

IBC — Structural



**2018 GROUP A PROPOSED  
CHANGES TO THE I-CODES  
COLUMBUS COMMITTEE ACTION  
HEARINGS**

April 15–23, 2018  
Columbus Convention Center  
Columbus, Ohio

First Printing

Publication Date: February 2018

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By

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## **IBC Structural Code Change Proposals**

The following code change proposals are labeled as structural code change proposals because they are proposals for changes to sections in chapters of the International Building Code that are designated as the responsibility of the IBC-Structural Code Development Committee (see page ix of the Introductory pages of this monograph), which meets in the Group B cycle in 2019. However the changes included in this Group A code development cycle are to sections of the code that have been prefaced with a [BF] or [BG], meaning that they are the responsibility of a different IBC Code Development Committee—either the IBC-Fire Safety Committee [BF] or the IBC-General Committee [BG].

The committee assigned for each code change proposal is indicated in a banner statement near the beginning of the proposal. Both the IBC-Fire Safety and the IBC-General hearing orders are include here for your reference.

# 2018 GROUP A – PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE – FIRE SAFETY

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# 2018 GROUP A – PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE – GENERAL

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Country Club Hills, IL

# TENTATIVE ORDER OF DISCUSSION 2018 PROPOSED CHANGES TO THE INTERNATIONAL PROPERTY MAINTENANCE CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some FS code change proposals may not be included on this list, as they are being heard by another committee.

F4-18, Part II	FS38-18	FS75-18	FS112-18
G7-18	FS39-18	FS76-18	FS113-18
G12-18	FS40-18	FS77-18	FS114-18
FS1-18	FS41-18	FS78-18	FS115-18
FS2-18	FS42-18	FS79-18	FS116-18
FS3-18	FS43-18	FS80-18	G6-18
FS4-18	FS44-18	F92-18 Part II	FS117-18
FS7-18	FS45-18	FS82-18	FS118-18
FS8-18	FS46-18	FS83-18	FS119-18
FS9-18	FS47-18	FS84-18	FS120-18
FS10-18	FS48-18	FS85-18	FS121-18
FS11-18	FS49-18	FS86-18	FS122-18
FS12-18	FS50-18	FS87-18	FS123-18
FS13-18	FS51-18	FS88-18	FS124-18
FS14-18	FS52-18	FS89-18	FS125-18
FS15-18	FS53-18	FS90-18	FS126-18
FS16-18	FS54-18	E97-18	FS127-18
FS17-18	FS55-18	FS91-18	FS128-18
FS18-18	FS56-18	FS92-18	FS129-18
FS19-18	FS57-18	FS93-18	FS130-18
FS20-18	FS58-18	FS94-18	FS131-18
FS21-18	FS59-18	FS95-18	FS132-18
FS22-18	FS60-18	FS96-18	FS133-18
FS23-18	FS61-18	FS97-18	FS134-18
FS24-18	G34-18	FS98-18	FS135-18
FS25-18	FS62-18	FS99-18	FS136-18
FS26-18	FS63-18	FS100-18	FS137-18
FS27-18	FS64-18	FS101-18	FS138-18
FS28-18	FS65-18	FS102-18	FS139-18
FS29-18	FS66-18	FS103-18	FS140-18
FS30-18	FS67-18	FS104-18	FS141-18
FS31-18	FS68-18	FS105-18	FS142-18
FS32-18	FS69-18	FS106-18	FS143-18
FS33-18	FS70-18	FS107-18	FS144-18
FS34-18	FS71-18	FS108-18	FS145-18
FS35-18	M72-18	FS109-18	FS146-18
FS36-18	FS72-18	FS110-18	FS147-18
FS37-18	FS74-18	FS111-18	FS148-18

FS149-18  
FS150-18  
FS151-181  
    S2-18  
    S3-18  
    S4-18  
FS152-18  
    S5-18  
    S6-18  
    S7-18  
    S8-18  
    S9-18  
FS153-18  
    G3-18  
    S6-18  
FS154-18  
    S14-18  
    S15-18  
    S16-18  
    S17-18  
    S18-18  
    S19-18  
    S20-18  
    S21-18  
    G10-18  
    G11-18  
FS155-18  
FS156-18  
FS157-18  
FS158-18  
FS159-18  
FS160-18  
FS161-18

# TENTATIVE ORDER OF DISCUSSION 2018 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE – GENERAL

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some G code change proposals may not be included on this list, as they are being heard by another committee.

G9-18	G64-18	G80-18	S12-18
G13-18	G65-18	G84-18	S13-18
G14-18	G66-18	G89-18	G137-18
G15-18 Part I	G68-18	FS5-18	G138-18
G8-18	G71-18 Part I	FS6-18	G139-18
G16-18	G72-18	FS73-18	G140-18
G17-18	G73-18	FS81-18	G141-18
G18-18	G74-18	G146-18	G143-18
G21-18	G76-18	G152-18	G142-18
G22-18	G77-18	G109-18	G144-18
G23-18 Part I	G78-18	G110-18	G145-18
G24-18	G79-18	G111-18	G147-18
G25-18	G81-18	G112-18	G148-18
G1-18	G82-18	G113-18	G149-18
G2-18	G83-18	G114-18	G150-18
G30-18	G85-18	G115-18	G151-18
G32-18	G86-18	G116-18 Part I	F262-18 Part II
G33-18	G87-18	G117-18	F267-18 Part II
G36-18	G88-18	G118-18	G153-18
G37-18	G90-18	G119-18	G154-18
G39-18	G93-18	G120-18	
G40-18	G94-18	M15-18 Part II	
G41-18	G95-18	G121-18	
G42-18	G96-18	G122-18	
G46-18	G97-18	G123-18	
G47-18	G98-18	G124-18	
G48-18	G99-18	G125-18	
G53-18	G100-18	G126-18	
G54-18	G101-18	G127-18	
G55-18	G102-18	G128-18	
G56-18	G103-18	G129-18	
G57-18	G104-18	G130-18 Part I	
G58-18	G105-18	G131-18	
G59-18	G106-18	G133-18	
G60-18	G107-18	G135-18	
G61-18	G108-18	G136-18	
G62-18	G27-18	S10-18	
G63-18	G75-18	S11-18	



## **S1-18**

**IBC: [P]1502.1, [P]1502.2**

**Proponent:** Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS PROPOSAL WILL BE HEARD BY THE INTERNATIONAL PLUMBING CODE COMMITTEE. SEE THE IPC-IPSDC HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[P] 1502.1 General.** Design and installation of roof drainage systems shall comply with this Section and Section 1611 of this code ~~and Sections 1106 and 1108, as applicable, and Chapter 11~~ of the International Plumbing Code.

**[P] 1502.2 Secondary (emergency overflow) drains or scuppers.** Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders and conductors shall comply with ~~Sections 1106 and 1108, as applicable, Section 1611 of this code and Chapter 11~~ of the International Plumbing Code.

#### **Reason:**

The proposed change provides a pointer to IBC Section 1611—Rain Loads. This pointer makes sure a designer considers the structural-related requirements for roof drainage system design that are currently in the structural section of the code. Additionally, we proposed to modify the references to sections in the International Plumbing Code. Currently, only Section 1106—Size of Conductors, Leaders and Storms Drains and Section 1108—Secondary (Emergency) Roof Drains are referenced where other sections in Chapter 11 may be relevant for a particular project. This problem is remedied by referencing IPC Chapter 11 as opposed to specific subsections.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

The proposed change does not increase the stringency of the code.

Internal ID: 1215

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## S2-18

### IBC: 1505.2

**Proponent:** Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### 2018 International Building Code

**[BF] 1505.2 Class A roof assemblies.** Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be *listed* and identified as Class A by an *approved* testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

#### Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
3. Class A roof assemblies include minimum 16 ounce per square foot (0.0416 kg/m<sup>2</sup>) copper sheets installed over combustible decks.
4. Class A roof assemblies include slate installed over ASTM ~~D226~~-D4869, Type ~~II~~ underlayment over combustible decks.

#### Reason:

Currently a ASTM D226, Type II underlayment is listed as an underlayment for slate as part of exception 4 but its use as an underlayment is not included in the scope of ASTM D226. An identical underlayment for slate roofing listed in Table 1507.1.1(1) underlayment Types is ASTM D4869, Type IV. ASTM D4869's scope includes the use of the material as an underlayment, so we propose changing the reference in exception 4 to ASTM D4869, Type IV as referenced in Table 1507.1.1(1). It is our intent to submit a code change in Group B to remove the reference to ASTM D226, Type II from Table 1507.1.1(1).

#### Cost Impact

The code change proposal will not increase or decrease the cost of construction .

Adding an equivalent option for an underlayment already listed in the code does not change the stringency of the existing exception.

**Staff Analysis:** The referenced standard in this proposal, ASTM D4869, is currently referenced in the I-Codes.

Internal ID: 1197

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## S3-18

IBC: 1505.8, 1505.9

**Proponent:** Joseph Cain, Solar Energy Industries Association (SEIA), representing Solar Energy Industries Association (JoeCainPE@gmail.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### 2018 International Building Code

#### Revise as follows:

**[BF] 1505.8 Building-integrated photovoltaic (BIPV) products.** *Building-integrated photovoltaic-BIPV products* installed as the roof covering shall be tested, *listed* and *labeled* for fire classification in accordance with Section 1505.1.

**[BF] 1505.9 Rooftop-mounted photovoltaic (PV) panel systems.** Rooftop ~~rack-mounted~~ *photovoltaic (PV) panel systems* shall be tested, *listed* and identified with a fire classification in accordance with UL 1703 and UL 2703. The fire classification shall comply with Table 1505.1 based on the type of construction of the building.

#### Reason:

This proposal includes editorial changes only, and does not change technical requirements.

The definition of Building-Integrated Photovoltaic (BIPV) Products in Chapter 2 already includes the shortened acronym BIPV. As BIPV products become more popular, the code can be made easier to read by moving toward use of the abbreviation/acronym "BIPV" instead of the 11-syllable long term. By using the full term and abbreviation/acronym in the title of Section 1505.8 (as in the Chapter 2 definition), the reader will understand the meaning of BIPV.

Similarly, the abbreviation "PV" entered the 2018 IFC in Section 1204.1. Even though the abbreviation "PV" is not yet included in IBC Chapter 2 definitions, language can be clear if both "photovoltaic" and "PV" terms are used. The definitions themselves cannot be revised until Group B, as they are preceded by [BS]. This usage will set up the code for a transition to greater use of the abbreviation.

In Section 1505.9, the language "Rooftop rack-mounted" is revised to "Rooftop-mounted" because there are an increasing number of rooftop mounted systems that are "rail-less" or "rail-free." These systems use the module frame as the bending member, and do not appear to be installed on a "rack." This proposed language improves Section 1505.9 by using language consistent with other sections of these codes, and consistent with a growing number of mounting systems in the marketplace.

#### Cost Impact

The code change proposal will not increase or decrease the cost of construction .

The proposal includes editorial changes only, and does not change technical requirements.

Internal ID: 1996

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## **S4-18**

### **IBC: 1505.9**

**Proponent:** Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1505.9 Rooftop mounted photovoltaic panel systems.** Rooftop rack-mounted *photovoltaic panel systems* shall be tested, *listed* and identified with a fire classification in accordance with UL 1703 and UL 2703. Listed systems shall include roof-mounting hardware. The fire classification shall comply with Table 1505.1 based on the type of construction of the building.

#### **Reason:**

The purpose of this change is to remedy a potential unintended consequence of adopted reference standards. It is important that roof mounting hardware be part of tested rooftop mounted photovoltaic panel system listings required by IBC Section 1505.9. If such hardware is not included in listings such hardware would be unregulated and mounting methods such as pieces of untreated lumber could potentially be used with unknown impacts on fire-related performance. There is lack of consensus within the roofing industry regarding systems listed according to UL 2703, "Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels." UL 2703 is not clear regarding the inclusion of roof-mounting hardware. NRCA has requested and UL has established a work group to issue an official interpretation, but the issue date of the interpretation is open-ended. It seems prudent to add a clarifying statement to code text as we believe it makes clear the intent of the code section.

#### **Cost Impact**

The code change proposal will increase the cost of construction .

The magnitude of cost impact cannot be determined until UL issues their interpretation. It is possible some systems may need to be retested with roof-mounting hardware and that some hardware may need to be improved to obtain desired test results.

Internal ID: 1218

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## **S5-18**

### **IBC: 1505.10**

**Proponent:** Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1505.10 Roof gardens and landscaped roofs.** Roof gardens and landscaped roofs shall ~~comply be~~ classified in accordance with Section 1505.1 and comply with Section 1507.16 and ~~shall be installed in accordance with ANSI/SPRI VF-1.~~ Section 317 of the International Fire Code.

#### **Reason:**

The purpose of this change is to simplify and to better cross-reference related I-Code sections. IFC Section 317—Rooftop Gardens and Landscaped Roofs references IBC Sections 1505.1 and 1507.16 as does IBC Section 1505.10 where the change is being proposed. The reference to IFC Section 317 makes users aware of related I-Code provisions already on the books. Deleting the reference to ANSI/SPRI VF-1 makes sense because IFC Section 317 contains provisions with the same scope as ANSI/SPRI VF-1, therefore VF-1 is not needed. Additionally, VF-1 is problematic because the portion of the documents subject to a consensus process (2 pages of text) contains multiple references to a 4-page commentary that is not subject to public review.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

The proposed change does not increase the stringency of the code.

Internal ID: 1221

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## S6-18

**IBC: 1507.3.10 (New), 1507.3.10.1 (New), 1507.3.10.2 (New), 1507.3.10.3 (New), 1507.3.10.4 (New)**

**Proponent:** Amanda Hickman, The Hickman Group, representing RIMA International (amanda@thehickmangroup.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### 2018 International Building Code

#### Delete without substitution:

#### ~~SECTION 1509 RADIANT BARRIERS INSTALLED ABOVE DECK~~

~~**[BF] 1509.1 General.** A *radiant barrier* installed above a deck shall comply with Sections 1509.2 through 1509.4.~~

~~**[BF] 1509.2 Fire testing.** *Radiant barriers* shall be permitted for use above decks where the *radiant barrier* is covered with an *approved roof covering* and the system consisting of the *radiant barrier* and the roof covering complies with the requirements of either FM 4450 or UL 1256.~~

~~**[BF] 1509.3 Installation.** The low emittance surface of the *radiant barrier* shall face the continuous airspace between the *radiant barrier* and the roof covering.~~

~~**[BF] 1509.4 Material standards.** A *radiant barrier* installed above a deck shall comply with ASTM C1313/1313M.~~

#### Add new text as follows:

**1507.3.10 Radiant barrier.** Where a radiant barrier is installed above a roof deck under clay or concrete tile, it shall comply with Sections 1507.3.10.1 through 1507.3.10.4

**1507.3.10.1 Installation.** Radiant barriers shall only be installed between a batten and a counter batten. A low-emittance surface of the radiant barrier shall face the airspace between the radiant barrier and roof deck.

**1507.3.10.2 Material fire testing.** The radiant barrier material shall have a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL 723, with test specimen preparation and mounting in accordance with ASTM E2599.

**1507.3.10.3 Assembly fire testing.** The roof assembly, including the radiant barrier, shall comply with the requirements of a Class A, B, or C roof assembly when classified as required by Section 1505.1.

**1507.3.10.4 Material standards.** Radiant barrier materials shall comply with ASTM C1313/C1313M.

#### Reason:

This proposal is submitted as a compromise between RIMA International and National Roofing Contractors Association (NRCA). NRCA approached RIMA with an interest to move section 1509 to 1507. The current language in 1509 is adequate; however, in the spirit of consensus, and because radiant barriers are often used in conjunction with concrete or clay tile, the proposed move of the radiant barrier language from 1509 to a new section in section 1507 Clay and Concrete Tile was developed.

The proposed new section 1507.3.10.2 was drafted based on the requirements in Chapter 14 for water resistive barriers: testing the radiant barrier (on its own) to both ASTM E1354 and ASTM E84 test standards. ASTM E2599 test standard is recommended as the test specimen preparation and mounting method since it is specific to radiant barriers (and some other materials); ASTM E2404 is applicable to water resistive barriers.

A fire classification is required for all roof assemblies per Section 1505. Adding the proposed Section 1507.3.10.3 requires assembly testing of the entire roof covering system. Therefore, the addition of the radiant barrier to any roof assembly will result in a fire classification for the roof assembly as required by Section 1505, just like all other roof assemblies.

#### Cost Impact

The code change proposal will not increase or decrease the cost of construction .

This will neither increase or decrease construction costs as radiant barriers are not mandatory, the proposal only moves 1509 language to 1507; and the revisions are minor.

**Staff Analysis:** The referenced standards within this proposal are currently referenced in the I-Codes.

Internal ID: 1110

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## **S7-18**

### **IBC: [BF] 1508.1**

**Proponent:** Bill McHugh, The McHugh Company, representing Chicago Roofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1508.1 General.** The use of above-deck thermal insulation shall be permitted provided that such insulation is covered with an approved roof covering and passes the tests of NFPA 276 or UL 1256 when tested as an assembly.

#### **Exceptions:**

1. Foam plastic roof insulation shall conform to the material and installation requirements of Chapter 26 and separated by an assembly having a minimum 30 minute fire-resistance rating.
2. Where a concrete roof deck is used and the above-deck thermal insulation is covered with an approved roof covering.

#### **Reason:**

The purpose of this proposal is to add safety for when foam plastic insulation is allowed to be used on roof assemblies. Foam plastic insulation is a great product but needs additional protection from fire, especially in roofing configurations. It seems in Chapter 26 that there is an exception that allows foam plastic insulation to be direct applied to wood sheathing but not metal decking. Regardless of roof deck type, it is important to protect the building with a 30 minute fire-resistance rated assembly as a thermal barrier.

#### **Cost Impact**

The code change proposal will increase the cost of construction .

This proposal will increase the cost of construction by about \$1.00 - \$1.25US per square foot of roofing area.

Internal ID: 1723

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## **S8-18**

### **IBC: [BF] 1508.1**

**Proponent:** Bill McHugh, The McHugh Company, representing Chicago Roofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

**[BF] 1508.1 General.** The use of above-deck thermal insulation shall be permitted provided that such insulation is covered with an approved roof covering and passes the tests of NFPA 276 or UL 1256 when tested as an assembly.

#### **Exceptions:**

1. Foam plastic roof insulation shall conform to the material and installation requirements of Chapter 26 and be separated from the interior of the building by 1/2-inch gypsum board.
2. Where a concrete roof deck is used and the above-deck thermal insulation is covered with an approved roof covering.

#### **Reason:**

The purpose of this proposal is to add safety for when foam plastic roof insulation is allowed to be used on roof assemblies. Foam plastic insulation is a great product but needs additional protection from fire, especially in roofing configurations. It seems in Chapter 26, there is an exception that allows foam plastic insulation to be direct applied to wood sheathing, but not to metal decks. Regardless of the deck type, there can be fire transmitted to the plastic roof insulation, hence the addition of 1/2" gypsum board in cases where the plastic insulation is used.

#### **Cost Impact**

The code change proposal will increase the cost of construction .

This proposal will increase the cost of the roof by \$1.00US - \$1.25US per square foot of roof area when mechanically fastened.

Internal ID: 1702

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## **S9-18**

### **IBC: 1508.1**

**Proponent:** Bill McHugh, representing Chicago Roofing Contractors Association (billmchugh-jr@att.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1508.1 General.** The use of above-deck thermal insulation shall be permitted provided that such insulation is covered with an approved roof covering and passes the tests of NFPA 276 or UL 1256 when tested as an assembly.

#### **Exceptions:**

1. Foam plastic roof insulation shall conform to the material and installation requirements of Chapter 26.
2. Where a concrete or composite metal and concrete roof deck is used and the above-deck thermal insulation is covered with an approved roof covering.

#### **Reason:**

The purpose of this proposal is to add an option to the allowable exceptions in the code. Currently the exception is limited to concrete roof deck and does not include a composite metal and concrete roof deck.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal does not increase the cost of construction as it provides an alternative to the type of concrete roof deck used for foam plastic insulation.

Internal ID: 1720

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## S10-18

IBC: 1510.1.1, 1510.2, 1510.2.1, 1510.2.2

**Proponent:** Jay Hyde, representing Sacramento Valley Association of Building Officials  
(jhyde@mogaveroarchitects.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC GENERAL CODE COMMITTEE. SEE THE IBC-G HEARING AGENDA.

### 2018 International Building Code

#### Revise as follows:

**1510.1.1 Area limitation.** The aggregate area of penthouses and other enclosed rooftop structures shall not exceed one-third the area of the supporting roof deck. The aggregate area of Occupied Rooftop Structures and Penthouses in conformance with Section 1502.2 shall not exceed ten percent of the area of the roof. Such penthouses and other enclosed rooftop structures shall not be required to be included in determining the building area or number of stories as regulated by Section 503.1. The area of such penthouses shall not be included in determining the fire area specified in Section 901.7.

**[BG] 1510.2 Penthouses and Occupied Rooftop Structures..** Penthouses and Occupied Rooftop Structures in compliance with Sections 1510.2.1 through 1510.2.5 shall be considered as a portion of the story directly below the roof deck on which such penthouses are located. Other penthouses shall be considered as an additional story of the building.

**[BG] 1510.2.1 Height above roof deck.** Penthouses and occupied rooftop structures constructed on buildings of other than Type I construction shall not exceed 18 feet (5486 mm) in height above the roof deck as measured to the average height of the roof of the penthouse. Penthouses located on the roof of buildings of Type I construction shall not be limited in height.

**Exception:** Where used to enclose tanks or elevators that travel to the roof level, penthouses shall be permitted to have a maximum height of 28 feet (8534 mm) above the roof deck.

#### **[BG] 1510.2.2 Use limitations.**

1. Penthouses shall not be used for purposes other than the shelter of mechanical or electrical equipment, tanks, elevators and related machinery, or vertical shaft openings in the roof assembly.
2. Occupied rooftop structures shall be accessory to the adjacent occupied roof in conformance with Section 508.2.

#### **Reason:**

Occupied roofs generally require some support space for functionality. The IBC recognizes the importance of limited area accessory occupancies within a building. This code change proposal would allow similar reasoning to be applied to occupied roofs. The 10% limitation is the same limitation for accessory occupancies in IBC Section 508.2.3.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal is permissive, it permits a designer to include a limited-scope occupied penthouse as an accessory to an adjacent roof but it does not require an accessory occupied penthouse. If a designer chooses to include an occupied penthouse, the cost of construction will increase but the designer may not choose to include a occupied penthouse in the project, in which instance there would be no change in cost.

Internal ID: 1406

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## S11-18

### IBC: 1510.2.4

**Proponent:** Homer Maiel, representing ICC Tri-Chapter (Peninsula, East Bay, Monterey Bay) (hmaiel@gmail.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC GENERAL CODE COMMITTEE. SEE THE IBC-G HEARING AGENDA.

### 2018 International Building Code

**[BG] 1510.2.4 Type of construction.** Penthouses shall be constructed ~~with walls, floors and roofs of building elements~~ as required for the type of construction of the building on which such penthouses are built.

#### Exceptions:

1. On buildings of Type I construction, the exterior walls and roofs of penthouses with a *fire separation distance* greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating. The exterior walls and roofs of penthouses with a fire separation distance of 20 feet (6096 mm) or greater shall not be required to have a fire-resistance rating.
2. On buildings of Type I construction two stories or less in height above grade plane or of Type II construction, the exterior walls and roofs of penthouses with a *fire separation distance* greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating or a lesser fire-resistance rating as required by Table 602 and be constructed of *fire-retardant-treated wood*. The exterior walls and roofs of penthouses with a *fire separation distance* of 20 feet (6096 mm) or greater shall be permitted to be constructed of fire-retardant-treated wood and shall not be required to have a fire-resistance rating. Interior framing and walls shall be permitted to be constructed of *fire-retardant-treated wood*.
3. On buildings of Type III, IV or V construction, the exterior walls of penthouses with a *fire separation distance* greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating or a lesser fire-resistance rating as required by Table 602. On buildings of Type III, IV or VA construction, the exterior walls of penthouses with a *fire separation distance* of 20 feet (6096 mm) or greater shall be permitted to be of heavy timber construction complying with Sections 602.4 and 2304.11 or noncombustible construction or *fire-retardant-treated wood* and shall not be required to have a fire-resistance rating.

#### Reason:

The addition of "Building element" is more fitting. See Table 601.

#### Cost Impact

The code change proposal will not increase or decrease the cost of construction .

This proposal will not increase or decrease the cost of construction because the proposal simply substitutes terms to more clearly reflect the intent of the code.

Internal ID: 1481

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## **S12-18**

### **IBC: 1510.7.2**

**Proponent:** Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC GENERAL CODE COMMITTEE. SEE THE IBC-G HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BG] 1510.7.2 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaic panels* and *modules* shall be *listed* and labeled in accordance with UL 1703 and UL 2703 and shall be installed in accordance with the manufacturer's instructions.

#### **Reason:**

Last code cycle a reference to UL 2703 was added to IBC Section 1505.9—Rooftop mounted photovoltaic panel systems. A reference to UL 2703 should also be added to IBC 1510.7.2—Photovoltaic panels and modules to be consistent with the requirements in IBC Section 1505 as both sections are dealing with the same topic.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

The proposed change does not increase the stringency of the code.

**Staff Analysis:** The standard referenced in this proposal, UL 2703, is currently referenced in the I-Codes.

Internal ID: 1198

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## **S13-18**

**IBC: 1510.7, 1510.7.1, 1510.7.2, 1512, 1512.1**

**Proponent:** Joseph Cain, Solar Energy Industries Association (SEIA), representing Solar Energy Industries Association (JoeCainPE@gmail.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC GENERAL CODE COMMITTEE. SEE THE IBC-G HEARING AGENDA.

### **2018 International Building Code**

#### **Delete without substitution:**

~~**[BG] 1510.7 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaic panels* and *modules* shall be designed in accordance with this section.~~

~~**[BG] 1510.7.1 Fire classification.** Rooftop-mounted *photovoltaic panels* and *modules* shall have the fire classification in accordance with Section 1505.9.~~

~~**[BG] 1510.7.2 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 instructions.~~

#### ~~**SECTION 1512 PHOTOVOLTAIC PANELS AND MODULES**~~

~~**1512.1 Photovoltaic panels and modules.** *Photovoltaic panels* and *modules* installed on a roof or as an integral part of a roof assembly shall comply with the requirements of this code and the International Fire Code.~~

#### **Reason:**

This proposal seeks to strike out IBC Sections 1510.7 and 1512, as they are entirely redundant with corresponding portions of IBC Section 3111. Section 3111 was expanded and improved during the 2018 IBC development cycle, with the intent of providing and improved and consolidated "road map" of requirements for solar energy systems. There is nothing unique in Section 1510.7 or 1512. In fact, these sections fall short of the improved language in Section 3111.

#### **Section 1510.7 is redundant with IBC Section 3111.3:**

1510.7 Photovoltaic panels and modules. Rooftop-mounted photovoltaic panels and modules shall be designed in accordance with this section.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the International Fire Code, NFPA 70 and the manufacturers installation instructions.

#### **Section 1510.7.1 is redundant with IBC Section 3111.3.2:**

1510.7.1 Fire classification. Rooftop-mounted photovoltaic panels and modules shall have the fire classification in accordance with Section 1505.9.

3111.3.2 Fire classification. Rooftop-mounted photovoltaic systems shall have a fire classification in accordance with Section 1505.9. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 1505.8.

#### **Section 1510.7.2 is redundant with IBC Section 3111.3.1:**

1510.7.2 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 manufacturer's instructions.

3111.3.1 Equipment. 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.

#### **IBC Section 1512 is redundant with IBC Section 3111.3:**

1512.1 Photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of this code and the International Fire Code.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the International Fire Code, NFPA 70 and the manufacturers installation instructions.

In each case, IBC Section 3111 does a better job of listing requirements in a cohesive manner. Sections 1510.7 and 1512 fall short of the guidance provided in the "road map" of Section 3111. The important technical requirements in Sections 1505.8 and 1505.9 remain in Chapter 15, and they are referenced in Section 3111.

**Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposals only removes redundant language from the IBC, and does not change any technical requirement.

Internal ID: 1999

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## **S14-18**

### **IBC: 1705.14**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.14 Sprayed fire-resistant materials.** *Special inspections* and tests of sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be performed in accordance with Sections 1705.14.1 through 1705.14.6. *Special inspections* shall be based on the fire-resistance design as designated in the *approved construction documents*. The tests set forth in this section shall be based on samplings from specific floor, roof and wall assemblies and structural members. *Special inspections* and tests shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, and before concealed, where applicable.

#### **Reason:**

The installation of SFRM fireproofing takes place early in the project when there is clear access to the beams, columns, trusses and horizontal assemblies. This installation to the manufacturers installation instructions and the listing needs to take place before the installation of the mechanical, electrical, plumbing (MEP) and ceilings takes place. SFRM fireproofing application does not take place while the MEP or ceiling contractors are working. It's not efficient.

This proposal aims to clarify that the fireproofing inspection takes place while the SFRM fireproofing application takes place rather than after. It is much more costly to repair any areas that are not in compliance with the listing if the MEP and ceilings contractors have mobilized.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal makes the code reflect the way that SFRM Fireproofing is inspected currently. If the inspection is to take lace after the SFRM contractor has demobilized, cost of construction will increase.

Internal ID: 1974

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## **S15-18**

### **IBC: 1705.14**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (billmchugh-jr@att.net)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.14 Sprayed fire-resistant materials.** *Special inspections* and tests of sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be performed in accordance with Sections 1705.14.1 through 1705.14.6. *Special inspections* shall be based on the fire-resistance design as designated in the *approved construction documents*. The tests set forth in this section shall be based on samplings from specific floor, roof and wall assemblies and structural members. *Special inspections* and tests shall be performed during construction with an addition visual inspection after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, where applicable.

#### **Reason:**

The way the current language reads is confusing and contrary to the way that fireproofing is currently inspected. The special inspection process for sprayed fire-resistive materials (SFRM) fireproofing has been conducted during the SFRM installation process for decades. The code seems to imply that the inspection not take place during construction and instead be performed at a much later time in the project. The code states that the inspection shall take place after the installation of the "rough in" of Mechanical, Electrical and Plumbing (MEP) and ceilings with very strong language.

The purpose of this code proposal is to clarify that the SFRM inspection takes place at the installation phase as is commonly practiced today on jobsites. The proposal also states that an additional visual inspection takes place before the "rough in" as stated in the code. This is to find any areas where the MEP or ceiling contractors might have unintentionally removed SFRM fireproofing and repair those areas.

The inspection after rough installation of various mechanical, electrical and plumbing (MEP), ceiling assembly items as stated in the code is more expensive and not practical. Should it be determined that the complete inspection only be performed after the MEP "rough in", the repairs made to deficiencies would increase the cost of construction significantly. The fireproofing applicator is usually demobilized once this MEP and ceiling "rough in" has started. This means another mobilization. It also makes repairs, if required, difficult or impossible to access due to pipes, cables, ductwork, and ceilings blocking the ability to get to those places to spray fire-resistive materials.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

Should it be determined that the SFRM Special inspection take place only after the "rough in" of the mechanical, electrical and plumbing and or ceilings, cost of construction will increase.

Internal ID: 1970

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## **S16-18**

### **IBC: 1705.14**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.14 Sprayed fire-resistant materials.** *Special inspections* and tests of sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be performed in accordance with Sections 1705.14.1 through 1705.14.6. *Special inspections* shall be based on the fire-resistance design as designated in the *approved construction documents*. The tests set forth in this section shall be based on samplings from specific floor, roof and wall assemblies and structural members. *Special inspections* and tests shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, where applicable. The required sample size shall not exceed 110% of that specified by the referenced standards in Sections 1705.14.4.1 through 1704.14.4.9.

#### **Reason:**

The code states that a minimum amount of inspection is to take place but not a maximum. The inspection agency has no limit to the amount of inspection that can be conducted, which seems unreasonable. As such, this code proposal brings a degree of reason and prevents "over-inspection" to the special inspection process and undue cost to the building owner and manager.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This code proposal changes a variable expense with an unknown maximum into a more fixed amount due to the limits of inspection.

Internal ID: 1967

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## S17-18

**IBC: 1705.14, 1705.14.1, 1705.14.2, 1705.14.3, 1705.14.4, 1705.14.4.1, 1705.14.4.2, 1705.14.4.3, 1705.14.4.4, 1705.14.4.5, 1705.14.4.6, 1705.14.4.7, 1705.14.4.8, 1705.14.4.9, 1705.14.5, 1705.14.6, 1705.14.6.1, 1705.14.6.2, 1705.14.6.3, Chapter 35, ordinal**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### 2018 International Building Code

#### Revise as follows:

**[BF] 1705.14 Sprayed fire-resistant materials.** *Special inspections* and tests of sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be performed in accordance with Sections 1705.14.1 through 1705.14.6. *Special inspections* shall be based on the fire-resistance design as designated in the *approved construction documents*. The tests set forth in this section shall be based on samplings from specific floor, roof and wall assemblies and structural members. *Special inspections* and tests shall be performed in accordance with ASTM XXXX after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, where applicable.

#### Delete without substitution:

~~**[BF] 1705.14.1 Physical and visual tests.** The *special inspections* and tests shall include the following to demonstrate compliance with the listing and the *fire resistance rating*:~~

- ~~1. Condition of substrates.~~
- ~~2. Thickness of application.~~
- ~~3. Density in pounds per cubic foot (kg/m<sup>3</sup>).~~
- ~~4. Bond strength adhesion/cohesion.~~
- ~~5. Condition of finished application.~~

~~**[BF] 1705.14.2 Structural member surface conditions.** The surfaces shall be prepared in accordance with the *approved fire resistance design* and the written instructions of *approved manufacturers*. The prepared surface of structural members to be sprayed shall be inspected by the special inspector before the application of the sprayed fire-resistant material.~~

~~**[BF] 1705.14.3 Application.** The substrate shall have a minimum ambient temperature before and after application as specified in the written instructions of *approved manufacturers*. The area for application shall be ventilated during and after application as required by the written instructions of *approved manufacturers*.~~

~~**[BF] 1705.14.4 Thickness.** Not more than 10 percent of the thickness measurements of the sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be less than the thickness required by the *approved fire resistance design*, and none shall be less than the minimum allowable thickness required by Section 1705.14.4.1.~~

~~**[BF] 1705.14.4.1 Minimum allowable thickness.** For design thicknesses 1 inch (25 mm) or greater, the minimum allowable individual thickness shall be the design thickness minus 1/4 inch (6.4 mm). For design thicknesses less than 1 inch (25 mm), the minimum allowable individual thickness shall be the design thickness minus 25 percent. Thickness shall be determined in accordance with ASTM E605. Samples of the sprayed fire-resistant materials shall be selected in accordance with Sections 1705.14.4.2 and 1705.14.4.3.~~

~~**[BF] 1705.14.4.2 Floor, roof and wall assemblies.** The thickness of the sprayed fire-resistant material applied to floor, roof and wall assemblies shall be determined in accordance with ASTM E605, making not less than four measurements for each 1,000 square feet (93 m<sup>2</sup>) of the sprayed area, or portion thereof, in each story.~~

~~**[BF] 1705.14.4.3 Cellular decks.** Thickness measurements shall be selected from a square area, 12 inches by 12 inches (305 mm by 305 mm) in size. Not fewer than four measurements shall be made, located symmetrically within the square area.~~

**[BF] 1705.14.4.4 Fluted decks.** Thickness measurements shall be selected from a square area, 12 inches by 12 inches (305 mm by 305 mm) in size. Not fewer than four measurements shall be made, located symmetrically within the square area, including one each of the following: valley, crest and sides. The average of the measurements shall be reported.

**[BF] 1705.14.4.5 Structural members.** The thickness of the sprayed fire resistant material applied to structural members shall be determined in accordance with ASTM E605. Thickness testing shall be performed on not less than 25 percent of the structural members on each floor.

**[BF] 1705.14.4.6 Beams and girders.** At beams and girders thickness measurements shall be made at nine locations around the beam or girder at each end of a 12-inch (305 mm) length.

**[BF] 1705.14.4.7 Joists and trusses.** At joists and trusses, thickness measurements shall be made at seven locations around the joist or truss at each end of a 12-inch (305 mm) length.

**[BF] 1705.14.4.8 Wide-flanged columns.** At wide-flanged columns, thickness measurements shall be made at 12 locations around the column at each end of a 12-inch (305 mm) length.

**[BF] 1705.14.4.9 Hollow structural section and pipe columns.** At hollow structural section and pipe columns, thickness measurements shall be made at not fewer than four locations around the column at each end of a 12-inch (305 mm) length.

**[BF] 1705.14.5 Density.** The density of the sprayed fire resistant material shall be not less than the density specified in the approved fire resistance design. Density of the sprayed fire resistant material shall be determined in accordance with ASTM E605. The test samples for determining the density of the sprayed fire resistant materials shall be selected as follows:

1. From each floor, roof and wall assembly at the rate of not less than one sample for every 2,500 square feet (232 m<sup>2</sup>) or portion thereof of the sprayed area in each story.
2. From beams, girders, trusses and columns at the rate of not less than one sample for each type of structural member for each 2,500 square feet (232 m<sup>2</sup>) of floor area or portion thereof in each story.

**[BF] 1705.14.6 Bond strength.** The cohesive/adhesive bond strength of the cured sprayed fire resistant material applied to floor, roof and wall assemblies and structural members shall be not less than 150 pounds per square foot (psf) (7.18 kN/m<sup>2</sup>). The cohesive/adhesive bond strength shall be determined in accordance with the field test specified in ASTM E736 by testing in-place samples of the sprayed fire resistant material selected in accordance with Sections 1705.14.6.1 through 1705.14.6.3.

**[BF] 1705.14.6.1 Floor, roof and wall assemblies.** The test samples for determining the cohesive/adhesive bond strength of the sprayed fire resistant materials shall be selected from each floor, roof and wall assembly at the rate of not less than one sample for every 2,500 square feet (232 m<sup>2</sup>) of the sprayed area, or portion thereof, in each story.

**[BF] 1705.14.6.2 Structural members.** The test samples for determining the cohesive/adhesive bond strength of the sprayed fire resistant materials shall be selected from beams, girders, trusses, columns and other structural members at the rate of not less than one sample for each type of structural member for each 2,500 square feet (232 m<sup>2</sup>) of floor area or portion thereof in each story.

**[BF] 1705.14.6.3 Primer, paint and encapsulant bond tests.** Bond tests to qualify a primer, paint or encapsulant shall be conducted where the sprayed fire resistant material is applied to a primed, painted or encapsulated surface for which acceptable bond strength performance between these coatings and the fire resistant material has not been determined. A bonding agent approved by the SFRM manufacturer shall be applied to a primed, painted or encapsulated surface where the bond strengths are found to be less than required values.

Add new standard(s) follows:

## CHAPTER 35 REFERENCED STANDARDS

# ASTM

ASTM International  
100 Barr Harbor Drive, P.O. Box  
C700  
West Conshohocken PA 19428-

**Draft Standard WK54567 - 2018:**

**Practice for the On-Site Inspection of Installed Fire Resistive Material with Annex and Appendix**

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**Reason:**

Special inspection for sprayed fire-resistive materials (SFRM) fireproofing has been in the International Building Code for many years. To date, the requirements have been prescriptive and in the IBC, Chapter 17. Over the past few years, the contractors, manufacturers and consultants of SFRM Fireproofing have come together to build an inspection standard at ASTM. The document is the result of the industry efforts to come to consensus with this new standard. We respectfully submit this document for insertion into the 2021 IBC.

**Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

The reason the proposal will not increase the cost of construction is that the methods used for inspection are the same as is in Chapter 17 of the IBC currently.

**Analysis:** A review of the standard proposed for inclusion in the code, ASTM - WK54567-2018, 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, 2018.

Internal ID: 1934

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## **S18-18**

**IBC: 1705.15, Chapter 35, ordinal**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.15 Mastic and intumescent fire-resistant coatings.** *Special inspections* and tests for mastic and intumescent fire-resistant coatings applied to structural elements and decks shall be performed in accordance with ~~AWCI-12-B. Draft ASTM Standard WK54767. Draft ASTM Standard WK54567.~~ *Special inspections* and tests shall be based on the fire-resistance design as designated in the *approved construction documents*.

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

### **CHAPTER 35 REFERENCED STANDARDS**

## **ASTM**

ASTM International  
100 Barr Harbor Drive, P.O. Box  
C700  
West Conshohocken PA 19428-  
2959  
US

#### **Draft Standard WK54567 - 2018:**

#### **Practice for the On-Site Inspection of Installed Fire Resistive Material with Annex and Appendix**

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#### **Reason:**

The Intumescent fire-resistant coatings industry - contractors, manufacturers and consultants - worked together at ASTM to build a new consensus standard for special inspection of mastic and intumescent fire-resistant coatings. We respectfully submit this standard for insertion into the International Building Code, Chapter 17.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal takes a new standard and improves on existing documents in the code resulting in uniform special inspection of fire-resistant coatings.

**Analysis:** A review of the standard proposed for inclusion in the code, ASTM - WK54567-2018, 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, 2018.

Internal ID: 1958

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## **S19-18**

### **IBC: 1705.15**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.15 Mastic and intumescent fire-resistant coatings.** *Special inspections* and tests for mastic and intumescent fire-resistant coatings applied to structural elements and decks shall be performed in accordance with AWCI 12-B. *Special inspections* and tests shall be based on the fire-resistance design as designated in the *approved construction documents*. Special Inspections and tests shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, and before concealed, where applicable.

#### **Reason:**

The special inspection of fireproofing needs to take place before the mechanical, electrical and plumbing, sprinkler, suspension systems and ceilings are 'roughed in' or installed. This proposal is to clarify in the code when the inspection is to take place, which is both as the fireproofing is installed and also visually after the rough in takes place.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal clarifies that inspection of fireproofing takes place as it currently does now meaning no increase in cost.

Internal ID: 2142

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## **S20-18**

### **IBC: 1705.15**

**Proponent:** Bill McHugh, The McHugh Company, representing National Fireproofing Contractors Association (Bill@mc-hugh.us)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.15 Mastic and intumescent fire-resistant coatings.** *Special inspections* and tests for mastic and intumescent fire-resistant coatings applied to structural elements and decks shall be performed in accordance with AWCI 12-B. *Special inspections* and tests shall be based on the fire-resistance design as designated in the *approved construction documents*. Additional inspections and tests shall not exceed an additional amount of 10 percent than required in AWCI-12-B.

#### **Reason:**

The code states that a minimum amount of inspection is to take place but not a maximum amount of inspection. The inspection agency has no limit to the amount of inspection that can be conducted if this is not added to this section on special inspections. The maximum number comes from another standard that has been in the IBC Special Inspection Section for the past code cycles, ASTM E 2174 for Firestop Special Inspection.

#### **Cost Impact**

The code change proposal will not increase or decrease the cost of construction .

This proposal limits the amount of inspection to a reasonable amount of maximum inspection to the code. It changes a variable expense to the building owner into a more fixed cost item.

**Staff Analysis:**The referenced standard within this proposal, AWCI 12-B, is currently referenced in the I-codes.

Internal ID: 2130

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## **S21-18**

### **IBC: 1705.17**

**Proponent:** William Koffel, representing Firestop Contractors International Association (wkoffel@koffel.com)

THIS PROPOSAL WILL BE HEARD BY THE IBC FIRE SAFETY CODE COMMITTEE. SEE THE IBC-FS HEARING AGENDA.

### **2018 International Building Code**

#### **Revise as follows:**

**[BF] 1705.17 Fire-resistant penetrations and joints.** In high-rise buildings ~~or~~ in buildings assigned to *Risk Category III or IV, or fire areas containing Group R occupancies with an occupant load greater than 250, special inspections for through-penetrations, membrane penetration firestops, fire-resistant joint systems and perimeter fire barrier systems that are tested and listed* in accordance with Sections 714.4.1.2, 714.5.1.2, 715.3 and 715.4 shall be in accordance with Section 1705.17.1 or 1705.17.2.

#### **Reason:**

Fire resistance rated compartmentation is a critical fire protection feature in many buildings with Group R occupancies. When through penetration firestop systems and fire resistant joint systems are not properly installed, the integrity of the compartmentation is compromised. The existing requirement for special inspections is proposed to be expanded to include larger buildings with Group R occupancies. The occupant load of 250 is consistent with what is used to define Group E occupancies that are Category III. Without this change, the special inspection requirement would only apply to Group R occupancies in high-rise buildings.

#### **Cost Impact**

The code change proposal will increase the cost of construction .

The addition of this special inspection requirement does increase the cost of construction which will vary based on the quality management system of the firestop contractor.

Internal ID: 2361

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## **S22-18**

### **IBC: 1705.19 (New)**

**Proponent:** Brian Tollisen, Division of Building Standards and Codes, NYS Dept. of State, representing Division of Building Standards and Codes, New York State Department of State (Brian.Tollisen@dos.ny.gov)

THIS PROPOSAL WILL BE HEARD BY THE INTERNATIONAL FIRE CODE COMMITTEE. SEE THE IFC HEARING AGENDA.

### **2018 International Building Code**

#### **Add new text as follows:**

**1705.19 Electrical Construction.** Electrical components, appliances, equipment and systems governed by NFPA 70 shall be inspected by an approved special inspector with expertise in NFPA 70 and electrical construction.

#### **Reason:**

The inspection of electrical construction is an activity that many building officials do not have the expertise to complete. This type of inspection should be included as a special inspection in Chapter 17.

#### **Cost Impact**

The code change proposal will increase the cost of construction .

Since this is a new requirement, it is assumed that it will add cost to a construction project.

**Staff Analysis:** The referenced standard in this proposal, NFPA 70, is currently referenced in the I-Codes.

Internal ID: 1419

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