

Proposed Change as Submitted

Proponent: Robert J Davidson, Code Consultant, Alan Shuman, President, representing the National Association of State Fire Marshals (NASFM)

Revise as follows:

504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one. These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3. For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one, but shall not exceed 60 feet (18 288 mm) or four stories, respectively.

Exceptions: The use of an automatic sprinkler system to increase building heights shall not be permitted for the following conditions:

1. Buildings, or portions of buildings, classified as a Group I-2 occupancy of Type IIB, III, IV or V construction.
2. Buildings, or portions of buildings, classified as a Group H-1, H-2, H-3 or H-5 occupancy.
3. ~~Fire-resistance rating substitution~~ Buildings where an automatic sprinkler system is substituted for fire-resistance rated construction in accordance with Table 601, Note d.
4. Buildings where an automatic sprinkler system is used to increase the building height or number of stories in accordance with Section 506.3.

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the area limitation in Table 503 is permitted to be increased by an additional 200 percent ($I_s = 2$) for buildings with more than one story above grade plane and an additional 300 percent ($I_s = 3$) for buildings with no more than one story above grade plane. ~~These increases are permitted in addition to the height and story increases in accordance with Section 504.2.~~

Exception: The use of an automatic sprinkler system to increase the building area limitation-increases shall not be permitted for the following conditions:

1. ~~The automatic sprinkler system increase shall not apply to Buildings with an occupancy in Group H-1.~~ Buildings classified as a Group H-1 occupancy.
2. ~~The automatic sprinkler system increase shall not apply to the building area of an occupancy in Group H-2 or H-3.~~ Buildings, or portions of buildings, classified as either a Group H-2 or H-3 occupancy. For buildings containing such occupancies, the allowable area shall be determined in accordance with Section 508.4.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.
3. Buildings where an automatic sprinkler system is substituted for fire-resistance rated construction ~~Fire-resistance rating substitution~~ in accordance with Table 601, Note d.
4. Buildings where an automatic sprinkler system is used to increase the building height or number of stories in accordance with Section 504.2.

Reason: In reviewing this comment we ask that you keep in mind that when the IBC was created, there was a policy decision made that when merging the three legacy codes into one, any conflict between legacy code provisions would default to the lesser requirement. This reportedly was done to avoid adoption problems for jurisdictions when moving to the IBC from a legacy code, i.e., if the new code was more restrictive there could be opposition to adoption. The concept of balance is constantly bandied about when examining specific code provisions in that when looking at the code as a whole, one requirement balances out the other. This concept is spoken of specifically when dealing with automatic sprinkler system trade offs. If we accept the fact that the three separate legacy codes were balanced, i.e., they had some requirements less restrictive than the same topic in another legacy code but they had other topics that were more restrictive, what happened when we merged the three codes? We went through and took the lowest requirement from each code without taking the more restrictive. What happened to the balancing effect that each legacy code had developed over the years? It does not exist in the IBC.

Another way to look at this issue is that in many jurisdictions the building code is the minimum standard to apply, in some it is the minimum and the maximum standard, (mini-max code). In any jurisdiction that previously applied one of the legacy codes, at the time they had a legacy code effective, the current IBC provisions would be less than that applicable code permitted. In other words, application of many of the provisions in the

IBC would be illegal. It is for that reason we seek to reduce the size of some of the buildings permitted to be built under the IBC to start to bring balance back to the code.

Those of us that have been proposing to modify some of the height and area requirements have been asked by opponents why we are so focused on this issue, what is so wrong with the height and areas. To be honest, we are not focused on this one issue. We have been active in many areas of the code we felt need clarification or tightening of requirements. But our specific interest in the height and area is because of the cumulative effect of the process we describe in the first two paragraphs of this reasoning statement.

We not only get bigger buildings under the IBC as compared to various legacy codes, we get them with less protective features and a reduced ability to withstand attack by fire. In much of the country Type 1A construction required 4 hour protection. Now it only requires 3 hour protection. So the buildings are bigger and when attacked by fire they may come down quicker.

The size of the buildings directly relates to how much area a responding fire department must deal with and possibly how much area must be searched. No one checked with the fire service to see if their manning levels could handle the increased size allowance coupled with the reduction in protection features. Take a look at the legacy codes and compared the restrictions on communicating floor levels with what the IBC allows now. So not only are the buildings bigger with reduced fire resistance requirements, we now allow the smoke and heat to travel to more of the building.

The answer we get on this topic is that the buildings in question will have an automatic fire suppression system and that takes care of all of your concerns. Though we are strong believers in the installation of automatic sprinkler systems and we would like to eventually see them installed in all buildings and structures, we also believe in striking a balance. Being safe means not relying on a single method of protection, or in this case a single protective system.

This position is supported by the recent NFPA report, "U.S. Experience with Sprinklers and Other Automatic Fire Extinguishing Equipment", <http://www.nfpa.org/assets/files/PDF/QSprinklers.pdf>. Though overall sprinklers operate in 95% of all reported structure fires and are effective 96% of that time, resulting in a combined overall effectiveness of 91%. The actual percentage changes based upon occupancy with warehouses at the 78% level.

They are out of service for maintenance, construction, (tenant improvements), unintentional human error. There is also a vulnerability factor-besides seismic, we have experience where systems were taken out by vehicle crash or explosion. In instances of improper design/use or arson, the system can be overcome. Most sprinkler systems as designed don't extinguish the fire, they only control it and there can be tremendous smoke generation and spread (particularly smoldering or shielded fires, etc). In fact, sprinklers drive the smoke lower and impede visibility, building size becomes more of an issue to both rescue (panic) and firefighting.

To balance this out we seek buildings to have increased fire-resistive design and they get larger. The larger the building the more time the fire service needs to deal with rescue and fire extinguishment. The more time the fire service needs to be in the building during adverse conditions, the better protected the building needs to be.

This proposal seeks to strike a balance. An increase would still be permitted based upon the presence of the automatic sprinkler protection, but a choice would have to be made to take either an area increase or a height increase, not both.

This proposal does not stop larger buildings from being constructed, what it does is change the trigger for the use of non-combustible versus combustible types of construction and changes the trigger of when protected types of construction would be required and at what fire resistance rating to building a larger building.

As already stressed fire departments suffer through wave after wave of cut backs in staff, equipment and fire stations, this issue increases in importance every day.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: DAVIDSON-SHUMAN-G4-504.2.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent provided no new data or information to provide technical justification for this change. The committee felt that the issues of height and area have been more than adequately reviewed both during the original drafting of the code and through the subsequent studies of the CTC. This proposal provided no information that distinguished it from past proposals that were disapproved in the past code development cycles.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Robert J Davidson, Davidson Code Concepts, LLC, representing self, requests Approval as Submitted.

Commenter's Reason: The committee disapproved the proposal by a narrow vote with the following reason statement:

The proponent provided no new data or information to provide technical justification for this change. The committee felt that the issues of height and area have been more than adequately reviewed both during the original drafting of the code and through the subsequent studies of the CTC. This proposal provided no information that distinguished it from past proposals that were disapproved in the past code development cycles.

That is an incorrect assessment by some of the committee members. New information is included below and new testimony was provided. It is disingenuous of some committee members to refer to "subsequent studies of the CTC". Everyone that followed that process knows that CTC recommended a change, a big change concerning height and area. The problem is the majority of the ICC membership did not agree with the change that was proposed. This proposal is an alternate recommendation and deserves equal consideration, not simply brushed off because another group already looked at the issue.

As fire departments across the nation continue to suffer layoffs and cutbacks of staff responsible for firefighting and fire inspections there has to be acknowledgement that we cannot balance the code on the backs of emergency responders. We need realistic balance that recognizes that

sprinkler systems, though effective when properly installed, inspected and maintained, are not 100% perfect. The fire service needs time to perform their duties safely and effectively and that equates to a higher fire resistance rating of structural support as buildings get larger. This proposal does not stop large buildings from being built, it will only modify the threshold at which the higher levels of construction are required. The original reason statement is included for information and background.

Final Action: AS AM AMPC_____ D

G99-09/10

506.3

Proposed Change as Submitted

Proponent: Sam Francis, representing American Forest & Paper Association

Revise as follows:

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, in addition to the height and story increases in accordance with Section 504.2, the building area limitation in Table 503 is permitted to be increased by the amounts specified in either Item 1 or Item 2 as follows: the building area limitation in Table 503 is permitted to be increased by an additional 200 percent ($I_s = 2$) for buildings with more than one story above grade plane and an additional 300 percent ($I_s = 3$) for buildings with no more than one story above grade plane. These increases are permitted in addition to the height and story increases in accordance with Section 504.2,

1. An additional 200 percent ($I_s = 2$) for buildings with more than one story above grade plane or an additional 300 percent ($I_s = 3$) for buildings with no more than one story above grade plane.
2. An additional 100 percent ($I_s = 1$) for buildings up to four stories above grade plane when the automatic sprinkler system is omitted from the unoccupied attic space and the roof is sheathed with fire retardant treated wood structural panels.

Exception: ~~The~~ Building area limitation increases shall not be permitted for the following conditions:

1. The automatic sprinkler system increase shall not apply to buildings with an occupancy in Group H-1.
2. The automatic sprinkler system increase shall not apply to the building area of an occupancy in Group H-2 or H-3. For buildings containing such occupancies, the allowable building area shall be determined in accordance with Section 508.4.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.
3. Fire-resistance rating substitution in accordance with Table 601, Note d.

Reason: AF&PA commissioned testing of three roof attic assembly configurations¹:

- 1) FRT wood trusses and FRT wood sheathing
- 2) Untreated wood trusses and untreated wood sheathing
- 3) Untreated wood trusses and FRT wood sheathing.

These tests were conducted to the same ad-hoc test protocol² used to modify sprinkler head spacing and water pressure requirements in NFPA 13.

AF&PA tests demonstrated that the fire performance of a roof assembly constructed with fire retardant treated (FRT) wood trusses and FRT wood sheathing (Configuration 1) resulted in no fire growth which is better performing than a roof assembly protected with a NFPA 13 sprinkler system. This configuration is exempt from attic sprinkler systems in NFPA 13.

Configuration 2, a roof assembly constructed with untreated wood trusses and untreated wood sheathing, had sustained fire growth when using the ad-hoc test protocol.

Configuration 3, a roof assembly constructed with untreated wood trusses and FRT wood sheathing, had similar results to Configuration 1 affording better protection than the NFPA 13 attic sprinkler system. This code change proposal recognizes the improved fire performance demonstrated by this configuration. The area limitation in Table 503 for buildings using this configuration and otherwise sprinklered throughout in accordance with NFPA 13 are permitted to be increased 100%.

1. "Flammability of Full Scale Roof Attic Assemblies by Ignition with 6 lb and 35 lb Wood Crib and Measurement of Heat Release," Omega Point Laboratories, Project 15475-117047, November 2004.

2. "Spray Sprinklers Installed in Sloped Combustible Concealed Spaces," Underwriters Laboratories Inc., Project 01NK32756, EX5985, September 2001

Cost Impact: The code change proposal will not increase the cost of construction. Will reduce cost of construction by approximately \$3/sq.ft. of roof area.

ICCFILENAME:FRANCIS-G1-506 3.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee felt that while the code often has provisions different than, and superseding of, referenced standards, the departure from the NFPA standard contained in this proposal would be better reviewed by NFPA in the context of revising the sprinkler standard. While the proposal concentrated on the make-up of the roof sheathing, the committee noted the presence of other combustible materials in attics, especially structural framing supporting the roof, that would be unprotected.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sam Francis, representing American Wood Council (FF&PA), requests Approval as Submitted.

Commenter's Reason: AF&PA commissioned testing of three roof attic assembly configurations¹:

- 1) FRT wood trusses and FRT wood sheathing
- 2) Untreated wood trusses and untreated wood sheathing
- 3) Untreated wood trusses and FRT wood sheathing.

These tests were conducted to the **same ad-hoc test protocol**² used to modify sprinkler head spacing and water pressure requirements in NFPA 13. AF&PA tests demonstrated that the fire performance of a roof assembly constructed with fire retardant treated (FRT) wood trusses and FRT wood sheathing (Configuration 1) resulted in no fire growth which is better performing than a roof assembly protected with a NFPA 13 sprinkler system. **This configuration is currently exempt from attic sprinkler systems in NFPA 13.**

Configuration 2, a roof assembly constructed with untreated wood trusses and untreated wood sheathing, had sustained fire growth when using the ad-hoc test protocol.

Configuration 3, a roof assembly constructed with untreated wood trusses and FRT wood sheathing, had similar results to Configuration 1 affording better protection than the NFPA 13 attic sprinkler system.

The report of the tests can be viewed at

<http://www.awc.org/fire/testreport.html>

username: guest

password: awc

This code change proposal recognizes the improved fire performance demonstrated by this configuration. The area limitation in Table 503 for buildings using this configuration and otherwise sprinklered throughout in accordance with NFPA 13 are permitted to be increased 100%. The question left for the membership to decide is this: do we wish to control the locations where we will require sprinklers to be placed and where we will permit them to be omitted reserving the installation and design information to a standard. OR do we wish to revise this code and other codes which currently have similar exceptions for sprinklers which allow omission of heads in certain specified spaces. As an example, the omission of heads in bathrooms and/or closets of some buildings is a condition decided by this membership.

AF&PA commissioned testing using the exact same ad hoc test protocol used by others to create the current exemption in the sprinkler standard: NFPA 13. Despite AF&PA's efforts, the committee ignored the alternate configurations which resulted in equally good fire performance when compared to either of the other configurations. This should be corrected.

1. "Flammability of Full Scale Roof Attic Assemblies by Ignition with 6 lb and 35 lb Wood Crib and Measurement of Heat Release," Omega Point Laboratories, Project 15475-117047, November 2004.
2. "Spray Sprinklers Installed in Sloped Combustible Concealed Spaces," Underwriters Laboratories Inc., Project 01NK32756, EX5985, September 2001

Final Action:

AS

AM

AMPC_____

D

G100-09/10

506.4.1, 506.5.2

Proposed Change as Submitted

Proponent: Dennis Richardson PE, dbr Group Inc., representing self

Revise as follows:

506.4 Single occupancy buildings with more than one story. The total allowable *building area* of a single occupancy building with more than one *story above grade plane* shall be determined in accordance with this section. The actual aggregate *building area* at all *stories* in the building shall not exceed the total allowable *building area*.

Exception: A single basement need not be included in the total allowable *building area*, provided such basement does not exceed the area permitted for a building with no more than one *story above grade plane*.

506.4.1 Area determination. The total allowable *building area* of a single occupancy building with more than one *story above grade plane* shall be determined by multiplying the allowable *building area per story* (A_a), as determined in Section 506.1, by the number of *stories above grade plane* as listed below:

1. For buildings with two *stories above grade plane*, multiply by 2;
2. For buildings with three or more *stories above grade plane*, multiply by 3; and
3. No *story* shall exceed the allowable *building area per story* (A_a), as determined in Section 506.1, for the occupancies on that *story*.

Exceptions:

1. Unlimited area buildings in accordance with Section 507.
2. The maximum area of a building equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.2 shall be determined by multiplying the allowable area per *story* (A_a), as determined in Section 506.1, by the number of *stories above grade plane*.
3. The first story of a single occupancy building with more than one story above grade plane shall not exceed the allowable building area permitted for a building of the same occupancy with one story above grade plane when all of the following criteria are met:
 - 3.1. The allowable area (A_a) of the first story above grade plane shall be determined individually based on the provisions in Section 506.1 for a building with no more than one story above grade plane.
 - 3.2. Each additional story shall not exceed the allowable building area per story (A_a), as determined in Section 506.1 for the occupancies on that story.
 - 3.3. The total allowable building area shall comply with Items 1 or 2 of Section 506.4.1 computed based on a building with more than one story above grade plane.

506.5 Mixed occupancy area determination. The total allowable *building area* for buildings containing mixed occupancies shall be determined in accordance with the applicable provisions of this section. A single basement need not be included in the total allowable *building area*, provided such basement does not exceed the area permitted for a building with no more than one *story above grade plane*.

506.5.1 No more than one story above grade plane. For buildings with no more than one *story above grade plane* and containing mixed occupancies, the total *building area* shall be determined in accordance with the applicable provisions of Section 508.1.

506.5.2 More than one story above grade plane. For buildings with more than one *story above grade plane* and containing mixed occupancies, each *story* shall individually comply with the applicable requirements of Section 508.1. For buildings with more than three *stories above grade plane*, the total *building area* shall be such that the aggregate sum of the ratios of the actual area of each *story* divided by the allowable area of such *stories* based on the applicable provisions of Section 508.1 shall not exceed 3.

Exception: The first story of a multi-story building shall not exceed the area permitted for a building with no more than one story above grade plane when all of the following criteria are met:

1. The allowable area of the first story above grade plane shall be determined individually in accordance with the applicable total building area provisions of Section 508.1 and comply with the building area provisions for a building with no more than one story above grade plane.
2. Each additional story shall individually comply with the applicable requirements of Section 508.1.
3. For buildings with two stories above grade plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such story, computed based on a building with more than one story above grade plane, based on the applicable provisions of Section 508.1, shall not exceed 2.
4. For buildings with three or more stories above grade plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such story, computed based on a building with more than one story above grade plane, based on the applicable provisions of Section 508.1, shall not exceed 3.

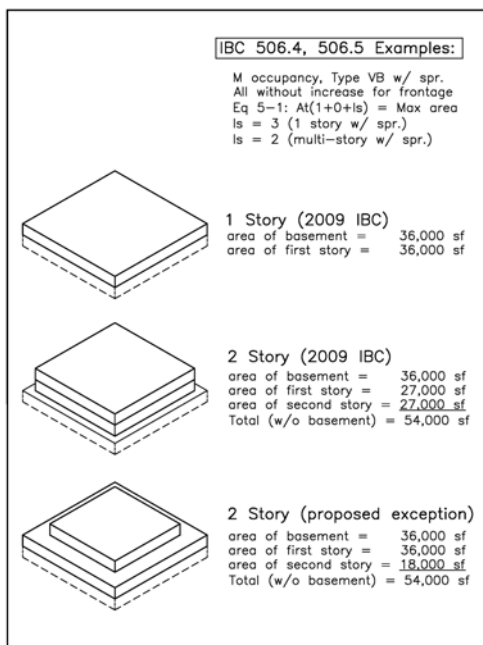
Reason: The proposed change would provide an exception allowing the first floor of a multi story building to be as large as a single story building which could be constructed on the same site as long as the total building area does not exceed the applicable code maximum allowable floor area.

Currently, based on Equation 5-1 and Section 506.3, a one story building with fire sprinklers throughout is permitted to be 4 times the Table 503 tabular area before considering any available area increase for frontage. However the first story of a multi-story building is limited to three times the tabular building area without consideration of any increase for frontage, even if the upper story levels are less than the maximum permitted area. The step function in the value of I_s between a one story building and all multistory buildings effectively limits the first story of multi-story buildings to 75% of the area allowed on that level for a one story building. This is true regardless of how small the second story is.

The current Section 506.4.1, item 3 indicates: No story shall exceed the allowable *building area per story* (A_a), as determined in Section 506.1 for occupancies on that *story*. This provision of the code encourages the construction of buildings that are box like in order to maximize building area with similar sized floors instead of allowing the flexibility for the designer to step back the upper floors giving the building the appearance of less mass and allowing more light to the street.

The exception to Section 506.4 and the last sentence in Section 506.5 each allow a single basement not to be included in the area calculation so long as the "basement area does not exceed the area permitted for a building with no more than one story above grade plane." Since a building with no more than one story above grade plane can be larger than the first floor of a similar multi-story building, this exception has the effect of allowing the basement to be larger in area than the area of first floor above it on a multi-story building.

The proposed code change is formatted as an exception so that it clear it does not change the existing code provisions unless utilized. When it is utilized it is intended to merely allow the first floor to be as large as it would otherwise be as a single story building without creating an increase in the total floor area of the entire building. As such the area of upper floors may have to be decreased from the maximum area that would otherwise be allowed so the total floor area is less than or equal to the total allowable building area. See attached example for a Group M occupancy, Type VB construction building. Similar examples would occur with other occupancies.



Cost Impact: The code change proposal will not increase the cost of construction. Because this exception does not have to be utilized by the designer and since it has the effect of allowing more construction to occur at grade where it is less expensive this proposed change would have the effect of decreasing construction cost if utilized by the designer.

ICCFILENAME: Richardson-G1-506.4.1 and 506.5.2

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Although the committee thought the concept included in the proposal may be an appropriate option to add to the code, it found the language of the proposal unclear and misleading. The committee expressed concern that the resulting building would potentially have first stories approaching unlimited area scale without any provision to improve firefighter access surrounding the building. Significantly smaller upper stories could also be set back a significant distance from the walls of lower story, again providing a challenging firefighter access issue. There appeared to be a potential that under a mixed occupancy scenario that an even larger building than intended could be achieved.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

David S. Collins, The Preview Group, LLC, representing The American Institute of Architects, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

506.4.1 Area determination. The total allowable *building area* of a single occupancy building with more than one *story above grade plane* shall be determined by multiplying the allowable *building area per story* (A_s), as determined in Section 506.1, by the number of *stories above grade plane* as listed below:

1. For buildings with two *stories above grade plane*, multiply by 2;
2. For buildings with three or more *stories above grade plane*, multiply by 3; and
3. No *story* shall exceed the allowable *building area per story* (A_s), as determined in Section 506.1, for the occupancies on that *story*.

Exceptions:

1. Unlimited area buildings in accordance with Section 507.
2. The maximum area of a building equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.2 shall be determined by multiplying the allowable area per *story* (A_s), as determined in Section 506.1, by the number of *stories above grade plane*.
- ~~3.~~ ~~The first story of a single occupancy building with more than one story above grade plane shall not exceed the allowable building area permitted for a building of the same occupancy with one story above grade plane when all of the following criteria are met:~~
 - ~~3.1-3.~~ The allowable area (A_s) of the first *story above grade plane* shall be determined individually based on the provisions in Section 506.1 for a building with no more than one *story above grade plane, when all of the following criteria are met.*
 - ~~3.1-3.1.~~ Each additional *story* shall not exceed the allowable *building area per story* (A_s), as determined in Section 506.1 for the occupancies on that *story*.
 - ~~3.2-3.2.~~ The total allowable *building area* shall comply with Items 1 or 2 of Section 506.4.1 computed based on a building with more than one *story above grade plane*.

506.5.2 More than one story above grade plane. For buildings with more than one story above grade plane and containing mixed occupancies, each *story* shall individually comply with the applicable requirements of Section 508.1. For buildings with more than three stories above grade plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such stories based on the applicable provisions of Section 508.1 shall not exceed 3.

Exception: ~~The first story of a multi-story building shall not exceed the area permitted for a building with no more than one story above grade plane when all of the following criteria are met:~~

- ~~1.~~ The allowable area of the first story above grade plane shall be permitted to be determined individually in accordance ~~with the applicable total building area provisions of Section 508.1 and comply~~ with the building area provisions for a building with no more than one story above grade plane per Section 508.1, provided the following are met:
- ~~2.~~ ~~1.~~ Each additional story shall individually comply with the applicable requirements of Section 508.1.
- ~~3.~~ ~~2.~~ For buildings with only two stories above grade plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such story, computed based on a building with more than one story above grade plane, ~~based on the applicable provisions of per~~ Section 508.1, shall not exceed 2.
- ~~4.~~ ~~3.~~ For buildings with three or more stories above grade plane, the total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such story, computed based on a building with more than one story above grade plane, ~~based on the applicable provisions of per~~ Section 508.1, shall not exceed 3.

Commenter's Reason: The committee disapproved this code change proposal even though there was no testimony against the proposal from the floor. The proposed change allows the first story above grade plane of a building with multiple stories above grade plane to be the same size as a building with only one story above grade plane as long as the total building area (including all stories) does not exceed the applicable total maximum floor area.

This comment has editorially changed the original proposal to reduce redundant language while keeping the intent and meaning intact.

Currently a sprinklered, single story building with the maximum floor area for a given occupancy, type of construction and site configuration could not have a second story addition of any size. This is because a second floor addition would change the sprinkler increase (Is) from a factor of 3 (for a building with only one story above grade plane) to an Is factor of 2 (for a building with multiple stories). A code compliant second story could not be constructed no matter how small unless 25% of the first floor is removed. This defies common sense and should be fixed in the code. For multiple occupancy buildings, G135-07/08 clarified and simplified the allowable area provisions for multi-story mixed occupancy buildings in Section 506.5.2. In doing so the 09 IBC acknowledged all three mixed occupancy design options (accessory occupancies, non-separated occupancies and separated occupancies).

The intent of this code change is to allow the first story above grade plane to be as large as a building with only one story above grade plane. The "sum of the ratios method of each story divided by the allowable maximum for that story as determined by any of the applicable methods" is used to ensure that the total building area does not exceed the maximum allowable area for the building.

Similar to single occupancy, multistory buildings, these mixed occupancy, multistory provisions only apply to buildings not permitted to be of unlimited area (unless of Type I and allowed to be unlimited by Table 503). As such, no reference to Section 507 was needed.

One final concern expressed by a committee member was that this could compromise firefighters due to building access and building step backs. This change does nothing to reduce the required yards and building access provisions and allows building step backs as is currently allowed

by the code. Given total building area and access, most firefighters when asked would rather fight a fire close to the ground rather than having to shuttle air tanks up a stair for breathing apparatus.

In summary, this code change proposal resolves a disconnect in the code which defies common sense. The code change proposal does nothing to decrease firefighter access and, for the same maximum size building, results in more of the overall building area to be located closer to the ground.

Final Action: AS AM AMPC_____ D

G101-09/10

507.1.1 (New)

Proposed Change as Submitted

Proponent: Sarah A. Rice, C.B.O., representing self

Add new text as follows:

507.1.1 Accessory occupancies. Occupancies not specifically listed in Section 507 shall be allowed to be located in unlimited area buildings provided the occupancy complies with Section 508.2 for an accessory occupancy.

Reason: The current text of Section 507 has been interpreted that unless an occupancy is specifically listed in that section it cannot be located within an unlimited area building. Unlimited area buildings are subject to the same guidelines as other buildings when it comes to 'accessory occupancies'. If the occupancy is one that is allowed and the area it occupies meets the size limitations of 508.2 they are allowed to be in an unlimited area building. The proposed language makes clear that occupancies which are not specifically listed in Section 507 are not prohibited from being in an unlimited area building as long as they meet the accessory occupancy provisions (including the 10% area limit in Section 508.

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

ICCFILENAME: RICE-G10-507.1.1.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee understood the concept of the proposal, but felt it needed to be more specific as to the accessory occupancies of concern or how they be applicable in the various unlimited area building scenarios. The use of the term 'listed' is not as the term is defined. The committee speculated that because 10% of an unlimited area building could be quite a large area whether a limit to the tabular value of Table 503 might not be appropriate.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

~~**507.1.1 Accessory occupancies.** Occupancies not specifically listed in Section 507 shall be allowed to be located in unlimited area buildings provided the occupancy complies with Section 508.2 for an accessory occupancy.~~

507.1 General. The area of buildings of the occupancies and configuration specified herein shall not be limited.

Exception: Other occupancies shall be permitted in unlimited area buildings in accordance with the provisions of Section 508.2.

Commenter's Reason: In its published reason for disapproval of G101-09/10, the ICC General Code Committee stated, "The committee understood the concept of the proposal, but felt it needed to be more specific as to the accessory occupancies of concern or how they be applicable in the various unlimited area building scenarios. The use of the term 'listed' is not as the term is defined. The committee speculated that because 10% of an unlimited area building could be quite a large area whether a limit to the tabular value of Table 503 might not be appropriate."

To simplify the concept of the inclusion of other occupancies in unlimited area buildings, the provision is relocated in context in the general charging language for unlimited area buildings as an exception to Section 507.1. Acknowledging the committee's concern about the term "listed," it has been removed.

As regards the committee's concern that limiting the accessory occupancy(s) to the tabular value(s) of Table 503 might be appropriate, Section 508.2.1 currently limits the area of the accessory occupancy to 10 percent of the floor area or the tabular limit without area increases.

Inasmuch as Section 507.8 allows for high hazard Group H occupancies in certain unlimited area buildings, it only stands to reason that ordinary hazard occupancies be permitted in unlimited area buildings under prescribed accessory mixed occupancy provisions. The clarification provided by this modification will greatly assist code users with this fairly obscure mixed occupancy condition. The Boeing Company has numerous two-story, unlimited area factories with additional occupancies such as cafeterias and day care facilities based on the requirements and limitations of Section 508.2. This is a common design practice nationwide.

Final Action: AS AM AMPC___ D

G103-09/10 507.3

Proposed Change as Submitted

Proponent: Tom Lariviere, Chairman, representing Joint Fire Service Review Committee

Revise as follows:

507.3 Sprinklered, one story. The area of a Group B, F, M or S building no more than one *story above grade plane*, or a Group A-4 building no more than one *story above grade plane* of other than Type V construction, shall not be limited when the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways or yards* not less than 60 feet (18 288 mm) in width.

Exceptions:

- 1- Buildings and structures of Type I and II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of Sections 507.3 and 903.3.1.1 and Chapter 23 of the *International Fire Code*.
- 2- ~~The automatic sprinkler system shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that:~~
 - 2.1- ~~Exit doors directly to the outside are provided for occupants of the participant sports areas; and~~
 - 2.2- ~~The building is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 907.~~

Reason: Code change F132-07/08 deleted the exception which allowed the elimination of a fire sprinkler system over participant sport areas in Group A-4 occupancies (See Section 903.2.1.4). However, when that code change was approved, a corresponding section in the IBC was overlooked. IBC 507.3 contains a similar exception to the item that was deleted in Chapter 9. Therefore, Exception 2 is proposed for deletion to be consistent with the action take last cycle in F132-07/08.

Section 507.3 allows for unlimited area buildings. Exception 2 would allow for an unlimited area Group A-4 occupancy and yet not require sprinklers over a major portion of the building.

The intention of the exception was for gymnasiums and similar areas where the probable occupant load was significantly less than what would be determined based on a square footage per occupant factor. However, these facilities have become multi-use and the occupant load is frequently higher than what was anticipated or expected when the exception was developed, and the fire load can vary based on the used to far exceed what would be expected for a sporting area.

For example, a community recreation center is constructed with no sprinklers over the gymnasium floor. The same area is also utilized for receptions and various community activities such as work fairs, rummage sale, art exhibits, emergency shelters for persons displaced by natural disasters, etc. Such uses could even include eating, sleeping, and fire loads far in excess of a few uniforms and leather volleyballs.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: LARIVIERE-G3-507.3

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee concluded that retaining this exception was not in conflict with the general limitations of Chapter 9 of the IBC and IFC because it was a specific provision that would take precedence over the general. The concerns expressed by supporters of the code change that these facilities get used for activities other than those listed were felt to be enforcement issues and should not be the basis of a code change. The listed activities are clearly those which have very limited fuel load on the sporting surface. The committee acknowledged that an

amendment that would clarify that the exception applies to just the sporting area and not surrounding support functions such as spectator seating, locker or dressing facilities or concession areas would be appropriate.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Joe Pierce, Dallas Fire Department, representing Joint Fire Service Review Committee, requests Approval as Submitted.

Commenter's Reason: The code change was Disapproved at the Code Development Hearing because the Code Development Committee felt that the exception applied in this case.

In the last code change cycle, Item F132-07/08 deleted the exception which allowed the elimination of a fire sprinkler system over participant sport areas in Group A-4 occupancies (See Section 903.2.1.4). This code change is merely a clean-up item that was missed in the original proposal. Therefore this Public Comment is suggesting that Approval as Submitted is the appropriate solution.

Item F132-07/08 removed this exception from the general sprinkler requirements. The approved revision in Section 903.2.1.4 applies to all situations regardless of the size of the building. This follow-up code change only applies to IBC Section 507.3, and is specific for unlimited area buildings. Exception 2 currently allows unlimited area A-4 occupancies without providing fire sprinklers over a major portion of the buildings.

The assembled membership decided that this exception is not appropriate for smaller Group A-4 occupancies when they approved F132-07/08. It is consistent with that thinking to eliminate the allowance for unlimited area buildings.

Final Action: AS AM AMPC____ D

G104-09/10

507.8

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company

Revise as follows:

507.8 Group H occupancies. Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited areas buildings containing Group F and S occupancies, in accordance with Sections 507.3 and 507.4 and the provisions ~~limitations of this section~~ Sections 507.8.1 through 507.8.3.

507.8.1 Allowable area. The aggregate floor area of ~~the~~ Group H occupancies located ~~at the perimeter of the~~ in an unlimited area building shall not exceed 10 percent of the area of the building nor the area limitations for the Group H occupancies as specified in Table 503 as modified by Section 506.2.

507.8.1.1 Located on building perimeter. Except as provided for in Section 507.8.1.2, Group H occupancies shall be located on the perimeter of the building. ~~, based upon the percentage of the perimeter of each Group H floor area that fronts~~ In Group H-2 and H-3 occupancies, not less than 25 percent of the perimeter of such occupancies shall front on a public way or open ~~street or other unoccupied~~ space.

507.8.1.2 Located within the building. The aggregate floor area of Group H occupancies not located at the perimeter of the building shall not exceed 25 percent of the area limitations for the Group H occupancies as specified in Table 503.

507.8.1.2.1 Liquid use, dispensing and mixing rooms. Liquid use, dispensing and mixing rooms having a floor area of not more than 500 square feet (46.5m²) need not be located on the outer perimeter of the building where they are in accordance with the International Fire Code and NFPA 30.

507.8.1.2.2 Liquid storage rooms. Liquid storage rooms having a floor area of not more than 1,000 square feet (93 m²) need not be located on the outer perimeter where they are in accordance with the International Fire Code and NFPA 30.

507.8.1.2.3 Spray paint booths. Spray paint booths that comply with the International Fire Code need not be located

on the outer perimeter.

507.8.2 Occupancy separations. Group H occupancies shall be separated from the remainder ~~rest~~ of the unlimited area building and from each other in accordance with Table 508.4.

507.8.3 Height limitations. For two-story unlimited area buildings, ~~the~~ Group H occupancies shall not be located more than one story above grade plane unless permitted based on ~~by~~ the allowable height in stories and feet as set forth in Table 503 for ~~based on~~ the type of construction of the unlimited area building.

Reason: This proposal is intended to clarify the provisions governing the placement of Group H occupancies in certain unlimited area buildings. Currently, all requirements are placed within a single run-on paragraph that does not separate thoughts or provisions. In its present format, it is easy to attempt to overlay requirements that are intended to address different design conditions. Additionally, Section 507.8 contains a very vague provision in that it states that Group H occupancies shall be located on the perimeter of the building based upon the “percentage of the perimeter” of each Group H floor area. No percentage figure is provided. Presumably, that is an indirect reference to Section 415.3. For purposes of continuity, Section 415.3 requirements have been incorporated into Section 507.8, including allowances for certain interior spaces. The format and clarity provided in this proposal will assist code users in the proper identification of requirements in this fairly rare, but very important provision.

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

ICCFILENAME: KEITH-G3-507.8.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee found the format of the proposal very appealing in the clarity it would bring to these provisions, however it appeared that the reformat includes a technical change in the relationship of the hazardous material area located at the building perimeter and the measurement of that perimeter.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

507.8 Group H occupancies. Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited areas buildings containing Group F and S occupancies, in accordance with Sections 507.3 and 507.4 and the provisions of this ~~sections 507.8.1 through 507.8.3.~~

507.8.1 Allowable area. The aggregate floor area of Group H occupancies in an unlimited area building shall not exceed 10 percent of the area of the building nor the area limitations for the Group H occupancies as specified in Table 503 as modified by Section 506.2, based upon the perimeter of each Group H floor area that fronts on a public way or open space.

507.8.1.2 507.8.1.1 Located within the building. The aggregate floor area of Group H occupancies not located at the perimeter of the building shall not exceed 25 percent of the area limitations for the Group H occupancies as specified in Table 503.

507.8.1.2.4 507.8.1.1.1 Liquid use, dispensing and mixing rooms. Liquid use, dispensing and mixing rooms having a floor area of not more than 500 square feet (46.5m²) need not be located on the outer perimeter of the building where they are in accordance with the International Fire Code and NFPA 30.

507.8.1.2.2 507.8.1.1.2 Liquid storage rooms. Liquid storage rooms having a floor area of not more than 1,000 square feet (93 m²) need not be located on the outer perimeter where they are in accordance with the *International Fire Code* and NFPA 30.

507.8.1.2.3 507.8.1.1.3 Spray paint booths. Spray paint booths that comply with the *International Fire Code* need not be located on the outer perimeter.

507.8.1.4 507.8.2 Located on building perimeter. Except as provided for in Section ~~507.8.1.2 507.8.1.1~~, Group H occupancies shall be located on the perimeter of the building. In Group H-2 and H-3 occupancies, not less than 25 percent of the perimeter of such occupancies shall be an exterior wall ~~front on a public way or open space.~~

507.8.2 507.8.3 Occupancy separations. Group H occupancies shall be separated from the remainder rest of the unlimited area building and from each other in accordance with Table 508.4.

507.8.3 507.8.4 Height limitations. For two-story unlimited area buildings, Group H occupancies shall not be located more than one story above

grade plane unless permitted based on the allowable height in stories and feet as set forth in Table 503 for the type of construction of the unlimited area building.

Commenter's Reason: In its published reason statement for the disapproval of Item G104-09/10, the ICC General Code Committee stated, "The committee found the format of the proposal very appealing in the clarity it would bring to these provisions, however it appeared that the reformat includes a technical change in the relationship of the hazardous material area located at the building perimeter and the measurement of that perimeter." The committee was correct and the technical error has been corrected. The error was that the procedure for determining the allowable area in Section 507.8.1 did not specify that Group H allowable area increases are based on the perimeter of the Group H occupancy as opposed to the unlimited area building as a whole. With this correction, the improved format recognized by the committee will greatly assist code users in the proper determination of these important provisions.

Final Action: AS AM AMPC_____ D

G105-09/10 507.10

Proposed Change as Submitted

Proponent: Joe Holland and Dave Bueche, representing Hoover Treated Wood Products

Revise as follows:

507.10 Group E buildings. The area of a Group E building no more than one *story above grade plane*, of Type II, ~~III~~ III or IV construction, shall not be limited when all of the following criteria are met:

1. Each classroom shall have not less than two *means of egress*, with one of the *means of egress* being a direct *exit* to the outside of the building complying with Section 1020.
2. The building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
3. The building is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

Reason: The exterior wall fire resistance required in Table 601 is greater for Type III than what is required for Type II and is equal to what is required for Type IV. The interior fire resistance in Type III construction is equivalent to Type II and therefore should be allowed. In addition, in Table 503 for E occupancies, the code recognizes that Type IIB and IIIB are equivalent in overall height, number of stories, and allowable area.

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

ICCFILENAME: HOLLAND-BUECHE-G2-507.10

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent did not provide sufficient technical support to justify reducing the allowed Type IIIA unlimited area building to the unrated Type IIIB. This could result in a significant increase in combustible materials in the building construction that would not be protected by one hour assemblies.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Joseph Holland and Dave Bueche, representing Hoover Treated Wood Products, Inc., requests Approval as Submitted.

Commenter's Reason: The provisions for a one story unlimited area Group E building of Type II, IIIA or IV construction require that 1) each classroom have not less than two means of egress with one being a direct exit to the outside of the building; 2) The building is equipped through with a sprinkler system; and 3) the building is surrounded and enjoined by public ways or yards not less than 60 feet. The exterior fire resistance required in Table 601 is greater for Type III than what is required for Type II and is equivalent for what is required for Type IV. The interior fire resistance in Type III construction is equivalent to Type II and should therefore be allowed. In addition, in Table 503 for E occupancies, the code recognizes that Type IIB and IIIB are equivalent in overall height, number of stories, and allowable area. This unlimited area building is required to be protected by an approved automatic sprinkler system in accordance with Section 903.3.1.1. The code in footnote d of Table 601 recognizes that

this type of sprinkler system can be substituted for 1-hour fire-resistance-rated construction provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted. A Type IIB building with no exterior wall fire protection is allowed to be of unlimited area.

The committees concern (see below) that that TYPE IIIB construction would result in a significant increase in combustible materials in the building construction that would not be protected by one hour assemblies is unfounded. The current code allows TYPE IV construction of unlimited area which has similar or greater fixed fire loads and does not need to be protected by one hour assemblies (Section 602.4.6, Partitions shall be of solid wood construction formed by not less than two layers of 1-inch (25 mm) matched boards or laminated construction 4 inches (102 mm) thick, or of 1-hour fire-resistance-rated construction.

For consistency in the code, a Type IIIB building with 2-hour fire-resistance-rated exterior walls should be allowed to be of unlimited area.

Final Action: AS AM AMPC_____ D

G106-09/10

507.11

Proposed Change as Submitted

Proponent: Joe Holland and Dave Bueche, representing Hoover Treated Wood Products

Revise as follows:

507.11 Motion picture theaters. In buildings of Type II or III construction, the area of a motion picture theater located on the first *story above grade plane* shall not be limited when the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

Reason: This change recognizes that Type III offers equivalent or superior fire resistance to Type II construction. The exterior wall fire resistance required in Table 601 is greater for Type III than what is required for Type II (2 hours versus 1 hour or none). The interior fire resistance in Type III construction is equivalent to Type II. In Table 503 for Group A-1 occupancies, the code recognizes that Type IIB and IIIB are equivalent in overall height, number of stories, and allowable area.

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

ICCFILENAME: HOLLAND-BUECHE-G3-507.11

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee disapproved this change because there was not justification that allowing motion picture theaters of unlimited size in a combustible building construction type where they are now only allows in non-combustible construction types.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Joseph Holland and Dave Bueche, representing Hoover Treated Wood, Inc., requests Approval as Submitted.

Commenter's Reason: The provisions for a one story unlimited area motion picture building of Type II construction requires that 1) The building is equipped through with a sprinkler system; and 2) the building is surrounded and enjoined by public ways or yards not less than 60 feet. The exterior fire resistance required in Table 601 is greater for Type III than what is required for Type II. The interior fire resistance in Type III construction is equivalent to Type II and should therefore be allowed. In addition, in Table 503 for A-1 occupancies, the code recognizes that Type IIB and IIIB are equivalent in overall height, number of stories, and allowable area. This unlimited area building is required to be protected by an approved automatic sprinkler system in accordance with Section 903.3.1.1. The code in footnote d of Table 601 recognizes that this type of sprinkler system can be substituted for 1-hour fire-resistance-rated construction provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted. A Type IIB building with no exterior wall fire protection is allowed to be of unlimited area. For consistency in the code, a Type IIIA or IIIB building with 2-hour fire-resistance-rated exterior walls should be allowed to be of unlimited area as well.

Final Action: AS AM AMPC_____ D

G107-09/10

508, 509 (New)

Proposed Change as Submitted

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

SECTION 508 MIXED USE AND OCCUPANCY

508.1 General. 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 the applicable provisions of Section 508.2, 508.3 or 508.4, or a combination of these sections.

Exceptions:

1. Occupancies separated in accordance with Section ~~509~~ 510.
2. Where required by Table 415.3.2, areas of Group H-1, H-2 and H-3 occupancies shall be located in a separate and detached building or structure.
3. Uses within live/work units, complying with Section 419, are not considered separate occupancies.

508.2 Accessory occupancies. Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through ~~508.2.4~~ 508.2.5.3.

508.2.1 Area limitations. Aggregate accessory occupancies shall not occupy more than 10 percent of the *building area* of the *story* in which they are located and shall not exceed the tabular values in Table 503, without *building area* increases in accordance with Section 506 for such accessory occupancies.

508.2.2 Occupancy classification. Accessory occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.

508.2.3 Allowable building area and height. The allowable *building area and height* of the building shall be based on the allowable *building area and height* for the main occupancy in accordance with Section 503.1. The height of each accessory occupancy shall not exceed the tabular values in Table 503, without increases in accordance with Section 504 for such accessory occupancies. The *building area* of the accessory occupancies shall be in accordance with Section 508.2.1.

508.2.4 Separation of occupancies. No separation is required between accessory occupancies and the main occupancy.

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
2. Incidental ~~accessory occupancies~~ *uses* required to be separated or protected by Section ~~508.2.5~~ 509.
3. Group I-1, R-1, R-2 and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from accessory occupancies contiguous to them in accordance with the requirements of Section 420.

(Relocate Section 508.2.5 through 508.2.5.3 to new Section 509)

508.3 Nonseparated occupancies. Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

508.3.1 Occupancy classification. Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code 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 building or portion thereof in which the nonseparated occupancies are located.

508.3.2 Allowable building area and height. The allowable *building 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.

508.3.3 Separation. No separation is required between nonseparated occupancies.

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
2. Group I-1, R-1, R-2 and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from other occupancies contiguous to them in accordance with the requirements of Section 420.

508.4 Separated occupancies. Buildings or portions of buildings that comply with the provisions of this section shall be considered as separated occupancies.

508.4.1 Occupancy classification. Separated occupancies shall be individually classified in accordance with Section 302.1. Each separated space shall comply with this code based on the occupancy classification of that portion of the building.

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)
[No change proposed to Table 508.4]

508.4.2 Allowable building area. In each *story*, the *building area* shall be such that the sum of the ratios of the actual *building area* of each separated occupancy divided by the allowable *building area* of each separated occupancy shall not exceed 1.

508.4.3 Allowable height. Each separated occupancy shall comply with the *building height* limitations based on the type of construction of the building in accordance with Section 503.1.

Exception: Special provisions permitted by Section ~~509~~ 510.

508.4.4 Separation. Individual occupancies shall be separated from adjacent occupancies in accordance with Table 508.4.

508.4.4.1 Construction. Required separations shall be fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712, or both, so as to completely separate adjacent occupancies.

SECTION 509
INCIDENTAL USES

~~508.2.5~~ 509.1 Separation of incidental uses ~~accessory occupancies~~. The incidental ~~uses~~ ~~accessory occupancies~~ listed in ~~Table 508.2.5~~ 509.1 shall be separated from the remainder of the building or equipped with an automatic fire-extinguishing system, or both, in accordance with ~~Table 508.2.5~~ 509.1.

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

~~508.2.5.1~~ 509.2 Fire-resistance-rated separation. Where ~~Table 508.2.5~~ 509.1 specifies a fire-resistance-rated separation, the incidental ~~uses~~ ~~accessory occupancies~~ shall be separated from the remainder of the *building* by a *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 712, or both. Construction supporting 1-hour fire-resistance-rated *fire barriers* or *horizontal assemblies* used for

incidental ~~use accessory occupancy~~ separations in buildings of Type IIB, IIIB and VB construction are not required to be fire-resistance rated unless required by other sections of this code.

**TABLE 508.2.5 509.1
INCIDENTAL ACCESSORY OCCUPANCIES USES**

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic fire-extinguishing system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic fire-extinguishing system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen cutoff rooms, not classified as Group H	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic fire-extinguishing system
Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy	1 hour or provide automatic fire-extinguishing system
Laundry rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Group I-3 cells equipped with padded surfaces	1 hour
Group I-2 waste and linen collection rooms	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Rooms containing fire pumps in nonhigh-rise buildings	2 hours; or 1 hour and provide automatic sprinkler system throughout the building
Rooms containing fire pumps in high-rise buildings	2 hours

For SI: 1 square foot = 0.0929 m², 1 pound per square inch (psi) = 6.9 kPa, 1 British thermal unit (Btu) per hour = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L.

508.2.5.2 509.2.1 Nonfire-resistance-rate separation and protection. Where Table 508.2.5 509.1 permits an automatic fire-extinguishing system without a *fire barrier*, the incidental ~~uses accessory occupancies~~ shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the ceiling that is a component of a fire-resistance-rated floor assembly or roof assembly above or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic closing upon detection of smoke in accordance with Section 715.4.8.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the incidental use shall not have air transfer openings unless provided with smoke dampers in accordance with Section 711.7.

508.2.5.3 509.2.2 Protection. Except as specified in Table 508.2.5 509.1 for certain incidental ~~uses accessory occupancies~~, where an automatic fire-extinguishing system or an *automatic sprinkler system* is provided in accordance with Table 508.2.5 509.1, only the space occupied by the incidental ~~use accessory occupancy~~ need be equipped with such a system.

(Renumber subsequent sections.)

Reason: A change occurred in the 2009 IBC that we believe has unintended consequences. As written, “incidental accessory occupancies” are only required to be separated when they are part of an accessory occupancy. They are mentioned only in Section 508.2.5, and, since it is a subsection of Section 508.2, it only applies where 508.2 applies.

This proposal creates a separate section so that the incidental use provisions will apply in all buildings, including single use buildings. The rooms and areas listed in the incidental use table present special hazards that require special protection. They should be separated from other occupancies and uses regardless of whether the other occupancies in the building are treated as separated or nonseparated occupancies.

We are also proposing to change the term to “incidental uses” instead of “incidental accessory occupancies”. Many of the items listed in the table are not occupancies in themselves—they are special uses that don’t fall neatly into any occupancy category. The use of this term should be changed throughout the code if this code change proposal is approved.

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

ICCFILENAME: Traxler-G5-508.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee found the code change appropriate because it clarifies that the activities and facilities listed in Table 508.2.5 present a special hazard regardless whether the building is a single occupancy or a mixed occupancy. The change would make sure that these standards are met regardless of the approach taken to address mixed occupancies. These things are uses or building support facilities and not occupancies unto themselves. The committee expressed concern that divorcing these provisions from the accessory use provisions would allow these features to exceed the 10% area limitation of accessory occupancy. While this part of the provision could be refined by public comment, the committee was comfortable that the term incidental was sufficiently clear that were such features/uses to become the primary or only use of a building, that it would be judged to be not 'incidental'.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

508.2.4 Separation of occupancies. No separation is required between accessory occupancies and the main occupancy.

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
- ~~2. Incidental uses required to be separated or protected by Section 509.~~
- ~~23.~~ 23. Group I-1, R-1, R-2 and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from accessory occupancies contiguous to them in accordance with the requirements of Section 420.

SECTION 509 INCIDENTAL USES

~~**509.1 General Separation of incidental uses.** Incidental uses located within single occupancy or mixed occupancy buildings shall comply with the provisions of this section. Incidental uses are ancillary functions associated with a given occupancy that generally pose a greater level of risk to that occupancy and are limited to those uses listed in Table 509.4. The incidental uses listed in Table 509.1 shall be separated from the remainder of the building or equipped with an automatic fire-extinguishing system, or both, in accordance with Table 509.1.~~

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

~~**509.2 Occupancy classification.** Incidental uses shall not be individually classified in accordance with Section 302.1. Incidental uses shall be included in the building occupancies within which they are located.~~

~~**509.3 Area limitations.** Incidental uses shall not occupy more than 10 percent of the *building area* of the *story* in which they are located.~~

~~**509.4 Separation and protection.** The incidental uses listed in Table 509.4 shall be separated from the remainder of the building or equipped with an automatic fire-extinguishing system, or both, in accordance with the provisions of that table.~~

TABLE ~~509.1~~ 509.4 INCIDENTAL USES

(No change to table contents)

~~**509.2 509.4.1 Fire-resistance-rated Separation.** Where Table 509.4 509.4 specifies a fire-resistance-rated separation, the incidental uses shall be separated from the remainder of the *building* by a *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 712, or both. Construction supporting 1-hour fire-resistance-rated *fire barriers* or *horizontal assemblies* used for incidental use separations in buildings of Type IIB, IIIB and VB construction are not required to be fire-resistance rated unless required by other sections of this code.~~

~~**509.2.1 509.4.2 Nonfire-resistance-rate separation and Protection.** Where Table 509.4 509.4 permits an automatic fire-extinguishing system without a *fire barrier*, the incidental use shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the ceiling that is a component of a fire-resistance-rated floor assembly or roof assembly above or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic closing upon detection of smoke in accordance with Section 715.4.8.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the incidental use shall not have air transfer openings~~

unless provided with smoke dampers in accordance with Section 711.7.

509.2.2 509.4.2.1 Protection limitation. Except as specified in Table 509.4 509.4 for certain incidental uses, where an automatic fire-extinguishing system or an *automatic sprinkler system* is provided in accordance with Table 509.4, 509.4 only the space occupied by the incidental use need be equipped with such a system.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The ICC General Code Committee approved Item G107-09/10 as submitted as they found the code change appropriate "because it clarifies the activities and facilities listed in Table 508.2.5 present a special hazard regardless whether the building is a single occupancy or a mixed occupancy." This proposed modification further clarifies the comments or concerns expressed during discussion of the item in Baltimore. As approved, the proposal contained no formal charging language. This public comment adds "General" provisions to Section 509.1 that include general applicability requirements.

Also mentioned in the committee reason statement was, "These things are uses or building support facilities and not occupancies unto themselves." This point has been clarified in new Section 509.2. Also mentioned was, "The committee expressed concern that divorcing these provisions from the accessory use provisions would allow these features to exceed the 10% area limitation of accessory occupancy. While this part of the provision could be refined by public comment, the committee was comfortable that the term incidental was sufficiently clear that where such features/uses become the primary or only use of a building, that it would be judged to be not "incidental." This public comment addresses the committee concern and the limitation is clearly stated in new Section 509.3.

A technical inconsistency has been eliminated by the deletion of Exception 2 to Section 508.2.4. Incidental uses are not accessory occupancies and therefore should not be referenced in that section.

Lastly, the provisions of Section 509 for incidental uses have been organized in a format similar to the various mixed occupancy design options contained in Section 508. This consistent format should assist users in determining applicable incidental use requirements. Approval of this public comment for approval as modified will address all committee concerns while placing the provisions in a logical format.

Final Action: AS AM AMPC____ D

G109-09/10

508.2, 508.2.1, 508.2.2, 508.2.3, 508.2.4

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company

Revise as follows:

508.2 Accessory occupancies. Buildings or portions of buildings that comply with the provisions of this section shall be considered as accessory occupancies. Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Section 508.2.1 through ~~508.2.5.3~~ 508.2.4.3.

~~**508.2.1 Area limitations.** 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 area increases in accordance with Section 506 for such accessory occupancies.~~

~~**508.2.2 508.2.1 Occupancy classification.** Accessory occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.~~

~~**508.2.3 508.2.2 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. 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 area increases in accordance with Section 506 for such accessory occupancies. The height of each accessory occupancy shall not exceed the tabular values in Table 503, without increases in accordance with Section 504 for such accessory occupancies. ~~The area of the accessory occupancies shall be in accordance with Section 508.2.1~~~~

~~**508.2.4 508.2.3 Separation of occupancies.** No separation is required between accessory occupancies and the main occupancy or each other.~~

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.

2. Incidental accessory occupancies required to be separated or protected by Section ~~508.2.5~~ 508.2.4.
3. Group I-1, R-1, R-2 and R-3 dwelling units and sleeping units shall be separated from other dwelling or sleeping units and from accessory occupancies contiguous to them in accordance with the requirements of Section 420.

~~508.2.5~~ 508.2.4 Separation of incidental accessory occupancies.

(The text of this and following sections are not changed; renumbering is shown for context of number changes in preceding sections.)

**TABLE ~~508.2.5~~ 508.2.4
INCIDENTAL ACCESSORY OCCUPANCIES**

~~508.2.5.1~~ 508.2.4.1 Fire-resistance-rated separation.

~~508.2.5.2~~ 508.2.4.2 Nonfire-resistance-rated separation and protection.

~~508.2.5.3~~ 508.2.4.3 Protection.

Reason: This proposal is intended to clarify accessory occupancy mixed occupancy provisions. Charging language has been added to Section 508.2 to duplicate that contained in Sections 508.3 and 508.4 for purposes of editorial and legal consistency. The area provisions in current Section 508.2.1 have been placed in context in proposed Section 508.2.2, "Allowable area and height." Having accessory occupancy allowable area provisions in two different sections could result in oversight. Proposed Section 508.2.3 clarifies that no occupancy separation is required between adjacent accessory occupancies, the exceptions notwithstanding. Approval of this proposal will result in more consistent application of IBC accessory occupancy provisions.

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

ICCFILENAME: KEITH-G5-508.2.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: While the intent of the proponent was to clarify the section, the committee felt that it did the opposite. Specifically the committee found the first sentence of new Section 508.2 could be read to imply that an accessory occupancy could be a total building, not a small area of a larger building. They found that the wording of Section 508.2.2 confused the determination of aggregate areas of accessory occupancies.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

508.2 Accessory occupancies. ~~Buildings or portions of buildings that comply with the provisions of this section shall be considered as accessory occupancies.~~ Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Section 508.2.1 through 508.2.4.3.

(Portion of proposal not shown remain unchanged.)

Commenter's Reason: In the ICC General Code Committee's published reason statement for disapproval of Item G109-09/10, it was stated that, "the committee found the first sentence of new Section 508.2 could be read to imply that an accessory occupancy could be a total building, not a small area of a larger building." Not wanting to create or add to any confusion, Section 508.2 has been returned to original 2009 IBC language. The reason statement also noted that, "the wording of Section 508.2.2 confused the determination of aggregate areas of accessory occupancies." This comment is somewhat confusing due to the fact that the accessory occupancy area limitations were moved verbatim from Section 508.2.1 to Section 508.2.2 simply to consolidate allowable area provisions, in context, in the appropriate location. The technical provision is unchanged. The location is consistent with mixed occupancy design option formatting contained throughout Section 508. Approval of this public comment will result in more consistent application of IBC accessory occupancy provisions.

Final Action: AS AM AMPC _____ D

G111-09/10
508.2.3

Proposed Change as Submitted

Proponent: Todd Andersen, representing self

Revise as follows:

508.2.3 Allowable building area and height. The allowable building area and height of the building containing accessory occupancies shall be based on the allowable building 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. The building area of the accessory occupancies shall be in accordance with Section 508.2.1.~~

Reason: The current text would limit the location of an accessory occupancy within a building such that it could not be located any higher in a building than the building area and height limits of Table 503 for the accessory would allow. From the Reason statement and testimony by the proponent this was never the intent. Code Change G14-04/05 relocated and rewrote the provisions for Mixed Occupancies in the 2006 IBC to move from Section 302 to new Section 508.

In the Reason statement the proponent wrote – “The purpose of this proposal is to organize and clarify the requirements for the various mixed occupancy and use design options recognized in the International Building Code...The various technical requirements for each design option have been articulated using consistent terminology and style. These requirements generally parallel current intent.”

As stated in the Reason statement to Code Change G14-04/05, the intent of code change was to relocate the provisions in Section 302.2 of the 2003 IBC and put their requirements in a consistent format, not to make technical changes. Therefore to understand that the current language was never part of the requirements we need to look at the language in Section 302.2 of the 2003 IBC – it reads:

302.2 Accessory use areas. A fire barrier shall be required to separate accessory use areas classified as Group H in accordance with Section 302.3.1, and incidental use areas in accordance with Section 302.1.1. 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.

302.2.1 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 m²). 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.

Nowhere in Section 302.2 (2006 IBC) was there ever a limit on the location of an accessory use area within a building, and it was not the intent of the proponents of Code Change G14-04/05 to ever impose one in the 2006 IBC nor to carry over to the 2009 IBC.

Without this code change building design as we know it today would literally not be allowed.

Without this code change a conference room would never be allowed to be located on the top story in a office building (Group B) of Type IIA construction because the building height limit (in stories) for a Group A-3 occupancies is 3 stories, where the Group B building would be allowed to be 5 stories in building height (or 6 stories if sprinklered). The current language would limit the location of any conference room to not more than the 3rd story.

Another example would be storage rooms (Group S-1). Based on Table 503 the building height limit (in stories) for a Group S-1 occupancy is 4 stories, again where the Group B building would be allowed to be 5 stories in building height (or 6 stories if sprinklered). The current language would limit the location of any store rooms to not more than the 4th story.

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

ICCFILENAME: Andersen G-1(former RICE-G9)-508.2.3.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee disapproved the change because they did not find it solved the issue raised by the proponent that of limiting accessory occupancy location in a building based on its tabular value in Table 503 rather than the tabular value of the primary occupancy of the building.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sarah A. Rice, The Preview Group, representing self, requests Approval as Modified by this Public Comment.

508.2.3. Allowable building area and height.. The allowable building area and height of the building containing accessory occupancies shall be based on the allowable building area and height for the main occupancy in accordance with Section 503.1. The building area occupied by accessory occupancies shall be in accordance with Section 508.2.1.

Commenter's Reason: As the proponent indicated in the original reason statement the current text would literally limit the vertical location of an accessory occupancy within a building to only the limits of Table 503.

For example, a building housing mostly offices (classified as Group B) and constructed of Type IIA construction is allowed by Table 503, when sprinklered, to be 6 stories in height. Most office building have small dining rooms, conference rooms and storage rooms dispersed throughout the building and these spaces are typically of such a size that they qualify as "accessory uses." If literally applied, current Section 508.2.3 would not allow small dining rooms (Group A-2) and small conference rooms (Group A-3) to be located above the 4th story, and small storage rooms would not be allowed to be located above the 5th story. Because Section 508.2.3 says that "The height of any accessory occupancy shall not exceed the tabular values in Table 503..."

Research into the development of current Section 508.2.3 finds its roots in one of the legacy codes, the 1996 BOCA National Building Code (Section 302.1.2). Members of the original Development Committee for Chapter 3 of the Working Draft for the 1st edition of the International Building Code indicated that the provisions for the section that would become Section 302.2 Accessory use areas in the 2000 IBC were essentially taken Section 302.1.2 of the 1996 BOCA National Building Code, which read:

302.1.2 Accessory uses. Except for accessory areas of Use Group H in accordance with Section 302.1.2.1 and specific occupancy areas indicated in Section 302.1.1, a fire separation assembly shall not be required between the main use group and accessory areas when the aggregate area devoted to all accessory occupancies does not occupy more than 10 percent of any fire area; the aggregate area devoted to all accessory occupancies within a story does not exceed 10 percent of the area of the story and the aggregate area devoted to an accessory occupancy is not more than 10 percent of the allowable area permitted by Section 503.0 based on the accessory use group. The required type of construction and the automatic fire suppression requirements of Section 904.0 shall be based on the main use group of the fire area.

No where in Section 302.1.2 is the relative vertical location of an accessory occupancy limited within a building? Only the amount of area occupied by accessory occupancies is regulated.

This comment also seeks to keep the last sentence of current 508.2.3 which reads "The building area occupied by accessory occupancies shall be in accordance with Section 508.2.1."

Final Action: AS AM AMPC ____ D

G118-09/10

Table 508.4

Proposed Change as Submitted

Proponent: Tony Crimi, A.C., Consulting Solutions Inc., representing North American Insulation Manufacturers Association

Delete the entire Table 508.4 and substitute as follows:

Errata: The table, as published with the proposed code changes had errors in two cells. An errata note was included in the Report of Hearings which showed the table corrected. The intent of the proponent is to replicate Table 302.3.2 from the 2003 IBC without change. The two cells are shown below, with their proper values (E and H-5; F-2 and U).

**TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

Use	A-1	A-2 ^e	A-3	A-4	A-5	B ^b	E	F-1	F-2	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M ^b	R-1	R-2	R-3, R-4	S-1	S-2 ^c	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 ^e	--	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-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 ^b						--	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 ^b																			--	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 ^d	1 ^d
S-1																							--	3	3
S-2 ^c																									1
U																									--

For SI: 1 square foot = 0.0929 m².

NP = Not permitted.

- a. Except for Group H and I-2 occupancies, where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, the fire-resistance ratings shall be reduced by 1 hour but to not less than 1 hour and to not less than the required floor construction according to the type of construction.
- 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 sprinkler 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. for private garages and carports.
- e. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

Reason: This proposal aims to restore the previous Table 302.3.2 from the 2003 IBC, but retain the modified text of section 508 on Mixed Use & Occupancy. In addition to restoring the separated uses (occupancies) concept previously prescribed in Section 302 of the 2003 IBC (and 2003 Supp), the proposal clarifies the distinction between separated uses and the non-separated use options. During the 2006 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 more than 100 changes in fire resistance ratings resulting from this proposal, most without justification or supporting rationale. The result of this Code change is to reduce the level of protection provided by the IBC over any of the previous Legacy Codes.

Approximately 40% of the jurisdictions who have adopted the IBC are now using the 2006 (or later) edition. In contrast, when this Code change was first accepted in the 2006 IBC, few jurisdictions had any history with the lack of fire resistance rated construction between occupancies which the 2006 and 2009 IBC now permits. As a result, there is a growing level of concern with the reductions in fire resistance ratings between separated occupancies in mixed occupancy buildings in the 2006 IBC. The adoption of this Code change in the 2006 and 2009 IBC arbitrarily reduced fire resistance ratings to levels significantly below most of the Legacy Codes, without providing any compensating safety measures. The full impact of this change has not yet been felt. 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.

The concept of separation of major occupancies exists in Building regulations throughout the world. Certainly, those occupancy separation requirements used in the separated occupancies option have stood the test of time. There continues to be a critical need to separate adjacent major occupancies of dissimilar use, with fire-resistance rated construction. This proposal would delete the current Table 508.4 in its entirety and substitute the previous Table 302.3.2 which was replaced in Code Change G32-04/05. The previous Table 302.3.2 had been in use for the three plus years it existed in the 2000 and 2003 editions of the IBC. Furthermore, the occupancy separation fire resistance ratings from this predecessor table were taken directly from the BOCA National Building Code, along with the entire concept of the non-separated and separated occupancies in mixed occupancy buildings. The occupancy separation Table had 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. Certainly, those occupancy separation requirements used in the separated occupancies option have stood the test of time. There continues to be a

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 proposal has led to over 100 changes to required fire resistance ratings for occupancy separation, in both sprinklered and unsprinklered occupancies, without providing individual justifications of any kind.

To illustrate some specific examples, 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. While it has been argued that a number of these separated use combinations are unrealistic, an equal number are very realistic and represent an unjustified reduction from current code requirements for fire-resistant construction. To unilaterally propose that a mixed use office and moderate hazard warehouse be reduced from the current 3-hour minimum fire separation to a zero separation is unjustifiable.

Bibliography & References:

¹ 2003 IBC, International Codes Council, Table 302.3.2

² 1996 BOCA National Building Code, BOCA

³ 1997 Standard Building Code, SBCCI

⁴ 1997 Uniform Building Code, ICBO

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Alternative locations for allowance in the footnotes to the table would be as exceptions to Sections 508.3.3 and 508.4.4.

ICCFILENAME: CRIMI-G3-TABLE 508.4.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee approved the table as providing a better format for the information for occupancy separation requirements. It allows a simple reading of the table for the intersection each possible combination of occupancies. The values quickly force someone to consider the non-separated mix occupancy option. There was discomfort that the existing Table 508.4 combines in the same column and row occupancies that are distinctly different. It was acknowledged that the values contained in the table are still the subject of considerable debate but the format provides a clear route to consider different values. The committee intends that existing Table 508.4 be replaced by Table 302.3.2 from the 2003 Edition of the IBC, with no changes to the tabular values in the 2003 Table.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Gerald Anderson, City of Overland Park, representing self, requests Disapproval.

Commenter's Reason: It would be my opinion that the committee's reason statement gives no justification at all for this code change. You would think that this code change is nothing but a re-organization of existing data. But that is not the case. This code change represents a major reversal in thought process. I would also note that I don't see where the committee, supported any on the proponents reason for the change. I have to wonder why the committee did not latch on to some of the proponents reasons if they really believed in the code change. Below I have outlined the committee's reasoning statement and provided comment.

Committee Reasons:

1. The committee approved the table as providing a better format for the information on occupancy separation. It allows for a simple reading of the table for the intersection each possible combination of occupancies. In reading this reason one is led to believe that the change is more editorial in nature. That is not true this code change is a major role back.

2. The values quickly force someone to consider the non-separated mix occupancy option. Why is this important? Is the committee suggesting that the non-separated use is the preferred method for dealing with mixed occupancies? Or are they suggesting the separation requirements are so stringent that one is automatically forced to use the non-separated use option.

3. There was discomfort that the existing table 508.4 combines the same column and row occupancies that are distinctly different. This is a comment concerning the format or readability of the table. It would be an appropriate comment if this code change simply re-arranged existing data but that is not the case.
4. It was acknowledged that the values contained in the table are still the subject of considerable debate but that format provides a clear route to consider different values. I am not sure what this reasoning statement is telling us other than the fact that the committee is acknowledging that the values in the table are still up for debate.

In the proponents reasoning statement, it is stated that the new proposed table is right out of the BOCA code and that the stated occupancy separations have stood the test of time. I am not going to dispute that statement. However, the problem with the proponents reasoning is that he is once again wishing to mix two very different concepts. Those concepts are separating are based on "occupancy" and separating occupancies and/or spaces into "fire areas". Fire Areas are closely associated with and can establish a threshold for the need for fire protection system. The need for occupancy separation is based on the inherent risk that one occupancy may pose to an adjacent occupancy. Fire Areas are based on potential fuel loading amongst one or a multitude of occupancies. Currently, the code adequately and correctly addresses occupancy separation in Table 504.8. Separating mixed occupancies into fire areas is addressed in Section 707.3.8. If one would go back and look at the proponents reasoning statement for G32-04/05 the explanation for the way the code currently exists is explained in great detail.

Furthermore, concerning the fact that the proponent is trying to address two very different concepts in One table" one only has to look the title of the BOCA Table 313.1.2 that the proponent wishes to bring into the code. That table is titled "Fire-resistance Separation Requirements for Fire Separation Assemblies of Fire Areas". Table 508.4 of the IBC is attempting to address occupancy separation.

There is no question that some dissimilar occupancies by themselves present a possible hazard to an adjacent occupancy. Table 508.4 currently recognizes this fact and does provide separation when needed. If the proponent really believes that all occupancies are such a hazard to one another that they need to be separated with these enhanced fire barriers then I think that begs the question as to why they support the concept of "non-separated mixed use".

I would also add that Table 508.4 is a heavily used table. It is not a table that we as code users can afford to be changing every other code cycle. The table as it currently exists adequately addresses occupancy separation. There is no need or justification to revert back to an old table in one of the legacy codes. Proper justification and reasoning was given and accepted when the existing table was brought forth. I urge your disapproval.

Public Comment 2:

Gene Boecker, Code Consultants, Inc., representing The National Association of Theatre Owners, requests Disapproval.

Commenter's Reason: The original code change that brought the current table into the code was an attempt to modernize the concept of separation of occupancies. Rather than consider each individual occupancy based simply on its being designated as a different occupancy from others, this change categorized occupancies according to relative levels of risk, a valid concept that is used in Chapter 8 of the IEBC. This concept better expresses the hazards shared among different occupancies, and rationally allows similar hazards and risks to be grouped together and therefore unseparated one from another. Based on this, the current language should be retained.

Public Comment 3:

Ron Clements, representing Chesterfield County Building Inspection Dept., requests Disapproval.

Commenter's Reason: The proponent of G118-09/10 would have you believe that the ICC General Code Committee for the 2004/2005 code cycle that voted to approve G32-04/05 and the membership at the final action hearings for the 2004/2005 code cycle that voted in support of the committee and against the public comment to deny G32-04/05 did not know what they were doing. And then again in the 2006/2007-code cycle this issue was brought up with G148-06/07, which attempted to do the same thing as the current G118-09/10 and return the old table and reverse the action of the membership during the 2004/2005 code cycle. Again the committee and the membership voted in support of the current mixed occupancies table and concept and denied change G148-06/07. I would suggest that since this has been voted on twice by two separate General Committees and twice by the membership that it is a flimsy argument to suggest that all those people did not understand what they were doing. I served on the ICC General Code Committee from 2003 to 2006. I served as Vice-Chair of the committee in for the last two cycles of those terms. In my opinion, every member of the committee understood G32-04/05 and G148-06/07 and what those code changes accomplished. Each committee member understood the technical ramifications of this issue. The published committee reason statement indicating that there were no technical changes was inaccurate and regrettable. Obviously, the format for the table and the fire-resistance rating requirements contained in the dedicated table were very different from the former consolidated table. I believe that the inference was intended to indicate that the new provisions were very similar to those contained in a former model code and therefore had historical precedence. In my opinion the membership also knew what they were doing based on comments I received from many of them. Therefore since this was the first time in three cycles that the committee voted to return to the old 2003 edition mixed occupancies table I felt it appropriate that the membership have the final vote to support their past actions.

The 2009 IBC Table 508.4 places similar risks together without a separation requirement and in those cases mixed occupancy is based solely on performing the ratio calculation. Only dissimilar risk requires a fire separation. All that table 508.4 is dealing with is allowable area limits; table 706.3.9 addresses separation of fire areas for fire protection thresholds. How much of a difference in allowable area is there between a group M and Group S1? In table 503 there is none with type 5B construction and only 5000sf with type 2B. The biggest difference is higher occupant loads but not higher fuel loads so it makes since to allow use of the ratio calculation only to mitigate the slight hazard disparity between the two similar uses thereby allowing slightly larger buildings than non-separated use would allow in those case. When you get to the next level where the fuel loading and occupant load risk differ, such as between Assembly and Storage use then in addition to the ration calculation you also get the fire rated separation. The current table 508.4 uses a more sensible stepped approach to handling mixed occupancies with the separated mixed-use method. This method also makes the method more usable. I can count on one hand the number of buildings I have seen in 16 years of code enforcement where separated mixed use was used to achieve allowable area requirements. With sprinkler and frontage increases and sprinkler thresholds that kick in most mixed-use buildings can comply as non-separated mixed use.

Public Comment 4:

David S. Collins, FAIA, The Preview Group, Inc., representing The American Institute of Architects, requests Disapproval.

Commenter's Reason: Under the provisions of the IBC, there are some groupings of occupancies that are very similar based on their risks as defined in Section 903 for fire, and Chapter 10 for egress. Often these occupancies are combined with business functions because of their need for such functional support. The question raised by G118-09/10 is whether or not such activities must be separated from each other. Historically the codes have treated these conditions differently, but both the 2006 and 2009 IBC have allowed these occupancies to be unseparated, but allowed them to be treated as if they were separated to determine the allowable area for a mixed use.

G118-09.10 changes the structure in Table 508.4 and takes the code back to the original separation requirements found in the 2003 IBC. Many of the "fixes" aren't fixes as all, and just add to the confusion of requiring separation where none is needed. A classic example is the mixed-use separated requirement for Business (B) and Low-Hazard Storage (S-2) occupancies. Table 503 establishes the numbers of stories and areas of a business and low-hazard storage as:

**Table 1 Area Permitted Per Story
B and S-2 per Table 503**

Type of Construction		IIB	IIIA	IIIB	VA	VB
Business	Stories	3	5	3	3	2
	Area	23,000	28,500	19,000	18,000	9,000
Storage (S-2)	Stories	4	4	4	4	1
	Area	26,000	39,000	26,000	21,000	13,500

When using G118-09/10 mixed-use options, you are limited by the smallest allowable area, or by a relative percentage of the allowed areas when separating them.

G118-09/10 ignores the safety factors associated with some groups that are so similar that the code treats them almost identically. They are often with each other in the same facility because of a business interrelationship. The following table shows the maximum allowable area for the mixed-use and the area of each occupancy if the B were strictly an accessory function.

**Table 2 Area Permitted Per Story
B Accessory to S-2**

Type of Construction		IIB	IIIA	IIIB	VA	VB
B/S-2 Combined	Stories	3	3	3	3	1
	Area	23,000	28,500	19,000	18,000	9,000
S-2 portion Area		20,700	25,650	17,100	16,200	8,100
B portion Area		2,300	2,850	1,900	1,800	900

If the B function were more than 10% of the building floor, G118-09/10 would require a 1 hour fire barrier between the business and storage occupancy in order to treat it as mixed-use separated. Under the 2009 IBC that same configuration would require no fire barrier. Assuming that 25% of the floor were business and 75% were low-hazard storage, the allowable floor area and the breakdown for the area for each occupancy would be as follows:

**Table 3 Area Permitted Per Story
25% B and 75% S-2 (no Sprinklers)**

Type of Construction		IIB	IIIA	IIIB	VA	VB
B + S-2 Combined	Stories	3	3	3	3	1
	Area	25,250	36,750	24,250	20,250	12,375
S-2 portion - Area		19,500	29,250	19,500	15,750	10,125
B portion - Area		5,750	7,125	4,750	4,500	2,250

In some cases the area of the low-hazard storage is smaller and in others it is larger than it would be if there were no mixed occupancy, but with G118-09/10, a 1 hour wall is required to protect it even though it is smaller in area than if it were a single occupancy.

Neither a B nor an S-2 occupancy require fire suppression, unless the S-2 is a commercial parking garage. The S-2 can be in a one story, unlimited area building without a fire suppression system, while the B could be in a one story and both a B and S-2 (unseparated) could be in two-story unlimited area buildings with fire suppression.

Both G118-09/10 (with a 1 hour fire barrier) and the current IBC (without the fire barrier) would allow the following if the building is sprinklered throughout assuming the same proportion of building area with 25% business and 75% low-hazard storage:

**Table 4 Area Permitted Per Story
25% B and 75% S-2 (with Sprinklers)**

Type of Construction		IIB	IIIA	IIIB	VA	VB
B/S-2	Stories	3	3	3	3	2
	Area	75,750	109,125	72,750	60,750	37,125

A similar phenomenon occurs in the group of at a B business combined with either M mercantile, or F-1 manufacturing, or S-1 moderate-hazard storage in a mixed-use. As designed, constructed and used, most of these cases the business activity is the minor portion of the facility. Table 503 permits these base areas:

**Table 5 Area Permitted Per Story
B, M, F-1, S-1 Stories/Area per Table 503**

Type of Construction		IIB	IIIA	IIIB	VA	VB
Business	Stories	3	5	3	3	2
	Area	23,000	28,500	19,000	18,000	9,000
Mercantile	Stories	4	4	4	3	1
	Area	12,500	18,500	12,500	14,000	9,000
Manufacturing (F-1)	Stories	2	3	2	2	1
	Area	15,500	19,000	12,000	14,000	8,500
Storage (S-1)	Stories	3	4	3	4	3
	Area	17,500	26,000	17,500	14,000	9,000

Because of the risk associated with these occupancies, Section 903.2 would require fire suppression for them at the following building area thresholds:

Section 903.2 Sprinkler thresholds for each occupancy is:

Business	None – based on area
Mercantile	12,000 or 24,000 combined
Manufacturing (F-1)	12,000 or 24,000 combined
Storage (S-1)	12,000 of 10,000 2 or more stories in height

Table 1004.1 The occupant load factor in each is:

Business	100 gross
Mercantile	300 gross (storage/stock/shipping)
Manufacturing (F-1)	100 gross
Storage (S-1)	500 gross (warehouses)

Table 1016.1 Travel distance limitation for each occupancy is:

Business	200 feet
Mercantile	200 feet
Manufacturing (F-1)	200 feet
Storage (S-1)	200 feet

To examine the question raised by G118-09/10, assume a mixed use of B with either M, F-1 or S-1 without separation, with the B being 25% of the building area (relatively large). The allowed total per floor area without fire suppression would be:

**Table 6 Area Permitted Per Story
25% B with 75% M or F-1 or S-1 (no Sprinklers)**

Type of Construction		IIB	IIIA	IIIB	VA	VB
B/M	Stories	2	2	2	2	1
	Area	11,999	11,999	11,999	11,999	9,000
B/F-1	Stories	2	2	2	2	1
	Area	11,999	11,999	11,999	11,999	8,500
B/S-1	Stories	1	1	1	1	1
	Area	11,999	11,999	11,999	11,999	9,000

Using the provisions from the 2009 IBC and assuming that an NFPA 13 fire suppression system were installed throughout the building, the total allowable area per floor for the uses (B @ 25%) in a multi-story application would be shown as B + M, F + F-1 and B + S-1. In the same table is the allowable area for only the M, F-1 and S-1 when totally sprinklered.

**Table 7 Area Permitted Per Story
25% B with 75% M or F-1 or S-1 (with Sprinklers)**

Type of Construction		IIB	IIIA	IIIB	VA	VB
B + M	Stories	3	3	3	3	3
	Area	45,375	63,000	42,375	45,000	27,000
M	Stories	3	3	3	3	2
	Area	37,500	55,500	37,500	42,000	27,000
B + F-1	Stories	3	3	3	3	3
	Area	52,125	64,125	41,250	45,000	25,875
F-1	Stories	3	3	3	3	2
	Area	46,500	57,000	36,000	42,000	25,500
B + S-1	Stories	3	3	3	3	3
	Area	56,625	79,875	53,625	45,000	27,000
S-1	Stories	3	3	3	3	3
	Area	52,500	78,000	52,500	42,000	27,000

Note: Because the code limits the overall building area, none of the values are shown for a building more than 3 stories in height. If a building with these occupancy groups were built higher, the area per floor would have to be fractionally reduced.

B group functions in these buildings would never trigger the requirement for the building to be sprinklered and does not play any role in the allowed height of the building except to limit it in some circumstances.

G118-10/11 requires a 1 hour fire barrier separation between the B portion of the building and the S-1 group, and a 2 hour fire barrier between the B functions and the M and F-1 areas. When you examine this question you should ask what has been accomplished. What additional safety exists? Except to significantly increase the cost of construction, no additional safety has been gained.

For example, in Type IIB structure, an M occupancy can be 37,500 sf per floor and have 10% of that floor area be an accessory business function (3,750 sf) with no separation and the building would not be classified as a B occupancy; it would be 100% M at 37,500 sf. However, if it is declared a B group mixed with an M group, the total building area could increase to 45,375 sf. and the building would be allowed to have 17,250 sf of B Group and 28,125 sf, M Group.

The assumed hazard (M Group) has been reduced by the less hazardous (B Group). The B function has such a low level of risk that including it in these buildings does not create a hazard for the M, F-1 and S-1 areas. It is the M, F-1 and S-1 areas that are the risk and that is why they have a fire suppression threshold at 12,000 sf.

G118-09/10 provides for additional construction cost without providing any additional safety in the building. I urge the membership to overturn the committee and deny this change.

Public Comment 5:

Bruce D. Dimmig, representing, Arizona Building Officials, request Disapproval.

Commenter's Reason: The occupancy separation table (508.3.3) should be left as it is in the 2009 codes, as it is more of a risk-based case than a prescriptive case as per the table in the 2003 code cycle. In the Proponent's reasoning statement provided with the proposal heard in Baltimore, they state that the 2006 code change resulted in over 100 fire-resistive ratings changes. However, information to show that this resulted in a decrease in fire safety or data showing that this increased the number of incidents (fires, etc.) was not provided. Moreover, very few projects are designed as separated occupancies.

Public Comment 6:

Sam Francis, representing American Wood Council (AF&PA), requests Disapproval.

Commenter's Reason: The proponent has stated that G118 is simply a restoration of previous Table 302.3.2 from the 2003 IBC. This is true. However, the proponent has failed to make the case for why such a drastic step is necessary. For example, separation from B to F-1 goes from None Required to 3 Hours. Is that an appropriate increase with virtually no data to support it? And of course, several examples of separated uses become not permitted under this proposal. On the surface, this seems to be a continuation of the struggle by Legacy Code users to recreate tables to reflect their experiential situation. Such change should require the rigor of data. It is lacking here.

Public Comment 7:

Jonathan Humble, AIA, American Iron & Steel Institute, requests Disapproval.

Commenter's Reason: We ask that the membership disapprove this proposal. Our basis for recommending this action is based on both the proposers reasoning for modifying the table back to the 2003 format and tabular values, and the recommendation by the code development committee concerning primarily format issues and not necessarily technical substance.

Why the 2003 edition? Comparing the 2009 table to the 2003 edition of the table represents a silo approach, yet the reason statement takes us to BOCA. Since the proponent used as an example the BOCA National Building Code, let's go back to 1989 when Section 313 (Mixed use and occupancy) was introduced as we recognize it today. From that time to the publication of the 1999 BOCA National Building Code there were a number of changes concerning the fire-resistance tabular values. The same can be said with respect to a comparison between the 1999 BOCA National Building Code and the 2003 International Building Code. And again, changes took place from the 2003 International Building Code to the 2009 International Building Code. One must therefore ask why should we only focus on the 2003 edition of the table only? Unfortunately, there is no clear basis cited in the original proponent's reasons to technically justify this narrow focus.

Does the proposal take into effect other modifications? Further, we must question if other related modifications to the International Building Code were addressed. For example, in the 2009 International Building Code the table contains a number of entries under the category "non-sprinklered" where it specifies "not permitted". But the original proponent's reason statement lacks that comparison. Therefore, is the argument for the 2003 table really legitimate? If one compares, one finds that the values in the 2003 edition represent an hourly rating thus representing a lessening of the stringency. Does this represent a logical approach? We would submit not. Then there are the modifications to other provisions of the International Building Code since 2003, such as additional sprinkler requirements, requirements for the high rise provisions, fire resistance, etc. which also can impact the decisions made to this table. None of which is accounted for in the proponents original reason statement.

In view of the above, we recommend disapproval.

Public Comment 8:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Disapproval.

Commenter's Reason: The fundamental argument of the proponent of G118-09/10 for approval was that his proposal corrects an error made by the ICC General Code Development Committee during the 2006 code development cycle. The proponent's contention is that the 2003 IBC separated mixed occupancy fire-resistance rating requirements are time proven and necessary for occupant safety. In the published reason statement for G118-09/10 the proponent states, "Certainly, those occupancy separations requirements used in the separated occupancies option

have stood the test of time. There continues to be a critical need to separate adjacent major occupancies of dissimilar use, with fire-resistance rated construction. This proposal would delete the current Table 508.4 in its entirety and substitute the previous Table 302.3.2 which was replaced in Code Change G32-04/05.”

Additionally, it is implied that the ICC General Code Committee was remiss in its approval of G32-04/05. He states, “This change needs to be corrected, and a selective justification undertaken to determine which, if any, of these changes are desirable and justifiable.” A misleading statement published in the committee report for the 04/05 code development cycle is offered as substantiation for that assertion. The proponent notes in his G118-09/10 reason statement, “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 over 100 changes to required fire resistance ratings for occupancy separation, in both sprinklered and unsprinklered occupancies, without providing individual justifications of any kind.” The G118-09/10 reason statement also declares, “Furthermore, the occupancy separation fire resistance ratings from this predecessor table were taken directly from the BOCA National Building Code, along with the entire concept of the non-separated and separated occupancies in mixed occupancy buildings. The occupancy separation Table had existed in the BOCA National Building Code for a very long time, and was incorporated into the first edition of the IBC.”

It is true that 2003 separated mixed occupancy fire-resistive rating requirements were contained within the BOCA code and therefore could be deemed to “have stood the test of time.” What is not mentioned is that most, if not all, of the former Table 302.3.2 requirements are intended to apply to fire barriers separating nonsprinklered fire areas. In fact, the title of BOCA code Table 313.1.2 that became ICC Table 302.3.2 was, “FIRERESISTANCE RATING REQUIREMENTS FOR FIRE SEPARATION ASSEMBLIES BETWEEN FIRE AREAS.”

The proponent’s reason statement notes, “There continues to be a critical need to separate adjacent major occupancies of dissimilar use, with fire-resistance rated construction.” The fact of the matter is that the proponent’s table is inconsistent with that technical philosophy. In reality, the proposed table impacts buildings of lesser heights and types of construction, and in many cases, creates illogical and excessive requirements. For example, in other than Group H occupancies, there are no occupancy separation requirements in unlimited area and height buildings of Type IA and IB construction. These buildings will always qualify for nonseparated mixed occupancy provisions. Similarly, Section 507 unlimited area buildings would often qualify for nonseparated or accessory mixed occupancy provisions, neither of which would require a fire-resistance rated occupancy separation in other than Group H occupancies. On the other hand, the proposed table requires a physical separation between certain occupancies that would typically qualify for nonseparated occupancy provisions. Various Group A occupancies, for example, are generally permitted the same allowable area based on the building type of construction at Table 503. Yet, the proposed table requires a 2-hour occupancy separation between different Group A occupancies. In this instance, there is negligible dissimilar risk, yet a significant requirement for passive fire protection. That 2-hour fire-resistance rating requirement is appropriate for separation between nonsprinklered fire areas. That requirement was incorporated into new Table 706.3.9 in 2003; however, was never removed from existing Table 302.3.2. The ICC General Code Committee did realize what had been accomplished through the creation of Table 706.3.9 in 2003. When they stripped the fire area separation provisions out of 2006 Table 508.3.3, the committee regarded the resulting table as not representing significant technical changes. It was largely a housekeeping exercise at that point in time. Another legacy code, the Uniform Building Code served as the historical precedent for new 2006 Table 508.3.3. It was the only legacy code that had an occupancy separation table based solely on dissimilar risk of adjacent occupancies. As was the case with the former BOCA table, the ICBO table has “stood the test of time.”

In his reason statement, the proponent provides a specific example intended to demonstrate the need for a three-hour fire-resistance rated occupancy separation between Group B office and a Group S-1 warehouse. He expresses the opinion that, “To unilaterally propose that a mixed use office and moderate hazard warehouse be reduced from the current 3-hour minimum fire separation to a zero separation is unjustifiable.” He fails to note that both Group B and Group S-1 are moderate or ordinary hazard occupancies exhibiting somewhat similar risks. The most glaring error in the proponent’s argument is that he fails to mention a key requirement in the separated occupancy design option. That is, the mandatory performance of the sum of the ratios calculation. By requiring the ratio of actual occupancy areas divided by total allowable areas not to exceed 1.0, the calculation ensures that fuel loading remains balanced in the subject occupancies. This calculation accounts for minor dissimilarities in risk between occupancies of a similar nature such as Groups B, F-1, M and S-1 moderate hazard occupancies or Groups A-1, A-2, A-3, A-4, A-5 and E people intensive occupancies. Using the proponent’s suggested occupancies as an example, Group B and Group S-1 occupancies of any size require no fire separation when constructed of Type IA or IB construction or unlimited area buildings as permitted in Sections 507.3 or 507.4. In other types of construction, a fire separation is not required where the relative areas qualify for accessory occupancy or nonseparated occupancy provisions. Contrary to the proponent’s contention that, “There continues to be a critical need to separate adjacent major occupancies of dissimilar use, with fire-resistance rated construction,” IBC mixed occupancy provisions (and cited former BOCA provisions) have always permitted the absence of a fire-resistance separation in a vast majority of buildings.

As previously mentioned, separated occupancy provisions illogically apply to smaller buildings with less inherent risk. The proponent makes a generalization without providing for any sense of scale. Type IIA construction provides the largest allowable areas for those construction types subject to separated occupancy provisions. The maximum allowable floor area of a sprinklered, Group S-1 occupancy is 97,500 square feet, including sprinkler and maximum frontage increases (Section 503.1). The basic maximum allowable floor area of a Group B occupancy is 140,625 square feet (Section 503.1). Separated occupancy provisions do not permit a story with a total combined floor area of 238,125 square feet (97,500 + 140,625). If such was the case, the fire-resistive separation requirement currently contained in Table 707.3.9 and previously contained in 2003 Table 302.3.2, would be entirely appropriate. However, the allowable area is regulated by Section 508.4.2.

The office occupancy could contain 14,062 square feet of Group S-1 use without fire separation based on Section 508.2, accessory occupancy provisions. Conversely, the warehouse occupancy could contain up to 9,750 square feet of office occupancy without separation. By increasing the Group S-1 area by 1 percent, to 10,725 square feet, the story no longer qualifies for accessory occupancy provisions. Assuming the design need for a total area greater than the most restrictive allowable area of 97,500 square feet, separated occupancy provisions would apply. In this instance, the total allowable area based on the required sum of the ratios calculation would be 135,851 square feet ($[125,126 \div 140,625] + [10,725 \div 97,500]$). Note that the maximum area is 4,774 square feet less than that normally permitted for a single occupancy Group B story. Although the Group B footprint has been decreased by almost 5,000 square feet and the Group S-1 occupancy is only 975 feet larger than that permitted by accessory occupancy provisions, the proponent believes that a three-hour fire-resistance rated occupancy separation should be required. The reverse proportion is just as dramatic. Assuming an 11 percent Group B floor area in a Group S-1 occupancy, the total allowable area would be 102,264 square feet ($[86,775 \div 97,500] + [15,469 \div 140,625]$). In this case, the floor area is only 4,764 square feet larger than the most restrictive Group S-1 allowable area while the area of the Group S-1 fuel load has been decreased by 10,725 square feet. Again, the proponent advocates a three-hour fire-resistance rated occupancy separation. Yet, no occupancy separation is required in unlimited area buildings containing the same occupancy groups.

During the 2006 code development cycle, the ICC General Code Committee fully understood the complexities of separated occupancies, and more importantly, the system of mixed occupancy design options in the IBC. Contrary to that suggested by the proponent, technical justifications for modifications to former Table 302.3.2 were not necessary because those values were largely applicable to unsprinklered fire area separation and out of context for the separation of dissimilar risk. Current Table 508.4 does not require correction. The current provisions were reviewed, considered and justified to be desirable and justifiable by the code committee over six code development cycles. Those conclusions were ratified by the membership at the conclusion of each of those cycles.

Although the proponent's primary opposition to current separated occupancy separation requirements was based on criticism of the committee's technical due diligence, the 2009 IBC General Code Committee report substantiating approval as submitted stated, "The committee approved the table as providing a better format for the information for occupancy separation requirements." Additionally, "There was discomfort that the existing Table 508.4 combines in the same column and row occupancies that are distinctly different." Lastly, it was stated that, "The committee intends that existing Table 508.4 be replaced by Table 302.3.2 from the 2003 Edition of the IBC, with no changes to the tabular values in the 2003 Table." Ironically, the proponent claims that current separated occupancy provisions were adopted without technical justification. Following many cycles of vetting current Table 508.4 requirements, there was no contextual technical justification for a return to former 2003 provisions. Nevertheless, this General Code Committee approved G118-09/10 as submitted, 7-5. The committee reason was somewhat contradictory. If it was desired to change the Table 508.4 format to include all possible occupancy combinations, the submittal should have modified the format while retaining the current separation requirements. The rationale for the format change is that it will accommodate future discussions of specific separation requirements. The current occupancy groupings were criticized by some. It should be noted that most tables in the IBC contain similar groupings. By way of example, the nonsprinklered fire area separation requirements formerly contained in 2000 IBC Table 302.3.2 were consolidated into Table 707.3.9 which has four lines of occupancy groupings. Table 508.4 currently has nine occupancy groupings. The groupings are based occupancy risk similarity. Individual groupings may be altered at any time during the code development process based on technical merit. There is no reason to create a table that isolates every occupancy group simply to "provide a clear route to consider different values," as stated in the committee reason statement.

The stated objective of G118-09/10 is to reformat the separated occupancy table, restore 2003 fire-resistive rating requirements between all mixed occupancy combinations and start over with the analysis for the justification of reduction of former requirements. Sustaining the approval of G118-09/10 would result in the taking of a giant technical step backwards and would serve to insult the countless hours that have been devoted to the ongoing development of a viable and effective system of mixed occupancy design options over the past decade. Current Table 508.4 values have been contained in the IBC for the last two editions. There is no loss history that would indicate that they are inadequate. The entire premise of the proponent's technical/philosophical contention is based on the fact that certain fire-resistance rating requirements were formerly contained in the two earliest editions of the IBC. Over years, the various IBC code committees have worked diligently to resolve technical discrepancies caused by the integration of the three former model (legacy) codes. One such discrepancy was the dual purpose table to which the proponent assigns so much importance and technical credibility. Based on considerable debate over numerous code development cycles, earlier ICC General Code Committees resolved those conflicts and developed a relative and pertinent system of mixed occupancy provisions. Achieving a wholesale return to out of context separated occupancy requirements is irresponsible code development. It will provide occupants with a false sense of security at considerable, unnecessary cost to building developers and owners. Please maintain the technical integrity of IBC mixed occupancy provisions and disapprove G118-09/10.

Public Comment 9:

Eirene Oliphant, MCP, City of Leawood, representing Metropolitan Kansas City Chapter of the ICC requests Disapproval.

Commenter's Reason: At first glance, it appears that this code change is nothing but a re-organization of existing data, but that is not the case. While the proposed table does indeed provide for simpler reading, it has introduced considerable changes from the current table. Refer to the table below for a comparison of the current code to what is provided for in this code change:

The proponent states in his reasoning that G32-04/05, "has unilaterally reduced the fire separation between a mixed use office and a moderate hazard warehouse from the previously existing 3-hour fire separation to zero, while providing no technical justification or compensating measures." The same could be said about this proposed code change which now allows for as little as a one-hour separation between "H" occupancy groups which are "not permitted" under the current table.

The proponent also states in their reasoning that "there is a growing level of concern with the reductions in the fire resistance ratings between separated occupancies in mixed occupancy in the 2006 IBC. The adoption of this code change in the 2006 and 2009 IBC arbitrarily reduced fire resistance ratings to levels significantly below most of the Legacy Codes, without providing any compensating safety measures." The same can be said of the proposed code change.

There is no question that some occupancy groups by themselves present a possible hazard to an adjacent occupancy. This is usually because of the fire load or other hazard associated with one of the occupancies. The current Table 508.4 recognizes this fact and does provide separation when needed. If the proponent really believes that all occupancies need to be separated from one another, then one is left wondering why the code allows for "non-separated mixed use."

It is unclear which of the proponent's reasons for the change the committee supported. As a result, one is left wondering why the committee took the action it did. Is the committee suggesting that the non-separated use is the preferred method for dealing with mixed occupancies; or is it suggesting the separation requirements are so stringent that one is automatically forced to use the non-separated use option? The committee's response does not appear to provide justification for changing the separation requirements.

This table is vital to the enforcement of the building code for both plan review and inspection purposes. It is not a section of the code that as code officials we can afford to change with every code cycle. There needs to be consistency in the application of occupancy separations. The current table provides adequate separation and does not need to be modified by reverting back to an old table.

Public Comment 10:

Stephen Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter of ICC, requests Disapproval.

Committer's Reason: Approval of this change is a reversal of hours of research and work by the committee and proponents of previous changes to this table. There was not technical justification given to go back to what was in the 2003 IBC. The proponent states that the change restores the concept of separated occupancies. Separated uses are still permitted within the IBC. It was never removed. The revisions that were made in the 2006 code were investigated and discussed for at least two code cycles. It was not an arbitrary decision by the previous committee.

The proposal also perpetuates mistakes in the table that have subsequently be fixed over the last few code cycles between the table and the footnotes. Footnote c permits a one-hour reduction in the separation between a parking garage used to store private and pleasure vehicles. There are some occupancies that only require a one-hour separation to start with. Does that mean that there is no separation required? Footnote b is not needed. Both B and M occupancies permit storage within the use (Ref. 304.1 & 309.1) Storage areas are included within the particular occupancy and therefore not a separate occupancy. The mixed occupancies provisions do not apply in this case.

The committee approved the proposal because they said it would be easier to read and provide a better format. They did not discuss any of the technical revisions and confirm that there was any technical justification provided to go back to the 2003 requirements. In my experience, the table in

	A-1 (2009)	A-1 (proposed)	A-2 (2009)	A-2	A-3 (2009)	A-3	A-4 (2009)	A-4	A-5 (2009)	A-5	B (2009)	B	E (2009)	E	F-1 (2009)	F-1	F-2 (2009)	F-2	H-1 (2009)	H-1	H-2 (2009)	H-2	H-3 (2009)	H-3	H-4 (2009)	H-4	H-5 (2009)	H-5	I-1 (2009)	I-1	I-2 (2009)	I-2	I-3 (2009)	I-3	I-4 (2009)	I-4	M (2009)	M	R-1 (2009)	R-1	R-2 (2009)	R-2	R-3, R-4 (2009)	R-3, R-4	S-1 (2009)	S-1	S-2 (2009)	S-2	U (2009)	U												
A-1	N	-	N	2	N	2	N	2	N	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	4	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1								
A-2			N	-	N	2	N	2	N	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	4	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1								
A-3					N	-	N	2	N	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	4	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1									
A-4							-	N	2	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	4	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1										
A-5							-	2	2	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	4	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1										
B							-	2	2	2	2	2	N	2	2	3	1	2	NP	NP	2	2	1	1	1	1	1	1	1	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	1	1							
E							-	2	2	2	2	2	N	2	2	3	1	2	NP	NP	4	4	3	3	3	2	3	3	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	2	1	1								
F-1							-	2	2	2	2	2	N	2	2	3	1	2	NP	NP	3	2	2	1	2	1	2	1	2	3	NP	3	2	3	2	3	NP	3	2	3	2	3	2	3	NP	3	2	3	NP	3	2	3	NP	3								
F-2							-	2	2	2	2	2	N	2	2	3	1	2	NP	NP	4	2	3	1	3	1	3	1	2	2	NP	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	N	2	N	1							
H-1																					NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP								
H-2																					-	NP	1	NP	2	NP	2	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4			
H-3																							-	NP	1	NP	1	NP	4	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3	NP	3			
H-4																									-	NP	1	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4			
H-5																										-	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4	NP	4				
I-1																													-	NP	2	N	2	N	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
I-2																														-	NP	2	N	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2
I-3																															-	NP	2	N	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	NP	2	
I-4																															-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
M																																																														
R-1																																																														
R-2																																																														
R-3, R-4																																																														
S-1																																																														
S-2																																																														
U																																																														

the 2003 code was more difficult to read than the 2006 revision. The committee also stated that the “The values quickly force someone to consider the non-separated mix occupancy option. Is that really the intent of the code, to force someone to consider one option or the other? Isn't it really to allow the design professional to use the code in a way that works with the building they are designing?”

Final Action: AS AM AMPC___ D

G120-09/10 Table 508.4

Proposed Change as Submitted

Proponent: Stephen Thomas, Colorado Code Consulting, LLC, representing The Colorado Chapter ICC

Revise table notes as follows:

TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

(Portions of table not shown are unchanged.)

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.4.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than one hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the ~~restaurant seating~~ dining areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.

Reason: Even though footnote e is included with the E occupancies in Table 508.4, a code official has interpreted that this footnote does not apply to the cafeteria in a school. In my opinion there is no difference in the two uses. However, it can be argued that a cafeteria in a school is not a “restaurant” which is specifically stated in the footnote. This change clarifies the intent that the footnote applies to any type of dining area that is adjacent to a commercial kitchen.

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

ICCFILENAME: THOMAS-G2-T508.4

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

(Portions of table not shown are unchanged.)

- a. For Group H-5 occupancies, see Section 903.2.4.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from dining or seating areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.

Committee Reason: The revision provides clarification that a separation is not needed between a 'commercial kitchen' and the associated dining and seating areas regardless if the activity is a restaurant or other use. Some of the committee felt the footnote wasn't needed at all because such kitchens are part of the occupancy and separation is not required. As there is not universal agreement on that interpretation, the change provides consistency regardless of the occupancy classifications assigned. The change also allows the exception clearly apply to such applications as school lunchrooms, places of religious worship and fire stations.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tony Crimi, A.C. Consulting Solutions Inc, representing International Firestop Council (IFC), requests Disapproval.

Commenter's Reason: Available statistics on fires in Commercial Cooking establishments does not support a relaxation of the separation requirements between the commercial kitchens and dining or seating areas, particularly in Educational facilities.

According to the most recent statistics from U.S. Fire Administration's (USFA) National Fire Incident Reporting System (NFIRS) and the National Fire Protection Association's (NFPA) annual fire department experience survey, there were an estimated 7,670 fires reported to public fire departments nationwide each year in restaurants between 1999 and 2002, per NFPA statistics. These fires resulted in direct property damage of \$153 million annually.¹

Cooking equipment was the leading cause of structure fires in college classroom buildings and adult education centers. Almost half (45%) of the structure fires in college classroom buildings and adult education centers were cooking equipment fires, including 42% which were reported as confined to cooking equipment.²

An estimated 4,870 structure fires involving pre-school through grade 12 buildings were reported per year in 2003-2006.

During the four-year period of 2003-2006, an estimated average of 4,870 structure fires in these properties were reported per year. These fires caused an annual average of 65 civilian fire injuries and \$74.2 million in direct property damage. There were no civilian deaths reported in these properties during this time period. Eighteen percent of fires in these properties were caused by cooking equipment, which includes 16% of fires reported as confined cooking equipment fires, and 21% of civilian injuries.²

Cooking equipment was the leading cause of structure fires in day-care centers. The leading causes of fires in these properties with data summarized from several NFIRS fields. In some cases, the equipment involved in ignition is most relevant; heat source, the field "cause," and factor contributing to ignition also provide relevant information. Almost two of every three (65%) structure fires in day-care centers were cooking equipment fires, including 59% which were reported as confined to cooking equipment. Another 8% of these fires were heating equipment fires, including 5% which were reported as confined heating equipment. Another 5% of fires in these properties were caused by electrical distribution and lighting equipment.²

Sources:

1. Protecting restaurants from cooking fires NFPA Journal online exclusive, *March/April 2007* By Charlie Bauroth

2. NFPA Report, STRUCTURE FIRES IN EDUCATIONAL PROPERTIES, Jennifer D. Flynn, August 2009

Final Action: AS AM AMPC_____ D

G122-09/10

Table 508.4, 303.1 (IFC [B] 202)

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company

Revise as follows:

**TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4	—	—	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP
I-2	—	—	—	—	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP
R	—	—	—	—	—	—	N	N	1 ^c	2 ^c	1	2	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U	—	—	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1	—	—	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2 ^a
H-1	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	1	NP
H-3, H-4, H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1 ^{d,e,f}	NP

For SI: 1 square foot = 0.0929 m².

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

N = No separation requirement.

NP = Not permitted.

a. For Group H-5 occupancies, see Section 903.2.4.2.

b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.

- c. See Section 406.1.4.
- d. ~~Commercial kitchens need not be separated from the restaurant seating areas that they serve.~~
- e. Separation is not required between occupancies of the same classification.
- f. For Group H-5 occupancies, see Section 415.8.2.2.

303.1 (IFC [B] 202) Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.

A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

- Banquet halls
- Nightclubs
- Restaurants (including associated commercial kitchens)
- Taverns and bars

(Portions not shown are unchanged.)

Reason: This proposal deletes a somewhat confusing and unnecessary commercial kitchen exception from Table 508.4 in favor of clarifying that the restaurant and associated kitchen are the same Group A-2 occupancy in Section 303.1. The current footnote reference d is shown as applicable to Group A occupancies. Occupancy separations are not required within Group A occupancies, therefore the footnote is extraneous and moot. Approval of this proposal will place the commercial kitchen provision in the proper context of occupancy classification as opposed to mixed occupancy.

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

Analysis: Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

ICCFILENAME: KEITH-G6A-508.4

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Deleting the footnote and adding provisions to only Group A-2 would leave in questions the application to kitchens serving schools, places of religious worship and fire houses. A definition of commercial kitchen would need to be provided; and would be helpful in clarifying this activity in this and other situations such as catering kitchens.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

303.1 (IFC [B] 202) Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.

A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

- Banquet halls
- Nightclubs
- Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens)
- Taverns and bars

(Portions of text not shown remain unchanged)

306.2 Factory Industrial F-1 Moderate-hazard Occupancy. Factory industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

Food processing and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities.

(Portions of text not shown remain unchanged)

Commenter's Reason: At the code development hearings in Baltimore, three separate proposals addressed Footnote d to Table 508.4. Each addressed the limiting and potentially confusing language of the footnote. The approach of G122-09/10 was to eliminate the footnote in favor of simply clarifying the commercial kitchens associated with restaurants were a portion of the same Group A-2 occupancy. The fact that there is a footnote in the table that potentially requires occupancy separations between different occupancies, indicates that commercial kitchens are a separate occupancy unto themselves. Traditionally, commercial kitchens associated with restaurants have been included as a portion of those restaurants. In fact, the presence of such kitchens was included in establishing the relative risk of Group A-2 occupancies.

Discussion of G122 in Baltimore revealed a number of related concerns. Some felt that reference to restaurants alone was too limiting and did not recognize cafeterias and similar dining facilities. Also, there was the concern about the classification of commercial kitchens not associated with dining facilities such as catering kitchens.

This public comment for approval as modified attempts to address those concerns. First, the description at Section 303.1 has been expanded to include all dining facility and associated kitchen contingencies, whether formal or informal. Also, it clarifies that stand-alone food preparation facilities such as catering kitchens shall be classified as Group F-1 Moderate Hazard occupancies. Approval of this public comment will demystify occupancy separation provisions associated with commercial kitchens. The current default assumes that an occupancy separation may be required if it were not for Footnote d to Table 508.4. This of course, presumes that dining facilities and commercial kitchens are different occupancies. The issue is best resolved by the proper initial classification of the occupancies. Historically, commercial kitchens associated with dining facilities have been included within the Group A-2 occupancy classification of the restaurant (or other dining facility). This public comment speaks to technical concerns expressed in Baltimore and will assist in the consistent application of code requirements applicable to commercial kitchens.

Final Action: AS AM AMPC _____ D

G124-09/10

Table 508.4

Proposed Change as Submitted

Proponent: Jason Thompson, National Concrete Masonry Association, representing the Masonry Alliance for Codes and Standards

Revise as follows:

**TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2,		R		F-2, S-2 ^b , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	4 2	2NP	N	1	1	2	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4	—	—	N	N	2	NP	4 2	NP	1	2NP	1	2	NP	NP	3	NP	2	NP
I-2	—	—	—	—	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP
R	—	—	—	—	—	—	N	N	4 ^c 2	2 ^e NP	4 2	2	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U	—	—	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1	—	—	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2 ^a
H-1	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	1	NP
H-3, H-4, H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.5.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.

Reason: Group R occupancies involve a living environment that has persons sleeping and who may not be aware of their surroundings should an emergency due to fire begin to develop. Because of this there is need to provide a higher degree of fire resistive separation than might normally be provided between occupancies where the persons in the buildings are alert to their surroundings such as Group A, B, E, F, M or S . This proposal increases the fire resistance between Group R occupancies and all other occupancies to 2-hours to reduce the risk of fire spreading while the occupants are sleeping.

The code change also corrects several cells in the table where the table implies you can have fire separation between an unsprinklered Group I-1, I-3, I-4 and R occupancies and other occupancy groups. All Group I-1, I-3, I-4 and R occupancies are required to be fully sprinklered.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: A question is how this proposed change would coordinate with the separation requirements in Section 406.1.4, which is referenced in note c.

ICCFILENAME: Thompson-G1-T508.4

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jason Thompson, National Concrete Masonry Alliance (NCMA), representing, Masonry Alliance for Codes and Standards (MACS), requests Approval as Submitted.

Commenter's Reason: We are submitting this Public Comment requests Approval of our Code Change G124-09/10 as a fallback position should there be Public Comments submitted to Code Change G118-09/10 requesting disapproval of that Code Change which was recommended for approval by the IBC General Code Development Committee. As noted in the Committee Reason statement, the Committee preferred the changes they approved in G118-09/10 so they considered this Code Change unnecessary. We agree with that approach and, in fact, at the ICC Code Development Committee Hearings held in Baltimore last year, we supported the approval of G118-09/10 and indicated that if it were approved, we would withdraw our Code Change G124-09/10.

We still believe that Code Change G118-09/10 is the best solution to the issue of requiring appropriate fire-resistance ratings for the separation of mixed occupancies under the separated occupancies option in Section 508.4 of the IBC. It takes a comprehensive approach to the issue as compared to this code change which focuses on the modification of several cells in Table 508.4 Required Separation of Occupancies. Our goal is to assure that Code Change G118-09/10 is approved at the ICC Final Action Hearings in which case we would withdraw this Public Comment to our Code Change G124-09/10. However, if Code Change G118-09/10 is voted for disapproval at the ICC Final Action Hearings, then we believe this Code Change should be approved as submitted based on our original Reason Statement.

Final Action: AS AM AMPC____ D

G125-09/10
Table 508.4

Proposed Change as Submitted

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

Table 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

Occupancy	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4	-	-	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP
I-2	-	-	-	-	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP
R	-	-	-	-	-	-	N	N	1 ^c	2 ^c	1	2	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U	-	-	-	-	-	-	-	-	N	N	4N	2N	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1	-	-	-	-	-	-	-	-	-	-	N	N	NP	NP	2	3	1	2 ^a
H-1	-	-	-	-	-	-	-	-	-	-	-	-	N	NP	NP	NP	NP	NP
H-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	NP	1	NP
H-3, H-4, H-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

(Notes a through f to the table remain unchanged.)

Reason: Table 508.4 allows an unrated separation between Groups B/M/U occupancies and Group F-1/S-1 (moderate-hazard) occupancies yet requires a 2-hr separation between Groups B/M/U occupancies and Group F-2/S-2 (low-hazard) occupancies. It is not appropriate to require a higher level of separation from an occupancy of lower hazard. This proposal amends the separation requirements so the low-hazard occupancies Group F-2 and S-2 no longer require a level of separation higher than that of the moderate-hazard occupancies Groups F-1 and S-1.

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

Analysis: Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

ICCFILENAME: TRAXLER-G4-T508.4.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Maureen Traxler, City of Seattle Dept. of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

Table 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

Occupancy	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4	-	-	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP
I-2	-	-	-	-	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP
R	-	-	-	-	-	-	N	N	1 ^c	2 ^c	1	2	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U	-	-	-	-	-	-	-	-	N	N	1	2	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1	-	-	-	-	-	-	-	-	-	-	<u>N1</u>	<u>N2</u>	NP	NP	2	3	1	2 ^a
H-1	-	-	-	-	-	-	-	-	-	-	-	-	N	NP	NP	NP	NP	NP
H-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	NP	1	NP
H-3, H-4, H-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

N = No separation requirement.

NP = Not permitted.

(Notes a through f to the table remain unchanged.)

Commenter's Reason: Table 508.4 allows an unrated separation between B/M occupancies and F-1/S-1 (moderate-hazard) occupancies yet requires a 2-hr separation between B/M occupancies and F-2/S-2 (low-hazard) occupancies. It is not appropriate to require a higher level of separation from an occupancy of lower hazard. To address some of the issues raised during testimony on this proposal, rather than reducing the separation requirement of the low-hazard occupancies to match the separation requirement of the moderate-hazard occupancies (as was done in the original proposal), this modification increases the separation requirement of the moderate-hazard occupancies to match the separation requirements of the low-hazard separation requirements.

Final Action: AS AM AMPC D

G127-09/10

Table 508.4

Proposed Change as Submitted

Proponent: Tony Crimi, A.C. Consulting Solutions Inc., representing International Firestop Council

Revise Table as follows:

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		B		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	<u>1</u>	<u>2</u>	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4			N	N	2	NP	1	NP	1	2	1	2	<u>1</u>	<u>NP</u>	NP	NP	3	NP	2	NP
I-2					N	N	2	NP	2	NP	2	NP	<u>2</u>	<u>NP</u>	NP	NP	3	NP	2	NP
R							N	N	1 ^c	2 ^c	1	2	<u>1</u>	<u>NP</u>	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U									N	N	1	2	<u>1^g</u>	<u>2^g</u>	NP	NP	3	4	2	3 ^a

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S- 2 ^b , U		B, F-1, M, S-1		B		H-1		H-2		H-3, H- 4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
B, F-1, M, S-1											N	N	1 ^g	2 ^g	NP	NP	2	3	1	2 ^a
B													N	N	NP	NP	2	3	1	2 ^a
H-1															N	NP	NP	NP	NP	NP
H-2																	N	NP	1	NP
H-3, H-4, H-5																			1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.5.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.
- g. Occupancy separation need not be provided for storage areas associated with a Group B occupancy if the:
 1. Area is less than 10 percent of the floor areas;
 2. Area is provided with an automatic sprinkler system and is less than 3,000 square feet; or
 3. Area is less than 1,000 square feet.

Reason: The purpose of this Code change is to break out the Group B Occupancies from Groups F-1, M, and S-1 since the current grouping in Table 508.4 does not represent similar hazards, and results in no fire separations being required between these.

This proposal aims to restore a portion of the level of protection afforded in the 2003 IBC and many of the Legacy Codes. While the current Table 508.4 was first revised for the 2006 IBC, few jurisdictions had any history with the lack of fire resistance rated separations between occupancies which the 2006 IBC would now permit.

As the table is currently formatted for required separation of occupancies under the separated occupancies option of Section 508.4, there is no occupancy separation required between any of the occupancies in the B, F-1, M, and S-1 Grouping, as indicated by the letter "N" contained in the table for those occupancy groups. However, a Group B occupancy generally has a significantly lower fire load than the Group F-1, M, and S-1 occupancies, and the occupancy hazard is different as well.

If Table 508.4 truly implements the separated occupancies option which mandates occupancy separations as compared to the nonseparated occupancies option in Section 508.3 which does not, it follows that there should be occupancy separations required between occupancies with different hazard characteristics. Group B occupancies generally have combustible fire loads less than 10 pounds per sq ft, as compared to the Group F-1, M, and S-1 occupancies which could have fire loads as much as 20 to 30 pounds per sq ft or more. Therefore, we have proposed a minimum 2-hour occupancy separation between the Group B occupancies and the Group F-1, M, and S-1 occupancies in nonsprinklered buildings and a minimum 1-hour fire-resistance rating in sprinklered buildings. This is consistent with the other occupancy classifications requiring occupancy separations between them and the Group F-1, M, and S-1 occupancies.

It should also be noted that this is consistent with the required occupancy separation for Group B/M mixed occupancies in former Table 302.3.2 of the 2003 IBC which Table 508.4 replaced in the 2006 IBC. And it is actually less restrictive than former Table 302.3.2 for the Group B/F-1 and Group B/S-1 mixed occupancies separations.

The concept of separation of major occupancies exists in Building regulations throughout the world. Certainly, those occupancy separations requirements used in the separated occupancies option have stood the test of time. There continues to be a critical need to separate adjacent major occupancies of dissimilar use, with fire-resistance rated construction. The previous Table 302.3.2 had been in use for the three plus years it existed in the 2000 and 2003 editions of the IBC. Furthermore, the occupancy separation fire resistance ratings from this predecessor table were taken directly from the BOCA National Building Code, along with the entire concept of the non-separated and separated occupancies in mixed occupancy buildings.

As currently published, the 2009 Code provisions in Section 508 blur the distinction between separated uses and the non-separated use options previously prescribed in Section 302.3.1. The full impact of this change has not yet been felt.

The proposal also adds a footnote g which is essentially the footnote that was provided for storage associated both Group B and M occupancies in Table 508.3.3 of the 2006 IBC. Based on the limited separations between the B, M and S occupancies, the footnote was determined unneeded and removed for the 2009 edition. With the reestablishment of separations between Group B and the S occupancies, this previous footnote should be re-established.

Bibliography & References:

- ¹ 2003 IBC, International Codes Council, Table 302.3.2
- ² 1996 BOCA National Building Code, BOCA
- ³ 1997 Standard Building Code, SBCCI
- ⁴ 1997 Uniform Building Code, ICBO

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Alternative locations for this allowance rather than as a footnote to a table would be as exceptions to Sections 508.3.3 and 508.4.4. Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tony Crimi, A.C. Consulting Solutions Inc, representing International Firestop Council (IFC), requests Approval as Submitted.

Commenter's Reason: The purpose of submitting this public comment is to maintain options for the ICC voting membership at the Final Action Hearings in Dallas, regardless of what may occur on other related Proposals. This proposal aims to restore a portion of the level of protection afforded in the 2003 IBC and many of the Legacy Codes. While the current Table 508.4 was first revised for the 2006 IBC, few jurisdictions had any history with the lack of fire resistance rated separations between occupancies which the 2006 IBC would now permit. The purpose of this Code change is to break out the Group B Occupancies from Groups F-1, M, and S-1 since the current grouping in Table 508.4 does not represent similar hazards, and results in no fire separations being required between these.

It should also be noted that this is consistent with the required occupancy separation for Group B/M mixed occupancies in former Table 302.3.2 of the 2003 IBC which Table 508.4 replaced in the 2006 IBC, and it is actually less restrictive than former Table 302.3.2 for the Group B/F-1 and Group B/S-1 mixed occupancies separations.

Final Action: AS AM AMPC_____ D

G128-09/10

Table 508.4

Proposed Change as Submitted

Proponent: Mike Ashley C.B.O. /Representing The Alliance for Fire & Smoke Containment & Control, Inc. (AFSCC)

Revise Table as follows:

**TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		M		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	<u>1</u>	<u>2</u>	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4			N	N	2	NP	1	NP	1	2	1	2	<u>1</u>	<u>NP</u>	NP	NP	3	NP	2	NP
I-2					N	N	2	NP	2	NP	2	NP	<u>2</u>	<u>NP</u>	NP	NP	3	NP	2	NP
R							N	N	1 ^c	2 ^c	1	2	<u>1</u>	<u>NP</u>	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U									N	N	1	2	<u>1^g</u>	<u>2^g</u>	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1											N	N	<u>1^g</u>	<u>2^g</u>	NP	NP	2	3	1	2 ^a
M													<u>N</u>	<u>N</u>	<u>NP</u>	<u>NP</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2^a</u>
H-1															N	NP	NP	NP	NP	NP
H-2																	N	NP	1	NP
H-3, H-4, H-5																			1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.

NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.5.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.
- g. Occupancy separation need not be provided for storage areas associated with a Group M occupancy if the:
 - 4. Area is less than 10 percent of the floor areas;
 - 5. Area is provided with an automatic sprinkler system and is less than 3,000 square feet; or
 - 6. Area is less than 1,000 square feet.

Reason: In this code change we propose to separate out the Group M occupancies from the grouping of occupancies which includes Groups B, F-1, M, and S-1 as is currently the case in Table 508.4 which is used for implementing the separated occupancies option of Section 508.4. It should be noted that the separated occupancies option requires different occupancies in the same building to be separated from each other based on the fire-resistance ratings specified in Table 508.4, as compared to the nonseparated occupancies option in Section 508.3 which does not require any fire-resistance-rated separation between occupancies. However, no occupancy separations are required between any of the occupancies in the grouping containing Group B, F-1, M, and S-1 occupancies since the letter "N" is entered in the table for those occupancy groups. This means that there is no separation requirement whatsoever.

By removing the Group M occupancies from that grouping and creating a separate entry for them, we have achieved a required separation of occupancies for the Group M occupancy from any of the Group B, F-1, or S-1 occupancies. We believe Group M occupancies should be separated from these other occupancies because of the relative hazard of a Group M occupancy as compared to the other occupancies both in terms of fire load and occupant life safety. Group M occupancies can contain fire loads as much as 20 pounds per sq ft or more depending upon the type of retail operations and, of course, they can contain high densities and numbers of people, especially during holiday seasons and special sales events, as compared to the other occupancies. Group B occupancies generally contain fire loads less than 10 pounds per sq ft so they should be separated in order to protect that occupancy from the higher fire exposure of the Group M occupancies. The Group F-1 and S-1 occupancies should be separated from the Group M occupancies mainly because of the occupant life safety hazard exposures from those occupancies to the occupants of the Group M occupancy. In this code change we are proposing a 2-hour occupancy separation for fire barrier walls and horizontal assemblies in nonsprinklered buildings and 1-hour for sprinklered buildings. This is consistent with the occupancy separations contained in the current table between the Group B, F-1, M, and S-1 occupancies and all other occupancies except Group H-2. We believe that those occupancy combinations represent similar relative hazards in terms of fire and life safety.

The proposal also adds a footnote g which is essentially the footnote that was provided for storage associated both Group B and M occupancies in Table 508.3.3 of the 2006 IBC. Based on the limited separations between the B, M and S occupancies, the footnote was determined unneeded and removed for the 2009 edition. With the reestablishment of separations between Group M and the S occupancies, this previous footnote should be re-established.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Alternative locations for this allowance rather than as a footnote to a table would be as exceptions to Sections 508.3.3 and 508.4.4. Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

ICCFILENAME: ASHLEY-G2-TABLE 508.4

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Mike Ashley, CBO, Alliance for Fire & Smoke Containment & Control, Inc. (AFSCC), requests Approval as Submitted.

Commenter's Reason: This change created a separate column for M occupancies for both sprinklered and non sprinklered. This just a simple clean up of table 508.4.

Final Action Agenda voters are asked to vote against the standing motion to disapprove the Committee's recommendation and, instead, to approve G128 as submitted by this Public Comment.

Final Action: AS AM AMPC____ D

G129-09/10
Table 508.4

Proposed Change as Submitted

Proponent: Jason Thompson, National Concrete Masonry Association, representing the Masonry Alliance for Codes and Standards

Revise as follows:

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2, I-3		R		F-2, S-2 ^b , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4	—	—	N 1 ^e	NP	2	NP	1	NP	1	2 NP	1	2 NP	NP	NP	3	NP	2	NP
I-2, I-3	—	—	—	—	N 2 ^e	NP	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP
R	—	—	—	—	—	—	N	N	1 ^c	2 ^c	1	2	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U	—	—	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1	—	—	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2 ^a
H-1	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	1	NP
H-3, H-4, H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.5.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.

Reason: This proposed code change accomplishes several things. First, it relocates the Group I-3 occupancies to the same cells as the Group I-2 occupancies. Second, it requires that the Group I-1 and Group I-4 occupancies be separated from each other with a minimum 1-hour fire-resistance rating. Third, it also clarifies the table regarding the Group I occupancies for the NS columns where some of the individual cell entries have been changed to "NP." This recognizes the fact that the entire building containing a Group I occupancy is required to be protected with an automatic sprinkler system throughout even where there are other mixed occupancies that may be separated with fire barriers or horizontal assemblies that would otherwise not be required to be sprinklered.

Group I-3 occupancies should be treated the same as the Group I-2 occupancy when the separated occupancies option of Section 508.4 is used since they have similar relative hazards. This is also consistent with the 2009 NFPA 101 Life Safety Code which requires a minimum 2-hour fire-resistance rating for all occupancy separations involving detention and correctional facilities and other occupancies in the same building as specified in Tables 6.1.14.4.1(a) and (b) Required Separation of Occupancies (hours), Part 1 and Part 2. The separated occupancies option section in Section 508.4 of the 2009 IBC, refers to Table 508.4 Required Separation of Occupancies (hours) for determining the fire-resistance rating of the occupancy separation depending upon the occupancies being separated. However, the way the table is currently structured, a Group I-3 occupancy would not be required to be separated from a Group I-1 or I-4 occupancy because they are grouped together.

As indicated previously, this amendment will also require that a Group I-1 occupancy be separated from a Group I-4 occupancy with a minimum 1-hour fire-resistance-rated separation. This would be consistent with the Table 508.4 requirement that these occupancies be separated from Group R occupancies with a minimum 1-hour fire-resistance rating.

Also Footnote e has been added to the 1-hour rating for the I-1/I-4 occupancies to indicate that where the occupancy classification is the same, then there is no separation required. In other words, this would not require, as is currently the case, an occupancy separation for a Group I-1 occupancy and an adjacent Group I-1 occupancy in the same building, or similarly for a Group I-4 occupancy adjacent to another Group I-4 occupancy in the same building. And, a footnote has been added for the Group I-2 and I-3 occupancies for the same reason.

Finally, for the Group I-1 occupancies, this amendment is consistent with Exception 3 to Section 508.2.4 Separation of Occupancies for accessory occupancies, Exception 2 to Section 508.3.3 Separation for nonseparated occupancies, and Section 420.2 Separation Walls for Group I-1 sleeping/dwelling units.

The code change also corrects several cells in the table where the table implies you can have fire separation between an unsprinklered Group 1-1, I-3, I-4 occupancies and other occupancy groups. All Group I and R occupancies are required to be fully sprinklered.

In conclusion, this amendment will clarify where the required occupancy separations are to be provided under the separated occupancies option of the 2009 IBC for all Group I occupancies while making the code internally consistent.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

ICCFILENAME: Thompson-G3-T508.4

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jason Thompson, National Concrete Masonry Alliance (NCMA), representing Masonry Alliance for Codes and Standards (MACS), requests Approval as Submitted.

Commenter's Reason: We are submitting this Public Comment requests Approval of our Code Change G129-09/10 as a fallback position should there be Public Comments submitted to Code Change G118-09/10 requesting disapproval of that Code Change which was recommended for approval by the IBC General Code Development Committee. As noted in the Committee Reason statement, the Committee preferred the changes they approved in G118-09/10 so they considered this Code Change unnecessary. We agree with that approach and, in fact, at the ICC Code Development Committee Hearings held in Baltimore last year, we supported the approval of G118-09/10 and indicated that if it were approved, we would withdraw our Code Change G129-09/10.

We still believe that Code Change G118-09/10 is the best solution to the issue of requiring appropriate fire-resistance ratings for the separation of mixed occupancies under the separated occupancies option in Section 508.4 of the IBC. It takes a comprehensive approach to the issue as compared to this code change which focuses on the modification of several cells in Table 508.4 Required Separation of Occupancies. Our goal is to assure that Code Change G118-09/10 is approved at the ICC Final Action Hearings in which case we would withdraw this Public Comment to our Code Change G129-09/10. However, if Code Change G118-09/10 is voted for disapproval at the ICC Final Action Hearings, then we believe this Code Change should be approved as submitted based on our original Reason Statement.

Final Action: AS AM AMPC_____ D

G130-09/10
Table 508.4

Proposed Change as Submitted

Proponent: Stephen V. Skalko, P.E., Portland Cement Association

Revise as follows:

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A ^d , E		I-1, I-3, I-4		I-2		R		F-2, S-2 ^b , U		B, F-1, M, S-1		F-1, S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^d , E	N	N	1	2	2	NP	1	2	N	1	1	2	<u>2</u>	<u>3</u>	NP	NP	3	4	2	3 ^a
I-1, I-3, I-4			N	N	2	NP	1	NP	1	2	1	2 NP	<u>2</u>	<u>NP</u>	NP	NP	3	NP	2	NP
I-2					N	N	2	NP	2	NP	2	NP	<u>2</u>	<u>NP</u>	NP	NP	3	NP	2	NP
R							N	N	1 ^c	2 ^c	1	2 NP	<u>2</u>	<u>NP</u>	NP	NP	3	NP	2	NP
F-2, S-2 ^b , U									N	N	1	2	<u>2</u>	<u>3</u>	NP	NP	3	4	2	3 ^a
B, F-1, M, S-1											N	N	<u>2</u>	<u>3</u>	NP	NP	2	3	1	2 ^a
F-1, S-1													<u>N</u>	<u>N</u>	<u>NP</u>	<u>NP</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u> ^a
H-1															N	NP	NP	NP	NP	NP
H-2																	N	NP	1	NP
H-3, H-4, H-5																			1 ^{e,f}	NP

For SI: 1 square foot = 0.0929 m².

- S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
- N = No separation requirement.
- NP = Not permitted.

- a. For Group H-5 occupancies, see Section 903.2.5.2.
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than 1 hour.
- c. See Section 406.1.4.
- d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.
- e. Separation is not required between occupancies of the same classification.
- f. For H-5 occupancies, see Section 415.8.2.2.

Reason: In this code change Group F-1 and S-1 occupancies are proposed to be separated out from the grouping of occupancies which includes Groups B, F-1, M, and S-1 as is currently the case in Table 508.4 which is used for implementing the separated occupancies option of Section 508.4. It should be noted that the separated occupancies option requires different occupancies in the same building to be separated from each other based on the fire-resistance ratings specified in Table 508.4 as compared to the nonseparated occupancies option in Section 508.3 which does not require any fire-resistance-rated separation between different occupancies. However, no occupancy separations are required between any of the occupancies in the grouping containing Group B, F-1, M, and S-1 occupancies since the letter "N" is entered in the table for those occupancy groups. This means that there is no separation requirement whatsoever even though the Group F-1 and S-1 occupancies may contain significantly greater fire loads than the Group B and M occupancies.

If Table 508.4 truly implements the separated occupancies option which mandates occupancy separations between mixed occupancies in the same building as compared to the nonseparated occupancies option in Section 508.3 which does not, it follows that there should be occupancy separations required between occupancies with different hazard characteristics. By removing the Group F-1 and S-1 occupancies from the grouping of the Group B, F-1, M, and S-1 occupancies and creating a separate entry for them in the table, a required separation of occupancies for the Group F-1 and S-1 occupancies from any of the Group B and M occupancies is achieved. This is based on the premise that the Group F-1 and S-1 occupancies should be separated from these occupancies because of the relative hazard of the Group F-1 and S-1 occupancy as compared to the Group B and M occupancies both in terms of the fire load and occupant life safety. Group F-1 and S-1 occupancies can contain fire loads as much as 20 to 30 pounds per sq ft or more. This can represent a significant fire exposure to the adjacent Group B and/or M occupancies in the same building which may also have significant numbers of occupants representing a potential life safety hazard.

Therefore, this proposal requires a minimum 3-hour occupancy separation for fire barrier walls and horizontal assemblies in nonsprinklered buildings and 2-hours for sprinklered buildings. This is consistent with the occupancy separations contained in the current table between the Group B, F-1, M, and S-1 occupancies and the Group H-2 occupancies. This occupancy usually has an occupancy combination that represents a similar relative hazard in terms of fire and life safety. This is also consistent with Table 707.3.9 for the separation of fire areas and Table 706.4 Fire Wall Fire-Resistance Ratings. It should also be noted that these proposed occupancy separations are consistent with the required occupancy separations for Group F-1 and S-1 mixed occupancies in former Table 302.3.2 of the 2003 IBC which Table 508.4 replaced in the 2006 IBC.

The code change also corrects several cells in the table where the table implies you can have fire separation between an unsprinklered Group I-1, I-3, I-4 and R occupancies and other occupancy groups. All Group I-1, I-3, I-4 and R occupancies are required to be fully sprinklered.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Because the code requires buildings containing either Group I or R occupancies to be fully sprinkler protected, the Code Correlation Committee has replaced all numeric values in cells indicating a NS (non sprinklered) Group I or R occupancy building with NP for not permitted.

ICCFILENAME: Skalko-G1-T508.4

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee preferred the changes approved under G118-09/10 and this change would be unnecessary.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Stephen V. Skalko, PE, Portland Cement Association, requests Approval as Submitted.

Commenter's Reason: G130 was submitted to correct a deficiency in TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES. In the existing table F-1 and S-1 occupancies are not required to have a fire rated separation between them and B and M occupancies. But F-2 and S-2 occupancies, which present a lesser fire risk to B and M occupancies, are required to have a fire rated separation from the B and M occupancies. This change will place F-1 and S-1 occupancies into a separate column and require a fire rated separation between these occupancies and all others.

The committee reason for disapproval of G130 was the action on code change G118 of recommending approval as submitted. We agree with the committee action on G118 and support the membership voting to sustain that recommendation. If the committee recommendation on G118 is sustained then G130 is not necessary. However, should the membership decide that the committee recommendation on G118 be overturned and then disapproved, G130 should be approved as submitted to correct the deficiency noted above.

Final Action: AS AM AMPC____ D

G131-09/10 509.2

Proposed Change as Submitted

Proponent: Lou Malattia representing Washington Association of Building Officials

Revise as follows:

509.2 Horizontal building separation allowance. A building shall be considered as separate and distinct buildings for the purpose of determining area limitations, continuity of *fire walls*, limitation of number of stories and type of construction where all of the following conditions are met:

1. The buildings are separated with a horizontal assembly having a minimum 3-hour fire-resistance rating.
2. The building below the horizontal assembly is no more than one story above grade plane.
3. The building below the horizontal assembly is of Type IA construction.
4. Shaft, stairway, ramp and escalator enclosures through the horizontal assembly shall have not less than a 2-hour fire-resistance rating with opening protectives in accordance with Section 715.4.

Exception: Where the enclosure walls below the horizontal assembly have not less than a 3-hour fire resistance rating with opening protectives in accordance with Section 715.4, the enclosure walls extending above the horizontal assembly shall be permitted to have a 1-hour fire-resistance rating, provided:

1. The building above the horizontal assembly is not required to be of Type I construction;
2. The enclosure connects less than four stories above the horizontal assembly; and

3. The enclosure opening protectives above the horizontal assembly have a minimum 1-hour fire protection rating.
5. The building or buildings above the horizontal assembly shall be permitted to have multiple Group A occupancy uses, each with an occupant load of less than 300, or Group B, M, R or S occupancies.
6. The building below the horizontal assembly shall be protected throughout by an approved automatic sprinkler system in accordance with Section 903.3.1.1, and shall be permitted to be any of the following occupancies:
 - 6.1. Group S-2 parking garage used for the parking and storage of private motor vehicles;
 - 6.2. Multiple Group A, each with an occupant load of less than 300;
 - 6.3. Group B;
 - 6.4. Group M;
 - 6.5. Group R; and
 - 6.6. Uses incidental to the operation of the building (including entry lobbies, mechanical rooms, storage areas and similar uses).
7. The maximum building height in feet shall not exceed the limits set forth in Section 503 for the building having the smaller allowable height as measured from the grade plane.

Reason: To provide clarification of this exception. There has been some conflicting code opinions and this exception. Section 509.2, Condition #4, the exception item 4.2, which reads, "The enclosure connects less than four stories;" has been interpreted by some jurisdictions to mean that the Group S-2 level below the 3-hour separation is considered to be a level for the purposes of this exception, and therefore only permitting two stories above the horizontal separation.

The intent of the code is to permit Group A occupancies less than 300, Groups B or M occupancies to be considered separate buildings for the purpose of determining area limitations, continuity of fire wall, limitation of number of stories and type of construction. A typical building type using this provision is a three story wood framing apartment building above an enclosed concrete parking level.

The exception to condition #4 permits the two hour shaft to be reduced to one hour provided that the enclosure walls below the horizontal assembly is increased to a three hour fire-resistance rating. This additional protection permits three levels above the horizontal assembly to be protected with one hour shafts instead of the two- hour assembly.

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

ICCFILENAME: MALATTIA-G3-509.2

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee was uncomfortable that the apparent effect of the change would be to allow a 5 story shaft which would only be rated as a one hour enclosure for four stories.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Maureen Traxler, City of Seattle, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Submitted.

Commenter's Reason: This proposal clarifies that the exception applies to shafts that connect 3 or fewer stories above the 3-hour assembly, and the story below the assembly. The current text can be interpreted to limit the total stairway enclosure to 3 stories as shown in Figure 1. However, the intent of the legacy code from which this provision is taken was to allow 3 stories above the three-hour separation as shown in Figure 2. The reduction in the rating of the enclosure above the 3-hour separation is mitigated by the requirement for 3-hour walls and 90-minute opening protectives below the 3-hour assembly. The proposed modification clarifies that the one-hour portion of the stairway can connect no more than 3 stories.

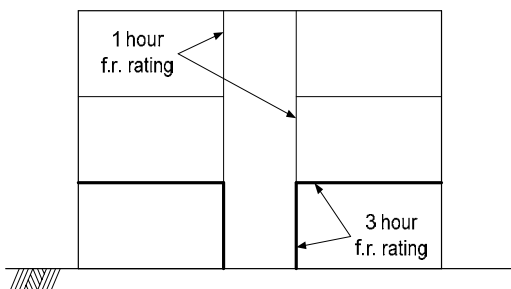


FIG. 1

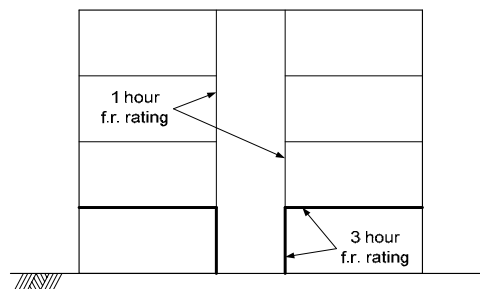


FIG. 2

G136-09/10

Table 601

Proposed Change as Submitted

Proponent: Mike Ennis, Single Ply Roofing Industry (SPRI), representing the Single Ply Roofing Industry (SPRI)

Revise as follows:

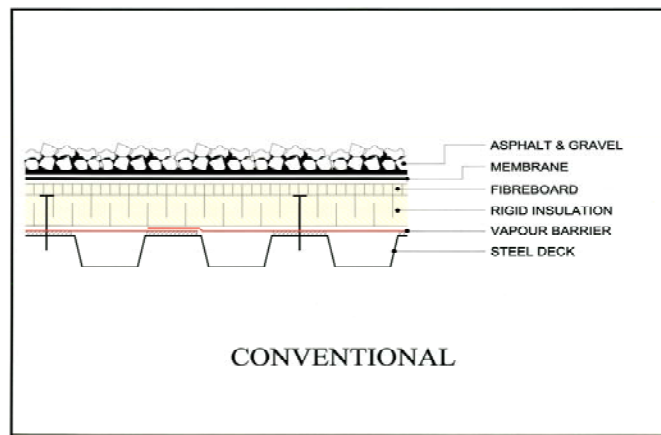
**TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)**

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A ^d	B	A ^d	B	HT	A ^d	B
Primary structural frame ^g (see Section 202)	3 ^a	2 ^a	1	0	1	0	HT	1	0
Bearing walls									
Exterior ^{f, g}	3	2	1	0		2	2	1	0
Interior	3 ^a	2 ^a	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions	See Table 602								
Exterior									
Nonbearing walls and partitions	0	0	0	0	0	0	See Section 602.4.6	0	0
Interior ^e									
Floor construction and secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and secondary members ^h (see Section 202)	1½ ^b	1 ^{b, c}	1 ^{b, c}	0 ^c	1 ^{b, c}	0	HT	1 ^{b, c}	0

For SI: 1 foot = 304.8 mm.

- a. Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
- b. Except in Groups F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
- c. In all occupancies, heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
- d. An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.
- e. Not less than the fire-resistance rating required by other sections of this code.
- f. Not less than the fire-resistance rating based on fire separation distance (see Table 602).
- g. Not less than the fire-resistance rating as referenced in Section 704.10
- h. The requirements of this table for roof construction are not applicable to above deck components. For construction Types I and II, the materials used in above deck components shall meet the requirements of Section 603.1.

Reason: Table 601 contains footnote b which states, "Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members." This footnote is referenced for all Types (I through V) of roof construction where a rated assembly is required. In many cases this footnote is being interpreted as meaning that fire-retardant-treated wood is required whenever wood is used in a roof assembly that requires an hourly rating. A typical roofing assembly contains the components shown below:



The roof deck is typically steel, concrete or wood. On top of the roof deck is a layer of insulation, in many cases a coverboard and then a waterproofing system. The waterproofing system may be a asphalt/gravel system as shown above, a single ply roof membrane, or for steeper slope applications shingles or tile. The current footnote b references structural members, components installed above the roof deck are not structural, they are supported by the structure.

Insulation suppliers to the roofing industry manufacture a nailable insulation product (see included Atlas Nailbase Datasheet). This product consists of foam plastic insulation with a layer of wood (OSB, Plywood, or fire-retardant-treated wood) laminated to it, thus combining two of the components shown above (insulation and fiberboard) into one product. This product is installed on top of the roof deck and is used as the nailable substrate for various roofing materials such as shingles, shakes and tile.

In many instances designers feel that footnote b of Table 601 requires that fire-retardant-treated wood be used as the nailable component of this product when a rated assembly is required. While this product can be made with fire-retardant-treated wood as the nailable component this unnecessarily increases the cost of construction.

The proposed footnote h would provide clarifying language while maintaining important fire safety requirements. For example, this footnote is no way removes the hourly rating requirements of the roof assembly. Hourly ratings can be achieved with OSB as the nailable substrate on this product. It also retains the requirement that the product meet the requirements of Section 603 COMBUSTIBLE MATERIALS IN TYPE I AND II CONSTRUCTION.

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

ICCFILENAME: ENNIS-G1-Table 601

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: At the proponent's request, the committee disapproved the code change acknowledging that it needed further study and refinement. Of particular concern that it would allow a lessening of structural stability of roof assemblies.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Mike Ennis, representing Single Ply Roofing Industry (SPRI), requests Approval as Modified by this Public Comment.

Modify proposal as follows:

- h. ~~The requirements of this table for roof construction are not applicable to above-deck components.~~ Fire-retardant treated wood is not required for non-structural components installed above the roof deck. For construction Types I and II, the materials used in above roof deck components shall meet the requirements of Section 603.1.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The proposed modification is provided to clarify the intent of the proposed Note h and to remove a potential conflict with Note a. As currently worded Note h could be used to ignore the fact that Note a should not be applied when any load is imposed on a roof by above deck installations.

The intent of Note h is to provide clarification to wording contained in Note b of Table 601. In part the intent of Note b is that fire-retardant treated wood is allowed for use in unprotected wood framing and decking if the roof construction is at least 20' above the floor. Some designers are interpreting Note b to mean that only fire-retardant treat wood can be used in roof assemblies. This has resulted in increased material costs and lead

2010 ICC FINAL ACTION AGENDA

times for a product commonly used in steep slope (>2:12) roofing applications. This product is composed of foam plastic insulation with OSB laminated to it. It is installed on top of the roof deck and is non-structural. This product provides both insulation and a nailable substrate for the attachment of roof shingles/tiles, etc. Requiring the use of fire-retardant treated wood instead of OSB increases the cost and lead-time for this product.

The proposed modification states in much clearer words the intent of Note h

Public Comment 2:

Rich Roe, representing Atlas Roofing Corporation, requests Approval as Modified by this Public Comment.

Modify proposal as follows:

- b. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and deck where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed for such unprotected members. Fire-retardant treated wood is not required for non-structural components installed above the roof deck. For construction Types I and II, the materials used in above roof deck components shall meet the requirements of Section 603.1.
- ~~h. The requirements of this table for roof construction are not applicable to above deck components. For construction Types I and II, the materials used in above roof deck components shall meet the requirements of Section 603.1.~~

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The proposed modification is provided to clarify the intent of the proposed Note b. The original proposal included the addition of Note h to provide this clarification. However as written Note h could be used to ignore the fact that Note a should not be applied when any load is imposed on a roof by above deck installations.

In part the intent of Note b is that fire-retardant treated wood is allowed for use in unprotected wood framing and decking if the roof construction is at least 20' above the floor. Some designers are interpreting Note b to mean that only fire-retardant treat wood can be used in roof assemblies. This has resulted in increased material costs and lead times for a product commonly used in steep slope (>2:12) roofing applications. This product is composed of foam plastic insulation with OSB laminated to it. It is installed on top of the roof deck and is non-structural. This product provides both insulation and a nailable substrate for the attachment of roof shingles/tiles, etc. Requiring the use of fire-retardant treated wood instead of OSB increases the cost and lead-time for this product.

The proposed modification provides wording directly in Note b to provide additional clarification instead of adding Note h.

Final Action: AS AM AMPC____ D

G138-09/10
Table 602

Proposed Change as Submitted

Proponent: Joe Holland or Dave Bueche, representing Hoover Treated Wood Products

Revise as follows:

TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE^{a, e}

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H ^f	OCCUPANCY GROUP F-1, M S-1 ^g	OCCUPANCY GROUP A, B, E, F-2, I, R, S-2 ^g , U ^b
X < 5 ^c	All	3	2	1
5 ≤ X < 10	IA	3	2	1
	Others	2	1	1
10 ≤ X 30	IA, IB	2	1	1 ^c
	IIB, IIIB, VB	1	0	0
	Others	1	1	1 ^c
X ≤ 30	All	0	0	0

For SI: 1 foot = 304.8 mm.

- a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.
- b. For special requirements for Group U occupancies, see Section 406.1.2.
- c. See Section 706.1.1 for party walls.
- d. Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.
- e. The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of the exterior wall and the story in which the wall is located.
- f. For special requirements for Group H occupancies, see Section 415.3.
- g. For special requirements for Group S aircraft hangars, see Section 412.4.1.

Reason: The exterior wall fire resistance required in Table 601 is greater for Type IIIB than what is required for either Type IIB or VB. The interior fire resistance in Type IIIB construction is equivalent to Type IIB and Type VB and therefore should be allowed in the same category.

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

ICCFILENAME: HOLLAND-BUECHE-G6-T602.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: No technical substantiation was provided to justify reducing the protection of Type IIIB construction.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Joseph Holland and Dave Bueche, representing Hoover Treated Wood Products, Inc., requests Approval as Submitted.

Commenter's Reason: The exterior bearing wall fire resistance required in Table 601 is greater for Type IIIB than what is required for either Type IIB or VB. The interior fire resistance in Type IIB construction is equivalent to Type IIB and Type VB and therefore should be allowed in the same category.

Final Action: AS AM AMPC_____ D

G140-09/10

602.3, 602.4

Proposed Change as Submitted

Proponent: Jason Thompson, National Concrete Masonry Association (NCMA), representing Masonry Alliance for Codes and Standards (MACS)

Revise as follows:

602.3 Type III. Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies of having not greater than a 2-hour fire-resistance rating or less where the exposed outer and inner faces of such walls are of noncombustible materials.

602.4 Type IV. Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces. The details of Type IV construction shall comply with the provisions of this section. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies with having not greater than a 2-hour fire-resistance rating or less where the exposed outer and inner faces of such walls are of noncombustible materials.

Reason: This code change adds to the provision for exterior walls using fire-retardant-treated wood framing in buildings of Types III and IV construction by requiring that the framing be covered on the outer and inner faces with noncombustible materials. This additional provision when fire-retardant-treated wood is used in exterior walls otherwise required to be constructed of noncombustible materials is taken from the 1997 ICBO Uniform Building Code (UBC) Section 503.4.3 Fire-Retardant-Treated Wood Framing. That section was the source for the justification in the IBC to allow fire-retardant-treated wood in these exterior wall assemblies where the fire-resistance rating did not exceed 2-hours.

A significant number of Type III construction buildings have taken advantage of this provision to allow the exterior wall to be framed of wood rather than constructed entirely of noncombustible materials, while also taking advantage of Section 1406.2.2. Section 1406.2.2 allows combustible exterior wall coverings to be installed on the exterior faces of these walls. That application does not meet the code intent for limiting the combustible materials in the exterior walls of Type III construction which is a basic fire safety component of that type of construction. Since the legacy code

provision was used to justify the use of fire-retardant-treated wood, then the other requirements applicable thereto in that legacy code should also be incorporated into the IBC to achieve the intended level of fire safety.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: Thompson-G5-602.3

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal defeats the allowance for fire-retardant-treated wood in these assemblies especially the application of FRTW sheathing. Language addressing inner and outer faces was unclear to the committee as how it should be interpreted.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jason Thompson, National Concrete Masonry Alliance (NCMA), representing Masonry Alliance for Codes and Standards (MACS), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

602.3 Type III. Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies having not greater than a 2-hour fire-resistance rating where the exposed outer face of the exterior wall covering and inner faces of such walls is constructed ~~are~~ of noncombustible materials and a noncombustible membrane is applied over the interior face of the fire-retardant-treated wood framing to separate the framing from the interior of the building.

602.4 Type IV. Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid laminated wood without concealed spaces. The details of Type IV construction shall comply with the provisions of this section. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies having not greater than a 2-hour fire-resistance rating where the exposed outer face of the exterior wall covering and inner faces of such walls is constructed ~~are~~ of noncombustible materials and a noncombustible membrane is applied over the interior face of the fire-retardant-treated wood framing to separate the framing from the interior of the building.

Commenter's Reason: We are submitting this Public Comment to request approval as modified of our Code Change Proposal G140-09/10 with appropriate revisions that respond to the IBC General Code Development Committee's Reason Statement for disapproval. The Committee felt that the language addressing inner- and outer-faces was unclear as to how it would be interpreted. Although this language was taken directly from the legacy building code from which the original provisions were taken and incorporated into the IBC, we have revised it to make it clear as to what is meant. The intent of this Code Change is to require some type of a noncombustible exterior covering on the outside of the exterior walls of Type III and IV buildings that are otherwise required to noncombustible, but are allowed to contain fire-retardant-treated wood framing within the wall construction. A noncombustible covering would also be required to be applied to the inner face of the fire-retardant-treated wood framing so that it is separated from the interior of the building. Thus, both the inner-face and the outer-face of the exterior wall construction covering the fire-retardant-treated wood framing would be required to be noncombustible by this Code Change Proposal as revised by this Public Comment.

As stated in our original Reason Statement for this Code Change, that is what the legacy building code, the 1997 ICBO Uniform Building Code (UBC), required in order to allow fire-retardant-treated wood framing within these exterior walls that are otherwise required to be constructed entirely of noncombustible materials.

Contrary to the Committee's Reason Statement that this code change defeats the allowance for fire-retardant-treated wood, especially in the application of FRTW sheathing, the code allowance for the use of fire-retardant-treated wood in the exterior walls of Types III and IV construction buildings only applies to the framing and not to the sheathing. In our opinion, fire-retardant-treated wood sheathing could still be applied over the noncombustible exterior wall covering applied over the fire-retardant-treated wood framing based on allowances in Section 1405.5 Wood Veneers and Section 1406.2.2 Type I, II, III and IV construction for combustible materials on the exterior side of exterior walls.

Section 1405.5 allows fire-retardant-treated wood veneer to be used on buildings of Type III and IV construction provided it is attached to, or furred from, a noncombustible backing that is fire-resistance rated as required by other provisions of this code based on Item 2 of that section. So this section would require a noncombustible backing which would be similar to the noncombustible exterior wall covering we are proposing in our Code Change Proposal allowing fire-retardant-treated wood framing in these exterior walls.

Section 1406.2.2 will allow combustible exterior wall coverings of fire-retardant-treated wood on buildings of Types III and IV construction as well, permitted to a height of 60 feet, just as that allowed by Section 1405.5. In our opinion, this assumes that the fire-retardant-treated wood will be applied over a noncombustible substrate represented by the noncombustible wall construction typically required by these types of construction.

In conclusion, we believe that the allowable use of fire-retardant-treated wood framing in exterior walls of Types III and IV construction, which are otherwise required to be constructed entirely of noncombustible materials, should be continued to be allowed within the scope of the original allowance from which this was derived, i.e. the 1997 ICBO UBC as indicated in our Reason Statement for our original Code Change Proposal. Therefore, we respectfully request that the Class A voting members overturn the Committee recommendation for disapproval of our Code Change and approve this Public Comment which will result in Code Change G140-09/10 being approved as modified.

Final Action: AS AM AMPC _____ D

G143-09/10
603.1

Proposed Change as Submitted

Proponent: Joe Holland and Dave Bueche, representing Hoover Treated Wood Products

Revise as follows:

603.1 Allowable materials. Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

- 1. Fire-retardant-treated wood shall be permitted in:
 - 1.1. Nonbearing partitions where the required fire-resistance rating is 2 hours or less.
 - 1.2. Nonbearing exterior walls where no fire rating is required.
 - 1.3. Roof construction, including girders, trusses, framing and decking.
 - 1.4. Blocking such as for handrails, millwork, cabinets and window and door frames.

Exception: In buildings of Type IA construction exceeding two stories above grade plane, fire-retardant-treated wood is not permitted in roof construction when the vertical distance from the upper floor to the roof is less than 20 feet (6096 mm).

2. through 13. *(No change to current text)*

~~14. Blocking such as for handrails, millwork, cabinets and window and door frames.~~

15. through 25. *(No change to current text)*

Reason: The primary members of partitions in Type I and Type II construction must be noncombustible or fire-retardant-treated wood. To allow untreated wood in the partitions for blocking is inconsistent with Type I and Type II construction. In some cases it can be flush mounted exposed with the wallboard behind cabinets or millwork. It certainly is not prudent. Two of the three legacy codes did not allow.

Cost Impact: The code change proposal will increase the cost of construction.

Staff Note: In the first 2 editions of the 2009 IBC, Item 1 of Section 603.1 was shown as Item 25.

ICCFILENAME: HOLLAND-BUECHE-G4-603.1

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent did not provide technical justification to restrict use of standard wood for simply blocking purposes. It was questioned whether there were fire retardant products available for all typical blocking situations. There was no information presented of a loss history because blocking materials were wood other than FRTW.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Joseph Holland and Dave Bueche representing Hoover Treated Wood Products Inc, requests Approval as Submitted.

Commenter's Reason: The committee disapproved the proposal because no technical justification was submitted or fire data. This is Type I and Type II construction. The use of untreated wood is typically limited to areas where it can be seen. There appears to be a conflict. Section 1 addresses the use of a combustible material, fire-retardant-treated wood, in partitions, exterior walls, and roofs. Section 14 allows untreated wood. This a conflict. To be consistent, all the wood should be treated. Most species of untreated wood used for backing and blocking has a Class C rating. FRTW is Class A. That can be a difference in the flame spread as great as 190 compared to less than 25. The FRTW products in the marketplace are actually in the 10 to 15 range. In addition, smoke generated by FRTW is substantially less than untreated wood. Depending on the species the smoke developed rating for untreated wood is in the 250 to 350 range. FRTW is 50 or less.

Final Action: AS AM AMPC D

G145-09/10, PART II

IRC R806.2

NOTE: PART I DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART I IS REPRODUCED FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART II.

Proposed Change as Submitted

Proponent: Lee Kranz representing Washington Association of Building Officials (WABO), Technical Code Development Committee

PART II – IRC BUILDING/ENERGY

Revise as follows:

R806.2 Minimum area. The total net free ventilating area shall not be less than $1/150$ of the area of the space ventilated, ~~except that reduction of the total area~~

Exceptions:

1. The net free-cross ventilation area shall be permitted to be reduced to $1/300$ ~~is permitted~~ provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.
2. ~~As an alternative,~~ The net free cross-ventilation area may shall be permitted to be reduced to $1/300$ when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.

Reason: IBC 1203.2. Current attic ventilation provisions do not address ventilation of low sloped or flat roof attics. It is appropriate to require more ventilation area (i.e. $1/150_{th}$) when 3' of vertical separation between the upper and lower vent areas is not possible. A reduction of required vent area (i.e. $1/300_{th}$) is appropriate when vertical separation of the vents is provided as natural convection provides additional air movement within the attic space. It is also appropriate to reduce the vent area when a vapor barrier is installed on the ceiling to reduce moisture transmission from the occupied space into the attic. This change also creates consistency with Section 806.2 of the 2009 IRC.

IRC R806.2. The current language found in IRC Section 806.2 includes two exceptions within the charging text. The proposal reformats the section to be consistent with the typical grammatical format found elsewhere in the codes. The change creates consistency with Section 1203.2 of the IBC.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: KRANZ-G2-1203.2

Public Hearing Results

PART II – IRC- B/E

Committee Action:

Disapproved

Committee Reason: The committee feels that the language of proposal RB158-09/10 more adequately addresses this issue.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lee J. Kranz, City of Bellevue, representing Washington Association of Building Officials Technical Development Committee, requests Approval as Submitted.

Commenter's Reason: G-145 Part I was submitted to correct a problem related to ambiguity on how to ventilate low slope roof attics with less than 3' of vertical separation between the upper and lower vents. In the 2009 IBC, the requirement in Section 1203.2 to provide not less than 3' of

vertical separation between the upper and lower vents is impossible to achieve in low slope roof attics. The IBC-General committee agreed and voted for approval of G-145 Part I as submitted.

G-145 Part II was submitted to correlate IRC Section R806.2 with IBC Section 1203.2; there are no substantive changes proposed for R806.2, only format. The IRC-B/E committee disapproved Part II because they thought RB-158 more adequately addressed the issue but subsequently disapproved RB-158 as well. As such we are recommending approval as submitted for G-145 Part II for correlation between the 2012 editions of the IBC and IRC.

Final Action: AS AM AMPC_____ D

NOTE: PART I REPRODUCED FOR INFORMATION PURPOSES ONLY – SEE ABOVE

**G145-09/10, PART I
1203.2**

Proposed Change as Submitted

Proponent: Lee Kranz representing Washington Association of Building Officials (WABO), Technical Code Development Committee

PART I – IBC GENERAL

Revise as follows:

1203.2 Attic Spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch of airspace shall be provided between the insulation and the roof sheathing.

The net free ventilating area shall not be less than ~~4/300th~~ 1/150th of the area of the space ventilated.

Exceptions:

1. The net free cross-ventilation area shall be permitted to be reduced to 1/300 provided that with at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.
2. The net free cross-ventilation area shall be permitted to be reduced to 1/300 when Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.

Public Hearing Results

PART I- IBC GENERAL

Committee Action:

Approved as Submitted

Committee Reason: The change resolves issues imposed by the current text. It puts the incentive in correct format to direct the code user to provide better ventilation. It also allows flat roof situations to be addressed where a 3 foot vertical distance between upper and lower vents cannot be achieved. It also eliminates the ability to interpret the section to allow all ventilation openings on the ridge of a roof.

Assembly Action:

None

**G146-09/10 – Part I
1203.2**

Proposed Change as Submitted

Proponent: Ali M. Fattah, City of San Diego, representing San Diego Area Chapter ICC Code Committee

Revise as follows:

1203.2 Attic spaces. Where determined necessary by the building official due to atmospheric or climatic conditions, ~~Enclosed enclosed~~ attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/300 of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Reason: The proposed code change deletes a current requirement. There are many conditions that can preclude providing attic ventilation where climactic conditions do not warrant attic ventilation, for example the installation of solar photovoltaics. Additionally, it is very impractical or not possible to ventilate occupied roof decks, low slope (flat) roofs or vaulted ceilings using rafters with drywall attached to directly to the underside of the solid combination rafter-ceiling joist. In many cases it is not possible to provide the 3 ft elevation difference between the high and low vents on

low slope roofs and where low slope roofs include parapets and therefore no eave vents. The proposed change will not preclude applicants from providing attic ventilation to satisfy manufacturer's installation instructions for roof covering and therefore preserving the roof warranty. The language existed in the Uniform Building Code (Section 1505.3). That legacy building code was enforced in climates ranging from cold winter regions to hot desert regions in the southwest and had been in effect for more than 20 years. We are not aware of any moisture damage issues in attic spaces within jurisdictions that did not require attic ventilation, for example the City of San Diego and many surrounding jurisdictions.

This section can conflict with required one hour protection for projections such as eaves, as well as eave protection required by the International Wildland Urban interface Code.

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

ICCFILENAME: FATTAH-G2.doc

Public Hearing Results

IBC GENERAL

Committee Action:

Disapproved

Committee Reason: The change would introduce highly discretionary language into the code without providing the building official ample guidance for its use. A more detailed exception addressing the variety of climatic conditions that might warrant the waiver of attic ventilation would be appropriate. The discussion regarding installation of photovoltaic equipment on roof tops seemed irrelevant to the proposal to allow a waiver of attic ventilation.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Ali M. Fattah, PE, City of San Diego, Development Services Department, representing San Diego Area Chapter of ICC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1203.2 Attic spaces. ~~Where determined necessary by the building official due to atmospheric or climatic conditions, enclosed~~ **Enclosed** attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/300 of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Exception: Attic ventilation shall not be required when determined not necessary by the code official due to atmospheric or climatic conditions.

Commenter's Reason: This public comment is submitted in response to feedback from the committee and public testimony in Baltimore. Reference to solar photovoltaic's was only used as an example to demonstrate cases where our jurisdiction has had to modify the code to allow the installation of solar PV since and alternative to required ventilation could not be provided. Code officials applying the section under a legacy code that enforced in major portions of the country did not need specific guidance to determine whether attic ventilation is required due to local conditions. By revising the proposed code change from that initially proposed to an exception a building official does not have to grant the exception if data or justification is not available. We stand on the remainder of our initial statement of reasons and urge the voting membership to support this public comment.

Final Action: AS AM AMPC_____ D

G146-09/10 – Part II

IRC R806.1

Proposed Change as Submitted

Proponent: Ali M. Fattah, City of San Diego, representing San Diego Area Chapter ICC Code Committee

Revise as follows:

R806.1 Ventilation required. Where determined necessary by the building official due to atmospheric or climatic conditions, ~~Enclosed~~ **enclosed** attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against

the entrance of rain or snow. Ventilation openings shall have a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than $\frac{1}{4}$ inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

Reason: The proposed code change deletes a current requirement. There are many conditions that can preclude providing attic ventilation where climactic conditions do not warrant attic ventilation, for example the installation of solar photovoltaics. Additionally, it is very impractical or not possible to ventilate occupied roof decks, low slope (flat) roofs or vaulted ceilings using rafters with drywall attached to directly to the underside of the solid combination rafter-ceiling joist. In many cases it is not possible to provide the 3 ft elevation difference between the high and low vents on low slope roofs and where low slope roofs include parapets and therefore no eave vents. The proposed change will not preclude applicants from providing attic ventilation to satisfy manufacturer's installation instructions for roof covering and therefore preserving the roof warranty. The language existed in the Uniform Building Code (Section 1505.3). That legacy building code was enforced in climates ranging from cold winter regions to hot desert regions in the southwest and had been in effect for more than 20 years. We are not aware of any moisture damage issues in attic spaces within jurisdictions that did not require attic ventilation, for example the City of San Diego and many surrounding jurisdictions.

This section can conflict with required one hour protection for projections such as eaves, as well as eave protection required by the International Wildland Urban interface Code.

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

ICCFILENAME: FATTAH-G2.doc

Public Hearing Results

IRC Building and Energy

Committee Action:

Disapproved

Committee Reason: This proposal would add language that would require the Building Official to decide the code requirements. This is a local issue and should be handled through local amendment to the code.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Ali M. Fattah, PE, City of San Diego, Development Services Department, representing San Diego Area Chapter of ICC, requests Approval as Modified by this Public Comment.

R806.1 Ventilation required. ~~Where determined necessary by the building official due to atmospheric or climatic conditions, enclosed~~ Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than $\frac{1}{4}$ inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

Exception: Attic ventilation shall not be required when determined not necessary by the code official due to atmospheric or climatic conditions.

Commenter's Reason: See commenter's reason for Part I.

Final Action: AS AM AMPC___ D

G150-09/10 1210.1.1 (New)

Proposed Change as Submitted

Proponent: Timothy Kyle Hantz, PE, General Services Administration, representing self

Add new text as follows:

1210.1.1 Diaper changing station. In assembly occupancies where a toilet room has two or more water closets, a diaper changing station shall be provided in the toilet room. Diaper changing stations shall comply with the work surface requirements of ICC A117.1.

Reason: IBC 101.3 states that the intent of the code is to provide minimum standards for public health, safety and general welfare. I have noticed diaper changing stations in restaurants, trains, airports, convention centers, etc. It is hard to believe that in 2009, we still have to change our children's diapers on a toilet room floor. This is very unsanitary for the baby and the changer. This proposal would also help people who have trouble bending over, or getting on their hands and knees to change diapers.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: The Code Correlation Committee approved an editorial combining of Sections 1210 and 2903 of the 2009 IBC into a single section 1210 on Toilet and Bathroom requirements. This proposal, if approved would be located as Section 1210.1.1 of the new combined section.

ICCFILENAME: Hantz-G1-1211.1.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The concept of the proposal was welcomed by some of the committee but they were concerned that the threshold numbers would not result in equal access to such stations for both fathers and mothers. The application to just assembly occupancies was too limited. Application to mercantile facilities, especially covered/open malls seemed essential. Other committee members were not convinced that as important as it is to provide these diaper changing stations, that it is an appropriate item for either building or plumbing codes.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Timothy Kyle Hantz, PE, General Services Administration, representing self, requests Approval as Modified by this Public Comment.

Replace proposal as follows:

1210.6. Diaper Changing Stations. A diaper changing station shall be provided in each restroom that contains two or more water closets, or that contains a combination of two or more water closets and urinals, and that serve the following occupancies:

Assembly occupancies: except taverns and bars
Mercantile occupancies.

Exception: Diaper changing stations are not required in restrooms limited to employee use only.

Commenter's Reason: Based on the Committee's reason for disapproval, I have expanded my proposal to include Mercantile occupancies, and also included language for "potty parity" (both restrooms having a diaper changer if only one is required by water closet count.). I also changed the code section from 1210.1.1 to 1210.6. (as a stand alone code reference).

Final Action: AS AM AMPC___ D

**G153-09/10, PART I
3001.2.1**

Proposed Change as Submitted

Proponent: Philip M. Chandler representing New York State, Department of State, Office of Fire Prevention & Control.

PART I – IBC

Add new text as follows:

3001.2 Referenced standards. Except as otherwise provided for in this code, the design, construction, installation, alteration, repair and maintenance of elevators and conveying systems and their components shall conform to ASME A17.1/CSA B44, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 for construction in flood hazard areas established in Section 1612.3.

3001.2.1 Certificate of inspection. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator or dumbwaiter, be available for public inspection in the office of the building operator or be posted in a publicly conspicuous location approved by the building official. The inspection and witnessing of tests required by ASME A17.1 shall be performed by an impartial, third-party inspector that meets the minimum qualifications as set forth in the referenced standard. The inspection and tests shall be performed at not less than the periodic intervals listed in ASME A17.1, Appendix N, except where otherwise specified by the authority having jurisdiction.

Reason: These three companion proposals will provide consistent provisions in the IBC, IFC and IPMC regarding elevator inspection and posting the appropriate certificate.

IBC Section 3001.2: As 3001.2 pertains to maintenance as well as to design, construction and installation, it is appropriate to use the same language found in IPMC here. Additionally, it is helpful to reiterate the qualifications needed by elevator inspectors and the importance of their impartiality.

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

ICCFILENAME: CHANDLER-G1-3001.2.1.doc

Public Hearing Results

PART I- IBC GENERAL

Committee Action:

Disapproved

Committee Reason: The committee disapproved the proposal because they felt that the requirement is adequately covered by the standard and the requirement doesn't need to be repeated in the code. In addition, the proposed language is poorly crafted, and would seem to prohibit inspection by qualified inspectors employed by the jurisdiction. The proponent did not clarify why this language was necessary in the code.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Part I – IBC General

Philip M. Chandler, representing New York State Department of State, Office of Fire Prevention & Control, requests Approval as Submitted.

Commenter's Reason: It is urged that proposed changes to IBC 3001.2.1, IFC 607.4 and IPMC 606.1, having been heard together as G153-09/10, be adopted for the following reasons:

First and foremost, it makes good sense to provide consistent language on elevator inspection in the above referenced codes. It is proposed that the language of the IPMC be ostensibly used as the model with some modification. Inasmuch as elevators have a significant impact on a building's overall fire safety, this language is needed in the IFC as well as the IBC and IPMC. There are those conducting life safety inspections of existing buildings, often fire code officials or firefighters, that might conclude that the IBC applies only to new construction and not to elevator maintenance. Similarly, there are those jurisdictions that may not choose to adopt the IPMC altogether. Accordingly, by inserting this same important inspection requirement into the IFC, we ensure the greatest likelihood that elevators will get the inspection and testing they need.

It is also argued that the inspection and testing of elevators be done by impartial, third parties. While inspecting one's own work may violate the canon of ethics subscribed to by those having QEI certification, the actual language of the referenced standards does not unambiguously spell it out. Impartiality is too important a requirement for assuring the safety of the public as well as firefighters and emergency responders to leave to inference alone.

The Committee worried that the language "impartial, third party," might serve to disenfranchise municipal elevator inspectors. This concern is unfounded. Government inspectors are by definition impartial third parties. What this proposal comes to exclude is the inspection and testing of elevators by agents of the building's owner (1st party), or of the installing or maintaining contractor (2nd party). QEI elevator inspection firms, or QEI certified governmental inspectors are exactly the parties that we want inspecting our elevators!

Final Action: AS AM AMPC____ D

G153-09/10, PART II

IFC 607.4

Proposed Change as Submitted

PART II – IFC

Add new text as follows:

607.4 Maintenance. Elevators, dumbwaiters and escalators shall be maintained in compliance with ASME A17.1. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator or dumbwaiter, be available for public inspection in the office of the building operator or be posted in a publicly conspicuous location approved by the code official. The inspection and witnessing of tests required by ASME A17.1 shall be performed by an impartial, third-party inspector that meets the minimum qualifications as set forth in the referenced standard. The inspection and tests shall be performed at not less than the periodic intervals listed in ASME A17.1, Appendix N, except where otherwise specified by the authority having jurisdiction.

Reason: These three companion proposals will provide consistent provisions in the IBC, IFC and IPMC regarding elevator inspection and posting the appropriate certificate.

IFC Section 607.4: Elevators, dumbwaiters and escalators have a significant impact on a building's overall fire safety. Accordingly, this new text will coordinate IFC requirements with those of the IBC and IPMC and at the same time, reiterate the qualifications needed by elevator inspectors and the importance of their impartiality.

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

ICCFILENAME: CHANDLER-G1-3001.2.1.doc

Public Hearing Results

PART II- IFC

Committee Action:

Disapproved

Committee Reason: Disapproved for consistency with the action taken on Part I.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Philip M. Chandler, representing New York State Department of State, Office of Fire Prevention & Control, requests Approval as Submitted.

Commenter's Reason: See commenter's reason for Part I.

Final Action: AS AM AMPC_____ D

G153-09/10, PART III

IPMC 606.1

Proposed Change as Submitted

PART III – IPMC

Revise as follows:

606.1 General. Elevators, dumbwaiters and escalators shall be maintained in compliance with ASME A17.1. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator or dumbwaiter, be available for public inspection in the office of the building *operator* or be posted in a publicly conspicuous location *approved* by the *code official*. The inspection and witnessing of tests required by ASME A17.1 shall be performed by an impartial, third-party inspector that meets the minimum qualifications as set forth in the referenced standard. The inspection and tests shall be performed at not less than the periodic intervals listed in ASME A17.1, Appendix N, except where otherwise specified by the authority having jurisdiction.

Reason: These three companion proposals will provide consistent provisions in the IBC, IFC and IPMC regarding elevator inspection and posting the appropriate certificate.

IPMC Section 606.1: This eliminates much confusion surrounding the minimum qualifications of elevator inspectors explicit in the referenced standard and the need for impartiality implicit in the requirements for QEI-1 certification. The need for impartiality is fundamental to the QEI process.

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

ICCFILENAME: CHANDLER-G1-3001.2.1.doc

Public Hearing Results

PART III- IPMC

Committee Action:

Disapproved

Committee Reason: Disapproved for consistency with the action taken on Parts I and II.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Philip M. Chandler, representing New York State Department of State, Office of Fire Prevention & Control, requests Approval as Submitted.

Commenter's Reason: See commenter's reason for Part I.

Final Action: AS AM AMPC_____ D

G154-09/10

3002.3

Proposed Change as Submitted

Proponent: Brian Black, BDBlack Codes, Inc., representing National Elevator Industry, Inc. (NEII)

Revise as follows:

3002.3 Emergency signs. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of

fire. The sign shall read: ~~IN FIRE EMERGENCY, DO NOT USE ELEVATOR. USE EXIT STAIRS~~ comply with ASME A17.1/CSA B44.

Exceptions:

1. The emergency sign shall not be required for elevators that are part of an *accessible means of egress* complying with Section 1007.4.
2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.

Reason: The message for these elevator signs is already addressed in the referenced standard:

ASME A17.1/CSA B44, Section 2.27.9 Elevator Corridor Call Station Pictograph. When the building code requires a sign be posted adjacent to hall call fixtures instructing occupants not to use the elevator in case of fire, the sign shown in Fig. 2.27.9 shall be provided. The sign shall include only the wording and graphics shown in Fig. 2.27.9. When the building code specifies a different design, 2.27.9 shall not apply.

(The Figure 2.27.9 uses the text "IN CASE OF FIRE ELEVATORS ARE OUT OF SERVICE. USE EXIT".)

ASME A17.1/CSA B44 already provides the "standardized design" required by IBC Section 3002.3 but provides non-standardized text to accompany the pictograph. This is essentially a harmonization between the IBC requirement and the code referenced in 3001.2.

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

ICCFILENAME: BLACK-G2-3002.3.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This language needs to be provided in the code and not force building officials or designers to consult the standard for 10 simple words.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Brian Black, BDBlack Codes, Inc., representing National Elevator Industry Inc., requests Approval as Modified by this Public Comment.

3002.3 Emergency signs. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of fire. The sign shall read: ~~comply with ASME A17.1/CSA B44~~ IN CASE OF FIRE ELEVATORS ARE OUT OF SERVICE. USE EXIT STAIRS.

Exceptions:

1. The emergency sign shall not be required for elevators that are part of an *accessible means of egress* complying with Section 1007.4.
2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.

Commenter's Reason: The intent of this code change was to coordinate the requirements of the IBC with those in the ASME A17.1/CSA B44 Safety Code for Elevators and Escalators. The committee disapproved the direct reference to the ASME code as it felt a code official should not have to go to a separate document "for 10 simple words". It also preferred the word "stairs" be retained in the sign.

The proposed new text is identical to the text on the sign required by ASME A17.1/CSA B44 with the addition of the word "STAIRS". If this is approved, NEII will submit a Technical Revision to the ASME A17 Standards Committee to harmonize that code's text with the IBC.

Final Action: AS AM AMPC _____ D

G155-09/10
3003.3 (New), 3007.3

Proposed Change as Submitted

Proponent: Dave Frable, representing U.S. General Services Administration

Revise as follows:

3003.3 Hoistway lighting. When firefighters' emergency operation is active, the entire height of the hoistway shall be illuminated at not less than 1 foot-candle (11 lux) as measured from the top of the car of each elevator.

~~**3007.3 Hoistway lighting.** When firefighters' emergency operation is active, the entire height of the hoistway shall be illuminated at not less than 1 foot-candle (11 lux) as measured from the top of the car of each fire service access elevator.~~

(Renumber subsequent sections)

Reason: The intent of this code change is to provide illumination within elevator hoistways when firefighter's emergency operation has been enabled. It relocates the provisions currently only applicable to fire service access elevators applicable to high-rise buildings, to be a requirement for all elevator hoistways regardless of height or whether the elevator is designated for a specific use or not.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: FRABLE-G3-3003.3

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The lighting is only needed for the use of firefighters. It has no relationship to the use of any elevator for accessible means of egress or for occupant self evacuation.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Dave Frable, representing U.S. General Services Administration, requests Approval as Submitted

Commenter's Reason: The intent of this code change is to provide illumination within all elevator hoistways of a building when firefighter's emergency operation has been enabled. This requirement would apply to all elevator hoistways within a building in lieu of just the elevator hoistways that are used for fire service access elevators. This new requirement will provide firefighters the ability to view the elevator hoistway for smoke without the need to shine a flashlight up the hoistway prior to using any elevator to transport equipment and/or personnel as well as evacuating mobility impaired individuals from a building regardless of height or whether the elevator is designated for a specifically as a fire service access elevator. Regarding the Committee's reason for disapproval; we feel the reasons stated have no bearing on the overall intent of this code change.

Final Action: AS AM AMPC___ D

G158-09/10

3007.2 (New), 3007.3 (New)

Proposed Change as Submitted

Proponent: Dave Frable, representing U.S. General Services Administration

Add new text as follows:

3007.2 Automatic sprinkler system. The building shall be equipped throughout by an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3007.2.1.

3007.2.1 Prohibited locations. Automatic sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways of fire service access elevators.

3007.2.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and waterflow-initiating device provided for each floor that is monitored by the building's fire alarm system.

3007.3 Shunt trip. Means for elevator shutdown in accordance with Section 3006.5 shall not be installed on elevator systems used for fire service access elevators.

(Renumber subsequent sections.)

Reason: 3007.2: The intent of this code change is to provide further clarification in meeting the original intent of Section 3007 regarding prohibiting the installation of automatic sprinklers in the associated elevator machine rooms and elevator machine spaces for fire service access elevators. . The subject proposed language is similar to the language in Section 3008.6 for occupant evacuation elevators.

3007.3: The intent of this code change is to provide further clarification in meeting the original intent of Section 3007 regarding prohibiting the installation of shunt trip for fire service access elevators. The subject proposed language is similar to the language in Section 3008.8 for occupant evacuation elevators.

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

Analysis: Would this requirement take precedence over Sections 403.2 and 903.2.11.3 which allow certain portions of a high-rise building not to be provided with sprinkler protection?

ICCFILENAME: FRABLE-G9-3007.2

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This clarifies that the same exemptions for sprinklers installed in the elevator machine room and shaft and the installation for shunt trips permitted for Occupant Evacuation Elevators in Section 3008.6 should also be permitted in Fire Service Access Elevators.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gerald Anderson, City of Overland Park, representing self, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

~~**3007.2 Automatic sprinkler system.** The building shall be equipped throughout by an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3007.2.1.~~

~~**3007.2.1 Prohibited locations.** Automatic sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways of fire service access elevators.~~

~~**3007.2.2 Sprinkler system monitoring.** The sprinkler system shall have a sprinkler control valve supervisory switch and waterflow initiating device provided for each floor that is monitored by the building's fire alarm system.~~

~~**3007.3 3007.2 Shunt trip.** Means for elevator shutdown in accordance with Section 3006.5 shall not be installed on elevator systems used for fire service access elevators.~~

Commenter's Reason: The proposed Section 3007.2 Automatic sprinkler systems is not necessary. Automatic sprinkler systems are already required by Chapter 9, another charging statement is not necessary.

Floor control valves are already required in high-rise buildings by section 903.4.3. A water flow initiating device for each floor is required in high-rise by section 907.6.3.2. Section 903.3.1.1.1 already exempts fire service access elevators from the general requirement for fire sprinklers and Section 8.14.5.5 of NFPA 13 exempts sprinklers for the tops of non-combustible elevator shafts.

Therefore the proposed language is not necessary.

I left the requirement for shunt trips in this proposal because I think that it is important to get this requirement into the code. However, this requirement should be an exception to 3006.5 not a stand alone requirement under fire service access elevators. A code change can be submitted for this at a later date.

Final Action: AS AM AMPC___ D

G159-09/10
3007.2 (New)

Proposed Change as Submitted

Proponent: Dave Frable, representing U.S. General Services Administration

Add new section as follows:

3007.2 Phase I Emergency Recall Operation. An independent, three-position, key-operated “Fire Recall” switch shall be provided at the designated level for each fire service access elevator or for each group of fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. In addition, actuation of any building fire alarm initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position key-operated “Fire Recall” switch or automatically initiated by the associated elevator lobby and elevator machine room smoke detectors.

(Renumber subsequent sections)

Reason: The intent of this code change is to provide further clarification in meeting the original intent regarding the design and operation of fire service access elevators. This code change will also ensure the subject elevators can be recalled quickly at the designated level by the responding firefighters.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: FRABLE-G7-3007.2

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

3007.2 Phase I Emergency recall operation. An independent, three-position, key-operated “Fire Recall” switch shall be provided at the designated level for each fire service access elevator or for each group of fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. In addition, actuation of any building fire alarm initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position key-operated “Fire Recall” switch or automatically initiated by the associated elevator lobby ~~and~~ hoistway or elevator machine room smoke detectors.

Committee Reason: The modification to the proposal is to coordinate with what is required in ASME A17.1 and will require activation of the fire recall from all three locations listed. The proposal provides the fire service a standardized way to initiate the fire recall process.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Dave Frable, representing U.S. General Services Administration, request Approval as Modified by this Public Comment.

Further modify the proposal as follows:

3007.2 Phase I Emergency recall operation. ~~An independent, three-position, key-operated “Fire Recall” switch shall be provided at the designated level for each fire service access elevator or for each group of fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. In addition, a~~ Actuation of any building fire alarm initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position key-operated “Fire Recall” switch or automatically initiated by the associated elevator lobby, hoistway or elevator machine room smoke detectors. In addition, if the building also employs occupant evacuation

elevators in accordance with Section 3008, an independent, three-position, key-operated "Fire Recall" switch conforming to the applicable requirements in ASME A17.1/CSA B44 shall be provided at the designated level for each fire service access elevator.

Commenter's Reason: The intent of the modification is for clarification purposes and to correct any misinterpretation of the subject paragraph. As currently written, we are unsure how the subject text will be interpreted and enforced by the Building Official. The subject revised text will not adversely impact the overall intent of the proposal to provide the fire service a standardized way to initiate the fire recall process for the fire service access elevators.

Public Comment 2:

Brian Black, BDBlack Code, Inc., representing National Elevator Industry Inc., request Disapproval.

Commenter's Reason: The ability to place elevators into service while others in a group of elevators are being used to fight a fire is both unnecessary and dangerous. It would allow the public to reenter the upper stories of a building, move from floor to floor within the building, and possibly reach a fire floor during an active fire. In an emergency situation, a firefighter could mistakenly recall a single elevator and not even be aware that the remaining elevators have not been recalled and are thus available to the public.

This type of requirement is appropriate where Occupant Evacuation Elevators (OEE) are in place because it allows fire fighters to release elevators from Phase II operation so that they can return to the affected floors and be used for evacuation purposes. The critical distinction is that the elevators in OEE mode cannot be used by the public to reenter the upper stories of the building or migrate from floor to floor within the building. There is no need for this type of operation where OEE is not installed in the building.

Finally, operation and function of the fire recall elevator keys are controlled by ASME A17.1/CSA B44. Any modifications to the code's requirements to account for Fire Service Access or Occupant Evacuation Elevators should remain in that reference standard.

Final Action: AS AM AMPC____ D

G160-09/10

3007.2.1

Proposed Change as Submitted

Proponent: Rick Thornberry, PE, The Code Consortium, Inc., representing: California Fire Safety Advisory Council (CFSAC)

Revise as follows:

3007.2 Hoistway enclosures protection. The fire service access elevator hoistway shall be located in a shaft enclosure complying with Section 708.

3007.2.1 Structural integrity of hoistway enclosures. The fire service access elevator hoistway shaft enclosure shall comply with Section 403.2.3.

Reason: This proposed code change is a follow up to the Cal Chiefs Code Change G194-07/08 which was disapproved in Minneapolis. That code change was disapproved mainly because it was based on a reference to the hose stream test in ASTM E119 for determining the structural integrity of the shaft enclosure. However, Code Change G65-07/08 by the Gypsum Association, which also addressed the issue of structural integrity of exit stairway and elevator hoistway shaft enclosures, was approved as modified in Minneapolis by Public Comment #2. That code change provided for another means for assessing the structural integrity of shaft enclosures, specifically for buildings known as super high-rise buildings (those greater than 420 ft in height). And it was supported by a NIST representative in response to one of the recommendations made in the NIST World Trade Center Report. Since it was approved for those conditions, it also seems appropriate that such structural integrity criteria should also be provided for the protection of fire service access elevator hoistways. These hoistways perform a very critical function protecting the responding fire fighters while the elevator assists them in gaining access to the fire floor in buildings generally more than 120 ft in height.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: Does the reference to Section 403.2.3 in the proposal result in requiring 'hardening' of the hoistway shaft at the 120 foot threshold for fire service access elevators or the 420 foot threshold provided in Section 403.2.3?

ICCFILENAME: THORNBERRY-G3-3007.2

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: With the reference to Section 403.2.3, it is not clear if the requirement for hardened shaft would be applicable for all Fire Service Access elevators (starting at 120 feet), or just those in Seismic Category III and IV or only at buildings taller than 420 feet. The intent of the

proponent is for all Fire Service Access elevators to be hardened at 120 feet regardless of seismic category. The correct placement for this requirement is in Section 402.3.2. Justification for the additional costs must be provided.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Rick Thornberry, PE, The Code Consortium, Inc., representing California Fire Safety Advisory Council (CFSAC), requests Approval as Modified by the Public Comment.

Modify this proposal as follows:

3007.2.1 Structural integrity of hoistway enclosures. The fire service access elevator hoistway shaft enclosure shall comply with Sections 403.2.3.1 through 403.2.3.4.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: This Public Comment responds to the main reason the IBC Means of Egress Code Development Committee recommended disapproval. The Committee was basically in support of the concept of the code change but was concerned about the confusion that would occur based on how Section 403.2.3 was referenced and how it was intended to apply regarding the height and type of high-rise building that would trigger the requirement for the structural integrity of fire service access elevator hoistway enclosures. So the proposed revision in this Public Comment makes specific reference to Sections 403.2.3.1 through 403.2.3.4 which describe how the structural integrity of the hoistway enclosure is to be constructed. Thus, the requirement applies to any fire service access elevator hoistway provided in a building as required by Section 403.6.1 which is triggered at 120 ft in height above the lowest level of fire department vehicle access.

Final Action: AS AM AMPC ____ D

G165-09/10
3007.7.1, 3008.15.1

Proposed Change as Submitted

Proponent: Brian Black BDBlack Codes, Inc., representing National Elevator Industry, Inc. (NEII), Sean DeCrane, representing, International Association of Fire Fighters (IAFF), Jack Murphy, representing Fire Safety Directors Association of Greater New York (FSDAGNY)

Revise as follows:

3007.7.1 Protection of wiring or cables. Wires or cables that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 4-2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 4-2-hour fire resistance rating.

3008.15.1 Protection of wiring or cables. Wires or cables that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 4-2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 4-2-hour fire resistance rating.

Reason: RE: 3007.7.1: The safety of firefighters during their firefighting operations is dependent upon the life safety support systems listed in Section 3007 being maintained during the critical first 2 hours of their efforts. Locating, surrounding, confining and extinguishing the fire, as well as removing those whose lives are in jeopardy, will take time. If the fire is not under control by 2 hours into the effort, then it is probably time to evacuate. Providing the 2 hour protection will provide the necessary safety factor for firefighters to undertake the firefighting and rescue operations without increased concern for system failure. The 2-hour rating is consistent with the hoistway fire rating and fire pump feeder enclosure rating. This request has the full support of the firefighting community and is not unreasonable when it is considered that this will allow for more time to ensure the full evacuation of the building.

RE: 3008.15.1: The safety of building occupants evacuating a building is dependent upon the life safety support systems listed in Section 3008 being maintained during the critical hours of evacuation. The 2-hour rating is consistent with the hoistway fire rating and fire pump feeder enclosure rating. This request has the full support of the firefighting community and is not unreasonable when it is considered that this will allow for more time to ensure the full evacuation of a building.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved because no technical justification was provided for the increase for the fire-resistance rating for cable protection. Most of the wiring for elevators can be run inside the protected shaft.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Brian Black, BDBlack Code, Inc., representing National Elevator Industry Inc., requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

3007.7.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 2-hour fire resistance rating.

3008.15.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to occupant evacuation elevators shall be protected by construction having a minimum 2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 2-hour fire resistance rating.

Commenter's reason: The committee stated "no technical justification was provided" for this proposal in that "most of the wiring for elevators can be run inside the elevator shaft". This proposed modification addresses the portion of the wiring that is outside of the 2-hour protected hoistway (power feeders for elevators, HVAC feeders, etc.). It essentially fixes the weak link created by horizontal runs from the transformer to the machine room. The cost will be negligible when compared to the original proposal.

Final Action: AS AM AMPC____ D

G169-09/10

3008.1.1 (New)

Proposed Change as Submitted

Proponent: Bill Ziegert, Smoke Guard, Inc, representing self.

Add new text as follows:

3008.1.1 Occupant evacuation elevators permitted. Occupant evacuation elevators shall be permitted only when the elevator code (ASME A17.1/CSA B44 or other) adopted by the jurisdiction contains specific requirements for the design, operation and maintenance of emergency evacuation operation (EEO).

Reason: Occupant Evacuation Elevators require many special operational / design requirements not found in the Building Code, and currently not included in any edition issued or under development of the ASME A17.1/CSA B44 Elevator Code. The proper operation and sequencing of the elevators to efficiently move occupants from the affected floors is the most important part of the occupant evacuation system and incorporation of this functionality currently allowed under the building code should not be allowed until the Elevator systems are designed with this additional functionality adequately addressed.

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The AMSE standard does not currently include specifics for Occupant Evacuation Elevators. Requiring the standard to have specific requirements before this option could be used would effectively prohibit Occupant Evacuation Elevators at this time. ASME should move forward to include specific information. The IBC needs to move forward to provide direction for this new technology. Involvement of the fire department and code official during construction and development of the fire and safety evacuation plans will address specific control issues on a case by case basis until the ASME standard is complete.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Bill Ziegert, Smoke Guard, Inc., representing self, requests Approval as Submitted.

Commenter's Reason: Occupant Evacuation Elevators require many special operational / design requirements not found in the *International Building Code*, and currently not included in any issued edition of the ASME A17.1/CSA B44 Elevator Code. While a volunteer task group chartered by ASME A17.1 including NIST, elevator experts, fire service representatives, human factors experts, and building code representatives from NFPA and ICC, have been working diligently on developing the proper requirements to be included in the elevator code, the new language will not appear before the 2013 version of A17.1.

It is impossible to safely conduct Occupant Evacuation using elevators until significant and substantial design enhancements are included in the elevator system design. The guidance for these is absent in the IBC, since all parties recognize that they should be appropriately included in the elevator code.

This change would not prohibit the consideration of Occupation Evacuation Elevator systems, just delay the implementation until both the adopted building code and elevator code concurrently contain the minimum design requirements for these systems.

The committee rational that "Involvement of the fire department and code official during construction and development of the fire and safety evacuation plans will address specific control issues on a case by case basis until the ASME standard is complete" fails to recognize the exceptional complexity of how these systems must integrate with not only the elevator system, but also fire service protocols during high rise fires. No building or fire official should undertake these decisions, particularly since a high level of understanding of the current requirements of A17.1 is required.

Final Action: AS AM AMPC____ D

G171-09/10 **3008.4 (New)**

Proposed Change as Submitted

Proponent: Dave Frable, representing U.S. General Services Administration

Add new text as follows:

3008.4 Phase I Emergency Recall Operation. An independent, three-position, key-operated "Fire Recall" switch shall be provided at the designated level for each occupant evacuation elevator in accordance with the requirements in ASME A17.1/CSA B44.

(Renumber subsequent sections)

Reason: The intent of this code change is to provide further clarification in meeting the original intent regarding the design and operation of fire service access elevators. This code change will also ensure the subject (as specific) elevators can be recalled quickly at the designated level by the responding firefighters.

Cost Impact: The code change proposal will increase the cost of construction.

ICCFILENAME: FRABLE-G8-3008.4

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This proposed text allows flexibility for individual recall in addition to bank recall. This will help fire department efficiency when using the Occupant Evacuation Elevators during evacuation events.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Dave Frable, representing U.S. General Services Administration, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

3008.4 Phase I Emergency recall operation. An independent, three-position, key-operated "Fire Recall" switch complying to the applicable requirements in ASME A17.1/CSA B44 shall be provided at the designated level for each occupant evacuation elevator ~~in accordance with the requirements in ASME A17.1/CSA B44.~~

Commenter's Reason: The intent of the modification is for clarification purposes and to correct any misinterpretation of the subject paragraph. As currently written, we are unsure how the subject text will be interpreted and enforced by the Code Official. The subject revised text will not adversely impact the overall intent of the proposal.

Public Comment 2:

Brian Black, BDBlack Codes, Inc., representing National Elevator Industry Inc., requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

3008.4 Phase I Emergency recall operation. An independent, three-position, key-operated "Fire Recall" switch complying with ASME A17.1/CSA B44 shall be provided at the designated level for each occupant evacuation elevator ~~in accordance with the requirements in ASME A17.1/CSA B44.~~

Commenter's Reason: This revision makes it clear that it is the three-position, key-operated "Fire Recall" switch and not the Occupant Evacuation Elevator (OEE) system that must comply with ASME A17.1/CSA B44. This is critical as the Safety Code for Elevators and Escalators has yet to have OEE requirements in it. A

Final Action: AS AM AMPC ____ D

G173-09/10

3008.9, 3008.9.1 (New)

Proposed Change as Submitted

Proponent: Rick Thornberry, PE, The Code Consortium, Inc., representing: California Fire Safety Advisory Council (CFSAC)

Revise as follows:

3008.9 Hoistway enclosure protection. The Occupant evacuation elevators hoistways shall be located in a ~~hoistway shaft enclosure(s)~~ complying with Section 708.

3008.9.1 Structural integrity of hoistway enclosures. Occupant evacuation elevator hoistway shaft enclosures shall comply with Section 403.2.3.

Reason: This code change is a follow up to Code Change G65-07/08 by the Gypsum Association which also addressed the issue of structural integrity of exit stairway and elevator hoistway shaft enclosures in super high-rise buildings (those greater than 420 ft in height). It was approved as revised by Public Comment #2 at the ICC Final Action Hearings held in Minneapolis, MN.

In our opinion, it follows that the structural integrity requirements for super high-rise building exit stairway and elevator hoistway shaft enclosures should also apply to elevator hoistway shaft enclosures provided for occupant evacuation elevators which are just as critical for life safety protection. Such new technology for evacuation of occupants should be provided with the highest level of fire protection that is reasonably possible in order to assure that the elevators will be available during a fire emergency to serve their intended purpose of evacuating the occupants. Certainly, the structural integrity of the elevator hoistway shaft enclosures should be required to have some reasonable degree of physical protection to assure that the hoistway shaft enclosures will remain in place when needed during a fire or other emergency.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This is the wrong place in the code for this requirement. This requirement for structural integrity needs to be incorporated into the high-rise provisions in Section 403.2.3. With this referenced, if the designer chose to provide Occupant Evacuation Elevators in building less than 420 feet it is not clear if the shaft would still have to meet the structural integrity requirements in Category I and II Seismic areas.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Rick Thornberry, PE, The Code Consortium, Inc., representing California Fire Safety Advisory Council (CFSAC) requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

3008.9.1 Structural integrity of hoistway enclosures. Occupant evacuation elevator hoistway shaft enclosures shall comply with Sections ~~403.2.3~~ 403.2.3.1 through 403.2.3.4.

(Portions or proposal not shown remain unchanged)

Commenter's Reason: This Public Comment responds to the main reason the IBC Means of Egress Code Development Committee recommended disapproval. The Committee was basically in support of the concept of the code change but was concerned about the confusion that would occur based on how Section 403.2.3 was referenced and how it was intended to apply regarding the height and type of high-rise building that would trigger the requirement for the structural integrity of occupant evacuation elevator hoistway enclosures. So the proposed revision in this Public Comment makes specific reference to Sections 403.2.3.1 through 403.2.3.4 which describe how the structural integrity of the hoistway enclosure is to be constructed. Thus, the requirement applies to any occupant evacuation elevator hoistway provided in a building regardless of height.

Final Action: AS AM AMPC___ D

**G189-09/10
3401.3**

Proposed Change as Submitted

Proponent: David Bonowitz, David Bonowitz, S.E., National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

Revise as follows:

3401.3 Compliance. Alterations, repairs, additions and changes of occupancy to existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy, respectively, in the *International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code, International Residential Code* and NFPA 70. Where provisions of the other codes conflict with provisions of this Chapter, the provisions of this Chapter shall take precedence.

Reason: The proposal clarifies and confirms the intent of Section 3401.3.

Cost Impact: No cost increase.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The revisions would seem to conflict with the general references to other codes as contained in Chapter 1 and the reasons for the differences are unclear.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

David Bonowitz, S.E., representing National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS), requests Approval as Submitted.

Commenter’s Reason: NCSEA EBS recommends approval as submitted for the following reasons:

The proposal makes two revisions. The first introduces the word “respectively” into section 3401.3. This clarifies that Alterations under Chapter 34, for example, need only comply with the provisions for Alterations in the referenced codes, and need *not* comply with the provisions in referenced codes for repairs, change of occupancy, etc. This should be obvious, but clarification by adding the word “respectively” is certainly consistent with the intent and does no harm.

The second proposed revision again clarifies the intent that *where conflicts occur*, specific provisions in Chapter 34 should take precedence over more general provisions in the referenced codes. The IBC General committee disapproved this change, referring to Chapter 1, presumably to section 101.4 Referenced codes.

However, this reasoning does not acknowledge the special circumstances inherent in Chapter 34 and other provisions for existing buildings. For new construction, it is quite likely that there is no overlap between the IBC and the referenced codes, so section 101.4 is relatively straightforward. For existing buildings, however, there is always a substantial overlap between the intended scope of alteration, repair, etc. covered by Chapter 34 and the condition of associated systems covered by the referenced codes. Thus there is an inherent conflict between Chapter 34 – which triggers compliance only in certain situations, only in prescribed areas, and often with scope reductions – and the general application of any referenced code.

The conflict, real or potential, is easily solved by adding the sentence as proposed, to clarify that where Chapter 34 limits the scope of triggered work, the referenced codes should not override it. (Without this proposed sentence, a full review and coordination of all the referenced codes will be required with each code cycle.)

Four examples of potential conflicts, all solved by adding the proposed additional sentence:

For historic buildings, 3409 clearly (and substantially) limits the extent of triggered work. Section 3401.3, however, does not on its face acknowledge that scope limitation.

For buildings potentially covered by the IRC, section 3401.3 would invoke existing building provisions of that reference code. But the IRC structural upgrade provisions and triggers are substantially different from and less complete than those in Chapter 34 or in the IEBC.

A new section in the 2009 IBC allows the use of the IEBC as deemed to comply with Chapter 34. The IEBC has even more specific and appropriate variations from the referenced codes than Chapter 34 does. It is certainly not the intent to both allow the use of the IEBC and require compliance with all the referenced codes in ways that might be inconsistent.

There are likely other cases where Chapter 34 intends a limited scope of work, but the referenced codes, by addressing a broad range of possibilities, could be invoked improperly under a misreading of 3401.3.

Any such potential conflicts are clearly unintended. To avoid them, the additional sentence should be added as proposed by G189.

Final Action: AS AM AMPC _____ D

G192-09/10

3401.5 (New), 3405.1.1 (IEBC [B] 301.3 (New), 304.1.1)

Proposed Change as Submitted

Proponent: David Bonowitz, David Bonowitz, S.E., National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

1. Add new text as follows:

3401.5 (IEBC [B] 301.3) Dangerous conditions. The building official shall have the authority to require the elimination of conditions deemed dangerous.

(Renumber subsequent sections in IBC.)

2. Delete without substitution:

~~3405.1.1 (IEBC 304.1.1) Dangerous conditions. Regardless of the extent of structural or nonstructural damage, the building code official shall have the authority to require the elimination of conditions deemed dangerous.~~

Reason: This proposal relocates a provision from Section 3405.1.1 to Section 3401. This provision, dealing with the elimination of dangerous conditions, should be at the top of the chapter, as proposed, because it has broad applicability throughout Chapter 34, not just in the Repairs subsection.

Cost Impact: No cost increase.

ICCFILENAME: BONOWITZ-G10-3401.6.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The code change appropriately relocates the section on dangerous conditions to the beginning of Chapter 34 to reflect its broad applicability.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Michael L. Perrino, Code Consultants, Inc., representing self, requests Disapproval.

Commenter's Reason: This change is overly broad. Section 3401.2 already covers maintenance of buildings. Dangerous conditions created by existing materials are already covered in Section 3401.4.1. Within the context of its original location in Section 3405, the relocated language limits the application of the concept of 'dangerous' to those conditions defined in Section 3402.1 relating to structural and/or nonstructural damage.

This change gives the official no guidance as to what constitutes a dangerous condition outside the context of the sections cited above. This change will create conditions for wildly inconsistent code enforcement, defeating one of the main goals for the development and adoption of building codes.

Final Action: AS AM AMPC____ D

G199-09/10

3410.1, 3410.2 through 3410.8 (New)

Proposed Change as Submitted

Proponent: Patrick Vandergriff, Vandergriff Code Consulting Services, representing Modular Building Institute

1. Delete text as follows:

~~**3410.1 Conformance.** Structures moved into or within the jurisdiction shall comply with the provisions of this code for new structures.~~

2. Add new section as follows:

3410.1 General. The relocation of any building to another location where the effects of wind, snow, flood or seismic provisions is greater than the percentage of increased loads allowed by this section relocated buildings shall comply with the requirements of Sections 3410.2 and Section 3410.8.

3410.2 Location on the lot. The building shall be located on the lot in accordance with the requirements of this code, or the *International Residential Code*, as applicable.

3410.3 Foundation. The foundation system of relocated buildings shall comply with Chapter 18, or the *International Residential Code* as applicable.

Exception: Foundations for modular structures are permitted to be of any materials allowed by the code and installed in accordance with either:

1. The manufacturers design requirements; or
2. An approved engineered design.

3410.3.1 Connection to the foundation. The connection of the relocated building to the foundation shall comply with Chapter 18, or the *International Residential Code*, as applicable.

3410.4 Wind loads. Buildings shall comply with Section 1609, or *International Residential Code* wind provisions, as applicable.

Exceptions:

1. Detached one- and two-family dwellings and Group U occupancies where wind loads at the new location are not higher than those at the previous location.
2. Structural elements whose stress is not increased by more than 5 percent.

3410.5 Seismic loads. Buildings shall comply with Section 1613, or *International Residential Code* seismic provisions, as applicable, to the new location.

Exceptions:

1. Structures in Seismic Design Categories A and B and detached one- and two-family dwellings in Seismic Design Categories A, B, and C where the seismic loads at the new location are not higher than those at the previous location.
2. Structural elements whose stress is not increased by more than 5 percent.

3410.6 Snow loads. Structures shall comply with Section 1608, or *International Residential Code* snow loads, as applicable, where snow loads at the new location are higher than those at the previous location.

Exception: Structural elements whose stress is not increased by more than 5 percent.

3410.7 Flood hazard areas. If relocated or moved into a *flood hazard area*, structures shall comply with Section 1612.

3410.8 Required inspection and repairs. The building official shall be authorized to inspect, or to require approved professionals to inspect at the expense of the owner, the various structural parts of a relocated building to verify that structural components and connections have not sustained structural damage. Any repairs required by the building official as a result of such inspection shall be made prior to the final approval.

Reason: This corresponds to several code change proposals establishing more clear definition and use issue with modular construction. This language provides the same language of the International Existing Building Code, Chapter 12 provisions dealing with the relocation of structures.

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

Analysis: This text is a copy of IEBC Chapter 12. If this proposal is approved, the Code Correlation Committee will decide if IEBC or IBC will control these provisions.

ICCFILENAME: VANDERGRIF-F7-3410.1 NEW.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: At the proponent's request, the committee disapproved the proposal. The proposal is in need of refinement to provide references other than the IRC; to consider if needed provisions were not included and reconsider it all of the repetitive code language and referencing to other sections are truly needed.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Patrick Vandergriff, Vandergriff Code Consulting Services, representing Modular Building Institute, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

3410.2 Location on the lot. The building shall be located on the lot in accordance with the requirements of this code, ~~or the International Residential Code, as applicable.~~

3410.3 Foundation. The foundation system of relocated buildings shall comply with Chapter 18, ~~or the International Residential Code as applicable.~~

Exception: Foundations for modular structures are permitted to be of any materials allowed by the code and installed in accordance with either:

- 1. The manufacturers design requirements; or
- 2. An approved engineered design.

3410.3.1 Connection to the foundation. The connection of the relocated building to the foundation shall comply with Chapter 18, ~~or the International Residential Code, as applicable.~~

3410.4 Wind loads. Buildings shall comply with Section 1609, ~~or International Residential Code wind provisions, as applicable.~~

Exceptions:

- 1. Detached one- and two-family dwellings and Group U occupancies where wind loads at the new location are not higher than those at the previous location.
- 2. Structural elements whose stress is not increased by more than 5 percent.

3410.5 Seismic loads. Buildings shall comply with Section 1613, ~~or International Residential Code seismic provisions, as applicable,~~ to the new location.

Exceptions:

- 1. Structures in Seismic Design Categories A and B and detached one- and two-family dwellings in Seismic Design Categories A, B, and C where the seismic loads at the new location are not higher than those at the previous location.
- 2. Structural elements whose stress is not increased by more than 5 percent.

3410.6 Snow loads. Structures shall comply with Section 1608, ~~or International Residential Code snow loads, as applicable,~~ where snow loads at the new location are higher than those at the previous location.

Exception: Structural elements whose stress is not increased by more than 5 percent.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: At the code committee hearings I discussed the need for this change to the code and then requested that it be disapproved to allow me time to make changes to the language to eliminate the references to the International Residential Code, IRC, as it was too late to submit a modification in writing in the manner prescribed. This language corresponds to the language in the International Existing Building Code, IEBC, chapter 12 provisions on relocation of structures.

Final Action: AS AM AMPC____ D

G200-09/10

3411.8.8 (IEBC [B] 310.8.8)

Proposed Change as Submitted

Proponent: Karen L. Braitmayer, FAIA, Studio Pacifica, Ltd, representing self

Revise as follows:

3411.8.8 (IEBC [B] 310.8.8) Type A dwelling or sleeping units. Where more than 20 Group R-2 *dwelling* or sleeping units are being altered or added, the requirements for Section 1107 for Type A units apply only to the quantity of spaces being altered or added.

Reason: This proposal retains language that has been in the IBC since 2003. Loss of this language in the 2009 reduces the percentage of Type A housing stock required by IBC.

Cost Impact: This code change will increase the cost of construction.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: It is not clear what level of alteration is required within a dwelling unit before the unit would be expected to comply with Type A dwelling unit requirements.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Dominic Marinelli, representing United Spinal Association, requests Approval as Submitted.

Commenter's Reason: United Spinal supports the availability of the more wheelchair friendly apartments (Type A) for it's members. What is being requested is minimal. These Type A units are only requested in facilities where more than 20 units are being altered at one. If they Type A units are already in the complex, there would be no requirements for additional Type A units (per Section 3411.3).

It is also important to note that right now IBC Section 3411.8.8 is copied as IEBC Section 310.8.8 (which addresses only when units are added). IEBC Section 605.1.9 includes a requirement for Type A units when units are being altered. IEBC Section 706.4 is a requirement for when Type A units when units are being added. It is confusing to users of the IEBC why these requirements are not coordinated between Chapters 3, 6 and 7.

Final Action: AS AM AMPC___ D

G208-09/10

Table 602

Proposed Change as Submitted

Proponent: John Berry, AIA – CR architecture + design (formerly Cole & Russell Architects) - representing self

Revise as follows:

**TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS
BASED UPON FIRE SEPARATION DISTANCE^{a,e,h}**

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H ^f	OCCUPANCY GROUP F-1, M, S-1 ^g	OCCUPANCY GROUP A, B, E, F-2, I, R, S-2 ^g , U ^b
X < 5 ^c	All	3	2	1
5 < X < 10	IA	3	2	1
	Others	2	1	1
10 < X < 30	IA, IB	2	1	1 ^d
	IIB, VB	1	0	0
	Others	1	1	1 ^d
X ≥ 30	All	0	0	0

(No Change to footnotes "a" through "g")

h. Where Table 705.8 permits exterior walls to contain unprotected openings with no limit of the allowable area, the required fire resistance rating for the exterior walls is 0 hours.

Reason: Currently Table 705.8 allows unlimited openings in a building suppressed per NFPA 13 and a fire separation distance as small as 20 feet. However Table 602 would still require the exterior wall to be rated 1 hour. This is a contradiction and makes no sense; why would I rate an exterior wall per Table 602 when that wall could be entirely open per Table 705.8. It is important to note that this would not apply to H-1, H-2 & H-3 Uses, as

they are specifically exempted from this provision by footnote "i" to Table 705.8. This would only effect buildings w/ a fire separation distance equal to or greater than 20 feet. There would be no change to buildings with a fire separation distance less than 20 feet.

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

Note: This code change was contained in the errata posted on the ICC website. Please go to <http://www.iccsafe.org/cs/codes/Pages/09-10ProposedChanges.aspx>.

ICCFILENAME: BERRY-G1-Table 602

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed footnote is so complex with so many references out of the section that this revisions would not make this provision simpler, but definitely more confusing. What happens to the framing needs to be addressed.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Maureen Traxler, City of Seattle Dept. of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

- h. Where Table 705.8 permits nonbearing exterior walls ~~to contain with unlimited area of~~ unprotected openings ~~with no limit of the allowable area,~~ the required fire-resistance rating for ~~the those~~ exterior walls is 0 hours.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: Tables 705.8 and 602 are in conflict. Table 705.8 allows unlimited unprotected openings in exterior walls of a sprinklered building with a fire separation distance of 20 feet or greater. However, Table 602 may require those same exterior walls to be rated 1 hour. An exterior wall that is allowed to be entirely open per Table 705.8 should not be required to be rated by Table 602. With this modification, the footnote specifies that the exterior walls must be nonbearing in order to have the fire-resistance rating reduced to 0 hours, ensuring that load-bearing exterior walls do not get this reduction for fire-resistance rating (which is consistent with Table 602 footnote "a" that states "Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.") It is important to note that this new footnote would have no effect on H-1, H-2 & H-3 occupancies, as they are specifically exempted from unlimited openings by Table 705.8 footnote "i". This new footnote would only affect buildings with a fire separation distance greater than 20 feet and less than 30 feet. There would be no change to buildings with a fire separation distance less than 20 feet.

Final Action: AS AM AMPC____ D
