IBC – MEANS OF EGRESS

Code Change No: E5-06/07

Original Proposal

Sections: 1002.1 (IFC [B] 1002.1)

Proponent: Marshall A. Klein, P.E., Marshall A. Klein & Associates, Inc.

Revise definition as follows:

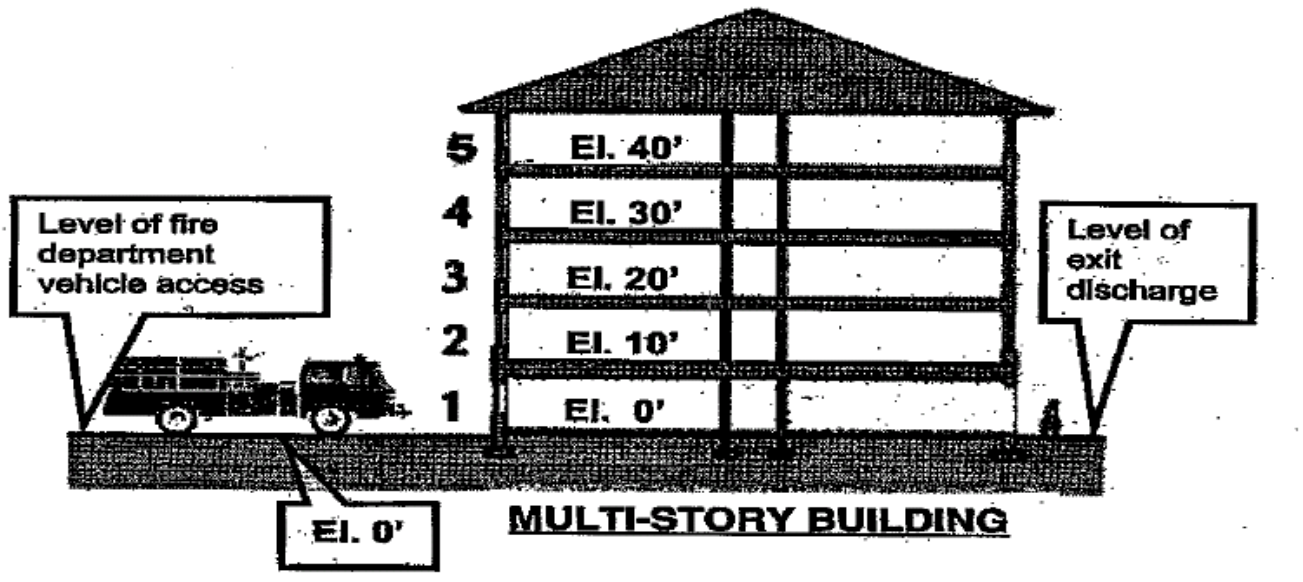
1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

EXIT DISCHARGE, LEVEL OF. The ~~horizontal plane located~~ lowest story at the point at which an exit terminates and an exit discharge begins.

Reason: IFC Formal Interpretations 44-03, 26-03, & 25-03, all issued on 5/11/04, stated the following:

> "When determining stories above the lowest level of exit discharge, a level, or floor level, is not a story. A "level" is the horizontal plane that is part of a story, not the entire story height. A "story" is the vertical space between the upper surface of one floor level and the upper surface of the floor level next above or below."

The level of exit discharge as shown in the attached drawing of a Multi-Story Building is at elevation 0.0', the first floor level of the building is also at elevation 0.0'; therefore, the level of exit discharge and the first floor level of the building are at the same elevation. The first story of the building begins at elevation 0.0' (first floor) and extends to the elevation 10.0' (second floor). The first story of the building is the first story above the level of exit discharge."



The intent of the "level of exit discharge" definitions in the previous three legacy codes, and in the ICC Codes was to use a similar definition for "level of exit discharge" as was being used in the NFPA 101, "Life Safety Code", which originally defined this term. Such similar definitions for "level of exit discharged" correlated between model codes and the NFPA Standards for user friendliness. For reference, 2006 NFPA 101 (LSC) defines "level of exit discharge":

"3.3.72.1 Level of Exit Discharge. (1) The lowest story from which not less than 50 percent of the required number of exits and not less than 50 percent of the required egress capacity from such a story discharge directly outside at grade; (2) the story with the smallest elevation change needed to reach grade where no story has 50 percent or more of the required number of exits and 50 percent or more of the required egress capacity from such a story discharge directly outside at grade."

The major difference between the IFC formal interpretations and the NFPA 101 definition is that NFPA 101 defines the "level of exit discharge" as a volume (story), not as a "horizontal plane". Therefore, in the diagram of the multistory building above, the "first story above the level of exit discharge" under NFPA 101 (and for that matter, as used under the legacy codes) was always considered the second story (El. 10'). However, under the IFC Formal Interpretations, it is now the first story (El. 0").

These formal IFC interpretations have been a rude awakening for many experienced users of the Codes, in particular to some ICC Staff members. Since a different ICC Committee, other than the ICC Means of Egress Code Development Committee, made these interpretations, this code proposal is providing the Means of Egress Code Development Committee its opportunity to "weigh in" on the intent of the Code when it comes to application of this definition.

This code proposal is only attempting to correlate the definition for "level of exit discharge" with the definition in NFPA 101, where the "level of exit discharge" concept came from. I believe that the NFPA 101 definition is a little too wordy for the ICC Codes. My proposed wording appears more than adequate to work for the ICC Codes, and to correlate between the ICC and NFPA Codes.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

EXIT DISCHARGE, LEVEL OF. The ~~lowest~~ story at the point at which an exit terminates and an exit discharge begins.

Committee Reason: The revised language will clarify that the level of exit discharge is the story the occupants are egressing from rather than the floor they are walking on. The modification was made because the story could be the lowest, highest or any level of building.

Assembly Action: **None**

Final Hearing Results

E5-06/07 **AM**

Code Change No: E6-06/07

Original Proposal

Sections: 1002 (New) [IFC [B] 1002 (New)]; IRC R202

Proponent: David W. Cooper, Stairway Manufacturers' Association

THIS PROPOSAL IS ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC

Add new definition as follows:

1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

FLIGHT. A continuous run of rectangular treads (fliers) or winders or combination thereof from one landing to another.

PART II – IRC

Add new definition to Section R202 as follows:

FLIGHT. A continuous run of rectangular treads (fliers) or winders or combination thereof from one landing to another.

Reason: The purpose of the change is to clarify the code. This proposal will foster a better understanding of what distinguishes a flight from a stairway. This definition is needed because the word "Flight" is used specifically to reference that part of a stairway that is between landings no less than 8 times in IBC 1009 and no less than 9 times in IRC 311.5. Often this word is misinterpreted to be stairs between *floors* causing the extending of handrails across landings, varying determinations of handrail continuity, dimensional uniformity, riser height, and tread depth. Furthermore this will help to clarify a major difference between winders and landings i.e., Landings separate flights within a stairway, winders are treads within a flight and are often combined with fliers in the same flight. Winders do not separate flights.

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

Public Hearing Results

PART I C IBC
Committee Action: **Approved as Modified**

Modify the proposal as follows:

FLIGHT. A continuous run of rectangular treads ~~(fliers)~~ or winders or combination thereof from one landing to another.

Committee Reason: The definition will clarify the difference between ›flight= and when a stairway moves from floor to floor. The term ›fliers= was dropped because it was confusing, not commonly used and not needed.

Assembly Action: **None**

PART II C IRC
Committee Action: **Approved as Modified**

Modify the proposal as follows:

FLIGHT. A continuous run of rectangular treads ~~(fliers)~~ or winders or combination thereof from one landing to another.

Committee Reason: The definition of Flight is a useful addition to Chapter 2 of the *International Residential Code*. The modification was passed by the Means of Egress committee and keeps the definitions consistent in the IBC and IRC.

Assembly Action: **None**

Final Hearing Results

E6-06/07, Part I	**AM**
E6-06/07, Part II	**AM**

Code Change No: E8-06/07

Original Proposal

Sections: 1003.2 (IFC [B] 1003.2)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1003.2 Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

Exceptions:

1. Sloped ceilings in accordance with Section 1208.2.
2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2.
3. Allowable projections in accordance with Section 1003.3.

4. Stair headroom in accordance with Section 1009.2.
5. Door height in accordance with Section 1008.1.1.
6. Ramp headroom in accordance with Section 1010.5.2.

Reason: For consistency Section 1003.2 should include ramps in headroom height exceptions. The change is also for coordination with ICC A117.1 Section 307.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Ramps are part of the means of egress, and it is logical to include them in the exceptions for the ceiling height provisions. This will coordinate the IBC requirements with ICC A117.1.

Assembly Action: **None**

Final Hearing Results

E8-06/07 **AS**

Code Change No: E11-06/07

Original Proposal

Sections: 1003.3.2, 1003.3.3, 1003.3.4 (IFC [B] 1003.3.2, [B] 1003.3.3, [B] 1003.3.4)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1003.3.2 ~~Free-standing~~ Post mounted objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finished floor or ground.

Exception: ~~This~~ These requirements shall not apply to sloping portions of handrails ~~serving~~ between the top and bottom riser of stairs and above the ramps~~s~~ run.

1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.

Exception: Handrails ~~serving stairs and ramps~~ are permitted to protrude 4.5 inches (114 mm) from the wall.

1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes ~~as required in Section 1104~~.

Reason: The concern is to two fold: 1) Not to apply the provisions of Section 1003.3.2 to the portions of the handrails along the stair or ramp run, but to apply those provisions to the handrail extensions. (Ex: A handrail on posts on a grand stairway.) 2) To allow handrails to protrude from the wall but never get less than the 36" wide ramp or route required for accessibility. The change is also for coordination with ICC A117.1 Sections 405 and 307.3. The change to Section 1003.3.4 would cover accessible routes for the way in as well as the way out.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal would add clarity on how to measure ramp width. The proposed language would increase coordination with the ICC A117.1 and new ADA/ABA Accessibility Guidelines.

Assembly Action: **None**

Final Hearing Results

E11-06/07 **AS**

Code Change No: E16-06/07

Original Proposal

Table 1005.1 (IFC [B] Table 1005.1)

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

Revise table as follows:

TABLE 1005.1
EGRESS WIDTH PER OCCUPANT SERVED

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM[a]	
	Stairways (inches per occupant)	Other egress components (inches per occupant)	Stairways (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than those listed below	0.3	0.2	0.2	0.15
Hazardous: H-1, H-2, H-3 and H-4	~~0.7~~ Not Permitted	~~0.4~~ Not Permitted	0.3	0.2
Institutional: I-2	~~NA~~ Not Permitted	~~NA~~ Not Permitted	0.3	0.2

For SI: 1 inch = 25.4 mm. NA = Not applicable.

a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Reason: Table 1005.1 is somewhat misleading in that Group H-1, H-2, H-3 and H-4 occupancies are not permitted in buildings without a sprinkler system according to Section 903.2.4.1. The format of the Institutional occupancy cells has been changed to be consistent with other similar tables in Chapter 10 such as Tables 1016.1 and 1017.1 It should be noted that this proposal was disapproved by the Means of Egress Code Committee during the previous code development cycle. Their rationale for that action was that there are existing, unsprinklered Group H occupancies and those data need to be retained for existing building purposes. If this logic is valid, there are numerous tables and other IBC provisions that need to reflect former requirements. The primary purpose of the International Building Code is to govern the design and construction of new buildings and structures. Its requirements should reflect that purpose. The code in effect at the time an existing building was constructed would be a better reference for prior code requirements, should they be needed. Approval of this proposal would result in technical consistency of International Building Code provisions.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language would provide consistency and clarity to the code for Group H and I-2 requirements.

Assembly Action: **None**

Final Hearing Results

E16-06/07 **AS**

Code Change No: E17-06/07

Original Proposal

Sections: 1005.2 (IFC [B] 1005.2)

Proponent: Ralph Vasami, The Kellen Company, representing The Door Safety Council

Revise as follows:

1005.2 Door encroachment. Doors opening into the path of egress travel shall not reduce the required width to less than one-half during the course of the swing. ~~When fully open~~, Excluding hardware, the door shall not project more than 7 inches (178 mm) into the required width when fully opened.

Exception: The restrictions on a door swing shall not apply to doors within individual dwelling units and sleeping units of Group R-2 and dwelling units of Group R-3.

Reason: This proposal modifies text regarding door encroachment. The existing code language fails to address the issue of hardware that is required as part of the door assembly to satisfy egress and security requirements. The proposed language seeks to clarify the manner in which the *Door Encroachment* language is enforced. Hardware projections should not be part of the measurement as they do not materially reduce the corridor width or impede egress flow.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Based on the testimony, if the hardware can be up to 10 inches from tip to tip, taking away the door and one handle, exclusion of the hardware could result in an additional protrusion of up to 11 inches into the path for means of egress. The 7 inches should include the hardware. In addition, when the door open 90 degrees, the 7 inches is the obstruction, while if it opens 180 degrees, there is credit given for the hardware so it is not a protrusion - this seems inconsistent.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Ralph Vasami, The Kellen Company, representing The Door Safety Council, requests Approval as Modified by this public comment.

Replace proposal with the following:

1005.3 Door hardware encroachment. Surface-mounted latch release hardware shall be exempt from inclusion in the 7-inch maximum (178mm) projection requirement of 1005.2 when:

1. The hardware is mounted to the side of the door facing the corridor width when the door is in the open position and;
2. The hardware is mounted not less than 34 inches (865mm) nor more than 48 inches (1220mm) above the finished floor.

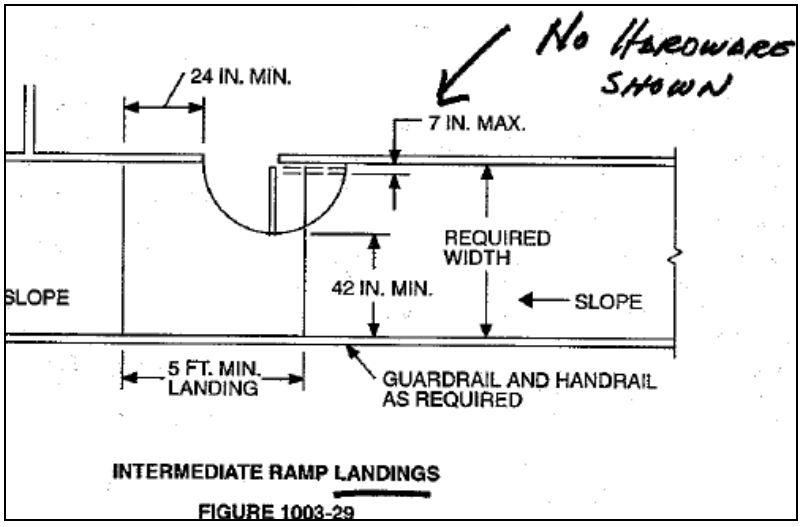
Commenter's Reason: The IFC and IBC requirements for door encroachment have not clearly addressed the issue of attached door latching hardware. The intent of the proposal as submitted was to clarify that door latching hardware should not be included in the dimensional requirement for door encroachment. The committee discussion and stated reasons for disapproval of E17 demonstrate the confusion surrounding this requirement. This public comment separates the door encroachment requirement from hardware, but adds restrictions on the height and mounting surface to capture the appropriate hardware encroachment prescriptions. The additional text is taken from NFPA 101 means of egress requirements.

The best illustration of just how confusing the current text is, and the best justification for this needed clarification, are the ICC Commentaries. The 7" door encroachment requirement is based upon legacy code provisions and has survived intact. In the *1997 UBC Handbook*, figure 1003-29 provides a detail with a dimension indicating a maximum of 7" door encroachment, but the figure shows no hardware and the dimension line leads to the edge of the door surface. Fast-forward to the 2000 *IBC Handbook Fire and Life-safety Provisions* and to figure 1003-5. In this detail, hardware has been added to the illustration but the 7" dimension line has moved to some vague point between the door slab and the doorknob. In the 2003 *IBC Commentary* Figure 1005.2, the detail has been modified to show accessible hardware instead of a doorknob, but the dimension line again leads to some vague spot on the door latch.

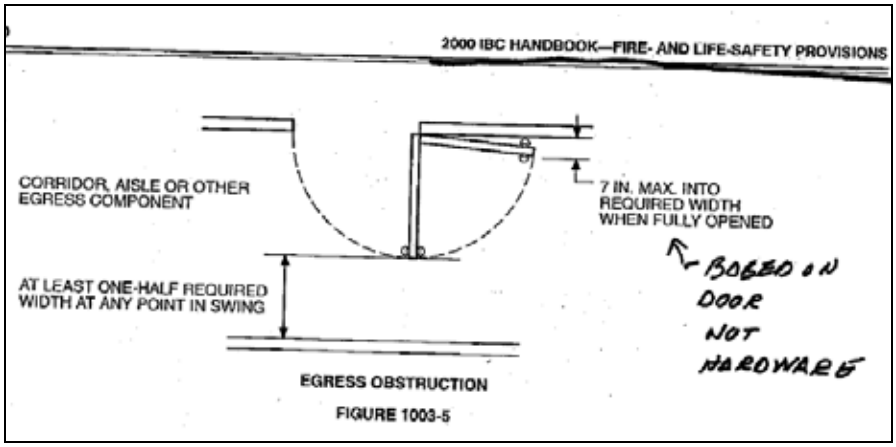
Despite the fact that the technical provision for door encroachment has not changed since the legacy codes, ICC artists have arbitrarily changed the details in the commentaries. The clarification provided by this proposal is necessary to clean up the ambiguity and resolve the issue in order to facilitate consistent code interpretations. The proposal is not a change in the requirement, merely a clarification made necessary by the confusion created by the ICC commentaries.

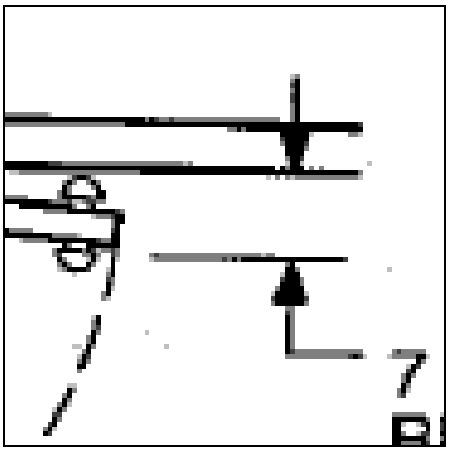
The following details are taken from the above referenced ICC and ICBO publications.

1997 UBC Handbook:

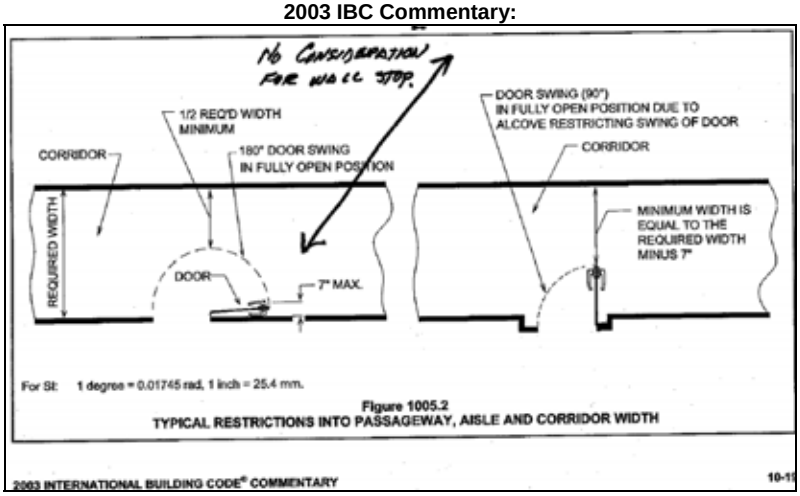


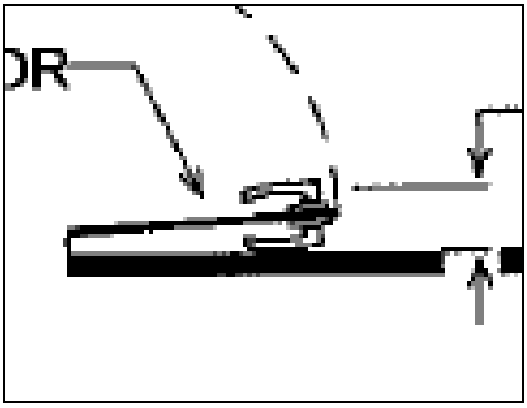
2000 IBC Handbook:





2003 IBC Commentary:





Final Hearing Results

E17-06/07 **AMPC1**

Code Change No: E18-06/07

Original Proposal

Sections: 1005.2, 1014.4, 1017.2, 1021.2, 1024.5.1 (IFC [B] 1005.2, [B] 1014.4, [B] 1017.2, [B] 1021.2, [B] 1024.5.1)

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

Revise as follows:

1005.2 ~~Door~~ Encroachment. Doors, when fully opened, and handrails, shall not reduce the required means of egress width by more than 7 inches (178 mm). Such door measurements shall include the thickness of the door and any hardware between the door and the adjacent wall surface. Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) on each side. ~~Doors opening into the path of egress travel shall not reduce the required width to less than one-half during the course of the swing. When fully open, the door shall not project more than 7 inches (178 mm) into the required width.~~

Exception: The restrictions on a door swing shall not apply to doors within individual dwelling units and sleeping units of Group R-2 and dwelling units of Group R-3.

1014.4 Aisles. Aisles serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles shall be provided from all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1025. The required width of aisles shall be unobstructed.

Exception: Doors complying with Section 1005.2. ~~, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side~~.

1017.2 Corridor width. The minimum corridor width shall be as determined in Section 1005.1, but not less than 44 inches (1118 mm).

Exceptions:

1. Twenty-four inches (610 mm)—For access to and utilization of electrical, mechanical or plumbing systems or equipment.
2. Thirty-six inches (914 mm)—With a required occupant capacity of less than 50.
3. Thirty-six inches (914 mm)—Within a dwelling unit.
4. Seventy-two inches (1829 mm)—In Group E with a corridor having a required capacity of 100 or more.
5. Seventy-two inches (1829 mm)—In corridors serving surgical Group I, health care centers for ambulatory patients receiving outpatient medical care, which causes the patient to be not capable of self-preservation.
6. Ninety-six inches (2438 mm)—In Group I-2 in areas where required for bed movement.

The required width of corridors shall be unobstructed.

Exception: Doors complying with Section 1005.2.

1021.2 Width. The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches (1118 mm), except that exit passageways serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width. The required width of exit passageways shall be unobstructed.

Exception: Doors complying with Section 1005.2. ~~, when fully opened, and handrails, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) on each side.~~

1024.5.1 Width. The width of egress courts shall be determined as specified in Section 1005.1, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Egress courts serving Group R-3 and U occupancies shall not be less than 36 inches (914 mm) in width. The required width of egress courts shall be unobstructed to a height of 7 feet (2134 mm).

Exception: Doors complying with Section 1005.2. , ~~when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side.~~

Where an egress court exceeds the minimum required width and the width of such egress court is then reduced along the path of exit travel, the reduction in width shall be gradual. The transition in width shall be affected by a guard not less than 36 inches (914 mm) in height and shall not create an angle of more than 30 degrees (0.52 rad) with respect to the axis of the egress court along the path of egress travel. In no case shall the width of the egress court be less than the required minimum.

Reason: Currently, there are no obstruction provisions for corridors in Section 1017. Section 1014.4 provides such criteria for aisles. Section 1021.2 provides such criteria for exit passageways. Section 1024.5.1 provides such criteria for egress courts. During the previous code development cycle, a similar proposal was disapproved by the means of egress code development committee. Their rationale was that the issue was already sufficiently addressed in the general provisions of Section 1005.2. Unfortunately, those general provisions are not as detailed as those encroachment provisions currently contained in the aforementioned means of egress component sections. Therefore, it is also proposed that Section 1005.2 be modified to be consistent with those component sections. Inasmuch as the required width encroachment provisions apply to more than doors, the section heading has been altered to reflect the more general nature of the provision. Additionally, the specific language currently contained in Sections 1014.4, 1021.2 and 1024.5 has been modified with an applicable cross-reference to Section 1005.2 as preferred by the previous code development committee. Lastly, the code is unclear as to how the seven inch door encroachment is measured (i.e. is door hardware included in the measurement). The proposal provides appropriate clarification. The approval of this proposal would result in the continuity of application of means of egress width encroachment requirements.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1005.2 Door encroachment. Doors, when fully opened, and handrails, shall not reduce the required means of egress width by more than 7 inches (178 mm). ~~Such door measurements shall include the thickness of the door and any hardware between the door and the adjacent wall surface.~~ Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) on each side.

Exception: The restrictions on a door swing shall not apply to doors within individual dwelling units and sleeping units of Group R-2 and dwelling units of Group R-3.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposed language would combine protrusion requirements in one section and would reduce redundancy. The sentence regarding measuring of the door and one-half of the hardware was deleted for consistency with the committee action on E17-06/07. Clear width or corridors should include hardware.

Assembly Action: **None**

Final Hearing Results

E18-06/07 **AM**

Code Change No: E21-06/07

Original Proposal

Sections: 1007.1 (IFC [B] 1007.1)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1007.1 Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Section 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

1. Accessible means of egress are not required in alterations to existing buildings.
2. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5.
3. In assembly ~~spaces~~ areas with sloped ~~floors~~ or stepped aisles, one accessible means of egress is ~~required from a space~~ permitted where the common path of travel is accessible and ~~of the accessible route for access to the wheelchair spaces~~ meets the requirements in Section 1025.8.

Reason: The purpose of this proposed change is threefold, first coordination with other sections of the building code, ICC A117.1, and ADAAG by the use of the term “assembly areas”, and second for the common path of travel to be the same for sloped or tiered seating arrangements, and then third to clarify the language of this exception.

“Assembly area” is a term that is used for seating elsewhere in the code and is coordinated with ICC A117.1 and ADAAG, therefore it should be the appropriate term used here for consistency. An accessible route to and from wheelchair spaces is required for safe ingress and egress. The same concern for the accessible route is applicable in both ramped or tiered seating arrangements, therefore, the exception should be applicable to both situations.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal would allow theaters to use common path of travel for stepped aisles as well as sloped floors. This is an improvement that was lacking in the code.

Assembly Action: **None**

Final Hearing Results

E21-06/07 **AS**

Code Change No: E23-06/07

Original Proposal

Sections: 1007.2, 1007.3, 1007.6, 1007.6.2 (IFC [B] 1007.2, [B] 1007.3, [B] 1007.6, [B] 1007.6.2)

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

Revise as follows:

1007.2 Continuity and components. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:

1. Accessible routes complying with Section 1104.
2. Interior exit stairways ~~within vertical exit enclosures~~ complying with Sections 1007.3 and 1020.
3. Exterior exit stairways complying with Sections 1007.3 and 1023.
4. Elevators complying with Section 1007.4.
5. Platform lifts complying with Section 1007.5.
6. Horizontal exits complying with Section 1022.
7. Ramps complying with Section 1010.
8. Areas of refuge complying with Section 1007.6

Exceptions~~:~~

~~1.~~ Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided in accordance with Section 1007.8.
~~2. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8.~~

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

~~1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress.~~
1.~~2.~~ The area of refuge is not required at unenclosed interior exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2.~~3.~~ The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3.~~4.~~ The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
4.~~5.~~ Areas of refuge are not required at exit stairways serving open parking garages.
5. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8

1007.6 Areas of refuge. Every required area of refuge shall be accessible from the space it serves by an accessible means of egress. The maximum travel distance from any accessible space to an area of refuge shall not exceed the travel distance permitted for the occupancy in accordance with Section 1016.1. Every required area of refuge shall have direct access to ~~an enclosed~~ a stairway within an exit enclosure complying with Sections 1007.3 and ~~1020.1~~

1020 or an elevator complying with Section 1007.4. Where an elevator lobby is used as an area of refuge, the shaft and lobby shall comply with Section 1020.1.7 for smokeproof enclosures except where the elevators are in an area of refuge formed by a horizontal exit or smoke barrier.

1007.6.2 Separation. Each area of refuge shall be separated from the remainder of the story by a smoke barrier complying with Section 709 or a horizontal exit complying with Section 1021. Each area of refuge shall be designed to minimize the intrusion of smoke.

Exception: Areas of refuge located within ~~a vertical~~ an exit enclosure.

Reason: The purpose of this proposal is to reorganize the requirements for accessible means of egress and eliminate extraneous provisions. Section 1007.1 specifies the minimum number of accessible means of egress. Section 1007.2 requires each one to be continuous to a public way by means of one or more components. Exception #1 is appropriately located but Exception #2 is better located in Section 1007.3.

The items in Section 1007.2 include stairways within vertical exit enclosures and exterior exit stairways. Unenclosed interior exit stairways are excluded, but Exception #1 to Section 1007.3 effectively includes them. The proposal simplifies the provisions by modifying Item #2 of Section 1007.2 to specify interior exit stairways complying with Sections 1007.3 and 1020. This has the effect of including unenclosed exit stairways as permitted by Section 10201. Exception #1 to Section 1007.3 is deleted in coordination with this change. The current Exception #2 (proposed Exception #1) to Section 1007.3 is also modified for consistency with the changes.

Section 1007.6 is changed for consistency with the current language in Item #2 of Section 1007.2, which is appropriate in this case. The reference to Section 1020.1 is changed to Section 1020 for the same reason.

In the exception to Section 1007.6.2, the change from "vertical exit enclosure" to "exit enclosure" is made for consistency with other provisions in the IBC, which consistently use the term "exit enclosure." This consistency was established by code change proposal E1-03/04 (AS).

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify proposal as follows:

1007.2 Continuity and components. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:

1. Accessible routes complying with Section 1104.
2. Interior exit stairways within vertical exit enclosures complying with Sections 1007.3 and 1020.
3. Exterior exit stairways complying with Sections 1007.3 and 1023.
4. Elevators complying with Section 1007.4.
5. Platform lifts complying with Section 1007.5.
6. Horizontal exits complying with Section 1022.
7. Ramps complying with Section 1010.
8. Areas of refuge complying with Section 1007.6

Exceptions:

1. Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided in accordance with Section 1007.8.
2. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8.

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. The area of refuge is not required at unenclosed interior exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
4. Areas of refuge are not required at exit stairways serving open parking garages.
5. ~~Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal clarifies the continuity for the accessible means of egress. The proponent asked for the modification to not relocate current Section 1007.2, Exception 2 to a new Section 1007.3, Exception 5. The proponent wished to bring this portion forward in a later proposal.

Staff note: The committee action to Sections 1007.2 and 1007.6.2 have removed the final direct reference to Avertical exit enclosures@ in Chapter 10. The result is that the title of Section 1020 will be changed from AVertical exit enclosures@ to AExit enclosures@. Note that titles are editorial.

Assembly Action: **None**

Final Hearing Results

E23-06/07 **AM**

Code Change No: E25-06/07

Original Proposal

Sections: 1007.3, 1007.4 (IFC [B] 1007.3, [B] 1007.4)

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

Revise as follows:

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an a accessible means of egress.
2. The area of refuge is not required at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
3. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
4. Areas of refuge are not required at exit stairways in buildings or facilities equipped throughout by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

~~4.~~ 5. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.

~~5.~~ 6. Areas of refuge are not required at exit stairways serving open parking garages.

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Sections 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.
2. Elevators are not required to be accessed from an area of refuge or horizontal exit in buildings and facilities equipped throughout by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

Reason: The purpose of this Code change is to reinstitute into the Code the subject exceptions regarding not requiring areas of refuge (AOR) in buildings or facilities protected throughout by an automatic sprinkler system designed and installed in accordance with Section 903.3.1.1 or 903.3.1.2. The subject exceptions had been in all previous editions of the IBC; including each of the legacy Codes, which recognized any floor of

a building protected throughout by an approved, operational automatic sprinkler system as an AOR. This recognition is based on sound technical research and acknowledges the ability of a properly designed and operational automatic sprinkler system to control a fire at its point of origin and to limit production of toxic products to a level that is not life threatening.

However, at the Final Action Hearings of the ICC in September 2005, the ICC membership voted to delete the subject two exceptions. However, no technical research data was provided to support any of the proponent's substantiation or rationale for deleting the exceptions for installing AOR in buildings protected throughout by an operational automatic fire sprinkler system.

Below, I have provided the technical research data that substantiated the rationale for not installing AOR in buildings that are protected throughout by an operational automatic fire sprinkler system in the previous editions of the IBC.

In 1989, at the request of Congress, the U.S. General Services Administration (GSA) undertook a project to construct AOR for persons with mobility limitations. In 1991, GSA funded the National Institute of Standards and Technology (NIST) to evaluate the concept of AOR as a means of providing fire protection for persons with disabilities in office buildings.

The NIST evaluation consisted of field tests, threat analysis, and a human behavior study of AOR in six office buildings. The threat analysis included hazards inside the AOR as well as hazards traveling to these areas for both sprinklered and unsprinklered office buildings.

In 1992, NIST issued their findings and recommendations in a report titled "*Staging Areas for Persons with Mobility Impairments*" – NISTIR 4770. The NIST report resulted in a number of conclusions regarding fire protection strategies for persons with disabilities that are believed to be applicable to many other buildings. The primary conclusion of the report was that the operation of a properly designed sprinkler system eliminates the life threat to all occupants regardless of their individual abilities and can provide superior protection for persons with disabilities as compared to staging areas.

To the best of our knowledge, no physical tests or scientifically based fire safety analysis of AOR's has occurred since the printing of this 1992 report. In addition, sprinkler technology has also improved since 1992. Quick response sprinklers are now required to be used where in 1992, standard response sprinklers were utilized.

Regarding some of the opinions expressed at the Final Action Hearings of the ICC in September 2005the regarding automatic sprinkler reliability. A recent comprehensive analysis in 2005 of high-rise fires by NFPA identified that no fatalities had occurred for more than a decade in any U.S. high-rise occupancy (> 10 story) other than the 6 fatalities in the unsprinklered Cook County Office Building (2003); the 1 fatality in the unsprinklered First Interstate Bank Building (1991); and 3 firefighter fatalities in the partially sprinklered (unsprinklered on floor of fire origin and several floors above) Meridan Plaza Building (1991). The Murrah Federal Building (1995) and the World Trade Center (1993 & 2001) bombings were excluded from this analysis.

The recently issued NFPA 2005 report on sprinkler reliability also indicated that automatic fire sprinklers successfully operating in reported structural fires was an exemplary 93%. In addition, NFPA also reported that 2/3rds of the reported automatic fire sprinkler system failures were because the automatic fire sprinkler systems were shut off. Since the IBC requires the supervision of the automatic fire sprinkler system, one can conclude that the successful operation of an automatic fire sprinkler system designed and installed in compliance with the IBC requirements could be reasonably estimated at 98%. NFPA also reported that the percentage of successfully operating automatic fire sprinkler systems is probably higher since a large percentage of small fire extinguished by fire sprinklers are not reported. Therefore, for an automatic fire sprinkler system designed and installed in accordance with the IBC requirements, the successful operation of an automatic fire sprinkler system could be reasonably estimated at 98% or more.

Based on all these points stated above, we strongly believe that it unreasonable not to recognize that any floor of a building protected throughout by an approved, operational automatic fire sprinkler system serve as an AOR. We believe the rationale is sound and based on technical research that acknowledges the ability of a properly designed and operational automatic sprinkler system to control a fire at its point of origin and to limit production of toxic products to a level that is not life threatening to all occupants of the building, including persons with disabilities. In addition, we believe the cost to construct AOR's will significantly increase building construction and maintenance costs without increasing the overall safety to the building occupants.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The sprinkler exception for areas of refuge was deleted from Sections 1007.2 and 1007.3 as part of the final action hearings of the 04/05 cycle. No technical justification was provided to support the deletion of this option. There has been no loss of life in sprinklered high rise buildings. In addition, the deletion of the exceptions have resulted in conflicts with the elevator protection provisions and smoke barrier construction. There would be significant ramifications to current building construction.

Assembly Action: **None**

Final Hearing Results

E25-06/07 **AS**

Code Change No: E27-06/07

Original Proposal

Sections: 1007.4 (IFC [B] 1007.4)

Proponent: Lawrence G. Perry, AIA, representing BOMA

Revise as follows:

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Sections 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.
2. Elevators not required to be located in a shaft in accordance with Section 707.2 are not required to be accessed from an area of refuge or horizontal exit.
3. Elevators are not required to be accessed from an area of refuge or a horizontal exit where all portions of the means of egress are essentially open to the outside.

Reason: The proposed two new exceptions attempt to coordinate the accessible means of egress/area of refuge requirements, which were significantly modified by floor action at the Final Hearings of the '04/'05 Cycle, with the requirements for enclosed elevator lobbies (707.14.1). Proposed exception 2 allows omission of the area of refuge at elevators that are not required to be located within a shaft enclosure. A common example is elevators located within an atrium. The code specifically exempts such elevators from lobby enclosure requirements; it makes no sense to mandate a small enclosed box around the elevator when the elevator is otherwise permitted to be totally open to the atrium.

Proposed exception 3 addresses outdoor locations where elevators may be provided, such as transit station platforms and A-5 assembly occupancies. The purpose of the area of refuge or horizontal exit is to provide separation from the products of combustion during a fire. If the area is open to the outside, smoke will not accumulate.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify proposal as follows:

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Sections 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.
2. Elevators not required to be located in a shaft in accordance with Section 707.2 are not required to be accessed from an area of refuge or horizontal exit.
3. ~~Elevators are not required to be accessed from an area of refuge or a horizontal exit where all portions of the means of egress are essentially open to the outside.~~

Committee Reason: The proposed exception 2 is a logical extension. If an elevator is not in a shaft, an area of refuge in front of it would not make sense. The modification to delete Exception 3 was for consistency with the committee action on E26-06/07. The term ›essentially‹ is not readily defined.

Assembly Action: **None**

Final Hearing Results

E27-06/07 **AM**

Code Change No: E28-06/07

Original Proposal

Sections: 1007.3, 1007.4, 1007.7 (IFC [B] 1007.3, [B] 1007.4, [B] 1007.7)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress.
2. The area of refuge is not required at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
3. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
4. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
5. Areas of refuge are not required at exit stairways serving open parking garages.
6. Areas of refuge are not required for smoke protected seating areas complying with Section 1025.6.2.

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Sections 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.
2. Elevators are not required to be accessed from an area of refuge or horizontal exit for smoke protected seating areas complying with Section 1025.6.2.

1007.7 Signage. At exits and elevators serving a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress. At refuge areas created by horizontal exits or where areas of refuge are not required, provide signage indicating areas to wait for rescue assistance.

Reason: The purpose of this proposed change is to rectify a potentially unintended result of a recent code change. The purpose of a smoke barrier is to minimize the intrusion of smoke. In environments where the entire area has protection against the accumulation of smoke, requiring an additional smoke barrier is not only redundant but potentially hazardous. For example, enclosing a room in an exterior stadium concourse does not enhance safety, if anything it would diminish it.

Smoke-protected seating is performance based design providing an environment where smoke is maintained away from occupants from the seat to exit discharge with design criterion established in Section 909. Therefore, smoke-protected seating already provides an environment meeting the intent of the protection offered by areas of refuge. For seating to be considered smoke-protected it is required to maintain the level of smoke at least 6 feet above the floor of the means of egress (please refer to Section 1025.6.2.1). In addition, a life safety evaluation, complying with NFPA 101, is required for smoke-protected assembly seating (please refer to Section 1025.6.2).

Even when areas of refuge are not provided, signage indicating where people can wait for assisted rescue should be provided. This would happen at horizontal exits, an open exit stairway or in smoke free environments such as open parking garages or smoke protected seating areas.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1007.7 Signage. At exits and elevators serving a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress. ~~At refuge areas created by horizontal exits or where areas of refuge are not required, provide signage indicating areas to wait for rescue assistance.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The modification provided definable criteria for areas where smoke protected seating for all occupants is provided. It is logical that this is a viable alternative for areas of refuge for persons with mobility impairments. The modification removed the proposed revision to Section 1007.7. If an area of refuge is not required, then signage for that area of refuge does not make sense.

Assembly Action: **None**

Final Hearing Results

E28-06/07 **AM**

Code Change No: E29-06/07

Original Proposal

Sections: 1007.3 (IFC [B] 1007.3)

Proponent: Ron Nickson, National Multi Housing Council/National Apartment Association

Revise as follows:

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress.
2. The area of refuge is not required at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
3. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
4. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
5. Areas of refuge are not required at exit stairways serving open parking garages.
6. <u>The areas of refuge are not required in Group R-2 occupancies.</u>

Reason: To allow an exception to not require an area of refuge in apartment buildings and individual dwellings because the individual sprinklered apartment provide a much superior area to protect the apartment occupant than would be provided by the area of refuge. In addition to each individual unit being surrounded by partitions and horizontal assemblies in accordance with Section 419, the unit also has the special items necessary for the individual occupant.

NFPA fire data from *U.S. Experience with Sprinklers* by Kimberly Rohr and John R. Hall, Jr., December 2005 (copy attached) supports the safety of the individual apartment. According to the report 95% (Table 12, page 46) of the fires in sprinklered apartment buildings are confined within the room of origin (object of origin – 69%, area of origin – 20%, and room of origin – 6%). More important the report goes on to address the

effectiveness of sprinklers in saving lives by stating “NFPA has no record of a fire killing more than two people in a completely sprinklered public assembly, educational, institutional, or residential building where the system was properly operating” (Page 32). NFPA also reports that residential sprinkler system reliability of 98% (2% failure, Table 4, page 17) is the highest for all occupancies. The Operation Life Safety reported on the safety of residential systems also shows that the systems save lives. An evaluation of the report *Residential Sprinkler Activations* (copy attached) shows no deaths in buildings protected with the NFPA 13D and 13R sprinkler systems?

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Since Group R-2 occupancies are required to be sprinklered and separated, there is sufficient protection for the residents. There was a question if with the committee action on E25-06/07 that this exception may be redundant.

Assembly Action: **None**

Final Hearing Results

E29-06/07 **AS**

Code Change No: E30-06/07

Original Proposal

Sections: 1007.3 (IFC [B] 1007.3)

Proponent: Ron Nickson, National Multi Housing Council/National Apartment Association

Revise as follows:

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:

1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress.
2. The area of refuge is not required at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.1.2.
3. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
4. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
5. Areas of refuge are not required at exit stairways serving open parking garages.

Reason: To allow the exceptions for not requiring and area of refuge at unenclosed exit stairways permitted for buildings with NFPA 13 sprinkler systems to also be allowed with NFPA 13R sprinkler systems. The design requirements and thus the protection provided with NFPA 13R system in the area being protected are the same as that provide with a NFPA 13 system.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: In this particular case, the use of sprinkler systems provided in accordance with NFPA 13R is reasonable and will provide the needed level of protection.

Assembly Action: **None**

Final Hearing Results

E30-06/07 **AS**

Code Change No: E35-06/07

Original Proposal

Sections: 1007.6 (IFC [B] 1007.6)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1007.6 Areas of refuge. Every required area of refuge shall be accessible from the space it serves by an accessible means of egress. The maximum travel distance from any accessible space to an area of refuge shall not exceed the travel distance permitted for the occupancy in accordance with Section 1016.1. Every required area of refuge shall have direct access to an enclosed exit stairway complying with Sections 1007.3 and 1020.1 or an elevator complying with Section 1007.4. Where an elevator lobby is used as an area of refuge, the shaft and lobby shall comply with Section 1020.1.7 for smokeproof enclosures except where the elevators are in an area of refuge formed by a horizontal exit or smoke barrier.

Exceptions:

1. A stairway serving an area of refuge is not required to be enclosed where permitted in Section 1020.1.
2. Smokeproof enclosure is not required for an elevator lobby used as an area of refuge not required to be enclosed.

Reason: The purpose of this proposed change is to clarify two things: first that an exit stair that is not required to be enclosed by Section 1020.1 is not otherwise required to be enclosed in order to serve an area of refuge, and then second that elevator shaft and lobby is not required to be smokeproof where the area of refuge would not need to be separated from the remaining space. Without this proposed change, it may be interpreted that the limited conditions where an exit stair is not required to be enclosed would need to be enclosed when it serves an area of refuge. In addition, it may be interpreted providing smokeproof enclosure for elevator lobbies and shafts would be required even when the area of refuge is not required to be separated.

An exterior stair in A5 occupancy is not required to be enclosed per Section 1020.1. However, without this proposed change that same exterior stair might be required to be enclosed when it serves an area of refuge. As stated in another proposed change, separating an area of refuge from an open air exterior concourse is counter-productive when the concourse is already protected from smoke. Enclosing an exterior exit stair does not seem to offer any greater protection from smoke, but potentially reduces its protection. Similarly, enclosing an exterior elevator shaft and lobby might offer more potential for smoke collection compared to an open air exterior space.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The level of protection offered by an open exit access stair is negligible, and what is needed is an actual exit enclosure.

Assembly Action: **None**

Final Hearing Results

E35-06/07 **AS**

Code Change No: E40-06/07

Original Proposal

Sections: 1008.1.1.1 (IFC [B] 1008.1.1.1)

Proponent: Bill Conner, Bill Conner Associates LLC, representing himself

Revise as follows:

1008.1.1.1 Projections into clear width. There shall not be projections into the required clear width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

Exception: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

Reason: The purpose of this proposal is to allow for door closers and stops to protrude into the 80" minimum height. This is coordinated with ICC A117.1, Section 404.2.2.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The lower headroom height for door closers and stops will allow design flexibility without adversely affecting the means of egress.

Assembly Action: **None**

Final Hearing Results

E40-06/07 **AS**

Code Change No: E41-06/07

Original Proposal

Sections: 1008.1.2 (IFC [B] 1008.1.2)

Proponent: John Neff, Washington State Building Code Council

Revise as follows:

1008.1.2 Door swing. Egress doors shall be side-hinged swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.
6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.
7. Power-operated doors in accordance with Section 1008.1.3.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.
9. In other than Group H Occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces with an occupant load of 10 or less.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15 pound (67 N) force. Forces shall be applied to the latch side.

Reason: The purpose of the code change is to add an exception to the code to allow a specific type of door for egress from areas of low occupancy. This exception is needed to allow space efficient design while maintaining a proven level of safety. Use of manual horizontal sliding doors for egress from low occupancy spaces was allowed under legacy codes with no impact on the health and safety of the occupants. Examples of where these doors have been used for egress include hotel balconies and in teacher break rooms in school facilities.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify proposal as follows:

1008.1.2 Door swing. Egress doors shall be side-hinged swinging.

Exceptions:

~~1.~~ ~~Private garages, office areas, factory and storage areas with an occupant load of 10 or less.~~

~~9~~ 1. In other than Group H Occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.
6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.
7. Power-operated doors in accordance with Section 1008.1.3.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15 pound (67 N) force. Forces shall be applied to the latch side.

Committee Reason: The change allowing for a horizontal sliding door instead of a side swinging door in areas with small occupant loads would not decrease safety for the means of egress. The modification to delete Exception 1 was to eliminate redundant text with the new exception. The Assembly Action was due to the deletion of Exception 1 resulting in overhead doors not being permitted as an option for some of these small areas.

Assembly Action: **Approved as Submitted**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful.

Final Hearing Results

E41-06/07 **AS**

Code Change No: E43-06/07

Original Proposal

Sections: 1008.1.2, 1008.1.3 (New), 1008.1.3.1 (New) [IFC 1008.1.2, [B] 1008.1.3 (New), [B] 1008.1.3.1 (New)]

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

Revise as follows:

1008.1.2 (IFC 1008.1.2) Door swing. Egress doors shall be side-hinged swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3 as applicable in Section 101.2.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.
6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.
7. Power-operated doors in accordance with Section 1008.1.3.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

1008.1.3 Door opening force. The ~~opening~~ force for pushing or pulling open interior ~~side-~~swinging egress doors ~~without closers~~ other than fire doors, shall not exceed ~~a 5-pound~~ 5 pounds (22 N) ~~force~~. For other ~~side-~~swinging doors, and sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15-pound (67 N) force.

1008.1.3.1 Location of applied forces. Forces shall be applied to the latch side of the door.

Reason: The purpose of this proposal is to make the provisions for door opening forces more technically sound and more consistent with similar provisions in ICC A117.1. IBC Section 1008.1.2 requires egress doors to be side-hinged swinging except for several cases noted in Exceptions #1 through #8. In paragraph #3, the opening force is limited to 5 pounds for interior side-swinging doors without closers. The charging language in paragraph #1, however, is limited to side-hinged swinging doors, which does not include side-swinging doors other than side-hinged swinging (i.e., pivoted). Paragraph #3 specifies limits on opening forces for sliding and folding doors, which is also beyond the scope of the same charging language. Because of this, a new code section is proposed so that the requirements for door opening force are not limited to the charging language in Section 1008.1.2.

Scoping issues aside, the current provisions in paragraph #3 are limited to side-swinging doors, sliding doors and folding doors. Excluded are swinging doors other than side-swinging (i.e., pivoted), which is not the intent. It is also not consistent Section 404.2.8 of ICC A117.1-03 on door-opening force, which applies to all interior hinged doors other than fire doors, not just side-swinging (hinged) doors. The change from "side-swinging" to "swinging" doors will make the necessary correction.

The current language in paragraph #3 of Section 1008.1.2 specifies "opening force." This is changed to "force for pushing and pulling open," also for consistency with Section 404.2.8 of ICC A117.1-03. The substitution of "fire doors" for "without closers" is being done for the same reason. The change from "5-pound force" to "5 pounds" is being done to eliminate redundancy. Note that "force" is specified at the beginning of the sentence.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The reorganization clarifies the operational force is applicable to all inside non-fire doors, including types other than side swinging doors.

Assembly Action: **None**

Final Hearing Results

E43-06/07 **AS**

Code Change No: E44-06/07

Original Proposal

Sections: 1008.1.3.1 (IFC [B] 1008.1.3.1)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1008.1.3.1 Revolving doors. Revolving doors shall comply with the following:

1. Each revolving door shall be capable of collapsing into a bookfold position with parallel egress paths providing an aggregate width of 36 inches (914 mm).
2. A revolving door shall not be located within 10 feet (3048 mm) of the foot of or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the revolving doors.
3. The revolutions per minute (rpm) for a revolving door shall not exceed those shown in Table 1008.1.3.1.
4. Each revolving door shall have a side-hinged swinging door which complies with Section 1008.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
5. Revolving doors shall not be part of an accessible route required by Section 1007 and Chapter 11.

Reason: Revolving doors cannot be used on an accessible route.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Revolving doors are a safety hazard along accessible routes without specifications for just how to make them accessible.

Assembly Action: **None**

Final Hearing Results

E44-06/07 **AS**

Code Change No: E47-06/07

Original Proposal

Sections: 1008.1.8.3 (IFC [B] 1008.1.8.3)

Proponent: Ralph Vasami, The Kellen Company, representing The Door Safety Council

Revise as follows:

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint. 2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   2.1. The locking device is readily distinguishable as locked,
   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background, 2.3. The use of the key-operated locking device is revokable by the building official for due cause.
3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. <u>Fire rated doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures</u>

Reason: This proposal will revise Section 1008 to clarify conditions under which latching devices shall be permitted to prevent door operation. The current code contains a contradiction in that the listed procedures for a fire door include the disabling of the mechanism. Without this added text, the code does not allow the listed feature.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint. 2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   2.1. The locking device is readily distinguishable as locked,
   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background, 2.3. The use of the key-operated locking device is revokable by the building official for due cause.
3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or lessare permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. Fire ~~rated~~ doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

Committee Reason: The proposed language would codify application for doors currently used. A concern was expressed if the listing information would be sufficient to regulate this type of mechanism. The modification to the new item five is for consistency with the terminology for fire doors.

Assembly Action: **None**

Final Hearing Results

E47-06/07 **AM**

Code Change No: E52-06/07

Original Proposal

Sections: 1008.1.8.7 (New) [IFC [B] 1008.1.8.7 (New)]

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

Revise as follows:

1008.1.8.7 Electromagnetically Locked Egress Doors. Doors in the means of egress in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch that meets the requirements below:

1. The listed hardware is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The listed hardware is capable of being operated with one hand.
3. Operation of the listed hardware interrupts power supply to the electromagnetic lock and unlocks the door.
4. Loss of power to the listed hardware automatically unlocks the door.

Reason: The intent of this code change proposal is add a new requirement that would permit doors in the means of egress to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch that interrupts the power supply to the electromagnetic lock and unlocks the door.

Current code requirements do not permit the use of this new type of technology for electromagnetically locked egress door. Current requirements only permit the use of delayed egress locking systems and egress access control systems. However, these two types of egress locking systems typically do not meet the security needs of the building and are often misapplied.

The listed hardware that incorporates a built-in switch has been tested by UL under Special Locking Arrangements FWAX.SA6635. For example, the Adams Rite 3000 bars are OEM listed as 3700, 3600, 3300, and 3100. In addition, the Securitron Touch Sense Bars and Handles are also listed.

We believe type of locking arrangement will address a majority of security concerns in buildings while still maintaining a reasonable degree of safety. This new type of locking arrangement would also be acceptable in the 2006 edition of the NFPA 101, *Life Safety Code*.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1008.1.8.7 Electromagnetically locked egress doors. Doors in the means of egress that are not otherwise required to have panic hardware in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch, and meet ~~that meets~~ the requirements below:

1. The listed hardware affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The listed hardware is capable of being operated with one hand.
3 Operation of the listed hardware releases ~~interrupts power supply~~ to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.

Committee Reason: The proposal resolves a huge misunderstanding in the code that all door locks are required to be mechanical. The modification to the base paragraph is to clarify that these locks will not conflict with panic hardware requirements. The modification to Item 2 clarifies that this type of lock is not a delayed egress lock or access control lock addressed elsewhere in the locking requirements.

Assembly Action: **None**

Final Hearing Results

E52-06/07 **AM**

Code Change No: E63-06/07

Original Proposal

Sections: 1009.3.3 (IFC [B] 1009.3.3)

Proponent: William McErlane, City of Springdale, Ohio, representing Ohio Building Officials Association

Revise as follows:

1009.3.3 Profile. The radius of curvature at the leading edge of the tread shall be not greater than 0.5 inch (12.7 mm). Beveling of nosings shall not exceed 0.5 inch (12.7 mm). Risers shall be solid and vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.52 rad) from the vertical. The leading edge (nosings) of treads shall project not more than 1.25 inches (32 mm) beyond the tread below and all projections of the leading edges shall be of uniform size, including the leading edge of the floor at the top of a flight.

Exceptions:

1. Solid risers are not required for stairways that are not required to comply with Section 1007.3, provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).
2. Solid risers are not required for occupancies in Group I-3 <u>or in F, H and S occupancies other than areas accessible to the public.</u>

Reason: Solid risers are required in occupancies where guards are limited to maximum four inch openings because open risers are typically more than four inches high. They are also a concern for mobility impaired persons. This section already recognizes one occupancy where the opening limitations are relaxed due to decreased hazard. This would allow stairs such as those at loading docks and industrial mezzanines to have open risers.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Areas that are not open to the public in F, H and S occupancies should not be required to have solid risers on stairway.

Assembly Action: **None**

Final Hearing Results

E63-06/07 **AS**

Code Change No: E64-06/07

Original Proposal

Sections: 1009.4 (IFC [B] 1009.4)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1009.4 Stairway landings. There shall be a floor or landing at the top and bottom of each stairway. The width of landings shall not be less than the width of stairways they serve. Every landing shall have a minimum dimension measured in the direction of travel equal to the width of the stairway. Such dimension need not exceed 48 inches (1219 mm) where the stairway has a straight run. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. When wheelchair spaces are required on the stairway landing in accordance with Section 1007.6.1, the wheelchair space shall not be located in the required width of the landing and doors shall not swing over the wheelchair spaces.

Exceptions: ~~1.~~ Aisle stairs complying with Section 1025.

~~2. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing.~~

Reason: The intent of this proposal is to maintain clear width for the general means of egress down an exit stairway. If a wheelchair space that is part of an area of refuge is located on the landing it is important for the safety of both the general public and the persons using the wheelchair spaces that this area is outside of the general path of travel. The door should not swing over the wheelchair space so that someone can be in the space and not block the door Wheelchair spaces should be outside of the general traffic flow so that the do not cause a bottle neck and the persons using the wheelchair spaces are not bumped. The other moved language was for consistency with corridors as paths for means of egress (e.g. don't allow the door swing to block the path of travel). This is a requirement, not an exception.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proponent has provided clarifying language for adequate stairway landings when dealing with both doors opening onto landing and when wheelchair spaces are located on the landing.

Assembly Action: **None**

Final Hearing Results

E64-06/07 **AS**

Code Change No: E65-06/07

Original Proposal

Sections: 1009.5.1 (IFC [B] 1009.5.1)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1009.5.1 Stairway walking surface. The walking surface of treads and landings of a stairway shall not be sloped steeper than one unit vertical in 48 units horizontal (2-percent slope) in any direction. Stairway treads and landings shall have a solid surface. Finish floor surfaces shall be securely attached.

Exceptions:

1. Openings in stair walking surfaces shall be a size that does not permit the passage of ½ inch (13 m) diameter sphere. Elongated opening shall be places so that the long dimension is perpendicular to the dominant direction of travel.
2. In Group F, H and S occupancies, other than areas of parking structures accessible to the public, openings in treads and landings shall not be prohibited provided a sphere with a diameter of 1.125 inches (29 mm) cannot pass through the opening.

Reason: The purpose of this proposal is to address what holes in treads should be permitted. This change is intended to coordinate with stairway treads as scoped in ADAAG.

For stairway walking surfaces ICC A117.1 Section 302.3 says ½" openings are permitted on walking surfaces.

There are many locations, especially outside, where allowing perforated treads would help keep snow and water off the tread surfaces.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1009.5.1 Stairway walking surface. The walking surface of treads and landings of a stairway shall not be sloped steeper than one unit vertical in 48 units horizontal (2-percent slope) in any direction. Stairway treads and landings shall have a solid surface. Finish floor surfaces shall be securely attached.

Exceptions:

1. Openings in stair walking surfaces shall be a size that does not permit the passage of 2 inch (13 m) diameter sphere. Elongated opening shall be placed so that the long dimension is perpendicular to the ~~dominant~~ direction of travel.
2. In Group F, H and S occupancies, other than areas of parking structures accessible to the public, openings in treads and landings shall not be prohibited provided a sphere with a diameter of 1.125 inches (29 mm) cannot pass through the opening.

Committee Reason: The allowances for grill or grate type stairways, especially in outdoor areas in climates subject to snow accumulation, is necessary for a safe means of egress. A modification was made to delete the word ›dominant‹ in Exception 1 because the word was redundant.

Assembly Action: **None**

Final Hearing Results

E65-06/07 **AM**

Code Change No: E67-06/07

Original Proposal

Sections: 1009.8 (IFC [B] 1009.8); IRC R311.5.8.1

Proponent: David W. Cooper, Stairway Manufacturers' Association

THIS PROPOSAL IS ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC

Revise as follows:

1009.8 Spiral stairways. Spiral stairways are permitted to be used as a component in the means of egress only within dwelling units or from a space not more than 250 square feet (23 m2) in area and serving not more than five occupants, or from galleries, catwalks and gridirons in accordance with Section 1015.6.

A spiral stairway shall have a 7.5 inch (191 mm) minimum clear tread depth at a point 12 inches (305 mm) from the narrow edge. The risers shall be sufficient to provide a headroom of 78 inches (1981 mm) minimum, but riser height shall not be more than 9.5 inches (241 mm). The minimum stairway clear width at and below the handrail shall be 26 inches (660 mm).

PART II – IRC

Revise as follows:

R311.5.8.1 Spiral stairways. Spiral stairways are permitted, provided the minimum clear width at and below the handrail shall be 26 inches (660 mm) with each tread having a 7 1/2-inches (190 mm) minimum tread depth at 12 inches from the narrower edge. All treads shall be identical, and the rise shall be no more than 9 1/2 inches (241 mm). A minimum headroom of 6 feet 6 inches (1982 mm) shall be provided.

Reason: The purpose of the change is to clarify the code. This proposal will allow consistent interpretation.

(IBC) The intent of the code needs to be clarified. The added text clarifies the width that has long been accepted and enforced. This issue is further complicated by the fact that the IBC Commentary drawing does not show the handrail. Another option would be to insert the text "measured at the tread" as the commentary drawing would imply however this is not felt to be the historical interpretation.

(IRC) In R311.5.1 Width, the section discusses the width of the stair at several points. Although this level of detail is not necessary in the Spiral stairway section the added text clarifies the width that has long been accepted and enforced. Because the exception in R311.5.1 refers to this section it is necessary to insert the additional text. The is further complicated by the fact that the IRC Commentary drawing does not show the handrail. Another option would be to insert the text "measured at the tread" as the commentary would imply however this is not felt to be the historical interpretation.

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

Public Hearing Results

PART I C IBC
Committee Action: **Approved as Submitted**

Committee Reason: The proposed language clarifies where to measure the width of a spiral stairway.

Assembly Action: **None**

PART II C IRC

Committee Action: **Approved as Submitted**

Committee Reason: The new language for spiral stairways helps to add clarity to this code section and it helps to keep the area at and below the guardrail clear.

Assembly Action: **None**

Final Hearing Results

E67-06/07, Part I	**AS**
E67-06/07, Part II	**AS**

Code Change No: E69-06/07

Original Proposal

Sections: 1009.10, 1010.8, 1025.13 (IFC [B] 1009.10, [B] 1010.8, [B] 1025.13)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1009.10 Handrails. Stairways shall have handrails on each side and shall comply with Section 1012. Where glass is used to provide the handrail, the handrail shall also comply with Section 2407.

Exceptions:

1. ~~Aisle stairs complying with Section 1025 provided with a center handrail need not have additional handrails.~~ Handrails for aisle stairs are not required where permitted by Section 1025.13.
2. Stairways within dwelling units, spiral stairways and aisle stairs serving seating only on one side are permitted to have a handrail on one side only.
3. Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.
4. In Group R-3 occupancies, a change in elevation consisting of a single riser at an entrance or egress door does not require handrails.
5. Changes in room elevations of only one riser within dwelling units and sleeping units in Group R-2 and R-3 occupancies do not require handrails.

1010.8 Handrails. Ramps with a rise greater than 6 inches (152 mm) shall have handrails on both sides. Handrails shall comply with Section 1012.

Exception: Handrails for ramped aisles are not required where permitted by Section 1025.13.

1025.13 Handrails. Ramped aisles having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and aisle stairs shall be provided with handrails located either at the side or within the aisle width.

Exceptions:

1. Handrails are not required for ramped aisles having a gradient no greater than one unit vertical in eight units horizontal (12.5-percent slope) and seating on both sides.
2. Handrails are not required if, at the side of the aisle, there is a guard that complies with the graspability requirements of handrails.
3. Handrail extensions are not required at the top and bottom of aisle stair and aisle ramp runs to permit crossovers within the aisles.

Reason: The intent is clarification of the handrail provisions for aisle steps and aisle ramps in assembly seating and coordination with ICC A117.1 and ADAAG Section 505.

Section 1009.10, Exception 1: The handrail exception for aisle steps should provided direct reference to handrail provisions.

Section 1010.8: Coordination with handrails provisions for ramps is required.

Section 1025.13: New language – coordination with A117.1 and ADA 505.2 and 505.10. The handrail extensions could become protruding objects at these locations.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal clarifies handrail requirements in aisles serving seating areas. Perhaps a public comment could be brought forward to clean up Anot required where permitted@ and put the exceptions in better code language.

Assembly Action: **None**

Final Hearing Results

E69-06/07 **AS**

Code Change No: E70-06/07

Original Proposal

Sections: 1009.10 (IFC [B] 1009.10)

Proponent: Tom Rubotton, City of Lakewood, Colorado, representing the Colorado Chapter of ICC

Revise as follows:

1009.10 Handrails. Stairways shall have handrails on each side and shall comply with Section 1012. Where glass is used to provide the handrail, the handrail shall also comply with Section 2407.

Exceptions:

1. Aisle stairs complying with Section 1025 provided with a center handrail need not have additional handrails.
2. Stairways within dwelling units, spiral stairways and aisle stairs serving seating only on one side are permitted to have a handrail on one side only.
3. Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.
4. In Group R-3 occupancies, a change in elevation consisting of a single riser at an entrance or egress door does not require handrails.
5. Changes in room elevations of ~~only one riser~~ 3 or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require handrails.

Reason: This code change will make these requirements for when handrails are required on stairs within dwelling units and sleeping units in R-2 and R-3 occupancies the same as the requirements when building under the IRC. These occupancies are considered non transient and therefore the occupants are living there for longer periods of time and are much more familiar with their surroundings. It does not make sense to require handrails when there are 2 or more risers in a condo or house built under the IBC and to only require handrails when 4 or more risers when single family house or townhouse is built under the IRC. The same types of people are living in these structures and they are often built on same street by the same builder.

It should be noted that the last sentence of Section R310 for R-3 states “Adult and Child care facilities that are within a single-family home are permitted to comply with the International Residential Code” which would allow the conditions this change proposes.

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

Analysis: Section 308.5 would limit adult and child care facilities in Group R-3 to five or fewer persons.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal would coordinate the IBC and IRC requirements for stairways in Group R-2 and R-3 with three of fewer risers. The hazard does not increase for this situation between single family homes and within a townhouse or apartment.

Assembly Action: **None**

Final Hearing Results

E70-06/07 **AS**

Code Change No: E74-06/07

Original Proposal

Sections: 1010.5.1 (IFC [B] 1010.5.1)

Proponent: William W. Stewart, Chesterfield, MO, representing himself

Revise as follows:

1010.5.1 Width. The minimum width of a means of egress ramp shall not be less than that required for corridors by Section 1017.2. The clear width of a ramp ~~and the clear width~~ between handrails~~, if provided,~~ or other permissible projections shall be 36 inches (914 mm) minimum.

Reason: Ramps require handrails on both sides per 1010.8 thus the deleted text is redundant. It is also misleading because it implies ramps do not need handrails on both sides. If the slope is less than 1:20 then the walking surface is not a ramp and is not regulated by this section. Other permissible projections are introduced because someone might think that ramp curbs and similar components should be included in the width if a ramp.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1010.5.1Width. The minimum width of a means of egress ramp shall not be less than that required for corridors by Section 1017.2. The clear width of a ramp between handrails, if provided, or other permissible projections shall be 36 inches (914 mm) minimum.

Committee Reason: The proposal will clarify that the clear width for an ramp is all the way down from the handrails to the ground. The term Aif provided@ was added back in as a modification to allow for ramps with a rise of less than 6 inches not having handrails.

Assembly Action: **None**

Final Hearing Results

E74-06/07 **AM**

Code Change No: E75-06/07

Original Proposal

Sections: 1010.6.3, 1010.6.4 (IFC [B] 1010.6.3, [B] 1010.6.4)

Proponent: John Rooney, United Spinal Association

Revise as follows:

1010.6.3 Length. The landing length shall be 60 inches (1525 mm) minimum.

Exceptions:

1. ~~Landings~~ In ~~nonaccessible~~ Group R-2 and R-3 individual dwelling and sleeping units that are not required to be Accessible, Type A or Type B units in accordance with Section 1107, landings are permitted to be 36 inches (914 mm) minimum.
2. Where the ramp is not a part of an accessible route, the length of the landing shall not be required to be more than 48 inches (1220 mm) in the direction of travel.

1010.6.4 Change in direction. Where changes in direction of travel occur at landings provided between ramp runs, the landing shall be 60 inches by 60 inches (1524 mm by 1524 mm) minimum.

Exception: ~~Landings~~ In ~~nonaccessible~~ Group R-2 and R-3 individual dwelling or sleeping units that are not required to be Accessible, Type A or Type B units in accordance with Section 1107, landings are permitted to be 36 inches by 36 inches (914 mm by 914 mm) minimum.

Reason: The purpose of this change is for code clarification. This change specifies where the exceptions are not permitted (i.e. within Accessible, Type A or Type B dwelling or sleeping units). The three levels of accessibility for units can lead to discussions about what is accessible. This language is more specific.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language for ›wet‹ conditions is too vague and open to opinion. A question would be if just the possibility of tracking water into an area would constitute a wet condition.

Assembly Action: **None**

Final Hearing Results

E75-06/07 **AS**

Code Change No: E77-06/07

Original Proposal

Sections: 1010.9 (IFC [B] 1010.9)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1010.9 Edge protection. Edge protection complying with Sections 1010.9.1 or 1010.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

Exceptions:

1. Edge protection is not required on ramps that are not required to have handrails, provided they have flared sides that comply with the ICC A117.1 curb ramp provisions.
2. Edge protection is not required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection is not required on the sides of ramp landings having a vertical dropoff of not more than 0.5 inch (12.7 mm) within 10 inches (254 mm) horizontally of the required landing area.
4. In assembly spaces with fixed seating, edge protection is not required on the sides of ramps where the ramps provide access to the adjacent seating and aisle accessways.

Reason: The current requirements for ramp edge protection are applicable to all ramps, including those in assembly seating. While 1010.9.2 could cover a ramp that went up with the sloped seating, the exception is attached to the location of the handrail. Ramped aisles may not have handrails, or may have a central handrail.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed text clarifies the code and reduces a potential tripping hazard along access to the seats.

Assembly Action: **None**

Final Hearing Results

E77-06/07 **AS**

Code Change No: E78-06/07

Original Proposal

Sections: 1010.9.1 (IFC [B] 1010.9.1)

Proponent: John Rooney, United Spinal Association

Revise as follows:

1010.9.1 Curb~~, rail, wall~~ or barrier. A curb~~, rail, wall~~ or barrier shall be provided to serve as edge protection. A curb must be a minimum of 2 inches (51mm) in height. Barriers must be constructed so that the barrier prevents the passage of a 4-inch-diameter (102 mm) sphere, where any portion of the sphere is within 4 inches (102 mm) of the floor or ground surface.

Reason: The proposed change will harmonize the code language with Section 405.9.2 of ICC/ANSI A117.1 and Section 405.9.2 of the ADA/ABA Guidelines. The laundry list is not needed since a "rail" or "wall" are types of barriers.

The proposal for a 2" dimension for a curb is consistent with current ADAAG. The new ADA/ABA Guidelines and ICC A117.1 do not indicate the height requirements if a curb option is chosen.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposed 2 inch minimum high curb would conflict with the requirements in ICC A117.1 and the new ADA/ABA Accessibility Guidelines which require a 4 inch minimum high curb.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment 2:

John Rooney, United Spinal Association, requests Approval as Modified by this public comment.

Modify proposal as follows:

1010.9.1 Curb, rail, wall or barrier. A curb, rail, wall or barrier shall be provided to serve as edge protection. A curb must be a minimum of ~~2 inches (51mm)~~ 4 inches (102 mm) in height. Barriers must be constructed so that the barrier prevents the passage of a 4-inch-diameter (102 mm) sphere, where any portion of the sphere is within 4 inches (102 mm) of the floor or ground surface.

Commenter's Reason: The proposed deletion of "rail, wall" has been withdrawn from this proposal. The important issue is to identify the height of a curb when that option is chosen. The current language is not clear. Two proposals are offered to allow the members to decide on which curb height should be required – 2" or 4". Testimony during the hearings indicated that the language in the new ADA/ABA Guideline (which do not give a specific requirement for curbs) could be interpreted as requiring a 4" high curb.

Final Hearing Results

E78-06/07 **AMPC2**

Code Change No: E82-06/07

Original Proposal

Sections: 1011.4, Chapter 35 (IFC [B] 1011.4, Chapter 45)

Proponent: Manny Muniz, Manny Muniz Associates, LLC, representing himself

1. Revise as follows:

1011.4 Internally illuminated exit signs. Internally illuminated exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and Section 2702. Exit signs shall be illuminated at all times.

2. Add new standard to Chapter 35 as follows:

Underwriters Laboratories (UL)
UL 924-06, Standard for Safety Emergency Lighting and Power Equipment

Reason: The purpose of the change is to clarify what standard internally illuminated exit signs shall be listed and labeled to. A requirement for a safety device to be listed must identify the standard that the device must be listed to. The code cannot require a device to be listed but then stay silent as to what standard it should be listed in accordance with. This section of the code would most likely be looked at by the courts as ambiguous, unclear and perhaps even unenforceable.

The Life Safety Code (NFPA 101), which is used in every state in the US, contains a similar requirement in Section 7.10.7.1 which does identify UL 924, Standard for Safety Emergency Lighting and Power Equipment, as the standard that internally illuminated exit signs must be listed to.

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

Analysis: The standard UL 924-06 has been reviewed for compliance with ICC Council Policy #28, Section 3.6. In the opinion of ICC Staff, the standard complies with ICC Criteria for referenced standards.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: UL 924 is an appropriate standard for illumination of exit signage. The standard has been revised to meet ICC criteria.

Assembly Action: **None**

Final Hearing Results

E82-06/07 **AS**

Code Change No: E83-06/07

Original Proposal

Sections: 1011.4, Chapter 35 (IFC [B] 1011.4, Chapter 45)

Proponent: Bob Eugene, Underwriters Laboratories, Inc.

1. Revise as follows:

1011.4 Internally illuminated exit signs. Electrically powered ~~Internally illuminated~~, self-luminous and photo-luminescent exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and Section 2702. Exit signs shall be illuminated at all times.

2. Add standard to Chapter 35 as follows:

UL
UL 924-06 Emergency Lighting and Power Equipment

Reason: The purpose is broadening the scope of this section to include self-luminous and photoluminescent exit signs and to add the specific standard for listing of these illuminated exit signs.

The reason for the change is to provide flexibility and to add clarity to the user. Internally powered covers all exit signs that generate their own luminosity. Using the phrase "electrically-powered" will capture LED, incandescent, fluorescent, and electroluminescent. In combination with self-luminous and photoluminescent, that covers the full range of product types currently in the market.

UL 924 applies to emergency lighting and power equipment for use in unclassified locations and intended for connection to branch circuits of 600 volts or less. Such equipment is intended to automatically supply illumination or power or both to critical areas and equipment in the event of failure of the normal supply, in accordance with Article 700 or 701 of the National Electrical Code, NFPA 70, the Life Safety Code, NFPA 101, and the International Building Code, IBC. EXIT SIGN is general term used to refer to an Exit Light, Exit Fixture, and Self-Luminous or Photoluminescent Exit Sign.

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

Analysis: A concern would be if the reference to Section 2702 for self-luminous and photoluminescent signage could be interpreted as a power requirement for signs that use no power.

The standard UL 924-06 has been reviewed for compliance with ICC Council Policy #28, Section 3.6. In the opinion of ICC Staff, the standard complies with ICC Criteria for referenced standards.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Indicating the three types of exit signage permitted is a good clarification for the code, UL 924 is an appropriate standard for illumination of exit signage. The standard has been revised to meet ICC criteria.

Assembly Action: **None**

Final Hearing Results

E83-06/07 **AS**

Code Change No: E84-06/07

Original Proposal

Sections: 403.15 (New); 1011.6, Chapter 35 (IFC 1011.6, Chapter 45)

Proponent: William M. Connolly, State of New Jersey, Department of Community Affairs, Division of Codes and Standards, representing International Code Council Ad Hoc Committee on Terrorism Resistant Buildings

1. Add new text as follows:

403.15 Exit path markings. Exit path markings shall be provided in accordance with Section 1011.6.

1011.6 Photoluminescent exit path markings: Photoluminescent exit path markings (outlining stripes) complying with UL 1994 shall be provided in buildings of Group B, E, M, and R-1 with occupied floors greater than 75 feet above the lowest level of fire department vehicle access. Exit stairways where photoluminescent exit path markings are required shall be continuously illuminated and lighting shall not be controlled by motion sensors or timers.

1011.6.1 Markings (outlining stripes) within vertical exits: Markings within vertical exits shall comply with Section 1011.6.1.1 through Section 1011.6.1.4.

1011.6.1.1 Steps: Outlining stripes shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of ½ inch (13 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than ½ inch (13 mm) down the vertical face of the step.

1011.6.1.2 Landings: The leading edge of landings in exits shall be marked with outlining stripes consistent with the dimensional requirements for steps and shall be the same length as and consistent with the stripes on the steps or shall extend the full length of the leading edge of the landing.

1011.6.1.3 Handrails: All handrails and handrail extensions shall be marked with a stripe having a minimum width of 1 inch (25 mm). The stripe shall be placed on the top surface of the handrail for the entire length of the handrail, including extensions and newel post caps. Where handrails or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

1011.6.1.4 Floor perimeter demarcation stripes: Stair landings and other parts of the egress path, with the exception of the sides of steps, shall be provided with demarcation lines on the floor or on the walls or a combination of both. The stripes shall be 1 (25 mm) to 2 inches (51 mm) wide with interruptions not exceeding 4 inches (102 mm).

1011.6.1.4.1 Floor mounted demarcation lines: Perimeter demarcation lines shall be placed within 4 inches of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors.

1011.6.1.4.2 Wall mounted demarcation lines: Perimeter demarcation lines shall be placed on the bottom edge of the wall no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path. Demarcation lines on walls shall continue across the face of all doors or may transition to the floor and extend across the floor in front of such doors.

2. Add standard to Chapter 35 (IFC Chapter 45) as follows:

UL

UL 1994-04 Luminous Egress Path Marking Systems, with revisions through February, 2005

Reason: This code change proposal is one of fourteen proposals being submitted by the International Code Council Ad Hoc Committee on terrorism Resistant Buildings.

The purpose of this code change is to add new requirements for photoluminescent exit path markings into the code.

The proposed new section on exit path markings will require photoluminescent exit path markings be provided in vertical exit enclosures. The Code currently has no requirements for the installation of these markings. This proposal will facilitate rapid egress and assist in full building evacuation and is drawn from Recommendations 17 and 18 of the National Institute of Standards and Technology's (NIST) report on the World Trade Center tragedy.

Up to this point, code requirements for high rise buildings were written under the assumption that the building would be evacuated floor by floor. In most instances, in a building with a full suppression system, only the floor where the fire is located and the floors immediately above and below would be evacuated. Acts of terrorism and accidental incidents like power failures have made it necessary to consider design for full building evacuation that is as rapid as possible. This may be made necessary in response to an event within the building or an event outside the building. The proposed code change to require exit path markings is intended to facilitate the most rapid possible full building evacuation.

In the City of New York, after the first bombing of the WTC, requirements were instituted to require exit path markings in vertical exit enclosures. This proposal is taken directly from those requirements.

New Section 1011.6 establishes the base requirement for the markings and requires compliance with UL 1994, a standard developed using an approved consensus process. As per this new section, the markings are required only in vertical exit enclosures. This is unlike previously unsuccessful proposals that attempted to establish requirements for low-level exit signage and exit access markings. The remainder of the new text establishes the minimum requirements for the markings.

Bibliography:

1. Reference Standard 6-1, Photoluminescent exit path markings as required by Local Law 26 of 2004, New York City Building Code, § 27-383(b)
2. National Institute of Standards and Technology. Final Report of the National Construction Safety Team on the Collapses of the World Trade Center Towers. United States Government Printing Office: Washington, D.C. September 2005.
3. UL 1994

Cost Impact: This proposal establishes a requirement for markings in vertical exit enclosures, which may increase costs, but only very modestly. The proponents believe that the decrease in egress and full building evacuation time outweighs the moderate cost of the markings.

Analysis: The standard UL 1994-04 has been reviewed for compliance with ICC Council Policy #28, Section 3.6. In the opinion of ICC Staff, the standard complies with ICC Criteria for referenced standards.

The action on the proposed change to Section 403.15 is dependent on the decision of the Means of Egress Committee to the remainder of the proposal, therefore, for consistency, the MEO Committee will make the determination for the entire proposal.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee agreed the intent for egress guidance had merit, but believed that there were other products that could address the exiting issues raised. Several proponents had similar proposals. The committee asked the proponents to work together to resolve issues brought up during the discussions. The proposal should be technology neutral - not just for photoluminescent materials. The markings should delineate the exit path in the enclosed exit stairway. An additional concerns about E84-06/07 was that there was no explanation of the limitation to Groups B, E, M and R-1. Of special concern was no inclusion of Groups A and I. This proposal also extended the requirements outside the exit stairway by the wording in proposed Section 1011.6.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment 2:

James P. Colgate, RA, Esq., Executive Architect, New York City Department of Buildings, requests Approval as Modified by this public comment.

Modify proposal as follows:

403.15 Exit path markings. Exit path markings shall be provided in accordance with Section 1027 ~~1011.6~~.

1027 EXIT PATH MARKINGS

1027.1 General. ~~1011.6 Photoluminescent exit path markings:~~ ~~Photoluminescent~~ Approved luminous ~~exit path~~ markings delineating the exit path ~~(outlining stripes) complying with UL 1994~~ shall be provided in exit enclosures, including vertical exit enclosures and exit passageways, of buildings of Group A, B, E, I, M, and R-1 ~~with~~ having occupied floors ~~greater~~ located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access and shall comply with Sections 1027.1.1 through 1027.1.7. ~~Exit stairways where photoluminescent exit path markings are required shall be continuously illuminated and lighting shall not be controlled by motion sensors or timers.~~

Exception: Exit path markings shall not be required in lobbies or areas of open parking garages, where such lobby or area is located on the level of exit discharge and complies with the exception to Section 1023.1.

~~**1011.6.1 Markings (outlining stripes) within vertical exits:** Markings within vertical exits shall comply with Section 1011.6.1.1 through Section 1011.6.1.4.~~

1027.1.1 ~~1011.6.1.1~~ Steps.~~:~~ ~~Outlining~~ A stripe~~s~~ shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of ½ inch (13 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than ½ inch (13 mm) down the vertical face of the step.

1027.1.2 ~~1011.6.1.2~~ Landings: The leading edge of landings ~~in exits~~ shall be marked with ~~outlining~~ a stripe~~s~~ consistent with the dimensional requirements for steps ~~and shall be the same length as and consistent with the stripes on the steps or shall extend the full length of the leading edge of the landing~~.

1027.1.3 ~~1011.6.1.3~~ Handrails: All handrails and handrail extensions shall be marked with a stripe having a minimum width of 1 inch (25 mm). The stripe shall be placed on the top surface of the handrail for the entire length of the handrail, including extensions and newel post caps. Where handrails or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

1027.1.4 ~~1011.6.1.4 Floor p~~Perimeter demarcation lines ~~stripes~~: Stair landings and other ~~parts of the~~ floor areas within exit enclosures ~~egress path~~, with the exception of the sides of steps, shall be provided with demarcation lines on the floor or on the walls or a combination of both. The stripes shall be 1 (25 mm) to 2 inches (51 mm) wide with interruptions not exceeding 4 inches (102 mm).

1027.1.4.1 ~~1011.6.1.4.1~~ Floor mounted demarcation lines: Perimeter demarcation lines shall be placed within 4 inches of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1027.1.4.2 ~~1011.6.1.4.2~~ Wall mounted demarcation lines: Perimeter demarcation lines shall be placed on the wall with the bottom edge of the stripe ~~wall~~ no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path. Where the wall line is broken by a door, ~~D~~demarcation lines on walls shall continue across the face of the ~~all~~ door~~s~~ or ~~may~~ transition to the floor and extend across the floor in front of such door~~s~~.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1027.1.4.3 Transition. Where a wall mounted demarcation line transitions to a floor mounted demarcation line, or vice-versa, the wall mounted demarcation line shall drop vertically to the floor to meet a complimentary extension of the floor mounted demarcation line, thus forming a continuous marking.

1027.1.5 Uniformity. Placement and dimensions of markings shall be consistent and uniform throughout the same exit enclosure.

1027.1.6 Materials. Luminescent exit path markings shall be permitted to be made of any material, including paint, provided that an electrical charge is not required to maintain the required luminance. Such materials shall include, but not limited to, self-luminous materials and photoluminescent materials. Materials shall comply with either:

1. UL 1994, or
2. ASTM E 2072, except that the charging source shall be 1 fc (10 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 5 milicandelas per square meter after 90 minutes. **1027.1.7 Illumination.** Exit enclosures where photoluminescent exit path markings are installed shall be provided with the minimum means of egress illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.

1027.1.7 Illumination. Exit enclosures where photoluminescent exit path markings are installed shall be provided with the minimum means of egress illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.

Chapter 35 (IFC Chapter 45):

UL
UL 1994-04 Luminous Egress Path Marking Systems, with revisions through February, 2005

ASTM
ASTM E 2072-04 Standard Specification for Photoluminescent (Phosphorescent) Safety Markings

Commenter's Reason: The Means of Egress Committee agreed that the intent of the provision has merit. However, because of the great number of similar proposals, the committee asked that the various proponents work together to resolve the issues. This comment amends the text from proposal E84 and draws on the standards of proposal E142. Among other recommendations, the Means of Egress Committee requested that the revised proposal be "technology neutral."

"TECHNOLOGY NEUTRAL": A fundamental characteristic of good governmental regulation is that, to the extent possible, it does not specify particular technologies, so that competition and innovation are fostered. However, the issue of technological neutrality must not be confused with the sensible restriction of materials proven to be inappropriate to a particular fire and life safety requirement. Electrically-based exit path systems are good systems that can provide much brighter luminance than photoluminescent materials, and are very useful in the right applications. However, we need to ask why we are requiring exit path markings in high-rise stairways, and whether electrically-based systems are appropriate for this specific code requirement.

For high-rise buildings, the IBC already requires electrical back-up to both exit lighting and those smokeproof enclosures that utilize mechanical means. So in an emergency condition where the backup power operates as designed, the stairs will remain lighted and smokeproof, rendering the exit path markings of limited utility. The real import of exit path markings is to provide a safe system of way-guidance in the dark, i.e. when even the backup power fails.

The lessons learned from the 1993 terrorist bombing of the World Trade Center resulted in many upgrades to the complex, including the installation of luminous exit path markings in the exits. The markings installed were photoluminescent, which meant that once the ambient lighting was removed, they will remain luminous without any additional electrical charge.

On 9/11, these exit path markings were put to use, and were later credited by NIST as a feature that aided the evacuation of the towers. The water in the stairs from the sprinklers did not affect the photoluminescent makings because there was no electrical wiring or circuitry to get wet or short-circuit. The explosion and vibration did not affect the photoluminescent markings because there were no wires or circuits to sever. The fire and heat on the upper floors did not affect the photoluminescent markings on the lower floors since there were no wires or circuits to melt or burn. On 9/11, the exit path markings worked, unlike other, electrically-based features that failed that day, because the photoluminescent markings did not rely on electricity, alarms, wires, or circuitry.

The extensive experience that the New York City Department of Buildings has had with egress failures in high rise buildings underscores this point. We are responsible for approximately 8,000 high rise buildings. When the August 2003 Northeast power grid blackout hit New Your City, many of our high-rise buildings' emergency exit lighting systems failed, including in the municipal office building in which I work. Most of the failures stemmed from faulty maintenance of batteries or generators, and in some cases from improper installations. But the fact is that many people, including me and my staff, were left wholly in the dark.

New York City took the lead in this area and, pursuant to its in-depth Report of the World Trade Center Building Code Task Force, enacted a local law in 2004 requiring exit path markings that do not rely on electricity, despite objections from the electroluminescent industry. The local law requires photoluminescent exit path markings to be installed retroactively in all of our approximately 1,700 existing high-rise office buildings.

To argue that electrically-based path making must be permitted in this code change, in the name of technological neutrality, is thus incorrect. Rather, what we must do as code officials charged with protecting the public is to distinguish between "technology neutral" and "technology appropriate." New York City's assessment is that electrically-based exit path systems in high rise buildings that already have backup power and smokeproof enclosures is not the appropriate technology. What is appropriate is a system of luminous markings that do not rely on an electrical charge, which is what this comment, if approved, would require.

OTHER COMMENTS:

1. **Section 403.13.** The only modification here is to point the user to the new section 1027.
2. **Section 1011.** The original proposal would have appended the requirements for exit path markings to Section 1011, which currently deals only with exit signs – i.e. the signs placed above doors and near the ceiling directing people to exits. Rather than complicate Section 1011 with an unrelated new concept of path markings to be located only within enclosed exits, a new Section 1027 is added to include all the low-location exit path markings. This now neatly divides the two topics, similar to New York City's local modifications to the IBC. Therefore, the title of Section 1011 reverts to the current IBC text; all exit path markings are relocated to Section 1027.
3. **Section 1027.1 (formerly 1011.6).** The term "outlining stripes" is deleted because of possible confusion with the subsequent term "demarcation lines"; instead, the phrase "delineating the exit path" is added, as requested by the Means of Egress Committee to clarify what the markings are intended to do. The text of the original proposal would have required exit path markings for the entire "exit path" or "egress path", which could include all portions of the means of egress including exit access – and would therefore have been too broad a requirement. The Means of Egress Committee recommended modifying the proposal in application only to the "enclosed exit stairway". But only the enclosed exit stairway would have been too narrow, since it would not have included enclosed transfer exit passageways – the marking of which was deemed important by the WTC Building Code Task Force. Therefore, the phrase "exit enclosures, including vertical exit enclosures and exit passageways" is added to specify where in the high rise building exit path markings are required, and make clear that exit access corridors are not included. For organizational improvement, the requirements for materials (reference standards) and lighting are relocated to Sections 1027.1.6 and 1027.1.7. Group A and I occupancies are added in response to concerns expressed by the Means of Egress Committee; the nature of these occupancies, and the occupants' lack of familiarity with the exits, justifies the safeguards as a minimum requirement. In addition, an exception is added to exempt lobbies at the level of exit discharge.
4. **Former section 1011.6.1.** Due to the simplified organization, the scoping provisions formerly contained in section 1011.6.1 are now incorporated in to Section 1027.1. Therefore, the former section 1011.6.1 is deleted.

5. **Section 1027.1.1 (formerly 1011.6.1.1).** The term "outlining stripes" is deleted because of possible confusion with the subsequent term "demarcation lines". The minimum 1" width is maintained, as it is crucial to achieve minimum visibility for the visually impaired, and follows established 1" minimum standards (e.g., ASTM E 2072-04 and NYC RS 6-1). The 2" maximum width is crucial to prevent the visual illusion that occurs in the dark when overly-thick markings on the various steps merge into one glowing object; the 2" maximum follows an established requirement (e.g., NYC RS 6-1). The maximum ½" overlap is important to prevent confusion in the dark by making clear to the occupant what represents the top plane of the steps, following an established minimum requirement (e.g., NYCRS 6-1).
6. **Section 1027.1.2 (formerly 1011.6.1.2).** The term "outlining stripes" is deleted because of possible confusion with the subsequent term "demarcation lines". The word "exit" is removed because this idea is already provided for in the scoping provisions for Section 1027.1. The last phrase is removed as it is redundant.
7. **Section 1027.1.3 (formerly 1011.6.1.3).** The minimum 1" width is maintained, as it is crucial to achieve minimum visibility for the visually impaired, and follows established 1" minimum standards (e.g., ASTM E 2072-04 and NYC RS 6-1).
8. **Section 1027.1.4 (formerly 1011.6.1.4).** As requested by the Means of Egress Committee, the proposal is modified to be specific that it only applies to the exit enclosures. The minimum 1" width is maintained, as it is crucial to achieve minimum visibility for the visually impaired, and follows established 1" minimum standards (e.g., ASTM E 2072-04 and NYC RS 6-1).
9. **Section 1027.1.4.1 (formerly 1011.6.1.4.1).** An exception is added to clarify that markings shall not extend in front of discharge doors.
10. **Section 1027.1.4.2 (formerly 1011.6.1.4.2).** A clarification is added indicating from where the 4" measurement is taken. This will allow the stripe to be placed above a standard 3 ½ -inch base molding, while still keeping the stripe low enough to signify to the occupant that it represents the intersecting planes of the wall and the floor. In tests conducted by NYC prior to the establishment of its RS 6-1, luminescent markings that were placed too high on the wall caused occupants to be unable to discern in the dark where the floor was. Language is added to clarify the two options for marking the door – either across the door or on the floor in front of it. An exception is added to clarify that markings shall not extend in front of discharge doors.
11. **Section 1027.1.4.3.** Clarifies ambiguous language in the former Section 1016.6.1.4. The new language makes clear that the owner has the option of wall-mounted or floor-mounted stripes, and that the stripes may transition from one to the other.
12. **Section 1027.1.5.** Clarifies that the placement and dimensions must be uniform.
13. **Section 1027.1.6.** Relocates the technical requirements for the materials to this section for organizational improvement. ASTM E 2072 is added as an option, in addition to UL 1994. (Note that ASTM E 2072 had been specified in Proposal E 142 by David Frable, US GSA, and was found to comply with ICC Council Policy #28). The original E84 proposal provided UL 1994 as the only standard. However, UL 1994 does not recognize the use of photoluminescent paints, which the New York City Department of Buildings has found an important type of product to achieve safe results and avoid tripping hazards, particularly in retrofits where the substrate is more likely to be uneven. ASTM E 2072 permits photoluminescent paints, and is therefore added for technological neutrality, in accordance with the comments of the Means of Egress Committee. The addition of ASTM E2073 as an option pulls together the proposals E84 and E142. The charging source for ASTM E 2072 has been changed to 1 footcandle with 5 mcd/m^2 to be consistent with the means of egress illumination requirements of IBC Section 1006.2.
14. **Section 1027.1.7.** The illumination provisions for photoluminescent products have been relocated from 1011.6 to this new subsection to provide additional clarity.

A note about New York City's Reference Standard RS 6-1. The International Code Council's Ad Hoc Committee on Terrorism-Resistant Buildings' proposal for E84 was based in large part on NYC's RS 6-1, and there are therefore many references to NYC RS 6-1 in this comment. The NYC RS 6-1 was developed by the New York City Department of Buildings' architects and engineers after over one year of research of all available relevant standards, including but not limited to those published by the ASTM, UL, ISO, IMO, APTA (American Public Transportation Association). In addition, the department performed outreach and consultation with the various industries, including those from overseas. The Buildings Department also inspected mock-up/test installations of luminescent markings in various permutations, with different placement and dimensional configurations, to ensure that the resulting standards were adequate and appropriate. The result of all this research was a draft standard that was published for public comment – the public hearing on the proposal drew over 80 attendees representing a wide range of egress and safety experts. As a result of the public comment, the draft standard was refined and published in final form on May 31, 2005. Since then over 1000 installations have been completed in high rise buildings pursuant to this standard. It is on the basis of this experience that this comment is being made.

Bibliography:

1. ASTM E 2072-04, Standard Specification for Photoluminescent (Phosphorescent) Safety Markings
2. National Institute of Standards and Technology. Final Report of the National Construction Safety Team on the Collapse of the World Trade Center Towers. United States Printing Office: Washington, DC. September 2005.
3. City of New York, Department of Buildings. Building Code Reference Standard RS 6-1 and 6-1A (available at http://www.nyc.gov/html/dob/downloads/pdf/rs_6-1.pdf). Promulgated May 31, 2005.
4. City of New York, Department of Buildings. Word Trade Center Building Code Task Force: Findings and Recommendations (available at http://home2.nyc.gov/html/dob/downloads/pdf/wtcbctf.pdf). February, 2003.
5. City of New York. Local Law 26 of 2004, Section 15, modifying Building Code Section 27-283 (available at http://www.nyc.gov/html/dob/downloads/bldgs_code/locallaw26of04.pdf). Enacted May 24, 2004.
6. UL 1994-04, Luminous Egress Path Marking Systems, with revisions through February, 2005.

Cost impact: The statements made by the original proponent of E84 about the cost impacts are not affected by the amendments proposed herein.

Final Hearing Results

E84-06/07 AMPC2

Code Change No: E86-06/07

Original Proposal

Sections: 1012.2 (IFC [B] 1012.2)

Proponent: Robert Bagnetto, Lapeyre Stair, Inc./Laitram Corp.

Revise as follows:

1012.2 Height. Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). Handrail height of alternating tread devices, measured above tread nosings shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

Reason: The purpose of this proposed change is to replace the current handrail height requirements for alternating tread devices, which are inappropriately based on the handrail height requirements for traditional type stairs, with new handrail height requirements more appropriate to alternating tread devices.

This proposal is superior to the current provisions of the code in that it rectifies shortcomings in the existing code for alternating tread device handrail height. The current required handrail height of alternating tread devices of 34 inches to 38 inches is based on the required handrail height of traditional type stairs which have stair angles much lower than alternating tread devices. This alternating tread device handrail height appears to have been chosen arbitrarily, assuming that the handrail height best suited for traditional type stairs would also be best for alternating tread devices. Although they have treads as a traditional stair does, alternating tread devices have considerable different characteristics (the most important being a much steeper angle) from a traditional stair and thus the requirements for the features for an alternating tread device often must differ from a traditional stair. The alternating tread device features result in differences of handrail use such as, different arm posture, the hand gripping the handrail near a higher part of the body and the use of the handrails under the arms for stabilization. Therefore, a lower handrail height of 30 inches to 34 inches is more appropriate for alternating tread devices.

Alternating tread devices have been used for approximately 25 years with handrail heights (measured vertically from the tread nosings to the top of the handrail) of approximately 32 inches. Lapeyre Stair is not aware of any cases where this handrail height has been a problem for users of alternating tread devices. Prior to release of the alternating tread device, Lapeyre Stair performed informal testing to verify that this is the most appropriate handrail height. Additionally, a scientific stud titled “Performance, perceived safety and comfort of the alternating tread stair” was performed that demonstrated the satisfactory use of alternating tread devices. The 34 inch to 38 inch handrail height requirement for alternating tread devices appears to have first been introduced in sections 1003.3.3.10.1 and 1003.3.3.11.1 of IBC-2000 and then carried forward to sections 1009.10.1 and 1009.11.1 of IBC-2003. The precursor codes to IBC appear either not to discuss alternating tread device handrail height or to allow whatever handrail height provides safe use of the device. (Ref: BOCA-1999 Sections 1014.6.6.1 and 1022.2.5, SBC-1999 Section 1007.8.4 and 1007.8.5; UBC Section 1003.3.3.1). Furthermore, Lapeyre Stair is not aware of any documented scientific testing to verify that the current handrail heights in IBC for alternating tread devices are the most appropriate. Finally, an IBC code interpretation letter dated July 23, 2004 to Fanning/Howley Associates Inc, indicates that the current handrail height in the IBC may not be appropriate for alternating tread devices, and a code official could approve an alternating tread device with a handrail height inconsistent with IBC, Section 1012.2.

The lower handrail height for alternating tread devices does not substantially alter the design of alternating tread devices, and actually results in less occupied space which could minimally lower costs.

Bibliography:

The BOCA National Building Code/1999 Sections 1014.6.6.1 & 1022.2.5
Standard Building Code 1999 Edition Sections 1007.8.4 & 1007.8.5
1997 Uniform Building Code Section 1003.3.3.1 (exception)
Performance, perceived safety and comfort of the alternating tread stair by Jorna, Mohageg & Synder Virginia Polytechnic Institute and State University, published Applied Ergonomics 1989.20.1,26-32

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: It is reasonable on alternating tread devices to allow for a lower handrail for safety reasons.

Assembly Action: **None**

Final Hearing Results

E86-06/07 **AS**

Code Change No: E88-06/07

Original Proposal

Sections: 1012.3 (IFC [B] 1012.3)

Proponent: David W. Cooper, Stairway Manufacturers' Association

Revise as follows:

1012.3 Handrail graspability. All required handrails shall meet Type I criteria as follows or shall provide equivalent graspability.

Type I. Handrails with a circular cross-section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) ~~or shall provide equivalent graspability~~. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (160 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

Exception: In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; handrails shall be Type I, Type II as follows or shall provide equivalent graspability.

Type II. Handrails with a perimeter greater than 6.25 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of .75 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least .3125 inch (8 mm) within .875 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least .375 inch (10mm)to a level that is not less than 1.75 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1.25 inches (32 mm) to a maximum of 2.75 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

Reason: The purpose of the change is to add new requirements to the code. This proposal is offered only as an alternative to our other change to this section, which would allow a more comprehensive solution.

Other types of rail have been proven to be equivalent to, or better than those currently allowed. Although this proposal will allow the use of additional types of rails now restricted from the code. The Type II shape allows for the development of new ergonomic profiles that could exceed the properties of the limited handrail options now allowed in the IBC. Such options would not only permit the design of profiles for those with impairments, unable to close their hand to grasp small round objects, but also would allow greater flexibility to the designer that must respond to the aesthetic preferences of the consumer, thereby encouraging long-term and committed compliance with code regulations. Because this proposals scope is only for residential use these advantages would be severely compromised and only available to persons in the home environment.

The handrail shape description that is proposed for Type II handrails has been developed by independent researchers retained by the SMA to investigate graspability of handrails. Acting without specific mandate from SMA, these researchers developed and implemented tests, experiments, and analyses that revealed stairway fall kinematics, the forces that stairway users exert on handrails during falls, and the forces that persons in the general population can exert on handrails of various shapes.

Specifically, through a collaborative effort with researchers at the University of Toronto, the primary researchers – engineers with Simpson Gumpertz & Heger Inc. – conducted tests with human subjects to determine forces exerted on handrails. During these tests, test subjects stood on an activated stairway in postures and positions that represent those of a descending stairway user. Then, the stairway was induced to move forward
and then suddenly stopped to cause the test subjects to lurch forward. By setting certain test parameters and through the introduction of barriers that prevented the test subjects from recovering, test subjects fell forward while attempting to arrest their fall by grabbing a handrail. During these tests, the researchers measured the forces exerted on the handrail and monitored the movements of the test subjects to understand fall kinematics.

To account for the broad variation in human stature, the researchers used a computer program, calibrated against the Toronto tests with live subjects, to extrapolate those test results to determine forces generated on handrails by persons representing the distribution within the population.

In a separate set of tests, the researchers investigated forces that persons can exert on handrails of various shapes. For these studies, the researchers developed test apparatus that allowed test subjects to grasp segments of handrails, which were then pulled by a motor out of the test subjects' grasp while forces were recorded. The test subjects were in a seated position (which represents a position that is similar to the posture that persons falling on stairways attain at the time they are exerting maximum arresting force on handrails), and forces were measured in three orthogonal directions: transverse, perpendicular upward, and longitudinal relative to the rail. Hundreds of tests were performed with dozens of test subjects ranging in age from sub-adolescent to elderly.

These tests, experiments, and analyses evaluated round handrails and a broad range of dimensions of handrails that are not round. With the results of these studies, the researchers conducted statistical analyses to determine the proportion of the population that would likely not be able to maintain a grasp on handrails of various shapes during a fall. Using this method, the researchers determined which shapes are graspable (meaning, at least as likely as round handrails to be secure handholds in actual fall scenarios). These statistical analyses showed that Type II handrails have graspability that is essentially equal to or greater than the graspability of handrails meeting the long-accepted and codified shape defined in this proposal as Type I (essentially round handrails, of common size).

The key feature of the graspability of Type II handrails is graspable finger recesses on both sides of the handrail. These recesses allow users to firmly grip a properly proportioned grasping surface on the top of the handrail, ensuring that the user can tightly retain a grip on the handrail for all forces that are associated with attempts to arrest a fall. In addition, Type II handrails have been shown to more than serve adequately for "guidance and support" as required by codes.

The research conducted by these independent researchers validates experience with handrails in service. Handrails meeting the Type II definition have been in service for perhaps hundreds of years without documentation that there is any deficiency in their functional characteristics. Indeed, some handrails conforming to the Type II definition perhaps are among the most common shapes presently used in the United States. Furthermore, by adopting the definition of Type II handrails in the IBC, we will be positively excluding from use a wide spectrum of handrail shapes that also are in common use, but do not meet the standard for graspability that has led to this proposal. With the adoption of this proposal, much of the uncertainty about what constitutes "equivalent graspability" will be removed, since a specific definition of acceptable alterative shapes will be introduced and codified.

The Type II definition has been expressly included in the IRC for five years. During that time, this shape definition has become a standard for determining the suitability of handrail shapes, even in jurisdictions that have not adopted the IRC. Furthermore, the SMA is aware of no documentation that suggests that inclusion of the Type II definition in the IRC has in any way diminished safety of handrails.

The adoption of the Type II shape allows the use of viable, lower-cost, safe handrails. Without allowing Type II shapes, we run the risk that economical and fully functional handrail designs (including those of wood, which require closely-spaced supports which potentially interfere with the grasping surface of round handrails) will be unreasonably excluded from use, to the detriment of the population which is entitled to cost-efficient construction when it has been demonstrated to be safe. Acceptance of the Type II shape would once again permit the use of low-cost, renewable-resource handrail shapes, all but eliminated as an option for the jurisdictions adopting the current IBC code.

The research and testing summarized above has been published and is available on the Internet as listed below in the bibliography. We believe that these landmark studies, sponsored by the SMA but performed by independent researchers, constitute the most thorough and legitimate research on handrail graspability performed anywhere in the world.

Bibliography:

Dusenberry, D.O., Simpson, H., DelloRusso, S.J., and Rao, R.S., "Evaluation of Graspability of Handrails During Falls on Stairs," Presented at the Proceedings of the 13th Conference of Engineering Mechanics, Baltimore, MD, 13-16, June, 1999. http://www.sgh.com/PDFs/Dusenberry.pdf

Maki, B.E. and Perry, S.D. (1996). "Influence of Handrail Design on Postural Stabilization: Pilot Phase." Report prepared for the Stairway Manufacturer's Association under contract to Simpson Gumpertz & Heger Inc., Arlington, MA. http://www.stairways.org/code_changes/Influence_HandrailDesign.pdf

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal is limited to handrails along stairways within individual dwelling units in Group R-2 and R-3. Approval will allow for coordination with the IRC. The studies have proved that these handrails proposed as Type II would result in handrails which provide equivalent graspability to what is currently permitted in the code.

Assembly Action: **None**

Final Hearing Results

E88-06/07 **AS**

Code Change No: E89-06/07

Original Proposal

Sections: 1012.4 (IFC [B] 1012.4)

Proponent: David W. Cooper, Stairway Manufacturers' Association

Revise as follows:

1012.4 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

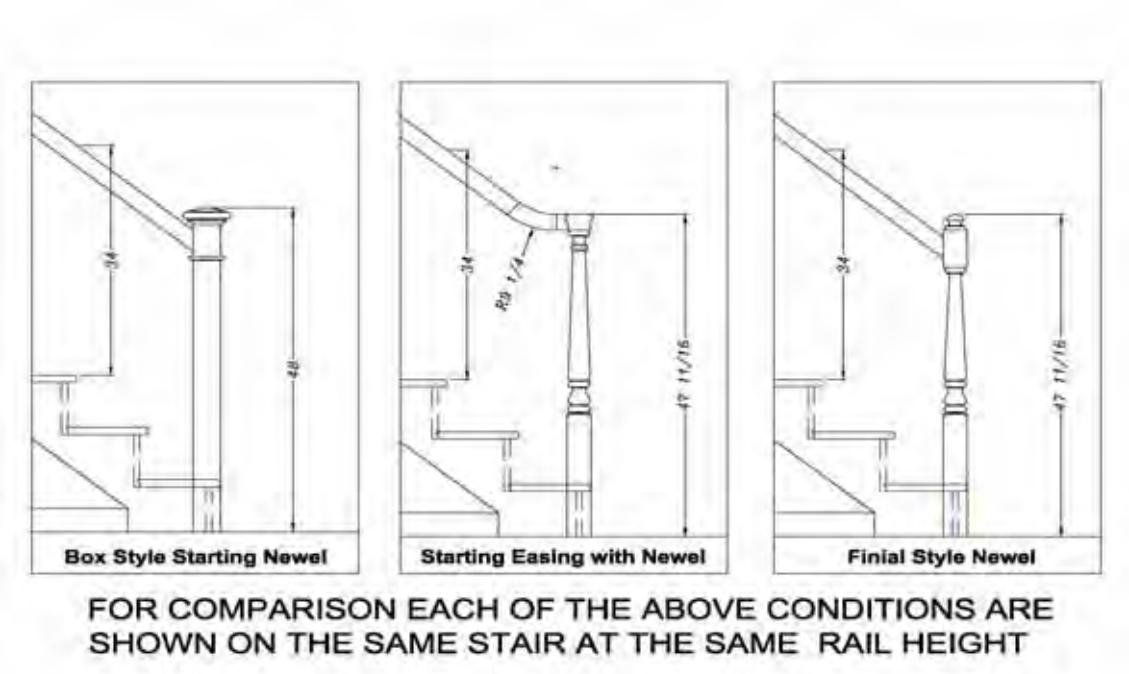
1. Handrails within dwelling units are permitted to be interrupted by a newel post at a turn ~~stair landing~~.
2. Within a dwelling unit, the use of a volute, turnout, ~~or~~ starting easing or starting newel is allowed ~~on~~ over the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each 0.5 inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1.5 inches (38 mm) shall be permitted to be reduced by 0.125 inch (3 mm).

Reason: The proposed change will make editorial corrections required as well as clarify the use of newels

The need to allow the use of a newel at intersections of the rail in dwelling units at a turn in the stair to provide for the use of newels within a flight has been recognized and allowed within the IRC and should be included in the IBC to allow lower cost options that have not caused any known attributable safety issues.

The use of a starting newel, like starting fittings, been a historically accepted practice in stairway construction and design. A starting newel installation presents no variance in the continuity of the handrail when compared to starting fittings and should be permitted. Please see attached graphic. As the user approaches the stair, if they use the handrail, the hand is extended more than the distance of one tread to grasp the rail. This is visually apparent in the wear marks on rails that extend beyond the nosing. The placement of the newel over the lowest step also allows for the post to be attached to the stair shortening the overall length of the stairway allowing more room to fit larger tread depths in the same space.

The editorial change in the preposition from “on” to “over” more clearly describes the position of the listed items to the lowest tread and has been used in the IRC with consistent interpretation.



The above illustration shows little or no variation in continuity for the stairway user.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1012.4 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a turn or stair landing.
2. Within a dwelling unit, the use of a volute, turnout starting easing or starting newel is allowed over the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each 0.5 inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1.5 inches (38 mm) shall be permitted to be reduced by 0.125 inch (3 mm).

Committee Reason: The proposal will provide clarification for different stair configurations. The modification would allow for landings at L or U shaped stairways to have newel posts at the corners.

Assembly Action: **None**

Final Hearing Results

E89-06/07 **AM**

Code Change No: E90-06/07

Original Proposal

Sections: 1012.4 (IFC [B] 1012.4)

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1012.4 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a stair landing.
2. Within a dwelling unit, the use of a volute, turnout or starting easing is allowed on the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each 0.5 inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1.5 inches (38 mm) shall be permitted to be reduced by 0.125 inch (3 mm).
4. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of the handrail gripping surfaces shal be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

Reason: Sometime handrails are provided for patient use in nursing homes and hospitals along hallways. In these situations, it would not be practicable to require them to meet the gripping surface and still work as a bumper guard or handrail. While a patient may fall in a corridor, they do not have the same safety concern of continuing to fall, such as on a stairway, therefore, this compromise would not create a safety concern. The change is also for coordination with ADAAG and ICC A117.1 Section 505.6

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Handrails located along areas other than ramps and stairways are used differently. The new exception is useful for rails that serve as walking aids along hallways. The change would also coordinate with ICC A117.1.

Assembly Action: **None**

Final Hearing Results

E90-06/07 **AS**

Code Change No: E91-06/07

Original Proposal

Sections: 1012.5 (New) [IFC [B] 1012.5 (New)]

Proponent: Bill Conner, Conner Associates LLC, representing himself

Add new text as follows:

1012.5 Fittings. Handrails shall not rotate within their fittings.

(Renumber subsequent sections)

Reason: This is an important safety concern that is not currently in the IBC requirements. This will also coordinate with ADAAG and ICC A117.1 Section 505.9.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal addresses a safety hazard commonly found in the field. This proposal will also coordinate with ICC A117.1.

Assembly Action: **None**

Final Hearing Results

E91-06/07 **AS**

Code Change No: E93-06/07

Original Proposal

Sections: 1012.5 (IFC [B] 1012.5)

Proponent: Robert Bagnetto, Lapeyre Stair, Inc./Laitram Corp.

Revise as follows:

1012.5 Handrail extensions. Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight. Where handrails are not continuous between flights the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At ramps where handrails are not continuous between runs, the handrail shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom ramps.

Exceptions:

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
2. Aisle handrails in Group A occupancies in accordance with Section 1025.13.

3. Handrails for alternating tread devices may terminate at a location vertically above the top and bottom risers. Handrails for alternating tread devices are not required to be continuous between flights or to extend beyond the top or bottom risers.

Reason: The purpose of this proposed change is to remove the current requirements for handrail continuity between flights of alternating tread devices and to remove the requirements for handrail extensions at the top and bottom of non-continuous flights of alternating tread devices.

This proposal is superior to the current provisions of the code in that it removes overly restrictive requirements for handrails of alternating tread devices. The current required handrail extension of alternating tread devices of 12 inches horizontally beyond the top riser and the slope of one tread depth beyond the bottom riser, as well as the requirement for handrail continuity between adjacent flights is based on the requirements for handrails of traditional type stairs. The alternating tread device handrail extension and continuity requirements appear to have been chosen arbitrarily, assuming that the handrail requirements best suited for traditional type stairs would also be best for alternating tread devices. However, considering alternating tread devices are typically used as a safer alternative to a ladder, typically used in tight spaces where traditional type stairs cannot be used, have stair angles much steeper than traditional type stairs, and have different usage than traditional type stairs, removal of the existing extension and continuity requirements is appropriate.

Alternating tread devices have been used for approximately 25 years without handrail extensions or continuous handrails been flights. Lapeyre Stair is not aware of any cases where these handrail features has been a problem for users of alternating tread devices. Alternating tread device handrails without extensions or continuity between flights have proved to provide adequate gripping length to allow the user to safely reach the top or bottom landing. Prior to release of the alternating tread device, Lapeyre Stair performed informal testing to verify the acceptability of this handrail configuration. Additionally, a scientific stud titled “Performance, perceived safety and comfort of the alternating tread stair” was performed that demonstrated the satisfactory use of alternating tread devices. The handrail extension and continuity requirements for alternating tread devices appears to have first been introduced in sections 1003.3.3.10.1, and 1003.3.3.11.5 of IBC-2000 and then carried forward to sections 1009.10.1 and 1009.11.5 of IBC-2003. The precursor codes to IBC appear not to discuss alternating tread device handrail extensions or continuity or to allow whatever handrail configuration provides safe use of the device. (Ref: BOCA-1999 Sections 1014.6.6.1 and 1022.2.5, SBC-1999 Section 1007.8.4 and 1007.8.5; UBC Section 1003.3.3.1). Finally, in an IBC code interpretation letter dated July 23, 2004 to Fanning/Howley Associates Inc, indicates that the current handrail extension requirements in the IBC may not be appropriate for alternating treads, and of alternative approval for an alternating tread device without handrail extensions may be acceptable. The elimination of extension and continuity requirements of handrails for alternating tread devices does not substantially alter the design of alternating tread devices, and actually results is less occupied space which could minimally lower costs.

Bibliography:
The BOCA National Building Code/1999 sections 1014.6.6.1 & 1022.2.5
Standard Building Code 1999 Edition sections 1007.8.4 & 1007.8.5
1997 Uniform Building Code section 1003.3.3.1 (exception)
Performance, perceived safety and comfort of the alternating tread stair by Jorna, Mohageg & Synder Virginia Polytechnic Institute and State University, published Applied Ergonomics 1989.20.1,26-32

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The unique configuration of alternating tread devices makes an exception for the handrail extensions reasonable.

Assembly Action: **None**

Final Hearing Results

E93-06/07 **AS**

Code Change No: E99-06/07

Original Proposal

Sections: 1013.2 (IFC [B] 1013.2)

Proponent: Robert Bagnetto, Lapeyre Stair, Inc./Laitram Corp.

Revise as follows:

1013.2 Height. Guards shall form a protective barrier not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.

Exceptions:

1. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards whose top rail also serves as a handrail shall have a height not less than 34 inches (864 mm) and not more than 38 inches (1067 mm) measured vertically from the leading edge of the stair tread nosing.
2. The height in assembly seating areas shall be in accordance with section 1024.14.
3. Along alternating tread device, guards whose top rail also serves as a handrail, shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

Reason: The purpose of this proposed change is to replace the current guardrail height requirements for alternating tread devices, which are inappropriately based on the guardrail height requirements for traditional type stairs, with new guardrail height requirements more appropriate to alternating tread devices. This change also allows the top rail of a guardrail to also be used as a handrail.

This proposal is superior to the current provisions of the code in that it rectifies shortcomings in the existing code for alternating tread device guard requirements. The current required guardrail height of alternating tread devices of 42 inches is based on the required guardrail height of traditional type stairs which have a stair angles much lower than alternating tread devices. This alternating tread device guardrail height appears to have been chosen arbitrarily, assuming that the guardrail height best suited for traditional type stairs would also be best for alternating tread devices. Although they have treads as a traditional stair does, alternating tread devices have considerable different characteristics (the most important being a much steeper angle) from a traditional stair and thus the requirements for the features for an alternating tread device often must differ from a traditional stair. Considering that the steeper angle of alternating tread devices and that the rails are often used under the arms for stabilization, a lower guardrail height of 30 inches to 34 inches is more appropriate and the existence of a separate handrail and guardrail is unnecessary for alternating tread devices.

Alternating tread devices have been used for approximately 25 years with a single rail, with a height (measured vertically from the tread nosings to the top of the rail) of approximately 32 inches, acting both as a guardrail and a handrail. Lapeyre Stair is not aware of any cases where this rail height has been a problem for users of alternating tread devices. Prior to release of the alternating tread device, Lapeyre Stair performed informal testing to verify that this is the optimal rail height. Additionally, a scientific stud titled “Performance, perceived safety and comfort of the alternating tread stair” was performed that demonstrated the satisfactory use of alternating tread devices. The 42 inch guardrail height requirement for alternating tread devices appears to have first been introduced in sections 1003.2.12 and 1003.2.12.1 of IBC-2000 and then carried forward to Section 1012.1 and 1012.2 of IBC-2003. The precursor codes to IBC are unclear or appear not to discuss alternating tread device guardrail height at all. (Ref: BOCA-1999 Sections 1014.6.6.1, 1021.2, 1022.2.2 and 1022.2.5, SBC-1999 Sections 1007.5, 1007.8.4 and 1007.8.5, 1015.1; UBC Section 1003.3.3.1, 1003.3.3.7, 509.1 and 509.2). Furthermore, there does not appear to be any documented scientific testing to verify that the current guardrail heights in IBC for alternating tread devices are the most appropriate. Finally, an IBC code interpretation letter dated July 23, 2004 to Fanning/Howley Associates Inc, indicated that the current rail height in the IBC may not be appropriate, and alternative approval of an alternating tread device with a rail configuration inconsistent with IBC, Section 1013.2 may be appropriate. The lower guardrail height and allowing a single rail to act as both a guardrail and a handrail for alternating tread devices does not substantially alter the design of alternating tread devices, and actually results in less construction cost and less occupied space which could minimally lower costs.

Bibliography:

The BOCA National Building Code/1999 Sections 1014.6.6.1, 1021.2, 1022.2.2 and 1022.2.5
Standard Building Code 1999 Edition Sections 1007.5, 1007.8.4 and 1007.8.5, 1015.1
1997 Uniform Building Code Section 1003.3.3.1 (exception), 1003.3.3.7, 509.1 and 509.2
Performance, perceived safety and comfort of the alternating tread stair by Jorna, Mohageg & Synder Virginia Polytechnic Institute and State University, published Applied Ergonomics 1989.20.1,26-32

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The locations of where alternating tread devices are permitted is limited, therefore a lower guard height is appropriate.

Assembly Action: **None**

Final Hearing Results

E99-06/07 **AS**

Code Change No: E100-06/07

Original Proposal

Sections: 1013.3 (IFC [B] 1013.3)

Proponent: Robert Bagnetto, Lapeyre Stair, Inc./Laitram Corp.

Revise as follows:

1013.3 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular openings formed by the riser, tread and bottom rail at the open side of a stairway shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.
3. In areas that are not open to the public within occupancies in Group I-3, F, H or S, <u>and for alternating tread devices,</u> balusters, horizontal intermediate rails or other construction shall not permit a sphere with a diameter of 21 inches (533 mm) to pass through any opening.
4. In assembly seating areas, guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
5. Within individual dwelling units and sleeping units in Group R-2 and R-3 occupancies, openings for required guards on the sides of stair treads shall not allow a sphere of 4.375 inches (111 mm) to pass through.

Reason: The purpose of this proposed change is to replace the current requirements for guard openings for alternating tread devices, which are inappropriately based on the requirements for guard openings for traditional type stairs, with new requirements for guard openings more appropriate to alternating tread devices.

This proposal is superior to the current provisions of the code in that it rectifies shortcomings in the existing code for requirements of, and provides clarification for, guard openings on alternating tread devices. The current requirements for guard openings of alternating tread devices are identical to the required guard openings of traditional type stairs. IBC currently requires open guards on stairs to have baluster or ornamental patterns such that a 4 inch diameter sphere cannot pass through (with exceptions above 34 inches and between the tread, riser and bottom rail). IBC provides an exception which allows guard openings such that a 21 inch diameter sphere cannot pass through for guards in areas not open to the public within occupancies in Group I-3, F, H or S. Requirements for guard openings on alternating tread devices appears to have not been addressed in the code, and by lack of any other requirements default to the requirements for traditional type stairs. Alternating tread devices are not limited to uses within the occupancies in Group I-3, F, H or S. In addition to use in the areas of these occupancies, alternating tread devices can be used for access to a.) unoccupied roofs (1009.11), b.) boiler, a incinerator and furnace rooms (1015.3) c.) refrigeration machinery rooms (1015.4) and d.) catwalks, gridirons and galleries used for stages (1015.6.1). None of the uses allowed in IBC for alternating tread devices are of the type such that the device would require guards with openings such that a 4 inch diameter sphere could not pass through. Guard requirements for alternating tread devices in uses than other Group I-3, F, H or S would therefore be unnecessarily restrictive by not allowing guard openings such that a 21 inch diameter sphere could not pass through.

Alternating tread devices have been used for approximately 25 years without guards having openings such that a 4 inch sphere cannot pass through. Lapeyre Stair is not aware of any cases where the guards have been a problem for users of alternating tread devices. Alternating tread devices are typically not used in locations where the 4 inch sphere rule would apply (i.e. where small children would use the device, etc.). The guardrail opening requirement for alternating tread devices appears to have first been introduced in section 1003.2.12.2 of IBC-2000 and then carried forward to section 1012.3 of IBC-2003. The precursor codes to IBC are unclear or appear not to discuss alternating tread device guardrail openings. (ref: BOCA-1999 Sections 1014.6.6, 1021.3 and 1022.2.5, SBC-1999 Sections 1007.8.4 and 1007.8.5, 1015.3; UBC Section 1003.3.3.1, 1003.3.3.7 and 509.3). Finally, in an IBC code interpretation letter dated July 23, 2004 to Fanning/Howley Associates Inc, indicated that rail requirements in the IBC may not be appropriate for alternating tread devices, and alternate approval of an alternating tread device with a rail configuration inconsistent with IBC, Section 1013.3 may be acceptable. Allowing a 21 inch guard opening in alternating tread devices does not substantially alter their design of, and actually results in less construction cost.

Bibliography:

The BOCA National Building Code/1999 sections 1014.6.6, 1021.3, and 1022.2.5
Standard Building Code 1999 Edition sections 1007.8.4 and 1007.8.5, 1015.3
1997 Uniform Building Code section 1003.3.3.1 (exception), 1003.3.3.7 and 509.3

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The locations of where alternating tread devices are permitted is limited, therefore a large guard opening is appropriate. This would be consistent with the committee action on E99-06/07.

Assembly Action: **None**

Final Hearing Results

E100-06/07 **AS**

Code Change No: E104-06/07

Original Proposal

Sections: 1014.2.2 (IFC [B] 1014.2.2)

Proponent: John Williams, Construction Review Services, Washington State Department of Health

Revise as follows:

1014.2.2 Group I-2. Habitable rooms or suites in Group I-2 occupancies shall have an exit access door leading directly to a corridor.

Exceptions:

1. Rooms with exit doors opening directly to the outside at ground level.
2. Patient sleeping rooms are permitted to have one intervening room if the intervening room is not used as an exit access for more than eight patient beds.
3. Special nursing suites are permitted to have one intervening room where the arrangement allows for direct and constant visual supervision by nursing personnel.
4. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through one intervening room where the travel distance to the exit access door is not greater than 100 feet (30 480 mm).
5. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 50 feet (15 240 mm).

Suites of sleeping rooms shall not exceed 5,000 square feet (465 m^2). Suites of rooms other than patient sleeping rooms shall not exceed 10,000 square feet (929 m^2). Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93 m^2) shall have at least two exit access doors remotely located from each other. Any room or suite of rooms other than patient sleeping rooms of more than 2,500 square feet (232 m^2) shall have at least two <u>exit</u> access doors remotely located from each other. The travel distance between any point in a Group I-2 occupancy and an exit access door in the room shall not exceed 50 feet (15 240 mm). The travel distance between any point in a suite of sleeping rooms and an exit access door of that suite shall not exceed 100 feet (30 480 mm).

Reason: The purpose of the proposed change is to clarify the required access to exits provided in a non sleeping suite of patient rooms. The term “access door” is not consistent with similar requirements in this section. This change would mend an omission to the original text. The charging statement of this code refers to an “exit access door”. All other requirements in this section that relate to size of suites and access to exits use the term “exit access door”.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal will provide consistency in the code for the use of the term ›exit access=.

Assembly Action: **None**

Final Hearing Results

E104-06/07 **AS**

Code Change No: E105-06/07

Original Proposal

Sections: 1014.2.2, 1014.2.3 through 1014.2.5 (New) [IFC [B] 1014.2.2, [B] 1014.2.3 through [B] 1014.2.5 (New)]

Proponent: John Williams, Construction Review Services, Washington State Department of Health

Delete and substitute as follows:

1014.2.2 Group I-2. Habitable rooms or suites in Group I-2 occupancies shall have an exit access door leading directly to a corridor.

Exceptions:

1. Rooms with exit doors opening directly to the outside at ground level.
2. Patient sleeping rooms are permitted to have one intervening room if the intervening room is not used as an exit access for more than eight patient beds.
3. Special nursing suites are permitted to have one intervening room where the arrangement allows for direct and constant visual supervision by nursing personnel.
4. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through one intervening room where the travel distance to the exit access door is not greater than 100 feet (30 480 mm).
5. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 50 feet (15 240 mm).

Suites of sleeping rooms shall not exceed 5,000 square feet (465 m^2). Suites of rooms other than patient sleeping rooms shall not exceed 10,000 square feet (929 m^2). Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93 m^2) shall have at least two exit access doors remotely located from each other. Any room or suite of rooms other than patient sleeping rooms of more than 2,500 square feet (232 m^2) shall have at least two access doors remotely located from each other. The travel distance between any point in a Group I-2 occupancy and an exit access door in the room shall not exceed 50 feet (15 240 mm). The travel distance between any point in a suite of sleeping rooms and an exit access door of that suite shall not exceed 100 feet (30 480 mm).

1014.2.3 Suites in patient sleeping areas. Patient sleeping areas in Group I-2 Occupancies shall be permitted to be divided into suites if one of the following conditions is met:

1. The intervening room within the suite is not used as an exit access for more than eight patient beds.
2. The arrangement of the suite allows for direct and constant visual supervision by nursing personnel.

1014.2.3.1 Area. Suites of sleeping rooms shall not exceed 5,000 square feet (465 m2).

1014.2.3.2 Exit access. Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93m^2) shall have at least two exit access doors remotely located from each other.

1014.2.3.3 Travel distance. The travel distance between any point in a suite of sleeping rooms and an exit access door of that suite shall not exceed 100 feet (30 480 mm).

1014.2.4 Suites in areas other than patient sleeping areas. Areas other than patient sleeping areas in Group I-2 Occupancies shall be permitted to be divided into suites.

1014.2.4.1 Area. Suites of rooms, other than patient sleeping rooms, shall not exceed 10,000 square feet (929 m^2).

1014.2.4.2 Exit access. Any room or suite of rooms, other than patient sleeping rooms, of more than 2,500 square feet (232 m^2) shall have at least two access doors remotely located from each other.

1014.2.4.3 One intervening room. For rooms other than patient sleeping rooms, suites of rooms are permitted to have one intervening room if the travel distance within the suite to the exit access door is not greater than 100 feet (30480mm).

1014.2.4.4 Two intervening rooms. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 50 feet (15 240 mm).

1014.2.5 Travel distance. The travel distance between any point in a Group I-2 occupancy room and an exit access door in that room shall not exceed 50 feet (15 240 mm).

Reason: This amendment serves to clarify the existing language to help designers and code enforcement personnel understand the current requirements.

The existing text is covers two main concepts:

- Suites that contain patient sleeping areas; and,
- Suites that do not contain patient sleeping areas.

The requirements for each of these concepts are different, but they are not arranged consecutively. The proposed change clarifies the language by grouping the requirements for these two primary concepts into consecutive sections of code.

Exception 1, 2 and 3 moved. The benefit of allowing the use of suites is the ability to have intervening rooms. These two exceptions provide the only instances where intervening room is acceptable for patient sleeping areas. Therefore, they also define the only acceptable conditions for a sleeping suite. These exceptions are reworded and moved to the “sleeping suite” area (1014.2.3.x) of the proposed code.

Exception 4 and 5 moved. These exceptions deal with non sleeping suites and have been moved to the “non sleeping suite” area (1014.2.4.x) of the proposed code.

There are no intended changes to the actual requirements. This proposal is intended to rearrange and put logical breaks into a long and confusing section of code.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides a logical order for the separation of different types of suites found in hospitals and will help clarify requirements for means of egress.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment 1:

John Williams, Washington State Department of Health – Construction Review Services, requests Approval as Modified by this public comment.

Modify proposal as follows:

1014.2.3 Suites in patient sleeping areas. Patient sleeping areas in Group I-2 Occupancies shall be permitted to be divided into suites with one intervening room if one of the following conditions is met:

1. The intervening room within the suite is not used as an exit access for more than eight patient beds.
2. The arrangement of the suite allows for direct and constant visual supervision by nursing personnel.

(Portions of the proposal not shown remain unchanged)

Commenter's Reason: This modification clarifies that suites in patient sleeping areas are allowed only one intervening room between the patient sleeping areas and an exit access corridor. As written, the restriction to one intervening room is too vague and would cause confusion. This change is consistent with the federal requirements for Medicare certification.

Public Comment 2:

John Williams Washington State Department of Health – Construction Review Services, requests Approval as Modified by this public comment.

Modify proposal as follows:

1014.2.5 Travel distance. The travel distance between any point in a Group I-2 Occupancy patient sleeping room and an exit access door in that room shall not exceed 50 feet (15,240 mm).

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The slowest evacuation rate in an I-2 occupancy is in patient sleeping areas, due to the equipment and support functions that must be moved with the patient when they are evacuated. Other common accessory uses in a hospital; such as supply rooms, dining rooms, gyms; do not have this complication. This change is consistent with the federal requirements for Medicare certification.

Final Hearing Results

E105-06/07 AMPC 1, 2

Code Change No: E106-06/07

Original Proposal

Sections: 1014.2.3 (New) [IFC [B] 1014.2.3 (New)]

Proponent: John Williams, Construction Review Services, Washington State Department of Health

Add new text as follows:

1014.2.3 Separation. Suites in Group I-2 occupancies shall be separated from other portions of the building by a smoke partition complying with Section 710.

Reason: The purpose of the proposed change is to clarify the walls that define an I-2 suite. Nowhere in the current code does it explain how the wall surrounding the suite should be constructed. The additional reference would help code officials determine how these suites should be designed.

The existing requirement listed in 1014 is that an I-2 occupant is able to travel directly from a room into a corridor or through a suite into a corridor. In either case, the occupant passes through a smoke partition (corridor wall) by entering the corridor. The occupancies are often designed with suites being placed directly adjacent to each other. The code also states that the sizes of suites should be limited. It appears that the intent of code is to create separate atmospheres of a certain size that are constructed limit the transfer of smoke.

Cost Impact: The code change proposal will not increase the cost of construction. Smoke partitions create an atmospheric separation only and do not require dampers in most cases.

Analysis: Requirements for smoke barriers in Group I-2 is located in Section 407.4.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal addresses a common question regarding separation of areas within hospitals. This is a good clarification.

Assembly Action: **None**

Final Hearing Results

E106-06/07 **AS**

Code Change No: E107-06/07

Original Proposal

Sections: 1014.3 (IFC [B] 1014.3)

Proponent: Ron Nickson, National Multi Housing Council/National Apartment Association

Revise as follows:

1014.3 Common path of egress travel. In occupancies other than Groups H-1, H-2 and H-3, the common path of egress travel shall not exceed 75 feet (22 860 mm). In Group H-1, H-2 and H-3 occupancies, the common path of egress travel shall not exceed 25 feet (7620 mm). For common path of egress travel in Group A occupancies having fixed seating, see Section 1025.8.

Exceptions:

1. The length of a common path of egress travel in Group B, F and S occupancies shall not be more than 100 feet (30 480 mm), provided that the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Where a tenant space in Group B, S and U occupancies has an occupant load of not more than 30, the length of a common path of egress travel shall not be more than 100 feet (30 480 mm).
3. The length of a common path of egress travel in a Group I-3 occupancy shall not be more than 100 feet (30 480 mm).
4. The length of a common path of egress travel in a Group R-2 occupancy shall not be more than 125 feet (38 100 mm), provided that the building is protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Reason: To increase the allowable common path of travel in R-2 occupancies from 75 feet to 125 feet when the R-2 occupancy is protected with a NFPA 13R sprinkler system. The design requirements and thus the protection provided with NFPA 13R system in the area being protected are the same as that provide with a NFPA 13 system. The 98% operational effectiveness of residential sprinkler systems is the best of all occupancy classifications.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal does not increase the overall travel distance, but increases the common path of travel only. The trade off is appropriate for a NFPA 13R system. The trade off will provide incentive for providing sprinkler systems and will provide adequate protection for the areas addressed in this change as far as the common path of travel. The proposals for E107 and E108 are the same.

Assembly Action: **None**

Final Hearing Results

E107-06/07 **AS**

Code Change No: E108-06/07

Original Proposal

Sections: 1014.3 (IFC [B] 1014.3)

Proponent: Richard B. Alpert, P.E., Schirmer Engineering Corporation

Revise as follows:

1014.3 Common path of egress travel. In occupancies other than Groups H-1, H-2 and H-3, the common path of egress travel shall not exceed 75 feet (22 860 mm). In occupancies in Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 25 feet (7620 mm). For common path of egress travel in Group A occupancies having fixed seating, see Section 1025.8.

Exceptions:

1. The length of a common path of egress travel in an occupancy in Groups B, F and S shall not be more than 100 feet (30 480 mm), provided that the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Where a tenant space in an occupancy in Groups B, S and U has an occupant load of not more than 30, the length of a common path of egress travel shall not be more than 100 feet (30 480 mm).
3. The length of a common path of egress travel in occupancies in Group I-3 shall not be more than 100 feet (30 480 mm).
4. The length of a common path of egress travel in a Group R-2 occupancy shall not be more than 125 feet (38 100 mm), provided that the building is protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Reason: The purpose of the code change is to revise the code to allow exception provision for sprinkler systems installed in accordance with NFPA 13R. Exception 4 to Section 1014.3, "Common path of egress travel" allows the extension of the common path of travel in R-2 occupancies from 75 feet to 125 feet for buildings protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the code. This allows the exception provision for sprinkler systems installed in accordance with NFPA 13. The code is overly restrictive in that it does not allow the exception provision for building protected throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.2 of the code which would allow the exception provision for sprinkler systems installed in accordance with NFPA 13R.

Substantiation: Exception 4 to Section 1014.3, "Common path of egress travel" allows the extension of the common path of travel in R-2 occupancies from 75 feet to 125 feet for buildings protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the code. R-2 occupancies are defined in the code as "residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature". NFPA 13R is the standard for the installation of sprinklers in residential occupancies up to and including four stories in height. As stated in the administrative section of the handbook to this standard "the Technical Committee on Residential Sprinkler Systems intends that NFPA 13R provides an acceptable level of fire protection with respect to life safety and property protection". Per the title and scope of NFPA 13R, R-2 occupancies greater than four stories would be required follow the requirements of NFPA 13 for the installation of automatic sprinkler systems.

The increase in the common path of egress is for the portion of egress travel within the dwelling unit, once outside of the dwelling unit and in the exit access corridor two paths of travel are available to the occupants as shown in Figure 1014.3 of the 2006 IBC Commentary. In addition to the protection provided by the automatic sprinkler systems the dwelling units of an R-2 occupancy are required to be separated from each other by a minimum of a 1-hour fire resistive construction per Section 708.1 of the IBC, and from the exit access corridor by a minimum of a ½ hour fire resistive construction per Section 1017.1 of the IBC.

As stated in the commentary for the 2006 IBC Section 1015.2.1, Exception 2, "The protection provided by an automatic sprinkler system installed in accordance with either NFPA 13 or NFPA 13R can reduce the threat of fire buildup so that the reduction in remoteness is not unreasonable, based on the presumption that it provides the occupants with an acceptable level of safety from fire". This same reasoning in the protection provided by an automatic sprinkler system is applicable to an increase in the common path of travel. This revision to allow the exception provision for automatic sprinkler systems installed in accordance with NFPA 13R would be consistent with the provisions of Exception 2 to Section 1015.2.1 of the code which allows the exception for the reduction of the required exit doors or exit access doorways separation distance "where a building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2".

Bibliography:
NFPA 13, "Standard for the Installation of Sprinkler Systems", 2002 Edition, National Fire Protection Association, Quincy, MA.
NFPA 13R, "Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height ", 2002 Edition, National Fire Protection Association, Quincy, MA.
Automatic Sprinkler Systems Handbook, 2002, National Fire Protection Association, Quincy, MA

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal does not increase the overall travel distance, but increases the common path of travel only. The trade off is appropriate for a NFPA 13R system. The trade off will provide incentive for providing sprinkler systems and will provide adequate protection for the areas addressed in this change as far as the common path of travel. The proposals for E107 and E108 are the same.

Assembly Action: **None**

Final Hearing Results

E108-06/07 **AS**

Code Change No: E110-06/07

Original Proposal

Sections: 1014.4 (IFC [B] 1014.4)

Proponent: Jay Hall, Virginia Department of Housing & Community Development, representing Virginia Building and Code Officials Association

Revise as follows:

1014.4 Aisles. Aisles serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles shall be provided from all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, ~~other than seating at tables~~, shall comply with Section 1025. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1025. The required width of aisles shall be unobstructed.

Reason: Aisle and aisle accessway are defined terms in the IBC and IFC. Section 1014.4.2.1 and 1014.4.2.2 provide requirements for aisle accessway widths only. Section 1014.4 requires the user to obtain width requirements on aisles serving seating at tables from this section. This section does not provide width requirements for aisles serving seating at tables. The proposed language sends the user to section 1025, specifically 1025.9.1 to obtain minimum aisle widths serving seating at tables.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides necessary direction for the different requirements for the width of aisles and aisle accessways.

Assembly Action: **None**

Final Hearing Results

E110-06/07 **AS**

Code Change No: E111-06/07

Original Proposal

Sections: 1002.1, 1014.4 through 1014.5.2 (IFC [B] 1002.1, [B] 1014.4 through [B] 1014.5.2)

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

Revise as follows:

1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AISLE. An unenclosed exit access component that defines and provides a path of egress travel to a corridor or to an exit.

SECTION 1017
AISLES

~~**1014.4**~~ **1017.1** ~~**Aisles**~~ **General.** Aisles serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles shall be provided form all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1025.

The required width of aisles shall be unobstructed.

Exception: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side.

~~**1014.4.1**~~ **1017.2 Aisles in Groups B and M.** In Group B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

Exception: Nonpublic aisles serving less than 50 people and not required to be accessible by Chapter 11 need not exceed 28 inches (711 mm) in width.

~~**1014.4.2**~~ **1017.3 Aisle accessways in Group M.** An aisle accessway shall be provided on at least one side of each element within the merchandise pad. The minimum clear width for an aisle accessway not required to be accessible shall be 30 inches (762 mm). The required clear width of the aisle accessway shall be measured perpendicular to the elements and merchandise within the merchandise pad. The 30-inch (762 mm)minimum clear width shall be maintained to provide a path to an adjacent aisle or aisle accessway. The common path of travel shall not exceed 30 feet (9144 mm) from any point in the merchandise pad.

Exception: For areas serving not more than 50 occupants, the common path of travel shall not exceed 75 feet (22 880 mm).

~~**1014.4.3**~~ **1017.4 Seating at tables.** Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisle or aisle accessways, the clear width shall be measured to walls, edges of seating and tread edges, except that handrail projections are permitted.

Exception: Where tables or counters are served by fixed seats, the width of the aisle accessway shall be measured from the back of the seat.

~~1014.4.3.1~~ **1017.4.1 Aisle accessway for tables and seating.** Aisle accessways serving arrangements of seating at tables or counters shall have sufficient clear width to conform to the capacity requirements of Section 1005.1 but shall not have less than the appropriate minimum clear width specified in Section 1014.4.3.2.

~~1014.4.3.2~~ **1017.4.2 Table and seating accessway width.** Aisle accessways shall provide a minimum of 12 inches (305 mm) of width plus 0.5 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length measured from the center of the seat farthest from an aisle.

Exception: Portions of an aisle accessway having a length not exceeding 6 feet (1829 mm) and used by a total of not more than four persons.

~~1014.4.3.3~~ **1017.4.3 Table and seating aisle accessway length.** The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) from any seat to the point where a person has a choice of two or more paths of egress travel to separate exits.

SECTION 1019
EGRESS BALCONIES

~~1014.5~~ **1019.1 ~~Egress balconies~~ General.** Balconies used for egress purposes shall conform to the same requirements as corridors for width, headroom, dead ends and projections.

~~1014.5.1~~ **1019.2 Wall separation.** Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.

Exception: Separation is not required where the exterior egress balcony is served by at least two stairs and a dead-end travel condition does not require travel past an unprotected opening to reach a stair.

~~1014.5.2~~ **1019.3 Openness.** The long side of an egress balcony shall be at least 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

Reason: A definition of aisle was introduced into the 2006 IBC. Unfortunately, a corridor, by definition, also meets the present definition of an aisle. The proposed modifications to the definition of aisle are based on the root definition of corridor as an exit access component. Inasmuch as there are only two interior exit access means of egress components and a corridor is defined as “an enclosed exit access component,” an aisle must be an unenclosed exit access component. The definition of corridor also prescribes the extent of egress travel within that component. Similar language has been added to the definition of aisle. It is felt that more comprehensive definitions will assist code users in the proper design and analysis of means of egress systems

Additionally, since aisles and exterior egress balconies are formal exit access components, it is felt that they should enjoy full section status similar to many other means of egress components. This will help users quickly and efficiently access necessary provisions. The reorganization of means of egress provisions in the 2003 IBC created several illogical locations for technical provisions. This provision will help correct that situation.

Approval of this proposal will clarify current code provisions and assist users in the proper determination of means of egress requirements. Approval of this proposal will greatly assist design professionals and code enforcement officials in the proper application of these fundamental and essential *International Building Code* provisions, especially those with minimal experience.

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

Analysis: If approved, the following editorial changes will occur. The proposed Section 1017, Aisles, would occur between current Section 1016, Exit Access Travel Distance, and Section 1017, Corridors. The proposed Section 1019, Egress Balconies, would occur between current Section 1017, Corridors, and Section 1018, Exits. Sections and references would be renumbered accordingly.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

AISLE. An unenclosed exit access component that defines and provides a path of egress travel ~~to a corridor or to an exit~~.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal will provide a more easily understood format for the requirements for aisles and egress balconies.

A modification was made to the definition for ›aisles= to delete the words Ato a corridor or to and exit.@ Since an aisle could extend to an exit access door or intervening room the text would be too restrictive. In addition, requirements should not be in a definition.

Assembly Action: **None**

Final Hearing Results

E111-06/07 **AM**

Code Change No: E113-06/07

Original Proposal

Sections: 1015.1, 1015.1.1, 1019.1, 1019.2 (IFC [B] 1015.1, [B] 1015.1.1, [B] 1019.1, [B] 1019.2)

Proponent: Philip Brazil, Reid Middleton, Inc., representing Washington Association of Building Officials (WABO)

Revise as follows:

1015.1 Exits or exit access doorways ~~required~~ from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds one of the values in Table 1015.1.
2. The common path of egress travel exceeds one of the limitations of Section 1014.3.
3. Where required by Section~~s~~ 1015.3, 1015.4, ~~and~~ 1015.5, 1015.6 or 1015.6.1.

Exception: Group I-2 occupancies shall comply with Section 1014.2.2.

TABLE 1015.1
SPACES WITH ONE MEANS OF EGRESS

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E [a], F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-3, I-4, R	10
S	29

a. Day care maximum occupant load 10.

1015.1.1 Three or more exits or exit access doorways. ~~Access to three or more~~ Three exits or exit access doorways shall be provided from ~~a floor area where required by Section 1019.1~~ any space with an occupant load of 501-1,000. Four exits or exit access doorways shall be provided from any space with an occupant load greater than 1,000.

1019.1 ~~Minimum number of~~ Exits from stories. All ~~rooms and~~ spaces within each story shall ~~be provided with and~~ have access to the minimum number of ~~approved independent~~ exits as ~~required by~~ specified in Table 1019.1 based on the occupant load of the story, except as modified in Section ~~1015.1 or~~ 1019.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story~~, basement or individual space~~ shall be maintained until arrival at grade or the public way.

TABLE 1019.1
MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD

OCCUPANT LOAD (persons per story)	MINIMUM NUMBER OF EXITS (per story)
1-500	2
501-1,000	3
More than 1,000	4

1019.2 Buildings with one exit. Only one exit shall be required in buildings as ~~described~~ specified below:

1. Buildings ~~described in~~ meeting the limitations of Table 1019.2, provided ~~that~~ the building has not more than one level below the first story above grade plane.
2. Buildings of Group R-3 occupancy.
3. Single-level buildings with ~~the~~ occupied spaces at the level of exit discharge provided ~~that the story or~~ each space complies with Section 1015.1 as a space with one ~~means of egress~~ exit or exit access doorway.

TABLE 1019.2
BUILDINGS WITH ONE EXIT

OCCUPANCY	MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE
A, B [d], E [e], F, M, U	1 Story	49 occupants and 75 feet travel distance
H-2, H-3	1 Story	3 occupants and 25 feet travel distance
H-4. H-5, I, R	1 Story	10 occupants and 75 feet travel distance
S [a]	1 Story	29 occupants and 100 feet travel distance
B [b], F, M, S [a]	2 Stories	30 occupants and 75 feet travel distance
R-2	2 Stories [c]	4 dwelling units and 50 feet travel distance

For SI: 1 foot = 304.8 mm.

a. For the required number of exits for open parking structures, see Section 1019.1.1.
b. For the required number of exits for air traffic control towers, see Section 412.1.
c. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1026 shall have a maximum height of three stories above grade plane.
d. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 with an occupancy in Group B shall have a maximum travel distance of 100 feet.
e. Day care maximum occupant load 10.

Reason: This proposal addresses questions raised by code users in the state of Washington concerning the application of Sections 1015.1, 1015.1.1, 1019.1 and 1019.2 in determining the required number of exits and exit access doorways. Section 1015.1 intends to specify when two exits or exit access doorways are required from a space. Section 1015.1.1 intends to specify when three or more exits or exit access doorways are required from a space. Section 1019.1 intends to specify the minimum number of exits from a story based on the occupant load of that story. At least two exits are required as specified in Table 1019.1. Section 1019.2 effectively serves as an exception to Section 1019.1, permitting a building to have one exit if certain conditions are met.

The proposal will make the application of the proposals clearer. The phrase "one of" is added to Items 1 and 2 of Section 1015.1 clarifying that not all of the values in Table 1015.1 need to be exceeded before two exits or exit access doorways are required from a space. Sections 1015.6 and 1015.6.1 are added to Item 3 of Section 1015.1 because of the requirements in those sections for means of egress.

The reference to Section 1019.1 in Section 1015.1.1 is replaced with language requiring more than two exits or exit access doorways from a space based on its occupant load. Note that Section 1019.1 does not require three or more exits from floor areas. The reference to "floor area" in Section 1015.1.1 is replaced with references to spaces for consistency with Section 1015.1. Section 1015.1.1 applies to spaces, not stories, which is implied by the reference to floor areas.

Section 1019.1 is revised to require access from all spaces within each story to the minimum number of exits for each story as specified in Table 1019.1, which is based on the occupant load of each story. Reference to "rooms" is deleted because Section 1014.1 refers only to spaces. Its presence in Section 1019.1 is superfluous and the lack of its presence in Section 1015.1 is a potential conflict.

Reference to Table 1019.1 for the required number of exits from spaces has been the source of much confusion and is deleted. The required number of exits from spaces is specified more comprehensively in Sections 1015.1 and 1015.1.1, which require two or more exits or exit access doorways from spaces based on their occupant load and other factors. Note that Table 1019.1 does not require a minimum number of exits from spaces, but does require a minimum number from each story. The phrase "approved independent" in Section 1019.1 is superfluous and is deleted. The phrase "basement or individual space" is also deleted. A basement is a story that is partly or completely below grade plane making it superfluous. A story is composed of spaces making reference to them superfluous since stories include them.

Reference to Section 1015.1 in Section 1019.1 is superfluous and is deleted. Section 1019.1 requires at least two exits from each story. Section 1015.1 requires two exits from certain spaces but does not require exits from stories. Consequently, Section 1015.1 would never modify the requirements of Section 1019.1. Section 1015.1.1 intends to require three exits or exit access doorways from spaces with an occupant load of 501-1,000 and four exits or exit access doorways from spaces with an occupant load greater than 1,000. This is consistent with Table 1019.1, which specifies three exits from stories with an occupant load of 501-1,000 and four exits from stories with an occupant load greater than 1,000.

The proposed revisions to Section 1019.2 are largely editorial. The charging statement and Item #1 are revised to mandatory language. In Item #3, reference to the story is deleted and the phrase "means of egress" is replaced with "exit or exit access doorway" because compliance with Section 1015.1 is dependent on the number of exits or exit access doorways from spaces, not from stories, and requirements for the means of egress are not specified other than exits or exit access doorways from spaces.

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

Analysis: Tables 1015.1, 1019.1 and 1019.2 are shown for information only.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1019.1 Exits from stories. All spaces within each story shall have access to the minimum number of approved independent exits as specified in Table 1019.1 based on the occupant load of the story, except as modified in Section 1015.1 or 1019.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story shall be maintained until arrival at grade or the public way.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal will address floors with smaller occupant loads than the level above or below, separating exits from spaces and exits from stories. The language will also clear up a reference circle.

The modification was to leave in the term ›approved independent‹ in Section 1019.1. This is important text to remain for the means of egress system.

Assembly Action: **None**

Final Hearing Results

E113-06/07 **AM**

Code Change No: E115-06/07

Original Proposal

Sections: 1015.1, 1019.1 (IFC [B] 1015.1, [B] 1019.1)

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

Revise as follows:

1015.1 Exit or exit access doorways required. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds the values in Table 1015.1.

   Exception: In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 16 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

2. The common path of egress travel exceeds the limitations of Section 1014.3.
3. Where required by Sections 1015.3, 1015.4 and 1015.5.

   Exception: Group I-2 occupancies shall comply with Section 1014.2.2.

1019.1 Minimum number of exits. All rooms and spaces within each story shall be provided with and have access to the minimum number of approved independent exits required by Table 1019.1 based on the occupant load of the story, except as modified in Section 1015.1 or 1019.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way.

Exception: In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 16 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Reason: This proposal allows one exit in some dwelling units. This proposal is consistent with the IRC provisions allowing one exit from dwelling units, and is safer because dwellings built according to the IBC will have sprinkler protection. This reduction in exiting requirements is mitigated by the familiarity of the occupants with the exits, and their control over the environment. The code still requires two exits from every story outside the dwelling unit.

This provision is important for small dwelling units where there often is not enough space for two exits. It's also important for larger dwelling units in multifamily buildings in which it can be impracticable to provide the required separation between exits, particularly for buildings on urban infill lots with small footprints.

The occupant load of 16 was chosen for consistency with new provisions for Group R congregate living facilities. According to Section 310.1, congregate living facilities with 16 or fewer persons are Group R-3 occupancies, and those with more are Group R-2 occupancies.

The proposal is limited to dwelling units that are less than 3,200 square feet (Table 1004.1.1 specifies 200 sq.ft./person x 16 occupants = 3,200 sq.ft.) which corresponds with maximum allowable area for dwellings with one exit in one of the legacy codes. Other provisions of Chapter 10 may require additional exits to be provided – provisions limiting the length of the common path of egress travel and travel distance will apply. The limit of 125 feet on common path of egress travel found in Section 1014.3 is an especially strict limit.

There are cases where multifloor dwelling units with a small floor area and small occupant load are required to have access to two exits from the upper floors. In these cases, the common path of egress travel, which will be measured along stairways, will limit the size of a dwelling that can have one exit.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1015.1 Exit or exit access doorways required. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds the values in Table 1015.1.

   Exception: In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of ~~16~~ 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

2. The common path of egress travel exceeds the limitations of Section 1014.3.
3. Where required by Sections 1015.3, 1015.4 and 1015.5.

Exception: Group I-2 occupancies shall comply with Section 1014.2.2.

1019.1 Minimum number of exits. All rooms and spaces within each story shall be provided with and have access to the minimum number of approved independent exits required by Table 1019.1 based on the occupant load of the story, except as modified in Section 1015.1 or 1019.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way.

Exception: In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of ~~16~~ 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Committee Reason: This proposal specifically addressed allowances for a single exit access door from an individual dwelling unit. This is a common problem resulting from dwelling units getting larger without an increase in actual occupant load.. A concern was expressed on how this propose would affect Group R-2 dormitories or congregate residences.

A modification was made to also allow a NFPA 13R systems, commonly used in Group R occupancies, for this allowance for one means of egress.

A second modification was made to increase the occupant load to 20 so that this provision would cover a dwelling unit up to 4,000 square feet in area. A concern was expressed about this number possibly leading to confusion with 16 occupants being used to determine congregate residences that could use Group R-3 requirements.

Assembly Action: **None**

Final Hearing Results

E115-06/07 **AM**

Code Change No: E122-06/07

Original Proposal

Sections: 1016.1, 1019.1, 1020.1 (IFC [B] 1016.1, [B] 1019.1, [B] 1020.1)

Proponent: Sarah A. Rice, CBO, Schirmer Engineering Corporation

Revise as follows:

1016.1 Travel distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distances given in Table 1016.1.

Where the path of exit access includes unenclosed stairways or ramps within the exit access ~~or includes unenclosed exit ramps or stairways as permitted in Section 1020.1~~, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

Exceptions:

1. Travel distance in open parking garages is permitted to be measured to the closest riser of open stairs.
2. In outdoor facilities with open exit access components and open exterior stairs or ramps, travel distance is permitted to be measured to the closest riser of a stair or the closest slope of the ramp.
3. ~~Where an exit stair is permitted to be unenclosed in accordance with Exception 8 or 9 of Section 1019.1, the travel distance shall be measured from the most remote point within a building to an exit discharge.~~ In other than occupancy Groups H and I, the exit access travel distance to a maximum of 50 percent of the exits is permitted to be measured from the most remote point within a building to an exit discharge using unenclosed stairways or ramps when connecting a maximum of 2 stories. The two connected stories shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
4. In other than occupancy Groups H and I, exit access travel distance is permitted to be measured from the most remote point within a building to an exit discharge using unenclosed stairways or ramps in the first and second stories in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3..1.1.The first and second stories shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

1019.1 Minimum number of exits. All rooms and spaces within each story shall be provided with and have access to the minimum number of approved independent exits required by Table 1019.1 based on the occupant load of the story, ~~except as modified in Section 1015.1 or 1019.2~~. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way.

Exceptions:

1. As modified by Section 1015.1.
2. As modified by Section 1019.2.
3. Rooms and spaces within each story provided with and having access to a means of egress that complies with Exception 3 or 4 in Section 1016.1 shall not be required to be provide the minimum number of approved independent exits required by Table 1019 on each story.

1020.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. Exit enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the exit enclosure shall include any basements but not any mezzanines. An exit enclosure shall not be used for any purpose other than means of egress.

Exceptions:

1. In all occupancies, other than Group H and I occupancies, a stairway is not required to be enclosed when the stairway serves an occupant load of less than 10 and the stairway complies with either Item 1.1 or 1.2. In all cases, the maximum number of connecting open stories shall not exceed two.
   1.1. The stairway is open to not more than one story above the story at the level of exit discharge; or
   1.2. The stairway is open to not more than one story below the story at the level of exit discharge.
2. Exits in buildings of Group A-5 where all portions of the means of egress are essentially open to the outside need not be enclosed.
3. Stairways serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.
4. ~~Stairways that are not a required means of egress element are not required to be enclosed where such stairways comply with Section 707.2.~~
5. Stairways in open parking structures that serve only the parking structure are not required to be enclosed.
6. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
7. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.

~~8. In other than Group H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.~~

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

Reason: There appears to be two distinct egress concepts that though integrally tied, are being confused. How exit access travel distance is measured (Section 1016.1) and when exits are required to be enclosed in fire rated constructions (Section 1020.1).

Section 1016.1 is intended to tell the code user how to measure "exit access travel distance" , e.g., from the most remote point on a story to an "exit." Section 1020.1 tells the code user that all exits are to be enclosed in fire rated construction, and more importantly, the conditions when an exit is not required to be enclosed in fire rated construction. In multiple story buildings, that "exit" is typically an interior stairway or an exterior stairway, separated from the remainder of the story by fire rated construction.

Through past code change activity, the membership has accepted the concept that exit access travel distance does not always have to terminate at an "exit" which is located on that story, but under certain circumstances (those found in Exceptions 8 & 9 in Section 1020.1) can continue down a vertical egress element until the exit access travel distance is exceeded. At that point, regardless of where within the building the person is they must enter an "exit" that is enclosed in fire rated construction.

We do not disagree with the concept of allowing the exit access travel distance to continue past what has traditionally been the termination point, the top of a stairway. But we do feel that code, as currently written in Sections 1016.1 and 1020.1, does not accurately depict the concept. Rather than making the allowance for exit access travel distance to extend past the story in which it started in Section 1016.1, the code has made exceptions to when a vertical exit is required to be enclosed in Section 1020.1.

The proposed language here, and in Section 1020.1, seeks to clarify the application of this concept. The exceptions now found in Section 1020.1 are proposed for deletion and relocated into Section 1016.1. In addition, the current arrangement of the concept of measuring exit access travel distance has created confusion with regard to the application of other provisions within the code, e.g., enclosure of exit access corridors, levels of exit discharge, exit passageways.

Regarding the deletion of Exception 4: Section 1020 is only applicable to "vertical exit enclosures." One would not even look to Section 1020 for a stair that is not an "exit." Openings created by stairs that are not exits are not treated unlike any other opening in a floor assembly. They are classified as "openings" in horizontal assemblies and subject to the applicable provisions for such, potentially shaft enclosures or classification as an atrium. Retaining the text of Exception 4 is misleading as it seems to imply that stairs that are not exits are in some way regulated by the provisions of Section 1020 when this is untrue. The proposed deletion of Exception 4 removes any possible confusion.

The intent of the revision to Section 1019.1 is to address the concern over two exit access stairways being provided from a 2nd floor when two exits were required. This is basically a correlation issue.

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

Public Hearing Results

Committee Action: Approved as Modified

Modify proposal as follows:

1016.1 Travel distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distances given in Table 1016.1.

Where the path of exit access includes unenclosed stairways or ramps within the exit access the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

Exceptions:

1. Travel distance in open parking garages is permitted to be measured to the closest riser of open stairs.
2. In outdoor facilities with open exit access components and open exterior stairs or ramps, travel distance is permitted to be measured to the closest riser of a stair or the closest slope of the ramp.
3. In other than occupancy Groups H and I, the exit access travel distance to a maximum of 50 percent of the exits is permitted to be measured from the most remote point within a building to an exit ~~discharge~~ using unenclosed stairways or ramps when connecting a maximum of 2 stories. The two connected stories shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.
4. In other than occupancy Groups H and I, exit access travel distance is permitted to be measured from the most remote point within a building to an exit ~~discharge~~ using unenclosed stairways or ramps in the first and second stories in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3..1.1.The first and second stories shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal moves exit access requirements out of the current exit requirements in Section 1020.1 and into the correct location, Section 1016.1. This clarifies the limits for the open stairways that are part of the means of egress and their use in the building. The modification deleted the term 'discharge' from Section 1016.1 in Exceptions 3 and 4. Travel down the open exit access stairways could lead to an enclosed exit stairway, and not always directly to the door to the outside (i.e. exit discharge).

Assembly Action: **None**

Final Hearing Results

E122-06/07 **AM**

Code Change No: E130-06/07

Original Proposal

Sections: 1017.3 (IFC [B] 1017.3)

Proponent: William E. Koffel, P.E., Koffel Associates, Inc.

Revise as follows:

1017.3 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 308.4), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, ~~and~~ E, F, I-1, M, R-1, R-2, R-4, S, and U, where the building is equipped throughout with an automatic sprinkler system in accordance with 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

Reason: The allowance of 50 foot dead-end corridors in fully sprinkler protected buildings is consistent with other national codes, including the 2006 Edition of NFPA 101 Table A.7.6, the 2006 Edition of NFPA 5000, the 2006 Edition of the International Existing Building Code (2006 IEBC), and the 2006 Edition of the International Fire Code (IFC). In other than Group A and H occupancies, the 2006 IEBC permits newly created dead-end corridors of 50 feet on floors protected with an automatic sprinkler system in accordance with the 2006 International Building Code (IBC) for Alterations – Level 2 (605.6 exc. 4) and Alterations – Level 3 (705.1). In addition, Section 812.4.1.1 (Means of egress for change in occupancy to higher hazard) of the 2006 IEBC references Section 605.6 for existing dead-end corridors. Further, when the change of occupancy complies with Section 812.3 of the 2006 IEBC, Section 812.4.1.2 (Means of egress for change of use to equal or lower hazard category) of the 2006 IEBC allows existing dead-end corridors no matter what length to remain regardless of the presence of an automatic sprinkler system. Section 1027.17.2 of the 2006 IFC permits dead-end corridors of 50 feet in buildings with an automatic sprinkler system in accordance with the 2006 IFC.

Once a new building is given its Use & Occupancy approval, any future work in the building can reference the 2006 IEBC and 2006 IFC requirements. The lack of conformity between the 2006 IBC and the 2006 IEBC and the 2006 IFC creates a conflict when future Alteration level work occurs. Amending Section 1017.3 of the 2006 IBC to allow 50 foot dead-end corridors in buildings containing the proposed occupancies, where the building is protected throughout with an automatic sprinkler system in accordance with NFPA 13 requirements allows for consensus between the two ICC building codes and the 2006 IFC. A similar code change is necessary for the Section 1017.3 (new dead-end corridors) of the 2006 IFC to address the allowable dead-end corridor distance of the 2006 IEBC and Section 1027.17.2 of the 2006 IFC.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that a 50 foot dead end corridor would allow for safe egress and increase design options. It was noted that a NFPA 13 system was required for this increase even for Group R occupancies.

Assembly Action: **None**

Final Hearing Results

E130-06/07 **AS**

Code Change No: E134-06/07

Original Proposal

Sections: 1019.1.2 (IFC [B] 1019.1.2)

Proponent: Robert Bagnetto, Lapeyre Stair, Inc./Laitram Corp.

Revise as follows:

1019.1.2 Helistops. The means of egress from helistops shall comply with the provisions of this chapter, provided that landing areas located on buildings or structures shall have two or more exits. For landing platforms or roof areas less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m2) in area, the second means of egress is permitted to be a fire escape, alternating tread device, or ladder leading to the floor below.

Reason: The purpose of this proposed code change to IBC-2006 is to allow the use of alternating tread devices as a means of egress from Helistops.

IBC-2006 Section 1019.1.2 is overly restrictive in that it does not allow the use of alternating tread devices as a means of egress from Helistops. IBC-2003 allows the use of alternating tread devices in sections, including but not limited to, 1009.11, 1015.3, 1015.4, and 1015.6.1. Alternating tread devices are typically safer to use than ladders and would be suitable for the application specified in section 1019.1.2. This proposal is superior to the current code in that it allows an additional adequate means of egress from Helistops that is not allowed under the current code.

Cost Impact: The change could result in a minor increase in construction costs if alternating tread devices are used in lieu of ladders as the second means of egress to Helistops.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The alternating tread device provides the same level of safety as the ladder, which is already permitted by the code as a second exit from helistops.

Assembly Action: **None**

Final Hearing Results

E134-06/07 **AS**

Code Change No: E136-06/07

Original Proposal

Sections: 1019.2, Table 1019.2, 1019.3 (New) [IFC [B] 1019.2, [B] Table 1019.2, [B] 1019.3 (New)]

Proponent: Lori Lee Graham, City of Portland, Oregon

1. Revise as follows:

1019.2 ~~Buildings~~ Stories with one exit. Only one exit shall be required ~~in buildings~~ from stories as described below:

1. ~~Buildings~~ Stories described in Table 1019.2, ~~provided that the building has not more than one level below the first story above grade plane~~.

2. Buildings of Group R-3 occupancy.
3. ~~Single-level buildings with the occupied space at the level of exit discharge provided that the story or space complies with Section 1015.1 as a space with one means of egress.~~

2. Delete table and substitute as follows:

~~TABLE 1019.2~~
~~BUILDINGS WITH ONE EXIT~~

~~OCCUPANCY~~	~~MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE~~	~~MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE~~
~~A, B[d], E[e], F, M, U~~	~~1 Story~~	~~49 occupants and 75 feet travel distance~~
~~H-2, H-3~~	~~1 Story~~	~~3 occupants and 25 feet travel distance~~
~~H-4, H-5, I, R~~	~~1 Story~~	~~10 occupants and 75 feet travel distance~~
~~S[a]~~	~~1 Story~~	~~29 occupants and 100 feet travel distance~~
~~B[b], F, M S[a]~~	~~2 Stories~~	~~30 occupants and 75 feet travel distance~~
~~R-2~~	~~2 Stories~~	~~4 dwelling units and 50 feet travel distance~~

~~For SI: 1 foot = 304.8 mm.~~

~~a. For the required number of exits for parking structures, see Section 1019.1.1.~~
~~b. For the required number of exits for air traffic control towers, see Section 412.1.~~
~~c. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1026 shall have a maximum height of three stories above grade plane.~~
~~d. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 with an occupancy in Group B shall have a maximum travel distance of 100 feet.~~
~~e. Day care maximum occupant load is 10.~~

TABLE 1019.2
STORIES WITH ONE EXIT

STORY ABOVE GRADE PLANE	OCCUPANCY	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE TO EXIT
First story or basement	A, B[d], E[e], F[d], M, U, S[d]	49 occupants and 75 feet travel distance
	H-2, H-3	3 occupants and 25 feet travel distance
	H-4, H-5, I, R	10 occupants and 75 feet travel distance
	S[a]	29 occupants and 100 feet travel distance
Second story	**B[b], F, M, S[a]**	29 occupants and 75 feet travel distance
	R-2	4 dwelling units and 50 feet travel distance
Third Story	R-2[c]	4 dwelling units and 50 feet travel distance

a. For the required number of exits for parking structures, see Section 1019.1.1.
b. For the required number of exits for air traffic control towers, see Section 412.1.
c. Emergency escape and rescue openings as provided in accordance with Section 1026.
d. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.
e. Day care occupancies shall have a maximum occupant load of 10.

1019.3 Egress from multi-story dwelling units. Only one exit is required from individual multi-story dwelling units located in buildings of any height provided the dwelling unit meets all of the following requirements:

1. The individual dwelling unit occupies not more than three stories; and

2. The exit from the dwelling unit is located at the level of exit discharge or is located to provide immediate access to not less than two approved independent exits from the story; and
3. The dwelling unit complies with Section 1015.1 as a space with one means of egress.

Reason: The purpose of the proposed code change is to provide clarity to egress review in conditions where only one exit is provided. The reasons are as follows:

- Confusion Regarding Application of Table**:** Table 1019.2 has caused great confusion amongst the plans examiners and the public. Frequently a building has multiple exits on the Ground Level and people have assumed that the table does not apply in these conditions. Yet, oftentimes, the exits are not available to all spaces or tenants.
- Mixed Occupancies: Table 1019.2 does not address mixed occupancies and yet planning codes are encouraging mixed occupancies. It is common to have residential use over commercial space but frequently the access and egress systems are completely independent of each other.
- Multiple Tenants: This code section fails to address the separations that occur in buildings due to multiple tenant spaces. Tenant configurations have become less standardized. Tenants frequently want to control access and egress from their space.
- Discrepancy in Application: The current table treats the first story of a two story building differently then a one-story building. This makes no sense. It would be preferable to review each level separately. For instance, under the current table, a one story mercantile building may have 50 occupants and 75 feet travel distance but the first story of a two story mercantile building may only have 30 occupants.

Examples:

- A two-story office building has separate tenant spaces on each story. There is a lobby shared by both tenants with a stair serving the 2nd floor tenant. There is a 2nd door, leading from the ground level tenant space to the parking lot. The 2nd floor does not have a 2nd exit access.
- A two story office building with a demising wall separating the building into two, two-story spaces. Each tenant has its own entrance and stair. There is no shared exit way.
- Three story, mixed use building with Retail on the first floor, offices on the 2nd floor and apartments on the 3rd floor. The offices and apartments share one exit stair. The Retail tenants have individual exits.

Substantiation: The proposed table evaluates the egress system based on the specific story in question and the occupancy of that story. This provides more flexibility in evaluating egress systems when there are mixed occupancies or multiple tenants. It also reduces the confusion that the present table has created.

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

Analysis: The proponent has a similar proposal that matches the last new section proposed, Section 1019.3. If approved, the committee should be aware of the different location for the proposed text.

Public Hearing Results

Committee Action: Approved as Modified

Modify the proposal as follows:

TABLE 1019.2
STORIES WITH ONE EXIT

(No change to content of table)

a. For the required number of exits for parking structures, see Section 1019.1.1.
b. For the required number of exits for air traffic control towers, see Section 412.1.
c. ~~Emergency escape and rescue openings as provided in accordance with Section 1026.~~ Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1026.
d. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.
e. Day care occupancies shall have a maximum occupant load of 10.

~~**1019.3 Egress from multi-story dwelling units.** Only one exit is required from individual multi-story dwelling units located in buildings of any height provided the dwelling unit meets all of the following requirements:~~

~~1. The individual dwelling unit occupies not more than three stories; and~~
~~2. The exit from the dwelling unit is located at the level of exit discharge or is located to provide immediate access to not less than two approved independent exits from the story; and~~
~~3. The dwelling unit complies with Section 1015.1 as a space with one means of egress.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal clarifies the intent of the code. The charging statement in 1019.1 states that every story has two exits. The proposal carries on with that and references stories again versus the entire building. The proposal will allow for small 2nd floors or basements that meet the travel distance over a much larger 1st floor to have single exits. Note c from the original text will be maintained. It is necessary to provide information that for a single exit to be permitted, both a sprinkler system and emergency escape window are necessary for adequate safety. A modification was offered by the proponent for the deletion of proposed section 1019.3 since it was already addressed by committee action on E115-06/07 and E135-06/07.

Assembly Action: **None**

Final Hearing Results

E136-06/07 **AM**

Code Change No: E138-06/07

Original Proposal

Sections: 1020.1 (IFC [B] 1020.1)

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

Revise as follows:

1020.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. Exit enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the exit enclosure shall include any basements but not any mezzanines. Exit enclosures shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours. An exit enclosure shall not be used for any purpose other than means of egress.

Exceptions:

1. In all occupancies, other than Group H and I occupancies, a stairway is not required to be enclosed when the stairway serves an occupant load of less than 10 and the stairway complies with either Item 1.1 or 1.2. In all cases, the maximum number of connecting open stories shall not exceed two.
   1.1. The stairway is open to not more than one story above the story at the level of exit discharge; or
   1.2. The stairway is open to not more than one story below the story at the level of exit discharge.
2. Exits in buildings of Group A-5 where all portions of the means of egress are essentially open to the outside need not be enclosed.
3. Stairways serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.
4. Stairways that are not a required means of egress element are not required to be enclosed where such stairways comply with Section 707.2.
5. Stairways in open parking structures that serve only the parking structure are not required to be enclosed.
6. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
7. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.
8. In other than Group H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.
9. In other than Group H and I occupancies, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.

Reason: The purpose of this code change is for vertical exit enclosures to have their minimum required fire-resistance rating determined in the same manner as required for shaft enclosures in Section 707.4. The added text is taken from the last sentence of that section. Since a vertical exit enclosure is basically the same as a shaft enclosure in regard to the protection of vertical openings penetrating multiple floors, the minimum fire-resistance rating requirements should be the same.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal will promote consistency between the floor rating requirements and the vertical enclosure ratings. A concern was expressed regarding the lack or substantiation for this change.

Assembly Action: **None**

Final Hearing Results

E138-06/07 **AS**

Code Change No: E139-06/07

Original Proposal

Sections: 1011.3, 1020.1.6 (IFC [B] 1011.3, [B] 1020.1.6), 1110.3

Proponent: Bill Conner, Conner Associates LLC, representing himself

Revise as follows:

1011.3 Tactile exit signs. A tactile sign stating EXIT and complying with ICC A117.1 Section 703.3 shall be provided adjacent to each door to an ~~egress~~ exit stairway, an exit ramp, an exit passageway and the exit discharge.

1020.1.6 ~~Stairway~~ Floor number signs. A sign shall be provided at each floor landing in interior exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the ~~stair~~ exit enclosure and the identification of the stair or ramp. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the ~~stairway~~ enclosure for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. Floor level identification signs in tactile characters complying with ICC A117.1, Section 703.3 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

1110.3 Other signs. Signage indicating special accessibility provisions shall be provided as shown:

1. Each assembly area required to comply with Section 1108.2.6 shall provide a sign notifying patrons of the availability of assistive listening systems.

   Exception: Where ticket offices or windows are provided, signs are not required at each assembly area provided that signs are displayed at each ticket office or window informing patrons of the availability of assistive listening systems.

2. At each door to an egress stairway, exit passageway and exit discharge, signage shall be provided in accordance with Section 1011.3.
3. At areas of refuge, signage shall be provided in accordance with Sections 1007.6.3 through 1007.6.5.
4. At areas for assisted rescue, signage shall be provided in accordance with Section 1007.8.3.
5. Within exit enclosures signage shall be provided in accordance with Section 1020.1.6.

Reason: Tactile signs should also be required at exit ramps, similar to exit stairways. Exit signage is not required at all stairways, just exit stairways. The change will also coordinate with ADAAG 216.4.1 and ICC A117.1 504.9.

Persons with visual impairments need to know what floor level they are on both for general use and emergency situations. This is coordination with ICC A117.1 504.9. The proposal to Section 1110.3 is coordination only.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the reason was given as coordination with ICC A117.1 and floor number signs are not required by ICC A117.1. The IBC should not reference specific sections of the ICC A117.1 standard.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Bill Conner, representing himself, requests Approval as Modified by this public comment.

Modify proposal as follows:

1011.3 Tactile exit signs. A tactile sign stating EXIT and complying with ICC A117.1 ~~Section 703.3~~ shall be provided adjacent to each door to an exit stairway, an exit ramp, an exit passageway and the exit discharge.

1020.1.6 Floor number signs. A sign shall be provided at each floor landing in interior exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair or ramp. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the enclosure for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. Floor level identification signs in tactile characters complying with ICC A117.1, ~~Section 703.3~~ shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

1110.3 Other signs. Signage indicating special accessibility provisions shall be provided as shown:

1. Each assembly area required to comply with Section 1108.2.6 shall provide a sign notifying patrons of the availability of assistive listening systems.

   Exception: Where ticket offices or windows are provided, signs are not required at each assembly area provided that signs are displayed at each ticket office or window informing patrons of the availability of assistive listening systems.

2. At each door to an egress stairway, exit passageway and exit discharge, signage shall be provided in accordance with Section 1011.3.
3. At areas of refuge, signage shall be provided in accordance with Sections 1007.6.3 through 1007.6.5.
4. At areas for assisted rescue, signage shall be provided in accordance with Section 1007.8.3.
5. Within exit enclosures signage shall be provided in accordance with Section 1020.1.6.

Commenter=s Reason: The reference to Section 703.3 in ICC A117.1 was intended to provide specific direction to appropriate requirements for the signage rather than a general reference, but based on the committee comments, it has been removed from the proposal.

The committee was incorrect in it's assumption that floor level identification is not found in A117.1. See ICC A117.1-2003, Section 504.9. It is proposed to add this important safety information into the building code. This is not just an accessibility issue.

Final Hearing Results

E139-06/07 **AMPC1**

Code Change No: E140-06/07

Original Proposal

Sections: 1020.1.6, 1020.1.6.1 (New) [IFC [B] 1020.1.6, [B] 1020.1.6.1 (New)]

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

Revise as follows:

1020.1.6 Stairway identification ~~floor number~~ signs. A sign shall be provided at each floor landing in interior exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and the identification of the stair. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the stairway for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions.

1020.1.6.1 Signage requirements. Stairway identification signs shall comply with all of the following requirements:

1. The signs shall be a minimum size of 18 inches (457 mm) by 12 inches (305 mm).
2. The letters designating the identification of the stair enclosure shall be a minimum of 1-1/2 inches (38 mm) in height.
3. The number designating the floor level shall be a minimum of 5 inches (127 mm) in height and located in the center of the sign.
4. All other lettering and numbers shall be a minimum of 1 inch in height (22 mm).
5. Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

Reason: The only intent of this code change proposal is to revise the title of this section to a title that more accurately reflects the content of the Section. In addition, the proposed signage requirements will provide some sort of consistency for stairway identification signs across the U.S. The signage requirements are based on current GSA requirements as well current signage requirement in the NFPA 101, *Life Safety Code*.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal adds necessary clarification and standardization to the code regarding stairway floor signage requirements.

Assembly Action: **None**

Final Hearing Results

E140-06/07 **AS**

Code Change No: E146-06/07

Original Proposal

Sections: 1022.4 (New) [IFC [B] 1022.4 (New)

Proponent: Dennis Richardson, City of San Jose, CA Building Division, representing Tri-Chapter Code Committee (Peninsula, East Bay and Monterey Chapters of ICC)

Add new text as follows:

1022.4 Ducts and air transfer openings, Ducts and air transfer openings through fire walls or fire barriers, forming a horizontal exit, shall be designed and protected in accordance with Section 716 in order to afford safety from both fire and smoke in the refuge area. All ducts and air transfer openings shall be protected by listed combination fire/smoke dampers.

Reason: The purpose of the code change is to provide code language that implements the intent of Section 1002.1, definition of Horizontal Exit. Horizontal exits are intended to afford safety from both fire **and smoke.**

No code provisions specifically require duct and air transfer openings in horizontal exit walls to be designed and protected in order to afford safety from both fire and smoke in the refuge area.

Section 1022.2 Separation, refers to sections 705 and 706 which refer to 716.5.1 and 716.5.2 There are no provisions in 716.5.1 Fire walls, and 716.5.2 Fire barriers, requiring ducts and air transfer openings in horizontal exit walls to be protected by anything other than fire dampers.

Cost Impact: The code change proposal will not increase the cost of construction as the definition of Horizontal Exit is very clear. It is currently the intent of the code to provide protection from smoke in addition to fire for horizontal exits. It appears the lack of such implementing code language is an oversight in the current code.

Analysis: If approved, would this section conflict with duct and transfer opening requirements for fire walls Section 705.10 or fire barrier in Section 706.10?

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proponent has identified a missing item in the code that needs be addressed, however, the reference to Section 716 jumps over limitations in fire walls and fire barriers. This language would better located in Chapter 7.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Dennis Richardson, City of San Jose, Building Division, representing Tri-Chapter Code Committee (Peninsula, East Bay, and Monterey Bay Chapters of ICC) requests Approval as Modified by this public comment.

Replace proposal with the following:

716.5.1.1 Horizontal Exits. A listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a fire wall or fire barrier that serves as a horizontal exit.

716.5.2.1 Horizontal Exits. A listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a fire wall or fire barrier that serves as a horizontal exit.

1022.2 Separation. The separation between buildings or refuge areas connected by a horizontal exit shall be provided by a fire wall complying with Section 705 or a fire barrier complying with Section 706 and having a fire-resistance rating of not less than 2 hours. Opening protectives in horizontal exit walls shall also comply with Section 715. Duct and air transfer openings in a fire wall or fire barrier that serves as a horizontal exit shall also comply with Section 716. The horizontal exit separation shall extend vertically through all levels of the building unless floor assemblies have a fire-resistance rating of not less than 2 hours with no unprotected openings.

Commenter's Reason: The committee acknowledged smoke dampers are missing for fire walls and fire barriers serving as horizontal exit walls in the present code language. This public comment addresses the concern raised by the committee that the original language in E146 creating a new section to address this issue jumped over references to Sections 705 and 706 found in Section 1022.2 of the present code language. By adding the reference to Section 716 in a similar manner as the reference to Section 715 found in Section1022.2, the public comment language preserves the integrity of the references to Sections 705 and 706 found in Section 1022.2. Sections 716.5.1.1 and 716.5.2.1 are added in Chapter 7 to clarify smoke dampers are required in addition to fire dampers for fire walls and fire barriers serving as a horizontal exit wall but not in other fire walls and fire barriers.

Final Hearing Results

E146-06/07 AMPC1

Code Change No: E147-06/07

Original Proposal

Sections: 1023.2 (IFC [B] 1023.2)

Proponent: Tim Pate, City and County of Broomfield, Colorado Building Department, representing Colorado Chapter ICC

Revise as follows:

1023.2 Use in a means of egress. Exterior exit ~~ramps and~~ stairways shall not be used as an element of a required means of egress for Group I-2 occupancies. For occupancies in other than Group I-2, exterior exit ramps and stairways shall be permitted as an element of a required means of egress for buildings not exceeding six stories above grade plane or having occupied floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

Reason: This proposal will delete the requirement that does not allow an exterior exit ramp to be used as a part of the means of egress (exit discharge) for an I-2 occupancy. The code would allow an exit ramp to be used within the building to access the exit so it does not make sense to not allow the same type of exit ramp to be used at the exterior discharge. The ramp would be constructed with the proper maximum slope, handrails, edge protection, etc. so that it would be just as safe on the exterior as it is on interior. The code also regulates outdoor conditions as per Section 1010.7.2 which would make sure water would not accumulate on the walking surface.

The change that put this in – E60/02, was adding 'ramps and' to multiple sections that addressed 'stairways'. The reason states "This proposal is to recognize that exterior exit elements can also include ramps. The same protection criteria applied to stairways is also applicable to ramps when used as part of the exit system." It appears this change, especially when a high percentage of the people could be in wheelchairs or even in beds, inadvertently resulted in a prohibition for exterior ramps for Group I-2 occupancies.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: While the committee agreed that ramps should be permitted as part of the means of egress from Group I-2 facilities at some level, with the current deletion, the second sentence of the section would then allow a Group I-2 to have an exit ramp of any height.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Tim Pate, City and County of Broomfield, Colorado, representing himself, requests Approval as Modified by this public comment.

Replace proposal as follows:

1023.2 Use in a means of egress. Exterior exit ramps with a rise of more than one story and stairways shall not be used as an element of a required means of egress for Group I-2 occupancies. For occupancies in other than Group I-2, exterior exit ramps and stairways shall be permitted as an element of a required means of egress for buildings not exceeding six stories above grade plane or having occupied floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

Commenter=s Reason: The intent of the original code change was to allow exterior ramps to serve as part of required means of egress for Group I-2 occupancies since ramps could also be used as part of the exit access within the same occupancy. The committee agreed that an exterior ramp should be allowed. They had concern that the original wording would then allow an exterior ramp of any height. This modification would restrict the height of the exterior ramp to one story or less. This modified change would then allow I-2 occupancies to be built on sites where the required exits are not always at grade.

Final Hearing Results

E147-06/07 AS

Code Change No: E150-06/07

Original Proposal

Sections: 1024.1 (IFC [B] 1024.1)

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

Revise as follows:

1024.1 General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building.

Exceptions:

1. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through areas on the level of discharge provided all of the following are met:
   1.1. Such exit enclosures egress to a free and unobstructed way to the exterior of the building, which way is readily visible and identifiable from the point of termination of the exit enclosure.
   1.2. The entire area of the level of discharge is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.
   1.3. The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exits.
2. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through a vestibule provided all of the following are met:
   2.1. The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.
   2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).
   2.3. The area is separated from the remainder of the level of exit discharge by construction providing protection at least the equivalent of approved wired glass in steel frames.
   2.4. The area is used only for means of egress and exits directly to the outside.

3. Stairways in open parking garages complying with Section 1020.1, Exception 5, are permitted to egress through the open parking garage at the level of exit discharge.
4. Horizontal exits complying with Section 1022 shall not be required to discharge directly to the exterior of the building.

Reason: This proposed code change corrects an oversight in the International Building Code (IBC). A horizontal exit complying with Section 1022 is a unique type of exit that is located generally within the middle of a story. It subdivides the story into separate areas by 2-hour fire-resistive wall construction to create refuge areas on either side of the horizontal exit wall. The code allows the doors in the horizontal exit to serve as one of the required exits provided there is at least one exit stairway or exterior exit door on each side of the horizontal exit. This allows for the occupants to eventually discharge to the exterior of the building without having to pass through another horizontal exit. Obviously, horizontal exits cannot discharge directly to the exterior of the building by virtue of their design. Yet they are recognized as acceptable exits by the code.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal clarifies that horizontal exits can exit into another building rather than directly to the exterior.

Assembly Action: **None**

Final Hearing Results

E150-06/07 **AS**

Code Change No: E152-06/07

Original Proposal

Sections: 1025.1, 1025.2, 1025.3, 1025.9, 1010.2, 1012.5, 1014.3 (IFC [B]1025.1, [B]1025.2, [B]1025.3, [B]1025.9, [B]1010.2, [B]1012.5, [B]1014.3)

Proponent: Arlan Smith, Idaho Division of Building Safety, representing Idaho Association of Building Officials

Revise as follows:

1025.1 General. Occupancies in Group A and assembly occupancies accessory to Group E which contain seats, tables, displays, equipment or other material shall comply with this section.

1025.2 Assembly main exit. Group A occupancies and assembly occupancies accessory to Group E occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load, but such width shall not be less than the total required width of all means of egress leading to the exit. Where the building is classified as a Group A occupancy, the main exit shall front on at least one street or an unoccupied space of not less than 10 feet (3048 mm) in width that adjoins a street or public way.

Exception: In assembly occupancies where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width.

1025.3 Assembly other exits. In addition to having access to a main exit, each level in a Group A or assembly occupancies accessory to Group E occupancies ~~occupancy~~ having an occupant load greater than 300 shall be provided with additional means of egress that shall provide an egress capacity for at least one-half of the total occupant load served by that level and comply with Section 1015.2.

Exception: In assembly occupancies where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building, provided that the total width of egress is not less than 100 percent of the required width.

1025.9 Assembly aisles are required. Every occupied portion of any occupancy in Group A or assembly occupancies accessory to Group E that contains seats, tables, displays, similar fixtures or equipment shall be provided with aisles leading to exits or exit access doorways in accordance with this section. Aisle accessways for tables and seating shall comply with Section 1014.4.3.

1010.2 Slope. Ramps used as part of a means of egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope). The slope of other pedestrian ramps shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

Exception: Aisle ramp slope in occupancies of Group A or assembly occupancies accessory to Group E occupancies shall comply with Section 1025.11.

1012.5 Handrail extensions. Handrails shall return to a wall, guard or thewalking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. At stairways where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At ramps where handrails are not continuous between runs, the handrail shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom ramps.

Exceptions:

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
2. Aisle handrails in Group A and E occupancies in accordance with Section 1025.13.

1014.3 Common path of egress travel. In occupancies other than Groups H-1, H-2 and H-3, the common path of egress travel shall not exceed 75 feet (22 860 mm). In Group H-1, H-2, and H-3 occupancies, the common path of egress travel shall not exceed 25 feet (7620 mm). For common path of egress travel in Group A occupancies and assembly occupancies accessory to Group E occupancies having fixed seating, see Section 1025.8.

Exceptions:

1. The length of a common path of egress travel in Group B, F and S occupancies shall not be more than 100 feet (30 480 mm), provided that the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Where a tenant space in Group B, S and U occupancies has an occupant load of not more than 30, the length of a common path of egress travel shall not be more than 100 feet (30 480 mm).
3. The length of a common path of egress travel in a Group I-3 occupancy shall not be more than 100 feet (30 480 mm).
4. The length of a common path of egress travel in a Group R-2 occupancy shall not be more than 125 feet (38 100 mm), provided that the building is protected throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

Reason: Without this change we are left with no provisions to govern assembly seating as found in school auditoriums, cafeterias and gymnasiums. These areas are not Group A Occupancies because they are specifically Group E occupancies as per IBC Section 302.2.1 and 303.1.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal provides equivalent levels of egress safety for educational occupancies that may have assembly areas (e.g. cafeterias, libraries).

Assembly Action: **None**

Final Hearing Results

E152-06/07 **AS**

Code Change No: E153-06/07

Original Proposal

Sections: 1025.4 (IFC [B] 1025.4)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

1025.4 Foyers and lobbies. In Group A-1 occupancies, where persons are admitted to the building at times when seats are not available ~~and~~ are allowed to wait in a lobby or similar space, provided such ~~use of~~ lobby or similar space shall not encroach upon the required clear width of the means of egress. ~~Such waiting areas shall be separated from the required means of egress by substantial permanent partitions or by fixed rigid railings not less than 42 inches (1067 mm) high.~~ Such foyer, if not directly connected to a public street by all the main entrances or exits, shall have a straight and unobstructed corridor or path of travel to every such main entrance or exit.

Reason: To eliminate an unnecessary code requirement from the IBC.

This provision does not address egress but the use of the space. It does not belong in the code. The only time that the separation is needed is when there is no emergency in the theater. In practice, these railed separations are unnecessary. The means of egress from a lobby must take into consideration the queuing population, making this requirement redundant.

It is a misunderstanding, therefore, to consider persons in waiting areas as potential obstructions to egress. Whether queuing or seated, these persons are occupants, and must be accommodated by the means of egress. Unfortunately, this requirement is widely interpreted to require rails or partitions, even when (as the code requires) the waiting load is already accommodated by the means of egress.

In addition, these rails or partitions can themselves constitute obstructions to egress.

As an example, a theater has 1,000 seats, 50 employees and a queuing (waiting) load of 300. This results in a total occupant load of 1,350. Egress capacity from the entire occupancy must at least equal this occupant load. More importantly to this proposal, the egress capacity of the main exit from the lobby must accommodate ½ of this load (675). The queuing load is already included in this calculation, and the egress width required to serve the queuing population as well as the theater occupants leaving the seating areas would be required by the code to be accommodated by the main exit and other exits from the occupancy.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The language should not be deleted. A separation is required for waiting areas in order to keep them from creeping into the path for means of egress.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, Code Consultants, Inc., requests Approval as Submitted.

Commenter's Reason: Several comments by the committee seem to indicate that the issue was not well understood. The issue raised y the committee does not validate the concern. Why is it necessary to keep the people in the waiting area from creeping into the path of egress? What is the threat or danger? There was no reason stated because there is none. All the occupants will need to egress in an emergency so the egress path will be "occupied" regardless.

The people in the waiting area and the people in the theater(s) are used to determine the total width of egress at the main entrance. It is not required to distribute the widths according to where they are located in the lobby. The entire set of doors is used for egress. If (for example) the doors are sized for 1500 people in the theater and 500 people in the waiting, the total width must be based upon 2000 occupants – regardless of where they are coming from. If a physical barrier is placed between the people waiting to egress (whether from the theaters or from the lobby) and the egress doors, people will be forced to either wait while their side egresses or climb over the barrier to reach the available egress doors. The entire main egress is designed for the 2000 occupants whether on one side or the other of the fixed barrier. If there were no barrier and people moved over to the path of egress from the theater, they would still be in queue waiting to leave. It takes the same amount of time to

egress 2000 people whether some are "within the path of egress" or not. On the other hand, with the physical barrier in place, it is possible to cause some occupants to be delayed based on which side of the barrier they chose to egress. Given a choice, people typically pick the shortest line but if they are restricted in so doing by a fixed barrier, they cannot opt for the alternate route.

It makes no sense to restrict the occupants from access to egress elements. This provision has been in one of the legacy codes but not the others; nor in the Life Safety Code©. If there is evidence of a problem with the design that has no physical barriers then that should be presented as evidence of a need for the barriers. To date, no entity has presented such evidence. It is illogical to place a restriction on egress in this manner.

The provision appears to be solely based on circulation related concerns – allowing people to leave the theater while not interfering with those waiting for the next event. If that is the case, there are no provisions within the code to determine the width, nor does that fall into the realm of life safety. Hence, it has no place within the code – it is a convenience issue.

As noted above, the fixed barrier is actually less safe that allowing a free and open area from which to select an egress path. Without substantiating data showing that this is a viable concern – and with historical evidence showing that some legacy other codes (and other current codes) do not require the barrier this provision should be removed as a potential impedance to egress.

Final Hearing Results

E153-06/07 AS

Code Change No: E155-06/07

Original Proposal

Sections: 1025.5, 1025.5.1, 1020.1 (IFC [B] 1025.5, [B] 1025.5.1, [B] 1020.1)

Proponent: Tom Wandrie, ICC 300 Development Committee

Revise as follows:

1025.5 Interior balcony, ~~and~~ gallery and press box means of egress. For balconies, ~~or~~ galleries or press boxes having a seating capacity of 50 or more located in Group A occupancies, at least two means of egress shall be provided, with one from each side of every balcony, ~~or~~ gallery or press boxes and at least one leading directly to an exit.

1025.5.1 Enclosure of balcony openings. Interior stairways and other vertical openings shall be enclosed in an exit enclosure as provided in Section 1020.1, except that stairways are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, ~~and~~ auditoriums and sports facilities. At least one accessible means of egress is required from a balcony, ~~or~~ gallery or press boxes level containing accessible seating locations in accordance with Section 1007.3 or 1007.4.

1020.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both. Exit enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the exit enclosure shall include any basements but not any mezzanines. An exit enclosure shall not be used for any purpose other than means of egress.

Exceptions:

1. In all occupancies, other than Group H and I occupancies, a stairway is not required to be enclosed when the stairway serves an occupant load of less than 10 and the stairway complies with either Item 1.1 or 1.2. In all cases, the maximum number of connecting open stories shall not exceed two.
   1.1. The stairway is open to not more than one story above the story at the level of exit discharge; or
   1.2. The stairway is open to not more than one story below the story at the level of exit discharge.
2. Exits in buildings of Group A-5 where all portions of the means of egress are essentially open to the outside need not be enclosed.
3. Stairways serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.

4. Stairways that are not a required means of egress element are not required to be enclosed where such stairways comply with Section 707.2.
5. Stairways in open parking structures that serve only the parking structure are not required to be enclosed.
6. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
7. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.
8. Means of egress stairways from balconies, galleries an press boxes as provided for in Section 1025.5.1, are not required to be enclosed.

~~8.~~ 9. In other than Group H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.

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

Reason: The intent of this proposal is to clarify when press boxes can use a single means of egress. Open stairways are permitted between the press box and the main floor or ground similar to balconies. Changes to Section 1020.1 are for coordination only. If the committee decision is that press boxes do not need to be included, the exception for open exit stairways at balconies and galleries should still be referenced in Section 1020.1.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: While the committee agreed with the intent of the proposal, there can be a great diversity in what might be considered a press box. A definition for press boxes is needed in order to define where this special means of egress would be permitted. It should be clarified if the occupant load would be determined for each room in a press box or the whole level. Press boxes are addressed in IBC 903, 1025 and 1104.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Tom Wandrie, ICC 300 Development Committee, requests Approval as Submitted.

Commenter's Reason: The reason "Press Boxes" were included in our proposed revision was to be certain they would be regulated under the IBC and not the ICC 300 standard. A press box is simply a space which is very similar to a balcony or gallery (both of which are not defined in the IBC). The press box is typically partially or fully enclosed for sound proofing purposes. If fully enclosed, at least one side facing the playing area is glazed. Therefore a fire in the press box would be noticed, similar to a balcony, gallery, or mezzanine. IBC sections 903, 1025, and 1104 already identify press boxes as accessory use areas, and provide sprinkler thresholds and accessible route requirements. We believe it makes the most sense to include press boxes with balconies and galleries in the IBC sections identified in this change proposal. These changes would clearly identify that; a seating capacity of 50 or more requires at least two exits and when exit enclosures are required.

Final Hearing Results

E155-06/07 **AS**

Code Change No: E158-06/07

Original Proposal

Sections: 1025.10 (IFC [B] 1025.10)

Proponent: Ed Roether, HOK SVE

Add new text as follows:

1025.10 Clear width of aisle accessways serving seating. Where seating rows have 14 or fewer seats, the minimum clear aisle accessway width shall not be less than 12 inches (305 mm) measured as the clear horizontal distance from the back of the row ahead and the nearest projection of the row behind. Where chairs have automatic or self-rising seats, the measurement shall be made with seats in the raised position. Where any chair in the row does not have an automatic or self-rising seat, the measurements shall be made with the seat in the down position. For seats with folding tablet arms, row spacing shall be determined with the tablet arm ~~down~~ in the used position.

Exception: For seats with folding tablet arms, row spacing is permitted to be determined with the tablet arm in the stored position where the tablet arm when raised manually to vertical position in one motion automatically returns to the stored position by force of gravity.

Reason: The current language is not clear if the arm is in the used position or folded down on the side. Means of egress should be evaluated using the most conservative approach for aisle accessway width.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: Seats with folding tablets are a common condition that occurs in many higher education lecture halls. The proposal provides specific criteria to maintain the aisle accessways where tablets are used.

Assembly Action: **None**

Final Hearing Results

E158-06/07 **AS**

Code Change No: E160-06/07

Original Proposal

Sections: 1025.14.2 (IFC [B] 1025.14.2)

Proponent: Tom Wandrie, ICC 300 Development Committee

Revise as follows:

1025.14.2 Sightline-constrained guard heights. Unless subject to the requirements of Section 1025.14.3, a fascia or railing system in accordance with the guard requirements of Section 1013 and having a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above

the floor or grade below and the fascia or railing would otherwise interfere with the sightlines of immediately adjacent seating. At bleachers, a guard must be provided ~~where the floor or footboard elevation is more than 24 inches (610 mm) above the floor or grade below and the fascia or railing would otherwise interfere with the sightlines of the immediately adjacent seating~~ where required by ICC 300.

Reason: Code change E73-02 which added this language into the IBC was approved as a coordination item with ICC 300. This 24" drop off requirement is not in the ICC 300 Section 408.1 which deals with guards.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal will coordinate with the ICC 300 and should be addressed in that standard.

Assembly Action: **None**

Final Hearing Results

E160-06/07 **AS**

Code Change No: E163-06/07

Original Proposal

Chapter 35

Proponent: Tom Wandrie, ICC 300 Development Committee

Revise standard as follows:

ICC

ICC 300 – ~~02~~ 06 Standard on Bleachers, Folding and Telescopic Seating and Grandstands

Reason: The work plan for the bleacher standard should result in a completed document before the September hearings.

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

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because although the development of the 2006 edition is complete, the standard is not yet printed and generally available.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Tom Wandrie, ICC 300 Development Committee, requests Approval as Submitted.

Commenter=s Reason: The committee disapproved this proposal because while the final draft for the 2007 edition off ICC 300 was available, the document was not available for sale. The ICC 300, 2007 edition will be published and available for sale before the Final Action Hearings in 2007.

Final Hearing Results

E163-06/07 AS

Code Change No: E164-06/07

Original Proposal

Chapter 35

Proponent: Standards writing organizations as listed below.

Revise standards as follows:

BHMA	Builders Hardware Manufacturers Association 355 Lexington Avenue, 17th Floor New York, NY 10017-6603
Standard reference number	Title
A 156.10-2005 ~~1999~~	Power Operated Pedestrian Doors
NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269-9101
Standard reference number	Title
101-06 ~~03~~	Life Safety Code

Reason: The *ICC Code Development Process for the International Codes* (Procedures) Section 4.5* requires the updating of referenced standards to be accomplished administratively, and be processed as a Code Proposal. In May 2005, a letter was sent to each developer of standards that are referenced in the I-Codes, asking them to provide ICC with a list of their standards in order to update to the current edition. Above is the list received of the referenced standards under the maintenance responsibility of the IBC Means of Egress Committee.

*** 4.5 Updating Standards:** The updating of standards referenced by the Codes shall be accomplished administratively by the appropriate code development committee in accordance with these full procedures except that multiple standards to be updated may be included in a single proposal.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The latest editions of BMHA A156.10 and NFPA 101 were approved for inclusion in the referenced standards.

Assembly Action: **None**

Final Hearing Results

E164-06/07 AS

Code Change No: E165-06/07

Original Proposal

Section: 1103.2.3

Proponent: Ed Roether, HOK SVE

Revise as follows:

1103.2.3 Employee work areas. Spaces and elements within employee work areas shall only be required to comply with Sections 907.9.1.2, 1007 and 1104.3.1 and shall be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. Work areas, or portions of work areas, other than raised courtroom stations, that are less than ~~150~~ 300 square feet (~~14~~ 30 m^2) in area and elevated 7 inches (178 mm) or more above the ground or finish floor where the elevation is essential to the function of the space shall be exempt from all requirements.

Reason: The purpose of this proposed change is twofold, first to clarify that raised courtroom stations are to be accessible and second to amend the allowance for the area of raised work areas in order to coordinate with ADAAG revised July 2004. Without this proposed change raised courtroom stations might typically be exempt even though it is questionable whether such elevation is essential to the function and raised platforms greater than 150 square feet but less than 300 would be required to be accessible even though they would not by ADAAG.

The question at hand is what degree of accessibility is appropriate for raised courtroom stations and raised platforms in general. ADAAG is recognized for establishing such limits. As such, the requirements of ADAAG regarding this issue should be reflected in IBC. However, ADAAG would permit the accessible route to be installed at a later date. This proposal would not given a previous action by the means of egress committee which rejected a proposal to permit courtroom stations to be "adaptable" consistent with ADAAG because of concerns regarding enforceability.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal language will help small business employee areas. This is also consistent with the new ADA/ABA Accessibility Guidelines for employee work areas. The language for court rooms is addressed in E183-06/07.

Assembly Action: **None**

Final Hearing Results

E165-06/07 **AS**

Code Change No: E168-06/07

Original Proposal

Section: 1103.2.14

Proponent: Bill Conner, Bill Conner Associates LLC, representing himself

Revise as follows:

1109.14 ~~1103.2.14~~ Fuel-dispensing systems. Fuel-dispensing systems ~~The operable parts on fuel-dispensing devices~~ shall comply with ICC A117.1~~, Section 308.2.1 or 308.3.1~~.

Reason: Technical provisions specific for accessibility for fuel dispensing systems are addressed in ICC A117.1. There is no reason to repeat the technical requirements/limitations in the IBC. As proposed, this requirement is no longer an exception (Section 1103.2, General Exceptions), so the section should be relocated to Section 1109, Other Features and Facilities. The proposed language also coordinates the provisions in the IBC with the latest ADAAG requirements.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal will coordinate with the technical requirements for fuel dispensing devices in ICC A117.1-2003. Specific sections of a standard should not be referenced in the building code.

Assembly Action: **None**

Final Hearing Results

E168-06/07 **AS**

Code Change No: E169-06/07

Original Proposal

Sections: 1104.3, 1108.2.4

Proponent: Ed Roether, HOK SVE

Revise as follows:

1104.3 Connected spaces. When a building or portion of a building is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways and the public way.

Exception: In assembly areas with fixed seating ~~required to be accessible~~, an accessible route shall not be required to serve ~~fixed seating~~ levels where wheelchair spaces ~~or designated aisle seats~~ ~~required to be on an accessible route~~ are not provided.

1108.2.4 Designated aisle seats. At least 5 percent, but not less than one, of the total number of aisle seats provided shall be designated aisle seats and shall be the aisle seats located closest to accessible routes.

Exception: Designated aisle seats are not required in team or player seating serving areas of sport activity.

Reason: The purpose of this proposed change is to coordinate with the revised ADAAG issued July 2004. Designated aisle seats are not required on an accessible route by the new ADAAG. Therefore, the proposed language is necessary to coordinate with the revised ADAAG.

The applicable provision in the new ADAAG states: “At least 5 percent of the total number of aisle seats provided shall comply with 802.4 and shall be the aisle seats located closest to accessible routes.” Without the proposed revisions, the designated aisle seats could be located up or down a series of steps, which would make their purpose much less effective. This proposed change would coordinate IBC with the new ADAAG.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal clarifies the limits of the exception in Sectin 1104.3. The proposed language in Section 1108.2.4 coordinates the location of the designated aisle seats with the new ADA/ABA Accessibility Guidelines.

Assembly Action: **None**

Final Hearing Results

E169-06/07 **AS**

Code Change No: E170-06/07

Original Proposal

Section: 1104.4

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

Revise as follows:

1104.4 Multilevel buildings and facilities. At least one accessible route shall connect each accessible level, including mezzanines, in multilevel buildings and facilities.

Exceptions:

1. An accessible route is not required to stories and mezzanines above and below accessible levels that have an aggregate area of not more than 3,000 square feet (278.7 m2). This exception shall not apply to:
   1.1. Multiple tenant facilities of Group M occupancies containing five or more tenant spaces;
   1.2. Levels containing offices of health care providers (Group B or I); or
   1.3. Passenger transportation facilities and airports (Group A-3 or B).
2. ~~In Group A, I, R and S occupancies,~~ levels that do not contain accessible elements or other spaces required by Section 1107 or 1108 are not required to be served by an accessible route from an accessible level.
3. In air traffic control towers, an accessible route is not required to serve the cab and the floor immediately below the cab.
4. Where a two-story building or facility has one story with an occupant load of five or fewer persons that does not contain public use space, that story shall not be required to be connected by an accessible route to the story above or below.
5. The vertical portion of the accessible route to elevated employee work stations within a courtroom is not required at the time of initial construction, provided a ramp, lift or elevator complying with ICC A117.1 can be installed without requiring reconfiguration or extension of the courtroom or extension of the electrical system.

Reason: We believe that the IBC requirements for accessible route to elevated workstations in a courtroom do not need to be more restrictive then the Federal ADA/ABA guidelines. While requiring access in a single courtroom building would be a good idea, requiring the installation of a platform lift or ramp in all courtrooms in a multi-courtroom building would be cost-prohibitive. The proposed language is consistent with the Federal ADA/ABA guidelines. Please note that the exception does not apply to elevated courtroom areas that are likely to be used by members of the public who are not employees of the court such as jury areas, attorney areas, or witness stands. In addition, GSA as well as other Federal agencies adhere to the Federal ADA/ABA guidelines and having the IBC accessibility requirements in courtrooms being more restrictive then the Federal ADA/ABA guidelines will lead to confusion among architects designing Federal Courthouses.

The revision to Exception 2 is editorial in nature. Groups A and S are addressed in Section 1108. Groups I and R are addressed in Section 1107. This exception has currently been misinterpreted as a general exception to all Group A, I, R and S occupancies, especially in jurisdictions that had exceptions for storage levels in previous accessibility requirements. A straight reference to Sections 1107 and 1108 would allow the same exception without the confusion.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1104.4 Multilevel buildings and facilities. At least one accessible route shall connect each accessible level, including mezzanines, in multilevel buildings and facilities.

Exceptions:

1. An accessible route is not required to stories and mezzanines above and below accessible levels that have an aggregate area of not more than 3,000 square feet (278.7 m2). This exception shall not apply to:
   1.1. Multiple tenant facilities of Group M occupancies containing five or more tenant spaces;
   1.2. Levels containing offices of health care providers (Group B or I); or 1.3. Passenger transportation facilities and airports (Group A-3 or B).
2. Levels that do not contain accessible elements or other spaces required by Section 1107 or 1108 are not required to be served by an accessible route from an accessible level.
3. In air traffic control towers, an accessible route is not required to serve the cab and the floor immediately below the cab.
4. Where a two-story building or facility has one story with an occupant load of five or fewer persons that does not contain public use space, that story shall not be required to be connected by an accessible route to the story above or below.
5. ~~The~~ Vertical ~~portion of the accessible route~~ access to elevated employee work stations within a courtroom is not required at the time of initial construction, provided a ramp, lift or elevator complying with ICC A117.1 can be installed without requiring reconfiguration or extension of the courtroom or extension of the electrical system.

Committee Reason: The IBC should include provisions for accessibility into courtrooms that are consistent with the new ADA/ABA Accessibility Guidelines. The modification to Exception 5 would be more consistent with the terminology found in the Guidelines. The proposed language in Exception 5 regarding the route has implications that are not appropriate for this section.

Assembly Action: **None**

Final Hearing Results

E170-06/07 **AM**

Code Change No: E173-06/07

Original Proposal

Sections: 1106.2, 1106.3, 1106.4

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

Revise as follows:

1106.2 Groups R-2 and R-3. At least two percent, but not less than one, of each type of parking space provided for occupancies in Groups R-2 and R-3, which are required to have Accessible, Type A or Type B dwelling or sleeping units, shall be accessible. Where parking is provided within or beneath a building, accessible parking spaces shall also be provided within or beneath the building.

1106.3 Hospital outpatient facilities. At least ten percent, but not less than one, of patient and visitor parking spaces provided to serve hospital outpatient facilities shall be accessible.

1106.4 Rehabilitation facilities and outpatient physical therapy facilities. At least twenty percent, but not less than one, of the portion of patient and visitor parking spaces serving rehabilitation facilities specializing in treating conditions that affect mobility and outpatient physical therapy facilities shall be accessible.

Reason: The purpose of this proposal is to clarify the requirements for minimum numbers of accessible parking spaces in Groups R-2 and R-3 occupancies, and at hospital outpatient, rehabilitation and outpatient physical therapy facilities. It is also being done for consistency with similar language in Sections 1106.5, 1107.5.1.1, 1107.5.2.1, 1107.5.3.1, 1107.5.5.1, 1107.6.2.1.1, 1107.6.4.1. There is the impression that a threshold of 2 percent, for example, is reached when the number of parking spaces reaches 76, which is not the intent. A second parking space is required when the number of parking spaces reaches 51.

In Section 1106.3, the phrase “but not less than one” is inserted for consistency with Sections 1106.2 and 1106.4 on accessible parking spaces, and for consistency with similar provisions in Sections 1107.5.1.1, 1107.5.2.1, 1107.5.3.1, 1107.5.5.1 and 1107.6.2.1.1. Without the added phrase, code users may conclude that an accessible parking space is not required until the number of parking spaces reaches 5.

In Section 1106.4, the phrase "specializing in treating conditions that affect mobility" is inserted for consistency with the current ADAAG provisions. Refer to Section 208.2.2 of the 2004 ADA "Accessibility Guidelines for Buildings and Facilities." Note that the editorial corrections to these provisions published in the Federal Register, Vol.70, No. 150 (August 5, 2005) do not affect Section 208.2.2 as published in the 2004 Guidelines.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal clarifies that the numbers for parking spaces are not absolutes, but minimums. Clarifies the extent of the parking for rehabilitation facilities and is consistent with the new ADA/ABA Accessibility Guidelines.

Assembly Action: **None**

Final Hearing Results

E173-06/07 **AS**

Code Change No: E174-06/07

Original Proposal

Section: 1106.7.4 (New)

Proponent: Linda Volpe, United Spinal Association

Add new text as follows:

1106.7.4 Mechanical access parking garages. Mechanical access parking garages shall provide at least one passenger loading zone at vehicle drop-off and vehicle pick-up areas.

Reason: Mechanical access parking garages provide services similar to valet parking arrangements, which are required to be provided with a passenger loading zone. In addition, this new requirement would coordinate IBC with Section 209.5 of ADAAG.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal for valet parking at mechanical parking garages makes sense for the user and is consistent with the new ADA/ABA Guidelines.

Assembly Action: **None**

Final Hearing Results

E174-06/07 **AS**

Code Change No: E176-06/07

Original Proposal

Table 1107.6.1.1

Proponent: Joe Reich, New York State Commission on Quality of Care and Advocacy for Persons with Disabilities;Dominic Marinelli, United Spinal Association

Revise table as follows:

TABLE 1107.6.1.1
ACCESSIBLE DWELLING AND SLEEPING UNITS

TOTAL NUMBER OF UNITS PROVIDED	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS WITHOUT ROLL-IN SHOWERS	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS ASSOCIATED WITH ROLL-IN SHOWERS	TOTAL NUMBER OF REQUIRED ACCESSIBLE UNITS
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1,000	2% of total	1% of total	3% of total
Over 1, 001	20, plus 1 for each 100, or fraction thereof, over 1000	10 plus 1 for each 100, or fraction thereof, over 1,000	30 plus 2 for each 100, or fraction thereof, over 1,000

Reason: This proposed modification will clarify and ensure, that the accessible units will offer the same bathing options, as found in the standard rooms.

This change also meets the intent of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 9.1.4 (1) which requires these facilities to offer persons with disabilities a range of options equivalent to those available to other persons served by the facility. Finally, the modified table is identical to the ADA Draft, "Table 224.2 Guest Rooms with Mobility Features". This draft, published July 23, 2004 awaits final approval from the Department of Justice.

The current IBC Table 1107.6.1.1 uses the term "MINIMUM" when referring to the number of rooms associated with roll-in showers. Minimums can always be surpassed, thus allowing roll-in showers to be incorporated in all the accessible units. Some design professionals and hotel chains have done just that, in the belief that roll-in showers were favored by the disabled population. Nothing could be further from the truth. CHOICE and options equivalent to those available without disabilities is the basic premise found in the ADA.

Roll-in showers were never intended to replace transfer showers or tubs in accessible rooms. Once again, this is made clear under 9.1.4 (1) of ADA Title III.

In order to provide persons with disabilities a range of options equivalent to those available to other persons served by the facility, …..it continues.

"Factors to be considered include room size, cost, amenities provided and the number of beds."

If the standard rooms have tubs, then the accessible rooms would also have tubs, with a small percentage of rooms incorporated roll-in showers. The same would hold true if all the standard rooms had transfer showers, the accessible rooms would have transfer showers, with a small percentage of rooms having roll-in showers.

Providing roll-in showers in all the accessible rooms is problematic for persons who do not weight-bear or have poor sitting balance, yet are independent. Roll-in showers, do not provide the same protection as a 36" x 36" transfer shower stall. Roll-in showers do not have grab bars positioned to prevent a person from falling forward, as found in the transfer shower stall. Tubs provide 360° protection once seated, and is preferred by many people with mobility impairments for both security when sitting and the therapeutic relief from a warm bath.

The proposed modification of IBC Table 1107.6.1.1 provides for both roll-in showers and bathing fixtures equivalent to those offered in standard rooms be incorporated in the accessible rooms. The proposed table meets the intent of ADAAG section 9.1.4 in providing equal amenities, and is identical to the table found in the ADA draft, currently being reviewed by the Department of Justice.

Bibliography:

28 CFR Part 36 Section 9.1.4
Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines July 23, 2004 Table 224.2 Guest Rooms with Mobility features

Cost Impact: The code change proposal will not increase the cost of construction. The bathing fixtures placed in the accessible room are the same fixtures found in the standard rooms.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify table heading as follows:

TABLE 1107.6.1.1
ACCESSIBLE DWELLING AND SLEEPING UNITS

TOTAL NUMBER OF UNITS PROVIDED	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS WITHOUT ROLL-IN SHOWERS	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS ~~ASSOCIATED~~ WITH ROLL-IN SHOWERS	TOTAL NUMBER OF REQUIRED ACCESSIBLE UNITS

(Portions of proposal not shown remain unchanged)

Committee Reason: Adding the column would clarify that some Accessible Units should be provided with bathtubs or transfer showers to allow consumers increased options. A concern would be if the text in Section 1107.6.1.1 should be revised to clarify the options. This proposal is consistent with the new ADA/ABA Accessibility Guidelines. The title of the third column should be revised for consistency with the other titles.

Assembly Action: **None**

Final Hearing Results

E176-06/07 **AM**

Code Change No: E181-06/07

Original Proposal

Section: 1108.2.8.1

Proponent: Ed Roether, HOK SVE

Revise as follows:

1108.2.8.1 Dining surfaces. Where dining surfaces for the consumption of food or drink are provided, at least 5 percent, but not less than one, of the ~~seating and standing spaces at the~~ dining surfaces for the seating and standing spaces shall be accessible and be distributed throughout the facility.

Reason: The purpose of this proposed change is to clarify that dining surfaces are to be accessible since the seating and standing spaces are not fixed elements. The proposed language puts the emphasis on the dining surface rather than the seating and standing spaces. Without this change the only thing required to be accessible could be the seating and standing surfaces and not their related dining surface.

There is confusion regarding which is required to be accessible. The only thing determining whether the dining area is accessible is the dining surface itself since the seating and standing spaces may not have any identifying demarcation.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language focuses on the surfaces rather than the seating and therefore clarifies the code.

Assembly Action: **None**

Final Hearing Results

E181-06/07 **AS**

Code Change No: E182-06/07

Original Proposal

Section: 1108.2.8.1

Proponent: Ed Roether, HOK SVE

Revise as follows:

1108.2.8.1 Dining surfaces. Where dining surfaces for the consumption of food or drink are provided, at least 5 percent, but not less than one, of the seating and standing spaces at the dining surfaces shall be accessible, ~~and~~ be distributed throughout the facility and located on a level accessed by an accessible route.

Reason: The purpose of this proposed change is to clarify that accessible dining surfaces are not required to be located in spaces that are not required to have an accessible route. There are several limited locations where an accessible route is not required in the building code that would have dining surfaces. Not providing accessible dining surfaces in these limited locations would not diminish accessibility since these spaces are not provided an accessible route.

Specifically, Section 1108 would not require an accessible route to a mezzanine seating area, provided that the mezzanine contains less than 25 percent of the total area and the same services are provided in the accessible area. These limited applications would also not require an accessible route in the new ADAAG issued July 2004. Therefore, accessibility is not diminished regardless of how dining surfaces are provided these limited locations.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal clarifies that the accessible dining surfaces should be located on levels that have an accessible route to them. Dining areas can have non-accessible mezzanines.

Assembly Action: **None**

Final Hearing Results

E182-06/07 **AS**

Code Change No: E183-06/07

Original Proposal

Section: 1108.4.1 (New)

Proponent: Ed Roether, HOK SVE

1. Revise as follows:

1108.4.1 Courtrooms. Each courtroom shall be accessible and comply with Sections 1108.4.1.1 through 1108.4.1.5.

2. Add new text as follows:

1108.4.1.1 Jury box. A wheelchair space complying with ICC A117.1 shall be provided within the jury box.

Exception: An adjacent companion seating is not required.

1108.4.1.2 Gallery seating. Wheelchair spaces complying with ICC A117.1 shall be provided in accordance with Table 1108.2.2.1. Designated aisle seats shall be provided in accordance with Section 1108.2.4.

1108.4.1.3 Assistive listening systems. An assistive listening system must be provided. Receivers shall be provided for the assistive listening system in accordance with Section 1108.2.6.1.

1108.4.1.4 Employee work stations. The judges' bench, clerks' station, baliffs' station, deputy clerk's station, and court reporter's station shall be located on an accessible route. The vertical portion of the accessible route to elevated employee work stations within a courtroom is not required at the time of initial construction, provided a ramp, lift or elevator complying with ICC A117.1 can be installed without requiring reconfiguration or extension of the courtroom or extension of the electrical system.

1108.4.1.5 Other work stations. The litigant's and counsel stations, including the lectern, shall be accessible in accordance with ICC A117.1.

Reason: The intent of the proposal is to provide specifics to comply with the accessibility provisions for courtrooms.

Jury boxes are a unique form of fixed seating in assembly spaces and should be addressed separately. The intent is consistent with the ADA/ABA Guidelines. The exception is necessary to over ride the current ICC A117.1 requirement for an adjacent companion seat to all wheelchair spaces.

Gallery seating is addressed the same as any fixed seating arrangements. All courtrooms are required to have assistive listening systems. This is consistent with the ADA/ABA Guidelines.

The proposed language for employee work areas is consistent with the intent in the ADA/ABA Guidelines, Sections 231 and 808. The ADA/ABA guidelines allow for planning for the accessible route to raised employee work areas within courtrooms. In the public comment phase of the 2004/2005 code change cycle, the membership decided that there should not be a generic exception for the raised employee work stations within courtrooms (E141-04/05). While this is understandable in a single courtroom in a courthouse situation, this is an undue burden for the taxpayers when more than one courtroom of the different types (e.g., panel courtroom, jury courtroom and no jury courtroom) are provided.

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

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

1108.4.1.1 Jury box. A wheelchair space complying with ICC A117.1 shall be provided within the jury box.

Exception: ~~An~~ Adjacent companion seating is not required.

1108.4.1.4 Employee work stations. The judges' bench, clerks' station, baliffs' station, deputy clerk's station, and court reporter's station shall be located on an accessible route. The vertical ~~portion of the accessible route~~ access to elevated employee work stations within a courtroom is not required at the time of initial construction, provided a ramp, lift or elevator complying with ICC A117.1 can be installed without requiring reconfiguration or extension of the courtroom or extension of the electrical system.

(Portions of proposal not shown remain unchanged)

Committee Reason: This proposal would be consistent with the change made to employee work stations in E165-06/07. The new provisions indicate the level of accessibility required in courtrooms. The modification is for consistency with the modification made to similar language in E170-06/07.

Assembly Action: **None**

Final Hearing Results

E183-06/07 **AM**

Code Change No: E185-06/07

Original Proposal

Sections: 1109.2.1 through 1109.2.1.7, [P] 2902.1.1 (IPC 403.1.1), 3409.8.9 (IEBC [B] 308.8.9, 605.1.9), 3409.9.4 (IEBC [B] 308.9.4, 1104.1.4)

Proponent: David Viola, Plumbing Manufacturers Institute

Revise as follows:

1109.2.1 ~~Unisex~~ Family or assisted-use toilet and bathing rooms. In assembly and mercantile occupancies, an accessible ~~unisex~~ family or assisted-use toilet room shall be provided where an aggregate of six or more male and female water closets is required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the ~~unisex~~ family or assisted-use toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible ~~unisex~~ family or assisted-use bathing room shall be provided. Fixtures located within ~~unisex~~ family or assisted-use toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

Exception: Where each separate-sex bathing room has only one shower or bathtub fixture, a ~~unisex~~ family or assisted-use bathing room is not required.

1109.2.1.1 Standard. ~~Unisex~~ Family or assisted-use toilet and bathing rooms shall comply with Sections 1109.2.1.2 through 1109.2.1.7 and ICC A117.1.

1109.2.1.2 ~~Unisex~~ Family or assisted-use toilet rooms. ~~Unisex~~ Family or assisted-use toilet rooms shall include only one water closet and only one lavatory. A ~~unisex~~ family or assisted-use bathing room in accordance with Section 1109.2.1.3 shall be considered a ~~unisex~~ family or assisted-use toilet room.

Exception: A urinal is permitted to be provided in addition to the water closet in a ~~unisex~~ family or assisted-use toilet room.

1109.2.1.3 ~~Unisex~~ Family or assisted-use bathing rooms. ~~Unisex~~ Family or assisted-use bathing rooms shall include only one shower or bathtub fixture. ~~Unisex~~ Family or assisted-use bathing rooms shall also include one water closet and one lavatory. Where storage facilities are provided for separate-sex bathing rooms, accessible storage facilities shall be provided for ~~unisex~~ family or assisted-use bathing rooms.

1109.2.1.4 Location. ~~Unisex~~ Family or assisted-use toilet and bathing rooms shall be located on an accessible route. ~~Unisex~~ Family or assisted-use toilet rooms shall be located not more than one story above or below separate-sex toilet rooms. The accessible route from any separate-sex toilet room to a ~~unisex~~ family or assisted-use toilet room shall not exceed 500 feet (152 m).

1109.2.1.5 Prohibited location. In passenger transportation facilities and airports, the accessible route from separate-sex toilet rooms to a ~~unisex~~ family or assisted-use toilet room shall not pass through security checkpoints.

1109.2.1.6 Clear floor space. Where doors swing into a ~~unisex~~ family or assisted-use toilet or bathing room, a clear floor space not less than 30 inches by 48 inches (762 mm by 1219 mm) shall be provided, within the room, beyond the area of the door swing.

1109.2.1.7 Privacy. Doors to ~~unisex~~ family or assisted-use toilet and bathing rooms shall be securable from within the room.

[P] 2902.1.1 (IPC 403.1.1) ~~Unisex~~ Family or assisted-use toilet and bath fixtures. Fixtures located within ~~unisex~~ family or assisted-use toilet bathing rooms complying with Section 1109.2.1 ~~404 of the *International Plumbing Code*~~ are permitted to be included in determining the minimum required number of fixtures for assembly and mercantile occupancies.

3409.8.9 (IEBC [B]308.8.9, 605.1.9) Toilet rooms. Where it is technically infeasible to alter existing toilet and bathing facilities to be accessible, an accessible ~~unisex~~ family or assisted-use toilet or bathing facility constructed in accordance with Section 1109.2.1 is permitted. The ~~unisex~~ family or assisted-use facility shall be located on the same floor and in the same area as the existing facilities.

3409.9.4 (IEBC [B]308.9.4, 1104.1.4) Toilet and bathing facilities. Where toilet rooms are provided, at least one accessible family or assisted-use toilet room complying with Section 1109.2.1 shall be provided.

Reason: The "unisex" room required in large mercantile and assembly spaces by IBC Section 1109.2.1 is confused with the unisex toilet room permitted in tenants with fewer than 15 occupants as permitted by the IPC. The change in the name to 'Family' or 'Assisted Use' will make the original intent for this facility clear. A reference to Section 1109.2.1 of the IBC in the plumbing and existing building sections will clarify what toilet/bathing room requirements are expected within this room.

In addition, the new ADA uses the term "Unisex/Single-Use or Family" differently than IBC. The new ADA refers to toilet rooms with two water closets or a water closet and a urinal as a 'unisex' toilet room. The change in terminology should keep them separated.

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

Analysis: The action on the proposed change to Sections 2902.1.1, 3409.8.9 and 3409.9.4 (as well as the associated IPC and IEBC) is dependent on the decision of the Means of Egress Committee to the remainder of the proposal, therefore, for consistency, the MEO Committee will make the determination for these section instead of the General, IPC and IEBC Committees.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The change in the language from ›Unisex‹ to ›Family or assisted use‹ will clarify the intent of these bathrooms (required in large mercantile and assembly facilities) is to serve anyone that needs assistance and is traveling with an opposite sex attendant. It is recommended that there should be a public comment to address the travel distance concerns between the 500' travel distance in Section 1109.2.1.5 and the ›same area‹ language in Section 3409.8.9.

Assembly Action: **None**

Final Hearing Results

E185-06/07 **AS**

Code Change No: E187-06/07

Original Proposal

Section: 1109.10

Proponent: Ed Roether, HOK SVE

Delete without substitution:

~~1109.10 Assembly area seating.~~ ~~Assembly areas with fixed seating shall comply with Section 1108.2 for accessible seating and assistive listening devices~~.

Reason: This section is redundant and is unnecessary. It should be removed. Section 1108.2 already covers any assembly seating with fixed seats.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal deletes redundant language in the code.

Assembly Action: **None**

Final Hearing Results

E187-06/07 **AS**

Code Change No: E188-06/07

Original Proposal

Section: 1109.11.1

Proponent: Ed Roether, HOK SVE

Revise as follows:

1109.11.1 Dispersion. Accessible fixed or built-in seating at tables, counters or work surfaces shall be distributed throughout the space or facility containing such elements and located on a level accessed by an accessible route.

Reason: The purpose of this proposed change is to clarify that accessible tables, counters or work surfaces are not required to be located in spaces that are not required to have an accessible route. There are several limited locations where an accessible route is not required in the building code that would have tables, counters or work surfaces. Not providing accessible tables, counters or work surfaces in these limited locations would not diminish accessibility since these spaces are not provided an accessible route.

Specifically, Section 1108 would not require an accessible route to a mezzanine seating area, provided that the mezzanine contains less than 25 percent of the total area and the same services are provided in the accessible area. There are other similar limited applications where an accessible route is not required yet could have tables, counters or work surfaces, such as the cab in an air traffic control tower. These limited applications would also not require an accessible route in the new ADAAG issued July 2004. Therefore, accessibility is not diminished regardless of how tables, counters or work surfaces are provided these limited locations.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposed language would clarify that accessible tables and counters should be located in areas with an accessible route. This would be consistent with E182-06/07.

Assembly Action: **None**

Final Hearing Results

E188-06/07 **AS**

Code Change No: E190-06/07

Original Proposal

Section: 1109.13.1

Proponent: Tim Pate, City and County of Broomfield, Colorado Building Department, representing himself

Revise as follows:

1109.13.1 Operable windows. Where operable windows are provided in rooms that are required to be accessible in accordance with Sections 1107.5.1.1, 1107.5.2.1, 1107.5.3.1, 1107.5.4, 1107.6.1.1, 1107.6.2.1.1, 1107.6.2.2.1, and 1107.7.6.4.1, at least one window in each room shall be accessible and each required operable window shall be accessible.

Exception: Accessible windows are not required in bathrooms and kitchens.

Reason: The ICC Code Correlating Committee added all the individual section numbers to Section 1109.13.1 and failed to include Section 1107.6.2.1.1. IBC Section 1107.6.2.1 requires that all apartment houses, monasteries, and convents have the minimum number of Type A units as listed in this section. The IBC then requires all Type A units to be constructed as per ICC A117.1. The 2003 edition of ICC A117.1, Section 1003.13 requires that "Where operable windows are provided, at least one window in each sleeping, living, or dining space shall have operable parts complying with Section 1003.9." The intent of the IBC is to tell us when things need to be accessible and the ICC A117.1 Standard is to be used to tell us how to build things to be accessible. Therefore adding Section 1107.6.2.1.1 to Section 1109.13.1 would help reduce any confusion as to when operable windows would need to be accessible.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The addition of Type A units into the list for accessible windows would be consistent with ICC A117.1.

Assembly Action: **None**

Final Hearing Results

E190-06/07 **AS**