

# Code Review

## 2018 Changes to International Codes

### IMC - MECHANICAL TAC

**W A R N I N G**

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**W A R N I N G**



**FLORIDA  
BUILDING  
COMMISSION**  
*"Stronger Codes Through Science and Consensus"*

Florida  
**dbpr**  
Department of Business and Professional Regulation



Building Codes and Standards

# Mechanical Code (IMC)

Mechanical Technical Advisory Committee (TAC)

2018 International Mechanical Code - Mechanical TAC

IMC Code Change No.	IMC Section	Change Summary b/t 2015 IMC and 2018 IMC	Change Summary b/t 2017 FMC and 2018 IMC	Staff comments										
<b>Chapter 2 Definitions</b>														
M1-15	202	<p>Changes text of definition "OCCUPATIONAL EXPOSURE LIMIT (OEL)." The WEEL values previously issued are now issued by Toxicology Excellence for Risk Assessment (TERA) Occupational Alliance for Risk Science (OARS). Changes to reflect this. This change is consistent with addendum d to ASHRAE Standard 34-2013.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction. This proposal <b>simply updates a definition</b> to indicate what organization is responsible for WEEL values, which has no impact on construction cost.</p>	Same as change between 2015 IMC and 2018 IMC											
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
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M2-15	202	<p>Changes text of definitions "ACCESS (TO)" and "READY ACCESS (TO)." Removes from text the term "Door" to limit confusion in regards to other definitions of doors. The proposal intends to distinguish egress doors from cabinet doors, access doors and alcove doors and intends to prevent these definitions from being misinterpreted as prohibiting room and closet doors.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction. This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.</p>	Same as change between 2015 IMC and 2018 IMC											

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

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M3-15	202	Changes to text of definition “COMMERCIAL COOKING APPLIANCES.” The revised definition dumps the appliance laundry list and describes what would be considered as commercial food service establishments, which is the intent of the definition. Chapter 5 determines where hoods are required, not this definition.  <b>Cost Impact:</b> Will not increase the cost of construction. This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		
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M5-15	202	Changes text of definition “MACHINERY ROOM.” Language and clarifies that not all rooms that contain refrigeration equipment are machinery rooms. The proposal is consistent with ASHRAE 15 and IIAR 2 language. The code change was further modified by the Committee. The modification coordinates the language with that found in IIAR 2 and clearly specifies the two conditions that define a machinery room.  <b>Cost Impact:</b> Will not increase the cost of construction. This proposal is a <b>clarification</b> that should have no impact on the cost of construction	Same as change between 2015 IMC and 2018 IMC		

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M6-15	202	Changes to text of definition "PIPING." The proposal removes brass because brass is a copper-alloy and copper-alloy is the term used to identify materials manufactured where copper is the base metal and includes brass and bronze  <b>Cost Impact:</b> Will not increase the cost of construction. This proposal will not increase the cost of construction as this change is only to <b>update the name of a material</b> that is already in the code.	Same as change between 2015 IMC and 2018 IMC		
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M8-15	202	Changes definition "PRESS JOINT" to definition "PRESS-CONNECT JOINT." The only change in this proposal is to replace the term "PRESS" with the industry recognized term "PRESS-CONNECT".  <b>Cost Impact:</b> Will not increase the cost of construction. This change is <b>merely replacing a term</b> , and is not a substantive technical change.	Same as change between 2015 IMC and 2018 IMC		

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M9-15	202	Changes to text of definition "VENTILATION" Simplify definition. The revised definition is open such that it will recognize any means of supplying the outdoor air, such as by supply fans with relief fans or gravity openings and by means of exhaust fans and supply fans or gravity intake openings. This code change was further modified by public comment to remove the words "at an approximate equal rate."  <b>Cost Impact:</b> Will not increase the cost of construction. This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		
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M11-15	303.7	Revises text of Section 303.7 "Pit locations." This proposal is just for correlation between codes for consistency. Proposal correlates with Sections 306.1 and 304.10 of the IMC. The code change was further modified by the Committee. The modification makes the proposal consistent with Section 304.10 of the IMC.  <b>Cost Impact:</b> Will not increase the cost of construction. This proposal is just for <b>correlation</b> between codes for consistency.	Same as change between 2015 IMC and 2018 IMC		

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M12-15	303.9 901.5	Adds new sections 303.9 “Fireplaces in Group I-2 Condition 2 occupancies.” and 901.5 “Solid fuel-burning fireplaces and appliances in Group I-2 Condition 2.” Put forth by the Adhoc Healthcare Committee to clarify, restrict and limit the ignition source hazards in healthcare occupancies  <b>Cost Impact:</b> Will not increase the cost of construction Wood burning fireplaces are not permitted by the federal CMS regulations; therefore, there is no change in cost of construction.	Same as change between 2015 IMC and 2018 IMC		
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M13-15	Table 305.4	Change to text of Table 305.4 “PIPING SUPPORT SPACING”. This proposal modifies the spacing for piping material support  <b>Cost Impact:</b> Will not increase the cost of construction This proposal modifies the spacing for piping material support into the code and thus the code with this proposal added will not cause the cost of construction to increase, and could decrease the cost as less support is required for larger pipe.	Same as change between 2015 IMC and 2018 IMC		

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M14-15	Table 305.4	Change to text of Table 305.4 "PIPING SUPPORT SPACING". Changes to piping material support and removes brass because brass is a copper-alloy and copper-alloy is the term used to identify materials manufactured where copper is the base metal. The code change was further modified by the Committee. The modification recognizes the different support practice for pipe verses tube.  <b>Cost Impact:</b> Will not increase the cost of construction The proposal will not impact the cost of construction as it is only <b>changing the material terminology</b> and combining it this the copper section of this table.	Same as change between 2015 IMC and 2018 IMC		
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M15-15, Part I	306.1.1	Deletes section 306.1.1 "Central furnaces." Deleted as the section has become antiquated.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent	Same as change between 2015 IMC and 2018 IMC		

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M17-15	307.2.2	Modifies text of Section 307.2.2 “Drain pipe materials and sizes.” Addition of copper alloy to list of approved materials.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal is adding a material use in the field and will not impact the cost of construction.	Same as change between 2015 IMC and 2018 IMC		
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M22-15	Table 401.5	Changes text of Table 401.5 “OPENING SIZES IN LOUVERS, GRILLES AND SCREENS PROTECTING AIR INTAKE OPENINGS”. Addition of clarification to table for rectangular, square, and round openings via footnote “a.”  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		

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M24-15	403.3.1.1, Table 403.3.1.1	Changes text of Table 403.3.1.1 “MINIMUM VENTILATION RATES.” This proposal is to update the existing ventilation rate table in the IMC. Standard 62.1 is the source material for this table, and this updates the table to match the ventilation rates in 62.1-2013.  <b>Cost Impact:</b> Will increase the cost of construction. the cost of construction may increase in refrigerated warehouses/freezers, and warehouses as there will now need to be mechanical ventilation in those spaces	Same as change between 2015 IMC and 2018 IMC		
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M25-15	403.3.2.4	Adds new Section 403.3.2.4 “Systems controls.” Labeling of air ventilation systems to indicate system function to occupants. The modification clarifies that the text applies to controls within dwelling units. The code change was further modified by the Committee. The modification clarifies that the text applies to controls within dwelling units and better aligns the text with the proponent's reason statement.  <b>Cost Impact: Will increase the cost of construction.</b> This proposal is expected to have minimal cost impacts, as it simply involves labeling equipment for its intended purpose.	Same as change between 2015 IMC and 2018 IMC		

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Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M26-15	403.3.2.4	Adds new section 403.3.2.4 “Ventilating Equipment”. And adds new standard ANSI/AMCA 210-ANSI/ASHRAE 51-07. Exhaust equipment shall be listed and labeled to provide min required air flow.  <b>Cost Impact: Will increase the cost of construction</b> Over 12,000 ventilating equipment products are labeled and listed in the HVI directory. For these products, there will be no incremental cost associated with this change. For equipment that is not currently tested, listed, and labeled, the incremental costs are highly dependent upon volume of the specific products sold.	Same as change between 2015 IMC and 2018 IMC		
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M27-15	404.1	Changes text of Section 404.1 “Enclosed parking garages” and adds new standard UL 2075-13 Standard for Gas and Vapor Detectors and Sensors. This proposal clarifies that the detectors required by this section must be listed to UL 2075 and installed in accordance with their listing  <b>Cost Impact: Will increase the cost of construction.</b> Listed UL 2075 detectors might be marginally more expensive than non-listed detectors	Same as change between 2015 IMC and 2018 IMC		

**Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:**

**a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design**

TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M28-15	404.1, 404.2	Changes text of Section 404.1 “Enclosed parking garages.” It also deletes Section 404.2. Section 404.2 is being rolled into Section 404.1. It clarifies that the exhaust system either has to run constantly or it has to run automatically.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M30-15	501.2, 506.1, 507.1, 507.1.2, 509.1	Changes text of Section 501.2 “Independent system required”, 506.1 “General”, 507.1 “General”, 507.12 Domestic cooking appliances used for commercial purposes”, 509.1 “Where required”. This code change is intended to clarify that hoods and fire suppression systems are required where the hazard justifies such protection, regardless of the type of equipment being covered. The code change was further modified by the Committee. The modification clarifies that the exhaust system is designed for both the appliance and the cooking process.  <b>Cost Impact:</b> Will not increase the cost of construction The code change is for purposes of <b>clarification</b> , and does not change the overall requirements of the section, thus will not	Same as change between 2015 IMC and 2018 IMC		

**Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:**

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		change the cost of compliance				
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/>	<b>Cmsn.</b> <input type="checkbox"/>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	
M37-15	504.4	Changes text of Section 504.4 "Exhaust installation" to <b>clarify</b> that dryer ducts must be sealed in accordance with 603.9  <b>Cost Impact:</b> Will not increase the cost of construction The requirement has always been in the code to seal ducts. This code change proposal just reminds you that it is also required for dryer ducts within the section that regulates dryer ducts.	Same as change between 2015 IMC and 2018 IMC			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/>	<b>Cmsn.</b> <input type="checkbox"/>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	
M38-15	504.4.1	Adds new section 504.4.1 "Exhaust termination outlet and passageway size."  <b>Cost Impact: Will increase the cost of construction</b> The cost of the vent terminal may be higher.	Same as change between 2015 IMC and 2018 IMC			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/>	<b>Cmsn.</b> <input type="checkbox"/>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

M42-15	504.8.2	<p>Modifies text of 504.8.2 “Duct installation.” Changes to cavity size language to allow installation of the ducts without deformation. The code change was further modified by the Committee. The modification eliminates an exact dimension.</p> <p><b>Cost Impact: Will increase the cost of construction.</b> There is an added cost of adding furring strips to a 2 x 4 wall.</p>	Same as change between 2015 IMC and 2018 IMC			
<p><b>TAC Action</b>  Accommodate Florida Specific Need:  <b>YES (Select Criteria)</b> <input type="checkbox"/>  a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/>  <b>NO:</b> <input type="checkbox"/>  <b>Others (Explain):</b>  <input type="text"/></p>		<p><b>Commission Action</b>  Accommodate Florida Specific Need:  <b>YES (Select Criteria)</b> <input type="checkbox"/>  a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/>  <b>NO:</b> <input type="checkbox"/>  <b>Others (Explain):</b>  <input type="text"/></p>		<p><b>TAC</b></p> <p><input type="checkbox"/> No Action Needed</p> <p><input type="checkbox"/> Overlapping provisions</p>	<p><b>Cmsn.</b></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	
M44-15	505, 505.1, 505.1 (New), 505.2 (New), 505.4.	<p>Modifies test of Section 505 “DOMESTIC COOKING EXHAUST EQUIPMENT”. Adds new section 505.2 “Domestic cooking Exhaust”, and adds new standard “NSI Z21.1 - 2010 Household Cooking Gas Appliances,” “UL 507 - 2014 Standard for Safety Electric Fans.” The code needs added coverage for domestic exhaust equipment and downdraft equipment and needs to reference the relevant product standards. The code change was further modified by the Committee. The modification limits the application to domestic uses as was intended in the revised text of Section 505.4, however, such distinction was lost as the section was originally revised. In addition, the code change was modified by public comment to correct the mistake with the original submittal.</p> <p><b>Cost Impact: Will increase the cost of construction.</b>  In most cases there should be no increase in costs if exhaust hoods and downdraft equipment are listed to the specified standards, which appears to be common practice.</p>	Same as change between 2015 IMC and 2018 IMC			

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Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M45-15	505.1	Adds text to Section 505.1 “Domestic systems.” Modification regarding fire suppression for range hoods installation in Groups I-1 and I-2 occupancies. The code change was further modified by the Committee. The modifications eliminate the reference to an IBC section number that is not encompassing of all Group I uses, and move the proposed exception into the main section because the new text is not an exception.  <b>Cost Impact:</b> Will not increase the cost of construction There is no cost impact as this proposal is strictly <b>editorial</b> in nature.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M48-15	506.3.13.2	Modifies section 506.3.13.2 “Termination through an exterior wall.” Intent of change is fire safety related. Clarification to show that Exterior openings shall be located in accordance with section 506.3.13.3.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		

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TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M51-15	202, 506.5.2	Adds new definition "POLLUTION CONTROL UNIT (PCU)" and adds new Section 506.5.2 "Pollution Control Units." Concerning smoke, grease, and other particulate at the exhaust outlets commercial cooking appliances. The code change was further modified by the Committee. The modification removes any ambiguity about whether these units are required to be installed.  <b>Cost Impact: Will increase the cost of construction</b> The cost of construction of these specific units may be increased by manufacturers if their current unit did not meet the minimum requirements per this new section.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M55-15	507.2.6	Modification of Section 507.2.6 "Clearances for Type I hood." To add an exception for Type I hoods which can be listed to the latest edition of UL710 and includes testing for clearances to combustibles. This exception will allow lesser clearances without having to seek alternative approval from the AHJ.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.	Same as change between 2015 IMC and 2018 IMC		

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M56-15	507.6.1	Modification of Section 507.6.1" Capture and containment test" to clarify that smoke bombs should not be used for this type of test. The code change was further modified by public comment to remove the word "generators" as it is too generic.  <b>Cost Impact:</b> Will not increase the cost of construction There will be no additional cost as this in only an <b>editorial</b> modification and clarification.	Same as change between 2015 IMC and 2018 IMC		
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M59-15	510.8.4	Adds new Section 510.8.4. "Duct cleanout". To avoid an accumulation of combustible dust and reduce potential dust deflagration from the accumulation of dusts inside ducts, cleanouts are needed to provide for accessible points as part of the housekeeping and inspection. The code change was further modified by the Committee. The modification allows other designs. The prefix "pre" was deleted before "engineered" because it is not known what is meant by "pre-engineered."  <b>Cost Impact: Will increase the cost of construction</b> The proposed code change will increase the cost of construction since previous editions did not require cleanouts	Same as change between 2015 IMC and 2018 IMC		

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

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M61-15	512.2	<p>Modification of text for Section 512.2 “Materials.” Removes brass because brass is a copper alloy and reworded the sentence without changing the meaning.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal will not impact the cost of construction as this is only <b>changing the name of the material</b>.</p>	Same as change between 2015 IMC and 2018 IMC		
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>			<p><b>TAC</b></p> <p><b>Cmsn.</b></p>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M62-15	601.5	<p>Adds text to Section 601.5” Return air openings” to clarify that return air shall not be taken from indoor swimming pool enclosures and associated deck areas baring exceptions. The code change was further modified by public comment. This public comment includes the FG 38 modification, made during the development hearings, and an exception for dedicated system, which has also been added to FG 38 by Public Comment.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction No cost unless the air is treated.</p>	Same as change between 2015 IMC and 2018 IMC		
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>			<p><b>TAC</b></p> <p><b>Cmsn.</b></p>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M64-15	602.1	<p>Modification of text for Section 602.1 “General” to permit as a plenum framing cavities addressed in Section 602.3.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction because</p>	Same as change between 2015 IMC and 2018 IMC		

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

		no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> NO: <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> NO: <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>TAC</b> <input type="checkbox"/> No Action Needed <input type="checkbox"/> Overlapping provisions	<b>Cmsn.</b> <input type="checkbox"/> <input type="checkbox"/>
M66-15	602.2.1	Modification of text for Section 602.2.1 “Materials within plenums.” Concerning material installation within a plenum that should be listed for the application.  <b>Cost Impact:</b> Will not increase the cost of construction This will prevent the errors in the field as the construction community will not have to spend additional time and money removing the improper insulation and replacing with the correct material.	Same as change between 2015 IMC and 2018 IMC		
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> NO: <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> NO: <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>TAC</b> <input type="checkbox"/> No Action Needed <input type="checkbox"/> Overlapping provisions	<b>Cmsn.</b> <input type="checkbox"/> <input type="checkbox"/>
M67-15	602.2.1.1, 602.2.1.2, 602.2.1.3	Modification of text for Sections 602.2.1.1 “Wiring”, 602.2.1.2 “Fire sprinkler piping,” and 602.2.1.3 “Pneumatic tubing.” This proposal concerns consistency with the pass/fail criteria for the testing of products from in these sections, and the listing and labeling requirements.  <b>Cost Impact:</b> Will not increase the cost of construction  <b>Editorial changes only</b>	Same as change between 2015 IMC and 2018 IMC		

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

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TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
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M70-15, P I	602.2.1.6, 602.2.1.6, 602.2.1.6.1, 602.2.1.6.2, 602.2.1.6.3	Entirely replaces Section 602.2.1.6 "Foam plastic insulation in plenums as interior finish or interior trim". Deletes sections 602.2.1.6.1, 602.2.1.6.2, 602.2.1.6.3. This proposal is intended to revise the requirements for foam plastic in plenums and to clarify the code's intent for the use of foam plastic in plenums. The code change was further modified by the Committee. The modification deletes the word "insulation" as it matters not what form the foam plastic takes.  <b>Cost Impact:</b> Will not increase the cost of construction No cost increase. This code proposal revises existing requirements without technical changes.	Same as change between 2015 IMC and 2018 IMC		
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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M70-15 P II	2603.7, 2603.7 (New), 2603.7.1, 2603.7.2, 2603.7.3, 2604.1.1 (New) (IBC)	Entirely replaces Section 2603.7 "Foam plastic insulation in plenums as interior finish or interior trim." Adds new Section 2604.1.1 "Plenums". This proposal is intended to revise the requirements for foam plastic in plenums. There is a companion proposal for the International Mechanical Code. This code change is intended to not revise technical requirements, but clarifies the code's intent for the use of foam plastic in plenums. The code change was further modified by the Committee. The committee reason is identical to the reason for M70-15, Part I.  <b>Cost Impact:</b> Will not increase the cost of construction	Same as change between 2015 IMC and 2018 IMC		

**Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:**

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

		No cost increase. This code proposal revises existing requirements without technical changes.				
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/>	<b>Cmsn.</b> <input type="checkbox"/>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
M76-15	602.2.1.7	Modification of text for Section 602.2.1.7 “Plastic plumbing piping and tubing.” Adds new standard UL 2846-14, “Fire Test of Plastic Water Distribution Plumbing Pipe for Visible Flame and Smoke Characteristics” Clarifies that the section is only applicable to plastic piping and tubing exposed within a plenum. Allows an option for water distribution piping and tubing to be listed to the UL 2846 criteria. The code change was further modified by the Committee. The modification eliminates redundant words because this section is about materials within plenums. The deleted words would allow materials to cover the pipes where such materials were not listed for the application of covering pipes.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal provides an <b>alternative method</b> for evaluating plastic water distribution system piping and tubing.	Same as change between 2015 IMC and 2018 IMC			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/>	<b>Cmsn.</b> <input type="checkbox"/>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
M79-15	602.2.1.8 (New)	Adds new Section 602.2.1.8 “Pipe and duct insulation within plenums.”  <b>Cost Impact:</b> Will not increase the cost of construction This is <b>clarification</b> only because fire safety requirements for	Same as change between 2015 IMC and 2018 IMC			

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

		materials contained within plenums already exist.											
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>											
M89-15	603.5.2 (New), CHAPTER 15	Adds new Section 603.5.2 “Phenolic ducts.” <b>Adds new standard “SMACNA</b> Phenolic Duct Construction Standard 1st edition 2015.” Phenolic duct is a new air distribution material. The code change was further modified by the Committee. The modification is for consistency with other similar text in the IMC.  <b>Cost Impact:</b> Will not increase the cost of construction The standard provides means/methods for phenolic duct construction.	Same as change between 2015 IMC and 2018 IMC										
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>											
<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>											
M94-15	603.8.2	Modifies Section 603.8.2 “Sealing.” Ducts shall be sealed, secured, and then tested prior to concrete encasement or direct burial. The code change was further modified by the Committee. The modification provides the allowable leakage rate and uses existing IECC testing criteria.  <b>Cost Impact: Will increase the cost of construction</b> This may have a minimal increase in initial cost, but could have potential savings in the long run for buildings utilizing underground duct systems.	Same as change between 2015 IMC and 2018 IMC										

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Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
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				<input type="checkbox"/>	<input type="checkbox"/>
M96-15	603.9	Modifies exception for Section 603.9 "Joints, seams, and connections." Concerns ducts that are located outside of conditioned spaces.  <b>Cost Impact:</b> Will not increase the cost of construction <b>Cost decrease of up to \$314</b> for an average house according to research conducted by Home Innovation Research Labs	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M100-15	604.11	Adds exception to Section 604.11 "Vapor retarders". Proposal adds an option to the vapor retarder requirements for duct insulation of the IMC.  <b>Cost Impact:</b> Will not increase the cost of construction The <b>proposal adds options</b> for the code; does not add any new mandatory requirements.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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M102-15	805.7 (New)	<p>Adds new Section 805.7 “Insulation shield.” the code should require insulation shields for factory-built and metal chimneys as they require clearance to insulation and represents a fire hazard when one is not installed.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction There technically is no cost impact since the insulation shield should already be installed where needed to ensure a proper and safe installation.</p>	Same as change between 2015 IMC and 2018 IMC		
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/></p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/></p>	<p><input type="checkbox"/> No Action Needed</p> <p><input type="checkbox"/> Overlapping provisions</p>	<p><b>TAC</b></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><b>Cmsn.</b></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
M104-15	916.1, CHAPTER 15	<p>Modifies Section 916.1 “General.” Seeks to add new standards “AHRI 1160 (I-P) -09 Performance rating of Heat Pump Pool Heaters,” “ANSI Z21.56a/CSA 4.7 -2013 Gas Fired Pool Heaters,” “CSA C22.2 No. 236-11 Cooling Equipment CSA C22.2 No. 218.1-M89(R2011) Spas, Hot Tubs and Associated Equipment”, “UL 1563-2009 Standard for Electric Spas, Hot Tubs and Associated Equipment-with revisions through July 2012.” To ensure consistency with what standards are required for the various pool heaters in Section 316.2 and Table 316.2 of the International Swimming Pool &amp; Spa Code. The code change was further modified by the Committee. The modification deletes AHRI 1160 which is already referenced in the IECC. Gas heaters are covered by the IFGC and the new exception recognizes integral heaters in spas listed to UL1563.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction and ensures the applicable standards for the various pool heaters are provided within all the I-codes that address pool heaters.</p>	Same as change between 2015 IMC and 2018 IMC		

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				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M108-15	202 (New), 929 (New), 929.1 (New), CHAPTER 35	Adds Definition "HIGH VOLUME LARGE DIAMETER FAN." Adds Section 929 "HIGH VOLUME LARGE DIAMETER FANS." Adds new standard "AMCA 230-CD1 Laboratory Methods of Testing Air Circulating Fans for Rating and Certification." Adds the appropriate test standard, installation instructions, and a definition for high volume large diameter fans to the code. The code change was further modified by the Committee. The modification brings in the necessary requirement for such fans to be listed to a product safety standard.  <b>Cost Impact:</b> Will not increase the cost of construction  The code change will not increase the cost of construction because high volume large diameter fans are not being made mandatory.	Same as change between 2015 IMC and 2018 IMC		
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M110-15	1002.1, 1401.4, 1401.4.1 (New), CHAPTER 15	Modifies Sections 1002.1 "General," 1401.4 Solar thermal equipment and appliances." Adds new Section 1401.4.1 "Collectors and panels." Adds new standards "SRCC Standard 100-13, Minimum Standard for Solar Thermal Collectors, January 3, 2013, Solar Rating and Certification Corporation," "SRCC Standard 300-13 Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013, Solar Rating and Certification Corporation," "SRCC Standard 600-13, Minimum	Same as change between 2015 IMC and 2018 IMC		

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**a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design**

		<p>Standard for Solar Thermal Concentrating Collectors, January 2, 2013, Solar Rating and Certification Corporation.”</p> <p>Updates standard citations for solar thermal water heaters. Adds references to SRCC 100 and 600 for solar collectors.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction The proposed changes are not anticipated to impact the cost of installation. No new equipment or features are required, and no new requirements are placed on manufacturers impacting certification or manufacturing costs. Proposed provisions provide additional clarity and direction for installers and code officials at inspection.</p>			
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/></p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/></p>		<p><b>TAC</b></p> <p><b>Cmsn.</b></p>	
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M111-15	1006.6, CHAPTER 15	<p>Modifies text of Section 1006.6 “Safety and relief valve discharge”. Adds new standard ASME A112.4.1. Added changes to text for clarification and ease of use. The code change was further modified by the Committee. The modification changes air gap to air break, which is more representative of the actual installations addresses by Chapter 10.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction There will be no additional cost as this in only an <b>editorial</b> modification and clarification which provides information from other codes. No new requirements.</p>	Same as change between 2015 IMC and 2018 IMC		

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M113-15	202 (New), 1009.1, Chapter 15, 1402, 1403, 1404	<p>Adds exception to 1009.1 “Where required.” Adds Definitions “DIRECT SOLAR SYSTEM”, “DRAIN BACK SYSTEM”, “FOOD GRADE FLUID”, “INDIRECT SOLAR SYSTEM”, “NO-FLOW CONDITION (SOLAR)”, “NON-FOOD GRADE FLUID”, “SOLAR THERMAL SYSTEM.” Revises Section 1401.1 “Scope,” Section 1401.4 “Solar thermal equipment and appliances”. Modifies text and adds new sections to Section 1402 “Design and Installation.” Modifies text and adds new sections to Section 1403 “Heat Transfer Fluids.” Modifies text and adds new sections to Section 1404 “Labeling”.</p> <p>Adds new standards “100-13, Minimum Standard for Solar Thermal Collectors, January 3, 2013”, “SRCC Standard 300-13, Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013”, “SRCC Standard 600-13, Minimum Standard for Solar Thermal Concentrating Collectors, January 3, 2013.”, “Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1, Food and Drug Administration, Parts 174-186, Title 15 of the Federal Hazardous Substances Act.”</p> <p>The solar thermal provisions in the 2015 IRC were significantly revised by proposals submitted by a Solar Task Group working under the SEPHCAC. These same changes were not submitted for the IMC, however, due to time constraints. This proposal seeks to extend these updates to the solar thermal provisions in the IMC to align with the language that appears in the 2015. The code change was further modified by the Committee. The modification appropriately defers to the IPC for backflow protection coverage; adds the word "solar" to clarify the scope of the definitions and eliminates the concern for placing solar panels over plumbing vents.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction</p>	Same as change between 2015 IMC and 2018 IMC		

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		The proposed changes are not anticipated to raise the cost of construction. Most solar thermal systems and collectors are already certified to these standards in order to meet state requirements, those of the Internal Revenue Service for federal rebates, or to comply with the requirements of the 2015 IRC. Therefore, no additional product certifications are required. It is possible that costs reductions will result from the correlation of requirements between codes and these standards.		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>

M115-15	1101.6, Chapter 15	Revise text to Section 1101.6 "General." Adds new standards "IIAR 3-2012 Ammonia Refrigeration Valves", "IIAR 4-2015 (pending completion) Installation of Closed-Circuit Ammonia Mechanical Refrigerating Systems", "IIAR 5-2013 Start up and Commissioning of Ammonia Refrigeration Systems." Adds ANSI standards that are applicable for ammonia refrigeration facilities.  <b>Cost Impact:</b> Will not increase the cost of construction The IMC reference will correlate with what should already be industry practice.	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

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M116-15	Table1103.1	<p>Modifies Table 1103.1 “Refrigerant Classification, Amount and OEL.” This proposal seeks to update the refrigerant table with the new refrigerants added to ASHRAE Standard 34 since the last code cycle.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal only classifies refrigerants. How a refrigerant is classified has no impact on the cost of construction.</p>	Same as change between 2015 IMC and 2018 IMC		
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>			<p><b>TAC</b></p> <p><b>Cmsn.</b></p>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M118-15	1104.2.2	<p>Revises Section 1104.2.2 “Industrial occupancies and refrigerated rooms.” The proposal clarifies that Section 1104.2.2 only applies when a machinery room is otherwise required.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction The proposal only <b>clarifies</b> the intended application of the current provisions.</p>	Same as change between 2015 IMC and 2018 IMC		
<p><b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>		<p><b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain):</p>			<p><b>TAC</b></p> <p><b>Cmsn.</b></p>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
M119-15	1104.2.2, 202 (New)	<p>Adds Definition “LOW-PROBABILITY PUMP.” Revises Section 1104.2.2 “Industrial occupancies and refrigerated rooms.” The change ensures that the drive power for liquid pumps and other motorized equipment attached to the system is not improperly added. The code change was further modified by public comment. The public comment updates the proposed IMC text to maintain correlation between the IMC and IIAR 2.</p>	Same as change between 2015 IMC and 2018 IMC		

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		<p><b>Cost Impact:</b> Will not increase the cost of construction</p> <p>The proposal will not increase the cost of construction because the first portion of the change is a <b>clarification</b> of current provisions, and the second portion of the change is an optional path to compliance. Standard pumps will continue to be permitted when they are located in refrigerant machinery rooms.</p>		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M120-15	1104.2.2	<p>Deletes item from Section 1104.2.2 “Industrial occupancies and refrigerated rooms.” The section proposed for deletion is archaic.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction</p> <p>The proposal is unlikely to impact the cost of construction because the <b>deleted text is probably never applied anyway.</b></p>	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M121-15	1104.2.2	<p>Adds exceptions to Section 1104.2.2 (4) “Industrial occupancies and refrigerated rooms.” The proposed exceptions are derived from IIAR 2. In areas that only contain fixed piping, there are no expected leak sources, so detection is unnecessary regardless of the refrigerant type. The code change was further modified by the Committee. The modification limits the exception to ammonia which was the</p>	Same as change between 2015 IMC and 2018 IMC	
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*Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:*

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		intent and which is consistent with ASHRAE 15.  <b>Cost Impact:</b> Will not increase the cost of construction <b>The proposed exceptions are optional.</b> Therefore the will never increase the cost of construction. The cost of construction may decrease depending on whether the exceptions provide a more cost effective option for leak detection.		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M122-15	202, 1104.2.2	Deletes definition in “REFRIGERATED ROOM OR SPACE.” Modifies Section 1104.2.2 “Industrial Occupancies and refrigerated rooms.” The definition that is proposed for deletion only applies to Section 1104.2.2, and it makes more sense to incorporate the criteria of the definition into the section than to have them remotely located in Chapter 2.  <b>Cost Impact:</b> Will not increase the cost of construction The proposal is simply a <b>clean up of code</b> text and a correlation of the IMC to the IBC. It will not increase the cost of construction.	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M123-15	1105.6.1.1	Adds new Section 1105.6.1.1 “Indoor exhaust opening location.” Code addresses openings when equipment is located outdoors, but not where dealing with exhaust duct opening locations inside the machinery room. This mod is to	Same as change between 2015 IMC and 2018 IMC	
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		<p>address this. The code change was further modified by the Committee. The modification is for consistency with ASHRAE 15 text format and also clarifies that "machinery" is specific to refrigeration machinery.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction There will be no additional cost as this in <b>only an editorial</b> modification and clarification. This proposal contains no new requirements.</p>		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>

M124-15	1105.6.3	<p>Modifies Section 1105.6.3 "Ventilation Rate." Added modification. "The minimum required <u>emergency</u> ventilation rate..." Clarifies that the 30 air change per hour ventilation rate for ammonia is the emergency ventilation rate.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction</p> <p>The proposal is a <b>clarification</b> of the current requirements and will not affect the cost of construction.</p>	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
				<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>

M128-15	1107.2	<p>Modification of text to Section 1107.2 "Piping location." Concerning installation of refrigerant piping in means of egress, Section 1107.2 is copied from ASHRAE 15 but this proposal gives it a reasonable interpretation that identifies specific locations where refrigerant piping is prohibited, and allows it to</p>	Same as change between 2015 IMC and 2018 IMC	
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		<p>be installed in occupied buildings. The code change was further modified by public comment to clarify where refrigerant piping cannot be installed. The modification cleans up the proposal such that it is consistent with ASHRAE 15.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal does not increase the cost of construction because it merely interprets an ambiguous term that is in the current code.</p>		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M130-15	1107.5.2	<p>Modifies Section 1107.5.2 “Copper and copper-alloy pipe.” Removes term brass because brass is a copper alloy.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal is <b>updating the name of the materials</b> used in the field and will not impact the cost of construction.</p>	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M132-15	1107.5.3, Chapter 15	<p>Modifies Section 1107.5.3 “Copper tube.” Adds standard “ASTM B819-00 (R2011) Standard Specification for Seamless Copper Tube for Medical Gas Systems.” Deleted a part of 1107.5.3 to reduce confusion to issues for refrigeration system.</p> <p><b>Cost Impact:</b> Will not increase the cost of construction This proposal is <b>adding a standard</b> that is used in the field and will have no impact on the cost of construction.</p>	Same as change between 2015 IMC and 2018 IMC	
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Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

TAC Action		Commission Action		TAC	Cmsn.		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>
M133-15	1107.5.3	Modifies Section 1107.5.3 "Copper tube." Modification adds press-connect joints to mechanical joints to 1107.5.3. The code change was further modified by the Committee. The modification <b>clarifies</b> that the code is referring only to press-connect joints that are listed for refrigerant piping applications.  <b>Cost Impact:</b> Will not increase the cost of construction This new technology has great potential to save construction costs by drastically reducing labor costs as well as potential damage caused by typical brazing and soldering flames.		Same as change between 2015 IMC and 2018 IMC			
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>
M135-15	Table 1202.4, Table 1210.4	Deletes ASTM F 877 from Table 1202.4 "Hydronic Pipe" and Table 1210.4 "Ground-Source Loop Pipe." This proposal simply deletes a standard that is no longer pipe or tubing related from the code.  <b>Cost Impact:</b> Will not increase the cost of construction This <b>proposal simply deletes a standard that is no longer pipe</b> or tubing related from the code. The piping material is now covered by a different standard, and as such, the option is not deleting or adding a material. Thus the code with this proposal added will not cause the cost of construction to increase. ASTM F877 is already in the code.		Same as change between 2015 IMC and 2018 IMC			

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TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
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M136-15	Table 1202.4, Table 1210.4, Chapter 15	Modifies text of Table 1202.4 “Hydronic Pipe” and Table 1210.4 “Ground-Source Loop Pipe.” Adds new standard “CSA B137.18 - 13 Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications.” This change is to simply add reference to a new standard to the Code.  <b>Cost Impact:</b> Will not increase the cost of construction This change is <b>to simply add reference to a new standard</b> to the Code. There is no cost impact in adding the new standard. This change just permits an option to meet a different standard then the current reference standards.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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M137-15	Table 1202.5, CHAPTER 15	Modifies text of Table 1202.5 (1202.5) “Hydronic Pipe Fittings.” Adds new standard “ASSE 1061-2011 Performance Requirements for Push Fit Fittings.” Modifies Section 1203.11 “Cross-linked polyethylene (PEX) and plastic tubing” and Section 1203.16 “Raised temperature polyethylene (PE-RT) plastic tubing.”  The proponent of this proposal also proposed a floor amendment to address a concern which exists for using push-to-connect type fittings on hydronic oxygen barrier type PEX and PE-RT tubing containing an EVOH (Ethlene Vinyl Alcohol)	Same as change between 2015 IMC and 2018 IMC		

**Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:**

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		layer as the oxygen barrier. Public Comment to add those amendments.  <b>Cost Impact:</b> Will not increase the cost of construction Proposal addresses fittings and methods already used in the industry.		
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

M138-15	Table 1202.4, Table 1210.4, Chapter 15	Modifies text of Table 1202.4 “Hydronic Pipe” and Table 1210.4 “Ground-Source Loop Pipe.” Adds new standard “CSA B137.18 - 13 Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications.” CSA B137.1 and ASTM D3261 are being added to Table 1202.5 and are already included in other tables in the IMC and can be used for this application as well. . ASTM F2098, ASTM F2735, and ASTM F2769 are being added to Table 1210.5 and are already referenced in the IMC for PERT fittings for other applications and can be used for this application as well.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal simply adds an <b>alternative standard</b> for fittings. The actual fittings are similar or the same as the current standards for fittings. No impact on cost.	Same as change between 2015 IMC and 2018 IMC	
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<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b>	<b>Cmsn.</b>
		<input type="checkbox"/> No Action Needed		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/> Overlapping provisions		<input type="checkbox"/>	<input type="checkbox"/>	

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M139-15	Table 1202.5	Table 1202.4 “Hydronic Pipe Fittings.” Added two additional commonly used PEX fitting standards, F1960 and F2080, to the Table 1202.5  <b>Cost Impact:</b> Will not increase the cost of construction Addition of two more fitting standards to this table has absolutely no impact on the cost of construction	Same as change between 2015 IMC and 2018 IMC			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/> No Action Needed <input type="checkbox"/> Overlapping provisions	<b>Cmsn.</b> <input type="checkbox"/> <input type="checkbox"/>
M141-15	1203.3.3, Chapter 15	Modifies Section 1203.3.3 “Soldered joints.” Adds new standard “ASTM B828 Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings.” This change creates consistency between the IMC and the IPC. The proposed language is identical to that in IPC 605.13.3  <b>Cost Impact:</b> Will not increase the cost of construction This proposal simply <b>clarifies</b> surface preparation, which will not increase cost.	Same as change between 2015 IMC and 2018 IMC			
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<b>TAC</b> <input type="checkbox"/> No Action Needed <input type="checkbox"/> Overlapping provisions	<b>Cmsn.</b> <input type="checkbox"/> <input type="checkbox"/>
M144-15	1203.5, 1203.6	Deletes section 1203.5 Brass pile and 1203.6 Brass tubing. Brass is a copper allow and is covered by section 1203.7 and 1203.8.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction as this	Same as change between 2015 IMC and 2018 IMC			

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		change is <b>to remove language covered in section 1203.7 &amp; 1203.8.</b>											
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>											
M145-15	202, 1203.8, 1203.8.3	Revises definition "PRESS-CONNECT". Revises section 1203.8 and 1203.8.3 to reflect this change of Press-connect.  <b>Cost Impact:</b> Will not increase the cost of construction Change is simply for <b>clarity of what is already included.</b>	Same as change between 2015 IMC and 2018 IMC										
<b>TAC Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<b>Commission Action</b> Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>											
M150-15	1208.1	Adds exception to 1208.1 "General." Adds language from PPFA which allows for limited air testing of plastic piping systems, if a number of conditions are met. The code change was further modified by the Committee. The modification limits the air testing to PEX pipe and tubing because such non-rigid polyolefin material does not pose a danger. Products other than PEX are not recommended to be tested with compressed gases.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal simply <b>adds another option</b> for air testing some specific piping materials into the code and as such, the option is not requiring that this method be chosen. Thus the code with this proposal added will not cause the cost of construction to increase.	Same as change between 2015 IMC and 2018 IMC										

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M152-15	1209.3, 1209.3.5 (New)	Modifies text for Section 1209 “Embedded piping.” Adds new Section 1209.3.5 “Cross-linked polyethylene (PEX) joints.” Addition of the PEX joints section is necessary to be consistent with the previous sections and to be consistent with the allowances given in the PE-RT joints section, 1209.3.4.  <b>Cost Impact:</b> Will not increase the cost of construction The addition of PEX joints in this particular section of the code is really more <b>editorial</b> in nature as PEX is already addressed in the code but is lacking the same treatment as the other piping materials mentioned in 1209.3.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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M153-15	1209.5, 1209.5.1, 1209.5.2	Modifies text of Section 1209.5 “Thermal barrier required.” Deleted sections 1209.5.1 and 1209.5.2. The proposal is a step in re-locating an existing insulation requirement from the IMC to the IECC.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not increase the cost of construction as it is the first step in re-locating an existing insulation requirement from the IMC to the IECC. There is no increase in the R-value of the insulation or the installation labor.	Same as change between 2015 IMC and 2018 IMC		

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M154-15	Table 1210.4, Table 1210.5, CHAPTER 15	Modifies Table 1210.4 "GROUND-SOURCE LOOP PIPE", Table 1210.5 "GROUND-SOURCE LOOP PIPE FITTINGS". "NSF 358-2-2012 Polypropylene Pipe & fittings for water-based ground-source "geothermal" heat pump systems." Updates the tables to add standard NSF 358-2-2012. Tests for the material suitability, performance, chemical resistance and quality assurance of geothermal products.  <b>Cost Impact:</b> Will not increase the cost of construction Providing an <b>additional option</b> will not increase the cost of construction.	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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M157-15	1303.1.1	Modification of Section 1303.1.1 "Joints between different piping materials." The proposal removes brass because brass is a copper-alloy and copper-alloy is the term used to identify materials manufactured where copper is the base metal and includes brass and bronze  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not impact the cost of construction, as the change <b>is only to update the name of the material.</b>	Same as change between 2015 IMC and 2018 IMC		

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M158-15	1303.4, 1303.5	Deletes section 1303.4 and section 1303.5. The proposal removes brass sections because brass is a copper-alloy and copper-alloy is used to identify materials manufactured where copper is the base metal including brass and bronze.  <b>Cost Impact:</b> Will not increase the cost of construction This proposal will not impact the cost of construction as it is <b>updating the name of the material.</b>	Same as change between 2015 IMC and 2018 IMC		
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
M159-15	1402.4, 1402.4.1	Modifies text of Section 1402.4 "Roof-mounted collectors," and 1402.4.1 "Collectors mounted above the roof." As Light transmitting materials the plastics need to meet section 2606 of the IBC and the fire properties need to comply with Class CC1 or CC2 of section 2606.4. This proposal ties in with the change to the definition of "plastic, approved" to "light transmitting plastic, approved" in the IBC.  <b>Cost Impact:</b> Will not increase the cost of construction  <b>Clarification</b>	Same as change between 2015 IMC and 2018 IMC		

*Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:*

*a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design*

TAC Action		Commission Action		TAC	Cmsn.
Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
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				<input type="checkbox"/>	<input type="checkbox"/>
M1-16	[F] 502.4, [F] 502.4.1, [F] 502.4.2, [F] 502.4.3, [F] 502.5, [F] 502.5.1, [F] 502.5.2, [F] 502.5.3	Modifies Section 502.4 "Stationary storage battery systems." Deletes Sections 502.4.1, 502.4.2, 502.4.3, 502.5, 502.5.1, 502.5.2, 502.5.3. The requirements for the design and operation of Stationary Storage Battery Systems is contained within the various topic sub-sections of the International Fire Code Section 608. By directly referencing these sections of the International Fire Code all currently proposed and future code change proposals will be reflected in one place and thus the scope, types of batteries, and all considerations for this space including ventilation are easily located and uniformly addressed. The current language of the codes are different yet the requirements are the same. This will also provide one Code Commentary in one code rather than two differing commentaries by different authors.  <b>Cost Impact:</b> Will not increase the cost of construction <b>Cost saving will be attained</b> in research hours and uniformity for code compliance by designers, installers, manufacturers, operators and the code enforcement community.	Same as change between 2015 IMC and 2018 IMC – with the appropriate correlation with the FFPC		
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> <b>NO:</b> <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following:

a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

**Code Change No: M1-15**

**Original Proposal**

**Section: 202**

**Proponent:** Steven Ferguson, representing ASHRAE (sferguson@ashrae.org)

**Revise as follows:**

**SECTION 202 DEFINITIONS**

**OCCUPATIONAL EXPOSURE LIMIT (OEL).** The ~~time-weighted~~ time-weighted average (TWA) concentration for a normal ~~eight-hour~~ eight-hour workday and a 40-hour workweek to which nearly all workers can be repeatedly exposed without adverse effect, based on the OSHA PEL, ACGIH TLV-TWA, ~~AIHA~~ TERA OARS WEEL, or consistent value.

**Reason:** The WEEL values were previously issued by the American Industrial Hygiene Association. These values are now issued by the Toxicology Excellence for Risk Assessment (TERA) Occupational Alliance for Risk Science (OARS). Please visit this website to view the WEEL database: <http://www.tera.org/OARSWEEL.html>

This change is consistent with addendum d to ASHRAE Standard 34-2013 which can be found here: <https://www.ashrae.org/standards-research--technology/standards-addenda>

**Bibliography:** <http://www.tera.org/OARSWEEL.html>  
<https://www.ashrae.org/standards-research--technology/standards-addenda>

**Cost Impact:** Will not increase the cost of construction

This proposal simply updates a definition to indicate what organization is responsible for WEEL values, which has no impact on construction cost.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M1-15**

**AS**

## Code Change No: **M2-15**

### Original Proposal

#### Section: 202

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

#### Revise as follows:

### SECTION 202 DEFINITIONS

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

**READY ACCESS (TO).** That which enables a device, *appliance* or *equipment* to be directly reached, without requiring the removal or movement of any panel, ~~door~~ or similar obstruction [see "Access (to)"].

**Reason:** The term "door" has caused confusion because one must pass through one or more egress doors before reaching any object inside of a building. For example, if an emergency control must be readily accessed, personnel would likely pass through one or more egress/ingress doors before reaching the emergency control, and that is the reality of the situation. The term "door" as used in the definitions was referring to "access doors" similar to panels. The term "access door" might be an alternative to the term "door" because "access door" clearly differentiates between access doors/panels and egress doors. This proposal intends to distinguish egress doors from cabinet doors, access doors and alcove doors and intends to prevent these definitions from being misinterpreted as prohibiting room and closet doors.

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

### Final Action Results

**M2-15**

**AS**

## Code Change No: **M3-15**

### Original Proposal

#### Section: 202

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

#### Revise as follows:

### SECTION 202 DEFINITIONS

**COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial food service establishment for heating or cooking food ~~and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances.~~ For the purpose of this definition, a commercial food service establishment shall include any building is where food is prepared for sale or is prepared on a portion thereof used for the preparation-scale that is by volume and serving frequency not representative of food-domestic household cooking.

#### Reason:

- 1) The current definition is circular in that Chapter 5 uses the term and dictates where a hood is required for such appliances, yet this definition says that a commercial cooking appliance is something that requires a hood (local exhaust system). The current definition is flawed because if Chapter 5 does not require a hood for a particular cooking appliance, then this definition would say that it is no longer a commercial cooking appliance.
- 2) The laundry list of appliances in this definition is incomplete and is redundant with and overlaps the definitions of light-, medium- and heavy-duty cooking appliances. The overlap among the definitions creates confusion.
- 3) There is no accepted definition for "commercial" therefore this proposal attempts to reunite the term with its roots. "Commercial" means commerce which means money exchanging hands, buying and selling. Clearly the cooking of food for sale is commercial, however, it becomes muddy when the cooking is large scale and frequent, but food is not sold. Consider charity kitchens, some church kitchens and some institutional occupancies. If food is not being sold, then other considerations such as volume and frequency of cooking must dictate what is commercial, because as the volume and frequency increase, so too do the hazards associated with such cooking.
- 4) The current definition says that ANY building or portion thereof used for preparing food is a food service establishment. This is extremely broad and could include, for example, a kitchenette (lunch/break room) in an office building. Food service establishments include, but are not limited to: restaurants, cafeterias, institutional kitchens, charity kitchens, dormitory and barrack kitchens, cooking schools, church kitchens, school cafeteria kitchens, mercantile kitchens, banquet and catering facilities, bakeries, wholesale production kitchens, and similar occupancies. The volume and frequency of cooking in these occupancies is not representative of domestic household cooking.

The revised definition dumps the appliance laundry list and describes what would be considered as commercial food service establishments, which is the intent of the definition. Chapter 5 determines where hoods are required, not this definition. The revised text nails down what is commercial by tying it to sales, and attempts to categorize the non-sales cooking facilities by contrasting them with domestic cooking. This is as close as we can get to defining "commercial." If the cooking looks, smells, sounds and tastes like domestic cooking, then the code does not intend to treat it as commercial because the fire and health hazards just aren't there.

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

#### **Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.



**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. Not all appliances are required to be served by hoods, such as UL 710B listed appliances. The proposal helps define what is commercial.

**Assembly Action:**

**None**

**Final Action Results**

**M3-15**

**AS**

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**Code Change No: M5-15**

**Original Proposal**

**Section(s):** 202

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com) 2015 International Mechanical Code

**Revise as follows:**

**MACHINERY ROOM.** ~~A room meeting prescribed safety~~ An enclosed space that, where required by Chapter 11 to contain refrigeration equipment, must comply with the requirements and set forth in which refrigeration systems or components thereof are located (see Sections 1105 and 1106).

**Reason:** The proposed definition is consistent with the definition in IAR 2 and resolves a problem with the current definition. The current definition implies that any room with refrigeration equipment is a machinery room, which is incorrect. Only those rooms that are required to contain certain refrigeration machinery and refrigerant quantities are classified as machinery rooms.

**Cost Impact:** Will not increase the cost of construction  
This proposal is a clarification that should have no impact on the cost of construction

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**MACHINERY ROOM.** ~~An enclosed space that, where is required by Chapter 11 to contain refrigeration equipment, must and to comply with the requirements set forth in Sections 1105 and 1106.~~

**Committee Reason:** The proposal is consistent with ASHRAE 15 and IAR 2 language and clarifies that not all rooms that contain refrigeration equipment are machinery rooms. The modification coordinates the language with that found in IAR 2 and clearly specifies the two conditions that define a machinery room.

**Assembly Action:**

**None**

**Final Action Results**

**M5-15**

**AM**

## Code Change No: **M6-15**

### Original Proposal

**Section: 202**

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

**Revise as follows:**

### SECTION 202 DEFINITIONS

**PIPING.** Where used in this code, "piping" refers to either pipe or tubing, or both.

**Pipe.** A rigid conduit of iron, steel, copper, ~~brass-copper-alloy~~, or plastic.

**Tubing.** Semirigid conduit of copper, ~~copper-alloy~~, aluminum, plastic or steel.

**Reason:** The proposal removes brass because brass is a copper-alloy and copper-alloy is the term used to identify materials manufactured where copper is the base metal and includes brass and bronze. Copper-alloy tubing is manufactured ASTM B135 & ASTM B251.

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction as this change is only to update the name of a material that is already in the code.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The term copper alloy is used in the product standards. Approval is based on the proponent's published reason statement.

**Assembly Action:**

**None**

### Final Action Results

**M6-15**

**AS**

**Code Change No: M8-15**

**Original Proposal**

**Section: 202**

**Proponent:** Jay Peters, representing Cerro Flow Products (peters.jay@me.com)

**Revise as follows:**

**SECTION 202 DEFINITIONS**

~~PRESS~~ **PRESS-CONNECT JOINT.** *(No change to text.)*

**Reason:** The only change in this proposal is to replace the term "PRESS" with the industry recognized term "PRESS-CONNECT". The ASTM standard, as well as the industry, refer to this technology as *press-connect joints* and *press-connect fittings*. This proposed edit to the definition was created to bring the IMC and other related standards into alignment and to prevent potential confusion in the industry. The IPC currently utilizes the term *press-connect* and this small edit would bring uniformity to the ICC Codes. A proposal to Section 1107.5 also uses the term *press-connect* and this would correlate with that proposal.

**Cost Impact:** Will not increase the cost of construction  
 This change is merely replacing a term, and is not a substantive technical change.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement.

**Assembly Action:**

**None**

**Final Action Results**

**M8-15**

**AS**

## Code Change No: **M9-15**

### Original Proposal

**Section(s):** 202

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

**Revise as follows:**

### SECTION 202 DEFINITIONS

**VENTILATION.** The natural or mechanical process of ~~supplying introducing~~ conditioned or unconditioned outdoor air to, or a space and removing such air from, any such space at an approximately equal rate.

**Reason:** The current definition dates back to when ventilation involved recirculation and has caused confusion because it still implies that ventilation involves recirculated air, when in fact, it does not. In the IMC, ventilation is by means of outdoor air only. There is no recognition of ventilation by recirculated indoor air. The revised definition makes this clear and also states a fundamental principal that ventilation does not occur without a balance of supplied air and removed air. If a system supplies 1000 cfm of outdoor ventilation air to a space, then it must exhaust, relieve or otherwise remove air at an equal rate or else the space will positively or negatively pressurize and the ventilation rate will not be realized. The revised definition is open such that it will recognize any means of supplying the outdoor air, such as by supply fans with relief fans or gravity openings and by means of exhaust fans and supply fans or gravity intake openings.

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Disapproved**

**Committee Reason:** Ventilation in Section 403 of the IMC is not solely supplying outdoor air. The proposal will cause confusion and conflicts with Section 401 of the IMC and also ASHRAE 62.1.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Janine Snyder, representing Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org) requests Approve as Modified by this Public Comment.**

**Modify as follows:**

**SECTION 202  
DEFINITIONS**

**VENTILATION.** Thenaturalormechanicalprocess of introducing conditioned or unconditioned outdoor air to a space and removing air from such space ~~at an approximately equal rate.~~

**Commenter's Reason:** The IMC committee seemed to take issue with the words "at an approximate equal rate," even though Section 403.1 states the same requirement. Those words are not essential to the definition, however, and can be omitted. Chapter 4 does indeed deal only with outdoor air for ventilation. There is no allowance for recirculated ventilation air in Chapter 4. Whether by mechanical or natural means, ventilation is the process of bringing in outdoor air and relieving or exhausting the same amount of air. The proposed definition reflects this.

**Final Action Results**

**M9-15**

**AMPC1**

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**Code Change No: M11-15**

**Original Proposal**

**Section(s):** 303.7

**Proponent:** Guy McMann, Jefferson County, Colorado (gcmcmann@jeffco.us)  
2015 International Mechanical Code

**Revise as follows:**

**303.7 Pit locations.** Appliances installed in pits or excavations shall not come in direct contact with the surrounding soil and shall be installed not less than 6 inches above the pit floor. The sides of the pit or excavation shall be held back not less than 12 inches (305 mm) from the *appliance*. Where the depth exceeds 12 inches (305 mm) below adjoining grade, the walls of the pit or excavation shall be lined with concrete or masonry. Such concrete or masonry shall extend not less than 4 inches (102 mm) above adjoining grade and shall have sufficient lateral load-bearing capacity to resist collapse. Excavation on the control side of the appliance shall extend not less than 30 inches (762mm) horizontally. The *appliance* shall be protected from flooding in an *approved* manner.

**Reason:** This Section lacks some detail in floor and control side language found in the other codes. This modification completes this section and has all the information necessary for a complete and code compliant installation.

**Cost Impact:** Will not increase the cost of construction  
This proposal is just for correlation between codes for consistency.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**303.7 Pit locations.** Appliances installed in pits or excavations shall not come in direct contact with the surrounding soil and shall be installed not less than ~~6~~3 inches above the pit floor. The sides of the pit or excavation shall be held back not less than 12 inches (305 mm) from the *appliance*. Where the depth exceeds 12 inches (305 mm) below adjoining grade, the walls of the pit or excavation shall be lined with concrete or masonry. Such concrete or masonry shall extend not less than 4 inches (102 mm) above adjoining grade and shall have sufficient lateral load-bearing capacity to resist collapse. Excavation on the control side of the appliance shall extend not less than 30 inches (762mm) horizontally. The *appliance* shall be protected from flooding in an *approved* manner.

**Committee Reason:** Service access is important. Proposal correlates with Sections 306.1 and 304.10 of the IMC. The modification makes the proposal consistent with Section 304.10 of the IMC.

**Assembly Action:**

**None**

**Final Action Results**

**M11-15**

**AM**

## Code Change No: **M12-15**

### Original Proposal

**Section: 303.9 (New), 901.5 (New)**

**Proponent:** John Williams, CBO, Chair, representing Adhoc Health Care Committee

**Add new text as follows:**

**303.9 Fireplaces in Group I-2 Condition 2 occupancies. Fuel burning appliances and fireplaces in Group I-2 condition 2 occupancies shall be in accordance with Section 901.5.**

**901.5 Solid fuel-burning fireplaces and appliances in Group I-2 Condition 2. In Group I-2 Condition 2 occupancies, solid fuel-burning fireplaces and appliances are prohibited.**

**Reason:** The AHC committee is recommending limitations for the use of gas-fired fireplaces and decorative equipment and the restriction of solid-fuel burning fireplaces and appliances in the Group I-2, Condition 2 occupancy. Please note: these are not new requirements for the I-2 Occupancy facilities but are needed in the I-Codes for coordination of the long-standing provision of the construction and operational requirements for healthcare facilities.

It is standard practice and operational procedure to control the ignition sources in healthcare occupancies that can contain combustible, flammable (and sometimes even explosive) material. Fire risks need to be limited to the maximum extent feasible and specific requirements for these facilities are not currently or are not completely addressed in the I-Codes.

The language proposed in the IFGC prescribes limitations and conditions to provide the necessary safety and limitations of hazards from within the healthcare environments to the fire and ignition sources inherent to all gas-fired fireplaces and appliances. Combustion air has been restricted from being drawn from healthcare environments extending beyond the last decade and is not a new requirement.

The physical separation of the combustion chambers of gas-fired fireplaces and equipment is required to separate and provide a barrier between the ignition sources and the environmental air within healthcare occupancies. All combustion air is required to be taken directly from the exterior of the building in accordance with an existing exception that is provided for in IFGC Section 303.3.

The placement of solid fuel burning fireplaces and appliances, both decorative and heating, creates conditions where open flames that are not otherwise able to be controlled or extinguished like the similar gas-fed and fired appliances. This is why the Adhoc Healthcare Committee is proposing their restriction instead of a limitation with operational and special control equipment.

The code sections that address the installation limitations of fuel gas-fired fireplaces and appliances will also provide alternative means for compliance for existing facilities. Given the hazards present with these appliances in the Group I-2, Condition 2 Occupancies, the proposed IFC requirements will be 'retro-active' requirements for healthcare occupancies (I-2);

The proposals to the IFC that are being put forth by the Adhoc Healthcare Committee have been drafted to clarify, restrict and limit the ignition source hazards in healthcare occupancies and also will reference similar requirements being proposed in the IBC, IMC AND IFGC. For instance, solid fuel heating appliances are limited by other requirements of the IMC which is why heating appliances are not needed to be referenced in this section of the IFGC.

There was a concern mentioned during testimony at the code hearings for the 2012 I-codes that the AHC code change proposals placing restrictions on solid fuel burning fireplaces and appliances and fuel gas-fired fireplaces and appliances might be misinterpreted to prohibit mechanical heating equipment elsewhere regulated in the IMC.

The ICC Ad Hoc Committee on Healthcare (AHC) has just completed its 4th year. The AHC was established by the ICC Board to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Information on the AHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the AHC effort can be downloaded from the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>.

**Cost Impact:** Will not increase the cost of construction

Wood burning fireplaces are not permitted by the federal CMS regulations, therefore, there is no change in cost of construction.



**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement.

**Assembly Action:**

**None**

**Final Action Results**

**M12-15**

**AS**

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**Code Change No: M13-15**

**Original Proposal**

**Section: Table 305.4**

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

**Revise as follows:**

**TABLE 305.4  
PIPING SUPPORT SPACING<sup>a</sup>**

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
PE-RT <u>one inch and smaller</u>	$2\frac{2}{3}$ (32 inches)	10 <sup>c</sup>
PE-RT > 1 <sup>1</sup> / <sub>4</sub> inches	4	10 <sup>c</sup>
PEX tubing <u>one inch and smaller</u>	$2\frac{2}{3}$ (32 inches)	10 <sup>c</sup>
PEX tubing 1 1/4 inch and larger	4	10 <sup>c</sup>

*(Portions of table not shown remain unchanged)*

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

- a. See Section 301.18.
- b. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.
- c. Mid-story guide.

**Reason:** The 2015 code cycle for the IRC included updates to the PE-RT tubing for sizes larger than 1". The IRC-P Table P2605.1 is current and correct and should be used as the base template for all other tables within the ICC codes as identified in this amendment proposal. The horizontal support spacing for both PEX and PE-RT tubing (piping) up to and including 1" size is 32" (2-2/3Ft) and 48" (4Ft) for sizes 1- 1/4" and larger. These dimensions are consistent with all published PEX literature and manufacture's installation instructions. This would have been included in the IPC and IMC had it been in the same code cycle as the IRC for 2015.

**Cost Impact:** Will not increase the cost of construction

This proposal modifies the spacing for piping material support into the code and thus the code with this proposal added will not cause the cost of construction to increase, and could decrease the cost as less support is required for larger pipe.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement.

**Assembly Action:**

**None**

**Final Action Results**

**M13-15**

**AS**

**Code Change No: M14-15**

**Original Proposal**

**Section(s):** 305.4

**Proponent:** Pennie L Feehan (penniefeehan@me.com)

**Revise as follows:**

**TABLE 305.4 (305.4)  
PIPING SUPPORT SPACING<sup>a</sup>**

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
ABS pipe	4	10 <sup>c</sup>
Aluminum pipe and tubing	10	15
<del>Brass pipe</del>	<del>10</del>	<del>10</del>
Brass tubing, 1 <sup>+</sup> / <sub>4</sub> -inch diameter and smaller	6	10
Brass tubing, 1 <sup>+</sup> / <sub>2</sub> -inch diameter and larger	10	10
Cast-iron pipe <sup>b</sup>	5	15
Copper or copper-alloy pipe and tubing	12-8	10
<del>Copper or copper-alloy tubing, 1<sup>+</sup>/<sub>4</sub>-inch diameter and smaller</del>	<del>6</del>	<del>10</del>
<del>Copper or copper-alloy tubing, 1<sup>+</sup>/<sub>2</sub>-inch diameter and larger</del>	<del>10</del>	<del>10</del>
CPVC pipe or tubing, 1 inch and smaller	3	10 <sup>c</sup>
CPVC pipe or tubing, 1 <sup>+</sup> / <sub>4</sub> -inch and larger	4	10 <sup>c</sup>
Lead pipe	Continuous	4
PB pipe or tubing	2 <sup>2</sup> / <sub>3</sub> (32 inches)	4
PE-RT	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
PE-RT > 1 <sup>+</sup> / <sub>4</sub> inches	4	10 <sup>c</sup>
PEX tubing	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
Polypropylene (PP) pipe or tubing, 1 inch or smaller	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
Polypropylene (PP) pipe or tubing, 1 <sup>+</sup> / <sub>4</sub> inches or larger	4	10 <sup>c</sup>
PVC pipe	4	10 <sup>c</sup>
Steel tubing	8	10
Steel pipe	12	15

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

- a. See Section 301.18.
- b. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.
- c. Mid-story guide.

**Reason:** Brass is a copper alloy and the supporting requirements are covered under the Copper and Copper Alloy Pipe and Tubing line. The 6 foot requirement is too restrictive. The Copper Tubing Handbook written by Copper Development Association recommends horizontal support every 8 feet.

**Cost Impact:** Will not increase the cost of construction

The proposal will not impact the cost of construction as it is only changing the material terminology and combining it this the copper section of this table.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**TABLE 305.4 (305.4)  
PIPING SUPPORT SPACING<sup>a</sup>**

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
ABS pipe	4	10 <sup>c</sup>
Aluminum pipe and tubing	10	15
Cast-iron pipe <sup>b</sup>	5	15
Copper or copper-alloy pipe	12	10
Copper or copper-alloy tubing, <del>1<sup>+</sup>/<sub>2</sub>-inch diameter and larger</del>	10-8	10
CPVC pipe or tubing, 1 inch and smaller	3	10 <sup>c</sup>
CPVC pipe or tubing, 1 <sup>1</sup> / <sub>4</sub> -inch and larger	4	10 <sup>c</sup>
Lead pipe	Continuous	4
PB pipe or tubing	2 <sup>2</sup> / <sub>3</sub> (32 inches)	4
PE-RT	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
PE-RT > 1 <sup>1</sup> / <sub>4</sub> inches	4	10 <sup>c</sup>
PEX tubing	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
Polypropylene (PP) pipe or tubing, 1 inch or smaller	2 <sup>2</sup> / <sub>3</sub> (32 inches)	10 <sup>c</sup>
Polypropylene (PP) pipe or tubing, 1 <sup>1</sup> / <sub>4</sub> inches or larger	4	10 <sup>c</sup>
PVC pipe	4	10 <sup>c</sup>
Steel tubing	8	10
Steel pipe	12	15

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

- a. See Section 301.18.
- b. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.
- c. Mid-story guide.

**Committee Reason:** Approval is based on the proponent's published reason statements. The modification recognizes the different support practice for pipe verses tube.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M14-15**

**AM**

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## Code Change No: M15-15 Part I

### Original Proposal

#### Section: 306.1.1

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

**THIS IS A 2 PART CODE CHANGE. PART I WAS HEARD BY THE IMC COMMITTEE. PART II WAS HEARD BY THE IRC-MECHANICAL COMMITTEE.**

#### Delete without substitution:

**306.1.1 Central furnaces.** ~~Central furnaces within compartments or alcoves shall have a minimum working space clearance of 3 inches (76 mm) along the sides, back and top with a total width of the enclosing space being not less than 12 inches (305 mm) wider than the furnace. Furnaces having a firebox open to the atmosphere shall have not less than 6 inches (152 mm) working space along the front combustion chamber side. Combustion air openings at the rear or side of the compartment shall comply with the requirements of Chapter 7.~~

**Exception:** ~~This section shall not apply to replacement appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the equipment or appliance manufacturer's installation instructions.~~

**Reason:** This section is antiquated and has apparently lost its purpose. There is no reason to single out central furnaces. Clearances for working spaces are already covered by the manufacturer's instructions and Section 306.1. The requirement for a 3 inch clearance around the sides, back and top has no apparent justification. What work could personnel perform in a 3 inch space? What is the 12 inch extra width supposed to accomplish? Section 306.1 covers this adequately. There is nothing in Chapter 7 regarding combustion air openings on the sides and rear of the furnace. If these requirements are really necessary, then why does the exception negate them for subsequent (replacement) installations?

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement.

**Assembly Action:**

**None**

### Final Action Results

**M15-15 Part I**

**AS**

**Code Change No: M15-15 Part II**

**Original Proposal**

**Section: M1305.1.1**

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

**THIS IS A 2 PART CODE CHANGE. PART I WAS HEARD BY THE IMC COMMITTEE. PART II WAS HEARD BY THE IRC-MECHANICAL COMMITTEE.**

**Delete without substitution:**

~~**M1305.1.1 Furnaces and air handlers.** Furnaces and air handlers within compartments or alcoves shall have a minimum working space clearance of 3 inches (76 mm) along the sides, back and top with a total width of the enclosing space being not less than 12 inches (305 mm) wider than the furnace or air handler. Furnaces having a firebox open to the atmosphere shall have not less than a 6-inch (152 mm) working space along the front combustion chamber side. Combustion air openings at the rear or side of the compartment shall comply with the requirements of Chapter 17.~~

~~**Exception:** This section shall not apply to replacement appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the equipment or appliance manufacturer's installation instructions.~~

**Reason:** This section is antiquated and has apparently lost its purpose. There is no reason to single out central furnaces. Clearances for working spaces are already covered by the manufacturer's instructions and Sections M1307.1, M1401.1 and M1402.2. The requirement for a 3 inch clearance around the sides, back and top has no apparent justification. What work could personnel perform in a 3 inch space? What is the 12 inch extra width supposed to accomplish? Section M1305.1 covers this adequately. There is nothing in Chapter 17 regarding combustion air openings on the sides and rear of the furnace. If these requirements are really necessary, then why does the exception negate them for subsequent (replacement) installations?

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Required clearances are already addressed in the appliance manufacturer's instructions. Deletion of this text will eliminate conflicts with the appliance installation instructions.

**Assembly Action:**

**None**

**Final Action Results**

**M15-15 Part II**

**AS**

**Code Change No: M17-15**

**Original Proposal**

**Section: 307.2.2**

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

**Revise as follows:**

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper and copper alloy, cross-linked polyethylene, polyethylene, ABS, CPVC, PVC, or polypropylene pipe or tubing. 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 <sup>3</sup>/<sub>4</sub>-inch (19.1 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

**Reason:** Copper alloys fittings and pipe are used regularly in condensate waste disposal systems and were missing from the list of approved materials. As an example, nipples and unions.

**Cost Impact:** Will not increase the cost of construction  
This proposal is adding a material use in the field and will not impact the cost of construction.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M17-15**

**AS**



**Code Change No: M22-15**

**Original Proposal**

**Section: Table 401.5**

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

**Revise as follows:**

**TABLE 401.5 (401.5)  
OPENING SIZES IN LOUVERS, GRILLES AND SCREENS PROTECTING AIR INTAKE OPENINGS**

OUTDOOR OPENING TYPE	MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS <sup>a</sup> MEASURED IN ANY DIRECTION
Intake openings in residential occupancies	Not < <sup>1</sup> / <sub>4</sub> inch and not > <sup>1</sup> / <sub>2</sub> inch
Intake openings in other than residential occupancies	> <sup>1</sup> / <sub>4</sub> inch and not > 1 inch

For SI: 1 inch = 25.4 mm.

a. For rectangular openings, the table requirements apply to the shortest side. For round openings, the table requirements apply to the diameter. For square openings, the table requirements apply to any side.

**Reason:** The current text would not permit slotted louvers and grilles because the size limit applies to all sides "in any direction." A slot 3/8 inch wide and 12 inches long meets the intent of the code but would be prohibited by the current table. The table appears to rule out slots and instead allows only openings that are a maximum of 1/2 by 1/2 or 1 x 1 inch. What if the openings are round? If so, the measurement should apply to the diameter of the circle. "Measured in any direction" would also include the diagonal of a square or rectangle. For example, a 1/2 by 1/2 inch square mesh screen on a residential building has a diagonal of 11/16 inch, which exceeds the 1/2 inch maximum. As revised, note (a) clearly specifies the measurement that applies to the geometry of the opening.

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M22-15**

**AS**

**Code Change No: M24-15**

**Original Proposal**

**Section: 403.3.1.1**

**Proponent:** Steven Ferguson, representing ASHRAE (sferguson@ashrae.org)

**Revise as follows:**

**TABLE 403.3.1.1 (403.3.1.1)  
MINIMUM VENTILATION RATES**

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1000 FT <sup>2</sup> <sup>a</sup>	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R <sub>p</sub> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R <sub>a</sub> CFM/FT <sup>2</sup> <sup>a</sup>	EXHAUST AIRFLOW RATE CFM/FT <sup>2</sup> <sup>a</sup>
<b>Correctional facilities</b>				
Booking/waiting	50	7.5	0.06	—
Cells				
without plumbing fixtures	25	5	0.12	—
with plumbing fixtures <sup>g</sup>	25	5	0.12	1.0
Day room	30	5	0.06	—
Dining halls	—	—	—	—
(see food and beverage service)				
Guard stations	15	5	0.06	—
<b>Dry cleaners, laundries</b>				
Coin-operated dry cleaner	20	15	—	—
Coin-operated laundries	20	7.5	<del>0.06</del> <b>0.12</b>	—
Commercial dry cleaner	30	30	—	—
Commercial laundry	10	25	—	—
Storage, pick up	30	7.5	0.12	—
<b>Education</b>				
Art classroom <sup>g</sup>	20	10	0.18	0.7
Auditoriums	150	5	0.06	—

Classrooms (ages 5-8)	25	10	0.12	—
Classrooms (age 9 plus)	35	10	0.12	—
Computer lab	25	10	0.12	—
Corridors (see public spaces)	—	—	—	—
Day care (through age 4)	25	10	0.18	—
Lecture classroom	65	7.5	0.06	—
Lecture hall (fixed seats)	150	7.5	0.06	—
Locker/dressing rooms <sup>g</sup>	—	—	—	0.25
Media center	25	10	0.12	—
Multiuse assembly	100	7.5	0.06	—
Music/theater/dance	35	10	0.06	—
Science laboratories <sup>g</sup>	25	10	0.18	1.0
Smoking lounges <sup>b</sup>	70	60	—	—
Sports locker rooms <sup>g</sup>	—	—	—	0.5
Wood/metal shops <sup>g</sup>	20	10	0.18	0.5
<b>Food and beverage service</b>				
Bars, cocktail lounges	100	7.5	0.18	—
Cafeteria, fast food	100	7.5	0.18	—
Dining rooms	70	7.5	0.18	—
Kitchens (cooking) <sup>b</sup>	<u>—20</u>	<u>—7.5</u>	<u>—0.12</u>	0.7
<b>Hotels, motels, resorts and dormitories</b>				
Bathrooms/toilet—private <sup>g</sup>	--	—	—	25/50 <sup>f</sup>
Bedroom/living room	10	5	0.06	—
Conference/meeting	50	5	0.06	—
Dormitory sleeping areas	20	5	0.06	—
Gambling casinos	120	7.5	0.18	—
Lobbies/prefunction	30	7.5	0.06	—
Multipurpose assembly	120	5	0.06	—

<b>Offices</b>				
Conference rooms	50	5	0.06	—
Main entry lobbies	10	5	0.06	—
Office spaces	5	5	0.06	—
Reception areas	30	5	0.06	—
Telephone/data entry	60	5	0.06	—
<b>Private dwellings, single and multiple</b>				
Garages, common for multiple units <sup>b</sup>	—	—	—	0.75
Kitchens <sup>b</sup>	—	—	—	25/100 <sup>f</sup>
Living areas <sup>c</sup>	Based upon number of bedrooms. First bedroom, 2; each additional bedroom, 1	0.35 ACH but not less than 15 cfm/person	—	—
Toilet rooms and bathrooms <sup>g</sup>	—	—	—	25/50 <sup>f</sup>
<b>Public spaces</b>				
Corridors	—	—	0.06	—
Courtrooms	70	5	0.06	—
Elevator car	—	—	—	1.0
Legislative chambers	50	5	0.06	—
Libraries	10	5	0.12	—
Museums (children's)	40	7.5	0.12	—
Museums/galleries	40	7.5	0.06	—
Places of religious worship	120	5	0.06	—
Shower room (per shower head) <sup>g</sup>	—	—	—	50/20 <sup>f</sup>
Smoking lounges <sup>b</sup>	70	60	—	—
Toilet rooms — public <sup>g</sup>	—	—	—	50/70 <sup>e</sup>

<b>Retail stores, sales floors and showroom floors</b>				
Dressing rooms	—	—	—	0.25
Mall common areas	40	7.5	0.06	—
Sales	15	7.5	0.12	—
Shipping and receiving	<u>—2</u>	<u>—10</u>	0.12	—
Smoking lounges <sup>b</sup>	70	60	—	—
Storage rooms	—	—	0.12	—
Warehouses (see storage)	—	<u>—10</u>	<u>—0.06</u>	—
<b>Specialty shops</b>				
Automotive motor-fuel dispensing stations <sup>b</sup>	—	—	—	1.5
Barber	25	7.5	0.06	0.5
Beauty salons <sup>b</sup>	25	20	0.12	0.6
Nail salons <sup>b, h</sup>	25	20	0.12	0.6
Embalming room <sup>b</sup>	—	—	—	2.0
Pet shops (animal areas) <sup>b</sup>	10	7.5	0.18	0.9
Supermarkets	8	7.5	0.06	—
<b>Sports and amusement</b>				
Bowling alleys (seating areas)	40	10	0.12	—
Disco/dance floors	100	20	0.06	—
Game arcades	20	7.5	0.18	—
Gym, stadium, arena (play area)	<u>—7</u>	<u>—20</u>	<del>0.30</del> <u>0.18</u>	—
Health club/aerobics room	40	20	0.06	—
Health club/weight room	10	20	0.06	—
Ice arenas without combustion engines	—	—	0.30	0.5
Spectator areas	150	7.5	0.06	—
Swimming pools (pool and deck area)	—	—	0.48	—

<b>Storage</b>				
Repair garages, enclosed parking garages <sup>b,d</sup>	—	—	—	0.75
<u>Refrigerated warehouses/Freezers</u>	—	<u>10</u>	—	—
Warehouses	—	— <u>10</u>	0.06	—
<b>Theaters</b>				
Auditoriums (see education)	—	—	—	—
Lobbies	150	<u>5</u>	0.06	—
Stages, studios	70	<u>10</u>	0.06	—
Ticket booths	60	5	0.06	—
<b>Transportation</b>				
Platforms	100	7.5	0.06	—
Transportation waiting	100	7.5	0.06	—
<b>Workrooms</b>				
Bank vaults/safe deposit	5	5	0.06	—
Computer (without printing)	4	5	0.06	—
Copy, printing rooms	4	5	0.06	0.5
Darkrooms	—	—	—	1.0
Meat processing <sup>c</sup>	10	15	—	—
Pharmacy (prep. area)	10	5	0.18	—
Photo studios	10	5	0.12	—

**Reason:** This proposal seeks to update the existing ventilation rate table in the IMC. Standard 62.1 is the source material for this table, and this updates the table to match the ventilation rates in 62.1-2013.

Addendum s to ASHRAE Standard 62.1-2007 added a minimum outdoor airflow rate per person as well as a minimum per unit area rate in response to concerns expressing that minimum rates were needed for those spaces. Additionally, that addendum increased the outdoor airflow rate for coin operated laundry facilities based on concerns that those types of spaces were not getting enough outdoor air.

Addendum h to ASHRAE Standard 62.1-2010 modified the ventilation rates for gym/arenas/play areas because the space types had ventilation rates based on floor area only; the per-person rate was zero. Users of the standard expressed interest in applying demand-controlled ventilation to these space types, which was effectively prohibited by the lack of a per-person component to the ventilation rate. The addendum, and this associated change replaces these space types with the new rates in this proposal. One concern about allowing CO<sub>2</sub>-based demand controlled ventilation in these spaces is that the volume per person in these spaces is typically large, which means that CO<sub>2</sub> concentration changes will have longer than usual lag times behind occupancy changes.

Addendum L to 62.1-2010 added a new category for refrigerated warehouses/freezers. The current code includes ventilation spaces for warehouses, which would apply to refrigerated warehouses. Refrigerated warehouse spaces are significantly different from conventional warehouses in a number of ways. The low temperatures will slow the emission of contaminants, such as VOCs,

from the materials stored in the space; the characteristics of the items being stored will be different; and the amount of time spent in the space by occupants may be shorter (particularly for spaces kept at sub-freezing temperatures).

This proposal adds a refrigerated warehouse space type to Table 6-1, providing revised ventilation rates for these spaces. These rates include a People Outdoor Air Rate which will require ventilation during periods of expected occupancy, but do not include an Area Outdoor Air Rate which will allow the ventilation rate to be zero for refrigerated warehouses with no occupants. This change was provided to ASHRAE TC 10.1, Custom Engineered Refrigeration Systems, for review. Based on comments from that Technical Committee, the Area Outdoor Air Rate was set to zero, and no distinction is made between refrigerated and freezer spaces.

**Bibliography:**

ASHRAE Standard 62.1-2013

Addendum s to ASHRAE Standard 62.1-2007

Addendum h to ASHRAE 62.1-2010

Addendum L to ASHRAE 62.1-2010

Addenda to ASHRAE Standard 62.1 can be found here:<https://www.ashrae.org/standards-research--technology/standards-addenda>

**Cost Impact:** Will increase the cost of construction

While many of these changes may not increase the cost of construction, the cost of construction may increase in refrigerated warehouses/freezers, and warehouses as there will now need to be mechanical ventilation in those spaces, while there was no previous airflow rate requirement.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M24-15**

**AS**

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## Code Change No: **M25-15**

### Original Proposal

**Section(s):** 403.3.2.4 (New)

**Proponent:** Mike Moore, Newport Ventures, representing Broan-NuTone, representing Newport (mmoore@newportventures.net)

**Add new text as follows:**

**403.3.2.4 System controls.** Control devices for outdoor air ventilation systems shall be provided with text or a symbol indicating the device's function.

**Reason:** Tight dwelling units are being outfitted with code-mandated outdoor air ventilation systems. These systems are often simply a bathroom exhaust fan expected to run continuously. The problem is that without a label indicating the system's function, occupants have no idea of the purpose of these systems and are likely to turn them off – thereby increasing the rate of accumulation of harmful indoor pollutants without their knowledge. At a minimum, these systems should be labeled to indicate that they are different than a typical bath fan.

**Cost Impact:** Will increase the cost of construction

This proposal is expected to have minimal cost impacts, as it simply involves labeling equipment for its intended purpose. This label could either be supplied from manufacturers (incremental cost would probably be <\$0.10) or field-applied.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**403.3.2.4 System controls.** Control devices Where provided within a dwelling unit, controls for outdoor air ventilation systems shall be provided with include text or a symbol indicating the device's system's function.

**Committee Reason:** The proposal is an inexpensive solution to prevent occupants from inadvertently shutting off the ventilation system. The controls need to be identified and known to the occupants. The modification clarifies that the text applies to controls within dwelling units and better aligns the text with the proponent's reason statement.

**Assembly Action:**

**None**

### Final Action Results

**M25-15**

**AM**



## Code Change No: **M26-15**

### Original Proposal

#### Section: 403.3.2.4 (New)

**Proponent:** Mike Moore, Newport Ventures, representing Broan-NuTone, representing Newport (mmoore@newportventures.net)

#### Add new text as follows:

**403.3.2.4 Ventilating Equipment.** Exhaust equipment serving single dwelling units shall be listed and labeled to provide the minimum required air flow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.

#### Add new standard(s) as follows:

ANSI/AMCA 210 - ANSI/ASHRAE 51 -07 Laboratory Methods of Testing Fans for Aerodynamic Performance Rating

**Reason:** Industry experience and research have shown that "for advertised airflows that are not certified, the actual installed airflow can be a small fraction of the advertised value".<sup>1</sup> Without a code minimum requirement for listing and labeling flows in accordance with an ANSI standard, there is nothing in place to stop a manufacturer from reporting an airflow under whatever conditions they please (e.g., the condition with no duct work attached). Requiring listing and labeling of ventilating equipment per ANSI/AMCA 210 - ANSI/ASHRAE 51 is the first step in ensuring that fans perform to expectations. In 2015, the IRC adopted a requirement for fans to be tested per ANSI/AMCA 210 - ANSI/ASHRAE 51 when using prescriptive duct sizing Table M1506.2 (see footnote "a"), so this standard has already been referenced elsewhere in the I-codes.

Listing and labeling of products tested to this standard is maintained by the Home Ventilating Institute, which has been in operation for decades. Verification of listing and labeling to this standard can be accomplished by visually inspecting the equipment for an HVI sticker or by looking up the equipment in the on-line database.<sup>2</sup> Certification by HVI in accordance with ANSI/AMCA 210 - ANSI/ASHRAE 51 is already required by ASHRAE 62.2, ENERGY STAR for Homes, and the State of California, among other groups. Roughly 12,000 ventilating equipment products are listed, labeled, and can be referenced in the HVI directory.

#### Bibliography:

1. Singer, B. C., Delp, W. W., Apte, M., & Price, P. N. (2011). Performance of Installed Cooking Exhaust Devices. LBNL-5265E. Berkeley, CA: Lawrence Berkeley National Laboratory.
2. Home Ventilating Institute. HVI-Certified Products Directory. <http://hvi.org/proddirectory/index.cfm> . Accessed December 10, 2014.

#### Cost Impact: Will increase the cost of construction

Over 12,000 ventilating equipment products are labeled and listed in the HVI directory. These fans are tested for airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51. For these products, there will be no incremental cost associated with this change. For equipment that is not currently tested, listed, and labeled, the incremental costs are highly dependent upon volume of the specific products sold.

**Analysis:** A review of the standard proposed for inclusion in the code, ANSI/AMCA 210 - ANSI/ASHRAE 51, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

#### Committee Action:

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. This proposal provides for proper equipment selection and consistent ratings among various manufacturers.

#### Assembly Action:

**None**

**Final Action Results**

**M26-15**

**AS**

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**Code Change No: M27-15**

**Original Proposal**

**Section: 404.1**

**Proponent:** Jonathan Roberts, representing UL LLC (jonathan.roberts@ul.com)

**Revise as follows:**

**404.1 Enclosed parking garages.** Where mechanical ventilation systems for enclosed parking garages operate intermittently, such operation shall be automatic by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be listed in accordance with UL 2075 and installed in accordance with their listing and the manufacturers' recommendations instructions.

**Add new standard(s) as follows:**

UL 2075-2013 Standard for Gas and Vapor Detectors and Sensors

**Reason:** This proposal clarifies that the detectors required by this section must be listed to UL 2075 and installed in accordance with their listing. Requiring these detectors to be listed to UL 2075 is consistent with IBC and IFC requirements.

**Cost Impact:** Will increase the cost of construction  
Listed UL 2075 detectors might be marginally more expensive than non-listed detectors.

**Analysis:** A review of the standard proposed for inclusion in the code, UL 2075, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. This is a life safety issue.

**Assembly Action:**

**None**

**Final Action Results**

**M27-15**

**AS**

## Code Change No: M28-15

### Original Proposal

#### Section: 404.1, 404.2

**Proponent:** Janine Snyder, City of Thornton, Colorado, representing Colorado Association of Plumbing & Mechanical Officials (CAPMO) (Janine.Snyder@cityofthornton.net)

#### Revise as follows:

**404.1 Enclosed parking garages.** ~~Where mechanical-~~ Mechanical ventilation systems for enclosed parking garages shall operate intermittently, such operation continuously or shall be automatic automatically operated by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be installed in accordance with their manufacturers' recommendations. Automatic operation shall cycle the ventilation system between the following two modes of operation:

1. Full-on at an airflow rate of not less than 0.75 cfm per square foot of the floor area served.
2. Standby at an airflow rate of not less than 0.05 cfm per square foot of the floor area served.

#### Delete without substitution:

**404.2 Minimum ventilation.** ~~Automatic operation of the system shall not reduce the ventilation airflow rate below 0.05 cfm per square foot (0.00025 m<sup>3</sup>/s • m<sup>2</sup>) of the floor area and the system shall be capable of producing a ventilation airflow rate of 0.75 cfm per square foot (0.0038 m<sup>3</sup>/s • m<sup>2</sup>) of floor area.~~

**Reason:** This section has been misinterpreted regarding intermittent operation. No technical changes are proposed by this revision. It is simpler to state that the exhaust system either has to run constantly or it has to run automatically. It is either on all of the time, or it is allowed to be cycled between full-on and minimum-on by the detectors. "Intermittent" operation implies that the system shuts off completely, but, Section 404.2 clearly does not allow the system to shut off completely. The current text breaks the requirements into two separate sections which adds to the confusion. Section 404.2 is being rolled into Section 404.1. Section 404.2 does not convey the simple concept that the system has to exhaust 0.75 cfm continuously or must cycle between 0.75 cfm and some rate that is not less than 0.05 cfm. The detectors determine when the system goes from standby airflow rate to full-on airflow rate. This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes and the code content in terms of scope and application of referenced standards. The PMGCAC has held one open meeting and multiple conference calls which included members of the PMGCAC. Interested parties also participated in all conference calls to discuss and debate the proposed changes.

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. The proposal provides better text structure for understanding.

**Assembly Action:**

**None**

**Final Action Results**

**M28-15**

**AS**

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## Code Change No: M30-15

### Original Proposal

**Section(s):** 501.2, 506.1, 507.1, 507.1.2, 509.1

**Proponent:** Jim Tidwell, Tidwell Code Consulting, representing Fire Equipment Manufacturers' Association (jimtidwell@tccfire.com)

**Revise as follows:**

**501.2 Independent system required.** Single or combined mechanical exhaust systems for environmental air shall be independent of all other exhaust systems. Dryer exhaust shall be independent of all other systems. Type I exhaust systems shall be independent of all other exhaust systems except as provided in Section 506.3.5. Single or combined Type II exhaust systems for food-processing operations shall be independent of all other exhaust systems. Kitchen exhaust systems shall be constructed in accordance with Section 505 for domestic ~~equipment~~ cooking operations and Sections 506 through 509 for commercial ~~equipment~~ cooking operations.

**506.1 General.** Commercial kitchen hood ventilation ducts and exhaust *equipment* shall comply with the requirements of this section. Commercial kitchen grease ducts shall be designed for the type of cooking ~~appliance~~ and hood served.

**507.1 General.** Commercial kitchen exhaust hoods shall comply with the requirements of this section. Hoods shall be Type I or II and shall be designed to capture and confine cooking vapors and residues. A Type I or Type II hood shall be installed at or above ~~all commercial cooking appliances~~ in accordance with Sections 507.2 and 507.3. Where any cooking *appliance* under a single hood requires a Type I hood, a Type I hood shall be installed. Where a Type II hood is required, a Type I or Type II hood shall be installed. Where a Type I hood is installed, the installation of the entire system, including the hood, ducts, exhaust equipment and makeup air system shall comply with the requirements of Sections 506, 507, 508 and 509.

**Exceptions:**

1. Factory-built commercial exhaust hoods that are listed and labeled in accordance with UL 710, and installed in accordance with Section 304.1, shall not be required to comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5.
2. Factory-built commercial cooking recirculating systems that are listed and labeled in accordance with UL 710B, and installed in accordance with Section 304.1, shall not be required to comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5. Spaces in which such systems are located shall be considered to be kitchens and shall be ventilated in accordance with Table 403.3.1.1. For the purpose of determining the floor area required to be ventilated, each individual *appliance* shall be considered as occupying not less than 100 square feet (9.3 m<sup>2</sup>).
3. Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for the application in accordance with NFPA 96, a hood shall not be required at or above them.

**507.1.2 Domestic cooking appliances used for commercial purposes.** Domestic cooking appliances utilized for commercial purposes shall be provided with Type I or Type II hoods as required for the type of ~~appliance~~ and ~~cooking processes~~ in accordance with Sections 507.2 and 507.3. Domestic cooking appliances utilized for domestic ~~purposes~~ cooking shall comply with Section 505.

**509.1 Where required.** ~~Commercial cooking~~ Cooking appliances required by Section 507.2 to have a Type I hood shall be provided with an approved automatic fire suppression system complying with the *International Building Code* and the *International Fire Code*.

**Reason:** The existing verbiage in this section is somewhat confusing, in that it refers to the type of cooking equipment to justify the type of hood (commercial cooking equipment), then states that when domestic cooking equipment is used for commercial purposes, hoods are also required. This code change is intended to clarify that hoods and fire suppression systems are required where the hazard justifies such protection, regardless of the type of equipment being covered.

Section 501.2 addresses the construction of hoods based upon the type of appliance being used; however, other sections (505.4, 507.1.2, 507.2, 507.3) contain requirements based upon the hazard regardless of the type of equipment. The proposed change to 501.2 clarifies and correlates the requirements in the chapter.

Currently, 506.1 states that hood ventilation ducts and exhaust equipment be designed for the type of appliance; however, Section 507.1.2 requires a Type I hood where domestic appliances are used in commercial operations that produce grease or smoke (refers to 507.2). Domestic appliances are currently available that generate very similar heating characteristics as commercial appliances; as a matter of fact, some of the appliances being sold to consumers for their homes are virtually indistinguishable from commercial appliances and may easily be used in commercial cooking operations. The proposed change clarifies that the hazards generated from the cooking operation dictate the required protection scheme.

Section 507.1 currently states that Type I or Type II hoods shall be installed above all commercial cooking appliances, but points to sections of the code that describe requirements for both cooking appliances and other appliances such as dishwashers. In addition, Section 507.1.2 clearly states that Type I or Type II hoods are required for domestic cooking appliances used for commercial purposes. The proposed change clarifies that hoods should be installed over appliances based upon the hazard (or lack thereof) rather than the type of appliance.

507.1.2 requires Type I or Type II hoods over domestic appliances utilized for commercial purposes. It then states that the type of hood is dependent upon the type of appliance and the process being used, and refers the user to sections 507.2 and 507.3.

These sections clearly apply to commercial cooking and other commercial applications, so maintaining the reference to the type of appliance only confuses the user. The proposed change to this section clarifies the intent of the code.

The change to 509.1 is intended to clarify that any time a Type I hood is required, suppression is required, regardless of the type of equipment.

**Cost Impact:** Will not increase the cost of construction

The code change is for purposes of clarification, and does not change the overall requirements of the section, thus will not change the cost of compliance.

<b>Report of Committee Action Hearings</b>
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**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**506.1 General.** Commercial kitchen hood ventilation ducts and exhaust equipment shall comply with the requirements of this section. Commercial kitchen grease ducts shall be designed for the type of cooking appliance and hood served.

**507.1.2 Domestic cooking appliances used for commercial purposes.** Domestic cooking appliances utilized for commercial purposes shall be provided with Type I or Type II hoods as required for the type of ~~cooking~~ appliance and processes in accordance with Sections 507.2 and 507.3. Domestic cooking appliances utilized for domestic cooking shall comply with Section 505.

**Committee Reason:** Approval is based on the proponent's published reason statements. The modification clarifies that the exhaust system is designed for both the appliance and the cooking process.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M30-15**

**AM**

**Code Change No: M37-15**

**Original Proposal**

**Section: 504.4**

**Proponent:** Janine Snyder, City of Thornton, Colorado, representing Colorado Association of Plumbing & Mechanical Officials (CAPMO) (Janine.Snyder@cityofthornton.net)

**Revise as follows:**

**504.4 Exhaust installation.** Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or *chimney*. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums. Clothes dryer exhaust ducts shall be sealed in accordance with Section 603.9

**Reason:** Section 504 covers duct construction for dryers, however, it is unclear on the requirement to seal dryer ducts. Sealing is specified in 603.9. Because we don't have a reference directing the code official to 603.9 do we inadvertently lose the duct sealing requirements? This code change clarifies that dryer ducts must be sealed in accordance with 603.9 removing any doubt.

**Cost Impact:** Will not increase the cost of construction  
The requirement has always been in the code to seal ducts. This code change proposal just reminds you that it is also required for dryer ducts within the section that regulates dryer ducts.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M37-15**

**AS**



## Code Change No: M38-15

### Original Proposal

**Section: 504.4.1 (New)**

**Proponent:** Julius Ballanco, JB Engineering and Code Consulting, P.C., representing In-O-Vate Technologies (JBENGINEER@aol.com)

**Add new text as follows:**

**504.4.1 Exhaust termination outlet and passageway size.** The passageway of dryer exhaust duct terminals shall be undiminished in size and shall provide an open area of not less than 12.5 square inches (8,065 sq mm).

**Reason:** The allowable (calculated) length of the dryer exhaust duct is based on an open (non-restrictive) exhaust terminal. Some exhaust terminals increase resistance due to their inherent design characteristics (path and final opening size). This results in the dryer exhaust duct having to be reduced in length. However, there is no allowance for a reduction in length for a highly resistant vent cap. Short of requiring testing standards for every vent termination, the code must require a minimum open area of 12.5 sq. inches which equates to a 4" round duct. The code is very sensitive and detailed as it relates to 90 degree elbows and their respective friction loss but does not prohibit or penalize for termination hoods that grossly create back pressure, reducing the efficiency of the dryer.

The dimension used for the opening in the interior area of the 4 inches duct is rounded to an even number (12.5"). By maintaining the same opening area throughout the vent terminal, the friction resistance in vent caps can be greatly reduced.

Video Links:

[www.youtube.com/watch?v=5KnRp3eXNbk](http://www.youtube.com/watch?v=5KnRp3eXNbk)

<http://youtu.be/ZL2zV1-Gjdl?t=50s>



Using the blower unit from an electric dryer and a Magnehelic Gauge we ran some random pressure testing on popular roof vent caps. Back pressures provided in some were equal to what three or more elbows would provide.



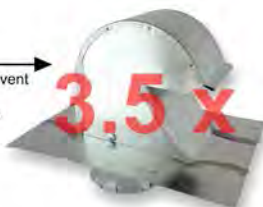
.21 inches of water column pressure  
2 times as much as a typical elbow



.30 inches of water column pressure  
3 times as much as a typical elbow



Popular 4 inch wide galvanized roof vent  
= .35 inches of water column pressure  
3.5 times as much pressure as a typical elbow



Provided by In-O-Vate Technologies 12/19/2014

**Cost Impact:** Will increase the cost of construction  
The cost of the vent terminal may be higher.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. The code lacks coverage for terminal configurations.

**Assembly Action:**

**None**

**Final Action Results**

**M38-15**

**AS**

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## Code Change No: M42-15

### Original Proposal

**Section(s):** 504.8.2

**Proponent:** Julius Ballanco, JB Engineering and Code Consulting, P.C., representing In-O-Vate Technologies (JBENGINEER@aol.com)

**Revise as follows:**

**504.8.2 Duct installation.** Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude more than  $\frac{1}{8}$  inch (3.2 mm) into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall have a least dimension of not less than 4.25 inches (108 mm). Round duct shall not be deformed.

**Reason:** The dryer exhaust duct must remain round in shape to reduce friction loss in the duct system. The length of the duct and termination are based on friction loss for round duct, not oval duct. The length of the dryer exhaust duct would have to be reduced if the 4 inch duct was oval in shape. In addition to the reduction in efficiency, the oval pipe creates a difficult connection for the consumer to make to the dryer exhaust transition hose.

A 1 inch furring strip (1x2) can be added to a 2 x 4 stud providing the 4.25 inches of space. In most cases, this "mechanical" wall is busy with other trades (plumbing drainage and vent stacks, gas piping, electric service, laundry services and water piping). A 4.25 inch space will benefit all of the trades working within that space. The minimum space required to keep the dryer exhaust duct round is 4.125 inches. This dimension could also be referenced here, however, most contractors will simply use a furring strip on a 2 x 4 to provide the minimum spacing for the duct.









Examples of "mechanical walls" showing the abundance of utilities in this wall, demonstrating the need to provide more than 3.5"

**Cost Impact:** Will increase the cost of construction  
 There is an added cost of adding furring strips to a 2 x 4 wall.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**504.8.2 Duct installation.** Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall ~~have a least dimension~~ allow the installation of not less than 4.25 inches (108 mm). Round ~~the duct shall not be deformed~~ without deformation.

**Committee Reason:** Approval is based on the proponent's published reason statements. Deformed ducts can fail during cleaning operations. The manufacturer's instructions do not address cavity size and duct deformation. The modification eliminates an exact dimension.

**Assembly Action:**

**None**

**Final Action Results**

**M42-15**

**AM**

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## Code Change No: **M44-15**

### Original Proposal

**Section(s):** 505, 505.1, 505.1 (New), 505.2 (New), 505.4.

**Proponent:** Jonathan Roberts, UL LLC, representing UL LLC (jonathan.roberts@ul.com)

**Revise as follows:**

### SECTION 505 DOMESTIC ~~KITCHEN~~ COOKING EXHAUST EQUIPMENT

**Add new text as follows:**

**505.1 General.** Domestic cooking exhaust equipment shall comply with the requirements of this section.

**505.2 Domestic cooking exhaust.** Where domestic cooking exhaust equipment is provided it shall comply with the following as applicable:

1. Overhead range hoods and downdraft exhaust equipment not integral with the cooking appliance shall be listed and labeled in accordance with UL 507.
2. Domestic cooking appliances with integral downdraft exhaust equipment shall be listed and labeled in accordance with UL 858 or ANSI Z21.1.
3. Microwave ovens with integral exhaust for installation over the cooking surface shall be listed and labeled in accordance with UL 923.

**Revise as follows:**

**~~505.1-505.3 Domestic systems Exhaust ducts.~~** ~~Where domestic range hoods and domestic appliances equipped with downdraft~~ Domestic cooking exhaust are provided, such hoods and appliances equipment shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper, and shall be independent of all other exhaust systems.

**Exceptions:**

1. In other than Group I-1 and I-2, where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.
2. Ducts for domestic kitchen cooking appliances equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
  - 2.1 The duct shall be installed under a concrete slab poured on grade.
  - 2.2 The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
  - 2.3 The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
  - 2.4 The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
  - 2.5 The PVC ducts shall be solvent cemented.

**505.4 Other than Group R.** In other than Group R occupancies, where domestic cooktops, ranges, and open-top broilers are used for domestic purposes, domestic cooking appliances are utilized for domestic purposes, such appliances shall be provided with domestic range hoods. Hoods and exhaust systems shall be in accordance with Sections 505.1 and 505.2 provided.

**Add new standard(s) as follows:**

ANSI Z21.1 - 2010 Household Cooking Gas Appliances  
UL 507 - 2014 Standard for Safety Electric Fans

**Reason:** The IMC currently has no criteria for exhaust hoods and downdraft equipment. This proposal accomplishes the following:

1. Includes a new charging Section 505.1 that is similar to other charging sections in the IMC.
2. New section 505.2 describes the listing standards used to investigate the various types of exhaust equipment.
3. Section 505.3 (formerly Section 505.1) was retitled "Exhaust ducts" to more accurately reflect what is covered in the section. Some edits were made to clarify the wording. No substantive changes were made to the requirements for the exhaust ducts.
4. Section 505.4 was revised to clarify the types of domestic cooking appliance that requires a domestic cooking exhaust system. Without this change an exhaust system could be required for a coffee maker, wall mounted oven, rice cooker, etc.

**Cost Impact:** Will increase the cost of construction

In most cases there should be no increase in costs if exhaust hoods and downdraft equipment are listed to the specified standards, which appears to be common practice.

**Analysis:** A review of the standard proposed for inclusion in the code, UL 507, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**505.4 Other than Group R.** In other than Group R occupancies, where domestic cooktops, ranges, and open-top broilers are installed used for domestic purposes, domestic cooking exhaust systems shall be provided.

**Committee Reason:** The code needs the added coverage for domestic exhaust equipment and needs to reference the relevant product standards. The modification limits the application to domestic uses as was intended in the revised text of Section 505.4, however, such distinction was lost as the section was originally revised.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Julius Ballanco, JB Engineering and Code Consulting, P.C., representing Self (JBENGINEER@aol.com) requests Approve as Modified by this Public Comment.**

**Modify as follows:**

**505.2 Domestic cooking exhaust.** Where domestic cooking exhaust equipment is provided it shall comply with the following as applicable:

- ~~1. Overhead The fan for overhead range hoods and downdraft exhaust equipment not integral with the cooking appliance shall be listed and labeled in accordance with UL 507.~~
- ~~2. Overhead range hoods and downdraft exhaust equipment with integral fans shall comply with UL 507.~~
3. Domestic cooking appliances with integral downdraft exhaust equipment shall be listed and labeled in accordance with UL 858 or ANSI Z21.1.
- ~~34.~~ Microwave ovens with integral exhaust for installation over the cooking surface shall be listed and labeled in accordance with UL 923.



**Commenter's Reason:** This change as originally proposed exceeds the scope of UL 507. UL 507 is a standard for fans and blowers, not range hoods. Included in the scope of the standard are overhead range hoods and downdraft exhaust equipment that have integral hoods. UL 507 does not regulate stand-alone range hoods that do not have an integral fan.

These prefabricated range hoods have served the industry successfully for many years. There is no justification for removing a viable range hood. If the code change is approved as proposed, one could only install a range hood that has an integral fan. That would be overly restrictive.

The modification corrects the mistake with the original submittal. UL 507 regulates all fans used for overhead range hoods and downdraft exhaust equipment. It also addresses range hoods and downdraft exhaust equipment with integral fans.

UL 507 does not regulate range hoods, whether prefabricated or field made. Hence, it is inappropriate to reference the standard for this application.

If this modification is not accepted, the change must be denied since the reference to UL 507 exceeds the scope of the standard. This is a violation of ICC policy.

<b>Final Action Results</b>
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**M44-15**

**AMPC1**

## Code Change No: **M45-15**

### Original Proposal

#### Section(s): 505.1

**Proponent:** Guy McMann, Jefferson County Colorado, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO) (gmcman@jeffco.us)

#### Revise as follows:

**505.1 Domestic systems.** Where domestic range hoods and domestic appliances equipped with downdraft exhaust are provided, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper, and shall be independent of all other exhaust systems.

#### Exceptions:

1. In other than Group I-1 and I-2, where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled ductless range hoods shall not be required to discharge to the outdoors. Installations in Group I-1 and Group I-2 occupancies shall be in accordance with Section 407.2.6 of the International Building Code and Section 904.13 of the International Fire Code.
2. Ducts for domestic kitchen cooking appliances equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
  - 2.1 The duct shall be installed under a concrete slab poured on grade.
  - 2.2 The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
  - 2.3 The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
  - 2.4 The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
  - 2.5 The PVC ducts shall be solvent cemented.

**Reason:** These pointers are going to aid the user in finding the pertinent information regarding fire suppression for these range hoods. It can be very time consuming trying to locate the correct language for a code compliant installation. The user would never know that fire suppression is even required without these pointers.

**Cost Impact:** Will not increase the cost of construction  
There is no cost impact as this proposal is strictly editorial in nature.

### Report of Committee Action Hearings

#### Committee Action:

**Approved as Modified**

#### Modify proposal as follows:

**505.1 Domestic systems.** Where domestic range hoods and domestic appliances equipped with downdraft exhaust are provided, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper,

and shall be independent of all other exhaust systems. Installations in Group I-1 and Group I-2 occupancies shall be in accordance with the International Building Code and Section 904.13 of the International Fire Code.

**Exceptions:**

1. In other than Group I-1 and I-2, where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled ductless range hoods shall not be required to discharge to the outdoors. ~~Installations in Group I-1 and Group I-2 occupancies shall be in accordance with Section 407.2.6 of the International Building Code and Section 904.13 of the International Fire Code.~~
2. Ducts for domestic kitchen cooking appliances equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
  - 2.1 The duct shall be installed under a concrete slab poured on grade.
  - 2.2 The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
  - 2.3 The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
  - 2.4 The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
  - 2.5 The PVC ducts shall be solvent cemented.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modifications eliminate the reference to an IBC section number that is not encompassing of all Group I uses, and move the proposed exception into the main section because the new text is not an exception.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M45-15**

**AM**

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## Code Change No: **M48-15**

### Original Proposal

#### Section: 506.3.13.2

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

#### Revise as follows:

**506.3.13.2. Termination through an exterior wall.** Exhaust outlets shall be permitted to terminate through exterior walls where the smoke, grease, gases, vapors and odors in the discharge from such terminations do not create a public nuisance or a fire hazard. Such terminations shall not be located where protected openings are required by the *International Building Code*. ~~Other exterior openings. Such terminations shall be located in accordance with Section 506.3.13.3 and shall not be located within 3 feet (914 mm) of such terminations any opening in the exterior wall.~~

**Reason:** The current last sentence implies that outdoor air intakes and windows can be within 3 feet of the exhaust terminal, however Section 506.3.13.3 requires a 10 foot separation for outdoor intakes unless there is a 3 foot vertical separation. This section has been misinterpreted to allow grease duct terminations to be within 3 feet of an operable window. The real intent of the current last sentence is fire safety related and that intent is preserved in the proposed revision. Exterior openings include all openings in the wall such as fixed (non-openable) fenestration panels. The clearance requirement of Section 506.3.13.3 must not be overlooked.

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements

**Assembly Action:**

**None**

### Final Action Results

**M48-15**

**AS**

## Code Change No: **M51-15**

### Original Proposal

**Section(s):** 202 (New), 506.5.2 (New)

**Proponent:** Shawn Strausbaugh, Arlington County, VA representing the VA Plumbing and Mechanical Officials Association (VPMIA) and the VA Building Code Officials Association (VBCOA) Guy McMann, Jefferson County CO, representing the CO Association of Plumbing and Mechanical Officials (CAPMO) (sstrausbaugh@arlingtonva.us)

**Add new definition as follows:**

### SECTION 202 DEFINITIONS

**POLLUTION CONTROL UNIT (PCU)** Manufactured equipment that is installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles, and odors from the exhaust flow by means of a series of filters.

**Add new text as follows:**

**506.5.2 Pollution Control Units.** Pollution control units shall be installed in accordance with the manufacturer's installation instructions and shall be in accordance with all of the following:

1. Pollution control units shall be listed and labeled in accordance with UL 1978.
2. Fans serving pollution control units shall be listed and labeled in accordance with with UL 762.
3. Pollution control units shall be mounted and secured in accordance with the manufacturer's installation instructions and the International Building Code.
4. Pollution control units located indoors shall be listed and labeled for such use. Where enclosed duct systems, as required by Section 506.3.11, are connected to a pollution control unit, such unit shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of the unit. The space or enclosure shall be ventilated in accordance with the manufacturer's installation instructions.
5. A clearance of not less than 18 inches (457 mm) shall be maintained between the pollution control unit and combustible material.
6. Roof mounted pollution control units shall be listed for exterior installation and shall be mounted not less than 18 inches (457 mm) above the roof.
7. Exhaust outlets for pollution control units shall be in accordance with Section 506.3.13.
8. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections of a pollution control unit. When the airflow is reduced below the design velocity, the airflow differential pressure control shall activate a visual alarm located in the area where cooking operations occur.
9. Pollution control units shall be provided with a factory installed fire suppression system.
10. Service space shall be provided in accordance with the manufacturer's instructions for the pollution control unit and the requirements of Section 306.
11. Wash down drains shall discharge through a grease interceptor and shall be sized for the flow. Drains, shall be sealed with a trap or other approved means to prevent air bypass. Where a trap is utilized it shall have a seal depth that accounts for the system pressurization and evaporation between cleanings.
12. Protection from freezing shall be provided for the water supply and fire suppression systems where such systems are subject to freezing.

13. Duct connections to pollution control units shall be in accordance with Section 506.3.2.3. Where water splash or carryover can occur in the transition duct as a result of a washing operation, the transition duct shall slope downward toward the cabinet drain pan for a length not less than 18 inches (457 mm). Ducts shall transition to the full size of the units inlet and outlet openings.
14. Extra heavy duty appliance exhaust systems shall not be connected to pollution control units except where such units are specifically designed and listed for use with solid fuels.
15. Pollution control units shall be maintained in accordance with the manufacturer's instructions.

**Reason:** Pollution Control Units have been manufactured by numerous companies for several years. The desire to limit the amount of smoke, grease, and other particulate at the exhaust outlets of commercial cooking appliances has driven the use of these units as numerous entities are requiring these types of units to be installed. These unit and there minimum construction and installation standards need to be addressed in the mechanical code.

**Cost Impact:** Will increase the cost of construction

The cost of construction of these specific units may be increased by manufacturers if their current unit did not meet the minimum requirements per this new section. As we do not represent manufacturers it is difficult to substantiate if this proposed change will have create such a cost increase or not

<b>Report of Committee Action Hearings</b>
------------------------------------------------

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**506.5.2 Pollution Control Units.** Where provided ~~Pollution-pollution~~ control units shall be installed in accordance with the manufacturer's installation instructions and shall be in accordance with all of the following:

1. Pollution control units shall be listed and labeled in accordance with UL 1978.
2. Fans serving pollution control units shall be listed and labeled in accordance with with UL 762.
3. Pollution control units shall be mounted and secured in accordance with the manufacturer's installation instructions and the International Building Code.
4. Pollution control units located indoors shall be listed and labeled for such use. Where enclosed duct systems, as required by Section 506.3.11, are connected to a pollution control unit, such unit shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of the unit. The space or enclosure shall be ventilated in accordance with the manufacturer's installation instructions.
5. A clearance of not less than 18 inches (457 mm) shall be maintained between the pollution control unit and combustible material.
6. Roof mounted pollution control units shall be listed for exterior installation and shall be mounted not less than 18 inches (457 mm) above the roof.
7. Exhaust outlets for pollution control units shall be in accordance with Section 506.3.13.
8. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections of a pollution control unit. When the airflow is reduced below the design velocity, the airflow differential pressure control shall activate a visual alarm located in the area where cooking operations occur.
9. Pollution control units shall be provided with a factory installed fire suppression system.
10. Service space shall be provided in accordance with the manufacturer's instructions for the pollution control unit and the requirements of Section 306.
11. Wash down drains shall discharge through a grease interceptor and shall be sized for the flow. Drains, shall be sealed with a trap or other approved means to prevent air bypass. Where a trap is utilized it shall have a seal depth that accounts for the system pressurization and evaporation between cleanings.
12. Protection from freezing shall be provided for the water supply and fire suppression systems where such systems are subject to freezing.
13. Duct connections to pollution control units shall be in accordance with Section 506.3.2.3. Where water splash or carryover can occur in the transition duct as a result of a washing operation, the transition duct shall slope downward toward the cabinet drain pan for a length not less than 18 inches (457 mm). Ducts shall transition to the full size of the units inlet and outlet openings.
14. Extra heavy duty appliance exhaust systems shall not be connected to pollution control units except where such units are specifically designed and listed for use with solid fuels.
15. Pollution control units shall be maintained in accordance with the manufacturer's instructions.

**Committee Reason:** Approval was based on the proponent's published reason statements. These units are being installed today and need coverage. The modification removes any ambiguity about whether these units are required to be installed.

**Assembly Action:**

**None**

## Public Comments

### Public Comment:

**Shawn Strausbaugh, representing Arlington County, VA representing VA Plumbing and Mechanical Inspectors Association, VA Building Code Official Association (sstrausbaugh@arlingtonva.us) requests Approve as Modified by this Public Comment.**

#### Modify as follows:

**506.5.2 Pollution Control Units.** ~~Where provided~~ The installation of pollution control units shall be installed in accordance with the manufacturer's installation instructions and ~~shall be in accordance with~~ all of the following:

1. Pollution control units shall be listed and labeled in accordance with UL 1978.
2. Fans serving pollution control units shall be listed and labeled in accordance with with UL 762.
3. Pollution control units shall be mounted and secured in accordance with the manufacturer's installation instructions and the International Building Code.
4. Pollution control units located indoors shall be listed and labeled for such use. Where enclosed duct systems, as required by Section 506.3.11, are connected to a pollution control unit, such unit shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of the unit. The space or enclosure shall be ventilated in accordance with the manufacturer's installation instructions.
5. A clearance of not less than 18 inches (457 mm) shall be maintained between the pollution control unit and combustible material.
6. Roof mounted pollution control units shall be listed for exterior installation and shall be mounted not less than 18 inches (457 mm) above the roof.
7. Exhaust outlets for pollution control units shall be in accordance with Section 506.3.13.
8. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections of a pollution control unit. When the airflow is reduced below the design velocity, the airflow differential pressure control shall activate a visual alarm located in the area where cooking operations occur.
9. Pollution control units shall be provided with a factory installed fire suppression system.
10. Service space shall be provided in accordance with the manufacturer's instructions for the pollution control unit and the requirements of Section 306.
11. Wash down drains shall discharge through a grease interceptor and shall be sized for the flow. Drains, shall be sealed with a trap or other approved means to prevent air bypass. Where a trap is utilized it shall have a seal depth that accounts for the system pressurization and evaporation between cleanings.
12. Protection from freezing shall be provided for the water supply and fire suppression systems where such systems are subject to freezing.
13. Duct connections to pollution control units shall be in accordance with Section 506.3.2.3. Where water splash or carryover can occur in the transition duct as a result of a washing operation, the transition duct shall slope downward toward the cabinet drain pan for a length not less than 18 inches (457 mm). Ducts shall transition to the full size of the units inlet and outlet openings.
14. Extra heavy duty appliance exhaust systems shall not be connected to pollution control units except where such units are specifically designed and listed for use with solid fuels.
15. Pollution control units shall be maintained in accordance with the manufacturer's instructions.

**Commenter's Reason:** The committee's modification of adding "Where provided" creates additional language that is not needed as there is not a charging section requiring the installation of PCU units. If the "where provided" language is needed in this new section then this language would need to be added to numerous code

Sections for equipment that is not required by the code to be installed. We have rewritten the first sentence in this new code section to make it clear that these pieces of equipment are not required however if they are installed they must conform to the manufactures installation instructions and the rest of the requirements under this new section.

## Final Action Results

**M51-15**

**AMPC2**

## Code Change No: **M55-15**

### Original Proposal

#### Section: 507.2.6

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

#### Revise as follows:

**507.2.6 Clearances for Type I hood.** A Type I hood shall be installed with a ~~clearance~~clearance to combustibles of not less than 18 inches (457 mm).

#### **Exception** Exceptions:

1. Clearance shall not be required from gypsum wallboard or ½-inch (12.7 mm) or thicker cementitious wallboard attached to noncombustible structures provided that a smooth, cleanable, nonabsorbent and noncombustible material is installed between the hood and the gypsum or cementitious wallboard over an area extending not less than 18 inches (457 mm) in all directions from the hood.
2. Type I hoods listed and labeled for clearances less than 18 inches in accordance with UL710 shall be installed with the clearances specified by such listings.

**Reason:** Type I hoods can be listed to the latest edition of UL710 which now includes testing for clearances to combustibles. There are hoods that are listed for clearances of less than 18 inches, however, the code does not currently recognize this fact and would require 18 inches minimum in all cases. Adding the new exception will allow lesser clearances without having to seek alternative approval from the AHJ.

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements

**Assembly Action:**

**None**

### Final Action Results

**M55-15**

**AS**



**Code Change No: M56-15**

**Original Proposal**

**Section(s):** 507.6.1

**Proponent:** Guy McMann, Jefferson County, Colorado., representing Colorado Association of Plumbing and Mechanical Officials (CAPMO) (gmcmann@jeffco.us)

**Revise as follows:**

**507.6.1 Capture and containment test.** The permit holder shall verify capture and containment performance of the exhaust system. This field test shall be conducted with all appliances under the hood at operating temperatures, with all sources of outdoor air providing *makeup air* for the hood operating and with all sources of recirculated air providing conditioning for the space in which the hood is located operating. Capture and containment shall be verified visually by observing smoke or steam produced by actual or simulated cooking, such as ~~with that provided by smoke candles, smoke puffers, and similar means generators.~~

**Reason:** The term "smoke generators" includes all forms of smoke producing products and cleans up the section a little bit.

**Cost Impact:** Will not increase the cost of construction  
There will be no additional cost as this is only an editorial modification and clarification.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Steven Ferguson, representing American Society of Heating Refrigerating and Air-Conditioning Engineers (sferguson@ashrae.org) requests Approve as Modified by this Public Comment.**

**Modify as follows:**

**507.6.1 Capture and containment test.** The permit holder shall verify capture and containment performance of the exhaust system. This field test shall be conducted with all appliances under the hood at operating temperatures, with all sources of outdoor air providing *makeup air* for the hood operating and with all sources of recirculated air providing conditioning for the space in which the hood is located operating. Capture and containment shall be verified visually by observing smoke or steam produced by actual or simulated cooking, such as that provided by smoke ~~generators~~ candles and smoke puffers. Smoke bombs shall not be used.

**Commenter's Reason:** ASHRAE recommends disapproval and a clarification as a modification. The term generator is too generic. Generators do not differentiate between smoke candles and smoke bombs. The source of Section 507.6.1 is ASHRAE Standard 154, which prohibits smoke bombs because of the large volume it produces which does not represent an actual cooking process. We are ok with the concept of cleaning up of the language, however, we want to be clear that smoke bombs should not be used for this type of test, and the current proposal permits the use of smoke bombs.

**Final Action Results**

**M56-15**

**AMPC1**

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## Code Change No: **M59-15**

### Original Proposal

**Section(s):** 510.8.4 (New)

**Proponent:** Ellie Klausbruckner, representing Klausbruckner & Associates Inc. (ek@klausbruckner.com)

**Add new text as follows:**

**510.8.4 Duct cleanout.** Ducts conveying combustible dust as part of a dust collection system shall be equipped with cleanouts that are provided with access. The cleanouts shall be located at the base of each vertical duct riser and at intervals not exceeding 20 foot in horizontal sections of duct.

**Reason:** To avoid an accumulation of combustible dust and reduce potential dust deflagration from the accumulation of dusts inside ducts, cleanouts are needed to provide accessible points as part of the housekeeping and inspection. While this hazard is more commonly found in industries that produce heavy combustible dusts [e.g. metal dusts, etc.], the potential accumulation of dusts in ducts exist in all combustible dust producing facilities.

**Cost Impact:** Will increase the cost of construction

The proposed code change will increase the cost of construction since previous editions did not require cleanouts.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**510.8.4 Duct cleanout.** Ducts conveying combustible dust as part of a dust collection system shall be equipped with cleanouts that are provided with approved access, pre-designed to be disassembled for cleaning, or engineered for automatic cleanouts. Where provided, cleanouts shall be located at the base of each vertical duct riser and at intervals not exceeding 20 foot in horizontal sections of duct.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification allows other designs. The prefix "pre" was deleted before "engineered" because it is not known what is meant by "pre-engineered."

**Assembly Action:**

**None**

### Final Action Results

**M59-15**

**AM**

**Code Change No: M61-15**

**Original Proposal**

**Section: 512.2**

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

**Revise as follows:**

**512.2 Materials.** Subslab soil exhaust system duct material shall be air duct material *listed* and *labeled* to the requirements of UL 181 for Class 0 air ducts, or any of the following piping materials that comply with the *International Plumbing Code* as building sanitary drainage and vent pipe: cast iron; galvanized steel; ~~brass or copper and copper-alloy pipe; copper and tube of a weight not less than that of copper drainage tube, Type type DWV;~~ and plastic piping.

**Reason:** The proposal removes brass because brass is a copper alloy and reworded the sentence without changing the meaning.

**Cost Impact:** Will not increase the cost of construction  
This proposal will not impact the cost of construction as this is only changing the name of the material.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements

**Assembly Action:**

**None**

**Final Action Results**

**M61-15**

**AS**

**Code Change No: M62-15****Original Proposal****Section(s): 601.5**

**Proponent:** Guy McMann, Jefferson County, Colorado., representing Colorado Association of Plumbing and Mechanical Officials (CAPMO) (gmcmann@jeffco.us)

**Revise as follows:**

**601.5 Return air openings.** Return air openings for heating, ventilation and air-conditioning systems shall comply with all of the following:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open combustion chamber or draft hood of another appliance located in the same room or space.
2. Return air shall not be taken from a hazardous or insanitary location or a refrigeration room as defined in this code.
3. The amount of return air taken from any room or space shall be not greater than the flow rate of supply air delivered to such room or space.
4. Return and transfer openings shall be sized in accordance with the appliance or equipment manufacturer's installation instructions, ACCA Manual D or the design of the registered design professional.
5. Return air taken from one dwelling unit shall not be discharged into another dwelling unit.
6. Taking return air from a crawl space shall not be accomplished through a direct connection to the return side of a forced air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
7. Return air shall not be taken from a closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic.

**Exceptions:**

1. Taking return air from a kitchen is not prohibited where such return air openings serve the kitchen and are located not less than 10 feet (3048 mm) from the cooking appliances.
2. Dedicated forced air systems serving only the garage shall not be prohibited from obtaining return air from the garage
8. Return air shall not be taken from indoor swimming pool enclosures and associated deck areas except where such spaces are dehumidified.

**Reason:** It is not desirable to pull return air from swimming pool areas due to the affects it would have on the system from humidity and chemical odors associated with such spaces. A dedicated system would be required or a combination of supply and exhaust or the air should be dehumidified.

**Cost Impact:** Will not increase the cost of construction  
No cost unless the air is treated.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposed text would prohibit the installation of a dedicated HVAC system for the pool area.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Brent Ursenbach, Salt Lake County, representing Utah Chapter ICC (bursenbach@slco.org) requests Approve as Modified by this Public Comment.**

**Modify as follows:**

**601.5 Return air openings.** Return air openings for heating, ventilation and air-conditioning systems shall comply with all of the following:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open combustion chamber or draft hood of another appliance located in the same room or space.
2. Return air shall not be taken from a hazardous or insanitary location or a refrigeration room as defined in this code.
3. The amount of return air taken from any room or space shall be not greater than the flow rate of supply air delivered to such room or space.
4. Return and transfer openings shall be sized in accordance with the appliance or equipment manufacturer's installation instructions, ACCA Manual D or the design of the registered design professional.
5. Return air taken from one dwelling unit shall not be discharged into another dwelling unit.
6. Taking return air from a crawl space shall not be accomplished through a direct connection to the return side of a forced air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
7. Return air shall not be taken from a closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic.

**Exceptions:**

1. Taking return air from a kitchen is not prohibited where such return air openings serve the kitchen and are located not less than 10 feet (3048 mm) from the cooking appliances.
2. Dedicated forced air systems serving only the garage shall not be prohibited from obtaining return air from the garage
8. Return air shall not be taken from indoor swimming pool enclosures and associated deck areas ~~except where~~

**Exceptions:**

1. Where the air from such spaces is dehumidified in accordance with Sections 403.2.1 Item #2.
2. Dedicated HVAC systems serving only such spaces.

**Commenter's Reason:** The original proposal correctly identified it is generally not desirable to draw return air from a pool area, where the moisture and chemical odors may be distributed through other areas of a building. This public comment addresses concerns identified by both the IFGC and IMC committees.

A similar proposal FG 38, was modified during the IFGC Hearings, but disapproved by the committee; however an Assembly Motion for As Modified was successful. The IMC committee disapproved this proposal, as it prohibited the installation of a dedicated HVAC system for a pool enclosure. This public comment includes the FG 38 modification, made during the development hearings, and an exception for dedicated system, which has also been added to FG 38 by Public Comment.

**Final Action Results**

**M62-15**

**AMPC3**

**Code Change No: M64-15**

**Original Proposal**

**Section: 602.1**

**Proponent:** Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

**Revise as follows:**

**602.1 General.** Supply, return, exhaust, relief and ventilation air plenums shall be limited to uninhabited crawl spaces, areas above a ceiling or below the floor, attic spaces and mechanical equipment rooms and the framing cavities addressed in Section 602.3. Plenums shall be limited to one fire area. Air systems shall be ducted from the boundary of the fire area served directly to the air-handling equipment. Fuel-fired appliances shall not be installed within a plenum.

**Reason:** Section 602.3 is in the plenum Section 602 and covers stud and joist space plenums, however, Section 602.1 does not recognize such plenums. Section 602.1 limits plenums to a list of spaces that excludes stud and joist space plenums.

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

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction because no additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code nor are the code requirements made more stringent.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements. Under this proposal, framing cavities will no longer be excluded.

**Assembly Action:**

**None**

**Final Action Results**

**M64-15**

**AS**

## Code Change No: **M66-15**

### Original Proposal

#### Section: 602.2.1

**Proponent:** Janine Snyder, City of Thornton, Colorado, representing Colorado Association of Plumbing & Mechanical Officials (CAPMO) (Janine.Snyder@cityofthornton.net)

#### Revise as follows:

**602.2.1 Materials within plenums.** Except as required by Sections 602.2.1.1 through 602.2.1.7, materials within plenums shall be noncombustible or shall be listed and labeled as having a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E 84 or UL 723.

#### Exceptions:

1. Rigid and flexible ducts and connectors shall conform to Section 603.
2. Duct coverings, linings, tape and connectors shall conform to Sections 603 and 604.
3. This section shall not apply to materials exposed within plenums in one- and two-family dwellings.
4. This section shall not apply to smoke detectors.
5. Combustible materials fully enclosed within one of the following:
  - 5.1 Continuous noncombustible raceways or enclosures.
  - 5.2 Approved gypsum board assemblies.
  - 5.3 Materials listed and labeled for installation within a plenum and listed for the application.
6. Materials in Group H, Division 5 fabrication areas and the areas above and below the fabrication area that share a common air recirculation path with the fabrication area.

**Reason:** There is a misconception that any material listed for plenum use such as ordinary insulation can be used to cover PVC pipe so it can be installed in a plenum. There are specific products which have been specifically designed and tested for specific applications. This section leaves something to be desired in terms of specificity in that although some insulations may indeed be listed for plenum use, they cannot be installed to protect pipes during a fire. They are not tested for limiting flame propagation or smoke generation.

**Cost Impact:** Will increase the cost of construction

This will prevent the errors in the field as the construction community will not have to spend additional time and money removing the improper insulation and replacing with the correct material.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. The proposal would prevent something such as paint from being used, just because the paint was listed for use in a plenum, as opposed to the paint being listed as a means of protecting the material from exposure in a plenum.

**Assembly Action:**

**None**

### Final Action Results

**M66-15**

**AS**



**Code Change No: M67-15**

**Original Proposal**

**Section:** 602.2.1.1, 602.2.1.2, 602.2.1.3.

**Proponent:** Jonathan Roberts, UL LLC, representing UL LLC (jonathan.roberts@ul.com)

**Revise as follows:**

**602.2.1.1 Wiring.** Combustible electrical wires and cables and optical fiber cables exposed within a plenum shall be listed and labeled as having a ~~maximum~~ peak optical density of not greater than 0.50 ~~or less~~, an average optical density of not greater than 0.15 ~~or less~~, and a ~~maximum~~ flame spread distance of not greater than 5 feet (1524 mm) ~~or less~~ when tested in accordance with NFPA 262 or shall be installed in metal raceways or metal sheathed cable. Combustible optical fiber and communication raceways exposed within a plenum shall be listed and labeled as having a ~~maximum~~ peak optical density of not greater than 0.5 ~~or less~~, an average optical density of not greater than 0.15 ~~or less~~, and a ~~maximum~~ flame spread distance of not greater than 5 feet (1524 mm) ~~or less~~ when tested in accordance with ANSI/UL 2024. Only plenum-rated wires and cables shall be installed in plenum-rated raceways. ~~Electrical wires and cables, optical fiber cables and raceways addressed in this section shall be listed and labeled and shall be installed in accordance with NFPA 70.~~

**602.2.1.2 Fire sprinkler piping.** Plastic fire sprinkler piping exposed within a ~~plenum~~ plenum shall be used only in wet pipe systems and shall ~~have~~ be listed and labeled as having a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread of distance not greater than 5 feet (1524 mm) when tested in accordance with UL 1887. ~~Piping shall be listed and labeled.~~

**602.2.1.3 Pneumatic tubing.** Combustible pneumatic tubing exposed within ~~plenum~~ plenum shall ~~have~~ be listed and labeled as having a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread of distance not greater than 5 feet (1524 mm) when tested in accordance with UL 1820. ~~Combustible pneumatic tubing shall be listed and labeled.~~

**Reason:** This proposal is primarily editorial and introduces no substantive changes. It provides consistency with the pass/fail criteria for the testing of these products, and the listing and labeling requirements. The last sentence of each section is not necessary because the first sentence already requires the product to be listed and labeled.

In Section 602.2.1.1 the requirement for the electrical wiring to be installed in accordance with NFPA 70 was deleted because Section 301.10 already requires electrical wiring to be installed in accordance with NFPA 70.

**Cost Impact:** Will not increase the cost of construction  
Editorial changes only.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M67-15**

**AS**

## Code Change No: M70-15 Part I

### Original Proposal

**Section(s):** IMC: 602.2.1.6, 602.2.1.6 (New), 602.2.1.6.1, 602.2.1.6.2, 602.2.1.6.3

**Proponent:** John Woestman, Kellen Company, representing Extruded Polystyrene Foam Association (XPSA) (jwoestman@kellencompany.com)

**THIS IS A 2 PART CODE CHANGE. BOTH PARTS WERE HEARD BY THE IMC COMMITTEE.**

~~**602.2.1.6 Foam plastic insulation.** Foam plastic insulation used in plenums as interior wall or ceiling finish or as interior trim shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 and shall also comply with one or more of Sections 602.2.1.6.1, 602.2.1.6.2 and 602.2.1.6.3.~~

**Add new text as follows:**

**602.2.1.6 Foam plastic insulation in plenums as interior finish or interior trim.** Where exposed to the airflow in plenums, foam plastic insulation in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, and shall be tested in accordance with NFPA 286 and meet the acceptance criteria of Section 803.1.2 of the *International Building Code*.

**Exceptions:**

1. Foam plastic insulation in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by a thermal barrier complying with Section 2603.4 of the *International Building Code*.
2. Foam plastic insulation in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm).
3. Foam plastic insulation in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by not less than a 1 inch (25mm) thickness of masonry or concrete.

**Delete without substitution:**

~~**602.2.1.6.1 Separation required.** The foam plastic insulation shall be separated from the plenum by a thermal barrier complying with Section 2603.4 of the *International Building Code* and shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use.~~

~~**602.2.1.6.2 Approval.** The foam plastic insulation shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use and shall meet the acceptance criteria of Section 803.1.2 of the *International Building Code* when tested in accordance with NFPA 286.~~

~~The foam plastic insulation shall be approved based on tests conducted in accordance with Section 2603.9 of the *International Building Code*.~~

~~**602.2.1.6.3 Covering.** The foam plastic insulation shall be covered by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm) and shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use.~~

**Reason:** This proposal is intended to revise the requirements for foam plastic in plenums. There is a companion proposal for the International Building Code. This code change is intended to not revise technical requirements, but clarifies the code's intent for the use of foam plastic in plenums. The following revisions are proposed:

- 1) The term "exposed to the airflow" is added to clarify the placement of the foam relative to the plenum airflow. This term is taken from the IMC Section 602.2: "602.2 Construction. Plenum enclosure construction materials that are exposed to the airflow shall comply with . . . ."
- 2) The requirements for foam plastic exposed to the plenum airflow (currently 602.2.1.6.2 Approval) are moved to the charging paragraph in proposed Section 2603.7.
- 3) Not including the last sentence in 602.2.1.6.2 in this re-write of 602.2.1.6 clearly establishes the ASTM E84 performance limits and NFPA 286 with the identified acceptance criteria in IBC Section 803.1.2 as the qualifying tests for use of foam plastics exposed to the airflow in plenums.
- 4) The use of a thermal barrier (currently Section 602.2.1.6.1 Separation required) separating the foam plastic from the air flow in the plenum is allowed and therefore listed as an exception.
- 5) The use of an alternate barrier (currently Section 602.2.1.6.3 Covering) separating the foam plastic from the air flow in the plenum is allowed and therefore listed as an exception.
- 6) A new exception is added to recognize the use of masonry or concrete as a means to separate the foam plastic from the air flow in the plenum. Masonry and concrete, with minimum 1 inch thickness, are approved thermal barriers for foam plastic per IBC Section 2603.4.1.

The changes bring needed clarification regarding the approved barriers and corresponding flame spread and smoke-developed requirements for foam plastic used in plenums.

**Cost Impact:** Will not increase the cost of construction

No cost increase. This code proposal revises existing requirements without technical changes.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

~~**602.2.1.6 Foam plastic insulation in plenums as interior finish or interior trim.** Where exposed to the airflow in plenums, foam Foam plastic insulation in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, and shall be tested in accordance with NFPA 286 and meet the acceptance criteria of Section 803.1.2 of the International Building Code.~~

**Exceptions:**

1. ~~Foam plastic insulation~~ in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by a thermal barrier complying with Section 2603.4 of the International Building Code.
2. ~~Foam plastic insulation~~ in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm).
3. ~~Foam plastic insulation~~ in plenums used as interior wall or ceiling finish or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by not less than a 1 inch (25mm) thickness of masonry or concrete.

**Committee Reason:** The proposal reorganizes the text for ease of use and also adds an option for concrete protection of the foam plastic. The modification removes language that is redundant with Section 602.2.1. The modification deletes the word "insulation" as it matters not what form the foam plastic takes.

**Assembly Action:**

**None**

**Final Action Results**

**M70-15 Part I**

**AM**

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## Code Change No: M70-15 Part II

### Original Proposal

**Section(s):** IBC: 2603.7, 2603.7 (New), 2603.7.1, 2603.7.2, 2603.7.3, 2604.1.1 (New)

**Proponent:** John Woestman, Kellen Company, representing Extruded Polystyrene Foam Association (XPSA) (jwoestman@kellencompany.com)

**THIS IS A 2 PART CODE CHANGE. BOTH PARTS WERE HEARD BY THE IMC COMMITTEE.**

**Add new text as follows:**

**2603.7 Foam plastic insulation in plenums as interior finish or interior trim.** Where exposed to the airflow in plenums, foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, and shall be tested in accordance with NFPA 286 and meet the acceptance criteria of Section 803.1.2.

**Exceptions:**

1. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by a thermal barrier complying with Section 2603.4.
2. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm).
3. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by not less than a 1 inch (25mm) thickness of masonry or concrete.

**Delete without substitution:**

~~**2603.7 Foam plastic insulation used as interior finish or interior trim in plenums.** Foam plastic insulation used as interior wall or ceiling finish or as interior trim in plenums shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 and shall comply with one or more of Sections 2603.7.1, 2603.7.2 and 2607.3.~~

~~**2603.7.1 Separation required.** The foam plastic insulation shall be separated from the plenum by a thermal barrier complying with Section 2603.4 and shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use.~~

~~**2603.7.2 Approval.** The foam plastic insulation shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use and shall meet the acceptance criteria of Section 803.1.2 when~~

~~tested in accordance with NFPA 286. The foam plastic insulation shall be approved based on tests conducted in accordance with Section 2603.9.~~

~~**2603.7.3 Covering.** The foam plastic insulation shall be covered by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm) and shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the thickness and density intended for use.~~

**Add new text as follows:**

**2604.1.1 Plenums.** Foam plastics installed in plenums as interior wall or ceiling finish shall comply with Section 2603.7. Foam plastics installed in plenums as interior trim shall comply with Sections 2604.2 and 2603.7.

**Reason:** This proposal is intended to revise the requirements for foam plastic in plenums. There is a companion proposal for the International Mechanical Code. This code change is intended to not revise technical requirements, but clarifies the code's intent for the use of foam plastic in plenums. The following revisions are proposed:

- 1) The term "exposed to the airflow" is added to clarify the placement of the foam relative to the plenum airflow. This term is taken from the IMC Section 602.2: "602.2 Construction. Plenum enclosure construction materials that are exposed to the airflow shall comply with . . . ."
- 2) The requirements for foam plastic exposed to the plenum airflow (currently 2603.7.2 Approval) are moved to the charging paragraph in proposed Section 2603.7.
- 3) Not including the last sentence in 2603.7 in this re-write of 2603.7 clearly establishes the ASTM E84 performance limits and NFPA 286 with the identified acceptance criteria in 803.1.2 as the qualifying tests for use of foam plastics exposed to the airflow in plenums.
- 4) The use of a thermal barrier (currently Section 2603.7.1 Separation required) separating the foam plastic from the air flow in the plenum is allowed and therefore listed as an exception.
- 5) The use of an alternate barrier (currently Section 2603.7.3 Covering) separating the foam plastic from the air flow in the plenum is allowed and therefore listed as an exception.
- 6) A new exception is added to recognize the use of masonry or concrete as a means to separate the foam plastic from the air flow in the plenum. Masonry and concrete, with minimum 1 inch thickness, are approved thermal barriers for foam plastic per Section 2603.4.1.
- 7) A sentence is added to the Interior Finish and Trim (Section 2604.1) pointing back to the plenum requirements in Section 2603.7.

The changes bring needed clarification regarding the approved barriers and corresponding flame spread and smoke-developed requirements for foam plastic used in plenums.

**Cost Impact:** Will not increase the cost of construction

No cost increase. This code proposal revises existing requirements without technical changes.

<b>Report of Committee Action Hearings</b>
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**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**2603.7 Foam plastic insulation in plenums as interior finish or interior trim.** Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 25 or less and a smoke-developed index of 50 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, and shall be tested in accordance with NFPA 286 and meet the acceptance criteria of Section 803.1.2.

**Exceptions:**

1. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by a thermal barrier complying with Section 2603.4.
2. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by corrosion-resistant steel having a base metal thickness of not less than 0.0160 inch (0.4 mm).
3. Foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL

723 at the maximum thickness and density intended for use, where it is separated from the airflow in the plenum by not less than a 1 inch (25mm) thickness of masonry or concrete.

**Committee Reason:** The committee reason is identical to the reason for M70-15, Part I.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M70-15 Part II**

**AM**

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## Code Change No: M76-15

### Original Proposal

**Section(s):** 602.2.1.7

**Proponent:** Jonathan Roberts, UL LLC, representing UL LLC (jonathan.roberts@ul.com)

**Revise as follows:**

**602.2.1.7 Plastic plumbing pipe-piping and tube-tubing.** Plastic piping and tubing used in plumbing systems ~~exposed within a plenum~~ shall be listed and ~~shall exhibit~~ labeled as having a flame spread index of not ~~more-greater~~ than 25 and a smoke-developed index of not ~~more-greater~~ than 50 when tested in accordance with ASTM E 84 or UL 723.

**Exception:** Plastic water distribution piping and tubing listed and labeled in accordance with UL 2846 as having a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread distance not greater than 5 feet (1524 mm), and installed in accordance with its listing.

**Add new standard(s) as follows:**

UL 2846-14, Fire Test of Plastic Water Distribution Plumbing Pipe for Visible Flame and Smoke Characteristics

**Reason:** This proposal accomplishes the following:

1. Clarifies that this section is only applicable to plastic piping and tubing exposed within a plenum, using wording similar to Section 602.2.1.3.
2. Makes grammatical revisions for consistency.
3. Allows an option for water distribution piping and tubing to be listed to the UL 2846 criteria noted.

UL 2846 is an ANSI standard that includes a test method for determining values of flame propagation distance and optical smoke density for individual pairs of plastic plumbing pipes for distribution of potable water that can be installed in ducts, plenums, and other spaces used for environmental air. The scope of this standard can be viewed at <http://ulstandards.ul.com/standard/?id=2846>.

The acceptance criteria specified (peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread distance not greater than 5 feet) is consistent with values in Sections 602.2.1.1, 602.2.1.2 and 602.2.1.3.

**Cost Impact:** Will not increase the cost of construction

This proposal provides an alternative method for evaluating plastic water distribution system piping and tubing.

**Analysis:** A review of the standard proposed for inclusion in the code, UL 2846, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**602.2.1.7 Plastic plumbing piping and tubing.** Plastic piping and tubing used in plumbing systems ~~exposed within a plenum~~ shall be listed and labeled as having a flame spread index not greater than 25 and a smoke-developed index not greater than 50 when tested in accordance with ASTM E 84 or UL 723.



**Exception:** Plastic water distribution piping and tubing listed and labeled in accordance with UL 2846 as having a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread distance not greater than 5 feet (1524 mm), and installed in accordance with its listing.

**Committee Reason:** Approval is based on the proponent's published reason statements. The modification eliminates redundant words because this section is about materials within plenums. The deleted words would allow materials to cover the pipes where such materials were not listed for the application of covering pipes.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M76-15**

**AM**

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## Code Change No: **M79-15**

### Original Proposal

**Section: 602.2.1.8 (New)**

**Proponent:** Jonathan Roberts, UL LLC, representing UL LLC (jonathan.roberts@ul.com)

**Add new as follows:**

**602.2.1.8 Pipe and duct insulation within plenums.** Pipe and duct insulation contained within plenums, including insulation adhesives, shall have a flame spread index of not more than 25 and a smoke developed index of not more than 50 when tested in accordance with ASTM E84 or UL 723, using the specimen preparation and mounting procedures of ASTM E2231. Pipe and duct insulation shall not flame, glow, smolder or smoke when tested in accordance with ASTM C411 at the temperature at which they are exposed in service. The test temperature shall not fall below 250°F (121°C) . Pipe and duct insulation shall be listed and labeled.

**Reason:** Section 602 covers the contents of plenums and section 604 covers insulation of ducts. However, it is quite common to have insulated pipes and/or insulated ducts within plenums. Pipe insulation is not specifically covered by the IMC. Moreover, the potential exists that duct insulation contained within plenums falls through the cracks and is not properly regulated. Moreover, there is also the possibility that section 604 is amended and that would affect pipe or duct insulation contained within plenums. Note that duct insulation could be applied outside buildings and the requirements may need to be different from duct insulation within plenums. However, the new section will ensure that the fire safety requirements are applied to pipe and duct insulation contained within plenums irrespective of other requirements for exterior insulation of ducts not contained within plenums.

Therefore it is proposed to add the same requirements from Section 604.3 to the new section on pipe and duct insulation within plenums, and, that way, the section addressing materials contained within plenums is independent of the section on materials associated with ducts, whether the ducts are free-standing or within plenums.

Exception 2 to section 602.2.1 does not specifically mention pipe or duct insulation within plenums.

**Cost Impact:** Will not increase the cost of construction

This is clarification only because fire safety requirements for materials contained within plenums already exist.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements. The proposal is consistent with the format for other code sections for coverage of materials in plenums.

**Assembly Action:**

**None**

### Final Action Results

**M79-15**

**AS**

## Code Change No: **M89-15**

### Original Proposal

**Section(s):** 603.5.2 (New), CHAPTER 15

**Proponent:** Eli Howard, SMACNA, representing SMACNA (ehoward@smacna.org)

**Add new text as follows:**

**603.5.2 Phenolic ducts.** Nonmetallic phenolic ducts shall be constructed in accordance with the SMACNA Phenolic Duct Construction Standards.

**Add new standard(s) as follows:**

SMACNA Phenolic Duct Construction Standard 1st edition 2015

**Reason:** Phenolic duct is a new air distribution material not presently covered in the IMC for commercial systems. The inclusion of the SMACNA Phenolic Duct Construction Standards will address this issue.

**Bibliography:** SMACNA Phenolic Duct Construction Standard 1st edition 2015.

**Cost Impact:** Will not increase the cost of construction  
The standard provides means/methods for phenolic duct construction.

**Analysis:** A review of the standard proposed for inclusion in the code, SMACNA Phenolic Duct Construction Standards, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**603.5.2 Phenolic ducts.** Nonmetallic phenolic ducts shall be constructed and installed in accordance with the SMACNA Phenolic Duct Construction Standards.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification is for consistency with other similar text in the IMC.

**Assembly Action:**

**None**

### Final Action Results

**M89-15**

**AM**

**Code Change No: M94-15**

**Original Proposal**

**Section(s):** 603.8.2

**Proponent:** Jay Peters, Codes and Standards International, representing AQC Industries (peters.jay@me.com)

**Revise as follows:**

**603.8.2 Sealing.** Ducts shall be sealed and secured and then tested with air to a pressure of not less than 2-inches water column (498 Pa) for not less than 5 minutes. Testing shall be performed in the presence of the code official and prior to pouring the encasement in concrete encasement or direct burial.

**Reason:** All duct leakage, whether in the envelope, in the attic or underground are of concern, but underground ducts are more likely to cause serious issues due to their location. Underground duct systems have a propensity to leak which causes air exfiltration (loss) and also duct infiltration (gain) of contaminants into the duct system and building. The leakage, in-and-out, not only causes poor air quality, duct system degradation, sick building occupants, mold, mildew and even radon contamination, but also major energy waste. Some estimate that after the combined infiltration from leaks in walls/floors/ceilings, the duct system is the next largest cause of infiltration or building leakage. Underground return ducts are of particular concern due to their intake of impurities due to the negative pressure within the system. All ducts are required to be sealed before they are encased in concrete or placed underground but the code does not designate any sort of test to prove the airtightness, and more importantly, watertightness of underground duct systems. Plastic ducts are typically not subject to concrete encasement but should also be tested for air and water tightness before buried directly into the ground.

**Cost Impact:** Will increase the cost of construction  
 This may have a minimal increase in initial cost, but could have potential savings in the long run for buildings utilizing underground duct systems.

**Report of Committee Action Hearings**

**Committee Action:** **Approved as Modified**

**Modify proposal as follows:**

**603.8.2 Sealing.** Ducts shall be sealed and, secured and then tested with air to a pressure of not less than 2-inches water column (498 Pa) for not less than 5 minutes. Testing shall be performed in the presence of the code official and prior to concrete encasement in concrete or direct burial. Ducts shall be leak tested as required by Section C403 of the *International Energy Conservation Code*.

**Committee Reason:** Approval was based on the proponent's published reason statements. Testing of ducts is necessary. The modification deletes the requirement for the code official to observe the testing which caused concern for some. The modification provides the allowable leakage rate and uses existing IECC testing criteria.

**Assembly Action:** **None**

**Final Action Results**

**M94-15** **AM**

**Code Change No: M96-15**

**Original Proposal**

**Section: 603.9**

**Proponent:** Donald Surrena, National Association of Home Builders, representing National Association of Home Builders (dsurrena@nahb.org)

**Revise as follows:**

**603.9 Joints, seams and connections.** All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in *SMACNA HVAC Duct Construction Standards—Metal and Flexible* and *NAIMA Fibrous Glass Duct Construction Standards*. All joints, longitudinal and transverse seams and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used to seal fibrous glass ductwork shall be listed and labeled in accordance with UL 181A and shall be marked "181 A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat-sensitive tape. Tapes and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked "181 B-C." Closure systems used to seal all ductwork shall be installed in accordance with the manufacturer's instructions.

**Exception:** For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams of other than the snap-lock and buttonlock types for ducts that are located outside of conditioned spaces.

**Reason:** This proposal will reduce construction cost and still reduce energy loss that would occur due to duct leakage outside conditioned space. Low pressure longitudinal seam duct leakage is very limited and the small amount of leakage within conditioned space is still useful energy.

**Bibliography:** Estimated Costs of the 2015 IRC Codes Changes, Home Innovation Research Labs, Upper Marlboro, MD, December 2014, Report Reference No: MAT 1, Page 33

**Cost Impact:** Will not increase the cost of construction  
 Cost decrease of up to \$314 for an average house according to research conducted by Home Innovation Research Labs.

**Report of Committee Action Hearings**

**Committee Action:** **Approved as Submitted**

**Committee Reason:** The leakage rate for snap-lock and button-lock joints is insignificant and acceptable within conditioned spaces.

**Assembly Action:** **None**

**Final Action Results**

**M96-15**

**AS**

**Code Change No: M100-15**

**Original Proposal**

**Section: 805.7 (New)**

**Proponent:** Gregg Achman, Hearth & Home Technologies, representing Hearth & Home Technologies (achmang@hearthnhome.com)

**Revise as follows:**

**604.11 Vapor retarders.** Where ducts used for cooling are externally insulated, the insulation shall be covered with a vapor retarder having a maximum permeance of 0.05 perm [2.87 ng/(Pa • s • m<sup>2</sup>)] or aluminum foil having a minimum thickness of 2 mils (0.051 mm). Insulations having a permeance of 0.05 perm [2.87 ng/(Pa • s • m<sup>2</sup>)] or less shall not be required to be covered. All joints and seams shall be sealed to maintain the continuity of the vapor retarder.

**Exception:** A vapor retarder is not required for spray polyurethane foam insulation having a water vapor permeance of not greater than of 3 perm per inch [1722 ng/(s · m<sup>2</sup> · Pa)] at the installed thickness.

**Reason:** The proposal adds an option to the vapor retarder requirements for duct insulation of the IMC. The proposal is consistent with the vapor retarder requirements of M1601.4.6 of the 2015 IRC.

**Cost Impact:** Will not increase the cost of construction  
The proposal adds options for the code; does not add any new mandatory requirements.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M100-15**

**AS**

## Code Change No: **M102-15**

### Original Proposal

#### Section: 805.7 (New)

**Proponent:** Gregg Achman, Hearth & Home Technologies, representing Hearth & Home Technologies (achmang@hearthnhome.com)

#### Add new text as follows:

**805.7 Insulation shield** Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's instructions.

**Reason:** The code currently requires an insulation shield for vents (802.8) to ensure proper clearance to insulation so as not to cause a fire hazard, the code should also require insulation shields for factory-built and metal chimneys as they also require clearance to insulation and represents a fire hazard when one is not installed.

**Cost Impact:** Will not increase the cost of construction

There technically is no cost impact since the insulation shield should already be installed where needed to ensure a proper and safe installation.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

### Final Action Results

**M102-15**

**AS**

## Code Change No: **M104-15**

### Original Proposal

**Section(s):** 916.1, CHAPTER 15

**Proponent:** Jennifer Hatfield, J. Hatfield & Associates, PL, representing Association of Pool & Spa Professionals (jhatfield@apsp.org)

**Revise as follows:**

**916.1 General.** Pool and spa heaters shall be installed in accordance with the manufacturer's instructions. Oil-fired pool and spa heaters shall be tested in accordance with UL 726. Electric pool and spa heaters shall be tested in accordance with UL 1261, UL 1563 or CSA C22.2 No. 218.1. Gas-fired pool heaters shall comply with ANSI Z21.56/CSA 4.7. Pool and spa heat pump water heaters shall comply with UL 1995, AHRI 1160, or CSA C22.2 No. 236.

**Add new standard(s) as follows:**

AHRI 1160 (I-P) -09 Performance rating of Heat Pump Pool Heaters  
ANSI Z21.56a/CSA 4.7 -2013 Gas Fired Pool Heaters  
CSA C22.2 No. 236-11 Cooling Equipment  
CSA C22.2 No. 218.1-M89(R2011) Spas, Hot Tubs and Associated Equipment  
UL 1563-2009 Standard for Electric Spas, Hot Tubs and Associated Equipment-with revisions through July 2012

**Reason:** This proposal is needed to ensure consistency with what standards are required for the various pool heaters in Section 316.2 and Table 316.2 of the International Swimming Pool & Spa Code. This same proposal has been submitted to Section M2006.1 of the IRC.

**Bibliography:** International Swimming Pool & Spa Code, Section 316.2 & Table 316.2

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction and ensures the applicable standards for the various pool heaters are provided within all the I-codes that address pool heaters.

**Analysis:** A review of the standard proposed for inclusion in the code, AHRI 1160 (I-P), ANSI Z21.56a/CSA 4.7, CSA C22.2 No. 236, CSA C22.2 No. 218.1, UL 1563, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**916.1 General.** Pool and spa heaters shall be installed in accordance with the manufacturer's instructions. Oil-fired pool and spa heaters shall be tested in accordance with UL 726. Electric pool and spa heaters shall be tested in accordance with UL 1261, ~~UL 1563 or CSA C22.2 No. 218.1.~~ Gas-fired pool heaters shall comply with ANSI Z21.56/CSA 4.7. Pool and spa heat pump water heaters shall comply with UL 1995, ~~AHRI 1160,~~ or CSA C22.2 No. 236.

**Exception:** Portable residential spas and portable residential exercise spas shall comply with UL 1563 or CSA C22.2 No. 218.1.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification deletes AHRI 1160 which is already referenced in the IECC. Gas heaters are covered by the IFGC and the new exception recognizes integral heaters in spas listed to UL1563.

**Assembly Action:**

**None**



**Final Action Results**

**M104-15**

**AM**

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## Code Change No: **M108-15**

### Original Proposal

**Section(s):** 202 (New), 929 (New), 929.1 (New), CHAPTER 35

**Proponent:** Vickie Lovell, InterCode Incorporated, representing MacroAir (vickie@intercodeinc.com)

**Add new definition as follows:**

#### SECTION 202 DEFINITIONS

**HIGH VOLUME LARGE DIAMETER FAN.** A low speed ceiling fan that circulates large volumes of air and that is greater than 7 feet (2134 mm) in diameter.

**Add new text as follows:**

#### SECTION 929 HIGH VOLUME LARGE DIAMETER FANS

**929.1 General.** High volume large diameter fans shall be tested in accordance with AMCA 230 and installed in accordance with the manufacturer's instructions.

**Add new standard(s) as follows:**

AMCA 230-CD1 Laboratory Methods of Testing Air Circulating Fans for Rating and Certification.

**Reason:** The proposed language adds the appropriate test standard, installation instructions, and a definition for high volume large diameter fans to the code.

The definition is based on the Department of Energy's current rule making activity on ceiling fans efficiency requirements. The test method AMCA 230 is the most current and most widely used method for fan rating and certification. The formatting used in this proposal is consistent with the formatting in Section 928.1.

**Cost Impact:** Will not increase the cost of construction

The code change will not increase the cost of construction because high volume large diameter fans are not being made mandatory.

**Analysis:** A review of the standard proposed for inclusion in the code, AMCA 230, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**929.1 General.** High ~~Where provided,~~ high volume large diameter fans shall be tested ~~and labeled~~ in accordance with AMCA 230, ~~listed~~ and installed ~~labeled~~ in accordance with UL 507, and installed in accordance with the manufacturer's instructions.

**Committee Reason:** Approval is based on the proponent's published reason statement. The modification brings in the necessary requirement for such fans to be listed to a product safety standard.

**Assembly Action:**

**None**

**Final Action Results**

**M108-15**

**AM**

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## Code Change No: **M110-15**

### Original Proposal

**Section: 1002.1, 1401.4, 1401.4.1 (New), CHAPTER 15**

**Proponent:** Rex Gillespie (rex.gillespie@caleffi.com)

**Revise as follows:**

**1002.1 General.** Potable water heaters and hot water storage tanks shall be listed and labeled and installed in accordance with the manufacturer's instructions, the *International Plumbing Code* and this code. All water heaters shall be capable of being removed without first removing a permanent portion of the building structure. The potable water connections and relief valves for all water heaters shall conform to the requirements of the *International Plumbing Code*. Domestic electric water heaters shall comply with UL 174 or UL 1453. Commercial electric water heaters shall comply with UL 1453. Oil-fired water heaters shall comply with UL 732. Solid-fuel-fired water heaters shall comply with UL 2523. ~~Thermal solar Solar thermal water heaters heating systems~~ shall comply with Chapter 14 and ~~UL 174 or UL 1453~~ SRCC 300.

**1401.4 Solar energy-thermal equipment and appliances.** ~~Solar energy-thermal equipment and appliances shall conform to the requirements of this chapter. Solar thermal systems shall be listed and labeled to SRCC 300 and shall be installed in accordance with the manufacturer's manufacturers' instructions and SRCC 300.~~

**Add new text as follows:**

**1401.4.1 Collectors and panels** Solar thermal collectors and panels shall be listed and labeled in accordance with SRCC 100 or SRCC 600, as applicable.

**Add new standard(s) as follows:**

SRCC Standard 100-13, Minimum Standard for Solar Thermal Collectors, January 3, 2013, Solar Rating and Certification Corporation.

SRCC Standard 300-13, Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013, Solar Rating and Certification Corporation.

SRCC Standard 600-13, Minimum Standard for Solar Thermal Concentrating Collectors, January 2, 2013, Solar Rating and Certification Corporation.

**Reason:** Updates standard citations for solar thermal water heaters. The UL 174 and UL 1453 are not appropriate standard references because they address electric water heaters. They are removed in favor of SRCC Standard 300 which addresses solar water heating systems and is also referenced in the 2015 IRC for the same purpose.

Additional references to SRCC 100 and 600 for solar collectors are added to ensure that collectors meet minimum requirements and freeing the code official from inspecting the internal components of solar collectors. Identical references to the 100 and 600 standards also appear in the 2015 IRC. These standards are already cited in most states for incentive and rebate programs, and therefore do not create an additional burden for manufacturers.

**Bibliography:**

SRCC Standard 100, Minimum Standard for Solar Thermal Collectors, January 3, 2013.

SRCC Standard 600, Minimum Standard for Solar Thermal Concentrating Collectors, January 2, 2013.

SRCC Standard 300, Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013

**Cost Impact:** Will not increase the cost of construction

The proposed changes are not anticipated to impact the cost of installation. No new equipment or features are required, and no new requirements are placed on manufacturers impacting certification or manufacturing costs. Proposed provisions provide additional clarity and direction for installers and code officials at inspection.

**Analysis:** A review of the standard proposed for inclusion in the code, SRCC-100, SRCC-300, SRCC-600, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M110-15**

**AS**

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## Code Change No: M111-15

### Original Proposal

#### Section(s): 1006.6, CHAPTER 15

**Proponent:** Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanical Officials (CAPMO) (gmcman@jeffco.us)

#### Revise as follows:

**1006.6 Safety and relief valve discharge.** Safety and relief valve discharge pipes shall be of rigid pipe that is approved for the temperature of the system. ~~The discharge pipe shall be the same diameter as the safety or relief valve outlet. Safety and relief valves shall not discharge so as to be a hazard, a potential cause of damage or otherwise a nuisance.~~ High pressure- steam safety valves shall be vented to the outside of the structure. ~~Where a low-pressure safety valve or a temperature relief valves and combinations of such valves shall:~~ The discharge piping serving pressure relief valve discharges valves,

1. Not be directly connected to the drainage system,.
2. Discharge through an air gap located in the installation same room as the appliance.
3. Not be smaller than the diameter of the outlet of the valve served and shall conform discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to the pan serving the boiler or storage tank, to a waste receptor or to the outdoors.
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 of the *International Plumbing Code*. or materials tested, rated and approved for such use in accordance with ASME A112.4.1

#### Add new standard(s) as follows:

##### ASME A112.4.1 Water Heater Relief Valve Drain Tubes

**Reason:** This section lacks the detail needed and doesn't paint a complete picture. Why must the user jump to another code to find and use these requirements? It's very helpful to find all the requirements in any given Section that will complete the picture of what needs to be done to complete an installation.

**Cost Impact:** Will not increase the cost of construction

There will be no additional cost as this is only an editorial modification and clarification which provides information from other codes. No new requirements.

**Analysis:** A review of the standard proposed for inclusion in the code, ASME A112.4.1, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**1006.6 Safety and relief valve discharge.** Safety and relief valve discharge pipes shall be of rigid pipe that is *approved* for the temperature of the system. High pressure-steam safety valves shall be vented to the outside of the structure. The discharge piping serving pressure relief valves, temperature relief valves and combinations of such valves shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap break located in the same room as the appliance.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap break.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to the pan serving the boiler or storage tank, to a waste receptor or to the outdoors.
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed so as to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of such piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section 605.4 of the *International Plumbing Code* or materials tested, rated and approved for such use in accordance with ASME A112.4.1

**Committee Reason:** Approval was based on the proponent's published reason statements. The proposal is consistent with IPC Section 504.6. The modification changes air gap to air break, which is more representative of the actual installations addresses by Chapter 10.

**Assembly Action:**

**None**

**Final Action Results**

**M111-15**

**AM**

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## Code Change No: **M113-15**

### Original Proposal

**Section(s):** 202 (New), 1009.1, Chapter 15

**Proponent:** Rex Gillespie (rex.gillespie@caleffi.com)

**Revise as follows:**

**1009.1 Where required.** An expansion tank shall be installed in every hot water system. For multiple boiler installations, not less than one expansion tank is required. Expansion tanks shall be of the closed or open type. Tanks shall be rated for the pressure of the hot water system.

**Exception:** Expansion tanks shall not be required in the collector loop of *drain-back systems*.

**Add new definitions as follows:**

### SECTION 202 DEFINITIONS

**DIRECT SYSTEM.** A solar thermal system in which the gas or liquid in the solar collector loop is not separated from the load.

**DRAIN-BACK SYSTEM.** A solar thermal system in which the fluid in the solar collector loop is gravity drained from the collector into a holding tank under prescribed circumstances.

**FOOD GRADE FLUID.** Potable water or a fluid containing additives listed in accordance with the Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1, Food and Drug Administration, Parts 174-186.

**INDIRECT SYSTEM.** A solar thermal system in which the gas or liquid in the solar collector loop circulates between the solar collector and a heat exchanger and such gas or liquid is not drained from the system or supplied to the load during normal operation.

**NO-FLOW CONDITION.** A condition where thermal energy is not transferred from a solar thermal collector by means of flow of a heat transfer fluid.

**NON-FOOD GRADE FLUID.** Any fluid that is not designated as a food grade fluid.

**SOLAR THERMAL SYSTEM.** A system that converts solar radiation to thermal energy for use in heating or cooling.

**Revise as follows:**

**1401.1 Scope.** This chapter shall govern the design, construction, installation, *alteration* and repair of solar thermal systems, *equipment* and appliances intended to utilize solar energy for space heating or cooling, domestic hot water heating, swimming pool heating or process heating.

**1401.4 Solar energy-thermal equipment and appliances.** Solar energy-thermal *equipment* and appliances shall conform to the requirements of this chapter and SRCC 300 and shall be installed in accordance with the manufacturer's instructions.



**SECTION 1402**  
**DESIGN AND INSTALLATION**

**Add new text as follows:**

**1402.1 General** The design and installation of solar thermal systems shall comply with Sections 1402.1 through 1402.8. Solar thermal systems shall be listed and labeled to SRCC 300 and shall be installed in accordance with the manufacturer's instructions and SRCC 300.

**Revise as follows:**

~~1402.1~~ **1402.2 Access.** Access shall be provided to solar energy thermal equipment and appliances for maintenance. Solar thermal systems and appurtenances shall not obstruct or interfere with the operation of any doors, windows or other building components requiring operation or access. Roof-mounted solar thermal equipment shall not obstruct or interfere with the operation of roof-mounted equipment, appliances, chimneys, plumbing vents, roof hatches, smoke vents, skylights and other roof penetrations and openings.

~~1402.5.1~~ **1402.3 Pressure and temperature.** Solar energy thermal system components containing pressurized fluids shall be protected against pressures and temperatures exceeding design limitations with a pressure and temperature relief valve valves or pressure relief valves. Each section of the system in which excessive pressures are capable of developing System components shall have a relief device located so that a section cannot be valved off or otherwise isolated from a working pressure rating of not less than the setting of the pressure relief device. Relief valves shall comply with the requirements of Section 1006.4 and discharge in accordance with Section 1006.6.

**Add new text as follows:**

**1402.3.1 Relief device** Each section of the system in which excessive pressures are capable of developing shall have a relief device located so that a section cannot be valved off or otherwise isolated from a relief device. Relief valves shall comply with the requirements of Section 1006.6. For indirect systems, pressure relief valves in solar loops shall also comply with SRCC 300.

**Revise as follows:**

~~1402.5.2~~ **1402.3.2 Vacuum.** The solar energy system System components that are might be subjected to a vacuum while in operation or during shutdown shall be designed to withstand such vacuum or shall be protected with vacuum relief valves.

~~1402.5.3~~ **1402.4 Protection from freezing.** System components shall be protected from damage by freezing of heat transfer liquids at the lowest ambient temperatures that will be encountered during the operation of the system. Freeze protection shall be provided in accordance with SRCC 300. Drain-back systems shall be installed in compliance with Section 1402.4.1 and systems utilizing freeze protection valves shall comply with Section 1402.4.2.

**Add new text as follows:**

**1402.4.1 Drain-back systems.** Drain-back systems shall be designed and installed to allow for manual gravity draining of fluids from areas subject to freezing to locations not subject to freezing, and air filling of the components and piping. Such piping and components shall maintain a horizontal slope in the direction of flow of not less than one-fourth unit vertical in 12 units horizontal (2-percent slope). Piping and components subject to manual gravity draining shall permit subsequent air filling upon drainage and air storage or venting upon refilling.

**1402.4.2 Freeze protection valves.** Freeze protection valves shall discharge in a manner that does not create a hazard or structural damage.

**1402.5 Protection of potable water.** Where a solar thermal system heats potable water to supply a potable *hot water* distribution or any other type of heating system, the solar thermal system shall be in accordance with Sections 1402.5.1 through 1402.5.3 as applicable.

**1402.5.1 Indirect systems.** Water supplies of any type shall not be connected to the solar heating loop of an indirect solar thermal *hot water* heating system. This requirement shall not prohibit the presence of inlets or outlets on the solar heating loop for the purposes of servicing the fluid in the solar heating loop.

**1402.5.2 Direct systems for potable water distribution systems.** Where a solar thermal system directly heats potable water for a potable water distribution system, the pipe, fittings, valves and other components that are in contact with the potable water in the system shall comply with the requirements of the *International Plumbing Code*.

**1402.5.3 Direct systems for other than potable water distribution systems.** Where a solar thermal system directly heats water for a system other than a potable water distribution system, a potable water supply connected to such system shall be protected by a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012. Where solar thermal system directly heats chemically treated water for a system other than a potable water distribution system, a potable water supply connected to such system shall be protected by a reduced pressure principle backflow prevention assembly complying with ASSE 1013.

Revise as follows:

~~1402.2~~ **1402.6 Protection of equipment.** Solar *thermal equipment* exposed to vehicular traffic shall be installed not less than 6 feet (1829 mm) above the finished floor.

**Exception:** This section shall not apply where the *equipment* is protected from motor vehicle impact.

Add new text as follows:

**1402.7 Protection of structure** In the process of installing or repairing any part of a solar thermal system, the building or structure shall be left in a safe structural condition in accordance with Section 302 and Sections 1402.7.1 through 1402.7.2.

Revise as follows:

~~1402.3~~ **1402.7.1 Controlling condensation.** Where attics or structural spaces are part of a passive solar system, ventilation of such spaces, as required by Section 406, is not required where other *approved* means of controlling condensation are provided.

~~1402.6~~ **1402.7.2 Penetrations.** Roof and wall penetrations shall be flashed and sealed to prevent entry of water, rodents and insects in accordance with Section 302.

~~1402.5~~ **1402.8 Equipment.** The solar *energy* thermal system shall be equipped in accordance with the requirements of Sections ~~1402.5.4~~ 1402.8.1 through ~~1402.5.4~~ 1402.8.5.

Add new text as follows:

**1402.8.1 Collectors and panels.** Solar collectors and panels shall comply with Sections 1401.2.2.1 through 1401.2.2.3.

**1402.8.1.1 Design.** Solar thermal collectors and panels shall be listed and labeled in accordance with SRCC 100 or SRCC 600, as applicable.

Revise as follows:

**1402.4.1-1402.8.1.2 Collectors mounted above the roof. Rooftop-mounted solar thermal collectors and systems** The roof shall be constructed to support the loads imposed by roof mounted solar collectors. Where mounted on or above the roof covering, the collector array and supporting construction shall be constructed of noncombustible materials or fire-retardant-treated wood conforming to the *International Building Code* to the extent required for the type of roof construction of the building to which the collectors are accessory.

**Exception:** The use of plastic solar collector covers shall be limited to those *approved* plastics meeting the requirements for plastic roof panels in the *International Building Code*.

**1402.41402.8.1.3 Roof-mounted collectors. Collectors as roof covering** Roof-mounted solar collectors that also serve as a roof covering shall conform to the requirements for roof coverings in accordance with the *International Building Code*.

**Exception:** The use of plastic solar collector covers shall be limited to those *approved* plastics meeting the requirements for plastic roof panels in the *International Building Code*.

**Add new text as follows:**

**1402.8.1.4 Collector sensors.** Collector sensor installation, sensor location and the protection of exposed sensor wires from degradation shall be in accordance with SRCC 300, NFPA 70 and the collector manufacturer's instructions.

**Revise as follows:**

**1401.5-1402.8.2 Ducts.** (No change to text.)

**1402.7-1402.8.2.1 Filtering.** Air transported to occupied spaces through ~~rock or~~ dust-producing materials by means other than natural convection shall be filtered at before entering the outlet from the heat storage system occupied space in accordance with Section 605.

**Add new text as follows:**

**1402.8.3 Piping.** Potable piping shall be installed in accordance with the *International Plumbing Code*. Hydronic piping shall be installed in accordance with Chapter 10 of this code. Mechanical system piping shall be supported in accordance with Section 305.

**1402.8.3.1 Piping insulation.** Piping shall be insulated in accordance with the requirements of the *International Energy Conservation Code*. Exterior insulation shall be protected from degradation. The entire solar loop shall be insulated. Where split-style insulation is used, the seam shall be sealed. Fittings shall be fully insulated. Insulation shall comply with Section 1204.1.

**Exceptions:**

1. Those portions of the piping that are used to help prevent the system from overheating shall not be required to be insulated.
2. Those portions of piping that are exposed to solar radiation, made of the same material as the solar collector absorber plate and are covered in the same manner as the solar collector absorber, or that are used to collect additional solar energy, shall not be required to be insulated.
3. Piping in solar thermal systems using unglazed solar collectors to heat a swimming pool shall not be required to be insulated.

**Revise as follows:**

**1401.3-1402.8.4 Heat exchangers.** Heat exchangers used in domestic water-heating systems shall be *approved* for the intended use. The system shall have adequate protection to ensure that the potability of the water supply and distribution system is properly safeguarded.

**Add new text as follows:**

**1402.8.4.1 Double-wall heat exchangers.** Heat exchangers utilizing a *non-food grade fluid* shall be separated from the potable water by double-wall construction. *An air gap* open to the atmosphere shall be provided between the two walls. The discharge location from the double-wall heat exchanger shall be visible.

**1402.8.4.2 Single-wall heat exchangers.** Single-wall heat exchangers shall be permitted to be used where *food grade fluid* is used as the heat transfer fluid.

**1402.8.5 Water heaters and hot water storage tanks.** Auxiliary water heaters, boilers and water storage tanks associated with solar thermal systems shall comply with Chapter 10 of this code and SRCC 300.

**1402.8.5.1 Hot water storage tank insulation.** Hot water storage tanks shall be insulated and such insulation shall have an R value of not less than R-12.5.

**1402.8.5.2 Outdoor locations.** Storage tanks and heating equipment installed in outdoor locations shall be designed for outdoor installation.

**1402.8.5.3 Storage tank sensors.** Storage tank sensors shall comply with SRCC 300.

**1402.8.6 Solar loop.** Solar loops shall be in accordance with Sections 1402.8.6.1 and 1402.8.6.2.

**1402.8.6.1 Solar loop isolation.** Valves shall be installed to allow the solar loop to be isolated from the remainder of the system.

**1402.8.6.2 Drain and fill valve caps.** Drain caps shall be installed on drain and fill valves.

**Revise as follows:**

**1402.5.4-1402.8.7 Expansion tanks.** Liquid single-phase solar energy systems shall be equipped with expansion tanks sized in accordance with Section 1009, except that additional expansion tank acceptance volume equal to the total volume of liquid contained in the installed solar collectors and piping above the collectors shall be included.

## SECTION 1403 HEAT TRANSFER FLUIDS

**1403.1 Flash point.** The flash point of the ~~actual~~ heat transfer fluid utilized in a solar system shall be not less than 50°F (28°C) above the design maximum nonoperating (no-flow) temperature of the fluid attained in the collector.

**Add new text as follows:**

**1403.2 Heat transfer fluids** Heat transfer gases and liquids shall be rated to withstand the system's maximum design temperature under operating conditions without degradation. Heat transfer fluids shall be in accordance with SRCC 300.

**1403.3 Food grade additives.** Any *food grade fluid* used as a heat transfer fluid containing additives shall be third party listed by an approved agency to the appropriate section of the *Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1, Food and Drug Administration, Parts 174-186.*

**1403.4 Toxicity** The use of *toxic fluids* shall comply with Title 15 of the Federal Hazardous Substances Act and Chapter 60 of the International Fire Code.

## **SECTION 1404** **MATERIALS LABELING**

**Revise as follows:**

**1404.1 Collectors.** Factory-built collectors shall be ~~listed and labeled~~, and bear a label showing the manufacturer's name and address, model number, ~~collector dry weight, collector maximum allowable operating and nonoperating temperatures and pressures, minimum allowable temperatures and the types of heat transfer fluids that are compatible with the collector.~~ The label shall clarify that these specifications apply only to the collector serial number.

**1404.2 Thermal Water storage units tanks.** Pressurized ~~thermal water storage units tanks~~ shall be ~~listed and labeled~~, and bear a label showing the manufacturer's name and address, model number, serial number, storage unit maximum and minimum allowable operating temperatures, and storage unit maximum and minimum allowable operating pressures and the types of heat transfer fluids compatible with the storage unit. The label shall clarify that these specifications apply only to the ~~thermal water storage unit tanks~~.

**Add new text as follows:**

**1404.3 Fluid safety labeling** Drain and fill valves shall be labeled with a description and warning that identifies the fluid in that loop as "Potable Water", "Food Grade Fluid", "Non-Food Grade Fluid" or "Toxic". Labeling shall also be provided that reads as follows: "Fluid could be discharged at high temperature or pressure or both. Unauthorized alterations to this system could result in a health hazard or a hazardous condition."

**1404.4 Heat exchangers.** Heat exchangers shall be labeled to indicate the heat exchanger type with one of the following:

1. "Single-wall without leak protection"
2. "Double-wall with no leak protection"
3. "Double-wall with leak protection"

**Add new standard(s) as follows:**

Solar Rating and Certification Corporation  
400 High Point Drive, Suite 400  
Cocoa, FL 32926

SRCC Standard 100-13, Minimum Standard for Solar Thermal Collectors, January 3, 2013.

SRCC Standard 300-13, Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013.

SRCC Standard 600-13, Minimum Standard for Solar Thermal Concentrating Collectors, January 3, 2013.  
Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1, Food and Drug Administration, Parts 174-186.

Title 15 of the Federal Hazardous Substances Act.

**Reason:** The solar thermal provisions in the 2015 IRC were significantly revised by proposals submitted by a Solar Task Group working under the SEPHCAC. These same changes were not submitted for the IMC, however, due to time constraints. This proposal seeks to extend these updates to the solar thermal provisions in the IMC to align with the language that appears in the 2015. As the language currently stands there are conflicts and key differences for freeze protection, labeling, expansion tanks, pressure and temperature control and many other items. The changes add a citation to three standards from the Solar Rating and Certification Corporation (SRCC) as was done in the 2015 IRC. These standards are already cited in most states for incentive and rebate programs.

Several other improvements that do not currently appear in the IRC Chapter 23 were also proposed. Identical language was also proposed for the 2018 IRC during this cycle to ensure that they align in the next version, if approved. They include:

- Access provisions were revised to clarify that roof-mounted solar collectors and equipment should not interfere with the operation of key safety components and features from other systems. While this can reasonably assumed, providing this provisions will provide code officials more clear language to reference when inspecting installations.
- New language has been added to the freeze protection section to address specific issues with two of the most common freeze protection approaches: drainback systems and freeze protection valves. Drainback systems allow the liquid to drain from the external collector to conditioned space when flow is not occurring. As a result proper slope is critical to ensure operation. Inspection of the installation and workmanship is necessary to ensure that the slope is consistent and the freeze protection is fully functional. Freeze protection valves discharge a small amount of water in freezing conditions and therefore should be addressed in a way similar to T&P valves to ensure that the discharge does not damage the roof or create a hazard (e.g. freezing on a pedestrian walkway). Identical language has also been proposed for Chapter 14 of the IMC.
- The provisions relating to collector and hot water storage tank labeling were simplified since this information and more can be found in manuals and specifications. The language for storage units (tanks) was also revised to clarify that they are only to apply to hot water storage tanks.

**Bibliography:** SRCC Standard 100-13, Minimum Standard for Solar Thermal Collectors, January 3, 2013.  
 SRCC Standard 300-13, Minimum Standard for Solar Thermal Water Heating Systems, January 3, 2013.  
 SRCC Standard 600-13, Minimum Standard for Solar Thermal Concentrating Collectors, January 2, 2013.

**Cost Impact:** Will not increase the cost of construction

The proposed changes are not anticipated to raise the cost of construction. Most solar thermal systems and collectors are already certified to these standards in order to meet state requirements, those of the Internal Revenue Service for federal rebates, or to comply with the requirements of the 2015 IRC. Therefore, no additional product certifications are required. It is possible that costs reductions will result from the correlation of requirements between codes and these standards.

**Analysis:** A review of the standard proposed for inclusion in the code, SRCC Standard 100, SRCC Standard 300-13, SRCC Standard 600-13, Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1, Food and Drug Administration, Parts 174-186. Title 15 of the Federal Hazardous Substances Act, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

## Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

### SECTION 202 DEFINITIONS

**DIRECT SOLAR SYSTEM.** (No change to text.)

**INDIRECT SOLAR SYSTEM.** (No change to text.)

**NO-FLOW CONDITION (SOLAR).** (No change to text.)

**1402.2 Access.** Access shall be provided to solar thermal equipment for maintenance. Solar thermal systems and appurtenances shall not obstruct or interfere with the operation of any doors, windows or other building components requiring operation or access. Roof-mounted solar thermal equipment shall not obstruct or interfere with the operation of roof-mounted equipment, appliances, chimneys, plumbing vents, roof hatches, smoke vents, skylights and other roof penetrations and openings.

**1402.3.1 Relief device.** Each section of the system in which excessive pressures are capable of developing shall have a relief device located so that a section cannot be valved off or otherwise isolated from a relief device. Relief valves shall comply with the requirements of Section 1006.6. For indirect solar systems, pressure relief valves in solar loops shall also comply with SRCC 300.

**1402.5.3 Direct systems for other than potable water distribution systems.** Where a solar thermal system directly heats water for a system other than a potable water distribution system, a potable water supply connected to such system shall be protected by a ~~backflow preventer in accordance with an intermediate atmospheric vent complying with ASSE 1012.~~ Where solar thermal system directly heats chemically treated water for a system other than a potable water distribution system, a potable water supply connected to such system shall be protected by a reduced pressure principle backflow prevention assembly complying with ASSE 4013. ~~the International Plumbing Code.~~

**1402.4 Heat exchangers.** Heat exchangers shall be labeled to indicate the heat exchanger type with one of the following:

1. "Single-wall without leak protection"
2. "Double-wall with no leak protection"

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification appropriately defers to the IPC for backflow protection coverage; adds the word "solar" to clarify the scope of the definitions and eliminates the concern for placing solar panels over plumbing vents.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M113-15**

**AM**

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## Code Change No: **M115-15**

### Original Proposal

#### Section: 1101.6, CHAPTER 15

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration

#### Revise as follows:

**1101.6 General.** Refrigeration systems shall comply with the requirements of this code and, except as modified by this code, ASHRAE 15. Ammonia-refrigerating systems shall comply with this code and, except as modified by this code, ASHRAE 15 and IAR 2, IAR 3, IAR 4 and IAR 5.

#### Add new standard(s) as follows:

IAR 3-2012 Ammonia Refrigeration Valves

IAR 4-2015 (pending completion) Installation of Closed-Circuit Ammonia Mechanical Refrigerating Systems

IAR 5-2013 Start up and Commissioning of Ammonia Refrigeration Systems

**Reason:** These are ANSI standards that are already applicable for ammonia refrigeration facilities. Including references in the IMC will ensure that the standards can be enforced by the mechanical code official so that proper valves are used on ammonia refrigeration systems and that these systems are properly installed and commissioned.

**Cost Impact:** Will not increase the cost of construction

The IMC reference will correlate with what should already be industry practice.

**Analysis:** A review of the standard proposed for inclusion in the code, IAR 3, IAR 4 and IAR 5, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

### Final Action Results

**M115-15**

**AS**



## Code Change No: M116-15

### Original Proposal

**Section: Table 1103.1**
**Proponent:** Steven Ferguson, representing ASHRAE (sferguson@ashrae.org)

**Revise as follows:**

**TABLE 1103.1  
REFRIGERANT CLASSIFICATION, AMOUNT AND OEL**

Chemical Refrigerant	Formula	Chemical Name of Blend	Refrigerant Classification	Pounds per 1000 CF of spac	ppm	g/m <sup>3</sup>	OEL <sup>e</sup>	[F] Degrees of Hazard <sup>a</sup>
R-444B	zeotrope	R-32/152a/1234ze(E) (41.5/10.0/48.5)	A2 <sup>i</sup>	4.3	23,000	69	890	-
R-448A	zeotrope	R-32/125/1234yf/134a/1234ze(E) (26.0/26.0/20.0/21.0/7.0)	A1	24	110,000	390	890	-
R-449A	zeotrope	R-32 /125 /1234yf /134a (24.3/24.7/25.3/25.7)	A1	23	100,000	370	830	-
R-450A	zeotrope	R-134a /1234ze(E) (42.0/58.0)	A1	20	72,000	320	880	-
R-1233zd(E)	CF <sub>3</sub> CH=CHCl	trans-1-chloro-3,3,3-trifluoro-1-propene	A1	5.3	16,000	85	800	-
R-417C	zeotrope	R-125/134a/600 (19.5/78.8/1.7)	A1	5.4	21,000	87	1,000	-
R-419B	zeotrope	R-125/134a/E170 (48.5/48.0/3.5)	A2	4.6	17,000	74	1,000	-
R-422E	zeotrope	R-125/134a/600a (58.0/39.3/2.7)	A1	16	57,000	260	1,000	-
R-445A	zeotrope	R-744/134a/1234ze(E)(6.0/9.0/85.0)	A2 <sup>i</sup>	4.2	16,000	67	930	-
R-446A	zeotrope	R-32/1234ze(E)/600 (68.0/29.0/3.0)	A2 <sup>i</sup>	2.5	16,000	39	960	-
R-447A	zeotrope	R-32/125/1234ze(E) (68.0/3.5/28.5)	A2 <sup>i</sup>	2.6	16,000	42	900	-
R-30	CH <sub>2</sub> Cl <sub>2</sub>	dichloromethane (methylene chloride)	B1	-	-	-	-	-
R-40	CH <sub>3</sub> Cl	chloromethane (methyl chloride)	B2	-	-	-	-	-
R-50	CH <sub>4</sub>	methane	A3	-	-	-	1,000	-
R-443A	zeotrope	R-1270/290/600a (55.0/40.0/5.0)	A3	0.19	1,700	3.1	580	-
R-444A	zeotrope	R-32/152a/1234ze(E) (12.0/5.0/83.0)	A2 <sup>i</sup>	5.1	21,000	81	850	-
R-445A	zeotrope	R-744/134a/1234ze(E) (6.0/9.0/85.0)	A2 <sup>i</sup>	4.2	16,000	67	930	-
R-610	ethoxyethane (ethyl ether)	CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	-	-	-	-	400	-
R-611	methyl	HCOOCH <sub>3</sub>	B2	-	-	-	100	-

	formate							
R-451A	zeotrope	R-1234yf/134a (89.8/10.2)	A2f	5.3	18,000	81	520	-
R-451B	zeotrope	R-1234yf/134a (88.8/11.2)	A2f	5.3	18,000	81	530	-
R-452A	zeotrope	R-32/125/1234yf (11.0/59.0/30.0)	A1	27	100,000	440	780	-
R-513A	azeotrope	R-1234yf/134a (56.0/44.0)	A1	20	72,000	320	650	-

(Portions of table not shown remain unchanged)

For SI: 1 pound = 0.454 kg, 1 cubic foot = 0.0283 m<sup>3</sup>.

- Degrees of hazard are for health, fire, and reactivity, respectively, in accordance with NFPA 704.
- Reduction to 1-0-0 is allowed if analysis satisfactory to the code official shows that the maximum concentration for a rupture or full loss of refrigerant charge would not exceed the IDLH, considering both the refrigerant quantity and room volume.
- For installations that are entirely outdoors, use 3-1-0.
- Class I ozone depleting substance; prohibited for new installations.
- Occupational Exposure Limit based on the OSHA PEL, ACGIH TLV-TWA, the AIHATERA WEEL or consistent value on a time-weighted average (TWA) basis (unless noted C for ceiling) for an 8 hr/d and 40 hr/wk.
- The ASHRAE Standard 34 flammability classification for this refrigerant is 2L, which is a subclass of Class 2.

**Reason:** The Refrigerant Classifications (except Degrees of Hazard) are determined by ASHRAE SSPC 34 and published in ASHRAE Standard 34. This proposal seeks to update the refrigerant table with the new refrigerants added to Standard 34 since the last code cycle. The reasons for the additions of new refrigerants can be found at <https://www.ashrae.org/standards-research-technology/standards-addenda>. The following four addenda may not be published by the time this monograph is published, so here is the information related to those refrigerants. No review comments were received during the public comment period and expected to be reviewed for publication approval at the end of January 2015.

R-451A: The recommended flammability classification 2 (2L in Standard 34 per footnote f of this table) is based on an LFL of 7.0 vol. %, a heat of combustion of 9790 kJ/kg (4209 Btu/lb), and a burning velocity less than 4 cm/s. The recommended toxicity classification A is based on an adopted OEL of 520 ppm v/v. The recommended ATEL is 100,000 ppm v/v.

R-451B: The recommended flammability classification 2 (2L in Standard 34 per footnote f of this table) is based on an LFL of 7.0 vol. %, a heat of combustion of 9790 kJ/kg (4209 Btu/lb), and a burning velocity less than 4 cm/s. The recommended toxicity classification A is based on an adopted OEL of 530 ppm v/v. The recommended ATEL is 100,000 ppm v/v.

R-513A: The recommended flammability classification is 1. The recommended toxicity classification A is based on an adopted OEL of 650 ppm v/v. The recommended ATEL is 72,000 ppm v/v.

R-452A: The recommended flammability classification is 1. The recommended toxicity classification A is based on an adopted OEL of 780 ppm v/v. The recommended ATEL is 100,000 ppm v/v.

Additionally, three small/significant figure edits or corrections have been made to R-436B (8.1 g/m<sup>3</sup> should be 8.2 g/m<sup>3</sup> for consistency), R-1270 (the lbs/1000 cf changes from 0.1 to 0.11 due to significant digits in the analysis by SSPC 34), and the WEELs (workplace environmental exposure levels) which were previously issued by the American Industrial Hygiene Association (AIHA) are now set by The Toxicology Excellence for Risk Assessment (TERA) Occupational Alliance for Risk Science (see addendum d to ASHRAE Standard 34-2013 for more information).

If approved, the intent is for the refrigerants in this table to be re-organized in numerical order.

**Bibliography:** ASHRAE Standard 24-2013

**Cost Impact:** Will not increase the cost of construction

This proposal only classifies refrigerants. How a refrigerant is classified has no impact on the cost of construction.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

### Final Action Results

**M116-15**

**AS**

## Code Change No: **M118-15**

### Original Proposal

#### Section: 1104.2.2

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration

#### Revise as follows:

**1104.2.2 Industrial occupancies and refrigerated rooms.** This section applies only to industrial occupancies and refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. ~~Machinery rooms are~~ Where a machinery room would otherwise be required by Section 1104.2, a machinery room shall not be required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into *approved* building exits, the minimum floor area shall not apply.
4. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
5. Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
6. All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
7. All refrigerant-containing parts in systems exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Reason:** The proposal clarifies that Section 1104.2.2 only applies when a machinery room is otherwise required. As currently written, the code could be interpreted such that the special regulations in 1104.2.2 are applicable even if a machinery room weren't otherwise required, such as a case where the primary refrigerant is a brine solution. This revision will make it clear that this is not a proper application of the IMC.

**Cost Impact:** Will not increase the cost of construction  
The proposal only clarifies the intended application of the current provisions.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M118-15**

**AS**

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## Code Change No: **M119-15**

### Original Proposal

**Section(s):** 1104.2.2, 202 (New)

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

**Add new definition as follows:**

#### SECTION 202 DEFINITIONS

**LOW-PROBABILITY PUMP.** A pump that does not rely on a dynamic shaft seal as a singular means of containment to prevent atmospheric release of the pumped fluid.

**Revise as follows:**

**1104.2.2 Industrial occupancies and refrigerated rooms.** This section applies only to industrial occupancies and refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. Machinery rooms are not required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into *approved* building exits, the minimum floor area shall not apply.
4. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
5. Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
6. All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
7. All refrigerant-containing parts in systems with a total connected compressor power exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; low-probability pumps; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Reason:** The modification of the 100 HP power threshold in Item 7 clarifies that this is compressor drive power, which is the terminology used in IAR 2 Section 4.2.3 and ASHRAE 15 Section 7.2.2(g). The change ensures that the drive power for liquid pumps and other motorized equipment attached to the system is not improperly added.

Recognition of low-probability pumps acknowledges the superior leak resistance of these pumps and encourages their use to increase safety. The approach is modeled after the current IMC approach for low-probability systems, as defined in Chapter 2.

Because low-probability systems are inherently more resistant to atmospheric releases than high-probability systems, the IMC permits more widespread use of low-probability systems. With respect to pumps, experience has shown that pump leaks are typically associated with failed seals on rotating (dynamic) parts, which can result in events ranging from a simple nuisance release

to a hazardous condition requiring an emergency response. This proposal will encourage the use of pumps that are hermetically sealed or similar in lieu of pumps that rely on dynamic seals to contain refrigerant..

**Cost Impact:** Will not increase the cost of construction

The proposal will not increase the cost of construction because the first portion of the change is a clarification of current provisions, and the second portion of the change is an optional path to compliance. Standard pumps will continue to be permitted when they are located in refrigerant machinery rooms.

**Report of Committee Action  
Hearings**

**Committee Action:**

**As Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Jeffrey Shapiro, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com) requests Approve as Modified by this Public Comment.**

**Modify as follows:**

**SECTION 202  
DEFINITIONS**

**LOW-PROBABILITY PUMP.** A pump that does not rely on a dynamic shaft seal as a singular means of containment is designed to prevent atmospheric release of the pumped fluid by one of the following methods:

1. The pump is permanently sealed.
2. The pump incorporates a static seal.
3. The pump incorporates not less than two sequential dynamic shaft seals to isolate the pumped fluid from atmosphere at shaft penetrations and automatically shuts down upon failure of any seal.

**Commenter's Reason:** The definition of low-probability pump is based on correlation with IAR 2, and the definition in IAR 2 was updated following approval of M119 in Memphis. This proposal updates the proposed IMC text to maintain correlation between the IMC and IAR 2.

**Final Action Results**

**M119-15**

**AMPC1**

## Code Change No: **M120-15**

### Original Proposal

#### Section: 1104.2.2

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

#### Revise as follows:

**1104.2.2 Industrial occupancies and refrigerated rooms.** This section applies only to industrial occupancies and refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. Machinery rooms are not required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
- ~~3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into approved building exits, the minimum floor area shall not apply.~~
- 4 3. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
- ~~5~~ 4 Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
- ~~6~~ 5 All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
- ~~7~~ 6 All refrigerant-containing parts in systems exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Reason:** The section proposed for deletion is archaic, makes no sense, and doesn't typically apply because the second sentence largely negates the first. Simply by having a direct outside exit or an "approved" building exit (why would an exit not be approved, and how is a building exit different than an exit?), the occupant density limit is waived. Nevertheless, there is no logical reason for this section to establish a maximum occupancy limit based on providing a minimum floor area per occupant simply because someone is in a refrigerated area. Note that fixing a hard limit on the number of people permitted in an industrial space is very different than a typical occupant load calculation that is only for the purpose of designing the required means of egress.

**Cost Impact:** Will not increase the cost of construction

The proposal is unlikely to impact the cost of construction because the deleted text is probably never applied anyway.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M120-15**

**AS**

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## Code Change No: **M121-15**

### Original Proposal

#### Section(s): 1104.2.2

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

#### Revise as follows:

**1104.2.2 Industrial occupancies and refrigerated rooms.** This section applies only to industrial occupancies and refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. Machinery rooms are not required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into *approved* building exits, the minimum floor area shall not apply.
4. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.

#### Exceptions:

1. Refrigerant detectors are not required in unoccupied areas that contain only continuous piping that does not include valves, valve assemblies, equipment, or equipment connections.
2. Where approved alternatives are provided, refrigerant detectors are not required for rooms or areas that are always occupied, and for rooms or areas that have high humidity or other harsh environmental conditions that are incompatible with detection devices.
5. Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
6. All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
7. All refrigerant-containing parts in systems exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Reason:** The proposed exceptions are derived from IIAR 2. In areas that only contain fixed piping, there are no expected leak sources, so detection is unnecessary regardless of the refrigerant type. This is not unlike how the IFC and IBC don't count quantities of some materials in piping systems towards MAQ amounts. The proposed exception recognizing alternative detection protocols for ammonia in areas that are continuously occupied and areas where the environmental conditions would damage or diminish the reliability of fixed detectors provides flexibility for the mechanical code official and the designer to accommodate conditions that sometimes arise for specific applications and facilities. Because of ammonia's strong self-alarming odor, it is common for facilities to have emergency plans in place that respond to an ammonia odor, which is detectable at a fraction of the

thresholds at which a health or fire hazard may occur.

**Cost Impact:** Will not increase the cost of construction

The proposed exceptions are optional. Therefore they will never increase the cost of construction. The cost of construction may decrease depending on whether the exceptions provide a more cost effective option for leak detection.

<b>Report of Committee Action Hearings</b>
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**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

This section applies only to industrial occupancies and refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. Machinery rooms are not required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into *approved* building exits, the minimum floor area shall not apply.
4. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.

**Exceptions:**

1. Refrigerant detectors are not required in unoccupied areas that contain only continuous piping that does not include valves, valve assemblies, equipment, or equipment connections.
2. Where approved alternatives are provided, refrigerant detectors for ammonia refrigeration are not required for rooms or areas that are always occupied, and for rooms or areas that have high humidity or other harsh environmental conditions that are incompatible with detection devices.
5. Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
6. All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
7. All refrigerant-containing parts in systems exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification limits the exception to ammonia which was the intent and which is consistent with ASHRAE 15.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M121-15**

**AM**

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## Code Change No: **M122-15**

### Original Proposal

#### Section: 202, 1104.2.2

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

#### Delete without substitution:

~~**REFRIGERATED ROOM OR SPACE.** A room or space in which an evaporator or brine coil is located for the purpose of reducing or controlling the temperature within the room or space to below 68°F (20°C).~~

#### Revise as follows:

**1104.2.2 Industrial occupancies and refrigerated rooms.** This section applies only to rooms and spaces that are within industrial occupancies, that contain a refrigerant evaporator, that are maintained at temperatures below 68°F (20°C) and refrigerated rooms that are used for manufacturing, food and beverage preparation, meat cutting, other processes and storage.

Machinery rooms are not required where all of the following conditions are met:

1. The space containing the machinery is separated from other occupancies by tight construction with tight-fitting doors.
2. Access is restricted to authorized personnel.
3. The floor area per occupant is not less than 100 square feet (9.3 m<sup>2</sup>) where machinery is located on floor levels with exits more than 6.6 feet (2012 mm) above the ground. Where provided with egress directly to the outdoors or into *approved* building exits, the minimum floor area shall not apply.
4. Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.
5. Surfaces having temperatures exceeding 800°F (427°C) and open flames are not present where any Group A2, B2, A3 or B3 refrigerant is used (see Section 1104.3.4).
6. All electrical *equipment* and appliances conform to Class 1, Division 2, *hazardous location* classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.
7. All refrigerant-containing parts in systems exceeding 100 horsepower (hp) (74.6 kW) drive power, except evaporators used for refrigeration or dehumidification; condensers used for heating; control and pressure relief valves for either; and connecting piping, shall be located either outdoors or in a *machinery room*.

**Reason:** The definition that is proposed for deletion only applies to Section 1104.2.2, and it makes more sense to incorporate the criteria of the definition into the section than to have them remotely located in Chapter 2. There is a related requirement in IBC Section 1006.2.3, and the IBC approach of incorporating the criteria into the code text vs. using a definition is the approach modeled by this proposal. From a technical perspective, this change eliminates the mentioning of brine solution as being the source of temperature control for application of IMC 1104.2.2. UBC 1006.2.3 mentions only evaporators as a source for temperature control, not brine, and this makes sense given that brine is simply a salt water solution and doesn't present a hazard that warrants any special controls from a code/safety perspective.

**Cost Impact:** Will not increase the cost of construction

The proposal is simply a clean up of code text and a correlation of the IMC to the IBC. It will not increase the cost of construction.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M122-15**

**AS**

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## Code Change No: **M123-15**

### Original Proposal

**Section(s):** 1105.6.1.1 (New)

**Proponent:** Guy McMann, Jefferson County, Colorado., representing Colorado Association of Plumbing and Mechanical Officials (CAPMO) (gmcmann@jeffco.us)

**Add new text as follows:**

**1105.6.1.1 Indoor exhaust opening location.** Indoor mechanical exhaust intake openings shall be located where refrigerant leakage is likely to concentrate based on the refrigerant's relative density to air. Air current paths and machinery location shall be accounted for in locating such intake openings.

**Reason:** Although the code addresses openings when equipment is located outdoors, it is silent where dealing with exhaust duct opening locations inside the machinery room. This will be very helpful to inspectors providing guidance when they examine openings in the machinery room. Similar language can be found in ASHRAE-15.

**Cost Impact:** Will not increase the cost of construction

There will be no additional cost as this is only an editorial modification and clarification. This proposal contains no new requirements.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**1105.6.1.1 Indoor exhaust opening location.** Indoor mechanical exhaust intake openings shall be located where refrigerant leakage is likely to concentrate based on the refrigerant's relative density to air. ~~Air, the location of the air~~ current paths and ~~refrigerating~~ machinery location shall be accounted for in locating such intake openings.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification is for consistency with ASHRAE 15 text format and also clarifies that "machinery" is specific to refrigeration machinery.

**Assembly Action:**

**None**

### Final Action Results

**M123-15**

**AM**

<b>Code Change No: M124-15</b>
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<b>Original Proposal</b>
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**Section: 1105.6.3**

**Proponent:** Jeffrey Shapiro, International Institute of Ammonia Refrigeration, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

**Revise as follows:**

**1105.6.3 Ventilation rate.** For other than ammonia systems, the mechanical ventilation systems shall be capable of exhausting the minimum quantity of air both at normal operating and emergency conditions, as required by Sections 1105.6.3.1 and 1105.6.3.2. The minimum required emergency ventilation rate for ammonia shall be 30 air changes per hour in accordance with IAR2. Multiple fans or multispeed fans shall be allowed to produce the emergency ventilation rate and to obtain a reduced airflow for normal ventilation.

**Reason:** Clarifies that the 30 air change per hour ventilation rate for ammonia is the emergency ventilation rate.

**Cost Impact:** Will not increase the cost of construction

The proposal is a clarification of the current requirements and will not affect the cost of construction.

<b>Report of Committee Action Hearings</b>
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**Committee Action:****Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements. The proposal makes a critical distinction.

**Assembly Action:****None**

<b>Final Action Results</b>
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**M124-15****AS**

**Code Change No: M128-15**

**Original Proposal**

**Section(s): 1107.2**

**Proponent:** Maureen Traxler, Seattle Dept of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee (maureen.traxler@seattle.gov)

**Revise as follows:**

**1107.2 Piping location.** Refrigerant piping that crosses an open space that affords passageway in any building shall be not less than 7 feet 3 inches (2210 mm) above the floor unless the piping is located against the ceiling of such space. Refrigerant piping shall not be placed in any of the following:

1. A fire-resistance-rated exit access corridor.
2. An interior exit stairway.
3. An interior exit ramp.
4. An exit passageway.
5. An elevator, dumbwaiter or other shaft containing a moving object or in any.
6. ~~A shaft that has openings to living quarters one or to means of egress. Refrigerant piping shall not be installed in an enclosed public stairway more openings into a dwelling unit or sleeping unit.~~
7. A shaft that has one or more openings into a fire-resistance-rated exit access corridor, interior exit stairway landing or ramp, or means of egress exit passageway.

**Reason:** The current code prohibits refrigerant piping in "means of egress" and in shafts with openings into "means of egress." The IBC definition is "A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way...." In other words, the means of egress includes all occupied spaces in a building, so prohibiting refrigerant piping in the means of egress means it's prohibited almost everywhere. Section 1107.2 is copied from ASHRAE 15 but this proposal gives it a reasonable interpretation that identifies specific locations where refrigerant piping is prohibited, and allows it to be installed in occupied buildings. This proposal is meant as an interpretation of the term "means of egress" as used in the ASHRAE language, without changing the intended meaning of the term.

**Cost Impact:** Will not increase the cost of construction

This proposal does not increase the cost of construction because it merely interprets an ambiguous term that is in the current code.

**Report of Committee Action Hearings**

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposal does not address living quarters. The term "exit" could condense items 1 through 4 into a single item. The terminology is inconsistent with the IBC.

**Assembly Action:**

**None**

## Public Comments

### Public Comment:

Jeffrey Shapiro, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com); Maureen Traxler, representing Washington Assn of Building Officials Technical Code Committee (maureen.traxler@seattle.gov); Julius Ballanco, representing Self (JBENGINEER@aol.com) requests Approve as Modified by this Public Comment.

### Modify as follows:

**1107.2 Piping location.** Refrigerant piping that crosses an open space that affords passageway in any building shall be not less than 7 feet 3 inches (2210 mm) above the floor unless the piping is located against the ceiling of such space. Refrigerant piping shall not be placed in any of the following:

1. A fire-resistance-rated exit access corridor.
2. An interior exit stairway.
3. An interior exit ramp.
4. An exit passageway.
5. An elevator, dumbwaiter or other shaft containing a moving object.
6. A shaft that has one or more openings into a ~~dwelling unit or sleeping unit.~~
7. ~~A shaft that has one or more openings into a~~ fire-resistance-rated exit access corridor, interior exit stairway or ramp, or exit passageway.

### Commenter's Reason:

**SHAPIRO:** The intent of this proposal is primarily to correct an error in the code. When the provisions in Section 1107.2 were first included in the code, the term "means of egress" was used differently. When the code changed to use a 3-part means of egress (exit access, exit and exit discharge), this section should have been updated to correlate, but it was not. The proposal, as modified by this public comment, provides the necessary update and clarifies that regulations for locating refrigerant piping are only intended to apply to the exit portion of the 3-part means of egress (not the exit access or exit discharge).

When this item was discussed by the committee, it was suggested that Items 1-4 of the proposal could be replaced by the term "exit" to simplify the text, but this is not correct because there are some exit components that are not intended to be captured by Items 1-4, such as exterior exits. Although consolidation is nice when possible, the separate items listed in the public comment are necessary to accurately reflect how the code should be applied.

With respect to committee's comments regarding the exclusion of "living quarters" and terminology issues, there was no intent in the original proposal to fix anything other than the "means of egress" concern. Nevertheless, we attempted to deal with this during the discussion, and things became confused, which led to the disapproval recommendation. Upon further consideration, it is clear that the current provisions that prohibit installation of refrigerant piping in shafts serving dwelling or sleeping areas, living quarters, etc. are unnecessary. Refrigerant concentration limits in ASHRAE 15 already limit refrigerant quantities such that a release into the smallest occupied space will not create an acute health risk for occupants. So, such a release into a shaft connecting to an occupied space, which is an even lesser risk than a release directly into a sleeping area, is likewise not a health risk. Thereby this comments recommends a revision to delete the unnecessary text.

**TRAXLER/BALLANCO:** The primary purpose of this code change proposal was to clarify what is meant by "means of egress." Items 1-4 in the proposal clearly specify which elements of a means of egress are prohibited as locations for refrigerant piping. The Committee suggested that items 1-4 could be collapsed under the term "exit." However, since item

Most of the discussion before the Code Development Committee, however, was about "living quarters" and "dwelling units." Some people said the proposed change in terminology would broaden the restrictions on location of refrigerant piping, while others said the change added clarity. On further consideration, we believe the limitation on location of refrigerant piping in shafts with openings into either living quarters or dwelling and sleeping units is onerous and antiquated.

Ballanco: ASHRAE 15 is currently undergoing revisions to correlate with the Building and Mechanical Code. It was recognized that the text used to describe where refrigerant piping cannot be installed was confusing and inconsistent with Building Code language. This proposed change will clarify where refrigerant piping cannot be installed. The modification cleans up the proposal such that it is consistent with ASHRAE 15.

## Final Action Results

M128-15

AMPC1



**Code Change No: M130-15**

**Original Proposal**

**Section: 1107.5.2**

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

**Revise as follows:**

**1107.5.2 Copper and ~~brass~~ copper-alloy pipe.** Standard iron-pipe size, copper and ~~red brass~~ (copper-alloy (not less than 80-percent copper) pipe shall conform to ASTM B 42 and ASTM B 43.

**Reason:** The proposal removes brass because brass is a copper alloy.

**Cost Impact:** Will not increase the cost of construction  
This proposal is updating the name of the materials used in the field and will not impact the cost of construction.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M130-15**

**AS**

**Code Change No: M132-15**

**Original Proposal**

**Section: 1107.5.3, Chapter 15**

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

**Revise as follows:**

**1107.5.3 Copper tube.** Copper tube used for refrigerant piping erected on the premises shall be seamless copper tube of Type ACR (hard or annealed) complying with ASTM B 280. ~~Where approved, copper tube for refrigerant piping erected on the premises shall be seamless copper tube of Type K, L or M (drawn or annealed) in accordance with ASTM B 88~~**B819**. Annealed temper copper tube shall not be used in sizes larger than a 2-inch (51 mm) nominal size. Mechanical joints shall not be used on annealed temper copper tube in sizes larger than -inch (22.2 mm) OD size.

**Add new standard(s) as follows:**

ASTM B819-00 (R2011) Standard Specification for Seamless Copper Tube for Medical Gas Systems

**Reason:** I am deleting the where approved sentence, because it is confusing and may cause issues for the refrigeration system. ASTM B88 tube is not cleaned or capped by the manufacture and it would not be specified by a registered design professional. It would only be used as a repair or quick fix and not inspected.

**Cost Impact:** Will not increase the cost of construction  
 This proposal is adding a standard that is used in the field and will have no impact on the cost of construction.

**Analysis:** A review of the standard proposed for inclusion in the code, ASTM B819, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M132-15**

**AS**

## Code Change No: **M133-15**

### Original Proposal

**Section(s):** 1107.5.3

**Proponent:** Jay Peters, representing Cerro Flow Products (peters.jay@me.com)

**Revise as follows:**

**1107.5.3 Copper tube.** Copper tube used for refrigerant piping erected on the premises shall be seamless copper tube of Type ACR (hard or annealed) complying with ASTM B 280. Where *approved*, copper tube for refrigerant piping erected on the premises shall be seamless copper tube of Type K, L or M (drawn or annealed) in accordance with ASTM B 88. Annealed temper copper tube shall not be used in sizes larger than a 2-inch (51 mm) nominal size. Mechanical joints, other than press-connect joints, shall not be used on annealed temper copper tube in sizes larger than 7/8-inch (22.2 mm) OD size.

**Reason:** Press-connect joints and fittings specifically manufactured for refrigerant pipe and tube connections (including soft annealed copper) have been tested by Underwriters Laboratories (UL) on sizes larger than 7/8" to meet UL 207, already referenced in the IMC. This technology is *listed* by both ICC ES PMG and UL to meet the requirements of the International Mechanical Code and the Uniform Mechanical Code. The term was changed to match the terminology used in the industry and the ASTM standard from *press joint* to *press-connect joint*. A proposal to edit the definition to match this term has also been proposed to the IMC.

**Cost Impact:** Will not increase the cost of construction

This new technology has great potential to save construction costs by drastically reducing labor costs as well as potential damage caused by typical brazing and soldering flames.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**1107.5.3 Copper tube.** Copper tube used for refrigerant piping erected on the premises shall be seamless copper tube of Type ACR (hard or annealed) complying with ASTM B 280. Where approved, copper tube for refrigerant piping erected on the premises shall be seamless copper tube of Type K, L or M (drawn or annealed) in accordance with ASTM B 88. Annealed temper copper tube shall not be used in sizes larger than a 2-inch (51 mm) nominal size. Mechanical joints, other than press-connect joints listed for refrigerant piping, shall not be used on annealed temper copper tube in sizes larger than 7/8-inch (22.2 mm) OD size.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification clarifies that the code is referring only to press-connect joints that are listed for refrigerant piping applications.

**Assembly Action:**

**None**

### Final Action Results

**M133-15**

**AM**

**Code Change No: M135-15**

**Original Proposal**

**Section:** Table 1202.4, Table 1210.4

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

**Revise as follows:**

**TABLE 1202.4  
HYDRONIC PIPE**

MATERIAL	STANDARD (see Chapter 15)
Cross-linked polyethylene (PEX) tubing	ASTM F 876; ASTM F 877

*(Portions of table not shown remain unchanged)*

**TABLE 1210.4  
GROUND-SOURCE LOOP PIPE**

MATERIAL	STANDARD (see Chapter 15)
Cross-linked polyethylene (PEX)	ASTM F 876; ASTM F 877; CSA B137.5

*(Portions of table not shown remain unchanged)*

**Reason:** ASTM F877 has been revised a few years ago to remove the redundant pipe/tubing dimensional and performance specifications which are otherwise specified in ASTM F876. F877 remains a PEX fitting and PEX system materials and performance standard exclusive for use with ASTM F876 piping/tubing.

**Cost Impact:** Will not increase the cost of construction.

This proposal simply deletes a standard that is no longer pipe or tubing related from the code. The piping material is now covered by a different standard, and as such, the option is not deleting or adding a material. Thus the code with this proposal added will not cause the cost of construction to increase. ASTM F877 is already in the code.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M135-15**

**AS**

**Code Change No: M136-15**

**Original Proposal**

**Section:** Table 1202.4, Table 1210.4, Chapter 15

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

**Revise as follows:**

**TABLE 1202.4  
HYDRONIC PIPE**

MATERIAL	STANDARD (see Chapter 15)
Raised temperature polyethylene (PE-RT)	ASTM F 2623; ASTM F 2769; <u>CSA B137.18</u>

*(Portions of table not shown remain unchanged)*

**TABLE 1210.4  
GROUND-SOURCE LOOP PIPE**

MATERIAL	STANDARD (see Chapter 15)
Raised temperature polyethylene (PE-RT)	ASTM F 2623; <u>ASTM F2769</u> ; <u>CSA B137.18</u>

*(Portions of table not shown remain unchanged)*

**Add new standard(s) as follows:**

CSA B137.18 - 13 Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications.

**Reason:** CSA B137.18 - Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications is a new consensus standard for tubing and fittings. The scope of the standard includes ground source geothermal systems and hydronic heating systems. ASTM F2769 is a standard for PE-RT systems which is currently referenced in the IMC for other applications and can be used for ground source loop pipe and hydronic pipe.

**Cost Impact:** Will not increase the cost of construction.

This change is to simply add reference to a new standard to the Code. There is no cost impact in adding the new standard. This change just permits an option to meet a different standard than the current reference standards.

**Analysis:** A review of the standard proposed for inclusion in the code, CSA B137.18, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M136-15**

**AS**

**Code Change No: M137-15**

**Original Proposal**

**Section(s):** Table 1202.5, CHAPTER 15

**Proponent:** William Chapin, Professional Code Consulting, LLC, representing Professional Code Consulting, LLC (bill@profcc.us)

**Revise as follows:**

**TABLE 1202.5 (1202.5)  
HYDRONIC PIPE FITTINGS**

MATERIAL	STANDARD (see Chapter 15)
Copper and copper alloys	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.26; ASTM F 1974; ASTM B16.24; ASME B16.51; <u>ASSE 1061</u>
Ductile iron and gray iron	ANSI/AWWA C110/A21.10; AWWA C153/A21.53; ASTM A 395; ASTM A 536; ASTM F 1476; ASTM F 1548
Ductile iron	ANSI/AWWA C153/A21.53
Gray iron	ASTM A 126
Malleable iron	ASME B16.3
PE-RT fittings	ASTM F 1807; ASTM F 2098; ASTM F 2159; ASTM F 2735; ASTM F 2769; <u>ASSE 1061</u>
PEX fittings	ASTM F 877; ASTM F 1807; ASTM F 2159; <u>ASSE 1061</u>
Plastic	ASTM D 2466; ASTM D 2467; ASTM F 438; ASTM F 439; ASTM F 877; ASTM F 2389; ASTM F 2735
Steel	ASME B16.5; ASME B16.9; ASME B16.11; ASME B16.28; ASTM A 53; ASTM A 106; ASTM A 234; ASTM A 420; ASTM A 536; ASTM A 395; ASTM F 1476; ASTM F 1548

**Add new standard(s) as follows:**

ASSE 1061-2011 Performance Requirements for Push Fit Fittings.

**Reason:** ASSE 1061 Performance Requirements for Push Fit Fittings was originally published in 2006 and referenced in the 2009 IPC. These fittings have been used in the industry for over 15 years.

**Cost Impact:** Will not increase the cost of construction  
Proposal addresses fittings and methods already used in the industry.

**Analysis:** A review of the standard proposed for inclusion in the code, ASSE-1061, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action  
Hearings**

**Committee Action:**

**As Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Public Comments**

*Public Comment:*

**Gary Morgan, representing Viega LLC (gary.morgan@viega.us) requests Approve as Modified by this Public Comment.**

**Further modify as follows:**

**1203.11 Cross-linked polyethylene (PEX) plastic tubing.** Joints between cross-linked polyethylene plastic tubing and fittings shall conform to Sections 1203.11.1, 1203.11.2 and ~~1203.11.3~~1203.11.3. Mechanical joints shall conform to Section 1203.3.

**1203.11.1 Compression-type fittings.** Where compression-type fittings include inserts and ferrules or O-rings, the fittings shall be installed without omitting the inserts and ferrules or O-rings.

**1203.11.2 Plastic-to-metal connections.** Soldering on the metal portion of the system shall be performed not less than 18 inches (457 mm) from a plastic-to-metal adapter in the same water line.

**1203.11.3 Push-fit Joints.** Push-fit joints that create a seal on the outside diameter of the tubing shall not be used with tubing that has an EVOH oxygen barrier layer.

**1203.16 Raised temperature polyethylene (PE-RT) plastic tubing.** Joints between raised temperature polyethylene tubing and fittings shall conform to Sections 1203.16.1, 1203.16.2 and ~~1203.16.3~~1203.16.3. Mechanical joints shall conform to Section 1203.3.

**1203.16.1 Compression-type fittings.** Where compression-type fittings include inserts and ferrules or O-rings, the fittings shall be installed without omitting the inserts and ferrules or O-rings.

**1203.16.2 PE-RT-to-metal connections.** Solder joints in a metal pipe shall not occur within 18 inches (457 mm) of a transition from such metal pipe to PE-RT pipe.

**1203.16.3 Push-fit Joints.** Push-fit joints that create a seal on the outside diameter of the tubing shall not be used with tubing that has an EVOH oxygen barrier layer.

**Commenter's Reason:** The proponent of this proposal also proposed a floor amendment to address a concern which exists for using push-to-connect type fittings on hydronic oxygen barrier type PEX and PE-RT tubing containing an EVOH (Ethlene Vinyl Alcohol) layer as the oxygen barrier. The floor modification was a very good one however the technical committee felt that the floor language did not do a good job describing the word "layer" as it pertained specifically to the material of concern in this case the EVOH layer material.

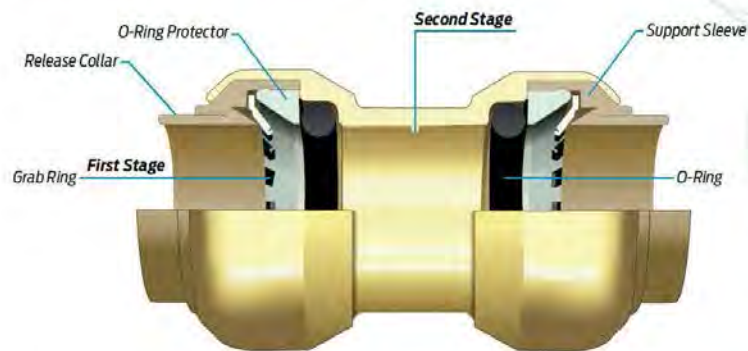
First of all it is widely known and accepted in the hydronics industry that one should never use an OD sealing push-to-connect type fitting on PEX or PE-RT tubing which contains an EVOH layer as the EVOH layer should not be directly exposed to the pressurized water or water/glycol mixture as the EVOH will eventually be dissolved and a potential leak path could allow water to escape between the tube outer wall and the O-Ring seal. All fittings used with EVOH layered PEX or PE-RT hydronic tubing use a fitting design which seals on the ID of the pipe and does not allow the fluid media to come into contact with the EVOH barrier layer.

However it is completely appropriate for ASSE 1061 to be included in the hydronics fittings table as there are other pipe types which do not contain an outer EVOH layer (Copper and CPVC) and also there are PEX and PE-RT tubes used without an EVOH layer in systems where no ferrous materials are used. It is for that reason that I am proposing to include the proponent's original floor modifications with slight additions describing the layer as one of EVOH material in the sections of the code specific to PEX and PE-RT fittings which would then contain the prohibition from using a OD sealing type push-fitting type joint IF an EVOH layer is present. The original floor modification did not define specifically the EVOH as the layer material which could be problematic and therefore the technical committee rejected the amendment because of the unclarity of what it means by "layer". My proposal addresses this concern and that of the original proponent.

Please review the attached illustration document which helps explain exactly the details of what is being discussed here. The first drawing illustration shows what a somewhat typical push-to-connect fitting looks like that uses an O-ring to seal against the outermost surface of the tubing. The second photo illustration shows what PEX looks like with a typical EVOH outer layer. I appreciate your approval of these proposed amendments to M137.

Public Comment: Supporting information  
M137-15 : Adding ASSE 1061 Push-fit fittings to TABLE 1202.5  
HYDRONIC PIPE FITTINGS

The SharkBite® connection system uses an advanced push-fit design that works in two stages. When the tube is inserted into the fitting it passes the first stage through a release collar and then through a stainless steel grab ring. The grab ring has teeth that open out and grip onto the tube. At the second stage the tube is pushed through an o-ring protector which aligns the tube. A specially formulated o-ring is then compressed between the wall of the fitting and the tube before the end of the tube reaches the tube stop.



Drawing Illustration courtesy of Reliance Worldwide - SharkBite® Installation Instructions



Photo Illustration courtesy of Watts Radiant – A Watts Water Technologies Company

### Final Action Results

M137-15

AMPC1



## Code Change No: **M138-15**

### Original Proposal

**Section:** Table 1202.5, Table 1210.5, Chapter 15

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

**Revise as follows:**

**TABLE 1202.5  
HYDRONIC PIPE FITTINGS**

MATERIAL	STANDARD (see Chapter 15)
PE-RT fittings	ASTM F 1807; ASTM F 2098; ASTM F 2159; ASTM F 2735; ASTM F 2769; <u>ASTM D3261</u> ; CSA B137.18; <u>CSA B137.1</u>

*(Portions of table not shown remain unchanged)*

**TABLE 1210.5  
GROUND-SOURCE LOOP PIPE FITTINGS**

PIPE MATERIAL	STANDARD (see Chapter 15)
Raised temperature polyethylene (PE-RT)	ASTM D 3261; ASTM F 1807; ASTM F 2159; CSA B137.1; <u>ASTM F2098</u> ; ASTM F2735; ASTM F2769; <u>CSA B137.18</u>

*(Portions of table not shown remain unchanged)*

**Add new standard(s) as follows:**

CSA B137.18 - 13 Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications.

**Reason:** CSA B137.18 - Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications is a new consensus standard for tubing and fittings is being added to Tables 1202.5 and 1210.5. The scope includes fittings for these applications. CSA B137.1 and ASTM D3261 are being added to Table 1202.5 and are already included in other tables in the IMC and can be used for this application as well. . ASTM F2098, ASTM F2735, and ASTM F2769 are being added to Table 1210.5 and are already referenced in the IMC for PERT fittings for other applications and can be used for this application as well.

**Cost Impact:** Will not increase the cost of construction.

This proposal simply adds an alternative standard for fittings. The actual fittings are similar or the same as the current standards for fittings. No impact on cost.

**Analysis:** A review of the standard proposed for inclusion in the code, CSA B137.18, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M138-15**

**AS**

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**Code Change No: M139-15**

**Original Proposal**

**Section: Table 1202.5**

**Proponent:** Gary Morgan, Viega LLC, representing Viega LLC (gary.morgan@viega.us)

**Revise as follows:**

**TABLE 1202.5  
HYDRONIC PIPE FITTINGS**

<b>MATERIAL</b>	<b>STANDARD (see Chapter 15)</b>
PEX fittings	ASTM F 877; ASTM F 1807; ASTM F 2159; <u>ASTM F1960; ASTM F2080</u>

*(Portions of table not shown remain unchanged)*

**Reason:** Added two additional commonly used PEX fitting standards, F1960 and F2080, to the Table 1202.5. This has clearly been a long-standing oversight.

**Cost Impact:** Will not increase the cost of construction.  
Addition of two more fitting standards to this table has absolutely no impact on the cost of construction.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M139-15**

**AS**

## Code Change No: **M141-15**

### Original Proposal

**Section:** 1203.3.3, Chapter 15

**Proponent:** Marcelo Hirschler, representing The Oatey Corporation (gbhint@aol.com)

**Revise as follows:**

**1203.3.3 Soldered joints.** ~~Joint surfaces~~ Solder joints shall be ~~cleaned~~ made in accordance with ASTM B828. Cut tube ends shall be reamed to the full inside diameter of the tube end. A flux conforming to ASTM B-813-B813 shall be applied. The joint shall be soldered with a solder conforming to ASTM B-32-B32.

**Add new standard(s) as follows:**

ASTM B828 Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings.

**Reason:** This change creates consistency between the IMC and the IPC. The proposed language is identical to that in IPC 605.13.3. As often mechanical and plumbing contractors can be one and the same, this creates uniform practice in the industry.

**Cost Impact:** Will not increase the cost of construction

This proposal simply clarifies surface preparation, which will not increase cost.

**Analysis:** A review of the standard proposed for inclusion in the code, ASTM B828, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

### Final Action Results

**M141-15**

**AS**

**Code Change No: M144-15**

**Original Proposal**

**Section: 1203.5, 1203.6**

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

**Delete without substitution:**

~~**1203.5 Brass pipe.** Joints between brass pipe or fittings shall be brazed, mechanical, threaded or welded joints conforming to Section 1203.3.~~

~~**1203.6 Brass tubing.** Joints between brass tubing or fittings shall be brazed, mechanical or soldered joints conforming to Section 1203.3.~~

**Reason:** Brass is a copper alloy and is covered by section 1203.7 & 1203.8

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction as this change is to remove language covered in section 1203.7 & 1203.8.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M144-15**

**AS**

**Code Change No: M145-15**

**Original Proposal**

**Section:** 202, 1203.8, 1203.8.3

**Proponent:** Curtis Dady, Viega, LLC, representing Viega, LLC (curtis.dady@viega.us)

**Revise as follows:**

**~~PRESS~~ PRESS-CONNECT JOINT.** *(No change to text.)*

**1203.8 Copper or copper-alloy tubing.** Joints between copper or copper-alloy tubing or fittings shall be brazed, mechanical or soldered joints conforming to Section 1203.3, flared joints conforming to Section 1203.8.1, push-fit joints conforming to Section 1203.8.2 or ~~press-type press-connect type~~ joints conforming to Section 1203.8.3.

**1203.8.3 Press-connect joints.** *Press-connect joints* shall be installed in accordance with the manufacturer's instructions.

**Reason:** Harmonize the designation and definition of PRESS-CONNECT fittings and joints throughout the code. Both referenced standards (ANSI LC-4/CSA 6.32 and ASME B16.51) listed in the code use the designation "press-connect" in the title and body of the standard as well as code sections IPC 605.14.5, IRC P2906.18 and IRC G2414.10.2.

**Cost Impact:** Will not increase the cost of construction  
Change is simply for clarity of what is already included.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval was based on the proponent's published reason statements. Approval is consistent with action taken on M8-15.

**Assembly Action:**

**None**

**Final Action Results**

**M145-15**

**AS**

## Code Change No: **M150-15**

### Original Proposal

**Section(s):** 1208.1

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

**Revise as follows:**

**1208.1 General.** Hydronic piping systems shall be tested hydrostatically at one and one-half times the maximum system design pressure, but not less than 100 psi (689 kPa). The duration of each test shall be not less than 15 minutes.

**Exception:** For plastic piping systems, testing with a compressed gas shall be an alternative to hydrostatic testing where compressed air or other gas pressure testing is specifically authorized by all of the manufacturer's instructions for the plastic pipe and fitting products installed at the time the system is being tested, and compressed air or other gas testing is not otherwise prohibited by applicable codes, laws or regulations outside of this code.

**Reason:** PPFA has a new air testing policy, which allows for some limited air testing of plastic piping systems, if a number of conditions are met.

**Bibliography:** PLASTIC PIPE AND FITTINGS ASSOCIATION POLICY ON TESTING PLASTIC PIPE AND FITTINGS INSTALLATIONS WITH COMPRESSED GAS, PPFA, 2014, <http://www.ppfahome.org/ub4.aspx>  
Compressed air or any other compressed gases should not be used for pressure testing plastic plumbing systems.

EXCEPTIONS:

- 1.) With trap seal pull testing, where a completed DWV system is vacuum tested with all of its traps filled with water, and the trap seals are tested with a vacuum typically between one and two inches of water column.
- 2.) For plastic piping systems specifically designed for use with compressed air or gasses;
  - Manufacturers' instructions must be strictly followed for installation, visual inspection, testing and use of the systems,
  - (and)
  - Compressed air or other gas testing is not prohibited by the authority having jurisdiction (AHJ).
- 3.) When compressed air or other gas pressure testing is specifically authorized by the applicable written instructions of the manufacturers of all plastic pipe and plastic pipe fittings products installed at the time the system is being tested and compressed air or other gas testing is not prohibited by the authority having jurisdiction (AHJ).

The manufacturer should be contacted if there is any doubt as to how a specific system should be tested.

**Cost Impact:** Will not increase the cost of construction

This proposal simply adds another option for air testing some specific piping materials into the code and as such, the option is not requiring that this method be chosen. Thus the code with this proposal added will not cause the cost of construction to increase.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**1208.1 General.** Hydronic piping systems shall be tested hydrostatically at one and one-half times the maximum system design pressure, but not less than 100 psi (689 kPa). The duration of each test shall be not less than 15 minutes.

**Exception:** For plastic-PEX piping systems, testing with a compressed gas shall be an alternative to hydrostatic testing where compressed air or other gas pressure testing is specifically authorized by all of the manufacturer's instructions for the plastic PEX pipe and fitting products installed at the time the system is being tested, and compressed air or other gas testing is not otherwise prohibited by applicable codes, laws or regulations outside of this code.

**Committee Reason:** Approval was based on the proponent's published reason statements. The modification limits the air testing to PEX pipe and tubing because such non-rigid polyolefin material does not pose a danger. Products other than PEX are not recommended to be tested with compressed gases.

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M150-15**

**AM**

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## Code Change No: **M152-15**

### Original Proposal

**Section: 1209.3, 1209.3.5 (New)**

**Proponent:** Gary Morgan, Viega LLC, representing Viega LLC (gary.morgan@viega.us)

**Revise as follows:**

### SECTION 1209 EMBEDDED PIPING

**1209.1 Materials.** *(No change to text.)*

**1209.2 Pressurizing during installation.** *(No change to text.)*

**1209.3 Embedded joints.** Joints of pipe or tubing that are embedded in a portion of the building, such as concrete or plaster, shall be in accordance with the requirements of Sections 1209.3.1 through ~~1209.3.4~~ 1209.3.5

**1209.3.1 Steel pipe joints.** *(No change to text.)*

**1209.3.2 Copper tubing joints.** *(No change to text.)*

**1209.3.3 Polybutylene joints.** *(No change to text.)*

**1209.3.4 Polyethylene of raised temperature (PE-RT) joints.** PE-RT tubing shall be installed in continuous lengths or shall be joined by hydronic fittings listed in Table 1202.5.

**1209.3.5 Cross-linked polyethylene (PEX) joints.** PEX tubing shall be installed in continuous lengths or shall be joined by hydronic fittings listed in Table 1202.5.

**Reason:** Addition of the PEX joints section is necessary to be consistent with the previous sections and to be consistent with the allowances given in the PE-RT joints section, 1209.3.4.

**Cost Impact:** Will not increase the cost of construction

The addition of PEX joints in this particular section of the code is really more editorial in nature as PEX is already addressed in the code but is lacking the same treatment as the other piping materials mentioned in 1209.3.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This fixes an oversight in the coverage for PEX joints. Approval is based on the proponent's published reason statement..

**Assembly Action:**

**None**

### Final Action Results

**M152-15**

**AS**

**Code Change No: M153-15**

**Original Proposal**

**Section:** 1209.5, 1209.5.1, 1209.5.2

**Proponent:** Brent Ursenbach, Salt Lake County, representing Utah Chapter ICC (bursenbach@slco.org)

**Revise as follows:**

**1209.5 Thermal barrier required.** Radiant floor heating systems shall be provided with a thermal barrier in accordance with Sections 1209.5.1 through 1209.5.4 and 1209.5.2. Insulation R-values for slab-on-grade and suspended floor installation shall be in accordance with the International Energy Conservation Code.

**Exception:** Insulation shall not be required in engineered systems where it can be demonstrated that the insulation will decrease the efficiency or have a negative effect on the installation.

**Delete without substitution:**

~~**1209.5.1 Slab on grade installation.** Radiant piping utilized in slab on grade applications shall be provided with insulating materials installed beneath the piping having a minimum R-value of 5.~~

~~**1209.5.2 Suspended floor installation.** In suspended floor applications, insulation shall be installed in the joist bay cavity serving the heating space above and shall consist of materials having a minimum R-value of 11.~~

**Reason:** Insulation R-values should be located in the IECC, not the IMC. A search shows these are the only R-values specified in the IMC. Design professionals, code officials, contractors, developers, virtually all involved in the building process look to the IECC for specific thermal performance values. Locating these two sub-sections in the IMC has created considerable confusion. A similar proposal will be submitted in Group B, to add these sub-sections into the IECC where they belong.

**Cost Impact:** Will not increase the cost of construction

This proposal will not increase the cost of construction as it is the first step in re-locating an *existing* insulation requirement from the IMC to the IECC. There is no increase in the R-value of the insulation or the installation labor.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement..

**Assembly Action:**

**None**

**Final Action Results**

**M153-15**

**AS**

## Code Change No: **M154-15**

### Original Proposal

**Section:** Table 1210.4, Table 1210.5, CHAPTER 15

**Proponent:** Jeremy Brown, representing NSF International

**Revise as follows:**

**TABLE 1210.4 (1210.4)**  
**GROUND-SOURCE LOOP PIPE**

MATERIAL	STANDARD (see Chapter 15)
Chlorinated polyvinyl chloride (CPVC)	ASTM D 2846; ASTM F 441; ASTM F 442
Cross-linked polyethylene (PEX)	ASTM F 876; ASTM F 877; CSA B137.5
Polyethylene/aluminum/polyethylene (PE-AL-PE) pressure pipe	ASTM F 1282; CSA B137.9
High-density polyethylene (HDPE)	ASTM D 2737; ASTM D 3035; ASTM F 714; AWWA C901; CSA B137.1; CSA C448; NSF 358-1
Polypropylene (PP-R)	ASTM F 2389; CSA B137.11; <u>NSF 358-2</u>
Polyvinyl chloride (PVC)	ASTM D 1785; ASTM D 2241
Raised temperature polyethylene (PE-RT)	ASTM F 2623

**TABLE 1210.5 (1210.5)**  
**GROUND-SOURCE LOOP PIPE FITTINGS**

PIPE MATERIAL	STANDARD (see Chapter 15)
Chlorinated polyvinyl chloride (CPVC)	ASTM D 2846; ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
Cross-linked polyethylene (PEX)	ASTM F 877; ASTM F 1807; ASTM F 1960; ASTM F 2080; ASTM F 2159; ASTM F 2434; CSA B137.5
Polyethylene/aluminum/polyethylene (PE-AL-PE)	ASTM F 1282; ASTM F 2434; CSA B137.9
High Density Polyethylene (HDPE)	ASTM D 2683; ASTM D 3261; ASTM F 1055; CSA B137.1; CSA C448; NSF 358-1
Polypropylene (PP-R)	ASTM F 2389; CSA B137.11; <u>NSF 358-2</u>
Polyvinyl chloride (PVC)	ASTM D 2464; ASTM D 2466; ASTM D 2467; CSA B137.2; CSA B137.3
Raised temperature polyethylene (PE-RT)	ASTM D 3261; ASTM F 1807; ASTM F 2159; CSA B137.1

**Add new standard(s) as follows:**

NSF 358-2-2012 Polypropylene Pipe & fittings for water-based ground-source "geothermal" heat pump systems

**Reason:** NSF 358-2 Polypropylene Pipe & fittings for water-based ground-source "geothermal" heat pump systems is the American National standard and should be included in these tables. This standard has requirements for material suitability, performance, chemical resistance long term strength and quality assurance requirements related to geothermal products. A copy of this standard will be provided to the committee and may be obtained by anyone else by emailing [brown@nsf.org](mailto:brown@nsf.org).

**Cost Impact:** Will not increase the cost of construction  
Providing an additional option will not increase the cost of construction.

**Analysis:** A review of the standard proposed for inclusion in the code, NSF 358-2 , with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

<b>Report of Committee Action Hearings</b>
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**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement..

**Assembly Action:**

**None**

<b>Final Action Results</b>
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**M154-15**

**AS**

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<b>Code Change No: M157-15</b>
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<b>Original Proposal</b>
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**Section: 1303.1.1**

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

**Revise as follows:**

**1303.1.1 Joints between different piping materials.** Joints between different piping materials shall be made with *approved* adapter fittings. Joints between different metallic piping materials shall be made with *approved* dielectric fittings or ~~brass-copper-alloy~~ converter fittings.

**Reason:** The proposal removes brass because brass is a copper-alloy and copper-alloy is the term used to identify materials manufactured where copper is the base metal and includes brass and bronze.

**Cost Impact:** Will not increase the cost of construction

This proposal will not impact the cost of construction, as the change is only to update the name of the material.

<b>Report of Committee Action Hearings</b>
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**Committee Action:****Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement..

**Assembly Action:****None**

<b>Final Action Results</b>
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**M157-15****AS**

**Code Change No: M158-15**

**Original Proposal**

**Section: 1303.4, 1303.5**

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

**Delete without substitution:**

~~**1303.4 Brass pipe.** Joints between brass pipe or fittings shall be brazed, mechanical, threaded or welded joints complying with Section 1303.3.~~

~~**1303.5 Brass tubing.** Joints between brass tubing or fittings shall be brazed or mechanical joints complying with Section 1303.3.~~

**Reason:** The proposal removes brass section because brass is a copper-alloy and copper-alloy is used to identify materials manufactured where copper is the base metal including brass and bronze. The brass sections are not necessary because the joining types are the same in the copper and copper-alloy pipe and tubing sections.

**Cost Impact:** Will not increase the cost of construction  
This proposal will not impact the cost of construction as it is updating the name of the material.

**Report of Committee Action Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement..

**Assembly Action:**

**None**

**Final Action Results**

**M158-15**

**AS**

## Code Change No: **M159-15**

### Original Proposal

**Section:** 1402.4, 1402.4.1

**Proponent:** Marcelo Hirschler, representing GBH International (gbhint@aol.com)

**Revise as follows:**

**1402.4 Roof-mounted collectors.** Roof-mounted solar collectors that also serve as a roof covering shall conform to the requirements for roof coverings in accordance with the *International Building Code*.

**Exception:** The use of plastic solar collector covers shall be limited to those approved light transmitting plastics meeting the requirements for plastic roof panels in Section 2609 of the *International Building Code*.

**1402.4.1 Collectors mounted above the roof.** Where mounted on or above the roof covering, the collector array and supporting construction shall be constructed of noncombustible materials or fire-retardant-treated wood conforming to the *International Building Code* to the extent required for the type of roof construction of the building to which the collectors are accessory.

**Exception:** The use of plastic solar collector covers shall be limited to those approved light transmitting plastics meeting the requirements for plastic roof panels in Section 2609 of the *International Building Code*.

**Reason:** Plastic roof panels are regulated by section 2609 of the IBC and that section addresses "light transmitting plastic" roof panels. As light transmitting materials the plastics need to meet section 2606 of the IBC and the fire properties need to comply with Class CC1 or CC2 of section 2606.4. This proposal ties in with the change to the definition of "plastic, approved" to "light transmitting plastic, approved" in the IBC.

**Cost Impact:** Will not increase the cost of construction  
Clarification

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statement. The proposal provides a necessary link to the IBC.

**Assembly Action:**

**None**

### Final Action Results

**M159-15**

**AS**

## Code Change No: M1-16

### Original Proposal

**Section:** [F] 502.4, [F] 502.4.1, [F] 502.4.2, [F] 502.4.3, [F] 502.5, [F] 502.5.1, [F] 502.5.2, [F] 502.5.3

**Proponent:** Jeffrey Betz, AT&T Corp. (jbetz@att.com)

**Revise as follows:**

**[F] 502.4 Stationary storage battery systems.** Stationary storage battery systems, ~~as shall be regulated by and ventilated in accordance with~~ Section 608 of the *International Fire Code*, ~~shall be provided with ventilation in accordance with and the general requirements of this chapter and Section 502.4.1 or 502.4.2.~~

**Exception:** ~~Lithium-ion and lithium metal polymer batteries shall not require additional ventilation beyond that which would normally be required for human occupancy of the space.~~

**Delete without substitution:**

**[F] 502.4.1 Hydrogen limit in rooms.** ~~For flooded lead acid, flooded nickel cadmium and VRLA batteries, the ventilation system shall be designed to limit the maximum concentration of hydrogen to 1.0 percent of the total volume of the room.~~

**[F] 502.4.2 Ventilation rate in rooms.** ~~Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (cfm/ft<sup>2</sup>) [0.00508 m<sup>3</sup>/(s • m<sup>2</sup>)] of floor area of the room.~~

**[F] 502.4.3 Supervision.** ~~Mechanical ventilation systems required by Section 502.4 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.~~

**[F] 502.5 Valve-regulated lead acid batteries in cabinets.** ~~Valve-regulated lead acid (VRLA) batteries installed in cabinets, as regulated by Section 608.6.2 of the *International Fire Code*, shall be provided with ventilation in accordance with Section 502.5.1 or 502.5.2.~~

**[F] 502.5.1 Hydrogen limit in cabinets.** ~~The cabinet ventilation system shall be designed to limit the maximum concentration of hydrogen to 1.0 percent of the total volume of the cabinet during the worst-case event of simultaneous boost charging of all batteries in the cabinet.~~

**[F] 502.5.2 Ventilation rate in cabinets.** ~~Continuous cabinet ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (cfm/ft<sup>2</sup>) [0.00508 m<sup>3</sup>/(s • m<sup>2</sup>)] of the floor area covered by the cabinet. The room in which the cabinet is installed shall be ventilated as required by Section 502.4.1 or 502.4.2.~~

**[F] 502.5.3 Supervision.** ~~Mechanical ventilation systems required by Section 502.5 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.~~

**Reason:** The requirements for the design and operation of Stationary Storage Battery Systems is contained within the various topic sub-sections of the International Fire Code Section 608. By directly referencing these sections of the International Fire Code all currently proposed and future code change proposals will be reflected in one place and thus the scope, types of batteries, and all considerations for this space including ventilation are easily located and uniformly addressed. The current language of the codes are different yet the requirements are the same. This will also provide one Code Commentary in one code rather than two differing



commentaries possibly by different authors.

**Cost Impact:** Will not increase the cost of construction

Cost saving will be attained in research hours and uniformity for code compliance by designers, installers, manufacturers, operators and the code enforcement community.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Approval is based on the proponent's published reason statements.

**Assembly Action:**

**None**

**Final Action Results**

**M1-16**

**AS**

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