Proposed Change as Submitted:

Proponent: Maureen Traxler, City of Seattle, Washington, representing Washington Association of Building Officials

Revise definition as follows:

SECTION 202

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.

Reason: The current definition of “change of occupancy” creates a loop of code provisions. A change in use of a building is only a “change of occupancy” if the code requirements for the building change. But, according to Chapter 8, code requirements apply only if there is a change in occupancy.

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

Committee Action: Disapproved

Committee Reason: The committee indicated that removing the last portion of the current definition makes it less clear as to when a change of occupancy occurs; therefore the current language is preferred.

Assembly Action: None

Note: The original proposal has been changed to reflect current 2006 IEBC text.

Individual Consideration Agenda

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

Public Comment:

Jonathan C. Siu, City of Seattle, Washington, representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Modified by this public comment.

Modify proposal as follows:

A change in the use, purpose or level of activity within a building.

Commenter’s Reason: Three issues are addressed by this editorial clarification of the definition:
1. It addresses changing the use of the building (not addressed in the proposal as originally submitted to the IEBC Committee),
2. It eliminates the circular reference as stated in the reason statement of the originally-submitted proposal, and
3. It removes scoping language/code requirements from the definition. The published reason for disapproval by the IEBC Committee states the portion of the definition that is being proposed to be deleted makes it clearer when a change of occupancy occurs. We believe that portion does not belong in the definition, but in the scoping for what is required once it has been determined that a change of occupancy has occurred. That is, the thought process should be: 1) determine if a change of occupancy has occurred, in accordance with the proposed definition, then 2) determine whether the code applies, and 3) what is required based on the provisions in IEBC Chapter 9.

Final Action: AS AM AMPC D
Proposed Change as Submitted:

**PropONENT:** Greg Wheeler, C.B.O., Chair, ICC Ad Hoc Committee on Existing Buildings

Delete and substitute as follows:

707.1 General. Where alteration work includes installation of additional equipment that is structurally supported by the building or reconfiguration of space such that portions of the building become subjected to higher gravity loads as required by Tables 1607.1 and 1607.6 of the International Building Code, the provisions of this section shall apply.

707.2 Reduction of strength. Alterations shall not reduce the structural strength or stability of the building, structure, or any individual member thereof.

**Exception:** Such reduction shall be allowed as long as the strength and the stability of the building are not reduced to below the International Building Code levels.

[B] 707.1 General. Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5 percent, unless the increased forces on the element are still in compliance with the code for new structures, nor shall the strength of any structural element be decreased to less than that required by this code for new structures. Where repairs are made to structural elements, and uncovered structural elements are found to be unsound or otherwise structurally deficient, such elements shall be made to conform to the requirements for new structures.

[B] 707.1.1 Existing live load. Where an existing structure is altered or repaired, the minimum design loads for the structure shall be the loads applicable at the time of erection, provided that public safety is not endangered thereby.

[B] 707.1.2 Live load reduction. If the approved live load is less than required by Section 1607 of the International Building Code, the areas designed for the reduced live load shall be posted with the approved load. Placards shall be of an approved design.

**Reason:** The ICC Board established the Ad Hoc Committee on Existing Buildings to evaluate and further refine the IEBC in response to issues raised by the membership over the past couple of code development cycles. This proposal is a follow-up to part 3 of EB 38-04/05 from last cycle.

The proposed language will result in internal consistency between the Chapter 3 compliance alternative of the IEBC (Sections 302.2, 302.2.1, 302.2.2) and the Alteration Level 2 requirements, as well as with Section 3403.2 of the IBC.

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

**Analysis:** As proposed, the IBC General Committee will control any future modification to theses sections [IBC 3403.2 (IEBC 302.2, 707.1), 3403.2.1 (IEBC 302.2.1, 707.1.1) and 3403.2.2 (IEBC 302.2.2, 707.1.2)].

Committee Action: Disapproved

Committee Reason: Proposed Section 707.1 appears to conflict with Section 707.4 with respect to additional loads on existing structural elements. Further, the proposed requirements are technically covered in other portions of Section 707 of the IEBC. Lastly, the proposed Section 707.1 indicates that it is applicable to additions and alterations whereas Chapter 7 deals only with alterations.

Assembly Action: None

**Individual Consideration Agenda**

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

**Public Comment:**

Greg Wheeler, CBO, Chair, Ad Hoc Committee on Existing Buildings, requests Approval as Modified by this public comment.
Replace proposal with the following:

707.1 General. Where alteration work includes installation of additional equipment that is structurally supported by the building or reconfiguration of space such that portions of the building become subjected to higher gravity loads as required by Tables 1607.1 and 1607.6 of the International Building Code, the provisions of this section shall apply.

707.2 Reduction of strength. Alterations shall not reduce the structural strength or stability of the building, structure, or any individual member thereof.

Exception: Such reduction shall be allowed as long as the strength and the stability of the building are not reduced to below the International Building Code levels.

[B] 707.1 General. Alterations to an existing structure shall not increase the force in any structural element by more than 5 percent, unless the increased forces on the element are still in compliance with the code for new structures, nor shall the strength of any structural element be decreased to less than that required by this code for new structures. Where repairs are made to structural elements, and uncovered structural elements are found to be unsound or otherwise structurally deficient, such elements shall be made to conform to the requirements for new structures.

Exception: Existing structural members in accordance with Section 707.3.

[B] 707.1.1 Existing live load. Where an existing structure is altered or repaired, the minimum design loads for the structure shall be the loads applicable at the time of erection, provided that public safety is not endangered thereby.

[B] 707.1.2 Live load reduction. If the approved live load is less than required by Section 1607 of the International Building Code, the areas designed for the reduced live load shall be posted with the approved load. Placards shall be of an approved design.

707.2 New structural members. New structural members in alterations, including connections and anchorage, shall comply with the International Building Code.

707.3 Existing structural members. Existing structural components supporting additional equipment or subjected to additional loads based on International Building Code Tables 1607.1 and 1607.6 as a result of a reconfiguration of spaces shall comply with Sections 707.4.1 through 707.4.3.

707.4.1 Gravity loads. Existing structural elements supporting any additional gravity loads as a result of additional equipment or space reconfiguration shall comply with the International Building Code.

Exceptions:

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R occupancy with no more than five dwelling units or sleeping units used solely for residential purposes where the existing building and its alteration comply with the conventional light-frame construction methods of the International Building Code or the provisions of the International Residential Code.

707.4.2 Lateral loads. Buildings in which Level 2 alterations increase the seismic base shear by more than 10 percent or decrease the seismic base shear capacity by more than 10 percent shall comply with the structural requirements specified in Sections 807.5 and 807.7. Changes in base shear and base shear capacity shall be calculated relative to conditions at the time of the original construction.

Exception: If the building’s seismic base shear capacity has been increased since the original construction, the percentage changes shall be permitted to be calculated relative to the increased value.

707.4.3 Snow drift loads. Any structural element of an existing building subjected to additional loads from the effects of snow drift as a result of additional equipment shall comply with the International Building Code.

Exceptions:

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R occupancy with no more than five dwelling units or sleeping units used solely for residential purposes where the existing building and its alteration comply with the conventional light-frame construction methods of the International Building Code or the provisions of the International Residential Code.

Commenter’s Reason: In the reason for disapproval, the committee correctly notes a conflict with proposed Section 707.1 and 707.4. This public comment proposes the exception to section 707.1 to make it clear that the provisions of renumbered Section 707.3 apply to existing structural members.

The code change committee correctly identified that proposed section 707.1 in the original proposal included “additions” which is not addressed in Chapter 7. The term has been deleted in this public comment such that the only classification of work addressed is alterations.

Final Action: AS AM AMPC D
Proposed Change as Submitted:

Proponent: Joseph A. McGrath, PE, RA, New York State Department of State

1. Revise as follows:

912.5.1 Height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *International Building Code* for the new occupancy classification.

   *Exception:* In other than Groups H, F-1 and S-1, in lieu of fire walls, use of fire barriers having a fire-resistance rating of not less than 2 hours constructed in accordance with Section 706 of the *International Building Code* shall be permitted to meet area limitations in buildings protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Fire Code*. Walls shall be constructed to conform to the requirements of ACI 530/ASCE 5/TMS 402, ACI 530.1/ASCE 6/TMS 602, or GA 600.

2. Add new standards to Chapter 15 as follows:

   **ACI**
   
   ACI 530-05  Building Code Requirements for Masonry Structures
   ACI 530.1-05  Specifications for Masonry Structures

   **ASCE**
   
   ASCE 5-05  Building Code Requirements for Masonry Structures
   ASCE 6-05  Specifications for Masonry Structures

   **GA**
   

   **TMS**
   
   TMS 402-05  Building Code Requirements for Masonry Structures
   TMS 602-05  Specifications for Masonry Structures

Reason: This proposal substitutes fire barriers for fire walls in existing steel and mill buildings undergoing a change of occupancy. Old mill buildings typically contain building areas larger than new building area code requirements, and thus must be compartmentalized when undergoing a change of occupancy. Traditional masonry firewalls are required to be built on a supporting concrete footing and/or supporting foundation. These walls, though effective in limiting the spread of fire by containing fire to the area of origin, would hamper the ability of the existing building to be fully utilized due to the limited flexibility of design or location afforded by traditional firewalls.

Allowing 2 hour rated fire barriers instead of fire walls still provides life safety redundancy in fully sprinklered buildings. Group H, F-1 and S-1 occupancies are excluded from the exception because of the fire loads inherent in these occupancies.

Mill and steel buildings are often landmarks in the community. The re-use of these often historic buildings, commonly for residential use, can add new life to an existing neighborhood, often encouraging additional development.

Constructing masonry walls in existing buildings is difficult. Separation walls constructed of materials not requiring additional structural supports that could be placed on existing floor decks would provide the flexibility required to successfully rehab existing buildings to more specifically meet client space needs. The barrier is built in such a way that the wall is supported at each floor, which in turn has a fire rated supporting structure. The two choices of construction are non-combustible rated wall construction systems of steel studs and multiple layers of gypsum wallboard or autoclaved concrete.

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

Analysis: These standards are currently listed in the IBC.

Committee Action: Approved as Modified

Modify the proposal as follows:

912.5.1 Height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *International Building Code* for the new occupancy classification.
**Individual Consideration Agenda**

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

Public Comment 1:

Rick Thornberry, PE, The Code Consortium, Inc., representing Alliance for Fire and Smoke Containment and Control (AFSCC) requests Approval as Modified by this public comment.

Further modify proposal as follows:

912.5.1 Height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the International Building Code for the new occupancy classification.

**Exception:** In other than Groups H, F-1 and S-1, in lieu of fire walls, use of fire barriers having a fire-resistance rating of not less than 2 hours constructed in accordance with Section 706 of the International Building Code shall be permitted to meet area limitations in buildings protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code. Walls shall be constructed to conform to the requirements of ACI 530/ASCE 5/TMS 402, ACI 530.1/ASCE 6/TMS 602, or GA 600.

Committee Reason: The committee indicated that use of fire barriers in lieu of fire walls in existing sprinklered buildings was commonly approved in current practice. Further, in keeping with the spirit of the IEBC this proposal provides a reasonable level of safety without requiring the existing building to meet all of the requirements for new construction, which will further promote the reuse of existing buildings.

Assembly Action: None

Walls shall be constructed to conform to the requirements of ACI 530/ASCE 5/TMS 402, ACI 530.1/ASCE 6/TMS 602, or GA 600.

ACI
ACI 530-05 Building Code Requirements for Masonry Structures
ACI 530.1-05 Specifications for Masonry Structures

ASCE
ASCE 5-05 Building Code Requirements for Masonry Structures
ASCE 6-05 Specifications for Masonry Structures

GA

TMS
TMS 402-05 Building Code Requirements for Masonry Structures
TMS 602-05 Specifications for Masonry Structures

2007 ICC FINAL ACTION AGENDA 545
The maximum area between fire barriers and horizontal assemblies or any combination thereof shall not exceed 12,000 square feet or the tabular area specified in Table 503 without any area increases for open space or automatic sprinkler systems for the compartment in the building (where fire walls are not provided to subdivide the building into the maximum allowable areas) to a maximum of 5060 square feet. Our originally proposed modifications to this code change proposal as modified by the Committee would have limited the size of any compartment in the building so as to limit the overall fire and life safety risks of converting the existing building to a new occupancy that is more hazardous than the existing building housed previously.

In an effort to achieve the spirit of the International Existing Building Code (IEBC), we had originally proposed a Public Comment which would have further modified the code change proposal as recommended for approval as modified by the IEBC Committee. We don't believe the code change proposal as approved is appropriate since it sets a precedent for allowing a fire barrier wall with a potentially lesser fire-resistance rating to be substituted for a fire wall, which is used to subdivide a structure into separate buildings, to meet the allowable area limits for the given type of construction and the occupancy classification. However, we believe that it may be appropriate to consider compartmenting the existing building into relatively smaller compartments utilizing fire barriers and horizontal assemblies in conjunction with an automatic sprinkler system to limit the potential spread of fire and smoke throughout the building and provide the opportunity for the responding fire department to control and contain the fire before it spreads to multiple compartments.

Another reason this code change should be disapproved is that it only specifies a minimum 2-hour fire-resistance rating for the fire barrier walls which are being substituted for the fire walls even though Table 705.4 of the IBC may require a 3-hour fire-resistance rating for the fire wall being substituted for. Generally speaking, fire walls in all occupancies, other than H-1 and H-2 occupancies which require a 4-hour fire-resistance rating, F-2, S-2, R-3, and R-4 occupancies, and Group A, B, E, H-4, I-1, and R-2 occupancies in buildings of Types II and V construction, are required to have a fire-resistance rating of 3 hours. This proposal has no technical justification provided to substantiate the 1-hour reduction in the fire-resistance rating of these walls.

It should also be noted that the language in the exception is somewhat confusing in that it starts out by stating “In other than Groups H, F-1, and S-1...”. It is not clear if this applies to the occupancy of the existing building or to the occupancy to which the existing building is being converted.

Even though this exception addresses existing buildings, we do not believe that the precedent it would set regarding the sprinkler system trade-off from a fire wall to a fire barrier wall of a lesser fire-resistance rating has been technically justified. This code change placed the burden on an occupancy to have an automatic sprinkler system to perform adequately in one out of every nine fires in which the fire is severe enough to cause activation of the automatic sprinkler system. This statistic is based on a recent paper by William E. Koffel, P.E. of Koffel Associates dated January 2006, evaluating the National Fire Protection Association’s (NFPA) most recent data on automatic sprinkler system performance and which has subsequently been verified by Dr. John Hall of NFPA who compiles the sprinkler statistics. In those cases sprinklers are operationally successful 89% of the time. For these reasons, we strongly recommend disapproval of this code change proposal.

**Public Comment 3:**


**Commenter's Reason:** The Alliance for Fire and Smoke Containment and Control (AFSCC) is opposed to this automatic sprinkler system trade-off for existing buildings which allows fire barriers having a fire-resistance rating of only 2 hours to be substituted for fire walls, which may have required fire-resistance ratings as great as 3 hours, when the building is protected throughout with an automatic sprinkler system. This is basically a double sprinkler trade-off.

The proposed new Exception to Section 912.5.1 is applicable to existing buildings which are converted to a different occupancy, where that occupancy has a higher hazard category rating based on Table 912.5, for the purpose of limiting the maximum allowable area in accordance with the requirements of the International Building Code (IBC). This code change has been approved without any technical justification. More specifically, this code change proposal will apply to existing buildings which are converted from F-1, S-1, and M occupancies to A, I, and R occupancies. It would also apply to existing buildings of Group B, F-2, S-2, and R-3 converted to Group E, F-1, S-1, M, A, I, and R occupancies. And as mentioned above, the fire-resistance rating of the separation would be allowed to be 2 hours when Table 705.4 of the IBC would require 3 hours for fire walls for all occupancies other than H-1 and H-2 (which require 4 hours), F-2, S-2, R-3, and R-4 occupancies, and Group A, B, E, H-4, I, R-1, and R-2 occupancies of Types II or V construction (which require 2 hours).

We certainly understand the difficulties of reutilizing existing building stock, especially where the buildings are very large and very old. However, the code still needs to address the fire and life safety issues related to the maximum sizes of buildings based on the type of construction and the occupancy of the building so as to limit the overall fire and life safety risks of converting the existing building to a new occupancy that is more hazardous than the existing building housed previously.

Even though this exception addresses existing buildings, we do not believe that the precedent it would set regarding the sprinkler system trade-off from a fire wall to a fire barrier wall of a lesser fire-resistance rating has been technically justified. This code change placed the burden on an occupancy to have an automatic sprinkler system to perform adequately in one out of every nine fires in which the fire is severe enough to cause activation of the automatic sprinkler system. This statistic is based on a recent paper by William E. Koffel, P.E. of Koffel Associates dated January 2006, evaluating the National Fire Protection Association’s (NFPA) most recent data on automatic sprinkler system performance and which has subsequently been verified by Dr. John Hall of NFPA who compiles the sprinkler statistics. In those cases sprinklers are operationally successful 89% of the time. For these reasons, we strongly recommend disapproval of this code change proposal.

Our originally proposed modifications to this code change proposal as modified by the Committee would have limited the size of any compartment in the building (where fire walls are not provided to subdivide the building into the maximum allowable areas) to a maximum of 12,000 square feet or the tabular area specified in Table 503 without any area increases for open space or automatic sprinkler systems for the given occupancy and type of construction, whichever is less. Although the 12,000 square foot compartment size is an arbitrary number, it is based on the typical sprinkler system threshold requirement specified for many occupancies in Section 903.2 of the IBC. Our proposed modification would have added a new sentence to the end of the Exception to read: “The maximum area between fire walls, fire barriers, and horizontal assemblies or any combination thereof shall not exceed 12,000 square feet or the tabular area specified in Table 503 of the International Building Code without any area increases allowed in accordance with Section 506 of the International Building Code, whichever is less.”

Unfortunately, our original Public Comment was disallowed because it was judged to be beyond the scope of the code change proposal as modified by the IEBC Committee.
Since that proposed modification cannot be considered during the ICC Final Action Hearings, we have no choice but to recommend to the ICC voting membership that this code change be disapproved. It simply does not provide the reasonably equivalent level of fire and life safety protection to the current code requirement. If implemented, it will allow existing buildings to be converted to higher hazard occupancies which will pose additional challenges to the responding fire department during a fire condition. The fire could spread beyond the ability of the local fire department to control and contain it to the required fire area. This could result in much greater property damage and negatively impact firefighter safety. Therefore, this code change needs to be disapproved.

Final Action:   AS    AM    AMPC____   D

EB35-06/07
1105.9, Chapter 15

Proposed Change as Submitted:


1. Revise as follows:

1105.9 Finishes. Where interior finish materials are required to have a flame spread classification of Class III flame spread index of Class C or better, existing nonconforming materials shall be surfaced with approved fire-retardant paint or finish fire-retardant coatings that comply with the requirements of NFPA 703.

   Exception: Existing nonconforming materials need not be surfaced with an approved fire-retardant paint or finish where the building is equipped throughout with an automatic fire-suppression system installed in accordance with the International Building Code and the nonconforming materials can be substantiated as being historic in character.

2. Add new standard to Chapter 15 as follows:

NFPA

NFPA 703-00 Standard for Fire Retardant-Treated Wood and Fire-Retardant Coatings for Building Materials

Reason: This change is to introduce correct terminology consistent with the International Building Code (IBC). The IBC talks, correctly, about flame spread index and the appropriate denomination for materials with flame spread index of less than 200 is Class C, in accordance with the IBC. The IFC explains that coatings that are applied to improve the fire performance of existing interior finish materials need to comply with NFPA 703.


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

Analysis: This standard is currently listed in the IFC.

Committee Action: Disapproved

Committee Reason: The current language is adequate in that it allows a code official and owner the latitude to determine the appropriateness of a fire-retardant coating.

Assembly Action: None

Individual Consideration Agenda

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

Public Comment:

Marcelo M. Hirschler, GBH International, requests Approval as Modified by this public comment.

Replace proposal as follows:

1105.9 Finishes. Where interior finish materials are required to have a flame spread index of Class C flame spread classification of Class III or better, existing nonconforming materials shall be surfaced with approved fire-retardant paint or finish.
Commenter's Reason: This change is just editorial, to introduce the correct terminology. The IBC talks, correctly, about flame spread index and the appropriate denomination for materials with flame spread index of less than 200 is Class C, in accordance with the IBC. This comment eliminates the potentially controversial change addressing coatings per NFPA 703.

Final Action: AS AM AMPC D