

## 2006-2007 ICC CODE DEVELOPMENT CYCLE

# ERRATA TO THE 2006/2007 PROPOSED CHANGES TO THE INTERNATIONAL CODES

**Revised Second Posting: August 10, 2006**

**(See Tentative Agenda for Fire Code (Inadvertently left off 7 code changes – marked with \*))**

The following is a list of errata to the published monograph entitled “2006/2007 Proposed Changes to the 2006 Editions of the International Codes.”

This listing is organized based on the order of codes as published.

### **INTRODUCTORY PAGES: REVISION TO CP #28 CODE DEVELOPMENT, SECTION 5.5.2.2:**

**5.5.2.2 Criteria.** The Chairman shall rule proposed modifications in or out of order before they are discussed on the floor. A proposed modification shall be ruled out of order if it:

1. is not legible, unless not required to be written in accordance with Section 5.5.2.1;
2. changes the scope of the original proposal;
3. is not readily understood to allow a proper assessment of its impact on the original proposal or the code; ~~or~~
4. ~~is objected to by the proponent of the proposal.~~

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### **REVISIONS TO TENTATIVE ORDERS OF DISCUSSION:**

#### **VOLUME I:**

**IFC:** Add F233-06/07 between F143-06/07 and F144-06/07  
Delete 2<sup>nd</sup> F204-06/07 and add F205-06/07

# IBC – FIRE SAFETY (VOLUME I)

FS37-06/07: Replace the proposal with the following:

## FS37-06/07

402.4.6, 402.7.1, 403.2, [F]404.3, 410.5.1, 410.5.2, [F]415.6.1.2, [F]415.6.2.2, [F]415.6.3.4.1, [F]415.6.3.5.2, [F]415.7.1, [F]415.7.3, [F]415.8.2.2, 415.8.5.2.1, 415.8.5.2.2, [F]416.2, [F]418.4, [F]418.5, [F]418.6, 706.3.3, 706.3.9, Table 706.3.9, 707.11, 707.13.3, 707.13.4, 712.3, 901.7, 903.2, [F]909.11 (IMC 513.11 & IFC 909.11), 909.20.2, 909.20.6.1, [F]910.3.4, [F]910.4.4, 1021.3 (IFC [B] 1021.3), 1022.2 (IFC [B] 1022.2) 3006.4, 3104.5, 3410.6.16.1 (IEBC [B] 1301.6.16.1)

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

**THIS PROPOSAL IS ON THE AGENDA OF THE IBC FIRE SAFETY, IBC GENERAL AND IBC MEANS OF EGRESS AND IFC CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

### 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~~ separate room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. ~~and 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**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART II – IBC GENERAL**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART III – IBC MEANS OF EGRESS**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**PART IV – IFC**

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

**FS40-06/07: Revise Part I, Section 706.5, 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.

Remainder of change is as published

**FS159-06/07: Replace the proposal with the following:**

**FS159–06/07  
803.3**

**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.

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF



# IBC – GENERAL (VOLUME I)

**G33-06/07: Revise instruction line as follows:**

**PART I – IBC**

**Add new definition as follows:**

Remove the deletion of definition of “Registered Design Professional” and maintain current text.

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**G150-06/07: Replace the entire proposal with the following: (See instructions lines 3 and 4)**

## **G150–06/07** **508**

**Proponent:** Tony Crimi, A.C. Consulting Solutions, Inc., representing North American Insulation Manufacturers' Association and the International Firestop Council

**1. Delete and substitute as follows:**

### **SECTION 508** **MIXED USE AND OCCUPANCY**

~~**508.1 General.** Where a building or portion thereof contains two or more occupancies or uses, the building or portion thereof shall comply with the applicable provisions of this section.~~

~~**508.2 Incidental uses.** Incidental use areas shall comply with the provisions of this section.~~

~~**Exception:** Incidental use areas within and serving a dwelling unit are not required to comply with this section.~~

~~**508.2.1 Occupancy classification.** An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located or the building shall be classified as a mixed occupancy and shall comply with Section 508.3.~~

~~**508.2.2 Separation.** Incidental use areas shall be separated or protected, or both, in accordance with Table 508.2.~~

~~**508.2.2.1 Construction.** Where Table 508.2 requires a fire-resistance-rated separation, the incidental use area shall be separated from the remainder of the building by a fire barrier constructed in accordance with Section 706 or a horizontal assembly constructed in accordance with Section 711, or both. Where Table 508.2 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The partitions shall extend from the floor to the underside of the fire-resistance-rated floor/ceiling assembly or fire-resistance-rated roof/ceiling assembly above or to the underside of the floor or roof sheathing, or sub-deck above. Doors shall be self- or automatic-closing upon detection of smoke. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80.~~

~~**508.2.3 Protection.** Where an automatic fire-extinguishing system or an automatic sprinkler system is provided in accordance with Table 508.2, only the incidental use areas need be equipped with such a system.~~

~~**508.3 Mixed occupancies.** Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with Sections 508.3.1, 508.3.2, 508.3.3 or a combination of these sections.~~

#### **Exceptions:**

- ~~1. Occupancies separated in accordance with Section 509.~~
- ~~2. Where required by Table 415.3.2, areas of Group H 1, H 2 or H 3 occupancies shall be located in a separate and detached building or structure.~~

**508.3.1 Accessory occupancies.** Accessory occupancies are those occupancies subsidiary to the main occupancy of the building or portion thereof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall not exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies.

**Exceptions:**

1. Accessory assembly areas having a floor area less than 750 square feet (69.7 m<sup>2</sup>) are not considered separate occupancies.
2. Assembly areas that are accessory to Group E occupancies are not considered separate occupancies except when applying the assembly occupancy requirements of Chapter 11.
3. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies.

**508.3.1.1 Occupancy classification.** Accessory occupancies shall be individually classified in accordance with Section 302.1. Code requirements shall apply to each portion of the building based on the occupancy classification of that accessory space, except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the entire building or portion thereof.

**508.3.1.2 Allowable area and height.** The allowable area and height of the building shall be based on the allowable area and height for the main occupancy in accordance with Section 503.1. The height of any accessory occupancy shall not exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies.

**508.3.1.3 Separation.** No separation is required between accessory occupancies or the main occupancy.

**Exception:** Group H-2, H-3, H-4 or H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.3.3.

**508.3.2 Nonseparated occupancies.** Buildings or portions of buildings that comply with the provisions of this section shall qualify as nonseparated occupancies.

**508.3.2.1 Occupancy classification.** Nonseparated occupancies shall be individually classified in accordance with Section 302.1. Code requirements shall apply to each portion of the building based on the occupancy classification of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the entire building or portion thereof.

**508.3.2.2 Allowable area and height.** The allowable area and height of the building or portion thereof shall be based on the most restrictive allowances for the occupancy groups under consideration for the type of construction of the building in accordance with Section 503.1.

**508.3.2.3 Separation.** No separation is required between occupancies.

**Exception:** Group H-2, H-3, H-4 or H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.3.3.

**508.3.3 Separated occupancies.** Buildings or portions of buildings that comply with the provisions of this section shall qualify as separated occupancies.

**508.3.3.1 Occupancy classification.** Separated occupancies shall be individually classified in accordance with Section 302.1. Each fire area shall comply with this code based on the occupancy classification of that portion of the building.

**508.3.3.2 Allowable area.** In each story, the building area shall be such that the sum of the ratios of the actual floor area of each occupancy divided by the allowable area of each occupancy shall not exceed one.

**508.3.3.3 Allowable height.** Each occupancy shall comply with the height limitations based on the type of construction of the building in accordance with Section 503.1. The height, in both feet and stories, of each fire area shall be measured from grade plane. This measurement shall include the height, in both feet and stories, of intervening fire areas.

**Exception:** Special provisions permitted by Section 509.

**508.3.3.4 Separation.** Individual occupancies shall be separated from adjacent occupancies in accordance with Table 508.3.3

**508.3.3.4.1 Construction.** Required separations shall be fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies.

## **SECTION 508** **MIXED USE AND OCCUPANCY**

**508.1 General.** Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed below. Structures with multiple uses shall be classified according to Section 508.3. Where a structure is proposed for a purpose which is not specifically provided for in this code, such structure shall be classified in the group which the occupancy most nearly resembles, according to the fire safety and relative hazard involved.

1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5
2. Business (see Section 304): Group B
3. Educational (see Section 305): Group E
4. Factory and Industrial (see Section 306): Groups F-1 and F-2
5. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5
6. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4
7. Mercantile (see Section 309): Group M
8. Residential (see Section 310): Groups R-1, R-2, R-3 as applicable in Section 101.2, and R-4
9. Storage (see Section 311): Groups S-1 and S-2
10. Utility and Miscellaneous (see Section 312): Group U

**508.1.1 Incidental use areas.** Spaces which are incidental to the main occupancy shall be separated or protected, or both, in accordance with Table 508.1.1 or the building shall be classified as a mixed occupancy and comply with Section 508.3.2. Areas that are incidental to the main occupancy shall be classified in accordance with the main occupancy of the portion of the building in which the incidental use area is located.

**Exception:** Incidental use areas within and serving a dwelling unit are not required to comply with this section.

**508.1.1.1 Separation.** Where Table 508.1.1 requires a fire-resistance-rated separation, the incidental use area shall be separated from the remainder of the building with a fire barrier. Where Table 508.1.1 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated by construction capable of resisting the passage of smoke. The partitions shall extend from the floor to the underside of the fire-resistance-rated floor/ceiling assembly or fire-resistance-rated roof/ceiling assembly above or to the underside of the floor or roof sheathing deck or slab above. Doors shall be self-closing or automatic-closing upon detection of smoke in accordance with Section 715.3.7.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80.

**508.2 Accessory use areas.** A fire barrier shall be required to separate accessory use areas classified as Group H in accordance with Section 508.3.2 and incidental use areas in accordance with Section 508.1.1.1 Any other accessory use area shall not be required to be separated by a fire barrier provided the accessory use area occupies an area not more than 10 percent of the area of the story in which it is located and does not exceed the tabular values in Table 503 for the allowable height or area for such use.

**508.2.1 Assembly areas.** Accessory assembly areas are not considered separate occupancies if the floor area is equal to or less than 750 square feet (69.7 m<sup>2</sup>). Assembly areas that are accessory to Group E are not considered separate occupancies. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies.

**508.3 Mixed occupancies.** Where a building is occupied by two or more uses not included in the same occupancy classification, the building or portion thereof shall comply with Section 508.3.1 or 508.3.2 or a combination of these sections.

### **Exceptions:**

1. Occupancies separated in accordance with Section 509.
2. Areas of Group H-2, H-3, H-4 or H-5 occupancies shall be separated from any other occupancy in accordance with Section 302.3.2.
3. Where required by Table 415.3.2, areas of Group H-1, H-2 or H-3 occupancy shall be located in a separate and detached building or structure.

4. Accessory use areas in accordance with Section 508.2.
5. Incidental use areas in accordance with Section 508.1.1.

**508.3.1 Nonseparated uses.** Each portion of the building shall be individually classified as to use. The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building. All other code requirements shall apply to each portion of the building based on the use of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to these nonseparated uses. Fire separations are not required between uses, except as required by other provisions.

**508.3.2 Separated uses.** Each portion of the building shall be individually classified as to use and shall be completely separated from adjacent areas by fire barriers having a fire-resistance rating determined in accordance with Table 508.3.2 for uses being separated. Each fire area shall comply with this code based on the use of that space. Each fire area shall comply with the height limitations based on the use of that space and the type of construction classification. In each story, the building area shall be such that the sum of the ratios of the floor area of each use divided by the allowable area for each use shall not exceed one.

**Exception:** Except for Group H and I-2 areas, where the building is equipped throughout with an automatic sprinkler system, installed in accordance with Section 903.3.1.1, the fire-resistance ratings in Table 508.3.2 shall be reduced by 1 hour but to not less than 1 hour and to not less than that required for floor construction according to the type of construction.

**508.4 Spaces used for different purposes.** A room or space that is intended to be occupied at different times for different purposes shall comply with all the requirements that are applicable to each of the purposes for which the room or space will be occupied.

2. **Renumber table as follows:**

**TABLE 508.2 508.1.1  
INCIDENTAL USE AREAS**

3. **Delete current Table 508.3.3 as follows:**

**TABLE 508.3.3  
~~REQUIRED SEPARATION OF OCCUPANCIES (HOURS)~~**

4. Add new Table 508.3.2 as follows:

**TABLE 508.3.2  
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)<sup>a</sup>**

USE	A-1	A-2	A-3	A-4	A-5	B <sup>b</sup>	E	F-1	F-2	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M <sup>b</sup>	R-1	R-2	R-3, R-4	S-1	S-2 <sup>c</sup>	U
A-1	—	2	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-2 <sup>e</sup>	—	—	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-3	—	—	—	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-4	—	—	—	—	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-5	—	—	—	—	—	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
B <sup>b</sup>	—	—	—	—	—	—	2	3	2	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
E	—	—	—	—	—	—	—	3	2	NP	4	3	2	3	2	2	2	2	2	2	2	2	3	2	1
F-1	—	—	—	—	—	—	—	—	3	NP	2	1	1	1	3	3	3	3	3	3	3	3	3	3	3
F-2	—	—	—	—	—	—	—	—	—	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
H-1	—	—	—	—	—	—	—	—	—	—	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	1	2	2	4	4	4	4	2	4	4	4	2	2	1
H-3	—	—	—	—	—	—	—	—	—	—	—	—	1	1	4	3	3	3	1	3	3	3	1	1	1
H-4	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	4	4	4	1	4	4	4	1	1	1
H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	4	3	1	4	4	4	1	1	3
I-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	2	2	4	3	2
I-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	2	3	2	1
I-3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	3	2	1
I-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	3	2	1
M <sup>b</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	3	2	1
R-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	3	2	1
R-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	3	2	1
R-3, R-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	2 <sup>d</sup>	1 <sup>d</sup>
S-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3
S-2 <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
U	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

For SI: 1 square foot = 0.0929 m<sup>2</sup>

NP = Not permitted

- a. See exception to Section 508.3.2 (was 302.3.2) for reduction permitted.
- b. Occupancy separation need not be provided for storage areas within Groups B and M if the:
  - 1. Area is less than 10 percent of the floor area;
  - 2. Area is provided with an automatic fire-extinguishing system and is less than 3,000 square feet; or
  - 3. Area is less than 1,000 square feet.
- c. Areas used only for private or pleasure vehicles shall be allowed to reduce separation by 1 hour.
- d. See Section 406.1.4.
- e. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

**Reason:** North American Insulation Manufacturers' Association.

To restore the separated uses (occupancies) concept previously prescribed in Section 302 of the 2003 IBC (and 2003 Supp) and clarify the distinction between separated uses and the non-separated use options.

During the last cycle the separated uses section of the IBC was changed based on public proposal G32-04/05 on the basis that it presented no significant technical changes. To the contrary, there are dozens of reductions in fire resistance ratings resulting from these changes, without justification or supporting rationale. This creates a potentially dangerous condition for certain building occupants and firefighters.

The occupancy separation Table has existed in the BOCA National Building Code for a very long time, and was incorporated into the first edition of the IBC. The concept of separation of major occupancies exists in Building regulations throughout the world. There continues to be a critical need to separate adjacent occupancies of dissimilar use, with fire-resistance rated construction.

As currently published, the 2006 Code provisions in Section 508 blur the distinction between separated uses and the non-separated use options previously prescribed in Section 302.3.1. In some cases, the reductions in required fire resistance ratings are as large as 3 hours for given occupancy separations, while in others, the requirement to provide fire separations is removed altogether. In the published "Report of the Public Hearing on the 2003 editions of the International Building Code", the committee's published reason for recommending adoption of G32-04/05 is reported as follows: "The proposal does not have any significant technical changes from the current requirements." In reality, this code change proposals has lead to literally dozens of separate and distinct reductions in fire resistance rating requirements, in both sprinklered and unsprinklered occupancies, without justification or compensation of any kind.

To illustrate an example, this change has unilaterally reduced the fire separation between a mixed use office and a moderate hazard warehouse from the previously existing 3-hour minimum fire separation to zero, while providing no technical justification or compensating measures. Table 302.3.2 of the 2003 IBC, as well as the Exception to Section 302.2.3 (IBC 2003 Supplement), specified a minimum fire resistance for every occupancy separation and did not permit a fire resistance rating to be less than one hour, even when an automatic sprinkler system was provided. In contrast, the new Table 302.3.2 allows numerous instances where the fire resistance ratings are waived entirely. Further, while Exception 1 of the old section 302.3.2 did not apply to Group H and I-2 areas, the revised Table in the new section 508 shows a reduction of 1-h in fire resistance rating between all I occupancies and for F-2, S-2, U, B, F-1, M, and S-1 without any justification or compensation.

The former Table 302.3.2 specified a minimum fire resistance rating for every occupancy separation between different occupancies and never allowed a fire resistance rating to be less than one hour, even when an automatic sprinkler system is provided which allows a one hour reduction. The Exception to Section 302.2.3 (Supp) did not allow the ratings to be reduced to below one hour even when the automatic sprinkler system reduction is used. This is in contrast to the new Table 508.3.3 which has many entries indicating that no separation is required, again without justification or compensation. So how can a mixed occupancy building have separate occupancies if there is no fire resistance-rating requirement to separate such occupancies? Is this now a tenant separation issue?

It is our belief that the adoption of this Code change in the 2006 IBC has a significant detrimental impact on fire safety in buildings by arbitrarily reducing fire resistance ratings without providing any compensating safety measures. This change needs to be corrected, and a selective process of review, consideration, and justification undertaken to determine which, if any, of these changes are desirable and justifiable.

International Firestop Council.

The purpose of this proposed code change is to restore the separated uses (occupancies) concept prescribed in Section 302 of the 2003 IBC (and 2003 Supp) which was severely corrupted in the last cycle by proposed Code Change G32-04/05, and clarify the distinction between separated uses and the non-separated use options. The proposed wording is intended to be identical to that of 2003 IBC (and 2003 Supp), and renumbered for consistency in the 2006 IBC.

The committee's reasons for approving the changes was that there was no significant technical changes made by this Code Change Proposal. To the contrary, there are dozens of reductions in fire resistance ratings resulting from these changes, without justification or supporting rationale. This creates a potentially dangerous condition for certain building occupants and firefighters. The occupancy separation Table has existed in the BOCA National Building Code for a very long time, and was incorporated into the IBC since the first edition. The concept of separation of major occupancies exists in Building regulations throughout the world. There continues to be a critical need to separate adjacent occupancies of dissimilar use, with fire-resistance rated construction.

This proposed Code change would re-introduce the identical wording contained in the 2003 IBC (and Supplement). In the published "Report of the Public Hearing on the 2003 editions of the International Building Code", the committee's published reason for recommending adoption of G32-04/05 is reported as follows:

"The proposal does not have any significant technical changes from the current requirements."

In reality this code change proposals has lead to literally dozens of separate and distinct reductions in fire resistance rating requirements, in both sprinklered and unsprinklered occupancies, without justification or compensating fire safety measures of any kind. As currently published, the 2006 Code provisions in Section 508 blur the distinction between separated uses and the non-separated use options previously prescribed in Section 302.3.1. In some cases, the reductions in required fire resistance ratings are as large as 3 hours for given occupancy separations, while in others, the requirement to provide fire separations is removed altogether.

To illustrate an example, this change has unilaterally reduced the fire separation between a mixed use office and a moderate hazard warehouse from the previously existing 3-hour minimum fire separation to zero, while providing no technical justification or compensating measures. Table 302.3.2 of the 2003 IBC, as well as the Exception to Section 302.2.3 (IBC 2003 Supplement), specified a minimum fire resistance for every occupancy separation and did not permit a fire resistance rating to be less than one hour, even when an automatic sprinkler system was provided. In contrast, the new Table 302.3.2 allows numerous instances where the fire resistance ratings are waived entirely. Further, while Exception 1 of the old section 302.3.2 did not apply to Group H and I-2 areas, the revised Table in the new section 508 shows a reduction of 1-h in fire resistance rating between all I occupancies and for F-2, S-2, U, B, F-1, M, and S-1 without any justification or compensating fire safety measures being provided.

The former Table 302.3.2 specified a minimum fire resistance rating for every occupancy separation between different occupancies and never allowed a fire resistance rating to be less than one hour, even when an automatic sprinkler system is provided which allows a one hour reduction. The Exception to Section 302.2.3 (Supp) did not allow the ratings to be reduced to below one hour even when the automatic sprinkler system reduction is used. This is in contrast to the new Table 508.3.3 which has many entries indicating that no separation is required, again without justification or compensating fire safety measures. So how can a mixed occupancy building have separate occupancies if there is no fire resistance-rating requirement to separate such occupancies? Is this now a tenant separation issue?

It is our belief the adoption of this Code change in the 2006 IBC was done without thorough consideration being given to the impact on both fire resistance ratings, code users, and fire safety. This change needs to be corrected, and a selective process of review, consideration, and justification undertaken to determine which, if any, of these changes are desirable and justifiable.

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

**Analysis:** The term 'fire barrier' is used in proposed Sections 508.1.1.1, 508.2 and 508.3.2. During the last cycle, there was a global change to consider fire barriers as walls only, and add 'horizontal assemblies when the separation would be walls and floor/ceiling assemblies. Should the language in this proposal be revised to include 'and horizontal assemblies' for any section?

The language in the proposed Section 508.4 is currently found in Section 302.1. Should it be repeated or deleted from Section 302.1?

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**G206-06/07: Replace the proposal with the following:**

## **G206-06/07**

**3409.1, 3409.6, 3409.8.7 (IEBC [B] 308.1, [B] 308.6, [B] 308.8.7); IEBC 605.1, 605.1.8, 706.3, 912.8**

**Proponent:** Brian D. Black, BD Black Codes, Inc., Perry, NY, representing himself

**THIS PROPOSAL IS ON THE AGENDA OF THE IBC MEANS OF EGRESS AND IEBC CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES**

### **PART I – IBC**

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

**3409.1 (IEBC 308.1) Scope.** The provisions of Sections 3409.1 (IEBC 308.1) through 3409.9 (IEBC 308.9) apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

**Exception:** Type B dwelling or sleeping units required by Section 1107 are not required to be provided in existing buildings and facilities being altered or undergoing a change of occupancy.

**3409.6 (IEBC 308.6) Alterations.** A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 and ICC A117.1, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

#### **Exceptions:**

1. The altered element or space is not required to be on an accessible route, unless required by Section 3409.7 (IEBC 308.7).
2. Accessible means of egress required by Chapter 10 are not required to be provided in existing buildings and facilities.
3. ~~The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit and shall comply with the applicable provisions in Chapter 11 and ICC/ANSI A117.1.~~ Type A dwelling units or sleeping units required by Section 1107 are not required to be provided in existing building and facilities being altered.

**3409.8.7 (IEBC 308.8.7) Dwelling or sleeping units.** Where I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 for Accessible ~~or Type A~~ units and Section 907 for accessible alarms apply only to the quantity of spaces being altered or added.

### **PART II – IEBC**

#### **1. Revise as follows:**

**605.1 General.** A building, facility or element that is altered shall comply with the applicable provisions in Sections 605.1.1 through 605.1.12, Chapter 11 of the *International Building Code* and ICC A117.1 unless it is technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent that is technically feasible. A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

#### **Exceptions:**

1. The altered element or space is not required to be on an accessible route unless required by Section 605.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. Type A and Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities being altered.
4. ~~The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provisions for Type B dwelling units and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.~~

**605.1.8 Dwelling units and sleeping units.** Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for Accessible units ~~or Type A units~~ and Chapter 9 of the *International Building Code* for accessible alarms apply only to the quantity of spaces being altered.

**706.3 Dwelling units and sleeping units.** Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling units or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for Accessible units ~~or Type A units~~ and Chapter 9 of the *International Building Code* for accessible alarms apply only to the quantity of spaces being added.

**912.8 Accessibility.** Existing buildings or portions thereof that undergo a change of group or occupancy classification shall have all of the following accessible features:

1. At least one accessible building entrance.
2. At least one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1110 of the *International Building Code*.
4. Accessible parking, where parking is provided.
5. At least one accessible passenger loading zone, where loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible. Changes of group or occupancy that incorporate any alterations or additions shall comply with this section and Sections 605.1 and 1005.1 as applicable.

**Exception:** Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities undergoing a change of occupancy.

**Reason:** The purpose of the proposed code change is to remove the requirement to comply with ICC A117.1 Type A provisions where an existing Group R-2 dwelling unit is altered.

Chapter 11 requires that in Group R-2 occupancies containing more than 20 dwelling units, at least 2 percent but not less than one of the units shall be a Type A unit. This requirement was established based on demographic information that indicated a small segment of the population needs a greater level of accessibility in residential construction than that afforded by the Fair Housing Accessibility Guidelines and the parallel scoping of Type B dwelling units by the *International Building Code*.

While this may be a sound approach in new construction, it has never made sense in alterations to existing Group R-2 occupancies, most of which do not involve major renovations that include moving walls, relocating plumbing lines, and complete reconfigurations of bathrooms and kitchens – all of which could be necessary to make a 30 year old apartment unit comply with the Type A criteria.

For example, an apartment manager or condominium owner could opt to completely gut the master bathroom in a single dwelling unit to replace the existing fixtures and reconfigure the space. Arguably, the first unit in a building so altered would be designated the required Type A unit, which would then mean that a turning space would have to be provided in the room, the toilet would have to be located in a corner, any shower unit provided would have to be accessible, etc. This could require demolishing and relocating walls if the room isn't of sufficient size to meet the Type A criteria.

Even where the code requirement is met, the result could be a Type A master bathroom in an otherwise totally inaccessible dwelling unit in an inaccessible building. Clearly, the intent of the scoping for Type A units found in Chapter 11 would not be met.

The additional wording in Section 3409.1 will clarify that the exception is limited to alterations and change of occupancy, not additions.

This proposed change would not affect the code's harmonization with the ADA or Fair Housing Act.

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

## PART I – IBC

Public Hearing:	Committee	AS	AM	D
	Assembly:	ASF	AMF	DF

## PART II – IEBC

Public Hearing:	Committee	AS	AM	D
	Assembly:	ASF	AMF	DF



**G217-06/07 Add comma in Section G102.1 as follows:**

**G102.1 General.** This appendix, in conjunction with the *International Building Code*, provides minimum requirements for development located in flood hazard areas, including the subdivision of land; installation of utilities; placement and replacement of manufactured homes; new construction and repair, reconstruction, rehabilitation or additions to new construction; substantial improvement of existing buildings and structures, including restoration after damage, temporary structures and temporary or permanent storage, and certain building work exempt from permit under Section 105.2.

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# IBC – MEANS OF EGRESS (VOLUME I)

**E155-06/07: Add current Exception 9 to Section 1020.1 and renumber to Exception 10 as follows:**

- 9- 10. In other than Group H and I occupancies, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.
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# IBC – STRUCTURAL (VOLUME I)

**S24-06/07: Revise Item 1 of code change to read as follows:**

**1613.6.3 Autoclaved aerated concrete (AAC) masonry shear wall design coefficients and system limitations.**

Add the following text at the end of Section 12.2.1 of ASCE 7:

For ordinary reinforced AAC masonry shear walls used in the seismic force-resisting system of structures, the response modification factor,  $R$ , shall be permitted to be taken as 3, the deflection application factor,  $C_d$ , shall be permitted to be taken as 3, and the system overstrength factor,  $\Omega_o$ , shall be permitted to be taken as  $2\frac{1}{2}$ . The maximum height for reinforced AAC masonry shear walls shall not be limited for buildings assigned to Seismic Design Category B, shall be limited to 160 feet (48768 mm) for buildings assigned to Seismic Design Category C, shall be limited to 65 feet (19812 mm) for buildings assigned to Seismic Design Category D, and is not permitted for buildings assigned to Seismic Design Categories E and F.

For ordinary plain (unreinforced) AAC masonry shear walls used in the seismic force-resisting system of structures, the response modification factor,  $R$ , shall be permitted to be taken as  $1\frac{1}{2}$ , the deflection application factor,  $C_d$ , shall be permitted to be taken as  $1\frac{1}{2}$ , and the system overstrength factor,  $\Omega_o$ , shall be permitted to be taken as  $2\frac{1}{2}$ . The maximum height for plain AAC masonry shear walls shall not be limited for buildings assigned to Seismic Design Category B and is not permitted for buildings assigned to Seismic Design Categories C, D, E and F.

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**S83-06/07: Replace the proposal with the following:**

## **S83–06/07**

**2306**

**Proponent:** Jeffrey B. Stone, American Forest & Paper Association

**Revise as follows:**

### **SECTION 2306 ALLOWABLE STRESS DESIGN**

**2306.1 Allowable stress design.** The structural analysis and construction of wood elements in structures using allowable stress design shall be in accordance with the following applicable standards:

**American Forest & Paper Association.**

NDS National Design Specification for Wood Construction  
SDPWS Special Design Provisions for Wind and Seismic

**American Institute of Timber Construction.**

AITC 104 Typical Construction Details  
AITC 110 Standard Appearance Grades for Structural  
Glued Laminated Timber  
AITC 113 Standard for Dimensions of Structural Glued  
Laminated Timber  
AITC 117 Standard Specifications for Structural Glued  
Laminated Timber of Softwood Species  
AITC 119 Structural Standard Specifications for Glued  
Laminated Timber of Hardwood Species  
AITC A190.1 Structural Glued Laminated Timber  
AITC 200 Inspection Manual

**American Society of Agricultural Engineers.**

ASAE EP 484.2 Diaphragm Design of Metal –Clad,  
Post-Frame Rectangular Buildings  
ASAE EP 486.1 Shallow Post Foundation Design  
ASAE 559 Design Requirements and Bending Properties  
for Mechanically Laminated Columns

## **APA—The Engineered Wood Association.**

Panel Design Specification

Plywood Design Specification Supplement 1 – Design & Fabrication of Plywood Curved Panel

Plywood Design Specification Supplement 2 – Design & Fabrication of Glued Plywood-Lumber Beams

Plywood Design Specification Supplement 3 – Design & Fabrication of Plywood Stressed-Skin Panels

Plywood Design Specification Supplement 4 – Design & Fabrication of Plywood Sandwich Panels

Plywood Design Specification Supplement 5 – Design & Fabrication of All-Plywood Beams

EWS T300 Glulam Connection Details

EWS S560 Field Notching and Drilling of Glued Laminated Timber Beams

EWS S475 Glued Laminated Beam Design Tables

EWS X450 Glulam in Residential Construction

EWS X440 Product and Application Guide: Glulam

EWS R540 Builders Tips: Proper Storage and Handling of Glulam Beams

## **Truss Plate Institute, Inc.**

TPI 1 National Design Standard for Metal Plate Connected

Wood Truss Construction

**2306.1.1 Joists and rafters.** The design of rafter spans is permitted to be in accordance with the *AF&PA Span Tables for Joists and Rafters*.

**2306.1.2 Plank and beam flooring.** The design of plank and beam flooring is permitted to be in accordance with the *AF&PA Wood Construction Data No. 4*.

**2306.1.3 Treated wood stress adjustments.** The allowable unit stresses for preservative-treated wood need no adjustment for treatment, but are subject to other adjustments. The allowable unit stresses for fire-retardant-treated wood, including fastener values, shall be developed from an approved method of investigation that considers the effects of anticipated temperature and humidity to which the fire-retardant-treated wood will be subjected, the type of treatment and the redrying process. Other adjustments are applicable except that the impact load duration shall not apply.

**2306.1.4 Lumber decking.** The capacity of lumber decking arranged according to the patterns described in Section 2304.8.2 shall be the lesser of the capacities determined for flexure and deflection according to the formulas in Table 2306.1.4.

### **TABLE 2306.1.4 ALLOWABLE LOADS FOR LUMBER DECKING**

No change to table entries

## **2306.2 Wind provisions for walls.**

**2306.2.1 Wall stud bending stress increase.** The AF&PA NDS fiber stress in bending ( $F_b$ ) design values for sawn lumber wood studs resisting out of plane wind loads shall be increased by the factors in Table 2306.2.1, in lieu of the 1.15 repetitive member factor. These increases take into consideration the load sharing and composite actions provided by the wood structural panels as defined in Section 2302.1. The increases shall apply where the studs are designed for bending and are spaced no more than 16 inches (406 mm) o.c., covered on the inside with a minimum of 1/2 inch (12.7 mm) gypsum board fastened in accordance with Table 2306.4.5 and sheathed on the exterior with a minimum of 3/8 inch (9.5mm) wood structural panel sheathing. All panel joints shall occur over studs or blocking and shall be attached using a minimum of 8d common nails spaced a maximum of 6 inches o.c. (152 mm) at panel edges and 12 inches o.c. (305mm) at intermediate framing members.

### **TABLE 2306.2.1 WALL STUD BENDING STRESS INCREASE FACTORS**

## **2306. 3 Wood diaphragms.**

**2306. 3.1 Wood structural panel diaphragms.** Wood structural panel diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.3.1 or Table 2306.3.2. The allowable shear capacities in Table 2306.3.1 and Table 2306.3.2 are permitted to be increased 40 percent for wind design. Calculated by principles of mechanics without limitations by using values for fastener strength in the AF&PA NDS, structural design properties for wood structural panels based on DOC PS-1 and DOC PS-2 or wood structural panel design properties given in the *APA Panel Design Specification (PDS)*.

**TABLE 2306.3.1****RECOMMENDED SHEAR FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR LARCH OR SOUTHERN PINE FOR WIND AND SEISMIC LOADING.**

No change to table entries

**TABLE 2306.3.2****ALLOWABLE SHEAR IN POUNDS PER SQUARE FOOT FOR HORIZONTAL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF FASTENERS WITH FRAMING OF DOUGLAS FIR LARCH OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING.**

No change to table entries

**2306.3.2 Shear capacities modifications.** The allowable shear capacities in Tables 2306.3.1 and 2306.3.2 for horizontal wood structural panel diaphragms shall be increased 40 percent for wind design.

**2306.3.3 Diagonally sheathed lumber diaphragms.** Diagonally sheathed lumber diaphragms shall be nailed in accordance with Table 2306.3.3.

**TABLE 2306.3.3****DIAGONALLY SHEATHED LUMBER DIAPHRAGM NAILING SCHEDULE**

**2306.3.4 Single diagonally sheathed lumber diaphragms.** Single diagonally sheathed lumber diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. ~~Single diagonally sheathed lumber diaphragms shall be constructed of minimum 1-inch (25 mm) thick nominal sheathing boards laid at an angle of approximately 45 degrees (0.78 rad) to the supports. The shear capacity for single diagonally sheathed lumber diaphragms of southern pine or Douglas fir larch shall not exceed 300 plf (4378N/m) of width. The shear capacities shall be adjusted by reduction factors of 0.82 for framing members of species with a specific gravity equal to or greater than 0.42 but less than 0.49 and 0.65 for species with a specific gravity of less than 0.42, as contained in the AF&PA NDS.~~

**2306.3.4.1 End joints.** End joints in adjacent boards shall be separated by at least one stud or joist space and there shall be at least two boards between joints on the same support.

**2306.3.4.2 Single diagonally sheathed lumber diaphragms.** ~~Single diagonally sheathed lumber diaphragms made up of 2-inch (51 mm) nominal diagonal lumber sheathing fastened with 16d nails shall be designed with the same shear capacities as shear panels using 1-inch (25 mm) boards fastened with 8d nails, provided there are not splices in adjacent boards on the same support and the supports are not less than 4 inch (102mm) nominal depth or 3-inch (76 mm) nominal thickness.~~

**2306.3.5 Double diagonally sheathed lumber diaphragms.** Double diagonally sheathed lumber diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. ~~Double diagonally sheathed lumber diaphragms shall be constructed of two layers of diagonal sheathing boards at 90 degrees (1.57 rad) to each other on the same face of the supporting members. Each chord shall be considered as a beam with uniform load per foot equal to 50 percent of the unit shear due to diaphragm action. The load shall be assumed as acting normal to the chord in the plan of the diaphragm in either direction. The span of the chord or portion thereof shall be the distance between framing members of the diaphragm, such as the joists, studs and blocking that serve to transfer the assumed load to the sheathing. The shear capacity of double diagonally sheathed diaphragms of Southern pine or Douglas fir larch shall not exceed 600 plf (8756 Kn/m) of width. The shear capacity shall be adjusted by reduction factors of 0.82 for framing members of species with a specific gravity equal to or greater than 0.42 but less than 0.49 and 0.65 for species with a specific gravity of less than 0.42, as contained in the AF&PA NDS. Nailing of diagonally sheathed lumber diaphragms shall be in accordance with Table 2306.3.3.~~

**2306.3.6 Gypsum board diaphragm ceilings.** Gypsum board diaphragm ceilings shall be in accordance with Section 2508.5.

**2306.4 Shear walls.** Panel sheathing joints in shear walls shall occur over studs or blocking. Adjacent panel sheathing joints shall occur over and be nailed to common framing members (see Section 2305.3.1 for limitations on shear wall bracing materials).

**2306.4.1 Wood structural panel shear walls.** Wood structural panel shear walls shall be designed and constructed in accordance with AF&PA SDPWS. ~~Wood structural panel shear walls are permitted to resist horizontal forces using The the allowable shear capacities set forth in for wood structural panel shear walls shall be in accordance with Table 2306.4.1. These Allowable capacities in Table 2306.4.1 are permitted to be increased 40 percent for wind design.~~

Shear walls are permitted to be calculated by principles of mechanics without limitations by using values for nail strength given in the AF&PA NDS and wood structural panel design properties given in the *APA Panel Design Specification*.

**TABLE 2306.4.1 ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING**  
No change to table entries

**2306.4.2 Lumber sheathed shear walls.** Single and double diagonally sheathed lumber diaphragms shear walls shall be designed and constructed in accordance with AF&PA SDPWS. ~~Are permitted using the construction and allowable load provisions of Sections 2306.3.4 and 2306.3.5. Single and double diagonally sheathed lumber walls shall not be used to resist seismic loads in structures in Seismic Design Category E or F.~~

**2306.4.3 Particleboard shear walls.** ~~Particleboard shear walls shall be designed and constructed in accordance with AF&PA SDPWS. Particleboard shear walls shall be permitted to resist horizontal forces using The design the allowable shear capacity of capacities particleboard shear walls shall be in accordance with set forth in Table 2306.4.3. Allowable capacities in Table 2306.4.3 are permitted to be increased 40 percent for wind design. Shear panels shall be constructed with particleboard sheets not less than 4 feet by 8 feet (1219 mm by 2438 mm), except at boundaries and changes in framing. Particleboard panels shall be designed to resist shear only, and chords, collector members and boundary elements shall be connected at all corners. Panel edges shall be backed with 2 inch (51 mm) nominal or wider framing. Sheets are permitted to be installed either horizontally or vertically. For 3/8 inch (9.5 mm) particleboard sheets installed with the long dimension parallel to the studs spaced 24 inches (610 mm) o.c, nails shall be spaced at 6 inches (152 mm) o.c. along intermediate framing members. For all other conditions, nails of the same size shall be spaced at 12 inches (305mm) o.c. along intermediate framing members. Particleboard panels less than 12 inches (305 mm) wide shall be blocked. Particleboard shall not be used to resist seismic forces in structures in Seismic Design Category D, E or F.~~

**TABLE 2306.4.3 ALLOWABLE SHEAR FOR PARTICLEBOARD SHEAR WALL SHEATHING**  
No change to table entries

**2306.4.4 Fiberboard shear walls.** ~~Fiberboard shear walls shall be designed and constructed in accordance with AF&PA SDPWS. Fiberboard shear walls are permitted to resist horizontal forces using The design the allowable shear capacity of capacities fiberboard shear walls shall be in accordance with set forth in Table 2306.4.4. Allowable capacities in Table 2306.4.4 are permitted to be increased 40 percent for wind design. The fiberboard sheathing shall be applied vertically or horizontally to wood studs not less than 2 inch (51 mm) in nominal thickness spaced 16 inches (406 mm) o.c. Blocking not less than 2 inch (51 mm) nominal in thickness shall be provided at horizontal joints. Fiberboard shall not be used to resist seismic forces in structures in Seismic Design Category D, E or F.~~

**TABLE 2306.4.4 ALLOWABLE SHEAR VALUES (plf) FOR WIND OR SEISMIC LOADING ON VERTICAL DIAPHRAGMS OF FIBERBOARD SHEATHING BOARD CONSTRUCTION FOR TYPE V CONSTRUCTION ONLY**  
No change to table entries

**2306.4.5 Shear walls sheathed with other materials.** ~~Shear walls sheathed with ortland cement plaster, gypsum lath, gypsum sheathing, or gypsum board shall be designed and constructed in accordance with AF&PA SDPWS. Shear walls sheathed with these materials are permitted to resist horizontal forces using the allowable Shear shear capacities for walls sheathed with lath, plaster or gypsum board shall be in accordance with set forth in Table 2306.4.5. Shear walls sheathed with lath, plaster or gypsum board shall be constructed in accordance with Chapter 25 and Section 2306.4.5.1. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. Shear walls sheathed with ortland cement plaster, gypsum lath, gypsum sheathing, or gypsum board shall not be used to resist seismic loads in structures in Seismic Design Category E or F.~~

**TABLE 2306.4.5 ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES FOR SHEAR WALLS OF LATH AND PLASTER OR GYPSUM BOARD WOOD FRAMED WALL ASSEMBLIES**  
No change to table entries

**2306.4.5.1 Application of gypsum board or lath and plaster to wood framing.**

**2306.4.5.1.1 Joint staggering.** ~~End joints of adjacent courses of gypsum board shall not occur over the same stud.~~

**2306.4.5.1.2 Blocking.** ~~Where required in Table 2306.4.5, wood blocking having the same cross-sectional dimensions as the studs shall be provided at joints that are perpendicular to the studs.~~

**2306.4.5.1.3 Fastening.** Studs, top and bottom plates and blocking shall be fastened in accordance with Table 2304.9.1.

**2306.4.5.1.4 Fasteners.** The size and spacing of fasteners shall be set forth in Table 2306.4.5. Fasteners shall be spaced not less than 3/8 inch (9.5 mm) from edges and ends of gypsum boards or sides of studs, blocking and top and bottom plates.

**2306.4.5.1.5 Gypsum lath.** Gypsum lath shall be applied perpendicular to the studs. Maximum allowable shear values shall be as set forth in Table 2306.4.5.

**2306.4.5.1.6 Gypsum sheathing.** Four foot wide (1219 mm) pieces of gypsum sheathing shall be applied parallel or perpendicular to studs. Two foot wide (610 mm) pieces of gypsum sheathing shall be applied perpendicular to the studs. Maximum allowable shear values shall be as set forth in Table 2306.4.5.

**2306.4.5.1.7 Other gypsum boards.** Gypsum board shall be applied parallel or perpendicular to studs. Maximum allowable shear values shall be as set forth in Table 2306.4.5.

**Reason:** Provisions being deleted from Section 2306 of the IBC are also contained in the AF&PA *Special Design Provisions for Wind and Seismic* (AF&PA SDPWS) which is currently adopted by reference. Deleted provisions are primarily for the building designer and duplication of the provisions is not necessary and causes confusion. However, this proposed change retains tabulated values of ASD unit shear capacity for shear walls and diaphragms as the building code has been the primary source of this information for many years. ASD unit shear capacities for shear walls and diaphragms can also be obtained directly from the SDPWS-05. Over time, it is desired that all the design provisions, including tabulated ASD unit shear capacities, be obtained by reference to the SDPWS. Provisions of the IBC Section 2306 are covered in SDPWS-05 as shown in Table 2306.

**Table 2306. Comparison of IBC Section 2306 and SDPWS-05**

IBC Section 2306	SDPWS-05	Comment
2306.2.1	3.1.1.1	Same
Table 2306.2.1	Table 3.1.1.1	Same
2306.3.1	4.1.2	Same
2306.3.2	Table 4.2A-C	Same except increase for wind is incorporated in SDPWS design value tables.
2306.3.3	4.2.7.2, 4.2.7.3	Same
2306.3.4	4.2.7.2	Same except 40% increase is recognized for wind design consistent with SDPWS.
2306.3.4.1	4.2.7.2	Same
2306.3.4.2	4.2.7.2	Same
2306.3.5	4.2.7.3	Same except 40% increase is recognized for wind design consistent with SDPWS.
2306.4	4.3.7	Same
2306.4.1	4.1.2	Same
2306.4.3	4.3.7.2	Same except 40% increase is recognized for wind design consistent with SDPWS.
2306.4.4	4.3.7.3	Same except 40% increase ins recognized for wind design consistent with SDPWS.
2306.4.5.1	4.3.7.4	Same
2306.4.5.1.1	4.3.7.4	Same
2306.4.5.1.2	4.3.7.4	Same
2306.4.5.1.3	4.3.7.4	Same
2306.4.5.1.4	4.3.7.4	Same
2306.4.5.1.5	4.3.7.4.3	Same
2306.4.5.1.6	4.3.7.4.2	Same
2306.4.5.1.7	4.3.7.4	Same

With removal of duplicate information, it is suggested that remaining sections be numbered as follows:

**SECTION 2306**

**ALLOWABLE STRESS DESIGN**

**2306.1 Allowable stress design.**

**2306.1.1 Joists and rafters.**

**2306.1.2 Plank and beam flooring.**

**2306.1.3 Treated wood stress adjustments.**

**2306.1.4 Lumber decking.**

**2306.2 Wood diaphragms.**

**2306.2.1 Wood structural panel diaphragms.**

**2306.2.2 Single diagonally sheathed lumber diaphragms.**

**2306.2.3 Double diagonally sheathed lumber diaphragms.**

**2306.2.4 Gypsum board diaphragm ceilings.**

**2306.3 Shear walls.**

**2306.3.1 Wood structural panel shear walls.**

**2306.3.2 Lumber sheathed shear walls.**

**2306.3.3 Particleboard shear walls.**

**2306.3.4 Fiberboard shear walls.**

**2306.3.5 Shear walls sheathed with other materials.**

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

Public Hearing: Committee: AS      AM      D  
 Assembly: ASF      AMF      DF

**S112-06/07: Replace Part I of the proposal with the following:**

**2509.2 Base for tile.** ~~Glass mat gypsum, Cement, fiber-cement or glass mat gypsum~~ fiber-mat reinforced cement backers in compliance with ASTM C 1178, C 1288 or C 1325 and installed in accordance with manufacturer recommendations shall be used as a base for wall tile in tub and shower areas and wall and ceiling panels in shower areas. Water-resistant gypsum backing board shall be used as a base for tile in water closet compartment walls when installed in accordance with GA-216 or ASTM C 840 and manufacturer recommendations. Regular gypsum wallboard is permitted under tile or wall panels in other wall and ceiling areas when installed in accordance with GA-216 or ASTM C 840.

**S115-06/07: Add the following standard update**

**DOC**  
 PS 20- 99 05 *American Softwood Lumber Standard*

**S117-06/07: Add the following code change:**

**S117-06/07**  
**Table 2306.4.4**

**Proponent:** Louis Wagner, American Fiberboard Association

**Delete Table 2306.4.4 and substitute as follows:**

**TABLE 2306.4.4**  
**ALLOWABLE SHEAR VALUES (plf) FOR WIND OR SEISMIC LOADING ON SHEAR WALLS OF FIBERBOARD SHEATHING BOARD CONSTRUCTION FOR TYPE V CONSTRUCTION ONLY<sup>a,b,c,d,e</sup>**

<b>THICKNESS AND GRADE</b>	<b>FASTENER SIZE</b>	<b>ALLOWABLE SHEAR VALUE (pounds per linear foot) nail spacing at panel edges (inches)<sup>a</sup></b>		
		<b>4</b>	<b>3</b>	<b>2</b>
<b>1/2" or 25/32" Structural</b>	<u>No. 11 gage galvanized roofing nail 1-1/2" long for 1/2", 1-3/4" for 25/32" with 3/8" head</u>	<u>170</u>	<u>230</u>	<u>260</u>
	<u>No. 16 gage galvanized staple, 7/16" crown<sup>f</sup></u>	<u>150</u>	<u>200</u>	<u>225</u>
	<u>No. 16 gage galvanized staple, 1" crown<sup>f</sup></u>	<u>220</u>	<u>290</u>	<u>325</u>

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m

- a. Fiberboard sheathing shall not be used to brace concrete or masonry walls.
- b. Panel edges shall be backed with 2 inch or wider framing of Douglas fir-larch or Southern pine. For framing of other species: (1) Find specific gravity for species of framing lumber in AF&PA NDS. (2) For staples, multiply the shear value from the table above by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species. (3) For nails, multiply the shear value from the table above by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific gravity of the framing lumber.
- c. Values shown are for fiberboard sheathing on one side only with long panel dimension either parallel or perpendicular to studs.
- d. Fastener shall be spaced 6 inches on center along intermediate framing members.
- e. Values are not permitted in Seismic Design Category D, E, or F.
- f. Staple length shall not be less than 1-1/2" for 25/32-inch sheathing or 1-1/4" for 1/2-inch sheathing.



**Reason:** This change incorporates revisions consistent with those implemented in the reference document SDPWS-05 for nailed fiberboard shear walls. Nailed values are based on requirements in ASTM C208 for fiberboard and test results in PFS Test Report #96-60 such that the minimum target ratio of test load to allowable load is 2.8 Test results for 2 inch edge nail spacing are adjusted for 3" and 4" edge nail spacing assuming load per nail for 2 inch edge nailing is 75% of that for less dense 3 inch and 4 inch edge nail patterns. The ratio of 75% is based on minimum requirements of ASTM C208 for 3 inch edge nail spacing. During a prior change submittal, cyclic data was not available for fiberboard shear walls. Cyclic testing has been conducted and results are reported in WMEL-2002-03 (see page 56). Results confirm adequacy in resisting cyclic loads as the ratio of cyclic to monotonic strength values were equivalent to those for wood structural panel control walls. Stapled values are derived from tests (PFS Test Report #96-60) in a consistent manner to nailed values such that the minimum target ratio of test load to allowable load will be 2.8. Values are not permitted for lateral resistance in Seismic Design Categories D, E, or F consistent with provisions of the SDPWS-05 for nailed fiberboard shear walls.

**Bibliography:**

Special Design Provisions for Wind and Seismic (SDPWS) 2005 Edition American Forest & Paper Association  
Available at <http://www.awc.org/pdf/windsiesmicsupp.pdf>  
Monotonic and Cyclic Tests of Shear Walls With Gypsum Wallboard, Fiberboard and Hardboard Siding  
Report No. WMEL-2002-03 Dolan and Toothman  
Available at [www.fiberboard.org](http://www.fiberboard.org)  
PFS Test Report#96-60 Available at [www.fiberboard.org](http://www.fiberboard.org)

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

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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# INTERNATIONAL EXISTING BUILDING CODE – (VOLUME II)

**EB2-06/07: Replace the proposal with the following:**

**101.5 Compliance methods.** The repair, alteration, change of occupancy, addition or relocation of all existing buildings shall comply with one of the methods listed in Sections 101.5.1 through 101.5.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the code official. Sections 101.5.1 through 101.5.3 shall not be applied in combination with each other.

**Exception:** Alterations complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless ~~the building has sustained substantial structural damage as defined in Section 506.2,~~ or the building is undergoing more than a limited structural alteration as defined in Section 807.5.3. New structural members added as part of the repair or alteration shall comply with the *International Building Code*. ~~Repairs and~~ Alterations of existing buildings in flood hazard areas shall comply with ~~Sections 501.4 and~~ Section 601.3, respectively.

(Reason and cost impact remain as published)

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# TENTATIVE ORDER OF DISCUSSION

REVISED 7/31/06

## 2006-2007 PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes. Code Changes to the International Wildland-Urban Interface Code (WUIC) are heard by the International Fire Code Committee.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation **does not** necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair.

### WILDLAND-URBAN

G221-06/07, Part XI  
WUIC1-06/07  
G1-06/07, Part XII  
WUIC2-06/07  
WUIC3-06/07  
WUIC4-06/07  
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FS11-06/07 Part VII  
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WUIC52-06/07

### FIRE CODE

G221-06/07, Part IV  
G1-06/07, Part V  
F1-06/07  
G3-06/07, Part IV  
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F35-06/07  
E38-06/07, Part II  
F36-06/07  
F37-06/07  
F38-06/07  
F39-06/07  
F40-06/07, Part 1  
F41-06/07, Part I  
F42-06/07, Part I  
F43-06/07  
G7-06/07, Part II  
G90-06/07, Part II  
F44-06/07  
F45-06/07  
F46-06/07  
F220-06/07  
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F60-06/07  
FS14-06/07, Part II  
FS15-06/07, Part II  
F61-06/07  
FS11-06/07, Part IV  
G6-06/07, Part II  
F62-06/07  
F63-06/07  
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F80-06/07, Part I  
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F97-06/07  
F98-06/07  
F221-06/07  
F99-06/07  
F100-06/07  
F101-06/07  
G2-06/07, Part II  
F102-06/07  
F103-06/07  
F104-06/07  
F105-06/07  
F106-06/07  
F226-06/07  
F107-06/07  
F108-06/07

F109-06/07	F166-06/07
F110-06/07	F167-06/07
F111-06/07, Part 1	F168-06/07
F112-06/07	F169-06/07
F113-06/07, Part 1	F224-06/07
F114-06/07, Part 1	F170-06/07
F115-06/07, Part 1	F171-06/07
F116-06/07	F231-06/07
F117-06/07	F172-06/07
F118-06/07	F173-06/07
F119-06/07	F174-06/07
F120-06/07, Part I	F175-06/07
F121-06/07, Part I	F176-06/07
F122-06/07, Part I	F177-06/07
F123-06/07	F178-06/07
F124-06/07	F179-06/07
F125-06/07	F180-06/07
F126-06/07	F181-06/07
F127-06/07	F182-06/07
F128-06/07	F183-06/07
F129-06/07	F184-06/07
F130-06/07	F185-06/07
F131-06/07	F186-06/07
F132-06/07	F187-06/07
F133-06/07	F188-06/07
E1-06/07, Part II	F189-06/07
F134-06/07	F219-06/07
F135-06/07	F190-06/07
F136-06/07	F191-06/07
F137-06/07	F192-06/07
F138-06/07	F193-06/07
F139-06/07	F194-06/07
F140-06/07	F195-06/07
F141-06/07	F196-06/07
F142-06/07	F197-06/07
F228-06/07	F198-06/07
F143-06/07	F199-06/07
F225-06/07	F200-06/07
<u>F233-06/07</u>	F201-06/07
F144-06/07	F202-06/07
F145-06/07	F232-06/07
F146-06/07	F203-06/07
F147-06/07	F204-06/07
F148-06/07	<del>F204-06/07</del>
F149-06/07	<u>F205-06/07</u>
F150-06/07	F206-06/07
F151-06/07	F207-06/07
F152-06/07	F208-06/07
F153-06/07	F209-06/07
F154-06/07	F210-06/07
F155-06/07	F211-06/07
F156-06/07, Part I	F212-06/07
F229-06/07	F213-06/07
F157-06/07	F214-06/07
F158-06/07	F215-06/07
F159-06/07	*F216-06/07, Part I
F160-06/07	*F217-06/07
F161-06/07	*F222-06/07
F162-06/07	*F223-06/07
F163-06/07	*FS37-06/07, Part IV
F164-06/07	*F227-06/07
F165-06/07	*F230-06/07
F218-06/07	

\* Indicates left off of  
initial 2<sup>nd</sup> posting

**F233-06/07: Add new code change as follows:**

**F233-06/07**  
**1504.7.3**

**Proponent:** Ben Greene, City of Englewood, Colorado, representing Fire Marshal’s Association of Colorado

**Revise as follows:**

**1504.7.3 Air Ventilation rate and velocity.** Ventilation systems shall be designed, installed and maintained such that the average air velocity over the open face of the booth, or booth cross section in the direction of airflow during spraying operations, shall not be less than 100 feet per minute (0.51 m/s). the vapor concentration within the spray room, spray booth or spray space does not exceed 25% of the LFL. Ventilation rate and velocity shall be determined using the following formula:

$$R_{CFM} = ((L \times W \times H) - (Sf)) \times Ac$$

$R_{CFM}$  = Required ventilation in cubic feet per minute

$L$  = Length inside of booth

$W$  = Width inside of booth

$H$  = Height inside of booth

$Sf$  = Structural features inside of booth, such as gables, beams, filter bank structures, etc. (Shall not include the object(s) being refinished.)

$Ac$  = Number of air changes per minute. (4 is the standard)

$$A_{FPM} = R_{CFM} / Fb$$

$A_{FPM}$  = Average linear feet per minute ventilation measured at the exhaust filter bank

$R_{CFM}$  = Required ventilation in cubic feet per minute

$Fb$  = Exhaust filter bank measured in square feet

**Reason:** The purpose of this code change is to clarify the air flow requirements for spray booths, spray rooms and spray spaces.

The existing language uses 100 feet per minute. This language does not allow for increased sizes of booths and does not address small booths. The proposed language provides a simple formula for verification that the air changes per minute provide an environment complying with 25% or less LFL. The 25% of the LFL is based upon the IMC Section 510.2 for required ventilation when concentrations exceed the 25% of the LFL.

In the formula  $R_{CFM}$ , the use of 4 is the number of air changes required per minute. This number is used by both SMACNA and ASHRAE standards for indoor air quality.

Below are examples of the 100 feet per minute and the calculations of 25% of the LFL

**Example #1**

Spray booth is 14' wide, 9' tall and 24' in length

Using the 100 linear feet the air flow requirement would be 14' x 9' x 100 FPM = 12,600 cubic feet of air per minute.

If you divide the required air flow by the cubic feet of the booth (14' x 9' x 24' = 3,024 cubic feet) you have 4.2 air changes per minute.

This exceeds the requirement of 25% of the LFL.

Using the same size booth with the proposed code change:

$((24' \times 14' \times 9') - (0)) \times 4 = 12,096$  cubic feet per minute. This meets the requirement for 25% of the LFL

**Example #2**

Spray booth is 14' wide, 9' tall and 30' in length

Using the 100 linear feet the air flow requirement would be 14' x 9' x 100 FPM = 12,600 cubic feet of air per minute

If you divide the required air flow by the cubic feet of the booth (14' x 9' x 30' = 3,780 cubic feet) you have only 3.32 air changes per minute. This does not meet the requirement of 25% of the LFL.

Using the same size booth with the proposed code change:

$((30' \times 14' \times 9') - (0)) \times 4 = 15,120$  cubic feet per minute. This meets the requirement for 25% of the LFL.

**Example #3**

Bench spray booth is 4' wide, 4' tall and 6' in length

Using the 100 linear feet the air flow requirement would be 4' x 4' x 100 FPM = 1,600 cubic feet of air per minute.

If you divide the required air flow by the cubic feet of the booth (4' x 4' x 6' = 96 cubic feet) you have 16.6 air changes per minute.

Exceeding the 25% of the LFL. This may not be a reasonable amount of air to move through the bench spray booth.

Using the same size bench booth with the proposed code change:

$((4' \times 4' \times 6') \times (0)) \times 4 = 384$  cubic feet per minute. This meets the required 25% of the LFL and is a reasonable air flow through the bench spray booth.

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

Public Hearing: Committee: AS AM D  
Assembly: ASF AMF DF

# IRC – BUILDING/ENERGY – (VOLUME II)

**RB124-06/07: Replace the proposal with the following:**

**Revise as follows:**

**R319.3 Fasteners.** Fasteners for pressure-preservative and fire-retardant-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A153.

**Exceptions:**

1. One-half-inch (12.7 mm) diameter or larger steel bolts.
2. Fasteners ~~other than nails and timber rivets~~ shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55, minimum.

(Reason and cost impact remain as published)

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