2015-2017 PMGCAC

Proposals to Change the

2015 IPC, IMC, IFGC, IRC-P, IRC-M, IPSDC, ISPSC and sections of other I-Codes that correlate with these codes

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Total Number of Pages: 51

Revision Notes:

Revision O, March 1 thru April 5, 2014. Creation of original document. All Section numbers are for 2012 I-codes unless otherwise stated.

Revision 1, April 8, 2014. Notes from April 7 through 8, 2014 physical meeting of the PMGCAC in Chicago, IL. Item No.s 1 thru 164 discussed and added to the list. Gray highlighted items at end of the document are ideas that were discarded. Red text names below other items are assignments as to who volunteered to work the item along with notes about certain aspects of the item.

1. IPC (IRC? YES). Sections 405.8 & 1002.2. Slip joints. Change the wording for slip joint locations to include slip joints in the waste piping *from the fixture outlet* to the trap outlet (and in between).
Alex

2. IPC (IRC? YES). Section 905.3. Vent connections. Add the following sentence: “Vents shall not connect to the drainage
system from the fixture outlet to the trap outlet where slip joints are used.
Lots of discussion, potentially affects Section 918 ?
Alex

3. IPC (IRC? YES). Section 908.2 & 908.3. [Staff note: these are 2009 section numbers. 2012 Section numbers are 911.2 911.3] The title of Common vent should read, Horizontal common vent. The text should be changed to: “Where two drains connect horizontally to a horizontal drain, their interconnection shall be at the same level through a double pattern

fitting. The vent connection shall be at the interconnection of the fixture drains or downstream of the interconnection.

Maybe include a similar change to 911.3 Vertical Common Vent ?
Maybe need better words, maybe a definition. Need a figure?
Alex

4. IFGC (IRC? AUTOMATIC as necessary) Section 503.5.7 & 503.5.7.2. What is liquid fuel? Oil/ Propane?
[Staff note: IFGS controlled section]
Clarification needed by a definition. Maybe coordinate with AGA/NFPA
Tom

5. IFGC (IRC? AUTOMATIC as necessary) Section 202. Definitions. VENTED DECORATIVE APPLIANCES. Are these appliance limited to those in ANSI Z21.50 or are they also gas logs?
Z21.84 is for manually lit gas logs. 3 categories of appliances called *decorative appliances*. Some confusion that needs cleared up. Involve Section 621.7 ?
Tom

6. IRC (IMC? YES but only for large homes) Section M1508.1 (New). A new section is needed in the code to address depressurization concerns for the house as a system. There is currently no approach in the IRC to deal with appliance venting and depressurization holistically. These are new, reasonable requirements (above current code) that would address today's tighter homes. Under Item 2 of this section kitchen exhaust systems are excluded because they are already covered in their own section (M1503.4 in the 2012 IRC). Under Item 3 pf this section, appliances that are supplied with air from permanent openings to the outside and located in a separate room don't need additional air from outside.

> **M1508.1 Venting and Depressurization**. Gas-and oil-fired space-heating and gas-and oil-fired water-heating combustion appliances in new dwelling units shall comply with at least one of the following:
>
> 1. Space- heating and water-heating combustion appliances located within a dwelling unit's air barrier shall be of the direct-vent type.
> 2. Space-heating appliances and water-heating combustion appliances located within a dwelling unit's air barrier shall be of the direct-vent or *mechanical draft* type. Mechanical

ventilation shall be provided in accordance with Section M1507. Makeup air shall be provided for each of the dwelling unit's two largest exhaust systems, other than the kitchen exhaust system, at a rate approximately equal to or greater than the design exhaust rate. Makeup air systems shall be equipped with not less than one gravity or motorized damper. Motorized dampers shall be automatically controlled to operate simultaneously with the exhaust systems. Kitchen exhaust systems shall be provided makeup air in accordance with Section M1503.4.

3. Space-heating and water-heating combustion appliances shall not be located within a dwelling unit's air barrier or shall be located in a mechanical room and supplied with *combustion air* taken directly from the outdoors in accordance with Section G2407.6.

Exceptions: The section shall not apply to:

1. Dwelling units with a tested air tightness of greater than 3 ACH50.
2. Dwelling units having a tested depressurization that is within the limits specified by an approved test.
3. Dwelling units which do not contain an exhaust-only *whole-house mechanical ventilation system*.

Canadian standard F300 might have info to address. Not limit to only homes?

Dan, Tom

7. IRC (IMC? MAYBE) Section M1503.4. The section on makeup air is meant to address appliance backdrafting. For over three code cycles 400 cfm has been upheld as the accepted threshold by the membership and this proposed language does not attempt to change that.

The current section requires 0 cfm of makeup air for a 400 cfm exhaust system, but it stipulates that 401 cfm of makeup air be supplied for a system that is just 1 cfm larger. Logic would suggest that if a 400 cfm exhaust system is code compliant, then a 500 cfm system with 100 cfm of makeup air would be, too (400 = 500 - 100). Why is this not the case? The underlined text in the charging paragraph attempts to fix this.

The proposed exception provides a higher threshold for appliances which are not, or are not as, susceptible to backdrafting. (Note that the current requirement is in effect even in all-electric homes or where the only combustion appliances are direct vent or unvented.) It would make sense to have a simple exception (or two) for these scenarios.

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m3/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the difference of the exhaust air rate that is in excess of 400 cubic feet per minute. Such makeup air systems shall be equipped with not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that

automatically opens when the exhaust system operates. Dampers shall be accessible for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced.

Exception: Where all appliances within a dwelling unit's air barrier are sealed combustion, power-vent, unvented. or electric, makeup air shall be provided where exhaust fans are capable of exhausting more than 600 cubic feet per minute (0.28 m3/s). Exhaust hood systems capable of exhausting more than 600 cubic feet per minute (0.28 m3/s) shall be provided with makeup air at a rate approximately equal to the difference of the exhaust air rate that is in excess of 600 cubic feet per minute.

Related to PMGCAC Item 5 but probably still needs to be a separate proposal. Picking a number might be based on the area of space? How tight of building? Maybe get a depressurization number from other sources?? Tie in to PMGCAC Item 6. Gregg suggests to limit to 0.02 WC etc. my suggestion.
Dan, Tom

8. ISPSC Section 311.3. This section needs to be updated to replace the existing language because APSP-7 2013 (a new standard) no longer states water velocity requirements deferring to the properly installed suction outlet cover/grate to ensure safe operating velocity. The new text needs to say:

311.3 Water Velocity. [delete exiting text] The water velocity in return piping and suction piping in residential pools and spas shall not exceed 8 feet per second. The water velocity in public pools and spas shall not exceed 6 feet per second in suction piping and shall not exceed 10 feet per second in return piping. Velocity through suction outlet covers/grates shall be in compliance with APSP-16.

Carvin

9. ISPSC Section 809.2. The last sentence of the section *"Pools having more than one shallow area, including but not limited to center deep, play or sports pools, shall use the same type of entry and exit in all shallow areas. Ladders shall not be installed in a shallow area of a pool."* has to be removed.
[Staff note: The sentence referred to is not that of the 2012 or 2015 editions. The text of the 2015 code is:

809.2 Entry and exit. Pools shall have a means of entry and exit in all shallow areas where the design water depth of the shallow area at the shallowest point exceeds 24 inches (610 mm). Entries and exits shall consist of one or a combination of the following: steps, stairs, ladders, treads, ramps, beach entries, underwater seats, benches, swimouts and other *approved* designs. The means of entry and exit shall be located on the shallow side of the first slope change.

end of staff note.]

Since the APSP-5 2011 standard was published, several calls have been received from builders and fiberglass pool manufacturers expressing concern that the language in Section 6.1 of APSP-5 is creating problems both in construction and for fiberglass pool manufacturers with existing molds. According to the language in the 2011 edition of APSP-5, these existing molds can no longer be used.

The existing language has been modified to help clarify and remedy this section. Hopefully, it will eliminate the problems encountered by builders and manufacturers, while at the same time, eliminate the misperception of a shallow end being the deep end based on the assumption that a ladder signifies the deep end.

> **809.2 Entry/exit.** All pools shall have a means of entry/exit in the shallow area if water depth exceeds 24 in. (61.0 cm) at the shallowest point. The means of entry/exit shall be located on the shallow side of any first slope change. ~~Pools having more than one shallow area, including but not limited to; center deep, play or sports pools, shall use the same means of entry/exit in all shallow areas.~~
>
> [Staff note: The struck out language of the above proposed section is not that of the 2012 or 2015 editions]
>
> **809.2.1 {TITLE}** A secondary means of entry/exit shall be provided in the deep area of the pool if the water depth exceeds 5 ft (152.4 cm).
>
> **Exception:** In pools where a deep end egress may present a potential hazard, handholds may be substituted for a means of egress.

Carvin

10. ISPSC New Chapter/New Section. A pool proposal for “spray grounds” did not receive approval during the last code development cycle because the term Spray Grounds was a trademarked name. Because of the recent (sewage) contamination event of one of these play areas for a Traverse City, MI city park, it is suggested that the CAC propose something like this proposal again. There is an accessory document for this item.
Carvin

11. ISPSC. SWIM PONDS. Should a man-made pond with liner and recirculation system be covered by the code?

Maybe narrow it to swimming and chlorination.
Carvin

12. ISPSC. SHALLOW AREAS definition. 5 feet conflicts with the 4 feet in Section 807.2.
Carvin

13. ISPSC. SWIMOUT definition. The second sentence (a requirement) needs to be moved into the code text. The definition conflicts with Figure 322.2.
Carvin

14. ISPSC. New in Section 411. What about protection outside of vanishing edge pools where the vertical drop is greater than 3 feet? Think of vanishing edge pool at top of a high rise. What protects swimmers when they hike themselves up on the vanishing edge and fall over the side of the building? Is this also appropriate for Residential pools? This might need coordination with the IBC.

Carvin

15. IFGC (IRC? AUTOMATIC as necessary) Sections 401.9 & 401.10. Problem: Black iron pipe and fittings are not available with labeling or 3rd party certification. Carryover from IMC.
Need to identify what the problem is
Tom

16. IPC (IRC? YES). Section 312.2. Drainage testing. Change the head of water height to 5 feet to match the IRC or change the IRC back to 10 feet. If the height stays at 5 feet the air test pressure needs to be equivalent to the water test pressure.
Seek consistency
Janine

17. IPC (IRC? YES). Section 301.6. Indirect. This section needs to be located in Chapter 8 as chapter 8 states " Fixtures not required by this section to be indirectly connected shall be directly connected".
Add text of exception to 8 so it won't be overlooked.
Alex

18. IPC (IRC? YES). Section 915. Combination Waste and Vent System – There needs to be greater definition and clarity in this entire section.

[Staff note: There were several errata for this section for the 2012 edition. See accessory documents].
Alex

19. IPC (IRC? MAYBE) Section 202. Definitions - Create a definition for "clear-water waste". [Staff note: "clear-water waste" used in Sections 709.4.1, 801.1, 802.1.3 & .5 (in titles only), 802.3.]
Alex

20. IPC (IRC? MAYBE) Section 202. Definitions. Ready Access. Strike the word "door" from "Ready access" definition.
Alex

21. IMC (IRC? MAYBE) Table 803.10.4. System A needs to be eliminated. NFPA 211 in process of same. Not code worthy and a dangerous practice.
Tom

22. IPC (Other codes? YES). Section references to other I-codes. Where a Code sends the reader to look at another I-code for a requirements, the language from that other I-code *should* just be put into the Code that you are looking at. Otherwise, don't allow the Code to make the reference.
Provide examples to better define what is needed.
Alex

23. IPC (IRC? NO) Section 1002.1. Exception 3: strike the words "A grease" and insert "An".
Maybe delete this exception altogether?
Alex

24. IPC (IRC? MAYBE) Section 704.3 Base of stacks. Clarify “horizontal branches” if it is the intent of the code to not have openings below the centerline of the horizontal section of the base of a stack within 10 pipe diameters. If so, then “horizontal branches” should be replaced with more defined language.
Alex

25. IFGC (IRC? AUTOMATIC) Section 409.5.3 (IRC G2420.5.3), This section allows an appliance shutoff valve to be up to 50 feet away from an appliance. A furnace located in an attic, with a manifold and appliance located in the basement creates a hazardous condition, especially for servicing technicians. This section needs deleted.
Brent

26. IRC (IMC? YES) Section M1601.4.3. This section requires 18 gauge straps or 12 gage wire for duct support. This is significantly heavier than required for 6 inch round pipe or other smaller ducts. Consider a graduated table just as we have in duct gauge. For example: 1 inch wide strap not less than one or two gages heavier than the wall thickness of the duct being supported.
Gregg to check.
Brent

27. IMC (IRC? NO) Section 506.3.2.5. The section allows grease duct testing procedures using a light but that test does not identify all leaks. Leaks in slip or over lapping duct joints are not identified with a light test as the light does not bend around the open spaces in the duct. Possibly consider pressure testing with a duct blaster.
Brent

28. IMC (IRC? YES) Section 202 Definitions. The definition for VENTILATION in the IRC and IMC creates confusion. Lacking in the definition is the link to outside air.

- Ventilation results when outside air is introduced into a building, with excess air either leaking out or exhausted out of the building,

-or-

- Air is exhausted out of the building, with outside air leaking into the building to replace that exhausted or made up mechanically.

Consider a change in the definition to:

VENTILATION. [delete existing text] <u>The controlled movement of air from outside, through the conditioned space, to outside.</u>

(This is similar to the definition in ACCA/ANSI Manual J.)
Brent

29. IRC (IPC? YES) Section P2602.1. The following proposal (RP12-13) was Approved as Submitted (AS) at the IRC-P hearings in Dallas, however, some committee members felt the section needed additional language to clarify that the ANSI/NGWA standard could not preempt state and local laws. A Public Comment was submitted to update the language and that is the language being proposed here.

[Staff note: The public comment was approved in the Public Comment hearing, however, because the new standard was not ready for publication, the language could not be put into the 2015 IRC]

> **P2602.1 General.** The water-distribution and drainage system of any building or premises where plumbing fixtures are installed shall be connected to a public water supply or sewer system, respectively, if available. When either a public water supply or sewer system, or both, are not available, or connection to them is not feasible, an individual water supply or individual (private) sewage-disposal system, or both, shall be provided. Individual water supplies shall be constructed in accordance with <u>the applicable</u> state and local laws ~~or~~<u>.</u> <u>Where the construction of individual water supplies is not regulated by state or local laws, such individual water supplies shall be constructed</u> in accordance with ANSI/NGWA-01-07.
>
> **Add new standard to Chapter 14 as follows:**

Dan

30. IPC (IRC? YES). Section 424.5. “such protection provided by a combination tub/shower valve in accordance with Section 424.3”. Other types of tub filler faucets now have a high-limit setting – are these designs suitable as well? No different than a pressure balanced shower valve with a high limit setting. Or does the requirement for ASSE 1070 device eliminate a pressure balanced shower valve from supplying a tub? (Remember that a pressure balanced shower valve is NOT a thermostatic valve like a ASSE 1070 valve is.)

Assignment ?

31. IPC (IRC? YES) Table 709.1 (with Section 709.4.1 related) Water dispenser drainage fixture unit. Where water dispensers are connected to the sanitary drainage system what should be the dfu value? Drinking fountains are ½ dfu

Alex

32. IPC (IRC? YES) Section 605.14 and others. Push-fit fittings (e.g. Sharkbite, Probite, Easygrip, Speed Fit, etc.) Although the standard ASSE 1061 is in the fittings table, code text was not put in the appropriate sections for tubing that these fittings are intended for (copper, PEX, CPVC tubing)

John

33. IPC 605.10.2 (IRC? YES). Table 605.5. ABS solvent-cemented pressure fittings are no longer available. The standard for pressure fittings (ASTM D2468) was withdrawn by ASTM in 2003. This section needs to be removed and the ABS entry in Table 605.5 needs removed.
New York still has availability of fittings?
John

34. IPC (IRC? NO) Section 709.3. Suggested rewording: “This is an estimated equivalency” and “the reverse is not true”
Maybe address continuous and semi-continuous issue too.
Jim

35. IPC (IRC? YES) Table 702.4 plus new section in Section 705 Joints. Polyethylene pipe is in IPC (and IRC) building sewer table but not in fittings table. Should there be a new section about fittings and that they should comply with ASTM D2683 (socket fittings for PE pipe-this standard is already in the code)? Remember, there could be fittings required in a building sewer pipe..laterals…cleanouts.
John

36. IPC (IRC? YES) New Section in Chapter 3. Should there be a section about support of thermal expansion tanks?
Bill

37. IRC (IPC? NO) Section P2905.9. Last line. This appears to be out of place. In the IMC and the IPC, according to the definition of “mechanical joint”, a flared joint is a mechanical joint. Remove the last line and put in a section for flared joint in P2906.3 (just like what the IPC has).
Janine

38. IPC (IRC? YES) New Section in Section 417. Field constructed showers with seats should be required to have the same lining material as shower floors do. A seat is a horizontal surface which can have a lot of water on it such that the water can leak to the structure.
Janine

39. ISPSC Latch (release?) height for doors has to be coordinated with IBC and IRC. See the exception for IBC section 1008.1.9.2. And in general, coordination with the accessibility requirements for doors and landings. [Staff Note: Might need to be coordinated with a BCAC proposal that the PMGCAC generates for the BCAC]
Shawn

40. ISPSC. Section 202 Definition. UNDERWATER LEDGE "whose dimensions….." What standard? Can't the information be put into the code??
Carvin

41. ISPSC. Section 305.1. Last two sentences are commentary and should be removed. The exceptions really don't fit correctly because the main paragraph does not have the requirements that are being excepted from. The section needs to be rewritten.
Carvin

42. ISPSC. Section 306.1. The beginning needs to be rewritten to remove the implication that decks are required. " The *structural* design and the installation of decks shall …..". Furthermore, at what point away from the pool or spa does the deck become just a normal deck and not a pool deck?
Carvin

43. ISPSC. Section 307.1. The exception needs to be moved to each of Sections 307.3. 307.4, 307.5, and 307.6.
Carvin

44. ISPSC. Section 308.3 Totally inappropriate language. Needs re-written with mandatory language.
Carvin

45. IMC (IRC? YES) New Section(s). The codes are silent on the location of exhaust outlets for stationary fuel-fired generator sets. Clearance to windows, doors, air intakes?
Janine, Maggie, Brent, Dan

46. IMC (IRC? YES) New Section(s). What is the required chimney termination height and clearance requirement for outdoor fireplaces?
Include smokers, cooking appliances.
Tom, Janine Dan, Tom, Maggie

47. IMC (IRC? YES) New Section(s). The code is silent on chimney termination heights for solid fuel-fired outdoor hydronic heaters.
Include smokers, cooking appliances.
Tom, Janine

48. IRC (IMC? MAYBE) Section M1506.2. This section has been misinterpreted regarding the intent of the words “operable and non-operable.” Intent is pathways into the building are to be protected. Doors, windows, intake louvers, etc are the issue, not fixed fenestration panels. “Non-operable” could refer to windows that don’t open or intake louvers that don’t close, big difference.
Brent

49. IRC (IMC? MAYBE) Section M1507.2. This section does not mention kitchen exhaust.
Brent

50. IPC (IRC? YES) Section 712.3.3. IS approval really needed?
Jim, Janine

51. IPC (IRC? YES) Section 424.5. Add the sentence, “Access to enable removal for replacement and temperature adjustments shall be provided to the water tempering device.”
Janine

52. IPC (IRC? NO) Tables 702.1, 702.2, 702.3 are missing ductile iron pipe material (however, the pipe fitting Table 702.4 has ductile iron fittings). And there are not corresponding sections in Section 705 (Joints) for ductile iron. The pipe standards are AWWA C115 (flanged ends) and AWWA C151 (plain end). Both standards are already in the code in Chapter 6, however, ductile iron for wastewater service does not require cement mortar lining like water distribution piping does. (Same pipe spec – just ordered with or without mortar lining.)
Shawn

53. IPC (IRC? YES) Table 702.4. Copper and copper alloy row. ASME B 16.15 (pressure fittings), B 16.18 (pressure fittings), B16.22 (pressure fittings) and B16.26 (flared copper tube fittings) are not drainage pattern fittings and should be removed. The remaining standards ASME B16.23 and B16.29 are correct for DWV.
Maggie

54. IPC (IRC? NO) Table 702.4. The malleable iron fitting row should be deleted. These are not drainage pattern fittings and would not even be suitable for venting systems as the condensate would not ready flow back to the drain system.
Maggie

55. IRC (IMC? MAYBE) Section M1507.3.2 does not indicate the nature of the controls. Can the typical wall switch for bathroom fans be considered to be the required control? Same for kitchen exhaust fans and hoods. Should the "controls" be recognizable as whole-house ventilation system controls?
Need definitions and controls
Brent.

56. IRC (IMC? MAYBE) New Section. There is no prohibition on connecting the positive pressure discharge of exhaust fans from different dwelling units to a common duct, thereby allowing cross-contamination between dwellings.
Mike

57. IRC (IMC? MAYBE) Section M1601.1.1, item 6 applies to plastic ducts but does not say so.
Maggie

58. IRC (IMC? MAYBE) Section M1601.1.1 item 7 refers to "solid" joists, which rules out trusses. Does this include solid web (TJI) truss joists. The fireblocking could be more substantial than the web material.
Janine

59. IRC (IMC? MAYBE) New Section. RM36-13 added duct length table based on fan rating at 0.25 inch wc pressure drop. Industry says 0.10 inch wc is the norm.
Brent

60. ISPSC. Section 315.2.1. Turnover rate is a “time” according to the definition. But the use of “turnover rate” in this section doesn’t seem to correlate.
Mike, Carvin

61. ISPSC. Section 315.4. Change “sole” to “only”. Then go on to say: “outlet for surface skimming of the pool or spa, not less than 50% of the pool or spa perimeter shall have a perimeter-type skimming system.”
Carvin

62. ISPSC. Section 401.1. The last sentence is not in mandatory language. It can be melded into the first sentence.
Carvin

63. ISPSC. Section 401.2. Sentence not written in mandatory terms.
Carvin

64. IRC (IPC? NO) Section 3003.19. This section does not clearly address fastening the water closet flange to the floor. (The IPC clearly states “Flanges shall be secured to the building structure with corrosion-resistant screws or bolts”). There are several “conflicting” issues. IPC Section 405.4.1. The organization of this section isn’t correct and there are some conflicting issues about attaching the flange to the floor
John, Shawn

65. IPC (IRC? NO) Section 707.1 New item. The IRC prohibits the use of a joint between a closet flange fitting and the inside of a pipe (See Section P3003.19 that states “The inside diameter of the drainage pipe shall not be used as a socket fitting for a 4 inch by 3 inch closet flange”). Having this restriction for the IRC and not for the IPC seems odd. However, if you do prohibit that kind of attachment, then how do you attach the flange to a concrete slab on grade floor? Reference P167-12 (failed)
Janine

66. IPC (IRC? YES) Appendix P (Appendix P for IRC). This appendix has been dormant for many code cycles. The code requirements that the appendix examples (and example table) have changed and now the example is incorrect. There are some mistakes in the example. Although

these appendices are not code (unless adopted by the jurisdiction), they should be changed to be correct. Some of the language is poor and could be updated so that if adopted with the code, it is up-to-snuff as proper code language. There are many people using these materials. The IRC *partially* references its appendix. There is an accessory document for this item.
Jim

67. IRC (IMC? NO) Section M2002.4 is poorly worded. Should refer to appliances, instead of equipment; should refer to boiler manufacturer's instructions for rating; what is the "max rating of a boiler? Why should the boiler relief discharge be any different than required for water heaters? Should refer to P2803.6.1.
Look at plumbing listings for water heaters
Janine, Maggie.

68. IMC (IRC NO) Section 202. Definitions? Definition of commercial cooking appliance has always been ambiguous. There is no accepted definition of "commercial." The definition includes appliances that only heat food, and therefore are not cooking appliances. Chapter 5 determines what appliance effluent has to be exhausted, yet the definition itself says that a cooking appliance is an appliance that must have its effluent exhausted. This seems circular. In other words, Chapter 5 dictates where an exhaust system is required for cooking appliances and the definition says that a cooking appliance is something that requires a hood. ??? If Chapter 5 does not require an exhaust system for a particular cooking appliance, then is that appliance no longer a cooking appliance by definition? The last sentence states that a food service establishment is any building or portion thereof that is used to prepare and serve food. This paints with a very wide brush. Is a kitchenette/lunch room in an office building a food service establishment? A school district central kitchen cooks meals for delivery to satellite school buildings in the district, thus such kitchen is NOT a food service establishment because it does serve food. Likewise, the satellite school buildings are not food service establishments because they only serve the food, not cook it.
Janine, Brent, Maggie

69. IMC (IRC? NO) Section 304.11 is a source of interpretation questions regarding what types of fans and equipment trigger the guard requirement.

Solar collectors and arrays? Direct drive permanently lubricated general exhaust fans? Service routinely or once every 10 years?
Janine, Brent

70. ISPSC. 2015 item. Section 309.1 & 309.2. What are the appropriate or applicable product standards? How is this enforceable?
Maggie, Carvin

71. ISPSC. Section 401.4.1 & 401.6. What authority? "the authority that provides the accreditation of the pool for competitive events."
Carvin

72. ISPSC. Section 202 & Various. Change the defined term "accessible" to be the IMC controlled definition for ACCESS (TO) throughout the code as it applies. Leave the term accessible for referring ONLY to accessibility provisions….
Fred, Carvin

73. ISPSC. Section 402.3. 4th sentence. "minimum diving water envelope dimensions…"
Almost editorial
Fred

74. IPC (IRC? YES) Section 305.6. No mention is made about protection required for piping through a metal stud hole or for protection of piping placed directly behind the flange of a metal stud. What is acceptable? (See P16-12 failed)
Janine

75. IPC (IRC? YES) Section 912.1.1. It is not clear that a vertical wet vent cannot have horizontal offsets.
John

76. IPC (IRC? NO) Chapter 11. Is it clear that "area" drains (those outside the building) are not required to be "trapped"?
Mike

77. IMC (IRC? NO) Section 306.1.1. The rationale is not known for the requirement in Section 306.1.1 for 3 inch work space clearances and 12 inch excess width. The exception appears to negate the last sentence regarding combustion air and also stresses the lack of rationale for the work space clearances.
Brent

78. IMC (IRC? NO) Section 306.5. Section 306.5 does not appear to address appliances and equipment that are installed on a raised support structure erected on a roof. Should it, or once the roof is accessed, the service personnel are on their own?
Brent, Janine

79. IMC (IRC? NO) Table 401.5 Table 401.5 states opening is measured in any direction. Louvers and grilles can never comply. Does this apply to round openings (diameter)? A ½ by ½ opening has a diagonal of 11/16ths which exceeds ½ inch.
Brent

80. IMC (IRC? YES) Section 504.6.1. This section 504.6.1 intends 4 inch round duct but does not state that.
Brent

81. ISPSC. Section 402.5. The language is convoluted and very difficult to understand.
Fred to give the rewording a try
Fred

82. ISPSC. Section 402.6. The reference to Figure 322.2 doesn't tell the whole story. The figure only only shows a "at the waterline" perimeter of the diving water envelope. What about under water ledges that might intrude into the diving water envelope?
Fred

83. IPC (IRC? MAYBE) Section 1101.4. Should a building storm sewer require leak testing? What if the storm sewer is a pressurized piping system? The code is silent.
John

84. IPC (IRC? MAYBE?) Section 802.4 (2015 Section 802.3.3). The term “trapped” is slang. In the last line the term “rodding” is somewhat slang. Does the requirement for access to the drain for “rodding” require a cleanout on the fixture drain after the trap?? Also, can a standpipe have vertical offsets??
Jim.

85. IPC (IRC? NO) Chapter 2 SWIMMING POOL. Align definition with the intent of Public and Residential swimming pool definitions in the 2015 ISPSC. Important: remove the 2 foot deep part of definition. This definition also needs to be changed in the IBC. A two part(?) proposal involving the BCAC. What are the implications in such a definition change?
Fred, Carvin

86. IPC (IRC? NO) Section 802.2.1. A drainage air gap is required to be not less than twice the effective opening of the indirect waste pipe. This seems to be unrealistically large. For example, an 1 ½ pipe would be required to end 3 inches above the waste receptor. One problem that the food case industry is having is that there is minimal vertical clearance from the bottom of the cabinet and the floor surface. Given that the drain outlet of the case is not directly over the receptor, the drain has to elbow over and then elbow down at the receptor. Adding the “2 times” air gap requires risers for the food case. The use of the defined term “effective opening” doesn’t seem correct in the context that it is used. As a reference, the UPC calls for drainage air gap to be not less than 1 inch.
John

87. IPC (IRC? NO) Table 403.1. Factory and industrial row AND Storage row at showers column indicates: “(see Section 411)”. Section 411 doesn’t say anything about requirements. This sometime confuses people into thinking that an emergency shower is required in factory and industrial occupancies AND storage occupancies. That is not the intent. The “(see Section 411)” should be changed to point to a new footnote in the table indicating something like “Emergency showers required by the owner or occupant of the factory or industrial operation OR storage operation shall be in accordance with Section 411.
Mike, Shawn

88. IMC (IRC? NO) Section 602.1. According to Section 602.1, stud and joist space plenums are not recognized as plenums, yet Section 602.3 addresses stud and joist spaces under the main section title of “PLENUMS.”
Look at Bigger picture, the whole Section 602
Maggie, Brent, Janine, Bill, John

89. IMC (IRC? MAYBE) Section 603.8. This Section requires code official approval of underground ducts with no stated criteria for such approval. It should simply state that metal ducts shall have a protective coating or shall be concrete encased. Fiberglass ducts are not mentioned. Section 603.8.3 addresses HDPE fittings but not HDPE duct. 603.8.3 limits plastic duct to underground installations, but this section is a subsection of **603.8 Underground ducts**. This limitation belongs under a different section.
Maggie, Brent

90. IPC (IRC? NO) Section 403.3. The word “in” in the first sentence should be changed to “for” because there is confusion as to what the section requires in an open mall (for example, a strip center). This section does not have the intent of specifying *where* the toilet facilities are provided, only that toilet facilities must be provided. Section 403.3.1 could use a tuneup to make the location intent clear.
Jim

END OF APRIL 7, 2014 MEETING

BEGINNING OF APRIL 8, 2014 MEETING

91. IPC (IRC? YES) 2015 Item. Section ???? P225-12 – tank standards – how was this integrated with the P11 change. Need to be able to use other tanks than just these listed under P225-12 such as wood, poured in place etc.
Shawn

92. IPC (IRC? NO) Section 403.3.1. Access to toilet facilities from outside of building or in another building. P-36-12 disapproved from last code cycle – Submit again?
Jim

93. IPC (IRC? NO) 2015 item. Section ???. Dishwasher issue – RP44 from 2015 cycle.
Brent

95. IPC (IRC? NO) Section 608.16.10 - Add ASSE 1024 device language? Also do we want to add carbonated beverage dispenser to the Section 608.16.1 as the code states non-carbonated beverage dispenser in 608.16.10?
John, Shawn

96. IPC (Is this first IMC with an IPC Automatic? IRC? MAYBE) New Section in chapter 7?. Condensate drainage pipe sizing where combining multiple condensate drains from appliance.
Review 2015 text for possible changes
Brent

97. IPC (IRC? NO) Table 403.1. Drinking fountains have seen decreased usage with the popularity of bottled water. An across the board reduction limiting the need to occupant loads over 50 has been in effect for the past two code cycles in Phoenix without any complaints. In addition, the need for service sinks has decreased with the use of carpet and dry cleaning products. Cost Impact: Savings from reduced number of required fixtures.

Table 403.1 - continued

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

(See Sections 403.2 and 403.3)

Delete all service sink requirements from Table 403.1

f. Drinking fountains are not required for an occupant load of ~~15~~ 50 or fewer.

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

Leaving the decision to the building owner is suggested.
John, Mike, David.

98. IPC (IRC? NO) Section 403.4.2. It has been long standing practice in the Codes to group business and mercantile occupancies in regards to plumbing fixtures. It was not clear why the number was changed from 50 to

100 in the 2012 IPC for mercantile with the IBC occupant load remaining the same. These revisions are made to allow for small business occupancies to provide a single toilet facility for up to 50 occupants and reduce the number to the previous value of 50 for mercantile occupancies.

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 and business occupancies in which the maximum occupant load is 50 ~~100~~ or fewer.

Mike, David

99. IPC (IRC? NO) Table 605.3. ABS material conflicts with first sentence of IPC Section 605.3 which requires water service pipe to conform to NSF 61. We have not seen any product in Phoenix with the NSF 61 approval. Cost Impact: None

Table 605.3 Water Service Pipe

MATERIAL	STANDARD
~~Acrylonitrile butadiene styrene (ABS) plastic pipe~~	~~ASTM D 1527; ASTM D 2282~~

Table 605.5 PIPE FITTINGS

MATERIAL	STANDARD
~~Acrylonitrile butadiene styrene (ABS) plastic pipe~~	~~ASTM D 2468~~

John, Maggie

100. IPC (IRC? NO) New Section. This proposal adds specific requirements for backflow assemblies to allow access for the required testing, maintenance and repair. It also adds clearance and the need for a service platform for elevated installations for the tester or maintenance person. Additional clearance and location requirements are added for secondary backflow devices.

> **608.3.2 Access and Clearance.** Access and clearance shall be provided for the required testing, maintenance, and repair. Access and clearance shall be in accordance with manufacturer's instructions, and not less than 12 inches between the lowest portion of the assembly and grade, floor, or platform. Elevated installations that exceed 5 feet above the floor or grade shall be provided with a platform capable of supporting a tester or maintenance person. Secondary backflow assemblies shall be installed above ground, as close as practicable to the point of service delivery. A minimum 3-foot (914 mm) clear space shall be maintained for testing, maintenance and repair.

David, John

101. IMC (IPC? AUTOMATIC) Section 307.2.2. Due to our (Phoenix) extreme weather conditions, it is recommended that all nonmetallic condensate piping be prohibited from areas of direct sunlight, such as roofs. Nonmetallic piping subject to extreme heat will eventually sag between supports. This causes low spots in the drainage system and prevents gravity flow to the point of disposal. In addition, exposure to UV rays from the sun causes the pipe to become brittle and subject to fracture when placed under stress or strain. Both of these conditions lead to condensate disposal failure with the likely result of water ponding on the roof.

Not across board, climate & specific material specific.

David, Maggie, Janine

> **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 pipe or tubing. Nonmetallic piping shall not be installed in exposed locations. 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 be not less than 3/4-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.

102. IBC (IMC? AUTOMATIC) Section ??? (IMC Section 309.1). The 2012 IMC and IBC text covers heating concerns only and does not distinguish between residential or commercial buildings. Many spaces are "intended for human occupancy" but do not need constant heating or cooling such as large warehouses with non-perishable goods. Required heating and cooling are justified in living quarters, thus the use of the term "habitable spaces". Part of the intent of this proposed amendment is to recognize that the cooling season may be the dominant design condition in the geographic area or summer heat waves are just as dangerous as freezing temperatures. It also makes it clear that only habitable spaces are required to be conditioned and insures that permanent equipment is installed. It also allows for a building owner to decide if heating and cooling are needed in spaces other than habitable.
Cost Impact: Increased cost of heating and cooling equipment.
[Staff note: This proposal will need to be passed to the BCAC to propose]

[B] 309.1 ~~Space-heating systems.~~ Heating and cooling systems. Habitable spaces ~~Interior spaces intended for human occupancy~~ shall be provided with active or passive space-heating and space-cooling systems capable of maintaining ~~a minimum indoor~~ temperatures between 70~~ of 68~~°F (20~~1~~°C) and 90°F (32°C) at a point 3 feet (914 mm) above the floor~~ on the design heating day~~. The installation of portable space heaters or coolers shall not be used to achieve compliance with this section.

~~**Exception:** Space heating and cooling systems are not required for interior spaces where the primary purpose is not associated with human comfort.~~

Limit to habitable or cooling also. Should requirement go away entirely?
Needs to be a BCAC proposal
David and Mike

103. IMC (IRC? NO) Section 502.14. Motor vehicle operation in a building depletes oxygen and causes a build-up of carbon monoxide and other products of combustion which could be fatal to occupants. It is critical to the health of occupants to remove these emissions from the occupied space. In

the referenced section 403, an exhaust rate of 0.75 cfm/ft2 is specified for both repair garages and enclosed parking garages. Repair garages that have stationary vehicle operation, such as engine tune-up services, radiator or transmission flushing, etc. require dedicated exhaust systems. This proposal adds specific requirements to provide permanent openings for makeup air or use mechanical makeup air units. This eliminates the use of open doors, which cannot be reliable. It also requires any mechanical equipment or mechanical louvers used for makeup air to be electrically interlocked with the dedicated exhaust system. Cost Impact: Minimal cost increase to install openings and controls.

> **502.14 Motor vehicle operation.** In areas where motor vehicles operate, mechanical ventilation shall be provided in accordance with Section 403. Additionally, areas in which stationary motor vehicles are operated shall be provided with a *source capture system* that connects directly to the motor vehicle exhaust systems. Makeup air for the required exhaust systems in areas where motor vehicles operate shall be provided through permanent unobstructed openings to the outdoors, such as louvers and grills. Mechanical equipment and louvers used for makeup air purposes shall be electrically interlocked with the exhaust system.
>
> **Exceptions:**
> 1. This section shall not apply where the motor vehicles being operated or repaired are electrically powered.
> 2. This section shall not apply to one- and two-family dwellings.
> 3. This section shall not apply to motor vehicle service areas where engines are operated inside the building only for the duration necessary to move the motor vehicles in and out of the building.

Brent, David

104. IMC (IRC? NO) New Sections in Chapter 5. This amendment clarifies that mechanical ventilation is required for liquid carbon dioxide (Co2) bulk storage systems regardless of quantity. Businesses that provide carbonated drinks have been increasingly switching from dry to liquid Co2 storage systems. Liquid Co2 storage systems have been deemed potentially hazardous to human health by the Phoenix Fire Department. Separate Fire Department permits are also required for the Co2 systems. Cost Impact: Additional cost due to requirement for installation of dedicated mechanical exhaust system in the area of liquid Co2 tanks.
[Staff note: Would this be an IFC driven section? At least partially?]

502.20 Storage and use of liquid carbon dioxide (Co_2) systems. Indoor or outdoor areas that contain liquid carbon dioxide (Co_2) stored in ASME pressure vessels in new and existing facilities shall be provided with mechanical exhaust ventilation in accordance with this section.

Exception: Outdoor storage areas in non-enclosed spaces designed to prevent the collection of vapors where approved by the IFC code official.

502.20.1 System requirements. Exhaust ventilation systems for liquid carbon dioxide (Co_2) tanks shall comply with all of the following:

1. The installation shall be in accordance with this code and the *IFC*.

2. Mechanical ventilation shall be provided at a rate of not less than 1 cfm per square foot [0.00508 $m^3/(s \cdot m^2)$] of floor area over the storage area.

3. The system shall operate continuously unless alternate designs are approved by the IFC code official .

4. A manual start control shall be provided outside of the room in a position adjacent to the access door to the room or in another approved location. The switch shall be a break-glass or other approved type and shall be labeled: VENTILATION SYSTEM EMERGENCY ON-ONLY.

5. Exhaust ventilation shall be designed to consider the density of the potential vapors released. For liquid **Co_2** systems, exhaust shall be taken from a point within 12 inches (305 mm) of the floor.

6. Makeup air shall be provided. The location of both the exhaust and makeup air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.

7. Exhaust air shall not be recirculated to occupied areas. Exhaust termination shall be located where it will not allow for a dangerous accumulation of vapors and in accordance with Section 501.3.1 (2).

8. Sensors, controls, alarms, piping and all accessory components shall be as prescribed by the IFC code official.

FCAC item to be PMG developed
David. Brent. Bill

105. ISPSC Section 302.6. Needs to be a requirement for indirect connection of waste water.

302.6 Wastewater discharge. Where wastewater from *pools* or *spas*, backwash from *filters* and water from deck drains discharge to the building drainage system they shall be an indirect waste connection by means of an air gap and such installation shall be in accordance with the *International Plumbing Code* or the *International Residential Code* as applicable in accordance with Section 102.7.1.

Shawn, Carvin

106. ISPSC Section 307.5 & 311.4.3. Freeze protection. Reference previous idea submitted by SS for the IPC (IRC) concerning freeze protection methods.

Include a review of all ICC Codes with respect to freeze protection of piping.

Shawn, Brent

107. ISPSC Section 313.7. This section needs modified as follows:

313.7 Emergency shutoff switch. An emergency shutoff switch shall be provided to disconnect all power to recirculation and jet system pumps and air blowers. Emergency shutoff switches shall be: provided with ready access; located within sight of the *pool* or *spa,* and located not less than 5 feet (1524mm) horizontally from the inside walls of the *pool or spa*.

Carvin

108. ISPSC Chapter 2. Add new definition for

"READY ACCESS". That which enables a fixture, appliance or equipment to be directly reached without requiring the removal or movement of any panel, door or similar obstruction and without the use of a portable ladder, step stool or similar device.

"ACCESS (TO)". That which enables a fixture, appliance or equipment to be reached by ready *access* or by a means that first requires the removal or movement of a panel, door similar obstruction (see "Ready *access*").

[Staff note: these are definitions used in the IMC. Will be scoped to IMC for control].

Carvin

109. ISPSC Section 609.3.1. The VUSBC made the following change to this section:

609.3.1 Deck hand shower or shower spray unit. Not less than one ~~shower~~ and not greater than half of the total number of showers required by Section 609.2 shall be a hand shower or spray shower unit located on the deck of or at the entrance of each pool.

Shawn, Carvin, Mike

110. ISPSC Section 410.1. Dressing rooms are not required by the IBC. Only plumbing fixtures are required by IPC/IBC. Nothing about dressing rooms or bathing facilties.

Shawn, Carvin

111. IMC (IRC? MAYBE in part) Section 928.1. This amendment adds to the installation requirements for evaporative coolers based on a long history of use in Phoenix. Cost Impact: There is no cost impact.

928.1 General. Evaporative cooling equipment shall:

1. Be installed in accordance with the manufacturer's instructions.
2. Be installed on level platforms in accordance with Section 304.10. An evaporative cooler supported by the building structure shall be installed on a substantial level base and shall be secured directly or indirectly to the building structure by suitable means to prevent displacement of the cooler. Modifications made to the supporting framework of buildings as a result of the installation shall be made in accordance with the requirements of the *International Building Code* as amended.
3. Have openings in exterior walls or roofs flashed in accordance with the *International Building Code as amended.*
4. Be provided with potable water backflow protection in accordance with Section 608 of the *International Plumbing Code.*
5. Have air intake opening locations in accordance with Section 401.4.
6. A permanent relief opening or other engineered design sufficient to assure positive airflow shall balance intake air.
7. Outside air shall be provided as specified in Section 403.2.
8. Air ducts and dampers, which are a portion of an evaporative cooling system, shall comply with Chapter 6.
9. Overflow drains shall be provided that discharge to an approved disposal location and comply with the *International Plumbing Code*.

David, Brent, Mike, Maggie

112. IMC (IRC? NO) New Section 1105.10. This section is needed to ensure adequate safe working space around the equipment in a refrigeration machinery room. Cost Impact: Minimal cost increase for signage and additional space.

> **1105.10 Dimensions**. Refrigeration machinery rooms shall be of such dimensions that all system parts are readily accessible with adequate space for service, maintenance, and operations. An unobstructed walking space at least three (3) feet (914 mm) in width and six (6) feet eight (8) inches (2032 mm) in height shall be maintained throughout allowing free access to at least two sides of all moving machinery and approaching each stop valve. Access to refrigeration machinery rooms shall be restricted to authorized personnel and posted with a permanent sign.

There might be a copyright issue on this language.
Redundant coverage desired
Brent

113. IPC (IRC? YES) Section 712.4.2 – Specifically, the requirement for 1 inch solids handling capacity for pumps do not encompass the smaller pump systems used for individual fixtures such as pantry sinks, etc.
Bill, Shawn

114. IPC (IRC? NO) Section 710.2. Future fixture DFU should be used in determining the required drain size. Reference language in IRC 3005.1.6.
Shawn, Bill

115. IPC (Is the IECC the lead code in this subject??, IRC? YES, IMC? YES) Section [E] 607.5. Direct solar thermal systems. Need an insulation requirement exception for automatic circulating systems that energy is derived from solar or other than fossil fuels.

> **301.8.8 Insulation.** Insulation shall be used on all exposed hot water piping and the final 1.5 meters (5.0 feet) of metallic cold water supply pipe leading into the system, or the length of piping that is exposed if less than 1.5 meters. Insulation shall have a value of R-0.46 ^{o}K m^{2}/W (R-2.6 ^{o}F-ft^{2}-hr /Btu) or greater.

Shawn says the Code language comes from the new solar thermal standard
Need to Coordinate w/ IECC-C and IECC-R provisions
Shawn, Brent, Bill

116. IPC (IRC? YES) Section 305.6. Freeze protection seems to be guesswork. Should there be something just a little more scientific based on design degree day? Consider the recent minus 41 degrees below zero is the new “low” temperature record. How much insulation is required on piping inside the building in unconditioned spaces versus exterior.
Shawn

117. IRC (IPC? MAYBE) Section in Chapter 3. Shower wall finish height failed in Group B because of “smooth and nonabsorbent language”, but there was not an issue with shower wall finish height changes. Reference RB109-13 (failed).
Shawn, Janine

118. IPC (IRC? NO) Section 403.3.3. The term “occupancies” is defined term that appears to mean “occupancy classification”. But there is not an IBC occupancy classification for malls. Could this section be reworded to make it more clear about what types of buildings are being discussed?
Review the term “occupancy” throughout PMG and S codes
Maggie, Shawn, Mike

119. IPC (IRC? NO) Section 403.3.1 (and 403.3.3 and 403.3.4). do not clearly indicate the possibility that the required toilet facilities *could* be located in a building other than the building that creates the demand for plumbing fixtures. The previous PMGCAC worked on this before but their proposal was unsuccessful. It failed because of concerns about *access control* where the required facilities were in another building. The committee realized that these situations commonly exist but the proposal just wasn’t quite right.
Redundant to PMG item ???? but perhaps a different approach should be offered.
Shawn

120. IPC (IRC? YES) Section 308.6. This requirement has recently “caught” several contractors by surprise. I think it could be worded better by starting off with “For piping 4 inches and larger….”. Then there needs to be some

better clarification as to what constitutes a “rigid support sway brace” *and* in what orientation is the “sway” supposed to be prevented?
Alex

121. IPC (IRC? NO) Section 308.7. It is believed that the intent of this section (and its subsection) is to require piping connected with elastomeric type couplings (such as no-hub couplings for cast iron pipe). That intent is not clear until the end of the subsection. This section could be written better to convey intent.
Alex, Mike

122. IMC (IRC? MAYBE) Section 603.16. This section provides no guidance as to what type of protection is required. Is galvanized sheet metal considered to be protected from the elements?
Maggie, Brent

123. IMC (IRC? NO) Section 605. The IgCC has requirements to prevent air flow from bypassing air filters, yet this basic requirement is not in the IMC Section 605.
Brent

124. IMC (IRC? MAYBE) Section 404.1. This section has caused confusion regarding the intent to operate the exhaust continuously or intermittently. There is no intent to allow the system to be completely off. Current text also has permissive language. Should say: “Mechanical ventilation systems for enclosed parking garages shall operate continuously or intermittently. Intermittent operation shall be in accordance with one or more of the following:” (Items 1 and 2 no change.
Brent

125. IMC (IRC? MAYBE) Section 501. In this section, there is no prohibition on connecting the discharge (positive pressure) side of exhaust fans to common ducts.
Brent Bill

IMC (IRC? MAYBE) Section 507.9. This section does not recognize that are listed for lesser clearances in accordance with UL710.
Jim, Maggie Brent

126. IPC (IRC? Maybe?) New section in Chapter 11. Conductors or leaders shall not discharge to a sump inside of a building except where the termination of conductors or leaders is at an elevation lower than the building storm sewer or grade adjacent to the building.
Alex

126. IPC (IRC? YES) Modular constructed buildings. How to test the field connections of plumbing without causing damage/disaster but still ensure some level of verification?
Define scope of application
John

127. IPC (IRC? YES) New section with Section 917. "An AAV shall not be used for protection of air intakes that are too close to plumbing vent terminations"
Jim Alex

128. IPC (IRC? NO) Sections 608.6.1, 608.16.9 and 608.16.10. We believe that the intent of the code is for these individual pieces of equipment, there needs to be individual backflow preventers for each water line to the equipment to prevent cross contamination between individual pieces of equipment. Sections 608.1 and Section 608.3 talk about protection of the potable water supply system but it is not clear this includes between different pieces of equipment supplying water for human ingestion.
Jim, Maggie

129. IPC (IRC? NO) New Section in Chapter 5 ? or New Section in Chapter 8. There isn't anything addressing a minimum size for an indirect waste pipe that captures T&P relief valve waste (or WH drain pan drains) from many WHs.
John

130. IRC New Section P2906.6.1 (???). “The use of saddle tap fittings or combination saddle tap and valve fittings shall be prohibited.” The IPC has prohibited these for a long time. We have seen and heard about saddle tap fittings being used on PEX and CPVC tubing.
Correlation only.
Fred

131. IMC (IRC? NO) Section 507.3. This section does not provide guidance as to method of compliance. The intent is to prevent depressurization of the space containing vented fuel-fired appliances of other than the direct-vent type.
Brent, Maggie, Shawn

132. IMC (IRC? NO) In the multi-family structures, it is common practice to put a furnace and water heater in a closet and use the closet as a return air plenum for the furnace. Note the definition of *mechanical equipment room*, which only exists if the appliances are not fuel-fired. This is prohibited for gas-fired furnaces by 618.7 of the IFGC and for other furnaces by 918.6 of the IMC (closets). Despite the codes, this is still a prevalent practice that leads many interp issues and jobs being delayed. If an electric furnace or heat pump is used, nothing appears to address a gas-fired water heater in the closet. Should the code prohibit the practice or be abundantly clear in Chapter 6 as to the limitations? The lack of definition of “closet” also complicates the issue.
Brent

133. IFGC (IRC? AUTOMATIC as necessary) Section 624.2. This section only implies that water heaters cannot be used solely for space heating. A water heater used solely for space heating is not a water heater by definition. This should be clearly expressed. Same for IMC Section 1001.2
Maggie, Jim, Brent

134. IPC (IRC? NO) Section [B] 419.3. It would seem that this section has nothing to do with plumbing and everything to do with the interior environment of toilet rooms (IBC Section 1210). Perhaps this section needed to be removed from the IPC? IBC Section 1210 doesn’t directly address that the floor, 2 feet out from the outermost lip of the urinal needs to be waterproof. Also, the IBC states “smooth, hard, non-absorbent” but the IPC says “smooth, readily cleanable, non-absorbent”. What is hard? What is

smooth? What is readily cleanable? These questions continue to come up every year. For instance, is an epoxy painted gypsum wall OK? How about painted a CMU wall? Is a tile floor with grout lines OK? How about a wood partition with a polyurethane coating (gaps between panels, etc). Is a painted concrete floor OK? Perhaps this IPC section should be replaced with a pointer to IBC Section 1210 so that coordination hopefully occurs between the selection of the urinal and the provided "zone of waterproofing"? Also, for WCs the issue is the same. What type of walls and floors are allowable around WCs?
[Staff note: The BCAC will need to be notified to see if they will support this idea. If so, this CAC will generate a proposal for them to process]
Janine

135. IRC Table P3005.1 and Table P3005.4.2. Footnotes need editorial type work. Eliminate trap arm (so "trap arm" definition can finally be eliminated, I think – need to do a search). Change footnote "b" to "This pipe size shall not carry the discharge from a water closet." What is a "pumped discharge fixture"? Just needs cleaned up.
Only taking on Table P3005.1 and not Table P3005.4.2 item.
Alex

136. IPC (IRC? NO) Section 710. What about horizontal offsets in a vertical drain pipe that is not a stack? Nothing is said about this.
John, Alex

137. IPC (IRC? NO). Section 701.9. This section has come up several times over several years. At first, we believed the reasoning behind this was the potential for leakage from joints in piping. But lately, reading the Food Code by the FDA, there is (and has been) a big deal made about "clean ability" of surfaces above food areas. Obviously pipes and pipe hangers would be difficult to clean. And the other issue is condensation forming on the outside of the piping (and maybe dripping dirt down on the food area). The bottom line is that the food preparation area needs to have a ceiling below piping, ductwork and all other things that might be hard to clean. This requirement needs to be removed from the IPC and put in as a requirement in the IBC (perhaps at the end of Chapter 12?). Perhaps a section in Chapter 3 of the IPC might be appropriate to remind the plumbers that all piping needs to be above the required ceiling.
Brent, David

138. IPC (IRC? YES) Section 705. There needs to be clarification on where and what type of elastomeric sealing couplings (FERNCO) can be used. There is a new standard ASTM D5926. FERNCO has been contacted.
John, Alex

139. IPC (IRC? YES) Table 706.3. There is always confusion about how to use this table and the table doesn't seem to be complete to describe the issues between different types of bends of different materials. An attempt was made in last cycle to convert this to words but it was too cumbersome. But the hearing committee did acknowledge that the table could use some improvement. Reference P166-12. The table method could still be used but better introduced and then expanded to cover more material specifics and use Y and NP for the indicators.
John

140. IPC (IRC? NO) Sections 405.3.1 and 403.3.5. There needs to be a slight modification concerning the spacing between fixtures. Where partitions are involved, the spacing cannot be 30" between fixtures. We have heard about contractors who have been caught off guard by this, not knowing about the thickness of a partition (it is not there "in the rough"), only to find out at final, they have a violation. These sections could be word much better in that respect.
John, Brent

141. IPC (IRC? YES) Section 802.3.2. What constitutes a "water impervious" floor? Why is this necessary for hub drains? Here's the problem: In an equipment closet for a water heater, there needs to be a receptor for the T&P relief valve discharge pipe and usually a drain pipe from a WH pan. A floor drain *could* do the job but that would necessitate that the floor be *sloped* towards the drain. And suppose that the floor has a wood subfloor where sloping the floor towards the drain would be impossible. Again, a hub drain would be best for application (provides low profile above the floor), but the floor is not necessarily "water-impervious" (such as above a concrete floor).
John

142. IPC (IRC? NO) 2015 item. Section 1003.9. The new requirement for venting of interceptor could be interpreted to also include gravity type interceptors that are typically located in a parking lot. I am not sure that the statement "one of the venting methods of Chapter 9 is really what it should say. A vent on the outlet of these units would be a horizontal dry vent below the flood level rim of the unit. Although the exception in 905.4 allows for this arrangement, there are questions about what to do with the vent where it does exit grade, how far above grade should it be, should there be cleanouts in this line, should the fittings be required to be sanitary drainage type (as opposed to vent fittings).
John

143. IPC (IRC? YES) Section 305.6. The 2015 IRC reduced the threshold to 1 ¼ inch. The IPC needs to be the same. However, there needs to be clarity that this means *metal* studs as well (if the metal stud thickness is less than the strike plate thickness. Probably need to add some wording about metal tracks to get the ideas across.
Janine, John

144. IPC (IRC? NO) Section 303.4. The IRC was clarified with: <u>required by the code to be in compliance with a referenced standard</u>
Maggie

145. IRC (IPC? NO) Section P2902.5.4. There is a possible conflict between this section and the last line of Section P2904.1. Is a backflow preventer required between *standalone* sprinkler system installed in accordance with the IRC (Section P2904?) and the water distribution system?
Combine with other backflow issues.
Mike, Janine.

146. IPC (IRC? NO) 2015 item. Section 504.7. The IRC was revised to allow aluminum and plastic pans for water heater drain pans. The IPC should follow similarly.
Consider possible problems with these types of pans under large water heaters. Correlation.
Dan.

147. IPC (IRC? NO) 2015 item. Section 504.6. RP56-13 was successful and the IPC needs to match. Add another list item: <u>Be one nominal size larger than the size of the relief valve outlet, where the relief valve discharge</u>

piping is constructed of PEX or PE-RT tubing. The outlet end of such tubing shall be fastened in place.
Correlation.
Mike

148. IPC (IRC? YES). Section 608.7. RP78-13 (failed) attempted to require backflow protection for yard hydrants. This is an accident waiting to happen and is important of both the IPC and IRC.
Janine, Maggie, Jim

149. IRC (IPC? NO). 2015 item. Section P2903.4. See RP83-13 (failed). This concerns thermal expansion control. The IPC and the IRC are now different. For coordination, these need to be the same.
Janine

150. IPC (IRC? NO) 2015 item. Section 918.8. The coordinating IRC section was corrected for 2015. This section is about the prohibition of AAVs venting tanks unless the venting system was of an engineered design. Current IPC text is incorrect wording.
Janine

151. IRC (IPC? NO) 2015 item. Section P2503.5.1. A language change for the 2015 IRC was to lower the water test minimum pressure from 10 feet to 5 feet of head. (The air test pressure was not changed) Does the CAC agree with the lower test head? Does the CAC wish to make the air test pressure correlated?
Alex, Mike

152. IPC (IRC? NO) 2015 item. Section 305.1. The 2015 IRC has new language for this section on Corrosion Protection. The IPC should be coordinated.
Dan

153. IPC (IRC? YES) New Section 305.4. New section on piping through footings was proposed for the 2015 IPC (RP22-13) and failed. However, this is of critical concern of both the protection of the piping and for protection of structural integrity of the footing (especially in areas subject to wind uplift and seismic).
Janine

154. IPC (IRC? NO) Table 403.1. There has been confusion/conflict for several years about whether or not bleachers at a city park need to have toilet facilities provided. ICC is divided on interpretation. See A5 row in table. Reference P29-12 (failed).
Janine

155. IBC (IMC? AUTOMATIC) Section 717.6.1. The exception permits a duct to penetrate 3 rated floors (i.e., connecting 4 floors) without a fire damper at each floor. To qualify for this exception, the duct must be located within the cavity of a wall and be constructed of steel not less than 0.019 inches thick, the duct must be continuous from one dwelling to the exterior, the duct must not exceed 4 inches in diameter, the total area of such ducts must not exceed 100 in^2 in any 100 ft^2 of floor area and the annular space around the duct must be protected with materials that prevent the passage of flame and hot gases sufficient to ignite cotton waste. Using the exception, a duct could go up through a non-rated wall and enter the fire-resistance-rated floor/ceiling assembly. In accordance with the exception it would then penetrate through the floor membrane into another non-rated wall and continue up.

The question that has come up is whether this exception can be used to get the duct into the floor/ceiling assembly and then have it run through the floor/ceiling to the exterior wall and to the exterior of the building. The duct is located within the cavity of a wall and penetrates through the ceiling membrane into the floor/ceiling assembly cavity. Once all the criteria are met, the duct, instead of continuing up, could turn 90 degrees and run horizontally through the fire-rated floor/ceiling assembly to the exterior wall. Is this allowed?

Also, must the duct be in a wall cavity through an attic space all the way up to the roof deck?

Also, can an exhaust fan be installed in the ceiling membrane and a duct run horizontally within the floor/ceiling cavity until it reaches the wall cavity above?

[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]

Maggie

156. IBC (IMC? AUTOMATIC) Section 717.6.1**.** When going through a rated floor/ceiling assembly and connecting only two stories, a fire damper is required at the floor line. What if the ceiling membrane is part of the fire

rated floor/ceiling assembly? Is a ceiling damper required at the ceiling membrane and a fire damper at the floor line? Currently only a fire damper is required at the floor line and the code is silent on the ceiling damper.

Also, a furnace supply plenum box penetrates the ceiling membrane of the rated assembly and a CRD would be required in the plenum box. Is there a device listed for the application? Since the air flow is upward, how is the device supposed to close? Dynamic rated CRD??
Also, how do we protect a domestic kitchen exhaust hood duct that penetrates the ceiling in order to run through the joist space to the outside wall termination. Duct mounted CRD; CRD with grease?? Section 717.6.2.1 allows TPFS as an alternative, but this alternative is disconnected from 717.6.2 that requires the CRD in the first place. Bad location?
[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]

157. IBC (IMC? AUTOMATIC) Section 717.5.2**.** Exception #3 speaks of a ducted system consisting of 26 gage sheet steel. This implies that flexible air ducts and connectors that comply with UL 181 cannot be located in the system. What about where the duct run penetrates a rated wall and terminates within the rated room? What harm would flex duct cause downstream of the penetration? Flex duct on both sides of the rated wall would be an obvious violation. The phrase, “shall be continuous from the air-handling equipment to the air outlet and inlet terminals” has caused confusion.

[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]

Maggie

158. IBC (IMC? AUTOMATIC) Section 717.5.4. Exception #3 does not state that the wall is a corridor wall, yet item 3.3 speaks of “the corridor.”
[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]

Maggie

159. IBC (IMC? AUTOMATIC) Section 717.6.2**.** Item #2 requires a CRD within a duct. Are CRD’s listed for such? Compare to item #3. This section does not include the scenario where a duct does connect to a register.

[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]
Maggie

160. IBC (IMC? AUTOMATIC) Section 713.11 Item #3 This section requires a fire damper at the bottom of a shaft where the wall requires a fire and smoke damper. Why is a fire/smoke damper not required at the bottom?
[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]

161. IBC (IMC? AUTOMATIC) Section 713.12. Requires the top of the shaft to be enclosed but does not address where a duct penetrates the top of the shaft. Need text to state that a fire and smoke damper must be located where a duct penetrates the top of a shaft, or should top penetration be prohibited?

[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]
Maggie

162. IBC (IMC? AUTOMATIC) Section 717.3.1. The scope of UL 555C indicates that ceiling dampers tested to the UL555C standard can only be used as a substitute for field-constructed hinged door dampers that were tested in the floor/ceiling or roof/ceiling assembly. Therefore, if the floor/ceiling or roof/ceiling assembly was tested with field-constructed hinged door dampers, either field-constructed hinged door dampers can be used to protect the membrane penetration or UL 555C tested dampers can be substituted for the field-constructed hinged door dampers. Field-constructed hinged door dampers that are tested in the floor/ceiling or roof/ceiling assembly will not be marked as being tested to UL 555C.
If the floor/ceiling or roof/ceiling assembly was tested to the ASTM E119 standard with a specific make and model ceiling damper, then only that specific make and model ceiling damper can be installed at the ceiling membrane penetrations. The ceiling damper that was tested as part of the assembly in accordance with ASTM E119 may not be listed or marked as compliant with UL 555C. The provisions of the UL 555C standard, in essence, are no longer applicable because the damper was tested as part of the rated floor/ceiling or roof/ceiling

assembly. If no dampers were tested in the floor/ceiling assembly, then it would appear that ceiling membrane penetrations are not permitted in this assembly.

The issue with the code is that ceiling dampers are required by Section 717.6.2 to be installed where ducts penetrate the membrane of a floor/ceiling or roof/ceiling and those dampers are required to meet UL 555C, but the scope of the standard limits where UL 555C dampers can be installed. Therefore, based on the code, ceiling dampers can be installed in any ceiling membrane when the test standard limits their application.
[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]
Maggie

163. IBC (IMC? AUTOMATIC) Section 714.4.1.1**.** The exception mentions "concrete or masonry items." What are these items? Can a floor assembly be penetrated by concrete? Why is there no mention of masonry chimneys and factory-built chimneys?

[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]
Maggie

164. IBC (IMC? AUTOMATIC) Section 717.6.1. We have been told by industry people and damper manufacturer's that there is no listed damper for installation in horizontal assembly constructed of wood. The code is silent on this and would allow such an installation except for the fact that the damper must be installed in accordance with its listing.
[Staff note: BCAC needs to be notified and asked if they will take on. If so, this will need worked up and forwarded to the BCAC.]
Maggie

THE FOLLOWING ARE DISCARDED IDEAS FROM THIS MEETING:

- IPC (IRC? YES) Section 802.3. Close the stand pipe loophole. The code prohibits waste receptors in attics and crawl spaces (and other "out of sight" locations). However, if the waste receptor is turned into a standpipe (18" to 42" high), a standpipe can be located anywhere (see Section 802.4). This also seems to contradict Section 1002.1 for limiting the distance from a fixture outlet to the trap weir to not more than 24 inches.

  [Staff Note – Resolved by 2015 codes]

- IPC (IRC? YES). Section 306.1. Support of piping. For pipe sizes 2 inches and larger, bedding should be brought up to a point halfway on both sides of the pipe, so that the piping remains aligned.

- IFGC (IRC? AUTOMATIC as necessary) Section 202. Definitions. APPLIANCE. Is definition of Appliance correct? It is different that the definition that CSA uses.

- IPC (IRC? NO) Chapter 2 Definition **GREASE REMOVAL DEVICE.** Certain grease removal devices rely on moving parts and electricity to separate grease from the waste stream; therefore, if moving parts break down or electrical power is lost the device will still be able to operate as a passive device and prevent grease from entering the sewer system.

  GREASE REMOVAL DEVICE. A plumbing appurtenance that is installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Such a device operates on a time-or event-controlled basis and has the ability to remove free-floating fats, oils and grease automatically without intervention from the use except for maintenance. <u>These devices must be able to perform as a gravity interceptor if mechanical or electrical power is lost and provide continuous grease separation.</u>

- IPC (IRC? NO) Section 419.2. These revisions are made to return to a more even and simple application of providing urinals and water closets for all occupancies. Cost Impact: None

  419.2 Substitution for water closets. ~~In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in~~

~~assembly and educational occupancies.~~ Urinals shall not be substituted for more than 50 percent of the required water closets in all ~~other~~ occupancies.

- IFGC (IRC? AUTOMATIC as necessary) Section 303.3, Item 5. What is a “Weather stripped, solid door”? Is this this attempting to define a separate combustion room?

- IFGC (IRC? AUTOMATIC as necessary) Section 621.7. Listed and labeled for use in UL 127 Fireplace. Is this being followed?

- IMC (IRC? MAYBE) Section 905.1. Should these units require EPA Qualified or Certified? Would doing so strengthen and support *listings*?

- IMC (IRC? MAYBE) Section 905.3. Should the code state which version of UL 1618 to include types of protection?
  [Staff note: See UL 1618 in Chapter 15]

- IMC (IRC? MAYBE) Section 903.3. Unvented gas log heaters: Is the requirement for Listed and Labeled still valid?

- IFGC (IRC? AUTOMATIC as necessary) Section 503.5.4 503.6.4.1. In .5.4, last sentence concerning “decorative shrouds”. Should this section be altered since many do not follow it? Should clearances be defined here?
  [Staff note: IFGS controlled section]

- Liquid Fuel 503.5.7.2 87 What is liquid fuel? [Staff note: item combined with previous item]

- Decorative Shrouds 503.6.4.1 88 (as above) [Staff note: item combined with previous item]

- IFGC (IRC? AUTOMATIC as necessary) Section 503.14. “Automatically operated vent damper” A discussion is needed on this issue.
  [Staff note: IFGS controlled section] [Staff note: there is not a definition in Chapter 2]

- IFGC (IRC? AUTOMATIC as necessary) Section 304.4. How does one determine if those items interfere such that make up air needs provided?
  [Staff note: IFGS controlled section]
- IPC (IRC? NO) Section 802.1.8. Strike “or an air break”

  [Staff Note – Resolved for 2015 code]

- IMC (IRC? MAYBE) Section 202 Definitions. Pellet Fuel Burning Appliance Should “as defined by ASTM E1509” be added to the definition?
  [Staff note: Section 904.1 has the requirement]

- IMC (IRC? MAYBE) Section 805.6. To what standard are Decorative Shrouds Listed and Labeled to? Is this requirement still useful?

- IMC (IRC? MAYBE) Section 802.4. Is a Vent Termination Cap required where a decorative shroud installed?

- IFGC (IRC? AUTOMATIC as necessary) Section 304.5. Air infiltration rate. Balance with in IRC N1102.4.1.2 ACH 3.
  [Staff note: IFGS controlled section]

- IFGC (IRC? AUTOMATIC as necessary) New Section. If blower door test is required, is a Full closure damper required on Fireplace in order to meet blower door requirements.
- IPC (IRC? MAYBE) Accessibility dimensions- Include all of the accessibility requirements/measurements found in the IPC commentary for restrooms.

- IPC (IRC? NO) Section 917. Single stack Vent System. - Clean up this venting system, get it in the same style as the other systems, or strike the section altogether.

- IFGC (IRC? AUTOMATIC) Section 410.1 (IRC G2421.1). This section requires gas regulator to comply with ANSI Z21.80. This standard requires an over-pressure device (OPD) for inlet gas pressures greater than 2 psi. Code officials do not have a copy of that standard. IFGC

416 talks a lot about OPD's; however it is confusing to the code official and really does not give the straight forward direction needed. Simple text needs to be added to require OPD's whenever the gas supply pressure exceeds 2 psi. We see a lot of 5 psi gas, especially in commercial projects.

[Staff note: For information only, IFGC Section 416 is IFGS controlled]

- IRC (IPC? NO) Section P3201.2. This section allows a *deep seal trap* for trap protection- need to define *deep seal trap* in definitions.
[Staff note: 2015 IRC revisions eliminated the term *deep seal trap.*]

- ISPSC. Section 315.3. "sole overflow system"? What is meant by that? Possibly, "the only outlet for surface skimming of the pool or spa, the number of skimmers shall be determined from the area of coverage indicated in Table 315.3. Where the calculated number of skimmers results in a fraction of a skimmer, the number of skimmers required shall be rounded up to the next whole number"

- IPC (IRC? YES) Section 417.5. Linear shower drains are not covered in the field-fabricated shower receptor section. Are there standards for these new design of drains? How is the clamping of standard liner (plastic) material to these drains accomplished? Should there be special language for the paper thin membrane attachment method to the special linear drains that the membrane manufacturer offers? How are the liquid type membranes attached to shower drains in general?

- IRC (IMC? MAYBE) Section M1601.1.1. RM50 failed and the energy codes and Section M1601.1.1 still differ on the use of framing cavity plenums.

ISPSC. 2015 item. Section What are the applicable product standards? How is this enforceable?

IPC (IRC? NO) The code is not clear about protecting (or not) storm water piping from freezing. Traps in parking garages, yes. But why install traps to begin with? Coordination needed with Section 305.4 (and maybe Section 903.7?). Unsuccessful P212-12 generates some thought.

- IPC (IRC? YES). Section 312 DWV testing. AAVs shall not be installed for rough-in pressure testing.

- IMC (IRC? MAYBE) Section 501. This section does not prohibit exhaust fans from connecting to a common duct on the discharge side of the fans. This is a Duplicate of one previously discussed

- IMC (IRC? MAYBE) Section 506.3.2.5. This section requires an unreliable test method. The kitchen industry and ASHRAE have rejected this test and advocate a pressure wash water test or an air pressure test. Code officials have asked why a smoke test is not an option. Plumbing systems can be smoke tested. This is a duplicate of one previously considered

- IMC (IRC? NO) Section 506.3.11.4, This section grants exception to the grease duct enclosure requirement for unrated roof/ceiling assemblies for single story building or the top floor of a building. What is the difference if it is a rated roof assembly? (e.g. the roof deck is rated and there is no ceiling).

- IMC (IRC? NO) Section 601.2.1. This section is permissive and fails to establish the intended limitation. Should be: “Where the space between the corridor ceiling and the floor or roof above is used as an air plenum, it shall be limited to return air applications and one or more of the following conditions shall apply:”

- IMC- Condensate sizing [Staff note: combined with SS previous idea]

- IRC: Direct solar thermal system insulation requirement exception for automatic circulating systems that energy is derived from solar or other than fossil fuels. [Staff note: combined with previous item by SS]

- IFGC (IRC? AUTOMATIC as necessary) Sections 611.2 & 612.3. These sections limit the appliances to “industrial and commercial” occupancies. These are undefined terms.

- IPC Table 403.1. The column header for water closets includes “(URINALS SEE SECTION 419.2)”. Because this header is over the

top of both the male and female ratios columns, this seems to indicate that urinals could be substituted for female water closets. Although some time back, there *were* female urinal designs available to the U.S. market, there are no such designs currently available. The standards referenced in Section 419.1 do not include such designs. However, if the header note is taken literally, a designer, looking to save space and cost, *could* install male-type urinals, at the allowed substitution percentage, in a women's toilet room. I don't think that follows the intent of the code. (It is interesting to note that a recent plumbing test question did use this anomaly as support for an answer indicating that urinals *could* be substituted for water closets in women's toilet facilities). The "(URINALS SEE SECTION 419.2)" should be removed and put into a footnote to the table (and a footnote letter on the MALE column header).

- IPC Table 403.1. One problem that has been coming to light lately is the attack on the "separate male/female toilet facilities" code fundamental. Some of this problem might be caused by the lavatory ratios for most of the use descriptions are shown in one cell below the MALE and FEMALE column headers. For example, see the first use description row of the table. This could be interpreted that the lavatories could be combined for both males and females. We have seen designs come through the plan review department where there is a common LAVs area (for both males and females) with individual water closet compartments labeled men and women, all in the same room. (Grade 1 through 12 school buildings are now doing this arrangement so they only need one person viewing the LAVs area from a door-less hallway opening). The suggestion is to make all of the ratios in the table repeated under each column header of male and female, even though the ratios might be identical. There might be some exceptions to this – the table will need to be carefully reviewed.

- IPC (IRC? YES) New Section for Chapter 3. A workmanship section is needed to reduce the multitude of "instructions" in other sections of the code such as "cut the pipe square", "fully insert pipe or tube in the fitting", etc. etc. This section is needed so that the code official will have something to point to when he sees evidence of the shoddy workmanship. We don't need these "common instruction" language scattered all about in the code because if you *don't* put it somewhere,

does that mean that shoddy workmanship is allowed for the item that you don't have the notations? (The IRC already has Section P2607 Workmanship that can be expanded. The IPC should have the same)

- IPC (IRC? YES). Section 607.4. While the concept of "hot is on the left" for faucets is simple, the code language and the variety of controls for water outlets creates some confusion in the code enforcement community. ICC staff receives 6 or more calls each year on the topic. Of specific note is the "side control" for kitchen faucets where the temperature adjustment is pushing forward and pulling towards. This is not simply "hot's on the left". Are these faucets in violation of the code?

- IRC (IPC? NO). Section P2904.3. The new exception is poorly written. What does it mean?

- IMC (IRC? NO) Section 606.2. Recommend that this section be revised to correlate with NFPA 90A Installation of Air-Conditioning and Ventilating Systems. The 2012 IMC references NFPA 72 National Fire Alarm Code, which in turn references NFPA 90A for installation of smoke detectors. These NFPA Standards are generally recognized as the national standards for smoke detector installation. A large amount of air distribution systems installed in Phoenix utilize a filtered grill for return air, typically installed in a ceiling or wall. In order to place a duct detector in front of this filter without having it attached to the grill, an additional length of plenum or duct is required. This leads to added construction costs and space restraints. The duct smoke detector may also be subjected to a higher frequency of false alarms from contaminants in the room. The committee reasons that any appreciable amount of smoke entering the return air system will pass through the filtered grill and reach the probe for the smoke detector. This proposed amendment will help to keep down the design costs while still providing an equivalent level of life safety based on the national standard.

Cost Impact: Saves cost of additional duct work and false alarms.

606.2 Where required. Smoke detectors shall be installed where indicated in Sections 606.2.1 through 606.2.3.

Exception: Smoke detectors shall not be required where air distribution systems

are incapable of spreading smoke beyond the enclosing walls, floors and ceilings of the room or space in which the smoke is generated.

606.2.1 ~~Return air systems.~~ Air distribution systems. Smoke detectors shall be installed in ~~return air systems with~~ air distribution systems downstream of the filters and ahead of any branch connections in systems having a design capacity greater than 2,000 cfm (0.9 m^3/s). ~~, in the return air duct or *plenum* upstream of any filters, *exhaust air* connections, outdoor air connections, or decontamination *equipment* and appliances.~~

> **Exception:** Smoke detectors are not required ~~in the return air system~~ where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the *International Fire Code.* The area smoke detection system shall comply with Section 606.4.

- IMC (IRC? NO) New Section 606.5. Smoke detectors can save lives when they operate correctly. The Mechanical code requires that these devices be installed at specific locations in the building air distribution systems but is silent in regards to testing. With this proposal testing of the operation of each smoke detector is required to be completed by a Special Inspector that is independent of the installer and qualified to complete the work. Special Inspections is covered in the International Building Code Chapter 17 and has been extended in the City of Phoenix to include several life safety items related to Mechanical design. Due to the importance of these life safety devices, it is recommended that a Special Inspector submit a final report certifying that all devices operate as designed and the Registered Design Professional in Responsible Charge signs the certificate. To maintain consistency with the Special Inspections program, the testing agency and the registrant shall follow the guidelines set forth in the 2012 IBC as specified in Chapter 17. Cost Impact: Increases costs associated with hiring a Special Inspector.

  606.5 Testing. Smoke detectors shall be tested by an approved testing agency or a qualified third party Special Inspector. The Special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the *International Building Code as amended*.

- IMC (IRC? NO) Section Fire and smoke dampers can save lives when they operate correctly. The Mechanical code requires that these

devices be installed at specific locations to prevent fire and smoke from spreading throughout a building. The IMC requires all dampers to be listed and tested at the factory. This proposal will verify that the dampers operate correctly after they are installed in the building. This amendment requires that testing of dampers shall be performed by a qualified third party testing agency and all results shall be verified by the professional design engineer. Special inspection requirements are listed in the 2012 IBC Chapter 17 and a reference is provided in this proposal. Cost Impact: Increases costs associated with hiring a Special Inspector.

607.2 Installation. Fire dampers, smoke dampers, combination fire/smoke dampers and ceiling radiation dampers located within air distribution and smoke control systems shall be installed in accordance with the requirements of this section, and the manufacturer's installation instructions and listing. Dampers shall be tested by an approved testing agency or a qualified third party special inspector. The special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the *International Building Code as amended*.

- IPC (IRC? YES) Section 704.5. "Dead end" definition still in Chapter 2 even though the section was removed. Is there another reference? Dead end section still in the IRC 3005.1.5. [Staff note: IPC and IPC definitions for "dead end" were removed editorially for 2015 code]

- IPC (IRC? YES) Section IPC 504.1. Reference to anti-siphon methods. The use of "such as". Are there other means to prevent siphoning?

- IPC (IRC? NO) Section 416.5. There needs to be text coordination with the requirements in IECC-C 404.3.
  [Staff note: IECC-C Section 404.3 was deleted. This is no longer an issue]

- IMC (IRC? MAYBE) Section ????. Hydronic piping – solar thermal issues – see IPC/IRC issue [Staff note: Not sure what is meant] Staff note: this is a redundant item.

- IPC (IRC? YES) Section 312. Affected by 2015 action. Re-review the DWV testing sections in IPC and IRC-P sections in relevance to changes proposed and what was successful.
  Redundant with PMGCAC Item 9.

END OF PMGCAC MEETING ON APRIL 8, 2014

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