTTERS**~~

TABLE 1106.6
HORIZONTAL GUTTER SIZING

GUTTER DIMENSIONS[a] (inches)	SLOPE (inch/foot)	CAPACITY (gpm)
1½ × 2½	1/4	26
1½ × 2½	1/2	40
4	1/8	39

GUTTER DIMENSIONS[a] (inches)	SLOPE (inch/foot)	CAPACITY (gpm)
2¼ × 3	1/4	55
2¼ × 3	1/2	87
5	1/8	74
4 × 2½	1/4	106
3 × 3½	1/2	156
6	1/8	110
3 × 5	1/4	157
3 × 5	1/2	225
8	1/16	172
8	1/8	247
4½ × 6	1/4	348
4½ × 6	1/2	494
10	1/16	331
10	1/8	472
5 × 8	1/4	651
4 × 10	1/2	1055

a. Dimensions are width by depth for rectangular shapes.

Single dimensions are diameters of a semicircle.

Reason: The ASPE Research Foundation completed a research project on the flow rates through roof drains. What was uncovered was the fact that storm drainage systems have been improperly designed since the code requirements inception. The code requirements date back to the original National Plumbing Code recommendations from the National Bureau of Standards published in 1940. The current code assumes that the water will gradually flow to a roof drain and flow into the piping, never to exceed the amount of flow permitted in the drain.

What is occurring is the rain water flows at different rates depending on the pitch of the roof. The more ponding of water at the roof drain, the greater the quantity of flow through the roof drain. The research discovered that for smaller roof drains, the roof drain often allowed a much greater quantity of water to flow in the drain than is permitted by pipe sizing. The end result is the storm drain becomes a pressurized piping system. There are many occurrences of pipe failures resulting from storm drainage piping blowing apart inside the building. This can be attributed to improper sizing of the storm drainage system. Either a smaller roof drain was required, or a larger storm drain pipe.

By changing the method of sizing, the flow through the roof drain is finally considered when sizing the piping system. This is no different than sizing a sanitary drainage system whereby the system is sized based on the flow rate from a given fixture drain.

There is no need to indicate roof areas since the slope and shape of the roof will impact the sizing of the storm drainage system. An engineer will have to evaluate the amount of ponding around the roof drain during a 100 year storm of one hour duration. Once the ponding is known, the drain can be selected based on the flow rate of that particular drain. The piping is then sized based on the flow through the roof drain.

The sizing for all of the tables was taken from the ASPE Sizing Tables Application. Schedule 40 PVC was used for the pipe sizes, with the exception of 5 inch. Cast iron was used to develop the 5 inch numbers. The flow rates are maximum flows using one third full for the stacks and full flow for the horizontal drains. One third full stacks was identified by the National Bureau of Standards as a flow amount that will assure open channel flow in the piping system.

Gutter sizing was also taken from the ASPE Sizing Table Application.

The ASPE Research Foundation report has not been published as of the date of code change submittal deadline. However, the testing has been completed. The flow rate through roof drains varies with manufacturer, type of strainer, and head height. There is no one size fits all result from the testing. An engineer must know the flow through the roof drain they select in order to properly size the system.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The report is not yet complete and the final data needs to be put in public comment for the final action and consistency with the committee's action on P218-12.

Assembly Action: **None**

Public Comment

Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self, requests Approval as Submitted.

Commenter's Reason: The Committee had a valid concern when they stated that the research report had not been issued regarding storm drainage. All attempts were made to have the report completed prior to the first hearing, but to no avail. As this Public Comment is being prepared, the ASPE Research Foundation, Storm Drainage System Research Project, Flow Rate Through Roof Drains report is in the final week of peer review. The report will be published shortly after the completion of the peer review. The report is over 180 pages in length in Word format. It will be typeset for publication, probably resulting in fewer pages.

With the issuance of this research report, it is imperative that the International Plumbing Code be updated for sizing storm drainage systems. The report points out that storm drainage systems have been sized incorrectly for the last 80 years. The new sizing method will result in properly designed storm drainage systems. The proposed code change is consistent with the recommendations in the ASPE RF report.

I will make this report available to anyone wishing to review it. Please contact me at JBEngineer@aol.com. I will also have a copy of the report available for review at the Annual Conference. I will make this report available to anyone wishing to review it. Please contact me at JBEngineer@aol.com. I will also have a copy of the report available for review at the Annual Conference.

Final Hearing Results

P219-12 **AS**

Code Change No: P220-12

Original Proposal

Section(s): 1108.1

Proponent: Bob Adkins, Prince William County VA Representing, the Virginia Plumbing and Mechanical Inspectors Association and The Virginia Building Code Officials Association and ICC Region 7 (radkins@pwcgov.org)

Revise as follows:

1108.1 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary (emergency overflow) 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. Where primary and secondary roof drains are manufactured as a single assembly, the inlet and outlet for each drain shall be independent.

Reason: Fittings are available today to accomplish a single roof penetration and provide both a primary drain and a secondary roof drain. This added text will assure compliance is met with Section 1108.2 to maintain separate primary and secondary systems.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P220-12	**AS**

Code Change No: P221-12

Original Proposal

Section(s): 1108.3

Proponent: Julius Ballanco, P.E., CPD, FASPE, JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Revise as follows:

1108.3 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(1), 1106.2(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 have an opening dimension of not less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

Reason: This is a companion change to the change to Section 1106. There is no need to reference the tables in Section 1106. By merely referencing the section, the code adequately identifies the requirements for sizing the secondary drainage system.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The report is not yet complete and the final data needs to be put in public comment for the final action and consistency with the committee's action on P218-12.

Assembly Action: **None**

Public Comment

Public Comment:

Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self, requests Approval as Submitted.

Commenter's Reason: The Committee had a valid concern when they stated that the research report had not been issued regarding storm drainage. All attempts were made to have the report completed prior to the first hearing, but to no avail. As this Public Comment is being prepared, the ASPE Research Foundation, Storm Drainage System Research Project, Flow Rate Through Roof Drains report is in the final week of peer review. The report will be published shortly after the completion of the peer review. The report is over 180 pages in length in Word format. It will be typeset for publication, probably resulting in fewer pages.

With the issuance of this research report, it is imperative that the International Plumbing Code be updated for sizing storm drainage systems. The report points out that storm drainage systems have been sized incorrectly for the last 80 years. The new sizing method will result in properly designed storm drainage systems. The proposed code change is consistent with the recommendations in the ASPE RF report.

I will make this report available to anyone wishing to review it. Please contact me at JBEngineer@aol.com. I will also have a copy of the report available for review at the Annual Conference.

Final Hearing Results

P221-12 **AS**

Code Change No: P222-12

Original Proposal

Section(s): 1110, 1110.1

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Delete without substitution:

~~**SECTION 1110**~~
~~**VALUES FOR CONTINUOUS FLOW**~~

~~**1110.1 Equivalent roof area.** Where there is a continuous or semicontinuous discharge into the building *storm rain* or building storm *sewer*, such as from a pump, ejector, air conditioning plant or similar device, each gallon per minute (L/m) of such discharge shall be computed as being equivalent to 96 square feet (9 m2) of roof area, based on a rainfall rate of 1 inch (25.4 mm) per hour.~~

Reason: This is a companion change to the change in sizing in Section 1106. Since the new sizing method uses gpm for sizing, there is no need to convert numbers for adding values for continuous flow. The gpm is simply added to the rainfall gpm.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The report is not yet complete and the final data needs to be put in public comment for the final action and consistency with the committee's action on P218-12.

Assembly Action: **None**

Public Comment

Public Comment:

Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., representing self, requests Approval as Submitted.

Commenter's Reason: The Committee had a valid concern when they stated that the research report had not been issued regarding storm drainage. All attempts were made to have the report completed prior to the first hearing, but to no avail. As this Public Comment is being prepared, the ASPE Research Foundation, Storm Drainage System Research Project, Flow Rate Through Roof Drains report is in the final week of peer review. The report will be published shortly after the completion of the peer review. The report is over 180 pages in length in Word format. It will be typeset for publication, probably resulting in fewer pages.

With the issuance of this research report, it is imperative that the International Plumbing Code be updated for sizing storm drainage systems. The report points out that storm drainage systems have been sized incorrectly for the last 80 years. The new sizing method will result in properly designed storm drainage systems. The proposed code change is consistent with the recommendations in the ASPE RF report.

I will make this report available to anyone wishing to review it. Please contact me at JBEngineer@aol.com. I will also have a copy of the report available for review at the Annual Conference.

Final Hearing Results

Code Change No: P223-12

Original Proposal

Section(s): 1302.2, Chapter 14

Proponent: Jeremy Brown, NSF International (Jeremy@nsf.org)

Revise as follows:

1302.2 Disinfection and treatment. ~~Gray water shall be disinfected by an approved method that employs one or more disinfectants such as chlorine, iodine or ozone that are recommended for use with the pipes, fittings and equipment by the manufacturer of the pipes, fittings and equipment.~~ Gray water shall be disinfected and treated by an on-site water reuse treatment system complying with NSF 350.

Add new standard to Chapter 14 as follows:

NSF
350-2011 Onsite Residential and Commercial Water Reuse Treatment Systems

Reason: In addition to microbiological contaminants that need disinfection, gray water contains organic compounds, suspended solids, turbidity, surfactants, and other contaminants that have the potential to accumulate and negatively impact the functioning of water closets and urinals if not treated properly. NSF/ANSI-350 *Onsite Residential and Commercial Water Reuse Treatment Systems* establishes the minimum materials, design and construction, and performance requirements for systems that disinfect and treat gray water for non-potable reuse applications, including flushing water for closets and urinals. Rigorous testing with gray water as defined by the standard ensures the treatment systems meet strict effluent quality requirements suitable for reuse applications, along with providing protection of public health and the environment. NSF 350 is currently referenced in the IGCC and IAPMO Green Supplement. Copies of this document may be obtained from the proponent.

Cost Impact: This will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, NSF 350-2011, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P223-12 **AS**

Code Change No: P224-12

Original Proposal

Section(s): 1302.4

Proponent: Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C. representing self (JBEngineer@aol.com)

Revise as follows:

~~**1302.4 Coloring.** The gray water shall be dyed blue or green with a food grade vegetable dye before such water is supplied to the fixtures.~~

Reason: This is an archaic requirement that dates back to when gray water was first considered for flushing water closets and urinals. The reason for abandoning the practice was because the dye stained building components when there was splashing of the dyed gray water. The means of identifying gray water is the purple coloring of the piping system.

Cost Impact: This change does not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P224-12 **AS**

Code Change No: P225-12

Original Proposal

Section(s): 1308.1.1 (New), Chapter 14

Proponent: Lorri Grainawi, STI/SPFA Representing the Steel Tank Institute / Steel Plate Fabricators Association (lgrainawi@steeltank.com)

Add new text as follows:

1308.1.1 Design and construction. Reservoirs shall be designed and constructed in accordance with Chapters 16 through 22 of the International Building Code and in accordance with the following standards as appropriate for the material of the reservoir: AWWA D100, AWWA D115, AWWA D120, UL 58, UL 1746, UL 1316, UL 142, API 12F or API 12D.

Add new standards to Chapter 14 as follows:

American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

API

API 12F-2008	Specification for Shop Welded Tanks for Storage of Production Liquids, effective April 1, 2009
API 12D-2008	Specification for Field Welded Tanks for Storage of Production Liquids, effective April 1, 2009

AWWA

D100-05	AWWA Standard for Welded Carbon Steel Tanks for Water Storage
D115-06	AWWA Standard for Tendon Prestressed-Concrete Water Tanks
D120-09	AWWA Standard for Thermosetting Fiberglass-Reinforced Plastic Tanks

UL

UL 58-1996	Steel Underground Tanks for Flammable and Combustible Liquids with revisions through July 27, 1998
UL 1746-2007	External Corrosion Protection Systems for Steel Underground Storage Tanks
UL 1316-1994	Glass-Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol Gasoline Mixtures with revisions through May 12, 2006
UL 142-2006	Steel Aboveground Tanks for Flammable and Combustible Liquids with revisions through February 12, 2010

Reason: The Steel Tank Institute is proposing the above language in response to the fact that there are no specific references to allow the designer the ability to directly reference the appropriate provisions for the design and construction of reservoirs.

In addition, we would note that the graywater and rainwater reservoir market today is unregulated. We have experienced this through the number of communications to the Institute, were it has been found that the inquiries were citing an inconsistent application for the design and construction of reservoirs.

Our position is that some form of structural provisions needs to be incorporated in order to ensure that this subject is, at the very least, addressed. These provisions are not intended, nor do they, favor one or more materials or types of constructions of reservoirs. We simply feel that basic structural and foundation provisions of the International Building Code should be used to provide for the safe storage and installation of reservoirs holding gray water and rainwater.

With respect to the listing of standards, STI has simply employed those standards used in other applications, such as automatic fire suppression reservoirs and fuel tank reservoirs. Unfortunately, until either these standards are enhanced, or new standards are created, to handle gray water and rain water applications we felt these the most appropriate since they do cover the structural design of a reservoir.

Cost Impact: We do not anticipate significant additional costs.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's written reason statement.

Assembly Action: **None**

Final Hearing Results

P225-12 **AS**

Code Change No: P226-12

Original Proposal

Section(s): Table E202.1

Proponent: Michael Cudahy, Plastic Pipe and Fittings Association (mike@cmservnet.com)

Revise as follows:

TABLE E202.1
INTERNAL VOLUME OF VARIOUS WATER DISTRIBUTION TUBING

OUNCES OF WATER PER FOOT OF TUBE									
Size Nominal, Inch	**Copper Type M**	**Copper Type L**	**Copper Type K**	**CPVC CTS SDR 11**	**CPVC SCH 40**	**CPVC SCH 80**	**PE-RT SDR 9**	**Composite ASTM F 1281**	**PEX CTS SDR 9**
3/8”	1.06	0.97	0.84	N/A	1.17	-	0.64	0.63	0.64
1/2”	1.69	1.55	1.45	1.25	1.89	1.46	1.18	1.31	1.18
3/4”	3.43	3.22	2.90	2.67	3.38	2.74	2.35	3.39	2.35
1”	5.81	5.49	5.17	4.43	5.53	4.57	3.91	5.56	3.91
1 1/4	8.70	8.36	8.09	6.61	9.66	8.24	5.81	8.49	5.81
1 1/2	12.18	11.83	11.45	9.22	13.20	11.38	8.09	13.88	8.09
2”	21.08	20.58	20.04	15.79	21.88	19.11	13.86	21.48	13.86

For SI: 1 ounces = 0.030 liter

Reason: This proposal simply adds two more commonly used water distribution piping and tubing materials to this table in order to make the table more useful to designers.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent’s written reason statement.

Assembly Action: **None**

Final Hearing Results

P226-12 **AS**

Code Change No: SP19-13

Original Proposal

Section(s): 303.1; IECC C404.7; IECC R403.9

Proponent: Jennifer Hatfield, J. Hatfield & Associates, PL, representing the Association of Pool & Spa Professionals (jhatfield@apsp.org)

THIS IS A 3 PART CODE CHANGE. PART I WILL BE HEARD BY THE ISPSC COMMITTEE, Part II WILL BE HEARD BY THE IECC-CE COMMITTEE, PART III WILL BE HEARD BY THE IECC-RE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I - ISPSC

Revise as follows:

303.1 ~~General~~ Pool and spa energy consumption. The energy consumption of ~~requirements for~~ pools and ~~inground permanently~~ ~~installed~~ *permanent residential spas* shall be controlled by the requirements ~~as specified~~ in Sections 303.~~2~~ 1.1 through 303.1.4. ~~and APSP 15. The energy requirements for residential portable electric spas shall be in accordance with APSP 14.~~

303.1.1 Residential pools and permanent residential spas. *Residential swimming pools* and *permanent residential spas* shall be in accordance with APSP-15.

303.1.2 Heaters. The electric power to heaters shall be ~~equipped with~~ controlled by ~~an~~ readily accessible ~~external~~ on-off switch that is mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. ~~to allow the heater to be shutoff without adjusting the thermostat setting. Such switch shall be provided with ready access~~. Gas-fired heaters shall not be equipped with ~~continuous pilot burners~~ continuously-burning ignition pilots.

~~**Exception:** Portable residential spas and portable residential exercise spas.~~

303.1.3 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump~~s~~ motors according to a preset schedule shall be installed ~~with~~ for ~~on~~ ~~all~~ heaters and pump motors. Heaters and~~,~~ pump~~s and~~ motors that have built-in timer~~s~~ switches shall be ~~deemed~~ in compliance with this section ~~requirement~~.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.
3. ~~Portable residential spas and portable residential exercise spas.~~

303.1.4 Covers. Outdoor heated pools and outdoor ~~inground permanently-installed~~ *permanent residential spas* shall be provided with a vapor retardant cover, a liquid cover or other *approved* vapor retardant means in accordance with 104.11.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.

303.2 Portable residential spas. The energy consumption of electric-powered *portable residential spas* shall be controlled by the requirements of APSP 14.

PART II - IECC-COMMERCIAL PROVISIONS

Revise as follows:

C404.7 Pools and spa energy consumption ~~inground permanently installed spas.~~ (Mandatory). ~~Pools and inground permanently installed spas shall comply with Sections C404.7.1 through C404.7.3.~~ The energy consumption of pools and ~~inground~~ permanent residential spas shall be controlled by the requirements in Sections C404.7.1 through C404.7.4.

C404.7.1 Heaters. The electric power to ~~all~~ heaters shall be ~~equipped with~~ controlled by ~~an~~ readily accessible ~~external~~ on-off switch that is mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. ~~to allow the heater to be shutoff without adjusting the thermostat setting. Such switch shall be provided with ready access~~. Gas-fired heaters shall not be equipped with ~~continuous pilot burners~~ continuously-burning ignition pilots..

~~Exception:~~ ~~Portable residential spas and portable residential exercise spas.~~

C404.7.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed ~~with~~ for ~~on all~~ heaters and pump motors. Heaters and~~,~~ pumps ~~and~~ motors that have built-in timers switches shall be ~~deemed~~ in compliance with this section ~~requirement~~.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. ~~Where~~ Pumps that ~~are required to~~ operate solar- and waste-heat-recovery pool heating systems.

C404.7.3 Covers. Outdoor heated pools and outdoor ~~inground permanently-installed~~ permanent residential spas shall be provided with a vapor retardant cover, a liquid cover or other *approved* vapor retardant means.

Exception: ~~A vapor-retardant cover is not required for pools deriving over 70 percent of the energy for heating from site-recovered energy, such as a heat pump or solar energy source computed over an operating season.~~ Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.

C404.8 Portable residential spas. The energy consumption of electric-powered portable residential spas shall be controlled by the requirements of APSP 14.

Part III - IECC-Residential Provisions

Revise as follows:

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R403.9 Pools and spa energy consumption ~~inground permanently installed spas.~~ (Mandatory). ~~Pools and inground permanently installed spas shall comply with Sections R403.9.1 through R403.9.3.~~ The energy consumption of pools and ~~inground~~ permanent residential spas shall be controlled by the requirements in Sections R403.9.1 through R403.9.4.

R403.9.1 Heaters. The electric power to heaters shall be ~~equipped with~~ controlled by an readily accessible ~~external~~ on-off switch that is mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. ~~to allow the heater to be shutoff without adjusting the thermostat setting. Such switch shall be provided with ready access~~. Gas-fired heaters shall not be equipped with ~~continuous pilot burners~~ continuously-burning ignition pilots.

R403.9.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed ~~with~~ for ~~on all~~ heaters and pump motors. Heaters and~~,~~ pumps ~~and~~ motors that have built-in timers switches shall be ~~deemed~~ in compliance with this section ~~requirement~~.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. ~~Where~~ Pumps that ~~are required to~~ operate solar- and waste-heat-recovery pool heating systems.

R403.9.3 Covers. Outdoor heated pools and outdoor ~~inground permanently-installed~~ permanent residential spas shall be provided with a vapor retardant cover, a liquid cover or other *approved* vapor retardant means.

Exception: ~~A vapor-retardant cover is not required for pools deriving over 70 percent of the energy for heating from site-recovered energy, such as a heat pump or solar energy source computed over an operating season.~~ Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.

R403.10 Portable residential spas. The energy consumption of electric-powered portable residential spas shall be controlled by the requirements of APSP 14.

Reason:
PART I: This code change provides for the following:

1. All parts work to provide consistent language with pool and spa energy provisions found in the ISPSC and IECC. Some portions have been added here that were already included in the ISPSC and vice versa on part II and III of this proposal below.
2. Clarifies APSP-15 only applies to residential pools and inground spas.
3. Changes wording to use defined terms, as found in Chapter 2 of the ISPSC.
4. Clarifications regarding on-off switches for heaters.
6. Consistent verbiage within the time switch requirements.
7. Provides for clarity that the cover requirements are only for outdoor pools.
8. Provides for options when it comes to pool and spa covers to ensure one can comply with more intricately designed pools and spas (shape, size/infinity pools/etc.). Otherwise if only one type of method can be used then the code is limiting the design of any pool or spa. The “typical” rectangle pool is no longer the norm.

PART II Reason: This code change provides for the following:

1. All parts work to provide consistent language with pool and spa energy provisions found in the ISPSC and IECC. Some portions have been added here that were already included in the ISPSC and vice versa on part II and III of this proposal below.
2. Changes wording to use defined terms, as found in Chapter 2 of the ISPSC.
3. Clarifications regarding on-off switches for heaters.
4. Consistent verbiage within the time switch requirements.
5. Provides for clarity that the cover requirements are only for outdoor pools.
6. Provides for options when it comes to pool and spa covers to ensure one can comply with more intricately designed pools and spas (shape, size/infinity pools/etc.). Otherwise if only one type of method can be used then the code is limiting the design of any pool or spa. The “typical” rectangle pool is no longer the norm.
7. Provides for a new subsection to address portable residential spas in the rare case they would be used for more than a four story building and therefore fall under the commercial code.

PART III Reason: This code change provides for the following:

1. All parts work to provide consistent language with pool and spa energy provisions found in the ISPSC and IECC. Some portions have been added here that were already included in the ISPSC and vice versa on part II and III of this proposal below.
2. Clarifies APSP-15 only applies to residential pools and inground spas.
3. Changes wording to use defined terms, as found in Chapter 2 of the ISPSC.
4. Clarifications regarding on-off switches for heaters.
5. Consistent verbiage within the time switch requirements.
6. Provides for clarity that the cover requirements are only for outdoor pools.
7. Provides for options when it comes to pool and spa covers to ensure one can comply with more intricately designed pools and spas (shape, size/infinity pools/etc.). Otherwise if only one type of method can be used then the code is limiting the design of any pool or spa. The "typical" rectangle pool is no longer the norm.
8. Provides for a new subsection to address portable residential spas, requiring their compliance with the APSP-14 energy standard, consistent with the ISPSC.

Cost impact: These code change proposals will not increase the cost of construction.

Public Hearing Results

The code change is contained in the Updates to the 2013 Proposed Changes posted on the ICC website. Please go to http://www.iccsafe.org/cs/codes/Documents/2012-2014Cycle/Proposed-B/00-CompleteGroupB-MonographUpdates.pdf for more information.

PART I – ISPSC

Heard by the ISPSC Committee

Committee Action: Disapproved

Committee Reason: The proposal was disapproved because it does not give credit to heaters that have on-off switches integral to the product. Shutting off power to some controls might cause the control to revert back to factory settings. Covers are only required for outdoor pools and spas. Indoor pools and spas should also have covers. Liquid covers are relatively new but there are no standards for this type of product. A standard for this product should be available before it is required by the code.

Assembly Action: None

PART II – IECC - Commercial

Heard by the IECC-Commercial Provisions Committee

Committee Action: Approved as Modified

Modify the proposal as follows:

C404.7 Pools and permanent spa energy consumption (Mandatory). The energy consumption of pools and permanent ~~residential~~ spas shall be controlled by the requirements in Sections C404.7.1 through C404.7.4.

C404.7.1 Heaters. The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously-burning ignition pilots.

C404.7.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:
1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.

C404.7.3 Covers. Outdoor heated pools and outdoor permanent ~~residential~~ spas shall be provided with a vapor retardant cover~~, a liquid cover~~ or other *approved* vapor retardant means.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered

energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.
C404.8 Portable ~~residential~~ spas (Mandatory). The energy consumption of electric-powered portable ~~residential~~ spas shall be controlled by the requirements of APSP 14.

Committee Reason: The reason for making the modification is that this limits the energy requirements to permanent spas only. The reason for approving the overall proposal is that the proposal coordinates the energy requirements between the IECC and the ISPSC.

Assembly Action: **None**

PART III – IECC – Residential

Heard by the IECC-Residential Provisions Committee

Committee Action: **Approved as Modified**

Modify the proposal as follows:

R403.9 (N1104.9) Pools and permanent spa energy consumption (Mandatory). The energy consumption of pools and permanent residential spas shall be controlled by the requirements in Sections R403.9.1 through R403.~~9.~~4 9.3.

> **Exception: ~~R403.9.1 Residential pools and permanent residential spas.~~** Heaters and time switches for swimming pools and permanent spas that are accessory to detached one- and two- family dwellings and townhouses 3 stories or less in height above ground plane and that are available only to the household and its guests shall be in accordance with APSP-15.

R403.9.2 1 (N1104.9.2 1) Heaters. The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously-burning ignition pilots.

R403.9.3 2 (N1104.9. 3 2) Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for ~~on all~~ heaters and pump motors. Heaters and~~,~~ pump~~s and~~ motors that have built-in time switches shall be in compliance with this section.

> **Exceptions:**
>
> 1. Where public health standards require 24-hour pump operation.
> 2. Pumps that operate solar- and waste-heat-recovery pool heating systems.

R403.~~9.4~~ 9.3 (N1104. ~~9.4~~ 9.3) Covers. Outdoor heated pools and outdoor ~~permanent~~ residential spas shall be provided with a vapor retardant cover~~, a liquid cover~~ or other *approved* vapor retardant means.

> **Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be requi~~r~~ed

Committee Reason: For the modification, the committee agreed with the testimony from the proponent of floor modification that heaters and time switches for pools and spas accessory to IRC-type buildings do not need to comply with the same, more stringent, requirements for commercial applications. For the overall proposal, the committee agreed with the proponent's reason statement.

Assembly Action: **None**

Public Comments

PART I

Public Comment:

Jennifer Hatfield, J. Hatfield & Associates, PL, representing the Association of Pool & Spa Professionals requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

303.1 Energy consumption of pool~~s~~ and permanent spas. The energy consumption of pools and *permanent ~~residential~~ spas*

shall be controlled by the requirements in Sections 303.1.1 through 303.1.43.

~~**303.1.1 Residential pools and permanent residential spas.** *Residential swimming pools* and *permanent residential spas* shall be in accordance with APSP-15.~~

303.1.21 Heaters. The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously-burning ignition pilots.

303.1.32 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in timer switches shall be deemed in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

303.1.43 Covers. Outdoor heated pools and outdoor *permanent ~~residential~~ spas* shall be provided with a vapor retardant cover~~, a liquid cover~~ or other *approved* vapor retardant means in accordance with Section 104.11.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.

303.2 Portable ~~residential~~ spas. The energy consumption of electric-powered *portable ~~residential~~ spas* shall be controlled by the requirements of APSP 14.

303.3 Residential pools and permanent residential spas. The energy consumption of *residential swimming pools* and *permanent residential spas* shall be controlled in accordance with the requirements of APSP 15.

Commenter's Reason: As it stands now there are inconsistent energy efficiency requirements between the IECC and ISPSC, which is why this three part public comment is essential to ensure that these codes are consistent with ANSI approved APSP Standards. Otherwise code officials, owners, manufacturers and installers will be faced with conflicting and possibly incompatible language. The public comment addresses the ISPSC committee's concerns, some of which was addressed in the IECC parts of the proposal in Dallas by floor modification after the input received by the ISPSC committee under Part I. This public comment implements those IECC changes to the ISPSC (Part I) portion of the proposal, but makes further clarifications to all parts to ensure the two I-codes have consistent energy efficient requirements for pools and spas.

Specifically in regards to Part I of the proposal, the public comment addresses the ISPSC committees reason for disapproval by a) adding in the integral on and off switches for heaters (already done in the IECC), b) removing the specific reference to a liquid cover, and allowing the AHJ to determine what other "approved vapor retardant means" can be used consistent with Chapter 1 (already done in the IECC), and 3) clarifying which provisions apply to public as opposed to residential *pools or permanent spas or portable spas*. This last aspect is critical to ensure it is only residential pools and spas that must meet the APSP Standard, as intended by the Standard, and the remaining portions are for both public and residential.

Part II of the proposal simply modifies the committee action by correcting a section reference. Part III of the proposal clarifies what provisions apply to public versus residential *pools as opposed to permanent spas or portable spas* – ensuring consistency between the respective Codes and the APSP Standard, following the proposed modifications under Part I.

PART II

Public Comment 1:

Jennifer Hatfield, J. Hatfield & Associates, PL, representing the Association of Pool & Spa Professionals requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

C404.7 Energy consumption of pools and permanent spas (Mandatory). The energy consumption of pools and permanent spas shall be controlled by the requirements in Sections C404.7.1 through C404.7.43.

Commenter's Reason: This public comment simply modifies the committee action by fixing a section reference. There is not a Section C404.7.4.

Public Comment 2:

Edward R. Osann, Natural Resources Defense Council on behalf of self (eosann@nrdc.org) requests Approval as Modified by this Public Comment

Further modify the proposal as follows:

C404.7.3 Covers. ~~Outdoor~~ Heated pools and outdoor permanent spas shall be provided with a vapor retardant cover or other *approved* vapor retardant means.

> **Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required.

Commenter's Reason: Without explanation or justification, the proposal as submitted would weaken current code language by removing the requirement that a pool cover be provided for all heated pools, whether located indoors or out. There is important value provided by a cover for an indoor pool, including humidity management, which has important energy implications. The modification in this comment would restore the current requirement that new heated indoor pools be provided with a vapor retardant cover.

PART III

Public Comment 1:

Jennifer Hatfield, J. Hatfield & Associates, PL, representing the Association of Pool & Spa Professionals requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

R403.9 (N1104.9)) Pools and permanent spa energy consumption (Mandatory). The energy consumption of pools and permanent ~~residential~~ spas shall be controlled by the requirements in Sections R403.9.1 through R403.9.3.

> ~~**Exception:** Heaters and time switches for swimming pools and permanent spas that are accessory to detached one- and two-family dwellings and townhouses 3 stories or less in height above ground plane and that are available only to the household and its guests shall be in accordance with APSP-15.~~

R403.9.3 (N1104.9.3) Covers. Outdoor heated pools and outdoor permanent ~~residential~~ spas shall be provided with a vapor retardant cover or other *approved* vapor retardant means.

> **Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required

R403.10 (N1103~~4~~.10) Portable ~~residential~~ spas (Mandatory). The energy consumption of electric-powered portable ~~residential~~ spas shall be controlled by the requirements of APSP 14.

R403.11 (N1104.11) Residential pools and permanent residential spas. Residential swimming pools and permanent residential spas that are accessory to detached one- and two- family dwellings and townhouses 3 stories or less in height above grade plane and that are available only to the household and its guests shall be in accordance with APSP-15.

Commenter's Reason: This public comment simply clarifies what provisions apply to public versus residential pools as opposed to permanent spas or portable spas, also ensuring consistency between the respective codes.

Public Comment 2:

Edward R. Osann, Natural Resources Defense Council on behalf of self (eosann@nrdc.org) requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

R403.9.3 (N1104.9.3) Covers. ~~Outdoor~~ Heated pools and outdoor residential spas shall be provided with a vapor retardant cover or other *approved* vapor retardant means.

> **Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor retardant means shall not be required

Commenter's Reason: Without explanation or justification, the proposal as submitted would weaken current code language by removing the requirement that a pool cover be provided for all heated pools, whether located indoors or out. There is important value provided by a cover for an indoor pool, including humidity management, which has important energy implications. The modification in this comment would restore the current requirement that new heated indoor pools be provided with a vapor retardant

cover.

Final Hearing Results

SP19-13 Part I	**AMPC**
SP19-13 Part II	**AMPC1**
SP19-13 Part III	**AMPC1**

Code Change No: M22-12

Original Proposal

Section(s): 307.2.2

Proponent: James Paschal, Paschal Engineering, representing self (Jim@PaschalEngineering.com)

Revise as follows:

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, ~~polybutylene~~, polyethylene, ABS, CPVC~~,~~ ~~or~~ PVC, or polypropylene pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the *International Plumbing Code* relative to the material type. Condensate waste and drain line size shall not be less than ¾-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

Reason: Delete PB material as it is no longer available or used in this application, and add polypropylene materials which are currently being used in this application.

Cost Impact: None

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Approval is based upon the proponent's published reason.

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Assembly Action: **None**

Final Hearing Results

M22-12 AS

Code Change No: M29-12

Original Proposal

Section(s): 202, 307.2.4.1

Proponent: Timothy Burgos, InterCode Incorporated, representing Rectorseal Corporation and Ken Sagan, NRG Code Advocates, representing self

Add new definition as follows:

DUCTLESS MINI-SPLIT SYSTEM. A heating and cooling system that is comprised of one or multiple indoor evaporator/air handler units and an outdoor condensing unit that is connected by refrigerant piping and electrical wiring. A ductless mini-split system is capable of cooling or heating one or more rooms without the use of a traditional ductwork system.

Add new text as follows:

307.2.4.1 Ductless Mini-Split Traps. Ductless mini split equipment that produces condensation shall be provided with an inline check valve located in the drain line instead of a trap.

Reason: Ductless mini-split condensate lines are direct openings for unconditioned outside air, contaminants, insects and other undesirable materials to enter the conditioned space and should be trapped using an inline check valve as a preventative measure.

Ductless mini-split systems have existed for more than 50 years and have been available for more than 30 years in the United States HVAC residential and/or light commercial markets. Most American consumers, however, are unaware of these products. A ductless-mini split system is not a window unit; it is a permanently installed mechanical system used in new construction, additions, multi-family (condo/apartment) housing, and to improve comfort in poorly conditioned spaces. Since mini-splits require no ducts and indoor components are mounted directly on interior ceiling, walls, or on the floor, they avoid the energy losses associated with ductwork of central forced air systems. Duct losses can account for more than 30% of energy consumption for space conditioning, especially if the ducts are in an unconditioned space such as an attic.

Ductless mini-split heating and cooling systems are highly efficient products that deliver warm or cool air directly into different zones in a building instead of through ducts. They are also called mini-split, multi-split, or variable refrigerant flow (VRF) heat pump systems. They are an increasingly popular and cost-effective solution to replace inefficient baseboard electric heating and window air conditioners in existing homes.

Ductless mini-split systems have numerous potential applications in residential, commercial, and institutional buildings. The most common applications are in multifamily housing or as retrofit add-ons in houses with "non-ducted" heating systems, such as hydronic (hot water heat), radiant (electric resistance), and space heaters (wood, kerosene, propane). They can also be a good choice for room additions and small apartments where extending or installing distribution ductwork (for a central air-conditioner or heating systems) is not feasible or where existing equipment cannot handle the additional load.

A ductless mini-split system is comprised of an indoor unit called the evaporator and an outdoor unit called the condenser. The evaporator is connected to the condensing unit by copper tubing and electrical wiring which is passed through a 2 ½" – 4" hole. Basically, it is a small central air unit with the flexibility of cooling or heating one or more room.

The advantages of installing a ductless mini-split over a central air system.

The main advantages of a ductless mini-split are their small size and flexibility for zoning or heating and cooling individual rooms. Models can have as many as four indoor air handling units (for four zones or rooms) connected to one outdoor unit. The number of units is determined by how much heating or cooling is required for the building or each zone (which in turn is affected by the properties of the building envelope). Since each of the zones has its own thermostat, the space can be conditioned only when occupied saving energy and money.

1. With Central Air, an entire home must be cooled when only one room may be occupied. Ductless mini-splits cool only the areas that require conditioning.
2. 18,000 BTU is a typical minimum central air unit: ductless mini-splits are available beginning at 9,000 or 12,000 BTUs.
3. Typical homes requiring 3-ton HVAC units may not be zoned or require complex zoning systems that are very expensive for the homeowner. With ductless mini-splits, multiple evaporators make zoning as simple as setting a remote control.
4. Energy wasted in long lengths of uninsulated ductwork means higher energy bills. Less than 5% cooling loss occurs in insulated refrigerant lines compared with up to 25% through ducts.
5. Retrofitting existing homes with whole house air conditioning requires cutting holes in walls, floors, ceilings or decreasing closet space with ducts.
6. Ductless mini-splits require just a 2 ½ or 4" diameter hole in the outside wall meaningless mess and better home aesthetics.

Most systems now incorporate inverter-driven compressors, which allow for system ramp-up until the desired set temperature is met, then permit the system to modulate its operation so that a comfortable temperature is maintained. This operation avoids the abrupt and energy-consuming start and stop exhibited by traditional HVAC systems.

Ductless mini-split systems are also often easier to install than other types of space conditioning systems. For example, the hook-up between the outdoor and indoor units generally requires only a three inch (~8 centimeter [cm]) hole through a wall for the conduit. Also, most manufacturers of this type of system can provide a variety of lengths of connecting conduits. So, if necessary, you can locate the outdoor unit as far away as 50 feet (~15 meters [m]) from the indoor evaporator. This makes it possible to cool rooms on the front side of a building with the compressor in a more appropriate or inconspicuous place on the outside of the building.

Indoor air handlers can be suspended from a ceiling, flush-mounted in a drop ceiling, or hung on a wall. Floor-standing models are also available. Many offer a remote control to make control of high mounted units easier. Split systems can also contribute to the security of a building by eliminating the need for larger openings required for through-the-wall units or unsecured windows housing window-mounted units –openings that can provide easy access for intruders

Ductless mini-split equipment must follow the same code requirements as other condensate producing equipment due to the potential damage and health risk associated with uncontrolled condensation. Ductless mini-split units also do not have provisions for a secondary drain, or auxiliary drain pans to prevent condensation from overflowing the primary drain pan. Currently it is unclear in the code if ductless mini-split units require water-level monitoring devices. In installations where gravity drains condensation removal is impossible, a condensate pump must be installed that communicates with the ductless mini-split to stop the equipment if there is a failure of the condensate removal system. Power for the condensate pump should be provided from the mini-split equipment and not from a separate power source. The danger of using a separate power supply is that if the circuit that supplies power to the condensate pump fails, but the circuit providing power to the mini split equipment remains active, the pump will not operate and the equipment will produce excessive condensation without shutting down.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: There is no need to mandate a check valve as the only means. Manufacturers vary and this should be left to the manufacturers to decide.

Assembly Action: **None**

Public Comments

Public Comment:

Vickie Lovell, InterCode Incorporated, representing Rectorseal Corporation, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

307.2.4.1 Ductless Mini Split System Traps. Ductless mini split equipment that produces condensation shall be provided with an inline check valve located in the drain line ~~instead of~~ or a trap.

(Portions not shown are unaffected by this Public Comment.)

Commenter's Reason: The committee had an issue with the original proposal because it was too limiting for what could be used as trap. We agree with their reason. The reason for this public comment is to give an option of either using an inline check valve or a traditional trap when installing a ductless mini split system.

One of the advantages of a ductless mini split system is the ability to install a cooling system in a limited space. However, if the space is limited, a traditional trap may not be practical and an inline check should be used.

Final Hearing Results

M29-12 **AMPC**

Code Change No: M32-12

Original Proposal

Section(s): 307.2.5 (New)

Proponent: Andrew Scott Jones, President, A Better Deal Heating and Air Conditioning, Inc., a Texas Corporation, representing self (tfkolter@gmail.com/tom.kolter@yahoo.com)

Add new text as follows:

307.2.5 Cleanouts. Condensate drains shall be provided with a means to allow cleaning of the drain and clearing of blockages without having to cut or disassemble the piping.

Reason: Drain line stoppages in evaporative coils drain pan drain lines are unavoidable and common occurrences requiring clearing the drain line. Clearing these lines almost always involves cutting the drain line itself, causing water to leak into the attic or closet where the drain is located, possible collected in a bucket or soaked up with rags or paper towels. Then the technician blows compressed air through the drain line in both directions from the cut. The cut must be repaired by resealing the drain line with a PVC coupling and solvent.

This process exposes the surrounding area to water leakage and spilling with the risk of damage, mold, spilling, as well as the extra time and effort of carrying extra equipment, parts and flammable solvent. The process takes extra time and costs the homeowner more money.

With a device that permits the introduction of compressed air or nitrogen directly into the drain system permitting clearing in both directions, there is no spillage of water, no cost for the couplings or solvent and no risk of water damage or mold. The entire process requires less than five minutes.

Typically the cost of clearing a drain equipped with such a device is at least 50% less to the homeowner than the cost of clearing a blockage through the common method of cutting the pipe, attempting to collect the condensate water and repairing the cut in the drain line.

Each time a drain line is cleared though the cutting/repair process, the repair could be accomplished by installing a $15.00 line clearing device rather than a simple coupling.

Also, if clearing the drain lines were part of regular maintenance, line blockages could largely be prevented in the first place.

Cost Impact: The code change will increase the cost of construction, totaling an estimated $15.00 per unit.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The words “a means” are not defined. It may not be safe to pressurize drains with nitrogen. The proposed text may preclude the use of unions to allow disassembly.

Assembly Action: **None**

Public Comments

Public Comment:

Andrew S. Jones, State of Texas, representing A Better Deal Heating and Air Conditioning, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

~~**307.2.5 Cleanouts.** Condensate drains shall be provided with a means to allow cleaning of the drain and clearing of blockages without having to cut or disassemble the piping.~~

307.2.5 Cleanouts. Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.

Commenter's Reason: Stoppages in drain lines from evaporative coil drain pans are a common problem, often causing substantial damage to structures and property.

Final Hearing Results

M32-12 **AMPC**

Code Change No: G8-12 Part I

Original Proposal

Section(s): 202

PART I – IPC

Revise as follows:

SECTION 202
DEFINITIONS

IPC [B] DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the *design flood elevation* shall be the elevation of the highest existing grade of the *building's* perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

Reason: This definition is controlled by the IBC; this proposal brings the IPC, IMC, IFGC, and IPSDC, IEBC definitions in line with the term as defined by the IBC.

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

Public Hearing Results

All parts of this code change were heard by the IBC Structural code development committee.

Committee Action: **Approved as Submitted**

Committee Reason: Correlates the IPC definition of design flood elevation with the IBC definition.

Assembly Action: **None**

Final Hearing Results

G8-12 Part I **AS**

Code Change No: G40-12

Original Proposal

Section(s): 202, 310.5, 310.5.2 (NEW), IPC Table 403.1 (IBC [P] Table 2902.1)

Proponent: Tim Nogler, Washington State Building Code Council, representing Washington Association of Building Officials Technical Code Development Committee (tim.nogler@des.wa.gov)

Revise as follows:

310.5 Residential Group R-3. Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two *dwelling units*
Boarding houses (nontransient) with 16 or fewer occupants
Boarding houses (*transient*) with 10 or fewer occupants
Care facilities that provide accommodations for five or fewer persons receiving care
Congregate living facilities (nontransient) with 16 or fewer occupants
Congregate living facilities (*transient*) with 10 or fewer occupants
Lodging houses with five of fewer *guest rooms*

310.5.2 Lodging houses. Owner occupied *lodging houses* with five or fewer *guest rooms* shall be permitted to be constructed in accordance with the *International Residential Code*.

Add new definitions as follows:

SECTION 202
DEFINITIONS

GUEST ROOM. A room used or intended to be used by one or more guests for living or sleeping purposes.

LODGING HOUSE. A one family dwelling where one or more occupants are primarily permanent in nature, and rent is paid for guestrooms.

Revise as follows:

IPC TABLE 403.1 (IBC [P] TABLE 2902.1)
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See IPC Sections 403.2 and 403.3)
(See IBC Sections 2902.2 and 2902.3)

No.	Classification	Occupancy	Description	WATER CLOSETS (Urinals see section 419.2 of the IPC)		LAVATORIES		BATHTUBS/SHOWERS	Drinking Fountains[e,f] (See Section 410.1 of the IPC)	OTHER
				MALE	FEMALE	MALE	FEMALE			
7	**Residential**	R-3	One-and two-family dwellings and lodging houses	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	--	1 kitchen sink per dwelling unit; 1 automatic clothes

			with 5 or fewer guest rooms					washer connecti on per dwelling unit

(Portions of table not shown remain unchanged)

Reason: The purpose of this code change is to allow a small bed and breakfast or similar lodging to be classified as single family. The proposed definitions are from the 2012 IRC. This proposal makes the IBC consistent with the IRC in regulating "lodging houses". The 2012 IRC scope covers lodging house occupancies with five or fewer guestrooms, when equipped with a fire sprinkler system. In the previous cycle, the IBC General committee had concerns that adding the IRC definitions to the IBC would create conflict with chapter 29 required plumbing fixtures. The committee had concerns that a new Group R-3 occupancy would create confusion with how to determine minimum number of plumbing fixtures per chapter 29. To address that concern, this proposal adds "lodging house" to IPC Table 403.1 (IBC Table 2902.1) to be consistent with one-family dwellings.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The concept addressed is similar to G41-12 but based upon number of rooms versus occupants. This does not work with the IBC construct of occupant load but is consistent with the IRC approach. A possible solution is using total number of occupants similar to G41-12. It was encouraged to coordinate with G41-12 and evaluate how this proposal works with the accessibility requirements.

Assembly Action: **None**

Public Comment

Public Comment:

Clare Ray Allshouse AIA, CBO, City of Shoreline, WA, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Submitted.

Commenter's Reason: The Committee disapproved the original proposal in part due to a failure to work within the IBC construct of occupant load (number of occupants versus rooms) even though it was acknowledged that it is consistent with the IRC approach. The terms used in this proposal are identical to the terms currently used in the IRC. Since the expressed purpose of this proposal is to coordinate the IBC with the IRC, it would seem most appropriate to define it in IRC terms to reduce the potential for confusion in its proper application. Furthermore, by making this scope clarification in the IBC that these occupancies are subject to the provisions of the IRC, the accessibility question raised by the Committee is resolved by definition.

Final Hearing Results

G40-12 **AS**

Code Change No: G71-12 Part III

Original Proposal

Section(s): 906.2, Table 906.3(1), Table 906.3(2), 907.2.6, 907.2.10.1 (IBC [F] 906.2, Table 906.3(1), Table 906.3(2), 907.2.6, 907.2.10.1)

Proponent: Philip Brazil. PE, Reid Middleton, Inc., representing Washington Association of Building Officials, Technical Code Development (pbrazil@reidmiddleton.com)

THIS IS A 3 PART PROPOSAL AND ALL THREE PARTS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS CODE DEVELOPMENT COMMITTTEE. SEE THE TENTATIVE HEARING ORDER FOR THE IBC MEANS OF EGRESS CODE DEVELOPMENT COMMITTEE.

PART III – IPC

Revise as follows:

403.3 (IBC [P] 2902.3.2) Location of toilet facilities in occupancies other than malls. In occupancies other than covered and open mall buildings, the required *public* and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

> **Exception:** The location and maximum ~~travel~~ distances of travel to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum ~~travel~~ distance of travel are *approved*.

403.3.4 (IBC [P] 2902.3.3) Location of toilet facilities in malls. In covered and open mall buildings, the required *public* and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 300 feet (91 440 mm). In mall buildings, the required facilities shall be based on total square footage within a covered mall building or within the perimeter line of an open mall building, and facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum ~~travel~~ distance of travel to central toilet facilities in mall buildings shall be measured from the main entrance of any store or tenant space. In mall buildings, where employees' toilet facilities are not provided in the individual store, the maximum ~~travel~~ distance of travel shall be measured from the employees' work area of the store or tenant space.

403.5 (IBC [P] 2902.5) Drinking fountain location. Drinking fountains shall not be required to be located in individual tenant spaces provided that public drinking fountains are located within a ~~travel~~ distance of travel of 500 feet of the most remote location in the tenant space and not more than one story above or below the tenant space. Where the tenant space is in a covered or open mall, such distance shall not exceed 300 feet. Drinking fountains shall be located on an accessible route.

Reason: The change from “travel distance” to “distance of travel” more clearly distinguishes between “exit access travel distance” as specified in Section 1016 and a travel distance that is other than an exit access travel distance for which the provisions of Section 1016 do not apply. Note that Section 1016.3 specifies the measurement of exit access travel distance as being from “the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit,” except for open parking garages and outdoor facilities with open access components where it is measured as specified therein. The sections in this proposal, however, specify the measurement of travel distance between points within the exit access (i.e., to an exit access door in Sections 407.4.2, 407.4.3.3, 407.4.3.4 and 407.4.3.5.3; to a smoke barrier door in Sections 407.5, 408.6.1 and 422.3; to an extinguisher in Section 906.2 and Tables 906.3(1) and 906.3(2); etc.).

Changing from “travel distance” to “distance of travel” in these cases is considered to be clarifying and does not change the meaning or the intent of the language. The changes will also be consistent with “distance of travel” in 2012 IBC Sections 402.8.3, 402.8.5 and 415.10.3.3. The other change in Section 2902.5 is grammatical. Based on our analysis of the 2012 IBC, all instances of “travel distance” in the 2012 IBC where a change to “distance of travel” is warranted are included in this proposal.

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

Public Hearing Results

All three parts of this code change was heard by the IBC Means of Egress code development committee.

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

Committee Reason: The proposal clarifies where a distance is not 'exit access travel distance' as the term is used in Section 1016, but is a distance utilized for other types of elements. The IPC deals with distance of travel to items such as toilet rooms and drinking fountains.

Assembly Action: **None**

Final Hearing Results

G71-12 Part III **AS**

Code Change No: E201-12

Original Proposal

Section(s): 1109.5.1 (IPC [B] 410.2)

Proponent: Lee J. Kranz, City of Bellevue, Washington, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)

Revise as follows:

1109.5.1 Minimum Number. No fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheel-chair and one drinking fountain shall comply with the requirements for standing persons.

Exceptions:

1. A single drinking fountain with two separate spouts that comply with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.
2. Where drinking fountains are primarily for children's use, drinking fountains for people using wheelchairs shall be permitted to comply with the children's provisions in ICC A117.1 and drinking fountains for standing children shall be permitted to provide the spout at 30 inches (762 mm) minimum above the floor.

IPC [B] 410.2 Minimum number. Where drinking fountains are required, not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Exception: A single drinking fountain with two separate spouts that complies with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.

Reason: The current language is not specific enough. It isn't clear that for the single drinking fountain, two separate spouts are required to meet the needs of the people in the wheelchairs and the standing people. The proposed verbiage clarifies this.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The current language is continuously misapplied, resulting in a reduction of accessibility for either wheelchair users or the standing users. The proposal would add clarity to the exception. Allowing for two spouts on one bowl would not be a violation of ICC A117., but would clarify that this can be one bowl that has clearances and two spouts complying with requirements for wheelchair and standing fountains.

Assembly Action: **None**

Final Hearing Results

E201-12 **AS**

Code Change No: ADM6-13

Original Proposal

Section: PART I - IBC: [A] 101.3; ICCPC: [A] 101.2.2; IFC: [A] 101.3; IFCG: [A] 101.4; IMC: [A] 101.3; IPC: [A] 101.3; IPSDC: [A] 101.6; IPMC: [A] 101.2
PART II – IRC R101.3

THIS IS A 2 PART CODE CHANGE. PART 1 WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE RESIDENTIAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Carl F. Baldassarra, representing Rolf Jensen & Associates, Inc. (cbaldassarra@rjagroup.com)

PART I – IBC; ICCPC; IFC; IFCG; IMC; IPC; IPSDC; IPMC

Revise the International Building Code as follows:

IBC [A] 101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation; ~~,~~ to safeguard ~~and safety to~~ life and property from fire and other hazards attributed to the built environment; and, to safeguard ~~provide safety to~~ fire fighters and emergency responders during emergency operations.

Revise the International Code Council Performance Code as follows:

ICCPC [A] 101.2.2 Fire. Part III of this code establishes requirements necessary ~~to provide an acceptable level~~ to safeguard ~~of~~ life ~~safety~~ and property ~~protection~~ from the hazards of fire, explosion or dangerous conditions in all facilities, equipment and processes.

Revise the International Fire Code as follows:

IFC [A] 101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level to safeguard ~~of~~ life ~~safety~~ and property ~~protection~~ from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to safeguard ~~provide safety to~~ fire fighters and emergency responders during emergency operations.

Revise the International Fuel Gas Code as follows:

IFGC [A] 101.4 Intent. The purpose of this code is to provide minimum standards to safeguard life ~~or limb,~~ health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of fuel gas systems.

Revise the International Mechanical Code as follows:

IMC [A] 101.3 Intent. The purpose of this code is to provide minimum standards to safeguard life ~~or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of mechanical systems.

Revise the International Plumbing Code as follows:

IPC [A] 101.3 Intent. The purpose of this code is to provide minimum standards to safeguard life ~~or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 101.6 Intent. The purpose of this code is to provide minimum standards to safeguard life ~~or limb,~~ health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of *private sewage disposal systems*.

Revise the International Property Maintenance Code as follows:

IPMC [A] 101.2 Scope. The provisions of this code shall apply to all existing residential and nonresidential structures and all existing *premises* and constitute minimum requirements and standards for *premises*, structures, equipment and facilities for light, *ventilation*, space, heating, sanitation, protection from the elements, to safeguard life ~~safety, safety~~ from fire and other hazards, and for safe and sanitary maintenance; the responsibility of *owners*, *operator*s and *occupants*; the *occupancy* of existing structures and *premises*, and for administration, enforcement and penalties.

PART II – IRC

Revise the International Residential Code as follows:

IRC R101.3 Intent. The purpose of this code is to establish minimum requirements to safeguard the public safety, health and general welfare through affordability, structural strength, means of egress facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment and to safeguard ~~provide safety to~~ fire fighters and emergency responders during emergency operations.

Reason: The intent of this change is to make a minor, but important, clarification of the intent of the code. The section covering the "intent" of the IBC is often used by attorneys and others outside of the code community as the basis for various legal actions. Therefore, it is important that this section reflects both the intention of the code community and the relative level of safety that is reasonably provided through these regulations.

The proposal includes changes that make the levels of intended "safety" the same to the reader by using the same term "safeguard" (used in the first phrase) in the other two phrases. While the language using the term "safeguard" is, perhaps, somewhat vague, it is better than suggesting absolute "safety" can be provided to any person or property through the provisions of the code. There is no intention to reduce the level of safety provided by the code with this change. All users and beneficiaries of the code will be better served through this clarification.

Cost Impact: This code change proposal will not affect the cost of construction.

Staff Analysis: The section on Intent are also found in IEBC 101.3, IWUIC 101.3, IZC 101.2, IECC C101.3, IECC R101.3 and ISPSC 101.3.

Public Hearing Results

PART I - IADMIN
Committee Action: **Disapproved**

Committee Reason: The committee agreed that the scope should be coordinated across the codes, however, they preferred the "reasonable level of life safety" language found in the IFC. The term 'safeguard' is not a match to "provide safety to."

Assembly Action: **None**

PART II – IRC
HEARD BY IRC COMMITTEE

Committee Action: **Disapproved**

Committee Reason: The committee disapproved this code change proposal because they felt that the term 'safeguards is too vague, as the proponent notes. If the proposed requirements were used relative to emergency responders, they need to be further explained or narrowed.

Assembly Action: **None**

Public Comment(s)

Part I - Public Comment:

Carl F. Baldassarra, P.E., representing Rolf Jensen & Associates, Inc., requests Approval as Modified by this Public Comment.

Replace the proposal with the following:

Revise the International Building Code as follows:

IBC [A] 101.3 Intent. The purpose of this code is to establish the minimum requirements to provide a reasonable level of ~~safeguard the~~ public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation; and safety to life and property from fire and other hazards attributed to the built environment; and, to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

Revise the International Code Council Performance Code as follows:

ICCPC [A] 101.2.2 Fire. Part III of this code establishes requirements necessary to provide a reasonable ~~an acceptable~~ level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in all facilities, equipment and processes.

Revise the International Fire Code as follows:

IFC [A] 101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

Revise the International Fuel Gas Code as follows:

IFGC [A] 101.4 Intent. The purpose of this code is to establish ~~provide~~ minimum standards to provide a reasonable level of safety ~~safeguard life or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of fuel gas systems.

Revise the International Mechanical Code as follows:

IMC [A] 101.3 Intent. The purpose of this code is to establish ~~provide~~ minimum standards to provide a reasonable level of safety ~~safeguard life or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of mechanical systems.

Revise the International Plumbing Code as follows:

IPC [A] 101.3 Intent. The purpose of this code is to establish ~~provide~~ minimum standards to provide a reasonable level of safety ~~safeguard life or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 101.6 Intent. The purpose of this code is to establish ~~provide~~ minimum standards to provide a reasonable level of safety ~~safeguard life or limb~~, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of *private sewage disposal systems*.

Revise the International Property Maintenance Code as follows:

IPMC [A] 101.2 Scope. The provisions of this code shall apply to all existing residential and nonresidential structures and all existing *premises* and constitute minimum requirements and standards for *premises*, structures, equipment and facilities for light, *ventilation*, space, heating, sanitation, protection from the elements, a reasonable level of ~~life safety~~, safety from fire and other

hazards, and for a reasonable level of ~~safe and~~ sanitary maintenance; the responsibility of *owners*, *operator*s and *occupants*; the *occupancy* of existing structures and *premises*, and for administration, enforcement and penalties.

Commenter's Reason: The intent of this change is to make minor, but important, clarifications of the intent of the various ICC codes. It is important that these sections reflect both the intention of the code community and the relative level of safety that is reasonably provided through these regulations in a consistent manner. There is no intention to reduce the level of safety provided by the code with this change. All users and beneficiaries of the code will be better served through this clarification.

This modification addresses the reasons for disapproval of both Part I and Part II at the Code Development Hearing in Dallas. Specifically, the reason for Disapproval of Part I by the Administrative Provisions Committee was published as follows:

The committee agreed that the scope should be coordinated across the codes, however, they preferred the "reasonable level of life safety" language found in the IFC. The term 'safeguard' is not a match to "provide safety to."

Also, the reason for Disapproval of Part II by the International Residential Committee was published as follows:

The committee disapproved this code change proposal because they felt that the term "safeguards" (sic) *is too vague, as the proponent notes. If the proposed requirements were used relative to emergency responders, they need to be further explained or narrowed.*

As can be seen by the reviewing the revised proposals, the Committees' comments have been addressed and, therefore, the Proponent requests that the proposals for each code be Approved as Modified by this public comment.

Final Hearing Results

ADM6-13, Part I	**AMPC**
ADM6-13, Part II	**D**

Code Change No: ADM21-13

Original Proposal

Section: PART I - IBC 104.8; IEBC 104.8; IFC 103.4, 103.4.1; IFGC 103.4; IMC 103.4; IPC 103.4; IPSDC 103.4; IPMC 103.4; IWUIC 104.3; IZC 104.7;
PART II - IRC 104.8;
PART III - ISPSC 103.4

THIS IS A 3 PART CODE CHANGE. PARTS I WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE RESIDENTIAL CODE COMMITTEE. PART III WILL BE HEARD BY THE SWIMMING POOL AND SPA CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Mike Metheny, City of Aspen Colorado, representing Colorado Chapter Code Change Committee

PART I – IBC; IEBC; IFC; IFCG; IMC; IPC; IPSDC; IPMC; IWUIC; IZC

Revise the International Building Code as follows:

IBC [A] 104.8 Liability. The building official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be civilly or criminally rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

IBC [A] 104.8.1 Legal defense. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Existing Building Code as follows:

IEBC [A] 104.8 Liability. The code official, member of the Board of Appeals, or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

IEBC [A] 104.8.1 Legal defense. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for cost in any action, suit, or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Fire Code as follows:

IFC [A] 103.4 Liability. The fire code official, member of the board of appeals, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.
IFC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The fire code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.

Revise the International Fuel Gas Code as follows:

IFCG [A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

IFGC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Mechanical Code as follows:

IMC [A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

IMC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Plumbing Code as follows:

IPC [A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

IPC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the

provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

IPSDC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Property Maintenance Code as follows:

IPMC [A] 103.4 Liability. The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction, in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

IPMC [A] 103.4.1 Legal defense. Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Revise the International Wildland-Urban Interface Code as follows:

IWUIC [A] 104.3 Liability of the code official. The code official, member of the board of appeals or employee charged with the enforcement of this code, acting in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally personally liable for damages that may accrue to persons or property as a result of an act or by reason of an act or omission in the discharge of such duties.

IWUIC [A] 104.3.1 Legal defense. A suit or criminal complaint brought against the code official or employee because of such act or omission performed by the code official or employee in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings, and any judgment resulting there from shall be assumed by this jurisdiction. The code enforcement agency or its parent jurisdiction shall not be held as assuming any liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

Revise the International Zoning Code as follows:

IZC [A] 104.7 Liability. The code official, or designee, charged with the enforcement of this code, acting in good faith and without malice in the discharge of the duties described in this code, shall not be

personally civilly or criminally liable for any damage that may accrue to persons or property as a result of an act or by reason of an act or omission in the discharge of such duties.

IFGC [A] 104.7.1 Legal defense. A suit or criminal complaint brought against the code official or employee because such act or omission performed by the code official or employee in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the enforcement agency shall be defended by the jurisdiction until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by the jurisdiction.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building or parcel of land for any damages to persons or property caused by defects, nor shall the enforcement agency or its jurisdiction be held as assuming any such liability by reason of the reviews or permits issued under this code

PART II – IRC

Revise the International Residential Code as follows:

IRC R104.8 Liability. The building official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

IRC R104.8.1 Legal defense. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

PART III – ISPSC

Revise the International Swimming Pool and Spa Code as follows:

ISPSC 103.4 Liability. The *code official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the *jurisdiction* in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

ISPSC 103.4.1 Legal defense. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The *code official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

Reason: An Inspector in Colorado was charged with criminally negligent homicide as well as in a civil case as a result of a carbon monoxide poisoning that occurred in 2008. The inspector found that he was not afforded sovereign immunity for criminal charges even though he was acting in good faith and without malice in the discharge of the duties required by the codes. The jurisdiction was forced to go to City Council to request supplemental funding for his defense. The cost to the jurisdiction in defending the case was in excess of $260,000. The criminal case was eventually dismissed based on a motion that the statute of limitations had run. The criminal case was dismissed on its merits. As code officials we need to know that immunity extends to both criminal and civil actions while discharging our duties and providing for public safety and welfare.

The addition of the title to split the requirements in two parts is for consistency with the IFC.

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

Public Hearing Results

PART I - IADMIN
Committee Action: **Approved as Submitted**

Committee Reason: The addition of "or criminal complaint" protects code officials during performance of their jobs. The existing language of "lawful discharge of duties" would protect the jurisdiction from being liable if the code official was taking bribes or performing illegal acts.

Assembly Action: **None**

PART II – IRC
HEARD BY IRC COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: The committee approved this proposed code change because they felt that it is important to clearly state the code officials' personal liability and the recourse to personal defense. This is consistent with previous action taken on ADM21 Part I.

Assembly Action: **None**

PART III – ISPSC
HEARD BY THE ISPSC COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: Employees of building departments are doing the best that they can do every day. Such employees should be personally protected against civil and criminal actions while performing their duties.

Assembly Action: **None**

Final Hearing Results

ADM21-13, Part I	**AS**
ADM21-13, Part II	**AS**
ADM21-13, Part III	**AS**

Code Change No: ADM22-13

Original Proposal

Section: PART I – IBC: [A] 104.10, [A] 105.1, [A] 106.1, [A] 107.3.4, [A] 110.1, [A] 115.2, 202, 901.5, 1004.3, 1703.4.1, 1703.6, 1703.6.1, 1704.2, 1704.2.4, 1707.1, 1803.6, 3306.8, 3401.2, G104.1, J106.1, K102.3;
ICCPC: [A] 103.3.1, [A] 103.3.1.1, [A] 103.3.1.2, [A] 103.3.1.3, [A] 103.3.1.4, [A] 103.3.1.5, [A] 103.3.1.6, [A] 103.3.1.7, [A] 103.3.1.8, [A] 103.3.1.9, [A] 103.3.4.1.4, [A] 103.3.1.4.6, [A] 103.3.4.2.3, [A] 103.3.8.3, [A] 103.3.9.1.4, [A] 103.3.9.2.3, [A] 103.3.10.1;
IEBC: [A] 104.6, [A] 104.10, [A] 105.1, [A] 106.6, [A] 110.2, [A] 111.3, [A] 114.2, [A] 115.3, [A] 115.4, [A] 116.5, [A] 117.1, [A] 117.3;
IFC: [A] 104.3, [A] 104.3.1, [A] 104.7.2, [A] 105.1.1, [A] 109.2, [A] 109.3.1, [A] 109.3.2, [A] 110.4, [A] 111.2, [A] 112.1;
IFGC: [A] 102.3, [A] 104.4, [A] 105.1, [A] 106.1, [A] 106.3, [A] 108.5, [A] 108.7.2;
IMC: [A] 102.3, [A] 104.4, [A] 105.1, [A] 106.1, [A] 106.3, [A] 108.5, [A] 108.7.2;
IPC: [A] 102.3, [A] 104.4, [A] 105.1, [A] 106.1, [A] 106.3, [A] 108.5, [A] 108.7.2;
IPSDC: [A] 102.5, [A] 104.4, [A] 105.1, [A] 108.5, [A] 108.7.2;
IPMC: [A] 101.2, [A] 102.2, [A] 104.3, [A] 105.1, [A] 107.2, [A] 107.6, [A] 108.2, [A] 108.2.1, [A] 108.3, [A] 108.4, [A] 108.5, [A] 108.6, [A] 109.5, [A] 110.1, [A] 110.3, [A] 112.2;
IWUIC: [A] 101.6, [A] 105.1, [A] 105.2, [A] 109.2.2, [A] 109.3, [A] 109.4.1, [A] 109.4.5.2, [A] 109.4.5.2.1, [A] 109.4.5.3, [A] 109.4.5.4, [A] 113.2, [A] 114.2;
IZC: [A] 103.3, [A] 107.7.3, [A] 109.1
PART II – IECC: C108.2;
PART III – IECC: R108.2;
PART IV – IRC: R104.6, R105.1, R110.3, R111.3, R114.1;
PART V – ISPSC 102.3, 104.6, 104.8, 105.1, 105.2, 107.5, 107.7.2;

THIS IS A 5 PART CODE CHANGE. PARTS I WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE ENERGY CONSERVATION CODE-COMMERCIAL COMMITTEE. PART III WILL BE HEARD BY THE ENERGY CONSERVATION CODE-RESIDENTIAL COMMITTEE. PART IV WILL BE HEARD BY THE RESIDENTIAL CODE COMMITTEE. PART V WILL BE HEARD BY THE SWIMMING POOL AND SPA CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Philip Brazil, P.E., S.E., Reid Middleton, Inc., representing Washington Association of Building Officials, Technical Code Development Committee (pbrazil@reidmiddleton.com)

PART I – IBC; ICCPC; IEBC; IFC; IFCG; IMC; IPC; IPSDC; IPMC; IWUIC; IZC

Revise the International Building Code as follows:

IBC SECTION 202
DEFINITIONS

IBC [A] REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A *registered design professional* engaged by the owner or the owner's authorized agent to review and coordinate certain aspects of the project, as determined by the *building official*, for compatibility with the design of the building or structure, including submittal documents prepared by others, deferred submittal documents and phased submittal documents.

Revise the International Building Code as follows:

IBC [A] 104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *building official* shall have the authority to grant modifications for individual cases, upon application of the owner or the owner's ~~representative~~ authorized agent, provided the *building official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

IBC [A] 105.1 Required. Any owner or owner's authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the *building official* and obtain the required *permit*.

IBC [A] 106.1 Live loads posted. Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf (2.40 kN/m^2), such design live loads shall be conspicuously posted by the owner or the owner's authorized agent in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

IBC [A] 107.3.4 Design professional in responsible charge. When it is required that documents be prepared by a *registered design professional*, the *building official* shall be authorized to require the owner or the owner's authorized agent to engage and designate on the building *permit* application a *registered design professional* who shall act as the *registered design professional in responsible charge*. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original *registered design professional in responsible charge*. The building official shall be notified in writing by the owner or the owner's authorized agent if the *registered design professional in responsible charge* is changed or is unable to continue to perform the duties.
The *registered design professional in responsible charge* shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building.

IBC [A] 110.1 General. Construction or work for which a permit is required shall be subject to inspection by the *building official* and such construction or work shall remain accessible and exposed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the ~~*permit* applicant~~ owner or the owner's authorized agent to cause the work to remain accessible and exposed for inspection purposes. Neither the *building official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

IBC [A] 115.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, ~~or to~~ the owner's authorized agent, or ~~to~~ the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

Revise the International Building Code as follows:

IBC 901.5 Acceptance tests. Fire protection systems shall be tested in accordance with the requirements of this code and the *International Fire Code*. When required, the tests shall be conducted in the presence of the building official. Tests required by this code, the *International Fire Code* and the standards listed in this code shall be conducted at the expense of the owner or the owner's ~~representative~~ authorized agent. It shall be unlawful to occupy portions of a structure until the required fire protection systems within that portion of the structure have been tested and approved.

Revise the International Building Code as follows:

IBC 1004.3 (IFC [B] 1004.3) Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

Revise the International Building Code as follows:

IBC 1703.4.1 Research and investigation. Sufficient technical data shall be submitted to the *building official* to substantiate the proposed use of any material or assembly. If it is determined that the evidence submitted is satisfactory proof of performance for the use intended, the *building official* shall approve the use of the material or assembly subject to the requirements of this code. The costs, reports and investigations required under these provisions shall be paid by the ~~applicant~~ owner or the owner's authorized agent.

IBC 1703.6 Evaluation and follow-up inspection services. Where structural components or other items regulated by this code are not visible for *inspection* after completion of a prefabricated assembly, the ~~applicant~~ owner or the owner's authorized agent shall submit a report of each prefabricated assembly. The report shall indicate the complete details of the assembly, including a description of the assembly and its components, the basis upon which the assembly is being evaluated, test results and similar information and other data as necessary for the *building official* to determine conformance to this code. Such a report shall be *approved* by the *building official*.

IBC 1703.6.1 Follow-up inspection. The ~~applicant~~ owner or the owner's authorized agent shall provide for *special inspections* of fabricated items in accordance with Section 1704.2.5.

IBC 1704.2 Special Inspections. Where application is made for construction as described in this section, the owner or the *registered design professional in responsible charge* acting as the owner's authorized agent shall employ one or more *approved agencies* to perform inspections during construction on the types of work listed under Section 1705. These inspections are in addition to the inspections specified in Section 110.

Exceptions:

1. *Special inspections* are not required for construction of a minor nature or as warranted by conditions in the jurisdiction as *approved* by the *building official*.
2. Unless otherwise required by the *building official*, *special inspections* are not required for Group U occupancies that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.
3. Special inspections are not required for portions of structures designed and constructed in accordance with the cold-formed steel light-frame construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308.

IBC 1704.2.4 Report requirement. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the *building official*, and to the *registered design professional in responsible charge*. Reports shall indicate that work inspected was or was not completed in conformance to *approved construction documents*. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the *building official* and to the *registered design professional in responsible charge* prior to the completion of that phase of the work. A final report documenting required *special inspections* and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon prior to the start of work by the ~~applicant and~~ owner or the owner's authorized agent to the *building official*.

IBC 1707.1 General. In the absence of *approved* rules or other *approved* standards, the *building official* shall make, or cause to be made, the necessary tests and investigations; or the *building official* shall accept duly authenticated reports from *approved agencies* in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.11. The cost of all tests and other investigations required under the provisions of this code shall be borne by the ~~applicant~~ owner or the owner's authorized agent.

Revise the International Building Code as follows:

IBC 1803.6 Reporting. Where geotechnical investigations are required, a written report of the investigations shall be submitted to the *building official* by the owner or owner's authorized agent at the time of *permit* application. This geotechnical report shall include, but need not be limited to, the following information:

1. A plot showing the location of the soil investigations.
2. A complete record of the soil boring and penetration test logs and soil samples.
3. A record of the soil profile.
4. Elevation of the water table, if encountered.
5. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement and varying soil strength; and the effects of adjacent loads.
6. Expected total and differential settlement.
7. Deep foundation information in accordance with Section 1803.5.5.
8. Special design and construction provisions for foundations of structures founded on expansive soils, as necessary.
9. Compacted fill material properties and testing in accordance with Section 1803.5.8.
10. Controlled low-strength material properties and testing in accordance with Section 1803.5.9.

Revise the International Building Code as follows:

IBC 3306.8 Repair, maintenance and removal. Pedestrian protection required by this chapter shall be maintained in place and kept in good order for the entire length of time pedestrians are subject to being endangered. The *owner* or the *owner's* authorized agent, upon the completion of the construction activity, shall immediately remove walkways, debris and other obstructions and leave such public property in as good a condition as it was before such work was commenced.

Revise the International Building Code as follows:

IBC 3401.2 Maintenance. Buildings and structures, and parts thereof, shall be maintained in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in conformance with the code edition under which installed. The owner or the owner's ~~designated~~ authorized agent shall be responsible for the maintenance of buildings and structures. To determine compliance with this subsection, the building official shall have the authority to require a building or structure to be reinspected. The requirements of this chapter shall not provide the basis for removal or abrogation of fire protection and safety systems and devices in existing structures.

Revise the International Building Code as follows:

IBC G104.1 Required. Any person, owner or owner's authorized agent who intends to conduct any development in a flood hazard area shall first make application to the *building official* and shall obtain the required *permit*.

Revise the International Building Code as follows:

IBC J106.1 Maximum slope. The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be no steeper than two units horizontal to one unit vertical (50-percent slope) unless the owner or the owner's authorized agent furnishes a geotechnical report justifying a steeper slope.

Exceptions:

1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical (67-percent slope) provided that all of the following are met:
1.1. It is not intended to support structures or surcharges.
1.2. It is adequately protected against erosion.
1.3. It is no more than 8 feet (2438 mm) in height.
1.4. It is approved by the building code official.
1.5. Ground water is not encountered.
2. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical (100-percent slope).

Revise the International Building Code as follows:

IBC K102.3 Maintenance. Electrical systems, equipment, materials and appurtenances, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe, hazard-free condition. Devices or safeguards that are required by this code shall be maintained in compliance with the code edition under which installed. The owner or the owner's ~~designated~~ authorized agent shall be responsible for the maintenance of the electrical systems and equipment. To determine compliance with this provision, the *building official* shall have the authority to require that the electrical systems and equipment be reinspected.

Revise the International Code Council Performance Code as follows:

ICCPC [A] 103.3.1 Building owner's or the owner's authorized agent responsibility.

ICCPC [A] 103.3.1.1 Design professional. The owner or the owner's authorized agent shall have the responsibility of retaining and furnishing the services of a design professional, who shall be in responsible charge of preparing and coordinating a complete and comprehensive set of design documents and other services required to prepare reports and other documents in accordance with this code. If the services required by this section are not provided, the use of this code is prohibited.

ICCPC [A] 103.3.1.2 Principal design professional. When the project requires the services of multiple design professionals, a principal design professional shall be retained and furnished, who shall have the contractual responsibility and authority over all required design professional disciplines to prepare and coordinate a complete and comprehensive set of design documents for the project.

ICCPC [A] 103.3.1.3 Peer review. The owner or the owner's authorized agent shall be responsible for retaining and furnishing the services of a design professional or recognized expert, who will perform as a peer reviewer, when required and approved by the code official. See Section 103.3.6.3 of this code.

ICCPC [A] 103.3.1.4 Costs. The costs of all special services, including contract review, when required by the code official, shall be borne by the owner or the owner's authorized agent.

ICCPC [A] 103.3.1.5 Document retention. The owner or the owner's authorized agent shall retain on the premises all documents and reports required by this code and make them available to the code official upon request.

ICCPC [A] 103.3.1.6 Maintenance. The owner or the owner's authorized agent is responsible to operate and maintain a building, structure or facility designed and built under this code in accordance with the bounding conditions and the operations and maintenance manual.

ICCPC [A] 103.3.1.7 Changes. The owner or the owner's authorized agent shall be responsible to ensure that any change to the facility, process or system does not increase the hazard level beyond that originally designed without approval and that all changes shall be documented in accordance with this code.

ICCPC [A] 103.3.1.8 Special expert. Where the scope of work is limited or focused in an area that does not require the services of a design professional or the special knowledge and skills associated with the practice of architecture or engineering, a special expert may be employed by the owner or the owner's authorized agent as the person in responsible charge of the limited or focused activity. It is the intent of this code that the individual shall possess the qualification characteristics required in Appendix D.

ICCPC [A] 103.3.1.9 Occupant requirements. The owner or the owner's authorized agent is responsible and accountable to ensure that all occupants and employees who are required to take certain actions or perform certain functions in accordance with a performance-based design possess the required knowledge and skills and are empowered to perform those actions.

ICCPC [A] 103.3.4.1.4 Deed restriction. Design features with bounding conditions that require continued maintenance or supervision by the owner or the owner's authorized agent throughout the life of the building, facility or process as conditions of compliance with the objectives of this code, shall be recorded as a deed restriction until released by the code official. When required by the code official, the deed restriction shall be modified to reflect specific changes.

ICCPC [A] 103.3.4.1.6 Emergency response capabilities. Design documentation shall clearly describe the level of response expected by emergency responders under the direct control of the owner or the owner's authorized agent. Emergency response capabilities, staffing levels, training requirements and equipment availability shall be documented as a bounding condition.

ICCPC [A] 103.3.4.2.3 Operations and maintenance manual. The operations and maintenance manual shall identify system and component commissioning requirements and the required interactions between these systems. The manual shall identify for the facility owner or the owner's authorized agent and the facility operator those actions that need to be performed on a regular basis to ensure that the components of the performance-based design are in place and operating properly. Furthermore, the operations and maintenance manual shall identify the restrictions or limitations placed upon the use and operation of the facility in order to stay within the bounding conditions of the performance-based design. The operations and maintenance manual shall be submitted at the time of the design documents submittal, unless the code official approves another time based upon the type of project and data needed for a composite review. The operations and maintenance manual shall address but not be limited to the following:

1. Description of critical systems.
2. Description of required system interactions.
3. Occupant responsibilities.
4. Occupant and staff training requirements.
5. Periodic operational requirements.
6. Periodic maintenance requirements.
7. Periodic testing requirements.
8. Limitations on facility operations (due to bounding conditions).
9. Report format for recording maintenance and operation data.
10. System and component commissioning requirements.

ICCPC [A] 103.3.8.3 Deed restrictions. Design features with bounding conditions determined by the design professional to require continued operation and maintenance by the owner or the owner's authorized agent throughout the life of the building as conditions of compliance with the objectives of this code shall be recorded as a deed restriction as required by the code official until released by the code official.

ICCPC [A] 103.3.9.1.4 Revocation and renewal. Failure of the building owner or the owner's authorized agent to demonstrate to the code official that the building is being operated and maintained in compliance with Sections 103.3.1.6 and 103.3.9.1 is cause to revoke or not renew a certificate of occupancy.

ICCPC [A] 103.3.9.2.3 Revocation and renewal. Failure of the owner or the owner's authorized agent to demonstrate compliance with this section is cause to revoke or not renew the certificate of compliance.

ICCPC [A] 103.3.10 Maintenance.

ICCPC [A] 103.3.10.1 Owner's or the owner's authorized agent responsibility. The owner or the owner's authorized agent is responsible for maintaining the building or facility in accordance with the approved documents.

Revise the International Existing Building Code as follows:

IEBC [A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, *dangerous*, or hazardous, the *code official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *code official* shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

IEBC [A] 104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases upon application of the owner or owner's authorized representative, provided the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code, and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the Department of Building Safety.

IEBC [A] 105.1 Required. Any owner or owner's authorized agent who intends to *repair*, add to, alter, relocate, demolish, or change the occupancy of a building or to *repair*, install, add, alter, remove, convert, or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the *code official* and obtain the required permit.

IEBC [A] 106.6 Design professional in responsible charge. When it is required that documents be prepared by a registered design professional, the *code official* shall be authorized to require the owner or the owner's authorized agent to engage and designate on the building permit application a registered design professional who shall act as the *registered design professional in responsible charge*. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute *registered design professional in responsible charge* who shall perform the duties required of the original *registered design professional in responsible charge*. The *code official* shall be notified in writing by the owner or the owner's authorized agent if the *registered design professional in responsible charge* is changed or is unable to continue to perform the duties. The *registered design professional in responsible charge* shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

IEBC [A] 110.2 Certificate issued. After the *code official* inspects the building and finds no violations of the provisions of this code or other laws that are enforced by the Department of Building Safety, the *code official* shall issue a certificate of occupancy that shall contain the following:.

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner or the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the *code official*.
7. The edition of the code under which the permit was issued.
8. The use and occupancy in accordance with the provisions of the *International Building Code*.
9. The type of construction as defined in the *International Building Code*.
10. The design occupant load and any impact the *alteration* has on the design occupant load of the area not within the scope of the work.
11. If fire protection systems are provided, whether the fire protection systems are required.
12. Any special stipulations and conditions of the building permit.

IEBC [A] 111.3 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without the approval required by Section 111.1 or 111.2. The *code official* shall notify the serving utility and, wherever possible, the owner or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

IEBC [A] 114.2 Issuance. The stop work order shall be in writing and shall be given to the owner or the owner's authorized agent of the property involved ~~or to the owner's agent~~, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

IEBC [A] 115.3 Notice. If an *unsafe* condition is found, the *code official* shall serve on the owner, the owner's authorized agent, or person in control of the structure a written notice that describes the condition deemed *unsafe* and specifies the required *repairs* or improvements to be made to abate the *unsafe* condition, or that requires the *unsafe* building to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the *code official* acceptance or rejection of the terms of the order.

IEBC [A] 115.4 Method of service. Such notice shall be deemed properly served if a copy thereof is delivered to the owner or the owner's authorized agent personally; sent by certified or registered mail addressed to the owner or the owner's authorized agent at the last known address with the return receipt requested; or delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's authorized agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

IEBC [A] 116.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid by the jurisdiction. The legal counsel of the jurisdiction shall institute appropriate action against the owner of the premises or the owner's authorized agent where the unsafe structure is or was located for the recovery of such costs.

IEBC [A] 117.1 General. The *code official* shall order the owner of any premises or the owner's authorized agent upon which is located any structure that in the *code official's* judgment is so old, dilapidated, or has become so out of *repair* as to be *dangerous*, unsafe, insanitary, or otherwise unfit for human habitation or occupancy, and such that it is unreasonable to *repair* the structure, to demolish and remove such structure; or if such structure is capable of being made safe by *repairs*, to *repair* and make safe and sanitary or to demolish and remove at the owner's or the owner's authorized agent's option; or where there has been a cessation of normal construction of any structure for a period of more than two years, to demolish and remove such structure.

IEBC [A] 117.3 Failure to comply. If the owner or the owner's authorized agent of a premises fails to comply with a demolition order within the time prescribed, the *code official* shall cause the structure to be demolished and removed, either through an available public agency or by contract or arrangement with private persons, and the cost of such demolition and removal shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate.

Revise the International Fire Code as follows:

IFC [A] 104.3 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the *fire code official* has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, dangerous or hazardous, the *fire code official* shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the *fire code official* by this code. If such building or premises is occupied, the *fire code official* shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the *fire code official* shall first make a reasonable effort to locate the *owner*, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the *fire code official* has recourse to every remedy provided by law to secure entry.

IFC [A] 104.3.1 Warrant. When the *fire code official* has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an *owner*, the owner's authorized agent or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to permit entry therein by the *fire code official* for the purpose of inspection and examination pursuant to this code.

IFC [A] 104.7.2 Technical assistance. To determine the acceptability of technologies, processes, products, facilities, materials and uses attending the design, operation or use of a building or premises subject to inspection by the *fire code official*, the *fire code official* is authorized to require the *owner* or owner's authorized agent to provide, without charge to the jurisdiction, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the *fire code official* and shall analyze the fire safety properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to recommend necessary changes. The *fire code official* is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

IFC [A] 105.1.1 Permits required. Any property owner or owner's authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the *fire code official* and obtain the required permit.

IFC [A] 109.2 Owner/occupant responsibility. Correction and abatement of violations of this code shall be the responsibility of the *owner* or the owner's authorized agent. If an occupant creates, or allows to be created, hazardous conditions in violation of this code, the occupant shall be held responsible for the abatement of such hazardous conditions.

IFC [A] 109.3.1 Service. A notice of violation issued pursuant to this code shall be served upon the *owner*, the owner's authorized agent, operator, occupant or other person responsible for the condition or

violation, either by personal service, mail or by delivering the same to, and leaving it with, some person of responsibility upon the premises. For unattended or abandoned locations, a copy of such notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the notice of violation shall be mailed by certified mail with return receipt requested or a certificate of mailing, to the last known address of the *owner*, the owner's authorized agent, or occupant ~~or both~~.

IFC [A] 109.3.2 Compliance with orders and notices. A notice of violation issued or served as provided by this code shall be complied with by the *owner*, the owner's authorized agent, operator, occupant or other person responsible for the condition or violation to which the notice of violation pertains.

IFC [A] 110.4 Abatement. The *owner*, the owner's authorized agent, operator or occupant of a building or premises deemed unsafe by the *fire code official* shall abate or cause to be abated or corrected such unsafe conditions either by repair, rehabilitation, demolition or other *approved* corrective action.

IFC [A] 111.2 Issuance. A stop work order shall be in writing and shall be given to the *owner* of the property, or to the *owner's* authorized agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work is authorized to resume.

IFC [A] 112.1 Authority to disconnect service utilities. The *fire code official* shall have the authority to authorize disconnection of utility service to the building, structure or system in order to safely execute emergency operations or to eliminate an immediate hazard. The *fire code official* shall notify the serving utility and, whenever possible, the *owner* or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The *owner*, the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

Revise the International Fuel Gas Code as follows:

IFGC [A] 102.3 Maintenance. Installations, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe condition. Devices or safeguards which are required by this code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner's authorized ~~designated~~ agent shall be responsible for maintenance of installations. To determine compliance with this provision, the code official shall have the authority to require an installation to be reinspected.

IFGC [A] 104.4 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code that make the building or premises unsafe, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official has recourse to every remedy provided by law to secure entry.

When the code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an owner, the owner's authorized agent, ~~or~~ occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

IFGC [A] 105.1 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's authorized agent ~~representative~~, provided that the code official shall first find that special individual reason makes the strict letter of this code impractical and that

such modification is in compliance with the intent and purpose of this code and does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the Department of Inspection.

IFGC [A] 106.1 Where required. An owner, owner's authorized agent or contractor who desires to erect, install, enlarge, alter, repair, remove, convert or replace an installation regulated by this code, or to cause such work to be done, shall first make application to the code official and obtain the required permit for the work.
Exception: Where *appliance* and *equipment* replacements and repairs are required to be performed in an emergency situation, the permit application shall be submitted within the next working business day of the Department of Inspection.

IFGC [A] 106.3 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or an owner's authorized agent. The permit application shall indicate the proposed *occupancy* of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.

IFGC [A] 108.5 Stop work orders. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, the owner's authorized agent, or the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

IFGC [A] 108.7.2 Authority to disconnect service utilities. The code official shall have the authority to require disconnection of utility service to the building, structure or system regulated by the technical codes in case of emergency where necessary to eliminate an immediate hazard to life or property. The code official shall notify the serving utility, and wherever possible, the owner or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnection, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practicable thereafter.

Revise the International Mechanical Code as follows:

IMC [A] 102.3 Maintenance. Mechanical systems, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner's authorized ~~designated~~ agent shall be responsible for maintenance of mechanical systems. To determine compliance with this provision, the code official shall have the authority to require a mechanical system to be reinspected.

The inspection for maintenance of HVAC systems shall be done in accordance with ASHRAE/ACCA/ANSI Standard 180.

IMC [A] 104.4 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, insanitary, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or

control of the building or premises and request entry. If entry is refused, the code official has recourse to every remedy provided by law to secure entry.

When the code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an owner, the owner's authorized agent or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

IMC [A] 105.1 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases upon application of the owner or owner's authorized agent ~~representative~~, provided that the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the mechanical inspection department.

IMC [A] 106.1 When required. An owner, owner's authorized agent or contractor who desires to erect, install, enlarge, alter, repair, remove, convert or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be done, shall first make application to the code official and obtain the required permit for the work.

Exception: Where *equipment* and *appliance* replacements or repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the department of mechanical inspection.

IMC [A] 106.3 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or ~~an~~ the owner's authorized agent. The permit application shall indicate the proposed *occupancy* of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.

IMC [A] 108.5 Stop work orders. Upon notice from the code official that mechanical work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

IMC [A] 108.7.2 Authority to order disconnection of energy sources. The code official shall have the authority to order disconnection of energy sources supplied to a building, structure or mechanical system regulated by this code, when it is determined that the mechanical system or any portion thereof has become hazardous or unsafe. Written notice of such order to disconnect service and the causes therefor shall be given within 24 hours to the owner, the owner's authorized agent and occupant of such building, structure or premises, provided, however, that in cases of immediate danger to life or property, such disconnection shall be made immediately without such notice. Where energy sources are provided by a public utility, the code official shall immediately notify the serving utility in writing of the issuance of such order to disconnect.

Revise the International Plumbing Code as follows:

IPC [A] 102.3 Maintenance. All plumbing systems, materials and appurtenances, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. All devices or safeguards required by this code shall be maintained in compliance with the code edition under which they were installed.
The owner or the owner's authorized ~~designated~~ agent shall be responsible for maintenance of plumbing systems. To determine compliance with this provision, the code official shall have the authority to require any plumbing system to be reinspected.

IPC [A] 104.4 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in any building or upon any premises any conditions or violations of this code that make the building or premises unsafe, insanitary, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official shall have recourse to every remedy provided by law to secure entry.
When the code official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner, owner's authorized agent, ~~or~~ occupant or person having charge, care or control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

IPC [A] 105.1 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's ~~representative~~ authorized agent, provided the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification conforms to the intent and purpose of this code and that such modification does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the plumbing inspection department.

IPC [A] 106.1 When required. Any owner, owner's authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the *occupancy* of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the code official and obtain the required permit for the work.

IPC [A] 106.3 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or an owner's authorized agent. The permit application shall indicate the proposed *occupancy* of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.

IPC [A] 108.5 Stop work orders. Upon notice from the code official, work on any plumbing system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

IPC [A] 108.7.2 Authority to disconnect service utilities. The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by the technical codes in case of an emergency, where necessary, to eliminate an immediate danger to life or property. Where possible, the owner or an owner's authorized agent and occupant of the building, structure or service system shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner, an owner's authorized agent or occupant of the building, structure or service systems shall be notified in writing, as soon as practical thereafter.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 102.5 Maintenance. *Private sewage disposal systems*, materials and appurtenances, both existing and new, and all parts thereof shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. Devices or safeguards that are required by this code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner's authorized ~~designated~~ agent shall be responsible for maintenance of *private sewage disposal systems*. To determine compliance with this provision, the code official shall have the authority to require reinspection of any *private sewage disposal system*.

IPSDC [A] 104.4 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in any building or upon any premises any conditions or violations of this code that make the building or premises unsafe, insanitary, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed on the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official has recourse to every remedy provided by law to secure entry.
When the code official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner, owner's authorized agent or occupant or person having charge, care or control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

IPSDC [A] 105.1 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's ~~representative~~ authorized agent provided that the code official shall first find that special individual reason makes the strict letter of this code impractical, the modification is in conformity with the intent and purpose of this code and such modification does not lessen health and fire- and life-safety requirements. The details of action granting modifications shall be recorded and entered in the files of the Private Sewage Disposal Inspection Department.

IPSDC [A] 108.5 Stop work orders. Upon notice from the code official, work on any *private sewage disposal system* that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, to the owner's authorized agent or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

IPSDC [A] 108.7.2 Authority to disconnect service utilities. The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by the technical codes in case of emergency, where necessary, to eliminate an immediate danger to life or property.

Where possible, the owner, the owner's authorized agent and occupant of the building, structure or service system shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service systems shall be notified in writing as soon as is practical thereafter.

Revise the International Property Maintenance Code as follows:

IPMC [A] 101.2 Scope. The provisions of this code shall apply to all existing residential and nonresidential structures and all existing *premises* and constitute minimum requirements and standards for *premises*, structures, equipment and facilities for light, *ventilation*, space, heating, sanitation, protection from the elements, life safety, safety from fire and other hazards, and for safe and sanitary maintenance; the responsibility of *owners*, an owner's authorized agent, *operator*s and *occupants*; the *occupancy* of existing structures and *premises*, and for administration, enforcement and penalties.

IPMC [A] 102.2 Maintenance. Equipment, systems, devices and safeguards required by this code or a previous regulation or code under which the structure or *premises* was constructed, altered or repaired shall be maintained in good working order. No *owner*, owner's authorized agent, *operator* or *occupant* shall cause any service, facility, equipment or utility which is required under this section to be removed from or shut off from or discontinued for any occupied dwelling, except for such temporary interruption as necessary while repairs or alterations are in progress. The requirements of this code are not intended to provide the basis for removal or abrogation of fire protection and safety systems and devices in existing structures. Except as otherwise specified herein, the *owner* or the *owner's* authorized ~~designated~~ agent shall be responsible for the maintenance of buildings, structures and *premises*.

IPMC [A] 104.3 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or whenever the *code official* has reasonable cause to believe that there exists in a *structure* or upon a *premises* a condition in violation of this code, the *code official* is authorized to enter the structure or *premises* at reasonable times to inspect or perform the duties imposed by this code, provided that if such *structure* or *premises* is occupied the *code official* shall present credentials to the *occupant* and request entry. If such structure or *premises* is unoccupied, the *code official* shall first make a reasonable effort to locate the *owner*, the owner's authorized agent or other person having charge or control of the *structure* or *premises* and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

IPMC [A] 105.1 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases upon application of the *owner* or *owner*'s authorized agent ~~representative~~, provided the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the department files.

IPMC [A] 107.2 Form. Such notice prescribed in Section 107.1 shall be in accordance with all of the following:

1. Be in writing.
2. Include a description of the real estate sufficient for identification.
3. Include a statement of the violation or violations and why the notice is being issued.
4. Include a correction order allowing a reasonable time to make the repairs and improvements required to bring the *dwelling unit* or structure into compliance with the provisions of this code.
5. Inform the property *owner* or the owner's authorized agent of the right to appeal.
6. Include a statement of the right to file a lien in accordance with Section 106.3.

IPMC [A] 107.6 Transfer of ownership. It shall be unlawful for the *owner* of any *dwelling unit* or structure who has received a compliance order or upon whom a notice of violation has been served to sell, transfer, mortgage, lease or otherwise dispose of such *dwelling unit* or structure to another until the

provisions of the compliance order or notice of violation have been complied with, or until such *owner* or the owner's authorized agent shall first furnish the grantee, transferee, mortgagee or lessee a true copy of any compliance order or notice of violation issued by the *code official* and shall furnish to the *code official* a signed and notarized statement from the grantee, transferee, mortgagee or lessee, acknowledging the receipt of such compliance order or notice of violation and fully accepting the responsibility without condition for making the corrections or repairs required by such compliance order or notice of violation.

IPMC [A] 108.2 Closing of vacant structures. If the structure is vacant and unfit for human habitation and *occupancy*, and is not in danger of structural collapse, the *code official* is authorized to post a placard of condemnation on the *premises* and order the structure closed up so as not to be an attractive nuisance. Upon failure of the *owner* or the owner's authorized agent to close up the *premises* within the time specified in the order, the *code official* shall cause the *premises* to be closed and secured through any available public agency or by contract or arrangement by private persons and the cost thereof shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate and may be collected by any other legal resource.

IPMC [A] 108.2.1 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards set forth in Section 102.7 in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without approval. The *code official* shall notify the serving utility and, whenever possible, the *owner* or the owner's authorized agent and *occupant* of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnection the *owner*, the owner's authorized agent or *occupant* of the building structure or service system shall be notified in writing as soon as practical thereafter.

IPMC [A] 108.3 Notice. Whenever the *code official* has *condemned* a structure or equipment under the provisions of this section, notice shall be posted in a conspicuous place in or about the structure affected by such notice and served on the *owner*, the owner's authorized agent or the person or persons responsible for the structure or equipment in accordance with Section 107.3. If the notice pertains to equipment, it shall also be placed on the *condemned* equipment. The notice shall be in the form prescribed in Section 107.2.

IPMC [A] 108.4 Placarding. Upon failure of the *owner* or the owner's authorized agent or person responsible to comply with the notice provisions within the time given, the *code official* shall post on the *premises* or on defective equipment a placard bearing the word "Condemned" and a statement of the penalties provided for occupying the *premises*, operating the equipment or removing the placard.

IPMC [A] 108.5 Prohibited occupancy. Any occupied structure *condemned* and placarded by the *code official* shall be vacated as ordered by the *code official*. Any person who shall occupy a placarded *premises* or shall operate placarded equipment, and any *owner*, the owner's authorized agent or any person responsible for the *premises* who shall let anyone occupy a placarded *premises* or operate placarded equipment shall be liable for the penalties provided by this code.

IPMC [A] 108.6 Abatement methods. The *owner*, the owner's authorized agent, *operator* or *occupant* of a building, *premises* or equipment deemed unsafe by the *code official* shall abate or cause to be abated or corrected such unsafe conditions either by repair, rehabilitation, demolition or other *approved* corrective action.

IPMC [A] 109.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid by the jurisdiction. The legal counsel of the jurisdiction shall institute appropriate action against the *owner* of the *premises* or the owner's authorized agent where the unsafe structure is or was located for the recovery of such costs.

IPMC [A] 110.1 General. The *code official* shall order the *owner* of any *premises* or the owner's authorized agent, upon which is located any structure, which in the *code official* judgment after review is

so deteriorated or dilapidated or has become so out of repair as to be dangerous, unsafe, insanitary or otherwise unfit for human habitation or occupancy, and such that it is unreasonable to repair the structure, to demolish and remove such structure; or if such structure is capable of being made safe by repairs, to repair and make safe and sanitary, or to board up and hold for future repair or to demolish and remove at the *owner's* option; or where there has been a cessation of normal construction of any structure for a period of more than two years, the *code official* shall order the *owner* or the owner's authorized agent to demolish and remove such structure, or board up until future repair. Boarding the building up for future repair shall not extend beyond one year, unless *approved* by the building official.

IPMC [A] 110.3 Failure to comply. If the *owner* of a *premises* or the owner's authorized agent, fails to comply with a demolition order within the time prescribed, the *code official* shall cause the structure to be demolished and removed, either through an available public agency or by contract or arrangement with private persons, and the cost of such demolition and removal shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate.

IPMC [A] 112.2 Issuance. A stop work order shall be in writing and shall be given to the *owner* of the property, to the *owner's* authorized agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

Revise the International Wildland-Urban Interface Code as follows:

IWUIC [A] 101.6 Maintenance. All buildings, structures, landscape materials, vegetation, *defensible space* or other devices or safeguards required by this code shall be maintained in conformance to the code edition under which installed. The owner or the owner's authorized ~~designated~~ agent shall be responsible for the maintenance of buildings, structures, landscape materials and vegetation.

IWUIC [A] 105.1 Practical difficulties. When there are practical difficulties involved in carrying out the provisions of this code, the code official is authorized to grant modifications for individual cases on application in writing by the owner or a ~~duly~~ owner's authorized ~~representative~~ agent. The code official shall first find that a special individual reason makes enforcement of the strict letter of this code impractical, the modification is in conformance to the intent and purpose of this code, and the modification does not lessen any fire protection requirements or any degree of structural integrity. The details of any action granting modifications shall be recorded and entered into the files of the code enforcement agency.

IWUIC [A] 105.2 Technical assistance. To determine the acceptability of technologies, processes, products, facilities, materials and uses attending the design, operation or use of a building or premises subject to the inspection of the code official, the code official is authorized to require the owner, the owner's authorized agent, or the person in possession or control of the building or premises to provide, without charge to the jurisdiction, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the code official and the or the owner's authorized agent and shall analyze the fire safety of the design, operation or use of the building or premises, the facilities and appurtenances situated thereon and fuel management for purposes of establishing fire hazard severity to recommend necessary changes.

IWUIC [A] 109.2.2 Service of orders and notices. Orders and notices authorized or required by this code shall be given or served on the owner, the owner's authorized agent, operator, occupant or other person responsible for the condition or violation either by verbal notification, personal service, or delivering the same to, and leaving it with, a person of suitable age and discretion on the premises; or, if no such person is found on the premises, by affixing a copy thereof in a conspicuous place on the door to the entrance of said premises and by mailing a copy thereof to such person by registered or certified mail to the person's last known address.

Orders or notices that are given verbally shall be confirmed by service in writing as herein provided.

IWUIC [A] 109.3 Right of entry. Whenever necessary to make an inspection to enforce any of the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in any building or on any premises any condition that makes such building or premises unsafe, the code official is authorized to enter such building or premises at all reasonable times to inspect the same or to perform any duty authorized by this code, provided that if such building or premises is occupied, the code official shall first present proper credentials and request entry; and if such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent, or other persons having charge or control of the building or premises and request entry. If such entry is refused, the code official shall have recourse to every remedy provided by law to secure entry. Owners, the owner's authorized agent, occupants or any other persons having charge, care or control of any building or premises, shall, after proper request is made as herein provided, promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

IWUIC [A] 109.4.1 General compliance. Orders and notices issued or served as provided by this code shall be complied with by the owner, the owner's authorized agent, operator, occupant or other person responsible for the condition or violation to which the corrective order or notice pertains.

If the building or premises is not occupied, such corrective orders or notices shall be complied with by the owner or the owner's authorized agent.

IWUIC [A] 109.4.5.2 Notice. Where an unsafe condition is found, the code official shall serve on the owner, owner's authorized agent or person in control of the building, structure or premises, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified, or their designee, to declare within a stipulated time to the code official acceptance or rejection of the terms of the order.

IWUIC [A] 109.4.5.2.1 Method of service. Such notice shall be deemed properly served if a copy thereof is (a) delivered to the owner or the owner's authorized agent personally; (b) sent by certified or registered mail addressed to the owner or the owner's authorized agent at the last known address with the return receipt requested; or (c) delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's authorized agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

IWUIC [A] 109.4.5.3 Placarding. Upon failure of the owner, the owner's authorized agent, or person responsible to comply with the notice provisions within the time given, the code official shall post on the premises or on defective equipment a placard bearing the word "UNSAFE" and a statement of the penalties provided for occupying the premises, operating the equipment or removing the placard.

IWUIC [A] 109.4.5.4 Abatement. The owner, the owner's authorized agent, operator or occupant of a building, structure or premises deemed unsafe by the code official shall abate or correct or cause to be abated or corrected such unsafe conditions either by repair, rehabilitation, demolition or other *approved* corrective action.

IWUIC [A] 113.2 Authority to disconnect service utilities. The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards set forth in Section 102.4 in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without the release required by Section 113.1. The code official shall notify the serving utility and whenever possible the owner or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The owner, the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

IWUIC [A] 114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, to the owner's authorized agent or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

Revise the International Zoning Code as follows:

IZC [A] 103.3 Maintenance. All buildings or uses, both existing and new, and all parts thereof, shall be maintained. The owner or owner's authorized ~~designated~~ agent shall be responsible for the maintenance of buildings and parcels of land. To determine compliance with this section, the code official shall be permitted to cause any structure or use to be inspected.

IZC [A] 107.7.3 Variance review criteria. The board of adjustment shall be permitted to approve, approve with conditions or deny a request for a variance. Each request for a variance shall be consistent with the following criteria:

1. Limitations on the use of the property due to physical, topographical and geologic features.
2. The grant of the variance will not grant any special privilege to the property owner or the owner's authorized agent.
3. The applicant can demonstrate that without a variance there can be no reasonable use of the property.
4. The grant of the variance is not based solely on economic reasons.
5. The necessity for the variance was not created by the property owner or the owner's authorized agent.
6. The variance requested is the minimum variance necessary to allow reasonable use of the property.
7. The grant of the variance will not be injurious to the public health, safety or welfare.
8. The property subject to the variance request possesses one or more unique characteristics generally not applicable to similarly situated properties.

IZC [A] 109.1 Hearings. Upon receipt of an application in proper form, the code official shall arrange to advertise the time and place of public hearing. Such advertisement shall be given by at least one publication in a newspaper of general circulation within the jurisdiction. Such notice shall state the nature of the request, the location of the property, and the time and place of hearing. Reasonable effort shall also be made to give notice by regular mail of the time and place of hearing to each surrounding property owner or the owner's authorized agent; the extent of the area to be notified shall be set by the code official. A notice of such hearing shall be posted in a conspicuous manner on the subject property.

PART II – IECC-COMMERCIAL

Revise the International Energy Conservation Code-Commercial as follows:

IECC C108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's authorized agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

PART III – IECC-RESIDENTIAL

Revise the International Energy Conservation Code-Residential as follows:

IECC R108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's authorized agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

PART IV – IRC

Revise the International Residential Code as follows:

IRC R104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *building official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *building official* or designee is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *building official* shall first make a reasonable effort to locate the owner, the owner's authorized agent, or other person having charge or control of the structure or premises and request entry. If entry is refused, the *building official* shall have recourse to the remedies provided by law to secure entry.

IRC R105.1 Required. Any owner or owner's authorized agent who intends to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the *building official* and obtain the required *permit*.

IRC R110.3 Certificate issued. After the *building official* inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the *building official* shall issue a certificate of occupancy which shall contain the following:

1. The building *permit* number.
2. The address of the structure.
3. The name and address of the owner or the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code.
6. The name of the *building official*.
7. The edition of the code under which the *permit* was issued.
8. If an automatic sprinkler system is provided and whether the sprinkler system is required.
9. Any special stipulations and conditions of the building *permit*.

IRC R111.3 Authority to disconnect service utilities. The *building official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards set forth in Section R102.4 in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without the approval required by Section R111.1 or R111.2. The *building official* shall notify the serving utility and whenever possible the owner or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The owner, the owner's authorized agent, or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

IRC R114.1 Notice to owner or the owner's authorized agent. Upon notice from the *building official* that work on any building or structure is being prosecuted contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's authorized agent or to the person doing the work and shall state the conditions under which work will be permitted to resume.

PART V – ISPSC

Revise the International Swimming Pool and Spa Code as follows:

ISPSC 102.3 Maintenance. All *aquatic vessel* and related mechanical, electrical and plumbing systems, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. All devices or safeguards required by this code shall be maintained in compliance with the code edition under which they were installed.

The *owner* or the *owner's* authorized ~~designated~~ agent shall be responsible for maintenance of all systems. To determine compliance with this provision, the *code official* shall have the authority to require any system to be reinspected.

ISPSC 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *code official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the *code official* shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

ISPSC 104.8 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases, upon application of the owner or owner's authorized agent ~~representative~~, provided the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen sustainability, health, accessibility, life safety and structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

ISPSC 105.1 When required. Any *owner*, or owner's authorized agent who desires to construct, enlarge, alter, *repair*, move, or demolish an *aquatic vessel* or to erect, install, enlarge, alter, repair, remove, convert or replace any system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the *code official* and obtain the required *permit* for the work.

ISPSC 105.2 Application for permit. Each application for a permit, with the required fee, shall be filed with the *code official* on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or ~~an~~ the owner's authorized agent. The permit application shall contain such other information required by the *code official*.

ISPSC 107.5 Stop work orders. Upon notice from the *code official*, work on any system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

ISPSC 107.7.2 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the *aquatic vessel* regulated by the technical codes in case of an emergency, where necessary, to eliminate an immediate danger to life or property. Where possible, the owner or the owner's authorized agent and occupant of the building where the aquatic vessel is located shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner or the owner's authorized agent or occupant of the building shall be notified in writing, as soon as practical thereafter.

Reason: The purpose for the proposal is to update the references to “applicant” and “owner” throughout the building code by changing them to the “owner or the owner’s authorized agent” where it is warranted. In Section 110.1, “the permit applicant” is changed to “the owner or the owner’s authorized agent” because the latter should be responsible to keep the work accessible and exposed for inspection. In Sections 1703.4.1 and 1707.1, “the applicant” is changed to “the owner or the owner’s authorized agent” because the latter should be responsible for the costs of required tests, reports and investigations. In Sections 1703.6 and 1704.2.4, “the applicant” is changed to “the owner or the owner’s authorized agent” because the latter should be responsible for submitting required reports to the building official. In Section 1703.6.1, the applicant” is changed to “the owner or the owner’s authorized agent” for consistency with Section 1704.2 that requires the latter to employ the approved agencies. In Section 1803.6, the “owner or authorized agent” is changed to the “permit applicant” because it should be permissible for the latter to submit the geotechnical report with the other submittal documents at the time of permit application.
The 2012 IBC contains additional references to “owner” but, based on the context in which they are used, it is not considered appropriate or useful to revise the language in conjunction with this proposal (e.g., from “the owner” to “the owner or the owner’s authorized agent”). See Sections 101.4.4, 104.6, 111.2, 112.3, 116.3, 116.4, 402.3, 913.4, 1107.4-Exc. 1, 1607.7.4, 3108.2, 3307.1, 3412.4, 3412.4.1, G101.2, G105.6-Item 3, K103.1 and L101.3.
The 2012 IBC contains additional references to “applicant” but, based on the context in which they are used, it is also not considered appropriate or useful to revise the language in conjunction with this proposal (e.g., from “the applicant” to “the owner or the owner’s authorized agent”). See Sections 104.10.1-Item 5, 105.1.1, 105.3, 107.3.1, 109.3, 109.5, 1612.3.1, 1612.3.2, 1704.2.3, 1704.3, G103.3, G103.4, G103.5.1, G103.6, G104.2, G105.7-Item 5 and J104.1.
All instances in the 2012 IBC of “applicant” and “owner,” other than listed above, are included in this proposal.

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

Staff analysis: This proposal for IBC indicate a correlative change throughout the code for the changes in Chapter 1. If this proposal is approved, similar revisions will be completed in the other chapters of the codes where the terms similar to “owner and owner’s authorized agent”.

Public Hearing Results

PART I - IADMIN
Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides a consistent and proper designation of “owner and owner’s authorized agent” throughout the codes. The proposal will eliminate the confusion called by so many different terms being used in the codes to mean the same person.

Assembly Action: **None**

PART II – IECC – Commercial
HEARD BY IECC COMMERCIAL COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: Provides consistency in use of terminology within the code and with the use of the terms in the other International Codes.

Assembly Action: **None**

PART III – IECC – Residential
HEARD BY IECC RESIDENTIAL COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: This proposed language would clarify the intent of the code.

Assembly Action: **None**

PART IV - IRC
HEARD BY IRC COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: The committee approved this proposed code change because they felt that it clarifies who is referenced and distinguishes authorized as a legal status.

Assembly Action: **None**

PART V - ISPSC
HEARD BY THE ISPSC COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent's reason statement.

Assembly Action: **None**

Final Hearing Results

ADM22-13, Part I	**AS**
ADM22-13, Part II	**AS**
ADM22-13, Part III	**AS**
ADM22-13, Part IV	**AS**
ADM22-13, Part V	**AS**

Code Change No: ADM23-13

Original Proposal

Section: PART I - IBC: [A] 104.11; IEBC: [A] 104.11 IFC: [A] 104.9; IFGC: [A] 105.2; IMC: [A] 105.2; IPC: [A] 105.2; IPSDC: [A] 105.2; IPMC: [A] 105.2; IWUIC: [A] 105.3
PART II - IRC: R104.11;
PART III - ISPSC 104.9

THIS IS A 3 PART CODE CHANGE. PARTS I WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE RESIDENTIAL CODE COMMITTEE. PART III WILL BE HEARD BY THE SWIMMING POOL AND SPA CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Larry Wainright, Qualtim, representing Structural Building Components Association (lwainright@qualtim.com)

PART I – IBC; IEBC; IFC; IFCG; IMC; IPC; IPSDC; IPMC; IWUIC

Revise the International Building Code as follows:

IBC [A] 104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *building official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Existing Building Code as follows:

IEBC [A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design, or method of construction shall be approved where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Fire Code as follows:

IFC [A] 104.9 Alternative materials and methods. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. The *fire code official* is authorized to approve an alternative material or method of construction where the *fire code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety. Where the alternative

material, design or method of construction is not approved, the fire *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Fuel Gas Code as follows:

IFGC [A] 105.2 Alternative materials, methods, appliances and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Mechanical Code as follows:

IMC [A] 105.2 Alternative materials, methods, equipment and appliances. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Plumbing Code as follows:

IPC [A] 105.2 Alternative materials, methods and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved.* An alternative material or method of construction shall be *approved* where the code official finds that the proposed alternative material, method or equipment complies with the intent of the provisions of this code and is at least the equivalent of that prescribed in this code. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 105.2 Alternative materials, methods and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Property Maintenance Code as follows:

IPMC [A] 105.2 Alternative materials, methods and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the *code official* finds that the proposed

design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Revise the International Wildland-Urban Interface Code as follows:

IWUIC [A] 105.3 Alternative materials or methods. The code official, in concurrence with approval from the *building official* and fire chief, is authorized to approve alternative materials or methods, provided that the code official finds that the proposed design, use or operation satisfactorily complies with the intent of this code and that the alternative is, for the purpose intended, at least equivalent to the level of quality, strength, effectiveness, fire resistance, durability and safety prescribed by this code. Approvals under the authority herein contained shall be subject to the approval of the *building official* whenever the alternate material or method involves matters regulated by the *International Building Code*.
The code official shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the files of the code enforcement agency. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

PART II – IRC

Revise the International Residential Code as follows:

IRC R104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code. Compliance with the specific performance-based provisions of the International Codes in lieu of specific requirements of this code shall also be permitted as an alternate. Where the alternative material, design or method of construction is not approved, the *building official* shall respond in writing, stating the reasons the alternative was not approved.

PART III – ISPSC

Revise the International Swimming Pool and Spa Code as follows:

ISPSC 104.9 Alternative materials, methods and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be approved where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons the alternative was not approved.

Reason: the language added is similar to that included at 105.3.1 when a permit application is rejected. This proposed change assumes that the non-approval of an alternative method is not the same as the non-approval of a permit, i.e., the permit application may have been approved but an alternative method might not be approved until a later date. However, the reasons for responding to the applicant in writing are the same, as noted in the Commentary to section 105.3.1: 'In order to ensure effective communication and due process of law, the reasons for denial of an application for a permit are required to be in writing. Further, the language is coordinated across all of the I-codes for consistency of enforcement.

Cost Impact: This proposal will not increase the cost of construction.

Public Hearing Results

PART I - IADMIN
Committee Action: **Approved as Submitted**

Committee Reason: The additional language protects the designer, clarifies the decisions and helps in the appeals process. It is good practice for the code official to respond in writing to keep accountability for alternative materials.

Assembly Action: **None**

PART II – IRC
HEARD BY IRC COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: The committee approved this proposed code change because they felt that it is important to know the reason each time there is input given back. This is a learning experience on behalf of the design professional. The design professional understands what needs to be modified so the plans can be approved. It is important to have a paper trail for posterity.

Assembly Action: **None**

PART III – ISPSC
HEARD BY THE ISPSC COMMITTEE

Committee Action: **Disapproved**

Committee Reason: Requiring written reasons for disapproval for every alternative design, material or method will be a paperwork nightmare for smaller issues. The code official can make the determination as to when a response in writing is prudent.

Assembly Action: **None**

Final Hearing Results

ADM23-13, Part I	**AS**
ADM23-13, Part II	**AS**
ADM23-13, Part III	**D**

Code Change No: ADM26-13

Original Proposal

Section: IFC: [A] 105.1.4 (New), [A] 105.1.4.1 (New); IFGC: [A] 106.1.1 (New), [A] 106.1.2 (New); IMC: [A] 106.1.1 (New), [A] 106.1.2 (New); IPC: [A] 106.1.1 (New), [A] 106.1.2 (New); IPSDC: [A] 106.1.1 (New), [A] 106.1.2 (New)

Proponent: Anthony C. Apfelbeck, CBO, CFPS, City of Altamonte Springs Building/Fire Safety Division, representing self (ACApfelbeck@Altamonte.org)

Add new text to the International Fire Code as follows:

IFC [A] 105.1.4 Annual permit. In lieu of an individual construction permit for each alteration to an already approved system or equipment installation, the fire code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

IFC [A] 105.1.4.1 Annual permit records. The person to whom an annual permit is used shall keep a detailed record of alterations made under such annual permit. The fire code official shall have access to such records at all times or such records shall be filed with the fire code official as designated.

Revise the International Fuel Gas Code as follows:

IFGC [A] 106.1.1 Annual permit. In lieu of an individual construction permit for each alteration to an already approved system or equipment installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

IFGC [A] 106.1.2 Annual permit records. The person to whom an annual permit is used shall keep a detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

Revise the International Mechanical Code as follows:

IMC [A] 106.1.1 Annual permit. In lieu of an individual construction permit for each alteration to an already approved system or equipment installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

IMC [A] 106.1.2 Annual permit records. The person to whom an annual permit is used shall keep a detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

Revise the International Plumbing Code as follows:

IPC [A] 106.1.1 Annual permit. In lieu of an individual construction permit for each alteration to an already approved system or equipment installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more

qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

IPC [A] 106.1.2 Annual permit records. The person to whom an annual permit is used shall keep a detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

Revise the International Private Sewage Disposal Code as follows:

IPSDC [A] 106.1.1 Annual permit. In lieu of an individual construction permit for each alteration to an already approved system or equipment installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

IPSDC [A] 106.1.2 Annual permit records. The person to whom an annual permit is used shall keep a detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

Reason: This proposed language is identical to the current language in section 105.1.1 and 105.1.2 of the IBC with the exception that the title of the code official is changes and that the list of systems have been removed from the types of permits. There is similar language in the IEBC, Section 105.1.1 and 105.1.2. The need for this language in the IFC and other codes is similar to the justification for it being present in the IBC. If annual permits can be issued for MEP system upon approval of the Building Official, annual permits should be able to be issued for fire systems regulated by the IFC upon the approval of the Fire Official.

The idea for this proposal was originally brought up as an issue for the IFC and fire code officials. However, once it was identified that there is Permit section in the IFGC, IMC, IPC and IPSDC, it seemed appropriate to extend this proposal.

Cost Impact: This code change will reduce the cost of construction. In situations where the issuance of annual permit for fire protection systems is appropriate, there will be a direct cost saving to the contractor in avoiding the need for individual permits.

Staff analysis: Permit sections are also found in the IWUIC and Pool codes.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The additional language to the IFC, IFGC, IMC, IPC and IPSDC will coordinate with provisions in the IBC. This allowance will be handy for projects with continual work. If this option is used, the building owner will be responsible for providing records, such as inspections, so that compliance can be tracked by the jurisdiction.

Assembly Action: **None**

Final Hearing Results

ADM26-13 **AS**

Code Change No: ADM55-13

Original Proposal

Section: **PART I - IBC: 202, IFC: 202, IFGC: 202, IMC: 202, IPC: 202, IPMC: 202, IWUIC: 202**
PART II - IECC: C202;
PART III - IECC: R202 (IRC N1101.9);
PART IV - IRC: R202;
PART V - ISPSC 202.

THIS IS A 5 PART CODE CHANGE. PARTS I WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE ENERGY CONSERVATION CODE-COMMERCIAL COMMITTEE. PART III WILL BE HEARD BY THE ENERGY CONSERVATION CODE-RESIDENTIAL COMMITTEE. PART IV WILL BE HEARD BY THE RESIDENTIAL CODE COMMITTEE. PART V WILL BE HEARD BY THE SWIMMING POOL AND SPA CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Philip Brazil, P.E., Reid Middletonw, Inc., representing Washington Association of Building Officials, Technical Code Development (pbrazil@reidmiddleton.com)

PART I – IBC; IFC; IFCG; IMC; IPC; IPMC; IWUIC

Revise the International Building Code as follows:

IBC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to the *building official* ~~or authority having jurisdiction~~.

[A] PERMIT. An official document or certificate issued by the ~~authority having jurisdiction which~~ building official that authorizes performance of a specified activity.

Revise the International Fire Code as follows:

IFC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to the *fire code official*.

[A] PERMIT. An official document or certificate issued by the ~~authority having jurisdiction which~~ fire code official that authorizes performance of a specified activity.

Revise the International Fuel Gas Code as follows:

IFGC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to the *code official* ~~or authority having jurisdiction~~.

Revise the International Mechanical Code as follows:

IMC SECTION 202

DEFINITIONS

[A] APPROVED. Acceptable to the *code official* ~~or authority having jurisdiction~~.

Revise the International Plumbing Code as follows:

IPC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to the *code official* ~~or authority having jurisdiction~~.

Revise the International Property Maintenance Code as follows:

IPMC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to ~~Approved by~~ the *code official*.

Revise the International Wildland-Urban Interface Code as follows:

IWUICC SECTION 202
DEFINITIONS

[A] APPROVED. Acceptable to the code official ~~Approval by the code official as the result of review, investigation or tests conducted by the code official or by reason of accepted principles or tests by national authorities, or technical or scientific organizations.~~

PART II – IECC-COMMERCIAL

Revise the International Energy Conservation Code-Commercial as follows:

IECC SECTION C202
GENERAL DEFINITIONS

APPROVED. Acceptable to ~~Approval by~~ the code official ~~as the result of investigation and tests conducted by him or her, or by reason of accepted principles or tests by national recognized organizations.~~

PART III – IECC-RESIDENTIAL

Revise the International Energy Conservation Code-Residential as follows:

IECC SECTION R202 (IRC N1101.9)
GENERAL DEFINITIONS

APPROVED. Acceptable to ~~Approval by~~ the code official ~~as the result of investigation and tests conducted by him or her, or by reason of accepted principles or tests by national recognized organizations.~~

PART IV – IRC

Revise the International Residential Code as follows:

IRC SECTION R202
DEFINITIONS

APPROVED. Acceptable to the *building official*.

PERMIT. An official document or certificate issued by the ~~authority having jurisdiction~~ building official that authorizes performance of a specified activity.

PART V – ISPSC

Revise the International Swimming Pool and Spa Code as follows:

ISPSC SECTION 202
DEFINITIONS

APPROVED. Acceptable to the *code official* ~~or authority having jurisdiction~~.

PERMIT. An official document or certificate issued by the ~~authority having jurisdiction~~ building official that authorizes performance of a specified activity.

Reason: The purpose for the proposal is to clarify the meaning of the definitions for “approved” and “permit” by specifying the building official rather than the “authority having jurisdiction.” The provisions of the building code consistently identify the building official as the official in charge of administration and enforcement of the building code. The only instances of “authority having jurisdiction” in the 2012 IBC are in this proposal.

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

Public Hearing Results

PART I - IADMIN
Committee Action: **Approved as Submitted**

Committee Reason: The phrase ‘authority having jurisdiction’ is already addressed in the definition for code official, therefore, it can be removed from the definition for the term permit and approved. This revision would coordinate the codes and is preferred to the options for the term ‘approved’ offered in ADM53 and ADM 54.

Assembly Action: **None**

PART II – IECC – Commercial
HEARD BY IECC COMMERCIAL COMMITTEE

Committee Action: **Disapproved**

Committee Reason: Current text provides the code official guidance regarding what approved means and how something is 'approved'. This proposal removes that guidance.

Assembly Action: **None**

PART III – IECC – Residential
HEARD BY IECC RESIDENTIAL COMMITTEE

Committee Action: **Disapproved**

Committee Reason: The proposed text would diminish guidance to the code official regarding needed information for approval.

Assembly Action: **None**

PART IV - IRC
HEARD BY IRC COMMITTEE

Committee Action: **Disapproved**

Committee Reason: The committee disapproved this code change proposal because the authority having jurisdiction issues the permit and the building official is the representative of that authority.

Assembly Action: **None**

PART V - ISPSC
HEARD BY THE ISPSC COMMITTEE

Committee Action: **Disapproved**

Committee Reason: The permitting of pools might not be controlled by the building official. This proposal removes the flexibility for other authorities having jurisdiction to do permitting and to approve items.

Assembly Action: **None**

Public Comment(s)

Part II - Public Comment:

Maureen Traxler, City of Seattle Department of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Submitted.

Commenter's Reason: This proposal would make the definition of "approved" in the IECC consistent with the definition in the Building, Fire, Fuel Gas, Mechanical, Plumbing, Property Maintenance and Wildland Urban Interface codes as approved in Part I of this proposal. The committees disapproved these 2 parts of the proposal because they felt that building officials need guidance to make approvals. However, the other codes do not include the language the Energy Code Committees found necessary. We can see no reason building officials would need additional guidance to make approvals under the Energy Code. The language provides minimal guidance in any case. It doesn't require anything other than what a building official would normally do. "Accepted principles" and "tests by national recognized organizations" are typical standards for approvals. The deleted language allows "investigations" without defining what constitutes an investigation. Presumably making a phone call or reviewing manufacturer information could be considered investigation.

Part III - Public Comment:

Maureen Traxler, City of Seattle Department of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Submitted.

Commenter's Reason: This proposal would make the definition of "approved" in the IECC consistent with the definition in the Building, Fire, Fuel Gas, Mechanical, Plumbing, Property Maintenance and Wildland Urban Interface codes as approved in Part I of this proposal. The committees disapproved these 2 parts of the proposal because they felt that building officials need guidance to make approvals. However, the other codes do not include the language the Energy Code Committees found necessary. We can see no reason building officials would need additional guidance to make approvals under the Energy Code. The language provides minimal guidance in any case. It doesn't require anything other than what a building official would normally do. "Accepted principles" and "tests by national recognized organizations" are typical standards for approvals. The deleted language allows "investigations" without defining what constitutes an investigation. Presumably making a phone call or reviewing manufacturer information could be considered investigation.

Part IV - Public Comment:

Maureen Traxler, City of Seattle Department of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Submitted.

Commenter's Reason: The provisions of the International Codes consistently identify the building official as the official in charge of administration and enforcement of the codes. See IRC Section 104 reprinted below. The term "authority having jurisdiction" is not defined and is not used anywhere else in the International Codes. Using it in the definition makes code officials vulnerable to challenges to their authority. It's important that the code state clearly and unequivocally that the code official has ultimate authority to make approvals. This change will make the IRC definitions consistent with the definitions in 7 other codes that were approved in Part I— IBC; IFC; IFGC; IMC; IPC; IPMC; IWUIC.

The reason for disapproval of this part of the proposal misinterprets Chapter 1 of the IRC. Section 104 clearly gives the code official authority sole responsibility to administer this code.

SECTION R104
DUTIES AND POWERS OF THE BUILDING OFFICIAL

R104.1 General. The *building official* is hereby authorized and directed to enforce the provisions of this code. The *building official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in conformance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

R104.2 Applications and permits. The *building official* shall receive applications, review *construction documents* and issue permits for the erection and alteration of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

Part V - Public Comment:

Maureen Traxler, City of Seattle Dept of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Modified by this Public Comments.

Modify the proposal as follows:

ISPSC SECTION 202
DEFINITIONS

APPROVED. Acceptable to the *code official*.

PERMIT. An official document or certificate issued by the ~~building~~ code official that authorizes performance of a specified activity.

Commenter's Reason: The provisions of the codes consistently identify the code official as the person in charge of administration and enforcement of the codes. See ISPSC Section 104 reprinted below. The term "authority having jurisdiction" is not defined and is not used anywhere else in the International Codes. Using it in the definition makes code officials vulnerable to challenges to their authority. It's important that the code state clearly and unequivocally that the code official has ultimate authority to make approvals and issue permits. This change will make the ISPSC definitions consistent with the definitions in 7 other codes that were approved in Part I— IBC; IFC; IFGC; IMC; IPC; IPMC; IWUIC.

The reason for disapproval of this part of the proposal misinterprets Chapter 1 of the ISPSC. Section 104 clearly gives the code official authority sole authority to administer this code. Even if other agencies issue permits related to pools and spas, the code official retains responsibility for enforcing the ISPSC and issuing permits under the International Codes. If other agencies issue permits in some jurisdictions, the code official, by definition, may authorize others to perform duties. "**CODE OFFICIAL.** The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative." Disapproval of this proposal would result in inconsistency within the ISPSC between the definition and Section 104, as well as making this Code inconsistent with the other codes.

SECTION 104
DUTIES AND POWERS OF THE CODE OFFICIAL

104.1 General. The *code official* is hereby authorized and directed to enforce the provisions of this code. The code official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Applications and permits. The code official shall receive applications, review construction documents and issue permits for the erection, alteration, demolition and moving of aquatic vessels, related mechanical, electrical, plumbing systems, to inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

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Final Hearing Results

ADM55-13, Part I	**AS**
ADM55-13, Part II	**D**
ADM55-13, Part III	**D**
ADM55-13, Part IV	**D**
ADM55-13, Part V	**D**

Code Change No: ADM57-13

Original Proposal

Section: **PART I - IFGC: 202, IMC: 202, IPC: 202**
PART II - IECC: C202 (New);
PART III - IECC: R202 (IRC N1101.9)(New)

THIS IS A 3 PART CODE CHANGE. PARTS I WILL BE HEARD BY THE ADMINISTRATIVE PROVISIONS COMMITTEE AS ONE CODE CHANGE. PART II WILL BE HEARD BY THE ENERGY CONSERVATION CODE-COMMERCIAL COMMITTEE. PART III WILL BE HEARD BY THE ENERGY CONSERVATION CODE-RESIDENTIAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: Brenda A. Thompson, Clark County Development Services, Clark County, Nevada, representing Sustainable/Energy/High Performance Code Action Committee (bat@clarkcounty.gov)

PART I – IBC; IFCG; IMC; IPC

Revise the International Building Code as follows:

IBC SECTION 202
DEFINITIONS

[A] APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been *approved* by the building official.

Revise the International Fuel Gas Code as follows:

IFGC SECTION 202
GENERAL DEFINITIONS

[A] APPROVED AGENCY. An established and recognized agency ~~that is *approved* by the code official and~~ regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the code official.

Revise the International Mechanical Code as follows:

IMC SECTION 202
GENERAL DEFINITIONS

[A] APPROVED AGENCY. An established and recognized agency ~~that is *approved* by the code official and~~ regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the code official.

Revise the International Plumbing Code as follows:

IPC SECTION 202
GENERAL DEFINITIONS

[A] APPROVED AGENCY. An established and recognized agency ~~that is *approved* by the code official and~~ regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the code official.

PART II – IECC-COMMERCIAL

Add a new definition to the International Energy Conservation Code-Commercial as follows:

IECC SECTION C202
GENERAL DEFINITIONS

APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the code official.

PART III – IECC-RESIDENTIAL

Add a new definition to the International Energy Conservation Code-Residential as follows:

IECC SECTION R202 (IRC N1101.9)
GENERAL DEFINITIONS

APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the code official.

Reason: This proposal was submitted by the ICC Sustainability Energy and High Performance Code Action Committee (SEHPCAC). The SEHPCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the SEHPCAC has held 3 open meetings and over 30 workgroup calls which included members of the SEHPCAC as well as any interested party to discuss and debate proposed changes and public comments. Related documentation and reports are posted on the SEHPCAC website at: http://www.iccsafe.org/cs/SEHPCAC/Pages/default.aspx.

Reasons for this specific proposal:

Part I – These revisions are for consistency across codes with the defined term.

Part II and III - The term 'approved agency' is used in the IECC, but not defined. While the term is defined in the *International Building Code*, and therefore available for application to the IECC, the SEHPCAC believes that the definition should be included in the IECC so that it is readily available for code users and the term is consistently applied.

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

Staff analysis: The term "Approved Agency" is currently defined in the IBC, IFGC, IMC, IPC, IRC, ISPSC and IgCC. In the IBC, IPC, IMC and IPC, this definition is scoped to Administration. The term proposed for the IECC is the same as defined in the IRC and the ISPSC.

Public Hearing Results

PART I - IADMIN
Committee Action: **Approved as Submitted**

Committee Reason: The term 'approved agency' should be consistent throughout the codes.

Assembly Action: **None**

PART II – IECC – Commercial
HEARD BY IECC COMMERCIAL COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: Adding the definition for 'approved agency' provides a definition to a term already used in this code. This would also be consistent with the other International Codes.

Assembly Action: **None**

PART III – IECC – Residential
HEARD BY IECC RESIDENTIAL COMMITTEE

Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides a consistent definition of 'approved agency' throughout all of the I-Codes.

Assembly Action: **None**

Final Hearing Results

ADM57-13, Part I	**AS**
ADM57-13, Part II	**AS**
ADM57-13, Part III	**AS**

Code Change No: ADM62-13

Original Proposal

ADM62-13

IBC, IECC, IEBC, IFC, IFGC, IgCC, IMC, IPC, IPMC, IRC, and the ISPSC

The following table provides a comprehensive list of all standards that the respective standards promulgators have indicated have been, or will be, updated from the listing in the 2012 Editions of the International Codes. According to Section 4.5.1 of ICC Council Policy #CP 28, Code Development Policy, the updating of standards referenced by the Codes shall be accomplished administratively by the Administrative code development committee. Therefore, referenced standards that are to be updated for the 2015 edition of any of the I-Codes are listed in this single code change proposal. Note that the table below indicates the change to the standard, and the code or codes in which each standard appears. The list includes standards that the promulgators have already updated or will have updated by December 1, 2014.

***4.5.1 Standards referenced in the I-Codes:** The updating of standards referenced by the Codes shall be accomplished administratively by the Administrative code development committee in accordance with these full procedures except that the deadline for availability of the updated standard and receipt by the Secretariat shall be December 1 of the third year of each code cycle. The published version of the new edition of the Code which references the standard will refer to the updated edition of the standard. If the standard is not available by the deadline, the edition of the standard as referenced by the newly published Code shall revert back to the reference contained in the previous edition and an errata to the Code issued. Multiple standards to be updated may be included in a single proposal.*

AA — Aluminum Association

Standard Reference Number	Title	Referenced in Code(s):
ADM 1-~~2010~~ 2015	Aluminum Design Manual: Part I Specification for Aluminum Structures	IBC

AAMA — American Architectural Manufacturers Association

Standard Reference Number	Title	Referenced in Code(s):
450-~~09~~ 10	Voluntary Performance Rating Method for Mulled Fenestration Assemblies	IRC
506-~~08~~ 11	Voluntary Specifications for Hurricane Impact and Cycle Testing of Fenestration Products	IRC
711-~~07~~ 13	Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products	IRC
1402-~~86~~ 09	Standard Specification for Aluminum Siding, Soffit and Fascia	IBC

ACCA	Air Conditioning Contractors of America							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
Manual D ~~09~~ 2011	Residential Duct Systems	IMC	IRC					
Manual J-2011	Residential Load Calculation - Eighth Edition	IRC	IECC-R					
Manual S-~~10~~ 13	Residential Equipment Selection	IRC	IECC-R					
180-~~2008~~ 2012	Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems	IMC	IRC					
183-2007 (reaffirmed 2011)	Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings	IMC	IECC					
ACI	**American Concrete Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
216.1-~~07~~ 14	~~Standard Method~~ Code Requirements for Determining Fire Resistance of Concrete and Masonry Construction Assemblies	IBC						
304.2R-~~04~~ 96	Placing Concrete by Pumping Methods (Reapproved 2008)	ISPSC						
305.1-~~06~~ 14	Specification for Hot Weather Concreting	ISPSC						
308.1-~~98~~ 11	~~Standard~~ Specification for Curing Concrete	ISPSC						
318-~~11~~ 14	Building Code Requirements for Structural Concrete	IBC	IRC	ISPSC				
332-~~10~~ 14	Residential Code Requirements for Structural Concrete Construction	IRC						
506.2-~~95~~ 13	Specification for Shotcrete	ISPSC						
530-~~11~~ 13	Building Code Requirements for Masonry Structures	IBC	IRC					
530.1-~~11~~ 13	Specifications for Masonry Structures	IBC	IRC					
~~AF&PA~~ AWC	~~American Forest & Paper Association~~ American Wood Council							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
~~AF&PA~~ AWC STJR—~~2012~~ 2015	Span Tables for Joists and Rafters	IBC	IRC					
~~ANSI/AF&PA~~ AWC WFCM—~~2012~~ 2015	Wood Frame Construction Manual for One- and Two-Family Dwellings	IBC	IRC					
ANSI/AWC NDS-~~2012~~ 2015	National Design Specification (NDS) for Wood Construction - with 2012 Supplement	IBC	IRC					
~~ANSI/AF&PA~~ AWC SDPWS—~~2008~~ 2015	Special Design Provisions for Wind and Seismic	IBC						
~~AF&PA~~ AWC WCD No. 4-2003	Wood Construction Data-Plank and Beam Framing for Residential Buildings	IBC						

ANSI/~~AF&PA~~ AWC PWF—~~2007~~ 2015	Permanent Wood Foundation Design Specification	IBC	IRC					
AHRI	**Air Conditioning, Heating and Refrigeration Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
210/240-2008 with Addenda 1 and 2	Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment	IECC-C						
310/380-2004 (CSA - C744-04)	Standard for Packaged Terminal Air-Conditioners and Heat Pumps	IECC-C						
340/360-2007 with Addendum 2	Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment	IECC-C						
365 (I-P)-2009	Commercial and Industrial Unitary Air-Conditioning Condensing Units	IECC-C						
366 (SI)-2009	Commercial and Industrial Unitary Air-Conditioning Condensing Units	IECC-C						
400-2001 with Addenda 1 and 2	Liquid to Liquid Heat Exchangers ~~with Addendum 2~~	IECC-C						
440-2008	Performance Rating of Room Fan-Coils	IECC-C						
460-2005	Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers	IECC-C						
550/590-~~03~~ 2011 with Addendum 1	Performance Rating of Water-Chilling ~~Packages~~ and Heat Pump Water-Heating Packages Using the Vapor Compression Cycle ~~with Addenda~~	IECC-C						
700- ~~2006~~ 2011 with Addendum 1	~~Purity~~ Specifications for Fluorocarbon ~~and Other~~ Refrigerants	IECC-C						
870-~~2009~~ 05	Performance Rating of Direct Geoexchange Heat Pumps	IECC-C						
1160-~~08~~ (I-P) 09	Performance Rating of Heat Pump z21.56	IECC-C	ISPSC					
1160~~1~~ (SI)- ~~08~~ -2011	Performance Rating of Heat Pump Pool Heaters	IECC-C	ISPSC					
13256-1~~(2005)~~ (2011)	~~Water-Source Heat Pumps –~~ Water-to-Air and Brine-to-Air Heat Pumps – Testing and Rating for Performance: ~~Part 1-~~	IECC-C						
13256-2~~(1998)~~ (2011)	~~Water-source Heat Pumps~~ Water-to-Water and Brine-to-water Heat Pumps - Testing and Rating For Performance: ~~Part 2:~~	IECC-C						

AISI	**American Iron and Steel Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
AISI S100-07/S2-~~10~~ 12	North American Specification for the Design of Cold Formed Steel Structural Members ~~with Supplement 2, dated 2010~~ 2012	IBC	IRC					
AISI S110-07/S1-09 (2012)	Standard for Seismic Design of Cold-Formed Steel Structural Systems-Special Moment Frames, 2007 with Supplement 1, dated 2009, (2012)	IBC						
AISI S200-~~07~~ 2012	North American Standard for Cold-Formed Steel Framing - General Provisions	IBC						
AISI S210-~~07~~ 2012	North American Standard for Cold-formed Steel Framing-Floor and Roof System Design, 2007, (2012)	IBC						
AISI S211-07/S1-12 (2012)	North American Standard for Cold-Formed Steel Framing-Wall Stud Design, 2007, including Supplement 1, dated 2012, (2012)	IBC						
AISI S212-~~07~~ (2012)	North American Standard for Cold-Formed Steel Framing-Header Design, 2007, (2012)	IBC						
AISI S213-07/S1-~~09~~ (2012)	North American Standard for Cold-Formed Steel Framing-Lateral Design, with Supplement 1, dated 2009, (2012)	IBC						
AISI S214-~~07~~ 12	North American Standard for Cold-Formed Steel Framing - Truss Design with Supplement 2, dated ~~2008~~, 2012	IBC						
AISI S230-07-~~07/S2-08~~ /S3-12 (2012)	Standard for Cold-formed Steel Framing-Prescriptive Method for One- and Two-family Dwellings, 2007, with Supplement ~~2~~ 3, dated ~~2008~~ dated 2012, (2012)	IRC	IBC					
~~AITC~~	**~~American Institute of Timber Construction~~** (***Please note that the AITC is no longer promulgating ICC standards. Standards previously promulgated by AITC are now being handled by APA and WCLIB.)***							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
ALI	**Automotive Lift Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						

ALI/ALCTV-~~2006~~ 2011	Standard for Automotive Lifts - Safety Requirements for Construction, Testing, and Validation ~~(ANSI)~~	IBC						
AMCA	**Air Movement and Control Association International**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
205-~~10~~ 12	Energy Efficiency Classification for Fans	IgCC						
220-~~05~~ 08	Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating	IgCC						
500D-~~10~~ 12	Laboratory Methods for Testing Dampers for Rating	IECC-C						
ANSI	**American National Standards Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
Z97.1- ~~09~~ 2014	Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test	IBC	IRC					
ANSI A137.1-~~88~~ 2012	American National Standard Specifications for Ceramic Tile	IBC	IRC					
Z21.50/CSA 2.22-~~2007~~ 2012	Vented Gas Fireplaces	IRC	IFGC	IgCC				
Z21.88/CSA 2.33-~~09~~ 2015	Vented Gas Fireplace Heaters	IRC	IFGC	IgCC				
LC 1/CSA 6.26-~~2005~~ 2013	Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)	IFGC						
LC 4/CSA 6.32-~~2007~~ 2012	Press-Connect Metallic Fittings for Use in Fuel Gas Distribution Systems	IFGC	IRC					
Z21.1-~~2005~~ 2010	Household Gas Cooking Appliances	IFGC	IRC					
Z21.5.1/CSA 7.1-~~2006~~ 2014	Gas Clothes Dryers - Volume I - Type 1 Clothes Dryer	IFGC	IRC					
Z21.5.2/CSA 7.2-~~2005~~ 2014	Gas Clothes Dryers - Volume II - Type 2 Clothes Dryer	IFGC						
Z21.10.1/CSA 4.1-~~2009~~ 2012	Gas Water Heaters - Volume I - Storage Water Heaters with Input Ratings of 75,000 Btu per Hour or Less	IFGC	IRC					
Z21.10.3/CSA 4.3-~~2004~~ 2011	Gas Water Heaters - Volume III - Storage Water Heaters with Input Ratings Above 75,000 Btu per Hour, Circulating or Instantaneous	IFGC	IRC					
Z21.11.2-~~2007~~ 2011	Gas-Fired Room Heaters - Volume II - Unvented Room Heaters	IFGC	IRC					
Z21.13/CSA 4.9-~~2010~~ 2011	Gas-Fired Low Pressure Steam and Hot Water Boilers	IFGC	IRC					
A21.40.1/CSA 2.91-96 (R~~2002~~ 2011)	Gas-Fired Heat Activated Air Conditioning and Heat Pump Appliances	IFGC	IRC					
Z21.40.2/CSA 2.92-96 (R~~2002~~ 2011)	Air-Conditioning and Heat Pump Appliances (Thermal Combustion)	IFGC	IRC					
Z21.42-~~1993 (R2002)~~ 2014	Gas-Fired Illuminating Appliances	IFGC	IRC					

Z21.47/CSA 2.3-~~2007~~ 2012	Gas-Fired Central Furnaces	IFGC	IRC					
Z21.50/CSA 2.22-~~2006~~ 2012	Vented Gas Fireplaces	IFGC	IRC					
Z21.56/CSA 4.7-~~2007~~ 2013	Gas-Fired Pool Heaters	IFGC	ISPSC	IRC				
Z21.58/CSA 1.6-~~2003~~ 2013	Outdoor Cooking Gas Appliances	IFGC	IRC					
Z21.60/CSA 2.26-~~2003~~ 2012	Decorative Gas Appliances for Installation in Solid-fuel Burning Fireplaces	IFGC	IRC					
Z21.80/CSA 6.22-~~2003 (R2008)~~ 2011	Line Pressure Regulators	IFGC	IRC					
Z21.84-~~2002~~ 2012	Manually-lighted, Natural Gas Decorative Gas Appliances for Installation in Solid Fuel Burning Fireplaces	IFGC	IRC					
Z21.88/CSA 2.33-~~2009~~ 2015	Vented Gas Fireplace Heaters	IFGC	IRC					
Z21.97-~~2009~~ 2012	Outdoor Decorative Appliances	IFGC	IRC					
Z83.4/CSA 3.7-~~2003~~ 2012	Non-Recirculating Direct Gas-fired Industrial Air Heaters	IFGC						
~~Z83.6-90 (R1998)~~ withdrawn replaced with Z83.19 & Z83.20	Gas-fired Infrared Heaters	IFGC	IRC					
Z83.11/CSA 1.8-~~2006~~ 2013	Gas Food Service Equipment	IFGC						
Z83.18-~~2004~~ 2012	Recirculating Direct Gas-fired Industrial Air Heaters	IFGC						
Z83.19-2001 (R~~2005~~ 2009)	Gas-fired High Intensity Infrared Heaters	IFGC	IRC					
~~Z124.1-95~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Bathtub Units~~ Plumbing Fixtures	IPC	IRC					
~~Z124.1.2-2005~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Bathtub and Shower Units~~ Plumbing Fixtures	IPC	IRC					
~~Z124.2-95~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Shower Receptors and Shower Stalls~~ Plumbing Fixtures	IPC	IRC					
~~Z124.3-95~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Lavatories~~ Plumbing Fixtures	IPC	IRC					
~~Z124.4-96~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Water Closet Bowls and Tanks~~ Plumbing Fixtures	IPC	IRC					
~~Z124.6-97~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Sinks~~ Plumbing Fixtures	IPC	IRC					
~~Z124.7-97~~ replaced with IAPMO Z124.7-2012	Prefabricated Plastic Spa Shells	ISPSC						
~~Z124.9 -94~~ replaced with CSA B45.5-11/ IAPMO Z124-11	Plastic ~~Urinal Fixtures~~ Plumbing Fixtures	IPC	IRC					
APA	**APA -The Engineered Wood Association**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
ANSI/~~AITC~~ A 190.1 – ~~07~~ 12	Structural Glued-Laminated Timber	IBC	IRC	IgCC				
APA E30-~~03~~ 11	Engineered Wood Construction Guide	IRC						
APA PDS ~~04~~ 12	Panel Design Specification	IBC						
APA PDS Supplement 5-~~08~~ 12	Design and Fabrication of All-Plywood Beams (revised ~~2008~~ 2013)	IBC						

APA PDS Supplement 1-~~90~~ 12	Design and Fabrication of Plywood Curved Panels (revised ~~1995~~ 2013)	IBC						
APA PDS Supplement 4-~~90~~ 12	Design and Fabrication of Plywood Sandwich Panels (revised ~~1993~~ 2013)	IBC						
APA PDS Supplement 3-~~90~~ 12	Design and Fabrication of Plywood Stressed-skin Panels (revised ~~1996~~ 2013)	IBC						
APA PDS Supplement 2-~~92~~ 12	Design and Fabrication of Glued Plywood-lumber Beams (revised ~~1998~~ 2013)	IBC						
EWS R540-~~02~~ 12	Builders Tips: Proper Storage and Handling of Glulam Beams	IBC						
EWS S475-~~01~~ 07	Glued Laminated Beam Design Tables	IBC						
EWS S560-~~03~~ 10	Field Notching and Drilling of Glued Laminated Timber Beams	IBC						
EWS T300-~~05~~ 07	Glulam Connection Details	IBC						
EWS X440-~~03~~ 08	Product Guide - Glulam	IBC						

API

API –American Petroleum Institute

Standard Reference Number	Title	Referenced in Code(s):						
Publ 2009 7th Edition (2002, R2012)	Safe Welding and Cutting Practices in Refineries, Gas Plants and Petrochemical Plants	IFC						
Publ 2023 3rd Edition (R2001, R2006)	Guide for Safe Storage and Handling of Heated Petroleum-Derived Asphalt Products and Crude Oil Residue	IFC						
Publ 2028 3rd Edition (2002, R2012)	Flame Arrestors in Piping Systems	IFC						
Publ 2201 5th Edition (2003, 2010)	Procedures for Welding or Hot Tapping on Equipment in Service	IFC						
RP 651 (~~1997~~) 3rd Edition (2007)	Cathodic Protection of Aboveground Petroleum Storage Tanks	IFC						
RP 752 (~~2003~~) 3rd Edition (2009)	Management of Hazards Associated with Location of Process Plant Buildings, CMA Manager's Guide	IFC						
RP 1604 (1996) 3rd Edition, R2010)	Closure of Underground Petroleum Storage Tanks	IFC						
RP 1615 (~~1996~~) 6th Edition (2011)	Installation of Underground Petroleum Storage Systems	IFC						
RP 2001 (~~2005~~) 9th Edition (2012)	Fire Protection in Refineries	IFC						
RP 2350 (~~2005~~) 4th Edition (2012)	Overfill Protection for Storage Tanks in Petroleum Facilities, 3rd Edition	IFC						
RP 2003 (~~1998~~) 7th Edition (2008)	Protection Against Ignitions Arising out of Static, Lightening, and Stray Currents	IFC						
Spec 12P 3rd Edition (~~1995~~) (Reaffirmed ~~2000~~)	Specification for Fiberglass Reinforced Plastic Tanks	IFC						
Std 653 (~~2001~~) 4th Edition (~~2000~~) (2009)	Tank Inspection, Repair, Alteration and Reconstruction	IFC						
Std 2015 6th Edition (2001, R2006)	Safe Entry and Cleaning of Petroleum Storage Tanks	IFC						

Std 2000 6th Edition (1998) 2009	Venting Atmosphere and Low-pressure Storage Tanks: Nonrefrigerated and Refrigerated	IFC						
APHA	**American Public Health Association**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
2005 2012	Standard Methods for Examination of Water and Waste water 21 2nd Edition	IgCC						
APSP	**The Association of Pool & Spa Professionals**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
ANSI/NSPI APSP/ICC 3-99 2013	Standard for Permanently Installed Residential Spas	IRC						
ANSI/NSPI APSP/ICC 4-2007 2012	Standard for Above-ground/On-ground residential swimming pools	IRC						
ANSI/NSPI APSP/ICC 5-2003 2011	Standard for Residential In-Ground Swimming Pools	IRC						
ANSI/NSPI APSP/ICC 6-2009 2013	Standard for Residential Portable Spas	IRC						
ANSI/APSP/ICC 7-06 2013	Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins	IBC	IRC	ISPSC				
ANSI/APSP/ICC 14-11	Portable Spa Energy Efficiency Standard	IPSPC						
ANSI/APSP/ICC 15-11	Standard for Energy Efficiency for Residential Inground Swimming Pools and Spas with Addenda A Approved 2013)	ISPSC						
ANSI/APSP/ICC16-11	Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas and Hot Tubs	ISPSC						
ASABE	**American Society of Agricultural & Biological Engineers**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
EP 559.1 1997 W/Corr. 1 DEC 1996 (R2008) AUG2010	Design Requirements and Bending Properties for Mechanically Laminated Wood Columns Assemblies	IBC						
EP 486.1 2 DEC 1999 (R2005) OCT2012	Shallow Post and Pier Foundation Design	IBC						
EP542- FEB1999 99(R2009)	Procedures for Using and Reporting Data Obtained with the Soil Cone Penetrometer	IgCC						

S313.3-~~99~~ FEB1999 (R2009)	Soil Cone Penetrometer	IgCC						
ASCE/SEI	**American Society of Civil Engineers/Structural Engineers Institute**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
5—~~11~~ 13	Building Code Requirements for Masonry Structures	IBC	IRC					
6—11 13	Specification for Masonry Structures	IBC	IRC					
7—10	Minimum Design Loads for Buildings and Other Structures with Supplement No. 1	IBC	IEBC	IRC				
8—~~02~~ 14	Standard Specification for the Design of Cold-formed Stainless Steel Structural Members	IBC						
24-~~05~~ 13	Flood Resistant Design and Construction	IBC	ISPSC	IRC				
29-~~05~~ 14	Standard Calculation Methods for Structural Fire Protection	IBC						
~~31-03~~ 41-13 Note: will be incorporated into ASCE 41-13	Seismic Evaluation and Retrofit ~~Rehabilitation~~ of Existing Buildings	IEBC						
32-01	Design and Construction of Frost Protected Shallow Foundations	IBC	IRC					
41-~~06~~ 13	Seismic Evaluation and Retrofit ~~Rehabilitation~~ of Existing Buildings	IEBC						
ASHRAE	**American Society of Heating, Refrigerating and Air Conditioning Engineers**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
15-~~2010~~ 2013	Safety Standard for Refrigeration Systems	IMC						
34-~~2010~~ 2013	Designation and Safety Classification of Refrigerants	IRC	IMC					
52.2-~~2007~~ 2012	Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size	IgCC						
55-~~2004~~ 2010	Thermal Environmental Conditions on Human Occupancy	IgCC						
62.1-~~2010~~ 2013	Ventilation for Acceptable Indoor Air Quality	IMC	IECC	IEBC	IgCC			
90.1-~~2010~~ 2013	Energy Standard for Buildings Except Low-Rise Residential Buildings including Addendum G (ANSI/ASHRAE/IESNA 90.1-2007)	IECC	IgCC					

140-2010 11	Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs	IECC						
146-2006 2011	Testing for Rating Pool Heaters	IECC						
180-08 2012	Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems	IMC						
ANSI/ASHRAE/ACCA 183-2007 (RA2011)	Peak Cooling and Heating Load Calculations in Buildings, Except Low-rise Residential Buildings	IECC						
ASHRAE-2004 2012	HVAC Systems and Equipment Handbook - 2004	IMC	IECC					
ASHRAE-2009 2013	ASHRAE Handbook of Fundamentals	IRC	IECC-R	IMC				
13256-1(2005) 1998 (RA 2012)	Water-source Heat Pumps - Testing and Rating for Performance - Part 1: Water-to-Air and Brine-to-Air Heat Pumps (ANSI/ASHRAE/IESNA 90.1-2004)	IECC						

ASME — American Society of Mechanical Engineers

Standard Reference Number	Title	Referenced in Code(s):						
ASME A17.1/CSA B44—20072013	Safety Code for Elevators and Escalators	IBC	IFC	IEBC	IRC	IPMC		
A112.1.3-2000(Reaffirmed 2005 11)	Air Gap Fittings for Use with Plumbing Fixtures, Appliances, and Appurtenances	IPC	IRC					
A112.3.4-2000 (Reaffirmed 2004) replaced with ASME A112.3.4-2013/CSA B45.9-13	Macerating Toilet Systems and Related Components	IPC	IRC					
A112.4.1-1993 (Reaffirmed 2002) 2009	Water Heater Relief Valve Drain Tubes	IPC	IRC					
A112.4.2-2003 (R2008) 2009	Water Closet Personal Hygiene Devices	IPC						
A112.4.3-1999 (Reaffirmed 2004 10)	Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System	IPC	IRC					
A112.6.1M-1997 (Reaffirmed 2002 08)	Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use	IPC	IRC					
A112.6.2-2000 (Reaffirmed 2004 10)	Framing-Affixed Supports for Off-the-Floor Water Closets with Concealed Tanks	IPC	IRC					
A112.6.3-2001(Reaffirmed 2007)	Floor and Trench Drains	IPC	IRC					
A112.6.7-2001(Reaffirmed 2007) 2010	Enameled and Epoxy Coated Cast Iron and PVC Plastic Sanitary Floor Sinks	IPC						
A112.6.9-2005 (R2010)	Siphonic Roof Drains	IPC						
ASME A112.18.1-2005 2012/ CSA B125.1-2005 2012	Plumbing Supply Fittings	IPC	IRC					
ASME A112.18.2-2005 2011/ CSA B125.2-2005 2011	Plumbing Waste Fittings	IPC	IRC					
ASME A112.19.1-2013/ CSA B45.2-08 13	Enameled Cast-Iron and Enameled Steel Plumbing Fixtures	IPC	IRC					

ASME A112.19.2-~~2008~~ 2013/ CSA B45.1-~~08~~ 13	Ceramic Plumbing Fixtures	IPC	IRC					
ASME A112.19.3-2008/ CSA B45.4-08(R2013)	Stainless-Steel Plumbing Fixtures	IPC	IRC					
ASME A112.19.5-2011/ CSA/B45.15-~~09~~ 11	Flush Valves and Spuds ~~Trim~~ for Water Closets, Urinals ~~Bowls~~ and Tanks	IPC	IRC					
ASME A112.19.7-2012/ CSA B45.10-~~09~~ 2012	Hydromassage Bathtubs ~~Appliances~~ Systems	IPC	IRC					
B16.1-~~2005~~ 2010	~~Cast~~ Gray Iron Pipe Flanges and Flanged Fittings~~, Classes 25, 125 and 250~~	IFGC						
B16.3-~~2006~~ 2011	Malleable Iron Threaded Fittings Classes 150 and 300	IPC	IRC	IMC				
B16.4—~~2006~~ 2011	Gray Iron Threaded Fittings ~~Class 125 and 250~~	IPC	IRC					
B16.5-~~2003~~ 2009	Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24	IMC						
B16.11-~~2005~~ 2011	Forged Fittings, Socket-Welding and Threaded	IPC	IRC	IMC				
B16.12-~~1998 (Reaffirmed 2006)~~ 2009	Cast Iron Threaded Drainage Fittings	IPC	IRC					
B16.15-~~2006~~ 2011	Cast Bronze Threaded Fittings	IRC	IMC	IPC	IPSPC			
B16.18-~~2001 (Reaffirmed 2005)~~ 2012	Cast Copper Alloy Solder Joint Pressure Fittings	IPC	IBC	IRC	IMC	IFC		
B16.20-~~1998(Reaffirmed~~ 2007~~)~~	Metallic Gaskets for Pipe Flanges: Ring-Joint, Spiral-Wound, and Jacketed	IFGC						
B16.22-2001~~(Reaffirmed 2005)~~ (R2010)	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	IPC	IBC	IRC	IFC	IMC		
B16.23-~~2002 (Reaffirmed 2006)~~ 2011	Cast Copper Alloy Solder Joint Drainage Fittings: DWV	IPC	IRC	IMC				
B16.24-~~2006~~ 2011	Cast Copper Alloy Pipe Flanges and Flanged Fittings: Class 150, 300, 400, 600, 900, 1500 and 2500	IMC						
B16.26-~~2006~~ 2011	Cast Copper Alloy Fittings for Flared Copper Tubes	IPC	IRC	IMC				
B16.29-~~2007~~ 2012	Wrought Copper and Wrought-Copper-Alloy Solder Joint Drainage Fittings - (DWV)	IPC	IRC	IMC				
B16.33-~~2002(Reaffirmed 2007)~~ 2012	Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig (Sizes 1/2 through 2)	IFGC	IRC					
B31.1-~~2007~~ 2012	Power Piping	IFC						
B31.3-~~2004~~ 2012	Process Piping	IBC	IFC					
B31.4-~~2006~~ 2012	Pipeline Transportation Systems for Liquid Hydrocarbons and other Liquids	IFC						
B31.9—~~08~~ 2011	Building Services Piping	IFC	IMC					
ASSE 1016/ASME A112.1016/CSA B125.16-2011 is a replacement for ASSE 1016-2010	Performance Requirements for Automatic Compensating, Valves for Individual Showers and Tub/Shower Combinations	IPC	IRC	IgCC				
BPVC-~~2007~~ 2010/2011 addenda	Boiler & Pressure Vessel Code	IFC	IMC	IFGC	IRC			
CSD-1-~~2009~~ 2011	Controls and Safety Devices for Automatically Fired Boilers	IMC						

ASPE	American Society of Plumbing Engineers							
Standard Reference Number	Title	Referenced in Code(s):						
~~45-2007~~ 2013	Siphonic Roof Drainage Systems	IPC						

ASSE	American Society of Sanitary Engineering							
Standard Reference Number	Title	Referenced in Code(s):						
~~1016-2010~~ ASSE 1016/ASME A112.1016/CSA B125.16-2011	Performance Requirements for Automatic Compensating, Valves for Individual Showers and Tub/Shower Combinations	IPC	IRC	IgCC				

ASTM	ASTM International							
Standard Reference Number	Title	Referenced in Code(s):						
A53/A 53M-~~07~~ 12	Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	IPC	IMC	IRC	IFGC			
A74-~~09~~ 12	Specification for Cast Iron Soil Pipe and Fittings	IPC	IRC	IPSDC				
A82/A 2M-~~05a~~ 07	Specification for Steel Wire, Plain, for Concrete Reinforcement	IRC						
A106/A 106M-~~08~~ 11	Specification for Seamless Carbon Steel Pipe for High-Temperature Service	IMC	IRC	IFGC				
A123/A 123M-~~02~~ 12	Specification of Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Products	IBC						
A126-~~04~~(2009)	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings	IMC	IRC					
A153/A153M-~~05~~ 09	Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware	IBC	IRC					
A182-~~10a~~ 12A	Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service	ISPSC						
A185/A 185M-~~06E01~~ 07	Specification for Steel Welded Wire Reinforcement, Plain for Concrete	IBC						
A240/A 240M-~~09~~ 12	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications	IBC	IRC	IPSPC				
A252-~~98(2007)~~ 10	Specification for Welded and Seamless Steel Pipe Piles	IBC						
A283/A 283M-~~03(2007)~~ 12	Specification for Low and Intermediate Tensile Strength Carbon Steel Plates	IBC						
A307-~~07b~~ 10	Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength	IBC	IRC					
A312/A 312M-~~08a~~ 12A	Specification for Seamless, and Welded, and Heavily Cold Worked Austenitic Stainless Steel	IPC	IRC	ISPSC				

	Pipes							
A377-~~03~~ 2003(2008)e1*	Index of Specification for Ductile-Iron Pressure Pipe	IRC						
A403-~~10a~~ 12	Standard Specification for Wrought Austenitic Stainless Steel Pipe Fittings	ISPSC						
A416/A 416M-~~06~~ 12A	Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete	IBC						
A420/A 420M-~~07~~ 10A	Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service	IMC						
A421/A 421M- ~~05~~ 10	Specification for Uncoated Stress-Relieved Steel Wire for Prestressed Concrete	IBC						
A435/A 435M-90 ~~(2007)~~ 2012	Specification for Straight-Beam Ultrasonic Examination of Steel Plates	IBC						
A463M/A 463M-~~06~~ 10	Specification for Steel Sheet, Aluminum-Coated, by the Hot Dip Process	IBC	IRC					
A480/A480M-~~06b~~ 12	Specification for General Requirements for Flat-Rolled Stainless and Heat-/Resisting Steel Plate, Sheet and Strip	IBC						
A496-~~05~~ 07	Specification for Steel Wire, Deformed for Concrete Reinforcement	IBC						
A497 A497M-~~06e01~~ 07	Specification for Steel Welded Reinforcement Deformed for Concrete	IBC						
A510-~~08~~ 11	Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, Alloy Steel	IBC	IRC					
A572/A 572M-~~07~~ 12	Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel	IBC						
A588/A 588M-~~05~~ ~~10~~	Specification for High-Strength Low-Alloy Structural Steel with 50 ksi (345 Mpa) Minimum Yield Point, with Atmospheric Corrosion Resistance	IBC						
A615/A 615M-~~09~~ 12	Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement	IBC	IRC					
A653/A 653M-~~08~~ 11	Specification for Steel Sheet, Zinc-Coated Galvanized or Zinc-Iron Alloy-Coated Galvannealed by the Hot-Dip Process	IBC	IRC					
A690/690M-07(2012)	Standard Specification for High Strength Low-Alloy Nickel, Copper Phosphorus Steel H-Piles and Sheet Piling with Atmospheric Corrosion Resistance for Use in Marine Environments	IBC						
A706/A 706M-09B	Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement	IBC	IRC					
A722/A 722M-~~07~~ 12	Specification for Uncoated High-Strength Steel Bar for Prestressing Concrete	IBC						

A733-2003(2009)e1*	Specification for Welded and Seamless Carbon Steel and Austenitic Stainless Steel Pipe Nipples	IPC						
A755/A 755M-03(2008) 2011	Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process and Prepainted by the Coil-coating Process for Exterior Exposed Building Products	IBC	IRC					
A767/A 767M-05 09	Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement	IBC						
A775/A 775M-07b	Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process and Prepainted by the Coil-coating Process for Exterior Exposed Building Products	IBC						
A778-01(2009)e1	Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products	IPC	IRC					
A792/A 792M-08 10	Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process	IBC	IRC					
A875/A 875M-06 10	Standard Specification for Steel Sheet Zinc-5%, Aluminum Alloy-Coated by the Hot-Dip Process	IBC	IRC					
A888-09 11	Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application	IPC	IPSDC	IRC				
A913/A 913M-07 11	Specification for High-Strength Low-Alloy Steel Shapes of Structural Quality, Produced by Quenching and Self-Tempering Process (QST)	IBC						
A924/A 924M-08a 2010a	Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot Dip Process	IBC	IRC					
A951/A951M-06 11	Specification for Steel Wire Masonry Joint Reinforcement	IRC						
A992/A 992M-06a 11	Standard Specification for Structural Shapes	IBC						
A996/A 996M-2009b	Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement	IRC						
A1003/A 1003M-08 12	Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-formed Framing Members	IRC						
A1008/A1008M-07 12	Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Solution Hardened and Bake Hardenable	IBC						
B42-02e01 10	Specification for Seamless Copper Pipe, Standard Sizes	IPC	IBC	IRC	IFC			
B43-98(2004) 09	Specification for Seamless Red Brass Pipe, Standard Sizes	IPC	IBC	IRC	IFC	IMC		
B68-02 11	Specification for Seamless Copper Tube, Bright Annealed	IBC	IFC	IMC				
B75-02 11	Specification for Seamless Copper Tube	IPC	IPSDC	IRC	IMC			

B88-~~03~~ 09	Specification for Seamless Copper Water Tube	IPC	IBC	IPSDC	IRC	IMC	IFC	IPSPC
B101-~~07~~ 12	Specification for Lead-Coated Copper Sheet and Strip for Building Construction	IBC	IRC					
B135-~~08a~~ 10	Specification for Seamless Brass Tube	IRC	IMC					
B152/B 152M-~~06a~~ 09	Specification for Copper Sheet, Strip Plate and Rolled Bar	IPC						
B209-~~07~~ 10	Specification for Aluminum and Aluminum-Alloy Steel and Plate	IBC	IRC					
B210-~~04~~ 12	Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes	IFGC						
B227-~~04~~ 10	Specification for Hard-Drawn Copper-Clad Steel Wire	IRC						
B241/B 241M-~~02~~ 10	Specification for Aluminum and Aluminum-Alloy, Seamless Pipe and Seamless Extruded Tube	IFGC						
B251-~~02e01~~ 10	Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube	IPC	IPSDC	IBC	IFC	IRC	IMC	
B302-~~07~~ 12	Specification for Threadless Copper Pipe, Standard Sizes	IPC	IRC	IMC				
B370-~~09~~ 12	Specification for ~~Cold Rolled~~ Copper Sheet and Strip for Building Construction	IBC	IRC					
B447-~~07~~ 12a	Specification for Welded Copper Tube	IPC	IRC					
B633-~~07~~ 11	Specification for Electodeposited Coatings of Zinc on Iron and Steel	IRC						
B687-99~~(2005)e01~~ (2011)	Specification for Brass, Copper, and Chromium-Plated Pipe Nipples	IPC						
B695-04(2009)	Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel	IBC	IRC					
B813-~~00(2009)~~ 10	Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube	IPC	IPSDC	IRC	IMC			
B828-02(2010)	Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings	IPC	IPSDC	IRC				
C4-04~~e01~~ (2009)	Specification for Clay Drain Tile and Perforated Clay Drain Tile	IPC	IPSDC	IRC				
C5-~~03~~ 10	Specification for Quicklime for Structural Purposes	IBC	IRC					
C14-~~07~~ 11	Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe	IPC	IPSDC	IRC				
C22/C 22M-00~~(2005)e01~~ (2010)	Specification for Gypsum	IBC	IRC					
C27-98(2008)	Specification for ~~Standard~~ Classification of Fireclay and High-Alumina Refractory Brick	IBC	IRC					
C28/C 28M-~~00(2005~~) 10	Specification for Gypsum Plasters	IBC	IRC					
C31/C 31M-~~08b~~ 12	Practice for Making and Curing Concrete Test Specimens in the Field	IBC						
C33/C33M-~~08~~ 11a	Specification for Concrete Aggregates	IBC	IRC					

C34–~~03~~ 10	Specification for Structural Clay Load-Bearing Wall Tile	IBC	IRC					
C35-~~01(2005)~~/C35M-1995(2009)	Specification for Inorganic Aggregates for Use in Gypsum Plaster	IBC	IRC					
~~C36/C 36M-03~~ Withdrawn Replaced	Specification for Gypsum Wallboard	IBC						
~~C37/C 37M-01~~ Withdrawn Replaced	Specification for Gypsum Lath	IBC						
C42/C 42M-~~04~~ 12	Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	IBC						
C55-~~06e01~~ 2011	Specification for Concrete Building Brick	IBC	IRC					
C56-~~05~~ 2010	Specification for Structural Clay Non-Load-Bearing Tile	IBC						
C59/C 59M-**00(2006)**	Specification for Gypsum Casting Plaster and Molding Plaster	IBC	IRC					
C61/C 61M-00(2006) (2011)	Specification for Gypsum Keene's Cement	~~IBC~~	IRC					
C62-~~08~~ 12	Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)	IBC	IRC					
C67-~~08~~ 12	Test Methods of Sampling and Testing Brick and Structural Clay Tile	IBC						
C73-~~05~~ 10	Specification for Calcium Silicate ~~Face~~ Brick (Sand-Lime Brick)	IBC	IRC					
C76-~~08a~~ 12a	Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	IPC	IPSDC	IRC				
C90-~~08~~ 12	Specification for Loadbearing Concrete Masonry Units	IBC	IRC	IECC				
C91-~~05~~ 12	Specification for Masonry Cement	IBC	IRC					
C94/C 94M-~~09~~ 12	Specification for Ready-Mixed Concrete	IBC	IRC					
C109/C 109M-~~05~~ 2001b	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)	IBC						
C126-~~99(2005)~~ 12	Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units	IBC						
C129-~~06~~ 11	Specification for Nonload-bearing Concrete Masonry Units	IBC	IRC					
C140-~~08a~~ 2012a	Test Method Sampling and Testing Concrete Masonry Units and Related Units	IBC	IRC					
C143/C 143M-~~08~~ 2010a	Test Method for Slump of Hydraulic Cement Concrete	IRC						
~~C145-85~~ *Withdrawn Combined*	Specification for Solid-Load Bearing Concrete Masonry Units	IRC						
C150-~~07~~ 12	Specification for Portland Cement	IBC	IRC					
C172/C172M-~~08~~ 10	Practice for Sampling Freshly Mixed Concrete	IBC						

C199-84 ~~(2005)~~ (2011)	Test Method for Pier Test for Refractory Mortars	IBC	IRC					
C203-~~5a~~ (2012)	Standard Test Methods for Breaking Load and Flexural Properties of Block-type Thermal Insulation	IRC						
C206-03(2009)	Specification for Finishing Hydrated Lime	IBC						
C207-~~06~~ 2011	Specification for Hydrated Lime for Masonry Purposes	IBC	IRC					
C208-~~2008a~~ 12	Specification for Cellulosic Fiber Insulating Board	IBC	IRC					
C212-~~00(2006)~~10	Specification for Structural Clay Facing Tile	IBC						
C216-~~07a~~ 12	Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)	IBC	IRC					
C270-~~08a~~ 12a	Specification for Mortar for Unit Masonry	IBC	IRC					
C272-~~01(2007)~~/C272M-12	Standard Test Method for Water Absorption of Core Materials for ~~Structural~~ Sandwich Constructions	IRC						
C273/C273M-~~07a~~ 11	Standard Test Method for Shear Properties of Sandwich Core Materials	IRC						
C296-~~00(2004)~~ /C296M-00(2009)e1	Specification for Asbestos-Cement Pressure Pipe	IPC	IRC					
C315-07(2011)	Specification for Clay Flue Liners and Chimney Pots	IBC	IRC	IMC	IFGC			
C317/C 317M-00~~(2005)~~ 2010	Specification for Gypsum Concrete	IBC						
C330-~~05~~/**C330-2009**	Specification for Lightweight Aggregates for Structural Concrete	IBC						
C331-~~05~~ /C331M-2010	Specification for Lightweight Aggregates for Concrete Masonry Units	IBC						
C406-~~06e01~~ /C406M-2010	Specification for Roofing Slate	IBC	IRC					
C411-~~05~~ 11	Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation	IRC	IMC					
C425-04(2009)	Specification for Compression Joints for Vitrified Clay Pipe and Fittings	IPC	IPSDC	IRC				
C428/C428M-05(200~~6~~11)e1	Specification for Asbestos-Cement Nonpressure Sewer Pipe	IPC	IPSDC	IRC				
C443-~~05a~~ 12	Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets	IPC	IPSDC	IRC				
C472-99~~(2004)~~ (2009)	Specification for Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete	IBC						
C473-~~07~~ 12	Test Methods for Physical Testing of Gypsum Panel Products	IBC						
C474-~~05~~ 12	Test Methods for Joint Treatment Materials for Gypsum Board Construction	IBC						
C475/C 475M-~~02(2007)~~ 12	Specification for Joint Compound and Joint Tape for Finishing	IBC	IRC					

	Gypsum ~~Wall~~ Board							
C476-~~08~~ 10	Specification for Grout for Masonry	IRC						
C496/C496M-~~96~~ 11	Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens	IEBC						
C503-~~08a~~ 10	Specification for Marble Dimension Stone (Exterior)	IBC						
C508/C508M-00~~(2004)~~ (2009)e1	Specification for Asbestos-Cement Underdrain Pipe	IPC	IRC					
C514-04(2009)e1	Specification for Nails for the Application of Gypsum Board	IBC	IRC					
C516-08~~a~~	Specification for Vermiculite Loose Fill Thermal Insulation	IBC						
C518-~~04~~ 10	Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	IBC	IECC					
C547-~~07e1~~ 12	Specification for Mineral Fiber Pipe Insulation	IBC						
C549-06(2012)	Specification for Perlite Loose Fill Insulation	IBC						
C552-~~07~~ 12b	Standard Specification for Cellular Glass Thermal Insulation	IBC	IRC					
C557-03(2009)e~~0~~1	Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing	IBC	IRC					
C564-~~08~~ 12	Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings	IPC	IPSDC	IRC				
C568-~~08a~~ 10	Specification for Limestone Dimension Stone	IBC						
C578—~~08b~~12a	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation	IBC	IRC					
C587-04~~(2009)~~	Specification for Gypsum Veneer Plaster	IBC	IRC					
C595/C95M-~~08a~~ 2012e1	Specification for Blended Hydraulic Cements	IBC	IRC					
C615/C615M-~~03~~ 2011	Specification for Granite Dimension Stone	IBC						
C616/C616M-~~08a~~ 2010	Specification for Quartz Dimension Stone	IBC						
C629-~~08~~ 2010	Specification for Slate Dimension Stone	IBC						
~~C630/C 630M-03~~ *Withdrawn replaced by C1396/C1396M-11*	Specification for Water-Resistant Gypsum Backing Board	IBC	IRC					
C635/C635M-~~07~~ 12	Specification for the Manufacturer, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings	IBC						
C645-~~08a~~ 11A	Specification for Nonstructural Steel Framing Members	IBC	IRC					
C652-~~09~~ 12	Specification for Hollow Brick (Hollow Masonry Units Made from Clay or Shale)	IBC	IRC					
C685/C 685M-~~07~~ 11	Specification for Concrete Made by Volumetric Batching and	IRC						

	Continuous Mixing							
C700-~~07a~~ 11	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated	IPC	IPSDC	IRC				
C726-~~05e1~~ 12	Standard Specification for Mineral Wool Roof Insulation Board	IBC						
C728-05(2010)	Standard Specification for Perlite Thermal Insulation Board	IBC	IRC					
C744-~~08~~ 11	Specification for Prefaced Concrete and Calcium Silicate Masonry Units	IBC						
C754-~~08~~ 11	Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products	IBC						
C836/C836M-~~06~~ 12	Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course	IBC	IRC					
C840-~~08~~ 11	Specification for Application and Finishing of Gypsum Board	IBC						
C841-03(2008)E1	Specification for Installation of Interior Lathing and Furring	IBC						
C842-~~05~~(2010)E1	Specification for Application of Interior Gypsum Plaster	IBC						
C843-99(~~2006~~) (2012)	Specification for Application of Gypsum Veneer Plaster	IBC	IRC					
C844-04(2010)	Specification for Application of Gypsum Base to Receive Gypsum Veneer Plaster	IBC	IRC					
C847-~~09~~ 12	Specification for Metal Lath	IBC	IRC					
C887-05(2010)	Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar	IBC	IRC					
C897-05(2009)	Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters	IBC	IRC					
C920-~~08~~ 11	Standard Specification for Elastomeric Joint Sealants	IBC	IRC	IgCC				
C926-~~06~~ 12A	Specification for Application of Portland Cement-Based Plaster	IBC	IRC					
C931/C 931M-04 *Withdrawn Replaced by C1396/C1396M-11*	Specification for Exterior Gypsum Soffit Board	IBC						
C932-06	Specification for Surface-Applied Bonding Compounds ~~Agents~~ for Exterior Plastering	IBC						
C933-~~07b~~ 11	Specification for Welded Wire Lath	IBC						

C946-91 (2001) 10	Specification for Practice for Construction of Dry-stacked, Surface-Bonded Walls	IBC						
C954-07 11	Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 inch (0.84 mm) to 0.112 inch (2.84 mm) in Thickness	IBC	IRC					
C955-09 11C	Standard Specification for Load-bearing Transverse and Axial Steel Studs, Runners Tracks, and Bracing or Bridging, for Screw Application of Gypsum Panel Products and Metal Plaster Bases	IBC	IRC					
C956-04(2010)	Specification for Installation of Cast-in-Place Reinforced Gypsum Concrete	IBC						
C957-06 10	Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface	IBC	IRC					
C989/C989M-06 12A	Specification for Ground Granulated Blast Furnace Slag Cement for Use in Concrete and Mortars	IBC						
C1007-08a 11a	Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories	IBC						
C1019-09 11	Test Method for Sampling and Testing Grout	IBC						
C1029-08 10	Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation	IBC	IRC					
C1032-06(2011)	Specification for Woven Wire Plaster Base	IBC	IRC					
C1047-09 10A	Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base	IBC	IRC					
C1053-00(2005) (2010)	Specification for Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications	IPC						
C1063-08 12C	Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster	IBC	IRC					
C1088-09	Specification for Thin Veneer Brick Units Made From Clay or Shale	IBC						
C1072-06 11	Standard Text Method for Measurement of Masonry Flexural Bond Strength	IBC						
C1107/C1107-08 11	Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)	IRC						

C1116/C1116M-~~08a~~ 10	Standard Specification for Fiber - Reinforced Concrete and Shotcrete	IRC						
C1157-~~08a~~ 11	Standard Performance Specification for Hydraulic Cement	IBC						
C1167-~~03~~ 11	Specification for Clay Roof Tiles	IBC	IRC					
C1173-~~08~~ 10	Specification for Flexible Transition Couplings for Underground Piping Systems	IPC	IPSDC	IRC				
C1178/C 1178M-~~06~~ 11	Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel	IBC	IRC					
C1186-08	Specification for Flat ~~Nonasbestos~~ Fiber Cement Sheets	IBC	IRC					
C1218/C1218M-99(2008)	Test Method for Water-Soluble Chloride in Mortar and Concrete	IBC						
C1240-~~05~~ 12	Specification for Silica Fume Used in Cementitious Mixtures	IBC						
C1261-~~07~~ 10	Specification for Firebox Brick for Residential Fireplaces	IBC	IRC					
C1277-~~08~~ 11	Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings	IPC	IPSDC	IRC				
C1278/C1278M-07a(2011)	Specification for Fiber-Reinforced Gypsum Panels	IBC	IRC					
C1280-~~09~~ 12A	Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing	IBC						
C1283-~~07a~~ 11	Practice for Installing Clay Flue Lining	IBC	IRC					
C1288-99~~(2004)e1~~ 2010	Standard Specification for Discrete Non-Asbestos Fiber-Cement Interior Substrate Sheets	IBC	IRC					
C1289~~—08~~ 12a	Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board	IBC	IRC					
C1314-~~07~~ 11A	Test Method for Compressive Strength of Masonry Prisms	IBC						
C1325-08b	Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cement ~~Interior Substrate Sheets~~ Backer Units	IBC	IRC					
C1328/C1328M-~~05~~ 12	Specification for Plastic (Stucco Cement)	IBC	IRC					

C1364-~~07~~ 10B	Standard Specification for Architectural Cast Stone	IBC						
C1371-04A(2010)E1	Standard Test Method For Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers	IECC	IgCC					
C1373/C1373--~~03~~ 11	Standard Practice for Determination of Thermal Resistance of Attic Insulation Systems Under Simulated Winter Conditions	IECC						
C1396/1396M-~~06a~~ 11	Specification for Gypsum Ceiling Board	IBC	IRC					
C1405-~~08~~ 12	Standard Specification for Glazed Brick (Single Fired, Solid Brick Units)	IBC						
C1492-03(2009)	Standard Specification for Concrete Roof Tile	IBC	IRC					
C1513-~~04~~ 12	Standard Specification for Concrete Roof Tile	IRC						
C1540-~~08~~ 11	Specification for Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings	IPC						
C1611/C 1611M-~~05~~ 09BE1	Standard Test Method for Slump Flow of Self-Consolidating Concrete	IBC						
C1629/C1692M—06(2011)	Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels	IBC						
C1658/C1658-~~06~~ 12	Standard Specification for Glass Mat Gypsum Panels	IBC	IRC					
C1563-08	Standard Test Method for Gaskets for Use in Connection with Hub and Spigot Cast Iron Soil Pipe and Fittings for Sanitary Drain, Waste, Vent and Storm Piping Applications	IPC						
D25-~~99(2005)~~12	Specification for Round Timber Piles	IBC						
D56-05(2010)	Test Method for Flash Point by Tag Closed Tester	IBC						
D86-~~09~~ 2011b	Test Method for Distillation of Petroleum Products at Atmospheric Pressure	IBC	IFC					
D92-~~05a~~ 12	Test Method for Flash and Fire Points by Cleveland Open Cup Tester	IFC						
D93-~~08~~ 11	Test Method for Flash Point by Pensky-Martens Closed Cup Tester	IBC	IFC	IMC				

D226/D226M-~~06~~ 09	Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing	IBC	IRC					
D227/D227M-03(2011)E1	Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing	IBC	IRC					
D635-~~06~~ 10	Test Method for Rate of Burning and/or Extent and Time of Burning of ~~Self-Supporting~~ Plastics in a Horizontal Position	IBC						
D1003-~~07~~ 11e1	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics	IECC						
D1248-~~05~~ 12	Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable	IRC						
D1557-~~07~~ 12	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft3(2,700kN-m/m3))	IBC						
D1593-09	Non-rigid vinyl chloride plastic film and sheeting	ISPSC						
D1621-~~04a~~ 10	Standard Test Method for Compressive Properties Of Rigid Cellular Plastics	IRC						
D1623-~~03~~ 09	Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	IRC						
D1693-~~08~~ 12	Test Method for Environmental Stress-Cracking of Ethylene Plastics	IRC	IMC					
D1784-~~08~~ 11	Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Choloride) (CPVC) Compounds	IRC						
D1785-~~06~~ 12	Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120	IPC	IMC	IRC	ISPSC			
D1863/D1863M-05(2011)E1	Specification for Mineral Aggregate Used on Built-Up Roofs	IBC	IRC					
D1869-95 ~~(2005)e1~~ (2010)	Specification for Rubber Rings for Asbestos-Cement Pipe	IPC	IPSDC	IRC				
D1929-~~96(2001)e01~~ 12	Test Method for Determining Ignition ~~Properties~~ Temperature of Plastics	IBC						
D1970/D1970M-~~09~~ 11	Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roof Underlayment for Ice Dam Protection	IBC	IRC					
D2126-~~04~~ 09	Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging	IRC						
D2216-~~05~~ 10	Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass	IBC						
D2235-04 (2011)	Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings	IPC	IPSDC	IMC	IRC			

D2239-~~03~~ 12	Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter	IPC	IRC					
D2241-~~05~~ 09	Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series)	IPC	IRC	IMC	ISPSC			
D2412-~~02(2008)~~ 11	Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading	IRC	IMC					
D2487-~~06e1~~ 2011	Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	IBC						
D2513-~~08b~~ 12	Specification for ~~Thermoplastic~~ Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings	IRC	IMC	IFGC				
D2559-~~04~~ 12A	Standard Specification for Adhesives for ~~Structural Laminated~~ Bonded Structural Wood Products for Use under Exterior (West Use) Exposure Conditions	IRC						
D2564-~~04e01~~ 12	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems	IPC	IPSDC	IRC	IMC			
D2626/D2626M-04(2012)E1	Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing	IBC	IRC					
D2661-~~08~~ 11	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings	IPC	IPSDC	IRC				
D2665-~~09~~ 12	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings	IPC	IPSDC	IRC				
D2672-96a~~(2003)~~ (2009)	Specification for Joints for IPS PVC Pipe Using Solvent Cement	IPC	IRC	ISPSC				
D2683-04 10	Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing	IPC	IRC	IMC				
D2729-~~03~~ 11	Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings	IRC	IPC	IPSDC				
D2737-~~03~~ 12E1	Specification for Polyethylene (PE) Plastic Tubing	IPC	IRC					
D2822/D2822M-05(2011)E1	Specification for Asphalt Roof Cement, Asbestos Containing	IBC	IRC					
D2823/D2823M-05 (2011)E1	Specification for Asphalt Roof Coatings, Asbestos Containing	IBC	IRC					
D2824-06(2012)E1	Specification for Aluminum-Pigmented Asphalt Roof Coatings, Non-fibered, Asbestos Fibered, and Fibered without Asbestos	IRC	IBC					
D2837-~~08~~ 11	Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products	IRC	IMC					
D2843-~~99(2004)e01~~ 10	Test for Density of Smoke from the Burning or Decomposition of Plastics	IBC						
D2846/D 2846M-09BE1	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic	IPC	IRC	IMC	ISPSC			

	Hot- and Cold-Water Distribution Systems							
D2855-96~~(2002)~~ (2010)	Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings	IPC	IPSDC	IRC				
D2859-06 (2011)	Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials	IBC	IFC					
D2898-~~(04)~~ 10	Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing	IBC	IRC	IWUIC				
D2949-~~01a(2008)~~ 10	Specification for 3.25-in. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings	IPC	IPSDC	IRC				
D2974-07~~a~~ A	Standard Test Methods for Moisture, Ash and Organic Matter of Peat and other Organic Soils	IgCC						
D3035-~~08~~ 12	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter	IPC	IRC	IMC				
D3139-98~~(2005)~~ 2011	Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals	IPC						
D3161/D3161M-~~09~~ 12	Test Method for a Wind Resistance of Asphalt Shingles (Fan Induced Method)	IBC	IRC					
D3200-74~~(2005)~~ 2012	Standard Specification and Test Method for Establishing Recommended Design Stresses for Round Timber Construction Poles	IBC						
D3201-08AE1	Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Based Products	IBC	IRC	IWUIC				
D3261-~~03~~ 12	Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings Plastic Pipe and Tubings	IMC	IPC					
D3278-1996~~(2004)e1~~ (2011)	Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus	IBC	IFC	IMC				
D3311-~~08~~ 11	Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns	IPC	IRC					
D3350-~~08~~ 12	Specification for Polyethylene Plastics Pipe and Fittings Materials	IRC	IMC					
D3462/3462M-~~09~~ 10A	Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules	IBC	IRC					
D3679-~~09~~ 11	Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding	IBC	IRC					
D3689-07	Test Methods for Deep Foundations ~~Piles~~ Under Static Axial Tensile Load	IBC						
D3737-~~08~~ 09E1	Practice for Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)	IBC	IRC					
D3805/D3805M-97~~(2003)e1~~ (2009)	Standard Guide for Application of Aluminum-Pigmented Asphalt Roof Coatings	IBC						
D3909/D3909M-97b~~(2004)~~ 2012e1	Specification for Asphalt Roll Roofing (Glass Felt) Surfaced with Mineral Granules	IBC	IRC	IWUIC				
D3957-~~06~~ 09	Standard Practices for Establishing Stress Grades for Structural Members Used In Log	IBC	IRC					

	Buildings							
D4022/D4022M-2007(2012)E1	Specification for Coal Tar Roof Cement, Asbestos Containing	IBC	IRC					
D4068-01 09	Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane	IPC	IRC					
D4272-08a 09	Test Method for Total Energy Impact of Plastic Films by Dart Drop	IBC						
D4318-05 10	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils	IBC	IRC					
D4434/D4434M-09 12	Specification for Poly (Vinyl Chloride) Sheet Roofing	IBC	IRC					
D4479/D4479M-07(2012)E1	Specification for Asphalt Roof Coatings - Asbestos-Free	IBC	IRC					
D4551-96 (2008)e1 12	Specification for Poly (Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-Containment Membrane	IPC	IRC					
D4586/D4586M-07(2012)E1	Specification for Asphalt Roof Cement, Asbestos-Free	IBC	IRC					
D4601/D4601M-08 042012E1	Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing	IBC	IRC					
D4637/D4637M-08 12	Specification for EPDM Sheet Used in Single-Ply Roof Membrane	IBC	IRC					
D4829-08a 11	Test Method for Expansion Index of Soils	IBC	IRC					
D4869/D4869M-05(2011)e01	Specification for Asphalt-Saturated (Organic Felt) Underlayment Used in Steep Slope Roofing	IBC	IRC					
D4897/D4897M-01(2009)	Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing	IBC	IRC					
D4945-08 12	Test Methods for High-Strain Dynamic Testing of Deep Foundations	IBC						
D5019-07a Withdrawn/no replacement	Specification for Reinforced CSM Polymeric Sheet Used in Roofing Membrane	IBC	IRC					
D5055-10 12	Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists	IBC	IRC	IgCC				
D5197-09E1	Test Method for Determination of Formaldehyde and Other Carbonyl Compounds in Air (Active Sampler Methodology)	IgCC						
D5456-10 12	Standard Specification for Evaluation of Structural Composite Lumber Products	IBC	IRC	IgCC				
D5516-03 09	Test Method of Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to the Elevated Temperatures	IBC	IRC					
D5643/D5643M-06 (2012)E1	Specification for Coal Tar Roof Cement, Asbestos-Free	IBC	IRC					
D5664-08 10	Test Methods for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength	IBC	IRC					

	Properties of Fire-Retardant Treated Lumber							
D6162-2000a(2008)	Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements	IBC	IRC					
D6164/D6164M-05e1 11	Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements	IBC	IRC					
D6222/D6222M-08 11	Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements	IBC	IRC					
D6223D6223M-02(2009)E1	Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements	IBC	IRC					
D6662-09	Standard Specification for Polyolefin-Based Plastic Lumber Decking Boards	IWUIC						
D6694-08	Standard Specification for Liquid-applied Silicone Coating Used In Spray Polyurethane Foam Roofing Systems	IBC	IRC					
D6698-07 12	Standard Test Method for On-Line Measurement of Turbidity Below 5 NTU in Water	IgCC						
D6754/D6745M-02 10	Standard Specification for Ketone Ethylene Ester Based Sheet Roofing	IBC	IRC					
D6757-07	Standard Specification for Inorganic Underlayment Felt Containing Inorganic Fibers used in Steep-Slope Roofing Products	IBC	IRC					
D6878-08e1/D6878-11A	Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing	IBC	IRC					
D6886-11 12	Standard Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis	IgCC						
D7032-08 10a	Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)	IRC	IWUIC					
D7158-08d /D7158M 2011	Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method)	IBC	IRC					
E84-09 2012c	Test Method for Surface Burning Characteristics of Building Materials	IBC	IFC	IRC	IMC			
E96/E96M-05 10	Test Method for Water Vapor Transmission of Materials	IBC	IRC					
E108-07a 2011	Test Methods for Fire Tests of Roof Coverings	IBC	IRC					
E119-2008a 2012a	Standard Test Methods for Fire Tests of Building Construction and Materials	IBC	IRC	IMC	IWUIC			

E136-~~09~~ 2012	Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C	IBC	IRC	IMC	IWUIC			
E519-~~00e1~~ /E519M 2010	Standard Test Method for Diagonal Tension (Shear) in Masonry Assemblages	IEBC						
E605-93(~~2006~~) (2011)	Test Method for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members	IBC						
E681-~~04~~ 2009	Test Method for Concentration Limits of Flammability of Chemicals (Vapors and Gases)	IBC	IFC					
E736-00(~~2006~~) (2011)	Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members	IBC						
E779—~~03~~ 10	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization	IECC	IgCC					
E814-~~08b~~ 2011a	Test Method of Fire Tests of Through-Penetration Firestops	IBC	IRC	IMC				
E970-~~08a~~ 2010	Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source	IBC	IRC					
E1300-~~07e01~~ 12AE1	Practice for Determining Load Resistance of Glass in Buildings	IBC						
E1332-90(2003)	Standard Classification for the Determination of Outdoor-Indoor Transmission Class	IgCC						
E1354-~~09~~ 2011b	Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter	IBC	IFC					
E1465-08A	Standard Practice for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings	IRC						
E1509-~~04~~ 12	Standard Specification for Room Heaters, Pellet Fuel-Burning Type	IRC	IMC	IgCC				
E1529-~~06~~ 10	Test Method for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies	IFC						
E1537-~~07~~ 12	Test Method for Fire Testing of Upholstered Furniture	IFC						
E1590-~~07~~ 12	Test Method for Fire Testing of Mattresses	IFC						
E1592-05(2012)	Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	IBC						
E1602-~~03~~ 02(2010)E1	Guide for Construction of Solid Fuel-Burning Masonry Heaters	IBC	IRC					
E1643-~~10~~ 11	Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs	IgCC						

E1677-~~05~~ 11	Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls	IECC						
E1966-07A(2011)	Test Method for Fire resistant Joint Systems	IBC	IFC					
E1980-~~01~~ 11	Standard Practice for Calculating Solar Refluctance Index of Horizontal and Low-sloped Opaque Surfaces	IECC	IgCC					
E1996-~~09~~ 12	Specification for Performance of Exterior Windows, ~~Glazed~~ Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes	IBC	IRC	IFC				
E2072-~~04~~ 10	Standard Specification for Photolumiscent (Phosphorescent) Safety Markings	IBC	IFC					
E2174-~~09~~ 10AE1	Standard Practice for On-Site Inspection of Installed Fire Stops	IBC	IEBC					
E2178-~~03~~ 11	Standard Test Method for Air Permeance of Building Materials	IRC	IECC					
E2231-~~04~~ 09	Standard Practice for Specimen Preparation and Mounting of Pipe and Duct Insulation Materials to Assess to Surface Burning Characteristics	IRC	IMC					
E2273-03(2011)	Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies	IBC	IRC					
E2307 -~~04~~ 12	Standard Test Method for Determining Fire Resistance of a Perimeter ~~Fire Barriers~~ Joint System Between an Exterior Wall Assembly and a Floor Assembly Using the Intermediate-Scale, Multi-story Test Apparatus[1].	IBC						
E2336-04(2009)	Standard Test Methods Fire Resistive Grease Duct Enclosure Systems	IMC						
E2357-~~05~~ 11	Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies	IECC						
E2393-~~09~~ 10A	Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barrier	IBC	IEBC					
E2404—~~08~~ 12	Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics	IBC	IFC					
E2568—09e1	Standard Specification of PB Exterior Insulation and Finish Systems ~~(EIFS)~~	IBC	IRC					
E2573—~~07a~~ 12	Standard Practice for Specimen Preparation and Mounting of Site-fabricated Stretch Systems to Assess Surface Burning Characteristics	IBC	IFC					
E2599-~~09~~ 11	Standard Practice for Specimen Preparation and Mounting of Reflective Insulation Materials and Vinyl Stretch Ceiling Materials ~~Radiant Barrier~~ for Building Applications to Assess	IBC						

	Surface Burning Characteristics							
E2634-~~08~~ 11	Standard Specification for Flat Wall Insulating Concrete Form (ICF) Systems	IBC	IRC					
F409-~~02(2008)~~ 12	Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings	IPC	IRC					
F437-~~06~~ 09	Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80	IPC	IRC	IMC	ISPSC			
F438-~~04~~ 09	Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40	IPC	IRC	IMC	ISPSC			
F439-~~06~~ 12	Specification for ~~Socket-Type~~ Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80	IPC	IRC	IMC	ISPSC			
F441/F 441M-~~02(2008)~~ 12	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80	IPC	IRC	IMC				
F442/F 442M-~~99(2005)e1~~ 12	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)	IPC	IRC	IMC				
F477-~~08~~ 10	Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe	IPC	IPSDC	IRC				
F493-~~04~~ 10	Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings	IPC	IRC	IMC				
F547-~~06~~ (2012)	Terminology of Nails for Use with Wood and Wood-based Materials	IBC						
F656-~~08~~ 10	Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings	IPC	IPSDC	IRC				
F714-~~08~~ 12E1	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter	IPC	IRC	IMC				
F876-~~08b~~ 10E1	Specification for Crosslinked Polyethylene (PEX) Tubing	IPC	IRC	IMC				
F877-~~07~~ 11	Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems	IPC	IRC	IMC				
F891-~~07~~ 10	Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core	IPC	IPSDC	IRC				
F1055-~~98(2006)~~ 11	Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing	IPC	IRC	IMC				
F1281-~~07~~ 11	Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX)	IPC	IRC	IMC				

	Pressure Pipe							
F1282-~~06~~ 10	Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe	IPC	IMC	IRC				
F1346-91 ~~(2003)~~ (2010	Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs	IBC	IRC	IPMC	IgCC	ISPSC		
F1484-~~05~~ 12	Standard Test Methods for Performance of Steam Cookers	IgCC						
F1488-~~03~~ 09E1	Specification for Coextruded Composite Pipe	IPC	IPSDC	IRC	IgCC			
F1496-~~99(2005)e1~~ 12	Standard Test Method for Performance of Convection Ovens	IgCC						
F1499-~~01(2008)~~ 12	Specification for Coextruded Composite Drain, Waste, and Vent Pipe (DWV)	IPSDC						
F1667-05 11A E1	Specification for Driven Fasteners: Nails, Spikes, and Staples	IBC	IRC					
F1673-~~04(2005)~~ 10	Standard Specification for Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems	IPC						
F1807-~~08~~ 12	Specifications for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing	IPC	IRC	IMC				
F1924-~~05~~ 12	Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing	IMC						
F1960-~~09~~ 12	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing	IPC	IRC	IMC				
F1974-~~08~~ 09	Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe	IPC	IRC	IMC				
F1986-01~~(2006)~~ (2011)	Specification for Multilayer Pipe, Type 2, Compression Fittings and Compression Joints for Hot and Cold Drinking Water Systems	IPC	IRC					
F2080-~~08~~ 09	Specification for Cold-Expansion Fittings with Metal Compression-Sleeves for Cross-linked Polyethylene (PEX) Pipe	IPC	IRC					

F2098-08	Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-Linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings	IPC	IRC					
F2159-~~05~~ 11	Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing	IPC						
F2200—~~05~~ 11B	Standard Specification for Automated Vehicular Gate Construction	IRC	IFC					
F2262-~~05~~ 09	Standard Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Tubing OD Controlled SDR9	IPC	IRC					
F2306/F 2306M-~~08~~ 11	Specification for 12" to 60" 300 to 1500 mm annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications	IPC						
F2387-04(2012)	Standard Specification for Manufactured Safety Vacuum Release Systems, Swimming (SVRS) for Pools, Spas and Hot Tubs	IBC						
F2389-~~07e1~~ 10	Specification for Pressure-Rated Polypropylene (PP) Piping Systems	IPC	IRC	IMC				
F2434-~~08~~ 09	Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp ring for SDR9 Cross-Linked Polyethylene (PEX) Tubing and SDR9 Cross-Linked Polyethylene/Aluminum/Cross-Linked Polyethylene (PEX-AL-PEX) Tubing	IPC	IRC	IMC				
F2735-09	Standard Specification for Plastic Insert Fittings for SDR9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing	IMC	IPC	IRC				
F2769-~~09~~ 10	Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems	IMC	IPC	IRC				

AWCI — The Association of the Wall & Ceiling Industries International

Standard Reference Number	Title	Referenced in Code(s):						
12-B-~~98~~ 04	~~Technical Manual 12-B~~ Standard Practice for the Testing and Inspection of Field Applied Thin Film Intumescent Fire-Resistive Materials; an Annotated Guide, ~~First~~ Second Edition	IBC						

AWPA — American Wood Protection Association

Standard Reference Number	Title	Referenced in Code(s):

M4—~~08~~ 11	Standard for the Care of Preservative-Treated Wood Products	IBC	IRC					
U1—~~11~~ 14	USE CATEGORY SYSTEM: User Specification for Treated Wood except Section 6, Commodity Specification H	IBC	IRC					
AWS	**American Welding Society**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
A5.8-~~04~~M/A5.8:2011	Specifications for Filler Metals for Brazing and Braze Welding	IRC	IMC	IPC				
D1.3-~~98~~/D1.3M:2008	Structural Welding Code-Sheet Steel	IBC						
D1.4-~~1998~~ /D1.4M:2011	Structural Welding Code - Reinforcing Steel Including Metal Inserts and Connections in Reinforced Concrete Construction	IBC						
AWWA	**American Water Works Association**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
C104-~~98~~/A21.4-08	~~Standard for~~ Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water	IRC	IPC					
C110/A21.10-~~03~~ 12	~~Standard for~~ Ductile-Iron and Gray-Iron Fittings~~, 3 in through 48 Inches for Water~~	IRC	IPC	IMC				
C111-~~00~~/A21.11-12	~~Standard for~~ Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings	IPC	IFGC					
C115-A21.15-~~99~~ 11	~~Standard for~~ Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges	IRC	IPC	IMC				
C151/A21.51-~~02~~ 09	~~Standard for~~ Ductile-Iron Pipe, Centrifugally Cast for Water	IRC	IPC	IMC				
C153/A21.53-~~00~~ 11	~~Standard for~~ Ductile-Iron Compact Fittings for Water Service	IRC	IPC	IMC				
C510-~~00~~ 07	Double Check Valve Backflow Prevention Assembly	IRC	IPC					
C511-~~00~~ 07	Reduced-Pressure Principle Backflow Prevention Assembly	IRC	IPC					
C651-~~99~~ 05	Disinfecting Water Mains	IPC						
C652-~~02~~ 11	Disinfection of Water-Storage Facilities	IPC						
BHMA	**Builders Hardware Manufacturers' Association**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						

A 156.19-~~2007~~ 2013	Power Assist and Low Energy Power Operated Doors	IBC	IFC						

CDPH — California Department of Public Health

Standard Reference Number	Title	Referenced in Code(s):							
CDPH Section 01350	~~EHLB~~ Standard Method for the Testing and Evaluation of ~~VOC~~ Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1(2010)	IgCC							

CGA — Compressed Gas Association

Standard Reference Number	Title	Referenced in Code(s):							
C-7 (~~2004~~) (2011)	Guide to Preparation of Precautionary Labeling and Marking of Compressed Gas Containers	IFC							
ANSI/CGA P-18-2006	Standard for Bulk Inert Gas Systems ~~at Consumer Sites (an American National Standard)~~	IFC							
P-20 (~~2003~~) (2009)	Standard for Classification of Toxic Mixtures	IFC							
P-23 (~~2003~~) (2008)	Standard for Categorizing Gas Mixtures Containing Flammable and Nonflammable Components	IFC							
S-1.1 (~~2005~~) (2011)	Pressure Relief Device Standards - Part 1 - Cylinders for Compressed Gases	IFC	IFGC						
S-1.3 (~~2005~~) (2008)	Pressure Relief Device Standards - Part 3 - Stationary Storage Containers for Compressed Gases	IFC	IFGC						

CPA — Composite Panel Association

Standard Reference Number	Title	Referenced in Code(s):							
A135.4-~~2004~~ 2012	Basic Hardboard	IBC	IRC						
A135.5-~~2004~~ 2012	Prefinished Hardboard Paneling	IBC	IRC						
A135.6-~~2006~~ 2012	~~Hardboard~~ Engineered Wood Siding	IBC	IRC						
A208.1-~~99~~ 2009	Particleboard	IBC	IRC						

CRRC — Cool Roof Rating Council

Standard Reference Number	Title	Referenced in Code(s):							
CRRC-1-20~~10~~ 12	Cool Roof Rating Council Standard	IgCC							

CSA — ~~Canadian Standards Association~~ CSA Group

Standard Reference Number	Title	Referenced in Code(s):

ASME A17.1/CSA B44—2013	Safety Code for Elevators and Escalators	IBC	IFC	IEBC	IRC	IPMC			
ASME A112.18.1-2005 2012/ CSA B125.1-2005 2012	Plumbing Supply Fittings	IPC	IRC						
ASME A112.18.2-2005 2011/ CSA B125.2-2005 2011	Plumbing Waste Fittings	IRC	IPC						
ASME A112.19.1 2013/ CSA B45.2-08 13	Enameled Cast-Iron and Enameled Steel Plumbing Fixtures	IRC	IPC						
A112.19.2-2008 2013/ CSA B45.1-08 13	Ceramic Plumbing Fixtures	IPC	IRC						
ASME A112.19.3-2008/ CSA B45.4-08(R2013)	Stainless-Steel Plumbing Fixtures	IRC	IPC						
ASME A112.19.5-2011/ CSA/B45.15-09 11	Flush Valves and Spuds Trim for Water Closets, Urinals Bowls and Tanks	IPC	IRC						
ASME A112.19.7-2012/ CSA B45.10-09 2012	Hydromassage Bathtubs Appliances Systems	IPC	IRC						
ASME A112.3.4-2013/CSA B45.9-99(R2008) 13	Macerating Systems and Related Components	IRC	IPC						
ASSE 1016/ASME A112.1016/CSA B125.16-2011 is a replacement for ASSE 1016-2010	Performance Requirements for Automatic Compensating, Valves for Individual Showers and Tub/Shower Combinations	IPC	IRC	IgCC					
CSA B45.5-02 (R2008) 11/ IAPMO Z124-2011	Plastic Plumbing Fixtures	IRC	IPC						
B64.1.1-01 11	Vacuum Breakers, Atmospheric Type (AVB)	IRC	IPC						
B64.1.2-07 11	Pressure Vacuum Breakers (PVB)	IRC	IPC						
B64.1.3-07 11	Spill Resistant Pressure Vacuum Breakers (SRPVB)	IPC	IRC						
B64.2-01 11	Vacuum Breakers, Hose Connection Type (HCVP)	IRC	IPC						
B64.2.1-07 11	Vacuum Breakers, Hose Connection (HCVB) with Manual Draining Feature	IRC	IPC						
B64.2.1.1-07 11	Hose Connection Dual Check Vacuum Breakers (HCDVB)	IRC	IPC						
B64.2.2-01 11	Vacuum Breakers, Hose Connection Type (HCVP) with Automatic Draining Feature	IRC	IPC						
B64.3-07 11	Dual Check Valve Backflow Preventers Atmospheric Port (DCAP)	IRC	IPC						
B64.4-07 11	Reduced Pressure Principle Backflow Preventers (RP)	IRC	IPC						
B64.4.1-07 11	Reduced Pressure Principle for Fire Systems (RPF)	IRC	IPC						
B64.5-07 11	Double Check Backflow Preventers (DCVA)	IRC	IPC						
B64.5.1-07 11	Double Check Valve Backflow Preventers for Fire Systems (DCVAF)	IRC	IPC						
B64.6-07 11	Dual Backflow Preventers Check Valve (DuC)	IPC	IRC						
B64.7-07 11	Laboratory Faucet Vacuum Breakers (LFVB)	IRC	IPC						
B64.10.1-07 11	Manual for the Selection, Installation, Maintenance and Field Testing of Backflow Preventers ion	IPC							

	~~Devices~~							
B79-08 (R2013)	Commercial and Residential Drains, and Cleanouts	IPC						
CSA B125.3-~~2005~~ 12	Plumbing Fittings	IRC	IPC					
B137.1-~~05~~ 13	Polyethylene (PE) Pipe , Tubing and Fittings for Cold Water Pressure Services	IRC	IPC					
B137.2-~~05~~ 13	Polyvinylchloride PVC Injection-Moulded Gasketed Fittings for Pressure Applications	IRC	IPC	ISPSC				
B137.3-~~05~~ 13	Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications	IRC	IPC	IPSDC				
B137.5-~~05~~ 13	Cross-Linked Polyethylene (PEX) Tubing Systems for Pressure Applications	IRC	IPC					
B137.6-~~05~~ 13	Chlorinated Polyvinylchloride CPVC Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems	IRC	IPC	ISPSC				
B137.9-~~02~~ 13	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems	IRC	IPC	IMC				
B137.10M-~~05~~ 13	Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems	IRC	IPC	IMC				
B137.11-~~05~~ 13	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications	IRC	IPC					
B181.1-~~06~~ 11	Acrylonitrile-butadiene-stryrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings	IRC	IPC	IPSDC				
B181.2-~~06~~ 11	Polyvinylchloride PVC Drain, and chlorinated polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings	IRC	IPC	IPSDC				
B181.3-~~06~~ 11	Polyolefin and polyvinylidene fluoride (PVDF) Laboratory Drainage Systems	IRC	IPC					
B182.1- ~~06~~ 11	Plastic drain and sewer pipe and pipe fittings	IPC	IPSDC					
B182.2-~~06~~ 11	PSM type polyvinylchloride (PVC) sewer pipe and fittings	IRC	IPC	IPSDC				
B182.4-~~06~~ 11	Profile polyvinylchloride PVC Sewer Pipe and Fittings	IRC	IPC	IPSDC				
B182.6-~~06~~ 11	Profile Polyethylene (PE) Sewer Pipe and Fittings for leak proof sewer applications	IRC	IPC					
B182.8-~~06~~ 11	Profile Polyethylene (PE) Storm Sewer and Drainage Pipe and Fittings	IRC	IPC					
B356-~~00(2005)~~ 10	Water Pressure Reducing Valves for Domestic Water Supply Systems	IPC	IRC					
B481.1-~~07~~ 12	Testing and Rating of Grease Interceptors Using Lard	IPC						
B602-~~05~~ 10	Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe	IRC	IPC	IPSDC				
CAN/CSA A257.1M-~~92~~ 2009	Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings	IRC	IPC	IPSDC				

CAN/CSA A257.2M-~~92~~ 2009	Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings	IRC	IPC	IPSDC					
CAN/CSA A257.3M-~~92~~ 2009	Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections, and Fittings Using Rubber Gaskets	IRC	IPC	IPSDC					
B137.11-~~05~~ 13	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications	IRC	IPC						
B45.3-02 (R2008)	Porcelain Enameled Steel Plumbing Fixtures	IRC	IPC						
0437-Series-93 (R2006)	Standards on OSB and Waferboard (Reaffirmed 2001)	IRC							
ANSI ~~CSA America~~ FC 1-~~2003~~ 2012 to be relocated under ANSI	Stationary Fuel Cell Power Systems	IFGC	IMC	IRC					
CAN/CSA B366.1-~~2009~~ 2011	Solid-Fuel-Fired Central Heating Appliances	IgCC							
B483.1-~~07~~ 14	Drinking Water Treatment Systems	IRC	IPC						
CSA C22.2 No. 218.1-M89(R~~2006~~ 2011)	Spas, Hot Tubs and Associated Equipment	ISPSC							
C22.2 No. 236 ~~05~~ -11 ~~(R2009) M89(R2006)~~	~~Heating and~~ Cooling Equipment (binational standard with UL 1995)	ISPSC							
C22.2 No. 108-01 (R2010)	Liquid Pump	ISPSC							

CTI — Cooling Technology Institute

Standard Reference Number	Title	Referenced in Code(s):							
STD-201 (~~2009~~ 11)	Standard for Certification of Water Cooling Tower Thermal Performance	IECC							

DASMA — Door and Access Systems Manufacturers

Standard Reference Number	Title	Referenced in Code(s):							
105-92~~(R2004)~~ -13	Test Method for Thermal Transmitance and Air Infiltration of Garage Doors	IECC							
107-97 (R~~2004~~ 2012)	Room Fire Test Standard for Garage Doors Using Foam Plastic Insulation	IBC							
108-~~05~~ 12	Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference	IBC	IRC						
115-~~05~~ 12	Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind	IBC	IRC						

	Pressure									

FEMA — Federal Emergency Management Agency

Standard Reference Number	Title	Referenced in Code(s):								
FEMA P646-~~08~~ 12	Guidelines for Design of Structures for Vertical Evacuation from Tsunamis	IBC								
FEMA- ~~FA/~~ TB-2-08	Flood-D ~~d~~amage Resistant Materials Requirements	IRC								
~~FIA-TB-11—01~~ FEMA-TB 11—01	Crawlspace Construction for Buildings Located in Special Flood Hazard Area	IBC	IRC							

FM — FM Global

Standard Reference Number	Title	Referenced in Code(s):								
FM 4470 ~~2009~~ 2013	Approval Standard for Single-Ply Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction ~~Covers~~.	IBC								
4474-~~04~~ 11	American National Standard for Evaluating ~~the Simulated Wind Uplift Resistance of~~ Roof/Ceiling Assemblies, ~~-~~Plastic Interior Finish Materials, Plastic Exterior Building Panels, Wall/Ceiling Coating Systems, Interior or Exterior Finish Systems ~~Using Static Positive and/or Negative Differential Pressures~~	IBC								
4880 ~~(2005)~~ 2010	Approval Standard for Class 1 Rating of ~~Evaluating~~ Insulated Wall or Wall and Roof/Ceiling Panels, ~~Assemblies, Plastic~~ Interior Finish Materials, ~~Plastic Exterior Building, Wall/Ceiling~~ or Coatings ~~Systems, Interior or~~ and Exterior Finish Systems	IBC	IRC							

GA — Gypsum Association

Standard Reference Number	Title	Referenced in Code(s):								
GA 216-~~07~~ 13	Application and Finishing of Gypsum Panel Products	IBC								

GA-253-~~07~~ 12	~~Recommended Standard Specification for the~~ Application of Gypsum Sheathing	IRC								
GA-600-~~09~~ 12	Fire- Resistance Design Manual, ~~18th~~ 20th Edition	IBC								
HPVA	**Hardwood Plywood and Veneer Association**									
Standard Reference Number	**Title**	**Referenced in Code(s):**								
HP-1-~~2009~~ 2013	Standard for Hardwood and Decorative Plywood	IBC	IRC	IgCC						
IAPMO	**International Association of Plumbing and Mechanical Officials**									
Standard Reference Number	**Title**	**Referenced in Code(s):**								
CSA B45.5-11/ IAPMO Z124-2011 replaces ANSI Z124.1, 1.2, 2, 3, 4, 6, 9	Plastic Plumbing Fixtures	IRC	IPC							
IAPMO Z124.7-2012 replaces ANSI Z124.7-97	Prefabricated Plastic Spa Shells	ISPSC								
ICC	**International Code Council**									
Standard Reference Number	**Title**	**Referenced in Code(s):**								
ICC A117.1-09 14	Accessible and Usable Buildings and Facilities	IBC	IFC	IZC	IEBC	IRC				
IBC-~~12~~ 15	International Building Code	IRC	IFC	IMC	IPC	IPSDC	IFGC	IECC	IEBC IWUIC	
IECC-~~12~~ 15	International Energy Conservation Code	IBC	IRC	IMC	IPC	IFGC	IgCC	ISPSC		
IEBC-~~12~~ 15	International Existing Building Code	IBC	IMC	IPMC	IgCC					
IFC-~~12~~ 15	International Fire Code	IBC	IRC	IMC	IPC	IFGC	IECC	IEBC	IPMC	
IFGC-~~12~~ 15	International Fuel Gas Code	IBC	IRC	IFC	IMC	IPC	IECC	IEBC	IPMC	
IMC-~~12~~ 15	International Mechanical Code	IBC	IRC	IFC	IPC	IFGC	IECC	IEBC	IPMC	
ICCPC-~~12~~ 15	International Performance Code	IgCC								
IPC-~~12~~ 15	International Plumbing Code	IBC	IRC	IFC	IMC	IPSDC	IFGC	IEBC	IPMC	
IPSDC-~~12~~ 15	International Private Sewage Disposal Code	IBC	IPC	IRC						
IPMC-~~12~~ 15	International Property Maintenance Code	IBC	IRC	IFC	IEBC					
IRC-~~12~~ 15	International Residential Code	IBC	IFC	IMC	IFGC	IEBC	IPC	IPMC	IgCC	
IWUIC-~~12~~ 15	International Wildland-Urban Interface Code	IBC	IFC							
IZC-~~12~~ 15	International Zoning Code	IBC	IMC							
ICC 500-~~08~~ 14	ICC/NSSA Standard on the Design and Construction of Storm Shelters	IBC	IRC							

ICC 600-~~08~~ 14	Standard for Residential Construction In High Wind Regions	IBC	IRC						
ICC 700-~~2008~~ 12	National Green Building Standard	IgCC							
IgCC-~~12~~ 15	International Green Construction Code	IBC	ICCPC	IEBC	IECC	IFC	IFGC	IMC	IPC

IES — Illuminating Engineering Society

Standard Reference Number	Title	Referenced in Code(s):							
TM-15-~~07~~ 11	Luminaire Classification System for Outdoor Luminaires	IgCC							

IIAR — International Institute of Ammonia Refrigeration

Standard Reference Number	Title	Referenced in Code(s):							
2-~~99~~ 2014 (~~Addendum A-2005~~)	~~Addendum A to~~ Equipment, Design, and Installation of Ammonia Mechanical Refrigerating Systems	IMC							

ISEA — International Safety Equipment Association

Standard Reference Number	Title	Referenced in Code(s):							
ANSI/ISEA Z358.1-~~98~~ 2009	Emergency Eyewash and Shower Equipment	IPC							

MSS — Manufacturers Standardization Society of the Valve and Fittings Industry

Standard Reference Number	Title	Referenced in Code(s):							
MSS SP-6-~~01~~ 2012	Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings	IFGC							
ANSI MSS SP-58 ~~1993~~ 2009	Pipe Hangers and Supports –Materials, Design, Manufacture, Selection, Application, and Installation	IRC	IFGC						
~~SP-69-2002~~ ANSI/MSS SP-58-2009	Pipe Hangers and Supports – Materials, Design, Manufacture, Selection ~~and~~ , Application , and Installation (*SP69 will be withdrawn in 2014 and ANSI MSS SP-58-2009 replaces it*)	IMC							

NFPA — National Fire Protection Association

Standard Reference Number	Title	Referenced in Code(s):

10-~~10~~ 13	Standard for Portable Fire Extinguishers	IFC	IBC						
13-~~10~~ 13	Standard for the Installation of Sprinkler Systems	IFC	IBC						
13D-~~10~~ 13	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes	IFC	IRC	IBC					
13R- ~~10~~ 13	Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies ~~Up to and Including Four Stories in Height~~	IFC	IBC	IEBC					
14-~~10~~ 13	Standard for the Installation of Standpipe, ~~Private Hydrants~~ and Hose Systems	IFC	IBC						
15-12	Standard for the Water Spray Fixed Systems for Fire Protection	IFC							
16-11	Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems	IFC	IBC						
17-~~09~~ 13	Standard for Dry Chemical Extinguishing Systems	IFC	IBC						
17A-~~09~~ 13	Standard for Wet Chemical Extinguishing Systems	IFC	IBC						
20- ~~10~~ 13	Standard for the Installation of Stationary Pumps for Fire Protection	IFC	IBC						
22-~~08~~ 13	Standard for the Water Tanks for Private Fire Protection	IFC							
24- ~~10~~ 13	Standard for the Installation of Private Fire Service Mains and Their Appurtenances	IFC							
25-~~11~~ 13	Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems	IFC	IPMC						
30A-~~12~~ 15	Code for Motor Fuel Dispensing Facilities and Repair Garages	IFC	IMC	IFGC					
30B-~~12~~ 15	Code for the Manufacture and Storage of Aerosol Products	IFC							
31-~~11~~ 15	Standard for the Installation of Oil-Burning Equipment	IFC	IRC	IMC	IBC				

~~32-11~~ 15	Drycleaning Plants	IFC	IBC						
~~33-11~~ 15	Standard for Spray Application Using Flammable or Combustible Materials	IFC							
~~34-11~~ 15	Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids	IFC							
~~35-11~~ 15	Standard for Manufacture of Organic Coatings	IFC							
~~37-10~~ 14	Installation and Use of Stationary Combustion Engines and Gas Turbines	IMC	IFGC						
~~40-11~~ 15	Standard for the Storage and Handling of Cellulose Nitrate Film	IFC	IBC						
~~45-11~~ 15	Standard on Fire Protection for Laboratories Using Chemicals	IMC							
~~50-01~~ replaced with 55-13 that incorporates NFPA 50	~~Bulk Oxygen Systems at Consumer Sites~~ Compressed Gases and Cryogenic Fluids Code	IPC							
51- ~~07~~13	Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes	IFC	IPC	IFGC					
51A-12	Standard for Acetylene Cylinder Charging Plants	IFC							
~~52-10~~ 13	Vehicular Fuel Gaseous System Code	IFC							
~~55--10~~ 13	~~Standard for the Storage, Use and Handling of~~ Compressed Gases and Cryogenic Fluids Code ~~in Portable and Stationery Containers Cylinders and Tanks~~	IFC							
~~58-11~~ 13	Liquefied Petroleum Gas Code	IFC	IBC	IRC	IMC	IFGC			
~~59A 10~~ 13	Standard for the Production, Storage and Handling of Liquefied Natural Gas (LNG)	IFC							
61- ~~08~~ 13	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities	IFC	IBC						

~~69-08~~ 14	Standard on Explosion Prevention Systems	IFC	IMC						
72- ~~10~~ 13	National Fire Alarm and Signaling Code	IFC	IBC	IRC	IMC	IEBC	IgCC	IWUIC	
80- ~~10~~ 13	Standard for Fire Doors and Other Opening Protectives	IFC	IBC						
~~82-09~~ 14	Standard on Incinerators, Waste and Linen Handling Systems and Equipment~~, 2009 Edition~~	IMC	IFGC	IBC	IRC				
85-11	Boiler and ~~Construction~~ Combustion Systems Hazards Code	IFC	IBC	IRC	IFGC				
~~86-11~~ 15	Standard for Ovens and Furnaces	IFC							
88A-~~11~~ 15	Standard for Parking Structures	IFGC							
~~91-10~~ 15	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids	IMC							
~~92B—09~~ 12	Smoke Control ~~Management~~ Systems ~~in Malls, Atria, and Large Spaces~~	IFC	IBC	IMC					
~~96-11~~ 13	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operation	IMC							
~~99-12~~ 15	Health Care Facilities Code	IBC	IFC	IEBC	IBC				
101-~~12~~ 15	Life Safety Code	IBC	IFC	IEBC					
105-~~10~~ 15	~~Installation~~ Standard ~~of~~ for Smoke Door Assemblies and Other Opening Protectives	IBC	IFC						
110-~~10~~ 15	Standard for Emergency and Standby Power Systems	IFC	IBC	IECC					
111-~~10~~ 15	Standard on Stored Electrical Energy Emergency and Standby Power Systems	IFC	IECC	IBC					
120-~~10~~ 15	Standard for Fire Prevention and Control in Coal Mines	IFC	IBC						
160-~~11~~ 15	Standard for the Use of Flame Effects Before an Audience	IFC							
170-~~09~~ 15	Standard for Fire Safety and Emergency Symbols	IFC	IBC						

204-~~07~~ 15	Standard for Smoke and Heat Venting	IFC							
211-~~10~~ 13	Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances	IFC	IBC	IRC	IMC	IFGC			
221-~~09~~ 15	Standard for High Challenge Fire Walls, Fire Walls and Fire Barrier Walls~~, 2009 Edition~~	IBC							
241-~~09~~ 13	Standard for Safeguarding Construction, Alteration, and Demolition Operations	IFC							
253-~~11~~ 15	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source	IBC	IFC						
259-~~08~~ 13	Standard Test Method for Potential Heat of Building Materials	IBC	IRC						
260-~~09~~ 13	Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture	IFC							
261-~~09~~ 13	Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes	IFC							
262-~~11~~ 15	Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces	IMC							
274-~~09~~ 13	Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation	IMC							
275-~~10~~ 13	Standard Method of Fire Tests for the Evaluation of Thermal Barriers ~~Used Over Foam Plastic Insulation~~	IBC	IRC						
285-11	Standard Fire Test Method ~~of~~ for the Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible	IBC							

	Components								
286-~~11~~ 15	Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth	IFC	IBC	IRC					
288-12	Standard Methods of Fire Tests of ~~Floor~~ Horizontal Fire Door Assemblies Installed in Horizontal~~ly~~ Fire-Resistance-Rated Floor Systems	IBC							
289-~~09~~ 13	Standard Method of Fire Test for Individual Fuel Packages	IFC	IBC						
318-~~09~~ 15	Standard for the Protection of Semiconductor Fabrication Facilities	IFC							
385- ~~07~~ 12	Standard for Tank Vehicles for Flammable and Combustible Liquids	IFC							
407-12	Standard for Aircraft Fuel Servicing	IFC							
409-~~11~~ 15	Aircraft Hangers	IFC	IBC	IFGC					
~~430-04~~ 400-13	~~Storage of Liquid and Solid Oxidizers~~ Hazardous Material Code	IFC							
484-~~12~~ 15	Standard for Combustible Metals	IFC	IBC						
~~490-10~~ 400-13	Storage of Ammonium Nitrate Hazardous Material Code	IFC							
495-~~10~~ 13	Explosive Materials Code	IFC							
498-~~10~~ 13	Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives	IFC							
501-~~10~~ 13	Standard on Manufactured Housing	IRC							
505-~~11~~ 13	Fire Safety Standard Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations	IFC							
654-~~06~~ 13	Standard for Prevention of Fire & Dust Explosions from the Manufacturing, Processing, and	IBC	IFC						

	Handling of Combustible Particulate Solids								
655-12	Standard for the Prevention of Sulfur Fires and Explosions	IBC	IFC						
664-12	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	IBC	IFC						
701-10	Standard Methods of Fire Tests for Flame-Propagation of Textiles and Films	IFC	IBC						
703-~~12~~ 15	Standard for Fire Retardant Treated Wood and Fire Retardant Coatings for Building Materials	IFC							
704-12	Standard System for the Identification of the Hazards of Materials for Emergency Response	IFC	IMC	IBC					
720-~~09~~ 15	Standard for the Installation of Carbon Monoxide (CO) Warning Equipment Dwelling Units	IFC	IBC	IRC					
750-~~10~~ 13	Standard on Water Mist Fire Protection Systems	IFC	IMC	IFGC					
853-~~10~~ 15	Installation of Stationary Fuel Cell Power Systems	IRC							
1122- ~~08~~ 13	Code for Model Rocketry	IFC							
1123-~~10~~ 13	Code for Fireworks Display	IFC							
1124- ~~08~~ 13	Code for the Manufactureing, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles	IFC	IBC						
1125-12	Code for the Manufacture of Model Rocket and High Power Rocket Motors	IFC							
1126-~~11~~ 15	Standard for the Use of Pyrotechnics Before a Proximate Audience	IFC							
1127- ~~08~~ 13	Code for High Power Rocketry	IFC							
1142-12	Standard on Water Supply for Suburban and Rural Fire Fighting	IFC							
2001-12	Standard on Clean Agent Fire Extinguishing	IFC	IBC						

	Systems								
NSF	**NSF International**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
3—~~2008~~ 2010	Commercial Warewashing Equipment	IPC	IgCC						
14-~~2008e~~ 2011	Plastics Piping System Components and Related Materials	IRC	IPC	ISPSC					
18-~~2007~~ 2012	Manual Food and Beverage Dispensing Equipment	IPC							
40-~~2000~~ 2012	Residential Wastewater Treatment Systems	IPSDC							
41-~~1999~~ 2011	Nonliquid Saturated Treatment Systems ~~(Composing Toilets)~~	IPSDC							
42-~~2007ae~~ 2011	Drinking Water Treatment Units - Aesthetic Effects	IRC	IPC						
44-~~2007~~ 2012	Residential Cation Exchange Water Softeners	IRC	IPC	IgCC					
50-~~2009~~ 2012	Equipment for Swimming Pools, Spas, Hot Tubs, and other Recreational Water Facilities	IgCC	ISPSC						
53-~~2007a~~ 2011a	Drinking Water Treatment Units - Health Effects	IRC	IPC						
58-~~2007~~ 2012	Reverse Osmosis Drinking Water Treatment Systems	IRC	IPC	IgCC					
61-~~2008~~ 2012	Drinking Water System Components - Health Effects	IRC	IPC	IgCC					
62-~~2007~~ 2012	Drinking Water Distillation Systems	IPC							
350-2011	Onsite Residential and Commercial Water Reuse Treatment Systems	IgCC							
PCA	**Portland Cement Association**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
100-~~07~~ 12	Prescriptive Design of Exterior Concrete Walls for One and Two-Family Dwellings (Pub. No. EB241)	IRC							
PCI	**Prestressed Concrete Institute**								

Standard Reference Number	Title	Referenced in Code(s):							
MNL 124-~~89~~ 11	Design for Fire Resistance of Precast Prestressed Concrete	IBC							
PDI	**Plumbing and Draining Institute**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
PDI G101 ~~(2003)~~ 2012	Testing and Rating Procedure for Grease Interceptors with Appendix of Sizing and Installation Data	IPC							
PTI	**Post-Tensioning Institute**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
PTI DC ~~2007~~ 10.5-12	Standard Requirements for Design and Analysis of Shallow Post-tensioned Concrete Foundation on Expansive Soils~~, Second Edition~~	IBC							
~~PTI DC 2007 10.5-12~~	~~Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils, Third Edition~~	~~IBC~~							
RMI	**Rack Manufacturers Institute**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
ANSI/MH16.1~~—08~~ 12	Specification for Design, Testing and Utilization of Industrial Steel Storage Racks	IBC							
SBCA	**Structural Building Components Association**								
Standard Reference Number	**Title**	**Referenced in Code(s):**							
BCSI~~-2008~~ 2013	Building Component Safety Information Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected	IRC							

	Wood Trusses								
CFS-BCSI-2008	Cold Formed Steel Building Component Safety Information (CFSBCSI) Guide to Good Practice for Handling, Installing & Bracing of Cold-formed Steel Trusses	IRC							

SMACNA — Sheet Metal & Air Conditioning Contractors National Assoc. Inc.

Standard Reference Number	Title	Referenced in Code(s):							
SMACNA-~~85~~ 2012	HVAC Air Duct Leakage Test Manual 2nd Edition	IECC-C	IgCC						
SMACNA-~~/ANSI 2005~~ 2015	HVAC Duct Construction Standards - Metal and Flexible 4th Edition (ANSI)	IMC							

SPRI — Single-Ply Roofing Institute

Standard Reference Number	Title	Referenced in Code(s):							
ANSI/SPRI RP-4-~~08~~ 13	Wind Design Guide for Ballasted Single-ply Roofing Systems	IBC							
ANSI/SPRI/FM4435-ES-1-~~03~~ 11	Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems	IBC							

TIA — Telecommunications Industry Association

Standard Reference Number	Title	Referenced in Code(s):							
222-G-2005	Structural Standards for Antenna Supporting Structures and Antennas, including - Addendum 1, 222-G-1 dated 2007, ~~and~~ Addendum 2, 222-G-2 Dated 2009, Addendum 3, 222-3 dated 2013, and Addendum 4, 222-G-4 dated 2014	IBC							

TMS — The Masonry Society

Standard Reference Number	Title	Referenced in Code(s):							
216-~~97~~ 2013	Standard Method for Determining Fire Resistance of	IBC							

	Concrete and Masonry Construction Assemblies								
302-~~07~~ 2012	Standard Method for Determining the Sound Transmission ~~Class~~ Rating for Masonry Walls	IBC	IRC	IgCC					
402-~~11~~ 2013	Building Code for Masonry Structures	IBC	IRC						
403-~~10~~ 2013	Direct Design Handbook for Masonry Structures	IBC	IRC						
602-~~11~~ 2013	Specification for Masonry Structures	IBC	IRC						

TPI Truss Plate Institute

Standard Reference Number	Title	Referenced in Code(s):						
TPI 1-2007 2012	National Design Standards for Metal Plate Connected Wood Truss Construction	IBC	IRC					

UL Underwriters Laboratories

Standard Reference Number	Title	Referenced in Code(s):						
9–2009	Fire Tests of Window Assemblies~~, with Revisions through April 2005~~	IBC						
14B-2008	Sliding Hardware for Standard Horizontally Mounted Tin Clad Fire Doors ~~- with Revisions through July 2000~~	IBC						
14C-2006	Swinging Hardware for Standard Tin Clad Fire Doors Mounted Singly and in Pairs, with revisions through December 2008	IBC						
17-2008	Vent or Chimney Connector Dampers for Oil-Fired Appliances, with Revisions through January 2010	IRC	IMC					
80-2007	Steel Tanks for Oil-Burner Fuels and Other Combustible Liquids with Revisions through August 2009	IRC	IFC					

103-~~2001~~ 2010	Factory-Built Chimneys, for Residential Type and Building Heating Appliances with Revisions through July 2012	IBC	IMC	IFGC	IRC			
127-~~08~~ 2011	Factory-Built Fireplaces ~~- with Revisions through January 2010~~	IBC	IRC	IMC				
142-06	Steel Aboveground Tanks for Flammable and Combustible Liquids with Revisions through February 2010	IFC						
174-04	Household Electric Storage Tank Water Heaters - with Revisions through ~~May 2006~~ September 2012	IRC	IMC					
180-~~03~~ 2012	Liquid-level Indicating Guarges for Oil Burner Fuels~~- with revision through March 2007~~ and Other Combustible Liquids	IRC	IMC					
197-~~2003~~ 2010	Commercial Electric Cooking Appliances - with revisions through ~~March 2006~~ June 2011	IMC						
217–2006	Single and Multiple Stations Smoke Alarms - with revisions through April ~~2010~~ 2012	IBC	IRC	IFC				
263-~~03~~ 2011	Standard for Fire Test of Building Construction and Materials ~~with revisions through October 2007~~	IBC	IRC	IWUIC	IMC			
294-1999	Access Control Systems Units with Revisions through September 2010	IBC	IFC					
300-2005 (R2010)	Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Equipment with Revisions through July 16, 2010	IBC	IFC					
305-~~97~~ 2012	Panic Hardware	IBC	IFC					
325-2002	Door, Drapery, Gate, Louver and Window Operators and Systems - with Revisions through	IBC	IFC	IRC				

	~~February 2010~~ January 2012							
372-2007	Automatic Electrical Controls for Household and Similar Use - Part 2: Particular Requirements for Burner Ignition Systems and Components with revisions through July ~~25, 2011~~ 2012	ISPSC						
378-06	Draft Equipment, with Revisions through January 2010	IRC	IMC					
391-~~2006~~ 2010	Solid-Fuel and Combination-Fuel Central and Supplementary Furnaces	IMC						
412-~~2004~~ 2011	Refrigeration Unit Coolers - with Revisions through ~~January 2009~~ August 2012	IMC						
499-05	Electric Heating Appliances-with revisions through ~~January 2009~~ April 2012	IMC						
555–2006	Fire Dampers-with revisions through May ~~2010~~ 2012	IBC	IMC					
555S–1999	Smoke Dampers - with Revisions through May ~~2010~~ 2012	IBC	IMC					
641–~~1995~~ 2010	Type L Low-Temperature Venting Systems - ~~with Revisions through July 2009~~	IBC	IRC	IMC	IFGC			
651–~~05~~ 2011	Schedule 40 and Schedule 80 Rigid PVC Conduit and Fittings with revisions through March ~~2010~~ 2012	IFGC	IRC					
705-2004 Revision 5	Standard for Power Ventilators ~~with revisions through March 2012~~	IMC						
710B-~~2004~~ 2011	Recirculating Systems ~~with Revisions through December 2009~~	IBC	IFC	IMC				
723—08	Standard for Test for Surface Burning Characteristics of Building Materials with Revisions through September 2010	IBC	IFC	IWUIC	IRC			

726-1995	Oil-Fired Boiler Assemblies - with Revisions through April ~~2010~~ 2011	IRC	IMC	IECC				
729-03	Oil-Fired Floor Furnaces with revisions through ~~April 2010~~ August 2012	IRC	IMC					
730-03	Oil-Fired Wall Furnaces ~~with revisions through April 2010~~ August 2012	IRC	IMC					
731-1995	Oil-Fired Unit Heaters with Revisions through ~~April 2010~~ August 2012	IMC	IECC-C					
737-~~07~~ 2011	Fireplaces Stoves~~-with Revisions through January 2010~~	IRC	IMC					
793-08	Automatically Operated Roof Vents For Smoke and Heat with Revisions through September 2011	IBC	IFC					
795-~~2006~~ 2011	Commercial-Industrial Gas Heating Equipment with revisions through ~~April 2010~~ September 2012	IRC	IFGC					
842-07	Valves for Flammable Fluids, with Revisions through April 2011	IRC	IMC					
858-05	Household Electric Ranges - with Revisions through ~~May 2010~~ April 2012	IMC	IRC					
864-03	Standard for Control Units and Accessories for Fire Alarm Systems-with Revisions through ~~February 2010~~ August 2012	IBC	IFC					
867-~~00~~ 2011	Electrostatic Air Cleaners~~-with Revisions through February 2010~~	IMC						
873-2007	Temperature-Indicating and -Regulating Equipment, with revisions through July ~~25, 2011~~ 2012	ISPSC						
875-09	Electric Day Bath Heaters with revisions through ~~October 2009~~ November 2011	IMC	IRC					
896-1993	Oil-Burning Stoves - with Revisions	IRC	IMC					

	through May 2010 August 2012							
900-04	Air Filter Units- with revisions through ~~November 2009~~ February 2012	IFC	IMC					
907-~~94~~ 2010	Fireplace Accessories - with revisions through ~~July 2006~~ April 2010	IMC						
924-06	Emergency Lighting and Power Equipment with revisions through ~~January 2009~~ February 2011	IBC	IFC					
959-~~2001~~ 2010	Medium Heat Appliance Factory-Built Chimneys - ~~with Revisions through June 2010~~	IRC	IMC	IFGC				
1004-1-~~08~~ 2012	Standard for Rotating Electrical Machines General Requirements with revisions through June 23, 2011	ISPSC						
1026-~~07~~ 2012	Electric Household Cooking and Food Services Appliances	IRC						
1037-99	Antitheft Alarms and Devices with Revisions through December 2009	IFC						
1040-1996	Fire Test of Insulated Wall Construction - with Revisions through September 2007 October 2012	IBC	IRC					
1042-~~94~~ 2009	Electric Baseboard Heating Equipment- with revisions through ~~February 2008~~ June 2010	IRC						
1046-~~00~~ 2010	Grease Filters for Exhaust Ducts with revisions through January 2012	IMC						
1081-2008	Standard for Swimming Pool Pumps, Filters and Chlorinators, with revisions through ~~March 31, 2010~~ November 2011	ISPSC						
1240-2005	Electric Commercial Clothes-Drying Equipment - with Revisions through ~~October 2009~~ February 2011	IMC						
1261-2001	Electric Water Heaters for Pools and Tubs - with Revisions through	IRC	IMC	ISPSC				

	~~June 16, 2010~~ July 2012							
1275-2005	Flammable Liquid Storage Cabinets with Revisions through ~~May 2006~~ February 2010	IFC						
1315-~~95~~	Standard for Safety for Metal Waste Paper containers-with Revisions through ~~August 2007~~ September 2012	IFC						
1363-2007	Relocatable Power Taps - with revisions through ~~October 2009~~ September 2012	IFC						
1453-~~04~~	Electric Booster and Commercial Storage Tank Water Heaters - with Revisions through December 2009 July 2011	IRC	IMC					
1482-~~10~~ 2011	Solid-Fuel Type Room Heaters	IBC	IRC	IMC	IgCC			
1563-2009	Standard for Electric Hot Tubs, Spas and Association Equipment with revisions through ~~March 31, 2010~~ July 2012	ISPSC						
1673-~~96~~ 2010	Electric Space Heating Cables-with revision through ~~July 2003~~ October 2011	IRC						
1693-~~02~~ 2010	Electric Radiant Heating Panels and Heating Panel Sets, with Revisions through October 2011	IRC						
1703-02	Flat-plate Photovoltaic Modules and Panels - with revisions through ~~April 2008~~ May 2012	IBC						
1738-~~06~~ 2010	Venting Systems for Gas-Burning Appliances, Categories II, III and IV, with Revisions though May 2011	IRC	IFGC					
1741-~~99~~ 2010	Inverters, Converters, Controllers and Interconnection System Equipment with Distributed	IRC						

	Energy Resources~~-with revisions through November 2005~~							
1815-~~09~~ 2012	Standard for Nonducted Heat Recovery Ventilators	IMC						
1897-~~2004~~ 2012	Uplift Tests for Roof Covering Systems ~~with revisions through May 2008~~	IBC						
1978-~~05~~ 2010	Grease Ducts	IMC						
1994-04	Luminous Egress Path Marking Systems with Revisions through ~~April 2010~~ November 2010	IBC	IFC					
1995-~~2005~~ 2011	Heating and Cooling Equipment~~, with revisions through July 2009~~	IRC	IMC	ISPSC				
1996-~~04~~ 2009	Electric Duct Heaters-with revisions through ~~July 2009~~ November 2011	IRC	IMC					
2017-2008	Standards for General-Purpose Signaling Devices and Systems-with Revisions through ~~October 2009~~ May 2011	IBC	IRC					
2024-~~2008~~ 2011	Standard for Safety Optical-Fiber and Communications Cable Raceway ,with Revisions through April 2011	IMC						
2158-1997	For Electric Clothes Dryers - with Revisions through March 2009	IMC						
2158A-~~2006~~ 2010	Outline of Investigation for Clothes Dryer Transition Duct	IRC	IMC					
2200-~~98~~ 2012	Stationary Engine Generator Assemblies ~~with Revisions through December 2009~~	IBC	IFC	IMC	IFGC			

2208-~~2005~~ 2010	Solvent Distillation Units - with Revisions through ~~December 2009~~ March 2011	IFC						
2221-~~2001~~ 2010	Tests of Fire Resistive Grease Duct Enclosure Assemblies	IMC						
2335-~~01~~ 2010	Fire Tests of Storage Pallets-with Revisions through ~~March 2010~~ September 2012	IFC						
2518-~~02~~ 2005	Air Dispersion System Materials	IMC						
2523-09	Standard for Solid Fuel-Fired Hydronic Heating Appliances, Water Heaters, and Boilers, with Revisions through October 2011	IRC	IgCC	IMC				

ULC/CAN	**Underwriters Laboratories Canada**							
Standard Reference Number	**Title**	**Referenced in Code(s):**						
CAN/ULC S102.2-~~1988~~ 2010	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies ~~- with 2000 Revisions~~	IBC	IRC					

Reason: *The CP 28 Code Development Policy, Section 4.5.1 requires the updating of referenced standards to be accomplished administratively, and be proces as a Code Change Proposal for consideration by the Administrative Code Change Committee. In September 2012, a letter was sent to each developer of standa that is referenced in the International Codes, asking them to provide ICC with a list of their standards in order to update to the current edition. Above is the list of referenced standards that are to be updated based upon responses from standards developer.*

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

Public Hearing Results

Committee Action: **Approved as Modified**

Errata to this proposal is contained in the Updates to the 2013 Proposed Changes posted on the ICC website. Please go to http://www.iccsafe.org/cs/codes/Documents/2012-2014Cycle/Proposed-B/00-CompleteGroupB-MonographUpdates.pdf for more information

The following is errata that was not posted to the ICC website.

ASTM D5019, while withdrawn by ASTM, is still referenced in the IBC and IRC, so it will remain in the list of referenced standards. This standard will be removed from this update proposal.

ASTM	**ASTM International**	
Standard Reference Number	**Title**	**Referenced in Code(s):**
D5019-07a	Specification for Reinforced CSM Polymeric Sheet Used in Roofing Membrane	IBC, IRC

FM 4470 was indicated in the posted errata as being updated to 2013, however, the correct reference is 2012.

FM	FM Global	
Standard Reference Number	**Title**	**Referenced in Code(s):**
FM 4470 ~~2009~~ 2012	Approval Standard for Single-Ply Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction.	IBC

The following revisions are modifications to the proposal.

The following standards were in the automatic update code change proposals. Revise the referenced edition as follows.

AISI	American Iron and Steel Institute	
Standard Reference Number	**Title**	**Referenced in Code(s):**
AISI S110-07/S1-09 (2012)	Standard for Seismic Design of Cold-Formed Steel Structural Systems-Special Moment Frames, 2007 with Supplement 1, dated 2009, (Reaffirmed 2012)	IBC
AISI S210-07 (2012)	North American Standard for Cold-formed Steel Framing-Floor and Roof System Design, 2007, (Reaffirmed 2012)	IBC
AISI S211-07/S1-12 (2012)	North American Standard for Cold-Formed Steel Framing-Wall Stud Design, 2007, including Supplement 1, dated 2012, (Reaffirmed 2012)	IBC
AISI S212-07 (2012)	North American Standard for Cold-Formed Steel Framing-Header Design, 2007, (Reaffirmed 2012)	IBC
AISI S213-07/S1-09 (2012)	North American Standard for Cold-Formed Steel Framing-Lateral Design, with Supplement 1, dated 2009, (Reaffirmed 2012)	IBC
AISI S230-07-07/S2-08 /S3-12 (2012)	Standard for Cold-formed Steel Framing-Prescriptive Method for One- and Two-family Dwellings, 2007, with Supplement 2 3, dated 2008 dated 2012, (Reaffirmed 2012)	IBC, IRC

The following standards will be removed from the automatic update code change proposal. The current edition will remain the referenced edition.

ACI	American Concrete Institute	
Standard Reference Number	**Title**	**Referenced in Code(s):**
318-11	Building Code Requirements for Structural Concrete	IBC, IRC, ISPSC

ICC	International Code Council	
Standard Reference Number	**Title**	**Referenced in Code(s):**
ICC A117.1-2009	Accessible and Useable Buildings and Facilities	IBC, IEBC, IFC, IRC, IZC

The following standard is not referenced and should be removed from the IMC Chapter 15.

NFPA	National Fire Protection Association	
Standard Reference Number	**Title**	**Referenced in Code(s):**
~~NFPA 274-09~~	~~Standard Test Method to Evaluate Fire~~	~~IMC~~

	~~Performance Characteristics of Pipe Insulation~~	

Committee Reason: The proponent indicated that AISI standard references were not revised and updated, but were instead reviewed and reaffirmed in 2012. The committee agreed that it is important to clarify this in the reference.

The committee agreed that the edition of ACI 318 should remain at 2011 instead of being updated to 2014. The specific references to sections in the ACI 318 in the International Codes are coordinated with the 2011 edition. The 2014 edition will be substantially reformatted and renumbered. The 2014 edition must be finalized before it is possible to verify that the references will still be complete and accurate. Some of the revisions to references may be considered technical revisions. This correlation may need to be done as part of the Group A codes changes next cycle. If possible to address this in the public comments for Group B, it should be done.

The committee agreed that the edition of ICC A117.1 should remain 2009 instead of being updated to 2014. The ICC A117.1 is undergoing significant changes in relation to the sizes required for accessibility. At the time of the hearings, the standard has not yet reached the stage of a public draft. Once the revisions are finalized, the scoping requirements in the IBC must be reviewed to understand the full impact on spaces and buildings. Since some of the coordination may include revisions to the codes, the reference of the new edition should be delayed to allow for this coordination effort in the Group A and Group B code change cycles.

The proponent pointed out that NFPA 274 is no longer referenced anywhere in the IMC, however, it is still included in the IMC Chapter 15. Rather than being included in the automatic update proposal, it should be removed from the IMC Chapter 15.

The committee approved the automatic updates for the remainder of the standards listed in the proposal. The proposed updates to the standard are consistent with the ICC policies for updates.

A question was raised during the testimony regarding the updating of NFPA 70, National Electrical Code. NFPA 70 will be automatically updated from the 2011 edition to the 2014 edition. The ICC Board of Directors have identified NFPA 70 as a member of the ICC family of codes, therefore, it will not be indicated in the automatic update proposal.

Assembly Action **None**

Public Comment(s)

Public Comment 1:

Matthew Senecal, P.E., representing the American Concrete Institute (ACI), requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

ACI

318 - ~~11~~ 14 Building Code Requirements for Structural Concrete

Commenter's Reason: At the Dallas Committee Action Hearings, a decision was made to retain the reference to ACI 318-11 instead of updating to the latest edition, ACI 318-14. This was based upon a concern expressed on the floor that, because ACI 318 is going through reorganization, specific ACI 318 section numbers cited within the 2015 IBC may become inconsistent with ACI 318-14, thereby causing confusion to the user..

On July 1, 2013, ACI assembled a task group consisting of the concerned parties to review this issue in detail. The group concluded that If the specific ACI 318 section numbers cited in the 2015 IBC can be editorially changed to the correct ACI 318-14 section numbers, then any potential problem to the user will be avoided.

Editorial changes of this kind are allowed according to Section 4.4 of CP#28. The 318-14 section references compatible with the 2015 IBC have been determined and will be forwarded to ICC Staff for inclusion in the 2015 IBC, and other ICC Codes as appropriate.

It is important to note that there are no technical changes in ACI 318-14 that affect the eight modifications in 2015 IBC Section 1905 or any other provision of the 2015 IBC. This means only the editorial changes discussed above are required to make ACI 318-14 compatible with the 2015 IBC.

ASTM

Public Comment 2:

Marcelo M. Hirschler, representing GBH International, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

E814-~~08b~~ 2013 Test Method of Fire Tests of Through-Penetration Firestops

E1537-~~12~~ 2013	Test Method for Fire Testing of Upholstered Furniture

Commenter's Reason: Standards date updates

Public Comment 3:

Marcelo M. Hirschler, representing GBH International, and Steve Mawn, representing ASTM International, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

D6662-~~09~~ 2013	Standard Specification for Polyolefin-Based Plastic Lumber Decking Boards
E84-20~~12c~~ 2013A	Test Method for Surface Burning Characteristics of Building Materials
E1354-~~2011b~~ 2013	Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
E1590-~~12~~ 2013	Test Method for Fire Testing of Mattresses
E2404—~~12~~ 2013E1	Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics

Commenter's Reason: Standards date updates

Public Comment 4:

Steve Mawn, representing ASTM International, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

A74-~~12~~ 13A	Specification for Cast Iron Soil Pipe and Fittings
A182-~~12A~~ 13	Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service
A240/A 240M-~~12~~ 13A	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications
A283/A 283M-12A	Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
A307-~~10~~ 12	Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
A312/A 312M-~~12A~~ 13A	Specification for Seamless, and Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
A403-~~12~~ 13	Standard Specification for Wrought Austenitic Stainless Steel Pipe Fittings
A480/A480M-~~12~~ 13	Specification for General Requirements for Flat-Rolled Stainless and Heat-/Resisting Steel Plate, Sheet and Strip
A510-~~11~~ 13	Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, Alloy Steel
A572/A 572M-12A	Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
A588/A 588M-~~05~~ 10	Specification for High-Strength Low-Alloy Structural Steel with 50 ksi (345 Mpa) Minimum Yield Point, with Atmospheric Corrosion Resistance
A875/A 875M-~~10~~ 13	Standard Specification for Steel Sheet Zinc-5%, Aluminum Alloy-Coated by the Hot-Dip Process

A888-~~11~~ 13A	Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application
A924/A 924M-~~2010a~~ 13	Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot Dip Process
A1003/A 1003M-~~12~~ 13A	Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-formed Framing Members
A1008/A1008M-12A	Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Solution Hardened and Bake Hardenable
B152/B 152M-~~09~~ 13	Specification for Copper Sheet, Strip Plate and Rolled Bar
B241/B 241M-~~10~~ 12E1	Specification for Aluminum and Aluminum-Alloy, Seamless Pipe and Seamless Extruded Tube
B633-~~11~~ 13	Specification for Electodeposited Coatings of Zinc on Iron and Steel
C33/C33M-~~11a~~ 13	Specification for Concrete Aggregates
C34–~~10~~ 12	Specification for Structural Clay Load-Bearing Wall Tile
C42/C 42M-~~12~~ 13	Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
C56-~~2010~~ 12	Specification for Limestone Dimension Stone
C59/C 59M-00~~(2006)~~ (2011)	Specification for Gypsum Casting Plaster and Molding Plaster
C62-~~08~~ 13	Specification for Slate Dimension Stone
C67-~~12~~ 13	Test Methods of Sampling and Testing Brick and Structural Clay Tile
C76-~~12a~~ 13A	Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
C90-~~12~~ 13	Specification for Loadbearing Concrete Masonry Units
C94/C 94M-~~12~~ 13	Specification for Construction of Dry-stacked, Surface-Bonded Walls
C109/C 109M-~~2001b~~ 12	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
C126-~~12~~ 13	Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units
C140-~~2012a~~ 13	Test Method Sampling and Testing Concrete Masonry Units and Related Units
C143/C 143M-~~2010a~~ 12	Test Method for Slump of Hydraulic Cement Concrete
C207- ~~2011~~ 06(2011)	Specification for Hydrated Lime for Masonry Purposes
C216-~~12~~ 13	Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
C317/C 317M-00(2010)	Specification for Gypsum Concrete
C330-/C330M-2009	Specification for Lightweight Aggregates for Structural Concrete
C474-~~12~~ 13	Test Methods for Joint Treatment Materials for Gypsum Board Construction
C578—12a~~b~~	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
C587-04(2009)	Specification for Gypsum Veneer Plaster
C595/C95M-~~2012e1~~ 13	Specification for Blended Hydraulic Cements
C615/C615M-~~2011~~ 11	Specification for Granite Dimension Stone
C616/C616M-~~2010~~ 10	Specification for Quartz Dimension Stone

C629- ~~2010~~ 10	Specification for Slate Dimension Stone
C635/C635M-~~12~~ 13	Specification for the Manufacturer, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings
C645-~~11A~~ 13	Specification for Nonstructural Steel Framing Members
C652-~~12~~ 13	Specification for Hollow Brick (Hollow Masonry Units Made from Clay or Shale)
C700-~~11~~ 13	Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
C728-05 ~~(2010)~~ (2013)	Standard Specification for Perlite Thermal Insulation Board
C926-~~12A~~ 13	Specification for Application of Portland Cement-Based Plaster
C932-06(2013)	Specification for Surface-Applied Bonding Compounds ~~Agents~~ for Exterior Plastering
C933-~~11~~ 13	Specification for Welded Wire Lath
C1019-~~11~~ 13	Test Method for Sampling and Testing Grout
C1029-~~10~~ 13	Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation
C1063-12~~C~~ D	Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
C1072-~~11~~ 13	Standard Text Method for Measurement of Masonry Flexural Bond Strength
C1088-~~09~~ 13	Specification for Thin Veneer Brick Units Made From Clay or Shale
C1107/C1107M ~~-11~~ 13	Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
C1116/C1116M-10A	Standard Specification for Fiber - Reinforced Concrete and Shotcrete
C1157/C1157M-11	Standard Performance Specification for Hydraulic Cement
C1173-10E1	Specification for Flexible Transition Couplings for Underground Piping Systems
C1186-08(2012)	Specification for Flat Fiber Cement Sheets
C1277-~~11~~ 12	Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
C1280-~~12A~~ 13	Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing
C1289—~~12a~~ 13E1	Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
C1314-~~11A~~ 12	Test Method for Compressive Strength of Masonry Prisms
C1396/1396M-~~11~~ 2013	Specification for Gypsum Ceiling Board
C1513-~~12~~ 2013	Standard Specification for Concrete Roof Tile
C1563-~~08~~ 2013	Standard Test Method for Gaskets for Use in Connection with Hub and Spigot Cast Iron Soil Pipe and Fittings for Sanitary Drain, Waste, Vent and Storm Piping Applications
D86-~~2011b~~ 2012	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
D92-2012b	Test Method for Flash and Fire Points by Cleveland Open Cup Tester
D93-~~11~~ 2012	Test Method for Flash Point by Pensky-Martens Closed Cup Tester
D1693-~~12~~ 2013	Test Method for Environmental Stress-Cracking of Ethylene Plastics
D1970/D1970M-~~11~~ 2013	Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roof Underlayment for Ice Dam Protection
D2239-2012A	Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
D2513-~~12~~ 2013E1	Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings

D2683-2010E1	Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
D2737-2012E1A	Specification for Polyethylene (PE) Plastic Tubing
D2974-07A 2013	Standard Test Methods for Moisture, Ash and Organic Matter of Peat and other Organic Soils
D3035-2012E1	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
D3161/D3161M-12 2013	Test Method for a Wind Resistance of Asphalt Shingles (Fan Induced Method)
D3201-08AE1 2013	Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Based Products
D3350-08 2012E1	Specification for Polyethylene Plastics Pipe and Fittings Materials
D3689-07 2013E1	Test Methods for Deep Foundations Under Static Axial Tensile Load
D3737-09E1 2012	Practice for Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)
D4637/D4637M-12 2013	Specification for EPDM Sheet Used in Single-Ply Roof Membrane
D5055-12 2013	Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists
D5456-12 2013	Standard Specification for Evaluation of Structural Composite Lumber Products
D6223/D6223M-02(2009)(2011)E1	Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
D6757-07 2013	Standard Specification for Underlayment Felt Containing Inorganic Fibers used in Steep-Slope Roofing
E96/E96M-10 2013	Test Method for Water Vapor Transmission of Materials
E1332-90(2003 10A)	Standard Classification for the Determination of Outdoor-Indoor Transmission Class
E1529-10 2013	Test Method for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies
E1537-12 2013	Test Method for Fire Testing of Upholstered Furniture
E1996-2012A	Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
E2178–11 2013	Standard Test Method for Air Permeance of Building Materials
E2307-12 2010	Standard Test Method for Determining Fire Resistance of a Perimeter Joint System Between an Exterior Wall Assembly and a Floor Assembly Using the Intermediate-Scale, Multi-story Test Apparatus[1]
E2336-04(2013)	Standard Test Methods Fire Resistive Grease Duct Enclosure Systems
F441/F 441M-12 2013	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
F442/F 442M-12 2013	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
F714-12E1 2013	Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
F876-10E1 2013	Specification for Crosslinked Polyethylene (PEX) Tubing
F877-2011A	Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems
F1055-11 2013	Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing
F1496-12 2013	Standard Test Method for Performance of Convection Ovens

F1807-~~12~~ 2013	Specifications for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
F2080-~~09~~ 2012	Specification for Cold-Expansion Fittings with Metal Compression-Sleeves for Cross-linked Polyethylene (PEX) Pipe
F2200—~~11B~~ 2013	Standard Specification for Automated Vehicular Gate Construction
F2306/F 2306M-~~11~~ 2013	Specification for 12" to 60" 300 to 1500 mm annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

Commenter's Reason: Further revisions to ASTM Standards.

ICC

Public Comment 5:

Jonathan Humble, representing ICC Reference Standards Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

ICC A117.1 – ~~2009~~ 2014	Accessible and Usable Buildings and Facilities

Commenter's Reason (Humble): The ICC Reference Standards Committee (ICC-REF), a committee organized to review standards and provide an opinion of standards compliance based on Council Policy 28, requests that ADM 62-13 be further modified with the incorporation of ICC A117.1-2014 edition.

The ICC-REF disagrees with the ADM code development committee reasons for reverting back to the 2009 edition of ICC A117.1. Contrary to the code development committee's reason concerning significant changes, Section 4.5.1 of the Council Policy does not stipulate any restrictions to modifications to a standards updating. Rather, the intent is that an updated standard should coordinate with the various I-codes in which the standard is referenced. Since this standard is referenced generically in each of the referenced I-codes, and not specifically by individual section number, it is believed that the update will not yield the coordination issues cited in the code development committee's recommendation.

We therefore recommend that ADM62-13 be further modified by the updating of ICC A117.1 to the 2014 edition.

Public Comment 6:

Kenneth Schoonover, KMS Associates, Inc. representing self, requests Approval as Modified by this Public Comment.

Approve the proposed update to ICC/ANSI A117.1-14 for the IBC and the IRC. Retain the reference to ICC/ANSI A117.1-2009 for the IZC, IFC and IEBC.

Commenter's Reason: ICC/ANSI A117.1 Standard is going through its normal revision cycle, which is expected to be complete before the end of this code development cycle. The new edition of A117.1 will be published and available for reference in the 2015 International Codes.

While it is true that there are significant changes, that is not a good reason to freeze the I-Codes reference at the 2009 Edition of the standard. ICC Council Policy #CP28-05 specifically allows an administrative update of a standard to be approved, based upon completion before Dec. 1 of 2014. We anticipate that this standard will be published and available well before December 1, 2014. In writing this rule for completion of a referenced standard a full year after the update is approved, ICC is specifically allowing for completion of technical work on a standard to be completed, with no qualifications regarding the progress of that work. The revisions underway for A117.1 will not impact the content of the 2015 I-Codes. Further, there are a number of reasons why the update to this standard should be approved:

1. If the revisions in question are included in the new standard, there is no good reason not to move forward with them. The changes will have been well vetted, the benefits of the changes have already been established, and the basis for the changes will have been well substantiated.
2. The potential impact on design and construction is no reason delay implementation. It will be several years before the new edition of the I-Codes are widely adopted and enforced. The changes are significant, but not so dramatic as to cause a major upheaval in the design and construction industry. This would not be the first time, or the last, that changes in codes and standards will have had such effect. Designers and builders can and will adapt, and there will be sufficient time to adapt for those who choose to be proactive and plan ahead.
3. There are many other changes and improvements in the standard that will be delayed if the standard is not updated. Among them are revisions that will correlate to a great extent the I-Codes with the new 2010 ADA Standards, which are now adopted and in force. The I-Codes have long sought to be as technically consistent as possible with the ADA Accessibility Guidelines. Designers,

builders and building owners benefit from having model codes that match the federal accessibility requirements. Failure to update the standard will be a lost opportunity to continue that benefit.

4. The A117 Committee has, to date, agreed to minimize the impact of the changes on housing. The proposals under consideration by the committee include exceptions to Chapter 10 of the Standard that will limit the spatial impact Accessible, Type A and Type B units.

Analysis: Availability of older editions of a standard are determined by the policies of the standard promulgator. The IFC references the A117.1 in Sections 907.5.2.3.4 (Visible alarms) Group R-2, 1007.9 (Accessible means of egress) Signage and 1010.1 Ramps. Chapters 9 and 10 are repeated in the IBC and IFC. The IZC references the A117.1 in Sections 801.2.4 and 801.3.1. The references are specific to requirements for passenger loading zones and accessible parking spaces. Accessible parking requirements and passenger loading zones are also addressed in the IBC, Section 1106.

Public Comment 7:

Steve Orlowski, representing National Association of Home Builders (NAHB), and Tim Ryan, representing the International Association of Building Officials (IABO), requests Approved as Modified by the Code Committee.

Commenter's Reason: During the code development hearing, the committee agreed that there was a need to modify the list of referenced standard, specifically the updating of the A117.1 standard. CP policy 28 allows for standards that are already referenced in the I-Codes to be updated, even if they are still under development, provide they are completed before December 1, 2014. There are several standards that have been changed or are currently being changed without any opportunity to determine whether the standard should still be referenced in the code or the ability to change the code to reflect changes that have occurred in the standard.

For example the A117 standard is currently discussing changes that may possibly change the required dimensions of clear floor space and dimensions along the accessible route significantly. Without the opportunity to fully understand how existing buildings that were built in accordance with the previous edition of the standard and how the proposed changes will interact with ADA and FHA requirements, NAHB encourages the final assembly to support the modification approved by the committee to not update the reference to the 2014 A117.1 standard.

Public Comment 8:

Robert Eugene, representing UL LLC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

705-2004 ~~Revision 5~~ Standard for Power Ventilators with revisions through March 2012

Commenter's Reason: This modification provides no technical change. The re-formatting provides consistency with the formatting of the other UL referenced standards.

Public Comment 9:

Robert Eugene, representing UL LLC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1703-02 Flat-plate Photovoltaic Modules and Panels - with revisions through ~~May 2012~~ November 2014

Commenter's Reason: This modification will incorporate additional fire testing provisions. It will also include various clarifications and editorial revisions to the standard.

Public Comment 10:

Robert Eugene, representing UL LLC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

14B-2008 Sliding Hardware for Standard Horizontally Mounted Tin Clad Fire Doors with revisions through May 3, 2013

14C-2006 Swinging Hardware for Standard Tin Clad Fire Doors Mounted Singly and in Pairs, with revisions through ~~December 2008~~ May 2013

181A-~~05~~ 2013	Closure Systems for Use with Rigid Air Ducts and Air Connectors~~— with Revisions through February 2008~~
181B-~~05~~ 2013	Closure Systems for Use with Flexible Air Ducts and Air Connectors~~—with Revisions through February 2008~~
268~~—06~~2009	Smoke Detectors for Fire ~~Prevention Signaling~~ Alarm Systems ~~–with revisions through October 2003~~
325-2002	Door, Drapery, Gate, Louver and Window Operators and Systems - with Revisions through ~~January 2012~~ June 2013
343-2008	Pumps for Oil-Burning Appliances – with revisions through June 2013
441-2010	Gas Vents~~—with Revisions through August 2006~~
471-~~06~~ 2010	Commercial Refrigerators and Freezers—with Revisions through ~~October 2008~~ December 2012
499-05	Electric Heating Appliances-with revisions through ~~April 2012~~ February 2013
508-99	Industrial Control Equipment—with Revisions through ~~September 2008~~ March 2013
641~~–1995~~ 2010	Type L Low-Temperature Venting Systems with revisions through May 2013
710-~~95~~ 2012	Exhaust Hoods for Commercial Cooking Equipment~~—with Revisions through December 2009~~
834-04	Heating, Water Supply and Power Boilers Electric—with Revisions through ~~December 2009~~ January 2013
842-07	Valves for Flammable Fluids, with Revisions through ~~April 2011~~ October 2012
867-~~00~~ 2011	Electrostatic Air Cleaners-with Revisions through February 2013
923~~—2008~~ 2013	Microwave Cooking Appliances~~—with Revisions through June 2010~~
1042-~~94~~ 2009	Electric Baseboard Heating Equipment-with revisions through June ~~2010~~ 2013
1081-2008	Standard for Swimming Pool Pumps, Filters and Chlorinators, with revisions through ~~November 2011~~ May 2013
1240-2012	Electric Commercial Clothes-Drying Equipment - with Revisions through ~~February 2011~~ October 2012
1313-93	Standard for Nonmetallic Safety Cans for Petroleum Products—with Revisions through ~~August 2007~~ November 2012
1479-03	Fire Tests of Through-penetration Firestops—with Revisions through ~~*March 2010*~~ October 2012
1618-09	Wall Protectors, Floor Protectors and Hearth Extensions – with revisions through May 2013
1715-97	Fire Test of Interior Finish Material—with Revisions through ~~April 2008~~ January 2013
1812-~~2009~~ 2013	Standard for Ducted Heat Recovery Ventilators~~—with Revisions through June 2010~~
1820-04	Fire Test of Pneumatic Tubing for Flame and Smoke Characteristics—with Revisions through ~~February 2009~~ May 2013
1887-04	Fire Tests of Plastic Sprinkler Pipe for Visible Flame and Smoke Characteristics—with Revisions through ~~February 2009~~ May 2013
2075-~~04~~ 2013	Standard for Gas and Vapor Detectors and Sensors~~—with revisions through September 2007~~
2079-04	Tests for Fire Resistance of Building Joint Systems—with Revisions through ~~June 2008~~ December 2012
2085-97	Protected Above-ground Tanks for Flammable and Combustible Liquids—with Revisions through ~~December 1999~~ September 2010
2200-2012	Stationary Engine Generator Assemblies~~--~~ with Revisions through June 2013
2360-00	Test Methods for Determining the Combustibility Characteristics of Plastics Used in Semi-Conductor Tool Construction—with Revisions through ~~June, 2008~~ May 2013

2523-09	Standard for Solid Fuel-Fired Hydronic Heating Appliances, Water Heaters, and Boilers, with Revisions through ~~October 2011~~ February 2013

Commenter's Reason: This modification provides additional updates to referenced standards revision dates and titles as applicable.

Final Hearing Results

ADM62-13	AMPC1,2,3,4,8,9,10