Code Review
2018 Changes to International Codes

FLORIDA BUILDING COMMISSION
"Stronger Codes Through Science and Consensus"

Florida dbpr Building Codes and Standards

International Fire Code(IFC) / International Residential Code (IRC) – Fire Prevention

Fire Technical Advisory Committee (TAC)

IRC- Code Change No.	IRC- Section	Change Summary b/t 2015 IRC and 2018 IRC – Fire TAC	Change Summary b/t 2017 FRC and 2018 IRC.	Staff comments
F3-16 Part II	IRC: 202	Adds new definitions for "Carbon Monoxide Alarm" and "Carbon Monoxide Detectors" to provide definitions for terms that are used in section 915. **Cost Impact:** Will not increase the cost of construction. This code change **provides consistency** between federal guidelines and the definition within the code.	This change is not similar to that of the FRC. The FRC provides for Florida specific changes to this section	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	☐	☐

F85-16 Part II	IRC: R324.6, R324.6 (New), R324.6.1, R324.6.1 (New), R324.6.2 (New), R324.6.2.1 (New).	Adds new section R324.6 "Roof access and pathways," adds new section R324.6.1 "Pathways," adds new section R324.6.2 "Setback at ridge," adds new section R324.6.2.1 "Alternative setback at ridge," revises section R324.7 "Ground-mounted photovoltaic systems," and R324.7.1 "Fire separation distances" to clarify certain constraints on photovoltaic system placement. **Cost Impact:** Will not increase the cost of construction. This proposal **seeks to codify** certain constraints on photovoltaic system placement, and therefore in some cases constraints on system size based on fit. These requirements are often found in other codes or policies. While system economics can be impacted, the cost of construction will not increase.	Same as change between 2015 IRC and 2018 IRC	

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			
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	☐	☐

F87-16 Part II	IRC: 324.7.2.6 (New)	Adds new section R324.7.2.6 “Emergency escape and rescue opening” to provides necessary pathway provisions at emergency escape and rescue openings. This proposal was approved as modified. **Cost Impact**: Will not increase the cost of construction. The installation of PV panels **is optional** and is not required by the IRC, IBC, IFC, or NFPA 70.	Same as change between 2015 IRC and 2018 IRC	

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	☐	☐

Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following: a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

Code Change No: F3-16 Part II

Original Proposal

Section: IRC: 202

Proponent: Michael O'Brian (fcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE FIRE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

Add new definition as follows:

CARBON MONOXIDE ALARM. A single- or multiple station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components, and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTORS. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Reason: The proposal provides definitions for terms that are used in Section 915. Having these definitions in the code will help ensure code compliance for those not familiar with the two types of Co detection devices.

This proposal is submitted by the ICC Building Code Action Committee (BCAC) and the ICC Fire Code Action Committee (FCAC).

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 FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire safety and hazardous materials in new and existing buildings and facilities and the protection of life and property in wildland urban interface areas. In 2014 and 2015 the Fire-CAC has held 5 open meetings. In addition, there were numerous conference calls, Regional Work Group and Task Group meetings for the current code development cycle, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: FCAC

Cost Impact: Will not increase the cost of construction
Added new definitions only, not new code requirements.

Reason: The current definition of alcohol-blended fuel describes it as a flammable liquids consisting of 10-percent or greater, by volume, ethanol or other alcohols blended with gasoline. This is not consistent with federal regulations that consider gasohol to be fuels with greater than 10 percent by volume of ethanol or alcohol. The proposed wording corrects this discrepancy.

Cost Impact: Will not increase the cost of construction
This code change provides consistency between federal guidelines and the definition within the code.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: The committee recommended this proposal for approval based on the proponents reason statement.

Assembly Action: **None**

Final Action Results

F3-16 Part II	**AS**

F3-16 Part 11

CHAPTER 2, DEFINITIONS

CARBON MONOXIDE ALARM. A device for the purpose of detecting carbon monoxide, that produces a distinct audible alarm, and is listed or labeled with the appropriate standard, either ANSI/UL 2034~~– 96,~~ *Standard for Single and Multiple Station CO Alarms*, or UL 2075~~– 04~~, *Gas and Vapor Detector Sensor*, in accordance with its application.

Code Change No: F85-16 Part II

Original Proposal

Section: IRC: R324.6, R324.6 (New), R324.6.1, R324.6.1 (New), R324.6.2 (New), R324.6.2.1 (New).

Proponent: Joseph Cain, SunEdison, representing Solar Energy Industries Association (SEIA) (joecainpe@aol.com); Kevin Reinertson, Riverside County Fire , representing Riverside County Fire - Office of the Fire Marshal (kevin.reinertson@fire.ca.gov)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE FIRE CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

Add new text as follows:

R324.6 Roof access and pathways. Roof access, pathways, and setback requirements shall be provided in accordance with Sections R324.6.1 through R324.6.2.1. Access and minimum spacing shall be required to provide emergency access to the roof, to provide pathways to specific areas of the roof, provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof.

Exceptions:

1. Detached, nonhabitable structures, including but not limited to, detached garages, parking shade structures, carports, solar trellises, and similar structures shall not be required to provide roof access.
2. Roof access, pathways, and setbacks need not be provided where the code official has determined that rooftop operations will not be employed.
3. These requirements shall not apply to roofs with slopes of 2 units vertical in 12 units horizontal (2:12) or less.

R324.6.1 Pathways. Not less than two minimum 36 in. (914 mm) wide pathways on separate roof planes, from lowest roof edge to ridge, shall be provided on all buildings. At least one pathway shall be provided on the street or driveway side of the roof. For each roof plane with a photovoltaic array, a minimum 36 in. (914 mm) wide pathway from the lowest roof edge to ridge shall be provided on the same roof plane as the photovoltaic array, on an adjacent roof plane, or straddling the same and adjacent roof planes. Pathways shall be over areas capable of supporting fire fighters accessing the roof. Pathways shall be located in areas with minimal obstructions such as vent pipes, conduit, or mechanical equipment.

R324.6.2 Setback at ridge. For photovoltaic arrays occupying not more than 33 percent of the plan view total roof area, not less than an 18-inch (457 mm) clear setback is required on both sides of a horizontal ridge. For photovoltaic arrays occupying more than 33 percent of the plan view total roof area, not less than a 36-inch (914 mm) clear setback is required on both sides of a horizontal ridge.

R324.6.2.1 Alternative setback at ridge. Where an automatic sprinkler system is installed within the dwelling in accordance with NFPA 13D or Section P2904, setbacks at ridges shall conform with one of the following:

1. For photovoltaic arrays occupying not more than 66 percent of the plan view total roof area, not less than an 18-inch (457 mm) clear setback is required on both sides of a horizontal ridge.
2. For photovoltaic arrays occupying more than 66 percent of the plan view total roof area, not less than a 36-inch (914 mm) clear setback is required on both sides of a horizontal ridge.

Revise as follows:

~~R324.6~~ R324.7 Ground-mounted photovoltaic systems. *No change to text.*

~~R324.6.1~~ R324.7.1 Fire separation distances. *No change to text.*

Reason: We propose to introduce the applicable rooftop access concepts of International Fire Code Section 605.11 into the International Residential Code to provide for uniform design and enforcement. Many jurisdictions currently provide enforcement of the solar photovoltaic power systems guidelines in IFC Section 605.11, or other locally adopted provisions through the building department/official which typically do not enforce the International Fire Code. Furthermore, the intent to have these provisions reproduced into the IRC is to afford local communities the ability to provide adequate enforcement without the reference to a different code or standard. (IFC 605.11.3.3 through 605.11.3.3.3 are not reproduced; such provisions are not applicable to one- and two-family dwellings or townhouses.

In the Group B development process in 2013, parallel proposals were submitted in the IFC and IRC to clarify issues of scope and to ensure complete coverage of homes whether the are designed and built under the International Building Code or International Residential Code. 2015 IFC 605.11.1.2 covers photovoltaic systems installed on Group R-3 buildings. The exception to 605.11.1.2 states: "These requirements shall not apply to structured designed and constructed in accordance with the international Residential Code." Proposal RM95-13 sought to include applicable provisions in the IRC for complete coverage. At the final hearings, RM95-13 was Disapproved, leaving a gap in coverage for one- and two-family dwellings and townhouses. This proposal seeks to fill that gap in coverage.

The residential rooftop access and setback provisions in this proposals are improved over those found in the 2015 International Fire Code. The language has been simplified, and redundant language has been removed. In a collaborative effort with representatives from the International Association of Fire Fighters (IAFF), the requirements have been simplified. Requirements that were deemed unnecessary are removed, and access provisions are intended to be more effective for the fire service. The concepts for ridge setbacks varying with coverage of the PV system originated with the City of Boulder fire service.

There is a parallel proposal for the IFC. The residential portion of the IFC proposal is for Group R-3 Occupancies. This proposal uses the residential portions of the IFC proposal to serve one- and two-family dwellings and townhouses constructed in conformance with the IRC. There is also a parallel effort in the NFPA 1 Fire Code development process. Proposals with very similar technical provisions were approved by the NFPA 1 technical committee into the First Revision of 2018 NFPA 1 Fire Code. These efforts to update the IFC will play a role in the public comment process for NFPA 1. At the time of this submittal, NFPA 1 is not yet in the public comment period.

Cost Impact:

Will not increase the cost of construction

This proposal seeks to codify certain constraints on photovoltaic system placement, and therefore in some cases constraints on system size based on fit. These requirements are often found in other codes or policies. While system economics can be impacted, the cost of construction will not increase.

Report of Committee Action Hearings

Committee Action: **Approved as Submitted**

Committee Reason: This proposal gives good guidelines for roof pathways for fire fighters.

Assembly Action: **None**

Final Action Results

F85-16 Part II **AS**

Code Change No: F87-16 Part II

Original Proposal

Section: IRC: R324.7.2.6 (New)

Proponent: Daniel Nichols, New York State Division of Building Standards and Codes, representing New York State Division of Building Standards and Codes (dnichols@dos.state.ny.us)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IFC CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE.

Add new text as follows:

R324.7.2.6 Egress Openings. Panels and modules installed on dwellings shall not be placed on the portion of a roof that is below a window or door used for egress.

Reason: The current language does not address when egress openings are above another roof, such as the case with dormer-style windows and covered porch roofs. The installation of PV panels below these openings inhibits safe exiting by occupants and impedes firefighters from safely reaching these openings.

Since PV equipment can be installed on existing dwellings, the language uses the term egress opening to address both emergency escape and rescue openings required by this code, as well as egress requirements of older codes. Installation of these panels below egress windows could be considered an obstruction by IFC 1031.3.

Cost Impact: Will not increase the cost of construction
The installation of PV panels is optional and is not required by the IRC, IBC, IFC, or NFPA 70.

Report of Committee Action Hearings

Committee Action: **Approved as Modified**

Modify as follows:

R324.7.2.6 ~~Egress Openings~~ Emergency escape and rescue opening. Panels and modules installed on dwellings shall not be placed on the portion of a roof that is below ~~a window or door used for egress~~ an emergency escape and rescue opening. A 36 inch wide (914 mm) wide pathway shall be provided to the emergency escape and rescue opening.

Committee Reason: This proposal provides necessary pathway provisions at emergency escape and rescue openings.

Assembly Action **None**

Final Action Results

F87-16 Part II	**AM**