Code Review
2018 Changes to International Codes
IRC - FIRE SAFETY - FIRE TAC

FLORIDA BUILDING COMMISSION
"Stronger Codes Through Science and Consensus"

Florida dbpr
Building Codes and Standards

Residential Code (IRC) - (Fire)

RCCIWG and Fire Technical Advisory Committee (TAC

2018 International Residential Code – Fire safety
Fire TAC

IRC-B Code Change No.	IRC-B Section	Change Summary b/t 2015 IRC-B and 2018 IRC-B	Change Summary b/t 2017 FRC-B and 2018 IRC-B	Staff comments
RB2-16	R202, M1305.1, M1407.4, M1503.4, M1601.1.2, M1601.4.1, M1803.3.5, M1803.4.3, M2204.2, M2301.2.1, R1001.2.1, R1003.9.2, R202, R202 (New), R301.5, R302.7, R308.4.3, R308.4.6, R308.6.2, R308.6.5, R310.5, R311.3, R807.1	Deletes definitions “ACCESSIBLE”, “ACCESSIBLE”. Adds definitions “READILY”, “ACCESS (TO)”, “READY ACESS (TO)”. Modifies Definitions “CLEANOUT”, “FIXTURE FITTING”. Modifies text of Table R301.5 “MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS”. Modifies text of Section R302.7 “Under-stair protection”, R308.4.3 “Glazing in windows”, R308.4.6 “Glazing adjacent to stairs and ramps”, R308.6.2 “Materials.” R308.6.5 “Screens not required”, R310.5 “Dwelling additions”, R311.3 “Floors and landings at exterior doors”, R807.1 “Attic access”, R1001.2.1 “Ash dump cleanout”, R1003.9.2 “Spark arrestors”, M1305.1 “Appliance access for inspection service, repair and replacement”, M1407.4 “Access”, M1503.4 “Makeup air required”, M1601.1.2 “Underground duct systems”, M1601.4.1 “Joints, seams and connections”, M1803.3.5 “Access,” M1803.4.3 “Connection to masonry fireplace flue,” M2204.2 “Shutoff valves”, M2301.2.1 “Access”. The intent of this proposal is for **clarification** of terminology. This proposal will clarify where the provisions are for access for repair, not accessibility for persons with disabilities. This clarifies the code by separating something that is accessible from something that is accessed. **Cost Impact:** Will not increase the cost of construction. This is a clarification of terminology that will have no change on code requirements.	Same as change between 2015 IRC-B and 2018 IRC-B	

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

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB29-16	R302.1	Modifies text of TABLE R302.1 (1) "EXTERIOR WALLS". TABLE R302.1 (2) "EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS". The proposal will bring the IRC and the IBC into agreement. Currently, the IBC provides fire rating options of exterior wall while the IRC has only one method of compliance. The code change was further modified by the Committee. The proposal offers a good solution for projections. **Cost Impact**: Will not increase the cost of construction. The IBC in Section 705.2.3 permits the use of Type IV heavy timber construction, fire-retardant-treated wood or 1-hr fire-resistance construction for combustible projections. The IRC in Table R302.1(1) and Table R302.1(2) only permits the 1-hr fire-resistance construction on the underside. Proposal to address this.	This change is not similar to that of the FRC. The FRC provides for fire separation provisions as mandated by Florida Statutes	Overlapping provision to be considered during step 2 of the code change process

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB30-16	R302.1	Modifies text of TABLE R302.1 (1) "EXTERIOR WALLS", TABLE R302.1 (2) "EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS". Removes reference to roof eave from table, modifies text to reference eave overhang. The code change was further modified by the Committee. This proposal	This change is not similar to that of the FRC. The FRC provides for fire separation	Overlapping provision to be considered during step 2 of the code change process

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

		clarifies the distinctions between eaves and rakes. **Cost Impact**: Will not increase the cost of construction. The requirement to add fireblocking already exists, this proposal clarifies the installation.	provisions as mandated by Florida Statutes	

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	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB32-16	R302.1, R302.2, R302.3	Modifies text of TABLE R302.1 (1) “EXTERIOR WALLS”, TABLE R302.1 (2) “EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS”. Modifies text of Section R302.2 “Townhouses”, R302.3 “Two-family dwellings”. The IRC only permits ASTM E119 or UL 263 fire-resistance rated assemblies as written. However, Chapter 7 of the IBC has prescriptive and calculated fire assemblies that have been successfully used over the years to provide fire-resistant rated construction. Proposal to address this. The code change was further modified by the Committee. The modification provides assistance to the building official and the builder. The reference to the International Building Code clarifies that this option exists in the International Residential Code and gives the builder more options for compliance. **Cost Impact**: Will not increase the cost of construction. This proposal will allow more prescriptive assemblies which typically **are less costly than proprietary assemblies**. Therefore, this change will reduce the cost of construction.	This change is not similar to that of the FRC. The FRC provides for fire separation provisions as mandated by Florida Statutes and provides for Florida specific change to R302.2	Overlapping provision to be considered during step 2 of the code change process

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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Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):		

	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB33-16	R302.1	Modifies text of TABLE R302.1 (2) "EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS". This is an editorial change to text of footnote a. **Cost Impact**: Will not increase the cost of construction. **Editorial**	This change is not similar to that of the FRC. The FRC provides for fire separation provisions as mandated by Florida Statutes	Overlapping provision to be considered during step 2 of the code change process

RCCIWG – Comment	TAC Action	Commission Action		
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):		

	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB37-16	R302.1	Modifies text of Section R302.1 "Exterior walls. The change replace the term "dwellings" with "individual dwelling units." The current language could be misinterpreted to allow the placement of structures accessory to other dwelling units adjacent to another unit without regard to fire separation distances. **Cost Impact**: Will not increase the cost of construction. This proposal is **to provide clarity to an existing code section**. No additional cost is associated with this proposal.	Same as change between 2015 IRC-B and 2018 IRC-B	

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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Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):		TAC / Commission
			☐ No Action Needed	☐ / ☐
			☐ Overlapping provisions	☐ / ☐

RB44-16	R302.2, R302.2 (New), R302.2.1 (New), R302.2.4	Modifies text of Section R302.2.2 “Common Walls” and R302.2.4 “Structural independence.” Adds new text R302.2 “Townhouses”. R302.2.1 “Double Walls”. When Section 302.2 was changed between the 2012 and 2015 editions of the IRC, we lost the option of constructing two one-hour fire-resistant rated walls that have always been permitted in the IRC. Proposed this language to reinstate that option. The code change was further modified by the Committee. The modification adds another option and clarifies. Double exterior walls have been used for thirty or forty years, they work, and you can put plumbing in them. **Cost Impact**: Will not increase the cost of construction. This is just **another option** to providing the separation between townhouses. It may actually reduce the cost of construction in some cases.	This change is not similar to that of the FRC. The FRC provides for Florida specific changes to these sections	Overlapping provision to be considered during step 2 of the code change process

RCCIWG – Comment	TAC Action	Commission Action		
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):		TAC / Commission
			☐ No Action Needed	☐ / ☐
			☐ Overlapping provisions	☐ / ☐

R45-16	R302.2.2	Modifies text of Section R302.2.2 “Parapets for townhouses”. This proposal clarifies the code. There are code sections that regulate fire-retardant-treated wood. There is no need to use the word "approved".	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		Cost Impact: Will not increase the cost of construction. This is **an editorial revision** and will have no impact on construction costs.		

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
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			☐ Overlapping provisions	☐	☐

RB54-16	R302.4.2	Modifies text of Section R302.4.2 “Membrane penetrations”. This proposal is intended to bring consistency between the International Residential Code and the International Building Code. **The proposal adds an additional exception** which recognizes the listings of recessed incandescent and fluorescent can lights, or enclosure materials which protect recessed can lights or troffer light fixtures, which have been tested as a ceiling membrane penetration of fire-resistance-rated horizontal assemblies. **Cost Impact**: Will not increase the cost of construction. This code change proposal will not increase the cost of construction. These products are already in use within the construction industry.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
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			☐ Overlapping provisions	☐	☐

RB58-16	R302.5, R302.5.1	Modifies text of Section R302.5 Dwelling-garage opening and penetration protection and R302.5.1 Opening protection. The	This change is not similar to that of	Overlapping provision to be considered during step 2 of the

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

		purpose of this modification is to provide an option to use an automatic-closing device that is activated by smoke detection or heat detection on a door opening between the garage and the residence. This code change was further modified by the Committee. The modification clarifies whether this could be interpreted as requiring some type of system. The proposal allows the door to remain open and still address fire safety by means of a self-closer. **Cost Impact**: Will not increase the cost of construction. This proposal will not increase the cost of construction because the net effect is to **offer additional methods** of compliance for an existing requirement.	the FRC. The FRC provides for Florida specific changes to these sections as per Florida statutes	code change process

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
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			☐ Overlapping provisions	☐	☐

RB62-16	R302.10.1	Modifies text of Section R302.10.1 “Insulation.” This proposal provides a testing of the product assembly as it was intended to be used and makes that clear. **Cost Impact**: Will not increase the cost of construction. **Change is primarily editorial.**	Same as change between 2015 IRC-B and 2018 IRC-B	

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RB68-16	R302.13	Modifies text of Section R302.13 “Fire protection of floors”. The modification addresses all fuel equipment, which is appropriate. The proposal provides **complete exceptions** and addresses all fuel-fired equipment. The code change was further modified by the Committee. The modification addresses all fuel equipment, which is appropriate. The proposal provides complete exceptions and addresses all fuel-fired equipment. Also, it was modified by public comment limiting the restriction to heating appliances, to include all fuel-fired and electric furnaces and water heaters, is appropriate. **Cost Impact**: Will not increase the cost of construction. This proposal **will reduce the cost of construction** by removing a requirement from the code for certain installations.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action
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	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB79-16	R308.4.2	Modifies text of Section R308.4.2 “Glazing adjacent to doors”. The way that the section is written, it only applies to glass that is within the same plane as the door and perpendicular to plane of the door. The change proposed by the public comment will clarify that only if the window is in a position where a person can get pushed against the window by a door, will safety glazing be required. **Cost Impact**: Will not increase the cost of construction. This proposal is a **clarification** and therefore would not change the cost of construction.	Same as change between 2015 IRC-B and 2018 IRC-B	

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Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB81-16	R308.4.4.1(New)	Adds new Section R308.4.4.1 "Structural glass baluster panels". This proposal will clarify and align the IRC and IBC requirements for glass panels that are used as a structural component in a guard. **Cost Impact**: Will not increase the cost of construction. This change **creates consistency with the IBC** for glass guards only and allows for more safety and flexibility in design. There should be no increase in the cost.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
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			☐ Overlapping provisions	☐	☐

RB82-16	R308.4.7	Modified Figure R308.4.7 "HAZARDOUS GLAZING LOCATIONS AT BOTTOM STAIR LANDINGS". This proposal is intended to **provide information** on the figure with two callouts that describe the meaning of the figure, consistent with the text of Section R308.4.7. In addition, as figure titles are not enforceable, **an editorial change** is proposed to the title of the figure to more accurately reflect the meaning. This proposal cleans up the code and makes it more understandable. By labeling the stairs and landing, the modification further clarifies the intent of the code. **Cost Impact**: Will not increase the cost of construction.	Same as change between 2015 IRC-B and 2018 IRC-B	

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		This proposal will not increase the cost of construction as it proposes to **revise the figure to align with the existing text requirements of the code.**		

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			☐ Overlapping provisions	☐	☐

RB89-16	R310.1	Modifies text of Section R310.1 “Emergency escape and rescue opening required”. Provides an exception to R310.1. Per reasoning, the proposal may provide incentives to install automatic sprinkler systems in residential dwellings. **Cost Impact**: Will not increase the cost of construction. The **proposal adds an option to the code**. There is no requirement to utilize this option; however, if it is used, the **cost of construction may decrease**.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
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			☐ Overlapping provisions	☐	☐

RB96-16	R310.3, R310.3.2, R310.3.2.1, R310.3.2.1 (New), R310.4	Modifies text of Section R310.3 “Emergency escape and rescue doors”, R310.3.2 “Area Wells”, R310.3.2.2 “Drainage”, R310.4 “Bars, grilles, covers and screens”. Adds new section R310.3.2.1 “Ladder and steps”. The purpose of this change is to clarify the intent of the code and remove the reference to the bulkhead enclosure. The term is replaced it with area well. The code change was further modified by public comment to	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		remove 'bulhead enclosure' from the section to make it more sensible and to add the language 'area well' to the section as well to coordinate with the revised section that was approved. The purpose of this modification is to just correlate the two sections. **Cost Impact**: Will not increase the cost of construction. This **change will actually reduce the cost of construction** since the actual enclosure over the bulkhead would not be required.		

RCCIWG – Comment	TAC Action	Commission Action		
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):		TAC / Commission
			☐ No Action Needed	☐ / ☐
			☐ Overlapping provisions	☐ / ☐

RB101-16	R311.7.1, R311.7.8.2 (New)	Modifies text of Section R311.7.1 "Width". Adds new section R311.7.8.2 "Handrail Projection". The requirement for handrail projection currently included under R311.7.1, Width, is often overlooked. Moving the requirement to the handrail section of the code will provide for better understanding and compliance without changing the requirements for stair width. New section - Handrail Projection: This new section provides the needed information related to handrail projection within the handrail section to enable: clear recognition of the requirement, compliant design of handrails and improved enforcement of the code. **Cost Impact**: Will not increase the cost of construction. This proposal will not impact construction cost. In some cases it will allow the application of the required handrail on either side of the stair. **This choice can be a cost advantage.**	Same as change between 2015 IRC-B and 2018 IRC-B	

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

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB103-16	R311.7.3	Modifies text of Section R311.7.3 "Vertical rise". The proposal and the modification offer greater flexibility regarding stairway heights by allowing a vertical rise up to 151 inches. The code change was further modified by the Committee. The proposal and the modification offer greater flexibility regarding stairway heights. **Cost Impact**: Will not increase the cost of construction. **This would most likely reduce construction costs, by not requiring a landing to be incorporated into the stair design**, and reducing the footprint of the stairway.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB104-16	R311.7.4	Modifies text of Section R311.7.4 "Walkline". This proposal provides needed **clarification of the code** for compliant design, construction and enforcement of winder and landing regulations that reference the walkline. Landings have been added because R311.7.6 Landings for stairways regulates landing "depth at the walkline" however R311.7.4 Walkline only references winders. **Cost Impact**: Will not increase the cost of construction. This change will not affect the cost of construction because it	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		does not add any material or labor but **only provides needed clarification for design, construction, and enforcement.**		

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB105-16	R311.7.5.3	Modifies text of Section R311.7.5.3 “Nosings”. This change clearly describes and emphasizes the intent of the requirement to provide consistent nosings and nosing projections at every walking surface throughout the stairway **Cost Impact**: Will not increase the cost of construction. This change does not affect the cost of construction but only **clarifies without changing the existing requirement**.	Same as change between 2015 IRC-B and 2018 IRC-B

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB107-16	R311.7.8	Modifies text of Section R311.7.8 “Handrails”. The deleted phrase "continuous run of treads" predates the code definition of the term "flight", and is redundant. **Cost Impact**: Will not increase the cost of construction. **This change only clarifies the code language**, makes no change to the requirement and therefore does not affect the cost of construction.	Same as change between 2015 IRC-B and 2018 IRC-B

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

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB108-16	R311.7.8.2, R311.7.8.2 (New)	Adds new section R311.7.8.2 “Handrail Clearance”. Modifies text of Section R311.7.8.3 “Continuity”. The term stairway is defined to include flights and landings however handrails are only required at flights of stairs and ramps. The words "for stairways" have been deleted to clarify R311.7.8.3. The modification clears up a misconception. **This proposal clarifies the code** and allows a means for continuity to be looked at differently so that handrails can be interrupted or stopped at a flight or newel post. The code change was further modified by the Committee. The modification clears up a misconception. This proposal clarifies the code and allows a means for continuity to be looked at differently so that handrails can be interrupted or stopped at a flight or newel post. **Cost Impact**: Will not increase the cost of construction. This proposal **only moves the unchanged text to a new section** and therefore does not affect the cost of construction.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB110-16	R312.1.2	Modifies text of Section R312.1.2 “Height”. Nosing is a defined term in both the IRC and IBC and is the term recognized and used throughout the trade. Proposal is to replace text with	Same as change between 2015 IRC-B and 2018	

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

		term nosing. **Cost Impact**: Will not increase the cost of construction. This **proposal corrects and clarifies but does not change** the required resources to comply. It will not affect the cost of construction.	IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB112-16	R312.1.2	Adds exception to section R311.7.11 “Alternating tread devices” and R311.7.12 “Ships ladders”. Code change would provide a way to access a small loft area. The proposal includes an exclusion for kitchens and bathrooms where the only access is via the alternating tread device or ships ladder. **Cost Impact**: Will not increase the cost of construction. If this code change is **approved it will lower the cost of construction** and save space within the dwelling unit.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB117-16	R312.1.1	Modifies text of Section R312.1.1 “Where required”. This clarifies that a guard is only required in those portions where the vertical height above the adjacent floor or grade is greater than 30-inches	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		Cost Impact: Will not increase the cost of construction. This is **an editorial revision** that should have no impact on costs.		

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB131-16	R314.1	Modifies text of Section R314.4 “Interconnection”. With the inclusion of wireless alarms in the IRC, there is little justification on not providing the added life and safety benefits offered by interconnection. **Cost Impact**: **Will increase the cost of construction.** By eliminating the exception, wireless alarms would be required in those locations where hardwired inter-connectivity would not have occurred. This would result in a negligible increase in cost resulting in a huge life safety benefit.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB132-16	R314.2.2	Modifies text of Section R314.2.2 “Alterations, repairs and additions”. This code change makes minor modifications to unnecessary language that currently exists in this code section. Adding or creating a sleeping room would require a permit, which makes the second part of the first sentence	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		redundant. **Cost Impact**: Will not increase the cost of construction. **This code change deletes unnecessary language.**		

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB139-16	R315.2.2	Modifies text of Section R315.2.2 “Alterations, repairs and additions”. This code change makes minor modifications to unnecessary language that currently exists in this code section. Adding or creating a sleeping room would require a permit, which makes the second part of the first sentence redundant. **Cost Impact**: Will not increase the cost of construction. This code change **deletes unnecessary language**.	This change is not similar to that of the FRC. The FRC provides for Florida specific changes to this section as per Florida statutes with regard to Carbon Monoxide Alarms	Overlapping provision to be considered during step 2 of the code change process

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB144-16	R315.5	Adds Section R315.5 “Interconnectivity”. This code language is added to require interconnectivity of carbon monoxide alarms in a manner similar to the smoke alarm requirements **Cost Impact: Will increase the cost of construction**. Interconnectivity of the Carbon Monoxide Alarms will increase the cost of construction.	This change is not similar to that of the FRC. The FRC provides for Florida specific changes to this section as per Florida Statutes	Overlapping provision to be considered during step 2 of the code change process

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

			with regard to Carbon Monoxide Alarms	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB146-16	R316.3	Modifies text of Section R316.3 “Surface burning characteristics”. This proposal is editorial in nature and is intended to clarify that foam plastic used in applications other than as a component in manufactured assemblies does require a flame spread index of not more than 75 and a smoke-developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E84 or UL 723. **Cost Impact**: Will not increase the cost of construction. **The change is editorial in nature** and aligns with what most code officials are already requiring.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB150-16	R316.5.4	Modifies text of Section R316.5.4 “Crawl spaces”. Adds item where thermal barrier specified in Section R316.4. is not required. “One/four (1 /4)-inch (6.4 mm) fiber-cement panel, soffit or backer board.”	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		Cost Impact: Will not increase the cost of construction. The cost figures below were extracted on January 14th, 2015 from Home Depot's website for Store Number 1013. Zinc-Plated 26-Gauge Sheet Metal is priced at $3.62 per square foot of coverage. (as reference in the 2015 IRC Section R316.5.4 subsection 3.6) 1/4-inch thick fiber-cement backer board is priced at $0.76 per square foot of coverage. Installation labor for each of these materials is approximately the same. Both of these materials are attached with self-tapping or self-drilling screws. Each product can be cut to size using common hand or power tools sourced from local hardware stores. When cutting fiber-cement panels a scoring knife, razor knife, power shears or saw are commonly used. In the case of sheet metal tin snips, power nibblers, or saw are commonly used. Therefore, since the material cost for ¼-inch thick fiber-cement is significantly lower than the already accepted method using 26 gauge corrosion resistant steel and the comparative installation labor sheet metal versus fiber-cement panel is not expected to be substantially different, the cost of this code change will not increase the cost of construction.		

RCCIWG – Comment	TAC Action	Commission Action
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):

	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB154-16	R317.1, R402.1.2, R504.3, R905.8.5	Modifies text of Section R317.1 “Location required”, R402.1.2 “Wood treatment”, R504.3 “Materials”. Modifies Table R905.8.5. “Wood Shake Material Requirements.” The existing text was outdated, requiring clarification and updates to current AWPA section numbering and new standard. **Cost Impact**: Will not increase the cost of construction. These **changes merely clarify and update the existing text**	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		without any impact on the required specifications for materials used.		

RCCIWG – Comment	TAC Action	Commission Action
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):

	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB164-16	R324.3, R324.3.1, R324.4, R324.4.1, R324.5, R324.5.1, R324.5.2 (New), R907, R907.1, R907.2, R907.3, R907.4, R907.5, R909, R909.1, R909.2, R909.3	Modifies Sections R324.3 “Photovoltaic systems”, R324.3.1 “Equipment listings”, R324.4 “Rooftop-mounted photovoltaic systems”, R324.4.1 “Structural requirements”, R324.4.1.1 “Roof live load”, R324.4.1.2 “Wind resistance”, R324.4.2 “Fire classification”, R324.4.3 “Roof penetrations”, R324.5 “Building-integrated photovoltaic systems”, R324.5.1 “Photovoltaic shingles”, Section R907 “ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS”. Adds new Section R324.5.2 “Fire classification”. Deletes Section R907.4 “Installation”, R907.5 “Photovoltaic panels and modules”, SECTION R909 “ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS”. Proposal RM98-13 established R324, which was intended to consolidate and organize all the requirements, with necessary section revisions and section additions, in an easily-used format that assists the user to find all the applicable requirements – fire, electrical, structural, plumbing, and mechanical – related to solar thermal and photovoltaic systems. The intent of this proposal is to address redundant code requirements and consolidate/reorganize requirements that were also included in Chapter 9 during the last code cycle. These changes will help to address any confusion regarding the installation of photovoltaic systems.	Same as change between 2015 IRC-B and 2018 IRC-B	

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

		Cost Impact: Will not increase the cost of construction. The proposal **clarifies the applicable requirements** for photovoltaic systems.		

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB166-16	R202, R325.1, R325.6 (New)	Modifies definition "[RB] ATTIC, HABITABLE". Modifies text of Section R325.1 "General". Adds new Section 325.6 "Habitable attic". The definition of habitable attic is revised to shorten it and remove technical criteria which should be located in the body of the code. The criteria removed from the definition in R202 are relocated in a new section, R325.6, addressing Habitable Attics. **Cost Impact**: Will not increase the cost of construction. This proposal will not increase the cost of construction **as it clarifies the limitations on the area of an attic** as it relates to the floor below.	Same as change between 2015 IRC-B and 2018 IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB167-16	R325.3	Adds exception to Section R325.3 "Area limitation". The rationale for that proposal was to provide design flexibility without impacting safety. The exception trades the ability to	Same as change between 2015 IRC-B and 2018	

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

		enclose the mezzanine for a slight increase in floor area. **Cost Impact**: Will not increase the cost of construction. This **proposal has potential to reduce the cost** of construction by allowing larger mezzanines in dwellings.	IRC-B	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB168-16	R202 (New), R327 (New), R327.1 (New)	Adds new Appendix V "Tiny Houses". Per the committee, **Small houses are a growing concern**, the demand for them is increasing, the IRC needs to address them in some fashion. Public comment submits **Appendix V.** **Cost Impact**: Will not increase the cost of construction. This proposal will not increase the cost of construction **as it will provide direction and relief from current codes for small houses.**	Same as change between 2015 IRC-B and 2018 IRC-B	**Appendix V Tiny Houses**

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB171-16	R201 (New), R327.1 (New), R327.2 (New), R327.3 (New), R327.4 (New),	Adds definition "BATTERY SYSTEM, STATIONARY STORAGE." Adds new Section R327 "STATIONARY STORAGE BATTERY SYSTEMS". Adds new standard "A review of the standard(s) proposed for inclusion in the code, UL 9470-2014, Outline of Investigation for Energy Storage	Same as change between 2015 IRC-B and 2018 IRC-B	

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

	R327.5 (New), R327.6 (New)	Systems and Equipment." An increased number of electrical energy storage systems (ESS) utilizing stationary storage batteries are appearing on the market to help meet the energy needs of society. This proposal does not mandate that ESS or stationary battery storage systems be provided, but includes basic safety requirements that should be applied if such systems are provided. The code change was further modified by the Committee. The modification limits the application to areas other than habitable spaces in dwelling units. This technology already exists and we need something to move it forward in a safe way. **Cost Impact: Will increase the cost of construction.** Any cost increases for code compliant installations will be minimal, provide the equipment is installed per NFPA 70 which will require an inverter and other code mandated criteria. Listed ESS units are currently available and the proposal allows for non- listed ESS installations also.		

RCCIWG – Comment	TAC Action	Commission Action
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):

	TAC	Commission
☐ No Action Needed	☐	☐
☐ Overlapping provisions	☐	☐

RB369-16	AS107.1	Modifies text of Section AS107.1 "Fire-resistance rating". Editorial proposal. The correct terminology is to address fire resistance rating. **Cost Impact**: Will not increase the cost of construction.	Same as change between 2015 IRC-B and 2018 IRC-B **Appendix S**	Assign to the Fire TAC

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

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

RB370-16	AS107.1.1, AS107.1.2	Modifies text of Section AS107.1.1 “One-hour rated clay plastered wall” and AS107.1.2 “Two-hour rated cement plastered wall”. This proposal clarifies the requirements of the code. **Cost Impact**: Will increase the cost of construction. This proposal may increase the cost of construction if a user intended to build a 1-hour or 2-hour rated wall with bales of a density less than 7.5 pcf	Same as change between 2015 IRC-B and 2018 IRC-B **Appendix S**	

RCCIWG – Comment	TAC Action	Commission Action		TAC	Commission
Impactful (Explain) ☐	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	Accommodate Florida Specific Need: YES (Select Criteria) ☐ NO: ☐ a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ Others (Explain):	☐ No Action Needed	☐	☐
			☐ Overlapping provisions	☐	☐

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

2018

Complete Revision History to the **2018 I-Codes**®

Successful Changes and Public Comments

IRC®

INTRODUCTION

Each changed code section is listed in the Table of Changes which contains three headings. The first heading is “2018 IRC" which lists the section number in the 2018 code. If (new) appears after the section number it indicates that the section is new in 2018. If (deleted) is indicated in 2018 it means that the section no longer exists and the second column 2015 IRC will show the section number that was deleted. Also, the second heading will indicate if a section number has changed from 2015 to 2018. If there is nothing indicated in the 2015 column, the section number remained the same. The third heading lists the code change number(s) which affected that particular section. The published material for each change is contained in the Documentation section.

HOW TO USE THE HANDBOOK

This Complete Revision History to the 2018 I-Codes: Successful Changes with Public Comments makes it possible for the reader to examine, in one location, all published information about a particular code change. For any given change, the text of the proposed change, committee actions and modifications, assembly actions, successful public comments, and final action can be found by using the following steps:

1. Locate the code section in the Table of Changes using the 2018 IRC section number.
2. Note the corresponding proposed code change number(s) from the list.
3. Locate the proposed code change number (listed in numerical order under the appropriate year and letter designation) in the Documentation section to read the complete chronological documentation of the proposed change.

COMPLETE REVISION HISTORY TO THE 2018 I-CODES: SUCCESSFUL CHANGES WITH PUBLIC COMMENTS FORMAT

Code Change No: RB68-16

Code change numbers are identified with a letter and a year designation. For instance, **RB68-16** is proposed change number **68** to the International Residential Code - Building (RB) and was submitted in the **2016** code change cycle. (See Code Change Numbers on page iv for a discussion of code committees)

Original Proposal

This is the proposal as published in the 2016 Proposed Changes to the International Codes. It includes the section number(s), proponent’s name, who they are representing, the text of the proposed change and their reason for the change. This is a change to IRC Section R302.13.

Report of Committee Action Hearings

This is the result of the Committee Action Hearing held to consider the change, as published in the 2016 Report of the Committee Action Hearing to the International Codes. It includes the committee's action (As Modified) and reason for the action and also identifies if there was an assembly motion (none).

Public Comments

This is text of any submitted public comments, as published in the 2016 Public Comment Hearing Agenda to the International Codes. It includes the public commenter's name and affiliation, the requested action to be considered at the Public Comment Hearing (Approved as Modified) and the reason.

Final Action Results

This is the action taken by the eligible voting members of the ICC in the Online Governmental Consensus Vote, as published in the Final Action on 2015 Proposed Changes to the International Codes. RB68-16 the Final Action was AMPC1 which means the eligible voting members of ICC further modified the committee's action and approved the change based on the submitted public comment.

CODE CHANGE NUMBERS

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

Prefix	Code Committee	Primary IRC Chapters Affected
ADM	Administrative Code Development	Chapter 1
RB	IRC Building	Chapters 1-10
RM	IRC Mechanical	Chapters 12-23
RP	IRC Plumbing	Chapters 25-33
E	IBC Means of Egress Committee	Chapter 3
FS	IBC Fire Safety Committee	Chapters 7, 8, 9, 14, 26
G	IBC General Committee	Chapter 3, Appendices A, B, C, D, K
S	IBC Structural Committee	Chapters 4-10
CE	IECC Commercial	Chapter 11
RE	IECC Residential	Chapter 11
F	IFC Committee	Chapters 3, 4, 8, 9, 27
P	IPC Code Committee	Chapter 29

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

CODE SECTION NUMBER DIFFERENCES

For editorial reasons, some code section numbers in the 2018 edition have changed from the 2015 edition. The numbering of code sections is an editorial task which takes place outside of the normal code development cycle, and is necessary to avoid duplicate or non-sequential section numbers.

The Table of Changes typically references the 2015 code section numbers that have been deleted. (See Introduction)

In most cases the section numbers have not changed from the 2015 to the 2018 edition. However, the reader should remember that it is always the 2015 code section numbers which appear in the material contained in the Documentation section. This is due to proposed changes which have as their basis, a section number in the 2018 edition. Since an attempt to correlate code sections by number may lead to confusion, the user is advised to rely on the section content rather than the numbers to locate and compare parallel sections in the two editions.

ABBREVIATIONS FOR ACTIONS

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

Legend for 2015 and 2016 Code Change Cycle Documentation:

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

INTERNATIONAL RESIDENTIAL CODE
TABLE OF CHANGES

CHAPTER 1
SCOPE AND ADMINISTRATION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R101.2		ADM36-16, CCC2-16
R105.3.1.1		ADM72-16
R105.5		ADM73-16
R109.4		ADM88-16 Part II

CHAPTER 2
DEFINITIONS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Deleted	ACCESSIBLE	RB2-16
ACCESS (TO) (New)		RB2-16
Deleted	ACCESSIBLE, READILY	RB2-16
[RB] ADDITION		ADM1-16 Part IV
[RB] APPROVED AGENCY		ADM6-16 Part IV
APPROVED SOURCE (New)		ADM7-16 Part II
[RB] ATTIC, HABITABLE		RB166-16
BATTERY SYSTEM, STATIONARY STORAGE (New)		RB171-16
[RB] BUILDING		ADM8-16 Part II
BUILDING-INTEGRATED PHOTOVOLTAIC ROOF PANEL (BIPV Roof Panel) (New)		RB351-16
[RB] BUILDING OFFICIAL		ADM 12-16 Part II
CARBON MONOXIDE ALARM (New)		F3-16 Part II
CARBON MONOXIDE DETECTORS (New)		F3-16 Part II
CLEANOUT		RB2-16
COLLAPSIBLE SOILS (New)		RB172-16
COMPRESSIBLE SOILS (New)		RB172-16
CRAWL SPACE (New)		RB6-16
EXPANSIVE SOILS (New)		RB172-16
[RE] FENESTRATION		G9-16 Part II
FENESTRATION, VERTICAL (New)		G9-16 Part II
FIXTURE FITTING		RB2-16
FULL OPEN VALVE (New)		P3-15 Part II
[RB] HISTORIC BUILDING		ADM14-16 Part II
IMPACT PROTECTIVE SYSTEM (New)		RB259-16
[RB] JURISDICTION		ADM15-16 Part II
[RB] LABELED		ADM16-16 Part IV
[RB] LIGHT-FRAME CONSTRUCTION		G2-16 Part II
LOCKING-TYPE TAMPER-RESISTANCE CAP (New)		RB13-16
MANUFACTURER'S APPROVED INSTALLATION INSTRUCTIONS (New)		S29-16
[RB] PERMIT		ADM5-16 Part II
READY ACCESS (TO) (New)		RB2-16
[RB] REPAIR		ADM26-16 Part IV
[RB] ROOF ASSEMBLY		G14-16 Part II
ROOF COATING (New)		S51-16 Part II
[RB] SKYLIGHT AND SLOPED GLAZING		G10-16 Part II
SOLAR ENERGY SYSTEM (New)		G17-16 Part II

CHAPTER 2 *(continued)*
DEFINITIONS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
SOLAR THERMAL COLLECTOR (New)		G17-16 Part II
SOLAR THERMAL SYSTEM (New)		G17-16 Part II
VAPOR DIFFUSION PORT (New)		RB327-16

CHAPTER 3
BUILDING PLANNING

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Table R301.2(1)		RB21-16
Figure R301.2(2)		RB17-16
Figure R301.2(3) (New)		RB17-16
R301.2.2		RB23-16, RB24-16
Deleted	R301.2.2.4	RB23-16
R301.2.2.1.1		RB17-16
R301.2.2.1.2		RB17-16
Deleted	R301.2.2.2	RB24-16
R301.2.2.2	R301.2.2.1	RB24-16
R301.2.2.3	R301.2.2.2	RB24-16
R301.2.2.4	R301.2.2.3	RB24-16
R301.2.2.5	R301.2.2.3.4	RB24-16
R301.2.2.6	R301.2.2.2.5	RB24-16
R301.2.2.6.1 thru R301.2.2.6.7 (New)		RB24-16
Deleted	R301.2.2.3	RB24-16
Deleted	R301.2.2.3.2	RB24-16
Deleted	R301.2.2.3.3	RB24-16
R301.2.2.11	R301.2.2.4	RB24-16
R301.2.4		ADM72-16
R301.2.7	R301.2.2.3.1	RB24-16
R301.2.8	R301.2.2.3.5	RB24-16
R301.2.9	R301.2.2.3.6	RB24-16
R301.2.10	R301.2.2.3.7	RB24-16
Table R301.5		RB2-16
R302.1		RB37-16
Table R302.1		RB29-16, RB30-16, RB32-16
Table R302.1(2)		RB29-16, RB30-16, RB32-16, RB33-16
R302.2 (New)		RB44-16
R302.2.1 (New)		RB44-16
R302.2.2	R302.2	RB32-16, RB44-16
R302.2.4	R302.2.2	RB45-16
R302.3		RB32-16
R302.4.2		RB54-16
R302.5.1		RB58-16
R302.7		RB2-16
R302.10.1		RB62-16, RB89-16
R302.13		RB68-16
R308.4.2		RB79-16
R308.4.3		RB2-16
R308.4.4.1 (New)		RB81-16

CHAPTER 3 *(continued)*
BUILDING PLANNING

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R308.4.6		RB2-16
Figure R308.4.7		RB82-16
R308.6.2		RB2-16
R308.6.5		RB2-16
R310.1		RB89-16
R310.3		RB96-16
R310.3.2		RB96-16
R310.3.2.1 (New)		RB96-16
R310.3.2.2	R310.3.2.1	RB96-16
R310.4		RB96-16
R310.5		RB2-16
R311.3		RB2-16
R311.7.1		RB101-16
R311.7.3		RB103-16
R311.7.4		RB104-16
R311.7.5.3		RB105-16
R311.7.8		RB107-16
R311.7.8.2 (New)		RB108-16
R311.7.8.3 (New)		RB108-16
R311.7.8.4	R311.7.8.2	RB108-16
R311.7.11		RB112-16
R311.7.12		RB112-16
R312.1.1		RB117-16
R312.1.2		RB110-16
R314.2.2		RB132-16
R314.4		RB131-16
R315.2.2		RB139-16
R315.5 (New)		RB144-16
R316.3		RB146-16
R316.5.4		RB150-16
R317.1		RB154-16
R317.3.1		S275-16 Part II
R317.3.3		S245-16 Part II
R322.1		ADM72-16
R322.3.3		RB160-16
R322.3.4 (New)		RB160-16
R322.3.6 (New)		RB161-16
R322.3.7 (New)		RB162-16
R324.3		RB164-16
R324.3.1		RB164-16
R324.4		RB164-16
R324.4.1	R909.2	RB164-16
R324.4.1.1	R324.4.1	RB164-16, RB165-16
R324.4.1.2	R907.2	RB164-16, RB354-16
R324.4.2	R907.3	RB164-16
R324.4.3	R909.3	RB164-16
R324.5.2 (New)		RB164-16
R324.6 thru R324.6.2.1 (New)		F85-16 Part II
R324.6.2.2 (New)		F87-16 Part II
R325.1		RB166-16
R325.3		RB167-16
R325.6 (New)		RB166-16
SECTION R327 (New)		RB171-16

CHAPTER 4
FOUNDATIONS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R401.2		RB173-16
R401.4		RB172-16
R402.1.2		RB154-16
R403.1.1		RB176-16
R403.1.6		RB177-16
Table R403.3(1)		RB179-16
Table R403.4		RB178-16
Figure R403.4(2)		RB181-16
R405.1		RB184-16
R408.3		RB187-16

CHAPTER 5
FLOORS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R502.1.3		RB189-16
R502.6		RB192-16
R504.3		RB154-16
R505.1.1		RB195-16
R505.1.3		RB195-16
R505.2.6.2		RB195-16
Table R505.3.2		RB195-16
R505.3.7		RB195-16
R507.1		RB198-16
R507.2 (New)		RB202-16
R507.2.1 (New)		RB202-16
R507.2.1.1 (New)		RB202-16
R507.2.2	R507.3	RB198-16, R202-16
R507.2.2.1	R507.3.1	RB198-16, R202-16
R507.2.2.2	R507.3.2	RB198-16, R202-16
R507.2.2.3	R507.3.3	RB198-16, R202-16
R507.2.2.4	R507.3.4	RB198-16, R202-16
R507.2.2.5	R507.3.5	RB198-16, R202-16
R507.2.3 (New)		RB202-16
Table R507.2.3 (New)		RB202-16
R507.2.4 (New)		RB202-16
R507.2.5 (New)		RB202-16
R507.3 (New)		RB198-16,RB205-16, RB206-16, RB207-16, RB208-16
Figure R507.3	Figure R507.8.1	RB198-16, RB212-16, RB213-16, RB214-16
Table R507.3(New)		RB207-16
R507.3.1 (New)		RB205-16, RB206-16, RB207-16, RB208-16
R507.3.2 (New)		RB205-16, RB206-16, RB207-16, RB208-16
R5074.	R507.8	RB1898-16, RB212-16, RB213-16, RB214-16
Table 507.4	Table 507.8	RB198-16, RB212-16 RB213-16, RB214.16
R507.4.1	R507.8.1	RB198-16, RB212-16, RB213-16, RB214-16
R507.5	R507.6	RB198-16, RB200-16
Table R507.5	Table R507.6	RB198-16, RB200-16
Figure R507.5	Figure R507.5	RB198-16, RB200-16
R507.5.1	R507.7	RB200-16
R507.52	R507.7.1	RB198-16, RB200-16
Figure R507.5.1(1)	Figure R507.7.1	RB198-16, RB200-16
Figure R507.5.1(2) (New)		RB200-16

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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R507.6	R507.5	RB198-16, RB210-16
Table R507.6	Table R507.5	RB210-16
Figure R507.6	Figure R507.5	RB198-16, RB210-16
R507.6.1	R507.7	RB198-16, RB210-16
R507.6.2	R507.7	RB198-16, RB210-16
R507.7	R507.4	RB198-16, RB209-16
Table R507.7	Table R507.4	RB198-16, RB209-16
R507.8 (New)		RB198-16
R507.9	R507.2	RB203-16
R507.9.1 (New)		RB198-16, RB203-16
R507.9.1.1	R507.2.1	RB198-16, RB203-16
R507.9.1.2	R507.2.2	RB198-16, RB203-16
R507.9.1.3	R507.2.3	RB198-169, RB203-16
Table R507.9.1.3(1)	Table R507.2	RB198-16, RB203-16
Table R507.9.1.3(2)	Table R507.2.1	RB198-16, RB203-16
Figure R507.9.1.3(1)	Figure R507.2.1(1)	RB198-16, RB203-16
Figure R507.9.1.3(2)	Figure R507.2.1(2)	RB198-16, RB203-16
R507.9.1.4 (New)		RB203-16
R507.9.2	R507.2.4	RB198-16, RB203-16
Figure R507.9.2(1)	Figure R507.2.3(1)	RB198-16
Figure R507.9.2(2)	Figure R507.2.3(2)	RB198-16

CHAPTER 6
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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R602.1.3		RB189-16
R602.1.11 (New)		RB217-16
Table R602.3(1)		RB219-16, RB220-16, RB221-16, RB310-16
Table R602.3(6) (New)		RB218-16
R602.3.1		RB218-16
Table R602.7(1)		RB227-16
Table R602.7(2)		RB226-16
Figure R602.7.2		RB228-16
Table R602.7.5		RB229-16
Table R602.10.3(1)		RB233-16
Table R602.10.3(2)		RB230-16, RB231-16, RB234-16
Table R602.10.3(3)		RB235-16
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Table R602.10.4		RB240-16
R602.10.4.1		RB235-16
R602.10.4.4 (New)		RB230-16
Table R602.10.5		RB241-16
Figure R602.10.6.2		RB243-16
Figure R602.10.6.4		RB244-16, RB245-16
R602.10.6.5		RB239-16
Deleted	R602.10.10	RB230-16
R603.1.1		RB248-16
Table R603.3.1		RB248-16
Table R603.3.1.1(1)		RB248-16
Table R603.3.1.1(2)		RB248-16
Table R603.3.2(2) thru Table R603.3.2(16)		RB248-16
Table R603.3.2.1(1)		RB248-16
Table R603.3.2.1(2)		RB248-16
R603.3.5		RB248-16
R603.6		RB248-16

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WALL CONSTRUCTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Table R603.7(2) (New)		RB248-16
Table R603.8		RB248-16
Table R603.9.2(1)		RB248-16
R603.9.4.1		RB248-16
R606.1		RB249-16
R606.2.3		S243-16 Part II
R606.2.6 (New)		S245-16 Part II
R609.2		RB254-16
R609.6		RB259-16
R609.6.2 (New)		RB259-16
R610.2		RB217-16
R610.3		RB217-16
Deleted	R610.3.1	RB217-16
Deleted	Table R610.3.1	RB217-16
Deleted	R610.3.2	RB217-16
Deleted	Table R610.3.2	RB217-16
Deleted	R610.3.3	RB217-16
R610.4		RB217-16
Deleted	R610.4.1	RB217-16
Figure R610.5(1)		RB217-16
Figure R610.5(2)		RB217-16
Figure R610.5(3)		RB217-16
Figure R610.5(4)		RB217-16
Figure R610.5(5)		RB217-16
Figure R610.5.1		RB217-16
Figure R610.5.2		RB217-16
R610.5.3 (New)		RB217-16
R610.5.4 (New)		RB217-16
R610.5.5	R610.5.3	RB217-16
R610.5.6 (New)		RB217-16
Deleted	R610.8	RB217-16
R610.8	R610.10	RB217-16
Table R610.8	Table R610.10	RB217-16
Figure R610.8		RB217-16
610.8.1	62020.2	RB217-16
Deleted	R610.9	RB217-16
R610.9		RB217-16
Figure R610.9		RB217-16

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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Table R702.1(3)		RB295-16, RB296-16
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R702.2.2		RB261-16
R702.3.1		RB264-16, S300-16 Part II
R702.3.1.1 (New)		S300-16 Part II
R702.3.3		RB265-16
R702.7		RB266-16
R702.7.3		RB276-16
R703.1.1		RB280-16
R703.1.2		RB282-16
R703.2		RB283-16, RB284-16
R703.3		RB282-16
R703.3.1 (New)		RB282-16
R703.3.1.1 (New)		RB282-16
R703.3.1.2	R703.11.1.4	RB282-16
R703.3.2	R703.3.1	RB282-16

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WALL COVERING

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
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R703.7		RB295-16, RB296-16
R703.7.1		RB295-16, RB296-16
R703.7.2		RB295-16, RB296-16
R703.7.3		RB295-16, RB302-16
R703.8.4		RB303-16
Table R703.8.4(1)	Table R703.8.4	RB303-16. RB376-16
Table R703.8.4(2) (New)		RB303-16
R703.11.2		RB305-16
Table R703.11.2 (New)		RB305-16
Deleted	R703.11.2.1	RB305-16
Deleted	R703.11.2.2	RB305-16
Deleted	R703.11.2.3	RB305-16
R703.14		RB307-16
R703.14.3 (New)		RB307-16
Table R703.15.1		RB308-16
Table R703.15.2		RB308-16
Table R703.16.1		RB309-16
Table R703.16.2		RB309-16

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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R801.3		RB172-16
R802.1.2		RB189-16
R802.1.5.4		RB314-16
R802.1.8 (New)		RB315-16
R802.2		RB310-16
R802.3 (New)		RB310-16
R802.4 (New)		RB310-16
R802.4.1	R802.5	RB310-16
Table R802.4.1(1)	Table R802.5.1(1)	RB310-16
Table R802.4.1(2)	Table R802.5.1(2)	RB310-16
Table R802.4.1(3)	Table R802.5.1(3)	RB310-16
Table R802.4.1(4)	Table R802.5.1(5)	RB310-16
Table R802.4.1(5)	Table R802.5.1(4)	RB310-16
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Table R802.4.1(7)	Table R802.5.1(7)	RB310-16
Table R802.4.1(8)	Table R802.5.1(8)	RB310-16
R802.4.2	R802.3	RB310-16
R802.4.3 (New)		RB310-16
R802.4.4 (New)		RB310-16
R802.4.5	R802.5.1	RB310-16
Figure R802.4.5	Figure R802.5.1	RB310-16
R802.4.6 (New)		RB310-16
R802.5 (New)		RB310-16
R802.5.1	R802.4	RB310-16
Table R802.5.1(1)	Table R802.4(1)	RB310-16
Table R802.5.1(2)	Table R802.4(2)	RB310-16
R802.5.2	R802.3.1	RB310-16
Table R802.5.2	Table R802.5.1(9)	RB310-16, RB319-16
R802.5.2.1	R802.3.2.2	RB221-16, RB310-16
R802.5.2.2 (New)		RB310-16
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R803.2.3		RB221-16
R804.1.1		RB321-16
Table R804.3.1.1(1)		RB321-16

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ROOF-CEILING CONSTRUCTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Table R804.3.1.1(2)		RB321-16
Table R804.3.2.1(1)		RB321-16
Table R804.3.2.1(2)		RB321-16
R804.3.6		RB321-16
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R806.2		RB324-16, RB325-16
R806.3		RB323-16
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R807.1		RB2-16

CHAPTER 9
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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
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R905.1.1		RB341-16, S28-16
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Table R905.1.1(2)		RB343-16
Table R905.1.1(3)		RB343-16
R905.2.4.1		S8-16 Part II
R905.2.6		S29-16 Part II
R905.2.8		S34-16 Part II
Table R905.8.5		RB154-16
R905.9		S41-16
R905.11		S42-16 Part II
R905.11.1		S43-16 Part II
R905.11.2		S43-16 Part II
Table R905.11.2		S43-16 Part II
R905.11.2.1 (New)		S43-16 Part II
R905.12.2		S18-16
R905.13.2		S18-16
R905.15.3		RB345-16
R905.16.3		RB343-16
Deleted	R905.16.4	RB343-16
R905.16.3.1	R905.16.4.1	RB343-16
Deleted	R905.16.4.2	RB343-16
R905.17 thru R905.17.7 (New)		RB351-16
Table R906.2		RB352-16
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R907.1		RB164-16
Deleted	R907.4	RB164-16
Deleted	R907.5	RB164-16
R908.3.1		S51-16 Part II
Deleted	SECTION R909	RB164-16

CHAPTER 10
CHIMNEYS AND FIREPLACES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
R1001.2.1		RB2-16
R1003.9.2		RB2-16
R1005.8 (New)		RB359-16

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2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
N1101.1		CCC2-16
ADDITION		ADM1-16 Part III
AIR BARRIER		CE3-16 Part II
AIR-IMPERMEABLE INSULATION (New)		RE3-16
ALTERATION		ADM2-16 Part III
APPROVED		ADM4-16 Part III
APPROVED AGENCY		ADM6-16 Part III
BUILDING THERMAL ENVELOPE		CE4-16 Part II
Deleted	C-FACTOR (THERMAL CONDUCTANCE)	NOT USED IN CODE TEXT
DEMAND RECIRCULATION WATER SYSTEM		CE174-16 Part II
FENESTRATION		CE11-16 Part II
Deleted	*F*-FACTOR	NOT USED IN CODE TEXT
HIGH-EFFICACY LAMPS		RE5-16
LABELED		ADM16-16 Part III
OPAQUE DOOR (New)		RE8-16
ROOF ASSEMBLY		G14-16 Part III
Deleted	SKYLIGHT	CE11-16 Part II
Deleted	VERTICAL FENESTRATION	CE11-16 Part II
N1101.10.1		CE26-16 Part II
Table N1101.10.3(1)		CE30-16 Part II
Table N1101.10.3(2)		CE30-16 Part II
N1101.14		RE14-16
N1102.1.1		RE17-16
Table N1102.1.2		CE84-16 Part II, RE22-16, RE31-16
Table N1102.1.4		CE84-16 Part II
N1102.2.2		RE40-16
N1102.2.5		CE84-16 Part II
N1102.2.6		CE65-16 Part II
Table N1102.2.6		RE53-16
Table N1102.4.1.1		RE64-16, RE65-16, RE71-16
N1102.4.1.2		RE83-16, RE84-16
N1102.4.2		RE90-16
N1103.3		RE99-16, RE100-16
N1103.3.2		RE102-16
N1103.3.3		RE105-16
N1103.3.6 (New)		RE99-16, RE100-16
N1103.3.6.1 (New)		RE110-16
N1103.3.7 (New)		RE100-16
N1103.5.2		CE174-16 Part II
N1103.6.1		RE121-16
Table N1103.6.1		RE121-16
N1103.10.3		CE176-16 Part II, CE177-16 Part II
N1104.1		RE126-16, RE127-16
N1105.1		RE132-16
N1105.3		RE140-16
N1105.4.2		RE142-16
Table N1105.5.2(1)		RE143-16, RE149-16, RE152-16
N1106.3		CE248-16 Part II
Table N1106.4		RE173-16
N1106.4		CE274-16 Part II
N1106.6		CE275-16 Part II
N1108.1.1.2		RE183-16

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ENERGY EFFICIENCY

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
N1108.1.1.1		RE184-16
N1109.1.2		RE183-16

CHAPTER 13
GENERAL MECHANICAL SYSTEM REQUIREMENTS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Deleted	M1305.1.1	M15-15 Part II
M1305.1.4.2		RM1-15

CHAPTER 14
HEATING AND COOLING EQUIPMENT AND APPLIANCES

R2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M1401.3		RM3-15
M1407.4		RB2-16
M1411.6.1		RM5-15

CHAPTER 15
EXHAUST SYSTEMS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M1502.3.1 (New)		RM11-15
M1502.4.2		RM12-15
SECTION M1503		RM14-15
M1503.1 (New)		RM14-15
M1503.2 (New)		RM14-15
M1503.2.1 (New)		RM14-15
M1503.3	M1503.1	RM14-15
M1503.4	M1503.2	RB2-16, RM14-15
M1503.6	M1503.4	RM15-15, RM16-15
M1503.6.2 (New)		RM15-15
Deleted	SECTION M1504	RM19-15
Deleted	SECTION M1505	RM14-15
M1504.3	M1506.3	RM21-15
M1505.2	M1507.2	RM22-15
M1505.3 (New)		RM23-15
M1505.4.3	M1507.3.3	RM26-15

CHAPTER 16
DUCT SYSTEMS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M1601.1.1		RM31-15
M1601.1.2		RB2-16, RM34-15
M1601.4.1		RB2-16, RM36-15
M1602.2		RM37-15

CHAPTER 18
CHIMNEYS AND VENTS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M1803.3.5		RB2-16
M1803.4.3		RB2-16

CHAPTER 19
SPECIAL APPLIANCES, EQUIPMENT AND SYSTEMS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M1901.1		RM19-15
M1901.2		RM19-15

CHAPTER 20
BOILERS AND WATER HEATERS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M2005.1		RM52-15
M2006.1		RM39-15
Deleted	M2006.3	RM39-15

CHAPTER 21
HYDRONIC PIPING

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Table M2101.1		RM40-15, RM41-15, RM42-15, RM43-15
Table M2101.9		RM44-15
M2101.10		RM45-15, RM47-15
M2103.2		RM48-15
Deleted	M2103.2.1	RM48-15
Deleted	M2103.2.2	RM48-15
M2103.3		RM40-15
Table M2105.4		RM41-15, RM43-15, RM51-15
Table M2105.5		RM43-15, RM51-15
M2105.13		RM43-15
M2105.13.3 (New)		RM43-15
M2105.13.4 (New)		RM43-15

CHAPTER 23
SOLAR THERMAL ENERGY SYSTEMS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
M2301.2.1		RM52-15
M2301.2.2.2		RM52-15
M2301.2.4		RM52-15
M2301.2.6		RM52-15
M2301.2.6.1 (New)		RM52-15
M2301.2.6.2 (New)		RM52-15
M2301.2.8		RM52-15
M2301.2.11.1		RM52-15
M2301.3.1		RM52-15
M2301.3.2		RM52-15
M2301.2.6.1 (New)		RM52-15
M2301.2.6.2 (New)		RM52-15

CHAPTER 24
FUEL GAS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
APPLIANCE		FG2-15
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TOILET, GAS-FIRED (New)		FG1-15
UNIT HEATER		FG10-15
G2406.2		FG11-15
G2412.9		FG17-15
G2412.10 (New)		FG20-15
G2415.11		FG24-15
G2415.11.1 through G2415.11.4 (New)		FG24-15
Deleted	G2415.11.2	FG24-15
G2415.14		FG25-15
G2415.17.3		FG26-15
G2420.5.1		FG29-15
G2420.6 (New)		FG31-15
G2421.2		FG32.15
G2421.4		FG33-15
G2422.1		FG34-15
G2422.3 (New)		FG34-15
Deleted	G2442.2	FG37-15
G2447.2		FG40-15

CHAPTER 25
PLUMBING ADMINISTRATION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P2503.7		P20-15 Part II

CHAPTER 26
GENERAL PLUMBING REQUIREMENTS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P2602.1		P98-15 Part II, P166-15 Part II
P2605.1		P19-15 Part II

CHAPTER 27
PLUMBING FIXTURES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
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P2702.4		P51-15 Part II
SECTION P2704		P53-15 Part II
P2704.1		P53-15 Part II
P2713.1		P55-15 Part II

CHAPTER 28
WATER HEATERS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P2801.6		RP5-15
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CHAPTER 29
WATER SUPPLY AND DISTRIBUTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P2902.5.4		RP8-15
P2903.5		RP10-15
Table P2903.9.4		P124-15 Part II
P2904.1		RP8-15
Table P2906.4		P113-15 Part II, RP16-15
P2906.5		P115-15 Part II
Table P2906.5		P113-15 Part II, RP16-15
P2906.6.1 (New)		RP13-15
Table P2906.6		RP12-15, RP16-15
P2906.9.1.4		RP15-15
P2906.10	P2906.9.1.5	RP14-15
P2906.10.1	P2906.9.1.5.1	RP14-15
P2906.10.2	P2906.9.1.5.2	RP14-15
P2906.18.2 (New)		P135-15 Part II
P2906.20	P2906.19	RP16-15
P2906.20.2 (New)		RP16-15
P2906.20.3 (New)		RP16-15
P2906.21 (New)		P132-15 Part II

CHAPTER 30
SANITARY DRAINAGE

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
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P3003.2		P184-15 Part II
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P3003.13.1		P181-15 Part II
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P3003.13.3		P181-15 Part II
P3003.13.4		P184-15 Part II
P3005.1.6		P178-15 Part II
P3005.2.6		P191-15 Part II
P3007.3.2		P194-15 Part II
P3007.3.3		P195-15 Part II
P3007.6		P197-15 Part II, P198-15 Part II
P3008.1		P202-15
P3008.2 (New)		P202-15
Deleted	P3008.3	P203-15
P3008.3	P3008.2	P203-15
Deleted	P3008.4	P203-15
P3008.4	P3008.5	P203-15
SECTION P3010		P279-15
P3010.1		P279-15
P3010.2		P279-15
P3010.4		P204-15
P3010.5		P204-15
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CHAPTER 31
VENTS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P3103.1		P215-15
P3103.1.1 thru P3103.1.4 (New)		P215-15

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VENTS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Deleted	P3103.6	P215-15
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P3111.1.1 (New)		P221-15
P3111.2		P221-15
P3111.2.1		P221-15
P3111.2.2		P221-15
P3111.2.3		P221-15
Deleted	P3111.2.4	P221-15
P3111.3		P221-15
P3114.8		P226-15

CHAPTER 32
TRAPS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
P3201.1		P53-15 Part II

CHAPTER 44
REFERENCED STANDARDS

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
AAMA		FS164-15, FS165-15
ASTM		P184-15 Part II, P190-15 Part II, P205-15 Part II
MSS		P124-15 Part II
NGWA		P98-15 Part II
RESNET/ICC		RE83-16, RE166-16

APPENDIX E
EXISTING BUILDINGS AND STRUCTURES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
AE101.1		RB360-16
AE101.2 (New)		RB360-16

APPENDIX J
EXISTING BUILDINGS AND STRUCTURES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Deleted	LOAD-BEARING ELEMENT	ADM17-16 Part IV

APPENDIX Q
TINY HOUSES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
Appendix Q (New)		RB168-16

APPENDIX R
LIGHT STRAW-CLAY CONSTRUCTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
AR101.1		RB365-16
CLAY SLIP		RB365-16
CLAY SUBSOIL	CLAY SOIL	RB365-16
INFILL		RB365-16
LIGHT STRAW-CLAY		RB365-16
VOID		RB365-16
AR103.2.2		RB365-16
AR103.2.3		RB365-16
Table AR103.2.3 (New)		RB365-16
AR103.2.4		RB365-16
Figure AR103.2.4(1) (New)		RB365-16
Figure AR103.2.4(2) (New)		RB365-16
Figure AR103.2.4(3) (New)		RB365-16
AR103.3.1		RB365-16
AR103.3.2		RB365-16
Deleted	AR103.3.3	RB365-16
AR103.3.3	AR103.3.4	RB365-16
AR103.4.1		RB365-16
AR103.4.6		RB365-16
AR103.5.1		RB365-16
AR103.5.2		RB365-16
AR103.5.5		RB365-16
SECTION AR104		RB365-16
AR104.1		RB365-16
AR104.2 (New)		RB365-16
Deleted	SECTION AR105	RB365-16

APPENDIX S
STRAWBALE CONSTRUCTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
AS101.1		RB366-16
AS101.2 (New)		RB367-16
Figure AS101.2 (New)		RB367-16
CLAY SLIP		RB368-16
CLAY SUBSOIL (New)		RB368-16
LAID FLAT		RB366-16, RB367-16
,ESJ		RB366-16
MESH		RB366-16
ON-EDGE		RB366-16, RB367-16
ON-END (New)		RB367-16, RB368-16
PLASTER		RB366-16
Figure AS102.1 (New)		RB367-16
AS103.2		RB367-16
Figure AS103.2 (New)		RB367-16
AS103.4		RB366-16
AS103.5		RB366-16
AS104.2		RB368-16
AS104.4.3.1		RB368-16
AS104.4.3.2		RB368-16
AS104.4.4.1		RB368-16
AS104.4.5		RB366-16
AS104.4.6		RB366-16
AS104.4.8		RB366-16
AS105.1		RB367-16
Figure AS105.1(1) through AS105.1(4) (New)		RB367-16
AS105.2		RB366-16
AS105.3		RB367-16
AS105.3.1 (New)		RB368-16

APPENDIX S *(continued)*
STRAWBALE CONSTRUCTION

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
AS105.4		RB366-16
Table AS105.4		RB366-16, RB368-16
AS105.4.1		RB366-16
AS105.4.2		RB366-16
AS105.6		RB368-16
AS105.6.4		RB366-16
AS105.6.8		RB366-16
AS105.6.9 (New)		RB368-16
AS105.8 (New)		RB366-16
AS106.1		RB368-16
AS106.2 (New)		RB368-16
AS106.4	AS106.3	RB367-16
Deleted	AS106.5	RB366-16
AS106.10		RB367-16
AS106.11		RB366-16, RB367-16
AS106.12		RB366-16
AS106.12.3 (New)		RB367-16, RB368-16
AS106.12.3.1 (New)		RB367-16, RB368-16
AS106.13		RB366-16
AS106.13.1		RB366-16
Table AS106.13(2)		RB366-16
Table AS106.13(3)		RB366-16
AS106.15 (New)		RB367-16, RB368-16
AS107.1		RB369-16
AS107.1.1		RB370-16
AS107.1.2		RB370-16
AS108.1		RB368-16
AS108.2 (New)		RB368-16
AS109		RB368-16

APPENDIX T
RECOMMENDED PROCEDURES FOR WORST-CASE TESTING OF ATMOSPHERIC VENTING SYSTEMS UNDER N1102.4 OR N1105 CONDITIONS ≤ 5ACH$_{50}$

Deleted	APPENDIX T	RE187-16

APPENDIX U
SOLAR-READY PROVISIONS—DETACHED ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES

2018 IRC	2015 IRC	CODE CHANGE NUMBER(S)
APPENDIX T	APPENDIX U	RE187-16
T103.1	U103.1	RB371-16
T103.5 (New)		RB371-16
T103.6 (New)		RB371-16

Code Change No: RB2-16

Original Proposal

Section: R202, M1305.1, M1407.4, M1503.4, M1601.1.2, M1601.4.1, M1803.3.5, M1803.4.3, M2204.2, M2301.2.1, R1001.2.1, R1003.9.2, R202, R202 (New), R301.5, R302.7, R308.4.3, R308.4.6, R308.6.2, R308.6.5, R310.5, R311.3, R807.1

Proponent: David Collins (dcollins@preview-group.com); Dan Buuck (dbuuck@nahb.org); Steven Orlowski (sorlowski@boma.org)

Delete and substitute as follows:

~~**ACCESSIBLE.** Signifies access that requires the removal of an access panel or similar removable obstruction.~~

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.

~~**ACCESSIBLE, READILY.** Signifies access without the necessity for removing a panel or similar obstruction.~~

READY ACESS (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.

Revise as follows:

CLEANOUT. An ~~accessible~~ opening in the drainage system used for the removal of possible obstruction and located to allow for *access*.

FIXTURE FITTING.
Supply fitting. A fitting that controls the volume or directional flow or both of water and that is either attached to or ~~accessible~~ is *accessed* from a fixture or is used with an open or atmospheric discharge.
Waste fitting. A combination of components that conveys the sanitary waste from the outlet of a fixture to the connection of the sanitary drainage system.

TABLE R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS (in pounds per square foot)

USE	LIVE LOAD
Uninhabitable attics without storage[b]	10
Uninhabitable attics with limited storage[b,g]	20
Habitable attics and attics served with fixed stairs	30
Balconies (exterior) and decks[e]	40
Fire escapes	40
Guards and handrails[d]	200[h]
Guard in-fill components[f]	50[h]
Passenger vehicle garages[a]	50[a]
Rooms other than sleeping rooms	40
Sleeping rooms	30
Stairs	40[c]

For SI: 1 pound per square foot = 0.0479 kPa, 1 square inch = 645 mm ^{2} ,1 pound = 4.45 N.
a. Elevated garage floors shall be capable of supporting a 2,000-pound load applied over a 20-square-inch area.
b. Uninhabitable *attics* without storage are those where the clear height between joists and rafters is not more than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses. This live load need not be assumed to act concurrently with any other live load requirements.
c. Individual stair treads shall be designed for the uniformly distributed live load or a 300-pound concentrated load acting over an area of 4 square inches, whichever produces the greater stresses.
d. A single concentrated load applied in any direction at any point along the top.
e. See Section R507.1 for decks attached to *exterior walls* .
f. *Guard* in-fill components (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement.
g. Uninhabitable *attics* with limited storage are those where the clear height between joists and rafters is not greater than 42 inches, or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses. The live load need only be applied to those portions of the joists or truss bottom chords where all of the following conditions are met:
1. The *attic* area is ~~accessible~~ accessed from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the *attic* is not less than 30 inches.
2. The slopes of the joists or truss bottom chords are not greater than 2 inches vertical to 12 units horizontal.
3. Required insulation depth is less than the joist or truss bottom chord member depth.
The remaining portions of the joists or truss bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 pounds per square foot.
h. Glazing used in handrail assemblies and *guards* shall be designed with a safety factor of 4. The safety factor shall be applied to each of the concentrated loads applied to the top of the rail, and to the load on the in-fill components. These loads shall be determined independent of one another, and loads are assumed not to occur with any other live load.

R302.7 Under-stair protection. Enclosed ~~accessible~~ space under stairs that is *accessed* by a door or access panel, shall have walls, under-stair surface and any soffits protected on the enclosed side with $^1/_2$-inch (12.7 mm) gypsum board.

R308.4.3 Glazing in windows. Glazing in an individual fixed or operable panel that meets all of the following conditions shall be considered to be a hazardous location:

1. The exposed area of an individual pane is larger than 9 square feet (0.836 m^2),
2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor,
3. The top edge of the glazing is more than 36 inches (914 mm) above the floor; and
4. One or more walking surfaces are within 36 inches (914 mm), measured horizontally and in a straight line, of the glazing.

Exceptions:

1. Decorative glazing.
2. Where glazing is adjacent to a walking surfacae and a horizontal rail is installed ~~on the accessible side(s) of the glazing~~ 34 to 38 inches (864 to 965 mm) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and have a cross-sectional height of not less than $1^1/_2$ inches (38 mm).
3. Outboard panes in insulating glass units and other multiple glazed panels where the bottom edge of the glass is 25 feet (7620 mm) or more above *grade*, a roof, walking surfaces or other horizontal [within 45 degrees (0.79 rad) of horizontal] surface adjacent to the glass exterior.

R308.4.6 Glazing adjacent to stairs and ramps. Glazing where the bottom exposed edge of the glazing is less than 36 inches (914 mm) above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered to be a hazardous location.

Exceptions:

1. Where glazing is adjacent to a walking surface and a horizontal rail is installed ~~on the accessible side(s) of the glazing~~at 34 to 38 inches (864 to 965 mm) above the walking

surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and have a cross-sectional height of not less than $1^1/_2$ inches (38 mm).

2. Glazing 36 inches (914 mm) or more measured horizontally from the walking surface.

R308.6.2 Materials. The following types of glazing shall be permitted to be used:

1. Laminated glass with not less than a 0.015-inch (0.38 mm) polyvinyl butyral interlayer for glass panes 16 square feet (1.5 m^2) or less in area located such that the highest point of the glass is not more than 12 feet (3658 mm) above a walking surface ~~or other accessible area~~; for higher or larger sizes, the interlayer thickness shall be not less than 0.030 inch (0.76 mm).
2. Fully tempered glass.
3. Heat-strengthened glass.
4. Wired glass.
5. *Approved* rigid plastics.

R308.6.5 Screens not required. Screens shall not be required where fully tempered glass is used as single glazing or the inboard pane in multiple glazing and either of the following conditions are met:

1. Glass area 16 square feet (1.49 m^2) or less. Highest point of glass not more than 12 feet (3658 mm) above a walking surface ~~or other accessible area~~, nominal glass thickness not more than $^3/_{16}$ inch (4.8 mm), and (for multiple glazing only) the other pane or panes fully tempered, laminated or wired glass.
2. Glass area greater than 16 square feet (1.49 m^2). Glass sloped 30 degrees (0.52 rad) or less from vertical, and highest point of glass not more than 10 feet (3048 mm) above a walking surface ~~or other accessible area~~.

R310.5 Dwelling additions. Where *dwelling additions* occur that contain sleeping rooms, an emergency escape and rescue opening shall be provided in each new sleeping room. Where *dwelling additions* occur that have *basements*, an emergency escape and rescue opening shall be provided in the new *basement*.

Exceptions:

1. An emergency escape and rescue opening is not required in a new *basement* that contains a sleeping room with an emergency escape and rescue opening.
2. An emergency escape and rescue opening is not required in a new *basement* where there is an emergency escape and rescue opening in an existing *basement* that is ~~accessible~~ *accessed* from the new *basement*.

R311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. Every landing shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The slope at exterior landings shall not exceed $^1/_4$ unit vertical in 12 units horizontal (2 percent).

Exception: Exterior balconies less than 60 square feet (5.6 m^2) and only ~~accessible~~accessed from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an *attic* access opening to *attic* areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m^2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other ~~readily accessible~~ location with *ready access*. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the *attic* space shall be 30

inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical *equipment* is located in *attics*.

R1001.2.1 Ash dump cleanout. Cleanout openings located within foundation walls below fireboxes, when provided, shall be equipped with ferrous metal or masonry doors and frames constructed to remain tightly closed except when in use. Cleanouts shall be ~~accessible~~ located to allow *access* and ~~located~~ so that ash removal will not create a hazard to combustible materials.

R1003.9.2 Spark arrestors. Where a spark arrestor is installed on a masonry chimney, the spark arrestor shall meet all of the following requirements:

1. The net free area of the arrestor shall be not less than four times the net free area of the outlet of the chimney flue it serves.
2. The arrestor screen shall have heat and corrosion resistance equivalent to 19-gage galvanized steel or 24-gage stainless steel.
3. Openings shall not permit the passage of spheres having a diameter greater than $^{1}/_{2}$ inch (12.7 mm) nor block the passage of spheres having a diameter less than $^{3}/_{8}$ inch (9.5 mm).
4. The spark arrestor shall be ~~accessible~~ located with *access* for cleaning and the screen or chimney cap shall be removable to allow for cleaning of the chimney flue.

M1305.1 Appliance access for inspection service, repair and replacement. *Appliances* shall be ~~accessible~~ located to allow for *access* for inspection, service, repair and replacement without removing permanent construction, other *appliances*, or any other piping or ducts not connected to the *appliance* being inspected, serviced, repaired or replaced. A level working space not less than 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an *appliance*.

M1407.4 Access. Duct heaters shall be ~~accessible~~ located to allow *access* for servicing, and clearance shall be maintained to permit adjustment, servicing and replacement of controls and heating elements.

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m^3/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be ~~accessible~~ located to allow *access* for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced.

M1601.1.2 Underground duct systems. Underground *duct systems* shall be constructed of *approved* concrete, clay, metal or plastic. The maximum duct temperature for plastic ducts shall not be greater than 150°F (66°C). Metal ducts shall be protected from corrosion in an *approved* manner or shall be completely encased in concrete not less than 2 inches (51 mm) thick. Nonmetallic ducts shall be installed in accordance with the manufacturer's instructions. Plastic pipe and fitting materials shall conform to cell classification 12454-B of ASTM D 1248 or ASTM D 1784 and external loading properties of ASTM D 2412. Ducts shall slope to ~~an accessible~~ a point for drainage that has *access*. Where encased in concrete, ducts shall be sealed and secured prior to any concrete being poured. Metallic ducts having an *approved* protective coating and nonmetallic ducts shall be installed in accordance with the manufacturer's instructions.

M1601.4.1 Joints, seams and connections. 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*. 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 "181A-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 BM" 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 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint.

Closure systems used to seal all ductwork shall be installed in accordance with the manufacturers' instructions.

Exceptions:

1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially ~~inaccessible~~ without *access*, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. 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 button-lock types.

M1803.3.5 Access. The entire length of a connector shall ~~be accessible~~ allow *access* for inspection, cleaning and replacement.

M1803.4.3 Connection to masonry fireplace flue. A connector shall extend from the *appliance* to the flue serving a masonry fireplace to convey the flue gases directly into the flue. The connector shall ~~be accessible~~ allow *access* or removable for inspection and cleaning of both the connector and the flue. *Listed* direct-connection devices shall be installed in accordance with their *listing*.

M2204.2 Shutoff valves. A ~~*readily accessible*~~ manual shutoff valve shall be installed to allow for *ready access* and be located between the oil supply tank and the burner. Where the shutoff valve is installed in the discharge line of an oil pump, a pressure-relief valve shall be incorporated to bypass or return surplus oil. Valves shall comply with UL 842.

M2301.2.1 Access. Solar energy collectors, controls, dampers, fans, blowers and pumps shall be ~~accessible~~ located to allow *access* for inspection, maintenance, repair and replacement.

Reason: The intent of this proposal is for clarification of terminology. This proposal will clarify where the provisions are for access for repair, not accessibility for persons with disabilities.

The term 'accessible' is defined in the IBC and relates to elements and facilities that serve or have special accommodations for persons with mobility impairments. This term is used that way in IRC Section R320 and R321.3. The IPC, IFGC and IMC use the defined term "Access (to)" or "Ready Access" for access to equipment. Using those terms are proposed here for the IRC where applicable.

The phrase "other accessible area" has been removed from Sections R308.4.6, R308.6.2 and R308.6.5. This is confusing and not uniformly enforceable.

There is a similar proposal for the IECC, including Chapter 11 of the IRC. A similar proposal was approved for the International Plumbing Code as part of Group A - P84-15.

Cost Impact: Will not increase the cost of construction

This is a clarification of terminology that will have no change on code requirements.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This clarifies that code by separating something that is accessible from something that is accessed.

Assembly Action: **None**

Final Action Results

RB2-16	**AS**

Code Change No: RB29-16

Original Proposal

Section: R302.1

Proponent: Joseph Holland (jholland@frtw.com)

Revise as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside, or Type IV construction, or fire-retardant-treated wood.[a, b]	≥ 2 feet to
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside, or Type IV construction or fire-retardant-treated wood.[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.

b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

Reason: The proposal will bring the IRC and the IBC into agreement. Currently, the IBC provides options while the IRC has only one method of compliance.

The IBC in Section 705.2.3 permits the use of Type IV construction, *fire-retardant-treated wood* or 1-hr fire-resistance construction for combustible projections. The IRC in Table R302.1(1) and Table R302.1(2) only permits the 1-hr fire-resistance construction on the underside. There is no 1-hr. fire-resistance assembly listed for roof eaves. As a result, users of the International Residential Code are looking to the International Building Code for compliance with the requirement.

Cost Impact: Will not increase the cost of construction
The change only provides options. It does not mandate any requirements not permitted by ICC codes.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside, or ~~Type IV~~ heavy timber ~~construction~~, or fire-retardant-treated wood.[a, b]	≥ 2 feet to
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside, or ~~Type IV~~ heavy timber ~~construction~~ or fire-retardant-treated wood.[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.

b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

Committee Reason: The modification deletes a term that is not used in the code and replaces it with one that is used. The proposal offers a good solution for projections.

Assembly Action **None**

Final Action Results

RB29-16 **AM**

Code Change No: RB30-16

Original Proposal

Section: R302.1

Proponent: Jeff Hugo, National Fire Sprinkler Association, representing National Fire Sprinkler Association (hugo@nfsa.org)

Revise as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[a, b]	≥ 2 feet to
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. ~~Roof eave~~ The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. ~~Roof eave~~ The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the ~~eave~~ rake overhang where fireblocking is provided ~~that~~ and gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.

b. The ~~roof eave~~ fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The ~~roof eave~~ fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the ~~eave~~ rake overhang where fireblocking is provided ~~that~~ and gable vent openings are not installed.

Reason: This proposal provides the same application, regardless of the side of the dwelling faces the lot line. It is clearly not the intent of the IRC to provide no projection protection to the eave side that faces the lot line when the gable end vent is removed. However, a literal interpretation of the code does exactly that, which is not what RB67-13 intended.

Rake and eave overhangs are clearly defined visually (Figure R804.3.2.1.2) and in the text (R804.3.4.1.2 and R905.2.8.5) of the IRC. Some areas of the country use terms rake and eave interchangeably and the terms in the IRC needs to be consistent throughout the document for uniform code enforcement. This proposal uses these terms in the appropriate context and orientation. The proposal, to footnote "b" and "c", provides fireblocking to the gable rake, as is done on the eave side, because some gable end framing techniques use a shorter gable end truss with 2x4 outlooks to frame the rake overhang. Where this framing technique is not used, such as where the gable end wall framing and sheathing meet the roof sheathing, additional fireblocking would not be required.

Cost Impact: Will not increase the cost of construction
The requirement to add fireblocking already exists, this proposal clarifies the installation.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable.
a. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where ~~fireblocking is provided and~~ gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable
a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.
b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
c. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where ~~fireblocking is provided and~~ gable vent openings are not installed.

Committee Reason: The proposal was too restrictive without the modification. This proposal clarifies the distinctions between eaves and rakes.

Assembly Action **None**

Final Action Results

RB30-16 **AM**

Code Change No: RB32-16

Original Proposal

Section: R302.1, R302.2, R302.3

Proponent: Stephen Thomas, Colorado Code Consulting, LLC (sthomas@coloradocode.net)

Revise as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119~~,~~ ~~or~~ UL 263 or Chapter 7 of the International Building Code with exposure from both sides	
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[a, b]	≥ 2 feet to
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119~~,or~~ UL 263 or Chapter 7 of the International Building Code with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.

b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

R302.2 Townhouses. Common walls separating *townhouses* shall be assigned a fire-resistance rating in accordance with Section R302.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 ~~or~~, UL 263 or Chapter 7 of the International Building Code .
2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 ~~or~~, UL 263 or Chapter 7 of the International Building Code.

R302.3 Two-family dwellings. *Dwelling units* in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E 119~~ or,~~ UL 263 or Chapter 7 of the International Building Code. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the *exterior wall*, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

Exceptions:

1. A fire-resistance rating of $^{1}/_{2}$ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.
2. Wall assemblies need not extend through *attic* spaces where the ceiling is protected by not less than $^{5}/_{8}$-inch (15.9 mm) Type X gypsum board, an *attic* draft stop constructed as specified in Section R302.12.1 is provided above and along the wall assembly separating the *dwellings* and the structural framing supporting the ceiling is protected by not less than $^{1}/_{2}$-inch (12.7 mm) gypsum board or equivalent.

Reason: The IRC only permits ASTM E119 or UL 263 fire-resistance rated assemblies as written. However, Chapter 7 of the IBC has prescriptive and calculated fire assemblies that have been successfully used over the years to provide fire-resistant rated construction. It is our belief that users of the IRC should also be able to use these systems as well. Although many jurisdictions may permit the use as an alternate design, we have had building officials prohibit the use of Chapter 7 in the IBC since it is not specifically noted in the code. This proposal clearly states that a user can use the IBC fire-resistive rated assemblies.

Cost Impact: Will not increase the cost of construction
This proposal will allow more prescriptive assemblies which typically are less costly than proprietary assemblies. Therefore, this change will reduce the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

TABLE R302.1 (1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		**MINIMUM FIRE-RESISTANCE RATING**	**MINIMUM FIRE SEPARATION DISTANCE**
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119,UL 263 or Chapter 7Section 703.3 of the International Building Code with exposure from both sides	
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[a, b]	≥ 2 feet to
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet

Penetrations	All	Comply with Section R302.4	
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		**MINIMUM FIRE-RESISTANCE RATING**	**MINIMUM FIRE SEPARATION DISTANCE**
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119, UL 263 or Chapter 7Section 703.3 of the International Building Code with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.

b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

R302.2 Townhouses. Common walls separating *townhouses* shall be assigned a fire-resistance rating in accordance with Section R302.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119, UL 263 or ~~Chapter 7~~ Section 703.3 of the International Building Code .
2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 , UL 263 or ~~Chapter 7~~ Section 703.3 of the International Building Code.

R302.3 Two-family dwellings. *Dwelling units* in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E 119, UL 263 or ~~Chapter 7~~ Section 703.3 of the International Building Code. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the *exterior wall*, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

Exceptions:

1. A fire-resistance rating of $^{1}/_{2}$ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.
2. Wall assemblies need not extend through *attic* spaces where the ceiling is protected by not less than $^{5}/_{8}$-inch (15.9 mm) Type X gypsum board, an *attic* draft stop constructed as specified in Section R302.12.1 is provided above and along the wall assembly separating the *dwellings* and the structural framing supporting the ceiling is protected by not less than $^{1}/_{2}$-inch (12.7 mm) gypsum board or equivalent.

Committee Reason: The modification provides assistance to the building official and the builder. The reference to the International Building Code clarifies that this option exists in the International Residential Code and gives the builder more options for compliance.

Assembly Action **None**

Final Action Results

RB32-16 **AM**

Code Change No: RB33-16

Original Proposal

Section: R302.1

Proponent: Marcelo Hirschler, representing GBH International (gbhint@aol.com)

Revise as follows:

TABLE R302.1 (2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	N/A	
	Fire-resistance rated	1 hour on the underside[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable
a. For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for ~~nonrated~~ exterior walls not fire resistance rated and for fire resistance rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.
b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

Reason: Editorial

Cost Impact: Will not increase the cost of construction
Editorial

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This is a simple editorial change.

Assembly Action: **None**

Final Action Results

RB33-16 **AS**

Code Change No: RB37-16

Original Proposal

Section: R302.1

Proponent: Michael Gieszler, representing Oregon Building Officials Association (mike.gieszler@hillsboro-oregon.gov)

Revise as follows:

R302.1 Exterior walls. Construction, projections, openings and penetrations of *exterior walls* of *dwellings* and accessory buildings shall comply with Table R302.1(1); or *dwellings* equipped throughout with an *automatic sprinkler system* installed in accordance with Section P2904 shall comply with Table R302.1(2).

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of ~~*dwellings*~~ *individual dwelling units* and their *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.

Reason: Current language could be misinterpreted to allow the placement of structures accessory to other dwelling units adjacent to another unit without regard to fire separation distances.

Cost Impact: Will not increase the cost of construction
This proposal is to provide clarity to an existing code section. No additional cost is associated with this proposal.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The committee recommended the proposal for approval based upon the proponents reason statement and because the proposal clarifies the intent of the code.

Assembly Action: **None**

Final Action Results

RB37-16	**AS**

Code Change No: RB44-16

Original Proposal

Section: R302.2, R302.2 (New), R302.2.1 (New), R302.2.4

Proponent: Stephen Thomas, Colorado Code Consulting, LLC (sthomas@coloradocode.net)

Add new text as follows:

R302.2 Townhouses. Walls separating townhouse units shall be constructed in accordance with Section R302.2.1 or Section R302.2.2.

R302.2.1 Double Walls. Each townhouse shall be separated by two 1-hour fire-resistance rated wall assemblies tested in accordance with ASTM E119, UL 263 or Chapter 7 of the International Building Code.

Revise as follows:

~~R302.2~~ R302.2.2 ~~Townhouses~~ Common Walls. Common walls separating *townhouses* shall be assigned a fire-resistance rating in accordance with Section ~~R302.2~~R302.2.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.
2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.

R302.2.4 Structural independence. Each individual *townhouse* shall be structurally independent.

Exceptions:

1. Foundations supporting *exterior walls* or common walls.
2. Structural roof and wall sheathing from each unit fastened to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. *Townhouses* separated by a common wall as provided in Section ~~R302.2~~ R302.2.2, Item 1 or 2.

Reason: When Section 302.2 was changed between the 2012 and 2015 editions of the IRC, we lost the option of constructing two one-hour fire-resistant rated walls that have always been permitted in the IRC. We do not believe that this was the intent of the proponent of that change. The two walls has been used successfully in many townhouses across the country. So, we have proposed this language to reinstate that option. We have created a new subsection that provides the option and maintains the common wall option if the builder so chooses. We have also coordinated Section 302.2.4, exception 5 with the new section above.

Cost Impact: Will not increase the cost of construction
This is just another option to providing the separation between townhouses. It may actually reduce the cost of construction in some cases.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R302.2.1 Double Walls. Each townhouse shall be separated by two 1-hour fire-resistance rated wall assemblies tested in accordance with ASTM E119, UL 263 or Section 703.3 ~~Chapter 7~~ of the International Building Code.

R302.2.2 Common Walls Common walls separating *townhouses* shall be assigned a fire-resistance rating in accordance with Section R302.2.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 or Section 703.3 of the International Building Code.
2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 or Section 703.3 of the International Building Code.

(Portions of proposal not shown to remain unchanged.)

Committee Reason: The modification adds another option and clarifies. Double exterior walls have been used for thirty or forty years, they work, and you can put plumbing in them.

Assembly Action **None**

Final Action Results

RB44-16 **AM**

Code Change No: RB45-16

Original Proposal

Section: R302.2.2

Proponent: Richard Davidson, representing Self

Revise as follows:

R302.2.2 Parapets for townhouses. Parapets constructed in accordance with Section R302.2.3 shall be constructed for *townhouses* as an extension of exterior walls or common walls in accordance with the following:

1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall extend not less than 30 inches (762 mm) above the roof surfaces.
2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is not more than 30 inches (762 mm) above the lower roof, the parapet shall extend not less than 30 inches (762 mm) above the lower roof surface.

   Exception: A parapet is not required in the preceding two cases where the roof covering complies with a minimum Class C rating as tested in accordance with ASTM E 108 or UL 790 and the roof decking or sheathing is of noncombustible materials or ~~*approved*~~ fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each side of the wall or walls, or one layer of $^{5}/_{8}$-inch (15.9 mm) Type X gypsum board is installed directly beneath the roof decking or sheathing, supported by not less than nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a distance of not less than 4 feet (1219 mm) on each side of the wall or walls and any openings or penetrations in the roof are not within 4 feet (1219 mm) of the common walls. Fire-retardant treated wood shall meet the requirements of Sections R802.1.5 and R803.2.1.2.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm) above the lower roof. The common wall construction from the lower roof to the underside of the higher roof deck shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.

Reason: There are code sections that regulate fire-retardant-treated wood. There is no need to use the word "approved".

Cost Impact: Will not increase the cost of construction
This is an editorial revision and will have no impact on construction costs.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal clarifies the code.

Assembly Action: **None**

Final Action Results

RB45-16	**AS**

Code Change No: RB54-16

Original Proposal

Section: R302.4.2

Proponent: Jonathan Roberts (jonathan.roberts@ul.com)

Revise as follows:

R302.4.2 Membrane penetrations. Membrane penetrations shall comply with Section R302.4.1. Where walls are required to have a fire-resistance rating, recessed fixtures shall be installed so that the required fire-resistance rating will not be reduced.

Exceptions:

1. Membrane penetrations of not more than 2-hour fire-resistance-rated walls and partitions by steel electrical boxes that do not exceed 16 square inches (0.0103 m^2) in area provided that the aggregate area of the openings through the membrane does not exceed 100 square inches (0.0645 m^2) in any 100 square feet (9.29 m^2) of wall area. The annular space between the wall membrane and the box shall not exceed $^1/_8$ inch (3.1 mm). Such boxes on opposite sides of the wall shall be separated by one of the following:
   1.1. By a horizontal distance of not less than 24 inches (610 mm) where the wall or partition is constructed with individual noncommunicating stud cavities.
   1.2. By a horizontal distance of not less than the depth of the wall cavity where the wall cavity is filled with cellulose loose-fill, rockwool or slag mineral wool insulation.
   1.3. By solid fireblocking in accordance with Section R302.11.
   1.4. By protecting both boxes with *listed* putty pads.
   1.5. By other *listed* materials and methods.
2. Membrane penetrations by *listed* electrical boxes of any materials provided that the boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the *listing*. The annular space between the wall membrane and the box shall not exceed $^1/_8$ inch (3.1 mm) unless *listed* otherwise. Such boxes on opposite sides of the wall shall be separated by one of the following:
   2.1. By the horizontal distance specified in the *listing* of the electrical boxes.
   2.2. By solid fireblocking in accordance with Section R302.11.
   2.3. By protecting both boxes with *listed* putty pads.
   2.4. By other *listed* materials and methods.
3. The annular space created by the penetration of a fire sprinkler provided that it is covered by a metal escutcheon plate.
4. <u>Ceiling membrane penetrations by listed luminaires or by luminaires protected with listed materials, that have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.</u>

Reason: This proposal is intended to bring consistency between the International Residential Code and the International Building Code. A similar proposal, FS 67-15, submitted under the Group A code cycle, was Approved as Submitted by the committee and received no public comments.

The proposal adds an additional exception which recognizes the listings of recessed incandescent and fluorescent can lights, or enclosure materials which protect recessed can lights or troffer light fixtures, which have been tested as a ceiling membrane penetration of fire-resistance-rated horizontal assemblies. There are currently twenty six UL listed can lights which incorporate integral fire protection which have evaluated for use in fire-resistance-rated horizontal assemblies. Similarly there are eleven UL listed enclosure materials which have been evaluated for their ability to protect penetrations in ceiling membranes by non fire rated can lights or troffer light fixtures.

Cost Impact: Will not increase the cost of construction
This code change proposal will not increase the cost of construction. These products are already in use within the construction industry.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The committee approved this proposal based on the proponents reason statement and because it provides another alternative for builders.

Assembly Action: **None**

Final Action Results

RB54-16	**AS**

Code Change No: RB58-16

Original Proposal

Section: R302.5, R302.5.1

Proponent: Robert Davidson, Davidson Code Concepts, LLC, representing Allegion (rjd@davidsoncodeconcepts.com)

Revise as follows:

R302.5 Dwelling-garage opening and penetration protection. Openings and penetrations through the walls or ceilings separating the *dwelling* from the garage shall be in accordance with Sections R302.5.1 through R302.5.3.

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than $1^3/_8$ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than $1^3/_8$ inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing device or an automatic-closing device that is actuated by smoke detection or heat detection.

Reason: The purpose of this modification is to provide an option to use an automatic-closing device that is activated by smoke detection or heat detection on a door opening between the garage and the residence.

The option is intended to increase inclusion of the door closer requirement when states and local jurisdictions adopt the International Residential Code. Presently some states and jurisdictions delete this requirement upon adoption. The option is also intended to increase reliability of door closure by allowing options that occupants are comfortable with, preventing disabling and/or removal of the door closers by the occupants due to the inconvenience and difficulties they pose in everyday use.

The proposed code language would allow for multiple solutions currently available on the market, it is not a proprietary product requirement. It will also allow for the application of new technology.

Increased adoption and increased reliability of door closure requirements is an important goal. Studies by Underwriters Laboratories have documented the increased fuel loads in modern buildings, http://newscience.ul.com/articles/modern-residential-fires, and the importance of interrupting the flow path of a developing fire, http://newscience.ul.com/articles/interrupting-the-flow-path. Providing for additional compliance options addresses this goal.

Numerous examples exist where closed doors limited the spread and impact of residential fires. http://fox6now.com/2015/12/26/greenfield-house-fire-causes-minimal-damage-officials-credit-family-for-containing-blaze/

"They found the bedroom door had been closed. They do that periodically because of the dog they have. When the crews entered the house they found that because the door had been closed, it contained the fire to the room of origin which was that bedroom," said Krueger.

Cost Impact: Will not increase the cost of construction

This proposal will not increase the cost of construction because the net effect is to offer additional methods of compliance for an existing requirement.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than $1^3/_8$ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than $1^3/_8$ inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing ~~device or an~~ automatic-closing device ~~that is actuated by smoke detection or heat detection~~.

Committee Reason: The modification clarifies whether this could be interpreted as requiring some type of system. The proposal allows the door to remain open and still address fire safety by means of a self-closer.

Assembly Action **None**

Final Action Results

RB58-16 **AM**

Code Change No: RB62-16

Original Proposal

Section: R302.10.1

Proponent: Marcelo Hirschler, representing GBH International (gbhint@aol.com)

Revise as follows:

R302.10.1 Insulation. ~~Insulation~~ Insulating materials~~, including facings, such as vapor retarders and vapor-permeable membranes~~ installed within floor-ceiling assemblies, roof-ceiling assemblies, wall assemblies, crawl spaces and ~~*attics*~~ attics shall ~~have~~ comply with the requirements of this section. They shall exhibit a flame spread index not to exceed 25 ~~with an accompanying~~ and a smoke-developed index not to exceed 450 where tested in accordance with ASTM E 84 or UL 723. Insulating materials, where tested in accordance with the requirements of this section, shall include facings, where used, such as vapor retarders, vapor permeable membranes and similar coverings.

Exceptions:

1. Where such materials are installed in concealed spaces, the flame spread index and smoke-developed index limitations do not apply to the facings, provided that the facing is installed in substantial contact with the unexposed surface of the ceiling, floor or wall finish.
2. Cellulose fiber loose-fill insulation, that is not spray applied, complying with the requirements of Section R302.10.3, shall not be required to meet the smoke-developed index of not more than 450 and shall be required to meet a smoke-developed index of not more than 450 where tested in accordance with CAN/ULC S102.2.
3. Foam plastic insulation shall comply with Section R316.

Reason: The IBC approved FS123 at the committee hearings (as amended) and the key issue was the clarification that the section 720.1 (equivalent to this one) was unclear.

Rationale was: "This is simple clarification and language cleanup. Section 720.1 is intended to apply to all insulating materials but the sentence as is causes confusion because it refers to two types of insulation materials, namely (1) facings such as vapor retarders and vapor-permeable membranes and similar coverings and (2) all layers of single and multilayer reflective foil insulations. Therefore it is better if they are shown in a separate sentence at the end of the section that way the sentence is clearer."
Since the IRC does not have any information on reflective insulation, this proposed change does not include them, so that it is a primarily editorial change.

Cost Impact: Will not increase the cost of construction
Change is primarily editorial.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal provides a testing of the product assembly as it was intended to be used and makes that clear.

Assembly Action: **None**

Final Action Results

RB62-16	**AS**

Code Change No: RB68-16

Original Proposal

Section(s): R302.13

Proponent: Bruce Swiecicki, representing National Propane Gas Association (bswiecicki@npga.org)

Revise as follows:

R302.13 Fire protection of floors. Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a $^{1}/_{2}$-inch (12.7 mm) gypsum wallboard membrane, $^{5}/_{8}$-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage~~ or fuel-fired appliances~~.
3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
   3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m^2) per story
   3.2. Fireblocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

Reason: The requirement for installing protection on the underside of a floor assembly over a crawl space where a fuel-fired appliances is installed in the crawl space first appeared in Section 501.3 of the 2012 edition of the IRC. The text came in during the final action hearings of RB31-09/10, when three public comments were combined into the final text. In the 2015 edition, the text was moved into Section R 302.13.

Looking at the public comments associated with RB31-09/10, there is no substantiation or technical justification for including fuel-fired appliances. Listed gas-fired appliances are tested to the ANSI Z21/83 standards that are recognized and used not only in the United States but also Canada and other countries. Gas appliances are required to undergo testing that measures the temperatures on surrounding construction while the appliance is in an "over-fired" condition. All listed gas appliances are required to state the necessary clearance to combustible construction in the installation instructions.

Singling out fuel-fired appliances as a trigger for protecting the underside of a floor assembly over a crawl space is not justified. This provision imposes an unfair burden on gas appliances and provides an incentive for builders to install electric appliances instead, even though those appliances also produce heat and may contribute to elevated temperatures in their surroundings.

Acceptable but less desirable alternatives to this proposal would be to limit the requirement for protection when unlisted fuel-burning appliances are installed in the crawl space. This would recognize the fact that the temperatures on surrounding construction for unlisted appliances may not be known. Another alternative would be to include any heat-producing appliance that may be installed in the crawl space. Doing so would then address the presumed issue of concern (elevated temperatures) in a manner that does not discriminate based on the energy source for the appliance.

Cost Impact: Will not increase the cost of construction
This proposal will reduce the cost of construction by removing a requirement from the code for certain installations.

Report of Committee Action Hearings

Committee Action: **Approve as Modified**

Modify as follows:

R302.13 Fire protection of floors. Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a $^{1}/_{2}$-inch (12.7 mm) gypsum wallboard membrane, $^{5}/_{8}$-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or for the installation of fuel-fired or electric-powered appliances.
3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
   3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m^2) per story
   3.2. Fireblocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

Committee Reason: The modification addresses all fuel equipment, which is appropriate. The proposal provides complete exceptions and addresses all fuel-fired equipment.

Assembly Action: **None**

Public Comments

Public Comment 1:

Paul Coats, PE CBO, representing American Wood Council (pcoats@awc.org) requests Approve as Modified by this Public Comment.

Further modify as follows:

R302.13 Fire protection of floors. Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a $^{1}/_{2}$-inch (12.7 mm) gypsum wallboard membrane, $^{5}/_{8}$-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or for the installation of fuel-fired or electric-powered heating appliances.
3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
   3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m^2) per story
   3.2. Fireblocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

Commenter's Reason: Electric appliances could be interpreted to include sump pumps and other appliances less hazardous than heating appliances. Limiting the restriction to heating appliances, to include all fuel-fired and electric furnaces and water heaters, is appropriate.

Final Action Results

RB68-16 **AMPC1**

Code Change No: RB79-16

Original Proposal

Section(s): R308.4.2

Proponent: Stephen Thomas (sthomas@coloradocode.net)

Revise as follows:

R308.4.2 Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall ~~perpendicular to~~ not in the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

Exceptions:

1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

Reason: The current language creates the potential of creating a condition where safety glazing is required if the requirements are read literally. The way that the section is written, it only applies to glass that is within the same plane as the door and perpendicular to plane of the door. If it is anything other than those two locations, it is unclear what is required. For example if the glazing is in a wall that is 45º from the face of the door, neither requirement would apply. This proposal attempts to clear up this confusion. It changes the perpendicular wall to any wall not in the same plane as the door. Therefore, the example discussed above would require that it comply with item #2.

Cost Impact: Will not increase the cost of construction
This proposal is a clarification and therefore would not change the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approve as Submitted**

Committee Reason: This clarifies the requirements of the code.

Assembly Action: **None**

Public Comments

Public Comment 1:

Jonathan Siu, representing City of Seattle Department of Construction and Inspections (Jon.Siu@seattle.gov) requests Approve as Modified by this Public Comment.

Modify as follows:

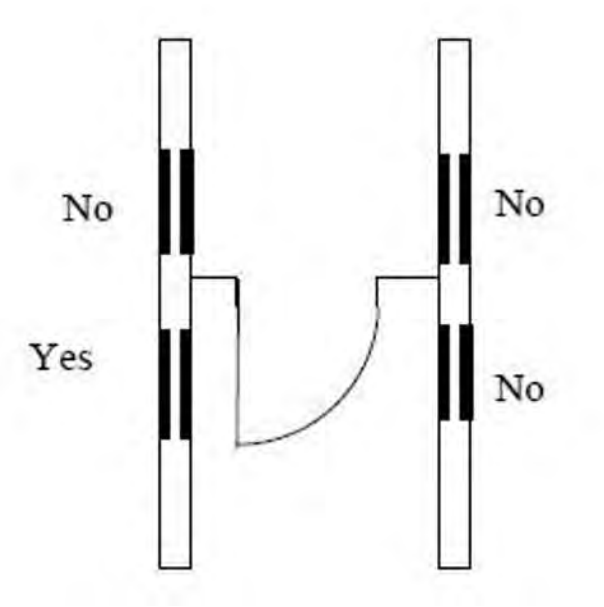
R308.4.2 Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall ~~not in~~ less than 180 degrees from the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

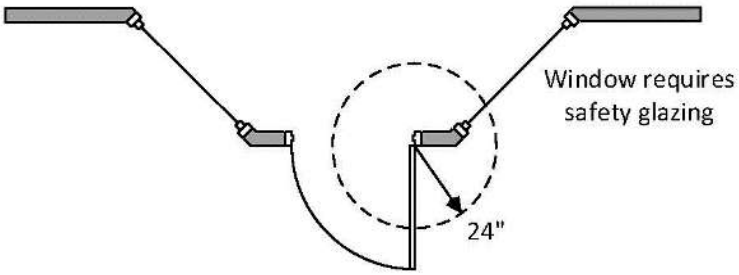
Exceptions:

1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

Commenter's Reason: This public comment clarifies when safety glazing is required for an in-swinging door. The original requirement was introduced into the 2015 IRC through code change proposal RB111-13. Based on the figures included in the reason statement (one of which is reproduced below) and the discussions on the proposal, our understanding is the concern being addressed by this provision is that a person can get pinned between the door and the wall, forcing the person against the glazing. The requirement safety glazing in this particular provision is not to address trip/fall/slip hazards, else it wouldn't only be required on the hinge side of the in-swinging door as shown in the figure for RB111-13



However, this proposed change can be interpreted to apply to situations where there is no danger of pinning a person between the door and the window. The figure below illustrates a situation where the wall bends away from the hinge side of the door. In this case, the door swing will be limited by the hinges and the walls, and there is no hazard from the door, but given the text of this proposal only refers to "not in the plane" of the door, safety glazing would be required in the window as shown.



The proposed modification will clarify that only if the window is in a position where a person can get pushed against the window by a door, will safety glazing be required.

The change to the exceptions is purely editorial. As the text appeared in the 2015 IRC, it is unclear if the exceptions only apply to Item 2. cdpACCESS accentuates the appearance by further indenting the exceptions. The context of the exceptions makes it clear they apply to both Items 1 and 2. The change is only to remove the indent, to clarify the exceptions apply to both items in this section.

Final Action Results

RB79-16 **AMPC1**

Code Change No: RB81-16

Original Proposal

Section: R308.4.4.1 (New)

Proponent: Lee Kranz, City of Bellevue, WA, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)

Add new text as follows:

R308.4.4.1 Structural glass baluster panels. Guards with structural glass baluster panels shall be installed with an attached top rail or handrail. The top rail or handrail shall be supported by a minimum of three glass baluster panels, or shall be otherwise supported to remain in place should one glass baluster panel fail.

Exception: An attached top rail or handrail is not required where the glass baluster panels are laminated glass with two or more glass plies of equal thickness and of the same glass type.

Reason: This proposal will clarify and align the IRC and IBC requirements for glass panels that are used as a structural component in a guard. Imperfections in glass can cause it to fail at loads that are well below its nominal resistance value. We believe the intent of the IBC requirements is to have something (a top rail or a handrail at stairs) to provide some additional fall protection for a person leaning on the guard, should a glass panel fail. Having a handrail attached to at least 3 panels also provides some backup support if a panel fails while someone is grabbing the handrail to prevent a fall. However, there is an exception that allows glass-only guards (without an attached top rail or handrail) if the balusters are laminated glass. The laminated glass provides some backup against total panel failure, but note that the entire glass baluster still has to be designed to be able to support the full loads for guards, as specified in Table R301.5, including using a factor of safety of 4 found in footnote "h".

We believe the IRC should also have these critical safety requirements, which it currently does not.

The proposed code text is consistent with, but not identical to the IBC text (Section 2407.1.2). However, we believe this more clearly states the requirements, and have submitted a parallel amendment for the IBC.

Cost Impact: Will not increase the cost of construction

This change creates consistency with the IBC for glass guards only and allows for more safety and flexibility in design. There should be no increase in the cost.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal aligns with the IBC and allows more options for handrails and guardrails while maintaining a level of safety.

Assembly Action: **None**

Final Action Results

RB81-16	**AS**

Code Change No: RB82-16

Original Proposal

Section: R308.4.7

Proponent: Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org)

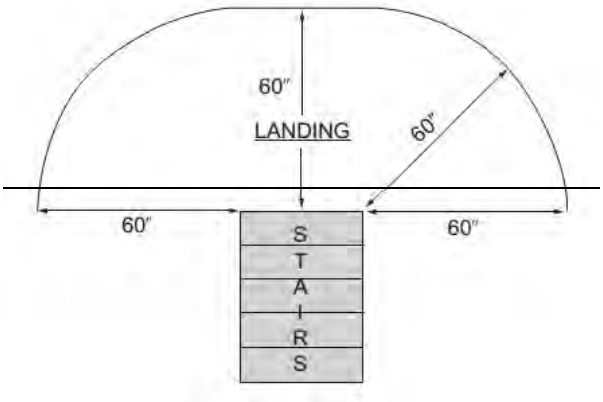
Revise as follows:

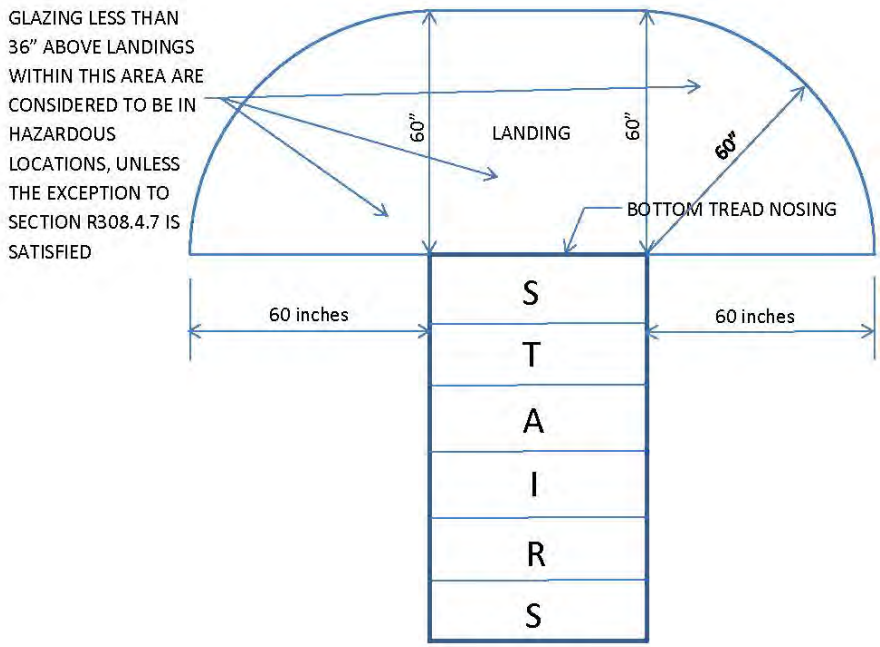
R308.4.7 Glazing adjacent to the bottom stair landing. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within a 60-inch (1524 mm) horizontal arc less than 180 degrees from the bottom tread nosing shall be considered to be a hazardous location.

Exception: The glazing is protected by a *guard* complying with Section R312 and the plane of the glass is more than 18 inches (457 mm) from the *guard*.

Revise as follows:

FIGURE R308.4.7
~~PROHIBITED~~ HAZARDOUS GLAZING LOCATIONS AT BOTTOM STAIR LANDINGS





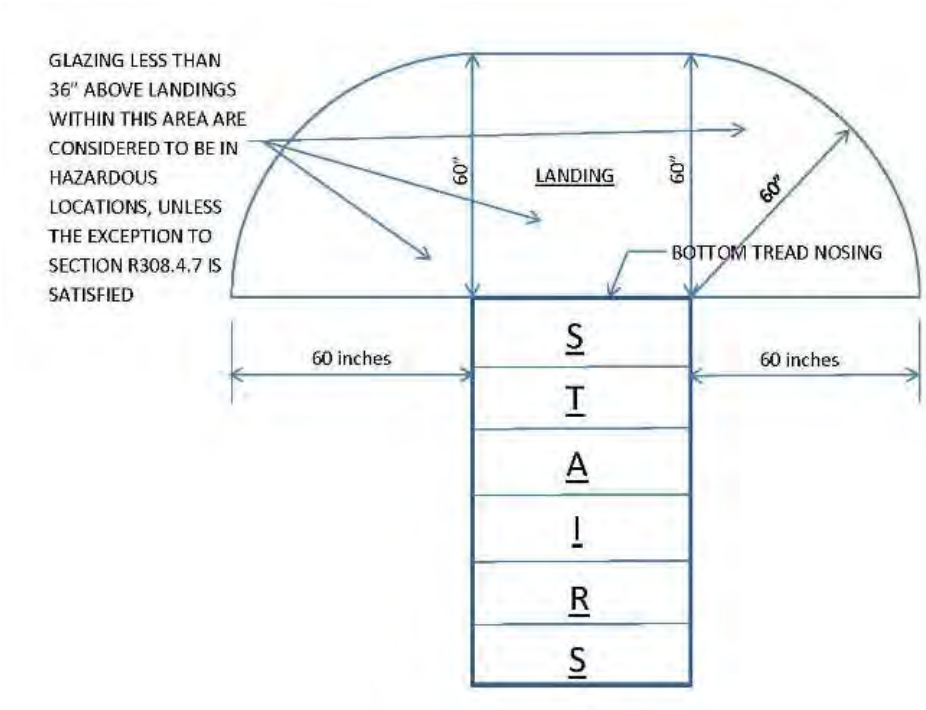
Reason: This proposal is intended to provide information on the figure with two callouts that describe the meaning of the figure, consistent with the text of Section R308.4.7. In addition, as figure titles are not enforceable, an editorial change is proposed to the title of the figure to more accurately reflect the meaning. Lastly, we have adjusted the 60 inch dimension at the landing for clarity. This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC**

Cost Impact: Will not increase the cost of construction
This proposal will not increase the cost of construction as it proposes to revise the figure to align with the existing text requirements of the code.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:



Committee Reason: This proposal cleans up the code and makes it more understandable. By labeling the stairs and landing, the modification further clarifies the intent of the code.

Assembly Action **None**

Final Action Results

RB82-16 **AM**

Code Change No: RB89-16

Original Proposal

Section: R310.1

Proponent: Jeffrey Shapiro, representing Self (jeff.shapiro@intlcodeconsultants.com)

Revise as follows:

R310.1 Emergency escape and rescue opening required. *Basements, habitable attics* and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exception~~n~~ Exceptions:

1. Storm shelters and *basements* used only to house mechanical *equipment* not exceeding a total floor area of 200 square feet (18.58 m^2).
2. Where the *dwelling* or *townhouse* is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in *basements* shall not be required to have emergency escape and rescue openings provided that the *basement* has one of the following:
   2.1. One means of egress complying with Section R311 and one emergency escape and rescue opening.
   2.2. Two means of egress complying with Section R311.

Reason: This proposal was approved in the Group A cycle for inclusion in 2018 IBC Section 1030.1, applying to Group R-3 and R-4 dwelling units (as well as R-2). Approval by the IBC Means of Egress Committee was by a margin of 13-1, and the proposal survived 3 public comments from industry groups seeking disapproval. It is inconceivable that the IRC would not want to accept the same proposal, given that rejection of this proposal would make the IRC more restrictive on means of escape from dwelling units than the IBC.

It is of interest to note that the IBC also allows Group R-1 and all Group I occupancies to have sleeping rooms in basements of a sprinkler buildings without any emergency escape and rescue openings in the basement. Nevertheless, rather than seeking full equivalency with these higher risk occupancies when sprinklers are provided, this proposal and the companion proposal already approved for the IBC only seek a reduction in the number of basement escape openings. Under the proposal, a minimum of one basement escape window or door plus a means of egress will still be required. Plus, it is important to remember that both sprinklers and hard-wired interconnected smoke alarms installed throughout the dwelling will be required to qualify for the proposed exception. This combination of sprinklers and smoke alarms is well established by the NFPA 101 - Life Safety Code as a basis for eliminating all required means of escape openings from sprinklered one- and two-family dwellings, hotels, motels, apartments and similar uses.

As further justification, note that the states of New Hampshire and Virginia have amended their statewide code adoptions by eliminating all requirement for means of escape openings when sprinklers are provided. Minnesota adopted a similar amendment, but the allowance was limited to exempting all basement escape windows, and the State of Washington just adopted this proposal as a statewide IRC amendment.

From a technical perspective, there is less value to a basement means of escape because the dynamics of a basement fire differ from fires above grade. In a nonsprinklered fire event, it might be possible for an occupant to be rescued or escape using an above-grade window because the lower portion of the window may initially draw fresh air. However, a basement window well will quickly and entirely fill with smoke and heated gases if there's an uncontrolled fire in the basement, and the importance of having fire sprinklers in providing extra egress time in such cases cannot be overstated. Likewise, by the time firefighters arrive, rescuing an occupant from a developed basement fire through a means of escape window or using such window as an escape route for a firefighter would be highly unlikely. Firefighter and occupant safety is far better assured by sprinklers.

Looking at the value of this incentive, the cost savings associated with eliminating even one basement escape window and the associated ladder and window well can be significant. Combine this with the benefit of eliminating leakage and maintenance issues and tripping/fall hazards that may be associated with window wells, and the incentive grows. Finally, recognize the enormous benefit that this change will offer for builders, who will now be allowed to locate sleeping rooms in lot-constrained below-grade areas of walk-out basements, and to homebuyers, who will gain the option of finishing an unfinished basement without the contsraint of

having to locate sleeping rooms based on existing window locations or having to add windows to an existing basement (which might lead to avoiding the issue by doing unpermitted work using an unlicensed contractor).

Considering that a number of states have legislatively preempted adoption of the IRC's residential sprinkler requirements for one- and two-family dwellings, it is important to provide reasonable incentives to strongly encourage the installation of sprinkler systems. It is also fair to offer the same incentives to builders and homebuyers in states and jurisdictions where sprinklers are required. This single incentive might be valuable enough to encourage voluntary sprinkler installations, and still, the level of safety will equal or exceed what is required by the IBC for residential and institutional occupancies and by NFPA 101 Life Safety Code, which entirely deletes the requirement for ANY escape or rescue openings from one- and two-family dwellings that are equipped with NFPA 13D sprinkler systems [NFPA 101, Section 24.2.2.1.2(2)]

Cost Impact: Will not increase the cost of construction
The proposal adds an option to the code. There is no requirement to utilize this option; however, if it is used, the cost of construction may decrease.

Analysis: A review of the standard(s) proposed for inclusion in the code, ASTM C518, 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 1, 2015.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal encourages design options and might even encourage sprinklers. In the past we have had sprinkler issues where there were give backs where a sprinkler system is provided. While this proposal is acceptable, these kinds of things seem to grow and we need to make sure that we have not gone too far. This is a minimum code and we should make sure it is not a code that requires compliance with the best that we can possible achieve.

Assembly Action: **None**

Final Action Results

RB89-16 **AS**

Code Change No: RB96-16

Original Proposal

Section(s): R310.3, R310.3.2, R310.3.2.1, R310.3.2.1 (New), R310.4

Proponent: Stephen Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter ICC (sthomas@coloradocode.net)

Revise as follows:

R310.3 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be permitted to be a side-hinged door or a slider. Where the opening is below the adjacent ~~ground elevation~~ grade, it shall be provided with ~~a bulkhead enclosure~~ an area well.

Delete and substitute as follows:

R310.3.2 ~~Bulkhead enclosures~~ Area Wells. ~~Bulkhead enclosures shall provide direct access from the basement. The bulkhead enclosure shall provide the minimum net clear opening equal to the door in the fully open position.~~

Area wells shall have a width of not less than 36 inches (914 mm). The area of the area well shall allow the emergency escape and rescue door to be fully opened.

Add new text as follows:

R310.3.2.1 Ladder and steps. Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the door in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the exterior stairwell.

Revise as follows:

~~R310.3.2.1~~ R310.3.2.2 Drainage. ~~Bulkhead enclosures~~ Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an *approved* alternative method.

> **Exception:** A drainage system for ~~bulkhead enclosures~~ area wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

Reason: The language "bulkhead enclosure" has caused confusion for the users of the IRC. There are too many different definitions of what they are. The common use of the term enclosure can be interpreted that the bulkhead must be covered similar to bulkhead enclosures used for storm shelters. We do not believe this was the original intent. The purpose of this change is to clarify the intent of the code and remove the reference to the bulkhead enclosure. We have removed the term and replaced it with area well. The access requirements for an emergency escape and rescue door should not be any different than emergency escape and rescue windows. So, we have duplicated the requirements from the window section to the door section. They are used for the same purpose and should have identical requirements.

Cost Impact: Will not increase the cost of construction
This change will actually reduce the cost of construction since the actual enclosure over the bulkhead would not be required.

Report of Committee Action Hearings

Committee Action: **Approve as Submitted**

Committee Reason: A term that is less regional would be more appropriate. The term is confusing. What is a bulkhead? Are these basement stairs? Is this a doorway below grade?

Assembly Action: **None**

Public Comments

Public Comment 1:

Stephen Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter ICC (sthomas@coloradocode.net) requests Approve as Modified by this Public Comment.

Modify as follows:

R310.4 Bars, grilles, covers and screens. Bars, grilles, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, ~~bulkhead enclosures~~ area wells, or window wells that serve such openings, provided that the minimum net clear opening size complies with Sections R310.1.1 to R310.2.3, and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that required for the normal operation of the escape and rescue opening.

Commenter's Reason: The original change was intended to remove the requirement that you had to have a bulkhead enclosure over any access from the basement. The committee agreed with this position and approved the item as submitted. After the committee hearing, we went back and found another section that needs to correlate with the original change. Section R310.4 talks about covers over the egress wells, etc. It also required covers over a bulkhead enclosure to comply. A bulkhead enclosure is a cover. So, that makes no sense. Therefore, we have removed 'bulhead enclosure' from the section to make it more sensible. We also added the language 'area well' to the section as well to coordinate with the revised section that was approved. The purpose of this modification is to just correlate the two sections.

Final Action Results

RB96-16 **AMPC1**

Code Change No: RB101-16

Original Proposal

Section: R311.7.1, R311.7.8.2 (New)

Proponent: David Cooper, Stair Design and Manufacturing Consultants, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. ~~Handrails shall not project more than 4½ inches (114 mm) on either side of the stairway and the~~ The clear width of the stairway at and below the handrail height, including treads and landings, shall be not less than 31½ inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R311.7.10.1.

Add new text as follows:

R311.7.8.2 Handrail Projection Handrails shall not project more than 4½ inches (114 mm) on either side of the stairway.

Exception: Where nosings of landings, floors, or passing flights project into the stairway reducing the required clearance at passing handrails, the handrail shall project not more than 6½ inches (165 mm) into the stairway, provided the required stair width and required handrail clearance are not reduced.

Reason:

Change to stair width section: The requirement for handrail projection currently included under **R311.7.1, Width,** is often overlooked. Moving the requirement to the handrail section of the code will provide for better understanding and compliance without changing the requirements for stair width.
New section - Handrail Projection: This new section provides the needed information related to handrail projection within the handrail section to enable: clear recognition of the requirement, compliant design of handrails and improved enforcement of the code. The requirement for handrail projections previously under **R311.7.1** has been moved without change. In addition a new requirement adds needed regulation for specific instances where handrails pass the projection of landing tread nosings and tread return nosings that project into the stairway. Typically at dogleg/switchback stairs the skirt-board and tread return of the flight above project into the stair below approximately 2 inches (51 mm) reducing the required clearance of passing handrails. A similar condition occurs where landing tread and fascia at floors or landings project into the stairway where handrails pass. The exception provides a maximum limit of the handrail projection to provide the required minimum handrail clearance and assures the required stair width is not reduced.

This proposal provides a comprehensive solution that can be consistently enforced. The new section and new requirement provides needed improvement of the code, easy recognition of the handrail projection requirements within the handrail section and clearly addresses specific issues frequently subject to varied interpretation. It further provides additional options for placement of the required handrail that enable optimizing stairway designs for safety such as locating handrails for the dominant hand of the user in descent, or more importantly it will often enable the installation of code compliant handrails on both sides of the stairway as is recommended for our aging population.

Cost Impact: Will not increase the cost of construction

This proposal will not impact construction cost. In some cases it will allow the application of the required handrail on either side of the stair. This choice can be a cost advantage.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The committee recommended this proposal for approval as submitted based on the proponents published reason statement. The proposal provides more options. This makes it clear that the handrail projection is in a separate location. The 6 1/2 inches will not intrude significantly into a minimum 36 inch wide stair, as required by the IRC.

Assembly Action: **None**

Final Action Results

RB101-16	**AS**

Code Change No: RB103-16

Original Proposal

Section: R311.7.3

Proponent: Kevin McOsker, representing Southern Nevada Chapter of ICC (ktm@ClarkCountyNV.gov)

R311.7.3 Vertical rise. A flight of stairs shall not have a vertical rise larger than ~~147~~ 150 inches (~~3734~~ 3810 mm) between floor levels or landings.

Reason: Many custom and larger tract homes desire a 10 foot ceiling height and use 24 inch floor trusses. With actual wall framing height of approximately 10 foot 1 inch, using nominal dimensioned lumber, and a sub floor thickness of 1-2 inches. This does not allow for any variation in thickness for premium floor finishes, nor construction tolerances, which could put the stairs out of compliance and require a landing. By giving some additional tolerance in the dimension the construction will have the same look and feel without creating an inconvenience to the home builder.

The 2015 IRC modified this from the previous 144 inches (3658 mm) to allow 147 inches (3734 mm); under code proposal RB132-13.

This proposal would allow more flexibility and tolerance, without an increase in hazard. The increased floor to floor height would require 20 risers to not exceed the 7-3/4 inch maximum riser height. But the additional riser would reduce the riser height to 7-1/2 inches, thus reducing the overall slope of the stair run.

Cost Impact: Will not increase the cost of construction
This would most likely reduce construction costs, by not requiring a landing to be incorporated into the stair design, and reducing the footprint of the stairway.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R311.7.3 Vertical rise. A flight of stairs shall not have a vertical rise larger than 151 ~~150~~ inches (3810 mm) between floor levels or landings.

Committee Reason: The proposal and the modification offer greater flexibility regarding stairway heights.

Assembly Action **None**

Final Action Results

RB103-16	**AM**

Code Change No: RB104-16

Original Proposal

Section: R311.7.4

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R311.7.4 Walkline. The walkline across winder treads and landings shall be concentric to the ~~curved~~ turn and parallel to the direction of travel ~~through~~ entering and exiting the turn ~~and~~. The walkline shall be located 12 inches (305 mm) from the ~~side where~~ inside of the ~~winders are narrower~~ turn. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface ~~of the winder~~. ~~If~~ Where winders are adjacent within ~~the~~a flight, the point of the widest clear stair width of the adjacent winders shall be used.

Reason: This proposal provides needed clarification of the code for compliant design, construction and enforcement of winder and landing regulations that reference the walkline.

Landings have been added because **R311.7.6 Landings for stairways** regulates landing "depth at the walkline" however **R311.7.4 Walkline** only references winders.

We have added the language approved for inclusion in the 2018 IBC *"concentric to the turn and parallel to the direction of travel entering and exiting the turn"*.

Winder treads extend beyond the corner of the turn. Because winders must have a minimum tread depth of 6 inches (152 mm) at any point, they cannot all meet at the corner but must extend around the corner, beyond the arc of the users turn. This straight extension of the walkline across winders always occurs unless the corner is rounded throughout the turn, as with curved stairs, at great expense. Figure A shows the most simple arrangement of two winders but winder sections wrapping a corner will have two or more winders with a walkline that is both curved and straight or entirely straight as in the entry and exit winders of Figure B. The current code does not accurately describe how the walkline should be demarcated to measure the winder tread depth. This change provides the needed correction.

The current 2015 IRC language requires correction. The word concentric by definition refers to circles or arcs having the same center and is not applicable to the straight portions of the walkline that are parallel to the direction of travel. The new text is more appropriate because it states "the walkline shall be concentric to the turn..."not the direction of travel that is sometimes a straight line. The turn is an arc, it has a center-point around which the turning person revolves, and use of the term concentric is applicable. This change further clarifies with the separate statement; "...and parallel to the direction of travel entering and exiting the turn." These modifications accurately describe the users path that the walkline emulates and provide the exacting location necessary to determine the winder tread depth by describing the curved and straight sections independently.

The changes simplify and offer text that is easy to understand, and uses well understood terms to provide language that is enforceable across the infinite array of winding stairway designs both simple and complex. This change would provide correlation with the 2018 IBC

Remainder of Changes:

"Inside of the turn" is suggested to replace "from the side where the winders are narrower" as it also applies to the the walkline at the landing where there are no winders. Finally the substitution of "Where" for "If" and "a" for "the" are intended to be better code language.

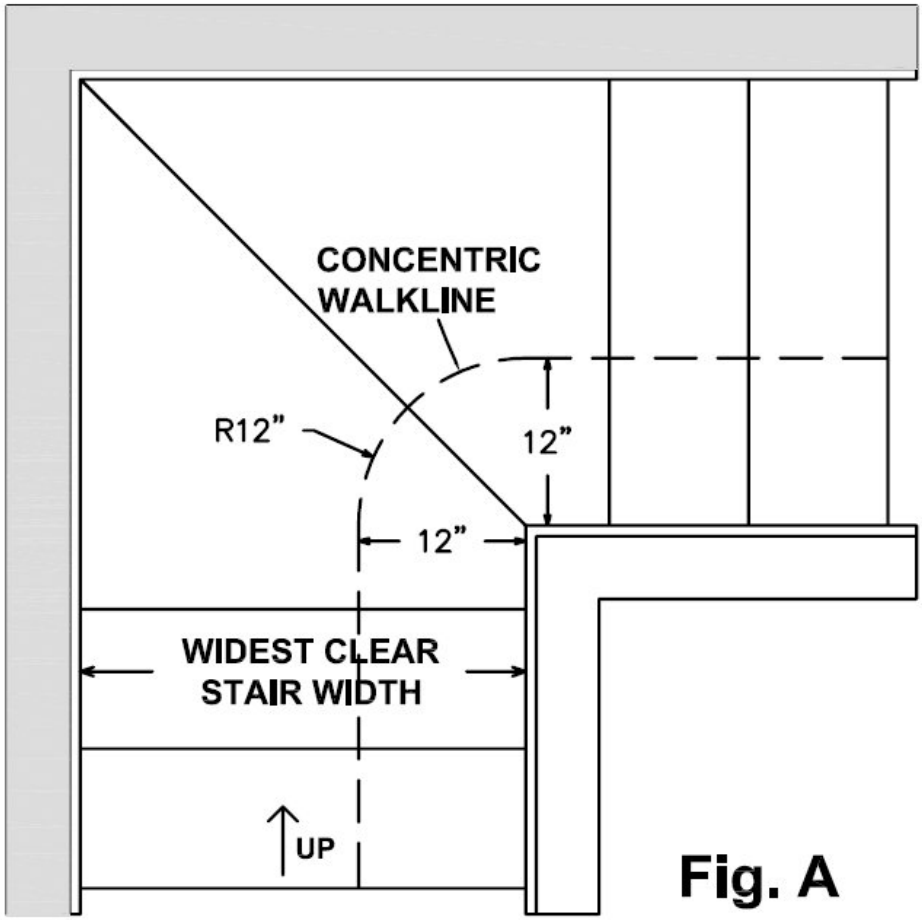
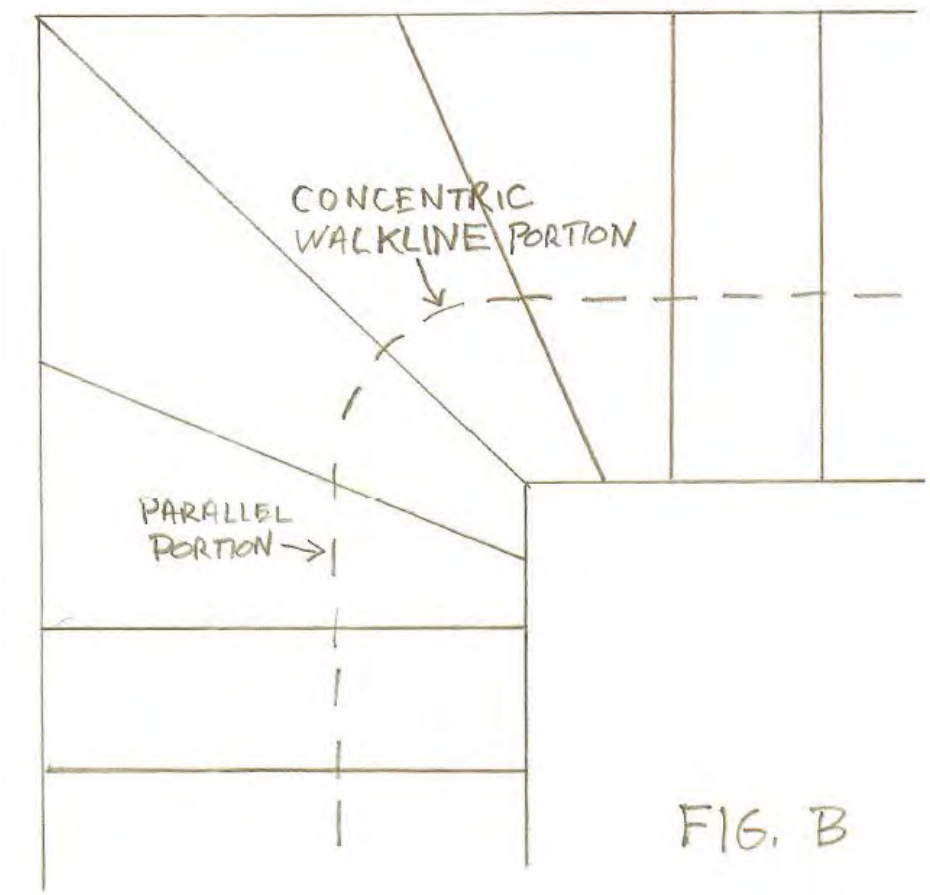


Fig. A



Cost Impact: Will not increase the cost of construction
This change will not affect the cost of construction because it does not add any material or labor but only provides needed clarification for design, construction, and enforcement.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This is a confusing part of the code and this proposal adds clarity. The figure also adds clarity and it would be beneficial if it were also part of the code.

Assembly Action: **None**

Final Action Results

RB104-16 **AS**

Code Change No: RB105-16

Original Proposal

Section: R311.7.5.3

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R311.7.5.3 Nosings. ~~The~~ Nosings at treads, landings and floors of stairways shall have a radius of curvature at the nosing ~~shall be~~ not greater than $^{9}/_{16}$ inch (14 mm) or a bevel not exceeding 1/2 inch (12.7 mm). A nosing projection not less than $^{3}/_{4}$ inch (19 mm) and not more than $1^{1}/_{4}$ inches (32 mm) shall be provided on stairways ~~with solid risers~~. The greatest nosing projection shall not exceed the smallest nosing projection by more than $^{3}/_{8}$ inch (9.5 mm) ~~between two stories, including the nosing at the level of floors and landings~~ within a stairway. ~~Beveling of nosings shall not exceed $^{1}/_{2}$ inch (12.7 mm).~~

Exception: A nosing projection is not required where the tread depth is not less than 11 inches (279 mm).

Reason: This change clearly describes and emphasizes the intent of the requirement to provide consistent nosings and nosing projections at every walking surface throughout the stairway. It combines the maximum rounding and beveling requirements in one sentence and eliminates unnecessary text that is now redundant.

Cost Impact: Will not increase the cost of construction
This change does not affect the cost of construction but only clarifies without changing the existing requirement.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal clarifies the code.

Assembly Action: **None**

Final Action Results

RB105-16	**AS**

Code Change No: RB107-16

Original Proposal

Section: R311.7.8

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R311.7.8 Handrails. Handrails shall be provided on not less than one side of each ~~continuous run of treads or~~ flight with four or more risers.

Reason: The deleted phrase "continuous run of treads" predates the code definition of the term "flight", and is redundant. *Flight* is defined as: *A continuous run of rectangular treads or winders or combination thereof from one landing to another*. The deletion of the text simplifies the code by sole use of the defined term "flight".

Cost Impact: Will not increase the cost of construction
This change only clarifies the code language, makes no change to the requirement and therefore does not affect the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The proposal eliminates redundant language.

Assembly Action: **None**

Final Action Results

RB107-16	**AS**

Code Change No: RB108-16

Original Proposal

Section: R311.7.8.2, R311.7.8.2 (New)

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Add new text as follows:

R311.7.8.2 Handrail Clearance Handrails adjacent to a wall shall have a space of not less than 1½ inches (38 mm) between the wall and the handrails.

Revise as follows:

~~**R311.7.8.2**~~ **R311.7.8.3 Continuity.** Handrails ~~for stairways~~ shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. ~~Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches (38 mm) between the wall and the handrails.~~

Exceptions:

1. ~~Handrails shall be permitted to be interrupted by a newel post at the turn.~~
2. ~~The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.~~
1. Handrail continuity shall be permitted to be interrupted by a newel post at a turn in a flight with winders, at a landing or over the lowest tread.
2. The use of a volute, turnout or starting easing shall not be prohibited over the lowest tread.

Reason:

1. The term stairway is defined to include flights and landings however handrails are only required at flights of stairs and ramps. The words "for stairways" have been deleted to clarify.
2. The title of the requirement is **Continuity** using this term in the first exception clarifies the intent of the exception.
3. The text of the IBC states "...at a turn or landing". This was clarified in the 2009 edition adding *"or landing"*. This change will allow technical coordination of the codes.
4. Starting newel has been deleted from exception 2 but has been included in exception one.

The original intent of the word turn was to apply it at the turn in a flight with winders or a turn in a stairway at a landing which is the most common interpretation of exception one. This change clarifies and allows the needed use of newels where rails in different planes and different elevations can be securely and cost effectively attached to a post as was the original intent.

Cost Impact: Will not increase the cost of construction
This proposal only moves the unchanged text to a new section and therefore does not affect the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R311.7.8.3 Continuity. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.

Exceptions:

1. Handrail continuity shall be permitted to be interrupted by a newel post at a turn in a flight with winders, at a landing or over the lowest tread.
2. The use of a volute, turnout or starting easing shall ~~not~~ be ~~prohibited~~ allowed to terminate over the lowest tread.

Committee Reason: The modification clears up a misconception. This proposal clarifies the code and allows a means for continuity to be looked at differently so that handrails can be interrupted or stopped at a flight or newel post.

Assembly Action **None**

Final Action Results

RB108-16 **AM**

Code Change No: RB110-16

Original Proposal

Section: R312.1.2

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R312.1.2 Height. Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface or the line connecting the ~~leading edges of the treads~~ *nosings*.

Exceptions:

1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the ~~leading edges of the treads~~ *nosings*.
2. Where the top of the *guard* serves as a handrail on the open sides of stairs, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the ~~leading edges of the treads~~ *nosings*.

Reason: Nosing is a defined term in both the IRC and IBC and is the term recognized and used throughout the trade. Use of terms defined by both the code and the trade allow for consistent interpretation by all. The code definition is:

Nosing. The leading edge of treads of *stairs* and of landings at the top of *stairway flights*.

The current text only references a line connecting the treads. Use of the defined term "Nosings", in this proposal, corrects the omission of the landing nosing, the essential point at the top of a flight on the line connecting the nosings, from which stair guard height is measured. An especially important point at the highest extent of the stair guard system that should not be omitted. The term nosing is also used in the similar regulation of handrail height. The two sections referencing the same point should use the same term.

Cost Impact: Will not increase the cost of construction
This proposal corrects and clarifies but does not change the required resources to comply. It will not affect the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The term nosing is better understood than the leading edge of the tread and, thereby, this proposal clarifies the code.

Assembly Action: **None**

Final Action Results

RB110-16	**AS**

Code Change No: RB112-16

Original Proposal

Section: R312.1.2

Proponent: David Cooper, representing Stairbuilders and Manufacturers Association (coderep@stairways.org)

Revise as follows:

R311.7.11 Alternating tread devices. Alternating tread devices shall not be used as an element of a means of egress. Alternating tread devices shall be permitted provided that the required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

Exception: Alternating tread devices are allowed to be used as an element of a means of egress for lofts, mezzanines, and similar areas of 200 gross square feet or less and not providing exclusive access to a kitchen or bathroom.

R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.

Exception: Ships ladders are allowed to be used as an element of a means of egress for lofts, mezzanines, and similar areas of 200 gross square feet or less and not providing exclusive access to a kitchen or bathroom.

Reason: It is not uncommon to see small lofts or mezzanines in single family dwelling units. Providing a full stairway to these areas is onerous because the required floor area for the stairway may significantly reduce the usable square footage in the house. There is a growing popularity for so-called tiny houses and other smaller residences. This code change would provide a legal and safe way to access a small loft area typically provided for these homes. The proposal includes an exclusion for kitchens and bathrooms where the only access is via the alternating tread device or ships ladder. This is done to ensure that access to and egress from these facilities will be via a normal stair or from the main floor of the dwelling unit.

Cost Impact: Will not increase the cost of construction
If this code change is approved it will lower the cost of construction and save space within the dwelling unit.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The term nosing is better understood than the leading edge of the tread and, thereby, this proposal clarifies the code.

Assembly Action: **None**

Final Action Results

RB112-16 **AS**

Code Change No: RB117-16

Original Proposal

Section: R312.1.1

Proponent: Richard Davidson, representing Self

Revise as follows:

R312.1.1 Where required. *Guards* shall be ~~located along~~ provided for those portions of open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

Reason: There are two schools of thought about guards when the walking surface is adjacent to a sloping grade. One group says that a guard is only required for that portion of the walking surface that is more than 30 inches above grade. The other group says that if a portion of the walking surface is more than 30 inches above grade the entire walking surface must be provided with a guard. In some circumstances the builder/designer of the walking surface may choose to place the guard all the way around such walking surface for aesthetic reasons. But if the building department is of the opinion that the code regulates the entire guard, correction notices could conceivably be written, for example, for improper spacing within a guard that is only 12 inches above grade. Because the code is not entirely clear and because some code officials interpret the text as applying to the entire walking surface, this amendment is proposed to clarify that guards are only require for those portions of the walking surface that pose a hazard.

Cost Impact: Will not increase the cost of construction
This is an editorial revision that should have no impact on costs.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This clarifies that a guard is only required in those portions where the vertical height above the adjacent floor or grade is greater than 30-inches.

Assembly Action: **None**

Final Action Results

RB117-16 **AS**

Code Change No: RB131-16

Original Proposal

Section: R314.4

Proponent: Michael Gieszler, representing Oregon Building Officials Association (mike.gieszler@hillsboro-oregon.gov)

Revise as follows:

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual *dwelling unit*. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

~~**Exception:** Interconnection of smoke alarms in existing areas shall not be required where *alterations* or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an *attic*, crawl space or *basement* available that could provide access for interconnection without the removal of interior finishes.~~

Reason: With the inclusion of wireless alarms in the IRC, there is little justification on not providing the added life and safety benefits offered by interconnection. While there is a cost increase to the total cost of the project, the benefits offered by interconnected alarms far exceeds the cost increase.

Cost Impact: Will increase the cost of construction
By eliminating the exception, wireless alarms would be required in those locations where hardwired inter-connectivity would not have occurred. This would result in a negligible increase in cost resulting in a huge life safety benefit.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The inclusion of wireless technology makes it affordable and addresses the issue of inter-connectivity.

Assembly Action: **None**

Final Action Results

RB131-16	**AS**

Code Change No: RB132-16

Original Proposal

Section: R314.2.2

Proponent: Kevin McOsker, representing Southern Nevada Chapter of ICC (ktm@ClarkCountyNV.gov)

Revise as follows:

R314.2.2 Alterations, repairs and additions. Where *alterations*, *repairs* or *additions* requiring a permit occur~~, or where one or more sleeping rooms are added or created in existing *dwellings*~~, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwellings*.

Exceptions:

1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, the *addition* or replacement of windows or doors, or the addition of a porch or deck~~, are exempt from the requirements of this section~~.
2. Installation, alteration or repairs of plumbing or mechanical systems~~ are exempt from the requirements of this section~~.

Reason: This code change makes minor modifications to unnecessary language that currently exists in this code section. Adding or creating a sleeping room would require a permit, which makes the second part of the first sentence redundant. The phrases "is/are exempt from the requirement of this section" are also redundant as the language is located within an exception.

Cost Impact: Will not increase the cost of construction
This code change deletes unnecessary language.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The proposal removes unnecessary language.

Assembly Action: **None**

Final Action Results

RB132-16	**AS**

Code Change No: RB139-16

Original Proposal

Section: R315.2.2

Proponent: Kevin McOsker, representing Southern Nevada Chapter of ICC (ktm@ClarkCountyNV.gov)

Revise as follows:

R315.2.2 Alterations, repairs and additions. Where *alterations*, repairs or *additions* requiring a permit occur~~, or where one or more sleeping rooms are added or created in existing *dwellings*~~, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new *dwellings*.

Exceptions:

1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck~~, is exempt from the requirements of this section~~.
2. Installation, alteration or repairs of plumbing or mechanical systems~~ are exempt from the requirements of this section~~.

Reason: This code change makes minor modifications to unnecessary language that currently exists in this code section. Adding or creating a sleeping room would require a permit, which makes the second part of the first sentence redundant. The phrases "is/are exempt from the requirement of this section" are also redundant as the language is located within an exception.

Cost Impact: Will not increase the cost of construction
This code change deletes unnecessary language.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: Unnecessary language is being deleted. This is aligned with prior committee action on RB132-16.

Assembly Action: **None**

Final Action Results

RB139-16	**AS**

Code Change No: RB144-16

Original Proposal

Section: R315.5 (New)

Proponent: Kevin McOsker, representing Southern Nevada Chapter of ICC (ktm@ClarkCountyNV.gov)

Add new text as follows:

R315.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception: Interconnection of carbon monoxide alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

Reason: The code does not currently contain a provision to require interconnection of carbon monoxide alarms as required for smoke alarms. This code language is added to require interconnectivity of carbon monoxide alarms is a manner similar to the smoke alarm requirements. Where one carbon monoxide alarm is activated, the other locations in the residence will receive early notification of carbon monoxide and allow for early evacuation of the residence and enhance a level of life safety to the occupants.

Cost Impact: Will increase the cost of construction
Interconnectivity of the Carbon Monoxide Alarms will increase the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: Carbon Monoxide alarms should have the same requirements for early response that smoke alarms do.

Assembly Action: **None**

Final Action Results

RB144-16	**AS**

Code Change No: RB146-16

Original Proposal

Section: R316.3

Proponent: Jonathan Roberts (jonathan.roberts@ul.com)

Revise as follows:

R316.3 Surface burning characteristics. Unless otherwise allowed in Section R316.5, foam plastic, or foam plastic cores used as a component in manufactured assemblies, used in building construction shall have a flame spread index of not more than 75 and shall have a smoke-developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E 84 or UL 723. Loose-fill-type foam plastic insulation shall be tested as board stock for the flame spread index and smoke-developed index.

> **Exception:** Foam plastic insulation more than 4 inches (102 mm) thick shall have a flame spread index of not more than 75 and a smoke-developed index of not more than 450 where tested at a thickness of not more than 4 inches (102 mm), provided that the end use is *approved* in accordance with Section R316.6 using the thickness and density intended for use.

Reason: This proposal is editorial in nature and is intended to clarify that foam plastic used in applications other than as a component in manufactured assemblies does require a flame spread index of not more than 75 and a smoke-developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E84 or UL 723. As written, Section R316.3 is being interpreted by some that it applies only to foamed plastic used as a component in manufactured assembles.

Cost Impact: Will not increase the cost of construction
The change is editorial in nature and aligns with what most code officials are already requiring.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal makes it clear that both must be tested.

Assembly Action: **None**

Final Action Results

RB146-16	**AS**

Code Change No: RB150-16

Original Proposal

Section: R316.5.4

Proponent: Chad Diercks, James Hardie Building Products, Inc., representing James Hardie Building Products, Inc.

Add new text as follows:

R316.5.4 Crawl spaces. The thermal barrier specified in Section R316.4 is not required where all of the following apply:

1. Crawl space access is required by Section R408.4
2. Entry is made only for purposes of repairs or maintenance.
3. The foam plastic insulation has been tested in accordance with Section R316.6 or the foam plastic insulation is protected against ignition using one of the following ignition barrier materials:
   3.1. one (1)$^{1}/_{2}$-inch-thick (38 mm) mineral fiber insulation;
   3.2. one/four ($^{1}/_{4}$)-inch-thick (6.4 mm) wood structural panels;
   3.3. three/eight ($^{3}/_{8}$)-inch (9.5 mm) particleboard;
   3.4. one/four ($^{1}/_{4}$)-inch (6.4 mm) hardboard;
   3.5. three/eight ($^{3}/_{8}$)-inch (9.5 mm) gypsum board; or
   3.6. Corrosion-resistant steel having a base metal thickness of 0.016 inch (0.406 mm).
   3.7. one/four (1 /4)-inch (6.4 mm) fiber-cement panel, soffit or backer board.

Reason: During the previous IRC code cycle (INTERNATIONAL CODE COUNCIL 2012 - 2014 CODE DEVELOPMENT CYCLE Group B (2013)) RB168-13 was approved and thereby added "1/4-inch fiber-cement panels" to the 2015 IRC R316.5.3 subsection 3.8 as an approved ignition barrier material (used in attics). In further support, the 2015 IBC Section 2603.5.7 includes ¼-inch thick fiber-cement as an ignition barrier over foam plastic sheathing.

By definition, ¼-inch fiber-cement panel complying with ASTM C1186, Type A, or ASTM C1288, or ISO 8336, Category C, has a flame spread of 0 and smoke developed index of 5 or less. In addition, the IBC (Sec. 1405.16) Fiber-cement siding ASTM C1186, Type A or ISO 8336, Category C shall be permitted on exterior walls of Type I, II, III, IV and V construction.
Lastly attached are two test reports (SwRI Project number 01.16924.01.219a & 01.12924.01.219b[1]) originally submitted as substantiating data the supported the approval of RB168-13 (Group B 2013) and FS128-12 (Group A 2013). Both reports conclude that the wall assemblies did not exhibit sustained flaming, thus meeting the acceptance criteria described in NFPA 268, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.

Bibliography: Performance Evaluation of a Fiber Cement Board and Spray Foam Wall Assembly in Accordance with NFPA 268, 2012 Edition, Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Energy Source, SwRI Project number 01.16924.01.219a, October 19th, 2012.
Performance Evaluation of a Fiber Cement Board and Rigid Foam Wall Assembly in Accordance with NFPA 268, 2012 Edition, Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Energy Source, SwRI Project number 01.12924.01.219b[1], November 27th, 2012.

Cost Impact: Will not increase the cost of construction
The cost figures below were extracted on January 14th, 2015 from Home Depot's website for Store Number 1013.
Zinc-Plated 26-Gauge Sheet Metal is priced at $3.62 per square foot of coverage. (as reference in the 2015 IRC Section R316.5.4 subsection 3.6)

1/4-inch thick fiber-cement backer board is priced at $0.76 per square foot of coverage.

Installation labor for each of these materials is approximately the same. Both of these materials are attached with self-tapping or self-drilling screws. Each product can be cut to size using common hand or power tools sourced from local hardware stores. When cutting fiber-cement panels a scoring knife, razor knife, power shears or saw are commonly used. In the case of sheet metal tin snips, power nibblers, or saw are commonly used.

Therefore, since the material cost for ¼-inch thick fiber-cement is significantly lower than the already accepted method using 26 gauge corrosion resistant steel and the comparative installation labor sheet metal versus fiber-cement panel is not expected to be substantially different, the cost of this code change will not increase the cost of construction.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal adds another option for compliance to this section of the code.

Assembly Action: **None**

Final Action Results

RB150-16	**AS**

Code Change No: RB154-16

Original Proposal

Section: R317.1, R402.1.2, R504.3, R905.8.5

Proponent: Colin McCown, representing American Wood Protection Association

Revise as follows:

R317.1 Location required. Protection of wood and wood- based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 ~~for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1.~~

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches (457 mm) or wood girders when closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.
2. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.
3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.
4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than $^{1}/_{2}$ inch (12.7 mm) on tops, sides and ends.
5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather.
6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.
7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below *grade* except where an *approved* vapor retarder is applied between the wall and the furring strips or framing members.

R402.1.2 Wood treatment. All lumber and plywood shall be pressure-preservative treated and dried after treatment in accordance with AWPA U1 (Commodity Specification A, ~~Use Category 4B and Section 5.2~~ Special Requirement 4.2)~~,~~ and shall bear the *label* of an accredited agency. Where lumber and/or plywood is cut or drilled after treatment, the treated surface shall be field treated with copper naphthenate, the concentration of which shall contain a minimum of 2-percent copper metal, by repeated brushing, dipping or soaking until the wood absorbs no more preservative.

R504.3 Materials. Framing materials, including sleepers, joists, blocking and plywood subflooring, shall be pressure-preservative treated and dried after treatment in accordance with AWPA U1 (Commodity Specification A, ~~Use Category 4B and Section 5.2~~ Special Requirement 4.2)~~,~~ and shall bear the *label* of an accredited agency.

TABLE R905.8.5
WOOD SHAKE MATERIAL REQUIREMENTS

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shakes of naturally durable wood	1	Cedar Shake and Shingle Bureau
Tapersawn shakes of naturally durable wood	1 or 2	Cedar Shake and Shingle Bureau
Preservative-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Fire-retardant-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Preservative-treated tapersawn shakes of Southern pine treated in accordance with AWPA Standard U1 (Commodity Specification A, Special Requirement 4.6 ~~Use Category 3B and Section 5.6~~)	1 or 2	Forest Products Laboratory of the Texas Forest Services

Reason: The existing text was outdated, requiring clarification and updates to current AWPA section numbering.

Cost Impact: Will not increase the cost of construction
These changes merely clarify and update the existing text without any impact on the required specifications for materials used.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal replaces outdated text and correlates to the new standard.

Assembly Action: **None**

Final Action Results

RB154-16 **AS**

Code Change No: RB164-16

Original Proposal

Section: R324.3, R324.3.1, R324.4, R324.4.1, R324.5, R324.5.1, R324.5.2 (New), R907, R907.1, R907.2, R907.3, R907.4, R907.5, R909, R909.1, R909.2, R909.3

Proponent: Joseph Cain, SunEdison, representing Solar Energy Industries Association (SEIA) (joecainpe@aol.com); Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org)

Revise as follows:

R324.3 Photovoltaic systems. Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through ~~R324.6.1 and~~R324.5.2.5, NFPA 70~~. Inverters shall be *listed* and *labeled* in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction~~ manufacturers installation instructions.

R324.3.1 Equipment listings. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703. Inverters shall be *listed* and *labeled* in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

R324.4 Rooftop-mounted photovoltaic systems. Rooftop-mounted ~~photovoltaic panel systems~~ *photovoltaic panel systems* installed on or above the roof covering shall be designed and installed in accordance with ~~Section R90 7~~ this section.

~~**R909.2**~~ **R324.4.1 Structural requirements.** Rooftop-mounted ~~photovoltaic panel systems~~ *photovoltaic panel systems* shall be designed to structurally support the system and withstand applicable gravity loads in accordance with Chapter 3. The roof upon which these systems are installed shall be designed and constructed to support the loads imposed by such systems in accordance with Chapter 8.

~~**R324.4.1**~~ **R324.4.1.1 Roof live load.** *No change to text.*

~~**R907.2**~~ **R324.4.1.2 Wind resistance.** *No change to text.*

~~**R907.3**~~ **R324.4.2 Fire classification.** Rooftop-mounted ~~photovoltaic panels or modules~~ *photovoltaic panel systems* shall have the same fire classification as the roof assembly required in Section R902.

~~**R909.3**~~ **R324.4.3 ~~Installation~~ Roof penetrations.** ~~Rooftop-mounted photovoltaic systems shall be installed in accordance with the manufacturer's instructions.~~ Roof penetrations shall be flashed and sealed in accordance with ~~this chapter~~ Chapter 9.

R324.5 Building-integrated photovoltaic systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section R905.

R324.5.1 Photovoltaic shingles. Photovoltaic shingles shall comply with Section R905.16.

Add new text as follows:

R324.5.2 Fire classification. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 902.3.

Revise as follows:

SECTION R907
ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS

R907.1 Rooftop-mounted photovoltaic panel systems. Rooftop-mounted ~~photovoltaic panels or modules~~ *photovoltaic panel systems* shall be designed and installed in accordance with ~~this section,~~ Section R324 and NFPA 70.

Delete without substitution:

~~**R907.4 Installation.** Rooftop-mounted photovoltaic panels or modules shall be installed in accordance with the manufacturer's instructions.~~

~~**R907.5 Photovoltaic panels and modules.** Rooftop-mounted photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's printed instructions.~~

~~SECTION R909~~
~~ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS~~

~~**R909.1 General.** The installation of photovoltaic panel systems that are mounted on or above the roof covering shall comply with this section, Section R324 and NFPA 70.~~

Reason: Proposal RM98-13 established R324, which was intended to consolidate and organize all the requirements, with necessary section revisions and section additions, in an easily-used format that assists the user to find all the applicable requirements – fire, electrical, structural, plumbing, and mechanical – related to solar thermal and photovoltaic systems. The intent of this proposal is to address redundant code requirements and consolidate/reorganize requirements that were also included in Chapter 9 during the last code cycle. These changes will help to address any confusion regarding the installation of photovoltaic systems.

The following explains the changes proposed:

1. Load requirements for rooftop mounted photovoltaic system installations are partially covered in R907.2 and R324.4.1. Relocating R907.2 to be a subsection of R324.4 consolidates the load requirements. The structural requirements (Section R909.2) are relocated to be a subsection of R324.4.
2. Fire classification requirements (Section R907.3) are for rooftop mounted photovoltaic systems, not rooftop mounted photovoltaic panels and modules, and are referenced in Section R324.4.2. The fire classification requirements for building-integrated photovoltaic systems are not linked in Section R324 or R905.16 (see new Section R324.5.2).
3. Installation in accordance with the manufacturer's installation instructions (Sections R907.4 and R907.5 and R909.3) are consolidated into Section R324.3.
4. Listed and labeled rooftop mounted panels and modules (Section 907.5) is already required by Section R324.3.1.
5. Two separate sections (Section 907 and 909) are not needed for rooftop-mounted photovoltaic panel systems.
6. Flashing of roof penetrations for rooftop-mounted photovoltaic systems (Section R909.3) is addressed in Section R324.4.3.
7. Equipment listing requirements relocated from Section R324.3 to R324.3.1 to consolidate in one location these requirements.

The ICC Building Code Action Committee (BCAC) is a co-proponent of this proposal. BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC**

Cost Impact: Will not increase the cost of construction
The proposal clarifies the applicable requirements for photovoltaic systems.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal correlates and organizes the provisions in the code.

Assembly Action: **None**

Final Action Results

RB164-16	**AS**

Code Change No: RB166-16

Original Proposal

Section: R202, R325.1, R325.6 (New)

Proponent: Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org)

Revise as follows:

SECTION 202 DEFINITIONS

[RB] ATTIC, HABITABLE. A finished or unfinished ~~area, not considered a *story*, complying with all of the following requirements:~~ habitable space within an attic.

~~1. The occupiable floor area is not less than 70 square feet (17 m²), in accordance with Section R304.~~
~~2. The occupiable floor area has a ceiling height in accordance with Section R305.~~
~~3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.~~

R325.1 General. Mezzanines shall comply with Section R325 through R325.5. Habitable attics shall comply with Section R325.6.

R325.6 Habitable attic. A habitable attic shall not be considered a story when complying with all of the following requirements:

1. The occupiable floor area is not less than 70 square feet (17 m2), in accordance with Section R304,
2. The occupiable floor area has a ceiling height in accordance with Section R305,
3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below, and
4. The floor of the occupiable space shall not extend beyond the exterior walls of the floor below.

Reason: The definition of habitable attic is revised to shorten it and remove technical criteria which should be located in the body of the code. The criteria removed from the definition in R202 are relocated in a new section, R325.6, addressing Habitable Attics. The first three provisions of the new Section 325.6 are identical to the provisions in the 2015 IRC. The fourth item is added to allow such roof elements as dormers to occur to provide additional habitable attic space, but also to prevent "gaming" of this concept to create large attic areas extending beyond floors below which should actually be considered to be "stories' and not habitable attics.
This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC**

Cost Impact: Will not increase the cost of construction
This proposal will not increase the cost of construction as it clarifies the limitaitons on the area of an attic as it relates to the floor below.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This brings a definition to habitable attics.

Assembly Action: **None**

Final Action Results

RB166-16 **AS**

Code Change No: RB167-16

Original Proposal

Section: R325.3

Proponent: Maureen Traxler, representing City of Seattle Dept of Construction & Inspections (maureen.traxler@seattle.gov)

Revise as follows:

R325.3 Area limitation. The aggregate area of a mezzanine or mezzanines shall be not greater than one-third of the floor area of the room or space in which they are located. The enclosed portion of a room shall not be included in a determination of the floor area of the room in which the *mezzanine* is located.

Exception: The aggregate area of a mezzanine located within a dwelling unit equipped with a fire sprinkler system in accordance with Section P2904 shall not be greater than one-half of the floor area of the room, provided:

1. Except for enclosed closets and bathrooms, the mezzanine shall be open to the room in which such mezzanine is located;
2. The opening to the room shall be unobstructed except for walls not more than 42 inches (1067 mm) in height, columns and posts, and
3. The exceptions to Section R325.5 are not applied.

Reason: This exception was added to the IBC in Group A by proposal G 138-15. (As of the code change submittal date, the proposal was subject to online governmental consensus vote.) The rationale for that proposal was to provide design flexibility without impacting safety. The exception trades the ability to enclose the mezzanine for a slight increase in floor area. The openness of the mezzanine gives occupants increased awareness of hazardous conditions developing in the dwelling unit. This rationale applies equally to IRC buildings.

Cost Impact: Will not increase the cost of construction
This proposal has potential to reduce the cost of construction by allowing larger mezzanines in dwellings.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal adds design flexibility.

Assembly Action: **None**

Final Action Results

RB167-16	**AS**

Code Change No: RB168-16

Original Proposal

Section(s): R202 (New), R327 (New), R327.1 (New)

Proponent: Richard Davidson, representing Self

Add new definition as follows:

Loft. A room or space directly under the roof of a small house that is open to the floor below and is used for accomodations or storage.

Small house. A building containing one dwelling unit and having a floor area, excluding lofts, of not more than 500 square feet.

Add new text as follows:

SECTION R327
SMALL HOUSES

R327.1 General. Small houses shall comply with the requirements of this code except as follows:

1. Access to basements, underfloor spaces, and lofts shall be by means of alternating tread devices, ladders or any means that complies with Section R311.
2. The minimum floor areas of Section R304 shall not apply.
3. The minimum ceiling height requirements of Section R305 shall not apply.
4. Lofts used as sleeping areas shall not be required to comply with Section R310 provided that the loft opens to a floor containing an emergency escape and rescue opening.
5. Basements and underfloor areas shall not be required to comply with Section R310 provided that the basement or underfloor area does not contain sleeping rooms.
6. The minimum door sizes of Section R311.2 shall not apply.
7. The hallway width requirements of Section R311.6 shall not apply.
8. The guard Requirements of Section R312 shall not apply to lofts.
9. The automatic fire sprinkler requirements of Section R313 shall not apply.

Reason: From Wikipedia:

In the United States the average size of new single family homes grew from 1,780 square feet in 1978 to 2,479 square feet in 2007 and to 2,662 square feet in 2013, despite a decrease in the size of the average family. Reasons for this include increased material wealth and prestige.

The small house movement is a return to houses of less than 1,000 square feet. Frequently the distinction is made between small (between 400 square feet and 1,000 square feet), and tiny houses (less than 400 square feet, with some as small as 80 square feet. Sarah Susanka has been credited with starting the recent countermovement toward smaller houses when she published The Not So Big House (1997). Earlier pioneers include Lloyd Kahn, author of Shelter (1973). Henry David Thoreau, and the publication of his book "Walden" is also quoted as early inspiration.

Tiny houses on wheels were popularized by Jay Shafer who designed and lived in a 96 sq ft house and later went on to offer the first plans for tiny houses on wheels, initially founding Tumbleweed Tiny House Company, and then Four Lights Tiny House Company (September 6, 2012).

In 2005, after Hurricane Katrina, Marianne Cusato developed Katrina Cottages that start at 308 square feet as an alternative to FEMA trailers. Though these were created to provide a pleasant solution to a disaster zone, Cusato received wider interest in her design from developers of resorts, for example.

With the financial crisis of 2007–08, the small house movement attracted more attention as it offers housing that is more affordable and ecologically friendly. Overall, however, it represents a very small part of real estate transactions. Thus only 1% of home buyers acquire houses of 1,000 square feet or less. Small houses are also used as accessory dwelling units (or ADUs), to serve as additional on-property housing for aging relatives or returning children, as a home office, or as a guest house. Typical costs are about $20,000 to $50,000 as of 2012.

In Oakland, California, Gregory Kloehn builds small houses out of found materials, for an estimated cost of $40.
Small and tiny houses have received increasing media coverage including a television show, Tiny House Nation, in 2014 and Tiny House Hunters. The possibility of building one's own home has fueled the movement, particularly for tiny houses on wheels. However, tiny houses are built to last as long as traditional homes. They use traditional building techniques and materials and they are aesthetically similar to larger homes.

This increase in popularity of tiny houses, and particularly the rapid increase in the number of both amateur and professional builders, has led to concerns regarding safety among tiny house professionals. In 2013, an Alliance of tiny house builders was formed to promote ethical business practices and offer guidelines for construction of tiny houses on wheels. This effort was carried on in 2015 by the American Tiny House Association. In 2015, the nonprofit American Tiny House Association was formed to promote the tiny house as a viable, formally acceptable dwelling option and to work with local government agencies to discuss zoning and coding regulations that can reduce the obstacles to tiny living.

One of the biggest obstacles to growth of the tiny house movement is the difficulty in finding a place to live in one. Zoning regulations typically specify minimum square footage for new construction on a foundation, and for tiny houses on wheels, parking on one's own land may be prohibited by local regulations against "camping." In addition, RV parks do not always welcome tiny houses. DIYers may be turned away, as many RV parks require RVs be manufactured by a member of the Recreational Vehicle Industry Association "(RVIA)".

Tiny houses on wheels are considered RVs and not suitable for permanent residence, according to the RVIA. From RVBusiness, "The RVIA will continue to shy away from allowing members who produce products that are referred to as 'tiny houses' or 'tiny homes. (However, the RVIA does allow "tiny home" builders to join as long as their units are built to park model RV standards.)"

In 2014, the first "tiny house friendly town" was declared in Spur, Texas, however it was later clarified that a tiny house may not be on wheels but must be secured to a foundation.

The IRC needs to catch up with the latest and hottest trend in residential construction, small houses. Smaller homes are less expensive than larger ones in terms of taxes and building, heating, maintenance, and repair costs. The typical size of a small home seldom exceeds 500 square feet. Small houses emphasize design over size, utilize dual purpose features and multi-functional furniture, and incorporate technological advances of space saving equipment and appliances. Vertical space optimization is also a common feature of small houses and apartments.

While people interested in building a small home may face opposition from local zoning ordinances and neighborhood groups, that opposition should not be used as a reason to ignore the need for regulating the construction of these structures where they are permitted. Whether small houses are permitted or not should be left to local jurisdictions and should not be part of the discussion for construction code debate.

It can be argued that small houses can be built with current building regulations and that is partly true. However, it can also be argued that the size of a structure makes certain requirements more or less important and the smaller size of small houses makes occupants more familiar with their surroundings giving credence to reducing the need for certain requirements.

This proposal limits the size of a small house to 500 square feet. It permits a loft with access by as little as a ladder to save space and does not require a guard similar to an oversized bunk bed. Because these homes are often occupied by one or two people and furniture often consists of built-ins, floor areas, hallway widths, and ceiling heights are less important. And, since these are often built as a single room with a loft and separate bathroom, lofts opening into the main room should not be required to have an emergency escape and rescue opening if the room it opens to contains such an opening. Because of the small size of basements or under floor spaces, they are less likely to be used in the same way that traditional basements may be used and should not be required to have emergency escape and rescue openings unless the space is used for a sleeping room(s).
While small houses may typically be thought of as a primary residence, they may also be used as a lake cabin, hunting cabin, or other recreational use that should be regulated but are often exempted from permitting because of the problems of applying current rules to these small structures.

There have been no reports that small houses are unsafe in any way. It is time that the IRC catches up with this new building design.

Cost Impact: Will not increase the cost of construction
This proposal will not increase the cost of construction as it will provide direction and relief from current codes for small houses.

Report of Committee Action Hearings

Committee Action: **Disapproved**

Committee Reason: The issue of small houses and apartments is important. However, there are problems that must be addressed, such as safety issues related to basements and attics. The proposal should not be approved as written. There needs to be a more comprehensive approach. The proposal seems to simply point out how small houses do not meet the code, which may not be appropriate. It is also important to realize that the current code's provisions, including, but not limited to, those for manufactured houses, do not disallow many types of small houses. A small house with a loft or mezzanine, for example, is possible in the IRC right now. The concept of smaller houses may be more suited for an appendix. Small houses are a growing concern, the demand for them is increasing, the IRC needs to address them in some fashion, and the committee encourages the proponent to further develop the proposal.

Assembly Action: **None**

Public Comments

Public Comment 1:

Andrew Morrison, representing Tiny House Enterprises, LLC (Andrew@TinyHouseBuild.com); Martin Hammer, representing Martin Hammer, architect (mfhammer@pacbell.net); Macy Miller, representing self (Mizacy@gmail.com); Chris Keefe, representing OrganicForms Design (chris@organicformsdesign.com); Brandon Marshall, representing FOG Studio (brandon@fogprojects.com); Gabriella Morrison, representing Tiny House Enterprises, LLC (Gabriella@TinyHouseBuild.com); James Herndon, representing self (jamesmherndon@gmail.com); Tiffany Redding, representing FOG Studio (tiffany@fogprojects.com); Nabil Taha, representing Precision Structural Engineering, Inc. (bill@structure1.com) requests Approve as Modified by this

Replace proposal as follows:

APPENDIX V
TINY HOUSES

CHAPTER PART AV101
GENERAL

AV101.1 Scope. This appendix shall be applicable to tiny houses used as single dwelling units. Tiny houses shall comply with this code except as otherwise stated in this appendix.

CHAPTER PART AV102
DEFINITIONS

AV102.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A skylight or roof window designed and installed to satisfy the emergency escape and rescue opening requirements in Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a loft.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor and open to it on at least one side with a ceiling height of less than 6 feet 8 inches (2032 mm), used as a living or sleeping space.

TINY HOUSE. A dwelling that is 400 square feet (37 m^2) or less in floor area excluding lofts.

CHAPTER PART AV103
CEILING HEIGHT

AV103.1 Minimum ceiling height. Habitable space and hallways in tiny houses shall have a ceiling height of not less than 6 feet 8 inches (2032 mm). Bathrooms, toilet rooms, and kitchens shall have a ceiling height of not less than 6 feet 4 inches (1930 mm). Obstructions shall not extend below these minimum ceiling heights including beams, girders, ducts, lighting and other obstructions.

Exception: Ceiling heights in lofts are permitted to be less than 6 feet 8 inches (2032 mm).

CHAPTER PART AV104
LOFTS

AV104.1 Minimum loft area and dimensions. Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections AV104.1.1 through AV104.1.3.

AV104.1.1 Minimum area. Lofts shall have a floor area of not less than 35 square feet (3.25m^2).

AV104.1.2 Minimum dimensions. Lofts shall be not less than 5 feet (1524 mm) in any horizontal dimension.

AV104.1.3 Height effect on loft area. Portions of a loft with a sloping ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6:12, portions of a loft with a sloping ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

AV104.2 Loft access. The access to and primary egress from lofts shall be any type described in Sections AV104.2.1 through AV104.2.4.

AV104.2.1 Stairways. Stairways accessing lofts shall comply with this code or with Sections AV104.2.1.1 through AV104.2.1.5.

AV104.2.1.1 Width. Stairways accessing a loft shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The minimum width below the handrail shall be not less than 20 inches (508 mm).

AV104.2.1.2 Headroom. The headroom in stairways accessing a loft shall be not less than 6 feet 2 inches (1880 mm), as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width.

AV104.2.1.3 Treads and risers. Risers for stairs accessing a loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus 4/3 of the riser height, or
2. The riser height shall be 15 inches (381 mm) minus 3/4 of the tread depth.

AV104.2.1.4 Landing platforms. The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches (1880 mm) where the stairway meets the loft. The landing platform shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing platform to the edge of the loft, and 16 to 18 inches (406 to 457 mm) in height measured from the landing platform to the loft floor.

AV104.2.1.5 Handrails. Handrails shall comply with Section R311.7.8.

AV104.2.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.1.

AV104.2.2 Ladders. Ladders accessing lofts shall comply with Sections AV104.2.1 and AV104.2.2.

AV104.2.2.1 Size and capacity. Ladders accessing lofts shall have a rung width of not less than 12 inches (305 mm) and 10 inches (254 mm) to 14 inches (356 mm) spacing between rungs. Ladders shall be capable of supporting a 200 pound (75 kg) load on any rung. Rung spacing shall be uniform within 3/8-inch (9.5 mm).

AV104.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

AV104.2.3 Alternating tread devices. Alternating tread devices accessing lofts shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

AV104.2.4 Ships ladders. Ships ladders accessing lofts shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).

AV104.2.5 Loft Guards. Loft guards shall be located along the open side of lofts. Loft guards shall not be less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less.

CHAPTER PART AV105
EMERGENCY ESCAPE AND RESCUE OPENINGS

AV105.1 General. Tiny houses shall meet the requirements of Section R310 for emergency escape and rescue openings.

Exception: Egress roof access windows in lofts used as sleeping rooms shall be deemed to meet thre requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the loft floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.

Commenter's Reason: During the Committee Action Hearings in Kentucky, IRC Committee members explained their disapproval of RB168-16, but also their support for addressing the issue of small houses. In the published reasons the Committee stated "The issue of small houses and apartments is important," and that "The IRC needs to address them in some fashion." They encouraged further development of the proposal, stating "There needs to be a more comprehensive approach", and that "The concept of smaller houses may be more suited for an appendix."

This Public Comment follows the Committee's advice by replacing the original piecemeal proposal with a proposed appendix that takes a "more comprehensive approach". It also reduces the 500 square foot threshold for "small houses" in the original proposal to the widely accepted threshold of 400 square feet for "tiny houses". At that smaller size there is increased difficulty in meeting certain dimensional requirements of the IRC; however, through years of practice by tiny house advocates and years of extensive use of comparably sized "recreational park vehicles" governed by ANSI A119.5, safe alternative dimensions and other requirements have been established that are included in the proposed appendix.

In the published reasons the Committee finally noted that "Small houses are a growing concern, [and] the demand for them is increasing." The reasons for that growing demand are both environmental and financial in nature. Below are statistics illustrating problematic housing trends, the environmental impacts of construction, the cost of home ownership, and how tiny houses can be a part of the solution. That is followed by specific reasons for the code language in the proposed appendix.

- The average home size in the U.S. increased 61% since 1973 to over 2600 square feet. In that time period the average household size decreased, leading to a 91% increase in home square footage per inhabitant (1000 SF per person) (source: US Census Bureau).
- The average house in the U.S. uses approximately 17,300 board feet of lumber and 16,000 square feet of other wood products. A 200 square foot tiny house uses only 1,400 board feet of lumber and 1,275 square feet of additional wood products. The lifetime conditioning costs can be as low as 7% of a conventionally sized home.
- United States Green Building Council (USGBC), the California Energy Commission (CEC), and other entities are working hard to increase energy efficiency in the construction industry. This is a great start, however a reduction in home size is the easiest way to lower energy consumption.
- National home ownership fell to 63.7% in 2015, the lowest level in two decades. Increased housing cost is cited as the main reason for low ownership rate. (source: Joint Center for Housing Studies (JCHS) at Harvard University)
- The average home in the United States costs approximately $358,000 to build, an increase of roughly $200,000 since 1998, whereas the average annual income in the United States has remained unchanged for the last several years, lingering near $52,000. (source: US Census Bureau)
- The average American spends roughly 27% of their annual income on housing (nearly 11 hours of every 40-hour work week). 48% of households making less than $30,000 annually pay more than half of their income on housing, leaving these households less than $15,000 a year to purchase food, health care, education, clothing, and anything else. (source: JCHS)
- The cost of new construction for a 200 square foot tiny house can be as low as $35,000. A typical down payment on an average-sized house is $72,000, more than twice the full cost of a tiny house.
- Cities benefit from tiny house ordinances. With significant need for affordable housing, cities are hard-pressed to find solutions that quickly expand their low-income housing stock without burdening an already burdened system. Tiny houses can be quickly installed in municipalities and set up at little or no cost to the cities.
- Although not addressed in the proposed code language of this public comment, it is important to recognize the need for codes pertaining specifically to movable tiny houses. For some people, homeownership is heavily impacted by the cost of land and even the construction of a fixed tiny house becomes unattainable. For those individuals, the presence of movable tiny houses in the building code may create their only path to home ownership. The flexibility of a movable tiny house allows individuals to locate their homes in areas of community living or on ancillary home sites, without the burdensome cost of a single-family lot. It also allows them to take their home with them should they need to relocate, thus eliminating many typical costs of moving.

Tiny houses can play an important role in minimizing the environmental impacts of housing while providing safe and healthy homes at affordable prices. Pride of ownership improves neighborhoods and community morale. Tiny houses enable more people to become homeowners and contribute to their communities.

REASONS FOR DEFINITIONS:

EGRESS ROOF ACCESS WINDOW. Most manufacturers use this term for their skylights and roof windows that are designed to satisfy the dimensional requirements of emergency escape and rescue openings in U.S. building codes.
LANDING PLATFORM: Landing platforms have been demonstrated in practice to allow for the safe transition between stairways and lofts. (See photos)
LOFT. This definition is a modified version of the definition of loft area in Section 1-3 of ANSI A119.5 Recreational Park Trailer Standard.
TINY HOUSE. This definition is based on the widely accepted maximum square footage for tiny houses in the construction industry.

REASONS PER SECTION:

AV103. CEILING HEIGHT: The minimum ceiling height for non-loft habitable spaces in this proposed appendix is 6 feet 8 inches. Though lower than the 7 foot minimum for habitable spaces in the IRC, it is higher than the minimum of 6 feet 6 inches in Section 5-3.5.4 of ANSI A119.5 Recreational Park Trailer Standard, that has proven to provide safe and adequate head room during the extended occupancy of recreational park trailers.
AV104 LOFT: Tiny houses have considerably smaller footprints and building height than conventional houses. As such, lofts are essential to maximize the use of space in tiny houses and make them viable shelter for many individuals and families.
It is common knowledge to many building inspectors that spaces labeled "non-habitable storage" in dwellings of all sizes are sometimes used for sleeping or other habitable purposes once the final inspection is complete. Rather than being unable to enforce a falsely stated use, building departments could regulate the health and safety of those spaces for their intended use with the proposed appendix, ensuring health and safety with minimum loft dimensions, requirements for access and egress, and proper emergency escape and rescue openings.
MINIMUM AREA and **MINIMUM DIMENSIONS**: Lofts in tiny houses are small by necessity; however, minimum dimensions are required for lofts used as a living or sleeping space, so as to not impose a risk to occupant health and safety.
HEIGHT EFFECT ON LOFT AREA: For most roof designs in tiny houses, a minimum ceiling height of 3 feet has proven adequate in sleeping lofts for consideration of their required floor area. For gable roofs with moderate to high slopes, the slope has an aggressive impact on the loss of ceiling height but makes up for it with higher areas under the ridge. Thus lofts under gable roofs with a minimum 6:12 slope have a lesser minimum ceiling height when calculating their required floor area.

STAIRWAY WIDTH: These dimensional requirements are identical to those in Section 5-10.4.1.1 of ASNI A119.5. This provision is considered and proven safe for extended occupancy of recreational park trailers.
STAIRWAY HEADROOM: Because tiny houses are limited in square footage and height, IRC compliant head heights for stairs serving lofts are often not achievable. Therefore the stair headroom requirement has been reasonably reduced to 6 feet 2 inches.
STAIRWAY TREAD/RISER: This is identical to the requirements for treads/risers in Section 5-10.4.1.1 of ANSI A119.5. This provision is considered and proven safe for extended occupancy of recreational park trailers.
LANDING PLATFORMS: Landing platforms have been demonstrated in practice to allow for the safe transition between stairways and lofts. The required range of dimensions allow for a simple transition between standing and kneeling when entering or exiting the loft. (See photos)
LADDERS: This is identical to the requirements for ladders in Section 5-10.5 of ANSI A119.5. This provision is considered and proven safe for extended occupancy of recreational park trailers.
ALTERNATING TREAD DEVICES: Alternating tread devices as described in the IRC, are allowed to provide access to and egress from lofts.
SHIPS LADDERS: Ships ladders as described in the IRC, are allowed to provide access to and egress from lofts.
LOFT GUARDS: The height requirement for loft guards is identical to that for guardrails in Section 5-10.7 of ANSI A119.5.
AV105 EMERGENCY ESCAPE AND RESCUE: Due to the considerably smaller footprints of tiny houses, ceiling heights in sleeping lofts therein are often necessarily lower than minimum ceiling heights required by the IRC for sleeping rooms in larger houses. Egress roof access windows (which are specifically designed to meet the dimensional requirements of emergency escape and rescue openings) can be installed with their openings within 44 inches of the loft floor, thus meeting the requirements of Section R310 when wall mounted windows meeting these requirements are not possible.

Bibliography: ANSI A119.5 Recreational Park Trailer Standard 2009 Edition

Final Action Results

RB168-16 **AMPC1**

Code Change No: RB171-16

Original Proposal

Section: R201 (New), R327.1 (New), R327.2 (New), R327.3 (New), R327.4 (New), R327.5 (New), R327.6 (New)

Proponent: Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org); Michael O'Brian (fcac@iccsafe.org)

Add new definition as follows:

BATTERY SYSTEM, STATIONARY STORAGE. A rechargeable energy storage system consisting of electrochemical storage batteries, battery chargers, controls, and associated electrical equipment designed to provide electrical power to a building. The system is typically used to provide standby or emergency power, an uninterruptable power supply, load shedding, load sharing or similar capabilities.

Add new text as follows:

SECTION R327
STATIONARY STORAGE BATTERY SYSTEMS

R327.1 General. *Stationary storage battery systems*, where provided, shall comply with the provisions of this section.

R327.2 Equipment listings. *Stationary storage battery systems* shall be listed and labeled for residential use in accordance with UL 9540.

Exceptions:

1. Where approved, repurposed unlisted battery systems from electric vehicles are allowed to be installed outdoors or in detached sheds located a minimum five feet (1524 mm) from exterior walls, property lines and public ways.
2. *Battery systems* that are an integral part of an electric vehicle are allowed provided the installation complies with Section 625.48 of NFPA 70.
3. Battery systems less than 1 KWh (3.6 Mega joules).

R327.3 Installation. *Stationary storage battery systems* shall be installed in accordance with the manufacturer's instructions and their listing, if applicable, and shall not be installed within a dwelling unit.

R327.4 Electrical installation. *Stationary storage battery systems* shall be installed in accordance with NFPA 70. Inverters shall be listed and labeled in accordance with UL 1741 or provided as part of the UL 9540 listing. Systems connected to the utility grid shall use inverters listed for utility interaction.

R327.5 Ventilation. Indoor installations of *stationary storage battery systems* that include batteries that produce hydrogen or other flammable gases during charging shall be provided with ventilation in accordance with Section M1307.4.

R327.6 Protection from impact. *Stationary storage battery systems* nstalled in a location subject to vehicle damage shall be protected by *approved* barriers.

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:

A review of the standard(s) proposed for inclusion in the code, UL 9470-2014, *Outline of Investigation for Energy Storage Systems and Equipment*

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 1, 2016.

Reason: An increased number of electrical energy storage systems (ESS) utilizing stationary storage batteries are appearing on the market to help meet the energy needs of society. This proposal does not mandate that ESS or stationary battery storage systems be provided, but includes basic safety requirements that should be applied if such systems are provided.

Comments on specific requirements:

The definition provides the code user with information on battery storage systems, and is identical to a definition being proposed for the IFC/IBC.

The UL 9540, *Outline of Investigation for Energy Storage Systems and Equipment* provides construction and performance requirements for investigating and listing stationary storage battery systems. This standard evaluates their ability to operate under both normal operating conditions and under certain fault conditions.

Since ESS is a new, evolving technology, exceptions to R327.2 are provided to allow for installations of repurposed, nonlisted ESS from electric vehicles. However a five foot separation distance from exterior walls, the property line and public ways to mitigate the performance of the equipment under fault conditions, which was not determined as part of a listing investigation. Installations that utilize ESS provided integral to electric vehicles are also allowed, provided they comply with NFPA 70 requirements that specifically cover such installations.

A final exception exempts battery systems under 1 KWh, which is slightly greater than two 12V, 40 A-H batteries. This exempts common household standby power systems for tools, alarm systems, and other appliances from having to comply with this section.

The R327.4 electrical installation requirements are based on R324.3, but include an option for inverters included as part of an ESS UL 9540 listing.

R327.5 includes ventilation requirements that must be provided for indoor installations of ESS technologies, such as those including lead-acid batteries that are capable of producing hydrogen gas during charging.

The R327.6 vehicle protection requirements are based on Section M1307.3.1.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC.** The ICC Fire Code Action Committee (FCAC) also supports this proposal.

Cost Impact: Will increase the cost of construction
Any cost increases for code compliant installations will be minimal, provide the equipment is installed per NFPA 70 which will require an inverter and other code mandated criteria. Listed ESS units are currently available and the proposal allows for nonlisted ESS installations also.

Analysis: A review of the standard(s) proposed for inclusion in the code, UL 9570, 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 1, 2016.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R327.3 Installation. *Stationary storage battery systems* shall be installed in accordance with the manufacturer's instructions and their listing, if applicable, and shall not be installed within the habitable space of a dwelling unit.

Committee Reason: The modification limits the application to areas other than habitable spaces in dwelling units. This technology already exists and we need something to move it forward in a safe way.

Assembly Action **None**

Final Action Results

RB171-16 **AM**

Code Change No: RB369-16

Original Proposal

Section: AS107.1

Proponent: Marcelo Hirschler, representing GBH International (gbhint@aol.com)

Revise as follows:

AS107.1 Fire-resistance rating. Strawbale walls shall not be considered to ~~be nonrated~~ exhibit a fire resistance rating, except for walls constructed in accordance with Section AS107.1.1 or AS107.1.2. Alternately, fire-resistance ratings of strawbale walls shall be determined in accordance with Section R302 of the *International Residential Code*.

Reason: Purely editorial: the correct terminology is to address fire resistance rating.

Cost Impact: Will not increase the cost of construction
Purely editorial

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: There are some improvements with the proposed language.

Assembly Action: **None**

Final Action Results

RB369-16	**AS**

Code Change No: RB370-16

Original Proposal

Section: AS107.1.1, AS107.1.2

Proponent: Tim Earl, representing GBH International (tearl@gbhinternational.com)

Revise as follows:

AS107.1.1 One-hour rated clay plastered wall. One-hour fire-resistance-rated nonload-bearing clay plastered strawbale walls shall comply with all of the following:

1. Bales shall be laid flat or on-edge in a running bond.
2. Bales shall maintain thickness of not less than 18 inches (457 mm).
3. Bales shall have a minimum density of 7.5 pounds per cubic foot.
4. Gaps shall be stuffed with straw-clay.
5. Clay plaster on each side of the wall shall be not less than 1 inch (25 mm) thick and shall be composed of a mixture of 3 parts clay, 2 parts chopped straw and 6 parts sand, or an alternative approved clay plaster.
6. Plaster application shall be in accordance with Section AS104.4.3.3 for the number and thickness of coats.

AS107.1.2 Two-hour rated cement plastered wall. Two-hour fire-resistance-rated nonload-bearing cement plastered strawbale walls shall comply with all of the following:

1. Bales shall be laid flat or on-edge in a running bond.
2. Bales shall maintain a thickness of not less than 14 inches (356 mm).
3. Bales shall have a minimum density of 7.5 pounds per cubic foot.
4. Gaps shall be stuffed with straw-clay.
5. one (1)$^{1}/_{2}$-inch (38 mm) by 17-gage galvanized woven wire mesh shall be attached to wood members with $1^{1}/_{2}$-inch (38 mm) staples at 6 inches (152 mm) on center. 9 gage U-pins with not less than 8-inch (203 mm) legs shall be installed at 18 inches (457 mm) on center to fasten the mesh to the bales.
6. Cement plaster on each side of the wall shall be not less than 1 inch (25 mm) thick.
7. Plaster application shall be in accordance with Section AS104.4.8 for the number and thickness of coats.

Reason: This appendix was added to the code last cycle. The fire test reports provided by the submitter stated that the bales tested had a density of 7.5 pcf. This section currently mandates a minimum bale density of 6.5 pcf. So, the appendix currently permits a 1-hour or 2-hour fire resistance rating for assemblies which have not demonstrated this level of performance in fire tests.

The ASTM E119 test involves measuring the temperature on the unexposed side of the specimen when it is exposed to heat from a furnace. A more dense bale will delay the temperature rise on the unexposed side and perform better in this test. As such, the fire test provided does not represent the worst case scenario, as it should.

Therefore, the 1-hour or 2-hour fire resistance rating should only be assigned to walls with bale density of at least 7.5 pcf, as no fire test data has been provided for bales of lesser density.

Cost Impact: Will increase the cost of construction
This proposal may increase the cost of construction if a user intended to build a 1-hour or 2-hour rated wall with bales of a density less than 7.5 pcf.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal clarifies the requirements of the code.

Assembly Action: **None**

Final Action Results

RB370-16	**AS**

RB29-16

Delete Tables R302.1(1) and R302.1(2) and replace with new table.

TABLE R302.1 EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside or calculated per Florida Building Code Building	0 feet
	Not fire-resistance rated	0 hours	3 feeta
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside b, c	2 feeta
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	< 3 feet
	Unlimited	0 hours	3 feeta
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feeta

TABLE R302.1 EXTERIOR WALLS

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable
For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in a c c o r d a n c e with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

RB30-16

Delete Tables R302.1(1) and R302.1(2) and replace with new table.

TABLE R302.1 EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside or calculated per Florida Building Code Building	0 feet
	Not fire-resistance rated	0 hours	3 feeta
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside b, c	2 feeta
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	< 3 feet
	Unlimited	0 hours	3 feeta
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feeta

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For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

RB32-16

Delete Tables R302.1(1) and R302.1(2) and replace with new table.

TABLE R302.1 EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside or calculated per Florida Building Code Building	0 feet
	Not fire-resistance rated	0 hours	3 feeta
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside b, c	2 feeta
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	< 3 feet
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Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feeta

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For SI: 1 foot = 304.8 mm.
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The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

RB33-16

Delete Tables R302.1(1) and R302.1(2) and replace with new table.

TABLE R302.1 EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside or calculated per Florida Building Code Building	0 feet
	Not fire-resistance rated	0 hours	3 feeta
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside b, c	2 feeta
	Not fire-resistance rated	0 hours	3 feet
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	Unlimited	0 hours	3 feeta
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feeta

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For SI: 1 foot = 304.8 mm.
N/A = Not Applicable
For residential subdivisions where all *dwellings* are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the *fire separation distance* for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining *lot* provides an open setback *yard* that is 6 feet or more in width on the opposite side of the property line.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

RB44-16

R302.2 Townhouses.~~Common walls separating *townhouses* shall be assigned a fire-resistance rating in accordance with Section R302.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.~~

~~1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.~~

~~2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E~~

~~119 or UL 263.~~

Each townhouse shall be considered a separate building and shall be separated by separate fire-resistance rated exterior wall assemblies meeting the requirements of zero clearance from property lines of Section R302.1 for exterior walls.

Exception: A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119, UL 263, or in accordance with the *Florida Building Code-Building* Section 727 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall unless such materials and methods of penetration comply with Section R302.4. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

R302.2.4 Structural independence. Each individual *townhouse* shall be structurally independent.

Exceptions:

1. Foundations supporting *exterior walls* or common walls.

2. Structural roof and wall sheathing from each unit fastened to the common wall framing.

3. Nonstructural wall and roof coverings.

4. Flashing at termination of roof covering over common wall.

~~5. *Townhouses* separated by a common wall as provided in Section R302.2, Item 1 or 2.~~

⬅BACK

RB58-16

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors~~, equipped with a self-closing device~~.

RB139-16

⬅BACK

R315.1 Carbon monoxide protection. Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes.

> **Exception:** This section shall not apply to existing buildings that are undergoing alterations or repair unless the alteration is an addition as defined in Section R315.1.3.

R315.1.3 Addition shall mean: An extension or increase in floor area, number of stories or height of a building or structure.

~~**R315.2.2 Alterations, repairs and additions.** Where *alterations*, repairs or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwellings*, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new *dwellings*.~~

~~**Exceptions:**~~

~~1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, is exempt from the requirements of this section.~~

~~2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.~~

RB144-16

⬅BACK

R315.1 Carbon monoxide protection. Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes.

Exception: This section shall not apply to existing buildings that are undergoing alterations or repair unless the alteration is an addition as defined in Section R315.1.3.

R315.1.1 Carbon monoxide alarm. The requirements of Section R315.1 shall be satisfied by providing for one of the following alarm installations:

(1) A hard-wired carbon monoxide alarm.
(2) A battery-powered carbon monoxide alarm.
(3) A hard-wired combination carbon monoxide and smoke alarm.
(4) A battery-powered combination carbon monoxide and smoke alarm.

R315.1.2 Combination alarms. Combination smoke/carbon monoxide alarms shall be listed and labeled by a Nationally Recognized Testing Laboratory.

R315.1.3 Addition shall mean: An extension or increase in floor area, number of stories or height of a building or structure.

~~**R315.1 General.** Carbon monoxide alarms shall comply with Section R315.~~
~~**R315.1.1 Listings.** Carbon monoxide alarms shall be *listed* in accordance with UL 2034.~~
~~Combination carbon monoxide and smoke alarms shall be *listed* in accordance with UL 2034 and UL 217.~~
~~**R315.2 Where required.** Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.~~
~~**R315.2.1 New construction.** For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.~~
~~1. The *dwelling unit* contains a fuel-fired *appliance*.~~
~~2. The *dwelling unit* has an attached garage with an opening that communicates with the dwelling unit.~~
~~**R315.2.2 Alterations, repairs and additions.** Where *alterations*, repairs or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwellings*, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new *dwellings*.~~
~~**Exceptions:**~~
~~1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, is exempt from the requirements of this section.~~
~~2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.~~
~~**R315.3 Location.** Carbon monoxide alarms in *dwelling units* shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning~~

appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

R315.5 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exceptions:

1. Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.
2. Carbon monoxide alarms installed in accordance with Section R315.2.2 shall be permitted to be battery powered.

R315.6 Carbon monoxide detection systems. Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with Sections R315.6.1 through R315.6.4.

R315.6.1 General. Household carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be *listed* in accordance with UL 2075.

R315.6.2 Location. Carbon monoxide detectors shall be installed in the locations specified in Section R315.3. These locations supersede the locations specified in NFPA 720.

R315.6.3 Permanent fixture. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy and owned by the homeowner.

R315.6.4 Combination detectors. Combination carbon monoxide and smoke detectors shall be permitted to be installed in carbon monoxide detection systems in lieu of carbon monoxide detectors, provided that they are *listed* in accordance with UL 2075 and UL 268.