

Code Review

2018 Changes to International Codes

IBC - GENERAL - ELECTRICAL - ELECTRICAL TAC

W A R N I N G

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W A R N I N G



2018 International Building Code (IBC – General) – Electrical

Electrical TAC

IBC-Electrical Code Change No	IBC-Electrical Section	Change Summary b/t 2015 IBC and 2018 IBC	Change Summary b/t 2017 FBC and 2018 IBC	Staff comments											
G117-15	412.3.7, 909.20.6.1, [F] 913.2.2, (IFC 913.2.2), [F] 2702.3, 3007.8.1, 3008.8.1, Chapter 35	Revises section 412.3.7 “Elevator protection,” section 909.20.6.1 [F] “Ventilation systems,” revises section 2702.3 [F] “Critical circuits,” revises section 3007.8.1 “Protection of wiring cables,” revises section 3008.8.1 “Protection of wiring cables” to provide consistency for the protection of cables and electrical circuits. The code change was further modified by public comment to address the addition of ASTM E 1725. Cost Impact: Will not increase the cost of construction. This code change will not increase the cost of construction since the intent of the code is not changed by this proposal.	Same as change between 2015 IBC and 2018 IBC												
TAC Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> NO: <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>		Commission Action Accommodate Florida Specific Need: YES (Select Criteria) <input type="checkbox"/> NO: <input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c. <input type="checkbox"/> d. <input type="checkbox"/> e. <input type="checkbox"/> f. <input type="checkbox"/> Others (Explain): <input type="text"/>			<table border="1"> <thead> <tr> <th></th> <th>TAC</th> <th>Cmsn.</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> No Action Needed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Overlapping provisions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		TAC	Cmsn.	<input type="checkbox"/> No Action Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>	<input type="checkbox"/>	
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G192-15 Part I	2701.1	Revises section 2701.1 “Scope” to provide consistency in the scoping for the Electrical, Plumbing, and Mechanical chapters. Cost Impact: Will not increase the cost of construction. This proposal will not increase the cost of construction. This proposal may decrease the cost of construction, by providing clarity to the scoping of these chapters.	Same as change between 2015 IBC and 2018 IBC												

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

TAC Action		Commission Action		TAC	Cmsn.
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				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
G35-16	[F] 2702.1.7; IFC: 604.1.7	Revises section [F] 2702.1.7 “Group I-2 occupancies,” and revises section 604.1.7 “Group I-2 occupancies” to clarify the intent of the code. The code change was further modified by public comment. This comment modification removes replacement, thus the requirements would apply only to new installations Cost Impact: Will not increase the cost of construction. The intent is to make the sections consistent.	Same as change between 2015 IBC and 2018 IBC		
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				<input type="checkbox"/> Overlapping provisions	<input type="checkbox"/>
G36-16	[F] 2702.2.5 (New); IFGC: [M] 614.10; IMC: 504.10, 505.3	Adds new section [F] 2702.2.5 “Exhaust systems,” revises section 504.10 “Common exhaust systems for clothes dryers located in multistory structures,” revises section 505.3 “Common exhaust systems for domestic kitchens located in multistory structures,” revises section [M] 614.10 “Common exhaust systems for clothes dryers located in multistory structures” to provide the necessary link in Chapter 27 of the IBC and Section 604 of the IFC for standby power for multistory common exhaust systems as required by the IMC and IFGC. Cost Impact: Will not increase the cost of construction. This proposal does not add any new requirements. It merely provides correlation with other requirements currently in the I Codes.	Same as change between 2015 IBC and 2018 IBC		

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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G37-16	[F] 2702.2.10;	Revises section [F] 2702.2.10 "Horizontal Special purpose horizontal sliding, accordion, or folding doors," This proposal updates references to IBC 1010.1.4.3. Special purpose horizontal sliding, accordion or folding doors as the name of this section and related text were revised for the 2015 IBC Cost Impact: Will not increase the cost of construction. No technical changes.	Same as change between 2015 IBC and 2018 IBC		
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Rule 61G20-2.002 2. Technical amendments needed to accommodate the specific needs of this state include but are not limited to amendments to the Florida Building Code that provide for the following: a. Establish minimum life safety construction requirements to protect buildings and their occupants from fire, wind, flood, and storm surge using the latest technical research and engineering standards for buildings and materials products. b. Provide for flood protection provisions that are consistent with the latest flood protection requirements of the National Flood Insurance Program. c. Maintain eligibility for federal funding and discounts from the National Flood Insurance Program, the Federal Emergency Management Agency, and the United States Department of Housing and Urban Development. d. Provide for energy efficiency standards for buildings that meet or exceed the national energy standards as mandated by Title III of the Energy Conservation and Protection Act. e. Maintain coordination with the Florida Fire Prevention Code. f. Provide for the latest industry standards and design

Code Change No: **G117-15**

Original Proposal

Section(s): 412.3.7, 909.20.6.1, [F] 913.2.2, (IFC 913.2.2), [F] 2702.3, 3007.8.1, 3008.8.1, Chapter 35

Proponent: Robert Davidson (RJDCodeConcepts@aol.com)

Revise as follows:

~~412.3.7 Elevator protection.~~ Wires or cables that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire detecting systems to elevators shall be protected by ~~construction having one of the following methods:~~

1. ~~Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 1 hour, or,~~
2. ~~Electrical circuit protective systems shall be *circuit integrity cable* having tested in accordance with ASTM E 1725 and shall have a *fire-resistance* ~~fire-resistance~~ *rating* of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.~~
3. ~~Construction having a *fire-resistance rating* of not less than 1 hour.~~

909.20.6.1 Ventilation systems. Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.
2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

Exceptions-Exception:

1. Control wiring and power wiring ~~utilizing located outside of a 2-hour rated cable or cable system~~ fire barrier construction shall be protected using any one of the following methods:
 - 1.1 Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 2 hours.
 - 1.2 Where encased with not less than 2 inches (51 mm) of concrete.
 - 1.3 Control wiring and power wiring protected by a listed electrical ~~Electrical~~ circuit protective system systems tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 2 hours. ~~Electrical circuit protective~~ systems shall be installed in accordance with their listing requirements.

[F] 913.2.2 Circuits supplying fire pumps. Cables used for survivability of circuits supplying fire pumps shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 1 hour.
2. Electrical circuit protective systems shall be tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 1 hour.

[F] 2702.3 Critical circuits. Required critical circuits shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 1 hour.
2. Electrical circuit protective systems shall be tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 1 hour.

3007.8.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire-detecting systems to fire service access elevators shall be ~~protected by construction having using one of the following methods:~~

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 2 hours.
2. Electrical circuit protective systems shall be a circuit integrity cable having tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 2 hours. ~~Electrical circuit protective systems shall be protected by a listed electrical protective system installed in accordance with their listing requirements.~~
3. Construction having a *fire-resistance rating* of not less than 2 hours.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operations.

3008.8.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway, machine room, control room and control space and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire-detecting systems to occupant ~~evacuation~~ evacuation elevators shall be ~~protected by construction having using one of the following methods:~~

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 2 hours. ~~shall be circuit integrity cable having a *fire-resistance rating* of not less than 2 hours or shall be protected by a listed electrical circuit protective system having a *fire-resistance rating* of not less than 2 hours.~~
2. Electrical circuit protective systems shall be tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 2 hours.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

Add new standard(s) as follows:**ASTM E 1725 "STANDARD TEST METHODS FOR FIRE TESTS OF FIRE-RESISTIVE BARRIER SYSTEMS FOR ELECTRICAL SYSTEM COMPONENTS"**

Reason: This series of code changes is intended to standardize the methods of protecting wiring or cables determined to be essential for the operation of systems and building services during emergency conditions. The basic intent of the code change proposals is already in the code, albeit somewhat random and inconsistent between sections. The change would permit protection of critical circuits using the most up to date technology based on current test methods while still recognizing the commonly used generic fire resistant materials constructed as an assembly already approved for use. Other than reformatting each section and adding a requirement for electrical circuit protective systems to be tested to the appropriate ASTM standard, there is no other significant change to what we believe is the intent of the code, and what the code already requires and/or permits.

Cost Impact: Will not increase the cost of construction
This code change will not increase the cost of construction since the intent of the code is not changed by this proposal.

Analysis: A review of the standard proposed for inclusion in the code, ASTM E 1725 "STANDARD TEST METHODS FOR FIRE TESTS OF FIRE-RESISTIVE BARRIER SYSTEMS FOR ELECTRICAL SYSTEM COMPONENTS", , with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

**Report of Committee Action
Hearings**
Committee Action:**Approved as Submitted**

Committee Reason: The proposal provides consistency for the protection of cables and electrical circuits. The five current locations addressing this issue have five unique sets of requirements. This proposal will provide consistency. It allows other methods that have been tested and proved effective. The concern raised is the term 'critical circuit'. The term is undefined and the terms used in the NEC are different.

Assembly Action:**None**
Public Comments
Public Comment 1:

Jonathan Roberts, representing Underwriters Laboratories (jonathan.roberts@ul.com) requests Approve as Modified by this Public Comment.

Modify as follows:

412.3.7 Elevator protection. Wires or cables that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire detecting systems to elevators shall be protected by one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 1 hour.
2. Electrical circuit protective systems shall be tested in accordance with ASTM E 1725 and shall have a *fire-resistance rating* of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 1 hour.

909.20.6.1 Ventilation systems. Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.
2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

Exception:

1. Control wiring and power wiring located outside of a 2-hour fire barrier construction shall be protected using any one of the following methods:
 - 1.1 Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 2 hours.
 - 1.2 Where encased with not less than 2 inches (51 mm) of concrete.
 - 1.3 Electrical circuit protective systems ~~shall be tested in accordance with ASTM E 1725 and~~ shall have a fire-resistance rating of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.

[F] 913.2.2 Circuits supplying fire pumps. Cables used for survivability of circuits supplying fire pumps shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 1 hour.
2. Electrical circuit protective systems ~~shall be tested in accordance with ASTM E 1725 and~~ shall have a fire-resistance rating of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 1 hour.

[F] 2702.3 Critical circuits. Required critical circuits shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 1 hour.
2. Electrical circuit protective systems ~~shall be tested in accordance with ASTM E 1725 and~~ shall have a fire-resistance rating of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 1 hour.

3007.8.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire-detecting systems to fire service access elevators shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 2 hours.
2. Electrical circuit protective systems ~~shall be tested in accordance with ASTM E 1725 and~~ shall have a fire-resistance rating of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 2 hours.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operations.

3008.8.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway, machine room, control room and control space and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire-detecting systems to occupant evacuation elevators shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a *fire-resistance rating* of not less than 2 hours.
2. Electrical circuit protective systems ~~shall be tested in accordance with ASTM E 1725 and~~ shall have a *fire-resistance rating* of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a *fire-resistance rating* of not less than 2 hours.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

Commenter's Reason: We agree with many of the updates in this proposal, which are reflected in this public comment. However we cannot support the addition of ASTM E 1725 in these sections. Cables used for survivability of required critical circuits should be tested to evaluate their functionality during a period of fire exposure. UL 2196 evaluates a cable's ability to function during the fire exposure test, including having voltage and current applied to the cable during the fire exposure portion of the test. It also includes specific conditions of acceptance to verify the cable's functionality, both during and after the fire exposure and a hose stream test.

ASTM E1725, which is proposed as an alternate method for determining cable survivability does not evaluate the cable's ability to function during the fire test. Instead it includes acceptance criteria that does not allow temperatures on the cable from exceeding an average temperature 250°F above ambient or an individual thermocouple temperature from exceeding 325°F above ambient, both which are far in excess of the temperature ratings of most cables used in these applications. It also does not evaluate performance after hose stream test exposure.

Final Hearing Results

G117-15**AMPC1**

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Code Change No: **G192-15 Part I**

Original Proposal

Section: 2701.1

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

THIS IS A 3 PART CODE CHANGE PROPOSAL. PART I WAS HEARD BY THE IBC GENERAL COMMITTEE, PART II WAS HEARD BY THE IMC COMMITTEE AND PART III WAS HEARD BY THE IPC/IPSDC COMMITTEE.

Revise as follows:

2701.1 Scope. ~~This~~ The provisions of this chapter governs and NFPA 70 shall govern the design, construction, erection, and installation of the electrical components, appliances, equipment and systems used in buildings and structures covered by this code. ~~Electrical~~ The *International Fire Code*, the *International Property Maintenance Code*, and NFPA 70 shall govern the use and maintenance of electrical components, appliances, equipment and systems ~~shall be designed~~. The *International Existing Building Code* and ~~constructed in accordance with the provisions of NFPA 70 shall govern the alteration, repair, relocation, replacement, and addition of electrical components, appliances, equipment and systems.~~

Reason: This proposal provides consistency in the scoping for the Electrical, Plumbing, and Mechanical chapters. Direction is provided as to what codes govern use and maintenance, and alteration, repair, relocation, replacement and additions for existing electrical, plumbing, and mechanical systems.

This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

Cost Impact: Will not increase the cost of construction

This proposal will not increase the cost of construction. This proposal may decrease the cost of construction, by providing clarity to the scoping of these chapters.

Report of Committee Action Hearings

Committee Action:

Approved as Submitted

Committee Reason: This helps clarify the code and provides the designer with valuable information. The pointer to the IEBC is valid and useful. This action is consistent with previous actions by the IPC and IMC committees.

Assembly Action

None

Final Hearing Results

G192-15 Part I

AS

Back

Code Change No: **G35-16**

Original Proposal

Section(s): [F] 2702.1.7; IFC: 604.1.7

Proponent: Gregory Wilson (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

THIS CODE CHANGE WILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 2702.1.7 Group I-2 occupancies. In Group I-2 occupancies, ~~in new construction or where the building is substantially damaged, where an essential electrical system is located in flood hazard areas established in Section 1612.3 where new or replacement essential electrical systems are installed,~~ the ~~system~~ systems shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

2015 International Fire Code

Revise as follows:

604.1.7 Group I-2 occupancies. In Group I-2 occupancies, ~~where an essential electrical system is located in flood hazard areas established in Section 1612.3 of the *International Building Code* and where new or replacement essential electrical system generators systems are installed, the system~~ systems shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

Reason: This proposal does two things to combine texts in two codes to produce the same phrasing in both sections, which was the original intent when these sections were approved for the 2015 editions. The differences between IBC 2702.1.7 and IFC 604.1.7 were brought to the attention of ICC staff several months ago.

First, the proposal makes the requirement apply to new and replacement essential electrical systems. Second, it makes the requirement apply to essential electrical systems, not just "essential electrical system generators" because a generator is a part of an essential electrical system. The term "essential electrical system" is used in the IBC and IFC, but defined in NFPA 99. The proposal adds a requirement related to hook up of temporary generators. Hook ups should be above the required flood elevation (i.e., at or above the same elevation as the building's lowest floor or dry floodproofing level), otherwise if inundated, the hook ups may not be functional and readily when floodwater rises to that elevation.

Cost Impact: Will not increase the cost of construction
Intent is to make the sections consistent.

Report of Committee Action Hearings

Committee Action:

Disapproved

Committee Reason: The committee disapproved the proposal based upon a concern that the requirements may be too restrictive for existing buildings.

Assembly Action:

None

Public Comments

Public Comment 1:

Gregory Wilson (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, representing Federal Emergency Management Agency (rcquinn@earthlink.net) requests Approve as Modified by this Public Comment.

Modify as follows:

2015 International Building Code

[F] 2702.1.7 Group I-2 occupancies. In Group I-2 occupancies located in flood hazard areas established in Section 1612.3 where new ~~or replacement~~ essential electrical systems are installed, and where new essential electrical system generators are installed, the systems and generators shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

2015 International Fire Code

604.1.7 Group I-2 occupancies. In Group I-2 occupancies located in flood hazard areas established in Section 1612.3 of the *International Building Code* where new ~~or replacement~~ essential electrical systems are installed, and where new essential electrical system generators are installed, the systems and generators shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

Commenter's Reason: Opposition to the proposal centered on whether the requirement should apply to both new and replacement systems and generators. This comment modification removes replacement, thus the requirements would apply only to new installations. When existing buildings in flood hazard areas are proposed to be substantially improved or repaired after substantial damage, they must be brought into compliance with the requirements of Section 1612, which refers to ASCE 24. When that occurs, existing systems and generators would be included in those elements that have to be brought into compliance.

Final Action Results

G35-15
AMPC1

Code Change No: **G36-16**

Original Proposal

Section: [F] 2702.2.5 (New); IFGC: [M] 614.10; IMC: 504.10, 505.3

Proponent: Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org), Adolph Zubia, representing IAFC Fire & Life Safety Section

THIS CODE CHANGE WILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

Add new text as follows:

[F] 2702.2.5 Exhaust systems. Standby power shall be provided for common exhaust systems for domestic kitchens located in multistory structures as required in Section 505.3 of the *International Mechanical Code*. Standby power shall be provided for common exhaust systems for clothes dryers located in multistory structures as required in Section 504.10 of the *International Mechanical Code* and Section 614.10 of the *International Fuel Gas Code*.

2015 International Mechanical Code

Revise as follows:

504.10 Common exhaust systems for clothes dryers located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple clothes dryers, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.4712 mm)(No. 26 gage) and in accordance with *SMACNA Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *International Building Code*.
8. Exhaust fan operation shall be monitored in an *approved* location and shall initiate an audible or visual signal when the fan is not in operation.
9. Makeup air shall be provided for the exhaust system.
10. A cleanout opening shall be located at the base of the shaft to provide *access* to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).
11. Screens shall not be installed at the termination.
12. The common multistory duct system shall serve only clothes dryers and shall be independent of other exhaust systems.

505.3 Common exhaust systems for domestic kitchens located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple domestic kitchen exhaust systems, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct, except as specified in Section 505.1. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.4712 mm) (No. 26 gage) and in accordance with *SMACNA Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *International Building Code*.
8. Exhaust fan operation shall be monitored in an approved location and shall initiate an audible or visual signal when the fan is not in operation.
9. Where the exhaust rate for an individual kitchen exceeds 400 cfm (0.19 m³/s) makeup air shall be provided in accordance with Section 505.2.
10. A cleanout opening shall be located at the base of the shaft to provide access to the duct to allow for cleanout and inspection. The finished openings shall be not less than 12 inches by 12 inches (305 mm by 305 mm).
11. Screens shall not be installed at the termination.
12. The common multistory duct system shall serve only kitchen exhaust and shall be independent of other exhaust systems.

2015 International Fuel Gas Code

Revise as follows:

[M] 614.10 Common exhaust systems for clothes dryers located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple clothes dryers, the construction of such system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2, of the *International Mechanical Code*.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.471 mm) (No. 26 gage) and in accordance with *SMACNA Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2 of the *International Mechanical Code*.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *International Building Code*.
8. The exhaust fan operation shall be monitored in an *approved* location and shall initiate an audible or visual signal when the fan is not in operation.
9. Makeup air shall be provided for the exhaust system.
10. A cleanout opening shall be located at the base of the shaft to provide *access* to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).

11. Screens shall not be installed at the termination.

Reason:

Kulik: This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>. Last cycle proposal F59-13 reorganized the ICC emergency and standby power requirements so they can be applied more consistently. The concept was that IBC Section 2702 would include the general standby and emergency power requirements and individual code sections would dictate the power duration and other specific details, and cross reference IBC Section 2702. The requirements for standby power for the common exhaust for domestic kitchens and clothes dryers located in multistory structures in the International Mechanical Code and International Fuel Gas Code are the only remaining references to standby power in the ICC family of codes that do not include these cross references, since F59-13 was introduced as a Group B proposal last cycle. This proposal adds the cross references needed to harmonize the standby power requirements. This proposal was also submitted by Fire and Life Safety Section of the International Association of Fire Chiefs. Code Change Item F59-13 was previously approved and reorganized the emergency and standby power requirements to maintain consistency between the various I-Codes. The concept of that code change was for IBC Section 2702 to include the general emergency and standby power requirements, while individual code sections would dictate the required duration and other specific details and provide a reference to IBC Section 2702.

The IMC and IFGC requirements for standby power for common exhaust systems serving domestic kitchens and clothes dryers in multistory structures are the only remaining I-Code sections which do not include a reference to IBC Section 2702. This occurred because F59-13 was introduced as a Group B code change item and it missed the Group A cycle.

This proposal will finish the correlation process started by F59-13. These are the last outstanding items to complete the correlation of emergency and standby power requirements.

Zubia: This proposal is submitted by Fire and Life Safety Section of the International Association of Fire Chiefs.

Code Change Item F59-13 was previously approved and reorganized the emergency and standby power requirements to maintain consistency between the various I-Codes. The concept of that code change was for IBC Section 2702 to include the general emergency and standby power requirements, while individual code sections would dictate the required duration and other specific details and provide a reference to IBC Section 2702.

The IMC and IFGC requirements for standby power for common exhaust systems serving domestic kitchens and clothes dryers in multistory structures are the only remaining I-Code sections which do not include a reference to IBC Section 2702. This occurred because F59-13 was introduced as a Group B code change item and it missed the Group A cycle.

This proposal will finish the correlation process started by F59-13. These are the last outstanding items to complete the correlation of emergency and standby power requirements.

Cost Impact: Will not increase the cost of construction

Kulik: This proposal will not increase the cost of construction if the standby power for the exhaust fan is provided in accordance with the provisions in IBC Section 2702. This proposal has the potential to increase the cost of construction if the standby power source is designed to lesser requirements.

Zubia: This proposal does not add any new requirements. It merely provides correlation with other requirements currently in the I-Codes.

Report of Committee Action Hearings

Committee Action:

Approved as Submitted

Committee Reason: This proposal provides the necessary link in Chapter 27 of the IBC and Section 604 of the IFC for standby power for multistory common exhaust systems as required by the IMC and IFGC.

Assembly Action

None

Final Action Results

G36-16

AS

Back

Code Change No: G37-16

Original Proposal

Section: [F] 2702.2.10; IFC: 604.2.10

Proponent: John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

THIS CODE CHANGE WILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

Revise as follows:

[F] 2702.2.10 ~~Horizontal~~ Special purpose horizontal sliding, accordion, or folding doors. Standby power shall be provided for special purpose horizontal sliding, accordion or folding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

2015 International Fire Code

Revise as follows:

604.2.10 ~~Horizontal~~ Special purpose horizontal sliding, accordion, or folding doors. Standby power shall be provided for special purpose horizontal sliding, accordion or folding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

Reason: This proposal updates references to IBC 1010.1.4.3. Special purpose horizontal sliding, accordion or folding doors as the name of this section and related text were revised for the 2015 IBC and IFC. Most of the references to 1010.1.4.3 were updated for the 2015 IBC and IFC. These were not.

Cost Impact: Will not increase the cost of construction
No technical changes.

Report of Committee Action Hearings
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Committee Action:

Approved as Submitted

Committee Reason: The proposal provides correlation with the IBC for these types of doors that had been missed in the 2015 edition as it relates to standby power.

Assembly Action

None

Final Action Results

G37-16

AS