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## 2006/2007 INTERNATIONAL BUILDING CODE

### Fire Safety Code Development Committee

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**INTERNATIONAL BUILDING CODE  
FIRE SAFETY COMMITTEE  
HEARING RESULTS**

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**FS1-06/07**

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

**Modify the proposal as follows:**

**701.1 Scope.** The provisions of this chapter shall govern the materials, ~~systems~~ and ~~systems~~ assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings ~~through compartmentation systems~~.

**Committee Reason:** The modifications help to provide terms which are used in the field and also recognized by building officials and those conducting tests. While some items are tested as a “system” most people are familiar with the phrase “assembly” which picks up all of the items involved. This modification simply combines the two terms. The deletion at the end is because “compartmentation systems” are not defined or a commonly used term.

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

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**FS2-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** This is an operation and maintenance issue which does not belong in a code which is intended for new construction. The IFC currently contains provisions which adequately address this issue and is the primary document for maintenance. The proposal would create a conflict with Section 3401 which permits the assembly to be maintained in accordance with the code under which it was installed. The provision is therefore not clear how it would affect Chapter 34 or the IEBC provisions. The term “structural fire resistance systems” is unclear.

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

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**FS3-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The proposal seems to require the building official to witness the test. While this language is similar to language found in Chapter 9 regarding commissioning systems it is not appropriate in this case since this is an inspection and not a test. The provision implies that the owner has to pay for the test and would not appear to address manufacturer’s testing. In addition, the building official should not dictate who pays for the testing of a proprietary assembly. The first sentence requires the building official to enforce provisions of the IFC while the last sentence will conflict with the requirements of Section 110, specifically 110.3.

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

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**FS4-06/07**

**PART I — IBC FIRE SAFETY  
Committee Action:** **Approved as Modified**

**Modify the proposal as follows:**

**702.1 Definitions.** The following words and terms shall, for the purposes of this chapter, and as used elsewhere in this code, have the meanings shown herein.

**BUILDING ELEMENT:** A fundamental component of building construction, listed in Table 601, which may or may not be of fire-resistance-rated construction and which is constructed of materials based on the building type of construction.

**703.2 Fire-resistance ratings.** The fire-resistance rating of building elements shall be determined in accordance with the test procedures set forth in ASTM E 119 or in accordance with Section 703.3. Where materials, systems or devices that have not been tested as part of a fire-resistance rated assembly are incorporated into the assembly, sufficient data shall be made available to the building official to show that the required fire-resistance rating is not reduced. Materials and methods of construction used to protect joints and penetrations in fire-resistance rated building elements shall not reduce the required fire-resistance rating.

**Exception:** In determining the fire-resistance rating of exterior bearing walls, compliance with the ASTM E 119 criteria for unexposed surface temperature rise and ignition of cotton waste due to passage of flame or gases is required only for a period of time corresponding to the required fire-resistance rating of an exterior nonbearing wall with the same fire separation distance, and in a building of the same group. When the fire-resistance rating determined in accordance with this exception exceeds the fire-resistance rating determined in accordance with ASTM E 119, the fire exposure time period, water pressure, and application duration criteria for the hose stream test of ASTM E 119 shall be based upon the fire-resistance rating determined in accordance with this exception.

**Committee Reason:** The definition helps to explain a fundamental item and when combined with the revisions proposed to Section 602.1 will help get people started with using the code. The modification to keep the existing text in Section 703.2 will help make it clear that the ratings are not to be reduced. Adding the reference to Table 601 in the definition helps clarify that the “building elements” are only those items listed in the table.

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

**PART II — IBC GENERAL  
Committee Action:** **Approved as Modified**

**Modify the proposal as follows:**

**602.1 General.** Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5. The building elements shall have a fire-resistance rating not less than that specified in Table 601 and exterior walls shall have a fire-resistance rating not less than that specified in Table 602. Where required to have a fire-resistance rating by Table 601, building elements shall comply with the applicable provisions of Section 703.2. The protection of openings, ~~penetrations, joints and~~ ducts and air transfer openings in building elements shall not be required unless required by other provisions of this code.

**Committee Reason:** The committee felt that these two sentences provided a benefit to the code user as opening protection is not always required. The modification addresses the fact that penetration protection and fire resistant joints systems are generally required for fire resistive construction whereas openings, ducts and air transfer may not require any special protection.

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

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## FS5-06/07

**Committee Action:** Disapproved

**Committee Reason:** These definitions have the possibility of creating confusion with other codes and provisions. While the term air transfer opening may help explain the provisions of Section 710, the term ducted opening and ducted system are not used within the IBC. In addition, the term vent may conflict or create confusion with the attic and foundation vents that are required by Section 1203. The proposal does not need to use the phrase "factory made components" within the definition for vent and "ducted system" within the definition of ducted system. It appears from the proposal that listed flexible air duct connectors and duct board products would not be accepted on any portion of a "ducted system." The definition for ducted system which is being taken from Section 716.5.2 item 3 was intended to only be used for that one location instead of as a global definition. That definition was based upon tests dealing with that exception and interpretations regarding its application.

**Assembly Action:** None

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## FS6-06/07

**Committee Action:** Disapproved

**Committee Reason:** Although compartmentation is a code concept, the term is not used in the code. The addition of this should be done as a part of a total package and not just be done as multiple separate items. Simply creating a definition does not help with using the code or improving application of it. This definition does not address all the items needed to complete the compartment. Ducts, doors and other items should be included and addressed. Additionally the definition says "fire-and smoke" resistant construction but there are some compartments which are intended only for fire or only smoke protection. If the separations are rated, then the term fire area applies.

**Assembly Action:** None

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## FS7-06/07

**Committee Action:** Disapproved

**Committee Reason:** Although this issue is not clear in the existing code, placing this requirement within the definition is not the best solution and may be overlooked. The testimony discussed items such as picnic shelters, flea-markets and other items which don't have walls around them that would be affected by this requirement and now need sprinklers or alarms due to exceeding the fire area. Another example given was a canopy which was 44 feet tall and open on all sides. Items which are open and unenclosed do not create the same fire hazard and should not be regulated by the same requirements that apply to enclosed buildings.

**Assembly Action:** Approved as Submitted

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## FS8-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

### PART I — IBC

**Committee Action:** Approved as Submitted

**Committee Reason:** The addition of this standard provides an alternative means of demonstrating compliance with the code. Having an additional option provides flexibility and additional design options. UL 1479 is already used in the code in Section 712 and the standard addresses air leakage while the current referenced standard does not.

**Assembly Action:** None

### PART II — IMC

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposed change provides more flexibility for approving firestop material by adding another nationally recognized standard.

**Assembly Action:** None

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## FS9-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal provides consistency between the three terms in both the definition of fire-resistance rating and also within the various code sections. The reorganization of the items in Section 703.3 start with the prescriptive elements and then move on to the calculation and performance options which is appropriate for a prescriptive code.

**Assembly Action:** None

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## FS10-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

### PART I — IBC FIRE SAFETY

**Committee Action:** Approved as Submitted

**Committee Reason:** Similar to the action taken on FS8-06/07 the addition of the new standard does provide additional flexibility for the designer and building official. While there was some uncertainty regarding whether the UL standard has incorporated some of the recent changes that have been made to the ASTM E 119 standard, the proposed UL standard does match up with the currently referenced E 119 standard.

**Assembly Action:** None

### PART II — IBC GENERAL

**Committee Action:** Approved as Submitted

**Committee Reason:** The inclusion of UL 263 as an alternate and equivalent standard to ASTM E 119 was felt to be an appropriate addition to the code. This is also consistent with the actions taken on the other portions of this code change.

**Assembly Action:** None

### PART III — IBC STRUCTURAL

**Committee Action:** Approved as Submitted

**Committee Reason:** The change adds a needed reference to a fire test standard.

**Assembly Action:** None

#### **PART IV — IRC**

**Committee Action:** Approved as Submitted

**Committee Reason:** The new reference to the Standard UL 263 adds depth to the code and provides an alternative to ASTM E119. These two standards describe the same test method. The addition of this alternate test method provides the authority having jurisdiction with the flexibility to accept listed and labeled products evaluated under UL 263.

**Assembly Action:** None

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### **FS11-06/07**

**Note:** The following analysis was not in the Code Change Proposal book but was published in the “Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards” provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

#### **PART I — IBC FIRE SAFETY**

**Committee Action:** Approved as Submitted

**Committee Reason:** Similar to the action taken with both FS10 and FS8 above, the addition of the standard will provide added flexibility for both the designer and the building official. This action also coordinates with the action taken by the IFC and IBC Structural committees which have already met and approved this item.

**Assembly Action:** None

#### **PART II — IBC GENERAL**

**Committee Action:** Approved as Submitted

**Committee Reason:** The inclusion of UL 723 as an alternate and equivalent standard to E 119 was felt to be an appropriate addition to the code. This is also consistent with the actions taken on the other portions of this code change.

**Assembly Action:** None

#### **PART III — IBC STRUCTURAL**

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal clarifies fire-retardant treated wood requirements by adding an appropriate reference to a test standard.

**Assembly Action:** None

#### **PART IV — IFC**

**Committee Action:** Approved as Submitted

**Committee Reason:** Including a reference to UL 723 will provide the code official with greater flexibility in approving materials tested to either ASTM E84 or UL723, since both test standards are equivalent.

**Assembly Action:** None

#### **PART V — IRC**

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**R314.6 Specific approval.** Foam plastic not meeting the requirements of Sections R314.3 through R314.5 shall be specifically approved on the basis of one of the following approved tests: NFPA 286 with the acceptance criteria of Section R315.4, FM4880, ~~UL 723~~, UL 1040 or UL 1715, or fire tests related to actual end-use configurations. The specific approval shall be based on the actual end use configuration and shall be performed on the finished foam plastic assembly in the maximum thickness intended for use. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

(Portions of proposal not shown remain unchanged)

**Committee Reason:** The new reference to UL 723 adds depth to the code and provides an alternative to ASTM E84. These two standards describe the same test method. The addition of this alternate test method provides the authority having jurisdiction with the flexibility to accept listed and labeled products evaluated under UL 723.

Section R314.6 was modified to remove the reference to UL723. The reference was not needed in this particular section of the IRC.

**Assembly Action:** None

#### **PART VI — IRC MECHANICAL**

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposed change provides an alternate method of testing fire-rated assemblies by adding another consensus standard.

**Assembly Action:** None

#### **PART VII — WUIC**

**Committee Action:** Approved as Submitted

**Committee Reason:** Including a reference to UL 723 will provide the code official with greater flexibility in approving materials tested to either ASTM E84 or UL723, since both test standards are equivalent.

**Assembly Action:** None

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### **FS12-06/07**

**Committee Action:** Disapproved

**Committee Reason:** While the proposal is intended to apply to structural systems, it is written where it could be applied to any “assembly” and not just to structural elements. The committee felt that this was more of a performance code issue which should be located there versus an item which belongs within the IBC. In addition, the committee felt that the provisions of the current item 5 which references Section 104.11 would already permit this option if approved by the building official. Some additional concerns where what types of loads are considered, what is “credible worst case”, who could be capable of doing a peer review, and the fact that the fire code official would not be included within the planning and evaluation. Given the NIST presentations regarding the World Trade Center and the limitations which were found with the existing software, the committee did not feel that there had been adequate evaluation yet to move this into the IBC.

**Assembly Action:** None

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### **FS13-06/07**

**Committee Action:** Disapproved

**Committee Reason:** Items FS13, FS14, FS15, FS73 and FS94 were all heard together. Many of the comments which are also applicable to the other items will therefore be included here with FS13. The committee had a number of concerns with how these requirements would be applied. One issue of concern was whether the provisions would be applicable to existing construction or areas which are being altered. Although the proponents had not addressed the lettering size due to comments received from previous cycles, there was some concern about not providing any guidance on the size or marking including additional information such as the purpose of the assembly and its rating. In addition, the spacing of the labels was not covered so the question of whether they would help if a single label was used for a long wall was raised. The various proposals addressed the issue of location differently but all seemed to have issues of concern. FS13 did not specify the location so the possibility exists that it could be required to be labeled on an exposed wall within a room. Items FS14 and FS15 included concealed spaces which would be impossible or difficult to access. While the proposals were probably geared to address penetrations, the proposals generally stated that the "openings" had to be protected. This is also unclear as to how items that are permitted to penetrate assemblies without protection (due to some of the code's exceptions) would be affected. Although this requirement had existed in one of the legacy codes and is used in both Virginia and Florida no evidence was presented to show that the protection was improved in those areas. FS13 was disapproved because of these concerns and because several of the other proposals are better.

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

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## FS14-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** **Disapproved**

**Committee Reason:** See the comments provided with FS13-06/07 above. In addition, there was concern regarding the subjective "decorative ceiling or in concealed spaces" language of this proposal.

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

### PART II — IFC

**Committee Action:** **Disapproved**

**Committee Reason:** The proposal contains no guidance as to the size or stroke of the required wording. The change would require signs or stenciling to be installed in a concealed location and provides no guidance as to where signs would go if there were no decorative ceiling present. In existing buildings, the lack of construction documents would be problematic since there would be no guidance as to what assemblies in the building were constructed as fire walls, fire barriers or fire partitions, thereby making such a requirement more appropriate for new buildings. The change also provides no requirement for on-going maintenance of the markings.

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

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## FS15-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** **Disapproved**

**Committee Reason:** See the comments provided with FS13-06/07 above. In addition, this item was disapproved because it was a companion change to FS14 and this provides consistency with the action taken on FS14.

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

### PART II — IFC

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposal contains no guidance as to the size or stroke of the required wording. The change would require signs or stenciling to be installed in a concealed location and provides no guidance as to where signs would go if there were no decorative ceiling present. In existing buildings, the lack of construction documents would be problematic since there would be no guidance as to what assemblies in the building were constructed as smoke barriers or smoke partitions thereby making such a requirement more appropriate for new buildings. The change also provides no requirement for on-going maintenance of the markings.

**Assembly Action:**

**None**

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## FS16-06/07

**Committee Action:**

**Disapproved**

**Committee Reason:** While this proposal may help ease the application of the code, the committee felt that there was some additional work needed before this type of revision went into the code. There was some concern related to how the "imaginary line" would apply to situations where a firewall was used between two buildings and whether this section would affect the items in Section 705.5. The 6 foot dimension does not match up with the 3 to 5 foot or 5 to 10 foot dimensions which are found in Table 704.8 The 6 foot requirement for openings was based on the plume dimensions of a fire at an opening and it does not coordinate with the concerns of protection either from or to property on the other side of the property line.

**Assembly Action:**

**None**

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## FS17-06/07

**Committee Action:**

**Disapproved**

**Committee Reason:** See comments with FS16-06/07 above.

**Assembly Action:**

**None**

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## FS18-06/07

**Committee Action:**

**Disapproved**

**Committee Reason:** The proposal FS22 provides a clearer solution for this issue. This item should probably go into Section 705 as a requirement for fire walls instead of in this section. This action was also taken based on the request of testimony given on behalf of the proponent.

**Assembly Action:**

**None**

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## FS19-06/07

**Withdrawn by Proponent**

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## FS20-06/07

**Committee Action:**

**Disapproved**

**Committee Reason:** The floor discussion focused on two separate issues, the asymmetrical assembly versus the protection of bearing wall issues that were raised by the proposal and during the testimony. Additionally the testimony focused on the spread of fire from the exterior and the affect it has on the exterior wall through window

plumes. While the ASTM E 119 fire test may not be a good test for this type of exterior exposure, there was a lack of information or evidence provided to support the elimination of the asymmetrical construction. The asymmetrical construction has been used for a number of years by some of the legacy codes and the evidence should be available to show whether a problem has existed in those areas

**Assembly Action:** **Approved as Submitted**

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**FS21-06/07** **Withdrawn by Proponent**

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**FS22-06/07**

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

**Committee Reason:** This proposal does provide clarification regarding how openings for fire walls are to be addressed. This will help to eliminate some confusion and will be consistent with the committee's understanding as to how this section should be interpreted.

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

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**FS23-06/07**

**PART I — IBC FIRE SAFETY**

**Committee Action:** **Disapproved**

**Committee Reason:** Section 716.5 does not include exterior walls. Therefore, providing a reference to it does not serve any purpose. This could be considered as being too restrictive since the rating may in many cases be greater than the rating of the wall itself.

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

**PART II - IBC GENERAL**

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal was disapproved as the committee felt it was in appropriate for a table on exterior walls to be referring to the sections related to fire barriers and fire walls.

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

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**FS24-06/07**

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

**Modify the proposal as follows:**

**Table 704.8 footnotes:**

P = Openings protected with an opening protective assembly in accordance with Section ~~704.8.4~~ 704.8.2.

(Portions of proposal not shown remain unchanged)

**Committee Reason:** This provides a clear connection between Table 704.8 and the code text which currently exists in Section 704.8.1. The modifications will correct a section reference which is not correct. The committee also expressed their desire that the various headings be spelled out instead of abbreviated. Additionally the action taken with FS22-06/07 will be added into this table if both of the items do get approved at the final action hearings.

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

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**FS25-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The proponent requested disapproval so that he could continue to work with others to resolve some concerns. Additionally the committee did note that the last sentence of Section 704.10 was not clear.

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

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**FS26-06/07**

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

**Committee Reason:** This proposal adds a recognized material that will not contribute to flame spread. Including this option provides additional choice to allow the use of fire-retardant-treated wood in lieu of a parapet.

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

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**FS27-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The proponent's reason statement does not really match the proposed code change. When dealing with the garage below, it would not be a fire wall issue. The added text regarding what items are considered as separate building issues is not complete and will create confusion because it raises the assumption that things which are not listed such as fire alarms and sprinklers are not issues that would be affected by separate buildings.

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

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**FS28-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** While the proponent relied on a legacy code requirement to show that they have had a good history with the noncombustible separations, they did not provide any information or details showing that the areas of the country which did not have this requirement had any greater problems or loss of property. While this is an issue which will only change the requirements for Type V buildings there was insufficient documentation of a problem. The rating of the fire wall and structural stability will not be affected by the framing material within the wall. It is really the performance of the assembly rather than the materials which affect how the fire wall works. Testimony was provided that these assemblies have worked where they have previously been permitted.

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

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**FS29-06/07**

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

**Modify the proposal as follows:**

**705.5.1 Exterior walls.** Where the fire wall terminates within an exterior wall as permitted by Section 705.5, the buildings on either side of the fire wall shall be assumed to have an imaginary line between

them. The location of the assumed imaginary line shall be such that the exterior wall and opening protection of each building shall comply with the criteria set forth in Sections 704.5 and 704.8. Such protection is not required for exterior walls terminating at fire walls that form an angle equal to or greater than 180 degrees (3.14 rad).

**Committee Reason:** This proposal helps explain how to deal with these items where the fire wall terminates at the exterior wall.

**Analysis:** This item needs to be reviewed based on the committee's later action to approve FS31-06/07. Without public comments, there will be coordination issues, see FS31.

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

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## FS30-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** Testimony given on behalf of the proponent requested disapproval in favor of FS31-06/07. The committee also did not feel that the proposal addressed all of the concerns which were mentioned in the proponent's reason statement.

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

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## FS31-06/07

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

**Committee Reason:** This proposal provides a better clarification for how to handle walls which are at an angle greater than 180 degrees. This item needs to be reviewed based on the previous action to approve FS29-06/07.

**Analysis:** Public comments may be needed to coordinate FS29 and FS31 and address any inconsistencies or conflicts which may result if both items are approved. Some committee members expressed that they liked the numbered list that this proposal provided as compared to FS29.

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

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## FS32-06/07

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

**Modify the existing code as follows:**

**705.6 Vertical continuity.** Fire walls shall extend from the foundation to a termination point at least 30 inches (762 mm) above both adjacent roofs.

**Exceptions:**

1. Stepped buildings in accordance with Section 705.6.1.
2. Two-hour fire-resistance-rated walls shall be permitted to terminate at the underside of the roof sheathing, deck or slab provided:
  - 2.1. The lower roof assembly within 4 feet (1220 mm) of the wall has not less than a 1-hour fire-resistance rating and the entire length and span of supporting elements for the rated roof assembly has a fire-resistance rating of not less than 1 hour.
  - 2.2. Openings in the roof shall not be located within 4 feet (1220 mm) of the fire wall.
  - 2.3. Each building shall be provided with not less than a Class B roof covering.

3. Walls shall be permitted to terminate at the underside of noncombustible roof sheathing, deck, or slabs where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within 4 feet (1220 mm) of the fire wall.
4. In buildings of Type III, IV and V construction, walls shall be permitted to terminate at the underside of combustible roof sheathing or decks provided:
  - 4.1. There are no openings in the roof within 4 feet (1220 mm) of the fire wall,
  - 4.2. The roof is covered with a minimum Class B roof covering, and
  - 4.3. The roof sheathing or deck is constructed of fire-retardant-treated wood for a distance of 4 feet (1220 mm) on both sides of the wall or the roof is protected with 5/8 inch (15.9 mm) Type X gypsum board directly beneath the underside of the roof sheathing or deck, supported by a minimum of 2-inch (51 mm) nominal ledgers attached to the sides of the roof framing members for a minimum distance of 4 feet (1220 mm) on both sides of the fire wall.
5. ~~In buildings located above a parking garage designed in accordance with Section 509.2, shall be permitted to have the fire walls for the buildings located above the parking garage-3 hour fire rated horizontal separation required by Section 509.2 item 1 shall be permitted to extend from the top of this horizontal separation between the parking garage and the buildings.~~

**Committee Reason:** The modification which was submitted and approved does help to clarify the application of these provisions. The changes by the proposal and modification are essentially editorial changes and do not intend to make technical changes to the requirements. The intent is to simply clarify the termination of the fire wall at the horizontal separation or "pedestal" and also address the fact that uses other than garages are permitted below the horizontal separation.

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

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## FS33-06/07

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

**Committee Reason:** These new size limitations are appropriate based on changes in the test standards and help provide consistency with the requirements in Section 706.7.

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

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## FS34-06/07

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

**Modify the proposal as follows:**

**705.11 Ducts and air transfer openings.** Ducts and air transfer openings shall not penetrate fire walls.

**Exception:** Penetrations by ducts and air transfer openings of fire walls that are not on a lot line shall be allowed provided the penetrations comply with Section 716.5.4 The size and aggregate width of all openings shall not exceed the limitations of Section 705.8.

**Committee Reason:** This helps to clarify the application of the fire wall provisions and direct the code user to the requirements of Section 716 which do require dampers at these locations. The modification changed the reference to Section 716 instead of Section 716.5.1 since that section does not really provide any added clarity and it would miss the provisions of Section 716.2, 716.3 and 716.4 that are also applicable.

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

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## FS35-06/07

**Committee Action:** Disapproved

**Committee Reason:** This action is taken based on the committee actions taken on FS103, FS117 and FS127. Because proposal FS103-06/07 was not approved, this provides consistency with the action taken on that item.

**Assembly Action:** None

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## FS36-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The relocation to Section 703 will assist code users in understanding that the requirements are applicable to more than fire barriers.

**Assembly Action:** None

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## FS37-06/07

**Errata:** Replace the proposal shown in the monograph with the following:

**Proponent:** Philip Brazil, P.E., Reid Middleton, Inc., representing himself

### PART I – IBC FIRE SAFETY

**706.3.3 Exit passageway.** The fire-resistance rating of the separation between fire barrier separating building areas and from an exit passageway shall comply with Section 1021.1.

**706.3.9. Single-occupancy fire areas.** The fire barriers or horizontal assembly assemblies, or both, separating a single occupancy into different fire areas shall have a fire-resistance rating of not less than that indicated in Table 706.3.9.

**707.11 Enclosure at the bottom.** Shafts that do not extend to the bottom of the building or structure shall comply with one of the following:

1. They shall be enclosed at the lowest level with construction of the same fire-resistance rating as the lowest floor through which the shaft passes, but not less than the rating required for the shaft enclosure;
2. They shall terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the remainder of the building by a fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. having a The fire-resistance rating and opening protectives shall be at least equal to the protection required for the shaft enclosure; or.
3. They shall be protected by approved fire dampers installed in accordance with their listing at the lowest floor level within the shaft enclosure.

#### Exceptions:

1. The fire-resistance-rated room separation is not required, provided there are no openings in or penetrations of the shaft enclosure to the interior of the building except at the bottom. The bottom of the shaft shall be closed off around the penetrating items with materials permitted by Section 717.3.1 for draftstopping, or the room shall be provided with an approved automatic fire suppression system.
2. A shaft enclosure containing a refuse chute or laundry chute shall not be used for any other purpose and shall terminate in a room protected in accordance with Section 707.13.4.

3. The fire-resistance-rated room separation and the protection at the bottom of the shaft are not required provided there are no combustibles in the shaft and there are no openings or other penetrations through the shaft enclosure to the interior of the building.

**707.13.3 Refuse and laundry chute access rooms.** Access openings for refuse and laundry chutes shall be located in rooms or compartments enclosed by a not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both that has a fire-resistance rating of not less than 1 hour. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. Doors shall be self- or automatic closing upon the detection of smoke in accordance with Section 715.4.7.3.

**707.13.4 Termination room.** Refuse and laundry chutes shall discharge into an enclosed room separated from the remainder of the building by a not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both that has a fire-resistance rating of not less than 1 hour. Openings into the termination room shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. Doors shall be self- or automatic closing upon the detection of smoke in accordance with Section 715.4.7.3. Refuse chutes shall not terminate in an incinerator room. Refuse and laundry rooms that are not provided with chutes need only comply with Table 508.2.

**712.3 Fire-resistance-rated walls.** Penetrations into or through fire walls, fire barriers walls, smoke barrier walls, and fire partitions shall comply with Sections 712.3.1 through 712.3.4.

**901.7 Fire areas.** Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with this chapter, such fire areas shall be separated by fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both having a fire-resistance rating of not less than that determined in accordance with Section 706.3.9.

**[B] 909.20.2 Construction.** The smokeproof enclosure shall be separated from the remainder of the building by not less than a 2-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. ~~without~~ Openings are not permitted other than the required means of egress doors. The vestibule shall be separated from the stairway by not less than a 2-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. The open exterior balcony shall be constructed in accordance with the fire-resistance-rating requirements for floor construction.

**[B] 909.20.6.1 Ventilation systems.** Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment and ductwork shall comply with one of the following:

1. Equipment 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 706 or horizontal assemblies constructed in accordance with Section 711, or both.
2. Equipment 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 706 or horizontal assemblies constructed in accordance with Section 711, or both.
3. Equipment 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 706 or horizontal assemblies constructed in accordance with Section 711, or both.

## PART II – IBC GENERAL

### Revise as follows:

**402.4.6 Service areas fronting on exit passageways.** Mechanical rooms, electrical rooms, building service areas and service elevators are permitted to open directly into exit passageways, provided the exit passageway is separated from such rooms with not less than 1-hour ~~fire-resistance-rated fire barriers and 1-hour opening protectives constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.~~ The minimum fire-protection rating of openings in the fire barriers shall be 1 hour.

**402.7.1 Attached garage.** An attached garage for the storage of passenger vehicles having a capacity of not more than nine persons and open parking garages shall be considered as a separate building where it is separated from the covered mall building by ~~a not less than 2-hour fire barriers having a fire-resistance rating of at least 2 hours constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.~~

**Exception:** Where an open parking garage or enclosed parking garage is separated from the covered mall building or anchor building a distance greater than 10 feet (3048 mm), the provisions of Table 602 shall apply. Pedestrian walkways and tunnels which attach the open parking garage or enclosed parking garage to the covered mall building or anchor building shall be constructed in accordance with Section 3104.

**410.5.1 Separation from stage.** ~~Where the stage height is greater than 50 feet (15 240 mm), The stage shall be separated from dressing rooms, scene docks, property rooms, workshops, storerooms and compartments appurtenant to the stage and other parts of the building by a fire barriers with not less than a 2-hour fire-resistance rating with approved opening protectives constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. The minimum fire-resistance rating shall be 2 hours for stage heights greater than 50 feet (15 240 mm) and 1 hour for stage heights of 50 feet (15 240 mm) or less; the required stage separation shall be a fire barrier with not less than a 1-hour fire-resistance rating with approved opening protectives.~~

**410.5.2 Separation from each other.** Dressing rooms, scene docks, property rooms, workshops, storerooms and compartments appurtenant to the stage shall be separated from each other by ~~not less than 1-hour fire barriers with not less than a 1-hour fire-resistance rating with approved opening protectives constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.~~

**3006.4 Machine rooms and machinery spaces.** Elevator machine rooms and machinery spaces shall be enclosed with fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, ~~or both, with a~~ The fire-resistance rating shall not be less than the required rating of the hoistway enclosure served by the machinery. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors.

**3104.5 Fire barriers between pedestrian walkways and buildings.** Walkways shall be separated from the interior of the building by fire barriers ~~walls~~ with a fire-resistance rating of not less than 2 hours. This protection shall extend vertically from a point 10 feet (3048 mm) above the walkway roof surface or the connected building roof line, whichever is lower, down to a point 10 feet (3048 mm) below the walkway and horizontally 10 feet (3048 mm) from each side of the pedestrian walkway. Openings within the 10-foot (3048 mm) horizontal extension of the protected walls beyond the walkway shall be equipped with devices providing a 3/4-hour fire protection rating in accordance with Section 715.

**Exception:** The walls separating the pedestrian walkway from a connected building are not required to have a fire-resistance rating by this section where any of the following conditions exist:

1. The distance between the connected buildings is more than 10 feet (3048 mm), the pedestrian walkway and connected buildings, except for open parking garages, are equipped throughout with an automatic sprinkler system in accordance with NFPA 13 and the wall is constructed of a tempered, wired or laminated glass wall and doors subject to the following:

- 1.1. The glass shall be protected by an automatic sprinkler system in accordance with NFPA 13 and the sprinkler system shall completely wet the entire surface of interior sides of the glass wall when actuated.
- 1.2. The glass shall be in a gasketed frame and installed in such a manner that the framing system will deflect without breaking (loading) the glass before the sprinkler operates.
- 1.3. Obstructions shall not be installed between the sprinkler heads and the glass.
2. The distance between the connected buildings is more than 10 feet (3048 mm), and both sidewalls of the pedestrian walkway are at least 50 percent open with the open area uniformly distributed to prevent the accumulation of smoke and toxic gases.
3. Buildings are on the same lot, in accordance with Section 503.1.3.
4. Where exterior walls of connected buildings are required by Section 704 to have a fire-resistance rating greater than 2 hours, the walkway shall be equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

**3410.6.16.1 (IEBC [B] 1301.6.16.1) Categories.** The categories for mixed occupancies are:

1. Category a — ~~Minimum 1-hour fire barriers between Occupancies separated by minimum 1-hour fire barriers or minimum 1-hour horizontal assemblies, or both.~~
2. Category b — ~~Fire barriers Separations~~ between occupancies in accordance with Section 508.3.3.
3. Category c — ~~Fire barriers Separations~~ between occupancies having a fire-resistance rating of not less than twice that required by Section 508.3.3.

## PART III – IBC MEANS OF EGRESS

**1021.3 (IFC 1021.3) Construction.** Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than that required for any connecting exit enclosure. Exit passageways shall be constructed as fire barriers in accordance with Section 706 ~~or horizontal assemblies constructed in accordance with Section 711, or both.~~

**1022.2 (IFC 1022.2) Separation.** The separation between buildings or refuge areas connected by a horizontal exit shall be provided by a fire wall complying with Section 705 or a fire barrier complying with Section 706 and having a fire-resistance rating of not less than 2 hours. Opening protectives in horizontal exits ~~walls~~ shall also comply with Section 715. The horizontal exit separation shall extend vertically through all levels of the building unless floor assemblies have a fire resistance rating of not less than 2 hours with no unprotected openings.

**Exception:** A fire-resistance rating is not required at horizontal exits between a building area and an above-grade pedestrian walkway constructed in accordance with Section 3104, provided that the distance between connected buildings is more than 20 feet (6096 mm).

Horizontal exits ~~walls~~ constructed as fire barriers shall be continuous from exterior wall to exterior wall so as to divide completely the floor served by the horizontal exit.

## PART IV – IFC

### Revise as follows:

**[F] 403.2 Automatic sprinkler system.** Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

**Exception:** An automatic sprinkler system shall not be required in spaces or areas of:

1. Open parking garages in accordance with Section 406.3.

2. Telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers consisting of not less than 1-hour fire resistance-rated walls and constructed in accordance with Section 706 or not less than 2-hour fire resistance-rated floor/ceiling horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 404.3 Automatic sprinkler protection.** An approved automatic sprinkler system shall be installed throughout the entire building.

**Exceptions:**

1. That area of a building adjacent to or above the atrium need not be sprinklered provided that portion of the building is separated from the atrium portion by not less than a 2-hour fire resistance-rated fire barriers constructed in accordance with Section 706 or horizontal assembly assemblies constructed in accordance with Section 711, or both.
2. Where the ceiling of the atrium is more than 55 feet (16 764 mm) above the floor, sprinkler protection at the ceiling of the atrium is not required.

**[F] 415.6.1.2 Grinding rooms.** Every room or space occupied for grinding or other operations that produce combustible dusts shall be enclosed with fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both, that have not less than a 2-hour The minimum fire-resistance rating shall be 2 hours where the area is not more than 3,000 square feet (279 m<sup>2</sup>), and not less than a 4-hour fire-resistance rating 4 hours where the area is greater than 3,000 square feet (279 m<sup>2</sup>).

**[F] 415.6.2.2 Tank protection.** Storage tanks shall be noncombustible and protected from physical damage. ~~A~~ Fire barriers ~~wall~~ or horizontal assemblies or both around the storage tank(s) shall be permitted as the method of protection from physical damage.

**[F] 415.6.3.4.1 Fire separation.** Separation of the attached structures shall be provided by fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both, having a ~~The minimum fire-resistance rating of not less than shall be 1 hour and the fire barriers shall not have openings.~~ Fire barriers between attached structures occupied only for the storage of LP-gas are permitted to have fire door *assemblies* that comply with Section 715. Such fire barriers and horizontal assemblies shall be designed to withstand a static pressure of at least 100 pounds per square foot (~~psf~~) (4788 Pa), except where the building to which the structure is attached is occupied by operations or processes having a similar hazard.

**[F] 415.6.3.5.2 Common construction.** Walls and floor/ceiling assemblies common to the room and to the building within which the room is located shall be fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both, with not less than a 1-hour The minimum fire-resistance rating shall be 1 hour and the fire barriers shall be without openings. Common walls for rooms occupied only for storage of LP-gas are permitted to have opening protectives complying with Section 715. The walls and ceilings shall be designed to withstand a static pressure of at least 100 psf (4788 Pa).

**Exception:** Where the building, within which the room is located, is occupied by operations or processes having a similar hazard.

**[F] 415.7.1 Gas rooms.** When gas rooms are provided, such rooms shall be separated from other areas by not less than ~~a~~ 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 415.7.3 Separation - highly toxic solids and liquids.** Highly toxic solids and liquids not stored in approved hazardous materials storage cabinets shall be isolated from other hazardous materials storage by ~~a~~

not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both having a fire-resistance-rating of not less than 1-hour

**[F] 415.8.2.2 Separation.** Fabrication areas, whose sizes are limited by the quantity of hazardous materials allowed by Table 415.8.2.1.1, shall be separated from each other, from corridors, and from other parts of the building by not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**Exceptions:**

1. Doors within such fire barrier walls, including doors to corridors, shall be only self-closing fire door assemblies having a fire-protection rating of not less than 3/4 hour.
2. Windows between fabrication areas and corridors are permitted to be fixed glazing listed and labeled for a fire protection rating of at least 3/4 hour in accordance with Section 715.

**[F] 415.8.5.2.1 HPM rooms and gas rooms.** HPM rooms and gas rooms shall be separated from other areas by not less than a 2-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. The minimum fire-resistance rating shall be 2 hours where the area is 300 square feet (27.9 m<sup>2</sup>) or more and not less than a 1-hour fire barrier 1 hour where the area is less than 300 square feet (27.9 m<sup>2</sup>).

**[F] 415.8.5.2.2 Liquid storage rooms.** Liquid storage rooms shall be constructed in accordance with the following requirements:

1. Rooms in excess of 500 square feet (46.5 m<sup>2</sup>) shall have at least one exterior door approved for fire department access.
2. Rooms shall be separated from other areas by fire barriers having a constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. The fire-resistance rating of shall be not less than 1 hour for rooms up to 150 square feet (13.9 m<sup>2</sup>) in area and not less than 2 hours where the room is more than 150 square feet (13.9 m<sup>2</sup>) in area.
3. Shelving, racks and wainscoting in such areas shall be of noncombustible construction or wood of not less than 1 inch (25 mm) nominal thickness.
4. Rooms used for the storage of Class I flammable liquids shall not be located in a basement.

**[F] 416.2 Spray rooms.** Spray rooms shall be enclosed with not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both with not less than a 1-hour fire-resistance rating. Floors shall be waterproofed and drained in an approved manner.

**[F] 418.4 Tank storage.** Storage areas for flammable and combustible liquid tanks inside of structures shall be located at or above grade and shall be separated from the processing area by not less than 2-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 418.5 Nitrocellulose storage.** Nitrocellulose storage shall be located on a detached pad or in a separate structure or a room enclosed with no less than 2-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 418.6 Finished products.** Storage rooms for finished products that are flammable or combustible liquids shall be separated from the processing area by not less than 2-hour fire barriers having a fire-resistance rating of at least 2 hours, and openings in the walls shall be protected with approved opening protectives constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 420.4 Design and construction.** Hydrogen cutoff rooms shall be classified with respect to occupancy in accordance with Section 302.1 and separated from other areas of the building by not less than 1-hour fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both; or as required by Section 508.2 or 508.3 as applicable.

**[F] 420.4.1 Opening protectives.** Doors within such the fire barriers walls, including doors to corridors, shall be self-closing in accordance with Section 715. Interior door openings shall be electronically interlocked to prevent operation of the hydrogen system when doors are opened or ajar or the room shall be provided with a mechanical exhaust ventilation system designed in accordance with Section 420.4.1.1.

**[F] 903.2 Where required.** Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

**Exception:** Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by not less than 1-hour fire barriers consisting of not less than 1-hour fire resistance-rated walls and constructed in accordance with Section 706 or not less than 2-hour fire-resistance-rated floor/ceiling horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 909.11 (IMC [F] 513.11, IFC 909.11) Power systems.** The smoke control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved standby source complying with the ICC *Electrical Code*. The standby power source and its transfer switches shall be in a separate room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. ~~The room shall be enclosed in a room constructed of with not less than 1-hour fire barriers ventilated directly to and from the exterior constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.~~ Power distribution from the two sources shall be by independent routes. Transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with this code or the ICC *Electrical Code*.

**[F] 910.3.4 Vent locations.** Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent lot lines and fire walls and 10 feet (3048 mm) or more from fire barriers walls. Vents shall be uniformly located within the roof area above high-piled storage areas, with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

**[F] 910.4.4 Wiring and control.** Wiring for operation and control of smoke exhaust fans shall be connected ahead of the main disconnect and protected against exposure to temperatures in excess of 1,000°F (538°C) for a period of not less than 15 minutes. Controls shall be located so as to be immediately accessible to the fire service from the exterior of the building and protected against interior fire exposure by not less than 1-hour fire barriers having a fire resistance rating not less than 1 hour constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both.

**Reason:** Code change proposal FS2-04/05 (AMPC1) changed the concept of a fire barrier from being a fire containment assembly to begin a component of a fire containment assembly. This was accomplished by changing the definition of fire barrier from begin a vertical or horizontal assembly to being a wall assembly and by deleting the provisions for horizontal fire barriers. The proposal made the necessary revisions to several sections of the IBC for consistency with the change in concept (i.e., Sections 403.10.1, 404.5, 414.2.1, 508.2.2.1, 508.3.3.4.1, 706.3.5, 706.3.7, 706.3.9, 707.5, 911.1 and 1020.1). The proposal, however, did not make the necessary revisions to other sections of the IBC, which are needed in order for the concept to be fully incorporated into the provisions of the IBC. The purpose of this proposal is to make the necessary revisions to the provisions in those code sections.

The changes are similar throughout the proposal, except for Sections 1022.2 and 3104.5. In these cases, the provisions apply only to walls. Consequently, "horizontal exit walls" is changed to "horizontal exits" in Section 1022.2 and "fire barrier walls" is changed to "fire barriers" in Section 3104.5 for consistency with the definition of fire barrier.

**Cost Impact:** The code change proposal will not increase the cost of construction.

## PART I — IBC FIRE SAFETY

**Committee Action:** Approved as Submitted

**Committee Reason:** The proponent has correctly addressed an inconsistency in the code which has been caused by the changes made by FS2-04/05 in a previous code change cycle. Those changes made the distinction that fire barriers were walls and did not include horizontal assemblies. By going through these sections and making these changes, it provides consistency between the intent of FS2-04/05 and between the sections which were not addressed by that proposal. This action also is consistent with the action taken by the IFC committee earlier.

**Assembly Action:** None

## PART II — IBC GENERAL

**Committee Action:** Approved as Submitted

**Committee Reason:** The revisions to add horizontal assemblies in addition to fire barriers is consistent with changes made to other portions of the code in the 2006 edition. This action is also consistent with the action on Part I of the proposal.

**Assembly Action:** None

## PART III — IBC MEANS OF EGRESS

**Committee Action:** Approved as Submitted

**Committee Reason:** The revised language in Sections 1021.3 and 1022.2. would provide consistency in the code for the usage of the terms fire barriers and horizontal assemblies.

**Assembly Action:** None

## PART IV — IFC

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal completes a needed correlation effort undertaken in the 2004/2005 cycle to provide consistent terminology and references when referring to fire barrier and horizontal assembly enclosures.

**Assembly Action:** None

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## FS38-06/07

**Committee Action:** Disapproved

**Committee Reason:** The committee felt that these provisions were not really appropriate for inclusion into Section 706. The reason being that Section 706 because Section 706 provides more of the general requirements for fire barriers and that these items should go elsewhere. Suggested locations included placing these into Section 707.13.3 and 707.13.4.

**Assembly Action:** None

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## FS39-06/07

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**706.3 Fire-resistance rating.** The required fire-resistance rating of *fire barriers* shall be as specified by other sections of this code ~~or the International Fire Code.~~

**706.3.1 Shaft enclosures.** ~~The fire-resistance rating of the fire barrier separating building areas from a shaft shall comply with Section 707.4.~~

**706.3.1. Single occupancy fire areas.** The fire barrier or horizontal assembly, or both, separating a single occupancy into different fire areas shall have a fire-resistance rating of not less than that indicated in Table 706.3.1.

**TABLE 706.3.1  
FIRE-RESISTANCE RATING REQUIREMENTS FOR  
FIRE BARRIER ASSEMBLIES BETWEEN FIRE AREAS**

OCCUPANCY GROUP	FIRE-RESISTANCE RATING (hours)
H-1, H-2	4
F-1, H-3, S-1	3
A, B, E, F-2, H-4, H-5, I, M, R, S-2	2
U	1

(Portions of proposal not shown remain unchanged)

**Committee Reason:** As stated in the proponent’s reason statement, this helps to continue with the clarifications which are needed as a result of code change FS2-04/05 during the previous cycle and addresses the fact that a single barrier does not form a separation. This will also help to resolve some of the reference conflicts by the elimination of the references which did not provide a complete listing of the requirements. The modification deleting Section 706.3.1 simply addresses what was intended and stated in the reason statement while deleting the IFC removes an unneeded reference which is really not within the building official’s control.

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

## FS40-06/07

**Errata:** Revise Part I, Section 706.5 of the proposal which was shown in the monograph. Revise as follows by adding “foundation or”;

**706.5 Continuity.** Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed spaces, such as the space above a suspended ceiling. The supporting construction for fire barriers shall be protected to afford the required fire-resistance rating of the fire barrier supported, except for 1-hour fire-resistance-rated incidental use area separations as required by Table 508.2 in buildings of Type IIB, IIIB and VB construction. Hollow vertical spaces within a fire barrier shall be fireblocked in accordance with Section 717.2 at every floor level.

### PART I — IBC FIRE SAFETY

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

**Committee Reason:** This helps clear up confusion as stated by the proponent and resolves some concerns with the actions taken by several previous code changes. This provides better clarity as to where a fire barrier is expected to extend.

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

### PART II — IBC GENERAL

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

**Committee Reason:** The proposal restores issues that had been previously approved but had been lost due to extensive changes to this particular section in the previous code change cycle.

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

## FS41-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** While the proposed Section 706.5.1 provides an easy to follow style, the proposed Section 706.5.2 makes technical revisions without really explaining the reason. This proposed section would regulate a rated wall and a non-rated floor deck which is a different approach from the existing code. Section 706.5.2 really just needs to direct users to 713 for joints, but it is not needed because existing Section 706.9.2 already addresses this. The joint ratings should be placed into the existing section 706.9. The term “gaps and voids” are not defined and could get into very small joints in materials or other locations. The committee felt that existing Sections 706.8, 706.9 and 717.2 adequately handle most of the concerns.

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

## FS42-06/07

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

**Committee Reason:** This proposal provides continuity with other sections on the amount of openings and coordinates with the action taken on FS33-06/07 earlier. In addition, this will address a very common situation that would not be permitted based on the literal interpretation of the current code text.

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

## FS43-06/07

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

**Committee Reason:** The proposal provides more specific language which will make the sections consistent with other sections of the code. In addition, Section 716.5.4 will help clarify exactly where the wall is required to extend to.

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

## FS44-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal seems to only address items such as sprayed applied protection. A modification was discussed which would have addressed items which did not need an added membrane. While the concept is good, the continuity was a concern and testimony was given where this could ultimately result in the fire protection being extended to not only the beam but also its support and then all the way down through the building. At that point this could have a major cost impact and be difficult to address when a fire barrier is installed or moved on an upper floor. In addition there was uncertainty regarding the continuity as to whether it applies just at the penetration or to the entire assembly. The proposed language states “materials having a fire-resistance rating” which is not technically correct. Materials do not generally have a rating, but assemblies do. Section 714.2.1 provides better specifics in regards to protection of the member.

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

## FS45-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** Based on testimony and a proposed modification, there were questions related to which section was the correct one to reference. This confusion affected the discussion and the committees action. This proposal would allow penetration protection and eliminate dampers for the floor/ceiling assemblies.

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

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## FS46-06/07

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

**Modify the proposal as follows:**

**707.2 Shaft enclosure required.** Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this Section.

**Exceptions:**

1. A shaft enclosure is not required for openings totally within an individual residential dwelling unit and connecting four stories or less.
2. A shaft enclosure is not required in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 for an escalator opening or stairway that is not a portion of the means of egress protected according to Item 2.1 or 2.2:
  - 2.1. Where the area of the floor opening between stories does not exceed twice the horizontal projected area of the escalator or stairway and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four stories.
  - 2.1. Where the opening is protected by approved power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with Section 907.11 and shall completely shut off the well opening. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s) and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release there from.
3. A shaft enclosure is not required for penetrations by pipe, tube, conduit, wire, cable and vents protected in accordance with Section 712.4.
4. A shaft enclosure is not required for penetrations by ducts protected in accordance with Section 712.4. Grease ducts shall be protected in accordance with the *International Mechanical Code*.
5. In other than Group H occupancies, a shaft enclosure is not required for floor openings complying with the provisions for atriums in Section 404.
6. A shaft enclosure is not required for approved masonry chimneys where annular space protection is provided at each floor level in accordance with Section 717.2.5.
7. In other than Groups I-2 and I-3, a shaft enclosure is not required for a floor opening or an air transfer opening that complies with the following:
  - 7.1. Does not connect more than two stories.
  - 7.2. Is not part of the required means of egress system, except as permitted in Section 1020.1.

- 7.3. Is not concealed within the building construction.
- 7.4. Is not open to a corridor in Group I and R occupancies.
- 7.5. Is not open to a corridor on nonsprinklered floors in any occupancy.
- 7.6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.
- 7.7. Is limited to the same smoke compartment.
8. A shaft enclosure is not required for automobile ramps in open and enclosed parking garages constructed in accordance with Sections 406.3 and 406.4, respectively.
9. A shaft enclosure is not required for floor openings between a mezzanine and the floor below.
10. A shaft enclosure is not required for joints protected by a fire-resistant joint system in accordance with Section 713.
11. A shaft enclosure shall not be required for floor openings created by unenclosed stairs or ramps in accordance with Exception 8 or 9 in Section 1020.1.
12. Floor openings protected by floor fire doors in accordance with Section 711.8.
13. Where permitted by other sections of this code.

**(Existing 712.3.3) 712.1.1 Ducts and air transfer openings.** Penetrations of fire-resistance-rated walls by ducts that are not protected with dampers shall comply with Sections 712.2 through 712.3.4. Penetrations of horizontal assemblies not protected with a shaft as permitted by Exception #4 of Section 707, and are not required to be protected with fire dampers by other sections of the code, shall comply with Sections 712.4 through 712.4.4. Ducts and air transfer openings that are protected with dampers shall comply with Section 716.

**716.1.1 (IMC 607.1.1) Ducts that penetrate fire resistance rated assemblies without dampers.** Ducts that penetrate fire-resistance-rated assemblies and are not required by this section to have dampers shall comply with the requirements of Sections 712.2 through 712.3.4. Ducts that penetrate horizontal assemblies not required to be contained within a shaft and are not required by this section to have dampers shall comply with the requirements of Sections 712.4 through 712.4.4

**716.1.1.1 (IMC 607.1.1.1) Ducts that penetrate non-fire resistance rated assemblies.** ~~The space around a duct penetrating a non-fire resistance rated wall assembly shall be filled with an approved material to limit the free passage of smoke.~~ The space around a duct penetrating a non-fire resistance rated floor assembly shall comply with 716.6.3.

**Committee Reason:** This proposal helps to provide references and direction to the applicable code section. These revisions should help clarify the application of the various sections. The modifications eliminate the changes in Section 707.2 item 4 which was acted on in FS45-06/07. The revision in 716.1.1.1 eliminates the requirement being applied to walls and leaves it so it simply references existing requirements for floors in 716.6.3. The revisions in Sections 712.1.1 and 716.1.1 are strictly editorial.

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

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## FS47-06/07

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

**Modify the proposal as follows:**

**707.2 Shaft enclosure required.** Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this Section.

**Exceptions:**

1. A shaft enclosure is not required for openings totally within an individual residential dwelling unit and connecting four stories or less.

2. A shaft enclosure is not required in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 for an escalator opening or stairway that is not a portion of the means of egress protected according to Item 2.1 or 2.2:
  - 2.1. Where the area of the floor opening between stories does not exceed twice the horizontal projected area of the escalator or stairway and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four stories.
  - 2.2. Where the opening is protected by approved power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with Section 907.11 and shall completely shut off the well opening. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s) and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release there from.
3. A shaft enclosure is not required for penetrations by pipe, tube, conduit, wire, cable and vents protected in accordance with Section 712.4.
4. A shaft enclosure is not required for penetrations by ducts protected in accordance with Section 712.4. Grease ducts shall be protected in accordance with the *International Mechanical Code*.
5. In other than Group H occupancies, a shaft enclosure is not required for floor openings complying with the provisions for atriums in Section 404.
6. A shaft enclosure is not required for approved masonry chimneys where annular space protection is provided at each floor level in accordance with Section 717.2.5.
7. In other than Groups I-2 and I-3, a shaft enclosure is not required for a floor opening or an air transfer opening that complies with the following:
  - 7.1. Does not connect more than two stories.
  - 7.2. Is not part of ~~an a~~ required exit enclosure, except as permitted in Section 1020.1.
  - 7.3. Is not concealed within the building construction.
  - 7.4. Is not open to a corridor in Group I and R occupancies.
  - 7.5. Is not open to a corridor on nonsprinklered floors in any occupancy.
  - 7.6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.
  - 7.7. Is limited to the same smoke compartment.
8. A shaft enclosure is not required for automobile ramps in open and enclosed parking garages constructed in accordance with Sections 406.3 and 406.4, respectively.
9. A shaft enclosure is not required for floor openings between a mezzanine and the floor below.
10. A shaft enclosure is not required for joints protected by a fire-resistant joint system in accordance with Section 713.
11. A shaft enclosure shall not be required for floor openings created by unenclosed stairs or ramps in accordance with Exception 8 or 9 in Section 1020.1.
12. Floor openings protected by floor fire doors in accordance with Section 711.8.
13. Where permitted by other sections of this code.

**Committee Reason:** This proposal helps to clarify the provisions regarding which part of the three-part means of egress system is excluded and being regulated by item 7.2. This will help to clarify situations such as those found in a mall building where there is a floor

opening and the mall walkways occur adjacent to this opening. The modifications delete the word enclosure and limit the provision to "required" exits. This will clarify that supplemental stairs can be placed within the floor opening.

**Assembly Action:**

**None**

## FS48-06/07

**Committee Action:**

**Approved as Modified**

**Modify the proposal as follows:**

**707.2 Shaft enclosure required.** Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this Section.

**Exceptions:**

1. A shaft enclosure is not required for openings totally within an individual residential dwelling unit and connecting four stories or less.
2. A shaft enclosure is not required in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 for an escalator opening or stairway that is not a portion of the means of egress protected according to Item 2.1 or 2.2:
  - 2.1. Where the area of the floor opening between stories does not exceed twice the horizontal projected area of the escalator or stairway and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four stories.
  - 2.2. Where the opening is protected by approved power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with Section 907.11 and shall completely shut off the well opening. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s) and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release therefrom.
3. A shaft enclosure is not required for penetrations by pipe, tube, conduit, wire, cable and vents protected in accordance with Section 712.4.
4. A shaft enclosure is not required for penetrations by ducts protected in accordance with Section 712.4. Grease ducts shall be protected in accordance with the *International Mechanical Code*.
5. In other than Group H occupancies, a shaft enclosure is not required for floor openings complying with the provisions for atriums in Section 404.
6. A shaft enclosure is not required for approved masonry chimneys where annular space protection is provided at each floor level in accordance with Section 717.2.5.
7. In other than Groups I-2 and I-3, a shaft enclosure is not required for a floor opening or an air transfer opening that complies with the following:
  - 7.1. Does not connect more than two stories.
  - 7.2. Is not part of the required means of egress system, except as permitted in Section 1020.1.
  - 7.3. Is not concealed within the building construction.
  - 7.4. Is not open to a corridor in Group I and R occupancies.

- 7.5. Is not open to a corridor on nonsprinklered floors in any occupancy.
- 7.6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.
- 7.7. Is limited to the same smoke compartment.
- 8. A shaft enclosure is not required for automobile ramps in open and enclosed parking garages constructed in accordance with Sections 406.3 and 406.4, respectively.
- 9. A shaft enclosure is not required for floor openings between a mezzanine and the floor below.
- 10. A shaft enclosure is not required for joints protected by a fire-resistant joint system in accordance with Section 713.
- 11. A shaft enclosure shall not be required for floor openings created by unenclosed stairs or ramps in accordance with Exception 8 or 9 in Section 1020.1.
- 12. Floor openings protected by floor fire doors in accordance with Section 711.8.
- 13. Where permitted by other sections of this code.
- 14. A shaft enclosure is not required for floor openings for elevators within a single use open parking garage. Elevators in open parking garages that serve only the parking garage are not required to be enclosed.

**Committee Reason:** This proposal helps make the code more consistent by allowing the elevator to not be within a shaft enclosure. The code currently permits the elimination of the enclosure for stairs and ramps, but not for elevators. As originally proposed the requirement limited the application to "single use" open parking garages. This was accepted because the hazards are low and have not been a problem for the other unprotected floor openings. The modification did eliminate the limitation to single use garages but still only applies the exception to an open garage portion of the building where the floor opening is not affected by other occupancies or connecting to openings at other floors. This modification uses language that is consistent with Section 1020.1 Exception 5.

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

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## FS49-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** The horizontal provisions should not be eliminated. There are offsets that are needed in some situations and they can be protected if constructed and rated correctly. The intent of the section is to assure that continuity is provided and not to only address vertical shafts.

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

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## FS50-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** This does not eliminate the redundancy as stated by the proponent. The proposal would also create confusion or possibly change the rating of the door since Table 715.5.4 would require a 1-hour assembly for "shafts" which would affect the termination room and may be interpreted to also affect the access rooms.

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

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## FS51-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** As currently written, the proposal will only address the partition but does not address any door opening in the partition. The reason statement and testimony really does not explain what the problem is that is trying to be addressed. Because of the exceptions which currently exist, specifically exceptions 3 and 5, this proposal will have very limited application, if any.

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

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## FS52-06/07

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

**Committee Reason:** This proposal helps provide better smoke control within this occupancy which tends to use a "defend in place" method of protection instead of evacuation. The I-2 non-ambulatory occupants need the same level of protection as I-3. Since the I-2 and I-3 have similar smoke compartment rules, the committee felt that the requirements should be consistent here also and help stop the spread of smoke between stories. Because elevator doors have a large air-leakage rate, the elevator openings should be protected by a lobby.

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

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## FS53-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** As written the proposal will only accept this option where quick response sprinklers are "required by this code." This would not allow this exception to be used if they were installed at the owner's or designer's discretion. Approval of this item would essentially conflict with the action the committee took on FS52-06/07. The exception would basically only end up working for high-rise buildings since most of the other exceptions will exempt most other situations. Given the testimony and recent reports regarding the incidence of sprinkler failures (approximately 11%) and that smoke does move to adjacent floors in sprinklered buildings approximately 16% of the time, this proposal was disapproved. There was additional discussion that item FS54-06/07 which was coming up after this item was a better solution.

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

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## FS54-06/07

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

**Committee Reason:** This proposal ties the exception to a specific occupancy which has a good fire record. The NIST analysis is new technical data that shows a justification for this proposal. The NIST study did address smoke flow in both winter and summer for this low-hazard occupancy. When combined with the excellent fire safety record for high-rise buildings, both sprinklered and unsprinklered, this exception appears justified and will help to eliminate this contentious issue which has come before the committee for several years.

**Assembly Action:** **Disapproved**

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## FS55-06/07

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

**Committee Reason:** This proposal will assure that the elevator will operate when the fire department uses them during an emergency and help to assure the door closes if the door is accidentally opened at the



fire floor. This is a relatively simple and cost effective item which will demonstrate performance of the doors during phase two elevator recall. The doors do need to be tested at each level because each door can have the force adjusted differently.

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

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## FS56-06/07

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

**Modify the proposal as follows:**

**707.14.2.1 Pressurization requirements.** Elevator hoistways shall be pressurized to maintain a minimum positive pressure of 0.04 to 0.05 inches of water column and a maximum positive pressure of 0.06 inches of water column ~~as allowed by the elevator door manufacturer's specifications~~ with respect to adjacent occupied space on all floors. This pressure shall be measured at the midpoint of each hoistway door, with all elevator cars at the floor of recall and all hoistway doors on the floor of recall open and all other hoistway doors closed. The supply air intake shall be from an outside, uncontaminated source located a minimum distance of 20 feet (6096 mm) from any air exhaust system or outlet.

**Committee Reason:** This modified proposal provides clarity on the testing conditions and where the elevator car is supposed to be during the test. This will help to provide consistency in the way the systems are tested and reflect the general condition that the elevators will be in during their emergency recall. There was also concern that tying the forces to the maximum the manufacturers specify could result in the door design going directly up to the maximum amount without any margin for error. The proposal will also clarify that the level of recall is used instead of the "ground floor level" since the ground floor is not always the appropriate location for the elevator to return to. The modification keeps the first sentence as it currently is in the code while the changes which were proposed to the second sentence are made as submitted.

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

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## FS57-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal seems to over complicate something which came into the code originally as a simple system to provide an alternate method of compliance. Based on testimony and reports submitted with other proposals, the information presented indicates that there is no jamming when the pressure is below 0.3 inches of water column. Therefore the pressure levels given in the proposal are well below the level which would create a problem and this issue is also addressed by the committees action taken on FS55-06/07.

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

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## FS58-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** Tying the proposal to the "maximum" probable pressure is an overly severe condition which is not necessary to be used as the design basis. Using the absolute "maximum" will involve designing for a condition which may only occur for a very short time over the course of a 100 year period. It would be better to design for a lower factor which could address the normally anticipated requirements without including the extremes. A design which can address the 98 or 99 percent of the cases which are anticipated would be much easier to

determine and design for. Section 909.4 takes care of this issue by saying the design should take into consideration but does not require it to meet the extreme maximums. This proposal also does not address the limited pressure ranges which were considered as being too restrictive. This proposal keeps that narrow range but simply changes the number that it is measured from.

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

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## FS59-06/07

### **PART I — IBC FIRE SAFETY**

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal is attempting to apply the requirements for hoistway venting from Chapter 30, which deals with smoke and heat within the hoistway for a very different situation. The ducts under this proposed new section are for pressurization and would not be anticipated to handle the heat and increased temperatures that the hoistway vent system of Chapter 30 is addressing. These ducts serve simply to pressurize the hoistway so that the smoke and heat do not get into it. Therefore, it would not be important for these ducts to be protected to the same level as the vents when they pass through the machine room.

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

### **PART II — IBC GENERAL**

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

**Committee Reason:** "Fire resistance rating" is more appropriate terminology than "fire protection rating" when referring to enclosure of ducts as such protection it is not being used in the context of opening protection.

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

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## FS60-06/07

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

**Committee Reason:** This proposal does clarify an apparent mistake in the 2006 edition of the code. This uses a term which is defined within the elevator standard and it uses it correctly.

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

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## FS61-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal will create uncertainty as to what is required for these systems and is contrary to the intent of 707.14.2 of providing a clear alternate design. If desired or needed, the proposal should provide a consolidated set of requirements. The reference in Section 707.14.2.6 will lead to Section 909.18 which contains many things which are not applicable to these provisions and will create confusion. The provisions of Section 909.19 which are referenced state that items must be reviewed for compliance with the provisions of Section 909 and relies on the approval of the fire official. Since these alternate hoistway ventilation systems are not required to comply with Section 909, it will create uncertainty regarding what is actually required.

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

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## FS62-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal would have the effect of reverting to higher pressure levels even though the concern is the pressure force affecting the doors. Section 909.20.5 increases the pressure to 0.35 inches of water which exceeds the current level permitted. This also would revert the requirements back to using stair provisions which were considered as not being comparable or effective when applied to an elevator hoistway.

**Assembly Action:** None

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## FS63-06/07

**Committee Action:** Disapproved

**Committee Reason:** Deleting this requirement takes away a prescriptive compliance option and provides less design flexibility. Jurisdictions that don't have the capacity to review or inspect more complex designs would have an added burden with the loss of this prescriptive option. Losing this option is likely to needlessly increase the cost of construction.

**Assembly Action:** None

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## FS64-06/07

**Committee Action:** Disapproved

**Committee Reason:** This requirement is beyond the purpose of the IBC and is generally considered as a property protection issue. This requirement is not needed for the height, area and type of construction purposes of the code. The tenants always have the option of exceeding the minimum code requirement and providing this separation if they are concerned with their exposure from neighbors or wish to address business continuity issues. These items do not belong within a "minimum" code. Inclusion of this requirement may create confusion that a higher rated "occupancy separation" from Chapter 5 (Table 508.3.3) can be reduced to this 1-hour requirement where the occupancies are in adjacent tenant spaces. This proposal may create conflicts with other sections such as the non-separated use option or the corridor provisions. If multiple separate tenant spaces occur on each side of a non-rated corridor, this would seemingly require the walls between adjacent spaces to be rated but there would not be any requirement for a separation or construction on the side towards the corridor.

**Assembly Action:** None

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## FS65-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal establishes a higher level of protection without justifying the need. As this is written, if the space is not "enclosed" then there is no added protection required. A large single space can be wide open and safe but if multiple tenants are on a floor where a wall will be dividing the spaces, this proposed section would require the wall to be rated to protect the people and the space. If such a separation truly is needed, perhaps a smoke partition would be a better choice. While this proposal was tied to the UBC legacy code, it did not mention that the UBC did not require protected openings in the wall. The proposal does not explain how the tenant separation would be applied or why it would not be needed if the tenant spaces were on separate floors. Disapproving this item is consistent

with the action taken on FS64-06/07 earlier. The proposal does not explain how spaces such as a bank within a grocery store or a fast-food restaurant within a retail store would be handled and if these "tenant spaces" would require separation.

**Assembly Action:** None

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## FS66-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal coordinates the requirements with the appropriate sections of the code which regulate the separation and is consistent with the other items in this section. This will help clarify the requirements and make the code easier to use. The deletion of item 6 provides consistency with other sections of the code which were modified in the last code change cycle to require a fire barrier instead of a fire partition.

**Assembly Action:** None

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## FS67-06/07

**Committee Action:** Disapproved

**Committee Reason:** Section 708.3 exception 1 seems to be trying to get away from having Table 1017 control the corridor walls. This may create confusion as to whether the 0.5-hour assembly or the non-rated assemblies are permitted. The change to Section 708.1 item 6 is appropriately and more accurately addressed by the action in FS66-06/07.

**Assembly Action:** None

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## FS68-06/07

**Committee Action:** Disapproved

**Committee Reason:** The reference to Table 1017.1 is more appropriate since that table does permit non-rated corridor walls for many occupancies when the occupant load is less than 10 or if other means of protection are provided. If the ratings exceptions are added, it raises the question of whether it is appropriate to only list the ½ hour exception or if the section should also address the non-rated corridors even though a non-rated corridor wall is not a fire partition. The committee felt that reference to Table 1017.1 in the existing exception is the correct and appropriate manner to address all possible scenarios.

**Assembly Action:** None

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## FS69-06/07

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**708.4 Continuity.** Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. If the partitions are not continuous to the sheathing, deck or slab, and where constructed of combustible construction, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 717.2 and

717.3 at the partition line. The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered mall buildings, walls separating dwelling units, sleeping units and corridor walls, in buildings of Types IIB, IIIB, and VB construction.

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## FS70-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** Disapproved

**Committee Reason:** The proposal does not clarify the requirements as intended by the proponent. The loss of exception 2 appears to create the need for the ceiling to extend throughout the area and not just within the corridor.

**Assembly Action:** None

### PART II — IBC MEANS OF EGRESS

**Committee Action:** Disapproved

**Committee Reason:** The proposed reference to the ceiling or corridors could be interpreted to require a rated ceiling and would therefore not allow options currently permitted for fire partitions.

**Assembly Action:** None

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## FS71-06/07

**Committee Action:** Disapproved

**Committee Reason:** There was no data submitted to show that the existing provisions are not adequate and working. The proponent fails to recognize that the Group R occupancies under the IBC are all required to be sprinklered while those under the IRC are not. The provisions that are proposed are addressing a fire wall under the IRC which differs from the dwelling unit separation which this provision is for. The public testimony did establish that the performance of sprinklers in R-1 and R-2 occupancies is very high. In addition, while the 13R sprinkler system may not generally require a sprinkler in the attic, it will be required in that area if there is an ignition source.

**Assembly Action:** None

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## FS72-06/07

**Committee Action:** Disapproved

**Committee Reason:** As written, the text appears to be attempting to make all floor ceiling assemblies be constructed as smoke barriers even when not connected to other smoke barrier or control issues. The requirements for horizontal continuity do not belong in this section and should be located in Section 711 and not within the smoke barrier section. The phrase "resistance to the passage of fire and smoke" is not consistent with the phrasing which is used in other sections of the code.

**Assembly Action:** None

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## FS73-06/07

**Committee Action:** Disapproved

**Committee Reason:** See the comments provided with FS13-06/07 above. This action is taken for consistency with the action taken on FS13, FS14 and FS15.

**Assembly Action:** None

## FS74-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal seems to be product driven and will increase the cost of construction without a strong justification. This issue seems to be outside the scope of Section 710 to require a fire-protection rating. This will require a fire-protected rated opening in a non-rated partition which may also have other unprotected doors and openings. Therefore because there is no level of durability with the wall this will lead to the window being higher rated than the partition. While some glazing materials may break due to the temperature differential that they face in smoke partitions, there are other solutions such as the use of tempered glazing similar to what has been done in the Wildland-Urban Interface Code (WUIC). The requirements for smoke partitions are generally found in I-2 occupancies which will be required to be sprinklered. This will help to address the thermal shock/temperature differential. This proposal did not include justification or data to show that the existing provisions have led to any type of problem or cases of failure.

**Assembly Action:** None

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## FS75-06/07

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**711.1 General.** Floor and roof assemblies required to have a fire-resistance rating shall comply with this section. **Exception:** Nonfire-resistance-rated ~~horizontal~~ floor and roof assemblies shall comply with Section 712.4.2.

**712.4 Horizontal assemblies.** Penetrations of a floor, floor/ceiling assembly or the ceiling membrane of a roof/ceiling assembly shall be protected in accordance with Section 707 or this section.

**Committee Reason:** This will help to flag the requirements which are applicable to non-rated assemblies in Section 712.4.2 so that they are not missed. Because Sections 711 and 712.4 are generally dealing with rated assemblies, the requirements which of 712.4.2 are often ignored or overlooked. Whether these items should be applied to penetrations of the roof is questionable. The modification eliminated the exception and made it the second sentence in Section 711.1. It also revised the text of the proposed exception to reference "floor and roof" assemblies.

**Assembly Action:** None

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## FS76-06/07

**Committee Action:** Disapproved

**Committee Reason:** The committee action was taken based on the proponent's request so that he can work with others to develop a public comment and resolve some concerns.

**Assembly Action:** None

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## FS77-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The additional text helps to clarify the requirements and will provide a direct reference to address the smoke barrier penetrations in both walls and horizontal assemblies.

**Assembly Action:** None

**FS78-06/07** **Withdrawn by Proponent**

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**FS79-06/07** **Withdrawn by Proponent**

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**FS80-06/07**

**PART I — IBC FIRE SAFETY**  
**Committee Action:** **Disapproved**

**Committee Reason:** While the reorganization does make understanding the provisions easier, there was concern with the limitation in Sections 712.3.1 item 1.3 and 712.4.1.1 items 2.2 and 3.3. The concern was that the 100 square foot requirement would be too limiting due to the way that it may be used to limit the number of openings and the uncertainty regarding the way that it may be applied. With the statement that the area limitation is applied to “any” 100 square feet, it may create interpretation problems. While one person would look at a 10 foot by 10 foot area, the next may take the same wall and look at an area that is 1 foot by 100 foot. Therefore differences in interpretations and enforcement would be expected. While this limitation does currently exist within the code in other places, specifically Section 712.4.1.1 item 1, it would be a new requirement for the three locations mentioned above.

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

**PART II — IRC**  
**Committee Action:** **Disapproved**

**Committee Reason:** There was insufficient technical justification provided to support this proposed code change. The language as submitted was somewhat confusing.

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

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**FS81-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The committee preferred the proposal shown in FS82-06/07. Based on the action taken with FS82-06/07 this item was disapproved.

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

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**FS82-06/07**

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

**Committee Reason:** This addresses a new UL listing category. These are listed products and are applicable for this use. This new text is needed in the code to permit these new listed systems to be accepted. This code change was preferred over FS81-06/07 because it addresses the size of the boxes, addresses both issues and provides additional flexibility in designs.

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

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**FS83-06/07**

**PART I — IBC FIRE SAFETY**  
**Committee Action:** **Disapproved**

**Committee Reason:** While there was support for the changes in item 2, this item was disapproved because of concerns with the changes in item 1.1. It did not appear that the revision in item 1.1 really coordinated with the other options which are listed in item 1. The committee was also not certain that the 24 inch offset was needed when used in a wall with non-communicating stud cavities.

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

**PART II — IRC**  
**Committee Action:** **Approved as Submitted**

**Committee Reason:** The new language clarifies the exceptions that govern electrical box placement in walls or partitions. While the committee felt a definition for non-communicating is still needed the change allows the code user a variety of options under exception 2. Instead of having to comply with all of the sub-sections of exception 2 only one is now required for compliance.

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

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**FS84-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal would mandate a listed box for these installations. While it is good to address listed boxes, this proposal eliminates the design option of using either a listed box or wrapping the membrane protection around the box. Non-rated cabinets with the membrane layer wrapped to back the cabinet have been used for years. The requirement at the end of the text which states the rating must be “greater than the fire rating of the membrane” is incorrect. The assembly has a rating, not the membrane.

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

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**FS85-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The term “mechanical” protection which is used within the definition is not a defined or clear term. Therefore the committee was uncertain as to what this statement was intended to provide. This proposal would require a “T” rating for the wall which typically would require an “F” rating or allow the use of a number of exceptions. There is also uncertainty regarding whether an electrical outlet box or a fire alarm box may also be considered as a “utility box.” If the definition would require an F and T rating for the outlet boxes that would be contrary to years of testing and also the provisions found Section 712.3.3 Exceptions 1 and 2. It may also seem inconsistent to permit an outlet box to use the typical methods of protection and yet require the F and T ratings for these utility boxes. The provision does not distinguish between the sizes of the box when establishing the requirements.

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

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**FS86-06/07**

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

**Committee Reason:** This proposal will provide pointers to the applicable sections. This will provide clarity and make the code easier to use by referring to the exceptions in Section 707.2.

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

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## FS87-06/07

**Committee Action:** Disapproved

**Committee Reason:** These provisions are based on separate test data that Allied Tube had performed. The committee did not agree that these test showed that there was a problem. This may be a material specific issue which may need to be addressed. The public testimony indicated that the earlier testing was done on steel while later testing included copper which is a better conductor and would result in higher temperatures on the unexposed side. The proposal is not clear whether the wall cavity is required above, below or both above and below floor penetration. Because the sizes are limited and this has been accepted for years, the committee disapproved this item. Since this has been acceptable for years and was the only option available prior to F and T rated assemblies, there should be actual fire data to show that there are problems and failures.

**Assembly Action:** None

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## FS88-06/07

**Committee Action:** Disapproved

**Committee Reason:** The proposal language is vague by limiting direct contact but not specifying a distance. The combustible could be separated by a very small distance and not be in "direct" contact but still be exposed. The proposal does not take into account the thickness of the assembly which will affect the protection. There are more and more products available which have higher T ratings. Most countries do require an equal F and T rating for these assemblies.

**Assembly Action:** None

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## FS89-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal can help provide consistency with other code sections and coordinate with the fact that wall requirements allow for ratings less than 1-hour. This also recognizes that assemblies of any rating should maintain the protection at penetrations.

**Assembly Action:** None

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## FS90-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal provides additional flexibility with an additional design option. This will coordinate with the action taken on FS82-06/07 but address horizontal assemblies. See FS82-06/07 for additional comments.

**Assembly Action:** None

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## FS91-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This revision provides clarity and consistency with the existing code text. The provision also distinguishes that only the ceiling portion of a roof/ceiling assembly is regulated.

**Assembly Action:** None

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## FS92-06/07

Withdrawn by Proponent

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## FS93-06/07

**Committee Action:** Disapproved

**Committee Reason:** The proposed 712.5.1 provides the same full test option which is available under 703.2 but it is seldom used. The proposal did not demonstrate the real need for this provision. Questions existed regarding how the assemblies would be tested and whether there are any tested assemblies which are available for this purpose.

**Assembly Action:** None

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## FS94-06/07

**Committee Action:** Disapproved

**Committee Reason:** See the comments provided with FS13-06/07 above. This action is taken for consistency with the action taken on FS13, FS14, FS15 and FS73. It was stated that committee hoped that all of the proponents would work together to help address these issues.

**Assembly Action:** None

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## FS95-06/07

**Committee Action:** Disapproved

**Committee Reason:** Moving the section will simply create confusion for current code users that know where the provisions can be found. Although this is just a movement of the existing requirements, questions were raised whether 712.2 should be done as a subsection of 712.4.

**Assembly Action:** None

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## FS96-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal will reduce protection for these locations due to the multitude of exceptions found within Section 707.2. This provision seemed too far reaching since it was tied to all of Section 707.2. As written, while a pipe penetration is exempted due to Section 707.2 Exception 3 permitting a penetration fire stop, this would also permit the elimination of the curtain wall protection.

**Assembly Action:** None

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## FS97-06/07

**Committee Action:** Disapproved

**Committee Reason:** The committee took this action based upon their previous action with FS12-06/07. As stated in the first line of the proponent's reason statement, this proposal is tied to the change which was not accepted by the committee. Such alternate analysis is already permitted by the code and this cross-reference which this proposal is adding does not bring any clarity to the code or resolve any conflicts.

**Assembly Action:** None

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## FS98-06/07

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

**Committee Reason:** This helps to address a couple of concerns which were raised by the NIST report on issues related to the World Trade Center. This item was considered to help with the concerns that the structural frame be better defined and addressed so that the level of fire protection is easier to determine. Having these elements better defined helps to clarify the fire protection required for the structural frame and secondary members. It also helps to clarify that the floor is not considered as being a part of the structural frame. This proposal does not contain any technical changes to the requirements but appropriately moves the definition for structural frame from the table footnote into the proposed sections 714.1.1 and 714.1.2.

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

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## FS99-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** The proposal is truly not needed since it would be doing the same thing that current Section 104.11 permits. This type of issue is probably also more appropriate for a performance code than for the prescriptive nature of the IBC. The proposal contains permissive language.

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

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## FS100-06/07

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

Modify the proposal as follows:

**714.8 ~~Spray-Applied~~ Sprayed Fire Resistive Materials (SFRM).** ~~Spray-applied~~ Sprayed fire resistive materials shall comply with the 714.8.1 through 714.8.4.

**714.8.1 Fire Resistance Rating.** The application of SFRM shall be consistent with its fire resistance rating listing including, but not limited to, minimum thickness and dry density of the applied SFRM, method of application, substrate surface conditions, the use of bonding adhesives, sealants and reinforcing or other materials.

**714.8.2 Manufacturer's Installation Instruction.** The application of SFRM shall be in accordance with the manufacturer's installation instruction. The instructions shall include, but are not limited to, substrate temperatures and surface conditions, and SFRM handling, storage, mixing, conveyance, method of application, curing and ventilation.

**714.8.3 Substrate condition.** The SFRM shall be applied to a substrate in compliance with 714.8.3.1 through 714.8.3.2.

**714.8.3.1 Surface Conditions.** Substrates to receive SFRM shall be free of dirt, oil, grease, release agents, loose scale or paint, primers, paints and encapsulants other than those fire-tested and classified by a recognized testing agency, and any other condition that ~~may~~ prevents ~~adequate~~ adhesion. Primed, painted or encapsulated steel shall be allowed provided that testing has demonstrated that required adhesion is maintained.

**714.8.3.2 Primers, Paints and Encapsulants.** Where the SFRM is to be applied over primers, paints, or encapsulants other than those specified in the listing, the material shall be field tested in accordance with ASTM E 736. Where testing of the SFRM with primers, paints or encapsulants demonstrates that required adhesion is maintained, SFRM shall be permitted to be applied to primed, painted or encapsulated wide flange steel shapes in accordance with the following conditions:

1. The beam flange width does not exceed 12 in. (300 mm); or
2. The column flange width does not exceed 16 in. (400 mm); or
3. The beam or column web depth does not exceed 16 in. (400 mm).
4. The average and minimum bond strength values shall be determined based on a minimum of five bond tests conducted in accordance with ASTM E736. Bond tests conducted in accordance with ASTM E 736 indicate a minimum average bond strength of 80 percent and a minimum individual bond strength of 50 percent, when compared to the bond strength of the SFRM as applied to clean uncoated 1/8-in. (3-mm) thick steel plate.

**714.8.4 Temperature.** A minimum ambient and substrate temperature of 40°F (4.44°C) shall be maintained during and for a minimum of 24 hours after the application of the SFRM, unless the manufacturer's installation instructions allow otherwise.

**714.8.5 Finished condition.** The finished condition of SFRM applied to structural members or assemblies shall not, upon complete drying or curing, exhibit cracks, voids, spalls, delamination or any exposure of the substrate. Surface irregularities of ~~spray-applied~~ SFRM shall be deemed acceptable.

**Committee Reason:** This proposal provides enforceable language to assure compliance with the code requirements. This helps to address the NIST report issue that testing is to un-primed steel but the actual field installation is done to steel with primers and therefore the adhesion is often greatly different. This proposal puts important provisions in the code and not just in the standard where the inspector often does not see them. The testimony did clarify that the size limitations of Section 714.8.3.2 items 1, 2, and 3 do not limit the size of members which may use SFRM but instead only limit the size of members which use this section and apply them to materials which are "other than those specified in the listing." The modifications help coordinate with changes made by FS156-06/07 regarding the term "sprayed" versus "spray-applied" and also included other changes which were believed to clarify the provisions and eliminate vague language.

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

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## FS101-06/07

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

**Committee Reason:** This helps to clarify existing code labeling issues. This makes the current marking provisions clearer. This does accept the higher rated "fire-resisted-rated glazing" versus the "fire-protection-rated glazing" in both doors and windows. This proposal will work regardless of the labeling provisions which may be adopted later (FS103-06/07).

**Analysis:** The reference to Section 706.2.1 may be revised depending on the final result of FS36-06/07. If FS36-06/07 is approved, the reference will be changed to Section 703.5.

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

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## FS102-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

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

**Committee Reason:** This action is consistent with the committee's action on similar proposals. This provides added flexibility by including a UL standard which is commonly used. The UL test standard also contains a positive pressure test which the committee felt is appropriate for the test standard.

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

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## FS103-06/07

**Committee Action:** Disapproved

**Committee Reason:** The committee decided to continue with the current system of labeling. The feeling is that the current system with labels in each section is easier for the code users. The current system, which the committee just adopted 2 years ago, is working because having specific sections makes it easier to know what is required and lets people know what is required. This proposal would accept items that are tested to NFPA 252 or NFPA 257 without a hose stream test. Glazing tested under these standards would end up being used at many locations. While currently the label would indicate that it was tested to the hose stream test, this information would not be included and could lead to misapplication.

**Assembly Action:** None

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## FS104-06/07

**Committee Action:** Disapproved

**Committee Reason:** This is not a consistency issue but is instead a performance issue related to prescribing a door that will provide the level of protection desired. With smoke barriers, substantial construction is all that is needed to be effective against smoke; therefore the 20 minute assembly is adequate. The purpose of the smoke barrier is by definition intended to resist smoke so the higher fire-protection rating is not needed. This will increase the cost of construction and there was not sufficient technical justification to indicate that the increase will improve the performance.

**Assembly Action:** None

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## FS105-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This helps clarify the intent of Section 715.4 by using similar terminology in Sections 715.4.1 and 715.4.2. The change to Section 715.4.4.1 will provide additional options to accept glazing which has been tested under several test standards instead of simply the one which is currently listed. The title to Section 715.4.2 may need to be modified since it does include fire shutters within this section. If FS105 is approved at the final action hearings, this change in title would be made editorially by the staff.

**Assembly Action:** None

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## FS106-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The 0.10 inch water column pressure level is adequate for conducting this test. While the test standard does include higher pressure levels, this level is adequate to demonstrate compliance and it does coordinate with the door testing. This does help clarify and bring back this issue which was taken out in the previous code because it was confusing. This language eliminates the confusion.

**Assembly Action:** None

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## FS107-06/07

**Committee Action:** Disapproved

**Committee Reason:** The concern is that the door has a limited fuel load adjacent to it while a sidelight may have things in front of them or near them. By removing this limitation, it will create confusion since

there is not a clear distinction between the wall and the door. Without it the only limitation would be the 25% limit and you could have a tempered glass "sidelight" taking up most of the area and be susceptible to breaking with any heat differential. This has been debated and argued in NFPA 101, NFPA 80 and also the IBC legacy codes; it has always been defeated. The hose stream requirement is consistent with the NFPA 257 reference standard. It would be better to change the requirement in the standard.

**Assembly Action:** None

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## FS108-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** As stated in the proponent's reason statement, this will provide consistency between multiple code sections.

**Assembly Action:** None

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**FS109-06/07** Withdrawn by Proponent

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## FS110-06/07

**Committee Action:** Approved as Modified

Modify the proposal as follows:

**715.4.5.1 Fire door labeling requirements.** Fire doors shall be labeled showing the name of the manufacturer or other identification readily traceable back to the manufacturer, the name or ~~logo~~ trademark of the third-party inspection agency, the fire protection rating and, where required for fire doors in exit enclosures and exit passageways by Section 715.4.4, the maximum transmitted temperature end point. Smoke and draft control doors complying with UL 1784 shall be labeled as such and shall also comply with Section 715.4.5.3. Labels shall be approved and permanently affixed. The label shall be applied at the factory or location where fabrication and assembly are performed.

**Committee Reason:** As stated in the proponent's reason statement, this does coordinate with the current labeling practices. UL does accept either the inclusion of the company's name or trademark. These trademarks are recorded and traceable should there be questions years from now when these labels are encountered by an inspector in the field.

**Assembly Action:** None

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## FS111-06/07

**Committee Action:** Disapproved

**Committee Reason:** While this does help clarify that both of the doors do not need to be rated, this seems like something that would be better addressed within the commentary. Additionally there was concern regarding whether there were products available which would accept the use of both rated and non-rated doors into the single rated frame without affecting the listing.

**Assembly Action:** None

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## FS112-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal does provide a better flow of the language and is a good clarification. The committee agrees that this is simply an editorial change and does not affect the application of the requirements.

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

## FS113-06/07

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

**Modify the proposal as follows:**

**715.4.6.1 Size limitations.** Fire-protective protection-rated glazing used in fire doors shall comply with the size limitations of NFPA 80.

**Exceptions:**

1. Fire-protection-rated glazing in fire doors located in fire walls shall be prohibited except that where serving as a horizontal exit, a self-closing swinging door shall be permitted to have a vision panel of not more than 100 square inches (0.065 m<sup>2</sup>) without a dimension exceeding 10 inches (254 mm).
2. Fire-protection-rated glazing shall not be installed in fire doors having a 1 1/2-hour fire protection rating intended for installation in fire barriers, unless the glazing is not more than 100 square inches (0.065 m<sup>2</sup>) in area.

**715.5 Fire-protection-rated glazing.** Glazing in fire window assemblies shall be fire-protection rated in accordance with this section and Table 715.5. Glazing in fire door assemblies shall comply with Section 715.4.6. Fire-protection-rated glazing shall be tested in accordance with and shall meet the acceptance criteria of NFPA 257. Fire-protection-rated glazing shall also comply with NFPA 80. Openings in nonfire-resistance-rated exterior wall assemblies that require protection in accordance with Section 704.3, 704.8, 704.9 or 704.10 shall have a fire-protection rating of not less than ¾ hour.

**Exceptions:**

1. Wired glass in accordance with Section 715.5.3.
2. Fire-protection-rated glazing in 0.5-hour fire-resistance-rated partitions is permitted to have an 0.33-hour fire protection rating.

**715.5.3 Wired glass.** Steel window frame assemblies of 0.125-inch (3.2 mm) minimum solid section or of not less than nominal 0.048-inch-thick (1.2 mm) formed sheet steel members fabricated by pressing, mitering, riveting, interlocking or welding and having provision for glazing with 1/4-inch (6.4 mm) wired glass where securely installed in the building construction and glazed with 1/4-inch (6.4 mm) labeled wired glass shall be deemed to meet the requirements for a 3/4-hour fire window assembly. Wired glass panels shall conform to the size limitations set forth in Table 715.5.3.

**TABLE 715.5.3  
LIMITING SIZES OF WIRED GLASS PANELS**

OPENING FIRE PROTECTION RATING	MAXIMUM AREA (square inches)	MAXIMUM HEIGHT (inches)	MAXIMUM WIDTH (inches)
3 hours	0	0	0
1 1/2-hour doors in exterior walls	0	0	0
1 and 1 1/2 hours	100	33	10
3/4 hour	1,296	54	54
20 minutes	Not Limited	Not Limited	Not Limited
Fire window Assemblies	1,296	54	54

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm<sup>2</sup>.



**715.5.4 Nonwired glass.** Glazing other than wired glass in fire window assemblies shall be fire-protection-rated glazing installed in accordance with and complying with the size limitations set forth in NFPA 80.

**Committee Reason:** Wired glass is no longer permitted as a safety glazing in hazardous locations. Therefore Section 715.4.6.1 should not include wired glass since it may not be used in the doors which are considered as a hazardous location. Additionally, the code should not be product specific but should address the required performance. The committee modified the proposal to keep Section 715.5 exception 1 and also keep all of the text which was proposed to be deleted in item 2 of this proposal. The modification recognizes that the code has historically accepted wired-glass in a steel frame as equivalent to a 3/4-hour assembly. The deletion of this section and table would require a listed frame which would increase the cost of construction without justification supporting such a change. The listing of wired-glass assemblies use the steel frames specified in this section during their testing. These prescriptive steel frame products have worked well historically and the option of using this should remain in the code. The change to "fire-protection" instead of "fire-protective" in Section 715.4.6.1 is an editorial change and not a modification by the committee. This aspect of the change was discussed during the hearings and ruled to be editorial.

**Assembly Action:** None

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**FS114-06/07** Withdrawn by Proponent

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**FS115-06/07** Withdrawn by Proponent

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**FS116-06/07**

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**715.4.6.3.1 Identification.** For fire-protection-rated glazing, the label shall bear the following four-part identification: "D – H or NH – T or NT – XXX." "D" indicates that the glazing shall be used in fire door assemblies and that the glazing meets the fire protection requirements of NFPA 252. "H" shall indicate that the glazing meets the hose stream requirements of the test standard NFPA 252. "NH" shall indicate that the glazing does not meet the hose stream requirements of the test. "T" shall indicate that the glazing meets the temperature requirements of Section 715.4.4.1. "NT" shall indicate that the glazing does not meet the temperature requirements of Section 715.4.4.1. The placeholder "XXX" shall specify the fire-protection-rating period, in minutes.

**Committee Reason:** The direct reference to the NFPA 252 standard provides a specific reference which is easy to follow and clear. The revision to fire "protection" is correct and is justified. There is a difference between fire-resistance and fire-protection and the terms should be used correctly.

**Assembly Action:** None

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**FS117-06/07**

**Committee Action:** Disapproved

**Committee Reason:** This action is taken to be consistent with the action taken on FS103-06/07. Since FS103-06/07 was not approved, this item which is dependent upon it should not be accepted.

**Assembly Action:** None

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**FS118-06/07**

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal moves the requirement to a more appropriate section. This requirement for fire windows is difficult to find where it currently exists because the section it is currently in is applicable to doors.

**Assembly Action:** None

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**FS119-06/07**

**Committee Action:** Disapproved

**Committee Reason:** Based on the action taken on FS118-06/07 previously, this Section is being revised and moved to two separate sections. While FS118-06/07's relocation of part of the provisions to other sections does not directly address the issue addressed by FS119-06/07, testimony given on behalf of the proponent requested this item be disapproved to allow the proponent to sort out any possible conflicts with FS118.

**Assembly Action:** None

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**FS120-06/07** Withdrawn by Proponent

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**FS121-06/07**

**Committee Action:** Disapproved

**Committee Reason:** The committee felt that this proposal would reduce the level of life safety which the code has generally required and provided. This action also coordinates with the committee's previous action of disapproved taken on FS107-06/07 which would have eliminated the hose-stream test for glazing in doors. While the support for this proposal was somewhat based on the method of European requirements, this was not accepted by the committee. The two main concerns with the European standards were that their glazing ratings are tested to destruction, therefore the hose stream can not be used. Additionally the argument was made that we should continue to set our requirements based on what we feel is right and not on what others do, especially when they are testing differently. Approval of this proposal would also establish an inconsistency with Exception 2. If this proposal is approved, the glazing in a 0.5-hour rated corridor would require the hose-stream test while that in a 1-hour corridor would not.

**Assembly Action:** None

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**FS122-06/07** Withdrawn by Proponent

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**FS123-06/07** Withdrawn by Proponent

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**FS124-06/07**

**Committee Action:** Approved as Submitted

**Committee Reason:** This change will coordinate with the requirements of the code which permit 1/2-hour fire partitions and will provide the rating required for the windows. This will help clarify an issue which is currently not addressed within the code but which does arise due to the available rating of the fire partition.

**Assembly Action:** None

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## FS125-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal would eliminate the requirements from the code and have them be found within the referenced standard. Having these size limitations within the code versus in a referenced standard is easier on the designer and inspector. While there was conflicting discussion whether NFPA 80 did address the size limits for windows or whether it was only addressing fire doors it would seem better to modify the table to match NFPA 80 instead of deleting it completely. This also coordinates with the committee action taken on FS113-06/07 to keep this table within the code.

**Assembly Action:** None

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## FS126-06/07 Withdrawn by Proponent

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## FS127-06/07

**Committee Action:** Disapproved

**Committee Reason:** Based upon actions taken previously with items FS103 and FS117. As stated in the analysis, approval of this item without the approval of FS103 would require additional needed modifications in order to fit into the code.

**Assembly Action:** None

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## FS128-06/07 Withdrawn by Proponent

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## FS129-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This corrects the terminology so that it uses the correct phrase and coordinates with the first portion of the paragraph that states it is "for fire-protection rated glazing". These items do have a fire-protection rating and not a fire-resistance rating. This also coordinates with the action taken on FS116 to correct the terminology.

**Assembly Action:** None

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## FS130-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** It is better to use the term "air transfer" opening since it is the typically used term in the code instead of the term "unducted" opening.

**Analysis:** A similar revision will also be made in Section 607.5.4.1 of the International Mechanical Code because it is using the same wording. This section was discussed during the committee discussion and because the section is under the control of this committee and is identical, it will be modified accordingly.

**Assembly Action:** None

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## FS131-06/07

**Committee Action:** Disapproved

**Committee Reason:** As this proposal is written, it appears to eliminate the requirement for a damper and simply allows the duct to be protected as a penetration with a penetration fire-stop system. The code requires the penetration fire-stop protection when a damper is not required, but it does not eliminate the damper and allow the fire-stop as an alternate method of protection. It was also felt that the actions taken by the committee on FS46-06/07 will help address this issue.

**Assembly Action:** None

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## FS132-06/07

**Committee Action:** Disapproved

**Committee Reason:** The committee had several issues of concern with this proposal. The first is that the addition of a smoke damper is a major change in the purpose of a fire barrier without adequate support or justification. This would change the compartmentation level expected from these fire barriers to also address the smoke control aspect. Aligning the smoke dampers with fire barriers gives the impression that control should be based on the concept of fire area or separated uses which is clearly not the case. The second concern is that the elimination of exception 3 will increase the cost of construction without any clear increase in safety or supporting data so that the loss statistics and benefit can be evaluated. As written the provisions do not reflect any distinction in the requirements based upon building size although the testimony by the proponent and supporters discussed the issue of smoke movement in large buildings and the use of these barriers for staging during fire fighting operations.

**Assembly Action:** None

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## FS133-06/07 Withdrawn by Proponent

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## FS134-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal would require the independent termination of virtually all clothes dryer exhausts. Eliminating the dryer from this exception would mean that a damper would be needed in the dryer vent. That is why this was included in the exception originally. This is something that has been accepted for years in a number of jurisdictions even though it is not addressed within the IBC or IMC. Testimony of jurisdictions that have used this did not indicate that there were any known problems.

**Assembly Action:** None

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## FS135-06/07

**Committee Action:** Approved as Modified

**Replace the original proposal with the following:**

**716.5.3 (IMC 607.5.5) Shaft enclosures.** Shaft enclosures that are permitted to be penetrated by ducts and air transfer openings shall be protected with approved fire and smoke dampers installed in accordance with their listing.

**Exceptions:**

1. Fire dampers are not required at penetrations of shafts where:

- 1.1. Steel exhaust subducts are extended at least 22 inches (559 mm) vertically in exhaust shafts, provided there is a continuous airflow upward to the outside; or
- 1.2. Penetrations are tested in accordance with ASTM E119 as part of the rated assembly; or
- 1.3. Ducts are used as part of an approved smoke control system designed and installed in accordance with Section 909 and where the fire damper will interfere with the operation of the smoke control system; or
- 1.4. The penetrations are in parking garage exhaust or supply shafts that are separated from other building shafts by not less than 2-hour fire-resistance-rated construction.
2. In Group B and R occupancies, equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, smoke dampers are not required at penetrations of shafts where:
  - 2.1. Kitchen, clothes dryer, bathroom and toilet room exhaust openings are installed with steel exhaust subducts, having a wall thickness of at least 0.019 inch (0.48 mm); and
  - 2.2. That extend at least 22 inches (559 mm) vertically; and
  - 2.3. An exhaust fan is installed at the upper terminus of the shaft that is, powered continuously in accordance with the provisions of Section 909.11, so as to maintain a continuous upward airflow to the outside.
3. Smoke dampers are not required at penetration of exhaust or supply shafts in parking garages that are separated from other building shafts by not less than 2-hour fire-resistance-rated construction.
4. Smoke dampers are not required at penetrations of shafts where ducts are used as part of an approved mechanical smoke control system designed in accordance with Section 909 and where the smoke damper will interfere with the operation of the smoke control system.
5. Fire dampers and combination fire/smoke dampers are not required in kitchen and clothes dryer exhaust system when installed in accordance with the *International Mechanical Code*.

**Committee Reason:** The committee modified the proposal to be consistent with the action taken previously on FS134-06/07. Therefore the proposal is modified so that no changes will be made to item 2.1 and only the new item 5 will move forward. The addition of exception 5 will be applicable to all occupancies and is not limited to the B and R occupancies as exception 2 is. This exception will basically serve as a cross-reference to the IMC and could be used to address items such as an industrial clothes dryer in a hospital. The IMC will prohibit the installation of dampers within these types of exhaust ducts.

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

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## FS136-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** The deletion of exception 2 would be inconsistent with the action the committee took with FS134 and FS135. The statistics show that 3 of 4 fire deaths are due to the smoke and not due to the fire. The revisions take what has been fairly limited to specific occupancies and opens the exceptions up to all occupancies. Sprinklers will "control" a fire but they will not necessarily extinguish it. Therefore the fire will continue to generate smoke. The provisions need to distinguish between HVAC shut down and active Section 909 smoke control systems. A passive smoke control system does need to be equipped with dampers to limit smoke migration. The proposal is lacking supporting data to justify this type of change. Because the IBC has eliminated the requirements for smoke control systems, this method of limiting spread of smoke is needed.

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

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## FS137-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** The loss of exception 1 means the loss of the connection to Section 909 and therefore the power requirements contained there which will keep the fan running. Exception 3 is also a big change because it can apply to all Section 909 systems including a passive system. So while the provisions of Section 909 may provide a reasonable solution when connected to an active mechanical system with the proper emergency power back-up, they don't work with passive systems. This action also coordinates with the discussion and actions taken by the committee on FS134, FS135 and FS136 related to the existing exception 2.

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

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## FS138-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** The new exception 3 is an attempt to get dampers into a non-rated corridor in sprinklered buildings. This exception is more restrictive than the base paragraph and is not appropriate in this section since a "fire partition" would have either a 1-hour or 0.5-hour rating but it will not have a "0-hour" rating. By making the exceptions more restrictive, it will lead to their being applicable less often and therefore additional dampers are likely to be required. This action is somewhat similar to and consistent with the committee action on FS132-06/07 which dealt with fire barriers instead of fire partitions as this change does.

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

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## FS139-06/07

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

**Committee Reason:** This helps to create a section to place these requirements in so that they are addressed and can be regulated. There is currently no section that picks up the protection requirements for ducts and air transfer openings through an exterior wall even though it is implied. Code users starting in Section 704.14 are referenced to Section 716.5 to determine where dampers are required. By placing this into the general "where required" section it provides clarity and gets to the damper listing provisions. In addition, it also provides consistency with fire walls, fire barriers and fire partitions. The intent is not to override Table 704.8 and permit openings in the 0 to 3 foot range even if they are protected with a damper.

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

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## FS140-06/07

**Committee Action:** **Disapproved**

**Committee Reason:** While the intent is to provide a section for the reference from Section 710.7 to send the users to, this proposal and some of the potential modifications that were discussed during the testimony created confusion. The concern with this proposal is that while the base paragraph addresses air transfer openings, the exception deals with ducts. If the word duct is added into the base paragraph, it would then conflict with Section 710.7 which does not require a damper in a ducted system.

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

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## FS141-06/07

**Committee Action:** Disapproved

**Committee Reason:** Based on the original intent of these provisions that they only apply to dwelling units, it is inappropriate to add sleeping units. The proponent of the original text discussed the history of the provisions and the Fire Safety committee actions taken on FS37-01 and FS67-02. The intent is that where the unit is within the control of a single tenant, it is reasonable to eliminate the damper. However sleeping units occur in things like dormitories, fraternities and other uses and the rooms are often under the control of different persons. Therefore it is not appropriate to permit the exhaust duct from one sleeping unit to pass through another.

**Assembly Action:** None

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## FS142-06/07

**Committee Action:** Disapproved

**Committee Reason:** The discussion of FS142 and FS143 were taken together. The committee action on this item is taken based on the broader support for code change FS143-06/07. Because FS143 includes the UL standard as a reference, it provides an additional design option.

**Assembly Action:** None

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## FS143-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

**Committee Action:** Approved as Submitted

**Committee Reason:** The discussion of FS142 and FS143 were taken together. The committee action on this item is taken based on the broader support for code change FS143-06/07. Because FS143 includes the UL standard as a reference, it provides an additional design option. Adding additional standards as design options coordinates with actions taken earlier at this hearing by the committee.

**Assembly Action:** None

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## FS144-06/07

**Committee Action:** Disapproved

**Committee Reason:** The added text does not seem to add much of use. The last sentence which appears to be trying to eliminate flexible duct within assemblies could be better written so that the purpose is easier to understand. One of the committee members stated the proposed text appeared more like commentary versus code text.

**Assembly Action:** None

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## FS145-06/07

**PART I — IBC FIRE SAFETY**

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**717.2.1 Fireblocking materials.** ~~Fireblocking or fill shall not be of any flammable material which can be shaped, fitted and permanently secured in position.~~ Fireblocking shall consist of 2-inch (51 mm) nominal lumber or two thicknesses of 1-inch (25 mm) nominal lumber with broken lap joints or one thickness of 0.719-inch (18.3 mm) wood structural panel with joints backed by 0.719-inch (18.3 mm) wood structural panel or one thickness of 0.75-inch (19 mm) particleboard with joints backed by 0.75-inch (19 mm) particleboard. Gypsum board, cement fiber board, batts or blankets of mineral wool, ~~glass mineral fiber~~ or other approved materials installed in such a manner as to be securely retained in place shall be permitted as an acceptable fireblock. Batts or blankets of mineral wool ~~or glass mineral fiber~~ or other approved nonrigid materials shall be permitted for compliance with the 10-foot (3048 mm) horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Loose-fill insulation material, insulating foam sealants and caulk materials shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases. The integrity of fireblocks shall be maintained.

**Committee Reason:** This proposal attempts to help to clarify what fireblocking is and it is attempting to stop the use of flammable materials which may reduce the effectiveness of the fireblocking. While the intent of the proposal is good, the language of the first sentence of the proposal does create a difficulty with certain products which may be used or around which the fireblocking is placed. The modifications help to address the concerns discussed during the testimony by eliminating the first sentence but accepting the added text regarding foam sealants which were the primary concern of this proposal. Additional changes were made to include "mineral fiber" instead of "glass fiber" which was an issue of discussion during previous code change cycles and resulted in changes in the definitions found in the 2006 IBC. Some brands of caulk have been tested and have been shown to be as effective as the prescribed material or fireblocking.

**Assembly Action:** None

**PART II — IRC**

**Committee Action:** Disapproved

**Committee Reason:** The proposed first sentence, for Section R602.8.1, is inappropriate for use in the IRC.

**Assembly Action:** None

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## FS146-06/07

**PART I — IBC FIRE SAFETY**

**Committee Action:** Approved as Submitted

**Committee Reason:** The editorial style makes it easier to read and see the options that are available for use as a fireblock. The loss of the word "or" after each of the items helps make it clear that any of them are acceptable for use. Dividing the long paragraph into smaller pieces makes the provisions easier to understand and find.

**Assembly Action:** None

**PART II — IRC**

**Committee Action:** Approved as Submitted

**Committee Reason:** This change reformats the requirements into a list. This clarifies the code and makes it more user friendly.

**Assembly Action:** None

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## FS147-06/07

**Committee Action:** Disapproved

**Committee Reason:** While the committee understood the need to address this issue since some of the reflective foil products perform so differently during the ASTM E 84 test and the "room corner" test, this proposal was not approved. As written, the proposal will catch all "reflective foil insulation" products. Therefore foil/fiber-glass, foil/foam and the foil/"bubble-pack" would all be included in this requirement although the main concern is the foil/bubble-pack product. The revision to Section 719.1 would eliminate the use of the ASTM E 84 test even though it is acceptable for some of the foil backed insulation products and should not be eliminated. The committee was also told that there are currently revisions to the various tests being developed which may also improve them and make them a better predictor of potential problems. The term "reflective foil insulations" although used in the code currently is not defined. Using this term and revising the requirements will affect all of the products including those that can pass both the ASTM E 84 and the room corner burn test. The committee action also allows time for the needed changes to be made and proposed to the test standards before making this change within the code.

**Assembly Action:** None

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## FS148-06/07

**Committee Action:** Disapproved

**Committee Reason:** The ASTM E 84 is not appropriate for the testing of the loose fill insulation. There are testing agencies within the states that do conduct testing to the Canadian standard. The committee discussion focused on the issue of an inconsistency that the proposal would create between Sections 719.3 and 719.4. The proposal would effectively eliminate the smoke-development testing requirement for cellulose loose-fill insulation.

**Assembly Action:** None

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## FS149-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** As stated in the proponents reason statement, the revisions address items that are currently missing in the code but which were a part of the testing or needed for clarification. Specifically, the revision in item 15-1.12 was a part of the original test and should be included to assure the assembly is properly constructed. The change to item 16-1.3 clarifies that this is a non-symmetrical assembly and it only has a fire-resistance rating from the one side. This also coordinates with the other items in section 16 of the table.

**Analysis:** The majority of the items shown in the monograph have been previously addressed and accepted as errata to the 2006 edition of the code. The following are considered as errata and will not be acted on by the committee: (1) deletion of existing item 15-1.16; (2) addition of the new item 15-1.16; (3) revisions in item 16-1.1; (4) revisions in item 16.1.2; and (5) the first two revisions shown in item 16-1.3 (the revision to 4 feet and deletion of "oriented strand board"). Therefore, the only changes which are being acted on by the committee are (1) the addition of text into item 15-1.12, and (2) the addition in the last line of item 16.1.3.

**Assembly Action:** None

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## FS150-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This revision provides consistency with the definition and also with the UL fire-resistance directory. The term "mineral fiber" will pick up both the glass and wool insulation products. Making this revision will allow for the inclusion of additional types of insulating materials other than fiberglass.

**Assembly Action:** None

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# FS151-06/07

Committee Action: **Approved as Modified**

Modify the proposal as follows:

**TABLE 720.1(2)  
RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS<sup>a,o,p</sup>**

MATERIAL	ITEM NUMBER	CONSTRUCTION	MINIMUM FINISHED THICKNESS FACE-TO-FACE <sup>b</sup> (inches)			
			4 hour	3 hour	2 hour	1 hour
15. Exterior or interior walls	15-2.1	3 5/8" No. 16 gage steel studs at 24" on center or 2" x 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick portland cement plaster. Thin veneer brick units of clay or shale complying with ASTM C1088, Grade TBS or better, installed in running bond in accordance with Section 1405.9. Combined total thickness of the portland cement plaster, mortar, and thin veneer brick units shall be not less than 1 3/4". Interior side covered with one layer of 5/8" thick Type X gypsum wallboard attached to studs with 1" long No. 6 drywall screws at 12" on center.				6
	15-2.2	3 5/8" No. 16 gage steel studs at 24" on center or 2" x 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick portland cement plaster. Thin veneer brick units of clay or shale complying with ASTM C1088, Grade TBS or better, installed in running bond in accordance with Section 1405.9. Combined total thickness of the portland cement plaster, mortar, and thin veneer brick units shall be not less than 2". Interior side covered with two layers of 5/8" thick Type X gypsum wallboard. Bottom layer attached to studs with 1" long No. 6 drywall screws at 24" on center. Top layer attached to studs with 1 5/8" long No. 6 drywall screws at 12" on center.			6 7/8	
	15-2.3	3 5/8" No. 16 gage steel studs at 16" on center or 2" x 4" wood studs at 16" on center. Where metal lath is used attach to the exterior side of studs with minimum 1" long No. 6 drywall screws at 6" on center. Brick units of clay or shale <u>not less than 2 5/8" thick complying with ASTM C 216 installed in accordance with Section 1405.5 with a minimum 1" air space.</u> Interior side covered with one layer of 5/8" thick Type X gypsum wallboard attached to studs with 1" long No. 6 drywall screws at 12" on center.				<del>6 3/4</del> <u>7 7/8</u>
	15-2.4	3 5/8" No. 16 gage steel studs at 16" on center or 2" x 4" wood studs at 16" on center. Where metal lath is used attach to the exterior side of studs with minimum 1" long No. 6 drywall screws at 6" on center. Brick units of clay or shale <u>not less than 2 5/8" thick complying with ASTM C 216 installed in accordance with Section 1405.5 with a minimum 1" air space.</u> Interior side covered with two layers of 5/8" thick Type X gypsum wallboard. Bottom layer attached to studs with 1" long No. 6 drywall screws at 24" on center. Top layer attached to studs with 1 5/8" long No. 6 drywall screws at 12" on center.			<del>7 7/8</del> <u>8 1/2</u>	

(Portions of table not shown do not change)

**Committee Reason:** The proposal adds additional prescriptive assemblies which use a clay brick veneer. The modifications provide more information within the code rather than relying upon the reference standard to find this requirement. The standard is currently referenced and used in the IBC. The second change that the modification makes is to add the 1-inch air gap. The code currently has this requirement in other sections due to the code's reference to ACI 530.1. The modification simply adds the air gap requirement and dimension into the assembly so that it is clearly seen and not inadvertently constructed in violation of the standard.

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

## FS152-06/07

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

**Committee Reason:** This revision provides consistency with the definition and also with the UL fire-resistance directory. The term "mineral fiber" will pick up both the glass and wool insulation products. Making this revision will allow for the inclusion of additional types of insulating materials other than fiberglass. This is also consistent with the action taken on FS150-06/07 previously.

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

## FS153-06/07

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

**Committee Reason:** The provisions of Section 721.6 are intended to be limited to 1-hour assemblies. The revision to Section 721.6.1.1 are editorial improvements by referring to the specific code section. The

change to Section 721.1 adds an additional reference to an existing standard which will permit assemblies to use this method and be able to achieve a fire-resistance rating of greater than 1-hour. The inclusion of this reference provides additional design options and flexibility in calculating fire-resistance ratings.

**Assembly Action:** None

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## FS154-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal will assist the code users by telling them what equation to use and how to calculate the factors which are needed for it.

**Assembly Action:** None

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## FS155-06/07

**Committee Action:** Disapproved

**Committee Reason:** This is consistent with the actions that the committee took earlier on similar items. See comments at FS12, FS97 and FS99. This concept is more appropriate for inclusion into the performance code than the IBC. It was also felt that this item contains permissive language which would be difficult to enforce.

**Assembly Action:** None

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## FS156-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal is truly an editorial change that provides clarification by being used consistently throughout the code and by matching up with the term used in the ASTM standards which the code references for these materials. This proposal switches to the term "sprayed" versus "spray-applied" wherever that term was used in the code. This will make the IBC terminology consistent so that only one term is used. This does coordinate with the intent of a previous code change from the last cycle.

**Assembly Action:** None

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### PART II — IBC STRUCTURAL

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal makes the code provisions for sprayed fire-resistant materials easier to apply by providing consistent terminology throughout the IBC.

**Assembly Action:** None

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## FS157-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal is primarily going to help coordinate these sections with changes which were made in the last cycle and that appear in the 2006 edition of the code. Textile materials are permitted to be tested in accordance with the NFPA 286 room

corner test and therefore should not be excluded in these sections. The inclusion of the term "index" makes the provisions consistent with the terminology and reporting from ASTM E 84.

**Assembly Action:** None

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## FS158-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This is consistent with the action taken on FS157-06/07 which made the same proposal. Under the 2006 edition of the code, textiles are permitted to be tested using the NFPA 286 room corner test. Therefore, the language which prohibited this needs to be removed for consistency with Section 803.6 and 803.6.3.

**Assembly Action:** None

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## FS159-06/07

**Errata:** Replace the proposal which was shown in the monograph with the following. The following proposal was not published in the monograph.

**Proponent:** David D. Lovich, Owens Corning

**Revise as follows:**

**803.3 Stability.** Interior finish materials regulated by this chapter shall be applied or otherwise fastened in such a manner that such materials will not readily become detached when installed in a room constructed in accordance with the Test Equipment chapter of NFPA 286 and where subjected to room temperatures of ~~200~~ 300°F (93 149°C) for not less than ~~30~~ 25 minutes.

**Reason:** Establish better definition of the stability test room configuration and modify the exposure temperature and time limits to better track comparable provisions from the legacy codes.

The stability test for interior finish materials is known to be deficient and difficult to apply because there is no specific test method to perform the test currently prescribed in the code, resulting in non-uniform testing and reporting of results. On the other hand, NFPA 286 is a well-established, national consensus test standard that enjoys a long history of use in the code relative to these materials.

The proposed language adding reference to the NFPA 286 room corner wall test equipment setup is intended to standardize this basic but important aspect of successfully conducting the stability test. Adding this reference is also consistent with the direction being taken by a major national testing agency that is currently performing groundbreaking test method development work in this area.

The proposed language revising the exposure temperature and time limits is based on a review of legacy code requirements pertaining to this issue. Two out of the three legacy codes contained the proposed limits, whereas only one contained the current limits, so the most prevalent limits are being proposed here. It is also felt that application of the revised limits, especially the higher temperature, constitutes a more significant overall fire test exposure that will make the stability test more effective in truly distinguishing between the diverse products covered by this code section as far as their high temperature stay-in-place performance is concerned.

Review of room corner wall tests performed on Owens Corning Basement Finishing System consisting of textile-covered / glass fiber board wall panels.

**Bibliography:** Available on request

**Cost Impact:** The code change proposal will not increase the cost of construction.

**Committee Action:** Disapproved

**Committee Reason:** While the committee agreed with the use of the NFPA 286 room corner test, the concern was the change in both the time and temperature that would be used to determine the stability. Because this section serves as the basis for evaluating all of the attached finish materials, the result of this revision can not be determined on how it will affect all of the existing materials which have been accepted due to the previous test criteria. This could have an impact of eliminating materials which have been traditionally accepted by the code. The fact that this proposal does provide a clear method of testing and acceptance criteria does improve upon what is currently in the code. However, until the committee has a better understanding of the change in the testing upon existing materials, it was unwilling to approve.

**Assembly Action:** None

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## FS160-06/07

**Committee Action:** Approved as Modified

Modify the proposal as follows:

**803.4 Foam plastics.** Foam plastics shall not be used as interior finish except as provided in Section 2603.9. This section shall apply both to exposed foam plastics and to foam plastics used in conjunction with a textile or vinyl facing or cover. ~~Foam plastics shall be permitted to be tested in accordance with Section 803.1.2, in the manner intended for use, and meet the criteria of 803.1.2.1.~~

(Portions of proposal not shown remain unchanged)

**Committee Reason:** This is essentially an editorial change that helps to put the requirements of Chapter 8 into a more logical order. This type of rewrite has been discussed for several years in both the IBC Fire Safety committee hearings and also in front of the IFC committee. This should make the code more usable. The modification made by the committee was simply done to delete what was viewed as repetitive language. The first sentence of the new Section 803.4 indicates that foam plastics are to be regulated by the provisions in Chapter 26. That sentence is appropriate and is all that is needed. The remainder of the proposal is approved as submitted.

**Assembly Action:** None

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## FS161-06/07

**Committee Action:** Disapproved

**Committee Reason:** Based on the action taken with FS160. This item is based on the existing layout of Chapter 8 and is not appropriate with the revisions that FS160 made in the format.

**Assembly Action:** None

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## FS162-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal is a good item for inclusion in the commentary but it is not necessary in the code and could create confusion. Adding this section on "test methods" when it does not really include any testing requirements but simply serves as a cross reference to other sections may create confusion. Additionally some of the topics within the table do not require any type of testing. Adding this table will also create an additional location which must be kept coordinated if changes are made to any of the base sections that the table references. There is also concern that pulling test requirements such as those from Chapter 26, dealing with foam plastics, into the provisions of Chapter 8 could create confusion.

**Assembly Action:** None

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## FS163-06/07

**Committee Action:** Approved

**Committee Reason:** The proposal provides needed correlation between the IBC and IFC with respect to alarm system supervision in both new and retroactively required systems.

**Assembly Action:** None

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## FS164-06/07

**Committee Action:** Disapproved

**Committee Reason:** The text proposed for deletion needs to be retained and appear in both codes for those designers and jurisdictions that do not use or adopt the IFC.

**Assembly Action:** None

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## FS165-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** Inclusion of these provisions into the IBC will allow the extinguishers to be required in jurisdictions which do not adopt the IFC. If a jurisdiction has not adopted the IFC they would miss this important requirement which is needed for protecting the building. This will also help designers determine the location and requirements for extinguishers so that cabinets and other mounting locations can be determined and installed as a part of the initial building construction. This helps when recessed cabinets are used or if the cabinets are installed within a wall with rated construction.

**Assembly Action:** None

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## FS166-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This brings the water supply requirements into the code which is important. The IBC currently does not even contain a reference to the fire pump requirements of the IFC. The inclusion of a fire pump is a design issue related to a piece of equipment which does affect the layout and construction of the building. Including these provisions within the construction code reminds the designer that the pump location, protection and connections be dealt with as a part of the initial design.

**Assembly Action:** None

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## FS167-06/07

**Committee Action:** Disapproved

**Committee Reason:** Unlike the items addressed in FS165 and FS166, this is not addressing an item which is integral to the building or that affects the building design. This is really beyond the scope of the IBC. While the IBC is dealing with new building construction, this is more of a jurisdictional infrastructure issue.

**Assembly Action:** None

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## FS168-06/07

**Committee Action:** Approved as Modified

Modify the proposal as follows:

### SECTION 915 EMERGENCY RESPONDER SAFETY FEATURES

**915.1 Shaftway markings.** Vertical shafts shall be identified as required by this section.

**915.1.1 Exterior access to shaftways.** Outside openings accessible to the fire department and which open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word SHAFTWAY in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

**915.1.2 Interior access to shaftways.** Door or window openings to a hoistway or shaftway from the interior of the building shall be plainly marked with the word SHAFTWAY in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible.

**Exception:** Marking shall not be required on shaftway openings which are readily discernible as openings onto a shaftway by the construction or arrangement.

~~**915.2 Pitfalls.** The intentional design or alteration of buildings to disable, injure, maim or kill intruders is prohibited. No person shall install and use firearms, sharp or pointed objects, razor wire, explosives, flammable or combustible liquid containers, or dispensers containing highly toxic, toxic, irritant or other hazardous materials in a manner which may passively or actively disable, injure, maim or kill an emergency responder who forcibly enters a building for the purpose of controlling or extinguishing a fire, rescuing trapped occupants or rendering other emergency assistance.~~

**915.3 Equipment room identification.** Fire protection equipment shall be identified in an approved manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves, or other fire detection, suppression or control elements shall be identified for the use of the fire department. Approved signs required to identify fire protection equipment and equipment location, shall be constructed of durable materials, permanently installed and readily visible.

**Committee Reason:** The items such as shaftway markings do address hazards which affect the safety of the fire fighters from the first day of occupancy and therefore need to be included within the building code so that the protection is there whenever it is first needed. The committee did feel that these items are related to the building construction, relate to the scope of the document found in IBC Section 101.3 since they are related to fire fighter safety. The committee did modify the proposal by deleting Section 915.2 believing that this element does not belong in the building code but is more of an operational and maintenance issue which should remain in the IFC.

**Assembly Action:** Disapproved

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## FS169-06/07

**Committee Action:** Disapproved

**Committee Reason:** This item is not related to the building construction and is beyond the scope of the building code. This is an emergency response issue and jurisdictions change the requirements based on their equipment. This is consistent with the action taken by the committee on FS167-06/07. There are three different code officials involved or referenced in this proposal. Section 916.1.1 states "approved" which in this code would be determined by the building

official. Most of the other sections refer the requirements to the "fire code official" while Section 916.6 refers to the "fire chief." Sections such as 916.1.3 still refer to the IFC even though one of the arguments that was given for the proposal is that some jurisdictions do not adopt the IFC. In those situations the IFC reference will be of no help anyway.

**Assembly Action:** None

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## FS170-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** Approved as Submitted

**Committee Reason:** This revision makes the definition consistent with the ASTM standard and helps clarify the products and what the appropriate code requirements are. This will help eliminate confusion which is occurring in the marketplace.

**Assembly Action:** None

### PART II — IRC

**Committee Action:** Approved as Submitted

**Committee Reason:** This new language in the definition for Fiber-Cement Siding helps to clarify the term and provides a clear means of defining this building product. The definition is now consistent with the language in ASTM C 1154-02.

**Assembly Action:** None

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## FS171-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This proposal brings the condensation control provisions from the IECC into the IBC. The committee indicated that it is their intention that the IECC code development committee keep the control of this section with the IECC so that the codes remain coordinated. Because the vapor barrier provisions were deleted from the code in the last cycle this brings the requirement back for those jurisdictions which do not adopt the IECC and provides guidance for designers and enforcers which are only familiar with the IBC. The building code does need to keep moisture control issues in the code as a part of building construction requirements.

**Assembly Action:** None

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## FS172-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The ASTM standard does have distinctions between the type of siding. It is appropriate that the code requires the correct type so that there is no question regarding the appropriateness of a product. This will make determining compliance easier for both the designer and the code official.

**Assembly Action:** None

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## FS173-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The provisions are not applicable to adhered veneer. Because there are differences between adhered and anchored veneer, it is important that the code distinguish its requirements when the provisions are not applicable to both of the veneer types. This will also coordinate with some other changes that are being heard by other committees this week which will help to clarify the distinction between the veneer types.

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

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## **FS174-06/07** **Withdrawn by Proponent**

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## **FS175-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** This code change was disapproved because the approval of FS176-06/07 addresses the issue.

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

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## **FS176-06/07**

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

**Committee Reason:** This proposal corrects the seismic requirements for anchored masonry veneer by referencing specific requirements in ACI530/ASCE5/TMS402 regarding wire reinforcement and ties.

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

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## **FS177-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** With the clarification made by FS 176-06/07 the committee prefers retaining the current requirements for anchored masonry veneer. It is suggested that the brick and masonry industry work through the detailing of anchored masonry veneer in Seismic Design Category D in conjunction with the Building Seismic Safety Council whose concern is with the accelerations on the high end of the Seismic Design Category D classification being almost, but not quite, at near-fault levels.

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

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## **FS178-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** The direct reference to ASTM D3679 is better than the reference to Sections 1404.9 and 1406 even though Section 1404.9 does reference the same standard. The reference to Section 1406 and the testimony that this was related to Section 1406.2.1 created confusion. Section 1406.2.1 would require compliance with the NFPA 268 test while exception 2 would limit its application to "other than vinyl sidings" and exception 4 would only exclude the Type V buildings. This would appear to be counter to the addition of the other types of construction proposed in 1405.13. There was confusion regarding where the reference to the sections ever required the fire testing.

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

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## **FS179-06/07**

**Committee Action:** **Disapproved**

**Committee Reason:** Section 1405.13.1.1 is confusing in the way that it starts out with the "unless otherwise specified..." and then goes to the wind speed and building height. It is not clear when the manufacturer's instructions apply. Section 1405.3.1.1 is confusing about what the requirement is since it indicates "as follows" but then nothing follows within that section. It would appear that it should reference 1405.13.1.1.1 through 1405.13.1.1.4 or those subsections should be eliminated and simply be included as items under Section 1405.13.1.1. Section 1405.13.1.2 (Editor's note: It is shown in monograph incorrectly as 1403.13.1.2) requires the information to be submitted, but does not require the approval or acceptance of the code official. In addition, it would seem that the approval of this item would be inconsistent with the action taken on FS178-06/07.

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

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## **FS180-06/07**

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

**Committee Reason:** As discussed in the proponent's reason statement, the term "compliance report" is not defined and is not clear as to what is required. Using the term "listing and label" will provide the clarification by using terms which are used and defined within the code. This also assures that because the item is listed, that it has been tested by an approved agency and deemed to comply with the appropriate standard.

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

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## **FS181-06/07**

### **PART I — IBC FIRE SAFETY**

**Committee Action:** **Disapproved**

**Committee Reason:** The committee members had some technical questions but were unable to get those answered and therefore did not feel that they had enough technical understanding to approve the change.

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

### **PART II — IRC**

**Committee Action:** **Disapproved**

**Committee Reason:** This would limit to specific fiber-cement product. Based on the action by the IBC Fire Safety Committee.

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

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## **FS182-06/07**

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

**Committee Reason:** This is a nice clean up which makes the provisions easier to understand and determine what the section is requiring and accepting. It appropriately limits the height of the trim instead of addressing it based on the height of the building that the trim is applied to.

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

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## FS183-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal provides for a clarification of the code requirements. Because Section 717 does contain exceptions which may be applicable to this situation, it does seem to be better to state "where required by" as this proposal does.

**Assembly Action:** None

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## FS184-06/07

**Committee Action:** Disapproved

**Committee Reason:** This proposal is confusing to the user because of the way it bounces them around. The concept is fine but it would be preferable to bring the provisions into Chapter 14 versus referring to Chapter 26. There is confusion by referring to Chapter 26 and it may be better to simply state whether it is required to be CC-1 or CC-2 material.

**Assembly Action:** None

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## FS185-06/07

**Committee Action:** Approved as Modified

**Modify proposal as follows:**

**AGGREGATE:** In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing ~~a built-up for roof coverings or modified bitumen roof covering.~~

**Committee Reason:** The definition will provide a concise explanation of the term aggregate. The modification removed references to specific types of roof coverings to address the concern that, as written, the definition would not apply to single ply roof coverings.

**Assembly Action:** None

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## FS186-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearing.

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

**Committee Action:** Approved as Modified

**Modify proposal as follows:**

**BALLAST:** Ballast is any item having weight that is used to hold or steady an object. In roofing, ballast comes in the form of Large ~~aggregate Stones (ASTM D448 #4 or larger)~~ or paver systems or light-weight interlocking paver systems and is used to provide uplift resistance for roofing systems that are not adhered or mechanically attached to the roof deck.

**Chapter 35:**

**ASTM**

~~D448-03a—Standard Classification for Sizes of Aggregate for Road and Bridge Construction~~

**Committee Reason:** The definition of ballast will help code users differentiate between aggregate used for wind uplift resistance versus other aggregate roofs. The modification changes "stone" to aggregate for consistency with the changes made in FS186-06/07.

**Assembly Action:** None

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## FS187-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal provides guidance on roof drainage systems that will benefit designers, particularly if the IPC is not adopted.

**Assembly Action:** None

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## FS188-06/07

**PART I — IBC FIRE SAFETY**

**Committee Action:** Approved as Submitted

**Committee Reason:** This restores a provision which was accidentally dropped in the last code change cycle. This proposal provides clarification by restoring the provision and moving it to the right section. The provision was previously in the asphalt roofing section and the code concern is a general item which is not material specific.

**Assembly Action:** None

**PART II — IRC**

**Committee Action:** Approved as Submitted

**Committee Reason:** Appropriately relocates the crickets and saddles requirements to the proper code section to apply to all roof coverings.

**Assembly Action:** None

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## FS189-06/07

**Committee Action:** Disapproved

**Committee Reason:** The proposal needs better justification. In particular, an explanation of the development of hail exposure map. The committee encourages the proponent to work with the roofing industry on this issue.

**Assembly Action:** None

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## FS190-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard (UL 2218-02) indicated that, in the opinion of staff, the standard did comply with ICC standards criteria.

Review of proposed new standard (FM 4473-05) indicated that, in the opinion of staff, the standard did not comply with ICC standards criteria, Section 3.6.2.11. The standard was not provided prior to publication of the monograph.

## PART I — IBC STRUCTURAL

**Committee Action:** Disapproved

**Committee Reason:** The proposed standard, FM 4473, is not a consensus standard. In addition, the studies referred to in the reason should be provided to the committee in order to substantiate this proposal.

**Assembly Action:** None

## PART II — IRC

**Committee Action:** Disapproved

**Committee Reason:** There was no technical data submitted to show that this is a needed change. This is a local or regional issue and is not appropriate for a national standard.

**Assembly Action:** None

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## FS191-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria. (Reviewed 2006 year date)

## PART I — IBC STRUCTURAL

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

### Chapter 35

#### ASTM

D7158-05 06 Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method)

**Committee Reason:** This proposal clarifies the attachment and determination of wind resistance of asphalt shingles. The added standard provides for testing of sealed asphalt shingles. The modification merely changes the edition of the standard to agree with what was submitted for committee review.

**Assembly Action:** None

## PART II — IRC

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

### 4. Add standard to Chapter 43 as follows:

#### ASTM

D7158-05 06 Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method)

(Portions of proposal not shown remain unchanged)

**Committee Reason:** Based on proponent's published reason. The modification updates the reference standard to the current edition.

**Assembly Action:** None

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## FS192-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal provides better coordination between the roof covering wind requirements in Section 1504 and Chapter 16 wind load requirements.

**Assembly Action:** None

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## FS193-06/07

## PART I — IBC FIRE SAFETY

**Committee Action:** Disapproved

**Committee Reason:** Although this standard does not meet the current ICC requirements, it was acceptable as a reference standard when first included within the code. The committee was not comfortable taking action on one specific non-complying standard without taking comprehensive action on all non-complying standards.

**Assembly Action:** None

## PART II — IBC STRUCTURAL

**Committee Action:** Disapproved

**Committee Reason:** The committee prefers to retain FM 4450 as a reference standard due to its record of successful use.

**Assembly Action:** None

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## FS194-06/07

**Committee Action:** Disapproved

**Committee Reason:** There is no need to remove the standard, FM 4470, at this time.

**Assembly Action:** None

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## FS195-06/07

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**1504.3.2** Metal roofs constructed of cold-formed steel, where the roof deck acts as the roof covering and provides both weather protection and support for structural loads, shall be designed and tested in accordance with the applicable referenced structural design standard in Section 2209.1.

**1504.3.3** Metal panel roof systems not defined in 1504.3.2 shall be tested in accordance with ~~UL 580~~ or ASTM E1592.

**Committee Reason:** This change reformats test requirements for metal roofs to eliminate potential conflicts with the applicable referenced standard. The modification removes the reference to UL 580.

**Assembly Action:** None

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## FS196-06/07

**Committee Action:** Approved as Modified

Modify proposal as follows:

**1504.4 Ballasted low-slope roof systems.** Ballasted low-slope (roof slope < 2:12) single-ply roof system coverings installed in accordance with Sections 1507.12 and 1507.13 shall be designed in accordance with Section 1504.8 and ANSI/SPRI RP-4.

**Committee Reason:** The proposal clarifies the installation of ballasted low-slope roof systems by providing more specific section references. The modification retains the reference to Section 1504.8 for design because no reason was given to justify removing it.

**Assembly Action:** None

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## FS197-06/07

**Note:** The following analysis was not in the Code Change Proposal book but was published in the "Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards" provided at the code development hearings:

**Analysis:** Review of proposed new standard indicated that, in the opinion of staff, the standard did comply with ICC standards criteria

**Committee Action:** Disapproved

**Committee Reason:** The proposed reference standard is not applicable to low-slope roofs which is the subject matter of Section 1504.7.

**Assembly Action:** None

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## FS198-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** Substituting the term "aggregate" for "gravel and stone" clarifies these roof covering provisions.

**Assembly Action:** None

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## FS199-06/07

### PART I — IBC FIRE SAFETY

**Committee Action:** Disapproved

**Committee Reason:** This would be a substantial change which would remove a provision which was permitted by all three legacy codes. This issue was debated during the IBC development and since then and has been disapproved because structures with steel roofs do have a good fire history. While there are new materials being introduced, they still are required to meet the material standards of Section 1507.4.3 and Table 1507.3(1). If there is a problem with a new material then those products should be addressed without creating a prohibition against a product without a history of problems. The proposal lacked technical support.

**Assembly Action:** None

### PART II — IRC

**Committee Action:** Disapproved

**Committee Reason:** There was no technical data submitted to show that the current code language is inadequate.

**Assembly Action:** None

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## FS200-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** This change makes the ice barrier requirements more uniform using consistent terminology that more accurately describes the applicable building elements.

**Assembly Action:** None

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## FS201-06/07

### PART I — IBC STRUCTURAL

**Committee Action:** Approved as Submitted

**Committee Reason:** The proposal clarifies valley lining requirements.

**Assembly Action:** None

### PART II — IRC

**Committee Action:** Approved as Submitted

**Committee Reason:** This change clarifies the code, properly references ASTM D 1970 for closed valleys, and eliminates non-mandatory language.

**Assembly Action:** None

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## FS202-06/07

### PART I - IBC STRUCTURAL

**Committee Action:** Disapproved

**Committee Reason:** The proposal would add a batten system for concrete and clay tile roofs in areas that are subject to wind driven snow. There are concerns with high winds damaging the roof tiles themselves in such installations. As written a batten system design would be required for installing this type of roof.

**Assembly Action:** None

### PART II - IRC

**Committee Action:** Disapproved

**Committee Reason:** This proposal contains poor code language. There is no definition of "wind driven snow". There is no definition of "bird blocking material".

**Assembly Action:** None

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## FS203-06/07

Withdrawn by Proponent

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## FS204-06/07

### PART I — IBC STRUCTURAL

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

**Committee Reason:** The corrosion-resistant fasteners this code change requires have a useful life commensurate with cedar shingles and shakes and thus protect against premature failure of the attachment to the deck.

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

### PART II — IRC

**Committee Action:** **Disapproved**

**Committee Reason:** This proposal lacks a definition of "coastal areas". No technical data was submitted to document premature failure of electro-galvanized fasteners.

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

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## FS205-06/07

### PART I — IBC STRUCTURAL

**Committee Action:** **Disapproved**

**Committee Reason:** There are concerns with enforceability and particularly how an inspector will determine that no more than 10 percent of the wood shingle joints are in direct alignment.

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

### PART II — IRC

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

**Modify the proposal as follows:**

**R905.7.5 Application.** Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. Wood shingles shall be laid with a side lap not less than 1½ inches (38 mm) between joints in courses, and not more than ~~40%~~ 25% shall be in direct alignment in alternate courses. Spacing between shingles shall not be less than ¼ inch to 3/8 inch (6 mm to 10 mm). Weather exposure for wood shingles shall not exceed those set in Table R905.7.5. Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of 1/2 inch (13 mm) into the sheathing. For sheathing less than ½ inch (13 mm) in thickness, the fasteners shall extend through the sheathing. Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than 3/4 inch (19 mm) from each edge and no more than 1 inch (25 mm) above the exposure line.

**Committee Reason:** This change provides needed guidance for the alignment of the shingles keyways (space between shingles). The modification changes the allowance to 25% for ease of inspection.

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

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## FS206-06/07

### PART I — IBC STRUCTURAL

**Committee Action:** **Disapproved**

**Committee Reason:** The committee does not believe there is a basis for revising the minimum spacing between wood shakes.

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

### PART II - IRC

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

**Committee Reason:** This change clarifies the manufacturer's requirements for the width of the keyways (spacing between shakes).

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

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## FS207-06/07

**Withdrawn by Proponent**

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## FS208-06/07

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

**Committee Reason:** The proposal clarifies requirements for thermoset ballasted roofs by inserting a cross reference to an applicable requirement.

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

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## FS209-06/07

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

**Committee Reason:** The proposal clarifies requirements for ballasted thermoplastic roofs by inserting a cross reference to an applicable requirement.

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

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## FS210-06/07

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

**Committee Reason:** This code change provides cross references to Chapter 16 that assure loading requirements for landscaped roofs are included by the designer.

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

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## FS211-06/07

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

**Committee Reason:** The proposal provides clarity with construction types and coordination with other allowances for fire-retardant-treated wood such as that allowed for roofs in Section 603.1.3.

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

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## FS212-06/07

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

**Committee Reason:** The proposal clarifies the current requirement for removing roof coverings by indicating the removal is to be down to the roof deck.

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

## FS213-06/07

### PART I — IBC STRUCTURAL

**Committee Action:** Disapproved

**Committee Reason:** The proposal does not indicate exactly what test standards are being referred to for tested assemblies. It is not specific enough.

**Assembly Action:** None

### PART II — IRC

**Committee Action:** Disapproved

**Committee Reason:** There was no technical data submitted to justify additional testing. Not specific as to the type of test required.

**Assembly Action:** None

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## FS214-06/07

### PART I — IBC STRUCTURAL

**Committee Action:** Disapproved

**Committee Reason:** No data was provided to the committee to substantiate that the spray foam covering applied over shingles will perform well.

**Assembly Action:** None

### PART II — IRC

**Committee Action:** Disapproved

**Committee Reason:** There was no technical data provided to substantiate that this application will perform properly.

**Assembly Action:** None

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## FS215-06/07

**Committee Action:** Disapproved

**Committee Reason:** While the committee did feel that there is a need for some requirements to clearly regulate these products, this proposal is not ready for inclusion and there is still another cycle before the 2009 code. The floor testimony indicated the industry has currently completed tests and is developing code requirements based on this testing. It is anticipated that these proposals will be ready for the next code development cycle. The definition indicates the material is a "reduced-density plastic" but the provisions provide no density requirements and it does not provide any explanation regarding what it is reduced from. The 0.5 inch bubble dimension is not tied to a specific product or standard. By simply modifying the bubble size to just over 0.5 inches, the product would be unregulated again yet the hazard is not reduced or changed. The committee was also unwilling to take this action at this time since it was uncertain who in the industry this proposal would be helping and who it would be hurting. However as demonstrated by both this proposal and by FS147-06/07 these products do need to be addressed in a manner that does correspond to their end use while also addressing the variety of products which may be considered as reflective insulations.

**Assembly Action:** None

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## FS216-06/07

**Committee Action:** Approved as Modified

**Modify the proposal as follows:**

**2606.4 Specifications.** Light-transmitting plastics, including thermoplastic, thermosetting or reinforced thermosetting plastic material, shall have a self-ignition temperature of 650°F (343°C) or greater where tested in accordance with ASTM D 1929; a smoke-developed index not greater than 450 where tested in the manner intended for use in accordance with ASTM E84, or a maximum average smoke density rating not greater than 75 where tested in the thickness intended for use in accordance with ASTM D 2843 and shall conform to one of the following combustibility classifications:

**Class CC1:** Plastic materials that have a burning extent of 1 inch (25 mm) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use, in accordance with ASTM D 635,

**Class CC2:** Plastic materials that have a burning rate of 2.5 inches per minute (1.06 mm/s) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use, in accordance with ASTM D 635.

**Committee Reason:** This makes the code technically correct. The reported results are an average of the three tests. The committee did modify the proposal by inserting the word "maximum" since it is the highest smoke density rating during the test which is of concern and should be reported.

**Assembly Action:** None

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## FS217-06/07

**Committee Action:** Approved as Submitted

**Committee Reason:** It is important to keep the standards updated to the current editions of the standards. This assures that the most up-to-date information is included and also that the standards are available for both the designers and code enforcement agencies.

**Assembly Action:** None

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